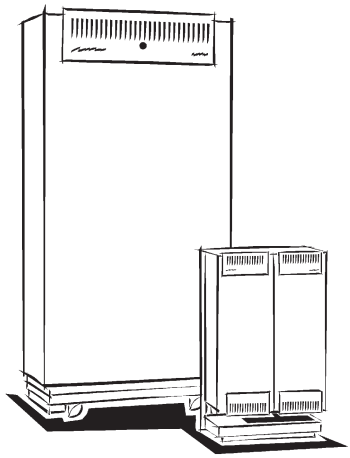
SOPHO iS3000 Series (SSW 805)

OM COMMANDS MANUAL (MML)



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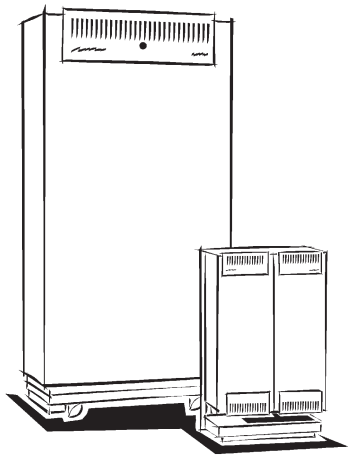

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Issue:
9908

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A Publication of
PHILIPS BUSINESS COMMUNICATIONS
HILVERSUM, THE NETHERLANDS

Order No.: 3522 009 05259

Manual No.:

Date: August 1999

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AMENDMENTS

The items that follow are incorporated in the update of this manual from issue 9809 to 9801:

CHAPTER/SECTION	DESCRIPTION
Bounds., Options, Timers	Chapter added; commands: CHOPTI, CHTIME and CHBOUN
Miscellaneous	Miscellaneous DNR actions (CNND: SSW 805.28)
Ch. 13	Description of CHDNRC adapted CHBDNR added
Hardware Configuration	CHPCTB added (SSW 805.28)
MCNE	CHMCNE and DISPEX adapted to SSW 805.28
Ch. 42	Description of CHPICC added; SPICC and DIPICC adapted
Parameters	Boards & PC-types; GEN-OPTS has been adapted ; BUDGET, BUDGET-ACTION, BUDGET-UNIT added; INDEX, BOUNDARY_VALUE, TRUE OR FALSE, TIME-UNIT and TIME-VALUE added
Boards & PC-types	DLX-L added

The items that follow are incorporated in the update of this manual from issue 9801 to 9807:

CHAPTER/SECTION	DESCRIPTION
Back-up Maint.	OM lock is added (SSW 805.29)
Trunk Traffic	OM commands for CLI or COL translation for ISDN (CHCCTR, DICCTR and DICCRT) are added (SSW 805.29)
SSM	OM command ASTMSW : service number 5 is renamed to 'Change PBX Data'; the window size is set to 3 (SSW 805.29)
Parameters	GEN-TONE adapted; WINDOW : Service number 5 is extended (SSW 805.29)

The items that follow are incorporated in the update of this manual from issue 9807 to 9810:

CHAPTER/SECTION	DESCRIPTION
Ch. 40	ASEXTP extended
Call Forwarding	DICALF: info added
Numbering scheme	Commands CHCSDD and DICSDD added (SSW 805.30)

The items that follow are incorporated in the update of this manual from issue 9810 to 9901:

CHAPTER/SECTION	DESCRIPTION
Free Numbering	Commands CHFDNR and DIFDNR added (SSW 805.30)
Ch. 5	Safe boundaries extended

The items that follow are incorporated in the update of this manual from issue 9901 to 9904:

CHAPTER/SECTION	DESCRIPTION
Chapter 26	Output of DIBRDS corrected
Chapter 57	Output of DITRAF:1; corrected

PREFACE

This manual is valid for members of the SOPHO iS3000 series using System Software 805 (SSW 805) as well as existing SOPHO-S systems, which are upgraded with SSW 805. All of these systems will further be referred to as “ISPBX”.

Note: *The SOPHO-S50 and SOPHO-S100 can not be upgraded with SSW 805.*

1. INTRODUCTION

1.1. WHAT IS AN OM COMMAND

OM stands for Operational Maintenance. An OM command allows you to perform maintenance functions on an operational system with the minimum of inconvenience. OM commands may be entered via a Personal Computer or OM terminal using Man Machine Language (MML). An OM command in MML is a mnemonic of 6 letters. There are two levels of OM commands, called the first and second line maintenance. This book gives all the first line maintenance commands in MML. The second line maintenance commands are reserved for the system specialists.
OM via the operator's desk is not so user friendly and the number of operator desk commands is limited. An OM command on the operator's desk consists of a 4-digit code. See the OM COMMANDS MANUAL (OPERATOR DESK) for these commands.
The use of OM commands includes:

- The specification and modification of project dependent data like External Numbering Scheme and Traffic Classes.
- Changing of service conditions.
- Reading of alarms and system status reports.
- Assigning of facilities to extension users.

1.2. OM COMMAND SYNTAX

Each OM command comprises a six character mnemonic, a colon (:), a number of parameters (some or all of which may be optional) separated by commas and finally a semi-colon (;) or exclamation mark (!).

- If you terminate the command with a semi-colon the command is executed and the system prompt < is returned.
- If you terminate the command with an exclamation mark (a continuation request) the mnemonic and colon are repeated after completion of the command, for you to use the same command again (CPS only).

Parameters are shown like this : `<DNR>`
This means that you must enter the information representing the directory number (DNR) of an extension.
Optional parameters are shown like this : `[<DNR>]`
This means that anything inside the square brackets [ ] may be omitted. In certain cases the square brackets may contain a number of parameters or a parameter and a comma. In such

cases it denotes that either everything inside the brackets must be filled in or everything inside the brackets must be omitted.
Example: A BSP-ID has the format: `<DNR> [-<BSPT>]`.

Note: *Unit numbers are always shown as [<UNIT>]. As a rule this parameter is mandatory in multi-unit systems and must be omitted in single unit systems. As from SSW 805.28 unit '0' may be entered: this is the unit the OM terminal is connected to.*

Parameters are always of the `single' type and some may be of the `series' and/or `range' type depending on the OM command used.

. Single	A single number, e.g. <DNR>. For example : 34078
. Series	Two, three or four numbers separated by ampersand signs (&). The possibility to input a series is indicated in this book by an s after the parameter, e.g. <DNR>s. For example : 34078&34079&34062 The OM action is performed for each of the numbers. The numbers need not be in sequential order.
. Range	Two numbers separated by two ampersand signs (&&). The possibility to input a range is indicated in this book by an r after the parameter, e.g. <DNR>r. For example : 34070&&34079 The OM action is performed for all numbers from the lowest to the highest inclusive. The first number must be lower than the second.

- Series/Range
  The parameter can be series or range. This is indicated by s/r after the parameter, e.g. <DNR>s/r.
  The two types cannot be mixed, e.g. 34070&34079&&34100 is not a valid input.
  Series/range on a BSP-ID parameter is only possible when the BSPT part is the same, e.g. 2406-98&&2410-98 is allowed, 2406-97&&2410-98 is not allowed.

1.3. REPRESENTATION OF OM COMMANDS

Throughout this book everything you type in is shown in bold capitals: **`LIKE THIS.`** System responses are in small capitals: `LIKE THIS.`
An OM command in this book has the following layout:

Change Abbreviated Number **124 #!**

```
CHABNR : <ABBR-NUMBER> [, [<EXP-NUMBER>], [<TRFC>] [,<AG>s/r]
         ];
```

The heading gives the description of the OM command. The number after the heading indicates the authority class index. This index is used to change the authority class of the command. A # sign indicates that this command is written to the journal file, if the journal updating is on. The exclamation mark (!) means that the command can only be executed with the journal updating on, i.e. it will not execute when OM command **SWJUPD:0;** is executed. If the terminal you have does not have the same authority class the command cannot be executed. OM command DIRECT, directory type user, displays the authority class of this command i.e. **DIRECT:LBUxx:CHABNR.*./,u;** (only for CPS systems, in other cases use **DIOVLM**).
The actual command description follows in the box. The box contains the 6 letter mnemonic, followed by parameters. The meaning of the parameters is explained in appendix B. This appendix also gives the minimum and maximum value of the parameter. Note that the maximum value might be set lower in the projecting for your exchange. Consult the Office Data Manual of your exchange for these values.
The command you type in might look like this:
CHABNR:33,0224978,4;**
This command links abbreviated number **33 to expanded number 02-24978 and tells the system that a user of this abbreviated number must have at least traffic class 4. Because the analysis group number **<AG>** is omitted, the abbreviated number is added to the common pool. The system replies with: EXECUTED.

1.4. ON SCREEN HELP FUNCTIONS

To facilitate the use of OM commands the system offers help texts (guidance) on the screen during an OM session. This guidance can be subdivided into:

- **Guidance About all OM Commands**
  To obtain a list of available OM commands simply enter a question mark (?) after the system prompt (<). However this is only for non-coded OM-sessions. This means that this feature is not available for OM-sessions via PC-applications.
- **Guidance About One OM Command**
  To obtain the correct syntax (i.e. the version of the OM command resident in your system) of a particular OM command, enter the six character code, a colon and a question mark. The syntax is then displayed with a description of the parameters. The system ends by repeating what was already typed in.
  CHABNR:?
  ```
  Change abbreviated number
  CHABNR: <ABBR-NUMBER> [, [<EXP-NUMBER], [<TRFC>] [,<AG>s/r]];
  If only the abbreviated number is entered, the erase function will be executed.
  If the analysis group number is omitted, the common analysis group number is
  used.
  ```

```
CHABNR:
```
After this the parameter guidance can be used. See below.

- **Guidance About One Parameter**
  To obtain help information about a parameter type a question mark at the parameter position you want help about. This results in a short guidance text about the parameter concerned.
  `CHABNR:**005,?`
  ```
  EXP-NUMBER: Expanded number (1 .. 20 digits)
  CHABNR:**005,
  ```
  Help about the first parameter can be obtained by first asking guidance about one OM command and when the command is repeated again typing in a question mark directly after the colon.

1.5. KEYBOARD COMMANDS

`Ctrl-G`	Start OM session.
`Ctrl-K`	Start coded OM session (for machine applications).
`Ctrl-X`	Abort OM command.
`Ctrl-S`	or `NO-SCROLL` key: Suspend OM output.
`Ctrl-Q`	or `NO-SCROLL` key again: Continue OM output.
`DEL`	Delete the last character.
`?`	Help information.

Enter **`END;`** or **`Ctrl-E`** to finish the OM session.
Enter **`END!`** or **`Ctrl-D`** to finish the OM session and distribute the license information.

1.6. SYSTEM RESPONSES

The reponse to an OM command can be the following:

- **Acceptance**
  The acceptance response means that the command was correct and is executed. It consists of the message: `EXECUTED.`
- **Rejection**
  The rejection response consists of one line containing the error code followed by the corresponding error message, e.g.:
  ```
  Error ###: corresponding text
  REJECTED
  <
  ```
  Look up the error number in appendix A. for more information about the error.
- **Request**

Sometimes a parameter causes non-fatal error. This means that the system does not stop the execution of the command, although a parameter is wrong. It will respond with:
`Px:`
The user can input the value for parameter x, terminated with a semi-colon (**;**) and the command will be executed or abort the command by typing `Ctrl-X`.

- **Congestion**
  The command is correct but can not be executed due to a temporary lack of resources. This causes the message:
  `CONGESTION!`
  The user does not have to repeat the command, it will be executed when the system has resources available. Alternatively the user can abort the command using `Ctrl-X` and try to execute the command some time later.

1.7. EHWA STRUCTURE

The EHWA has the following format:

<SHELF< [, [<BRD>] [,<CRT>]];

This enables the following combinations:

- **<SHELF>;**
  This is the address of the geographical shelf. Within this shelf a number of modules and other non-board related resources might be located. This address can never be used to identify a single module, even if the shelf contains only one module.
  Example:
  EHWA of shelf: **2011;**
- **<SHELF>,,<CRT>;**
  This is the address of a module (PM, CM, SM or IM). These are administrative resources and will always have circuit condition INS.
  Note that in order to address the PM controller (PPU or PMC) the EHWA of the controller board must be used (e.g. 2011, 17).
  In order to allow for external addressing of modules in all kinds of hardware configurations, these resources are given a circuit identification within the geographical shelf.
  The modules contained by a shelf are displayed by OM: **DISHLF:<SHELF>;**
  Examples:
  EHWA of PM: **2011,,0;** (conventional hardware)
  EHWA of CM: **2014,,0;** (combined CM/SM shelf and conventional hardware)
  EHWA of SM: **2013,,0;** (conventional hardware)
  EHWA of SM: **2014,,1;** (combined CM/SM shelf)
  EHWA of IM: **2011,,1;** (in combined CM/SM shelf)
- **<SHELF>, <BRD>;**

This is the address of the geographical board AND (conditionally) if there is only one function on that board, it is the address of the function too.
A board function is a classification of a type of resource. Often the board function is performed by a number of resources. An example of a board function is the CII board function. Resources that actually perform the CII function are the PCHs (physical channels).
Board related functions are:
- PM shelf, indicated by the PSC, PMC-HR, PMC-LU or PMC-MC;
- PM board function, including the DTUs;
- IAS board function;
- CIx board function;
- CII board function;
- MIC board function;
- SCU board function;
- CSG board function;
- CRU board function;
- CPU-ME or CSN-BC;
- CSM slice function.

Board functions must have an external hardware address. This is necessary to enable the identification of the function in certain alarm reports. In case the board comprises only one function the address of the geographical board is the address of the function too.
When more functions are combined on the geographical board an extra parameter is required to identify the various board functions.
Examples:

Conventional PM board	
EHWA of board:	**2011,10;**
EHWA of PM board function:	**2011,10;**
EHWA of first PCT on the board:	**2011,10,0;**
EHWA of the last PCT on the board:	**2011,10,7;**

Conventional CII-B board	**2014,16;**
EHWA of board:	**2014,16;**
EHWA of CII function:	**2014,16;**
EHWA of CII port (first Physical Channel):	**2014,16,0;**
EHWA of CII port (last Physical Channel):	**2014,16,15;**
EHWA of PMC:	**2011,17;**
EHWA of DOC on the PMC board:	**2011,17,0;**

- **<SHELF>,<BRD>,<CRT>;**

This is the address of a board function (in case more functions are combined on the same board) OR it is the address of one of the resources actually performing the board function. Examples:

Combined MIC/CII board

EHWA of board:	**2014,8;**
EHWA of MIC function:	**2014,8,0;**
EHWA of CII function:	**2014,8,1;**
EHWA of CII port (first Physical Channel):	**2014,8,2;**
EHWA of CII port (last Physical Channel):	**2014,8,17;**

2. ABBREVIATED NUMBERS

These commands are used to assign and erase relations between an abbreviated number and an expanded number. This relation is assigned to a certain analysis group. This means that only users in this analysis group will be able to use the abbreviated numbers. If this analysis group number (AG) is omitted, the action will be performed in the common pool, which is accessible to all extension users.

Change Abbreviated Number **124 #!**

CHABNR : <ABBR-NUMBER>[,[<EXP-NUMBER>],[<TRFC>][,<AG>s/r]];

The expanded number (EXP-NUMBER) and the traffic class (TRFC) must always be entered in combination:

- an expanded number is erased by leaving both empty;
- an expanded number is changed by entering both the expanded number and the traffic class.

Display Abbreviated Number **125**

DIABNR : [<ABBR-NUMBER>s/r][,<AG>s/r];

If the abbreviated number is not entered then all abbreviated number relations of the given analysis group are displayed. If AG is omitted, the relations of the common pool will be displayed.
Response:

```
ABBREVIATED  ---EXPANDED NUMBER-  TRAFFI ANALYS
             --                     C     IS
   NUMBER                         CLASS  GROUP
    XXXX          XXXXXXXXXXX      XX     XX
```

3. ANALYSIS GROUP, COMPATIBILITY VALUE AND SERVICE PROFILE

These OM commands are used to change and display the relation between Analysis Group (AG) and BSP-ID and/or Compatibility Value (CV) and BSP-ID and to change and display the relation between a BSP-ID and the service profile.

3.1. ANALYSIS GROUP AND COMPATIBILITY VALUE

The BSP-ID can also be a group DNR. See chapter Trunk Traffic to assign a Compatibility Value to a route. It is not possible (nor is it needed) to assign an Analysis Group to a route.

Change Analysis Group Number and Compatibility Value of DNR/BSP **207 #!**

CHAGCV : <BSP-ID>s/r[, [<AG>] [,<CV>]];

If either the CV and/or the analysis group parameter is omitted the relation between the BSP-ID and the omitted parameter(s) is set to the default value. Note that this command will download the specified terminal which will go to `non operational' for a moment. As from SSW 805.26 this download functionality has been removed.

Display Analysis Group and Compatibility Value of DNR/BSP **208**

DIAGCV : <BSP-ID>s/r;

Response:

```
DNR-BSPT      ANALYSIS-GROUP   COMPATIBILITY-VALUE
XXXXXX              XX                XX
```

3.2. SERVICE PROFILE

Change DNR/BSP Service Capabilities **183 #!**

CHDNRS : <BSP-ID>s/r,<IBSC>,<BSPT>[,<ORDER-IND>];

The BSPT parameter that is assigned should be previously defined by command CRBSPT or by the system. It should contain the specified IBSC. When only the IBSC is to be changed, then

the BSPT must be equal to the BSPT in the BSP-ID. When the BSPT differs from the BSPT in the BSP-ID then the BSP-ID is changed.
It is not allowed to give BSPT 99 in the BSP-ID.
Note that this command will download the specified terminal which will go to ”non operational” for a moment.

Display DNR/BSP Service Capabilities 210

DIDNRS : <BSP-ID>s/r;

Response:

```
DNR-BSPT        IBSC
xxxx            xx
```

4. BACKUP MAINTENANCE

Each unit has a database in the Central Memory (CM), containing all administrative data. This data should also be available on the backup devices.
The following files, representing the database in the Central Memory, can be made:

- Memory Image Snapshot files (MIS files), containing the CM database in binary format;
- Logical Format files, containing the CM database in subcommand format.

Before making these files, the Backup Maintenance Lock (OM command BMLOCK) must be set to avoid the changing of the database while it is being copied to the backup device.
When reconfiguring a system common practice is to create retrieve files, adapt these retrieve files and next reproject the system with these adapted retrieve files. Between the creation of the retrieve files and the reprojecting of the system with these adapted retrieve files BM lock remains set, to restrict the execution of data changing OM commands. However, when doing so, also no Desksharing actions can be executed as long as BM lock is set.
To solve this problem OM lock is to be used (introduced in SSW 805.29). After having made the retrieve files, OM lock is set and next BM lock is reset. Desksharing actions are now possible and are written to the journal file. When reprojecting the system with the adapted retrieve files all Desksharing actions, executed in the time period that OM lock was set, are present after reprojecting the system (after reprojecting the system, the journal-file is executed).

Note: *Journalling is not supported by the CPU-ME/MT systems. This means that all desksharing actions, executed during an 'OM lock' period are lost after reprojecting the system.*

Set or Clear Backup Maintenance Lock **108**

`BMLOCK : <OFF-ON>;`

Disables (or enables) all data changing OM activities in a system. The lock should be set before making a MIS file or a Logical Format file, and cleared afterwards.
Response:

```
Give user identification: ?
```

Fill in your name (1...6 characters) and terminate with a semi-colon (**;**)

Set or Clear Operational Maintenance Lock (from SSW 805.29) **511**

OMLOCK : <OFF-ON>;

This command can be used to temporary disable all OM actions (executed from an OM device) which change the configuration data. However OM actions initiated from an extension (e.g. when desksharing is executed) remain possible.
When OM lock is set, BM lock can only be reset! When OM lock is not set, BM lock can be set and reset.
When BM lock is set, OM lock is of no importance (don't care). BM lock has a higher priority than OM lock.
Response:

```
Give user identification: ?
```

Fill in your name (1...6 characters) and terminate with a semi-colon (**;**)

Change to New Empty Journal File (not for CPU-ME/MT) **109**

CHJOUR : <NETWORK-SIN>;

Before using this command the BM lock should be set first. This command deletes all versions of the journal file and makes a new empty journal file with the input SIN (Snapshot Identification Number). The SIN should be the same as the MIS files present. Check the SIN of the MIS files by typing: **DIRECT:LBUxx:LMxx01.POM./,U;**

WARNING: THIS COMMAND DELETES INFORMATION NOT YET PRESENT IN THE LATEST MIS FILE(S). USE GEBUMI, UNLESS THIS IS WHAT YOU REALLY WANT.

Generate Backup in Logical Format **105**

RTRIEV : [<RETRIEVE-ACTION>] [,<UNIT>];

Before using this command the BM lock should be set first. If the unit number is omitted, the Logical Format files are made in all units of the system. The Logical Format files are called PRxx.POM (PE data) and ORxx.POM (LL data).

WARNING: DO NOT USE SWJUPD WHEN MAKING A RETRIEVE.

Generate Backup in Memory Image Snapshot **104**

GEBUMI : [<UNIT>];

WARNING: DO NOT USE THIS COMMAND WHEN TRUNKS ARE IN CIRCUIT CONDITION OUT.

Before using this command the BM lock should be set. If the unit number is omitted, the MIS file (Memory Image Snapshot) is made in all units of the system (systemwide) and a new empty journal file is introduced. On completion of the command the advice is given to make a firecopy (if a MIS file is made in all units). See Section "*MAKING A FIRE COPY*" on page 18. After the MIS files are made, old versions may be deleted to make space on the local backup using the PUBUMI command. Each MIS file is called LMxx01.POM (xx=unit number) and is present on the Local Backup.

Note: *It is advised to keep the two latest versions of the MIS files as fire copies.*

Purge the MIS-file on the Backup Device **479**

PUBUMI : [<UNIT>];

PUBUMI purges MIS files at the backup device.
If no unit is specified, MIS files are purged in the unit the command is executed from. If only one MIS file is present on the backup device, no MIS file will be deleted.
Response:

```
UNIT 2  MISFILE-file version a
:       DELETED !
UNIT 2  MISFILE-file version b
:       DELETED !
```

Where a, b and c indicate the file generations.

Switch Journal Updating (not for CPU-ME/MT) **106**

SWJUPD : <OFF-ON>;

After starting an OM session the journal updating is on, commands are written to the journal file. For special purposes (test during installation) it can be switched off.

WARNING: SWITCHING THE JOURNAL UPDATING OFF LEADS TO GAPS IN THE JOURNAL FILE. ALSO THE BM LOCK WILL BE OVERRULED FOR THE CONCERNING OM TERMINAL.

Update Unit from Journal (not for CPU-ME/MT) 107

```
UPDATE : [<UNIT>];
```

After an operational restart normally the journal file is executed. When an operational restart occurs during the execution of an OM command, the possibility exists that the operational restart occurred due to an erreonous subcommand. Because this subcommand is also present on the journal file the unit would keep on restarting. This would be a deadlock situation. To prevent this the journal file is not executed when the unit lock is set (this happens automatically during the execution of an OM command). If the journal file is not executed this is signalled to the user. Two possibilities exist:

- The operational restart was not the result of a wrong subcommand. Give the UPDATE command to execute the journal file.
- The operational restart was the result of a wrong subcommand. After the UPDATE command another operational restart occurs. Report this situation, as it is due to a software error.

4.1. UNIT COMPATIBILITY

These commands are used when a non-simultaneous upgrade must be made in a iSNet Metropolitan Area Network (iSNet MAN) or also called `Fully Integrated Network' (FIN). In this situation the network will consist of units with the old software package (not yet upgraded) and units with the new software package. This means that the total network consists of two (incompatible) smaller networks. The network compatibility function ensures that calls between incompatible networks are still possible but without facilities.

Change the Network Compatibility 403

```
CHCOMP : <INC-OR-COM>;
```

```
DICOMP : <UNIT-1>[,<UNIT-2>];
```

The displayed status is the status of UNIT-2 as seen by UNIT-1.
Response:

```
 UNIT   COMPATIBILITY
  xx         xxx
```

The compatibility can be one of the following:

- Compatible;
- Incompatible;
- Unknown

4.2. MAKING A FIRE COPY

MIS files (refer to OM: GEBUMI) should be copied to floppy disks for safety reasons. This set of files is called a fire copy.

4.2.1. Making a Fire Copy for a CCS System

A fire copy for a CCS system is created at the Backup and Interface Module (BIM) as follows:

- Select the BIM menu option: `Spawn to command line';
- Insert a floppy diskette in the diskette drive of the BIM;
- Enter: **`backup -c`**
  This copies the PE, LL, MIS, journal and Config -file to the diskette.

4.2.2. Making a Fire Copy for a CPS or CPU-ME/MT System

- **CPS systems**
  The fire copy can be used to start the unit(s) again if the contents of the Solid State Backup Device (BMS boards) are erased. Take care that all MIS files and the journal file form a consistent set by checking the SIN. Verify the SIN when in doubt:
  - **`DIRECT:LBUxx:LMxx01.POM./,U;`** gives the SIN of the MIS file, repeat this for all units (xx = unit number);
  - **`DIRECT:CBU:JOURNL.POM./,U;`** gives the SIN of the journal file;

  If you have a consistent set, copy all recent MIS files to a PC. This can be done using the DISKMATE software on the PC. DISKMATE can be used as Disk Emulator or as Disk

Maintainer. See the Maintenance PC Users Guide.
If the PC is set up for use with Disk Emulator:

- **`CPYFIL:LBUxx:LMxx01.POM./,PCxx:;`**
  results in a copy to the PCxx, repeat this for all units (xx = unit number);
- Copy the files on the PC to floppy disks, label them with the date and SIN and store them in a safe place.

If the PC is set up for use with Disk Maintainer:

- Select the Back up menu on the PC connected to the CIS(-RM) in the main unit and back up the latest version of the JOURNL.POM and LMxx01.POM file;
- For a multi unit system: Go to the PCs connected to the CIS(-RM) in the other units, select the Back up menu and back up the latest version of the LMxx01.POM. Repeat this for all remaining units.
- Copy the files on the PC(s) to floppy disks, label them with the date and SIN and store them in a safe place.

- **CPU-ME/MT systems**

The fire copy can be used to start the unit again if the contents of the Internal Backup Unit (part of the FEPROM on the CPU-ME/MT board) are erased.
To copy files, the DISKMATE software on the PC may be used. DISKMATE can be used as Disk Emulator or as Disk Maintainer. See the Maintenance PC Users Guide.
If the PC is set up for use with Disk Emulator:

- **`CPYFIL:IBUxx:LMxx01.POM./,LBUxx:;`**
  results in a copy of the file to PCxx;
- Copy the file on the PC to a floppy disk, label it with the date and store it in a safe place.

If the PC is set up for use with Disk Maintainer:

- Select the Back up menu on the PC connected to the CPU and back-up the latest version of the LMxx01.POM file;
- Copy the file on the PC(s) to floppy disks, label it with the date and store it in a safe place.

5. BOUNDARIES, OPTIONS AND TIMERS

In previous releases the value of boundaries, timers and options could be changed with the command EXSUBC. As from SSW 805.25 three commands have been introduced to change the value of timers (CHTIME) and options (CHOPTI). They require a lower authorisation class (08) than EXSUBC.
As from SSW 805.27 the command CHBOUN has been introduced to change 'safe boundaries'.
When the above mentioned commands are executed, first a warning is given and the user is asked for a confirmation (this is done because it is not checked if the changes damage the system). On negative reply, the execution of the command is aborted. Before the command ends, a message is given that a MIS-file should be made to make the change(s) permanent.

Note: *The actual values of boundaries, options and timers can be displayed by OM command DIMDAT.*

Change Boundary Value **507 #!**

```
CHBOUN : <INDEX>,<BOUNDARY-VALUE> [,<UNIT>];
```

Index	Index value of the boundary to be modified.
Boundary-value	The new value of this boundary.
Unit	Unit number (1...14) in which the option should be modified. If omitted, the action is executed network wide.

In case of an unsafe boundary the system response is:" Unsafe boundary, change not allowed". It is advised to use the MEMCAL tool to change unsafe boundaries, using the following procedure:

1. Execute OM command GEBUMI to create a MIS file.
2. Execute OM command RTRIEV to create the PR/OR files.
3. Convert the PR file to PC format.
4. Run the MEMCAL tool to change the required unsafe boundaries in the PR file.
5. Safe the file to filename PEuu.TXT.
6. Convert the PEuu.TXT to iS3000 format.
7. Rename ORuuV1.POM to LLuuV1.POM.
8. Load both the PE and LL file to the LBU.
9. Execute OM command STPROJ to reproject the system.

Change Timer Value 497 #!

CHTIME : <INDEX>,<TIME-UNIT>,<TIME-VALUE> [,<UNIT>];

Index	Index value of the option to be modified.
Time-unit	0 = seconds, 1 = minutes.
Time-value	New value of the timer (0...16383)
Unit	Unit number (1...14) in which the option should be modified. If omitted, the action is executed network wide.

Change Option Value 498 #!

CHOPTI : <INDEX>,<TRUE or FALSE> [<UNIT>];

Index	Index value of the timer to be modified.
True or False	0 = False 1 = True.
Unit	Unit number (1...14) in which the timer should be modified. If omitted, the action is executed network wide.

6. CALL FORWARDING

These commands are used to assign, erase and display the call forwarding relations between an originator DNR (or BSP-ID) and a destination number. Depending on the CF-TYPE, the originator should be a BSP-ID or a UNIT:

CF-TYPE	ORIGIN-BSP-ID	UNIT
0, 1, 8	extension BSP-ID	-
2, 3	group DNR (all groups)	-
4, 5	ACD group DNR	-
6,7	-	UNIT

The destination number can be:

- A group or extension DNR;
- A general or individual operator DNR;
- A trunk access code and external number;
- A DPNSS number.

There are 9 types of call forwarding:

- Call forwarding on don't answer (0);
- Call forwarding on busy (1);
  For these types of call forwarding, enter an extension DNR at the place of **<ORIG-BSP-ID>** and leave **<UNIT>** out;
- Call forwarding on absent group member (2), leave **<UNIT>** out;
- Call forwarding on empty group (3);
  For these types of call forwarding, enter a group DNR at the place of **<ORIG-BSP-ID>** and leave **<UNIT>** out.
- Call forwarding on group overflow (4);
- Call forwarding when group in night service (5);
  For these types of call forwarding, enter an ACD group DNR at the place of **<ORIG-BSP-ID>** and leave **<UNIT>** out.
- As from SSW 805.21: call forwarding on not existing DNR (i.e. internal number, but not assigned to a circuit) (6);
- As from SSW 805.21: call forwarding on out of order extension (i.e. an extension which is not in service) (7).
  For these types of call forwarding, leave **<ORIG-BSP-ID>** out and leave **<UNIT>** out in the case of a single unit system.
- As from SSW 805.24: call forwarding on not reachable extension (8).

Change Call Forwarding Relation **127 #!**

CHCALF : <CF-TYPE> [, [<ORIG-BSP-ID>s/r]][,<DEST-NUMBER>][,[<UNIT>]][,<CFDA-TIME>];

<CFDA-TIME> has been added as from SSW 805.28.
If the destination is not entered the call forwarding relation of the originator DNR will be erased.

Display Call Forwarding Relations **128**

DICALF : [<BSP-ID>s/r] [,<UNIT>];

Response:

ORIGINATOR	CF-TYPE	CF-DESTINATION	CFDA-time
ext-dnr	xxxx*)	xxxx	xxx
grp-dnr	xxxx*)	xxxx	xxx

The <UNIT> parameter is only applied to display the CF-types 6 and 7. It may only be omitted in a single unit system. This makes the command layout:
DICALF: [,<UNIT>];
For the CF-types 0 … 5 and 8 the command layout is:
DICALF: <BSP-ID>s/r;
*) When assigned with CHCALF, the text shown is "cf on not reachable destination".
When NOT assigned with CHCALF, the system automatically determines a CFNR destination, depending on other relations of the particular extension. In that case, the text shown can be :
"cfnr don't answer destination"
"cfnr on absent member"
"cfnr to secretary"
"cfnr out of order ext"

7. CAMP ON BUSY

The OM commands for Camp On Busy (COB) are used to assign/change and display the maximum length of the COB queue for a DNR (or BSP-ID). Three COB-QUEUE-TYPES are distinguished:

- No-COB-Queue;
- Short-COB-Queue;
- Long-COB-Queue.

The type of queue is specified by a number in the parameter field COB-QUEUE-TYPE.

Change COB Queue Type Relation **372 #!**

CHCOBD : <BSP-ID>s/r[,<COB-QUEUE-TYPE>];

If the parameter COB-QUEUE-TYPE is omitted, the `Short-COB-Queue' type is chosen as default.

Display COB Queue Type Relation **373**

DICOBD : <BSP-ID>s/r;

Response:

```
DNR-    COB-QUEUE -
BSPT    TYPE
xxxx    xxxx-cob-queue
xxxx    xxxx-cob-queue
xxxx    xxxx-cob-queue
..      .. .. ..
```

8. COMMAND FILE EXECUTION

A command file gives the possibility to execute a series of commands at a pre-determined time, e.g. at night, when there is little traffic. It is also used when a series of commands must be executed regularly, e.g. once a week. This series of commands is contained in a command file, also called a job. All OM commands may be used in a command file.
A command file can be made in two ways:

- It can be made on a PC and transferred to the unit;
- It can be made on a unit with the CREFIL command.

A command file should look like an OM session, i.e. every command should start with the ready indication (<). The session should be terminated with the command **<END;**.
A line in a command file can have 3 meanings:

- It contains an OM command and starts with the ready indication (<), e.g. <DIDEST:0;
- It is a comment line and starts with a backslash and an asterisk (*). It ends with an asterisk and a backslash (*\), e.g. * This is a comment line *\
  This is only possible on a PC. These comment lines will disappear after Converting to SOPHO layout.
- It contains a password or an additional parameter as a response to question from the system, e.g. PASSWORD;

An example of a complete command file is:

```
<CRGRPA:1000,0,1,1001,2400;
1100,1,0;
1101,1,1;
;
<END;
```

8.1. NORMAL COMMAND FILES

Cancel a Batch Job **284**

CANJOB : <JOB>[,<UNIT>];

The indicated job is cancelled completely. This can be a job that is not yet executed or an active job.

Display Command File Execution status **283**

DISJOB : [<JOB>][,<UNIT>];

If the job number is omitted all jobs in the given unit are displayed.
Response:

```
Unit   Job    Status Date          Day    Time   Commandfile spec Log file spec
xx     xx     xxxx   xxxx-xx-xx    +x+    xx:xx                   xxxx:xxxx.xxx
                                                xxxxxx:xxxxxx.xx x.x
                                                x.x
```

The status of a job can be one of the following:

HOLD	:	Job was not active and is suspended.
AFTER	:	Job is waiting for time out.
ACTIVE	:	Job is active.
SUSPEND	:	Job was active and is suspended.
ERROR	:	Error accessing the command file or opening log file.
HOLD-ACTIVE	:	Timer expired during hold state.

Resume Command File Execution **286**

RESJOB : <JOB>[,<UNIT>];

This command is used to resume a job that has been suspended.

Submit Command File **282**

SUBJOB : [<COMMAND-FILE>],[<LOG-FILE>],[<DATE>],[<TIME>], [<UNIT>];

If no command file is specified, the default is used: LBUxx:SUBMIT.COM./
If no log file is specified, the file name of the command file is used, with the extension LOG, e.g. LBUxx:SUBMIT.LOG./
If the date and/or time are not specified the current date and time are used, this means the command file starts immediately. Recommended is to spread the subjobs with an interval of three minutes.
This command will only be accepted if protection levels of the OM terminal are at least NARD = 1131. The authority class and protection levels during the execution of the command file are the session authority class and protection levels of the terminal on which the job is submitted.

If a command file is submitted it is assigned a job number by the system. From this point on the system refers to the job number of the submitted command file.

Suspend Command File Execution **285**

```
SUSJOB : <JOB>[,<UNIT>];
```

This command is used to suspend the execution of a job. It can be resumed later.

8.2. AUTHORITY OVERRULING COMMAND FILES

Submit Authority Overruling Command File **288**

```
EXSJOB : [<COMMAND-FILE>],[<LOG-FILE>],[<DATE>],[<TIME>],
         [<UNIT>];
```

This command is used to submit a special command file. When the special command file is executed the authority class is set to unrestricted.
If no command file is specified, the default is used: LBUxx:SUBMIT.COM./
This command will only be accepted if protection levels of the OM terminal are at least NARD = 1131.

Change Command File into Authority Overruling Command File **287**

```
CHSJOB : [<COMMAND-FILE>];
```

This command is used to change a normal command file into a special command file.

9. DATA FUNCTIONS

These commands are used to maintain and assign Compatibility Values (CVs), Convertors and Cluster identities. CVs and convertors are used to determine whether parties may be connected to each other, Cluster identities are used for DPNSS.

9.1. COMPATIBILITY VALUES AND CONVERTORS

CVs are used for voice parties and data parties:

- With voice parties CVs are used to inhibit a conversation, e.g. in a hotel the kitchen is assigned a different CV as the guests, to make it impossible for the guests to dial the kitchen.
- With data parties CVs are used to check if it is possible for parties to understand each other, e.g. are the baud rates the same?

If two parties have different CVs the following connection allowances are possible:

- The connection is allowed;
- The connection is not allowed;
- The connection is only allowed via a convertor;
- The connection is not possible.

When CVs must be created and assigned use the following procedure:

- For both voice and data:
  - Use CRCVAL to create CVs;
  - Fill in the connection allowance matrix with CHCVCA;
  - Assign CVs to DNRs with CHAGCV (see Chapter "*ANALYSIS GROUP, COMPATIBILITY VALUE AND SERVICE PROFILE*" on page 12);
- For data only, when convertors are necessary:
  - Use CRCTYP to create a convertor type;
  - Use ASCONV to link this convertor to an EHWA;
  - Use ASCVCT to link CVs to the convertor;
  - Use CHCVCA to fill this in in the connection allowance table.

9.1.1. Compatibility Values

Change CV **130 #!**

```
CHCVAL : <CV>,<VOICE/DATA>[,<V24-CIRCUITS>,<SPEED+MODE>,
         <MISCELLANEOUS>[,<GUARD-1+GUARD-2>]];
```

If in the VOICE/DATA parameter V is filled in, the rest of the parameters should be omitted. The old data is overwritten.

Change CV-Pair Connection Allowance Relation **135 #!**

```
CHCVCA : <CV-A>s/r,<CV-B>s/r,<CON-ALLOWANCE>;
```

This command assigns the connection allowance from CV-A to CV-B.

Create CV **129 #!**

```
CRCVAL : <CV>,<VOICE/DATA>[,<V24-CIRCUITS>,<SPEED+MODE>,
         <MISCELLANEOUS>[,<GUARD-1+GUARD-2>]];
```

If in the VOICE/DATA parameter V is filled in, the rest of the parameters should be omitted.

Display CV **132**

```
DICVAL : [<CV>s/r];
```

If no CV is specified all CVs are displayed.
Response:

```
CV     V/D        V24-CIRCUITS/ SPEED MODE      MISCEL-        GUARD-1     GUARD-2
                        OPTION [BAUD]          LANEOUS         [MIN]       [SEC]
```

Display CV Pair-Connection Allowance **136**

```
DICVCA : [<CV-A>s/r],<CON-ALLOWANCE>s/r;
```

If the CV is omitted all relation with the specified connection allowance are displayed.
Response:

```
CV-A    CV-B    CONNECTION-
                ALLOWANCE
xx      xx      xx
```

Erase CV **131 #!**

ERCVAL : <CV>;

All relations with the specified CV are also removed.

9.1.2. Convertors

Assign Convertor to EHWA **143 #!**

ASCONV : <SHELF>,<BRD>s/r,<CRT>s/r,<CONVERTOR-TYPE>;

Assign CV Pair Convertor Type Relation **140 #!**

ASCVCT : <CV-A>s/r,<CV-B>s/r,<CONVERTOR-TYPE>;

This command can only be used if convertor type is created first. Use the CRCTYP command to do this.

Create Convertor Type **137 #!**

CRCTYP: :<CONVERTOR-TYPE>s/r;

Display Convertor EHWA **142**

DICONV : [<CONVERTOR-TYPE>s/r][,<UNIT>s/r];

If no unit number is specified, the data for all units will be displayed.
Response:

```
SHELF   BRD     CRT CONVERTOR-TYPE
xx      xx      xx
```

Display Convertor Type **139**

DICTYP : ;

Response:

```
CONVERTOR TYPES
CREATED
```

Display CV Pair Convertor Type **141**

DICVCT : [<CONVERTOR-TYPE>s/r];

Response:

```
CV-A   CV-B   CONVERTOR
              TYPE
```

Erase Convertor EHWA **144 #!**

ERCONV : <SHELF>,<BRD>s/r,<CRT>s/r;

The relation is only removed if the service condition of the circuit is “not installed”.

Erase Convertor Type **138 #!**

ERCTYP : <CONVERTOR-TYPE>s/r;

A convertor type can only be removed if no MLU circuit convertor relation with a convertor of the specified type exists in the system.

9.2. REMARKS ABOUT DOWNLOADING

It is possible to download a SOPHO-SET and LAM with data. This data can be:

- Data Terminal Equipment (DTE) data. This comprises V.24 circuit data, speed etc.
- Function key data. This data is needed to program the function keys.

- **DTE Data**
  DTE data is downloaded when:
  - The checksums of the SOPHO-SET or LAM is incorrect. SOPHO-SET or LAM without power for a long time.

- When a new compatibility value is assigned to the BSP-ID (or DNR) of the data ports of SOPHO-SET or LAM.
- When a user asks for new data with the download data request. See the relevant SOPHO-SET documentation.
- When the download command is issued on the OM terminal. See chapter Download.

• **Function Key Data**

Function key data is downloaded to extensions with Facility Class Mark 12:

- The checksums of the SOPHO-SET is incorrect. SOPHO-SET without power for a long time.
- When a user asks for new data with the download data request.
- When the download command is issued on the OM terminal. See chapter Download.

A function key can have one of four priorities:

0. No data assigned to the function key;
1. Data assigned to function key by ISPBX low priority;
2. Data assigned to function key by user;
3. Data assigned to function key by ISPBX high priority.

When downloading function key data, data with a higher priority overwrites data with a lower priority. Data on function keys, defined by the user, not used by the ISPBX stay intact during downloading. For the user it is possible to overwrite function key data downloaded by ISPBX if this data has priority 1. It is not possible for the user tho overwrite data which has priority 3.

See chapter Function Keys and Menus for more information about defining function key data.

9.3. SELECTIVE ANSWERING DNR

The 'selective answering DNR' facility has been designed for special projects only.
It allows to selectively answer a call from the waiting queue. This queue is displayed on a screen.

Assign selective answering DNR **428**

```
ASSADN : <DNR>s/r;
```

Display selective answering DNR **430**

```
DISADN : [<UNIT>s/r];
```

```
ERSADN : <DNR>s/r;
```

10. DATE, TIME AND EXCHANGE-ID

Display Date and Time 112

DIDATI : DIDATI: ;

Response:

```
YEAR-MONTH-DAY +DAY-OF-WEEK+  HOURS:MINUTES
```

When 0000-01-01 +1+ 00:00 is displayed the time is not set with SEDATI or the Clock Generator Boards (CSG/SNS) are not in service.

Display Exchange Identity (and Loaded Sets) 113

DIEXID: :<UNIT>[,<REPORT-FORM>[,<SET-TYPE>]];

Response (if parameters REPORT-FORM and SET-TYPE are omitted):

```
UNIT    CM        PACKAGE-ID     LEV   COUNTR     EXCHANGE#    ADMIN#  USER#   12NC
                                       Y#
xx      xx          xxxx         x     xxx         xxxx        xxxx    xxxx   xxxxxx
                                                                              xx
```

When the unit is not known, `DIEXID:0;` can be entered: 0 means 'own unit'.
REPORT-FORM omitted is the same as REPORT-FORM =0 (brief report).
In this response CM is always 1 (indicates where the CM is located) and the PACKAGE-ID is y805.xx, in which xx represents the version number of the package and y is 0 for CPU-ME/MT, 7 for CPS and 9 for CCS systems. LEV indicates the level of the package: 0 means no patches. Each patch gives the following letter of the alphabet, starting with A.
COUNTRY# indicates the country number:

Table 10-1 Country Codes.

COUNTRY	COUNTRY#	COUNTRY	COUNTRY#
Austria	720	France	380
Australia	150	Great Britain	420
Belgium	170	Italy	520
Brazil	200	Luxembourg	630
Switzerland	980	Netherlands	670
Germany	320	Portugal	790
Denmark	300	Sweden	970
Spain	850	South Africa	960
Hungary	450	Rest of the World	000
Far East	022		

Then the exchange number, administrative number, the user number (not used) and the 12 NC are displayed.
If a verbose report (REPORT-FORM = 1) is requested, the following output also appears:

```
FILE EXT ACT      12NC       PACK-ID L   FILE EXT ACT      12NC       PACK-ID L
xxxxxx.xxx x    xxxx-xxx-     xxx.xx x    xxxxxx.xxx x    xxxx-xxx-     xxxx.xx x
                  xxxxx                                     xxxxx
```

This gives the names of all files, their extension, if they are active or not, the package-ID and the level. If the set type is omitted, all sets will be displayed.
If information about the type of exchange is required, enter REPORT-FORM = 2. The following output appears:

```
UNIT    EXCHANGE-TYPE
xx          xxxxxx
```

Set Date and Time 111

SEDATI : <YEAR>,<MONTH>,<DAY>,<DAY-OF-WEEK>,<HOURS>,<MINUTES>;

If the date does not match the Gregorian calender the command is aborted and the date and time are not changed. If the Clock Generator Boards (CSG/SNS) are not in service the command will execute without an error, but the date and time will not be set.

Note: *The date and time on feature phones are updated automatically every 24 hours and after the execution of SEDATI.*

11. DIGITAL ALARMS

This command is used to get information about the detector status in the DTUs received by the CM.

Display Digital Alarms **300**

DIDILA : <SHELF>,<BRD>s/r[,[<CRT>s/r][,<MODE>]];

The CRT parameter must be omitted for non-ISDN non-basic access boards like the DTU-CA, DTU-PR, DTU-CC, DTU-PH and DTU-PU. The CRT parameter is mandatory for ISDN circuits from DTU-BA, DTU-PH and DTX-I.
The display MODE is only valid for non-ISDN DTU boards. If MODE is omitted the abstract display is given.
Response (abstract):

```
Alarms of resource on position <SHELF>, <BRD> Since <DATE> <DAY-OF-WEEK> <TIME>

                                    Detector Status       Counter
Clock error detected                    On/Off              0
Loss of frame alignment                 On/Off              0
Excessive error rate detected           On/Off              0
Slip detected                           On/Off              0
Signalling handler watchdog alarm       On/Off              0
Loss of multiframe alignment            On/Off              0
Remote alarm detected                   On/Off              0
Remote alarm ts16 detected              On/Off              0
AIS 2 Mbit/s detected                   On/Off              0
AIS 64 kbit/s detected                  On/Off              0
```

Response (full display):

```
Alarms of resource on position <SHELF> , <BRD> Since <DATE> <DAY-OF-WEEK> <TIME>

                                    Detector Status       Counter
Clock error detected                    On/Off              0
Alarm indicated by LTU                  On/Off              0
Loss of frame alignment                 On/Off              0
Excessive error rate detected           On/Off              0
Slip detected                           On/Off              0
Signalling handler watchdog alarm       On/Off              0
Loss of multiframe alignment bit 0      On/Off              0
Loss of multiframe alignment bit 1      On/Off              0
Loss of multiframe alignment bit 2      On/Off              0
Loss of multiframe alignment bit 3      On/Off              0
```

	Detector Status	Counter
Remote alarm detected	On/Off	0
Remote alarm ts16 detected	On/Off	0
AIS 2 Mbit/s detected	On/Off	0
AIS 64 kbit/s detected	On/Off	0

Response (ISDN):

```
Alarms for trunk resource on position <SHELF>, <BRD>,<CRT> Since <DATE> <DAY-OF-
WEEK> <TIME>
```

	Detector Status	Counter
Bit error warning	On/Off	0
Slip warning	On/Off	0
Power overload	On/Off	0
Loss of frame alignment	On/Off	0
Alarm indication signal	On/Off	0
Loss of signal	On/Off	0
RAI	On/Off	0
RAI CRC4	On/Off	0
Excessive bit error	On/Off	0
Excessive slip	On/Off	0
Clock error	On/Off	0
Link failure	On/Off	0

Erase Digital Alarms 368

ERDILA: :<SHELF>,<BRD>s/r[,[<CRT>s/r][,<MODE>]];

12. DISPLAY METERING

Display Metering Results **126**

DIMERE : <MET-TYPE>[,[<BSP-ID>s/r] [,<UNIT>s/r OR <ROUTE>s/r]];

The command will only be accepted if the protection levels are at least 5 for each of the actions New, Append, Read and Delete. The header line states whether the read type is destructive or non-destructive. This is a system option.
If only MET-TYPE is entered, the system will ask the following:

- MET-TYPE 0, Metering on BSP-ID.

Additional parameter:
[<BSP-ID>];

- MET-TYPE 1, Night Extensions.

Additional parameter:
[<UNIT>];

- MET-TYPE 2, Route.

Additional parameter:
[<ROUTE>];
If the question is answered with a single semi-colon, all results of the given metering type are displayed.
Response:

```
DNR-BSPT/NE-UNIT/ROUTE (Dep. on MET.- (NON) DCESTRUCTIVE READ
TYPE) METERING COUNTS                 TYPE
                 xx                                 xx
```

13. DNR/BSP-ID - LINE CIRCUIT/CENTRAL MODULE RELATIONS

This group of OM commands is used to display and change the relation between DNRs/BSP-IDs and line circuits/central module.

Change Extension DNR/BSP-ID to Line Circuit/Central Module Relation 99 #!

```
CHDNRC : <BSP-ID>s/r[,<SHELF>,[<BRD>],<CRT> [,<ACTION-
         INDICATOR>]];
```

Depending on the parameter combination and whether the BSP-ID is entered, an assign, delete or move action is executed:

- ASSIGN: assign a DNR, create hardware-less DNR or make a DNR hardware-less. BSP-ID, SHELF, BRD, CRT and [ACTION-INDICATOR] must be entered. If the BSP-ID only consists of a DNR and the DNR is not yet known in the system then the default BSPT will be used. For the hardware-less DNR, the Central Module-EHWA must be given.
- DELETE (hardware-less) DNR/BSP-IDs.
  Enter a BSP-ID only. If only the DNR part of the BSP-ID is entered, then all BSP-IDs with that DNR are deleted.
- MOVE (hardware-less) DNR to a line circuit EHWA.
  DNR, SHELF, [BRD], CRT, [ACTION-INDICATOR] must be entered. Ony the DNR part of the BSP-ID is entered, for always all BSP-IDs with that DNR are moved to the entered hardware address. For the hardware-less DNR, the Central Module-EHWA must be given.
  ACTION-INDICATOR (P[Q]).
  P determines whether a multi-unit move must still be executed if the destination unit has not enough room for the IABD list or for the name of a DNR (CNND, as from SSW 805.28). If this bit is set then a multi-unit move might erase the IABD list and/or the database contents associated with a DNR
  Q (added as from SSW 805.28) is the ORDER-INDICATOR. It indicates whether the BSP-ID must be inserted before or after an existing BSP.

Change Operator DNR to Line Circuit Relation 100 #!

```
CHOPDC : <DNR>s/r[,<SHELF>,<BRD>,<CRT>,<OPERATOR-TYPE>];
```

If the hardware address is omitted, the relation is erased. If the operator DNR is to be moved to another line circuit, the old relation must be erased first.

Display Circuit to DNR/BSP-ID Relation **101**

DICDNR : <SHELF>,[<BRD>s/r],<CRT>s/r;

To reduce processing time it is advised in case of a range of parameters for the circuit number to choose the upper value not higher than the actual highest circuit number on a board in the system.
For the hardware-less DNR, the Central Module-EHWA must be given.

```
 SHELF   BRD    CRT       TYPE       DNR-  Usable
                                     BSPT
 2014     -      0    Hardware-less 2014-   No
                                      95
```

Response example:

Display DNR to Line Circuit/Central Module Relation **102**

DIDNRC : <BSP-ID>s/r;

Response example:

```
  DNR   SHELF   BRD    CRT       TYPE
 1234   2011    11      2         LC
 1245   2014     -      0     Hardware-
                              less
```

Note: *Active desksharing DNRs are displayed as `normal' fixed DNRs; inactive desksharing DNRs are hardware-less DNRs.*

Change Basic DNR/BSP **35 #!**

CHBDNR : <BSP-ID>[,<UNIT>];

If UNIT is specified: create the Basic DNR or add a new BSP-id to the Basic DNR of the specified unit. Each unit must have a different Basic DNR projected. If the DNR exists already for the specified unit, the DNR-part of the new BSP-ID must be the existing DNR of that unit.
If UNIT is not specified: delete Basic DNR. If only the DNR-part of the BSP-ID is entered, then all BSP-IDs with the Basic DNR are deleted.

DIBDNR : [<UNIT>];

Display the Basic DNR of the specified unit. If no unit is specified the Basic BSPs of all units are shown.
Response:

```
 DNR-   UNIT
 BSPT
XXXX-    XX
  XX
```

14. DOWNLOAD

Download comprises two subjects:

- The downloading of extensions (SOPHO-SETs/LAMs);
- The downloading of packages to peripheral boards.

14.1. EXTENSION DOWNLOAD

This command requests the download of DTE data to a DNR related to a LAM or the download of DTE data and function key data to a DNR, related to a SOPHO-SET. See also section “Remarks about Downloading” in chapter “Data Functions”.

Request Download for a BSP-ID **296 #!**

DOWNLD : <BSP-ID>s/r;

An ALC or ISDN extension can not be downloaded, although this command returns: EXECUTED in such a case.
It is not allowed to enter the all-BSPT (99) as BSPT part.

14.2. PERIPHERAL BOARD DOWNLOAD

Install Software Package Relation **316 #!**

INSTPK : [<NEW-PACK>],[<OLD-PACK>][,<BRD-STYP>];

This command establishes the relation between a board (sub) type and a software package.

- Install a new package relation :
  INSTPK:<NEW-PACK>[,,<BRD-STYPE>];
- Replace an old package relation by a new :
  INSTPK:<NEW-PACK>,<OLD-PACK>[,<BRD-STYPE>];
- Delete a package relation :
  INSTPK:,<OLD-PACK>[,<BRD-STYPE>];

Display Software Package 412

DIPACK : [<SHELF>,<BRD>s/r];

When SHELF and BOARD are omitted, displayed is the package that should be present at a board type with a specific board sub type:

```
 TYPE  SUBTYP  PACKAGE-ID
         E
  XX     XX    XXXX.XX.XX
```

When SHELF and BOARD are not omitted, displayed is the package that should be present (PACKAGE-ID) and the package that is actually present at the board (LOADED-PACKAGE):

```
SHELF   BRD    CRT    TYPE  SUBTYP  PACKAGE-ID     LOADED-
                                E                  PACKAGE
XXXX    XX     XX     XX     XX     XXXX.XX.XX    XXXX.XX.XX
```

Delete Software Package 410 #!

DEPACK : <SHELF>,<BRD>s/r[,<WAIT>];

This can only be executed for a board which is out of service.
WAIT: wait for completion of the delete operation (yes = 1, no = 0).

15. DPNSS CLUSTER IDENTITY / ASSISTANCE POINT / FREE NUMBERING

15.1. CLUSTER IDENTITY

These commands are used to assign and display the DPNSS identity and/or assistance point of a system. The identity is called the cluster identity. This is the number, by which the SOPHO system can be reached by other exchanges. The assistance point defines where operator assistance should be given.

Change Cluster Identity **320 #!**

```
CHCLID : [[<CLUSTER-ID>] [,<ASSISTANCE-POINT> [,<LOCAL-
         OPERATOR-MARK]]];
```

If the assistance point is omitted, source assistance is selected.
If the Cluster ID and the assistance point are omitted, it is cleared.
If the local operator mark is omitted, value 0 will be assumed.

Display Cluster Identity **321**

```
DICLID : ;
```

Response:

```
CLUSTER-ID    Assistance point     Local
    xx              xxxx             xx
```

Note: *Any assistance point and local operator mark assigned to a compatibility value by CHCVAP overrules those assigned by CHCLID. Therefore, first check the settings of the compatibility value by DICVAP.*

15.2. ASSISTANCE POINT

Change CV related Assistance Point and Local Operator Mark **452 #!**

```
CHCVAP : <CV>[,<ASSISTANCE-POINT> [,<LOCAL-OPERATOR-MARK>]];
```

This command assigns or removes the assistance point related to the entered CV. Also the local operator mark related to this assistance point can be assigned.

If only the CV parameter is specified, the assistance-point will be deleted.

Display CV related Assistance Point and Local Operator Mark **453**

DICVAP : <CV>s/r];

This command displays the compatibility value's assistance point and local operator indication. If no CV is specified, the assistance-point and local-operator-mark of all CVs are displayed.
Response:

```
CV    ASSISTANCE-    LOCAL-OPERATOR-MARK
         POINT
xx    xxxxxxxxxxxx          Yes
xx                           No
```

15.3. FREE NUMBERING

Assign/Change the Network Location of a Free Number **450 #**

CHFDNR : [<FDNR>][,<FN-LOC-1>[,<FN-LOC-2>]];

The following parameter combinations are allowed :

- Assign or Change the network location of the specified Free Number :
  `CHFDNR: <FDNR>,<FN-LOC-1>;`
- Change the network location of all Free Numbers with FN-LOC-1 to FN-LOC-2 :
  `CHFDNR: ,<FN-LOC-1>,<FN-LOC-2>;`
- Remove specified Free Number :
  `CHFDNR: <FDNR>;`
- Remove all network locations of FN-LOC-1 (a confirmation request (yes/no) is given to prevent the user accidentally deleting all FDNRs related to a given FN-LOC-1) :
  `CHFDNR: ,<FN-LOC-1>;`
- Remove all Free Numbers :
  `CHFDNR: ;`

DIFDNR : <FDNR>][,<FN-LOC>];

The following parameter combinations are allowed :

- Display all Free Numbers with their network location :
  `DIFDNR: ;`
- Display the network location of the specified Free Number and the network location of the Free Numbers that start with the specified Free Number :
  `DIFDNR: <FDNR>;`
- Display all Free Numbers with the specified Network Location :
  `DIFDNR: ,<FN-LOC>;`

Response:

```
FREE NUMBER          NETWORK LOCATION
1234                 5678
```

16. EXECUTIVE SECRETARY GROUPS

16.1. NORMAL EXECUTIVE/SECRETARY GROUPS

Assign Executive Secretary Relation to Pool **146 #!**

```
ASEXSE : <EXEC/SECR-BSP-ID>,[<EXEC-BSP-ID>],[<EXEC-RANK>],
         <SECR-BSP-ID>[,[<SECR-RANK>][,<EXEC-LINE-POS>]];
```

This command is used to add executives and secretaries to an existing pool, created with the CREXSE command. If only a secretary is added, the EXEC-BSP-ID and EXEC-RANK must be omitted. If an executive is added the SECR-BSP-ID will be the preferred SECR-BSP-ID and may never be omitted. SECR-RANK may be omitted if it is a single secretary pool.
The EXEC-LINE-POS is only allowed if the EXEC-BSP-ID is not empty and if the EXEC-BSP-ID and the SECR-BSP-ID are located in the same unit.

Create Executive Secretary Pool **145 #!**

```
CREXSE : <TYPE-CODE>,<EXEC-BSP-ID>,[<EXEC-RANK>], <SECR-BSP-
         ID>[,[<SECR-RANK>][,<EXEC-LINE-POS>]];
```

This command is used to create a pool, assign general pool information to it and to enter the first executive secretary relation to it. The executive BSP-ID may not be already in use as an operator or group-DNR or a secretary BSP-ID. The same applies to the secretary BSP-ID. The EXEC-RANK and SECR-RANK may be omitted if there is only one executive and one secretary in the pool.
The EXEC-LINE-POS is only allowed if the EXEC-BSP-ID and the SECR-BSP-ID are located in the same unit.

Display One or More Executive Secretary Pools **148**

```
DIEXSE : [<EXEC/SECR-BSP-ID>s][,<UNIT>s/r];
```

Response:

```
 TYPE CODE          EXECUTIVE                SECRETARY
    PQRSTU  DNR-    RANK  EXEC-LINE-POS   DNR-BSPT       RANK
            BSPT
xxxxxx     xxxxxx   xx        xx          xxxxxx          xx
```

Erase an Executive Secretary Pool **147 #!**

EREXSE : <EXEC/SECR-BSP-ID>s;

If the message "Inconsistent executive-secretary pool data" is displayed, the command should be executed again.

16.2. ENHANCED EXECUTIVE/SECRETARY GROUPS

The commands for enhanced executive/secretary groups create command files. These command files will have to be offered by the user to the system in order to create or erase the enhanced executive/secretary groups.
See chapter: Command File Execution.

Create Command File to Create Executive/Secretary Group **251 #!**

CRESGR : <GROUP-DNR>[,<GROUP-PROPS>];

The properties MUST indicate a non-ACD group with group display. If this parameter is omitted value "9" will be used.
Switch allowance for all members (yes/no) :**YES/NO;**
Line position status prevails extension status (yes/no) :**YES/NO;**
Rerouting after transfer prohibited (yes/no) :**YES/NO;**
Hold tone after transfer (yes/no) :**YES/NO;**
LED based status monitoring (yes/no) :**YES/NO;**
Inhibit diversion for member - member calls (yes/no) :**YES/NO;**
Unrestricted call pick-up allowed (yes/no) :**YES/NO;**
Call forwarding on busy executive to secretary (yes/no) :**YES/NO;**
Secretary allowed to switch absent (yes/no) :**YES/NO;**
Busy indication when executive and secretary busy (yes/no) :**YES/NO;**
Common park positions (yes/no) :**YES/NO;**
Line position for executives (yes/no) :**YES/NO;**
Line position for secretaries (yes/no) :**YES/NO;**
Private park positions for executives (yes/no) :**YES/NO;**
Executive line position for executives (yes/no) :**YES/NO;**
Executive BSP-ID X:**[<BSP-ID>];**
(No BSP-ID means last executive).
Preferred Secretary BSP-ID X:**[<BSP-ID>];**
(No BSP-ID means last secretary).
Non preferred Secretary BSP-ID:**[<BSP-ID>];**
(No BSP-ID means last secretary).

Command File name:**[<COMMAND-FILE>];**
If the name of the command file is omitted, file name: LBUxx:CRESGR.COM./ is used, unless it already exists.

Display Executive - Secretary Group 302

DIESGR : [<GROUP-DNR>];

When the GROUP-DNR is omitted, all groups in the system are displayed.
Response:

```
 PROP   GROUP   PARK   EXT-     CF-O-BUSY    SECR-  BUSY-  EXE-  MULT-  MULT-
                       PROP                   SW     B-I    PICI   EX     SE
  xx      xx     xx   xxxxxx      xxx        xxx    xxx    xxx    xxx    xxx
                        x
MEMBER  RANK  SW-ALL  TYPE   RANK   LINE-  PARK-  EXEC-  MENU   PRE-   FM-ACT
                              POS    POS    LP            SECR
xxxxxx   xx     xxx   xxxx    x     xxx    xxx    xxx     xx   xxxxxx  xxx
  xx                                                             xx
```

Command DIPLPO displays the park/line position status. See also chapter Group Arrangements.

Create Command File to Erase Executive/Secretary Group 301 #!

ERESGR : <GROUP-DNR>;

Additional parameters:
Command File name:**[<COMMAND-FILE>];**
If the name of the command file is omitted, file name: LBUxx:ERESGR.COM./ is used.

Create Command File to Initiate Certain Function Key Menus 306 #!

INESGR : ;

Creates a command file to initiate standard menus (last 6 menus in the system) for executives and secretaries.
Additional parameters:
Enter short access code:**<NUMBER>;**
Command File name:**[<COMMAND-FILE>];**
If the name of the command file is omitted, file name: LBUxx:INESGR.COM./ is used, unless it already exists.

17. FACILITY CLASS MARKS

Facility class marks are related to extensions. They are used in two ways:

- As an indication to the system, to which facilities an extension user is entitled;
- To indicate the characteristics of an extension, e.g. SOPHO-SET or Voice Mail Server.

Each OM terminal has a restriction level, indicating which facility class marks may be changed. This restriction level of an OM terminal can be changed. See chapter System Security.
Mark that some facility class marks (FCMs) are marked Read Only in appendix B. This means that they cannot be assigned or deleted with ASFACM and ERFACM, but have specific commands to enter or delete them. An example of this is the facility class mark Hot Line, which must be assigned with the command for Hot line.

17.1. FACILITY CLASS MARKS FOR EXTENSIONS

These commands make it possible to assign, erase and display the facility class mark of specific extensions and to display the summary of the facility class marks used in the system.

Assign Facility Class Mark **20 #!**

ASFACM : <FCM>s,<BSP-ID>s/r;

Display Facility Class Mark **22**

DIFACM : <BSP-ID>s/r;

Response:

```
BSP-ID  FACILITY CLASS MARKS
xxxxxx  xx
        xxxxxxxxxxxxxxxxxxxx
```

Display Facility Class Mark Summary **23**

DIFCSU : <FCM>[,<UNIT>];

If the UNIT is omitted, the command is performed system wide.
Response:

```
VOICE-PORTS     DATA-PORTS       GROUPS
#SET   #RESET   #SET   #RESET   #SET   #RESET
 xx      xx      xx      xx      xx      xx
```

These have the following meaning:

VOICE-PORTS	#SET	Number of voice extensions who have the FCM assigned.
	#RESET	Number of voice extensions who don't have the FCM.
DATA-PORTS	#SET	Number of data extensions who have this FCM assigned.
	#RESET	Number of data extensions who don't have this FCM.
GROUPS	#SET	Number of group arrangements who have this FCM.
	#RESET	Number of group arrangements who don't have this FCM.

Erase Facility Class Mark **21 #!**

ERFACM : <FCM>s,<BSP-ID>s/r;

17.2. DEFAULT FACILITY CLASS MARKS

These commands are used to change and display the default facility class marks, these are facility class marks that are automatically assigned to new extensions. Note that changing the default FCMs will not affect existing extensions.

Change Default Facility Class Mark Set for Extensions **18 #!**

CHDFCM : <FCM>s[,<ADD-OR-DELETE>];

If the ADD-OR-DELETE parameter is omitted, the facility mark(s) will be deleted from the default set. See parameter FCM in Appendix "*ERROR MESSAGES*" on page 206 to determine which FCMs can be assigned as default, they are marked with D.

WARNING: THIS ACTION IS EXECUTED IN ALL THE UNITS OF A SYSTEM.

Display Default Facility Class Mark Set for Extensions **19**

DIDFCM : ;

Response:

```
DEFAULT FACILITY CLASS MARKS
xx
```

18. FACILITY TIMING

Assign Facility Timing Service **224 #!**

```
ASFATI : <FACILITY>s/r,<ON-TIME>,<OFF-TIME>,
         <CYCLIC>[,[<SEQUENCE-TABLE>][,<UNIT>]];
```

If the TRFC facility class (0) is selected for FACILITY, the time when the unit switches from day traffic class to night traffic class and vice versa is set.
Omit SEQUENCE-TABLE.
If the SAS facility class (1) is selected for FACILITY, the signalling of SAS alarms can be specified to occur at a pre-defined time.
Omit SEQUENCE-TABLE.
If Least Cost Routing and Private Virtual Networking (2) is selected for FACILITY, the active SEQUENCE-TABLE must be entered.

Delete Facility Timing **225 #!**

```
DEFATI : <FACILITY>s/r[,[<ON-TIME>],[<OFF-TIME>] [,[<SEQUENCE-
         TABLE>],[<UNIT>]]];
```

If both ON-TIME and OFF-TIME are omitted all programmed intervals are deleted.

Display Facility Timing Service **223**

```
DIFATI : <FACILITY>s/r[,[<SEQUENCE-TABLE>][,<UNIT>]];
```

Parameter SEQUENCE-TABLE must only be given when FACILITY=2 (Least Cost Routing and Private Virtual Networking)
Response:

```
UNIT   ON-     OFF-    CYCLIC ON-TIME-EXP   OFF-TIME-EXP  SEQUENCE-
       TIME    TIME                                       TABLE
```

19. FAULT REPORTS

This chapter contains the commands dealing with fault reports. These are commands concerning alarm buffers, history buffers and alarm routing.
In all commands if the unit number is omitted the command is performed system wide (advised).
Fault reports (all display commands in this chapter) have the following layout:

```
CODE  TYPE  SHELF  BRD  CRT  OCC  DATE  TIME  QLF  ADD.  INFO
```

CODE gives the error code. See the Maintenance Manual for more information.
TYPE stands for RESOURCE TYPE. See Appendix "*ERROR MESSAGES*" on page 206.
SHELF, BRD and CRT give an indication (if applicable) of the hardware address where the fault occurred.
OCC, DATE and TIME give the number of occurences of the error and the date and time of the first occurence.
QLF stands for qualifier. Look up the qualifier in the Maintenance Manual.
ADD. INFO stands for additional information and gives two numbers. Refer to PAR1 and PAR2 in the Maintenance Manual for the meaning of these numbers.

19.1. ALARM BUFFERS

Clear Alarm Buffers **52**

```
CLALRM : [<UNIT>s/r];
```

Alarms must have been read out before they can be cleared.

Note: *Clearing an alarm does not clear the cause of the alarm.*

Display Blocked Alarms **46**

```
DIBLCK : [<UNIT>s/r];
```

Display Major Alarms **50**

```
DIMAJA : [<UNIT>s/r];
```

Display Minor Alarms **49**

```
DIMINA : [<UNIT>s/r];
```

Display Silent Alarms **48**

```
DISILA : [<UNIT>s/r];
```

Switch Alarm Expansion Option Off or On **443**

```
SWALEX : [<OFF-ON>];
```

With this command the alarm code, qualifier and resource type can be expanded with explanatory text (when executing the commands DIHIBU, DIMAJA, DIMINA, DISILA and DIBLCK).

Note: *This command does not work on OM terminals of CPS systems.*

19.2. HISTORY BUFFERS

Display History Buffer **47**

```
DIHIBU : <REPORT-TYPE>s/r[,<UNIT>s/r];
```

19.3. ALARM ROUTING

Confirm Alarm Signalling at Distance **389**

```
CALSIG : ;
```

The Signalling at Distance (SAD) alarms can only be confirmed if the current alarm destination is SAD. This command is used to confirm alarms on a Remote Maintenance Centre.
Response:

```
              IF ALARMS ARE NOT CONFIRMED:
ALARMS        ROUTE-TYPE      ALARMS DESTINATION
CONFIRMED
xxxxx             xxxxxx             xxxx
```

Reroute Alarm signalling **51**

REROUT : <ROUTE-TYPE>[,<UNIT>s/r];

A unit number has to be given only if the route type “Isolate unit” is entered. With the other route types it is not allowed to enter a UNIT.

20. FILE MANIPULATION

If in a command the file specification <FILE> is used it consists of the following items: <LDN>:<FILE-NAME>.<EXTENSION>.<GENERATION>. If the generation is omitted the latest version will be used.
In the DIRECT and the CPYFIL commands it is possible to specify wildcards in some file specifications.
Wildcard characters are:

- * replaces the whole file-name or the file extension;
- % replaces a single character, it is possible to use more than one %.

Copy File **90**

CPYFIL : <SOURCE-FILE>,<DESTINATION-FILE>;

If in the destination file the file-name and/or extension are omitted, these will be the same as in the source file.
Omit the generation number of the destination file as this is administrated by the system autonomously. Any entered generation number for the destination will be ignored.

Create File **94**

CREFIL : <FILE>;

Only / (latest) may be used for the generation. Protection levels of the OM terminal should be at least 3 for each of the actions New, Append, Read and Delete.
This command is only used to create command files. See "*COMMAND FILE EXECUTION*" on page 25. All the commands in the command file should look the same as on the screen, so they must start with the ready indication <. If a command asks for additional parameters or passwords these can also be given in the command file, but should **not** be preceeded with a <. The last command of the command file should be **<END;** Type **EXIT;** to close the command file. It is not advised to create other types of files, used by the system itself.
Example:
We want to create a command file to read out the date and time and create a group. System responses are shown in small letters.

```
CREFIL:LBU01:MYFILE.COM./;
LINE 0001  :  <DIDATI:;
LINE 0002  :  <CRGRPA:1234,12,,1401;
LINE 0003  :  1403,1,0;
```

```
LINE 0004  :  ;
LINE 0005  :  <END;
LINE 0006  :  EXIT;
```

Delete File **91**

```
DELFIL : <LDN>:<FILE-NAME>.<EXTENSION>.<GENERATION>;
```

Note that the protection levels on the OM terminal should be equal to or more than the protection levels of the file to be deleted. Only / (latest) or 0 (zero = oldest) may be used for the generation.

Display List of Files on a Logical Device **92**

```
DIRECT : <LDN>:[<FILE-NAME>[.<EXTENSION>[.<GENERATION>]]]
         [,<DIRECTORY-TYPE>];
```

If the directory type is omitted, the system directory is given.
Response, depending on directory type (see Appendix "*ERROR MESSAGES*" on page 206 for parameters):

```
System directory:
VOLUME         FILE NAME      NARD CRE-DATE/TIME MOD-DATE/TIME TS         12NC
User directory:
VOLUME         FILE NAME      NAME REFNAM ACI/FLAG DEF CUR
Description directory:
VOLUME         FILE NAME      DESCRIPTION
```

The file name or file extension can be specified using the * as wild card character.
Example:
DIRECT:LBU01:ABC.*;
This lists all files starting with “ABC”.

Purge File **95**

```
PURFIL : <LDN>:[<FILE-NAME>.<EXTENSION>];
```

This command erases all old generations of a file. Only the latest version is unaffected.

Type File **93**

TYPFIL : <FILE>;

If the generation is omitted, the latest version is used. It is not allowed to type binary files or executable files.

Move File **505**

MOVFIL : <SOURCE-FILE>,<DESTINATION-FILE>;

Specification of the **<SOURCE-FILE>:**
<LDN>:<FILENAME>.<EXTENSION>[.<GENERATION>]
Specification of the **<DESTINATION-FILE>:**
<LDN>:[<FILENAME>[.<EXTENSION>[.<GENERATION>]]]
MOVFIL makes a copy from a source file to a destination file and when the action is successful the source file is deleted.
When the source file and the destination file are located on the same BIM (CCS only) a fast copy is performed. For a fast copy, a BIM version 1.4 or higher is required. When an older version of the BIM or CPS or CPU-ME/MT is used a normal copy (and delete) is performed. When the fast copy is performed the time stamp of the destination file will be the same as the time stamp on the source file.

21. FOLLOW ME

The OM commands for Follow-me (FM) are used to assign, erase and display the FM facility or the fixed FM facility. Normal FM destinations can be changed by the extension user, fixed FM destinations cannot be changed by the extension user. The FM originator is a BSP-ID or group DNR (group DNR is not allowed for fixed FM). FM destinations are:

- Extension;
- Group number;
- Individual operator;
- Operator M queue;
- External destination;
- Paging;
- DPNSS.

Change Follow Me Relation **290 #!**

CHFLME : <FM-TYPE>,<ORIG-BSP-ID>s/r[,<DEST-NUMBER>];

If DEST-NUMBER is omitted the relation is erased. Series/Range is only useful if you want to erase Follow-me relations.
For normal Follow-me: If a relation is assigned the command checks if the originator is Follow-me entitled. If necessary assign the facility class mark Follow-me entitled first (ASFACM). The destination should not have facility class mark Follow-me protected. This command will only write to the journal file (#) in case of a fixed FM relation.

Display Follow-me Relations **291**

DIFLME : <ORIG-BSP-ID>s/r;

Response:

```
ORIGINATOR     FIXED-FM-DESTINATION  STATUS FM-DESTINATION
    xxxxxx          xxxxxxxxxxxx       xxxx      xxxxxxxxxxxx
```

The status can be ACTIVE or NON-ACTIVE.

22. FUNCTION KEYS AND MENUS

A set of function key definitions that can be sent to an extension is called a menu. Each menu has a number. This group of commands is used to assign and display the contents of the function keys menus of SOPHO-SETs and the relation of the menus to the BSP-IDs.
The extension automatically gets the function key data belonging to its menu.
Refer to the Customer Engineer Manual of the relevant SOPHO-SET for more details about function keys. See also chapter Data Functions and chapter Download for more explanation about downloading.

22.1. FUNCTION KEYS

Change Function Key Data **260 #!**

```
CHFKDA : <MENU>s/r,<KEY>s/r,<KEY-LEVEL>s/r[,[<KEY-DATA>],
         <PRIO-CODE>[,<LED-CODE>]];
```

Optional response (when KEY-DATA is +0, +1, +2, +* or ++1…++9, or LED-CODE is 09…31, 65, 75 or 79…98):
`Enter soft ring indication:` **`[<SOFT-RING>];`**
If SOFT-RING is omitted, no softring is assigned. If the LED-CODE is omitted, 0 = LED off will be assigned.
If KEY-DATA, PRIO-CODE and LED-CODE are omitted the key is deleted from the menu.

Display Function Key Data **261**

```
DIFKDA : [<MENU>s/r[,<KEY>s/r]];
```

Response:

```
MENU    KEY     KEY-LEVEL      ---KEY-DATA--  PRIO-CODE      LED-    SOFT-RING
                               -                             CODE
  xx      xx          xx           xxxxxx          xx          xx         xx
```

Display Translated Function Key Menu **294**

```
DITFKM : <BSP-ID>s/r[,<KEY>s/r];
```

It is not allowed to give BSPT 99 in the BSP-ID.
Response:

DNR-BSPT	MENU	KEY	KEY-LEVEL	----KEY-DATA---	PRIOCODE	LED-CODE	SOFTRING	XLATED
xxxx	xx	xx	xx	xxxxxx	xx	xx	xx	xx

22.2. MENU-DNR/BSP-ID RELATIONS

Change Menu Number of DNR/BSP **262 #!**

CHMDNR : <DNR/BSP-ID>s/r[,<MENU>];

If the MENU is omitted the relation is erased.

Display ALL BSP-IDs Belonging to a Menu Number **396**

DIDNRM : [<MENU>s/r][,<UNIT>];

When the unit number is omitted the command is executed systemwide.
When the menu number is omitted all BSP-IDs of all menus are displayed.
Response:

MENU	DNR-BSPT
xx	xx

Display Menu Number of DNR/BSP **263**

DIMDNR : <DNR/BSP-ID>s/r;

Response:

DNR-BSPT	MENU
xx	xx

23. GENERAL CANCEL CODE

The General Cancel Code is used to cancel a number of facilities which are active on an extension. This cancelling is done by dialling a code on the extension.
Data stored in a list controls which facilities are cancelled by the General Cancel Code. The data stored consists of the result-ids of the facilities to be cancelled.
Changing a General Cancel Code affects data in all units of the network, which means that the results of the commands ASGECA and ERGECA are system wide.

Assign General Cancel Code **325 #!**

```
ASGECA : <RESULT-ID>s;
```

The result-ids in the list indicate which facilities are deactivated by the General Cancel Code. The following result-ids are allowed: 31, 32, 36, 41, 45, 57, 67, 85, 88 and 99.

Display General Cancel Code **326**

```
DIGECA : ;
```

This command displays the General Cancel Code list.
Response:

```
RESULT-IDS
   xx   xxxxxxxxxxxxxx
```

Erase General Cancel Code **327 #!**

```
ERGECA : <RESULT-ID>s;
```

This command removes result-id(s) from the General Cancel Code list.

24. GROUP ARRANGEMENTS

When making a new group arrangement, the group must first be created with CRGRPA.
With this command the members of the group can also be assigned.
When adding members to a existing group arrangement ASGRPM must be used.
Deleting members from a group can be done with DEGRPM.
Use DIGRPA to find out which group arrangements are existing and use DIGRPM to find out if a DNR is part of a group.

Assign a Member to a Group Arrangement **178 #!**

```
ASGRPM : <GROUP-DNR>,<MEMBER-BSP-ID>,[<SWITCH-ALLOWANCE>],
         <MEMBER-RANK>[,[<LINE-POS>][,<PARK-POS>]];
```

This command is used to add members to an existing group arrangement.
If either the parameters LINE-POS or PARK-POS is omitted, 0 (no) is assumed. The SWITCH-ALLOWANCE may only be omitted for an observation group.

Create Group Arrangement **177 #!**

```
CRGRPA : <GROUP-DNR>,<GROUP-PROPS>[,[<GROUP-DISPLAY>]
         [,[<SUPERVISOR-BSP-ID>][,[<PARK-POS>][,<EXT-
         PROPS>]]]];
```

In case of an ACD group, the system will ask for additional parameters:

```
Enter unit number:[<UNIT>];
Enter ACD group threshold priority [<THRESHOLD-PRIORITY>],
(default=0):[<THRESHOLD-PRIORITY>];
Enter `Full Threshold' [<ACD-THRESHOLD>], (default=100):[<ACD-THRESHOLD>];
Enter `Busy Threshold' [<ACD-THRESHOLD>], (default=100):[<ACD-THRESHOLD>];
Enter `Forced Absent Time' [<ACD-TIME-PERIOD>], (default=infinite):[<ACD-TIME-
PERIOD>];
Enter `After Call Work Time' [<ACD-TIME-PERIOD>], (default=0 sec.):[<ACD-TIME-
PERIOD>];
Enter `Call in Queue Time' [<ACD-TIME-PERIOD>], (default=infinite):[<ACD-TIME-
PERIOD>];
Enter Pause tone [<ANN-PAUSE-TONE>], (default=Silence):[<ANN-PAUSE-TONE>];
Enter CallManager MIS logical device ACDxxy [<LDN>], (default=`none'):[<LDN>];
Enter `Queue Position Algorithm' [<Q-POS-ALGORITHM>], (default=absolute):[<Q-
POS-ALGORITHM>];
```

Enter ACD group `Queue Priority' [<Q-PRIORITY>], (default=lowest):**[<Q-PRIORITY>];**
For all groups the next additional parameters will be asked:
Enter <MEMBER-BSP-ID>,[<SWITCH-ALL>],<RANK>[,[<LINE-POS>][,<PARK-POS>]]:**<MEMBER-BSP-ID>,[<SWITCH-ALL>],<RANK>[,[<LINE-POS>][,<PARK-POS>]];**
The system repeats this question until you enter a single semicolon (**;**).
Example: **2401,1,4,1,1;**
Fill in the BSP-ID, fill in if the member is allowed to switch absent (0 or 1), fill in his rank number within the group (used for short-code dialling within the group). For ACD groups, LINE-POS and PARK-POS must be omitted.
The optional GROUP-DISPLAY should be switched off, unless:

- the LED functionality is required on release 1 SOPHO-SETs,
- Rank number dialling is required.

In case the GROUP-DISPLAY option is used, the amount of extensions that are located in the group arrangements on DTX-I's/DLCU's is limited. Note that with option 102 extensive status messages can be avoided.
For non-ACD groups at least one member must be assigned before the group arrangement will be set up. For ACD groups it is possible to create a `no member' group.
If GROUP-PROPERTY 28 Observation Group is selected, the remaining parameters must be omitted. Also all optional parameters in de additional parameters must be empty.

Change ACD Group Data 425 #!

CHACDD : <GROUP-DNR>;

The system will ask for additional parameters:
Enter ACD group threshold priority [<THRESHOLD-PRIORITY>], (default=0):**[<THRESHOLD-PRIORITY>];**
Enter `Full Threshold' [<ACD-THRESHOLD>], (default=100):**[<ACD-THRESHOLD>];**
Enter `Busy Threshold' [<ACD-THRESHOLD>], (default=100):**[<ACD-THRESHOLD>];**
Enter `Forced Absent Time' [<ACD-TIME-PERIOD>], (default=infinite):**[<ACD-TIME-PERIOD>];**
Enter `After Call Work Time' [<ACD-TIME-PERIOD>], (default=0):**[<ACD-TIME-PERIOD>];**
Enter `Call in Queue time' [<ACD-TIME-PERIOD>], (default=infinite):**[<ACD-TIME-PERIOD>];**
Enter Pause tone [<ANN-PAUSE-TONE>], (default=Silence):**[<ANN-PAUSE-TONE>];**
Enter CallManager MIS logical device ACDxxy [<LDN>], (default=`none'):**[<LDN>];***

Enter `Queue Position Algorithm' [<Q-POS-ALGORITHM>], (default=absolute): **[<Q-POS-ALGORITHM>];**

Enter ACD group `Queue Priority' [<Q-PRIORITY>], (default=lowest): **[<Q-PRIORITY>];**

* An LDN can be deleted by entering `-' as LDN.

Change ACD Group Day/Night Status 448 #!

CHGRDN : <GROUP-DNR>,<DAY/NIGHT>;

Delete a Member from a Group Arrangement 404 #!

DEGRPM : <GROUP-DNR>,<MEMBER-RANK>;

Display One or More Group Arrangements 180

DIGRPA : [<GROUP-DNR>s][,<UNIT>s/r];

Response for an ACD group:

```
PROP      GROUP  T-PR  F-THR   B-THR   FA-TIM ACW-TIM  CIQ-    PAUSE  MAN-DEV
                                                        TIM
XX       XXXXXX    X    XXXX    XXXX      XX      XX     XX      XX   XXXXXXX


PROP    GROUP Q-POS  Q-PR
XX     XXXXXX   X      X


PROP    GROUP  DISPL SUPERV PARK   EXT-PR MEMBER SW-ALL RANK   LP     PP
XX     XXXXXX X      XXXXXX XX       XX   XXXXXX    X   XX     -      -
```

Response for a non-ACD group:

```
PROP    GROUP  DISPL SUPERV PARK   EXT-PR MEMBER SW-ALL RANK   LP     PP
XX     XXXXXX X      XXXXXX XX       XX   XXXXXX    X   XX     XX     XX
```

DIGRPM : <MEMBER-BSP-ID>s;

Response:

```
MEMBER  GROUP   SW-ALL   RANK  LINE-   PARK-
                                POS     POS
xxxxxx  xxxxxx     x       xx   xx      xx
```

Display ACD Group Status 64

DIGRPS : <GROUP-DNR>[,<MEMBER-RANK>];

This command can only be executed on groups with group property Automatic Call Distribution (ACD).
The status of ACD members is shown per 20 rank numbers: member rank 0…19, 10…29, 20…39, 40…59, 60…79 and 80…99. A particular range of members is displayed if the value of MEMBER-RANK falls within that range.
Response (if MEMBER-RANK points to the first range of rank numbers):

```
Statistical Group info:
ACD     AWT
xx      xx


Real-time Member and Group info:
0    1    2    3    4    5    6    7    8    9    11   12   13   14   15   16   17   18   1
.    +    +    -    -    *
```

In the header(s) the rank numbers of the group members are given. Also the following abbreviations are used:

ACD	Average call duration in seconds;
AWT	Average waiting time in seconds;
LGQ	Length of Group-COB-Queue;
NCH	Number of calls handled;
NLC	Number of lost calls;
D	Day/Night service (D/N).

The statistical group information is displayed every 15 minutes, while the real-time information is displayed every time a change occurs in the status of the group members.
The status of the group members can be one of the following:

"."	Idle	
"+"	Busy/	(When applicable, this is followed by the number of calls waiting in the Enquiry individual COB queue, e.g. +1)
"*"	Ringing	
"-"	Absent/After call work	
"="	Not in service	
""	Not assigned	

Display Park/Line Position Status and Service Condition 219

DIPLPO : <GROUP-DNR/BSP-ID>s/r;

Response:

```
DNR-BSPT        BSP-STATUS          PRK1  PRK2   LINE-POS    EXEC-LINE-
                                                               POS
            BSP          EHWA   COB              STAT  COB   STAT  COB
xxxxxx-xx   xxxxx        xxxxx  xx    xx    xx   xx    xx    xx    xx
                         xx
```

The BSP-STATUS is a combination of the BSP status and EHWA status. The following combinations are possible:

BSP	EHWA	MEANING
free	free	BSP might be used for a call.
busy	busy	BSP is busy.
free	busy	BSP is free but EHWA is occupied by other BSP.
free	not avail	BSP is free but EHWA not available (set NIN, OUT etc.)
downloading	-	BSP is busy because terminal is downloading.
claimed	-	BSP is claimed (possible to be moved to other EHWA).
not usable	not avail	BSP is not usable (too many BSPs assigned to one EHWA / Hardwareless DNR).

If the given DNR is a group DNR:
Response:

```
DNR   COB   PRK1  PRK2  PRK3  PRK4  PRK5  PRK6  PRK7  PRK8  PRK9
xxxx  xx    xx    xx    xx    xx    xx    xx    xx    xx    xx
```

ERGRPA : <GROUP-DNR>s;

Note: *The execution of this command can take some time, especially when an assigned device has its V.24 cable not connected (only for ACD-group).*

25. GUIDANCE AND MML VERSION

25.1. GUIDANCE

Ask for a List of all OM Commands (CPS only) **110**

```
GUIDNC : ;
```

The response is a list of all available OM commands. This command is also executed when a question mark (?) is keyed in immediately after the ready indication.

25.2. MML VERSION

Activate MML Version (not for CCS and CPU-ME/MT) **68 #!**

```
ACTMML : ;
```

This command is used to activate new (changed) MML texts systemwide. The MML files are loaded from the LBU. Note that new MML files have to be installed on all LBU's in the system.

Switch MML Session Language (not for CPU-ME/MT) **70**

```
SWMMLV : <OFF-ON>;
```

This command is used to change over from the projected MML version to the stand-by English version. The change over is only valid for the local OM session. If the OFF-ON parameter is 0 the default MML version is required, 1 selects the stand-by version.

26. HARDWARE CONFIGURATION

The commands for hardware configuration are used to change the projected configuration of a system. This can be done to:

- Add resources to the system (boards, modules, links etc.);
- Replace existing boards.

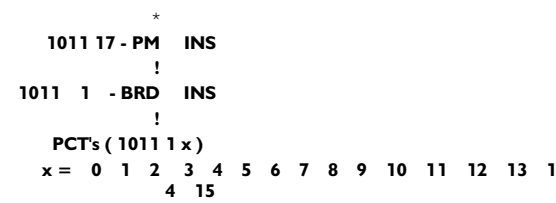
26.1. MODULES, BOARDS AND CIRCUITS

Display Hardware Configuration **407**

DICONF : <SHELF>[,[<BRD>][,<CRT>]];

Response:
A graphical representation of dependencies with directly related resources.
An example of this command for a PM board gives te following:

```
<DICONF:1011,1;
```




```
EXECUTED
```

26.1.1. Shelves

Assign Shelf and Type **69 #!**

ASSHLF : <SHELF>,<SHELF-TYPE>;

If an iS3010/3030 or RPM255 shelf is assigned, the command will ask for the EHWA of the related lower or upper shelf. Because these shelves always are physically located in the same cabinet, they have to be present together.

Delete Shelf **333 #!**

```
DESHLF : <SHELF>;
```

Display Shelf **334**

```
DISHLF : <SHELF>;
```

Response:

```
SHELF INFO :
SHELF   BRD     CRT             TYPE
xxxx    x       xx              xxxxx

MODULES IN SHELF :              BOARD POSITIONS
SHELF   BRD     CRT     TYPE    12345678901234567890123456789
xxxxx   -       xx      xxxx    X XXXXXXX X
```

26.1.2. Boards

Assign Board in Shelf **319 #!**

```
ASBRDS : <SHELF>,<BRD>,<BOARD-TYPE>[-BRD-STYP>][,<SIG-GROUP>
         [,[<HW-TYPE>] [,<AS-PCTS>]]];
```

With this command the following boards can be assigned:

- CM boards (CM-slice, MIC, CII-A, CII-B, CIx, MCI, CIE);
- SM boards (CSG, CSG-CRU, SCU, CRU, CSN-BC, SNS);
- All PM boards;
- IAS board.

BRD-STYP discriminates between boards with the same board type. This allows the OM command “INSTPK” for installing different firmware packages on boards with equal board types.
If AS-PCTS is omitted all circuits of the boards will be automatically assigned. If HW-TYPE is omitted, 255 (no test) is assumed. If the assigned board is a slave board, the command will ask for the EHWA of the corresponding main board:
Additional parameters:
<SHELF>,<BRD>;

For CCS systems: SNS (Switching Network Slice) boards must be assigned in ascending order (SNS-n cannot be assigned before SNS-n-1). When the SNS boards 0 and 1 are assigned, the CSG entry is assigned implicitly. When a CIE board is assigned, the SSU (Switch and Sense Unit) entries and the BIM (Back-up and Interface Module) are assigned implicitly.

Change the Subtype of a Board **315 #!**

CHBDST : <SHELF>,<BRD>s/r[,<BRD-STYP>];

This command is used when the subtype of a board must be entered or changed, used in combination with the download of peripheral boards.
If <BRD-STYP> is omitted, the current board sub-type is removed.

Delete Board from Shelf **324 #!**

DEBRDS : <SHELF>,<BRD>;

With this command the following boards can be deleted:

- For a CPS system:
  - CII-A or CII-B;
  - CIx;
  - PM boards;
  - IAS board.
- For a CPU-ME/MT system, all types of PCT boards may be deleted. The CPU-ME/MT and CSN-BC cannot be deleted and for the PM boards: the PMC located in the same shelf as the CPU-ME/MT cannot be deleted. For PM boards located in another shelf as the one in which the CPU-ME/MT is located, the corresponding SM-PM or PM-PM link has to be deleted first.
- For a CCS system: before an SNS board may be deleted the corresponding links have to be deleted first. For SNS-0 and SNS-1, the same must be done for the CRU entries. The CSG entries are deleted automatically when the board is deleted. The SNS boards must be deleted in descending order.
  Before a CIE board may be deleted, the device ports and devices must be deleted first. The SSU entries and the BIM circuit are deleted automatically when the CIE board is deleted.

A board can only be deleted if:

- the board and all the circuits on this board are in NIN;
- the board does not have any channels or ports in use (e.g. when a DTU-CC should be

removed from the system, the link in which the DTU-CC is used should be deleted first);
- the board does not have any other relations.

Display Boards in Shelf **335**

DIBRDS : <SHELF>,<BRD>;

Response:

```
BOARD INFO:
SHELF     BRD     CRT     TYPE   SUBTYP    MAIN/SLAVE     HW-     SIG-
                                    E                     TYPE    GROUP
  xxxx     xx       -       xX      XX         xxxx         xx      xxxx


RESOURCES ON BOARD:
SHELF   BRD     CRT     RES-    HW-     SIG-GROUP
                        TYPE    TYPE
  xxxx     x       x      xxx     xx         xxxx
  xxxx     x       x      xxx     xx         xxxx         xx
  ....     .       .      ...     ..         ....         ..
EXECUTED
```

26.1.3. Circuits

Assign Peripheral Circuit to Board **369 #!**

ASPCTB : <SHELF>,<BRD>,<CRT>s/r,<PCT-TYPE>,[<SIG-GROUP>]
[,<HW-TYPE>];

If HW-TYPE is omitted, 255 (no test) is assumed.
The SIG-GROUP may only be omitted when assigning a music on hold circuit on an IAS board in a CPS - or CCS system.

Change Peripheral Circuit Data of a Board **120 #!**

CHPCTB : <SHELF>,<BRD>,<CRT>s/r,<SIG-GROUP> [,<HW-TYPE>];

When a PM board is assigned and PCTs are present on it, it is possible (as from SSW 805.28) to change the sub SIG-GROUP and HW-TYPE of these PCTs. Suppose SIG-GROUP is represented by 'aass', only the ss-part can be changed.

Delete Peripheral Circuit from PM Board **370 #!**

```
DEPCTB : <SHELF>,<BRD>,<CRT>s/r;
```

A circuit can only be deleted if:

- the circuit is in NIN;
- the circuit does not have any other relations.

Find PCTs by Type **73**

```
FIPCTT : <PCT-TYPE>s/r[,<UNIT>];
```

Response: A list of all EHWA's with the required PCT type.

26.2. SWITCHING NETWORK TONE SOURCES

Display of the switching network tone sources can be done with the DICONF command on the EHWA of a PM.

Assign Switching Network Tone Sources to a PM **331 #!**

```
ASTONE : <SHELF>,<BRD>;
```

Delete Switching Network Tone Sources from a PM **332 #!**

```
DETONE : <SHELF>,<BRD>;
```

26.3. CLOCK REFERENCE UNIT ENTRIES

Assign Clock Reference Unit Entry **350 #!**

```
ASCRUE : <CRUE-SHELF>,<CRUE-BRD>,<CRUE-CRT>[,<DTU-SHELF>,
         <DTU-BRD>[,<DTU-CRT]];
```

The CRUEs can reside on the following boards:

For a CCS system: on the SNS (top coax connector is circuit 48, bottom coax connector is circuit 49).
For a CPU-ME/MT system on the CSN-BC or on the PMC-MC, projected as master (board-type 92). The circuit numbers of the entries for both boards are 20 and 21.
For a CPS system: on the CRU or on the CSG.
The DTU EHWA is only applicable for CPS systems in which case the following conditions apply:

- the DTU should be given if the CRU port is used for external referencing.
- DTU-CRT is only used for ISDN resources.
- CRUE-CRT can only have the value 9 if the CRU port is used for local referencing.

Delete Clock Reference Unit Entry **351 #!**

```
DECRUE : <CRUE-SHELF>,<CRUE-BRD>,<CRUE-CRT>;
```

Display Clock Reference Unit Entry **66**

```
DICRUE : [<UNIT>];
```

Response:

```
                    CRUE FOR       ATTACHED TRUNK
ASSIGNED CRUE       PHYS.          EQUIPMENT      CRUE STATUS
                    CONNECTION
SHELF     BRD    CRT SHELF    BRD   SHELF    BRD   CURREN USABILITY
                         CRT            CRT   T
  12       3     20                            INS    - *
```

(The * at the end of the output string gives the active clock reference unit entry (CRUE)

26.4. D-CHANNELS

ASBRVC can be used to assign virtual channels to DPNSS trunks or to set a relation between the D-channel at the IPH or DTU and the trunks at the DTU.
For the boards with basic rate DPNSS (DTU-BA, DTX-I, DTU-VC) no D-channel is present, the command assigns the virtual circuits to the traffic channels.
For the boards with primary rate DPNSS (DTU-PR/PU/PH), this command assigns the DTU board and the virtual channels to the D-channel. For DASS, this command is only used for assigning the DTU board to the D-channel (no virtual channels!).

ASBRVC : <SHELF>,<BRD>,<CRT>s/r,<DTU-SHELF>,<DTU-BRD>[,<NVCT>];

The parameters <SHELF>,<BRD>,<CRT> refer to the following:

- DTX-I	EHWA of the PCT(s) to which the virtual circuit is related (if required).
- DTU-BA	EHWA of the PCT(s) to which the virtual circuit is related (if required).
- DTU-VC	EHWA of the PCT(s) to which the virtual circuit is related (if required).
- DTU-PH	EHWA of the D-channel (circuit 16 on the DTU).
- DTU-PR/PU	EHWA of the D-channel (circuit 1 of the IPH).

The parameter <NVCT> only applies to primary rate DPNSS (DTU-PR/PU/PH).
example for a DTX-I, installed in shelf 1011, card slot 1:

```
ASBRVC:1011,1,2&&31,1011,1;
```

example for a DTU-PH, installed in shelf 1011, card slot 1:

```
ASBRVC:1011,1,16,1011,1,30;
```

(The number of virtual circuits must be equal to the number of traffic channels on the board).
example for a DTU-PR/PU, installed in shelf 1011, card slot 1. The IPH-B is installed in shelf 1011, card slot 3:

```
ASBRVC:1011,3,1,1011,1,30;
```

(The number of virtual circuits can be less than the number of traffic channels on the board)

Delete Board Relation and/or Virtual Channels **358 #!**

DEBRVC : <SHELF>,<BRD>,<CRT>s/r;

Conditions are:

- Board must be in circuit condition NIN;
- D-Channel circuit must be in circuit condition NIN;
- No line-bundle relations must be present;
- No CRU entry must be assigned to the DTX or DTU.

With command DICONF you can display assigned board relations and/or virtual channels.

26.5. DEVICES AND LOGICAL DEVICE NAMES

26.5.1. Devices

Specific channels have a predefined function depending on the type of board and on the position of switches on the board. This means that in certain situations there is a relation between the channel number (circuit number) entered in the commands and the equipment type. Consult the Maintenance Manual to find out this relation.

Assign Device **411 #**

ASDEVC : <SHELF>,<BRD>,<CRT>,<LDN>,<EQUIPMENT-TYPE>;

This command assigns a device to an already (with command ASPORT) initialised port. The logical device name will become the unique identifier of the equipment type. After assigning a device, the circuit must be set to INS.
For CCS systems, the device is assigned to a circuit of the CIE board, but is physically connected to BIM.
An example for a CPU-ME/MT system:

```
ASPORT:11,18,21,1,0;                (assign local BCS port on EHWA 11,18,21)
ASDEVC:11,18,21,VDU020,20;          (assign OM 1 keyboard device with ldn `VDU020' on port)
ASDEVC:11,18,21,VDU021,21;          (assign OM 1 display device with ldn `VDU021' on port)
ASDEVC:11,18,21,TMSAPP,29;          (assign SSM services with ldn `TMSAPP' on port)
```

An example for a CPS system:

```
ASPORT: 14,10,0,2;                  (assign logical port on EHWA 14,10,3)
ASDEVC: 14,10,0,VDU140,20;          (assign OM 1 keyboard device with ldn 'VDU140' on port)
ASDEVC: 14,10,0,VDU141,21;          (assign OM 1 display device with ldn 'VDU141' on port)
```

An example for a CCS system:

```
ASPORT: 14,10,0,2;                  (assign logical port on EHWA 14,10,0)
ASDEVC: 14,10,0,VDU140,20;          (assign OM 1 keyboard device with ldn 'VDU140' on port)
ASDEVC: 14,10,0,VDU141,21;          (assign OM 1 display device with ldn 'VDU141' on port)
```

Finish programming of the port at the Backup and Interface Module (BIM)

Note: *OM keyboard and display are considered to be two separate devices. The command should be given twice to assign a complete OM terminal.*

Delete Device 442

DEDEVC : <LDN>;

It is not allowed to delete a device when it has more than one LDN assigned to it. Delete the additional LDNs with command DELDNM first.

Activate/de-activate RBU 484

ACTRBU : <OFF/ON>;

First an RBU (Remote Backup Unit) must be created. An RBU is used as a (remote) alternative of an LBU. This could be the case when no local backup device (e.g. SSM or SPB) is connected. The RBU is created as follows (assuming a V.24 port has been projected for remote maintenance): `ASDEVC:<shelf>,<brd>,<crt>, RBUxx,26;` (xx=unit)
Then the RBU can be (de)activated with the `ACTRBU` command. The command modifies system option 68:
`<OFF>` =0: RBU is not active: option 68 is FALSE;
`<ON>` =1: RBU is active: option 68 is TRUE.

Display Device Characteristics 81

DICHAR : <SHELF>,[<BRD>s/r],<CRT>s/r;

Response:

```
SHELF:   BRD:    CRT:  Logical Device Name:  Equipment
                                             type:
xxxx      xx      xx   xxxxxx                xx


Prop:    Gen:  Rec. size:     Open files:    conc.comm.     Baudrate:
xxxxxx    xx   xxxxx          xxx            xx             xxx


- NON STORAGE CHARACTERISTICS -
Virtual line length      :         (up,    down,    left,   right,  home &  clear)
                         Cursor
                                     x       x       x       x       x       x
Total space (kbytes)     :
                         xxxxxx
Free space (kbytes)      :
                         xxxxxx
```

See display parameters Prop. and Gen. for more information about this response.
When the EHWA of the CM module is given, all devices of that unit are displayed using the first line of the normal output only.
Note that all assigned devices will be displayed. Devices assigned in `overlay' will have the same equipment type as the `original' device.

Display Device Characteristics 421

DIDEVC : <LDN>;

Response:

```
LOGICAL DEVICE NAME     EQUIPMENT TYPE
xxxxxx                  xx
 SHELF    BRD     CRT     PROP     GEN   REC.SIZ    OPEN FILES      CONC.COMM:
                                          E
  xxxx     xx      xx    xxxxxx    xx     xxx          xx              x
- NON STORAGE CHARACTERISTICS - KEYBOAR
LINE LENGTH             :        (UP,   DOWN,  RIGHT,  LEFT,   HOME,  CLEAR)
                        CURSOR
xx                               x       x       x       x       x       x
```

See appendix B for more information about display parameters Prop and Gen.
Note that all assigned devices will be displayed. Devices assigned in `overlay' will have the same equipment type as the `original' device.

Assign V.24 Port 417

ASPORT : <SHELF>,<BRD>,<CRT>,<PROTOCOL-TYPE>[,<CONNECTION-TYPE>];

This command selects the required port and communication protocol for an application that wants to communicate with a device. If the BCS communication protocol is chosen, an optional parameter determines whether remote communication with modems is needed.
For CCS systems: use ASPORT to assign the port number to the CIE, which physically resides on the BIM.

Change Baudrate on V.24 Port (CPU-ME/MT only) 419

CHPORT : <SHELF>,<BRD>,<CRT>s/r,<BAUDRATE>;

This command changes the baudrate for the port on the given hardware address.

Delete V.24 Port 418

DEPORT : <SHELF>,<BRD>,<CRT>;

This command deletes the port characteristics that have been established by commands ASPORT and CHPORT. All devices that have been assigned on this port must be deleted first, otherwise an error is reported.
For a CCS system, the last OM port can not be deleted

Display Port Characteristics 420

DIPORT : <SHELF>,<BRD>,<CRT>s/r;

Response:

```
SHELF   BRD     CRT     PROTOCOL TYPE  CONNECTION     BAUDRA
                                       TYPE           TE
XXXX    XX      XX      X              X              XX

LOGICAL DEVICE NAMES
XXXXXX
XXXXXX
```

The connection type is only shown if protocol type is BCS.

Change Device Application 471

CHDEVA : [<APPLICATION>[,<MINIMUM-VERSION>,<MAXIMUM-VERSION>]];

Response:

```
APPLICATION VERSION : 3
```

An application (like the CallManager MIS) can use this OM command to agree with the ISPBX upon the version. By this OM command, it sends it's MINIMUM-VERSION and MAXIMUM-VERSION. As a result of this, the ISPBX will set for the highest common version of the application and of the ISPBX. This OM command must be executed per session.
If MINIMUM-VERSION and MAXIMUM-VERSION are omitted, the ISPBX will set for the highest version that it can support.

26.5.2. Logical Device Names

Assign Logical Device Name **61 #**

```
ASLDNM : [<DN1>],<LDN2>[,<UNIT>];
```

The command ASLDNM can be used after using the ASDEVC command, to attach an additional LDN to the device on the EHWA that was assigned with ASDEVC.
LDN1 must be an existing LDN and LDN2 is the LDN to assign.
LDN2 cannot be `IBU' or, if journal updating is on, `CBU'.
If LDN2 has the form `DONxxx' then LDN1 must have the form `VDUxxx'.
If LDN is LBU resp. DBU (CCS system), the EHWA must be one of the fixed disk addresses.
If DBU resp. LBU still exists, LBU resp. DBU may only be assigned if the device addresses of LBU and DBU are on the same BIM.
Re-assign an LDN in the network as follows: leave LDN1 out, enter the LDN to be reassigned in LDN2 and enter the unit number where the LDN resides.

Delete Logical Device Name **62 #**

```
DELDNM : <LDN>;
```

A device may have more than one LDN assigned to it. This command will not delete the last LDN. See DEDEVC to delete the last LDN.
If LDN is CBU, this command must be executed when journal updating is OFF.
For a CCS system, if LDN is VDU, LBU, DBU, DON or FXAL, the delete action is not allowed.

WARNING: DO NOT DELETE THE CBU, UNLESS THE CBU MUST BE MOVED!

26.6. LINKS

Assign Link **56 #**

```
ASLINK : <SHELF>,<BRD>,<CRT>,<LINK-TYPE>;
```

Shelf, board and circuit refer to the switching module port, which is an SCU port in the case of a CPS system, a CSN-BC or PMC-MC-MASTER port in the case of a CPU-ME/MT system and an SNS port in the case of a CCS system.
The command will ask for additional parameters, depending on the LINK-TYPE entered:

- LINK-TYPE 1, SM-CM (not for CCS systems).

Additional parameters:
<SHELF>,<BRD>[,<CRT>];
Enter the CII EHWA. The CRT parameter only has to be filled in in case of an MCI board (1), it indicates the CII function.

- LINK-TYPE 2, SM-PM controllable.

Additional parameters:
<SHELF>,<BRD>,<SEQUENCE-NO>;
Enter the PM EHWA and the sequence number (0 or 1 for PM2500 / 0 or 6 for PM1100).

- LINK-TYPE 3, SM-PM not controllable.

Additional parameters:
<SHELF>,<BRD>,<SEQUENCE-NO>;
Enter the PM EHWA and the sequence number (0 for PM2500 / 1 .. 5, 7 for PM1100).

- LINK-TYPE 4, SM-RPM controllable.

Additional parameters:
<SHELF>,<BRD>;
<SHELF>,<BRD>,<SEQUENCE-NO>;
Enter the Local DTU EHWA, the Remote DTU EHWA and the sequence number (0 or 1 for CPS or CCS systems, and 0 only for CPU-ME/MT)

- LINK-TYPE 5, SM-RPM not controllable.

Additional parameters:
<SHELF>,<BRD>;
<SHELF>,<BRD>,<SEQUENCE-NO>;
Enter the Local DTU EHWA, the Remote DTU EHWA and the sequence number of the link (0 .. 3).

- LINK-TYPE 6, SM-IU controllable.

Additional parameters:
<SHELF>,<BRD>,<SEQUENCE-NO>,<UNIT>;
Enter the DTU EHWA, the sequence number (0 or 1) and the destination unit.

- LINK-TYPE 7, SM-IU not controllable.

Additional parameters:
<SHELF>,<BRD>,<SEQUENCE-NO>,<UNIT>;
Enter the DTU EHWA, the sequence number (0 .. 7) and the destination unit.

- LINK-TYPE 8, SM-IAS controllable.

Additional parameters:
<SHELF>,<BRD>,<CONTROL-SIDE>;
Enter the IAS EHWA (not in R-PM) and the control side (0 or 1).

- LINK-TYPE 10, PM-PM (CPU-ME/MT only).

Additional parameters:
<SHELF>,<BRD>;
Enter the PMC EHWA of the opposite end.

- LINK-TYPE 11, SM-PM (CPU-ME/MT only).

Additional parameters:
<SHELF>,<BRD>;
Enter the PMC EHWA.
Note that (in most cases) two links must be connected te a PMC-MC board.

Delete Link **57 #**

DELINK : <SHELF>,<BRD>,<CRT>;

Specify the hardware address of the switching network link to be deleted. It is not possible to delete the links between the CSN and the PMC-Primary (CPU-ME/MT only).
A link can only be deleted if:

- The link is in NIN;
- For links to a RPM or another unit the DTU-CC should be in NIN;
- The destination PMC is in NIN;
- The link with the control channel may not be deleted until all not-controllable links to the same destination have been deleted.

DILINK : <SHELF>[,[<BRD>,<CRT>][,<LINK-TYPE>]];

If the board and circuit number are specified, no type of link may be entered. If board and circuit are omitted the link type may be given. If the link type is omitted all link types are displayed.
Response:

```
EHWA LINK TYPE OF    EHWA DEST EHWA LDTU    EHWA RDTU     SIDE    UNIT
      LINK                                                SEQ
   xxxxx xx xx      xxxxx xx x xxxxx xx x   xxxxx xx x    x x x     x
   xxxxxxxxxxxx
```

27. HOT LINE

These commands are used to assign and delete the facility class mark Hot Line to a BSP-ID. If a BSP-ID gets this facility also the destination of the hot line is entered. There are two kinds of hot line:

- Delayed hot line. If the handset is lifted the system waits a pre-determined time before the connection to the destination is made. This gives the user the possibility to dial another BSP-ID.
- Non-delayed. Immediately after the handset has been lifted the connection to the destination is made.

Change Hot Line **122 #!**

CHHOTL : <ORIG-BSP-ID>s/r[,<DEST-NUMBER>,<DELAY>, <POST-DIAL>,<TRFC>];

If only the originator BSP-ID is entered the hot line relation of the originator will be erased. Series/range can only be used when erasing.

Display Hot Line **123**

DIHOTL : <ORIG-BSP-ID>s/r;

Response:

```
ORIGINATOR     DESTINATION  DELAYED  POSTDIALLING  TRAFFIC-CLASS
xxxxxx         xxxxxxxxxxx  x        x             x
```

28. IABD AND LENR FACILITY

These commands are used to assign and delete the facility class mark for Individual Abbreviated Dialling (IABD) and Last External Number Repetition (LENR) to a DNR.

Assign IABD and LENR Facility **244 #!**

```
ASIABD : <DNR>s/r;
```

Erase IABD and LENR Facility **245 #!**

```
ERIABD : <DNR>s/r;
```

Change IABD or LENR **303 #!**

```
CHIABD : <DNR>s/r[,[<IABD-NO>][,<DEST-NUMBER>]];
```

This command assigns or erases individual abbreviated numbers. The DNR must have the facility LENR/IABD assigned by ASIABD.
For LENR omit the parameter `<IABD-NO>`. The DNR user can then call the destination number by dialling the code for LENR only.
Any external number, dialled at the extension after a number has been entered by CHIABD will be overwritten.
For IABD enter all parameters. The DNR user can then call the destination number by dialling the abbreviated dialling prefix followed by the number defined by IABD-NO.
Erase all IABD numbers by omitting `[,[<IABD-NO>][,<DEST-NUMBER>]]` or erase a specific IABD number by omitting `[,<DEST-NUMBER>]`.

Display IABD or LENR **317 #!**

```
DIIABD : <DNR>s/r[,<IABD-NO>];
```

This command shows the LENR/IABD information of a DNR. If `<IABD-NO>` is omitted, all LENR/IABD information of a DNR is given.
Response:

DNR	IABD-NO	DEST
2400	--	0030740000
2400	00	0030740001
2400	01	0030740002
2400	90	0030740003

29. IBSC - BSPT RELATIONS

Create BSPT Definition **78 #!**

CRBSPT : <BSPT>;

Additional parameter:
[<IBSC>];
The BSPT to be entered in this command ranges from 20…93.
Enter all IBSCs belonging to the BSPT. Exit with a single semicolon on a line.
The second line maintenance manual describes how to change a BSPT, which is created by this OM command.

Display BSPT Definition **79**

DIBSPT : <BSPT>s/r;

For each BSPT the list of IBSCs contained are given:
Response:

```
BSPT          IBSC
xxx           xxxxxxxxxxx
xxx           xxxxxxxxxxx
```

30. INITIALISE DISK

This command is used to format the back-up device.

Initialise Disk **289**

`INIDSK : <LDN>[,<VOLUME>];`

This command will occupy the VDU until the back-up device is formatted, which could take a considerable time. It is therefore advised to execute this command from a command file.
If the logical device (LDN) is the Internal Back-up Unit (IBU), the parameter VOLUME must be omitted. In this case the command execution will take about 90 seconds.
Response:

```
Password:
```

WARNING: IF THE LDN = IBU THEN THE CONTENTS OF THE BACK-UP DEVICE (HARD DISK OR SOLID STATE BACK-UP OR FEPROM ON CPU-ME/MT) WILL BE LOST!

31. INTEGRATED ANNOUNCEMENT SYSTEM

If an Integrated Announcement Server (IAS) is connected to the unit, an announcement can be given to incoming calls.

Change Announcement Information **318 #!**

CHANNO : <ANN-SELECTION>[,[<ANN-NO>]];

If [,[<ANN-NO>]] is omitted, the announcement message is removed.
For ANN-SELECTION 6: omit [<ANN-NO>] if only dynamic announcements are needed.
The command will ask for additional parameters:

- ANN-SELECTION is 0: DDI fail calls

```
Enter assistance group number:[<ASSIST-GROUP>];
Enter encountered DDI fail situation:[<ANN-DDI-FAIL>];
```

- ANN-SELECTION is 1: Successful DDI calls

```
Enter assistance group number:[<ASSIST-GROUP>];
```

- ANN-SELECTION is 2: Non-DDI calls
  (includes PLE, INE, MCNE, SCNE and CANS)

```
Enter assistance group number:[<ASSIST-GROUP>];
```

- ANN-SELECTION is 3: Calls to operator A-queue

```
Enter assistance group number:[<ASSIST-GROUP>];
Enter A-queue:[<A-QUEUE>];
```

- ANN-SELECTION is 4: Station calls for ACD group

```
Enter ACD group DNR:[<GROUP-DNR>];
Enter `First announcement delay time':<ACD-TIME-PERIOD>;
```

- ANN-SELECTION is 5: Night announcement for ACD group

```
Enter ACD group DNR:[<GROUP-DNR>];
```

```
Enter `First announcement delay time':<ACD-TIME-PERIOD>;
```

- ANN-SELECTION is 6: Delay message for ACD group

```
Enter ACD group DNR:[<GROUP-DNR>];
Enter `Delay message pre-time':<ACD-TIME-PERIOD>;
Enter `Delay message repeat-time':<ACD-TIME-PERIOD>;
Enter `ANN-NO for QUEUE POSITION i':<ANN-NO>;
```
(This is asked up to 16 times)

- ANN-SELECTION is 7: Music On Hold

Display Announcement Information **392**

DIANNO : <SELECT-ANNOUNCEMENT-DATA>;

Depending on the selection made, the system will ask for additional parameters:

- In case of an assistance group:

```
Enter assistance group number:[<ASSIST-GROUP>];
```
Response:

```
DDI-FAIL:       BUSY   DIAL-TIME-OUT    NBR-UNOBT     OTHER-FAIL     DDI-    NON-
                                                                     SUCC    DDI
                 xx          xx             xx            xx         xx      xx
A-QUEUES:       A1 A2   A3 A4   A5 A6   A7 A8  A9 A10   A11     A13    A15
                                                         A12     A14    A16
                x x     x x     x x     x x     x x     x x     x x    x x
```

- In case of an ACD group:

```
Enter ACD group DNR:<GROUP-DNR>;
```
Response:

```
STATION CALLS:          ANN-NO   PRE-
                                 TIME
                          xx      xx
NIGHT ANNOUNCEMENT:     ANN-NO   PRE-
                                 TIME
                          xx      xx
DELAY MESSAGE:          ANN-NO   PRE-    REPEAT-TIME
                                 TIME
                          xx      xx          xx
```

```
QUEUE-POS       ANN-NO
x               xx
```

- In case of Music On Hold:

```
MUSIC ON HOLD: ANN-NO
      XX
```

32. INTER UNIT ROUTING (iS3070/3090 only)

Change Route Relation **271 #**

CHRORE : <UNIT>,<ROUTE-ALTERN>;

The command asks for additional parameters:
[<ORIG-UNIT>,<FAR-DEST>[,<IU-ROUTE>]];
If the inter unit route number is omitted the route relation is erased. If all additional parameters are omitted the command is stopped. If the alternate route is entered as routing alternative the originator unit must equal the unit in which the route relation must be changed.

Change Unit Relation **272 #**

CHUNRE : <UNIT>,<ROUTE-ALTERN>;

The command asks for additional unit parameters:
[<ORIG-UNIT>,<FAR-DEST>[,<NEAR-DEST>]];
If the near destination is omitted the unit relation is erased. If all additional parameters are omitted the command is stopped. If the alternate route is entered as routing alternative, the originator unit must equal the unit in which the route relation must be changed.

Display Unit and Route Relations **273**

DIURRE : <UNIT>,<ROUTE-ALTERN>,<ORIG-UNIT>s/r;

Response:

ROUTING ALTERNATIVE	ORIGINATOR UNIT	FAR DESTINATION	NEAR DESTINATION	INTERUNIT ROUTE
xxx	xxx	xxx	xxx	xxx

33. INTER UNIT TRUNK TRAFFIC

Note: *Inter unit networking is only available on iS3070 and iS3090 systems.*

Assign Bundle to Interunit Route **265 #!**

```
ASIBND : <BUNDLE>,<ROUTE>,<UNIT>;
```

Assign Line to Interunit Bundle **267 #!**

```
ASILIN : <SHELF>,<BRD>,<CRT>,<BUNDLE>;
```

Change Inter Unit Bundle Characteristics **264 #!**

```
CHIBNC : <BUNDLE>,<BUNDLE-DIR>,<UNIT>;
```

Delete Bundle from Inter Unit Route **266 #!**

```
DEIBND : <BUNDLE>,<UNIT>;
```

Delete Line from Inter Unit Bundle **268 #!**

```
DEILIN : <SHELF>,<BRD>,<CRT>;
```

Display Inter Unit Bundle Data **270**

```
DIIBND : <BUNDLE>,<UNIT>;
```

Response:

```
BUNDLE  ROUTE   UNIT    DIR
  XX      XX     XX      X
 SEQ    SHELF   BRD    CRT
  XX    XXXXX    XX     XX
```

Display Inter Unit Route Data 269

DIIROU : <ROUTE>,<UNIT>;

Response:

```
 ROUTE   UNIT    SEQ   BUNDLE   DIR
   XX     XX     XX     XX      XX
```

34. LICENSES

With this command one can display the following information about active licenses:

- License number and name;
- License granted yes or no;
- Total number of possible licensed items;
- Total number of used items (licensed and not licensed);
- Not licensed BSP-IDs (when exists);
- Not licensed ACD-agents (when exists)
- Not licensed SOPHO iSLinks for CSTA (when exists);
- Not licensed CSTA monitors (when exists).
- Not licensed desksharing BSP-ID (when exists).

Display actual License Information and not licensed Items **462**

DILICS : [<LICENSE-NUMBER>][,<UNIT>];

If LICENSE-NUMBER is omitted, every licenses number is displayed.
If UNIT is omitted, then the licenses of all units are displayed.
Response:

```
UNIT   NR     DESCRIPTION           GRANTE  TOTAL   USED
                                       D

02     001 :  BSP-IDs                Yes    3200   3204
NOT LICENSED DNR-BSPT
       2472-
       95
       2473-
       95
       2474-
       95
       2475-
       95
UNIT   NR     DESCRIPTION           GRANTE  TOTAL   USED
                                       D
02     002 :  IMP                    Yes     -       -
02     003 :  ACD agents             Yes    0112   0004
02     004 :  ISDN trunk             Yes     -       -
02     005 :  DPNSS                  Yes     -       -
02     006 :  Cost accounting        Yes     -       -
02     007 :  System management      Yes     -       -
02     008 :  FDCR                   Yes     -       -
```

```
02      009 :  LCCR                    Yes      -       -
02      010 :  Voice Mail Interf.      Yes      -       -
02      011 :  iSNet PVN                No      -       -
02      012 :  IPD                      No      -       -
02      013 :  MOH from IAS             No      -       -
02      014 :  Dynamic delay msg.       No      -       -
02      015 :  Oper. monitoring         No      -       -
02      016 :  Service license          No      -       -
02      017 :  S0-bus Links CSTA       Yes    0004    0001
02      018 :  Act. CSTA monitors      Yes    0032    0034
NOT LICENSED DNR-BSPT
                      2800-
                      95
                      2801-
                      95
02      019 :  Deskshar. BSP-ID        Yes    0100    0080
02      020 :  CNND                    Yes      -       -
02      021 :  Ethernet link CSTA      Yes     02      02
02      023 :  CSTA IO services        Yes
02      024 :  CSTA IO registrat.      Yes     02      02
02      025 :  Free Numbering          Yes
```

35. LOAD CONTROL

The load of a unit can be expressed in “permission units” of the CPU. The value of the permission units approaches the real load in %, but in case of changing load characteristics they may deviate. They should be interpreted as relative values. This load is caused by tasks running at the same moment. Examples of tasks are: calls, periodic tests and OM commands. These tasks are distributed over sources. A source combines a specific category of tasks. There are two types of sources. The primary sources show tasks that can be directly identified. The secondary sources contain tasks that are started by other tasks. For each source and for the unit as a whole, a guaranteed load level exists. If the actual load of a unit is above its guaranteed level, it will only allow more tasks as long as they stay below the guaranteed level of the corresponding source.
The monitor process and the display command are completely independent of each other.

35.1. MONITOR LOAD

The load in a unit can be monitored. This process writes information about the load in all the sources to a file. Only one load monitoring process can run in a unit.

Start Load Monitor **298**

```
STALDM : <FILE>,<MONITOR-INTERVAL>,<ON-TIME>,<OFF-TIME>,
         <DATA-INDICATOR>[,<UNIT>];
```

The layout of the output is the same as in the DIOVLD command, but in addition a 13th column indicates the actual load percentage and each line is preceded by the date and time in the following format:
`YYYY-MM-DD +W+ HH:MM`

Cancel Load Monitor **299**

```
CANLDM : [<ON-TIME>],[<OFF-TIME>][,<UNIT>];
```

If the load monitor was active, it will be stopped and the file will be closed.

Display Load Monitor **346**

```
DISLDM : [<UNIT>];
```

Response:

```
UNIT    ON-     OFF-    ON-     OFF-
        TIME    TIME    TIME    TIME
                        EXPIRE  EXPIRE
                          D       D
 xx    xxxxx   xxxxx   xxxxx   xxxxx
```

35.2. DISPLAY LOAD

Display Overview of Load **297**

DIOVLD : <DATA-INDICATOR>[,<UNIT>];

Response:

```
SAS   SAS   SAS   OM    OM    OM    CP    CP    SAS   OM    GOS   UNIT
URG   FHL   TST   URG   MNT   MAT   CAL   RM    GEN   GEN   RM    TOT
 xx    xx    xx    xx    xx    xx    xx    xx    xx    xx    xx    xx
```

Primary sources are:

SAS-URG	System Assurance urgent actions
SAS-FHL	System Assurance fault handling and location
SAS-TST	System Assurance preventive tests
OM-URG	Operational Maintenance urgent commands
OM-MNT	Operational Maintenance
OM-MAT	Operational Maintenance tests
CP-CAL	Call Processing
CP-RM	Call Processing Registration and Measurements

Secondary sources are:

SAS-GEN	System Assurance work
OM-GEN	Operational Maintenance work
GOS-RM	Global Operating System resource management
UNIT-TOT	indicates the total load for the unit.

36. MANAGER DATA

36.1. SYSTEM MANAGER DATA

Display Manager Data **221**

DIMDAT : <MANAGER-TYPE>[,[<MANAGER-INDEX>s/r] [,<UNIT>]];

This command can show the parameter value(s) of either boundaries, options or timers. The Second Line Maintenance manual gives detailed information of the items mentioned above.
If the index is omitted all data of the specified manager is displayed.
Response:

```
UNIT  MANAGER-TYPE MANAGER-INDEX VALUE  (TIME-UNIT)
 xx        xx           xx        xx     xx
```

36.2. MFC MANAGER DATA AND SUBSCRIBER CATEGORY

Display MFC Manager Data **222**

DIMMFC : <MFC-TYPE>,<MFC-INDEX>s/r,[<MFC-ADD-INDEX>s/r]
[,<UNIT>];

Response:

```
MFC-TYPE    MFC-INDEX     MEANING-MFC-SIGNAL or
MFC-TYPE    MFC-INDEX     BACKWARD-MFC-SIGNAL CALL-CONTROL-ACTION or
MFC-TYPE    MFC-INDEX     MFC-ADD-INDEX BACK-MFC-SIGNAL CALL-CONTROL-
                          ACTION or
MFC-TYPE    MFC-INDEX     CALL-CONTROL-ACTION or
MFC-TYPE    MFC-INDEX     MFC-ADD-INDEX CALL-CONTROL-ACTION
```

Change Subscriber Category of DNR/BSP **72 #!**

CHCASC : <SUBSCR-CAT>,<BSP-ID>s/r;

The Subscriber Category is transmitted during each outgoing MFC call as first digit of the Calling Line Identity (CLI).

This command assigns a Subscriber Category to a BSP-ID. This applies to both extensions and operators. A Subscriber Category assigned to an operator position must be effectuated by a transition from day to night of the operator position.

Display Subscriber Category of DNR/BSP **71**

DICASC : <BSP-ID>s/r;

Response:

```
DNR-BSPT      SUBSCR-CAT
xxxX          xx
```

37. MERCURY INDIRECT SERVICE

This OM command for Smart Box Emulation is used to change the authorization code (PIN code) for each user group in the system. This PIN code is used by Mercury for Call authorization.

Change Authorization Code **401**

CHAUCO : [<CV>];

If the CV (Compatibility Value) is omitted the default value is used (usually 0).
Response:

```
Old authorization     <AC>;
code :
New authorization :   <AC>;
Verification :        <AC>;
```

38. MISCELLANEOUS DNR ACTIONS

For maintenance on the internal database two OM commands are available to be used by either the MAC-manager or through standard OM. The commands below concern the DNR/name relations.

Change DNR/Name Relation **121 #!**

CHNAME : [<DNR>s/r];

This command deletes or assigns the name related to the DNR.
When the DNR is omitted, the system will ask for additional parameters:
`Enter [<DNR>[,<NAME>]];`
The question is repeated until a semicolon (;) is entered. If NAME is omitted the relation is deleted.
Names may be entered in upper and/or lower case characters.

Note:

- *The size of the database can be projected smaller than the maximum number of DNRs in the unit. This implies that congestion can occur on storing a new name into the database, when the database is full.*
- *A name/DNR relation is automatically stored in the unit the DNR is assigned in. Therefore it is not possible to move a name/DNR relation to another unit, unless the DNR is moved to the other unit.*
- *It is advised to enter names, by first entering the last name of a person and then the first names or first name initials. This is in line with the normal browsing functions.*

Display DNR/name Relation **339**

DINAME : <DNR>s/r;

This command shows the name that is assigned to the DNR.

39. MULTIPLE SUBSCRIBER NUMBER

Change Fixed MSN Digit **431 #!**

CHFMSN : <BSP-ID>,<DIGIT>;

Change MSN Parameters **415 #!**

CHMSNP : <SHELF>,<BRD>,<CRT>s/r,<MSN-TYPE> [,<NO-MSN-DIGITS>];

Parameter NO-MSN-DIGITS can only be entered if MSN-TYPE indicates MSN (1).

Note: *When associated hardware addresses (i.e. the two EHWAs of an S_0 bus) are involved, then the MSN parameters of both hardware addresses must be projected identical.*

Display Fixed MSN Digit **441**

DIFMSN : <BSP-ID>s/r;

Response:

```
                FIXED MSN
  DNR-BSPT        DIGIT
     XXX            XXX
```

Display MSN Parameters **424**

DIMSNP : <SHELF>,<BRD>,<CRT>s/r,;

Response:

```
SHELF BRD CRT MSN-TYPE      NUMBER-OF-MSN-
                            DIGITS
 XXXX XX XX   X             X
```

40. NIGHT TRAFFIC AND SPECIAL EXTENSIONS

40.1. CANS AND HOOTER

Assign Unit to CANS Area **203 #!**

```
ASCANS : [<UNIT-1>s/r,<UNIT-2>];
```

<UNIT-1> will be assigned to the Common Answering Night Service (CANS) area in <UNIT-2>. In a single unit system both parameter 1 and 2 can be omitted.

Change Hooter Presence Mark **205 #!**

```
CHHOOT : <MARK>[,<UNIT>s/r];
```

Indicates to the system if a hooter is present or not.

Display CANS and Hooter Characteristics **206**

```
DICANS : [<UNIT>];
```

If no unit number is specified the command is performed system wide.
Response:

```
 UNIT  HOOTER    NIGHT TRAFFIC CLASSES      CANS AREA
               INE    SCNE   MCNE   CANS
  XX     XXX     XX     XX     XX     XX      XXXXXXX
```

Erase Unit from CANS Area **204 #!**

```
ERCANS : [<UNIT-1>s/r,<UNIT-2>];
```

Unit 1 will be erased from the CANS area in unit 2. In a single unit system both parameter 1 and 2 can be omitted.

40.2. NIGHT EXTENSIONS

To display night extensions the DISPEX command is used; see next section.

Change Individual Night Extension **198 #!**

```
CHINEX : <SHELF>,<BRD>s/r,<CRT>s/r[,[<B-CHANNEL>s/r]
         [,<DNR>]];
```

When the DNR parameter is omitted the Individual Night Extension (INE) is deleted. The B-Channel only has to be given in case of an ISDN trunk line.

Change Main Common Night Extension **196 #!**

```
CHMCNE : [<UNIT>s/r][,<DNR>][,<ASSIST-GROUP>];
```

It makes it possible to assign or to change a specific Main Common Night Extension (MCNE). If the DNR is omitted in the command, the specific MCNE is deleted.
ASSIST-GROUP has been added to the command as from SSW 805.28. If ASSIST-GROUP is omitted a general MCNE is assigned. If DNR and ASSIST-GROUP are omitted, the general MCNE is deleted.

Change Sub Common Night Extension **197 #!**

```
CHSCNE : <ROUTE>s/r[,<DNR>];
```

When the DNR is omitted the Sub Common Night Extension (SCNE) is deleted.

Change Traffic Class of Night Extension Group **201 #!**

```
CHTRNE : <NE-LEVEL>,<TRFC>[,<UNIT>s/r];
```

40.3. SPECIAL EXTENSIONS

Change Overflow Extension **200 #!**

```
CHOVEX : <ROUTE>s/r[,<DNR>];
```

When the DNR is omitted the Overflow Extension (OVE) is deleted.

Change Permanent Line Extension **199 #!**

```
CHPLEX : <SHELF>,<BRD>s/r,<CRT>s/r[,[<B-CHANNEL>s/r]
         [,<DNR>]];
```

When the DNR is omitted the Permanent Line Extension (PLE) is deleted. The B-Channel only has to be given in case of an ISDN trunk line.

Display Special Extensions **202**

```
DISPEX : [<UNIT>];
```

The unit number is only displayed for the MCNE DNR in a multi unit system. The assistance group is only displayed for an (assistance group) specific MCNE.The route number is only displayed for the SCNE or OVE DNR. The EHWA (SHELF, BRD, CRT) and the B-channel are only displayed for the INE or PLE DNR.
Response:

```
TYPE   DNR    UNIT   ROUTE  SHELF  BRD    CRT    B-CH   ASSISTANCE-GROUP
xx     xxxxxx xx     xx     xxxxx  xx     xx     -      xx
```

41. NUMBERING SCHEME

The whole numbering scheme can be divided into the internal numbering scheme and the external numbering scheme. Both types of number analysis data are held in the same type of trees. As the internal and external numbering scheme data require different parameters, different OM commands are available. Some commands are valid for both numbering schemes.
The names internal number and internal numbering scheme can give confusion of thought. Internal numbers are the numbers that belong to extensions (DNRs). Such an internal number is only one of the analysis results of the internal numbering scheme. Other analysis results in the internal numbering scheme are abbreviated number, follow-me prefix etc.

41.1. NUMBERING SCHEME GENERAL

Change Traffic Class Barring **38 #!**

CHTBAR : <TREE>,<NUMBER>,<TRFC>;

This command is used to change the traffic class in a number analysis tree, without affecting the analysed digits.

Display Number Analysis Result String **426**

DINARS : <TREE>s/r[,<RESULT-ID>];

This command searches for the number that is related to a result identity. When Result-Id is omitted, all related numbers in the given tree will be displayed.
Response:

```
TREE   CODE         ANALYSIS       RESULTNUMBER  ID NUMBER *)
XX     xxx      XXXXXXXXXXXXXXXXX      XXXXX         XXXX
```

*) As from SSW 805.26 the `ID NUMBER' has been added to the response (when applicable). It gives information about the destination (assigned with ASINTN or CHCSDD). The destination `ID' is given and the related `NUMBER'.
Example:
The `ID NUMBER' could be:

P 1	meaning:	Paging route 1
D 123	meaning:	Destination number 123

Q 5	meaning:	A-queue number 5
U 2	meaning:	Unit 2

Display Number Analysis Scheme Data 42

DINASD : <TREE>s/r[,<NUMBER>];

This command is used to display (part of) the contents of a number analysis tree. If an existing NUMBER is entered the display starts from the last pyramid in which this digit string is analysed.
The tree numbers for the internal numbering scheme can be displayed by using command DIDIAL, for DDI (or DPNSS-in) by using command DIROUT and for DDO (or DPNSS-out) by using command DIDEST. The tables of the tree are displayed per level. Each table consists of:

```
A  B  C  D  E  F  G  H  I  J  K  L  M  N  O  P
```

These letters have the following meaning:

A	Digit in table
B	Result ID number
C	Analysis result
D	Next analysis table
E	Number length / PVN Mode
F	Destination number / route table / A-queue/Valid. type (≥ 28) / œ ρ ϖ ε ρ (≥ 30)
G	Paging route number
H	Traffic Class (TRFC)
I	Minimum number length
J	Maximum number length
K	Dial tone place
L	Pre-digit
M	Post-digit
N	Restoration mode
O	Toll operator intrusion allowance/toll-free number (≥ 25)
P	Barring possible mark

Display Number Analysis Scheme Used Memory 45

DINASM : ;

Response:

```
   ANALYSIS TABLES      EXTERNAL NUMBER
                             BLOCKS
(PROJECTED)  (FREE)   (MAXIMUM)   (FREE)
     XX        XX        XX        XX
```

Make Number Unobtainable **39 #!**

```
MAKENU : <TREE>,<NUMBER>;
```

This command is used to erase an internal or external numbering scheme number or block.

41.2. INTERNAL NUMBERING SCHEME

Assign Analysis Tree to Dial Type **33 #!**

```
ASTREE : <TREE>,<DIAL-TYPE>s[,<AG>];
```

The analysis group is only used for dial types “extension dialling” and “enquiry dialling”. If it is omitted the default will be used.

Assign Internal Numbering Scheme Block **34 #!**

```
ASBLCK : <TREE>,<NUMBER>,<TRFC>,<NUMBER-LENGTH>, <RESULT-ID>;
```

This command is used to assign a block of internal numbers or abbreviated dialling. Only the RESULT-IDs 10, 23 and 24 are allowed.

Assign Internal Numbering Scheme Number **36 #!**

```
ASINTN : <TREE>,<NUMBER>,<TRFC>,<RESULT-ID>[,[<DEST/NUMBER>]
         [,<NUMBER-LENGTH>]];
```

This command is used to assign a prefix. In this command the parameters DEST/NUMBER and NUMBER-LENGTH must be omitted. Exceptions to this rule are:

- If RESULT-ID = 49:
  DEST/NUMBER must be given. Fill in the A-queue number (1..16).
- If RESULT-ID = 14, 21, 91, 92, 138
  DEST/NUMBER must be the destination number.
- If RESULT-ID = 12, 13, 120…125, 139…142
  DEST/NUMBER must be the paging route number.
- If RESULT-ID = 20, 25, 43, 68, 69, 70, 71, 72, 73, 74, 82, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 118, 119, 127, 135, 136:
  NUMBER-LENGTH must be given and DEST/NUMBER must be empty.

Note: *The NUMBER-LENGTH in RESULT-ID 111 is used to validate the dialled cost centre code. The last digit of the cost centre code must be equal to the sum of the other digits MOD length. E.g. if the length is 6 then 1 2 3 4 5 3 is a valid cost centre code. 1+2+3+4+5=15. 15 MOD 6 =3 (remainder after division).*
Last digit is also 3, therefore it is a valid cost centre code.

- If the RESULT-ID is 50, 51, 143 and 144 and the DEST/NUMBER is empty or '0', PID validation (SSM) is used. If the DEST/NUMBER = 1 then password (IPD) validation is used. The NR-LENGTH (0…16) is the length of the PID or password and NUMBER means 'prefix'.
- If RESULT-ID = 82: The number of characters in NUMBER must be compatible with the TMS digit position.
- If RESULT-ID = 104: NUMBER-LENGTH (0…16) indicates length of password; DEST/NUMBER is 0 means `change password of current DNR' and 1 means `change password of any other DNR'.
- If RESULT-ID = 132, 133: Enter the unit number for DEST/NUMBER. NUMBER-LENGTH must be empty in the case of 132. In the case of 133, NUMBER-LENGTH must be PVN mode.
- RESULT-IDs 10, 22, 23, 24 and 145 are not allowed.

Change CSTA Server Dialled Data **158 #!**

```
CHCSDD : <TREE>,<NUMBER>,<TRFC>,<SERVER-AND-ACTION-CODE>
         [,[<PW-NBR-LENGTH>][,<ADD-INFO-NBR-LENGTH>]];
```

With this command a prefix can be defined leading to the result-id “CSTA server dialled”.

Display CSTA Server Dialled Data **215**

```
DICSDD : <TREE>[,[<NUMBER>][,<SERVER-AND-ACTION-CODE>]];
```

This command displays the data stored of the prefixes with result-id “CSTA server dialled”.
If the parameter NUMBER is omitted, all available CSTA server dialled data for the given TREE and SERVER-AND-ACTION-CODE will be displayed.
If the parameter SERVER-AND-ACTION-CODE is omitted, all available CSTA server dialled data for the given TREE and NUMBER will be displayed.
If the parameter NUMBER and SERVER-AND-ACTION-CODE are omitted, all available CSTA server dialled data for the given TREE will be displayed.
The layout of the display is as follows (example):

```
 TREE  NUMBER  SERVER-CODE   ACTION-CODE    #PASSWORD-DIGITS    #ADD.INFO-
                                                                  DIGITS
   0     #49         1             5                0               4
   0     #49         1             5                0               4
   0     #49         1             5                0               4
   0     #49         1             5                0               4
```

Display Dial Type Relations **44**

DIDIAL : [<DIAL-TYPE>s/r];

If DIAL-TYPE is omitted all dial types will be displayed. Response:

```
DIAL-TYPE                          ANALYSIS GROUP No  ANALYSIS TREE
                                                          No
0:     Extension dialling                  xx             xx
1:     Enquiry dialling                    xx             xx
2:     Operator dialling                                  xx
3:     Post dialling                                      xx
4:     Alternative destination                            xx
       dialling
5:     FM primary dialling                                xx
6:     Pick up destination                                xx
       dialling
7:     Executive secretary                                xx
       dialling
8:     Overlay time out dialling           xx             xx
9:     Overlay continue dialling           xx             xx
```

41.3. EXTERNAL NUMBERING SCHEME

Assign External Numbering Scheme Number **37 #!**

ASEXTN : <TREE>,<NUMBER>,<TRFC>,<MIN-LENGTH>,<MAX-LENGTH>,
<DIALTONE-PLACE>;

Additional parameter:
[<ROUTE-TABLE>];
The number (or number range) gets result-ID 022 (External number).
ROUTE-TABLE is only relevant for Least Cost Call Routing.

Assign External Numbering Scheme Number with additional Parameters 328 #!

ASEXTP : <TREE>,<NUMBER>,<TRFC>,<MIN-LENGTH>,<MAX-LENGTH>, <DIALTONE-PLACE>;

Additional parameters:
[<PRE-DIGIT>][,<POST-DIGIT>][,[<REST-MODE>][,[<INTR-ALL/ CHARGED>]]],<ROUTE-TABLE>;
This command is used when the number sent to the opposite exchange must be preceded by a pre-digit (also called Class-of-Call or Call-type) or followed by a post-digit and/or when the restoration mode and/or the intrusion allowance (toll-free, ISDN) are used (CSS1). The number (or number range) gets result-ID 022 (External number).

Assign Barred External Number 40 #!

ASBARR : <TREE>,<NUMBER>;

This command is used to bar an external number. The external number must have been defined with ASEXTN. This means that the result-ID 022 (External number) must be present in the concerning tree. Use DIDEST to locate the right tree number. In this command <NUMBER> can be 1 … 16 digits.

Erase Barred External Numbers 41 #!

ERBARR : ;

All numbers in the barring list will be erased from it.

Display Barred External Numbers 43

DIBARR : ;

Response is a list of barred external numbers and the analysis tree number.

```
--BARRED NUMBER--  ANALYSIS TREE
                         No
     xxxxxxxx            xx
```

42. OPERATOR CONSOLE

42.1. B-BUTTON / ACCESS CODE RELATION

CHBBUT and DIBBUT are provided to read and write the relation between B-buttons and trunk access codes. After a command which modifies this relation has been executed, the other B-button bound data (routes associated with the access code, B-LED status) are updated by the system. The relation is defined per unit.

Change or Delete Trunk Access Code of B-button **184 #!**

```
CHBBUT : <B-BUTTON>[,<TRUNK-CODE>] [,<UNIT>s/r];
```

If the trunk access code is omitted, the code under the indicated B button will be deleted.

Display Trunk Access Code of B-button **185**

```
DIBBUT : <B-BUTTON> [,<UNIT>s/r];
```

Response:

```
B-BUTOON    UNIT   TRUNK-CODE
   XX        XX        XX
```

42.2. QUEUE PREFERENCE

CHMQPR, CHCQPR, CHAQPR modify the answering priority list for the M, C and A call types. DIAQPR, DICQPR and DIMQPR display the list for A, C and M call types.
The commands which change the answering priority for M and C call types affect the preference for both the general and individual call queues, the M and C queue preference lists are the same for all operators in one unit.
The commands for A queues change the priority order in which incoming calls are served by a specific operator. In case of incoming calls (A calls) there is a preference table for every operator.

42.2.1. A-Queue

Change Answering Priority of A-Queue **188 #!**

CHAQPR : <OPERATOR-DNR>, <A1>[,<A2>[,<A3>[,<A4>[,<A5>]]]];

If from a certain An (n=1 to 5) parameter onwards the rest of the parameters are omitted, the preference list will be set to the default order, with the exception of the values already entered. The default order is 1 to 16 (see parameter An).
If A5 has been entered, the following request appears:

```
<Enter call types [<A6> [,<A7> … <A13>]]] …]:
```

Display Answering Priority of A-Queue **189**

DIAQPR : <OPERATOR-DNR>s;

Response:

```
OPERAT A-QUEUE PRIORITY LIST (Descending
OR     order)
XXXXXX X X X X X X X X X X X      X      X      X      X      X
```

42.2.2. C-Queue

Change Answering Priority of C-Queue **187 #!**

CHCQPR : [<UNIT>s/r],<C1>[,<C2>[,<C3>[,<C4>[,<C5>]]]];

If from a certain Cn (n=1 to 5) parameter onwards the rest of the parameters are omitted, the preference list will be set to the default order, with the exception of the values already entered. The default order is:

(3) - Recall - on hook
(2) - Recall - not on hook
(0) - Direct dial in - not answered
(1) - Direct dial in - unsuccessful
(5) - Taxmetering
(6) - Through connection - busy
(8) - Through connection - ringing
(7) - Preferred call
(4) - Series

If C5 has been entered, the following request appears:

```
<Please enter additional call types [<C6> [,<C7> [,<C8> [,<C9>]]]];
```

Display Answering Priority of C-Queue **361**

DICQPR : [<OPERATOR-DNR>s][,<UNIT>s/r];

One or both parameters must be omitted. If both parameters are omitted, the answering priority is displayed for all operators in all units of the system.
Response:

```
OPERATOR-DNR   UNIT   CODE  CALL-TYPE
xxxx            x      x    xxxxxxxxxxxx
```

42.2.3. M-Queue

Change Answering Priority of M-Queue **186 #!**

CHMQPR : [<UNIT>s/r],<M1>[,<M2>[,<M3>]];

If both M2 and M3 are omitted, the preference list will be set to the default, with the only exception of M1 as first element (and the former default first element in the default position of M1). The default order is: preferred call (2), normal call (1), individual call (0).

Display Answering Priority of M-Queue **362**

DIMQPR : [<OPERATOR-DNR>s][,<UNIT>s/r];

Response:

```
OPERATOR-DNR   UNIT   CODE  CALL-TYPE
xx              xx     x    XXXXXX
```

42.2.4. Queue to Lamp Relation

Change Queue Lamp Relation **423 #!**

CHQLMR : <LAMP-ID>,<INTERNAL-CALL-TYPE/A-QUEUE-NUMBER>
[,<UNIT>];

If UNIT is omitted the command will be executed system wide.

Display Queue Lamp Relation **422**

```
DIQLMR : [<LAMP-ID>] [,<UNIT>s/r];
```

If LAMP-ID is omitted, all LAMP-IDs are displayed. If UNIT is omitted the command will be executed system wide.
Response:

```
 UNIT   LAMP    QUEUE LIST
  xx     xx         xx
```

42.3. OPERATOR AVAILABILITY LIST AND ASSISTANCE GROUP

CHOPAV and DIOPAV are used to determine and read the order in which the units have to be hunted for operator service when a unit does not offer operator service to the calls originated in it. This sequence is defined per unit and per assistance group.

42.3.1. Availability List

Change Operator Availability List **190 #!**

```
CHOPAV : <UNIT>[, [<ASSIST-GROUP>] [,<U1>[,<U2>[,<U3>
         [,<U4>]]]]];
```

If from a certain Un (n=1 to 5) parameter on all parameters are omitted the availability list will be initialized only with the entered Un-1 units data.
If U4 has been entered, the following request appears:

```
<Enter none to 9 additional unit numbers [<U5> [,<U6> … [,<U13 ] … ] ];
```

Display Operator Availability List **191**

```
DIOPAV : [<UNIT>s/r][,<ASSIST-GROUP>];
```

If the unit number is omitted the command is performed system wide. Unit numbers in the availability list are displayed in descending order of priority.
The display format is:

```
UNIT   Assist-group  Availability list (Descending
                     order)
xx     xx            xx
```

42.3.2. Assistance Group

CHASOP, DIASOP, CHASCV and DIASCV define and read the relation between assistance groups and operators and between assistance groups and CV values. The purpose is to split up the system for multi user operation.

Change Assistance Group of Compatibility Value **194 #!**

```
CHASCV :  <CV>s/r[,<ASSIST-GROUP>];
```

Change Assistance Group of Operator **192 #!**

```
CHASOP : <OPERATOR-DNR>s[,<ASSIST-GROUP>];
```

If the assistance group is omitted the general assistance group will be taken. The operator must have inactive status: Headset removed (i.e. night mode) or global status OUT or NIN.

Display Assistance Group of Operator **193**

```
DIASOP : <OPERATOR-DNR>s;
```

If no assistance group is displayed the operator is assigned to the general assistance group.
Response:

```
OPERATOR      ASSISTANCE-
              GROUP
XXXX          XX
```

Display Assistance Group of Compatibility Value **195**

```
DIASCV : <CV>s/r;
```

If no assistance group is displayed the general assistance group is related to this compatibility value.
Response:

```
CV      ASSISTANCE
        GROUP
XX      XX
```

Display Service Mode of Assistance Groups **366**

DISEMD : [<ASSIST-GROUP>s/r];

The service mode indicates the DAY or NIGHT condition of the operators. If the assistance group is omitted the general assistance group is displayed.
Response:

```
ASSIST-GROUP  SERVICE MODE
xx            xxxx
```

Change Assistance Group Properties **476 #!**

CHASPR : [<ASSIST-GROUP>],<ASSIST-GROUP-PROPS> [,<UNIT>];

This command can switch operator monitoring ON or off. If it is switched on, the command will ask for an additional parameter:

```
Enter 'Operator monitoring logical device name' (LDN) : <LDN>
```

If you type ';' the LDN is not changed.
When ASSIST-GROUP is omitted, the general assistance group is changed.

Display Assistance Group Properties **477**

DIASPR : [<ASSIST-GROUP>][,<UNIT>];

Response:

```
UNIT   ASSIST-GROUP  PROPERTIES    MIS-
                                   LDN
xx     xx            x             xxx
```

42.4. OPERATOR STATUS

The commands in this group are used to inform the chief operator about the condition of all operator consoles.

Display Activity and Status of Operators 365

DIOPST : [<OPERATOR-DNR>s][,<UNIT>s/r];

This gives information about the activity (active or not active) and about the state (idle, busy, OM mode). One or both parameters must be omitted. If both parameters are omitted the status of all operators in the system is displayed.
Response:

```
OPERATOR-DNR  UNIT  ASSIST-GROUP ACTIVI STATUS
                                   TY
    xxxx       xx        xx       xxx    xxx
```

Display List of Active Operators 363

DIOPAC : [<ASSIST-GROUP>s/r][,<UNIT>s/r];

If UNIT is omitted, all operators in the system are displayed. If the assistance group is omitted, the general assistance group is displayed.
Response:

```
OPERATOR-DNR  UNIT  ASSIST-GROUP
    xxxx       xx        xx
```

Display List of Idle Operators 364

DIOPID : [<ASSIST-GROUP>s/r][,<UNIT>s/r];

If UNIT is omitted, all operators in the system are displayed. If the assistance group is omitted, the general assistance group is displayed.
Response:

```
OPERATOR-DNR  UNIT  ASSIST-GROUP
    xxxx       xx        xx
```

Display Load of Operators 367

DIOPLD : [<OPERATOR-DNR>s][,<UNIT>s/r];

One or both parameters must be omitted. If both parameters are omitted the status of all operators in the system is displayed.
Response:

```
DNR    UNIT    A:L C A1:L C A2:L C A3:L C  C:L C  M:L C TOTAL
xxxx   xx        x x    x x    x x    x x    x x    x x   xx
```

Display Load and Status of Operators Continuously 343

DIOPCT : [<OPERATOR-DNR>][,<UNIT>];

One or both parameters must be omitted. If both parameters are omitted data about the unit where the OM terminal is located will be displayed. The displayed information is refreshed periodically, with a default of 15 seconds.
Response:

```
DNR    ACTIVI STATUS  A:C L A1:C L A2:C L A3:C L  C:C L  M:C L M2:C L TOTAL
       TY
xxxx   xx       xx      x x    x x    x x    x x    x x    x x    x x xx
```

C indicates the number of calls waiting;
L indicates the first or second overload:

L=1	First overload level. The call is waiting and all operators are busy.
L=2	Second overload level. The call is waiting for more than 20-40 seconds, or more calls are waiting.

43. OVERLAY MODULES

Delete Specified Overlay Module from Memory **86 #**

```
DEOVLM : <OVERLAY-ID>s[,<UNIT>s/r];
```

Display Overlay Modules in Memory **87**

```
DIOVLM : [<OVERLAY-ID>s][,<UNIT>s/r];
```

If the overlay identity is omitted, all overlays are displayed.
Response:

```
UNIT   OVERLAY-ID    REFERENCE     LOAD-STATUS   CURR-AUTH
xx     xxxxx.xxx     xxx           xxx           xxx
```

Load Overlay Module in Memory **85 #**

```
LDOVLM : <OVERLAY-ID>s[,<UNIT>s/r];
```

Reset Delete Protection of Overlay Module **89 #**

```
REOVLM : <OVERLAY-ID>s[,<UNIT>s/r];
```

Set Delete Protection of Overlay Module **88 #!**

```
SEOVLM : <OVERLAY-ID>s[,<UNIT>s/r];
```

This command is not possible for CPU-ME/MT

44. PAGING

The following types of paging are defined:

- Virtual paging, using a loudspeaker system;
- Real paging, using paging equipment. This can be further divided into:
  - Meet-me paging. The pocket receiver beeps when there is a call waiting.
  - Non Meet-me paging. The pocket receiver is equipped with a display or voice channel.

The OM commands can be divided in:

- General commands, which must be executed for both virtual and real paging;
- Commands for virtual paging;
- Commands for real paging (Meet-me and Non Meet-me).

44.1. GENERAL PAGING

The commands in this section are used to create and/or display the paging area(s) and paging routes.

Create Paging Area **246 #!**

```
CRPARE : <AREA>[,<UNIT>];
```

Each paging area has one unit, where the paging equipment is connected (ATU-PA in case of real paging). This is called the Utility-unit, <UNIT> indicates this Utility-unit. This Utility-unit must also be given in case of virtual paging, although no paging equipment is connected.

Change Paging Area **248 #!**

```
CHPARE : <UNIT>[,<AREA>];
```

This command is used to add units to an existing paging area. This means the command can only be executed in a multi unit system.

Display Paging Area Data **258**

```
DIPARE : <AREA>;
```

Erase Paging Area **247 #!**

```
ERPARE : <AREA>;
```

Create Paging Route **249 #!**

```
CRPART : <AREA>,<ROUTE>[,<MIN>,<MAX>];
```

If MIN and MAX are given, a real route is created. Prior to SSW 805.25 the MAX value was only important for display paging.
As from SSW 805.25 the MAX value is important for all paging types.
If MIN and MAX are not given, a virtual route is created.

Display Paging Route Data **257**

```
DIPART : <ROUTE>;
```

Response:

```
ROUTE  MIN    MAX    AREA   UTILITY-UNIT  VR-
                                          TYPE
```

followed by the mode digits (real paging) or the virtual codes (virtual paging)

Erase Paging Route **250 #!**

```
ERPART : <ROUTE>;
```

44.2. VIRTUAL PAGING

Assign Code to Virtual Paging Route **253 #!**

```
ASPACD : <ROUTE>,<PAGING-CODE>s/r;
```

PAGING-CODE must be unique in the system. Conflicts with codes used for real paging are possible. No on-line check can be performed on this.

Delete Code from Virtual Paging Route **254 #!**

```
DEPACD : <ROUTE>,<PAGING-CODE>s/r;
```

PAGING-CODE may not be in use by the application.

44.3. REAL PAGING

Assign Line to Real Paging Route **255 #!**

```
ASPALN : <ROUTE>,<SHELF>,<BRD>,<CRT>;
```

Change Real Paging Route Mode Digits **252 #!**

```
CHPAMD : <ROUTE>,<REAL-TYPE>,<MD-TYPE>[,[<DIGIT-INT>]
         [,[<DIGIT-EXT>] [,<DIGIT-ASSIST>]]];
```

Refer to the documentation of the paging equipment to see if mode digits for urgent and non-urgent and for assisted, external and internal paging are supported.

Change Real Paging Route Number Length **80 #!**

```
CHPANL : <ROUTE>,<MIN>,<MAX>;
```

Delete Line from Real Paging Route **256 #!**

```
DEPALN : <ROUTE>,<SHELF>,<BRD>,<CRT>;
```

The line may not be in use by the application.

Display Paging Line Data **259**

```
DIPALN : <SHELF>,<BRD>s/r,<CRT>s/r;
```

Response:

```
SHELF  BRD    CRT    ROUTE
  XX     X     XX    XXX
```

45. PASSWORD PROTECTED FACILITIES

This group of commands is used to control the integrated password dialling process.

Assign Access to Password Protected Facilities **463 #!**

ASAPPF : <BSP-ID>s/r[,<FAC-INDICATOR>s/r];

ASAPPF is used to assign access to the password protected facilities: “Traffic class up-/downgrading”, “Password DDO” and “Change Password”.
If Traffic class up-/downgrading or Password DDO (or both) is assigned, the Change Password facility is assigned implicitly.
When a facility is assigned to a DNR for the first time, the associated password is set to the default value (all zeros). An extension user has to change this default password to a `real' password before it can be used.
If the facility indicator is omitted, the password is reset to all zeros for that DNR.

Erase Access to Password Protected Facilities **464 #!**

ERAPPF : <BSP-ID>s/r[,<FAC-INDICATOR>s/r];

If the facility indicator is omitted, all password protected facility relations for the entered DNR are erased.
If the password protected facility “Traffic class up/downgrading” (FAC-INDICATOR=0) is erased or all password protected facilities are erased, then the traffic class of the extension is changed to day/night switching mode.

Display Access to Password Protected Facilities **465**

DIAPPF : [<BSP-ID>s/r][,<FAC-INDICATOR>s/r];

Passwords are never displayed, only an indication is given whether the default password is still set. If both parameters are omitted, all relations are displayed.
Response:

```
DNR    FACILITY INDICATOR            DEFAULT
                                     PASSWORD
1672   0 : Up/downgrading traffic      Yes
       class
       1 : Password DDO
3470   0 : Up/downgrading traffic       No
       class
```

Assign PID, Cost Centre Number or Budget **466 #!**

```
ASPICC : <PID/COST-CENTRE>s[,[<TRFC>][,[<DNR>][,<BUDGET>
         [,BUDGET-UNIT>]]]];
```

ASPICC is used to assign a Personal IDentification code (PID), a budget or Cost Centre relations. In case of a PID also a traffic class value must be entered and optionally a DNR. The parameters BUDGET and BUDGET-UNIT are valid as from SSW 805.28.
When a BUDGET is entered and the DNR is omitted, a general PID is assigned. In a multi-unit configuration, BUDGET-UNIT must be entered.

Change PID Data **513 #!**

```
CHPICC : <PID/COST-CENTRE>,[<TRFC>][,[<DNR>][,<BUDGET>,
         <BUDGET-ACTION>[,<BUDGET-UNIT]]];
```

This command is valid as from SSW 805.28. CHPICC is used to change Personal IDentification codes (PID), budgets or cost centre relations.
If the value of BUDGET-ACTION = 0: the value of the BUDGET will be subtracted from the budget stored in the database.
If the value of BUDGET-ACTION = 1: the value of the BUDGET will be added to the budget stored in the database.
If the value of BUDGET-ACTION = 2: the value of the BUDGET will be reset to the value of the budget.
It is not possible to change the BUDGET and the BUDGET-UNIT at the same time with BUDGET-ACTIONs 0 and 1.

Erase PID or Cost Centre Number **467 #!**

```
ERPICC : [<PID/COST-CENTRE>s][,<DNR>s/r];
```

It is not allowed to omit both parameters. If the PID/COST-CENTRE number is omitted, the DNR must be given. In that case all PID numbers for that DNR are erased.

Display PID or Cost Centre Numbers **468**

```
DIPICC : [<PID/COST-CENTRE>s][,<DNR>s/r];
```

If both parameters are omitted, all possible PID / Cost Centre numbers are displayed.
Response:

PID/COST CENTRE	TRFC	DNR	BUDGET	BUDGET-UNIT
1234567890123456	7	1234		
123456	4	-		
67890123456	2	2		
123456	2	2	2	2

46. PRIVATE VIRTUAL NETWORKING

This group of OM commands is used for maintaining and displaying data used by iSNet Private Virtual Networking (PVN).

Change PVN Route **457 #!**

CHPVNR : <ROUTE>[,[<SIGCH-ADDRESS>], [<UCA-PREFIX>],<RIN>,<M/S>];

With this command, PVN route data can be changed, added or deleted. A route is a PVN route when it contains at least one bundle with signalling type DPNSS-PVN.
This command asks for additional parameters:
[<PVN-MODE>][,[<CV>][,[<TREE>][,<USER-MODE>]]];
Add a PVN route: All parameters have to be given. In case of an incoming route, the SIGCH-ADDRESS and the UCA-PREFIX may be omitted.
Change a PVN route: All parameters have to be given.
Delete PVN route data: only enter the route number.

Note: *USER-MODE has been added as from SSW 805.27.*

Display PVN Route Data **459**

DIPVNR : [<ROUTE>];

Response:

```
ROUTE   UNIT  SIGCH-ADDRESS  UCA-PREFIX    RIN    M/S
 xxx     xx     xxxxxxxxx        xx         xx     xx
PVN-     CV    TREE    STATUS *)   EHWA-HATCH *) USER-MODE **)
MODE
 xx      xx     xx        xx        xxxx xx xx     delayed/
                                                   normal
```

*) As from SSW 805.26:

- The EHWA of the used hatch resource is given,
- The STATUS now can be: idle, claimed, set up, identify, wait, ready, released or POM,
- When a specific route is given as parameter for DIPVNR (e.g. DIPVNR: 123) then the display is continuous. When data is changed, the changes are displayed on the screen. CTRL-X stops the continuous display.

**) As from SSW 805.27 delayed PVN has been added (USER-MODE = 1).

Assign PVN User Channel Address **455 #!**

```
ASPVNU : <UCA>[,<UNIT>];
```

The user channel address is the DDI number that an opposite ISPBX must dial to setup a user channel.

Delete PVN User Channel Address **456 #!**

```
DEPVNU : <UCA>[,<UNIT>];
```

Error message `UCA busy' may indicate that the specified UCA is in use and cannot be deleted.

Display all PVN User Channel Address(es) **461**

```
DIPVNU : [<UNIT>];
```

If UNIT is omitted, the command is executed for all units in the system. Response:

```
UNIT   UCA
xxx    xx
```

Change the PVN Sequence Table **458 #!**

```
CHPVNT : <ROUTE>[,<SEQUENCE-TABLE>[,<SIGCH-TU>, <SIGCH-
         TV>][,<USRCH-TU>,<USRCH-TV>]];
```

Depending on the parameter combination, the PVN sequence table can be changed or (partly) cleared. The timer values will be changed to 0 seconds.
This command must only be set at the “MAIN” side of the PVN route, because this side controls the reservation timers.

Display the PVN Sequence Table(s) 460

DIPVNT : <ROUTE>[,<SEQUENCE-TABLE>];

This commands displays the contents of one or all sequence tables belonging to the specified route. If the SEQUENCE-TABLE is omitted, all sequence tables for the specified route are displayed.
Response:

```
              SIGNALLING CHANNEL      USER CHANNEL
  SEQUENCE-    VALUE    TIME-UNIT    VALUE    TIME-UNIT
    TABLE
       1         2       Minutes       2       Minutes
       2         2       Minutes       2       Minutes
       3         2       Minutes       2       Minutes
       4         2       Minutes       2       Minutes
       5         2       Minutes       2       Minutes
```

Change PVN Security Code 472 #!

CHPVNS : [<PTN-ID>];

The PTN-ID is a number that is specified for the network. It is used by the PVN security mechanism during set-up of a signalling channel to verify if both parties belong to the same network. When the PTN-ID is omitted, the sytem will return to the default PTN-ID, which is 9999. In this case only the old security code will be asked. The new security code will also return to its default value. The default security code is `899111'.
This command asks for additional parameters:
`Enter old Security code :`**<SC>;**
`Enter new Security code :`**<SC>;**
`Verification :`**<SC>**
All ISPBX's in a PVN network must have the same PTN-ID and security code.

Change PVN Compressor DNR 495 #!

CHPVND : [<DNR>][,<UNIT>];

When the DNR is omitted, the compressor DNR is deleted.
UNIT may be omitted in a single unit system.

Display PVN Compressor DNR 496

```
DIPVNT : [<UNIT>];
```

UNIT may be omitted in a single unit system.

47. PROJECTING

The commands in this chapter are used to change and display the general PM projecting data, e.g. slave data, signalling group data, tone data and audio data;

Change PM Projecting Data **75 #!**

```
CHPMPD : <PM-OBJECT>,<OBJ-INDEX>[, [<NBR-OF-ITEMS>],
         [<PERIODICITY>][,<UNIT>]];
```

The NBR-OF-ITEMS and PERIODICITY must be omitted for PM-OBJECTS 0 and 1. If the UNIT is omitted the command will be executed system wide.
The command will ask for additional parameters, depending on the PM-OBJECT entered:

- PM-OBJECT 0: Signalling group data.

Additional parameters:
<ITEM-NBR>,<BIT/BYTE>[,<DATA>];
If DATA is omitted, the existing data is cleared.

- PM-OBJECT 1: Slave data.
  Depending on the given OBJ-INDEX the additional parameters have the following meaning:
  OBJ-INDEX 6 (ATC data):

Additional parameters:
<ITEM-NBR>[,<DATA>];
If DATA is omitted the existing data is cleared.
This action is only required for certain PSC tone-PROM-sets. Refer to the signalling data manual for details.

- PM-OBJECT 1: Slave data.
  Depending on the given OBJ-INDEX the additional parameters have the following meaning:
  OBJ-INDEX 8 (Stc tone data):

Additional parameters:
<TONE-SRC>,<FREQ-VALUE>;

- PM-OBJECT 1: Slave data.

Depending on the given OBJ-INDEX the additional parameters have the following meaning:
OBJ-INDEX 9 (Stc level data):

Additional parameters:
<TONE-SRC>,<LEVEL-VALUE>;

- PM-OBJECT 2: PSC tone data (when PPU-(PMU)-PSC hardware is used).

Additional parameters:
<ITEM-NBR>[,<TONE-SRC>,<T-VALUE> <UNIT-T>];
If TONE-SRC, T-VALUE and UNIT-T are omitted, the existing data is cleared.

Note: *As from SSW 805.24 when PSC data is changed, a warning is given that also the PMC data should be changed.*

- PM-OBJECT 3: Ring data.

Additional parameters:
<ITEM-NBR>[,<T-VALUE>,<UNIT-T>];
If T-VALUE and UNIT-T are omitted, the existing data is cleared.

- PM-OBJECT 4: Ticker data.

Additional parameters:
<ITEM-NBR>[,<TICKER-SRC>,<T-VALUE>,<UNIT-T>];
If TICKER-SRC, T-VALUE and UNIT-T are omitted, the existing data is cleared.

- PM-OBJECT 5: PMC tone data (when PMC hardware is used).

Additional parameters:
<ITEM-NBR>[,<TONE-SRC>,<T-VALUE>,<UNIT-T>];
If TONE-SRC, T-VALUE and UNIT-T are omitted, the existing data is cleared.

Note: *As from SSW 805.24 when PMC data is changed, a warning is given that also the PSC data should be changed.*

- PM-OBJECT 6: Direct downloadable signalling group data to PM.

Additional parameters:
<ITEM-NBR>,<BIT/BYTE>[,<DATA>];

If DATA is omitted the existing data is cleared. During download the OM terminal locks. There are no messages given about what is downloaded directly and what not. You can check this with the DIPMPD command.
If not all items are changed in the PM data, still a warm start or SETOUT/SETINS of the PM is necessary.
The signalling data manual describes which data can be downloaded directly.

Display PM Projecting Data **76**

DIPMPD : <PM-OBJECT>[,[<OBJ-INDEX>][,[<ITEM-NR>] [,[<BIT/BYTE>]]][[,<SHELF>/<UNIT>][,<BRD>]]];

Response for tone/ring/ticker functions:

```
PM-OBJ FUNC   NR-OF-ITEMS   PERIOD ITEM-  TONE/TICKER-  VALUE- UNIT-T
                                   NR     SRC           T
xxx    xx     xxx           xx     xx     xx            xx     xx
```

Response for slave data:

```
SLAVE-TYPE    ITME-NBR      DATA
xx            xx            xx
```

Response for signalling group data:

```
SIG-GROUP     ITME-NBR      DATA
xx            xx            xx
```

48. SERVICE CONDITIONS

The commands for service conditions are used to change the service conditions of resources or to display them. The service condition of a resource comprises:

- Required service condition. This is the status the resource should have.
- Actual or current service condition. The status of the resource.
- Owner. The software activity using the resource.
- B-channel status.
- CPU slice mask status.

Certain actions are not allowed:

- Taking the CBU or a higher system part to Out of Service or Not Installed while journal updating is on;
- Taking a module or a higher system part to Out of Service or Not Installed;
- Taking shelves or a higher system part Out of Service or Not Installed.

Other actions must be confirmed:

- Taking the last OM terminal or a higher system part to Out of Service or Not Installed;
- Taking the CBU or a higher system part to Out of Service or Not Installed.

Some resources are classified by a system degradation level, when they are taken to Out of Service (OUT) or Not Installed (NIN). The user must know the correct password. See chapter System Security.

Display Service Condition **27**

DISERV : <SHELF>[,[<BRD>s/r][,<CRT>s/r][,<B-CHANNEL>s/r]]];

The B-CHANNEL parameter is for ISDN only. If no range or series is given in the EHWA the display is continuous. Use CTRL-X to stop the display.
Response:

```
 SHELF   BRD    CRT   REQUIR CURREN  OWNER
                        ED     T
  XXXX    XX     XX     X      X       X
```

If the B-CHANNEL parameter is entered the following is displayed:

```
SHELF   BRD    CRT    B-CH   B-CH-STATUS
 XXXX    XX     XX     XX      XXXXXXX
```

The B-CH-STATUS can be:

- Free;*)
- Busy;
- Busy and incoming claimed;
- Busy for testing;
- Not usable; *)
- Claimed for ATF-ARB;
- Busy outgoing selection in progress.

*) Previously the status 'free' was used, even when the B-channel was not assigned to a bundle. As from SSW 805.26 the status 'not usable' will be displayed (instead of `free') in case the B-channel has not been assigned.

Display Service Condition of Virtual Channel 360

DIVICH : <SHELF>,<BRD>s/r,<CRT>s/r;

This command is used to display the service condition of virtual channels (DTU-PR/PH/BA boards). If no range or series is given the display is continuous. Use CTRL-X to stop the display.
Response:

```
SHELF   BRD    CRT   REQUIR CURREN  OWNER
                       ED      T
 XXXX    XX     XX     X       X       X
```

Find Resource with Given Service Condition 28

FISERV : <CONDITION>s[,<UNIT>s/r];

If no unit number is specified, the action is performed system wide.
Response:

```
SHELF   BRD    CRT   REQUIR CURREN  OWNER
                       ED      T
 XXXX    XX     XX     X       X       X
```

Force Service Condition to Out of Service 29

FRCOUT : <SHELF>,<BRD>s/r[,<CRT>s/r];

This command is used if a resource never becomes idle. If the circuit number is omitted the board is meant. If required, a password may be asked for.
Possible responses:

```
Password for degradation level x: ?
Error 113: Continuation deactivates the CBU. Switch off journal update first!
REJECTED
Error 140: Last OM device may not be deactivated on this ISPBX plattform
REJECTED
Continuation deactivates special device(s)
(e.g. LBU, DBU).
Continue (yes/no)?:
```

Set Service Condition to In Service 24

SETINS : <SHELF>[,<BRD>s/r][,<CRT>s/r];

If the circuit number is omitted the board is meant. If both the circuit and board are omitted the shelf service condition is meant.

Set Service Condition to Not Installed 26

SETNIN : <SHELF>,<BRD>s/r[,<CRT>s/r];

If the circuit number is omitted the board is meant. If required, a password may be asked for.
Response:

```
Password for degradation level x: ?
Error 113: Continuation deactivates the CBU. Switch off journal update first!
REJECTED
Error 140: Last OM device may not be deactivated on this ISPBX platform
REJECTED
Continuation deactivates special device(s)
(e.g. LBU, DBU).
Continue (yes/no)?:
```

Set Service Condition to Out of Service 25

SETOUT : <SHELF>,<BRD>s/r[,<CRT>s/r];

If the circuit number is omitted the board is meant. If required, a password may be asked for.
Response:

```
Password for degradation level x:
Error 113: Continuation deactivates the CBU. Switch off journal update first!
REJECTED
Error 140: Last OM device may not be deactivated on this ISPBX platform
REJECTED
Continuation deactivates special device(s)
(e.g. LBU, DBU).
Continue (yes/no)?:
```

Display the CPU Slice Mask Status 454

DICCSS : [<UNIT>];

This command is only valid for CSS systems. It continues monitoring the status of the slices until it is terminated by the OM user.
Response:

```
SLICE_1      SLICE_2      SLICE_3      SLICE_4
Status       Status       Status       Status
```

Where status can be:

- operational;
- masked;
- synchronizing;
- dual (operational);
- dual (standby).

49. REMOTE MAINTENANCE

Change Remote Maintenance Configuration (not for CCS) 427

CHREMC : <REMOTE-USER-GROUP>[,<UNIT>];

This OM command is only relevant for CPU-ME/MT and CPS systems. Remote maintenance for CCS systems is programmed by a menu option on the Backup and Interface Module (BIM). Data can be entered for two remote user groups: 0 and 1. In this way two logical groups of users can be defined using the remote maintenance function (e.g. service organisation and customer organisation). This user group is used by the SOPHO SystemManager to identify itself as being part of the service or customer organisation.

Note: *To activate the new changes made by CHREMC, the port has to be taken out of service and back to in service again.*

The command will request a new value for all fields, displaying the values or strings already present (with the exception of the password). If the file is new, the default values will be displayed. If only a semi-colon is given, the contents of the field will be unchanged. If a space followed by a semi-colon is entered the field is cleared.
The tables below show examples of remote configurations for the various system platforms. Note that CPS systems (CIS-RM) support Hayes as well as V.25bis protocol, whereas the CPU-ME/MT supports the Hayes protocol only.

DESCRIPTION	MAX SIZE	DEFAULT	VALID CHARACTERS
Password	6 chars	RMAINT	All upper case ASCII chars
Number of connection attemps	255	6	0 … 9
Connection setup command	2	1	1 = Connect allowed 2 = Dial back allowed 3 = Both allowed
Subscriber number 0 … 9 (Dial back number)	22 digits	---	See Modem Manual
Calling station identification	0 (must be empty)	---	
Number of retries	255	5	0 … 9
Time (in units of 10 seconds) between retries	255	12	0 … 9
System identification	30 chars	---	All ASCII chars
Hayes modem initiation string 0	40 chars	---	All ASCII chars
Hayes modem initiation string 1	40 chars	---	All ASCII chars

Note: *Subscriber number 0 is the remote alarm number.*
Subscriber number 1 is the fall-back remote alarm number.

Table 49-1 Remote Maintenance Data for CPU-ME/MT Systems.

DESCRIPTION	MAX SIZE	DEFAULT	VALID CHARS
Password	6 chars	RMAINT	All upper case ASCII chars
Number of connection attempts	255	6	0 … 9
Connection setup command	2	1	1 = Connect allowed 2 = Dial back allowed 3 = Both allowed
Subscriber number 0 … 9 (Dial back number)	22 digits	---	See Modem Manual
Calling station identification	20 chars	---	All ASCII chars
Number of retries	255	5	0 … 9
Time (in units of 10 seconds) between retries	255	12	0 … 9
System identification	30 chars	---	All ASCII chars
Hayes modem init string - dial method	1	0	0 = Pulse (P) 1 = Tone (T)
Hayes modem init string - synchronization	1	0	0 = Wait for dialtone (W) 1 = Wait fixed interval (,)
Hayes modem init string - M command	9	0	0 … 9
Hayes modem init string - X command	9	0	0 … 9
Hayes modem init string - Y command	9	0	0 … 9
Hayes modem init string - &L command	9	0	0 … 9
Hayes modem init string - S register 01 … 20	99255	---	SSVVV (00000 … 99255) SS = S register number VVV = S register value

Note: *Subscriber number 0 in file RMAIN0.CNF is the remote alarm number.*
Subscriber number 1 in file RMAIN0.CNF is the fall-back remote alarm number.

Note: *If Hayes is selected then:*
- *"Calling Station Identification" must be empty;*
- *RMAIN0.CNF must exist and contain the Hayes modem init strings.*

Note: *The Y, &L and Synchronisation fields are not used by the system.*

Table 49-2 Remote Maintenance Data for CPS Systems.

In an iS3070 (CPS), the changed data is stored in a file, named RMAINx.CNF (x=remote user-group), on the LBU. On the CPU-ME/MT platform the data is stored in a datastructure in the RAM.

The minimum requirements for modems at the ISPBX side are:

- Hayes AT command interface (via V.24 port);
- V22, V22bis, V32;
- AT commands: 'ATH', 'ATDT' and 'ATZ';
- ATZ is used to return to stored profile;
- DCD circuit follows carrier (only HIGH if connection available);
- No command echoing (ECHO OFF);
- Response (result) codes avialble and in text form;
- Dial-up telephone line;
- Escape sequence default '+++';
- Escape sequence guard time 1 second;
- Carriage return character '0D' (hex);
- AT-command string of more than 1 command e.g. ATE0V0QS01;
- Error correction disabled;
- Flow control disabled;
- Data compression disabled;
- AUTO ANSWER mode.

Example of the CHREMC command for a CPU-ME/MT system:
<CHREMC:0,3;

```
Password in configuration file [… …]  :; Entered password is not shown
Number of connect attempts [010]  :002;
Connection setup command [1]  :2;
Subscriber number 0 [0W035:6891234]  :0W035:6894321;Content of field changed
Subscriber number 1 [0W035:6891111]  : ;          Content of field cleared
Subscriber number 2 [0W035:6892222]  :;             Content of field not changed
Subscriber number 3 [ ]  :;
Subscriber number 4 [ ]  :;
Subscriber number 5 [ ]  :;
Subscriber number 6 [ ]  :;
Subscriber number 7 [ ]  :;
Subscriber number 8 [ ]  :;
Subscriber number 9 [ ]  :;
Calling station identification [pcs-hilversum]  :;
Number of retries [006]  :025;
Time interval [012]  :;
System identification [pcs-hilversum]  :PCS-SOPHO iS3050;
Hayes initiation string 0 [ ]  :
Hayes initiation string 1 [ ]  :
Message 100: The new configuration file is stored
```

```
Executed
<
```

Note: *The characters used in the subscriber number are passed on to the modem. The modem may recognize the following characters as Hayes commands:*
W. Wait for dial tone,
@ Wait for silence,
, Wait some time.

Example of the CHREMC command for a CPS system:
<CHREMC:0,3;

```
Password in configuration file [… …]  :; Entered password is not shown
Number of connect attempts [010]  :002;
Connection setup command [1]  :2;
Subscriber number 0 [0W035:6891234]  :0W035:6894321;Content of field changed
Subscriber number 1 [0W035:6891111]  : ; Content of field cleared
Subscriber number 2 [0W035:6892222]  :; Content of field not changed
Subscriber number 3 [ ]  :;
Subscriber number 4 [ ]  :;
Subscriber number 5 [ ]  :;
Subscriber number 6 [ ]  :;
Subscriber number 7 [ ]  :;
Subscriber number 8 [ ]  :;
Subscriber number 9 [ ]  :;
Calling station identification [pcs-hilversum]  :;
Number of retries [006]  :025;
Time interval [012]  :;
System identification [pcs-hilversum]  :PCS-SOPHO iS3070;
Hayes initiation string:
- dial method [p]:;
- synchronisation [W]:;
- M command [0]:;
- X command [0]:;
- Y command [0]:;
- &L command [0]:;
- S register contents 01 [ ]:;
A new configuration file is written
Executed
>
```

Note: *The characters used in the subscriber number are passed on to the modem except the following characters which are interpreted as V.25bis commands and are converted (by the CIS-RM) to Hayes commands:*

: Wait for dial tone (corresponding Hayes command: W),
< Wait for silence (corresponding Hayes command: @),
= or > Wait some time (corresponding Hayes command: ,).

The CPU-ME/MT logs all relevant actions on the remote port. By means of OM commands remote logging output can be activated (and de-activated). Remote access attempts are always logged.

Change Remote Logging Output Device (CPU-ME/MT only) 436

CHRLOD : [<LDN>][,<UNIT>s/r];

Before logging can be started the output device must be specified by means of command CHRLOD. When a printer is assigned as output device, this has to be another one as the one possibly assigned for toll-ticketing.

Display Remote Logging Output Device (CPU-ME/MT only) 437

DIRLOD : ;

Response:

```
UNIT   DEVICE-NAME   OUTPUT-FORMAT-
                     VERSION
xx     XXXXX         XX
```

Start Remote Logging (CPU-ME/MT only) 438

STRTRL : <FILE-NAME>;

The layout of the logging messages is:

```
Command       System-id     date          time   group/user
                                                 or: alarm
DIALBACK      SOPHO iS3050  1993-10-26    09:24  0/0
DISCONNECT    SOPHO iS3050  1993-10-26    10:36  0/0
CONNECT       SOPHO iS3050  1993-10-27    11:03  1/4
DISCONNECT    SOPHO iS3050  1993-10-27    11:12  0/0
```

```
ALARM         SOPHO iS3050  1993-10-27   13:14  0010
DISCONNECT    SOPHO iS3050  1993-10-27   13:18  0/0
```

Stop Remote Logging (CPU-ME/MT only) 439

STOPRL : ;

To stop logging output.

Display Remote Logging (CPU-ME/MT only) 440

DISPRL : ;

Response:

```
RL-OUTPUT-    RL-    RL-
FILE
              STATUS STATUS
XXXXXX        act    act
XXXXXX        act    act
```

50. SSM

Use the following sequence of commands if an SSM (a Telephone Management System=TMS) must be connected:

- Use ASINTN to assign the TMS prefix (see chapter Numbering Scheme);
- Use CHTFCR if traffic classes must be changed from the TMS (see chapter System Security);
- Use ASTMSD to assign the digit position;
- Use ASTMSW to assign the relation between window and window size;
- Use CHTMST to assign the relation between the tone type and tone source;
- Use CHTMSL to assign the relation between a service (window) and the TMS handling that service.

Assign TMS Digit Position **275 #!**

```
ASTMSD : <DIGIT-POSITION>;
```

Specifies which digit contains the TMS service code. If, for example the code for TMS is *12, the 4th position contains the service code.

Assign TMS Window Size **277 #!**

```
ASTMSW : <WINDOW>,<WINDOW-SIZE>[,<UNIT>];
```

Specifies the service code and the related number of possible simultaneous services. BAR/UNBAR (service number 5) uses the command CHTRFC and the window size must therefore be set to 1.
Service number 5 is renamed to 'Change PBX Data' : this window size must be set to 3.

Change TMS Logical Name Relation **281 #!**

```
CHTMSL : <WINDOW>,[<LDN>][,<UNIT>];
```

If there is more than one TMS connected the different TMS systems could provide different services. This command links a logical device name of a TMS to a service number (WINDOW). If there is only one TMS then all services in use must be defined to this TMS.

Change TMS Announcement Code Relation 279 #!

```
CHTMST : <ANNOUNCEMENT-CODE>[,[<ANNOUNCEMENT-SOURCE>]
         [,<UNIT>]];
```

The relation between the ANNOUNCEMENT-CODE and the ANNOUNCEMENT-SOURCE is assigned per UNIT. The relation to an announcement code is erased by omitting the ANNOUNCEMENT-SOURCE.
The command will ask for additional parameters:

- ANNOUNCEMENT-SOURCE is 1: Synchronous announcer specified by a DNR
  Enter <DNR> of synchronous announcer:
- ANNOUNCEMENT-SOURCE is 2: Tone announcer specified by tone-function number
  Enter <TONE_FUNCTION> number of tone announcer:
- ANNOUNCEMENT-SOURCE is 3: Continuous announcer specified by an EHWA
  Enter <SHELF>,<BRD>,<CRT> of continuous announcer:

Display TMS Digit Position 274

```
DITMSD : ;
```

Response:

```
DIGIT
POSITION
4
```

Display TMS Logical Device Name Relations 280

```
DITMSL : [<WINDOW>][,<UNIT>];
```

Response:

```
UNIT   WINDOW LDN
3      81     TMS03
```

Display TMS Announcement Code Relations 278

```
DITMST : [<ANNOUNCEMENT-CODE>][,<UNIT>];
```

Response:

```
ANNOUNCEMENT-CODE relations:
```

```
ANNOUNCEMENT-CODE
relations
UNIT   CODE   SOURCE DNR    TONE   SHELF  BRD    CRT
xx     xx     x      xxxxxx xx     xxxx   xx     xx
```

Display TMS Window Size and Status 276

DITMSW : [<WINDOW>][,<UNIT>];

Response:

```
              MAX    ACTUAL
UNIT   WINDOW SIZE   SIZE   STATUS
xx     xx     xx     xx     xxx
```

51. SYSTEM DUMP

System dumps are used when serious problems occur in a system and the cause of these problems is unknown. This system dump contains diagnostic system data gathered by the Local Operating System (LOS) of a unit. The system dump can be sent to the helpdesk together with the Problem Report to determine the cause of these problems. Also do a RTRIEV and enclose the generated files: OR and PR.
A system dump is made in the central memory of a unit:

- After a freeze;
- After an operational start (warm or hot), due to a software exception;
- After an operational start (warm or hot), due to a manual request (OM command);
- After the TRSYSD or the CHTRAP command.

The next step for the user is to decide what to do with the system dump information:

- Use DUSYSD to save to a logical device (LBU or PC). As soon as the dump is saved completely, it will be erased automatically from the memory. This action can also be performed automatically, in this case the save will be done to the local backup or;
- In case the system dump data is not needed use ERSYSD to delete the system dump information in the central memory.

Change Diagnostic System Data Parameters **133 #!**

CHSYSD : <SHELF>,,<CRT>,<DUMP>,<AUTO>,<WRITE-SEL>;

This command determines which data is stored in a system dump and whether the dump information is automatically saved to the local backup.
The default setting is:

DUMP	AUTO	WRITE-SEL
0: Freeze	ON	All
1: Exception	ON	All
2: Manual start	OFF	All
3: Trigger	ON	All

Display Diagnostic System Data Information **134**

DISYSD : <SHELF>,,<CRT>;

Response:

```
Auto   Write
FEMT   FEMT   Presen Writin Sequence nr.  Appended nr.   Frozen nr.
                ce     g
xxxx   xxxx   xxxxxx xxxxxx      xx            xx            xx
                x
```

In this response FEMT stands for **F**rozen process, software **E**xception, **M**anual start and **T**riggered system dump. Auto FEMT displays the automatic writing (0= no, 1= yes) and Write FEMT displays the write select (0= current segment, 1= all). Presence indicates the presence of system dump information (absent/present/writing/blocked). Writing indicates the current segment name, sequence number indicates the sequence number of the dump currently present. The appended number gives the number of dumps currently appended to the file DSuuss.DMP (ss=sequence nr). The frozen number indicates the number of frozen processes since the last operational start.

Dump Diagnostic System Data **230**

DUSYSD : <SHELF>,,<CRT>[,<LDN>];

This command will start the dumping of Diagnostic System Data present in the central memory to a Logical Device. The EHWA (SHELF and CRT) must indicate a CM module. The following files are dumped to the specified device:
DAuuxx.DMP, the current environment dump, containing:
(uu = the unit number and xx = the sequence number of the dump.)

- Process Instance Value (PIV);
- Stack pointer;
- PACBs of the current process;
- Control blocks of the current process;
- Stack;
- Priority/identity and destination address of the signals of the signal queues, etc.

DBuuxx.DMP, segment dump part 1.
DCuuxx.DMP, segment dump part 2.
DDuuxx.DMP, segment dump part 3.
DEuuxx.DMP, segment dump part 4.

DSuuxx.DMP, appended current environments (when WRITE-SEL=current segment).

Erase Diagnostic System Data 231

```
ERSYSD : <SHELF>,,<CRT>;
```

As long as a system dump is present in the central memory, no new dump can be made. With this command the dump information is erased from the central memory.

Trigger System Dump 232

```
TRSYSD : <DUMP-ACTION>,<SHELF>,[<BRD>],<CRT> [,<SIG-
         ID>,<SCT>];
```

If BRD is omitted (CM module indicated) then SIG-ID and SCT must also be omitted. If the BRD parameter is filled in, the EHWA must indicate a peripheral circuit.
No new system dump can be made as long as an old one is still present. This command is only used on indication of the Philips Laboratory in case of system errors. They will give the values to fill in for parameters SIG-ID and SCT.
This system dump can be copied to a PC and sent back to determine the cause.
Note that when a dump is reset (DUMP-ACTION = 1), the EHWA of the CPU has to be given.

52. SYSTEM SECURITY

System security consists of the following:

- **Authority classes.**
  Each OM command has an authority index. This index is linked to an authority class. This authority class is compared with the authority class of the OM terminal. If the OM terminal does not have the authority class of the command, the command cannot be executed.
  A distinction is made between session and default authority class. The default authority classes are given to a terminal when a new session begins. The session authority can be changed but it disappears after the session is terminated.
- **Protection levels.**
  Each file has protection levels for specific actions on the file. The actions are:

New	To determine if a user is allowed to make a new version of an existing file.
Append	To determine if a user is allowed to append to a file.
Read	To determine if a user is allowed to read a file.
Delete	To determine if a user is allowed to delete an existing file.

  These are compared with the protection levels of the OM terminal. If the OM terminal does not have the same (or higher) protection level as the file for a specific action, the command will not be executed.
  A distinction is made between session and default protection levels. The default protection levels are given to a terminal when a new session begins. The session protection levels can be changed but they disappear after the session is terminated.
- **Passwords.**
  Some commands are potentially dangerous. The user must type in a password, before the command can be executed.
- **Restriction levels.**
  Each OM terminal, operators desk and SSM system has restriction levels assigned to it. This means that some traffic classes and facility class marks cannot be assigned on that specific terminal or operators desk.

52.1. AUTHORITY AND PROTECTION

With these commands it is possible to define the authority classes, to set the default and session authority class and protection levels of an OM terminal. The authority class consists of 16 levels. The authority classes have the following default meanings:

Table 52-1 Default Definition of Authority Classes.

AUTHORITY CLASS	PERMITTED ACTIONS
0	Display functions for the customer
1	Change telephony functions by customer
2	Change complex and data functions by customer
3	File management
4	Batch jobs
5	Change of service conditions
6	Maintenance level 1
7	Maintenance level 2
8	Maintenance level 3
9	Second line maintenance tools
10	Spare (user definable)
11	Spare (user definable)
12	Spare (user definable)
13	Spare (user definable)
14	Change session authority class and protection (Always allowed)
15	Subcommands (Never allowed)

Protection levels are used to protect files against unauthorized use of an OM terminal. There are four kinds of protection: New (N), Append (A), Read (R) and Delete (D), each having a protection level between 0 (lowest level) and 7 (highest level). Each file has a specific protection level; only a terminal that has an equal or higher protection level can manipulate that file, e.g. a terminal with NARD 7443 can not delete a file with NARD 4444. New, append and read would be allowed for this example.
Display the current authority classes and protection levels by : `DIAUPR:;`

52.1.1. Authority Class Indexes

Change Authority Class Index and Value Relationship **14 #!**

`CHACIV : <AUTHORITY-INDEX>[,<AUTHORITY>];`

With this command it is possible to change the authority class connected to an OM command. Each OM command has an AUTHORITY-INDEX to which an AUTHORITY class can be linked. This command asks for a password.

Display Authority Class Index and Value Relationship **117**

`DIACIV : <AUTHORITY-INDEX>;`

Response:

```
Authority-      Authority
index
xxx             xx
```

52.1.2. Authority Classes and Protection Levels

Change Default Authority Class **114 #!**

```
CHDEAU : <TERMINAL>,<AUTHORITY>[,<ALLOWED>];
```

This command may ask for a password. The effect of this change will not be noticed until a new session is started.

Change Default Protection Level **115 #!**

```
CHDEPR : <TERMINAL>,<PROT-TYPE>,<PROTECTION>;
```

This command may ask for a password. The effect of this change will not be noticed until a new session is started.

Change Session Protection Level **14**

```
CHSEPR : <PROT-TYPE>,<PROTECTION>;
```

This command may ask for a password. The new protection level is only valid for the current session.

Change Session Authority Class **14**

```
CHSEAU : <AUTHORITY>[,<ALLOWED>];
```

This command may ask for a password. The new authority class is only valid for the current session.

Display Authority Class and Protection Level **116**

```
DIAUPR : [<TERMINAL>];
```

If the terminal name is omitted the current terminal name is used. In that case both the default and the session protection level are displayed.

Response:

```
 Default protection level (N/A/R/D): … …
(Session protection level (N/A/R/D): … …)
 Default authority class : … … … … …
(Session authority class : … … … … …)
```

52.2. PASSWORDS

Passwords are used by several commands. Each password is identified by a password group and a password key. The following table indicates the default passwords:

Table 52-2 Default Passwords.

PASSWORD KEY	PASSWORD GROUP						
	0	1	2	3	4	5	6
	AUTH.	PROT. N	PROT. A	PROT. R	PROT. D	SERVICE	MISC.
0	---	---	---	---	---	---	
1	---	---	---	---	---	SYSTEM	RISKY
2	---	---	---	---	---	RISKY	
3	---	---	---	---	---		
4	---	---	---	---	---		
5	---	CONFID	CONFID	CONFID	CONFID		
6	RISKY	RISKY	RISKY	RISKY	RISKY		
7	RISKY	RISKY	RISKY	RISKY	RISKY		
8	RISKY						
9	RISKY						
10	RISKY						
11	RISKY						
12	RISKY						
13	RISKY						

--- = No password present

These default passwords can be changed by OM command CHPASS.

Change Password **235 #!**

CHPASS : <PW-GROUP>,<PW-KEY>;

Response:

```
Old Password:
New Password:
Verification:
```

Fill in the old password and the new password (and again the new password for verification). A password can be deleted by just entering a semi-colon when asked for the new password

and verification. A password consists of maximum 6 characters. The following table gives the password groups and the password keys present in the groups:

Table 52-3 Password Usage.

PASSWORD GROUP	RELATED COMMAND	DESCRIPTION	PASSWORD KEY
0	CHDEAU	Changing default authority class	0 … 13 (Authority class No.)
0	CHSEAU	Changing session authority class	0 … 13 (Authority class No.)
1 … 4 (NARD)	CHDEPR	Changing default protection level	0 … 7 (Protection level)
1 … 4 (NARD)	CHSEPR	Changing session protection level	0 … 7 (Protection level)
5	SETOUT	Set service condition to out of service	0 … 2 (Degradation level)
5	SETNIN	Set service condition to not installed	0 … 2 (Degradation level)
5	FRCOUT	Forcing service condition to out of service	0 … 2 (Degradation level)
5	UNIINS	Set service condition of unit to installed	2 (Degradation level)
5	UNININ	Set service condition of unit to not installed	2 (Degradation level)
6	INIDSK	Initialise disk	1
	CHACIV	Change ACI and value relation	

The following degradation levels are used in password group 5:

0 Not serious PCT boards.
1 Serious PMs.
2 Very serious CM, SM, CM boards, SM boards, devices, SNL, ULL, DTU and PCH.

52.3. RESTRICTION LEVELS

This group of OM commands is used to determine which facility class marks and traffic classes may be assigned and deleted from a certain terminal type.

52.3.1. Facility Class Mark Restriction Levels

Change Facility Class Mark Restriction Level **228 #!**

```
CHFCMR : <TERMINAL-TYPE>s/r[,[<FCM>s/r] [,<RESTRICTION>]];
```

If the facility class mark level is omitted all facility class mark levels will be changed depending on the restriction. If parameter RESTRICTION is omitted the action is restricted as a default.

Display Facility Class Mark Restriction Level **229**

DIFCMR : <TERMINAL-TYPE>s/r;

Response:

```
Unrestricted facility class marks for "TERMINAL
TYPE"
   xx      xx      xx      xx      xx      xx
```

52.3.2. Traffic Class Restriction Levels

Change Traffic Class Restriction Level **266 #!**

CHTFCR : <TERMINAL-TYPE>s/r[,[<TRFC>s/r] [,<RESTRICTION>]];

If the traffic class level is omitted all traffic class restriction levels will be changed depending on the restriction. If parameter RESTRICTION is omitted the action is restricted as a default.

Display Traffic Class Restriction Level **277**

DITFCR : <TERMINAL-TYPE>s/r;

Response:

```
Unrestricted traffic classes for "TERMINAL TYPE"
   x       x       x       x       x       x
```

53. TESTING

53.1. PERIODIC AUTONOMOUS TESTING

Periodic Autonomous Testing (PAT) ensures that most system parts are tested from time to time. If a PAT fails the result appears in an alarm buffer. A successful test result is not displayed.

Change Periodic Autonomous Testing Mode **83**

```
CHPATM : <PAT-MODE>[,<UNIT>s/r];
```

This command is used to switch the unit between the Normal and Installation/Factory test mode. In the Installation/Factory test mode the periodic autonomous test has a higher priority than the handling of telephone traffic. Periodic autonomous testing is an idle time job in the normal mode, i.e. telephone traffic is more important than testing.
Remark: A fault report with alarm code 16 with qualifier 3 indicates that the Installation/Factory test mode is set.

Clear Periodic Autonomous Testing Cycle Counter **84**

```
CLPATC : [<UNIT>s/r];
```

Display Periodic Autonomous Testing Cycle Counter **82**

```
DIPATC : <RESOURCE-TYPE>s/r[,<UNIT>s/r];
```

Response:

```
UNIT   RESOURCE-TYPE CYCLE-COUNTER
XX     XX     XX
```

53.2. MANUALLY CONTROLLED TESTING

Manually Controlled Testing (MAT) gives the possibility to insert resources in a test request list. If this test fails the result can be read out from history buffer 12. A successful test will not be displayed. The following rules apply for the hardware addresses in these command:

- If CRT is omitted, the board is indicated.

- If BRD is omitted, the module is indicated.
- If BRD and CRT are omitted, the shelf is indicated.

Delete Resource from Test Request List **97**

DETEST : [<SHELF>[,[<BRD>s/r][,<CRT>s/r]]];

If the shelf is not specified, ALL test requests in the system will be deleted.
Response:

```
Do you want to delete ALL manual test requests (YES/NO) : ?
```

Display Manual Test Requests **98**

DITEST : [<SHELF>[,[<BRD>s/r][,<CRT>s/r]]];

If at least the shelf is specified the test requests STATUS and REP-FACTOR are shown, according to the following rules:
STATUS = request in progress or
STATUS = request waiting
Repeat factor = 0 means continuous testing, while any other value represents the number of tests for that EHWA that still has to be performed, plus the current test if the status is waiting.
If an EHWA is specified, the general status of manually controlled tests is displayed. Otherwise for each unit the total number of waiting requests and requests in progress is given.
If at least SHELF has been input the response is:

```
SHELF  BRD    CRT    STATUS REP-FACTOR
xxxxx  xx     xx     xx     xx
```

Otherwise:

```
UNIT     # WAITING   # IN PROGRESS
xx          xx           xx
```

Insert Resource into Test Request List **96**

INTEST : <SHELF>[,[<BRD>s/r][,[<CRT>s/r] [,<REP-FACTOR>]]];

If the repeat factor is omitted, value 1 is used.

53.3. TEST OF THE ALARM BOX

Test Alarm Box **233**

TSALRM : [<UNIT>s/r];

In the case of a CPU-ME/MT, only the alarm output (upper socket) at the CPU-ME/MT is tested.
Response:

```
Please enter the required test state ie “on”, “off” or “end” ?
```

53.4. MEMORY QUALITY

This command is used to test the main memories of the four processors.

Display Memory Quality (for CPS only) **234**

DIMEMQ : <SHELF>,,<CRT>;

Response:

```
THE CM MAIN MEMORY IS UNDER TEST NOW - PLEASE
BE PATIENT
BLOCK  : SHELF BRD   : SHELF BRD   : SHELF BRD   : SHELF BRD
       : xxxx x      : xxxx x      : xxxx x      : xxxx x
000    : 0000 0000   : 0000 0000   : 0000 0000   : 0000 0000
       00 0          00 0          00 0          00 0
001    : 0024 0000   : 0000 0000   : 0000 0000   : 0000 0000
       00 0          00 0          00 0          00 0
002    : 0000 0000   : 0000 0000   : 0000 0000   : 0000 0000
       00 0          00 0          00 0          00 0

Test completed
```

The output consists of a header, giving the hardware address of the four processor slices. The following lines give the block number, followed by the data for each of the four slices. The slice data is subdivided into four columns. Of these four columns:

- The first one indicates the number of hard bit faults detected (max. 9999);
- The second one indicates the number of soft bit errors (max. 9999);
- The third one indicates the number of times the slice contributed to a double bit error (max. 99);
- The fourth indicates whether a slice error did occur (0 or 1).

If the final message is not “Test completed” but “Test aborted by operating system”, this indicates that a synchronization action of the CM slices has been initiated, so there is no point in continuing the test. The test can be restarted when the synchronization action is finished. The test can be done for the following boards:

- CMS-D, 8 Mbytes, block number 0 … 127;
- CPS-4M, 8 Mbytes, block number 0 … 127.

- **Interpreting the Test Results**
  This test enables the maintenance engineer to locate faulty memory chips on the CMS-D/4M boards. See DB-A 9130e, Maintenance Manual.

53.5. CONTROLLED CONNECTION

The commands for controlled connections are used to establish and release a one way or a both way connection between two ports.
It is also possible to make a one way connection between a Sender/Receiver Tone and a port.
A connection is established by means of the commands: CRCCSP or CRCCPP. The controlled connection is released by means of command ERCOCO. The actual status of the controlled connection is displayed by means of command DICOCO. The following statuses are possible:

- SETUP :	Controlled connection has been set up.
- ACTIVE :	Connection has been established and active.
- ERROR :	An error has been detected and the related resources released. Clear the controlled connection by means of the ERCOCO command. Note that an action of SAS or the command FRCOUT can be the cause that a connection goes to error.
- KILL :	Connection has been erased.

The service condition of the circuits which are involved, must be OUT.
If a tone resource or a B-channel is involved, the circuit must be in service condition INS.
A controlled connection is limited to a unit. Per unit a maximum of 5 controlled connections may be set up.

Create Controlled Connection Single Path **322**

```
CRCCSP : <SHELF-A>,<BRD-A>[,<CRT-A>[,<B-CHANNEL-A>,
         <EXCLUSIVE-A>]];
```

The EHWA entered is that of the source EHWA. If the board number is omitted it means that a module (e.g. a PM) is addressed.
The parameters B-CHANNEL and EXCLUSIVE are mandatory for ISDN ports.
The system asks for the destination EHWA:

```
<SHELF-B>,<BRD-B>,<CRT-B>[,<B-CHANNEL-B>,<EXCLUSIVE-B>];
```

Create Controlled Connection Paired Path 323

CRCCPP : <SHELF-A>,<BRD-A>[,[<CRT-A>][,<B-CHANNEL-A>, <EXCLUSIVE-A>]];

If the board number is omitted it means that a module (e.g. a PM) is addressed. The parameters B-CHANNEL and EXCLUSIVE are mandatory for ISDN ports.
The system asks for the destination EHWA:

```
<SHELF-B>,<BRD-B>,<CRT-B>[,<B-CHANNEL-B>,<EXCLUSIVE-B>];
```

A controlled connection will be set up between A and B.

Display Controlled Connection 330

DICOCO : [<COCO-NUMBER>],[<UNIT>];

If the COCO-NUMBER is omitted the status of all controlled connections in the unit is given.
Response:

```
UN #    STATE  SHELF   BRD    CRT    BB X  SHELF   BRD    CRT    BB X  T
xx x     xxx   xxxxx    x      x     xx x   xxxx    x      x     xx x  x
SET UP TIME:                 [ROLL BACK TIME]
```

Erase Controlled Connection 329

ERCOCO : <COCO-NUMBER>[,<UNIT>];

Send Controlled Connection Tone 397

SECCTO : <COCO-NUMBER>[,[<TONE-FUNCTION>],[<UNIT>]];

Before using this command, be sure that the controlled connection is established and is in the `active' state.

Send Controlled Connection Digit **398**

SECCDI : <COCO-NUMBER>,<DFP-INDICATOR>,<DIGIT/FREQ> [,<UNIT>];

Before using this command, be sure that the controlled connection is established and is in the `active' state.

Display Controlled Connection Digit **399**

DICCDI : <COCO-NUMBER>[,<UNIT>];

Before using this command, be sure that the controlled connection is established and is in the `active' state.
Response: Received digits.

53.6. DIRECTED CALL

The directed call facility is used to test the function of receiver/sender resources. A directed call is limited to one unit.
The sequence to set up a directed call is as follows:

- Directed call definition.
  A directed call is defined by means of command ASDICA.
- Directed call activation.
  The directed call is activated by means of the extension of the user. The user goes off hook and dials the directed call facility code. He receives the dial tone if the resources which are defined for the extension are idle.

The directed call is removed from the registration list by means of command DEDICA.

Assign Resources to a Directed Call **393 #!**

ASDICA : <SHELF>,<BRD>,<CRT>;

The EHWA indicates the originator. The system asks for the resource EHWA(s):
<SHELF>,<BRD>,<CRT>;
The command is stopped by typing a single semi colon.

Delete Directed Call 395 #!

DEDICA : <SHELF>,<BRD>s/r,<CRT>s/r[,<SHELF>,<BRD>,<CRT>];

The first EHWA indicates the originator, the second is the resource EHWA.

Display Direct Call Definition 394

DIDICA : [<SHELF>,<BRD>s/r,<CRT>s/r][,<UNIT>];

Response:

```
ORIGINATOR RESOURCE
SHELF  BRD    CRT          SHELF  BRD    CRT    TYPE
xxxxx  xx     x            xxxxx  xx     xx     xxx
                           xxxxx  xx     xx     xxx
xxxxx  xx     x            xxxxx  xx     xx     xxx
                           xxxxx  xx     xx     xxx
```

54. TOLL TICKETING AND FULL DETAILED CALL RECORDING

The OM commands for toll-ticketing are only relevant when the system option "Full Detailed Call Recording in stead of Toll Ticketing" (60) is set to "FALSE". Likewise the OM commands for Full Detailed Call Recording (FDCR) are only relevant when system option 60 is set to "TRUE". Commands STOPTT and STOPFR are independent of option 60.

54.1. TOLL TICKETING

Change Thresholds of Route Number **152 #!**

```
CHTRLV :  <ROUTE>s/r,[<TICS>][,<DURATION>];
```

A call is only included in a call recording report, if the number of ticks (metering pulses) or the duration of the call exceeds a certain threshold. This command is used to assign these thresholds.

Display Thresholds of Route Number **153**

```
DITRLV : [<ROUTE>s/r];
```

This command shows the threshold(s) of a route as set by `CHTRLV`.
Response:

```
ROUTE   THRESHOLD      THRESHOLD
        METERING-TICS  DURATION (seconds)
```

Change Toll Ticketing Characteristics **154 #!**

```
CHTTCR : <LINES-PER-PAGE>;
```

Indicates the number of lines after which a page feed is generated in the call recording file.

Change Toll Ticketing Output Definitions **155 #!**

```
CHTTOD : [[<LDN>][,[<OUTPUT-FORMAT-VERSION>][,<UNIT>s/r]]];
```

Indicates to which device the toll ticketing file should be sent and in which output format. If LDN (Local Device Name) is omitted no output device is defined any more. If the output

device is changed while toll ticketing is active, the "old" device remains valid until toll ticketing is restarted.

Display Toll Ticketing Output Definitions 156

DITTOD : ;

If the output device is changed while toll ticketing is active, the "old" device remains valid until toll ticketing is restarted. In this case the displayed device is not the current output device. This command is always executed system wide.
The response is:

```
UNIT    OUTPUT-DEVICE  OUTPUT-FORMAT-VERSION
xx      xxxx           x
```

Display Toll Ticketing Status and Characteristics 151

DISPTT : ;

The response is:

```
TT-OUTPUT-FILE FILE-   TT-     IN      ACCUMULATIONS:
               STATUS  STATUS  PROGR   CALLS  PULSES  DUR    CALLS
filename       xxxx    xxxxx   xxxxx   xxxxx  xxxxx   xxxxx  xxxx
```

Start Toll Ticketing 149

STRTTT : <FILE-NAME>;

Before toll ticketing can be started the output device must be specified. This can be a LBUxx, a PC, a toll-ticketing device or a printer. If necessary use DICHAR to obtain a list of valid devices. When toll ticketing is active, another toll ticketing start with a different file name may be done. This redirects the output to the other file and the old one is closed. This to prevent gaps in the TT output. The file contains the following items:

```
CC CCT  DP P/B   EXT    IBSC    PSW   NUMBER DIALLED  DATE   TIME   UNITS   TETN
                        P/N                          DUR.
 xx xx   xx x    xxxx   xx x  xxxxxx      xxxx       xxxxx  xxxx    xxx    xxxx
                                                            xx
```

If the costcentre (CC) and costcentre type (CCT), department (DP), private/business indicator (P/B) and/or password (PSW) are not used by the caller, a blank is displayed in the related area. TETN contains the route and line number of the external line.

Stop Toll Ticketing **150 #**

STOPTT : ;

This command stops toll ticketing and closes the output file.

54.2. FULL DETAILED CALL RECORDING

Change FDCR Characteristics **445 #!**

CHFRCR : <FDCR-CALL-TYPE>s/r,<OFF-ON>;

This command adds or removes a FDCR call type to or from the list of recorded items. It allows you to perform call recording on a restricted set of call types.

Change FDCR Output Definitions **347 #!**

CHFROD : [[<LDN>][,[<OUTPUT-FORMAT-VERSION>][,<UNIT>s/r]]];

Indicates to which device the Full Detailed Call Recording (FDCR) file should be sent and in which output format. If LDN is omitted no output device is defined any more. If the output device is changed while FDCR is active, the "old" device remains valid until FDCR is restarted.

Display FDCR Output Definitions **371**

DIFROD : ;

If the output device is changed while FDCR is active, the "old" device remains valid until FDCR is restarted. In this case the displayed device is not the current output device. This command is always executed system wide.
The response is:

```
UNIT    OUTPUT-DEVICE  OUTPUT-FORMAT-VERSION
xx      xxxx           x
```

Display Full Detailed Call Recording 345

DISPFR : ;

This command is used to display the FDCR output file. Furthermore this command displays the accumulated metering pulses and call duration time, which are lost as result of congestion on accounting records.
The (example) response is:

```
FDCR-OUTPUT-   FILE-   TT-     IN      ACCUMULATIONS:
FILE
               STATUS  STATUS  PROGR   CALLS   PULSES  DUR     CALLS
filename       xxxxx   xxxxx   xxxxx   xxxxx   xxxxx   xxxxx   xxxx


Recording call types    :
internal calls          :1
outgoing calls          :1
incoming calls          :1
tieline calls           :1
assistance calls        :0
paging calls            :0
toll-ticketing calls    :1
```

Start Full Detailed Call Recording 340 #!

STRTFR : <FILE-NAME>;

Before FDCR can be started the output device must be specified. This can be a LBUxx, a PC or a printer. If necessary use DICHAR to obtain a list of valid devices. When FDCR is active, another FDCR start with a different file name may be done. This redirects the output to the other file and the old one is closed. This to prevent gaps in the output. For more information about this file, refer to the Facility Implementation Manual (Management Facilities).

Stop Full Detailed Call Recording 342 #!

STOPFR : ;

This command is used to close the FDCR output file.

55. TOOLS

55.1. NUMBER OF FREE PACKETS / ROUTING COUNTERS

The commands for tools are used to display the results of the Local Operating System (LOS) functions which monitor the routing counters, the use of software resources.
For detailed information of these OM commands, reference is made to the Second Line Maintenance Manual.

Display Number of Free Packets **293**

DIPOOL : [<UNIT>];

Response for CPS:

PCB	PACB	CB	SIG	BUF	SDB	MDB	LDB	IOM	STCK	CDB
0568	0565	0563	0400	0500	0028	0400	0179	810	0099	400

The display will be continuously and can be aborted by means of `Ctrl X'.

Display Routing Counters **292**

DIROCO : <SHELF>,<BRD>[,<CRT>s/r];

It is possible to display the routing counters of other units.
Response:

SHELF	BRD	CRT	CHNL	DESTINATION:	C1: C2:	C3: C4:	C5: C6:	C7: C8:
xxxx	xx	xx	x	xxxx xx	x x	x x	x x	x x

56. TRAFFIC CLASSES

Change Traffic Class of DNR/BSP **16 #!**

CHTRFC : [DAY-TRFC>],[<NIGHT-TRFC>],[UP-TRFC>],[<DOWN-TRFC>], <BSP-ID>s/r;

If any of the parameters DAY-TRFC, NIGHT-TRFC, UP-TRFC or DOWN-TRFC is omitted the corresponding traffic class is not changed.
Initially the UP-TRFC will be the same as the DAY-TRFC and the DOWN-TRFC will be the same as the NIGHT-TRFC.
The DNR part of the BSP-ID is sufficient as long as the DNR is unique.
If the DNR is an operator DNR only the DAY-TRFC is relevant.

Display Traffic Class of DNR/BSP **17**

DITRFC : <BSP-ID>s/r;

If the traffic class of an operator DNR is displayed only the DAY-TRFC is displayed.
Response:

```
DNR-     DAY-    NIGHT-TRFC    UP-     DOWN-TRFC
BSPT     TRFC                  TRFC
xxxxxx    xx         xx         xx         xx
```

57. TRAFFIC OBSERVATIONS AND MEASUREMENTS

57.1. TRAFFIC OBSERVATIONS

The command for traffic observation is used to scan and display the dynamic and static data of various resources in the system.
The static data is read out when the command is executed. It consists of:

- Number of resources in OUT;
- Number of resources in ABL;
- Number of resources in NIN;
- Total number of resources in a pool;
- Total number of B-channels (ISDN only);
- Not usable B-channels (ISDN only).

The dynamic data is scanned with a higher frequency. If the dynamic data changes a new output line is generated. Dynamic data comprises:

- Number of busy resources;
- Number of idle resources;
- Number of congested resources (never reset);
- Number of Camp On Busy situations on resources;
- Etc.

Data about the following resources can be observed with this command:

- Bundle and route data;
- Inter unit bundle and route data;
- Extension and group data;
- Paging route data;
- Add On Circuit (AOC) data;
- RKT-SDT and SKT-RDT data;
- Incoming and outgoing MFC data;
- Socotel data;
- Convertor data;
- Operator data and data about queues;
- Switching Network Channel (SNC) data;
- Call data;
- Inter Unit Traffic Dispersion;
- Dialled Facilities;

- Hatch data .

Display Result of Traffic Observations **209**

DITRAF : <OBJECT>;

The command will ask for additional parameters, depending on the selected object. Note that only objects without an asterisk (*) can be used for this command. See appendix B. parameter OBJECT.
The result of this command is some static and some dynamic data.
This command can be executed in the following ways:

- Display traffic observations of bundle:

```
DITRAF:0;
Enter bundle number:30;
Enter unit number:1;
```

Response:

```
    OBSERVED-ITEM      STATIC-DATA
    BUNDLE      UNIT    OUT     ABL     NIN    TOTAL    BCH    BCH-
                                                              NIN
      XXX        XX      X       X       X       X       X       X
    OBSERVED-ITEM      DYNAMIC-DATA
    BUNDLE      UNIT    BUSY    CONG
      XXX        XX      XX      XX
```

- Display traffic observations of route:

```
DITRAF:1;
Enter route number:30;
```

Response:

```
    OBSERVED-ITEM      STATIC-DATA
     ROUTE              OUT     ABL     NIN    TOTAL    BCH   BCH-NU
      XXX                X       X       X       X       X       X
    OBSERVED-ITEM      DYNAMIC-DATA
     ROUTE      UNIT    BUSY    CONG    COBS
      XXX        XX      XX      XX      XX
```

- Display traffic observations of inter unit bundle:

```
DITRAF:2;
```

```
Enter interunit bundle number:10;
Enter unit number:1;
```
Response:

```
    OBSERVED-ITEM      STATIC-DATA
  IU-BUNDLE    UNIT    OUT    ABL    NIN    TOTAL
     xxx        xx      x      x      x      x
    OBSERVED-ITEM     DYNAMIC-DATA
  IU-BUNDLE    UNIT    BUSY   CONG
     xxx        xx      xx     xx
```

- Display traffic observations of inter unit route:

```
DITRAF:3;
Enter interunit route number: 10;
Enter unit number:1;
```
Response:

```
    OBSERVED-ITEM      STATIC-DATA
   IU-ROUTE     UNIT    OUT    ABL    NIN    TOTAL
     xxx        xx      x      x      x      x
    OBSERVED-ITEM     DYNAMIC-DATA
   IU-ROUTE     UNIT    BUSY   CONG
     xxx        xx      xx     xx
```

- Display traffic observations of extensions:

```
DITRAF:4;
Enter unit number:1;
```
Response:

```
    OBSERVED-ITEM     DYNAMIC-DATA
   EXTENSION-UNIT     BUSY   RING
         xx            xx     xx
```

- Display traffic observations of extension or group:

```
DITRAF:5;
Enter extension <BSP-ID> or group <DNR>:1311;
```
Response:

```
    OBSERVED-ITEM     DYNAMIC-DATA
```

```
   DNR-BSPT     TYPE    PRES    ABS    BUSY    RING    COB      UNS-BIDS
    xxx-xx      xxx      xx      xx      xx      xx      xx         xx
```

- Display traffic observations of paging route:

```
DITRAF:6;
Enter paging route number:40;
```

Response:

```
    OBSERVED-ITEM      STATIC-DATA
  PAG-ROUTE    UNIT    OUT    ABL    NIN    TOTAL
     xxx        xx      x      x      x       x
    OBSERVED-ITEM     DYNAMIC-DATA
  PAG-ROUTE    UNIT   BUSY   CONG   COBS
     xxx        xx     xx     xx     xx
```

- Display traffic observations of Add On Circuit (7), RKT-SDT (8), SKT-RDT (9), Incoming MFC (10), Outgoing MFC (11), Socotel data (12) or Hatch (21):

```
DITRAF:7 . . 12 and 21;
Enter unit number:1;
```

Response:

```
    OBSERVED-ITEM      STATIC-DATA
    RES-ID       UNIT    OUT    ABL    NIN    TOTAL
      xxx         xx      x      x      x       x
    OBSERVED-ITEM     DYNAMIC-DATA
    RES-ID       UNIT   BUSY   CONG
      xxx         xx     xx     xx
```

- Display traffic observations of convertor:

```
DITRAF:13;
Enter convertor type:0;
Enter unit number:1;
```

Response:

```
    OBSERVED-ITEM      STATIC-DATA
   IU-ROUTE     UNIT    OUT    ABL    NIN    TOTAL
     xxx         xx      x      x      x       x
    OBSERVED-ITEM     DYNAMIC-DATA
   IU-ROUTE     UNIT   BUSY   CONG
     xxx         xx     xx     xx
```

- Display traffic observations of specific operator:

```
DITRAF:14;
Enter operator <DNR>:8991;
```

Response for specific DNR:

```
 OBSERVED-ITEM  DYNAMIC-DATA
OP-DNR          OP-     M-IND     WA      UA     C-SER*  C-TAX*    C-      C-     C-PRE*
                STAT                                               BUSY*   RING*
  xxx           xxx       x       x       x       x       x        x       x       x
```

General response:

```
    OBSERVED-ITEM       STATIC-DATA
    OPERATOR-UNIT        OUT     ABL     NIN    TOTAL
         xx               x       x       x       x
    OBSERVED-ITEM       DYNAMIC-DATA
    OPERATOR-UNIT        PRES    PRES-   PRES-   ABS-     ABS
                                 CH      POM     POM
         xx               xx      xx      xx      xx      xx
```

* C-SER:	series call rerouted to the C queue
C-TAX:	tax metering information
C-BUSY:	call to a busy extension rerouted to the C queue
C-RING:	call which encountered ringing time out rerouted to the C queue
C-PRE:	preferred calls

- Display traffic observations of queues:

```
DITRAF:15;
Enter queue type:0;
Enter assistance group:;
Enter unit number:1;
```

Response:

```
    OBSERVED-ITEM      DYNAMIC-DATA
 ASSIST-GROUP   UNIT     M-      C-      A-
                        QUEUE   QUEUE   QUEUE
      xx         xx      xx      xx      xx
```

- Display traffic observations of Switching Network Channels:

```
DITRAF:16;
Enter PMC/PSC address <SHELF>, <BRD>:1011,17;
```

Response:

```
OBSERVED-ITEM      DYNAMIC-DATA
SHELF-BRD-CRT      BUSY   CONG
   xxx - xx         xx     xx
```

- Display traffic observations of calls:

```
DITRAF:17;
Enter single or multi unit calls:1; (0=single, 1=multi)
Enter unit number:1;
```

Response for a multi unit system:

```
OUTSTANDING MULTI UNIT CALLS IN REQUESTED UNIT

SOURCE:      EXT   OPE   OPE   OPE   NE    NE    NE    EXT   TRK   EXT   TRK   TRK
UNIT         EXT   EXT   TRK   OTH   EXT   TRK   OTH   TRK   EXT   PAG   PAG   TRK
DESTIN:
xx           xx    xx    xx    xx    xx    xx    xx    xx    xx    xx    xx    xx
```

Response for a single unit system:

```
OUTSTANDING SINGLE UNIT CALLS IN REQUESTED UNIT

SOURCE:      EXT   OPE   OPE   OPE   NE    NE    NE    EXT   TRK   EXT   TRK   TRK
UNIT         EXT   EXT   TRK   OTH   EXT   TRK   OTH   TRK   EXT   PAG   PAG   TRK
DESTIN:
xx           xx    xx    xx    xx    xx    xx    xx    xx    xx    xx    xx    xx
```

57.2. TRAFFIC MEASUREMENT

If Traffic Measurement must take place, do the following:

- Put the object to be observed in the Object List.
- Enter the time and length of the measurement. As an alternative it is possible to start and stop the measurement manually.
- Traffic Measurement data is stored in a buffer. This contents of this buffer can be displayed on the screen with DISPTO. If an output device and file name have been assigned it will also be written to a file.

57.2.1. Start, Stop and Status

Start Traffic Measurement Observation **374**

STRTTM : <PERIODS>;

Stop Traffic Measurement Observation **379**

STOPTM : <OUTPUT-SWITCH>;

Display Traffic Measurement Status **387**

DISPTM : ;

Response:

```
 UNIT   START   START   TOTAL   CURR   NOT-    MEAS    FILE
                                       OUT
        DATE    TIME   PERIOD  PERIOD PERIOD STATUS  STATUS
                         S              S
  XX    XXXXX   XXXXX    XX      XX     XX     XX      XX
```

57.2.2. Timing

Assign Traffic Measurement Timing **380**

ASTMTI : <ON-TIME>,<PERIODS>,<CYCLIC>;

The previous measurement must end 15 minutes before the next one starts.
Cyclic means that the measurement is done weekly, depending on a system boundary.

Delete Traffic Measurement Timing **381**

DETMTI : [<ON-TIME>];

ON-TIME indicates the start time of the measurement that has to be erased. If it is omitted, all programmed measurements are deleted.

Display Traffic Measurement Timing **382**

DITMTI : ;

Response:

```
ON-     PERIOD  CYCLIC
TIME    S
xxxx    xxxx    xxx
```

57.2.3. Output

Change Traffic Measurement Output Device **383!**

CHTMOD : [<LDN>][,<UNIT>s/r];

If the Logical Device Name (LDN) is omitted no output device is defined any more.

Change Traffic Measurement Output File Name **385!**

CHTMOF : [<FILE-NAME>];

If FILE-NAME is omitted no output file is defined any more.

Display Traffic Measurement Output Device **384**

DITMOD : ;

This command is always executed system wide.
Response:

```
 UNIT    CURR-DEVICE     NEW-DEVICE
  xx    xxxxxx  xxxxxx
```

Display Traffic Measurement Output File Names **386**

DITMOF : ;

Response:

```
CURR-FILENAME   NEW-FILENAME
    xxxxxx          xxxxxx
```

Display Traffic Measurement Object Figures **388**

DISPTO : <OBJECT>;

See parameter Object. This parameter must be present on the object list.
The command will ask for additional parameters. Which parameters, depend on the entered objects. Response: Traffic measurement data.

57.2.4. Object List

Assign Traffic Measurement Object **378**

ASTMOB : <OBJECT>;

Delete Traffic Measurement Object **375**

DETMOB : <OBJECT>;

Display Traffic Measurement Object List **376**

DITMOB : [<UNIT>s/r];

Response:

```
UNIT    OBJECT-GROUP   OBJECT-INDEX
xx      xxxxxx         xxxxxx
```

Erase Traffic Measurement Object List **377**

ERTMLI : [<UNIT>s/r];

If UNIT is omitted all the lists in all the units are erased.

57.2.5. Output Formats

The result of the traffic measurement is a file or the display of data on the screen. The output varies with the selected object for traffic measurement. The time (e.g. average holding time) in this output is given in seconds, the carried load in Erlangs.
The following pages describe the format of the screen output (DISPTO).
When the output is written to a file, the file consists of lines, starting with the unit number, object number and followed by numbers. An example of such a file is given for object 0:

```
1 STATIC FIGURES
1 0 5 24 0 0 0 0 0
1 END STATIC FIGURES
1 DYNAMIC FIGURES
1 0 5 20.4 0.30 12 23 34
1 END DYNAMIC FIGURES
```

The static data in the example above consists of:

1	= Unit number
0	= Object: Exchange and Tie Line Bundles
5	= Bundle number
24	= Total circuits
0	= Circuits in OUT
0	= Circuits in NIN
0	= Circuits in ABL
0	= Total B-channels
0	= Not usable B-channels

The dynamic data in the example above consists of:

1	= Unit number
0	= Object
5	= Bundle number
20.4	= Average holding time
0.30	= Carried load
12	= Incoming seizures
23	= Outgoing seizures
34	= Congestion

Compare this output with the screen output given on the next pages.

Note: *The figures in brackets given in the outputs of the objects 14 and 15 are not part of the screen layout but indicate the number in the traffic measurement output file.*

The objects numbers have the following meanings:

- **Object 0, Exchange and Tie Line Bundles**

```
Average holding time  :            xxx .xx
Carried load          :            xxx .xx
Incoming seizures     :   xxxxxxxxxxxx
Outgoing seizures     :   xxxxxxxxxxxx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
Total B-channels      :            xxx
Not usable B-channels :            xxx
```

- **Object 1, Exchange and Tie Line Routes**

```
COB started           :   xxxxxxxxxxxx
COB to seizure        :   xxxxxxxxxxxx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
Total B-channels      :            xxx
Not usable B-channels :            xxx
```

- **Object 2, Inter Unit Bundles**

```
Average holding time  :            xxx .xx
Carried load          :            xxx .xx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
```

- **Object 3, Inter Unit Routes**

```
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
```

- **Object 4, All Extensions In a Unit**

```
Average holding time  :            xxx.xx
Carried load          :            xxx.xx
COB started           :   xxxxxxxxxxxx
COB to ringing        :   xxxxxxxxxxxx
Average ringing time  :            xxx.xx
Ringing started       :   xxxxxxxxxxxx
Answered              :   xxxxxxxxxxxx
```

- **Object 5, Extension Groups**

```
Average holding time  :            xxx.xx
Carried load          :            xxx.xx
COB started           :   xxxxxxxxxxxx
COB to ringing        :   xxxxxxxxxxxx
Average ringing time  :            xxx.xx
Ringing started       :   xxxxxxxxxxxx
Answered              :   xxxxxxxxxxxx
Average No of COBs    :            xxx.xx
Average COB time      :            xxx.xx
Unsuccessful bids     :   xxxxxxxxxxxx
Present groupmembers  :            xxx
Absent groupmembers   :            xxx
```

- **Object 6, Paging Routes (Real Paging)**

```
Average holding time  :            xxx.xx
Carried load          :            xxx.xx
COB started           :   xxxxxxxxxxxx
COB to seizure        :   xxxxxxxxxxxx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
```

- **Object 6, Paging Routes (Virtual Paging)**

```
Average holding time  :            xxx.xx
Carried load          :            xxx.xx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
```

- **Object 7, Add-on Circuits**

```
Average holding time  :            xxx.xx
Carried load          :            xxx.xx
```

```
Congestion           :   xxxxxxxxxxxx
Total Circuits       :            xxx
Circuits in OUT      :            xxx
Circuits in NIN      :            xxx
Circuits in ABL      :            xxx
```

- **Object 8, RKT-SDTs**

```
Average holding time  :            xxx .xx
Carried load          :            xxx .xx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
```

- **Object 9, SKT-RDTs**

```
Average holding time  :            xxx .xx
Carried load          :            xxx .xx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
```

- **Object 10, Incoming MFC Circuits**

```
Average holding time  :            xxx .xx
Carried load          :            xxx .xx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
```

- **Object 11, Outgoing MFC Circuits**

```
Average holding time  :            xxx .xx
Carried load          :            xxx .xx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
```

- **Object 12, RS-Socotel Circuits**

```
Average holding time  :            xxx.xx
Carried load          :            xxx.xx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
```

- **Object 13, Convertors**

```
Average holding time  :            xxx.xx
Carried load          :            xxx.xx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
```

- **Object 14, Operators**

```
Average holding time  :            xxx.xx
Carried load          :            xxx.xx
```

	QUEUE	AVERAGE QUEUE LENTGTH	AVERAGE QUEUE TIME	QUEUED CALLS	HANDLED CALLS
(0)	M individual	xxx.xx	xxx.xx	xxxxxxxxxxx	xxxxxxxxxx x
(28)	WA	xxx.xx	xxx.xx	xxxxxxxxxxx	xxxxxxxxxx x
(29)	UA	xxx.xx	xxx.xx	xxxxxxxxxxx	xxxxxxxxxx x
(10)	C preferred	xxx.xx	xxx.xx	xxxxxxxxxxx	xxxxxxxxxx x
(7)	C series	xxx.xx	xxx.xx	xxxxxxxxxxx	xxxxxxxxxx x
(8)	C taxmetering	xxx.xx	xxx.xx	xxxxxxxxxxx	xxxxxxxxxx x
(9)	C through connec t busy	xxx.xx	xxx.xx	xxxxxxxxxxx	xxxxxxxxxx x
(11)	C through connect ringing	xxx.xx	xxx.xx	xxxxxxxxxxx	xxxxxxxxxx x

- **Object 15, Operator Queues**

	QUEUE	AVERAGE QUEUE LENTGTH	AVERAGE QUEUE TIME	QUEUED CALLS	HANDLED CALLS
(1)	M noRMAL	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(2)	M preferred	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(3)	C ddi not answered	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(4)	C ddi unsuccessful	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(5)	C recall not on hook	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(6)	C recall on hook	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(12)	A1	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(13)	A2	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(14)	A3	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(15)	A4	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(16)	A5	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(17)	A6	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(18)	A7	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(19)	A8	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(20)	A9	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(21)	A10	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(22)	A11	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(23)	A12	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(24)	A13	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(25)	A14	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(26)	A15	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx
(27)	A16	xxx.xx	xxx.xx	xxxxxxxxxx	xxxxxxxxxx

- **Object 16, Switching Network Channels**

  Congestion : xxxxxxxxxx

All PMs in a specific unit will be observed. Therefore, only additional parameter for unit number is asked.

For each quarter of an hour, the data of the first PM is written to the output file of traffic measurement. Data of other PMs is only written to the output file when the data is changed.

OM command DISPTO can be used to display the data of a specific PM.

- **Object 17, Calls**

```
Single Unit:
SOURCE   DEST    INTRA UNIT  INTRA UNIT
CALL TYPE        AV.         EST. CALLS (AV. = AVERAGE)
                 DURATION
Ext      Ext     xxx.xx      xxxxxxxxxx (EST. = ESTABLISHED)
Ope      Ext     xxx.xx      xxxxxxxxxx
Ope      Ope     xxx.xx      xxxxxxxxxx
Ope      Oth     xxx.xx      xxxxxxxxxx
Spec-ext Ext     xxx.xx      xxxxxxxxxx
Spec-ext Trk     xxx.xx      xxxxxxxxxx
Spec -   Oth     xxx.xx      xxxxxxxxxx
ext
Ext      Trk     xxx.xx      xxxxxxxxxx
Trk      Ext     xxx.xx      xxxxxxxxxx
Ext      Pag     xxx.xx      xxxxxxxxxx
Trk      Pag     xxx.xx      xxxxxxxxxx
Trk      Trk     xxx.xx      xxxxxxxxxx


Multi Unit:
SOURCE   DEST    INTRA UNIT  INTRA UNIT  INTER UNIT  INTER UNIT
CALL TYPE        AV.         EST. CALLS  AV.         EST. CALLS (AV. = AVERAGE)
                 DURATION                DURATION
Ext      Ext     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx (EST. =
                                                                ESTABLISHED)
Ope      Ext     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx
Ope      Ope     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx
Ope      Oth     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx
Spec-ext Ext     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx
Spec-ext Trk     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx
Spec -   Oth     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx
ext
Ext      Trk     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx
Trk      Ext     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx
Ext      Pag     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx
Trk      Pag     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx
Trk      Trk     xxx.xx      xxxxxxxxxx  xxx.xx      xxxxxxxxxx
```

- **Object 18, Inter Unit Traffic Dispersion**

```
Destination    1 : xxxxxxxxxx
Unit
Destination    2 : xxxxxxxxxx
Unit
Destination    3 : xxxxxxxxxx
Unit
Destination    4 : xxxxxxxxxx
Unit
Destination    5 : xxxxxxxxxx
Unit
Destination    6 : xxxxxxxxxx
Unit
Destination    7 : xxxxxxxxxx
Unit
Destination    8 : xxxxxxxxxx
Unit
Destination    9 : xxxxxxxxxx
Unit
Destination   10 : xxxxxxxxxx
Unit
Destination   11 : xxxxxxxxxx
Unit
Destination   12 : xxxxxxxxxx
Unit
Destination   13 : xxxxxxxxxx
Unit
Destination   14 : xxxxxxxxxx
Unit
```

- **Object 19, Dialled Facilities**

```
Interna : xxxxxxxxxx
l
Assiste : xxxxxxxxxx
d
Externa : xxxxxxxxxx
l
```

- **Object 21, Hatch**

```
Average holding time  :            xxx .xx
Carried load          :            xxx .xx
Congestion            :   xxxxxxxxxxxx
Total Circuits        :            xxx
Circuits in OUT       :            xxx
Circuits in NIN       :            xxx
Circuits in ABL       :            xxx
```

58. TRUNK TRAFFIC

The commands for trunk traffic are used to enter and display data needed for external traffic (both incoming and outgoing). OM for trunk traffic is divided as follows:

- First the destinations are defined (for outgoing traffic).
  Destinations are related to a trunk access code or a network access code.
- One or more route tables are allocated to a destination to determine the different routing possibilities to this destination (route numbers)
- More destinations can lead to the same rota.
  Each route has a unique number.
- A route consists of one or more bundles.
  Bundles are numbered per unit.
- A bundle consists of lines (trunk circuits).
  All lines in a bundle have the same characteristics and are linked to the EHWA of a trunk circuit.
- For ISDN bundles an extra level is present. Within the bundle ISDN trunk circuits are assigned. Within these trunk circuits the B-channels (the actual trunk lines) are present. The B-channels of one circuit should all be assigned to the same bundle.

58.1. DESTINATIONS

Destinations are only used for outgoing traffic and are related to an access code. Dialling the same access code always results in the same destination, independent of the unit where the code was dialled. Destination numbers are unique in the system.

Change Destination Characteristics **157 #!**

```
CHDSTC : <DEST>,<TREE>,<FST-DT>,<SND-DT>,<ROUTE-TABLE> [,<ACC-
         REP>];
```

This command defines the network characteristics of a destination. If characteristics were already defined for the destination the old ones will be overwritten by the new characteristics. This gives the possibility to introduce changes in the external numbering scheme. In this case a new analysis tree must be defined, after which the old tree is replaced by the new tree. If ACC-REP is omitted, the access code repetition counter is set to 0.

Display Destination Data **171**

DIDEST : <DEST>;

This command shows the characteristics of a destination and which route tables there are to this destination.
Response:

```
DEST   TREE   FST-DT SND-DT ACC-   ROUTE-TABLE
                             REP
XXX    XXX    X      X      X      XXX D/P      (D = Definitive; P =
                                                Provisional)
```

58.2. ROUTE TABLES

Change Route Table **406 #!**

CHROTA : <ROUTE-TABLE>[,[<USER-TYPE>][,<SEQUENCE-TABLE>]
[,<UNIT>]];

When USER-TYPE is omitted, all user types will be adapted. When SEQUENCE-TABLE is omitted, 1 is assumed.
Additional parameters:
<ROUTE>,<PREF-CODE>,<TRFC>[,<SMART-BOX-EM>];
When all additional parameters are omitted, the contents of the route table will be erased.
The command will repeat this question up to 8 times, or until it is terminated with a single semi-colon.

Display Route Table **337**

DIROTA : <ROUTE-TABLE>s/r[,[<SEQUENCE-TABLE>s/r] [,<UNIT>]];

When SEQUENCE-TABLE is omitted, 1 is assumed.
Response:

```
 ROUTE-TABLE      UNIT       SEQUENCE
                               TABLE
      XX           XX           XX
NORMAL EXTENSION          OPERATOR                PRIORITY EXTENSION
 ROUTE  PREF   TRFC  SMART ROUTE  PREF   TRFC  SMART ROUTE  PREF   TRFC  SMART
   XX     XX     XX     XX     XX     XX     XX     XX     XX     XX     XX     XX
```

58.3. ROUTES

A rota has one or more routes assigned to it. The route numbers are unique in a system.

58.3.1. Routes General

Create Route **159 #!**

CRROUT : <ROUTE>[,<UNIT>];

If a route with the same route number already exists the command is rejected.

Display Route Data **172**

DIROUT : <ROUTE>[,<BSPT>];

When the BSPT parameter is omitted default BSPT 98 is displayed.
Response:

```
ROUTE  UNIT   BSPT   GEN-   GEN-   CV     CC_TABLE
                     OPTS   TONE
INC-   TONE-AND-DDI-OPTS    TREE   A-     OVE    SCNE
OPTS                               QUEUE
OUT-   ATF
OPTS
ORIG-NUMBER to CONV-NUMBER or "NO DIGIT CONVERSION ASSIGNED ON THIS
ROUTE"
SEQ    BUNDLE
```

Erase Route **160 #!**

ERROUT : <ROUTE>;

This command is only accepted when the route is known in the system and when there are no bundles and no SCNEs and/or OVEs assigned to it any more.

58.3.2. Route Characteristics

Change Route Characteristics General **161 #!**

```
CHRTCG : <ROUTE>,<GEN-OPTS>,<GEN-TONE>[,[<CV>][,<BSPT>] [,<CC-
         TABLE>]]];
```

If the compatibility value is omitted the default value will be valid. If the BSPT is omitted the default value (98) is valid. The command will only be accepted if the route and the BSPT are already known in the system. If general characteristics were already defined the old ones will be overwritten by the new ones.
Parameter CC-TABLE represents the CLI or COL translation table, which is introduced in SSW 805.29

Change Route Characteristics Incoming **162 #!**

```
CHRTCI :  <ROUTE>,<INC-OPTS>,<TONE-AND-DDI-OPTS>
         [,[<TREE>][,[<A-QUEUE>][,<BSPT>]]];
```

If in INC-OPTS P=0 then:

- V, W, X and Y must be omitted;
- TREE must be omitted;
- In TONE-AND-DDI-OPTS only P and Q must be given.

If A-QUEUE is omitted calls are routed to the A16 general queue.
If the BSPT is omitted the default value (98) is valid.

Change Route Characteristics Outgoing **163 #!**

```
CHRTCO : <ROUTE>,<OUT-OPTS>,<ATF>[,<BSPT>];
```

If the BSPT is omitted the default value (98) is valid.

58.3.3. Digit Conversion

See the DIROUT command to display the incoming digit conversions.

Assign Digit Conversion to an Incoming Route **164 #!**

```
ASDGCV :  <ROUTE>,[<ORIG-NUMBER>][,<CONV-NUMBER>];
```

Either ORIG-NUMBER or CONV-NUMBER may be omitted. If the route is not known to the system the command will be rejected.

Erase Digit Conversion from an Incoming Route **165 #!**

```
ERDGCV : <ROUTE>;
```

All digit conversions are erased from the route.

Assign Digit Conversion on Outgoing Route **390 #!**

```
ASDGCO : <ROUTE>,<DEST>,[<ORIG-NUMBER>][,[<CONV-NUMBER>]
         [,<DIALTONE-PLACE>]];
```

Either ORIG-NUMBER or CONV-NUMBER may be omitted. If the route is not known to the system the command will be rejected.

Erase Digit Conversion from an Outgoing Route **391 #!**

```
ERDGCO : <ROUTE>[,[<DEST>][,<ORIG-NUMBER>]];
```

The selected digit conversions are erased from the route.

Display Digit Conversion on Outgoing Route **400**

```
DIDGCO : <ROUTE>s/r[,[<DEST>][,<ORIG-NUMBER>]];
```

Response:

```
ROUTE  DESTINATION   ORIGINAL      CONVERTED
                     NUMBER        NUMBER
XX     XXX           XXX           XXXX
```

58.3.4. CLI or COL Translation For ISDN

The 'CLI/COL translation for ISDN' enables users to be presented to the Public ISDN by another CLI (Calling Line Identity) or COL (Connected Line Identity). This is especially

required for extensions which are not enabled to be reached directly from the public network. When these extensions are engaged in a call via ISDN to the public network, they send an invalid DNR, which may lead to confusion in the public network. This facility enables users to express with which CLI or COL they wish to be presented to the ISDN. The following examples show some of the possible combinations:

- non-DDI extensions;
- All or some extensions send the general access number as CLI or COL;
- Groupmembers send their group DNR.

The 'CLI/COL translation for ISDN' can only be used for calls to or from the ISDN.

Change CLI and COL Translation **514 #!**

CHCCTR : <CC-TABLE>s[,<ORIG-CC-STRING> [,[<DEST-CC-STRING>]]];

Add a new entry to the specified CC-table or redefine an existing translation in the specified CC-table.
It is possible to use wildcards in both the ORIG-CC-STRING and the DEST-CC-STRING. The wildcard character which can be used is '%'. This character stands for only one digit. Wildcards can only be used to terminate the strings. So 123%% is possible, while 12%4% is not.
When wildcards are used in the ORIG-CC-STRING, for example 123%%, then all 5-digit CLI or COL strings which start with 123 are translated according to the specified translation.
When wildcards are used in the DEST-CC-STRING, for example 45%%, then the last two digits are copied from the last two digits in the CLI or COL, which is to be translated.
Example:
CHCCTR: 1,123%%,45%%;
Now the CLI or COL of extension 12345 is translated to 4545.
When DEST-CC-STRING is left empty (not omitted, do not forget the comma!)) the system sends an empty CLI or no COL to the ISDN.
When DEST-CC-STRING is omitted, the entry is deleted from the specified CC-table. It is possible to use wildcards in the ORIG-CC-STRING, but only that exact entry will be deleted. The wildcard mechanism can not be used to delete a number of entries which start with the same digits.
When ORIG-CC-STRING and DEST-CC-STRING are omitted, the complete specified CC-table is deleted (after confirmation).

Display CLI and COL Translation **515 #!**

DICCTR : <CC-TABLE>s[,<ORIG-CC-STRING>];

When ORIG-CC-STRING is omitted, all entries in the specified CC-table are displayed.
When ORIG-CC-STRING is specified, but no exact match can be found in the CC-TABLE, then a wildcarded entry is searched for and, when found, displayed.
The ORIG-CC-STRING itself may also contain wildcards, but it can not be used to display all translation entries which start with the same digits. Only the best matched entry in the CC-TABLE is displayed.

Display CC-Table/Route Relation **512 #!**

DICCRT : <CC-TABLE>s/r;

This command displays all routes which use the specified CC-table to translate CLI or COL strings.

58.3.5. Route-BSPT Relation

Assign BSPT to Route **54 #!**

ASBSPR : <ROUTE>,<BSPT>;

BSPT 98 and 99 may not be assigned. When a new BSPT is assigned to a route it will have the same set of characteristics as the default BSPT (98).

Display BSPT of a Route **63**

DIBSPR : <ROUTE>;

Response:

```
ROUTE  BSPT
xx     xx
```

Erase BSPT from Route **59 #!**

ERBSPR : <ROUTE>,<BSPT>;

BSPT 98 cannot be removed from a route.

58.4. BUNDLES

Bundles are assigned to routes. They are numbered per unit, so the same number may occur more than once in a multi-unit system.

58.4.1. Bundles General

Assign Bundle to Route **167 #!**

ASBNDL : <ROUTE>,<BUNDLE>;

The signalling type of the first bundle assigned to a route determines if this route will be a DPNSS route or not. It is not allowed to mix DPNSS bundles and non-DPNSS bundles in one route.
Note that for a DPNSS route the signalling type must be set with CHBNDC before assigning bundles to the route, because the default signalling type is non-DPNSS.

Change Bundle Characteristics **166 #!**

CHBNDC : <UNIT+BUNDLE>,<DIR-AND-NEG>,<OPTIONS>, <CON-AND-SIG-TYPE>[,[<ALL-CALLS>][,<BSPT>]];

If ALL-CALLS is omitted, there is no restriction on the maximum number of allowed calls.
If BSPT is omitted BSPT 98 will be valid.

Delete Bundle from Route **168 #!**

DEBNDL : <ROUTE>,<BUNDLE>;

Display Bundle Data **173**

DIBNDL : <UNIT+BUNDLE>[,<BSPT>];

Response:

```
BUNDLE BSPT   ROUTE  UNIT   DIR-AND-NEG   OPTION CON-AND-SIG-  ALL-CALLS
                                          S      TYPE
xx     xx     xx     xx     x             xxxxxxxxxxxxxx xx    xx
```

```
SEQ    SHELF  BRD    CRT    B-CH   LINE or "NO LINES ASSIGNED TO THIS
                                   BUNDLE"
xx     xx     xx     xx     xx     xx
```

58.4.2. Bundle-BSPT Relation

Assign BSPT to Bundle **55 #!**

ASBSPB : <UNIT+BUNDLE>,<BSPT>;

BSPT 98 and 99 may not be assigned. When a new BSPT is assigned it will have the same set of characteristics as the default BSPT (98).

Display BSPT of a Bundle **77**

DIBSPB : <UNIT+BUNDLE>;

Response:

```
BUNDLE BSPT
xx     xx
```

Erase BSPT from Bundle **60 #!**

ERBSPB : <UNIT+BUNDLE>,<BSPT>;

58.4.3. Digital Bundles

All DTUs can have Bundle - DTU relations except the DTU-CC and the ISDN DTUs (DTU-BA and DTU-PH). A relation with bundles can be assigned to make outgoing calls impossible in case of a DTU alarm.

Change Bundle - DTU Relation **175 #!**

CHBDTU : <UNIT+BUNDLE>[,<SHELF>,<BRD>];

If the shelf and board are omitted the bundle - DTU relation is erased.

Display Bundle - DTU Relation **176**

DIBDTU : <UNIT+BUNDLE>s/r;

Response:

```
BUNDLE DTU POSITION
02022  2011 00 -5
```

58.5. LINES

Assign Line to Bundle **169 #!**

ASLINE : <BUNDLE>,<LINE>,<SHELF>,<BRD>,<CRT>[,<B-CHANNEL>];

When an ISDN circuit is assigned and the B-channel parameter is not entered, all B-channels are assigned to the bundle. This means that all B-channels have the same line number.

Delete Line from Bundle **170 #!**

DELINE : <SHELF>,<BRD>s/r,<CRT>s/r[,<B-CHANNEL>s/r];

If in case of an ISDN circuit the B-channel parameter is not entered, all B-channels will be deleted from the bundle.

Change B-Channel Dedication **212 #!**

CHCDED : <DED-TYPE>,<SHELF>,<BRD>s/r,<CRT>s/r,<BCH-VALUE>;

Parameter BCH-VALUE is series/range when parameter DED-TYPE is 0 … 2.

Display Line Data **174**

DILINE : <SHELF>,<BRD>s/r,<CRT>s/r[,<B-CHANNEL>s/r];

Response:

```
SHELF  BRD    CRT    B-CH   LINE   BUNDLE ROUTE  UNIT   INE    PLE
xxxx   xx     xx     xx     xxx    xxx    xx     xx     xxxx   xxxx
```

DITCRT : <SHELF>,<BRD>,<CRT>;

The response is different for primary rate circuits and basic rate circuits (Ass indicates whether a B-channel is assigned to a bundle):
Response primary rate:

```
SHELF  BRD    CRT    BUNDLE INC-CALLS     OUT-CALLS     TOTAL-CALLS
xxxx   xx     xx     xx     xxx           xxx           xxx


  B-CH DEDICATION   Ass      B-CH DEDICATION   Ass      B-CH DEDICATION   Ass
     1 outgoing     Yes         2 outgoing     Yes         3 outgoing     Yes
     4 outgoing     Yes         5 outgoing     Yes         6 outgoing     Yes
     7 outgoing     Yes         8 outgoing     Yes         9 outgoing     Yes
    10 outgoing     Yes        11 incoming     Yes        12 incoming     Yes
    13 incoming     Yes        14 incoming     Yes        15 incoming     Yes
    17 incoming     Yes        18 incoming     Yes        19 incoming     Yes
    20 incoming     Yes        21 incoming     Yes        22 bothway      Yes
    23 bothway      Yes        24 bothway      Yes        25 bothway      Yes
    26 bothway      Yes        27 bothway      Yes        28 bothway      Yes
    29 bothway      Yes        30 bothway      Yes        31 bothway      Yes
```

Response basic rate:

```
SHELF  BRD    CRT    B-CH   LINE   BUNDLE ROUTE  UNIT   INE    PLE
xxxx   xx     xx     xx     xxx    xxx    xx     xx     xxxx   xxxx


 B-CH  DIDICATION    Ass
   0   bothway       Yes
   1   bothway       Yes
```

59. TWINNING

These OM commands are used to create, delete and display twinning relations.

Create Twinning Relation **103**

CRTWIN : <ORIG-BSP-ID>,<DEST-NUMBER>;

This command is used to create a twinning relationship between a dialled destination and its twinning destination.

Erase Twinning Relation **118**

ERTWIN : <ORIG-BSP-ID>s;

This command is used to erase all information about a twinning relationship of the dialled destination.

Display Twinning Relations **119**

DITWIN : <ORIG-BSP-ID>s/r;

This command is used to display information about a twinning relationship. The <ORIG-BSP-ID> is the dialled destination.

```
DIALLED DESTINATION                TWINNING DESTINATION
      1000-95                             1001
```

60. UNIT STARTS

These OM commands give the possibility to force a start of a unit. The user must have the right authority class.
There are 7 different unit starts:

- Load a new software package (STLOAD);
- Start projecting (STPROJ);
- Cold start (STCOLD);
- Warm start (STWARM).
- Start Dual Mode (STDUAL)
  This is for CCS systems only (not for single CCS systems).
- Stop Dual Mode (SPDUAL)
  This is for CCS systems only (not for single CCS systems).
- Switch Dual Mode (SWDUAL)
  This is for CCS systems only (not for single CCS systems).

The warm start is an operational start; it restarts the system using the project data stored in RAM.
A different type of an operational start is the hot start. The hot start takes less time than a warm start because it does not download projecting data to the Peripheral Modules (PMs), it only tells the PMs to start those resources which were operational before the start.
As a result of this, all PMs will start simultaneously and set all their resources into service without testing them. The starts: STLOAD, STPROJ and STCOLD first load new data and then perform an operational start. This operational start is by default a warm start but can be changed to a hot start, except for the STPROJ which always uses a warm start. A hot start is only sensible if the PMs do not need to be downloaded. This explains that the hot start is not available for the restart: STPROJ, because this explicitely reprojects the complete unit, including the PMs.
The system accepts one hot start per 15 minutes. If it encounters a second hot start request within this period of time, it will be rejected.
If a restart in another unit occurs, that other unit will become unobtainable. This will not be reported, because the command normally is successfully executed.
A CCS system can be switched into dual mode by STDUAL (not valid for single CCS systems). This allows for loading (new) software (CPU, project data) into an operational system. The CPU, which consists of four CCS boards is split into two clusters of two CCS boards each. One of the clusters keeps the control of the complete system, while the other is set stand-by. This stand-by cluster can be provided with new software, while the other cluster keeps the system operational.

Subsequently, tasks can be swapped by SWDUAL: the operational cluster is switched to stand-by mode and the stand-by cluster to operational. This is a try out for the new software (if the new software causes problems, one can always fall back to the existing software).
With SPDUAL, dual mode is stopped; the current standby cluster is updated to the status of the operational cluster.

Load a new Software Package **435**

```
STLOAD : [<UNIT>][,<HOTSTART>];
```

The OM-command STLOAD is used to load a new CPU package in the system. It does so by requesting the program in the boot-PROM to load a new software-package. Upon completion of the load, the new software-package is automatically started, either using:

- the MIS-file (if present);
- projecting-files (if present);
- executing the internal projecting.

Note: *Only CCS - and CPU-ME/MT systems have an internal projecting.*

Start Projecting **434**

```
STPROJ : [<UNIT>];
```

This command executes the projecting files: PExx.POM and LLxx.POM.

Coldstart a Unit **433**

```
STCOLD : [<UNIT>][,<HOTSTART>];
```

This command is used to coldstart a unit. This restarts the system using a MIS-file. Note that for CPS (and NOT for CCS) systems also the CPU package is reloaded.
Execution of this command can be necessary for two reasons:

- The data in the data-base of the ISPBX is inconsistent, but a MIS-file is present. A coldstart uses this MIS-file for restoring the data in the data-base before a system start is executed.
- Major maintenance-actions are executed, but the system does not function as expected. In that case a previously generated MIS-file can be used for restoring the data in the data-base as it was before the maintenance was executed.

Warmstart a Unit **432**

STWARM : [<UNIT>][,<HOTSTART>];

This command is used to warmstart or hotstart a unit. The unit is still working but the behaviour is not predictable. In some cases system assurance does not provide a proper solution or does not detect the improper behaviour at all. In these cases the command STWARM can be used to force a warm/hotstart.
During a warmstart the data in the data-base of the ISPBX is used to become operational again.

Start Dual Mode (for CCS only, but not for single slice systems) **473**

STDUAL : [<UNIT>][,<RESTART>];

This command splits the CPU into two clusters; an operational cluster and a cluster which is stand-by. This command is accepted if:

- All slices are synchronised and the Dual mode Backup Unit (DBU) is available:
- Both the CBU and DBU contain an empty journal file;
- Backup Maintenance Lock (BMLOCK) is set.

Stop Dual Mode (for CCS only, but not for single slice systems) **474**

SPDUAL : [<UNIT>];

This command stops dual mode for a unit and must be entered in the operational cluster. Create a MIS file before stopping dual mode.

Switch Dual Mode (for CCS only, but not for single slice systems) **475**

SWDUAL : [<UNIT>][,<HOTSTART>];

This command changes the cluster from operational to stand-by and vice versa. The operational cluster controls the hardware. The stand-by cluster only controls some devices on the BIM.

61. UNIT STATUS

Display Unit Status 30

DIUNIT : <UNIT-1>[,<UNIT-2>s/r];

The unit status displayed is the status of UNIT-2 as seen by UNIT-1.
Response:

```
  UNIT     MANAGEMENT    COMMUNICATION  CURREN
                                           T
 NUMBER      STATUS          STATUS     ROUTIN
                                          G
   XXX         XXX             XXX        XXX
```

The management status can be INS (installed) or NIN (not installed), the communication status can be Established or Lost and the current routing can be Primary or Alternate.
If UNIT-2 is entered as a single parameter, the display will be continuous and can be aborted by `Ctrl X'.

Set Unit Status to Installed 31

UNIINS : [<UNIT-1>s/r],<UNIT-2>;

The unit status modified is the status of unit 2 as seen by unit 1. When unit 1 is omitted, it is executed in all units.
Response:

```
Password for degradation level 2: ?
```

Set Unit Status to Not Installed 32

UNININ : [<UNIT-1>s/r],<UNIT-2>;

The unit status modified is the status of unit 2 as seen by unit 1. When unit 1 is omitted, it is executed in all units.
Response:

```
Password for degradation level 2: ?
```

A . ERROR MESSAGES

This chapter contains an overview of the error messages and codes related to OM commands.

1…99	:	Fixed resident error messages;
100…189	:	Specific non-resident error messages;
190…256	:	General error messages.

A.1. FIXED RESIDENT ERROR MESSAGES (1…99)

1. Parameter 1 out of range.
   The first parameter of the command has an entered value which is out of range according to projectable boundaries or a fixed mode set.
   Examples are an offered route number of 120 while the maximum number of routes is 100, a DNR containing an over-ten digit while the DNR-radix number is projected to 10 or an entered digit representing an option while the digit can not be translated to a legal value of an internal mode set.
2. Parameter 2 out of range.
   As “Parameter 1 out of range” but for the second parameter.
3. Parameter 3 out of range.
   As “Parameter 1 out of range” but for the third parameter.
4. Parameter 4 out of range.
   As “Parameter 1 out of range” but for the fourth parameter.
5. Parameter 5 out of range.
   As “Parameter 1 out of range” but for the fifth parameter.
6. Parameter 6 out of range.
   As “Parameter 1 out of range” but for the sixth parameter.
7. Parameter out of range.
   As “Parameter 1 out of range” but to be used for additional parameters.
8. Non existing value of parameter 1.
   The value of parameter 1 is within the boundaries but is not known to the system while it is a requirement of the command that is should be known.
   Examples: A DNR that should be known (e.g. when assigning a facility to the DNR) but is not known in Translation Service. A route, a convertor type, a facility class mark being within boundaries but not known in the corresponding service process.
9. Non existing value of parameter 2.
   As “Non existing value of parameter 1” but for parameter 2.
10. Non existing value of parameter 3.
    As “Non existing value of parameter 1” but for parameter 3.
11. Non existing value of parameter 4.
    As “Non existing value of parameter 1” but for parameter 4.

12. Non existing value of parameter 5.
    As “Non existing value of parameter 1” but for parameter 5.
13. Non existing value of parameter 6.
    As “Non existing value of parameter 1” but for parameter 6.
14. Non existing value of parameter.
    As “Non existing value of parameter 1” but for additional parameters.
15. Already existing value of parameter 1.
    The value of parameter 1 is within the boundaries but already known to the system while it is a requirement of the command that is should not be known yet.
    Examples: A route, a convertor type, a cv-value etc., which is to be created, being within boundaries but already known in the corresponding service process.
16. Already existing value of parameter 2.
    As “Already existing value of parameter 1” but for parameter 2.
17. Already existing value of parameter 3.
    As “Already existing value of parameter 1” but for parameter 3.
18. Already existing value of parameter 4.
    As “Already existing value of parameter 1” but for parameter 4.
19. Already existing value of parameter 5.
    As “Already existing value of parameter 1” but for parameter 5.
20. Already existing value of parameter 6.
    As “Already existing value of parameter 1” but for parameter 6.
21. Already existing value of parameter.
    As “Already existing value of parameter 1” but for additional parameters.
22. Parameter 1 missing.
    Parameter 1 is omitted while it is not allowed according to system options or previously successfully executed commands.
    If the parameter is omitted conflicting with the value of another parameter in the same command string the message “Illegal parameter combination” is used instead.
    Example: Parameter 1 is the unit number. This parameter may only be omitted in a single unit-system (project dependent). In a multi-unit system then this message is generated.
23. Parameter 2 missing.
    As “Parameter 1 missing” but for parameter 2.
24. Parameter 3 missing.
    As “Parameter 1 missing” but for parameter 3.
25. Parameter 4 missing.
    As “Parameter 1 missing” but for parameter 4.
26. Parameter 5 missing.
    As “Parameter 1 missing” but for parameter 5.
27. Parameter 6 missing.
    As “Parameter 1 missing” but for parameter 6.
28. Illegal parameter combination.

This message is used when parameters within a command are related to each other. The value of one parameter can exclude the value of another parameter or the value of one parameter may require that another parameter is omitted. For cases like these it can not be determined which parameter actually is wrong (fatal validation).

This message is also used if a certain parameter is composed of several items (e.g. a parameter is a bit-stream, each bit representing an option). If one item of the parameter excludes another item within the same parameter this message can be used. As it is known which parameter is wrong this error may be non-fatal.

29. Device is write protected.
    An attempt is made to write to a write protected device.
30. Lack of space.
    This message is used as an execution error because no room is available in the corresponding service process to add new data. In most cases it will be evident which specific action causes the error as most commands add only one relation at a time so this error message will give sufficient information.
31. No relations or data found.
    This message is used in commands performing a display function.
    Example: All abbreviated numbers are to be displayed but there are no abbreviated numbers defined at all.
32. EHWA not in use.
    The elements of an entered EHWA are within the boundaries but the EHWA is not known to the system while it is a requirement of the command that is should be known.
    Example: A DNR is to be assigned to an LCT but the LCT (by its EHWA) is not known.
33. EHWA already in use.
    The elements of an entered EHWA are within the boundaries but the EHWA is already known to the system while it is a requirement of the command that is should not be known yet.
    Example: A board is to be installed at a certain position but that position (by its EHWA) is already occupied.
34. EHWA has incorrect type.
    Is used for actions on a resource (entered as EHWA) while the type of the entered EHWA does not fit with the action.
    Example: A DNR is to be assigned to an LCT but the offered EHWA belongs to a trunk.
35. Incorrect status.
    If an action to be performed on a resource requires a certain status (NIN, OUT, etc) and the resources does not have this status this message is used.
36. DNR has incorrect type.
    Used for actions on a DNR while the DNR has not the correct type (operator, group, extension).
    Example: An extension has to be moved but the offered DNR belongs to an operator instead of an extension.

37. Resource not assigned.
    Used for actions on a resource that should be assigned to a certain pool.
    Example: A trunk is to be removed from a bundle while it is not assigned.
38. Resource already assigned.
    Used for resources which are to be assigned to a certain pool.
    Example: Trunk lines, paging lines, paging codes to be assigned to a route while it is already been assigned before.
39. Invalid input data.
    The entered data in a command is conflicting with earlier entered data or data of one parameter is conflicting with data of another parameter in the same command string.
40. Not yet implemented.
    Standard message to cover an action within a command which has not yet been implemented.
41. Restriction on action.
    Besides the authority class mechanism also restrictions within a command are possible. If within a command a certain action is to be performed while this action is restricted to certain users only or not possible because of implementation reasons this message is used.
    Example: From a certain OM terminal it is only allowed to change only a few facility class marks and/or traffic classes
    Another example is derived from the limited possibilities of OM from the operator console. For a certain action a password is required. As passwords contain characters which are not available at an operator console this action will not be possible (restricted to OM terminals).
42. File specification error.
    File specifications are normally a concatenation of logical device name and file name (plus extension) in one parameter. Depending on the context certain characters are allowed or not. If the parameter contains invalid characters this message is used.
43. Source file specification error.
    As “File specification error” but to be used in commands with more file specifications in the same command string.
44. Destination file specification error.
    As “File specification error” but used in commands with more file specifications in the same command string.
45. Logical device does not exist.
    File specifications are normally a concatenation of logical device name and file name (plus extension) in one parameter. First check will always be to check the parameter on invalid characters. If invalid characters are present the message “… file specification error” will be used. If not, it will be checked if the logical device name part refers to an existing logical device. If not this message “Logical device does not exist” is used. If the parameter is not a file specification but only a logical device name the message “Non existing value of parameter x” is used instead.

46. Source logical device does not exist.
    As “Logical device does not exist” but used in commands with more file specifications in the same command string.
47. Destination logical device does not exist.
    As “Logical device does not exist” but used in commands with more file specifications in the same command string.
48. File open error.
    Execution error when accessing a file to be opened.
49. File write error.
    Execution error when accessing a file for writing.
50. File read error.
    Execution error when accessing a file for reading.
51. File delete error.
    Execution error when accessing a file to be deleted.
52. File close error.
    Execution error when accessing a file to be closed.
53. File specification incomplete.
    File specifications are normally a concatenation of logical device name and file name plus extension and generation in one parameter.
    Depending on the command one or more of these parts may be omitted.
    Defaults then may be used per part. If a part is omitted while no default is known this message is used.
54. Source file specification incomplete.
    As “File specification incomplete” but used in commands with more file specifications in the same command string.
55. Destination file specification incomplete.
    As “File specification incomplete” but used in commands with more file specifications in the same string.
56. Illegal password entered.
    Password is not correct.
57. File not found.
    The specified filename does not exist.
58. Source file open error.
    The specified (source) filename does not exist.
59. Destination file open error.
    The specified (destination) filename does not exist.
60. Protection level mismatch.
    Your protection level does not permit the requested action. See chapter 4.
61. Maximum number of open files exceeded.
    The maximum number of open files is reached, so it is not possible to open another one.
62. File already opened.

63. End of medium detected.
64. Device hardware error occurred.
65. Unreliable device.
66. Device unobtainable.
67. BSP-ID not unique
68. BSP-ID does not exist
69. Action not allowed for Internal Backup Unit (IBUxx)
70. Command not supported on this SOPHO ISPBX
71. Action not allowed in dual mode

76 Command not supported for this device

A.2. SPECIFIC NON-RESIDENT ERROR MESSAGES (100…189)

- **OM for ANALYSIS GROUP, COMPATIBILITY VALUE AND SERVICE PROFILE**
  120 BSPT value not allowed for group DNR
- **OM for BACKUP MAINTENANCE**
  110 BM or OM lock was set by:
  111 BM or OM lock already set by:
  112 BM lock was not set
  113 BM lock not set ! (CHJOUR)
  113 BM lock should be set first ! (GEBUMI/RTRIEV)
  114 No new journal file created
  115 Error deleting old journal file !
  116 Old journal file not deleted
  117 SIN overflow encountered
  118 Journal updating switched off; no systemwide GEBUMI allowed
  119 Not allowed in dual mode on this operational cluster
  119 Journal file not found (GEBUMI)
  120 Not allowed to set network incompatible
  121 Not all package-ids equal
  122 BM lock not set because OM lock already set; OM lock set by:
  148 Delete not allowed
- **OM for CALL FORWARDING**
  120 DNR already assigned the selective call answering facility
- **OM for CAMP ON BUSY**
  120 BSPT value not allowed for group DNR
- **OM for CIRCUIT CONDITIONS**
  111 Higher degradation level required
  112 It is not allowed to deactivate this resource
  113 Continuation deactivates the CBU. Switch off journal update first !

114 No virtual channel assigned
137 Action not allowed because there are already two CCS slices masked
138 It is not allowed to deactivate the local SSM-MPC
139 Action not allowed because port has no logical device yet
140 Last OM device may not be deactivated on this ISPBX platform
186 It is not allowed to deactive shelves, modules or the CPU

- **OM for COMMAND FILE EXECUTION**
  180 Command file specification error
  181 Log file specification error
  182 Date and time not set (use SEDATI)
  183 Command file not found
  184 Log file not found
  185 Maximum number of jobs already submitted
  186 Job not submitted due to internal error; try again
  187 Maximum file length [4000char's] exceeded
  188 Incompatible command file
  189 Use EXSJOB for special batch files
- **OM for DATA FUNCTIONS**
  120 No expanded cv modes
  122 Still EHWAs for convertor type present
- **OM for DIGITAL ALARMS**
  110 Resource not in service
- **OM for DISPLAY METERING**
  120 BSPT value not allowed for operator DNR
- **OM for DNR/BSP-ID - LINE CIRCUIT RELATIONS**
  120 No space for new DNR
  121 DNR is not assigned
  122 DNR is already assigned to other EHWA
  123 Move not possible - too many BSPs assigned
  124 WARNING : EHWA now contains more than one BSP-ID!
  125 No space for LENR data
  126 No space for IABD data
  127 DNR is special extension
  128 Not all IABD numbers are transferred
  129 DNR or EHWA busy
  130 (Some) involved BSP is executive or secretary
  133 DNR is groupmember
  134 DNR already in use
  135 No space for BSP data
  136 No space for night extension data
  137 No space for diversion to external data

138 No space for executive data
139 No space for hotline data
140 DNR and/or BSP already assigned to given EHWA
141 Incorrect BSP-ID or DNR has incorrect type
142 ALL-BSPT (99) not allowed
143 Maximum number of BSPs with given DNR already assigned
144 BSPT does not exist
145 BSP-ID already exists
146 DNR has been assigned the selective call answering facility
147 BSP is executive or secretary
148 No space for password data
149 BSPT does not contain IBSC
150 Special extension is already assigned to EHWA
151 No desksharing license
152 Special extension may not be moved to hardware-less position
153 Another Basic DNR for this unit already exists
154 After this action the BSP will be not-usable
155 No space for CNND data
156 CNND relation not transferred
157 Not all IABD numbers and CNND relations are transferred

- **OM for DOWNLOAD**

110 Download package delete error
111 No reply on delete error
120 ALL-BSPT (99) not allowed
121 Incorrect BSP-ID or DNR has incorrect type

- **OM for EXECUTIVE/SECRETARY GROUPS**

120 Executive BSP-ID has incorrect type or is already assigned
121 Secretary BSP-ID has incorrect type or is already assigned
122 Identifying BSP-ID is incorrect
123 Executive and secretary BSP-ID are not located in the same unit
124 Warning: BSP-ID is assigned to other executive-secretary pool or group
125 Warning: BSP-ID is not related to a feature phone
126 Warning: BSP-ID is already related to a function key menu
127 BSP-ID already in use
128 File already present
129 New command file written
130 Executive and secretary BSP-ID not located within the one unit
131 Group DNR is special extension
140 Warning: Function key menus should be used for exec/sec group
141 Number of function key menus too small
142 Group property not allowed

144 BSP-ID already assigned the selective call answering facility
145 ALL-BSPT (99) not allowed
146 BSP-ID with same identifying DNR already assigned to this group
147 Executive BSP-ID is already assigned as ACD group member
148 Secretary BSP-ID is already assigned as ACD group member

- **OM for FACILITY CLASS MARKS**
  120 Mark is R/O or not existing or disabled on this type of DNR
  121 Action not allowed for this facility class mark
  124 Incorrect BSP-ID or DNR has incorrect type
- **OM for FILE MANIPULATION**
  140 Directory file not found
  141 Directory file open error
  142 Directory read error
  143 Source file read error
  144 Copy read error > Check presence of incomplete destination file !
  145 Copy write error > Check presence of incomplete destination file !
  146 Delete not allowed
  147 Binary files may not be typed
  148 Delete not allowed
- **OM for FOLLOW ME**
  151 Originator is not follow me entitled
  152 Destination is follow me protected
  153 Action currently not allowed
  154 ALL-BSPT (99) not allowed
- **OM for FUNCTION KEYS AND MENUS**
  120 ALL-BSPT (99) not allowed
  132 Key-data indicates park position: led code not allowed
  133 Key-data indicates executive line position: wrong led code
  134 Key-data indicates executive line position: led code missing
  135 Function_key/level doesn't allow key-data for park/line position
  136 Series/range not allowed for function key or level when assigning data
  137 Key-data indicates automatic transfer: wrong led code
  138 Key-data indicates automatic transfer: led code missing
  139 Function key doesn't allow key-data for automatic transfer
- **OM for GENERAL CANCEL CODE**
  120 Result-id not allowed for general cancel code
- **OM for GROUP ARRANGEMENTS**
  120 Group DNR and/or member BSP-ID are special extension DNR
  121 Group has no ACD property (DIGRPS)
  121 Member BSP-ID has incorrect type or is already assigned (CRGRPA/ASGRPM)
  122 No-member group not allowed

123 DNR already in use
124 Member BSP-ID cannot be switched to absent
125 Still follow me relation present
126 Still call forwarding relation present
127 Park/line position only allowed in non ACD group
128 Option F of extended properties may only be set for ACD groups
129 DNR not found
130 BSP-ID already assigned the selective call answering facility
131 A no-member group may not be switched to Day status
132 BSP-ID with same identifying DNR already assigned to this group
133 BSP-ID or DNR does not exist
134 ALL-BSPT (99) not allowed
135 Member with same DNR already assigned to group with same supervisor
136 Member BSP-ID is already assigned as executive
137 Member BSP-ID is already assigned as secretary
138 No space for new ACD group member
139 DNR has incorrect type or group has no ACD property
140 No logical device assigned due to lack of space
141 No more members allowed in Multiple Ring Group
142 Group DNR and member BSP-ID are not located in the same unit
143 No space for member or group assignment

- **OM for HARDWARE CONFIGURATION**

109 Still dongle in overlay with VDU present
110 Not allowed circuit number at board
111 Action not allowed when journal updating switched ON !
112 Still boards in shelf present
113 The sequence number is invalid
114 Still links present
115 Still devices present
116 Still bundle-DTU relations present with bundle
117 Still a DNR present
118 Still line-route relations present
119 Still line-bundle relations present
120 Still special extension relations present
121 Still D-channel relation present
122 Still CRU-entry present
123 Still main-slave board relation present
124 Not allowed to delete last LDN
125 Still LDN relations present (DEDEVC)
125 Still tone sources present (DEBRDS)
126 Still boards controlled by this board present

127 Port occupied by B-channel of adjacent ISDN bus
128 A port, required for B-channel, is already in use
129 Different PCT-types not allowed at same bus
130 Module controller board is already present
131 PMC-MC-PRIMARY board may not be deleted
132 CSN-BC board may not be deleted
133 Only one remote port allowed in unit
134 Board not yet assigned
135 Illegal link combination
136 Link can not be deleted
137 This fixed device may not be deleted
138 Device name or type incorrect or not allowed for this port
139 Link type not allowed
140 Device not known as local device in unit (ASLDNM)
140 Link circuit number out of range (ASLINK/DELINK)
141 Still remote PM or Interunit link present in local PM
142 First CSN-PMC link has to be assigned to local PM
143 Still device ports present
144 First assign the SNS board(s) with lower EHWA
145 First assign the SNS board(s) with higher EHWA
146 Conflict between equipment type and LDN
147 Not allowed to delete circuit
149 LBU and DBU may not be deleted on this ISPBX
150 Device not known as local device in unit
151 Not all requested virtual circuits is assigned
152 Equipment type not supported on this SOPHO ISPBX
160 This link can not be assigned as a controllable link
161 Board not yet assigned
162 Controller board not yet assigned
163 Link incompatible with board
164 Device incompatible with board
165 Assign the controllable links to this destination first
166 Delete the not controllable links to this destination first
167 Still PCH resources in use
168 Not enough PCH resources available
169 Incorrect board position
170 Main board not present
171 DTU-CC not used in interunit link
172 DTU-CC already used in link
173 Parameter NVCT not allowed for given EHWA
174 Value for parameter 4 is not allowed on this ISPBX platform

175 Board is not an SCU board
176 Link assigned, but due to lack of space no or not all ILCs (ASLINK)
176 Not all requested virtual circuits assigned (ASBRVC)
177 Inconsistent data detected in HCA
178 Shelf not yet assigned
179 DTU already used with other CRU-entry
180 Still virtual circuits present
181 Still convertor present
182 Change board subtype not allowed for this board
183 Board of circuit is not yet assigned
184 Not allowed; use assign/delete board command
185 No related board characteristics table found
187 Board is not a PMC-MC-MASTER board
188 Board is not a CSN-BC
189 Board is not a PMC board

- **OM for IABD AND LENR FACILITIES**
  120 DNR has no IABD and LENR FACM assigned
- **OM for INITIALISE DISK**
  140 It is not allowed to initialise a CBU
  141 Device no storage device
  142 Command currently not allowed. Files open on device, try again.
- **OM for INTEGRATED ANNOUNCEMENT SYSTEM**
  121 Group has no ACD property
- **OM for INTER UNIT TRUNK TRAFFIC**
  120 Bundle already assigned
  121 Bundle not assigned to route
- **OM for MANAGER DATA**
  120 BSPT value not allowed for operator DNR
- **OM for MERCURY INDIRECT SERVICE**
  120 Old authorization code validation error
  121 New authorization code verification error
- **OM for MISCELLANEOUS DNR ACTIONS**
  120 No local CNND database defined
- **OM for MULTIPLE SUBSCRIBER NUMBER**
  120 Not allowed to change MSN parameters of a DCC circuit
- **OM for NIGHT TRAFFIC AND SPECIAL EXTENSIONS**
  121 DNR already assigned the selective call answering facility
  122 Already other special extension type assigned to trunkline
  123 Special extension type incorrect
  124 DNR is member of special extension group
  125 DNR is group with special extension member

- **OM for NUMBERING SCHEME**
  - 120 Barring mark set
  - 121 Number already barred
- **OM for OVERLAY MODULES**
  - 140 Overlay not found
  - 141 Delete not allowed
  - 142 Delete postponed until the overlay is unused
  - 143 Delete request pending
  - 144 No loading space available in memory
  - 145 CM device error
  - 146 Error in overlay found
  - 147 Action not allowed for permanent overlays
- **OM for PAGING**
  - 121 Unit already assigned to a paging area
  - 122 Unit is utility unit
  - 123 Still routes assigned to area
  - 124 Still virtual codes assigned to route
  - 125 Still lines assigned to route
  - 135 Route has incorrect type
- **OM for PASSWORD PROTECTED FACILITIES**
  - 120 Password relation not found
  - 121 PID/CC not found
  - 122 PID/CC already assigned
  - 123 PID/CC `999999' is reserved for malicious call trace
- **OM for PRIVATE VIRTUAL NETWORKING**
  - 120 Old security code validation error
  - 121 New security code verification error
  - 137 Signalling Channel busy
  - 138 UCA busy
  - 139 RIN already assigned to a signalling channel
  - 140 PVN route is not a Main route
- OM for PROJECTING
  - 110 Data rejected by service process
  - 140 PM (being) activated
  - 141 Downloading active
- **OM for REMOTE MAINTENANCE**
  - 100 The new configuration is stored
  - 110 Either RMAIN0.CNF or RMAIN1.CNF should be used
  - 111 A new configuration file RMAINx.CNF is written (x=remote usergroup)
  - 112 No new configuration file is written
  - 113 Not allowed to clear this item

- **OM for SYSTEM DUMP**
  - 140 No system dump present
  - 141 Dump already present
  - 142 Writing system dump initiated
  - 143 Writing system dump already in progress
  - 144 System dump erased
- **OM for SYSTEM SECURITY**
  - 110 Old password validation error
  - 111 New password verification error (CHPASS)
  - 111 Unknown OM terminal (CHDEAU/CHDEPR/DIAUPR)
  - 120 Authority class index 0..15 can not be changed
  - 121 Authority class value 15 is not allowed
  - 122 No value has been found, given index not known
- **OM for TESTING**
  - 100 Request already present
  - 101 Request not found
  - 110 B-channel not available for test (CRCCSP/CRCCPP)
  - 110 Test already in progress for this resource (DIMEMQ)
  - 111 Error during release of the controlled connection (ERCOCO)
  - 111 Test aborted by operating system - try again after a few minutes (DIMEMQ)
  - 112 The current controlled connection state does not allow this command
  - 113 The digits received are already monitored
  - 114 No digit receiving resource involved in this controlled connection
  - 115 No digit sending resource involved in this controlled connection
  - 116 No tone sending resource involved in this controlled connection
  - 117 Controlled connection rolled back
  - 118 Maximum number of controlled connections exceeded
  - 119 No tone resources allowed in paired path controlled connections
  - 120 Controlled connection erased
  - 121 Error during flow establishment
  - 122 No pulsed sending resource
  - 125 Incompatible resource status
- **OM for TOLL TICKETING AND FULL DETAILED CALL RECORDING**
  - 110 FDCR facility not active
  - 111 Toll Ticketing facility not active
- **OM for TRAFFIC OBSERVATIONS AND MEASUREMENT**
  - 110 Traffic measurement not started: already active
  - 111 Traffic measurement inconsistency
  - 112 No figures available; data currently being gathered
  - 113 Figures not yet available
  - 120 ALL-BSPT (99) not allowed

121 BSPT value not allowed for group DNR
122 BSPT value not allowed for operator DNR

- **OM for TRAFFIC CLASSES**

120 BSPT value not allowed for operator DNR

- **OM for TRUNK TRAFFIC**

120 Bundle already assigned
122 BSPT is not assigned
123 BSPT not known in system
124 BSPT already assigned
125 BSPT not unique (IBSC overlap)
126 Some B-channels in this circuit already assigned to other bundle
127 BSPT invalid or not assigned
128 Still SCNE or overflow extension assigned to route
129 Still bundles assigned to route
130 Still PVN data assigned to route (ERROUT)
130 Trunk/bundle incompatible with involved EHWA(s) (CHBNDC/ASLINE)
131 No lines allowed in a PVN bundle
132 Signalling-type of bundle and route mismatch
133 Original number is conflicting with an already defined conversion
134 Invalid input data - too many parameter characters
136 Bundle not in specified route
141 No space for FTLD data
142 FTLI already assigned to other trunk line
143 Special extension assigned to trunk line
144 No bundle-route relations present
145 Trunk line type does not support FTLI/FTLD facility
146 Incorrect number of inc-options (non-DDI : 6, DDI : 10)
147 Incorrect number of tone-and-ddi-optons (non-DDI : 2, DDI : 9)
148 Tree not allowed for non-DDI
149 Incorrect number of options (must be : 4)

- **OM for UNIT STARTS**

110 A hotstart is not yet possible
111 A MIS-file is required to execute a coldstart
112 A hotstart is not allowed
113 Not all slices synchronous
114 File CONDUA.POM not present on DBU
115 System already in dual mode
116 System not in dual mode
117 Not allowed on this cluster
118 BM lock not set
119 Cluster not operational

120 Empty JOURNL.POM file must be present on CBU and DBU
121 Unable to rename configuration files on LBU or DBU
122 No MIS-file present on LBU or DBU
123 Unit number in CONDUA.POM file differs from CONFIG.POM file for warm start
124 No new MIS-file generated after SWDUAL on this cluster yet
125 CIE or SNS communication error present
126 Hard errors occurred during last memory test
127 Snapshot identification number not equal in JOURNL.POM on CBU and DBU
128 LBU contains CONDUA.POM and/or DBU contains CONFIG.POM

A.3. GENERAL ERROR MESSAGES (190…254)

190 Notice - Projecting unit.
Part of message used during projecting phase (processing LL-file).
191 Notice - Updating unit.
Part of message used during processing journal file (JOURNL.POM).
192 at line number
Part of message used during projecting phase.
193 at sequence number
Part of message used during processing journal file.
194 aborted.
195 disabled
196 completed
197 NO
Enter yes or no, to answer a certain question.
200 Parameter syntax error.
201 Unknown command.
The command is unknown, or the command is not loaded because the local backup device is currently unavailable.
202 No load space.
The OM (sub)command cannot be loaded due to a lack of space.
203 Command counter overflow.
There are too many simultaneous executions of the same OM (sub)command.
204 Authority class mismatch.
It is not allowed to execute the OM command from the current terminal.
205 Too few parameters.
206 Too many parameters.
207 Congestion!
This may occur in access to the Central Back-up, simultaneous updates in the same unit, etc.
208 Unit unobtainable.
The unit indicated in the command cannot be reached.
This error message can be followed by:
REJECTED The completed action is rejected;
EXECUTED The action is accepted and written to the journal file, but not executed yet. As soon as the unit is obtainable again, it will be updated from the journal file.

209	Illegal multiple value. A parameter is entered as a series or range when this is not allowed.
210	Notice -. Header when the system generates information to the user, which is not an error indication.
211	Input line discarded. Used after Ctrl-X from an OM terminal.
212	Question mark at illegal position.
213	Unit currently locked.
214	Line too long.
215	Time out.
216	Illegal multiple value combination. An example is a range command with the second value smaller than the first: 50&&10. This is not allowed.
217	Too many parameter values.
218	Parameter value too long.
219	No colon at position 7 encountered.
220	Device error.
221	Error in overlay. The overlay contains a checksum error and is therefore not a loadable set, or the package ID of the overlay is not conform the package ID of the system.
222	Command aborted.
223	Illegal multiple command. It is not allowed to execute the command as a multiple command.
224	Enter new value.
225	Non-convertible parameter.
226	Execution completed.
228	Open error.
229	END;
230	Message.
231	No guidance text available.
232	aborted : Log-file open error.
233	aborted : Log-file write error.
234	See Maintenance manual.
235	END OF DIALOGUE #
236	Error.
237	REJECTED.
238	EXECUTED.
239	Job
240	Unit
241	finished executing
242	Unit updating. During execution of an OM command a unit is met which is not up to date. The result can be: -Unit updating + EXECUTED The command is accepted and written to the journal file. Execution is postponed because the unit is updating. -Unit updating +automatic retry The command is not yet accepted and not written to the journal file. First a validation must be done in the unit which is not up to date. Depending on this validation the command will be rejected or journalled and executed.

243	First value in range bigger than second value.
244	Empty parameter value.
245	Press; to continue or CTRL X to abort guidance.
246	Comma or ampersand in parameter repair input.
247	Parameter value too short.
248	Backup update error.
249	Backup congestion.
250	Backup unobtainable.
251	Unit not installed. A local data updating action is attempted in a unit which is not installed.
252	Backup maintenance currently locked. All OM actions that are normally written to journal file are currently disabled. This situation is the result of the execution of OM command BMLOCK. BMLOCK might be set because a MIS-file or a Retrieve-file is to be made.
253	YES A question will be put on the OM terminal screen if you have to confirm the continuation of a certain action. You can only enter yes (complete the action) or no (abort the action).
254	Operational maintenance currently locked. All OM actions that are normally written to journal file and executed from an OM device, are currently disabled. OM actions initiated from an extension (e.g. when desksharing is executed) remain possible and are written to the journal file. This situation is the result of the execution of OM command OMLOCK. OMLOCK might be set to temporary disable all OM actions which change PBX configuration data.

B . PARAMETERS

A

A-QUEUE
Routing to operator A-queue (1…16)

ABS
Displayed value, indicating the number of operators absent.

ABS-POM
Displayed value, indicating the number of operators absent and in OM mode.

ABBR-NUMBER
Abbreviated number (1…6 digits)

AC
Authorization code for Mercury smart box emulation (2…20 digits).

ACC-REP
Access code repetition counter (0…6)

ACD-TIME-PERIOD
ACD timer (used for various purposes)
0 = 0 seconds
1 = infinite
2 = 5 seconds
3 = 10 seconds
4 = 15 seconds
5 = 20 seconds
6 = 25 seconds
7 = 30 seconds
8 = 40 seconds
9 = 50 seconds
10 = 1 minute
11 = 2 minutes
12 = 5 minutes

ACD-THRESHOLD
ACD group dynamic COB threshold per 100 present and IN-SERVICE group members.

ACI/FLAG

Authority Class Index or in the case of a MIS file the validity flag: (v=valid, i=invalid)

ACTION-INDICATOR
Up to SSW 805.28 the syntax of the indicator is: P.
As from SSW 805.28 the syntax of the indicator is: P[Q]
P = IABD/CNND-IND
Indicates if an inter unit move is continued when there is not enough space for the IABD numbers and/or CNND relations belonging to the DNR in the destination unit:
0 = abort (default)
1 = continue
Q = ORDER-IND
Indicated whether the BSP-ID must be inserted in the BSP list before or after any existing BSP with the same value.
0 = insert after (default)
1 = insert before (used e.g. for desksharing)

ADD-INFO-NBR-LENGTH
One or two digits in the range of 0...20 indicating the number of additional info digits to be given. If the parameter is omitted, it is assumed that no additional info digits have to be given.

ADD-OR-DELETE
Action parameter (0 = delete, 1 = add)

AG
Analysis group (0…254)

ALL-CALLS
Number of allowed calls in the bundle for a given BSPT (0…254).

ALLOWED
OM terminal is (not) allowed to execute commands of the assigned authority class (0 = not allowed (default), 1 = allowed)

An
A-queue number (1…16) 1 = A1 to 16 = A16 (general)

ANN-DDI-FAIL
Announcement DDI fail option:
0 = Call to busy party
1 = Dialling time out
2 = Call to a non-allocated number

3 = Other unsuccessful calls

ANN-NO
Announcement number (0…254)

ANNOUNCEMENT-CODE
0…255; In some messages TMS will send an equipment number (60…79), indicating a tone source to which the subscriber should be connected. This equipment number is defined in the appropriate TMS *.PDT files.

ANNOUNCEMENT-SOURCE
0 or empty erases the relation
1 = Synchronous announcer specified by a DNR
2 = Tone announcer specified by a tone-function number
3 = Continuous announcer specified by an EHWA

ANN-PAUSE-TONE
Pause tone for ACD groups:
0 = COB tone
1 = External ring tone
2 = Internal ring tone
3 = MOH
4 = Music on COB
5 = Silence

ANN-SELECTION
Announcement selection on incoming trunks (0…7):
0 = DDI fail calls
1 = Successful DDI calls
2 = Non-DDI calls (including PLE, INE, MCNE, SCNE and CANS)
3 = Calls to operator A-queue
4 = Station calls for ACD group
5 = Night announcement for ACD group
6 = Delay message for ACD group
7 = Music on hold

APPLICATION
Application identification
16 = CallManager keyboard
17 = CallManager display
20 = General OM keyboard 1

21 = General OM display 1
22 = General OM keyboard 2
23 = General OM display 2

APPLICATION-VERSION
1 or 2 in the case of the CallManager (default 1);
2…9 in the case of general OM (default 2).

AREA
Paging area number (0… 13)

AS-PCTS
Indication whether the circuits on boards should be assigned automatically or not. Only valid if BOARD-TYPE is 0…69.
(0 = manual, 1 = automatic)

ASS
B-channel assigned yes or no.

ASSIST-GROUP
Assistance group (1…15)

ASSIST-GROUP-PROPS
Assistance group properties(P)
P= Operator monitoring (0 = off, 1 = on).

ASSISTANCE-POINT
Indicates in which exchange operator assistance should be given (1…12 digits). This can be:

- Network DNR or Cluster identify of the own exchange (local assistance).
- Network DNR or Cluster identity of another exchange (external assistance).
- Nothing (Source assistance).

ATF
Automatic trunk find
0 = No ATF
1 = ATF by camp on busy (COB)
2 = ATF by automatic ring back (ARB)

AUTHORITY
Authority class (0…15). Authority classes have the following meaning:

0 = Display functions for the customer
1 = Change telephony functions by customer
2 = Change complex and data functions by customer
3 = File management
4 = Batch jobs
5 = Change of service conditions
6 = Maintenance level 1
7 = Maintenance level 2
8 = Maintenance level 3
9 = Second line maintenance tools
10 = Spare (user definable)
11 = Spare (user definable)
12 = Spare (user definable)
13 = Spare (user definable)
14 = Change session authority class && protection (always allowed)
15 = Subcommands (never allowed)

AUTHORITY-INDEX
Authority Class Index.
Numeric identification of an OM command

AUTO
Automatic writing of system dump information to the local backup
(See also parameters DUMP and WRITE-SEL):
0 = Automatic writing disabled (default for DUMP = 2, WRITE-SEL = 0 current segment)
1 = Automatic writing enabled (default for DUMP = 0, 1 or 3, WRITE-SEL = 1 all data)

B

B-BUTTON
B button id (1…4)

B-CHANNEL
Relative B-channel number within the circuit. Only valid for ISDN.

BAUDRATE
Communication speed (in Bauds) which is used on the port:
8 = 1200
10 = 2400
12 = 4800
14 = 9600
17 = 19200
18 = 38400

BCH-VALUE
Relative B-Channel (0…31) (if DED-TYPE is 0…2) or number of B-channels (if DED-TYPE is 3…5)

BIT/BYTE
Indicating a bit (0) or a byte (1).

BOARD-TYPE
Board type, see Appendix C.

BR
Displayed parameter, indicating if the dialled destination is barred or not.

BRD
Board position in shelf (1…29).

BRD-STYPE
The sub type of the board. This is an arbitrary number given to a board, to distinguish between several boards of the same type (0…99)

BSP-ID
Basic Service Profile Identification. This parameter is used instead of parameter DNR. It consists of a DNR and a BSPT, separated by a hyphen (-):

<DNR>[-<BSPT>]
The -<BSPT> may be omitted when there is only one BSPT present on the DNR.

BSPT
Basic Service Profile Type (0…99).
Indicates for which BSPT the data must be changed. 99=change for all BSPTs.
Table B-1 Basic Service Profile Type (BSPT).

BSPT	IBSC	PRIORITY	DESCRIPTION
0	0	1	64 kBit/s unrestricted
1	1	1	Speech
2	2	1	3.1 kHz audio
3	3	1	3.1 kHz audio non-ISDN
4	4	1	7 kHz audio
5	5	1	Teletex
6	6	1	Telefax4
7	7	1	Mixed mode
8	8	1	Videotex
9	9	1	Slow scan television
10	10	1	Fernwirken
11	11	1	GrafikTelefon
12	12	1	Bildschirmtext
13	13	1	Bildtelefon Bild
14	14	1	SOPHO ISPBX speech
15	15	1	SOPHO ISPBX modem data
16	16	1	X.21
17	17	1	X.25
18	18	1	Bildtelefon Ton
19	19	1	64 kBit/s unrestricted non-ISDN
20…93	User definable	2	Free for use (CRBSPT command)
94	0, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 19	2	Data / possibly data
95	1, 3, 4, 14, 18, 19	2	Voice / possibly voice
96	0, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17	3	Data
97	1, 14, 18	3	Voice
98	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19	4	Any (Default)
99			All BSPTs
Note:	*On a route only one BSPT with priority 2 is allowed.*		
	Not all ISDN services (BSPTs) might be supported by the public exchange.		

BUDGET
Value to add to/subtract from the budget or the value to set the budget to. The range is 0 ... 999999.

BUDGET-ACTION
0 = subtract from the budget
1 = add to the budget
2 = set budget to amount

BUDGET-UNIT
Unit number where the budget is stored (1 ... 14).

BUNDLE
Bundle number (0…254)

BUNDLE-DIR
Direction of a bundle:
0 = incoming
1 = outgoing
2 = bothway.

C

C-BUSY
Displayed value, indicating the number of busy calls in the C-queue.

C-PRE
Displayed value, indicating the number of preferent calls in the C-queue.

C-RING
Displayed value, indicating the number of ringing calls in the C-queue.

C-SER
Displayed value, indicating the number of series calls in the C-queue.

C-TAX
Displayed value, indicating the number of taxmetering calls in the C-queue.

CC-TABLE
Number of the CLI or COL translation table (0...254).

CFDA-TIME
Call Forwarding on Don't Answer time in seconds (5...254 sec).

CF-TYPE
Type of call forwarding:
0 = call forwarding on don't answer
1 = call forwarding on busy
2 = call forwarding on absent group member
3 = call forwarding on empty group
4 = call forwarding on group overflow
5 = call forwarding on group in night service
6 = call forwarding on not existing DNR (from SSW 805.21)
7 = call forwarding on out of order extension (from SSW 805.21)
8 = call forwarding on not reachable extension (from SSW 805.24)

CHARGED
0 = toll free
1 = charged (default)

CLUSTER-ID

The identity of the SOPHO system (cluster) for use with DPNSS (1…6 digits, each 0…9)

Cn
C call type:
0 = Not answered
1 = unsuccessful
2 = Not on hook
3 = On hook
4 = Series
5 = Taxmetering
6 = Through connection busy
7 = Preferred call
8 = Through connection ringing

COB-QUEUE-TYPE
Length definition for the Camp On Busy queue. Three types:
0 = No COB queue
1 = Short COB queue
2 = Long COB queue

COCO-NUMBER
Controlled Connection Number.
This is a unique number for each controlled connection for test purposes. It must be in the range 1…99.

COMMAND-FILE
Command file specification consisting of:
[LDN:]FILE-NAME[.EXTENSION[.GENERATION]]
If GENERATION is omitted, the latest generation is used.
If EXTENSION is omitted, COM is used.
If FILE-NAME is omitted, SUBMIT is used.
If LDN is omitted, LBUxx is used, in which xx represents the unit number in which the job was submitted.

CON-ALLOWANCE
Connection allowance:
0 = Not possible
1 = Not allowed
2 = Allowed only with convertor
3 = Allowed

CON-AND-SIG-TYPE
Bundle connection and signalling type Y[Z]Z
Y represents the connection type:
0 = Four wire tie line
1 = Two wire PSTN line
2 = Two wire tie line
3 = Digital PSTN line
4 = Digital tie line
5 = Virtual connection
ZZ represents the signalling type:

		INCOMING:	OUTGOING:
0	=	impulse	impulse
1	=	keytone/KT sensitive	impulse
2	=	keytone	keytone
3	=	MFC	keytone
4	=	hotline*	impulse
5	=	keytone after answer	keytone
6	=	DPNSS-x	DPNSS-x
7	=	DPNSS-y	DPNSS-y
8	=	MFP	MFP
9	=	MF Socotel	MF Socotel
10	=	DASS	DASS
11	=	MFE	MFE
12	=	hotline*	keytone
13	=	MFC-CSS1	MFC-CSS1
14	=	ISDN-A	ISDN-A
15	=	ISDN-B	ISDN-B
16	=	DPNSS-PVN	DPNSS-PVN

* Hotline: the destination of incoming calls at any trunk in the bundle is fixed by Incoming digit conversion (as from SSW805.23).

CONDITION
Service condition:
0 = INS
1 = OUT
2 = OUT-ac
3 = ABL-er
4 = ABL-er-ac
5 = ABL-nu
6 = ABL-te
7 = ABL-te-ac

8 = ABL-deac
9 = ABL-fail
10 = ABL-hot
11 = NIN

CONNECTION-TYPE
If the BCS protocol is used (PROTOCOL-TYPE), this parameter determines whether modems are used or not (0=no, 1=yes).

CONTROL-SIDE
Indicates from which side a link is controlled
0 = MIC0 (for CPS)
1 = MIC1(for CPS)

CONV-NUMBER
Converted DNR, indicating the result string after conversion

CONVERTOR-TYPE
Convertor type (0…254)

CRE-DATE/TIME
Creation date and time of a file.

CRT
Circuit number (0…54)

CRUE-BRD
Board position of the clock entry

CRUE-CRT
Circuit number of the clock entry

CRUE-SHELF
Shelf number of the clock entry

CUR
Current authority class value.

CV
Compatibility value (0…254)

CYCLIC
Cyclic or once (0 = cyclic, 1 = once)

D

DATA
The contents of the BIT (0...1)/BYTE (0…255).

DATA-INDICATOR
This indicator specifies the kind of data:
0 = Load in permission units
1 = Number of tasks running
2 = Guaranteed load in %
3 = Maximum load in %
4 = Minimum load in %
5 = Maximum number of tasks allowed
6 = Timeout value in minutes

DATE
Absolute date in the form YYYY-MM-DD or relative date in the form +dddd (number of days)

DAY
Day of the month (1…31)

DAY/NIGHT
Day or Night indication for ACD groups (0 = Night, 1 = Day)

DAY-OF-WEEK
Day of week (1…7). Normally Monday is day 1.

DAY-TRFC
Traffic class during day time (see TRFC)

DED-TYPE
Dedication type (0…5):

- If DED-TYPE is 0…2 (1TR6/Euro-ISDN):
  The dedication mode of a specific B-Channel:
  0 = Set B-Channel dedication incoming
  1 = Set B-Channel dedication outgoing
  2 = Set B-Channel dedication bothway
- IF DED-TYPE is 3…5 (VN2):
  The maximum number of calls in the access:

3 = Set maximum number of incoming calls
4 = Set maximum number of outgoing calls
5 = Set maximum number of calls

DEF
Default authority class value.

DELAY
Delay mark (0 = no, 1 = yes)

DESCRIPTION
A description of the function of the file.

DEST
Number of the destination (0…254).

DEST/NUMBER
Number of the destination (0…254), in Numbering scheme this can also be a paging route (0…254). In the case of PVN result-id's this can also be a unit number and for desksharing it is the validation type.

DEST-NUMBER
Destination number for Follow Me, Hot Line, Twinning and Call Forwarding types 0…5 (1…20 digits) and 6 and up (1…8 digits for CPS and 1…20 digits for CCS.

DEST-BRD
Board identification of destination. See BRD.

DEST-CC-STRING
Translated CLI or COL string : max. 16 digits, the string may end in wildcards (%).

DEST-CRT
Circuit identification of destination. See CRT.

DEST-SHELF
Shelf identification of destination. See SHELF.

DESTINATION-FILE
Destination file specification. See FILE.

DFP-INDICATOR

Digit, frequency or pulsed indicator
(0 = digit, 1 = frequency, 2 =pulsed).

DIALTONE-PLACE
Place in the digit string (<MAX-LENGTH) where second dial tone is generated (1…19, 0=no second dialtone)

DIAL-TYPE
Dial type
0 = Extension
1 = Enquiry
2 = Operator
3 = Post
4 = Alternative destination
5 = FM primary
6 = Pickup destination
7 = Executive secretary
8 = Overlay time out dialling
9 = Overlay continue dialling

DIGIT
The given digit will be used as fixed MSN digit when the MSN type of the EHWA to which the BSP is assigned is `MSN with fixed digit'.

DIGIT-ASSIST
Paging mode digit for assisted transit calls (keyed numeral)

DIGIT-EXT
Paging mode digit for external originated calls (keyed numeral)

DIGIT-INT
Paging mode digit for internal originated calls (keyed numeral)

DIGIT/FREQ
Depending on DF-INDICATOR: Digit (0…15) or a frequency (0…6).
The control frequency is 6.

DIGIT-POSITION
TMS digit position (1…20). This indicates the place where TMS (SystemManager) expects the service code in a dialled string.

DIR-AND-NEG
Bundle direction and ISDN negotiation: P[Q]

P =	Bundle direction :	Q =	ISDN negotiation rule :
	0 = Incoming		0 = Any B-channel
	1 = Outgoing		1 = Exclusive B-channel
	2 = Bothway		2 = Preferred B-Channel

DIRECTORY-TYPE
Directory type
S = System directory layout (default)
U = User directory layout
D = Description directory layout

DNR
Directory number (1…6 digits). It is possible to use leading zero's (0) until a projectable digit is encountered. See FIM-Voice Explained, chapter 1, “Hardware Relations”.

DOWN-TRFC
Downgraded traffic class (see TRFC).

DS
Displayed parameter, indicating the destination of a call.

DT
Displayed parameter, indicating the dial tone place.

DTU-BRD
Board location of the DTU

DTU-SHELF
Number of the shelf in which the DTU is located

DUMP
Cause of the system dump (0…3):
0 = A frozen process
1 = An operational start due to a software exception
2 = An operational start due to a manual request
3 = A trigger to gather diagnostical data

DUMP-ACTION

System dump action (0…1):
0 = Set dump trigger
1 = Reset dump trigger

DURATION
Threshold of call duration in seconds (max 4 digits).

E

EQUIPMENT-TYPE
Type of the device:
0 = Non OM keyboard (Lab usage)
1 = Non OM display (Lab usage)
4 = Disc not tested (obsolete)
5 = Toll ticketing
7 = Solid State Backup Device (CPS only)
11 = MIS output
13 = Fixed alarming (CCS only)
14 = OM keyboard DND Nolog
15 = OM display DND Nolog
16 = OM keyboard CallManager
17 = OM display CallManager
18 = OM keyboard ACD90 (not for CCS)
19 = OM display ACD90 (not for CCS)
20 = OM 1 keyboard
21 = OM 1 display
22 = OM 2 keyboard
23 = OM 2 display
24 = Printer
25 = FDCR (ASCII output)
26 = Disk Emulator
27 = Alarm signaller
28 = Alarm unit (CPU-ME/MT only)
29 = SOPHO SystemManager services
30 = Dongle read
31 = Dongle write
32 = FDCR (binary) (binary output)

EXCL
Exclusivity mark (0=no, 1=yes).
The exclusivity mark is used when the access in connected to a test device. The system will not accept or make calls to any B-channel in this access.

EXEC-BSP-ID
Executive BSP-ID (see BSP-ID)

EXEC-RANK

Executive rank in pool (0…9)

EXEC-LINE-POS
Indication if the executive line position must be assigned (0=no, 1=yes)

EXEC/SECR-BSP-ID
Identifying BSP-ID for an executive/secretary group; BSP-ID of any executive or secretary in that group (see BSP-ID).

EXP-NUMBER
Expanded number (1…20 digits)

EXT-PROPS
Extended group properties [ABCDE[F[G]]], each 0 =false or 1=true.
If ABCDEF are omitted, all options will get value 0.
If F and/or G is omitted, value 0 is assumed.
A = Line position status prevails extension status.
If true, group members will notice a call, which arrives at a fellow group member's line position even if this fellow group member's extension is busy.
If false, then a call to a member's line position is only signalled when the member's extension is idle.
B = No rerouting after transfer
Trunk calls being transferred to a member in the same group and not answered within a specified time, will not be rerouted to an operator, even if the route has `assistance' activated.
C = Hold tone after transfer
This gives `hold tone after transfer' to an incoming caller, which is transferred by a group member to fellow group member, which is ringing.
D = LED based status monitoring
Status monitoring messages are related to LED codes.
E = Inhibit diversion of member-member calls
A call from one group member to another in the same group, can not be diverted (like follow me)
F = Inhibit operator assistance
This applies to ACD groups only: it inhibits a call to an ACD group from getting operator assistance.
For other types of groups, this option must be false.
G = Unrestricted call pick-up allowed.
This allows for individual call pick-up by extension users outside the group arrangement.

EXTENSION
Extension of a file, max 3 characters e.g. POM

F

FACILITY
Facility class (0 = Traffic class, 1 = SAS facility class, 2 = Least Cost Routing and iSNet Private Virtual Networking second list active)

FAC-INDICATOR
Password protected facility indicator:
0 = up/downgrading traffic class,
1 = password DDO/desksharing indicator.

FAR-DEST
Far destination unit (1…14).

FCM
Facility class mark (*RO* = read only, *D* = possible default):

0	=	add on entitled	*D*
1	=	IABD and LENR	*RO*
2	=	break in entitled	*D*
3	=	break in protected	*D*
4	=	data protected	*D*
5	=	data protected entitled	*D*
6	=	ELC barred	*D*
7	=	follow me entitled	*D*
8	=	follow me protected	*D*
9	=	indialling barred	*D*
10	=	metering	*D*
11	=	preference to operator	*D*
12	=	SOPHO Business telephone	
13	=	test call entitled	*D*
14	=	trunk priority allocation	*D*
15	=	long line	
16	=	CF on don't answer extension or on absent group member	*RO*
17	=	hot line	*RO*
18	=	delayed hot line	*RO*
19	=	group member	*RO*
20	=	call pick-up individual	*RO*
21	=	executive	*RO*
22	=	secretary	*RO*
23	=	special extension	*RO*
24	=	don't disturb	*D*
25	=	don't disturb entitled	*D*
26	=	toll ticketing	*D*

27	=	status display member	*RO*
28	=	external service display	*D*
29	=	auto COB on originator	*D*
30	=	auto COB on destination	*D*
31	=	X.21 DTE	*D*
32	=	keytone post dialling allowed	*D*
33	=	voice mail server	*D*
34	=	call waiting entitled	*D*
35	=	call waiting protected	*D*
36	=	start COB entitled	*D*
37	=	CF on busy extension or on empty group	*RO*
38	=	direct access protected	*D*
39	=	fixed follow me entitled	*RO*
40	=	TRANSCOM DTE	*D*
41	=	line position available	*RO*
42	=	park position available	*RO*
43	=	exec. line position entitled	*RO*
44	=	enquiry by impulse digit	*D*
45	=	selective call answering	*RO*
46	=	CLI permanently restricted	
47	=	overrule CLIR	*D*
48	=	ARB entitled	*D*
49	=	ARB protected	*D*
50	=	B-channel overflow	*D*
51	=	COL permanently restricted	*D*
52	=	message waiting on ALC	*D*
53	=	collect call reception entitled	*D*
54	=	CF on Not Reachable extension	*R/O*
55	=	Reserved FCM	*R/O*
56	=	B-channel bundling allowed	*D*
57	=	Desksharing entitled	*D*
58	=	Keytone dialling	*D*
59	=	Enquiry by keytone digit limited	*D*
60	=	Enquiry by keytone digit full	*D*

FDCR-CALL-TYPE

The type of call for Full Detailed Call Recording:
1 = Internal calls
2 = DDO calls
3 = DDI calls
4 = Tieline calls
5 = Assistance calls
6 = Paging calls
7 = Toll Ticketing calls

FDNR

Free Number : a digit string consisting of 1 to 6 digits (determined by boundary 307). The digits must be elements out of the digit set 0 ... 9, *, #, A, B, C. The parameter can be a complete DNR or the first digits of a range of DNRs.

FIGURE-TYPE
Indication of the traffic measurement figures that are required:
0 = last quarter hour figures
1 = cumulative figures

FILE
File specification consisting of:
LDN:FILE-NAME.EXTENSION[.GENERATION]

FILE-NAME
File name (1…6 alphanumeric characters)

FM-TYPE
Type of Follow-me:
0 = follow-me
1 = fixed follow-me

FN-LOC
Free Number Network Location : a digit string consisting of 1 to 6 digits (determined by boundary 307). The digits must be elements out of the digit set 0 ... 9, *, #, A, B, C. The parameter can be a complete DNR or the first digits of a range of DNRs.
This parameter must be a DPNSS Cluster ID.

FN-LOC-1/2
See FN-LOC.

FREQ-VALUE
Stc-tone data (0…33), see table the table on page 291.

FST-DT
First external dial tone option (0 = no, 1 = yes)

G

GEN
Maximum number of generations present on a device.

GEN-OPTS
General route options PQRSTUVWX [YZ] (0=no, 1=yes)
P = data protection applied
Q = assistance required
R = add on allowed
S = toll ticketing on route
T = impulse postdialling allowed
U = keytone postdialling allowed
V = enquiry on trunk allowed
W = Flexible operator assistance available
X = Time-break check (from SSW 805.25)
Y = Time-break enabled (from SSW 805.28)
Z = CNND name/number translation required (from SSW 805.29)

GEN-TONE
General tone types PQRSTU
P = Tone type before answer (2…5)
Q = Tone type after answer (2…5)
R = Tone during hold conditions (0…3)
S = Tone type for COB before answer (0…6)
T = Tone type for COB after answer (0…6)
U = Tone for special recall to operator (0…5)
The possible tone types are:
0 = Music on hold / no tone
1 = Music on hold / waiting tone
2 = No tone
3 = Waiting tone (this is the COB-tone to caller, see under TONE-FUNCTION, nr. 17 in the table).
4 = Internal ring back tone
5 = External ring back tone
6 = Busy tone

GENERATION
Generation of a file (/ = latest, 0 (zero) = oldest, or 1…9)

GROUP-DISPLAY
Group display. Flashing light with individual monitoring messages on all member extensions when a member is called (0 = no, 1 = yes)

GROUP-DNR
Group directory number (see DNR)

GROUP-BSP-ID
Group basic service profile identity.

GROUP-PROPS
Group properties : see figures the figure on page 249 and the figure on page 250.

OBSERVATION GROUP	ACD	GROUP HUNTING	HUNTING SEQUENCE	CALL PICKUP GROUP	CALL PICKUP MEMBER	EMPTY GROUP ALLOWED	AUTOM COB	GROUP PROPERTIES
No	No	No	---	No	---	No	---	0
						Yes	---	8
				Yes	Yes	No	---	1
						Yes	---	9
		Yes	Cyclic	No	---	No	No	17
							Yes	3
						Yes	No	23
							Yes	11
				Yes	Yes	No	No	19
							Yes	5
						Yes	No	25
							Yes	13
					No	No	No	21
							Yes	7
						Yes	No	27
							Yes	15
			Fixed	No	---	No	No	16
							Yes	2
						Yes	No	22
							Yes	10
				Yes	Yes	No	No	18
							Yes	4
						Yes	No	24
							Yes	12
					No	No	No	20
							Yes	6
						Yes	No	26
							Yes	14

Figure B-1 Group properties (1)

OBSER-VATION GROUP	ACD	GROUP HUNT-ING	HUNT-ING SEQU-ENCE	CALL PICKUP GROUP	CALL PICKUP MEMBER	EMPTY GROUP ALLOW-ED	AUTOM COB	GROUP PROPER-TIES
No	No	No	Multiple Ring	No	---	No	No	49
							Yes	52
						Yes	No	55
							Yes	58
				Yes	Yes	No	No	48
							Yes	51
						Yes	No	54
							Yes	57
					No	No	No	47
							Yes	50
						Yes	No	53
							Yes	55
	Yes	Yes	Cyclic	No	---	No	Yes	30
						Yes	Yes	39
				Yes	Yes	No	Yes	32
						Yes	Yes	41
					No	No	Yes	34
						Yes	Yes	43
			Fixed	No	---	No	Yes	29
						Yes	Yes	38
				Yes	Yes	No	Yes	31
						Yes	Yes	40
					No	No	Yes	33
						Yes	Yes	42
			Longest Idle	No	--	No	Yes	35
						Yes	Yes	44
				Yes	Yes	No	Yes	36
						Yes	Yes	45
					No	No	Yes	37
						Yes	Yes	46
Yes	No	---	---	No	---	No	---	28

Figure B-2 Group properties (2)

GUARD-1+GUARD-2

Data guard time in minutes (000…255) and incoming call guard time in seconds (000…255) in the form: mmmsss.
Remember to fill in exactly 6 digits for this parameter.
In the case of X.21: Clock adaption buffer size (12…240).

H

HOTSTART
0=No hot start, 1=Hot start

HOURS
Hours (0…23)

HW-TYPE
Hardware type. Refer to appendix C

I

IABD-NO
Sequence Number for Individual Abbreviated Dialling.

IBSC
Internal Basic Service Category (0… 19). Same as BSPT 0… 19.

INC-OPTS
Incoming traffic options PQRSTU[VWXY[Z]] (0 = No, 1 = Yes)
P = DDI traffic on route
If `P=No' then VWXYZ are omitted.
Q = Break-in protection
R = Transit allowed
S = Malicious call trace
T = Announcement allowed
U = Answer before announcement
V = DDI-delay time required
W = DDI barred check on inc. calls
X = DDI call waiting required
Y = Socotel shortened protocol
Z = Calling party control of incoming trunk call (since SSW 805.30)

INC-OR-COM
Indication if the network has to be set compatible or incompatible
0 = compatible
1 = incompatible

INTERNAL-CALL-TYPE/A-QUEUE-NUMBER
Internal Call types:
0 = Individual call
1 = Normal call
2 = Preferred call
A-queue number: See parameter A-QUEUE

INTR-ALL
Intrusion allowance for toll (public exchange) operator (0…1).
0 = not allowed
1 = allowed

ITEM-NBR
The item number (0…255).

IU-ROUTE
Inter Unit route (0…254)

J

JOB
Number of the batch job (01…99)

K

KEY
Function key number (0…254):
Level 0: 0…25 Real function keys
Level 1: 0…37 Real function keys
Level 0: 26…254 Virtual function keys
Level 1: 38…254 Virtual function keys
See the relevant SOPHO-SETand ErgoLine manuals.

KEY-DATA
Information to be stored under the function key or facility codes to be stored under virtual keys. (max. 17 digits, max. 4 digits for soft-keys)

KEY-LEVEL
Function key level (0 or 1)

L

LAMP-ID
Operator Service LEDs
1 = A1 LED
2 = A2 LED
3 = A3 LED
4 = A4 LED
5 = M1 LED
6 = M2 LED

LDN
Logical device name (1…6 characters).
Normally the following conventions are used (xx = unit number):

- ACDxxy for the CallManager MIS
- ALUNxx for alarm unit device
- ALRMxx for alarm signaller
- CBU for the central backup
- DBU for the dual mode backup
- DONuuy for the dongle (uu=unit number, y=0:read side of the dongle, y=1: write side of the dongle)
- FDxx for SSM FDCR Device
- FXALxx for fixed alarm
- IBUxx for the internal backup unit
- LBUxx for the logical backup device
- PCxx for the personal computer with the disk emulator software
- PRTRxx for the printer
- REMALM for remote alarming device
- TMSxx for the TMS or SOPHO SystemManager
- TTxx for SSM toll ticketing device
- VDUxxy for the OM terminal (y = 0: keyboard, 1: display);

LED-CODE
Code of the indication light (0…31) or a function code (32…99).
0 = LED off
1 = Follow-me
2 = Automatic Ring Back
3 = Call waiting
4 = Diversion on busy

5 = Do Not Disturb
6 = Night presence
7 = Exec/secr presence
8 = Group presence
9 = Group member rank 0
10 = Group member rank 1
11 = Group member rank 2
12 = Group member rank 3
13 = Group member rank 4
14 = Group member rank 5
15 = Group member rank 6
16 = Group member rank 7
17 = Group member rank 8
18 = Group member rank 9
19 = Group member rank 10
20 = Group member rank 11
21 = Group member rank 12
22 = Group member rank 13
23 = Group member rank 14
24 = Group member rank 15
25 = Group member rank 16
26 = Group member rank 17
27 = Group member rank 18
28 = Group member rank 19
29 = Group member rank 20
30 = Group member rank 21
31 = Group member rank 22
For function codes (32…99) see the Customer Engineer Manual of the relevant SOPHO-SET and ErgoLine terminals.

LEVEL-VALUE
Stc-level data (0…29), see table the table on page 292.

LICENSE-NUMBER
Identification of the licensed facility
01 = BSP-IDs
02 = IMP
03 = ACD agents
04 = ISDN trunk
05 = DPNSS
06 = Cost accounting

07 = System management
08 = Full Detailed Call Recording
09 = Least Cost Call Routing
10 = Voice Mail Interface
11 = iSNet Private Virtual Networking
12 = Integrated Password Dialling
13 = Music On Hold from IAS
14 = Dynamic delay message
15 = Operator monitoring
16 = Service license
17 = iSLinks for CSTA
18 = Active CSTA monitors
19 = Desksharing
20 = Central Name Number Directory (CNND)
21 = Ethernet CSTA
23 = CSTA IO services
24 = CSTA IO registration
25 = Free Numbering

LINE
Line number displayed on the operators console (1…4 decimals)

LINES-PER-PAGE
Number of lines per page (10…60)

LINE-POS
Indicates if a line position must be assigned to a group member (0=no, 1=yes)

LINK-TYPE
Type of link to be assigned or displayed:
1 = SM-CM
2 = SM-PM controllable
3 = SM-PM not controllable
4 = SM-RPM controllable
5 = SM-RPM not controllable
6 = SM-IU controllable
7 = SM-IU not controllable
8 = SM-IM controllable
10 = PMC-PMC
11 = CSN-PMC

LOCAL-OPERATOR-MARK
Indicates whether first assistance by local operator(s) must be tried before assistance according to assistance point will be attempted (0=no, do not try local operator first, 1=yes, try local operator first)

LOG-FILE
File specification consisting of:
[LDN:]FILE-NAME[.EXTENSION[.GENERATION]]
If GENERATION is omitted, the latest generation is used.
If EXTENSION is omitted, LOG is used.
If FILE-NAME is omitted, the name of the COMMAND-FILE is used.
If LDN is omitted, the LDN of the COMMAND-FILE is used.

M

M-IND
Displayed value, indicating the number of calls in the M-queue.

M/S
Main/Sub identification (0=main, 1=sub); identifies whether the protocol behaviour for a specified route will be main or sub.

MANAGER-INDEX
Index number of the requested manager type.

MANAGER-TYPE
Type of manager (0 = unit boundary, 1 = option, 2 = timer)

MARK
Hooter presence mark (0 = not present, 1 = present)

MAX
Maximum paging length (MIN…20).

MAX-LENGTH
Maximum number length (1…20). Must be ≥ MIN-LENGTH

MAXIMUM-VERSION
Version that is supported by the equipment-type.

MD-TYPE
Type indication of the offered set of mode digits (0 = prefix mode, 1 = suffix mode)

MEMBER-BSP-ID
BSP-ID of group member (see BSP-ID)

MEMBER-RANK
Rank of the member within a group.

MENU
Menu number (0…59); as from SSW 805.24: (0…254).

MET-TYPE

Metering type:
0 = Metering count of DNRs or BSP-IDs
1 = Metering count of night extensions
2 = Metering count of routes

MFC-ADD-INDEX
Additional requested MFC index, indicating:
Priority of the received signal II, on MFC-TYPE =3;
Previously sent signal II, on MFC-TYPE =5;
No meaning on other MFC-TYPES.

MFC-INDEX
The requested MFC index (0…20). See table the table on page 261.

MFC-TYPE
Selected MFC structure (0…5). See table the table on page 261.
Table B-2 Relation between MFC-TYPE and MFC-INDEX.

MFC-TYPE	MFC-INDEX	
0 Forward group I	Forward signal	(0…15)
1 Forward group II	Forward signal	(0…15)
2 Backward group A	Call progress index	(0…12 & 19…20)
3 Backward group B	Call progress index	(1…10 & 13…18)
4 Termination group A	Backward signal index	(0…15)
5 Termination group B	Backward signal index	(0…15)

The call progress numbers have the following meaning:
0 = Request next digit
1 = Call successful
2 = Extension busy
3 = Time out
4 = DDO successful
5 = Not exist. number
6 = DDI barred
7 = Call not allowed
8 = Congestion
9 = Number unobtainable
10 = Don't disturb
11 = Auto. answer dialled
12 = Auto. answer reply
13 = Busy - call type 1
14 = Busy - call type 2

15 = Busy - call type 3
16 = Busy - call type 4
17 = Busy - call type 5
18 = Busy - call type 6
19 = Request first digit of CLI
20 = Request next digit of CLI

MIN
Minimum paging length (1…6)

MIN-LENGTH
Minimum number length (1…20)

MINIMUM-VERSION
Version that is supported by the equipment-type.

MINUTES
Minutes (0…59)

MISCELLANEOUS
A string consisting of 12 characters: ABCDEFGHIJKL
In the case of X.21, only options B (=0), D (=0/1), E (=0/1), F (=7) and G (=2) are used, set all other options to 0.
A: Echo during keyboard dialling? (0 = no, 1 = yes)
B: Transmit unknown subscriber address? (0 = no, 1 = yes)
In the case of DTE's: 0=subaddressing, 1=no subaddressing.
C: Convert to upper case? (0 = no, 1 = yes)
DHot line? (0 = no, 1 = yes)
In the case of X.21: 0=switched, 1=leased.
E: Byte oriented protocol? (0 = no, 1 = yes)
F: Wordlength (5, 6, 7 or 8 bits)
G: Parity (0 = no parity, 1 = even parity, 2 = odd parity)
H: Stopbits (0 = 1 stop bit, 1 = 1.5 stop bit, 2 = 2 stop bits)
I: Break sequence initiates call clear (0 = disable or 1 = enable)
J: Rate adaption options (0=no options, 1= flow control end-to-end for asynchronous, or network independent clock for synchronous)
K: Terminal adaption function (0 = X.30 TA, 1 = V.110 TA)
L: Rate adaption method (0 = DRA, 1 = V.110 / X.30 / ECMA-102)

Mn
Internal call type

0 = individual
1 = normal
2 = preferred

MOD-DATE/TIME
Modification date and time of a file.

MODE
Display mode (0 = Abstract (default), 1 = Full display).

MODULE
This parameter indicates a PM module (0…31).

MONITOR-INTERVAL
The time between measurements in minutes (1…100)

MONTH
Month (1…12)

MSN-TYPE
Type of Multi Subscriber Number:
0 = No MSN
1 = MSN
2 = Fixed MSN digit

N

NAME
Name string belonging to a DNR (1...20 characters). Enter the last name first.

NAME/SIN
Command name or in the case of a MIS file the Snapshot
Identification Number (SIN): LOCAL or Nxxxxx (xxxxx = ident digits).

NARD
Protection level in the format New, Append, Read, Delete (4 digits of 0…7).

NBR-OF-ITEMS
The number of items in a tone function (0…255).

NE-LEVEL
Night extension level:
0 = INE
1 = SCNE
2 = MCNE
3 = CANS

NE-UNIT
Unit in which the night extension is present (1…14).

NEAR-DEST
Near destination unit, unit directly connected to own unit (1…14).

NETWORK-SIN
Network Snapshot Identification Number, 6 characters (Nxxxxx), first character is "N".

NEW-PACK
See parameter PACK.

NIGHT-TRFC
Night traffic class, see TRFC.

NL
Displayed parameter, indicating the number length.

NO-MSN-DIGITS
Number of MSN digits (0…6).

NUMBER
Internal number (DNR) or external number (1... 20 digits) or code (1…6 digits).

NUMBER-LENGTH
Length of internal number or code (1…6).
In command ASINTN the following exceptions to this rule exist:

- In combination with result-ID 43 maximum 12 digits.
- In combination with result-ID 82 the maximum length of this parameter is 20 digits - length of given NUMBER.
- In combination with result-ID 104…110, 113…115 this parameter indicates the length of the password: 6…12 digits.
- In combination with result-ID 111 and 112 this parameter indicates the length of the password: 1…16 digits.
- In combination with result-ID 118, 119 maximum 2 digits.
- In combination with result-ID 133, this represents the PVN-MODE:
  0 = PVN Standard Mode (default),
  1 = PVN Modem Mode,
  2 = PVN Compressed Mode.
- In combination with result-ID 135, 136 maximum 1 digit.
- In combination with result-IDs 50/51, 20 digits (length of the password).

NVCT
Number of virtual circuits (0…30).

O

OBJ-INDEX

A specific object in a PM-OBJECT, see table the table on page 266.

Table B-3 Relation between PM-OBJECT and OBJ-INDEX.

PM-OBJECT	OBJ-INDEX
0 Signalling group data	SIG-GROUP; see Chapter D.for a subset of the signalling data or the Signalling Data Manual for the complete set.
1 Slave data	6 ATC data 8 Stc-tone data, see table C.9a. 9 Stc-level data, see table C.9b.
2 PSC tone data	Tone-function (0…99) For Tone-function, refer to Table C.9c. and for Tone-Source to Table C.10a.
3 Ring data	Tone-function (100…199) For Tone-function, refer to Table C.9c., for Tone-Source of the PSC to Table C.10a for Tone-Source of the PMC to Table C.10b.
4 Ticker data	Tone-function (200…204) For Tone-function, refer to Table C.9c., for Tone-Source of the PSC to Table C.10a for Tone-Source of the PMC to Table C.10b.
5 PMC tone data	Tone-function (0…99) For Tone-function, refer to Table C.9c. and for Tone-Source to Table C.10b.
6 Direct downloadable signalling group data to PPU	Signalling group 9700 or 9800

OBJECT

Object for Traffic Observation or Measurement.

The DITRAF, DISPTO, ASTMOB and DETMOB commands ask for additional parameters, depending on the object.

The relation between objects and parameters is given in table the table on page 266.

Table B-4 Relation between OBJECT and Additional Parameters.

OBJECT	ADDITIONAL PARAMETERS
0 Bundles	BUNDLE, UNIT [, FIGURE-TYPE]
1 Routes	ROUTE, FIGURE-TYPE
2 Inter unit bundles	IU-BUNDLE, UNIT, FIGURE-TYPE
3 Inter unit routes	IU-ROUTE, UNIT, FIGURE-TYPE
4 Extensions	UNIT, FIGURE-TYPE
5 Groups	GROUP-DNR, FIGURE-TYPE
6 Paging routes	PAG-ROUTE, FIGURE-TYPE
7 Add on circuits	UNIT, FIGURE-TYPE
8 RKT-SDT circuits	UNIT, FIGURE-TYPE
9 SKT-RDT circuits	UNIT, FIGURE-TYPE
10 Incoming MFC circuits	UNIT, FIGURE-TYPE
* = Only applicable for DISPTO, ASTMOB and DETMOB.	

OBJECT	ADDITIONAL PARAMETERS
11 Outgoing MFC circuits	UNIT, FIGURE-TYPE
12 Socotel circuits	UNIT, FIGURE-TYPE
13 Convertors	CONVERTOR-TYPE, UNIT, FIGURE-TYPE
14 Specific operators	OPERATOR-DNR, FIGURE-TYPE
15 Queues	ASSIST-GROUP, UNIT, FIGURE-TYPE
16 Switching Network Channels	SHELF,17, CRT (PM-Module), FIGURE-TYPE
17 Call data	UNIT, FIGURE-TYPE
* 18 Interunit traffic dispersion data	SOURCE UNIT, UNIT, FIGURE-TYPE
* 19 Dialled facilities data	RESULT-ID, AG, UNIT, FIGURE-TYPE
21 Hatches	UNIT, FIGURE-TYPE
* = Only applicable for DISPTO, ASTMOB and DETMOB.	

OFF-ON
Used in various commands. On or off (0 = off, 1 = on)

OFF-TIME
Time on which the facility is downgraded in the format:
days (1…7), hours (0…23) and minutes (0…55): DHHMM.
The minutes are a multiple of five.

OLD-PACK
See parameter PACK.

ON-TIME
Time in the format: DHHMM.
In the case of facility timing: time of upgrading. In the case of traffic measurement: time on which measurement has to start.

OP-STAT
Displayed value, indicating the status of the operator, i.e. Idle, Busy or OM mode.

OPERATOR-DNR
Operator directory number (see DNR)

OPERATOR-TYPE
Type of operator:
0 = Basic operator console
1 = Enhanced operator console
2 = Digital operator console

OPTIONS

Bundle options MNOP[[QRSTUVWXYZ[A]] (0 = no, 1 = yes). When the bundle direction is incoming, QRSTUVWXYZA must be omitted.
M = Long line check
N = Exchange line barred check
O = Register recall available
P = Echo canceller connected
Q = Metering available on bundle
R = Detection first dialtone applied
S = Pre dialtone detection first dialtone
T = Pre dialtone detection second dialtone
U = Provisional switch through
V = Answer sensitive
W = DDO wait for answer
X = Routing tone
Y = TRANSCOM tone detection and alarming
Z = DDO sent MFC area number
A = DDO local ring tone provided (since SSW 805.30)

ORDER-IND
This parameter specifies the place where the BSP must be inserted:
0 = the BSP is inserted after any existing BSP with the same BSPT value;
1 = the BSP is inserted before any existing BSP with the same BSPT value.

ORIG-BSP-ID
Originator directory number (see BSP-ID)

ORIG-CC-STRING
Original CLI or COL string which has to be translated : max. 16 digits, the string may end in wildcards (%).

ORIG-NUMBER
Number to be converted (1…6 digits)

ORIG-UNIT
Originator unit (1…14)

OUT-OPTS
Outgoing route options PQRST (each 0 = no, 1 = yes)
P = Direct switch through
Q = Break in protection on outgoing calls
R = D button allowed

S = Transit allowed
T = Source identification

OUTPUT-FILE
The specification of the load control output file:
(LDN:FILE-NAME.EXTENSION.GENERATION)

OUTPUT-FORMAT-VERSION
0 = the default version that was supported by previous packages not having the possibility to define output formats.
1 = supports a 16 digit Costcentre/PID field.
2 = supports a 32 digit destination field.

OUTPUT-SWITCH
Switch to indicate if output of Traffic Measurement data has to be stopped or continued (0=stop, 1=continue).

OVERLAY-ID
Overlay identity (6 chars).
OM (sub)commands are 6 characters, SAS actions are 4 characters (preceded by l "As").

OWNER
Possible owners of resources are:
NO = No owner
CP = Call processing
SYS = System
SAS = System Assurance
POM = Project engineering and Operational Maintenance
START = Owner of resource during HOTSTART

P

PACK

The FEPROM/RAM file names are Fcpppv.vll or Fccppv.vll, in which :

'F'	:	all FEPROM/RAM file names start with an 'F'.	
'c' or 'cc'	:	indicates the type of board:	
		0x = CPU-ME/MT	note
		1x = PMC-HR/MC	
		22 = DTX-I	
		32 = DLC-U	
		33 = DLX-U	
		34 = DLX-L	
		43 = DCC	
		51 = DTU-VC	
		52 = ALC-G	
		7x = CPS (Z8K)	note
		82 = PM Observer	
		9x = CCS	note
		A0 = SNS	
		A1 = CIE	note
'ppp' or 'pp'	:	indicates the package-identity.	
'v.v'	:	indicates the version.	
'll'	:	indicates the level update.	

Note : Package downloading is not under CPU control. Package-ids are only displayed with OM command DIEXID (CCS) or DIPACK (CIE).

Examples :

F22010.105	:	DTX-I package 201.01.05
FA0000.304	:	SNS package 000.03.04
F98052.641	:	CCS package 805.26.A (41 is the hex value for 'A')

PAG-ROUTE

Paging route number (0…254). See also ROUTE.

PAGING-CODE

Virtual paging code (1…6 digits).

PARK-POS

Defines if park positions must be assigned (0 = no, 1 = yes).
If the value is 1, then 9 park positions are defined for the group DNR.
If the park position is related to a group member, then 2 park positions are defined.

PAT-MODE
Periodic Autonomous Test Mode (0=normal, 1=installation mode/factory test).

PCT-TYPE
Circuit type:
1 = Line circuit (LCT)
2 = Trunk circuit (TRC)
3 = Operator circuit (OCT)
4 = Convertor
5 = RKT-SDT
6 = SKT-RDT
7 = In-MFC
8 = Out-MFC
9 = Paging circuit
10 = RS-Socotel
11 = Music on Hold
12 = Music on COB
13 = D channel
14 = Trunk circuit ISDN
15 = Wake_up/MW announcement circuit
16 = Hatch
17 = IAS-TS
PCT types are discussed in more detail in Appendix C.

PERIODICITY
The item number where the periodicity sets in (0…254).
This parameter must be smaller than the NR-OF-ITEMS.

PERIODS
Number of measurement periods of 15 minutes (1…254)

PID/COST-CENTRE
Personal IDentification code (1…16 digits) or Cost Centre number (1…12 digits).

PM-OBJECT
The type of object when changing the PM projecting data, see table the table on page 266.

PORT-ID
Port identifier (6 hexadecimal digits or *)

POST-DIAL

Post dialling mark (0 = no, 1 = yes)

PR#
Displayed parameter, indicating the paging route number.

PRE-DIGIT
Digit, preceeding the external number (0…D).

PREF-CODE
Preferred/Non prefered code (0=non-preferred, 1=preferred)

PRES
Displayed value, indicating the number of operators present.

PRES-CH
Displayed value, indicating the number of operators present and call handling.

PRES-POM
Displayed value, indicating the number of operators present and in the OM mode.

PRIO-CODE
(Over)write Priority code
1 = User can reprogram the key
3 = User cannot reprogram the key

PROP
Properties of a device: 6 bits (0=no, 1=yes), indicating respectively: Read access, write access, multiple file device, multiple file access device, variable record size, relative access device.

PROT-TYPE
Protection type (0 =new, 1=append, 2=read, 3=delete)

PROTECTION
Protection level (0…7) of New, Append, Read or Delete

PROTOCOL-TYPE
Type of protocol used in device communication
0 = Character protocol (CPU-ME/MT)
1 = BCS protocol (CPU-ME/MT)
2 = Logical protocol (CPS/CCS)

PSI
Protocol Stack Identifier.

PTN-ID
PVN Private Telecommunication Network Identity (0…9999).
The default value is 9999.

PVN-MODE
PVN working mode
0 = PVN standard working mode (default)
1 = PVN Network Signalling Convertor (NSC) mode
2 = Compressed PVN Mode.

PW-GROUP
Password group (0…7). See table the table on page 273.

PW-KEY
Password key (0…15). See also table the table on page 273.
Table B-5 Relation between PW-GROUP and PW-KEY.

PW-GROUP	PW-KEY	REMARKS
0	0…13	Authority class No
1…4	0…7	1-New, 2 = Append, 3 = Read, 4 = Delete PW-KEY indicates the protection level
5	0…2	PW-KEY indicates the degradation level
6	0 or 1	1 = INIDSK and CHACIV, 0 =not used.
7	0...7	FTP access

PW-NBR-LENGTH
One or two digits in the range of 0...16 indicating the number of password digits to be given. If the parameter is omitted, it is assumed that no password digits have to be given.

Q

Q-POS-ALGORITHM
Queue Position Algorithm
1 = absolute position in the COB queue (default).
2 = weighed position. The weighed position is calculated relative to the number of active agents, and the maximum length of the queue.

Q-PRIORITY
Queue Priority (1…8)
The Queue Priority number ranges from 1 (highest priority) to 8 (lowest, default).

QUEUE-TYPE
Type of operator queue (0…22):
0 = Total values for M, C and A queues
1 = A1 queue
2 = A2 queue
3 = A3 queue
4 = A4 queue
5 = A5 queue
6 = A6 queue
7 = A7 queue
8 = A8 queue
9 = A9 queue
10 = A10 queue
11 = A11 queue
12 = A12 queue
13 = A13 queue
14 = A14 queue
15 = A15 queue
16 = A16 queue
17 = M normal queue
18 = M preferred queue
19 = C DDI not answered queue
20 = C DDI unsuccessful queue
21 = C DDI recall not on hook queue
22 = C DDI recall on hook queue

R

REAL-TYPE
Paging type in the case of real paging
0 = Meet-me paging urgent
1 = Meet-me paging non-urgent
2 = Speech paging urgent
3 = Speech paging non-urgent
4 = Display paging urgent
5 = Display paging non-urgent

REFNAME
Reference command name of the file.

REMOTE-USER-GROUP
Remote user group (0…1)

REP-FACTOR
Number of test repeats (0…9) (0 means continuous testing)

REPORT-FORM
0 = brief report
1 = verbose
2 = exchange type

REPORT-TYPE
The following report types exist:
00 = No suspicion report
01 = No successors failed
02 = Cancelled event of interest
03 = Suspicion level exceeded
04 = Expired alarm integration
05 = Expired isolation integr.
06 = Solved alarm
07 = Passive alarm
08 = Suspicion
09 = Alarm integration
10 = Successors failed
11 = Blocked alarm
12 = Manually controlled test

13 = Silent alarm
14 = Minor alarm
15 = Major alarm
99 = Project engineering alarm

RES-ID

Miscellaneous resource type
0 = Add on circuit
1 = RKT-SDT
2 = SKT-RDT
3 = Incoming MFC
4 = Outgoing MFC

RESOURCE-TYPE

Resource type. See table the table on page 276.

Table B-6 Resource Type List.

RESOURCE-TYPE	DESCRIPTION
000	Line circuit (LCT)
001	Trunk circuit (TRC)
002	Operator circuit (OPC)
003	Inter-unit line circuit
004	Receiver-Sender Socotel
005	Add-on Circuit
006	Converter
007	Receiver keytone - sender dial tone
008	Sender keytone - receiver dial tone
009	Incoming MFC
010	Outgoing MFC
011	Hatch
012	Peripheral Module (PM)
013	Board
014	Device
015	Communication Interface boards, except the CII (type 027)
016	Null tone
017	External ring tone
018	Internal ring tone
019	Music On Hold tone (MOH)
020	Switching Network Link (SNL)
021	Switch and Control Unit (SCU)
022	Central Module (CM)
023	Central Memory Slice (CMS)
024	Majority Interface Circuit (MIC)
025	Clock Signal Generator (CSG)
026	Clock Reference Unit (CRU)

RESOURCE-TYPE	DESCRIPTION
027	Communication Interface Internal (CII)
028	Switching Network Module (SM)
029	Logical Channel
030	Physical Channel
031	Testbus
032	Paging circuit
033	Camp on Busy tone
034	Busy tone
035	CRU entry
036	Unit Logical Link (ULL)
037	Digital Trunk Unit-Control
038	Virtual Channel
039	D-Channel
040	Shelf
041	Multi function board
042	SN routing tone
043	SN announcement
044	IAS module (IM)
045	IAS board
046	IAS timeslot
047	Peripheral Module (PM)
048	Prim - pm - network / pm - network
049	SN specific announcement
050	Communication Interface External (CIE)
051	Switch and Sense Unit (SSU)
052	Backup and Interface Module (BIM)
255	Null resource

REST-MODE

Restoration mode (0…2)
0 = First party control
1 = Calling party control
2 = Called party control

RESTART

A variable indicating the type of start to be executed:
0 = Warmstart stand-by cluster
1 = Coldstart stand-by cluster
2 = Re-project stand-by cluster
3 = Reload stand-by cluster

RESTRICTION

Restriction (0 = unrestricted or 1 = restricted)

RESULT-ID

Result identity (3 digits). See tables the table on page 278 and the table on page 282.

Table B-7 Result IDs.

RES-ID	DESCRIPTION	FROM DIAL TYPE / SOURCE													
		0	1	2	3	4	5	6	7	8	9	DDI	DDO	DPNSSIN	DPNSSOUT
00*	Second external dialtone place	--	--	--	--	--	--	--	--	--	--	--	X	--	--
01	No direct result	X	X	X	X	X	X	X	--	X	X	X	X	X	X
10**	Internal number	X	X	X	--	X	@	X	--	X	X	X	--	X	X
11	Operator M code dialled general	X	X	--	--	X	--	--	--	X	X	X	--	X	--
12	Meet-me paging urgent with CLI 1)	X	X	X	--	X	--	--	--	X	X	X	--	X	X
13	Meet-me paging non urgent with CLI 1)	X	X	X	--	X	--	--	--	X	X	X	--	X	X
14	Priority trunk access code	X	X	X	--	X	--	--	--	X	X	X	--	X	X
20	Paging answer prefix	X	--	--	--	--	--	--	--	X	X	--	--	X	--
21	Trunk access code	X	X	X	--	X	--	--	--	X	X	X	--	X	X
22*	External number	--	--	--	--	--	--	--	--	--	--	--	X	--	--
23**	Common pool abbr. dialling	X	X	X	--	--	--	--	--	X	X	--	--	X	--
24**	Group pool abbr. dialling	X	X	X	--	--	--	--	--	X	X	--	--	--	--
25	Access individual abbr. number	@	@	@	--	--	--	--	--	@	@	--	--	--	--
26	Access last external number	@	@	@	--	--	--	--	--	@	@	--	--	--	--
27	Activate FM from primary	@	@	--	--	--	--	--	--	@	@	--	--	--	--
28	Prepare FM from primary	@	@	--	--	--	--	--	--	@	@	--	--	--	--
29	Activate FM from destination	X	X	--	--	--	--	--	--	X	X	--	--	--	--
30	Cancel FM from destination sel.	X	X	--	--	--	--	--	--	X	X	--	--	--	--
31	Cancel FM from destination coll.	X	X	--	--	--	--	--	--	X	X	--	--	--	--
32	Cancel FM from primary	X	X	--	--	--	--	--	--	X	X	--	--	--	--
33	Pick up general	X	X	--	--	--	--	--	--	X	X	--	--	--	--
34	Pick up individual	X	X	--	--	--	--	--	--	X	X	--	--	--	--
35	Switch out of group by member	@	@	--	--	--	--	--	--	@	@	--	--	--	--

x	Normally accessable from this dial source	*	Automatically assigned with ASEXTN
1)	New names (as from SSW 805.25). See the next table for the old names.	2)	These Result-IDs are valid as from SSW 805.25.
--	Not accessable from this dialtype or source	**	Assigned with ASBLCK
***	assigned with CHCSDD		
@	Normally accessable, but appropriate facility class mark or OM facility configuration must be assigned to the origating party		

RES-ID	DESCRIPTION	FROM DIAL TYPE / SOURCE													
		0	1	2	3	4	5	6	7	8	9	D DI	D DO	DP NSS IN	DP NSS OUT
36	Switch in group by member	@	@	--	--	--	--	--	--	@	@	--	--	--	--
37	Switch out of group by supervisor	@	@	--	--	--	--	--	--	@	@	--	--	--	--
38	Switch in group by supervisor	@	@	--	--	--	--	--	--	@	@	--	--	--	--
39	Executive secretary access	@	@	--	--	--	--	--	--	@	@	--	--	--	--
40	Executive secretary absent	@	@	--	--	--	--	--	--	@	@	--	--	--	--
41	Executive secretary present	@	@	--	--	--	--	--	--	@	@	--	--	--	--
42	Executive secretary complete	--	--	--	--	--	--	--	X	--	--	--	--	--	--
43	Cost centre prefix	X	X	X	--	--	--	--	--	X	X	--	--	--	--
44	Night extension absent	@	@	--	--	--	--	--	--	@	@	--	--	--	--
45	Night extension present	@	@	--	--	--	--	--	--	@	@	--	--	--	--
46	Cans code dialled	X	--	--	--	--	--	--	--	X	X	--	--	--	--
47	Operator M code dialled priority	X	X	--	--	X	--	--	--	X	X	X	--	X	--
48	Operator A general	--	--	--	--	--	--	--	--	--	--	X	--	X	--
49	Operator A queue	--	--	--	--	--	--	--	--	--	--	X	--	X	--
50	Desksharing active	@	--	--	--	--	--	--	--	--	--	--	--	--	--
51	Desksharing deactive	@	--	--	--	--	--	--	--	--	--	--	--	--	--
52	Test telephone	@	--	--	--	--	--	--	--	@	@	--	--	--	--
53	Emergency access code	X	--	--	--	--	--	--	--	X	X	--	--	--	--
54	Dial up data protection	@	@	--	--	--	--	--	--	@	@	--	--	--	--
55	Add on prefix	--	@	--	--	--	--	--	--	--	--	--	--	--	--
56	Automatic ring back	--	--	--	@	--	--	--	--	--	--	--	--	--	--
57	Cancel automatic ring back	X	X	--	--	--	--	--	--	X	X	--	--	--	--
58	Break in	--	--	--	@	--	--	--	--	--	--	--	--	--	--
59	Bypass code	--	--	--	@	--	--	--	--	--	--	--	--	--	--
60	Malicious call trace	--	@	X	--	--	--	--	--	--	--	--	--	--	--
61	Extension programming	--	--	--	--	--	--	--	--	--	--	--	--	--	--
62	Common floor service dialled	X	X	--	--	--	--	--	--	X	X	--	--	--	--
63	Laundry dialled	X	X	--	--	--	--	--	--	X	X	--	--	--	--
64	Information dialled	X	X	--	--	--	--	--	--	X	X	--	--	--	--
65	Reception dialled	X	X	--	--	--	--	--	--	X	X	--	--	--	--

x	Normally accessable from this dial source	*	Automatically assigned with ASEXTN
1)	New names (as from SSW 805.25). See the next table for the old names.	2)	These Result-IDs are valid as from SSW 805.25.
--	Not accessable from this dialtype or source	**	Assigned with ASBLCK
***	assigned with CHCSDD		
@	Normally accessable, but appropriate facility class mark or OM facility configuration must be assigned to the origating party		

RES-ID	DESCRIPTION	FROM DIAL TYPE / SOURCE													
		0	1	2	3	4	5	6	7	8	9	DDI	DDO	DPNSSIN	DPNSSOUT
66	Set don't disturb	@	@	--	--	--	--	--	--	@	@	--	--	--	--
67	Reset don't disturb	@	@	--	--	--	--	--	--	@	@	--	--	--	--
68	Convertor prefix	X	X	--	--	--	--	--	--	X	X	X	--	--	--
69	Store individual abbr. number	@	@	--	--	--	--	--	--	@	@	--	--	--	--
70	Erase individual abbr. number	@	@	--	--	--	--	--	--	@	@	--	--	--	--
71	Replace ind. abbr. number	@	@	--	--	--	--	--	--	@	@	--	--	--	--
72	Upgrade traffic service class	@	--	--	--	--	--	--	--	@	@	--	--	--	--
73	Downgrade traffic service class	@	--	--	--	--	--	--	--	@	@	--	--	--	--
74	No traffic service class selected	@	--	--	--	--	--	--	--	@	@	--	--	--	--
75	Call waiting code dialled	X	X	--	--	--	--	--	--	X	X	--	--	--	--
76	Message waiting LED on type 0	X	X	--	--	--	--	--	--	X	X	--	--	--	--
77	Message waiting LED on type 1	X	X	--	--	--	--	--	--	X	X	--	--	--	--
78	Message waiting LED on type 2	X	X	--	--	--	--	--	--	X	X	--	--	--	--
79	Message waiting LED off type 0	X	X	--	--	--	--	--	--	X	X	--	--	--	--
80	Message waiting LED off type 1	X	X	--	--	--	--	--	--	X	X	--	--	--	--
81	Message waiting LED off type 2	X	X	--	--	--	--	--	--	X	X	--	--	--	--
82	TMS dialled	X	--	--	--	--	--	--	--	X	X	--	--	X	--
83	Activate FM from primary group	@	@	--	--	--	--	--	--	@	@	--	--	--	--
84	Prepare FM from primary group	@	@	--	--	--	--	--	--	@	@	--	--	--	--
85	Cancel FM from primary group	@	@	--	--	--	--	--	--	@	@	--	--	--	--
86	Activate FM from dest. group	X	X	--	--	--	--	--	--	X	X	--	--	--	--
87	Cancel FM from dest. sel. group	X	X	--	--	--	--	--	--	X	X	--	--	--	--

x	Normally accessable from this dial source	*	Automatically assigned with ASEXTN
1)	New names (as from SSW 805.25). See the next table for the old names.	2)	These Result-IDs are valid as from SSW 805.25.
--	Not accessable from this dialtype or source	**	Assigned with ASBLCK
***	assigned with CHCSDD		
@	Normally accessable, but appropriate facility class mark or OM facility configuration must be assigned to the origating party		

RES-ID	DESCRIPTION	FROM DIAL TYPE / SOURCE													
		0	1	2	3	4	5	6	7	8	9	D DI	D D O	DP NS S IN	DP NS S O UT
88	Cancel FM from dest. coll. group	X	X	--	--	--	--	--	--	X	X	--	--	--	--
89	Auto answering circuit dialled	--	--	--	--	--	--	--	--	--	--	X	--	--	--
90	COB display for supervisor	@	--	--	--	--	--	--	--	@	@	--	--	--	--
91	Network access code	X	X	X	--	X	X	--	--	X	X	X	--	X	--
92	CSDN access code	@	--	--	--	--	--	--	--	@	@	--	--	--	--
93	Give a line	--	--	X	--	--	--	--	--	--	--	--	--	--	--
94	Start post dialling	--	X	--	--	--	--	--	--	--	--	--	--	--	--
95	Enquiry on trunk initiation	--	X	X	--	--	--	--	--	--	--	--	--	--	--
96	Enquiry on trunk take over	--	X	X	--	--	--	--	--	--	--	--	--	--	--
98	Activate diversion on busy	X	X	--	--	--	--	--	--	X	X	--	--	--	--
99	Cancel diversion on busy	X	X	--	--	--	--	--	--	X	X	--	--	--	--
100	Activate fixed follow me	X	X	--	--	--	--	--	--	X	X	--	--	--	--
101	Start call waiting	--	--	--	@	--	--	--	--	--	--	--	--	--	--
102	Start camp on busy (COB)	--	--	--	@	--	--	--	--	--	--	--	--	--	--
103	General cancel code	X	X	--	--	--	--	--	--	X	X	--	--	--	--
104	Change password	X	X	--	--	--	--	--	--	X	X	--	--	--	--
105	Enable up/downgrading	X	X	--	--	--	--	--	--	X	X	--	--	--	--
106	Disable up/downgrading	X	X	--	--	--	--	--	--	X	X	--	--	--	--
107	Upgrade traffic class	X	X	--	--	--	--	--	--	X	X	--	--	--	--
108	Downgrade traffic class	X	X	--	--	--	--	--	--	X	X	--	--	--	--
109	Password DDO from own	X	X	--	--	--	--	--	--	X	X	--	--	--	--
110	Password DDO from other	X	X	X	--	--	--	--	--	X	X	--	--	--	--
111	Cost centre modulo	X	X	X	--	--	--	--	--	X	X	--	--	--	--
112	Cost centre validate	X	X	X	--	--	--	--	--	X	X	--	--	--	--
113	Access port direct (SSM)	X	X	X	--	--	--	--	--	X	X	X	--	X	--
114	Access port call back (SSM)	X	X	X	--	--	--	--	--	X	X	X	--	X	--
115	Cancel call back call (SSM)	X	X	X	--	--	--	--	--	X	X	X	--	X	--
116	Private call	X	X	X	--	--	--	--	--	X	X	--	--	--	--
117	Directed call	X	X	--	--	--	--	--	--	X	X	--	--	--	--
118	Short code dialling group	X	X	--	--	--	--	--	--	X	X	--	--	--	--
119	Pick up by rank number	X	X	--	--	--	--	--	--	X	X	--	--	--	--
120	Speech paging urgent with CLI 1)	X	X	X	--	X	--	--	--	X	X	X	--	X	X

x	Normally accessable from this dial source	*	Automatically assigned with ASEXTN
1)	New names (as from SSW 805.25). See the next table for the old names.	2)	These Result-IDs are valid as from SSW 805.25.
--	Not accessable from this dialtype or source	**	Assigned with ASBLCK
***	assigned with CHCSDD		
@	Normally accessable, but appropriate facility class mark or OM facility configuration must be assigned to the origating party		

RES-ID	DESCRIPTION	FROM DIAL TYPE / SOURCE													
		0	1	2	3	4	5	6	7	8	9	DDI	DDO	DPNSSIN	DPNSSOUT
121	Speech paging non urgent with CLI 1)	X	X	X	--	X	--	--	--	X	X	X	--	X	X
122	Display paging urgent with CLI 1)	X	X	X	--	X	--	--	--	X	X	X	--	X	X
123	Display paging non urgent with CLI 1)	X	X	X	--	X	--	--	--	X	X	X	--	X	X
124	Display paging urgent 1)	X	X	X	--	X	--	--	--	X	X	X	--	X	X
125	Display paging non urgent 1)	X	X	X	--	X	--	--	--	X	X	X	--	X	X
126	Recording of announcement	@	--	--	--	--	--	--	--	@	@	--	--	--	--
127	CallManager MIS dialled	@	@	--	--	--	--	--	--	@	@	--	--	--	--
128	ACD group day prefix	@	@	--	--	--	--	--	--	@	@	--	--	--	--
129	ACD group night prefix	@	@	--	--	--	--	--	--	@	@	--	--	--	--
130	Dial up break in	@	@	--	--	--	--	--	--	@	@	--	--	--	--
131	Dial up CLIR	X	X	--	--	--	--	--	--	X	X	--	--	--	--
132	PVN user channel address	--	--	--	--	--	--	--	--	--	--	X	--	--	--
133	PVN signalling channel address	--	--	--	--	--	--	--	--	--	--	X	--	X	--
134	Overlay	X	X	--	--	--	--	--	--	--	--	--	--	--	--
135	Log on prefix	X	X	--	--	--	--	--	--	--	--	--	--	--	--
136	Log off prefix	X	X	--	--	--	--	--	--	--	--	--	--	--	--
137	CSTA control prefix	X	--	--	--	--	--	--	--	--	--	--	--	--	--
138	Subnetwork access code	X	X	X	--	X	X	--	--	X	X	X	--	X	--
139	Meet me paging urgent 2)	X	X	X	--	X	--	--	--	X	X	X	--	X	X
140	Meet me paging non urgent 2)	X	X	X	--	X	--	--	--	X	X	X	--	X	X
141	Speech paging urgent 2)	X	X	X	--	X	--	--	--	X	X	X	--	X	X
145***	CSTA server dialled (since SSW 805.30)	X	X	X	--	X	--	--	--	X	X	X	--	X	X

x	Normally accessable from this dial source	*	Automatically assigned with ASEXTN
1)	New names (as from SSW 805.25). See the next table for the old names.	2)	These Result-IDs are valid as from SSW 805.25.
--	Not accessable from this dialtype or source	**	Assigned with ASBLCK
***	assigned with CHCSDD		
@	Normally accessable, but appropriate facility class mark or OM facility configuration must be assigned to the origating party		

Table B-8 Result-ID descriptions valid prior to SSW 805.25

RESULT ID	Description
12	Meet me paging urgent prefix
13	Meet me paging non urgent

RESULT ID	Description
120	Speech paging urgent
121	Speech paging non urgent
122	Display paging urgent ANT (= Aut. Number Transmission)
123	Display paging non urgent ANT (= Aut. Number Transmission)
124	Display paging urgent no ANT (= Aut. Number Transmission)
125	Display paging non urgent no ANT (= Aut. Number Transmission)

RETRIEVE-ACTION
Indicates which data should be retrieved
(0 = all data, 1 = network data)

RIN
Route Identification Number (1…4 digits).

ROUTE
Route number (0…254)

ROUTE-ALTERN
Routing alternative
0 = primary
1 = alternative

ROUTE-TABLE
Route table number (0…254).

ROUTE-TYPE
Route for alarm signalling:
0 = Suppress all
1 = MDF
2 = Standard (according to PE file)
3 = Isolate unit (No outgoing alarms to other units)
4 = Standard operator and MDF

S

SCT
Index, indicating the software state (4 decimal numbers)

SECR-BSP-ID
Secretary BSP-ID (see BSP-ID)

SECR-RANK
Secretary rank in pool (0…9)

SELECT-ANNOUNCEMENT-DATA
0 = Announcement data for assistance group
1 = Announcement data for ACD group
2 = Announcement data for music on hold

SEQ
Sequence number of a bundle in a route or a line in a bundle.
Sequence numbers are assigned automatically and represent the order in which the lines or bundles are defined. It also represents the order in which the bundle or line is selected.

SEQUENCE-NO
Sequence number of a link (0…7)

SEQUENCE-TABLE
Sequence table, indicates which route table should be selected (1…5). 1 indicates the default table, 2…5 can be used for Least Cost Routing and iSNet Private Virtual Networking (select with facility timing).

SERVER-AND-ACTION-CODE
A digit string with the format: P[Q]Q
P is the server code. It indicates the type of server addressed:
0 = Message server
1 = ACD MIS server
[Q]Q is the action requested from the server. The range depends on the type of server given by SERVER-CODE. The following actions are defined for each application type:

Message Server	0 = normal text message to server
	1 = urgent text message to server
	2 = forward normal text message
	3 = forward urgent text message

	4 = broadcast normal text message
	5 = broadcast urgent text message
ACD MIS Server	0 = agent login
	1 = agent logout
	2 = agent not ready
	3 = agent ready
	4 = agent not ready by supervisor
	5 = agent ready by supervisor
	6 = agent logout by supervisor
	7 = agent login and present
	8 = enter transaction code
	9 = agent request consultation
	10 = ACD group to day
	11 = ACD group to night

SET-NAME
Filename of a set (6 characters)

SET-TYPE
Type of set:
0 = all types
1 = active resident sets
2 = inactive resident sets
3 = overlay sets
4 = resident sets

SHELF
Shelf identity, UUCCS
UU= Unit (1…14), must be omitted for single unit systems
CC= Cabinet (01…15)
S = Shelf (1…4)

SHELF-TYPE
Indicates the type of shelf:
0 = PM-2500 shelf
1 = SM-2500 shelf
2 = CM-2500 shelf
3 = CM-SM-1025 shelf
4 = CM-SM-1025 redesign shelf
5 = CM-SM-2500 redesign shelf
6 = PM-1100 shelf
7 = RPM-1100 shelf
8 = RPM-255U shelf

9 = RPM-255L shelf
10 = PM-255 upper
11 = PM-255 lower
12 = PM-55 upper
13 = PM-55 lower
14 = PM-250/1000
15 = CSM

SIGCH-ADDRESS
Signalling channel address of the opposite ISPBX (1…20 digits)

SIGCH-TU
Signalling channel timer unit (0=seconds, 1=minutes); identifies the unit of the time value specified by parameter SIGCH-TV.

SIGCH-TV
Signalling channel timer value (0…16383).

SIG-ID
Signal identifier (0000…FFF (hex) or * = don't care)

SIG-GROUP
Signalling group AAAA.
AAAA : PPU signalling group. See appendix C.

SMART-BOX-EM
Mercury smart box emulation (0 = no, 1 = yes).

SND-DT
Second external dial tone option (0 = no, 1 = yes)

SOFT-RING
Controls the soft ring that can be activated for function keys where a group member is monitored. (0…3).
0 = no softring
1 = one softring beep
2 = two softring beeps
3 = three softring beeps

SOURCE-FILE
Specification of the source file in the format:

LDN:FILENAME.EXTENSION[.GENERATION]

SPEED+MODE
Concatenation of Terminal speed and Conversation mode: TTC
The following terminal speeds are possible (in Bauds):
1 = 50
2 = 75
3 = 110
4 = 150
5 = 200
6 = 300
7 = 600
8 = 1200
9 = 1275
10 = 2400
11 = 3600
12 = 4800
13 = 7200
14 = 9600
15 = 12000
16 = 14400
17 = 19200
18 = 38400
19 = 48000
20 = 56000
21 = 64000
The following conversation modes are possible:
0 = Full duplex, asynchronous
1 = Full duplex, synchronous
2 = Half duplex, asynchronous
3 = Half duplex, synchronous
4 = Simplex outgoing, asynchronous
5 = Simplex outgoing, synchronous
6 = Simplex incoming, asynchronous
7 = Simplex incoming, synchronous

START-FLG
Flag indicating if the STWARM command is generated (0 = no, 1 = yes).

SUBSCR-CAT
Category of subscriber indicating the type of calling party (1…15)

SUPERVISOR-DNR
Supervisor BSP-ID (see BSP-ID)

SWITCH-ALLOWANCE
Member can switch absent in group (0 = no, 1 = yes)

T

TERMINAL
Terminal name of 5 characters (eg. VDUxx)

TERMINAL-TYPE
Terminal type
0 = VDU
1 = Operator console
2 = Operator console with key
3 = TMS (SystemManager)

THRESHOLD-PRIORITY
Acd group priority (0=No priority, 1=Priority group).

TICS
Threshold of metering ticks (max 4 digits)

TICKER-SOURCE
Added ticker function source (0…2).
0 = no ticker
2 = ticker tone 0
3 = ticker tone 1

TIME
Time specification <HOURS>:<MINUTES>

T-VALUE
Number of time units (0…63).

TONE-AND-DDI-OPTS
Tone and direct dialling in options PQ[RSTUVWX]:
P = Busy tone before answer (0=no, 1=yes)
Q = Busy tone after answer (0=no, 1=yes)
R = DDI tone to be sent to external party (0…4)
- 0 = no tone
- 1 = internal dial tone
- 2 = external dial tone
- 3 = internal ring tone
- 4 = external ring tone

S = Traffic class (0…7)
T = Action when DDI to busy extension (0…9)
U = Action when DDI dial time out (0…9)
V = Action when DDI ringing time out (0…9)
W = Action when DDI to unallocated number (0…9)
X = Action when unsuccessful DDI call (0…9)
For TUVWX the following actions are possible:
0 = Busy tone
1 = NU tone
2 = Clear backward
3 = No action
4 = COB and send answer
5 = Operator or busy tone
6 = Operator or nu tone
7 = Operator or clear back
8 = Operator or no action
9 = Operator or night extension

TONE-FUNCTION

Default settings of Tone, Ring and Ticker functions can be found in the Signalling Data manual.
In this manual there are more Tone, Ring and Ticker functions as given in this table
The ones not mentioned here have become obsolete or are intended for future use.

FUNCTION	FUNCTION ID	DESCRIPTION
Tone Function	000	Internal ring tone.
	001	External ring tone.
	002	Internal dial tone.
	003	First external dial tone.
	004	Second external dial tone.
	005	Delayed hotline dial tone.
	006	Busy tone.
	007	Number unobtainable tone.
	008	Congestion tone.
	009	Diversion active dial tone.
	010	Confirmation tone.
	011	Urging tone.
	012	Call waiting tone burst.
	013	Paging absent tone.
	014	Paging in progress tone.
	015	Bypass tone.
	017	Camp on busy tone to caller.
	018	Park tone.
	019	Through connect ring tone.

FUNCTION	FUNCTION ID	DESCRIPTION
	020	Ticker tone 0.
	021	Ticker tone 1.
	024	ARB destination ring back tone.
	025	Alternative routing warning tone.
	026	Enter password tone.
	027	Routing tone.
Ring Function	100	Internal ring current.
	101	External ring current.
	102	Automatic ring back current.
	103	Emergency alarm ring current.
	104	Through connect ring current.
	105	Service A ring (used for wake-up ring).
	106	Service B ring (used for message waiting ring).
	107	Ring burst.
Ticker Function	200	Break-in ticker.
	201	Add-on ticker.
	202	Urging ticker
	203	Call waiting ticker.
	204	Dial up Break in Ticker.

Table B-9 Description of Tone, Ring and Ticker Functions.

TONE-SRC

Tone source number on the PSC-A tone PROM or PSC-G Country Group 1 (see table the table on page 292) or on the PMC (see table the table on page 293). See table the table on page 294 for the relation between tone sources on the PSC and PMC.

Table B-10 Stc-Tone Data for PMC.

FREQ- VALUE	TONE TYPE	FREQUENCY	LEVELS (dBm0)	REMARKS
0	Silence			
1	DTMF	697 1209	- 4.2 - 2	
2	DTMF	697 1336	- 4.2 - 2	
3	DTMF	697 1477	- 4.2 - 2	
4	DTMF	697 1633	- 4.2 - 2	
5	DTMF	770 1209	- 4.2 - 2	
6	DTMF	770 1336	- 4.2 - 2	
7	DTMF	770 1477	- 4.2 - 2	
8	DTMF	770 1633	- 4.2 - 2	
9	DTMF	852 1209	- 4.2 - 2	
10	DTMF	852 1336	- 4.2 - 2	
11	DTMF	852 1477	- 4.2 - 2	
12	DTMF	852 1633	- 4.2 - 2	
13	DTMF	941 1209	- 4.2 - 2	
14	DTMF	941 1336	- 4.2 - 2	
15	DTMF	941 1477	- 4.2 - 2	

FREQ- VALUE	TONE TYPE	FREQUENCY	LEVELS (dBm0)	REMARKS
16	DTMF	941 1633	- 4.2 - 2	
17	Ticker	400	0	4 cycles
18	Ticker	425	0	4 cycles
19	Single	400	0	
20	Single	425	0	
21	Single	440	0	
22	Single	450	0	
23	Single	620	0	
24	Single	950	0	
25	Single	1400	0	
26	Single	1800	0	
27	Dual	150 450	0 - 9	
28	Dual	350 440	- 3 - 3	
29	Dual	440 480	- 3 - 3	
30	Dual	480 620	- 3 - 3	
31	Multiply	33.33 400	0	
32	Multiply	25 425	0	
33	Carrier	33.33 400	- 2	80% modulation
34	H'FF		0	Idle pattern for DTX-I
35	H'00		0	Zero pattern

Table B-11 Coded Tone Levels for PMC.

INDEX	LEVEL (dB)	INDEX	LEVEL (dB)	INDEX	LEVEL (dB)
0	0	10	- 10	20	- 20
1	- 1	11	- 11	21	- 21
2	- 2	12	- 12	22	- 22
3	- 3	13	- 13	23	- 23
4	- 4	14	- 14	24	- 24
5	- 5	15	- 15	25	- 25
6	- 6	16	- 16	26	- 26
7	- 7	17	- 17	27	- 27
8	- 8	18	- 18	28	- 28
9	- 9	19	- 19	29	- 29

Note: The default settings of Tone, Ring and Ticker functions can be found in the Signalling Data Manual.
The Signalling Data Manual shows more Tone, Ring and Ticker functions as given in this table. The ones not mentioned have become obsolete or are intended for future use.

Table B-12 PSC Tone Source Numbers.

TONE-SOURCE	FREQUENCY (Hz)	LEVEL (dBm0)	COMMENT
00	- - -	- - -	Contents PROM identification
01	- - -	- - -	Idle pattern (silence)

TONE-SOURCE	FREQUENCY (Hz)	LEVEL (dBm0)	COMMENT
02	4 periods of 400	0	Ticker (incl. 500 msec)
03	4 periods of 425	- 12	Ticker (incl. 500 msec)
04	4 periods of 425	- 3	Ticker (incl. 500 msec)
05	150 + 440	- 6 - 15	
06	400	- 3	
07	400	- 6	
08	400	- 9	
09	400	- 12	
10	400 x 33.3	- 3	
11	400 x 33.3	- 9	400 Hz modulated by 33.3 Hz
12	400 x 33.3	- 17	
13	425	- 3	
14	425	- 6	
15	425	- 9	
16	425	- 12	
17	425	- 23	
18	425 x 25	- 10	425 Hz modulated by 25 Hz
19	425 x 25	- 14	
20	450	0	
21	450	- 4	
22	450	- 8	
23	950	- 4.5	
24	950	- 9	
25	950	- 13	
26	1400	- 4.5	
27	1400	- 9	
28	1400	- 13	
29	1800	- 4.5	
30	1800	- 9	
31	1800	- 13	

Table B-13 PMC Tone Source numbers.

TONE SOURCE	TONE SPECIFICATION		SLAVE DATA		REMARK
	FREQ. (Hz)	LEVEL (dBm)	TONE	LEVEL	
0	425	- 3	18	3	ticker
1	0	0	0	0	silence
2	425	- 12	20	12	H'FF*
3	450	- 8	22	8	
4	950	- 13	24	13	
5	150 440	- 6 - 15	17	6	
6	1400	- 13	25	13	
7	1800	- 13	26	13	

* Tone source 2 has a fixed setting.

TONE SOURCE	TONE SPECIFICATION		SLAVE DATA		REMARK
	FREQ. (Hz)	LEVEL (dBm)	TONE	LEVEL	
8	400	- 9	19	9	
9	400	- 12	19	12	
10	425	- 23	20	23	
11	425 x 25	- 10	32	10	
12	400 x 33.3	- 17	31	17	
13	425	- 3	30	3	
14	450	0	22	0	
15	425	- 9	20	9	
16	941 1336	- 10.2 - 8	14	6	DTMF `0'
17	697 1209	- 10.2 - 8	1	6	DTMF `1'
18	697 1336	- 10.2 - 8	2	6	DTMF `2'
19	697 1477	- 10.2 - 8	3	6	DTMF `3'
20	770 1209	- 10.2 - 8	5	6	DTMF `4'
21	770 1336	- 10.2 - 8	6	6	DTMF `5'
22	770 1477	- 10.2 - 8	7	6	DTMF `6'
23	852 1209	- 10.2 - 8	9	6	DTMF `7'
24	852 1336	- 10.2 - 8	10	6	DTMF `8'
25	852 1477	- 10.2 - 8	11	6	DTMF `9'
26	941 1209	- 10.2 - 8	13	6	DTMF `*'
27	941 1477	- 10.2 - 8	15	6	DTMF `#'
28	697 1633	- 10.2 - 8	4	6	DTMF `A'
29	770 1633	- 10.2 - 8	8	6	DTMF `B'
30	852 1633	- 10.2 - 8	12	6	DTMF `C'
31	941 1633	- 10.2 - 8	16	6	DTMF `D'
* Tone source 2 has a fixed setting.					

Table B-14 Conversion Tone Source Numbers of PSC-A to PMC.

PSC-A TONE SOURCE	PMC TONE SOURCE
4	0
16	2
17	10
18	11
20	14
22	3
25	4
26	6
28	6
31	7

TREE

Analysis tree number (0…254)

TRFC

Traffic class (0…7), see table the table on page 295.

Table B-15 Example of Traffic Classes Allocation.

TRAFFIC CLASS	DESCRIPTION
0	Only to operator
1	Internal traffic Limited tie-line access Abbreviated external traffic
2	Destinations of traffic class 1, plus: Full tie-line access More abbreviated dialled extensions
3	Destinations of traffic class 2, plus: DDO to local area More abbreviated dialled extensions
4	Destinations of traffic class 3, plus: DDO to national destinations More abbreviated dialled extensions
5	Destinations of traffic class 4, plus: DDO to continental destinations More abbreviated dialled extensions
6	No restrictions
7	Operator traffic class

TRUNK-CODE

Trunk access code (1…6 digits)

TS

Type and Subtype of a file.

T can be the following:

A = ASCII format
B = Binary format
L = Local data type
N = Network data type
S = System reserved
X = Executable file

S can be the following:

A = Action overlay
B = Backup library
C = Command overlay
D = Dump data
E = Compressed dump data
F = FDCR (Full Detailed Call Recording)

G = General data
I = PE initial file
J = Journal
K = Metering data
L = Backup location
M = Memory image
N = Compressed memory image
O = Traffic observation
P = Program library
Q = Sequence number
R = Resident set
S = Snapshot subcommands
T = Toll ticketing
U = Unit configuration

TYPE-CODE
Type code PQRSTU (for each letter: 0 = no, 1 = yes)
P = Call forwarding on busy executive to secretary
Q = Secretary allowed to switch absent
R = Single executive pool
S = Single secretary pool
T = Busy indication in the case of executive and secretary busy
U = Executive line position pickup by related executives allowed

U

UA
Displayed value, indicating the number of unanswered calls.

UCA
User Channel Address (1…6 digits)

UCA-PREFIX
User Channel Address prefix (1…20 digits)

Un
Unit number (n=1 to 14)

UNIT
Unit number (1…14)
As from SSW 805.28 unit '0' may be given. This is the unit the OM terminal is connected to.

UNIT+BUNDLE
Composite parameter of unit and bundle; format [UU]BBB

UNIT+DEST
Local destination id [UU]DDD

UNIT-INDICATOR
Indicates if a single unit or multi unit call should be observed:
0 = single unit call
1 = multi unit call

UNIT-T
Time unit (0…4):
0 = 10 msec
1 = 100 msec
2 = 1 sec
3 = 10 sec
4 = continuous

UNS-BIDS
Displayed value, indicating the total number of unsuccessful bids on a group or group members.

UP-TRFC
Upgraded traffic class, see parameter TRFC.

USER-MODE
0 = normal PVN (default)
1 = delayed PVN

USRCH-TU
User channel timer unit; identifies the unit of the time value specified by parameter USRCH-TV.
0 = seconds
1 = minutes

USRCH-TV
User channel timer value (0…16383)

USER-TYPE
Indicates for which type of user a routing table is valid:
0 = Normal extension
1 = Operator
2 = Priority extension

V

V.24-CIRCUITS

V option (0…14) or digit string ABCDEFGHIJ KL, each 0 or 1, to set the circuits individually, see table the table on page 299.

Table B-16 V-OPTION.

V-OPTION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
CT108-2	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CT108-ON	0	0	0	0	0	0	0	1	1	0	0	1	1	1	1
CT105-CREQ	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
CT103-DCALL	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
CT107-AUTON	1	0	0	1	1	0	0	0	0	1	1	1	1	0	0
AUTOM-ANSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CT105-109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CT106-109-INH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CT105-ON	0	0	1	0	1	0	1	0	1	0	1	0	1	0	1
DGUARD-ACT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DGUARD-INC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
V.25BIS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

If the circuits are filled in individually (0 = off, 1 = on):

A CT108-2:	CT108 **not** as call request. CT108 set as 108.1 or 108.2. If this circuit is on it is used as CT108.2 else it is used as C108.1 (call request).
B CT108-ON:	If this option is chosen, CT108 is assumed permanently on, independent of the actual state of the circuit.
C CT105-CREQ:	This option allows CT105 to be used as a call request.
D CT103-DCALL:	Activity on CT103 initiates a call request.
E CT107-AUTON:	CT107 as call clear indication. CT107 may be turned off independent of the state of CT108.
F AUTOM-ANW:	Automatic answer on incoming call.
G CT105-CT109:	CT105 connected to CT109.
H CT106-CT109-INH:	CT109 enables CT106.
I CT105-ON:	CT105 is assumed continuously on, independent of the actual state of the circuit.
J DGUARD-ACT:	No activity on CT103 or CT104 during certain time clears the call.
K DGUARD-INC:	No data activity on incoming call within certain time clears the call.
L V.25BIS:	V-interface working according to V.25bis.
In the case of X.21:	A= Autoclear, F=Auto answer.

VOICE/DATA

Voice data indication (V or D)

VOLUME

Volume name of the medium you wish to format (1…6 characters)

W

WA
Displayed value, indicating the number of waiting calls.

WAIT
Wait for completion of the delete operation.
Yes = 1
No = 0

WEEK
Day of the week (1…7)

WINDOW
TMS/SOPHO SystemManager service number (1…9, 81…89); see note 1
Normally the following values are used, check this in the TMS/SOPHO SystemManager documentation.
From the iS3000 to TMS/SOPHO SystemManager:
81 = External Service Display
82 = Room Status
83 = Automatic entry of messages
84 = Night Watchman control
85 = Peripheral facility manager request
86 = Peripheral facility manager user-to-PFM
87 = Access manager
From TMS/SOPHO SystemManager to the iS3000:
02 = Wake up
03 = Message waiting without announcement
04 = Automatic Directory Dialling
05 = Bar/Unbar extension (see note 2)
06 = Message waiting with announcement / security patrol manager alarm
07 = Peripheral facility manager-to-user
08 = Port protection call back
Note 1: The window numbers in the OM command are in hexadecimal. Window numbers in the subcommands are in decimal. E.g.: hexadecimal window number 81 corresponds to window number 129 in decimal.
Note 2: In SSW 805.29 switching service number 5 is extended an therefor renamed to 'Change PBX data'.
Service number 5 can now be used for bar/unbar an extension and to set/reset a PBX feature, e.g. activate/deactivate don't disturb.

WINDOW-SIZE
The number of simultaneous processes sent to the TMS/SOPHO SystemManager (0…254)

WRITE-SEL
Determines the type of data stored in a system dump:
0 = Write current environment only
1 = Write all data

Y

YEAR
Year (1985…2050)

C . BOARD AND PCT TYPES

C.1. BOARD-TYPE TABLE

The table below lists all the boards. The board-type is not mentioned if it can not be projected by ASBRDS (like PSU, LTU etc.) The signalling group, mentioned in this table, corresponds to the application. **Other applications with corresponding signalling groups can be found in the Signalling Data Manual.** The PCT-TYPE used by the application is in the "PCT-TYPES ON BOARD" column. The mode of operation for individual circuits can be changed to a PCT-TYPE, which is mentioned between square brackets, by first DEPCTB and subsequently ASPCTB.
PCT-TYPES are discussed in section "*PCT-TYPE TABLE*" on page 309.

Table C-1 Various Types of Boards

CIRCUIT NAME	BOARD TYPE	Sign Group	HARD W. TYPE	PCT-TYPES ON BOARD	APPLICATIONS
ACC	08	3205	35	LCT [TRC/MOH/Ann]	Extension
ACU (APNSS)					APNSS-board
ALC-Axx	03	3204	35	LCT [MOH/Ann]	extension
ALC-Bxx	03	3204	35	LCT [MOH/Ann]	extension
ALC-Exx	06	3205	35	LCT [MOH/Ann]	extension
ALC-Fxx/G	06	3204	35	LCT [MOH/Ann]	extension/clearing signal
ALC-Fxx/G	06	3210	35	LCT [MOH/Ann]	extension/message-waiting led.
AOC on PMC		0A04	255	[OCT]	
AS01 on ACC01		3304	35	[TRC]	ALS70
AS0B on ACC0B		3304	35	[TRC]	ALS70
ASU-G	06	9B17	255		Standard board 16 lines
ASU-G	06	3Exx	255	[TRC]	Subscr. Signalling
ASU-G	06	3Exx	255	[TRC]	PD Signalling
ATU-AS01	22	3304	35	TRC	ALS70
ATU-AS01	22	3704	35	TRC	Eind-Overdrager
ATU-AS0B	22	3304	35	TRC	ALS70
ATU-AS11	22	3704	35	TRC	Eind-Overdrager
ATU-AS36	22	3F04	35	TRC	Austria enhanced SS
ATU-AS48	22	4904	35	TRC	FRENCH DDO
ATU-CH01	22	3404	255	TRC	cailho
ATU-CH02	22	3804	35	TRC	German cailho
ATU-DI13	24	4104	255	TRC	United Kingdom DDI
ATU-EL03	24	4204	35	TRC	EC and loop disconn.
ATU-EM	35	5F04	255	TRC	external alarm
ATU-EM-D	22	3604	35	TRC	Dig. data +EM

CIRCUIT NAME	BOARD TYPE	Sign Group	HARD W. TYPE	PCT-TYPES ON BOARD	APPLICATIONS
ATU-EMXX	22	See *"PCT-TYPE TABLE"* on page 309	35*)	TRC	1 bit protocol See *"PCT-TYPE TABLE"* on page 309.
ATU-EMXX	22	7704	35*)	TRC	Italy EM
ATU-EMXX	22	7604	35*)	TRC	Spain EM
ATU-G	24	3304	35	TRC	ALS70
ATU-G	24	3704	35	TRC	Eind-Overdrager
ATU-G	24	3E04	35	TRC	SS
ATU-G2	24	4604	35	TRC	PDO Sweden
ATU-G2	24	3E0C	35	TRC	SS Sweden
ATU-G2	24	7804	35	TRC	PD2 New Zealand
ATU-G3 1)	24	3E1A	35	TRC	PD1 Spain
ATU-G3 1)	24	3E16	35	TRC	SS Germany
ATU-G3 1)	24	3E04	35	TRC	SS China
ATU-G3 1)	24	3E04	35	TRC	SS South Africa
ATU-G3 1)	24	4706	35	TRC	SS France
ATU-G3 2)	24	3E04	35	TRC	SS0
ATU-G3 2)	24	3E0C	35	TRC	PD1
ATU-G3 2)	24	3304	35	TRC	ALS70
ATU-G3 2)	24	3704	35	TRC	AS0/AS2 Eind-Overdrager
ATU-G3 2)	24	3E1A	35	TRC	PD1C Spain
ATU-G3 2)	24	4706	35	TRC	SS08 France
ATU-G4	24	3E04	35	TRC	SS01/AS2D Italy
ATU-G4	24	3704	35	TRC	AS21/AS2D Italy
ATU-G5	24	3E04	35	TRC	SS0M Brazil
ATU-G5	24	3E0C	35	TRC	PD1M Brazil
ATU-G5	24	3704	35	TRC	AS0M Brazil
ATU-G6	24	3E1F	35	TRC	SS02 Germany
ATU-IL31	22	4A04	255	TRC	China
ATU-ILxx	22	See Table D.2.	35*)	TRC	1 bit protocol See Table D.2.
ATU-LB01	22	3A04	255	TRC	Local battery
ATU-LB12	22	See Table D.2.	35*)	TRC	1 bit protocol See Table D.2.
ATU-LD28	22	4804	35	TRC	French DDI
ATU-LDxx	22	3B04	35	TRC	LOOPDICONN (SS-DC5)
ATU-PA	30	3D04	255	PAGING CIRCUIT	Paging
ATU-PD05	22	450B	35	TRC	Denmark polarity det.
ATU-PD07	22	4604	35	TRC	Sweden polarity det
ATU-PD11	22	3E04	35	TRC	polarity detection
ATU-PDx8	24	4704	35	TRC	French polarity det.

CIRCUIT NAME	BOARD TYPE	Sign Group	HARD W. TYPE	PCT-TYPES ON BOARD	APPLICATIONS
ATU-PSI	20	3E04	255	TRC	Analoge door-contact
ATU-SS02	22	3E04	35	TRC	SS
ATU-SSxx, not 02	23	3E04	35	TRC	SS
ATU-ST02 2 ports	21	3904	35	TRC	German IKZ
ATU-ST02 4 ports	22	3904	35	TRC	German IKZ
ATU-ST03	22	4304	255	TRC	United Kingdom DC10
ATU-ST12 2 ports	21	3C04	35	TRC	Luxembourg IKZ
ATU-ST12 4 ports	22	3C04	35	TRC	Luxembourg IKZ
ATU-ST26	22	4004	35	TRC	Austria 3 wire Sign.
ATX (APNSS)	--	----	---		APNSS
ATU-EC03	22	3504	35	TRC	Earth-Calling (EC)
BAC	--	----	---		
BCC	--	----	---		
CCS	88	----	---		
CFC	24	0E04	255	TRC	conference circuit
CFC	03	0E05	255	LCT	conference circuit
CI-X	84	----	---		
CIE	89	----	---		
CII-A	82	----	---		
CII-B	83	----	---		
CPS	80	----	---		
CPU-ME/MT	87	----	---		
CRU	71	----	---		
CSG	72	----	---		
CSG/CRU	73	----	---		
CSN-BC	75	----	---		
DCC (4)	15	0920	255	LCT	DECT, BB-section 0
DCC (4)	15	0921	255	LCT	DECT, BB-section 1
DCC (4)	15	0922	255	LCT	DECT, BB-section 2
DCC (4)	15	0923	255	LCT	DECT, BB-section 3
DCC (8)	13	0920	255	LCT	DECT, BB-section 0
DCC (8)	13	0921	255	LCT	DECT, BB-section 1
DCC (8)	13	0922	255	LCT	DECT, BB-section 2
DCC (8)	13	0923	255	LCT	DECT, BB-section 3
DLC-A	02	2804	4*)	LCT	2 wire U-interface TMP
DLC-B	04	2806	4*)	LCT	2 wire U-interface TMP
DLC-C	05	2807	255	LCT [OCT]	2 wire U-interface TMP
DLC-D	07	2808	255	LCT [OCT]	2 wire U-interface TMP
DLC-I	05	0904	255	LCT	4 wire S0-bus TMP/ 1TR6

CIRCUIT NAME	BOARD TYPE	Sign Group	HARD W. TYPE	PCT-TYPES ON BOARD	APPLICATIONS
DLC-U (15)	10	0912	255	LCT [OCT]	TMP/1TR6+take-over/ETSI
DLC-U (15)	10	090A	255	LCT [OCT]	2w, TMP/1TR6/ETSI
DLC-U (7)	12	090F	255	LCT [OCT]	2w, TMP/1TR6/ETSI
DLX-L (15) (15 ports)	64	0930	255	LCT	2w (2B1Q), TMP/ 1TR6,ETSI
DLX-L (15) (30 ports)	65	090A	255	LCT	2w (2B1Q), TMP/ 1TR6,ETSI
DLX-U (15) 15 ports	67	0930	255	LCT	2w (Upn), TMP/1TR6
DLX-U (15) 30 ports	68	090A	255	LCT	2w (Upn), TMP/1TR6
DLX-U (31) 31 ports	69	0931	255	LCT	2w (Upn), TMP/1TR6
DOC on PMC	--	1904	255	[OCT]	
DTA	00	3204	35	LCT	digital test access
DTU-BA	26	6605	255	TRC	2B+D DPNSS, B side
DTU-BA	26	6604	255	TRC	2B+D DPNSS, A side
DTU-BA	28	5C04	255	ISDN-TRC	2B+D 1TR6
DTU-CC	50	2004	48		(R)PM2500 only
DTU-PH	18	5D04	255	ISDN-TRC	30B+D 1TR6
DTU-PH	18	5D0D	255	ISDN-TRC	30B+D ETSI International free numb.
DTU-PH	19	6705	255	TRC/D-CHANNEL	30B+D DPNSS, B side
DTU-PH	19	6704	255	TRC/D-CHANNEL	30B+D DPNSS, A side
DTU-PH	19	6708	255	TRC/D-CHANNEL	30B+D DASS
DTU-PU as DTU-CA	25	3004	49*)	TRC	Belgium
DTU-PU as DTU-CA	25	See Table D.2.	49*)	TRC	1 bit protocol See Table D.2.
DTU-PU as DTU-CA	25	2B04	49*)	TRC	Italy
DTU-PU as DTU-CA	25	2D04	49*)	TRC	France
DTU-PU as DTU-CA	25	2C04	49*)	TRC	Sweden
DTU-PU as DTU-CA	25	2E04	49*)	TRC	South Africa
DTU-PU as DTU-CA	25	2904	49*)	TRC	Netherlands (ALS70)
DTU-PU as DTU-CA	25	3104	49*)	TRC	Denmark
DTU-PU as DTU-CA	25	5004	49*)	TRC	Thailand

CIRCUIT NAME	BOARD TYPE	Sign Group	HARD W. TYPE	PCT-TYPES ON BOARD	APPLICATIONS
DTU-PU as DTU-CA	25	5304	49*)	TRC	China
DTU-PU as DTU-CA	25	2F04	49*)	TRC	South Africa outg.
DTU-PU as DTU-CA	25	5204	49*)	TRC	Spain
DTU-PU as DTU-CA	25	5504	49*)	TRC	Czech REPUBLIC.
DTU-PU as DTU-CA	25	5604	49*)	TRC	Brazil
DTU-PU as DTU-CA	25	5404	49*)	TRC	Greece
DTU-PU as DTU-CC	50	2004	48		in (R) PM2500
DTU-PU as DTU-PR	25	2605	50*)	TRC	DPNSS, A-side
DTU-PU as DTU-PR	25	2606	50*)	TRC	DPNSS, B-side
DTU-PU as DTU-PR	25	2608	50*)	TRC	DASS
DTU-PU remote CC	52	5904	255		in RPM1100/255 (UG7/6/5/4)
DTU-PU/2 local CC	51	5904	255		CPS or CCS syst: in PM1100 (even postion, except 16)
DTU-PU/2 local CC	53	5904	255		CPU-ME/MT system (UG0/3/4/5)
DTU-VC	17	660C	255	TRC [LCT]	DPNSS, A-side
DTU-VC	17	660D	255	TRC [LCT]	DPNSS, B-side
DTU-VC + TRK-VC	17	660C	255	TRC	DPNSS, A-side
DTU-VC + TRK-VC	17	660D	255	TRC	DPNSS, B-side
DTX-I (15)	14	090A	255	LCT [TRC/OCT/ ISDN-TRC]	4w, TMP/1TR6/ETSI
DTX-I (15)	14	0912	255	LCT [TRC/OCT/ ISDN-TRC]	TMP/1TR6+take-over/ETSI
DTX-I (15)	27	6610	255	ISDN-TRC	DPNSS, A-side
DTX-I (15)	27	6611	255	ISDN-TRC	DPNSS, B-side
DTX-I (15)	29	5C09	255	ISDN-TRC [LCT/ TRC/OCT]	1TR6 germany
DTX-I (15)	29	5C10	255	ISDN-TRC [LCT/ TRC/OCT]	ETSI germany
DTX-I (15)	29	5C12	255	ISDN-TRC LCT/TRC/ OCT	ETSI international, free numb.
DTX-I (7)	28	5C12	255	ISDN-TRC LCT/TRC/ OCT	ETSI International, free numb. (byte 2 = 0)

CIRCUIT NAME	BOARD TYPE	Sign Group	HARD W. TYPE	PCT-TYPES ON BOARD	APPLICATIONS
DTX-I (7)	11	090F	255	LCT [TRC/OCT/ ISDN-TRC]	S0-bus
DTX-I (7)	26	660C	255	TRC [LCT/OCT/ ISDN-TRC]	DPNSS, A side
DTX-I (7)	26	660D	255	TRC [LCT/OCT/ ISDN-TRC]	DPNSS, B side
DTX-I (7)	28	5C08	255	ISDN-TRC [LCT/ TRC/OCT]	1TR6 germany
ESU (-LG) /MCE	34	1E04	64		Emergency switching
IAS as IAS-A 14p	05	2807	255	LCT/MOH/Ann	
IAS as IAS-A 30p	09	280D	255	LCT/MOH/Ann	
IAS iS3070/3090	55	----	---		IAS 30+1 ports
IAS+CPU+ME/MT 14p	57	5E04	255	IAS-TS [MOH]	IAS 14 ports
IAS+CPU+ME/MT 30p	56	5E05	255	IAS-TS [MOH]	IAS 30 ports
INC	--	----	---		
IPH-A	--	----	---		
IPH-B	31	2504	255	D-channel	DPNSS/DASS
KTLC 8/A	03	2304	35	LCT	4 wire analoge set
KTLC-E	06	2305	35	LCT	4 wire analoge set
LDC	--	----	---		
LTU-(C/F)	--	----	---		
MC	--	----	---		
MCE					see ESU
MCI	85	----	---		
MIC	81	----	---		
MLU convertor	33	1604	255	convertor [TRC]	
MLU leased Line	22	1604	255	TRC [convertor]	
MOH-I	--	----	---		
OIU	32	1706	255	OCT	Supervisor
PM-observer	36	6604	255		
PMC-HR	90	0B04	255	RKT-SDT/SKT-RDT [OCT/HATCH]	
PMC-LU	93	0B04	255	RKT-SDT/SKT-RDT [OCT/HATCH]	
PMC-MC	91	0B04	255	RKT-SDT/SKT-RDT [OCT/HATCH]	
PMC-MC MASTER	92	0B04	255	RKT-SDT/SKT-RDT [OCT/HATCH]	
PSC	94	----	---		
PSU-ML (D)/F/etc.	--	----	---		
RST-IM	41	1504	82	IN-MFC	
RST-KDxx	40	1404	255	RKT-SDT/SKT-RDT	
RST-OM	43	150A	83	OUT-MFC	
RST-SL	42	1C04	81	RS-SOCOTEL	Socotel France

CIRCUIT NAME	BOARD TYPE	Sign Group	HARD W. TYPE	PCT-TYPES ON BOARD	APPLICATIONS
RST-SL	42	2104	80	RS-SOCOTEL	Socotel Spain
SCU	70	----	---		
SNS	77	----	---		
SS01 on ACC01	--	3E04	35	[TRC]	Eind overdrager
SS0B on ACC0B	--	3E04	35	[TRC]	Eind overdrager
VPU	--	----	---		

1) 9562 158 81000
2) 9562 158 81100
*

Note: *These hardware test types only apply to the PM2500, use type 255 for other types of PM.*

Table C-2 1-Bit Protocols

PPU MODULE_TYPE	SIGNALLING GROUP	REMARKS
ATU-EM	3604	EM General
ATU-EM-AS	7304	France EM-AS
ATU-EM-LD	7404	France EM-LD
ATU-EM2-PULSE	7004	EM pulse protocol
ATU-EM3	6F04	Sweden IF3 and Brasil
ATU-EM4	6E04	Sweden IF4
ATU-EM5	6D04	Sweden IF5
ATU-EM6	6C04	Sweden IF6
ATU-EM7	6B04	Sweden IF7
ATU-EM8	6A04	Sweden IF8
ATU-EMF	7204	France
ATU-EMG	7504	Germany

C.2. PCT-TYPE TABLE

C.2.1. Line Circuit (LCT)

ACC/ALC-Axx/ALC-E/ALC-Bxx

Sign. Group	Remarks
3204	Enquiry by earth button, no auxiliary pulse detect (8 lines).
3205	Enquiry by earth button, no auxiliary pulse detect (16 lines).
3206	Enquiry by dial-one or auxiliary pulse.
3207	Enquiry by dial-one or auxiliary pulse and Special timing for Spain
3208	Enquiry by hook flash.
320A	Enquiry by dial-one or auxiliary pulse.

	320C	Enquiry by dial-one.
	3216	Enquiry by aux. loop swedish signalling.
	3218	Enquiry by aux. loop or enquiry digit [0].
	321A	Enquiry by aux. loop or enquiry digit [0] swedish signalling.

ALC-F

	Sign. Group	Remarks
	3205	Enquiry by earth button, no auxiliary pulse detect. Polarity reverse used to indicate release.
	3207	Enquiry by dial-one or auxiliary pulse and Special timing for Spain Polarity reverse used to indicate release.
	3210	French signalling Polarity reverse used to indicate release.
	3216	Enquiry by aux. loop Swedish Signalling. Polarity reverse used to indicate release.
	321A	Enquiry by aux. loop or enquiry digit [0] Swedish signalling. Polarity reverse used to indicate release.

ALC-G

	Sign. Group	Remarks
	3205	Enquiry by earth button, no auxiliary pulse detect. Polarity reverse used to indicate release.
	3207	Enquiry by dial-one or auxiliary pulse and Special timing for Spain Polarity reverse used to indicate release.
	3216	Enquiry by aux. loop Swedish signalling. Polarity reverse used to indicate release.
	321A	Enquiry by aux. loop or enquiry digit [0] Swedish signalling. Polarity reverse used to indicate release.

CFC

	Sign. Group	Remarks
	0E05	Conference circuit as line circuit

DCC (4 and 8)

	Sign. Group	Remarks
	0920	DECT, BB-section 0
	0921	DECT, BB-section 1
	0922	DECT, BB-section 2
	0923	DECT, BB-section 3

DLC-A/B/C/D

	Sign. Group	TMP	
	2804	level:	English

	language:	English
280A	level:	Dutch
	language:	Dutch
280C	modem converter function	

DLC-I

Sign. Group		TMP	1TR6 Call Handover	Layer 1
0904	level:	NET33		extended passive bus or point to point
	language:	German		
0905	level:	NET33		short passive bus
	language:	German		
0906	level:	terminal setting dependent		extended passive bus or point to point
	language:	terminal setting dependent		
0907	level:	terminal setting dependent		short passive bus
	language:	terminal setting dependent		
090D	level:	Dutch		extended passive bus or point to point
	language:	Dutch		
090E	level:	Dutch		short passive bus
	language:	Dutch		
0910	modem convertor function			extended passive bus or point to point

DLC-U

Sign. Group		TMP	1TR6 Call Handover	ETSI Aut. MSN Insertion	DWNLD
0904	level:	NET33		+	
	language:	German			
090F	level:	terminal setting dependent		+	+
	language:	terminal setting dependent			
090D	level:	Dutch		+	
	language:	Dutch			
0910	modem convertor function			+	+

	0911	level:	terminal setting dependent	+	+	+
		language:	terminal setting dependent			
	0914	level:	terminal setting dependent			+
		language:	terminal setting dependent			
	0915	level:	terminal setting dependent			+
		language:	terminal setting dependent			
	0916	level:	terminal setting dependent	+		+
		language:	terminal setting dependent			

DLX-L

Sign. Group	Remarks
090A	DLX-L (15) in 2B mode
0930	DLX-L (15) in 1B mode
0908… 090B +	DLX-L (15) in 2B mode if the DLX-L is used to substitute the DLX-U, DLC-U or DTX-I.
0910 … 0917	*Note:* *The DLX-L offers a different extension interface as the DLX-U, DLC-U and DTX-I. Therefore it cannot be used as a one-to-one replacement of the DLX-U, DLC-U and DTX-I.*

DLX-U

Sign. Group	Remarks
090A	DLX-U(15) in 2B mode
0930	DLX-U(15) in 1B mode
0931	DLX-U(31) in 1B mode
0908… 090B +	DLX-U(15) in 2B mode if the DLX-U is used to substitute the DLC-U or DTX-I.
0910… 0917	*Note:* *The DLX-U offers a different extension interface as the DLC-U and DTX-I. Therefore it cannot be used as a one-to-one replacement of the DLC-U and DTX-I.*

DTA

Sign. Group	Remarks
3204	DTA circuit

DTU-VC without TRK-VC

Sign. Group	Remarks
6614	passive side [automatic answer calls]
6615	active side [generate Call-request]

DTX-I

Sign. Group		TMP	1TR6 Call Handover	ETSI Aut. MSN Insertion	DWNLD	Layer 1
0904	level:	NET33		+		extended passive bus or point to point
	language:	German				
0905	level:	NET33		+		short passive bus
	language:	German				
0906	level:	terminal setting dependent		+		extended passive bus or point to point
	language:	terminal setting dependent				
0907	level:	terminal setting dependent		+		short passive bus
	language:	terminal setting dependent				
0909	level:	NET33		+		remote extension
	language:	German				
090A	level:	terminal setting dependent		+	+	extended passive bus or point to point
	language:	terminal setting dependent				

090B	level:	terminal setting dependent		+	+	remote extension
	language:	terminal setting dependent				
090D	level:	Dutch		+		extended passive bus or point to point
	language:	Dutch				
090E	level:	Dutch		+		short passive bus
	language:	Dutch				
090F	level:	terminal setting dependent		+	+	extended passive bus or point to point
	language:	terminal setting dependent				
0910	modem convertor function			+	+	extended passive bus or point to point
0911	level:	terminal setting dependent	+	+	+	remote extension
	language:	terminal setting dependent				
0912	level:	terminal setting dependent	+	+	+	extended passive bus or point to point
	language:	terminal setting dependent				
0913	level:	terminal setting dependent	+	+	+	short passive bus
	language:	terminal setting dependent				
0914	level:	terminal setting dependent			+	extended passive bus or point to point
	language:	terminal setting dependent				

	0915	level:	terminal setting dependent		+	short passive bus
		language:	terminal setting dependent			
	0916	level:	terminal setting dependent	+	+	extended passive bus or point to point
		language:	terminal setting dependent			
	0917	level:	terminal setting dependent	+	+	short passive bus
		language:	terminal setting dependent			

C.2.2. Trunk Circuit (TRC)

ASU-G

Sign. Group	Remarks
9B17	Sign. Group of the ASU-G board-16 lines.
3Exx	Subscriber signalling (Sign. Group per PCT)
3Exx	Polarity Detect signalling (Sign. Group per PCT)

TU-AS01 on ACC01 / TU-AS0B on ACC0B

Sign. Group	Remarks
3304	ALS70

ATU-AS01 / ATU-AS0B

Sign. Group	Remarks
3304	ALS70
3704	Eind-Overdrager

ATU-AS11

Sign. Group	Remarks
3704	Eind-overdrager

ATU-AS36

Sign. Group	Remarks
3F04	Austria enhanced SS

ATU-AS48

Sign. Group	Remarks
4904	French DDO

ATU-AS36

Sign. Group	Remarks
3F04	Austria enhanced SS

ATU-AS48

Sign. Group	Remarks
4904	French DDO

ATU-CH01

Sign. Group	Remarks
3404	Cailho

ATU-CH02

Sign. Group	Remarks
3804	German Cailho

ATU-DI13

Sign. Group	Remarks
4104	United Kingdom DDI

ATU-EC03

Sign. Group	Remarks
3504	Earth-Calling

ATU-EL03

Sign. Group	Remarks
4204	EC and loop disconnect

ATU-EM

Sign. Group	Remarks
3604	EM general
7304	France EM-AS
7404	France EM-LD
7004	EM pulse protocol
6F04	Sweden IF3 and Brasil

6E04	Sweden IF4
6D04	Sweden IF5
6C04	Sweden IF6
6B04	Sweden IF7
6A04	Sweden IF8
7204	France 1bit
7504	Germany 1bit
7604	Spain EM
7704	Italy EM

ATU-G

Sign. Group	Remarks
3304	ALS70
3704	Eind-Overdrager
3E04	SS0

ATU-G2

Sign. Group	Remarks
7804	New Zealand PD23
4604	Sweden PD0
3E0C	Sweden SS0

ATU-G3 (9562 158 81000)

Sign. Group	Remarks
3E1A	Spain PD1
3E16	Germany SS
3E04	SS0
4706	France SS08

ATU-G3 (9562 158 81100)

Sign. Group	Remarks
3E04	SS0
3E0C	PD1
3304	ALS70
3704	AS0/AS2 Eind-Overdrager
4706	SS08 France
3E1A	PD1C Spain

ATU-G4

Sign. Group	Remarks
3E04	SS01/SS0D Italy
3704	AS21/AS2D Italy

ATU-G5

Sign. Group	Remarks
3E04	SS0M Brazil
3E0C	SS01/SS0D Italy
3704	AS21/AS2D Italy

ATU-G6

Sign. Group	Remarks
3E1F	SS02 Germany

ATU-IL31

Sign. Group	Remarks
4A04	China IL

ATU-ILxx

Sign. Group	Remarks
3604	EM general
7304	France EM-AS
7404	France EM-LD
7004	EM pulse protocol
6F04	Sweden IF3 and Brasil
6E04	Sweden IF4
6D04	Sweden IF5
6C04	Sweden IF6
6B04	Sweden IF7
6A04	Sweden IF8
7204	France 1bit
7504	Germany 1bit

ATU-LB01

Sign. Group	Remarks
3A04	Local Battery

ATU-LB12

Sign. Group	Remarks
3604	EM general
7304	France EM-AS
7404	France EM-LD
7004	EM pulse protocol
6F04	Sweden IF3 and Brasil
6E04	Sweden IF4
6D04	Sweden IF5

6C04	Sweden IF6
6B04	Sweden IF7
6A04	Sweden IF8
7204	France 1bit
7504	Germany 1bit

ATU-LD28

Sign. Group	Remarks
4804	French DDI

ATU-LDxx

Sign. Group	Remarks
3B04	Loop disconnect (SS-DC5)

ATU-PDx8

Sign. Group	Remarks
4704	French polarity detection

ATU-PD05

Sign. Group	Remarks
450B	Denmark polarity detection

ATU-PD07

Sign. Group	Remarks
4604	Sweden polarity detection

ATU-PD11

Sign. Group	Remarks
3E04	Polarity detection

ATU-PSI / ATU-SSxx

Sign. Group	Remarks
3E04	SS

ATU-ST02 with 2 ports and/or 4 ports

Sign. Group	Remarks
3904	German IKZ

ATU-ST03

Sign. Group	Remarks
4304	United Kingdom DC10

ATU-ST12 2 ports, 4 ports

Sign. Group	Remarks
3C04	Luxembourg IKZ

ATU-ST26

Sign. Group	Remarks
4004	Austria 3 wire signalling

CFC

Sign. Group	Remarks
0E04	Conference circuit as trunk circuit

DTU-PU as DTU-CA

Sign. Group	Remarks
3604	EM general
7304	France EM-AS
7404	France EM-LD
7004	EM pulse protocol
6F04	Sweden IF3 and Brasil
6E04	Sweden IF4
6D04	Sweden IF5
6C04	Sweden IF6
6B04	Sweden IF7
6A04	Sweden IF8
7204	France 1bit
7504	Germany 1bit
2904	Channel associated (Netherlands (ALS70))
2B04	Channel associated (Italy)
2C04	Channel associated (Sweden)
2D04	Channel associated (France)
2E04	Channel associated (South Africa)
2F04	Channel associated (South Africa outgoing)
3004	Channel associated (Belgium)
3104	Channel associated (Denmark)
5004	Channel associated (Thailand)
5204	Channel associated (Spain)
5304	Channel associated (China)
5404	Channel associated (Greece)

5504	Channel associated (Czech Republic)
5604	Channel associated (Brazil)

DTU-PR (or DTU-PU used as DTU-PR)

Sign. Group	Remarks
2605	DPNSS, A side
2606	DPNSS, B side
2608	DASS

DTU-VC with TRK-VC

Sign. Group	Remarks
660C	DPNSS, A side
660D	DPNSS, B side

MLU

Sign. Group	Remarks	
160C	Carrier detection selection:	no action
	Speed selection:	low
	Direction selection:	outgoing
160E	Carrier detection selection:	guarding of the line
	Speed selection:	low
	Direction selection:	outgoing
1610	Carrier detection selection:	no action
	Speed selection:	high
	Direction selection:	outgoing
1612	Carrier detection selection:	guarding of the line
	Speed selection:	high
	Direction selection:	outgoing
1614	Carrier detection selection:	no action
	Speed selection:	low
	Direction selection:	incoming
1616	Carrier detection selection:	guarding of the line
	Speed selection:	low
	Direction selection:	incoming
1618	Carrier detection selection:	no action
	Speed selection:	high
	Direction selection:	incoming
161A	Carrier detection selection:	guarding of the line
	Speed selection:	high
	Direction selection:	incoming
161C	Carrier detection selection:	call detection
	Speed selection:	low
	Direction selection:	call dependent
161E	Carrier detection selection:	call detection
	Speed selection:	high

	Direction selection:	call dependent
1620	Carrier detection selection:	call detection
	Speed selection:	low
	Direction selection:	outgoing
1622	Carrier detection selection:	call detection
	Speed selection:	high
	Direction selection:	outgoing
1624	Carrier detection selection:	call detection
	Speed selection:	low
	Direction selection:	incoming
1626	Carrier detection selection:	call detection
	Speed selection:	high
	Direction selection:	incoming

TU-SS on ACC01, TU-SS0B on ACC0B

Sign. Group	Remarks
3E04	Eind overdrager

C.2.3. Operator Circuit (OCT)

Table C-3 Various Types of Operator Circuits

BOARD-NAME	PPU MODULE_TYPE	SIGNALLING GROUP	HARDW. TYPE
AOC on PMC			
with SV20	AOC	0A04	255
with SV25	AOC	0A04	255
with SV50	AOC	0A05	255
DLC-C/D			
with PNT1-SV25	SuperVisor-30	1905	255
with PNT1-SV35	SuperVisor-30	1905	255
with SV30	SuperVisor-30	1904	255
DLC-U (15)/(7)			
with PNT1-SV25	SuperVisor-1TR6	6005	255
with PNT1-SV35	SuperVisor-1TR6	6005	255
with PNT1-SV55	SuperVisor-1TR6	6004	255
with SV30	SuperVisor-30-D	5B04	255
with PNT1-SSV60	SuperVisor-60	6404	255
DOC on PMC			
with PNT1-SV25	SuperVisor-30	1905	255
with PNT1-SV35	SuperVisor-30	1905	255
with SV30	SuperVisor-30	1904	255
DTX-I (15) (7)			
with SV25	SuperVisor-1TR6	6005	255
with SV35	SuperVisor-1TR6	6005	255
with SV55	SuperVisor-1TR6	6004	255

BOARD-NAME	PPU MODULE_TYPE	SIGNALLING GROUP	HARDW. TYPE
with PNT-L/SSV60	SuperVisor-60	6404	255
DTX-I (15) (7)			
with SV20	OIU	1706	255
with SV25	OIU	1706	255
with SV50	OIU	1706	255

C.2.4. Converter

MLU

Sign. Group	Remarks
1604	Speed selection: low Direction selection: call dependent
1606	Speed selection: high Direction selection: call dependent
1608	Speed selection: call dependent (high speed is 1200 bits/s) Direction selection: call dependent
160A	Speed selection: call dependent (high speed is 2400 bits/s) Direction selection: call dependent

C.2.5. RKT-SDT

PMC

Sign. Group	Remarks
0B04	Receiver key tone, sender dial tone

RST-KDxx

Sign. Group	Remarks
1404	Receiver key tone, sender dial tone

C.2.6. RDT-SKT

PMC

Sign. Group	Remarks
0B04	Receiver dial tone, sender key tone

RST-KDxx

Sign. Group	Remarks
1404	Receiver dial tone, sender key tone

RST-KD18

Sign. Group	Remarks
1404	Receiver dial tone, sender key tone
1405	Receiver dial tone with long (1.2 s) recognition time and sender key tone
1406	Receiver dial tone, sender key tone and receiver ring tone/busy tone for transcom

C.2.7. In-MFC

RST-IM

Sign. Group	Remarks
1504	Transmission plan 01, CSS1 signalling
1505	Transmission plan 02, CSS1 signalling
1506	Transmission plan 03, CSS1 signalling
1507	Transmission plan 04, CSS1 signalling
1508	Transmission plan 05, CSS1 signalling
1509	Transmission plan 06, CSS1 signalling

C.2.8. Out-MFC

RST-OM

Sign. Group	Remarks
150A	Transmission plan 01 CSS1 signalling, without backward signals for repetition
150B	Transmission plan 02 CSS1 signalling, without backward signals for repetition
150C	Transmission plan 03 CSS1 signalling, without backward signals for repetition
150D	Transmission plan 04 CSS1 signalling, without backward signals for repetition
150E	Transmission plan 05 CSS1 signalling, without backward signals for repetition
150F	Transmission plan 06 CSS1 signalling, without backward signals for repetition
1510	Transmission plan 01 CCITT-R2 signalling for Indonesia, with: - Backward A signal A5 = switch through - Backward A signal A8 = repeat last but 1 digit - Backward A signal A9 = repeat last but 2 digit
1511	Transmission plan 01 CCITT-R2 signalling for Brunei, with: - Backward A signal A5 = switch through

	- Backward A signal A7 = repeat last digit - Backward A signal A8 = repeat last but 1 digit - Backward A signal A9 = repeat last but 2 digit
1512	Transmission plan 01 CCITT-R2 signalling for Poland, with: - Backward A signal A6 = switch through - Backward A signal A7 = repeat last but 2 digit - Backward A signal A8 = repeat last but 3 digit

C.2.9. Paging Circuit

ATU-PA

Sign. Group	Remarks
3D04	Paging

C.2.10. RS-Socotel

RST-SL

Sign. Group	Remarks
1C04	Socotel France phase 2
1C04	Socotel France phase 3
2104	Socotel Spain: - double frequencies: two out of five - control frequency =1700 Hz.
2105	Socotel Spain: - double frequencies: two out of six - control frequency =1900 Hz.

C.2.11. Music on Hold (MOH)

ACC with/without MOH-I, ALC-A/B/C/E/F with/without MOH-I

Sign. Group	Remarks
320E	Operation with open/close loop
2204	Operation with close loop, open loop causes alarm, clearing of alarm after manual action on OM interface
2205	Operation with close loop, open loop causes alarm, automatic alarm clearing on close loop

IAS in CPS - or CCS system

Sign. Group	Remarks
	No signalling group required

IAS in CPU-ME/MT

Remarks
See the table on page 303

IASA

Remarks
See the table on page 303

C.2.12. Music on COB

See Music on Hold

C.2.13. D-channel

DTU-PH for DPNSS/DASS firmware (port number 16)

Remarks
See the table on page 303

IPH-B

Remarks
See the table on page 303

C.2.14. Trunk circuit ISDN (TRC-ISDN)

DTU-PH with 1TR6 firmware

Sign. Group	Remarks
5D04	User side, 1TR6 (PSI=H'03)
5D05	Network side, 1TR6 (PSI=H'12)
5D06	User side, 1TR6 (PSI=H'13)

DTU-PH for VN6

Sign. Group	Remarks
5D07	User side, VN6 (PSI=H'23)

DTU-PH for ETSI

Sign. Group	Remarks
5D08	User side, ETSI (PSI=H'31), Netherlands
5D09	User side, ETSI (PSI=H'33), Belgium

5D0A	User side, ETSI (PSI=H'37), Switzerland
5D0B	User side, ETSI (PSI=H'67), Germany
5D0C	User side, ETSI (PSI=H'35), Italy
5D0D	User side, ETSI (PSI=H'6B) for free numbers
5D0E	User side, ETSI (PSI=H'6D) for free numbers
5D0F	User side, QSIG (PSI=H'61)
5D10	Network side, QSIG (PSI=H'6B)

DTU-BA for 1TR6

Sign. Group	Remarks
5C04	User side, 1TR6, Germany
5C05	Network side, 1TR6-tieline
5C06	User side, 1TR6-tieline

DTX-I for 1TR6/ETSI

Sign. Group	Remarks
5C04	User side, 1TR6, Germany
5C05	Network side, 1TR6-tieline
5C06	User side, 1TR6-tieline
5C0D	User side, ETSI-Netherlands
5C0E	User side, ETSI-Belgium
5C0F	User side, ETSI-Switzerland
5C10	User side, ETSI-Germany
5C11	User side, ETSI-Italy
5C12	User side, ETSI (PSI=H'6A) for free numbers
5C13	User side, ETSI (PSI=H'6C) for free numbers
5C14	User side, QSIG (PSI=H'60)
5C15	Network side, QSIG (PSI=H'62)
5C16	Network side, QSIG (PSI=H'64) via public

C.2.15. Wake-up/MW Announcement Circuit

See Music on Hold

C.2.16. IAS-TS

IAS with IAS firmware

Sign. Group	Remarks
	See table C.1.

C.2.17. HATCH

PMC

Sign. Group	Remarks
6104	Hatch

D. INDEX

D

E