

Nexus and Envoy Setup Tips

Most problems with ISDN occur during the initial setup of the line. In order for the Nexus or Envoy to work, you must program some information specific to your ISDN line, and there must be an "OK" message on the display. If any other message appears, the initial handshaking with the ISDN line has not been completed, and a call cannot be made.

Prior to programming the Nexus or Envoy, you need some information from the telephone company. This may have been written on the ISDN jack, or on a tag or paper left by the installer. If not, you should contact the telephone company and ask for the following:

SPID Numbers

You will usually be given two of these. They normally contain the phone numbers of the two "B" channels of your ISDN line, possibly with some extra digits before or after the number. The most common format is XXX-XXX-XXXX-0101, where the X's represent the 10-digit phone number, including area code.

Switch Type

The Nexus and Envoy have three choices for switch type, NI-1 (National ISDN-1), DMS-100 and 5ESS. These refer to the type of switching equipment your telephone company has at the other end of your ISDN line. Regardless of the make or model of their switch, if they are using the National ISDN 1 or 2 software, the correct choice would be NI-1. Also note that if the SPID numbers end in "0101", you can assume that NI-1 would be the switch type.

LDNs

The local dialing numbers are almost always just the 7-digit local telephone numbers without the area code or the extra digits found in the SPIDs.

Once you have this information, unplug the ISDN line from the Nexus or Envoy, and program the unit according to the instructions in the manual. With all of the numbers and choices stored, go back to the top menu and plug the line back in. You should now see a series of messages on the LCD screen (some may be skipped), ending in "OK". Allow a minute or so for the process to complete.



CURRENT NEXUS	ENVOY	OLD NEXUS	DESCRIPTION
Lnk Dn	Link Down	Lnk Dn	No activity has been detected on the ISDN line
Lnk A	ISDN Found	Layer 1	(Physical handshake accomplished with line).
Lnk B	Getting TEI 1	No T1	Terminal Endpoint Identifier 1 is being retrieved.
Lnk C	TEI 1 Found	T1 OK	Terminal Endpoint Identifier 1 is OK
Lnk D	SPID 1 OK		Service Profile ID 1 is OK.
Lnk E	Getting TEI 2	No T2	Terminal Endpoint Identifier 2 is being retrieved.
Lnk F	TEI 2 Found	T2 OK	Terminal Endpoint Identifier 2 is OK
	SPID 2 OK		Service Profile ID 2 is OK
OK	OK	OK	SPIDs are OK, handshaking is completed.

If the unit stops at Link Down, there is a basic communication problem with the ISDN line, possibly due to a physical wiring problem. Check that you are plugged into the correct jack, and that your telephone cord is OK.

If the display stops at an intermediate point, unplug the line, and check the numbers you have entered, particularly the SPIDs. You may have transposed some digits or made another mistake. Focus on SPID 1 if the message stops at Link B or C, and on SPID 2 if it stops at Link E or F. Also, be sure that you have correctly chosen the switch type. Plug the line back into the unit, and see if the problem is solved.

Still can't get the "OK"? Assuming you haven't made a "typo" (go ahead, check those SPIDs again), the telephone company may have given you incorrect information. You may save some time by simply calling them and asking for it over the phone. Otherwise, here are some tips that may help you out:

- New ISDN lines are usually installed with SPIDs consisting of the area code, local number and "0101" at the end. The correct switch type for these lines is NI-1. It may be worth trying this combination.
- NI-1 is the proper choice for most new ISDN installations.
- There is a flavor of ISDN provisioning called "5ESS custom point-to-point" that may not require SPIDs or LDNs. If you think that is possible in your case, try removing them, and selecting "5ESS" for the switch



type. Do note, however, that you may sometimes get a false "OK" when no SPID numbers are entered. You will not be able to place calls in that case.

If there has been a recent area code change at your location, you may want to try both the new and old area codes.

At the end of this document, we list some conventional wisdom about SPIDs and switches, gleaned from many years of experience with ISDN. Some of this information is becoming dated, but it may be useful on older lines or in areas that are slow to update their ISDN practices.

If none of this helps, Comrex Tech Support may be the solution. Remember, though, that we are quickly going to ask whether you have verified the line information with the telephone company, so you should do that first.

Once you have the "OK" on the screen, you should be able to place and receive calls. Comrex Tech Support would be happy to help with these initial tests.

A frequent problem with new ISDN installations is being unable to place a long-distance call. Unless you have made arrangements with a long-distance company to provide service on that line, you may be in this position. We strongly suggest using one of the major long-distance companies for ISDN calling. You may be able to temporarily make calls by entering the "1010" number for that company, but it is usually best to actually sign up for service. Here are some useful "1010" numbers:

- AT&T 1010288
- MCI 1010222
- Sprint 1010333

Other Known SPID Formats

Information from "ISDN, What Every Broadcaster Needs to Know"

Courtesy of Douglas A. Lane, 1900 Woodland Drive, North Reading, MA 01864

7 digits = local dialing number 10 digits = area code + local dialing number

NI1 = National ISDN 1



COMPANY	SWITCH TYPE	SPID FORMAT
Ameritech	AT&T 5ESS	
	Custom	01 + 7 digits + 0
	AT&T NI1 (5E8)	01 + 7 digits + 011
	AT&T NI1 (5E9)	10 digits + 0111
	DMS100 - NI1	10 digits + 0111
	DMS100 Custom	10 digits + 0
	Siemens NI1	10 digits + 0111
Verizon (formerly Bell Atlantic)	AT&T NI1	01 + 7 digits + 000
	DMS100 NI1	10 digits + 100
	Custom ISDN	01 + 7 digits + 0
	AT&T Point-to-Point	no SPIDS or LDNs needed
	AT&T NI1	10 digits + 0000
	DMS100 NI1	10 digits + 0001
Bell Canada	DMS100 NI1	7 digits + 00
Bell South	AT&T NI1	
	DMS100 Custom	10 digits + 34 or 4
	DMS100 NI1	10 digits + 0100
	NI-1	10 digits + 0 or 00 or 000
Verizon (NC) (formerly GTE, NC)	DMS100 NI1	10 digits + 0100 or 0000
	Verizon (OR) (formerly GTE, OR)	AT&T NI1
	AT&T Custom	01 + 7 digits + 0000



Pac Bell	AT&T Custom	01 + 7 digits + 0
	AT&T NI1	01 + 7 digits + 000
	DMS100	(note: there may be different suffixes for the B1 channel and the B2 channel)
		10 digits + 1 (B1) & 2 (B2)
		10 digits + 10 (B1) & 20 (B2)
		10 digits + 100 (B1) & 200 (B2)
		10 digits + 1000 (B1) & 2000 (B2)
		10 digits + 01 (B1) & 02 (B2)
		10 digits + 010 (B1) & 020 (B2)
		10 digits + 0100 (B1) & 0200 (B2)
SNET	AT&T NI1	01 + 7 digits + 000
	Custom	10 digits + 0101
SW Bell	DMS100	10 digits + 01
	AT&T NI1	10 digits + 000
	Siemens NI1	10 digits + 0100
Qwest (formerly US West)	AT&T NI1	01 + 7 digits + 000
	AT&T Custom	or 7 digits + 1111
		or 10 digits + 1111
		01 + 7 digits + 0

