The Book of Nindy (v1.51)

Resetting the software, configuration and passwords of Ascend products
(excluding the Cascade equipment).

- For the pipelines and maxes, you will need to open the box up, invalidating the warranty (except DSL boxes). You must inform the customer of this before proceeding!
- For all of these procedures you must have already downloaded or otherwise have ready a correct version of code for the box before you attempt to reset it.
- For all procedures you must upload the software using 1K Xmodem
- Take the necessary static discharge precautions before opening the box.
- Proceed with caution!

Pipelines

P15 (U-interface)

- With all cables and power removed, open the case take out the motherboard, turn over and orient the LEDs toward you (the front).
- Locate P3 in the left rear of the motherboard and short it. Put the motherboard back in the case temporarily.
- Connect power then the serial cable. Setup the terminal software for 38400 N-8-1 no flowcontrol.
- You should see PIPE15> At this prompt, enter DF and when you see CK appearing upload the correct software.
- It will take 3:45 minutes for this to complete. When complete, remove power and then the jumper. Put the motherboard back in the case and reassemble the box halves.
- The box is now ready to reconfigure from scratch using the wizard or setting the registers from a terminal program.

P25 PX / FX / Classic

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- In the front between the LEDs. Locate P503 or LD501 between the 4th and 5th LEDs from the left and short it.
- Attach the power then the serial cable. Configure the terminal software for 9600 N-8-1 no flow-control
- After 30 seconds you should see a PIPE25> prompt. Enter EF. If EF returns an error, don't worry.
- At the PIPE25> prompt, enter DF and when you see CK appearing upload the correct software.The software is about 450K.
- When complete (10-12 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired or use the JBPC.

P50 LS56-(2 wire)
Mainboard PN: 1000-0266-002

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- Locate the large 1.5" square Motorola chip in the front right corner. At the top right corner of this chip there are 2 pairs of jumpers. You will need to short P2.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a PIPE50> prompt. Enter EF . If EF returns an error, don't worry.
- At the PIPE50> prompt, enter DF and when you see CK appearing upload the correct software. The software is about 450K.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flow-control and configure as desired.

P50 LS56-2N and P50 LS56-(4 wire)

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- Locate the large 1.5" square Motorola chip in the front right corner. At the top left corner of this chip there are 2 pairs of jumpers. You will need to short P5.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a PIPE50> prompt. Type EF . If EF returns an error, don't worry.
- At the PIPE50> prompt, enter DF and when you see CK appearing upload the correct software. The software is about 450K.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired.

For Pipeline models 50 and 75, the best method for NINDY is to identify the board type since there were several different models produced.

Use the Mainboard part number over the serial number when questions arise.

P50 S-Interface
Main board PN: 1300-0264-001

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- Locate the large 1.5" square Motorola chip in the front right corner. At the top left corner of this chip there are 2 pairs of jumpers. You will need to short P9.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a PIPE50> prompt. Type EF . If EF returns an error, don't worry.
- At the PIPE50> prompt, enter DF and when you see CK appearing upload the correct software. The software is about 450K.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired.

P50 or P75 early models (serial numbers from 401xxxx-536xxxx)
Main board PN: 1300-0260-001
Main board PN: 1100-0260-001

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- Locate the square chip U17 in the front center of the motherboard and short the pins on the front-right and right-front corner. Use a paperclip or wire.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a PIPE50> prompt. Type EF . If EF returns an error, don't worry.
- At the PIPE50> prompt, enter DF and when you see CK appearing upload the correct software. The software is about 450K.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired or use the JBPC.

P50 or P75 or P130 early models type two

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- In the front left corner there are two jumpers. Locate JP1 and short it.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a PIPE50> prompt. Type EF . If EF returns an error, don't worry.
- At the PIPE50> prompt, enter DF and when you see CK appearing upload the correct software. The software is about 450K.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired or use the JBPC.

P50 or P75 later models (6xxxxx – 722xxxx)
Main board PN: 1300-0268-001

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- Locate the large 1.5" square Motorola chip in the front right corner. At the top left corner of this chip there are 2 pairs of jumpers. You will need to short JP9 or JP6, depending on the silkscreening.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a PIPE50> prompt. Type EF . If EF returns an error, don't worry.
- At the PIPE50> prompt, enter DF and when you see CK appearing upload the correct software. The software is about 450K.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired.

P50 or P75 or P85 (Rev 2 – Serial number 722xxxx and higher)
Main board PN: 1300-0285-001
NOTE: You will need to download an additional file of greater than 1MB (from the Max archives, b.m18 works well) This is because the EF command does not erase both FLASH! Chips. You need to overwrite the image stored in the 2nd chip in order for the new-correct image to take place.

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- Locate the 3 jumpers at the front center of the motherboard. Short P1.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a PIPE75> prompt. Type DF and you will see CK appearing. First download the wrong file – it must be close to 1MB. This will clear both flash chips (primary and backup)
- When that download has completed, repeat with the correct software. First type DF then download the correct version.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired or use the JBPC.

P75 – see P50 early models or later models

- You will see a pipe50> prompt after powering up the unit, this is normal.

P75 (Rev 2 – Serial number 722xxxx and higher) – see P50 rev 2
Main board PN: 1300-0285-001

- You will see a pipe75> prompt after powering up the unit, this is normal.

P75 S-Interface (Serial numbers 6??xxxx-8??xxxx) sample was 634xxxx
Main board PN: 1300-0277 001

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- In the front left corner there are two jumpers. Locate JP1 and short it.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a PIPE50> prompt. Type EF then DF. If EF returns an error, don't worry.
- After typing DF upload the correct version of the software. The software is about 450K.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired or use the JBPC.

P85U – see P50 rev 2 (these are all rev 2 motherboards)

- You will see a pipe75> prompt after powering up the unit, this is normal.

P85S
Main board PN: 1300-0288-001

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- Locate the 3 jumpers at the front center of the motherboard. Short P1.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a PIPE75> prompt. Type DF and you will see CK appearing. First download the wrong file – it must be close to 1MB. This will clear both flash chips (primary and backup)
- When that download has completed, repeat with the correct software. First type DF then download the correct version.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired or use the JBPC.

P130 rev1 – see p50 earlier models or P50 rev 1
Main board PN: 1300-0276-001

- You will see a pipe50> prompt after powering up the unit, this is normal.

P130 rev 2 – see p50 rev 2

- You will see a pipe50> prompt after powering up the unit, this is normal.

P220

If the box is accessible and you can get into diagnostics mode, and type nindy at the > prompt, then download the correct software, otherwise…

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- Locate the lithium battery at the right rear of the motherboard and remove it. Leaving it out for 3-4 minutes will clear the config and passwords. You can then replace and reconfigure from the factory settings.
- If the incorrect load of software was uploaded or if something has gone very wrong, proceed to nindy the box.
  - To nindy, turn off and remove all cables.
  - With the battery still removed, short jumper P5
  - Attach the serial and power cables. Power up at 57600 N-8-1 no flow-control.

→to download software

- Press enter a few times and you should see the => prompt. Enter DF and download the correct version of software
- When the download is complete, remove power then the jumper, replace the battery (small side down!) and replace the cover.
- Power up the unit, and configure as necessary. Serial port speed is 9600.

P400

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- Drain the battery by slipping a business card between the battery and its clamp.
- Let this sit for about 2-3 minutes
- Attach the serial and power cables. Power up at 57600 N-8-1 no flow-control
- Upon powering back up, you should see the ">" prompt. Enter DF then upload software when you see the CKs appearing
- When the download is complete, power cycle the box
- Reconfigure the serial connection for 9600 and configure

SuperPipe 95 or SuperPipe 155

- Locate the small “button” in the rear of the unit, next to the console port.
- Power on the unit at the same time pressing the “button” until the fault light on the front of the unit goes off.
- Attach the serial cable and configure the terminal application for 57600 N-8-1 no flow-control.
- Press enter a few times in the terminal application and you should see the SPIPE> prompt enter EF. Wait until the flash has finished erasing. It will return to the prompt.
- At the SPIPE> prompt enter DF and when you see CK appearing upload the correct software.
- When the download is complete power cycle the box.
- Reconfigure the serial connection for 9600 or use Navis Connect through the ethernet port and configure.

DSL

SDSL-COE / SDSL-CPE

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- In the center of the board locate the P3 and short it.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a DSLPipe> prompt. Type DF.
- After typing DF upload the correct version of the software. The software is about 450K.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired or use the JBPC.

DSL-HS and HST

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- On the right side of the board locate the P12 and short it.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a DSLPipe> prompt. Type DF.
- After typing DF upload the correct version of the software. The software is about 450K.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired.

ADSL-COE-C (COE)

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- In the front center of the board locate the motorola chip. Behind this chip are 2 pairs of jumpers. Short P13.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a DSLPipe> prompt. Type DF.
- After typing DF upload the correct version of the software. The software is about 450K.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired.

DSL-ACAP (CPE)

- With all cables and power removed, open the case and orient the LEDs toward you (the front).
- In the front center of the board locate the motorola chip. Behind this chip are 2 pairs of jumpers. Short P14.
- Attach the power then the serial cable. Configure the terminal software for 57600 N-8-1 no flow-control
- You should see a DSLPipe> prompt. Type DF.
- After typing DF upload the correct version of the software. The software is about 450K.
- When complete (2-4 minutes) remove the power cord then remove the jumper. Replace the box lid and power up. It's now running in a factory original configuration.
- Reconnect the serial cable using 9600 N-8-1 no flowcontrol and configure as desired.

DSL-P50A

- UNKNOWN at this time

DSL-DMT

- UNKNOWN at this time

DSL-Max20

- UNKNOWN at this time

DSL Terminator 100

- UNKNOWN at this time

DSL-TNT (same as the standard "red stripe" TNT)

- Remove power for the box.
- Connect to the console port at 38,400 bps.
- For release 1.2Ap5, set the shelf controller twist dial to 0 (zero), for Release 2.x, remove the shelf controller, open it and short P1. Replace the shelf controller.
- Power cycle or reset the TNT.
- EF
- DF
- Load the boot-sr file (TNTSR.BIN or TNTSRE.BIN)
- If you removed the shelf controller to short the jumper, remove the power, remove the shelf controller again and remove the jumper from P1 and reassemble.

Max 200+ - This process requires additional hardware!

- Remove power then remove all the cards
- Insert a Socket I/O serial card to PCMCIA slot #8
- Connect the serial port of the Socket I/O to a terminal or computer running a vt100 terminal program.
- Attach the serial and power cables. Power up at 57600 N-8-1 no flow-control
- At the > prompt enter DF then upload the correct version of firmware. It should be around 900k.
- When the download is complete, power cycle the box
- Reconfigure the terminal/serial connection for 9600 and configure the Max, or use the configurator.

Max 800

Software only -> type ascend (lowercase) during POST

Hardware method

- With all cables and power removed remove all cards from the box, open the case and orient the LEDs toward you (the front).
- Locate the lithium battery at the front left of the motherboard and remove it. Leaving it out for 3-4 minutes will clear the config and passwords. You can then replace and reconfigure from the factory settings.
- If the incorrect load of software was uploaded or if something has gone very wrong, proceed to nindy the box.
  - To nindy, turn off and remove all cables.
  - With the battery still removed, short the jumper labeled DIAG it is located on the left side of the motherboard
  - Attach the serial and power cables. Power up at 9600 N-8-1 no flow-control.

→to download software

  - Press enter a few times and you should see the => prompt.
  - Type EF (erases the Flash RAM)
  - Type DF (instructs Max to download new software through the serial port)
  - When the download is complete, remove power then the jumper, replace the battery (small side down!) and replace the cover.
- Power up the unit, and configure as necessary. Serial port speed is 9600.

Max 1600(classic)

- With all cables and power removed remove all cards from the box, open the box and separate the 2 parts, the motherboard and the backplane. Orient the LEDs toward you (the front).
- Locate the battery on the right side of the motherboard, toward the rear of the box, and insert a business card or similar non-conductive device between the battery and the contact.
- Leave the card in place for about 5 minutes. This will allow enough time for the Max to “forget” its configuration.
- Remove the card and reassemble the two parts, being careful to align the slots for the backplane with the card interface.
- Reattach the power cable and serial cable. Power up at 9600 N-8-1 no flow-control.
- Reconfigure the terminal/serial connection for 9600 and configure the Max.

Max 1800

- With all cables and power removed remove all cards from the box, open the case and orient the LEDs toward you (the front).
- Locate P5 and short it.
  - On the S interface box it is next to the battery.
  - On the U interface it is located at the top center of the box next to the ribbon cable.
- Attach the serial and power cables. Power up at 57600 N-8-1 no flow-control
- At the > prompt enter DF then upload the correct version of firmware. It should be around 900k. Down load the software using Xmodem 57600-N-8-1 no flowcontrol.
- Power down the unit then remove the jumper from P5 and put the cover back on
- Reconfigure the terminal/serial connection for 9600 and configure the Max, or use the configurator.

Max 2000

- With all cables and power removed remove all cards from the box, open the case and orient the LEDs toward you (the front).
- Locate P10 and short it. It is located in the front right corner of the motherboard next to a ribbon cable.
- Attach the serial and power cables. Power up at 57600 N-8-1 no flow-control
- At the > prompt enter DF then upload the correct version of firmware. Down load the software using Xmodem 57600-N-8-1 no flowcontrol.
- Power down the unit, remove the jumper from P10 and put the cover back on
- Reconfigure the terminal/serial connection for 9600 and configure the Max, or use the configurator.

Max 4000 HP

- With all cables and power removed remove all cards from the box, open the case and orient the LEDs toward you (the front).
- Locate P3 and short it.
- Attach the serial and power cables. Power up at 57600 N-8-1 no flow-control
- At the > prompt enter DF then upload the correct version of firmware. Down load the software using Xmodem 57600-N-8-1 no flowcontrol.
- Power down the unit, remove the jumper from P3 and put the cover back on
- Reconfigure the terminal/serial connection for 9600 and configure the Max, or use the configurator.

Max4000

- With all cables and power removed remove all cards from the box, open the case and orient the LEDs toward you (the front).
- Locate P6 and short it.
- Attach the serial and power cables. Power up at 57600 N-8-1 no flow-control
- At the > prompt enter DF then upload the correct version of firmware. Down load the software using Xmodem 57600-N-8-1 no flowcontrol.
- Power down the unit, remove the jumper from P6 and put the cover back on
- Reconfigure the terminal/serial connection for 9600 and configure the Max, or use the configurator.

Max 6000

Software only -> type ascend (lowercase) during POST

Hardware method

(This process can also be done without removing the case, however space will be very tight and it is recommended that the cover be removed)

Cover removal method

- With all cables and power removed, remove all cards from the box open the case and orient the LEDs toward you (the front).
- Locate P10 and short it. It is in the right side card slot space toward the center of the board near the left rear corner of the CPU.
- Attach the serial and power cables. Power up at 9600 N-8-1 no flow-control
- At the => prompt enter DF then upload the correct version of firmware. Down load the software using Xmodem 9600-N-8-1 no flowcontrol.
- Power down the unit, remove the jumper reassemble the case and power it back up.
- Leaving the terminal/serial connection set at 9600, configure the Max through the onscreen menus, or use the configurator.

Cover in-place method

- With all cables and power removed, remove all cards from the box and orient the rear panel of box so the card openings are toward you. Remove the card covers on the left side.
- Reach into the left side card opening and locate the 2 pairs of jumper about 2/3 of the way in. P10 is the left pin pair. Short this pair.
- Attach the serial and power cables. Power up at 9600 N-8-1 no flow-control
- At the => prompt enter DF then upload the correct version of firmware. Down load the software using Xmodem 9600-N-8-1 no flowcontrol.
- Power down the unit and remove the jumper. Reattach the serial and power cables and power it back up.
- Leaving the terminal/serial connection set at 9600, configure the Max through the onscreen menus, or use the configurator.

Max TNT

- Remove power for the box.
- Connect to the console port at 38,400 bps.
- For release 1.2Ap5, set the shelf controller twist dial to 0 (zero), for Release 2.x, remove the shelf controller, open it and short P1. Replace the shelf controller.
- Power cycle or reset the TNT.
- EF
- DF
- Load the boot-sr file (TNTSR.BIN or TNTSRE.BIN)
- If you removed the shelf controller to short the jumper, remove the power, remove the shelf controller again and remove the jumper from P1 and reassemble.

Multiband VSX:

VSX-T1 Pin P8 located near the center of the unit
VSX-BRI Pin P1 located near the front of the unit

You MUST hit <Shift> D to get the ckckckck

GRF

- Make sure the distribution files are on RAM disk somewhere (not on the internal flash!)
- Run the grmrflash command as follows (assume I want to install version 1.3.6 and my distribution files, A_1_3_6.TAR.gz and A_1_3_6.root.gz, are in /tmp.)
- prompt# grmrflash --archive_dir=/tmp --target=internal --force--release=A_1_3_6
- NOTE: You need to use the --force option because the internal flash already has a file system on it.
- Reboot the GRF by typing: prompt# reboot -i
- NOTE: Make sure you use the -i option!! This tells it to not check for any changes in /etc.
- When the GRF comes back up, it will run you through the initial configuration script again.

Document history
4-98 Document created and processes checked for accuracy
7-98 Added Pipe50 S-Interface section
8-98 Added Max 800
8-98 Added 'ascend' during POST to relevant boxes
8-98 Added P50-LS56-2N
8-98 Fixed a DSL section problem
11-98 Added reference to early rev 1 Pipe 75s
01-99 Revised P50 / 75 and 130 sections to make easier to read
01-99 Added the DSL-HS Pipeline and P85-S interface
01-99 Added the P75S
05-99 Updated to include additional DSL equipment and P50LS56 2W