MIF Supplement

Ascend Communications

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- The product name and model
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- The software version
- The SPIDs (Service Profile Identifiers) associated with your product
- The type of telco switch and mode, such as AT&T 5ESS Custom or Northern Telecom DMS-100 National ISDN 1
- Whether you are routing or bridging with your Ascend product
- The type of computer you are using
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Contents

About This Supplement

This Supplement specifies MIF (Machine Interface Format) for the following Ascend products:

- Multiband Plus
- All MAX units, except the MAX 200
- Pipeline 100/400

What is in this supplement?

This Supplement contains these chapters:

- Chapter 1, “Introduction,” gives you a brief overview of MIF.
- Chapter 2, “Machine Interface Format (MIF),” provides the syntax used by MIF.

For the meaning of the parameters you can set using MIF, see the *MAX Reference Guide*.

What you should know

This Supplement is intended for the person who will write a MIF program as an alternative configuration interface to an Ascend unit. It does not provide instruction in writing MIF programs or in deciding what interface elements you need to configure.

To write a MIF program, you should understand how to configure the Ascend unit and the meaning of each parameter you intend to change. You should also have some experience in programming in a high-level language. You should also understand serial communication.

Documentation conventions

This section shows the documentation conventions used in this guide.

Convention	Meaning
`Monospace text`	Monospace text represents information that you enter exactly as shown, and it identifies onscreen text, such as, statistical information.
italics	Italics represent variable information. Do not enter the words themselves in the command; enter the information they represent.
Note:	A note signifies important additional information.
 **Caution:**	A caution means that a failure to follow the recommended procedure could result in a loss of data or damage to equipment.
 **Warning:**	A warning means that a failure to take appropriate safety precautions could result in physical injury.

Introduction to MIF

6

This chapter covers these topics:

What is MIF?

MIF (Machine Interface Format) is an Ascend-specific language that enables users or VARs to write programs that provide an alternative configuration interface for Ascend units. You can write a MIF program that modifies the Ascend configuration, rather than use the configuration menus to change one parameter after another. MIF programs provide a batch-processing method of changing a configuration or performing a series of actions.

The primary features of MIF are listed below:

- MIF is command-line driven
- It does not require the controlling computer to process asynchronous events
- It allows the controlling computer to enable asynchronous event reporting

What you need before you start

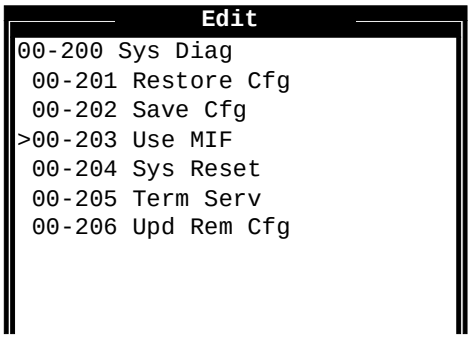
To interface a MIF program with an Ascend unit, you need these items:

- A controlling computer
- VT-100 emulation software
- Connection to the Ascend unit
- An Ascend unit with an Ethernet interface (optional on some Ascend units)

The controlling computer can be the computer you would use to access the Ascend configuration menus. It is typically connected to the Ascend unit via the serial port (the Control port in an Ascend unit) and communicates with the device by using VT-100 emulation software.

How to start MIF

To start sending MIF commands to the unit, you can select the Use MIF command in the Sys Diag menu.



When you start using MIF, the configuration menus are replaced by the MIF interface, where you can start entering MIF commands interactively. Or, you can download an ASCII file containing a series of MIF commands by using the appropriate transfer command (such as Send Text) in your VT-100 emulation program.

You can also enter the MIF interface from any location in the configuration menus by typing the following four-key sequence in rapid succession (press each key in the sequence shown, one after the other, as quickly as possible):

```
<ESC>[<ESC>!
```

<ESC> is the escape key, [is the left bracket key, and ! is Shift-1. Press these keys in the sequence shown, one after the other in rapid succession. You will see the MIF interface, where you can start entering MIF commands interactively.

Or, you can simply use the appropriate transfer command (such as Send Text) in your VT-100 emulation program, provided that the first line in your MIF program contains the required escape sequence:

```
<ESC>[<ESC>!
```

Machine Interface Format (MIF) 7

This chapter contains these sections

MIF addresses

Each addressable item, such as a profile, profile parameter, DO menu item, or status window, is called an “entity” and each of them has a unique address.

A full address specifies a specific entity and consists of the full syntax shown below. A “partial address” does not include the <name> attribute.

Entities are addressed using this syntax:

<slot><host><port>.<type>.<entry>.<name>

For example:

000.DIAL.1.Data Svc

These are the attributes in the address syntax:

- <slot>

  The one-digit slot number of the addressed entity. For most addresses, the slot number of the addressed entity is identical to the first digit of the menu number of the standard user interface.

- <port>

  The two-digit port number of the addressed entity. For most addresses, the port number of the addressed entity is identical to the 2nd and 3rd digits of the menu number of the standard user interface.

- <type>

  The type of the addressed entity. The defined types are listed below, and are described in detail in “Lexical sequence of MIF types” on page 7-6.

  – ALARM (Line alarm indications
  – BRIDGE (Bridge Adrs Profile)
  – CONN (Answer and Connection Profiles)
  – DEST (Destination Profiles)
  – DIAG (System Diagnostics)
  – DIAGN (Line Diagnostics)
  – DIAL (Call Profiles)
  – DO (DO Command Menu)
  – ETHERNET (Ethernet Profile)
  – FILT (Filter Profiles)
  – FR (Frame Relay Profiles)
  – HOST2 (Host-Interface Profile for Host/Dual modules)
  – HOST4 (Host-Interface Profile for Host/Quad modules)
  – HOST6 (Host-Interface Profile for Host/6 modules)
  – LINE (Line Profiles)
  – LMODEM (LAN Modem Profiles)
  – LOOP (Port Diagnostics (loopback)
  – PORT (Port Profile)
  – ROUTE (Route Profiles)
  – SEC (Security Profiles)

  - STAT (Status Menu)
  - SWAN (Serial WAN Profile) (currently not supported)
  - SYS (System Profile)
  - TRAP (SNMP Traps Profiles)
  - V110 (V.110 Profiles)

- <entry>

  Where multiple versions of the <type> exist, such as Line Profiles, 0 is the current (default) entry, 1 is the first entry saved after the current entry, etc. For items that do not support multiple entries, such as the Port profile or the DO Menu, <entry> is coded as zero. Addresses without an <entry> signify the factory version of the <type> profile.

- <name>

  The name of an addressed entity. The <name> component of an address is derived from, but not identical to the parameter names as used in the standard user interface. Every attribute has a name and a value.

MIF commands

The <value> attribute is established by the SET command and returned by the GET and NEXT commands. These are the supported commands:

- LOAD <partial address>
- SAVE <partial address>
- GET <full or edit address>
- NEXT <address>
- SET <full or edit address>=<value>

For a definition of the edit address, see“Loading and saving entities” on page 7-4

MIF responses

The LOAD and SAVE commands respond with a prompt (:) if the command is valid:

:

The GET and NEXT commands return a value in this syntax:

+ <address>=<value>

For example,

: GET 201.DIAL.16.Call Type

+ 201.DIAL.16.Call Type=AIM

The plus-sign indicates a returned value or an error. All commands return the following when invalid:

+ ERROR

The SET command also responds with a prompt (:), except when it is applied to a status or alarm entity, in which case it creates a trap that is reported in this syntax:

– <address>=<value>

For example,

: SET 100.ALARM.0.alarm=20

– 100.ALARM.0.alarm=LA

:

The minus-sign indicates an asynchronous report. See “MIF traps and asynchronous reports” on page 7-5.

Loading and saving entities

Only entities (such as profiles) that have been loaded into the edit area can be modified. Because there is only one edit area and it can have only one profile loaded into it at a time, commands that operate on entities in the edit area can use another version of the address called the “edit address.” The edit address has this format:

<name>

The LOAD commands loads a profile into the edit area. It uses this syntax:

LOAD <partial address>

For example,

: LOAD 201.PORT.0

When the profile has been loaded into the edit area, you can modify it, using only the SET command, for example:

: SET Port Name=Chicago #1

When you have finished modifying the profile, save it. The SAVE command copies the profile in the edit area to the specified address. It uses this syntax:

SAVE <partial address>

For example,

: SAVE 201.PORT.0

Getting an entity’s current value

If an entity (profile) has not already been loaded into the edit area by using the LOAD command, the GET command loads the profile and then extracts the requested value.

The GET command returns the value of the addressed attribute. When the addressed attribute is a parameter in the standard user interface, the value returned by GET is a parameter value. When the addressed attribute is a status window in the standard user interface, all lines in the status window are returned.

The GET command uses this syntax:

GET <full or edit address>

For example, the following GET command uses a full address:

: GET 201.DIAL.16.Call Type

+ 201.DIAL.16.Call Type=AIM

Or, if the profile has already been LOADed into the edit area, use this syntax:

: LOAD 201.DIAL.16

: GET Call Type

+ 201.DIAL.16.Call Type=AIM

Getting the address and value of the next entity

The NEXT command returns the address and value of the attribute with the next address. Addresses, though composed of both textual and numeric components, are ordered as if each component was a digit of a decimal number. The sequence is:

<name> within <entry>

<entry> within <type>

<type> within <port>

<port> within <slot>

The NEXT command uses this syntax:

NEXT <full address>

For example:

: NEXT 000.DIAL.1.Data Svc

+ 000.DIAL.1.Base Ch Count=1

Modifying parameter values

If an entity (profile) has not already been loaded into the edit area by using the LOAD command, the SET command loads the profile and then replaces the specified value.

The SET command replaces the current value of the entity with the <value> given in the command. In this context, it uses this syntax:

SET <edit address>=<value>

When the address refers to a parameter in a profile, the SET command accepts only an edit address. So, the profile must already be LOADed into the edit area. For example:

: LOAD 201.PORT.0

: SET Port Name=Chicago #1

: SAVE 201.PORT.0

:

Note: The SET command does not replace the parameter's value until you use the SAVE command.

To SET an enumerated parameter (such as Yes or No), the <value> must be identical to the enumerated value in the standard Ascend user interface. However, the specified value is not case-sensitive. For example, you can use either one of these commands:

: SET 100.DIAGN.0.Clr Err1=Yes

: SET 100.DIAGN.0.Clr Err1=yes

You can also apply the SET command to status and alarm entities, as described in the next section.

MIF traps and asynchronous reports

When you apply the SET command to a status window or an alarm, it enables asynchronous reports (traps) of the requested status screen or alarms. In this context, the SET command uses this syntax:

SET <full address>=<value>

The <value> established in the SET command sets the time period in seconds between status checks. For example,

: SET 100.ALARM.0.alarm=20

- 100.ALARM.0.alarm=LA

:

Reports are generated only whenever a change is detected in the requested status window components or whenever an alarm occurs. If the <value> in the SET command is 0, asynchronous reports are not generated.

Lexical sequence of MIF types

This section lists each MIF type with its allowed values. It uses the conventions and formats described next.

Types are listed alphabetically. The following format is used:

<address>=<value>

For example, the Remote Mgmt type can be set to Yes or No. It appears in the system profile (SYS) at the following MIF address:

000.SYS.0.Remote Mgmt

So, it is listed in this section like this:

000.SYS.0.Remote Mgmt=Yes,No

Comments are set off by parentheses(), as shown as below for the Clr Err1 type that can be SET but not read:

100.DIAGN.0.Clr Err1=Yes (write only)

If the type does not have enumerated values, the type of values it can take are given in *italics* as in the following two examples:

000.SYS.0.Name=*text*

000.SYS.0.Status 1=*XN-n00* (menu number for a status screen)

Note: The menu numbering shown in this section reflects the standard MAX whose base system slot 2 has a Host/Quad module. This differs from the MAX 4000, whose base system slot 2 has a Net/T1 module. Furthermore, the base system of the MAX 4000 has slot 9 (the Ethernet module), slot A (an Ether-Data module), and slot B (a Serial WAN module), while slots 9, A, and B do not exist on the standard MAX.

The slot and port of most addresses are given explicitly; however, in some cases they are represented by *spp*, where *s* is the slot number and *pp* is the port number. For example, either one of the following two commands may be used:

000.SYS.0.Name=*text*

spp.SYS.0.Name=*text*

ALARM

For T1/PRI and E1/PRI models:

```
s00.ALARM.n.alarm= (write)
   DS,RA,YA,1S,DF,LA (read)
```

For BRI models:

```
100.ALARM.n.alarm= (write)
   -,X,.,P,M,D (read) (dash, X, period, P, M ,D)
```

For Switched-56 models:

```
100.ALARM.n.alarm= (write)
   -,X,.,A (read) (dash, X, period, A)
```

Notes:

- Do not exceed 32,000 seconds when using SET to write to these addresses
- *s00*.ALARM.*n*...

  s = 1 (Multiband Plus and Pipeline 100/400)

  s = 1 or slot number of a T1/PRI or E1/PRI module (MAX)

  n = the line number minus 1. Namely, *n*=0 is line #1, *n*=1 is line #=2, etc.
- Alarm definitions for T1/PRI lines are as follows:
  - `DS (Line disabled)`
  - `RA (Red Alarm, loss of sync)`
  - `YA (Yellow Alarm)`
  - `1S (AIS, Blue alarm)`
  - `DF (No D channel)`
  - `LA (Link Active_`
- Alarm definitions for BRI/Switched 56 lines are as follows:
  - `– (Line disabled)`
  - `X (No physical link)`
  - `P (Link active, BRI point-to-point)`
  - `M (Link active, BRI multipoint 1)`
  - `D (Line active, BRI multipoint 2)`
  - `A (Line active, switched 56)`

Example:

Report status of the “100.ALARM.0.alarm” entity every 20 seconds if change occurs:

```
: SET 100.ALARM.0.alarm=20
- 100.ALARM.0.alarm=LA
:
```

BRIDGE

```
s00.BRIDGE.n.Enet Adrs=12-digit hexadecimal string
   .Net Adrs=dotted decimal format
   .Connection #=2-digit decimal string
```

Notes:

- This type applies to MAX equipped with the Ethernet module and Pipeline 100/400 only. It does not apply to Multiband Plus.
- *s*00.BRIDGE.*n*...

  s = slot into which the Ethernet card is installed (MAX)

  s = 2 (Pipeline 100/400)

  n = 0 to 98

CONN

```
s00.CONN.n.Force 56=Yes,No (n=0)
   .Profile Reqd=Yes,No (n=0)
   .CLID Auth=Ignore,Prefer,Force (n=0)
   .Assign Adrs=Yes,No (n=0)
   .Encaps...MPP=Yes,No(n=0)
   .Encaps...PPP=Yes,No(n=0)
   .Encaps...COMB=Yes,No(n=0)
   .Encaps...FR=Yes,No(n=0)
   .Encaps...EU-RAW=Yes,No(n=0)
   .Encaps...EU-UI=Yes,No(n=0)
   .Encaps...TCP-CLEAR=Yes,No(n=0)
   .Encaps...V.120=Yes,No(n=0)
   .PPP options...Route IP=Yes,No (n=0)
   .PPP options...Bridge=Yes,No (n=0)
   .PPP options...Recv Auth=PAP,CHAP,Either,None (n=0)
   .PPP options...MRU=number (n=0)
   .PPP options...LQM=Yes,No (n=0)
   .PPP options...LQM Min=number (n=0)
   .PPP options...LQM Max=number (n=0)
   .PPP options...Link Comp=Stac,None (n=0)
   .PPP options...VJ Comp=Yes,No (n=0)
   .PPP options...Dyn Alg=Constant,Linear,Quadratic (n=0)
   .PPP options...Sec History=number (n=0)
   .PPP options...Add Pers=number (n=0)
   .PPP options...Sub Pers=number (n=0)
   .PPP options...Min Ch Count=number (n=0)
   .PPP options...Max Ch Count=number (n=0)
   .PPP options...Target Util=number (n=0)
   .PPP options...Idle Pct=number (n=0)
   .COMB options...Password Reqd=Yes,No (n=0)
   .COMB options...Interval=number (n=0)
   .COMB options...Compression=Yes,No (n=0)

   .Station=text(n=1 to 31)
   .Active=Yes,No(n=1 to 31)
   .Encaps=MPP,PPP,COMB,FR,EU-RAW,EU-UI,TCP-CLEAR (n=1 to 31)
   .PRI # Type=Unknown,Intl,National,Local,Abbrev (n=1 to 31)
   .Dial #=phone number (n=1 to 31)
   .Calling #=phone number (n=1 to 31)
   .Route IP=Yes,No (n=1 to 31)
   .Route IPX=Yes,No (n=1 to 31)
   .Bridge=Yes,No (n=1 to 31)
   .Dial Brdcast=Yes,No (n=1 to 31)
   .Encaps options...Send Auth=PAP,PAP-TOKEN,PAP-TOKEN-CHAP,
     CACHE-TOKEN, CHAP,None (n=1 to 31)
   .Encaps options...Send PW=text (n=1 to 31)
   .Encaps options...Aux Send PW=text (n=1 to 31)
   .Encaps options...Recv PW=text (n=1 to 31)
   .Encaps options...Base Ch Count=number (n=1 to 31)
   .Encaps options...Min Ch Count=number (n=1 to 31)
   .Encaps options...Max Ch Count=number (n=1 to 31)
   .Encaps options...Inc Ch Count=number (n=1 to 31)
   .Encaps options...Dec Ch Count=number (n=1 to 31)
```

```
.Encaps options...MRU=number (n=1 to 31)
.Encaps options...LQM=Yes,No (n=1 to 31)
.Encaps options...LQM Min=number (n=1 to 31)
.Encaps options...LQM Max=number (n=1 to 31)
.Encaps options...Link Comp=Stac,None (n=1 to 31)
.Encaps options...VJ Comp=Yes,No (n=1 to 31)
.Encaps options...Dyn Alg=Constant,Linear,Quadratic(n=1 to
  31)
.Encaps options...Sec History=number (n=1 to 31)
.Encaps options...Add Pers=number (n=1 to 31)
.Encaps options...Sub Pers=number (n=1 to 31)
.Encaps options...Target Util=number (n=1 to 31)
.Encaps options...Idle Pct=number (n=1 to 31)
.Encaps options...Password Reqd=Yes,No (n=1 to 31)
.Encaps options...Interval=number (n=1 to 31)
.Encaps options...Compression=Yes,No (n=1 to 31)
.Encaps options...FR Prof=text (n=1 to 31)
.Encaps options...DLCI=number (n=1 to 31)
.Encaps options...Login Host=text (n=1 to 31)
.Encaps options...Login Port=number or dotted decimal format
  (n=1 to 31)
.Ip options...LAN Adrs=dotted decimal format/subnet mask
  (n=1 to 31)
.Ip options...WAN Alias=dotted decimal format(n=1 to 31)
.Ip options...Metric=number(n=1 to 31)
.Ip options...Private=Yes,No(n=1 to 31)
.Ip options...RIP=Off,Send,Recv,Both (n=1 to 31)
.Ip options...Pool=number (n=1 to 31)
.Ipx options...Dial Query=Yes,No (n=1 to 31)
.Ipx options...IPX ENet#=number (n=1 to 31)
.Ipx options...IPX Alias=number (n=1 to 31)
.Ipx options...Handle IPX=None,Client,Server (n=1 to 31)
.Ipx options...Netware t/o=number (n=1 to 31)

.Session options...RIP=Off,Send,Recv,Both (n=0 to 31)
.Session options...Data Filter=number (n=0 to 31)
.Session options...Call Filter=number (n=0 to 31)
.Session options...Idle=number (n=0 to 31)
.Session options...Preempt=number (n=0 to 31)
.Session options...Secondary=text (n=1 to 31) (Pipeline 25/
  50)
.Session options...Backup=text (n=1 to 31)
.Session options...IP Direct=dotted decimal format
.Session options...FR Direct=Yes,No (n=1 to 31)
.Session options...FR Prof=text (n=1 to 31)
.Session options...FR DLCI=number (n=1 to 31)
.Telco options...AnsOrig=Both,Ans Only,Call Only (n=1 to 31)
.Telco options...Callback=Yes,No (n=1 to 31)
.Telco options...Call Type=Switched, Nailed, Nailed/MPP
  (n=1 to 31)
.Telco options...Group=number (n=1 to 31)
CONN  (continued)
.Telco options....FT1 Caller=Yes,No
.Telco options...Data Svc=Voice,56KR,56K,64K,384KR,
```

```
384K,1536K,1536KR,128K,192K,256K,320K,448K,
512K,576K,640K,704K,768K,832K,896K,960K,1024K,
1088K,1152K,1216K,1280K,1344K,1408K,1472K
(n=1 to 31)
.Telco options...Force 56=Yes,No (n=1 to 31)
.Telco options...Bill #=number (n=1 to 31)
.Telco options...Call-by-Call=number (n=1 to 31)
.Telco options...Transit #=number (n=1 to 31)
```

Notes:

- This type applies to the MAX equipped with the Ethernet module and the Pipeline 100/400 only. It does not apply to Multiband Plus.
- *s*00.CONN.*n*.PRI # Type is a T1/E1/PRI parameter only
- *s*00.CONN.*n*.Telco Options...Bill # is a BRI, T1/PRI parameter only
- *s*00.CONN.*n*.Telco Options...Call-by-Call is a T1/PRI parameter only
- *s*00.CONN.*n*.Telco Options...Transit # is a T1/PRI or E1/PRI parameter
- *s*00.CONN.*n*...

  s = slot into which the Ethernet card is installed (MAX)

  s = 2 (Pipeline 100/400)

  n = 1 to 31
- *s*00.CONN.*n*.Data Svc for -SW56 models must = 56K.Data Svc for -BRI models can be Voice,56KR,56K,64K only

DEST

For T1/PRI models only:

```
000.DEST.n.Name=text
   .Option=1st Avail,1st Active,Any
   .Dial 1#=phone number
   .Call-by-Call 1=number
   .Dial 2#=phone number
   .Call-by-Call 2=number
   .Dial 3#=phone number
   .Call-by-Call 3=number
   .Dial 4#=phone number
   .Call-by-Call 4=number
   .Dial 5#=phone number
   .Call-by-Call 5=number
   .Dial 6#=phone number
   .Call-by-Call 6=number
```

Notes:

- does not apply to Pipeline 100/400
- 000.DEST.*n*...

  n = 1 to 31
- 000.DEST .*n*.Call-by-Call are PRI parameters only

DIAG

```
000.DIAG.0.Sys Reset=Yes (write only)
000.DIAG.0.UPD REM CFG=Yes (write only)
```

Notes:

- The UPD REM CFG command is available only for MAX and Pipeline 100/400.

Example:

```
: SET 000.DIAG.0.Sys Reset=No
+ ERROR
: SET 000.DIAG.0.Sys Reset=Yes
(unit resets!)
```

DIAGN

```
s00.DIAGN.0.Line LB1=Yes,No
   .Line LB2=Yes,No
   .Clr Err1=Yes (write only)
   .Clr Perf1=Yes (write only)
   .Clr Err2=Yes (write only)
   .Clr Perf2=Yes (write only)
```

Notes:

- This type applies to MAX-T1/PRI and Multiband Plus-T1/PRI only. It does not apply to E1/PRI, BRI, or SW56 models or to Pipeline 100/400.
- *s00*.DIAGN.*n*...

  s = 1 (Multiband Plus)

  s = 1 or slot number of a T1/PRI or E1/PRI module (MAX)

Example:

```
: SET 100.DIAGN.0.LB1=No
:
```

DIAL

```
spp.DIAL.n.Name=text
   .Dial #=phone number
   .Call Type=AIM,BONDING,1 Chnl,2 Chnl,FT1,Ft1-AIM,FT1-B&O
   .Call Mgm=Manual,Static,Dynamic,Delta,Mode 1,Mode 2
   .Data Svc=Voice,56KR,56K,64K,384KR,384K,1536K,1536KR,
      128K,192K,256K,320K,448K,512K,576K,640K,704K,
      768K,832K,896K,960K,1024K,1088K,1152K,1216K,
      1280K,1344K,1408K,1472K
   .Force 56K=Yes,No
   .Base Ch Count=number
   .Inc Ch Count=number
   .Dec Ch Count=number
   .Call-by-Call=number (T1/PRI only)
   .Bill #=number (T1/PRI only)
   .Auto-BERT=Off,15 sec,30 sec,60 sec,90 sec,120 sec
   .Bit Inversion=Yes,No
   .Fail Action=Disc,Reduce,Retry
   .PRI # Type=Unknown,Intl,National,Local,Abbrev (T1/PRI only)
   .Transit #=number (T1/PRI only)
   .Group=number
   .FT1 Caller=Yes,No
```

```
.B&O Restore=number (between 30 and 30000)
.Flag Idle=Yes,No
.Dyn Alg=Constant,Linear,Quadratic
.Sec History=number
.Add Pers=number
.Sub Pers=number
.Time Period 1...Activ=Disabled,Enabled,Shutdown
.Time Period 1...Beg Time=hh:mm:ss
.Time Period 1...Min Ch Cnt=number
.Time Period 1...Max Ch Cnt=number
.Time Period 1...Target Util=number
.Time Period 2...Activ=Disabled,Enabled,Shutdown
.Time Period 2...Beg Time=hh:mm:ss
.Time Period 2...Min Ch Cnt=number
.Time Period 2...Max Ch Cnt=number
.Time Period 2...Target Util=number
.Time Period 3...Activ=Disabled,Enabled,Shutdown
.Time Period 3...Beg Time=hh:mm:ss
.Time Period 3...Min Ch Cnt=number
.Time Period 3...Max Ch Cnt=number
.Time Period 3...Target Util=number
.Time Period 4...Activ=Disabled,Enabled,Shutdown
.Time Period 4...Beg Time=hh:mm:ss
.Time Period 4...Min Ch Cnt=number
.Time Period 4...Max Ch Cnt=number
.Time Period 4...Target Util=number
```

Notes:

- This type applies to MAX and Multiband Plus only. It does not apply to Pipeline 100/400.
- *spp*.DIAL.*n*...(Multiband Plus)

  s = 0 or 2

  when *s*=0, *pp* = 00

  when *spp*=000, *n* = 0 through 15 (These are shared Call Profiles 17 to 32)

  when *s*=2, *pp* = 01 through last serial host port

  when *spp* is not 000, *n* = 0 through 16(If *n*=0, this is the current Call Profile of serial host port *pp*. If n is not 0, these are stored Call Profiles 1 to 31.)
- *spp*.DIAL.*n*...(MAX)

  s = 0 or 2 or slot number of a Host/Dual or Host/6 module
  when s=0, *pp* = 00

  when *spp*=000, *n* = 0 through 15 (These shared Call Profiles 17 to 32)

  when s=2 or slot number, *pp* = 01 through last serial host port

  when *spp* is not 000, *n* = 0 through 16 (If *n*=0, this is the current Call Profile of serial host port *pp*. If n is not 0, these are stored Call Profiles 1 to 31.)
- *spp*.DIAL.*n*.Data Svc for -SW56 models must = 56K
  spp.DIAL.*n*.Data Svc for -BRI models can be Voice,56KR,56K,64K only
- s00.DIAL.n.PRI # Type is a T1/E1/PRI parameter only
- s00.DIAL.n.Bill # is a T1/PRI parameter only
- s00.DIAL.n.Call-by-Call is a T1/PRI parameter only
- s00.DIAL.n.Transit # is a T1/PRI only

Example:

```
: NEXT 000.DIAL.1.Data Svc
+ 000.DIAL.1.Base Ch Count=1
: GET 201.DIAL.16.Call Type
+ 201.DIAL.16.Call Type=AIM
:
```

DO

```
spp.DO.0.Dial=Yes,No (read) Yes (write)
   .Hang Up=Yes,No (read) Yes (write)
   .Answer=Yes,No (read) Yes (write)
   .Extend BW=Yes,No (read) Yes (write)
   .Contract BW=Yes,No (read) Yes (write)
   .Beg/End Rem LB=Yes,No (read) Toggle (write)
   .Beg/End BERT=Yes,No (read) Toggle (write)
   .Resynchronize=Yes,No (read) Yes (write)
```

Notes:

These commands apply only during certain conditions. For example, *spp*.DO.0.Hang Up applies only when the object specified has a call online, while *spp*.DO.0.Dial applies only to objects not having a call online.See the *MAX Reference Guide* for details on each of the DO commands.

- *spp*.DO...(Multiband Plus)

  s = 2

  pp = 01 through last serial host port

- *spp*.DO...(Pipeline 100/400)

  spp = 200

- *spp*.DO...(MAX)

  s = 2 or the slot number of a serial host or Ethernet module when s=2 or the slot number of a serial host module,

  pp = 01 through last serial host port when s= the slot number of the Ethernet module, *pp* = 00

- The <value> Toggle in a SET (write) command changes the state of the addressed entity from it current state to another state, i.e., from Yes to No or from No to Yes. The SET command applied to a DO <address> causes the DO action to be invoked if active.
- The GET (read) command returns the <value> YES or NO when applied to a DO <address>.YES is returned if the item can be invoked at the time of the request (is active) and NO is returned otherwise.
- DO P (password), DO S (save), and DO L (load) are not available.

Example:

```
: NEXT 201.D0.0.Extend
+ 201.D0.0.Contract=Yes
:
```

ETHERNET

The following applies to Pipeline 100/400s and Ethernet-equipped MAX units.

```
s00.ETHERNET.0.Module Name=text(MAX only)
   .Ether options...IP Adrs=dotted decimal format/subnet mask
   .Ether options...2nd Adrs=dotted decimal format/subnet mask
   .Ether options...RIP=Off,Send,Recv,Both
```

```
.Ether options...Ignore Def Rt=Yes,No
.Ether options...Proxy Mode=Off,Inactive,Active,Always
.Ether options...Filter=number
.Ether options...IPX Frame=802.3,802.2,SNAP,ENET II
.Ether options...IPX Net#=number
.WAN options...Dial Plan=Trunk Grp,Extended(MAX only)
.WAN options...Ans 1#=Phone number(MAX only)
.WAN options...Ans 2#=Phone number(MAX only)
.WAN options...Ans 3#=Phone number(MAX only)
.WAN options...Ans 4#=Phone number(MAX only)
.WAN options...Pool Start #1=dotted decimal format
.WAN options...Pool Count #1=number
.WAN options...Pool Start #2=dotted decimal format
.WAN options...Pool Count #2=number
.WAN options...Pool Only=Yes,No
.SNMP options...Read Comm=text
.SNMP options...R/W Comm=text
.Tserv options...TS Enabled=Yes,No
.Tserv options...Passwd=text
.Tserv options...Banner=text
.Tserv options...Prompt=text
.Tserv options...Term Type=text
.Tserv options...PPP=Yes,No
.Tserv options...SLIP=Yes,No
.Tserv options...SLIP BOOTP=Yes,No
.Tserv options...V42/MNP=Yes,No
.Tserv options...Telnet=Yes,No
.Tserv options...Def Telnet=Yes,No
.Tserv options...Clear Call=Yes,No
.Tserv options...Binary Mode=Yes,No
.Tserv options...Initial Scrn=Cmd,Menu
.Tserv options...Toggle Scrn=Yes,No
.Tserv options...Security=None,Partial,Full
.Tserv options...3rd Prompt=text
.Tserv options...Remote Conf=Yes,No
.Tserv options...Host #1 Addr=dotted decimal format
.Tserv options...Host #1 Text=text
.Tserv options...Host #2 Addr=dotted decimal format
.Tserv options...Host #2 Text=text
.Tserv options...Host #3 Addr=dotted decimal format
.Tserv options...Host #3 Text=text
.Tserv options...Host #4 Addr=dotted decimal format
.Tserv options...Host #4 Text=text
.Tserv options...Immed Telnet=Yes,No
.Tserv options...PPP Delay=Yes,No
.Tserv options...7-Even=Yes,No
.Tserv options...Login Case=L/P, l/p, L/p, l/P
.Tserv options...Ppp Info=Yes,No
.Tserv options...Clr Scrn=Yes,No
.Tserv options...Silent=Yes,No
.Bridging=Yes,No
.IPX Routing=Yes,No
.Shared Prof=Yes,No
.Telnet PW=text
```

```
.RIP Policy=Splt Hrzn,Poison Rvrs
.RIP Summary=Yes,No
.ICMP Redirects=Accept,Ignore
.DHCP Spoofing=Yes,No (Pipeline 50/25 only)
.Spoof Adr=dotted decimal format/subnet mask (Pipe 50/25
  only)
.Renewal Time=number (Pipeline 50/25 only)
.DNS...Domain Name=text
.DNS...Pri DNS=dotted decimal format
.DNS...Sec DNS=dotted decimal format
.DNS...Pri WINS=dotted decimal format
.DNS...Sec WINS=dotted decimal format
.Acct...Acct= None,RADIUS
.Acct...Acct Host #1=dotted decimal format
.Acct...Acct Host #2=dotted decimal format
.Acct...Acct Host #3=dotted decimal format
.Acct...Acct Port=number
.Acct...Acct Timeout=number
.Acct...Acct Key=number
.Acct...Sess Timer=number
.Auth...Auth= None,TACACS,RADIUS,RADIUS/LOGOUT
.Auth...Auth Host #1=dotted decimal format
.Auth...Auth Host #2=dotted decimal format
.Auth...Auth Host #3=dotted decimal format
.Auth...Auth Port=number
.Auth...Auth Timeout=number
.Auth...Auth Key=number
.Auth...Auth Pool=Yes,No
.Auth...Auth Req=Yes,No
.Auth...APP Server=Yes,No
.Auth...APP Host=dotted decimal format
.Auth...APP Port=number
.Log...Syslog=Yes,No
.Log...Log Host=dotted decimal format
.Log...Log Facility=Local0,Local1,Local2,Local3,Local4,
  Local5,Local6,Local 7
.Modem Ringback=Yes,No
```

The following applies to Ethernet-equipped Multiband Plus-T1/PRI and -E1/PRIs. (Ethernet IF does not apply to the Multiband Plus.)

```
300.ETHERNET.0.Ether options...Ethernet IF=AUI,COAX,UTP
.Ether options...IP Adrs=dotted decimal format/subnet mask
.Ether options...Def Rte=dotted decimal format
.Ether options...RIP=Off,Recv
.SNMP options...Read Comm=text
.SNMP options...R/W Comm=text
.Syslog=Yes,No
.Log Host=dotted decimal format
.Log Facility=Local0,Local1,Local2,Local3,Local4,Local5,
  Local6,Local 7
```

Notes:

- *s*00.ETHERNET... (MAX models)

  s = any slot into which the Ethernet expansion module is installed.

- *s*00.ETHERNET... (Multiband Plus-T1/PRI or -E1/PRI models)

  s = 3
- *s*00.ETHERNET... (Pipeline 100/400 models)

  s = 2
- Passwd, PPP, SLIP, Initial Scrn, Toggle Scrn, Security, Remote Conf, Host #*N* Addr, Host #*N* Text in the Tserv Options menu apply to the MAX and Pipeline 100/400 only.

Example:

```
: GET 200.ETHERNET.0.MODULE NAME
200.ETHERNET.0.MODULE NAME=Tom's Pipeline
:
```

FILT=<type>

*s*00.FILT.*n*.Name=*text*
.In Filter 01...Valid=Yes,No
.In Filter 01...Type=Generic,Ip
.In Filter 01...Generic...Forward=Yes,No
.In Filter 01...Generic...Offset=*number*
.In Filter 01...Generic...Length=*number*
.In Filter 01...Generic...Mask= *hexadecimal string*
.In Filter 01...Generic...Value= *hexadecimal string*
.In Filter 01...Generic...More=Yes,No
.In Filter 01...Ip...Forward=Yes,No
.In Filter 01...Ip...Src Mask=*dotted decimal format*
.In Filter 01...Ip...Src Adrs=*dotted decimal format*
.In Filter 01...Ip...Dst Mask=*dotted decimal format*
.In Filter 01...Ip...Dst Adrs=*dotted decimal format*
.In Filter 01...Ip...Protocol=*number*
.In Filter 01...Ip...Src Port Cmp=None,Less,Eql,Gtr,Neq
.In Filter 01...Ip...Src Port #=*number*
.In Filter 01...Ip...Dst Port Cmp=None,Less,Eql,Gtr,Neq
.In Filter 01...Ip...Dst Port #=*number*
.In Filter 01...Ip...TCP Estab=Yes,No
.Out Filter 01...Valid=Yes,No
.Out Filter 01...Valid=Yes,No
.Out Filter 01...Type=Generic,Ip
.Out Filter 01...Generic...Forward=Yes,No
.Out Filter 01...Generic...Offset=*number*
.Out Filter 01...Generic...Length=*number*
.Out Filter 01...Generic...Mask= *hexadecimal string*
.Out Filter 01...Generic...Value= *hexadecimal string*
.Out Filter 01...Generic...More=Yes,No
.Out Filter 01...Ip...Forward=Yes,No
.Out Filter 01...Ip...Src Mask=*dotted decimal format*
.Out Filter 01...Ip...Src Adrs=*dotted decimal format*
.Out Filter 01...Ip...Dst Mask=*dotted decimal format*
.Out Filter 01...Ip...Dst Adrs=*dotted decimal format*
.Out Filter 01...Ip...Protocol=*number*
.Out Filter 01...Ip...Src Port Cmp=None,Less,Eql,Gtr,Neq
.Out Filter 01...Ip...Src Port #=*number*
.Out Filter 01...Ip...Dst Port Cmp=None,Less,Eql,Gtr,Neq
.Out Filter 01...Ip...Dst Port #=*number*
.Out Filter 01...Ip...TCP Estab=Yes,No

```
   (.In/Out Filter 02... thru 12... same as .In/Out Filter
      01...)
```

Notes:

- This type applies to the MAX equipped with an Ethernet module and the Pipeline 100/400 only. It does not apply to the Multiband Plus.
- *s*00.FILT.*n*...

  s = slot into which the Ethernet card is installed (MAX)

  s = 0 (Pipeline 100/400)

  n = 0 to 15

FR

```
s00.FR.0.Name=text
   .Active=Yes,No
   .Call Type=Nailed,Switched
   .Nailed Grp=number
   .Data Svc=Voice,56KR,56K,64K,384KR,
      384K,1536K,1536KR,128K,192K,256K,320K,448K,
      512K,576K,640K,704K,768K,832K,896K,960K,1024K,
      1088K,1152K,1216K,1280K,1344K,1408K,1472K
   .PRI # Type=Unknown,Intl,National,Local,Abbrev
   .Dial #=number
   .Bill #=number
   .Call-by-Call=number
   .Transit #=number
   .Link Mgmt=T1.617D,None
   .N391=number
   .N392=number
   .N393=number
   .T391=number
   .N392=number
   .MRU=number
```

Notes:

- This type applies to the MAX equipped with the Ethernet module and the Pipeline 100/400 only. It does not apply to the Multiband Plus.

HOSTN

HOST2 applies to Multiband Plus and MAX only.

```
s00.HOST2.0.Module Name=text (MAX only)
   .Dual Port=No Dual,1&2 Dual
   .Palmtop=Full,Restrict
   .Palmtop Port #=number
   .Palmtop Menus=Standard,Limited,MIF
```

HOST4 applies to Multiband Plus only.

```
200.HOST4.0.Dual Port=No Dual,1&3 Dual,2&4 Dual,All Dual
   .F Palmtop=Full,Restrict
   .F Palmtop Port #=number
   .F Palmtop Menus=Standard,Limited,MIF
   .L Palmtop=Full,Restrict
   .L Palmtop Port #=number
   .L Palmtop Menus=Standard,Limited,MIF
```

```
   .R Palmtop=Full,Restrict
   .R Palmtop Port #=number
   .R Palmtop Menus=Standard,Limited,MIF
```

HOST6 applies to MAX only.

```
s00.HOST6.0.Module Name=text
   .Port 1/2 Dual=Yes,No
   .Port 3/4 Dual=Yes,No
   .Port 5/6 Dual=Yes,No
```

Notes:

- This type applies to the MAX and Multiband Plus only. It does not apply to the Pipeline 100/400.
- *s*00.HOST2... (MAX)

  s = 2 or any slot in which a Host/Dual serial host expansion module is installed.
- *s*00.HOST2... (Multiband Plus)

  s = 2
- *s*00.HOST4... (Multiband Plus)

  s = 2
- *s*00.HOST6... (MAX)

  s = any slot in which a Host/6 serial host expansion module is installed.

LINE

For models that interface to T1/PRI lines:

```
s00.LINE.n.Name=text
   .2nd Line=Disabled,D&I,Trunk
   .2nd Line=Yes,No (E1 Models only)
   .Line 1...Sig Mode=Inband,ISDN,PBX T1,ISDN_NFAS
   .Line 1...NFAS_ID num=number
   .Line 1...Rob Ctl=Wink-Start,Idle-Start,Inc-W-200,Inc-W-400,
      Loop-Start
   .Line 1...Switch Type=AT&T,NTI,GloBanD,Japan,NI-2
   .Line 1...Framing Mode=D4,ESF
   .Line 1...Encoding=AMI,B8ZS,None
   .Line 1...FDL=None,AT&T,ANSI,Sprint (Not Pipeline 100/400)
   .Line 1...Length=1-133,134-266,267-399,400-533,534-655
   .Line 1...Buildout=0 db,7.5 db,15 db,22.5 db
   .Line 1...Clock Source=Yes,No
   .Line 1...PBX Type=Voice,Data,Leased 1:1
   .Line 1...Delete Digits=number
   .Line 1...Add Number=
   .Line 1...Call-by-Call=number
   .Line 1...Ans #=phone number
   .Line 1...Ans Service=Voice,56KR,56K,64K,384KR,384K,
      1536K,1536KR,128K,192K,256K,320K,448K,512K,576K,
      640K,704K,768K,832K,896K,960K,1024K,1088K,1152K,
      1216K,1280K,1344K,1408K,1472K
   .Line 1...Ch 1=Unused,Switched,D&I,Nailed,D-channel
   .Line 1...Ch 1 #=number
   .Line 1...Ch 1 Slot=number (MAX only)
   .Line 1...Ch 1 Prt/Grp=number
```

```
   .Line 1...Ch 1 TrnkGrp=number

   (.Line 1...Ch 2 thru Ch 23 same as Ch 1)

   .Line 1...Ch 24=Unused,Switched,D&I,Nailed,D-channel, NFAS-
      Prime,NFAS-Second
   .Line 1...Ch 24 #=number
   .Line 1...Ch 24 Slot=number (MAX only)
   .Line 1...Ch 24 Prt/Grp=number
   .Line 1...Ch 24 TrnkGrp=number

   (.Line 2... same as Line 1...)
```

For models that interface to BRI lines:

```
100.LINE.n.Name=text
   .Switch
      Type=AT&T,NTI,NI1,FRANC,U.K.,JAPAN,BELGI,AUSTR,SWISS,
      GERMAN,DUTCH, NET 3
   .Line 1...Enabled=Yes,No
   .Line 1...LinkType=P_T_P,Multi_P
   .Line 1...B1 Usage=Unused,Switched,Nailed
   .Line 1...B1 Prt/Grp=number
   .Line 1...B2 Usage=Unused,Switched,Nailed
   .Line 1...B2 Prt/Grp=number
   .Line 1...Pri Num=phone number
   .Line 1...Pri SPID=number
   .Line 1...Sec Num=phone number
   .Line 1...Sec SPID=number

   (.Line 2... thru .Line 8... same as Line 1...)
```

For models that interface to Switched-56 lines:

```
100.LINE.n.Name=text
   .Line 1...Enabled=Yes,No
   .Line 1...Ch Usage=Unused,Switched,Nailed
   .Line 1...Phone Num=phone number
   .Line 1...Port/Grp=number

   (.Line 2... thru .Line 7... same as Line 1...)
```

For models that interface to E1/PRI lines:

```
s00.LINE.n.Name=text
   .Line 1...Sig Mode=ISDN,None,DPNSS
   .Line 1...Switch Type=NTI,French,German,GloBanD,Net 5, Aus-
      tralian,DASS 2,ISDX,ISLX,MERCURY
   .Line 1...L2=A END,B END
   .Line 1...L3=X END,Y END
   .Line 1...NL Value=number
   .Line 1...LoopAvoidance=number
   .Line 1...Framing Mode=G.703,2DS
   .Line 1...Clock Source=Yes,No
   .Line 1...Ch 1=Unused,Switched,Nailed
```

```
.Line 1...Ch 1 #=number
.Line 1...Ch 1 Slot=number (MAX only)
.Line 1...Ch 1 Prt/Grp=number
.Line 1...Ch 1 TrnkGrp=number

(.Line 1...Ch 2 to Ch 15 and Ch 17 to Ch 31 same as Ch 1)

.Line 1...Ch 16=D-channel
.Line 1...Ch 16 #=N/A
.Line 1...Ch 16 Slot=N/A
.Line 1...Ch 16 Prt/Grp=N/A
.Line 1...Ch 16 TrnkGrp=N/A

(.Line 2... same as Line 1...)
```

Notes:

- *s*00.LINE.*n*... (MAX)

  s = 1 or any slot in which a WAN (line) module is installed.

  n = 0 through 3, where 0 is the current Line Profile.

- *s*00.LINE.*n*... (Multiband Plus and Pipeline 100/400)

  s = 1

  n = 0 through 3, where 0 is the current Line Profile.

- B1 Prt/Grp, B2 Prt/Grp, Ch x Prt/Grp, Port/Grp, =*number* (software 4.4B and later) or *character* (software 4.4 and earlier)

Example:

```
: LOAD 100.LINE.1
:
```

LMODEM

LMODEM applies to the Pipeline 100/400 and MAX models with digital modems only.

```
s00.LMODEM.0.Module Name=text
.Ans 1#=phone number
.Ans 2#=phone number
.Ans 3#=phone number
.Ans 4#=phone number
```

Notes:

- *s*00.LMODEM... (MAX)

  s = any slot in which a LAN modem (digital modem) module is installed.

- *s*00.LMODEM... (Pipeline 100/400)

  s = 3

LOOP

```
spp.LOOP.0.Local LB=Yes,No
   .DSR=Active,Inactive (read) Toggle (write)
   .RI=Active,Inactive (read) Toggle (write)
   .CD=Active,Inactive (read) Toggle (write)
   .DLO=Active,Inactive (read) Toggle (write)
   .PND=Active,Inactive (read) Toggle (write)
   .ACR=Active,Inactive (read) Toggle (write)
   .Inc Ch Count=Yes (write only)
```

```
   .Dec Ch Count=Yes (write only)
   .Rate=64K,56K (read) Toggle (write)
```

Notes:

- This type applies to the MAX and Multiband Plus only. It does not apply to the Pipeline 100/400.
- *spp*.LOOP... (MAX)

  s = 1 or any slot in which a serial host expansion module is installed.

  pp = 01 through last serial host port.
- *spp*.LOOP... (Multiband Plus)

  s = 1

  pp = 01 through last serial host port.
- Active/Inactive and 64K/56K are <value>s only for read commands such as GET.
- Toggle is a <value> only for write commands such as SET.
- "SET *spp*.LOOP.0.Local LB=Yes" must be commanded before any other LOOP commands, such as RI, CD, etc.
- The <value> Toggle in a SET command changes the state of the addressed entity from it current state to another state, i.e., from Active to Inactive or from Inactive to Active.

Example:

```
: SET 202.LOOP.0.DSR=Toggle
+ ERROR
: SET 202.LOOP.0.Local LB=Yes
: SET 202.LOOP.0.DSR=Toggle
:
```

PORT

```
spp.PORT.0.Port Name=text
   .Ans 1#=phone number
   .Ans 2#=phone number
   .Ans 3#=phone number
   .Ans 4#=phone number
   .Idle=None,Call
   .Dial=Terminal,DTR Active,RS-366 Ext1,RS-366 Ext2,V.25bis,
   V.25bis-C,X.21 Ext1,X.21 Ext2,X.21 Ext1-P
   .Answer=Auto,DTR Active,DTR+Ring,V.25bis,V.25bis-C,Terminal,
   X.21,P-Tel Man,None
   .Clear=DTR Inactive,DTR Active,RTS Inactive,RTS Active,
   Terminal
   .Term Timing=Yes,No
   .RS-366 Esc=*,#,5,6,7,9,0,00
   .Early CD=Answer,Originate,Both,No
   .DS0 Min Rst=Monthly,Daily,Off
   .Max DS0 Mins=number
   .Max Call Mins=number
```

Notes:

- This type applies to the MAX and Multiband Plus only. It does not apply to the Pipeline 100/400.
- *spp*.PORT... (MAX)

  s = 1 or any slot in which a serial host expansion module is installed.

pp = 01 through last serial host port.

- *spp*.PORT... (Multiband Plus)

  s = 1

  pp = 01 through last serial host port.

Examples:

```
: LOAD 201.PORT.0
: SET 201.PORT.0.Port Name=Chicago #1
+ ERROR
: SET Port Name=Chicago #1
: SAVE 200.PORT.0
+ ERROR
: SAVE 201.PORT.0
:
```

ROUTE

```
s00.ROUTE.n.Name=text
   .Active=Yes,No
   .Dest=text in dotted decimal format/subnet mask
   .Gateway=text in dotted decimal format
   .Metric=number
   .Private=Yes,No
```

Notes:

- This type applies to the MAX equipped with the Ethernet module and the Pipeline 100/400 only. It does not apply to the Multiband Plus.
- *s*00.ROUTE.*n*...

  s = slot into which the Ethernet card is installed (MAX)

  s = 2 (Pipeline 100/400)

  n = 0 to 63
- If *n* = 0, Name=Default and Dest=0.0.0.0/0
- MAX Models must have the Ethernet expansion module option

SEC

```
000.SEC.n.Name=text
   .Passwd=*SECURE*
   .Operations=Yes,No
   .Edit Security=Yes,No
   .Edit System=Yes,No
   .Edit Line=Yes,No
   .Edit All Port=Yes,No(Multiband Plus and MAX only)
   .Edit Own Port=Yes,No(Multiband Plus and MAX only)
   .Edit All Calls=Yes,No
   .Edit Com Call=Yes,No(Multiband Plus and MAX only)
   .Edit Own Call=Yes,No(Multiband Plus and MAX only)
   .Edit Cur Call=Yes,No(Multiband Plus and MAX only)
   .Sys Diag=Yes,No
   .All Port Diag=Yes,No(Multiband Plus and MAX only)
   .Own Port Diag=Yes,No(Multiband Plus and MAX only)
   .Download=Yes,No
   .Upload=Yes,No
   .Field Service=Yes,No
```

Notes:

- 000.SEC.*n*...

  n = 0 thru 8 (The default security profile is 0.)

- The command SAVE cannot be applied to a security profile address.

Example:

```
: SAVE 000.SEC.8
:
```

STAT

For all models:

```
000.STAT.0.Sys Options=
   n.Message Log= (n = 0 thru 31)
   0.Port Info=
   0.CDR=
```

For T1/PRI and E1/PRI models only:

```
s00.STAT.0.Line 1 Stat=
   0.Line 2 Stat=
   0.Line Errors=
   n.FDL1=(n = 0 thru 96) (not E1/PRI or Pipeline)
   n.FDL2=(n = 0 thru 96) (not E1/PRI or Pipeline)
   0.Net Options=
```

(*s*=1 for Pipeline 100/400 and Multiband Plus. *s*=1 or any other slot in which a T1/PRI module is installed in a MAX.)

For BRI and Switched-56 models only:

```
100.STAT.0.Line 1 Stat=
   0.Line Errors=
   0.Net Options=
```

For the MAX and Multiband Plus models only:

```
spp.STAT.0.Call Status=
   n.Message Log= (n = 0 thru 31)
   0.Statistics=
   0.Port Opts=
   0.Session Err=
   0.Port Leads=
```

s=2 forMultiband Plus. *s*=2 or any other slot in which a serial host module is installed in a MAX. *pp*=01 through the last serial host port.

For models with Ethernet interface:

```
s00.STAT.0.Sessions= (does not apply to Multiband Plus)
   0.Routes= (does not apply to Multiband Plus)
   0.WAN Stat= (does not apply to Multiband Plus)
   0.Ether Stat=
   0.Ether Opt=
   0.Dyn Stat=
```

s=2 for Pipeline 100/400. *s*=3 for Multiband Plus. *s*=slot of a MAX in which the Ethernet module is installed.

Notes:

- *n* can range from 0 through 96 for the FDL Status Screens. If *n* is 0, the last 24 hours are reported. 1 through 96 refer to the 15 minute time intervals occurring during the last 24 hours, with 1 being the most recent interval.
- Do not exceed 32,000 seconds when using SET to write to these addresses
- The GET command returns a multiple-line <value> when applied to a Status Screen <address>. Output from a status request is almost identical to the status display using the native mode user interface. The difference is that displays that would scroll (000.STAT.0.Sys Option, 100.STAT.0.Line Errors, etc.) have all lines listed. Each line of the multi-line response is separated by a <CR><LF> pair. Multi-line output is indicated by starting the value field of the response with a <CR><LF> pair.
- When you apply SET to CDR, all events that occurred during the time period are displayed. This is unlike other traps generated by SET. For example, SET 201.STAT.0.Port Leads=20 compares the Port Info screen at the beginning to the end of the 20 sec. time period; and if there is a difference, only the current Port Leads is displayed.

Example:

```
: GET 100.STAT.0.Line Errors
+ 100.STAT.0.Line Errors=
+ 01-005 Ln1 Ln2
+10 -
+2 10 -
:
: SET 000.STAT.0.CDR=1
```

Example:

```
: GET 600.STAT.0.Line 2 Stat
(Get status of line #2 in the module in slot 6.)
```

Example:

```
: GET 202.STAT.0.Call Status
(Get call status of serial host port #2.)
```

SYS

```
000.SYS.0.Name=text
   .Location=text (Ethernet interface required)
   .Contact=text (Ethernet interface required)
   .Date=mm/dd/yy
   .Time=hh:mm:sec
   .Term Rate=300,1200,2400,4800,9600,19200,38400,57600
   .Palmtop Rate=300,1200,2400,4800,9600,19200,38400,57600
   .Console=Standard,Limited,MIF
   .Remote Mgmt=Yes,No
   .Parallel Dial=number
   .Single Answer=Yes,No (MAX and Multiband Plus only)
   .Sub-Adr=TermSel,Routing,None (T1/E1/BRI models only)
   .DM=number (T1/E1/BRI models only)
   .LAN=number (T1/E1/BRI models only)
   .Serial=number (T1/E1/BRI models only)
   .V110=number (MAX models only)
   .Use Trunk Grps=Yes,No (T1/PRI only)
   .Excl Routing=Yes,No (MAX and Multiband Plus only)
   .Auto Logout=Yes,No
   .Idle Logout=number
```

```
   .DS0 Min Rst=Monthly,Daily,Off
   .Max DS0 Mins=number
   .High BER=10 ** -3,10 ** -4,10 ** -5 (T1/PRI or E1/PRI only)
   .High BER Alarm=Yes,No (T1/PRI or E1/PRI only)
   .No Trunk Alarm=Yes,No (T1/PRI or E1/PRI only)
   .Delay Dual=Yes,No (MAX and Multiband Plus only)
   .Edit=XN-n00 (menu number for an edit screen)
   .Status 1=XN-n00 (menu number for a status screen)
   .Status 2=XN-n00 " "
   .Status 3=XN-n00 " "
   .Status 4=XN-n00 " "
   .Status 5=XN-n00 " "
   .Status 6=XN-n00 " "
   .Status 7=XN-n00 " "
   .Status 8=XN-n00 " "
```

Notes:

- Palmtop Rate applies only to the MAX and Multiband Plus
- MAX 4000 does not have a Palmtop Port.

Example:

```
: GET 000.SYS.0.Name
+ =kansas BRI
```

TRAP

```
s00.TRAP.n.Name=text
   n.Alarm=Yes,No
   n.Port=Yes,No
   n.Security=Yes,No
   n.Comm=dotted decimal format
   n.Dest=dotted decimal format
```

Notes:

- This type applies to the MAX equipped with the Ethernet module and the Pipeline 100/400 only. It applies to the Multiband Plus if equipped with Ethernet interface.
- *s*00.TRAP.*n*...

  s = slot into which the Ethernet card is installed (MAX)

  s = 2 (Pipeline 100/400

  s = 3 (Multiband Plus)

  n = 0 to 7

V110

V110 applies to MAX models with V.110 modules only.

```
s00.V110.0.Module Name=text
   .Ans 1#=phone number
   .Ans 2#=phone number
   .Ans 3#=phone number
   .Ans 4#=phone number
```

Notes:

- *s*00.V110... (MAX)

  s = any slot in which a V.110 module is installed.

Command line basics

This section gives a quick overview of command-line processing in MIF.

- Command Line Length

  The maximum command line is limited to 76 characters. Data entered after the 76th character is ignored and not echoed to the screen. The line is not terminated until a Line Termination is entered.

- Command Echo

  All data entered by the user except the line termination character will be echoed back to the user, character by character.

- Line Terminations

  Lines are terminated by either a Return (ASCII <CR>), or a Line Feed (ASCII <LF>), or both. When either is first received, the sequence <CR>-<LF> is echoed. An <LF> following a <CR> does not result in an additional <CR>-<LF> being echoed. The Line Termination character may be entered at any point on the line; the entire line is accepted.

- Prompt

  The display of a prompt is an explicit acknowledgment that the previous entry has been processed and that the system is now ready to process the next request.The default prompt is a colon (:).

- Output Indicators

  To make it easier for a computer program to parse, all output lines are prefixed with either an output indicator, namely plus (+) or minus (-). There are two indicators used.

  The plus indicator (+) is used when the output is a response to a previous command. Multi-line responses start each line with the output indicator.

  The minus indicator (-) is used when the output is the result of an asynchronous event.

Editor basics

When modifying an entity in the edit area, the following line-editing conventions are supported:

- Line History

  The last 10 lines entered are kept. Whenever a line is entered the oldest kept line is thrown away. The stack is initialized empty at power up. Previous lines can be selected using the line selection characters. When a previous line is selected, the newly edited line replaces the selected line. That line becomes the newest line.

- Line Selection Characters

  There are two line selection characters, one to walk backwards through the Line History and another to walk forward through the Line History. When the oldest entry is selected while walking backwards through the line history, the next backward selection selects the newest line entered. When the newest entry is selected while walking forward through the line history, the next forward selection selects the oldest line.

  The backward line selection character is either a VT100 up arrow (the Escape sequence ESC-[-A) or the control character ^P. The P is mnemonic for Previous.

  The forward line selection character is either a VT100 down arrow (the escape sequence ESC-[-B) of the control character ^N. The N is mnemonic for Next.

If you enter a Line selection character while editing a line, the current line is replaced by the current line -- any edits in progress are lost.

The cursor is positioned at the end of the selected line.

- Cursor movement

  The cursor can be moved within a line by entering the Cursor Left character or the Cursor Right character. The Cursor Left character is ignored when the cursor is at the first character of a line. The Cursor Right character is ignored when the cursor is one position to the right of the last character of the line.

  The Cursor Left character is either a VT100 left arrow (the escape sequence ESC-[-D) or the control character ^B. The B is mnemonic for Backward.

  The Cursor Right character is either a VT100 right arrow (the escape sequence ESC-[-C) or the control character ^F. The F is mnemonic for Forward.

- Line Editing

  The current line can be edited until the Line Termination character is entered. Line editing is always in “insert” mode; the character typed will be entered before the cursor and any characters starting from the cursor to the end of the line will be shifted right one position. If the insertion causes the line to exceed the maximum line length the last (rightmost) character is dropped. Cursor movement and line selection commands are processed as described above. The backspace character deletes the character behind the cursor. When a backspace is received at the beginning of a line it is ignored.

Index

P

R

S

T

V