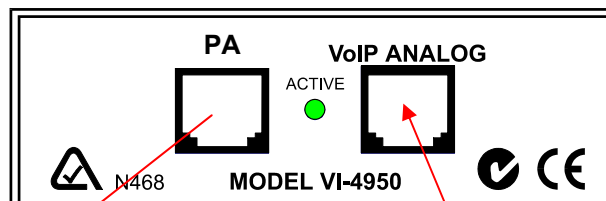




DIAL UP AUDIO INTERFACE VI-4950PA

The VoIP Analog Interface Model VI-4950 can be used as a dial up audio interface. You can dial up the unit and make announcements over a Public Address system or dial up the unit and listen to an audio source. The unit is telephone line powered and does not require an external power supply.

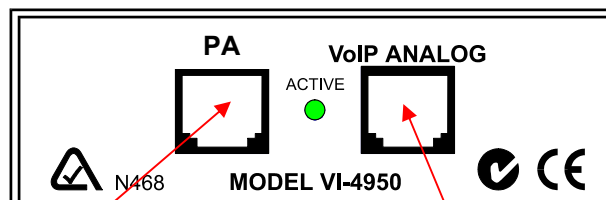
TELEPHONE LINE TO PA



PA OR AM/FM
TRANSMITTER
LINE-LEVEL
INPUT
Pins 3 & 4 on RJ12
or RCA Connector

ANALOGUE
TELEPHONE LINE
Pins 3 & 4 on RJ12

TELEPHONE LINE TO AUDIO SOURCE



AUDIO SOURCE
eg. Racing results,
live to air
broadcast, etc.
Pins 3 & 4 on RJ12
or RCA Connector

ANALOGUE
TELEPHONE LINE
Pins 3 & 4 on RJ12

Please Note: The analog telephone line must be programmed for Cut Off on Disconnect (COD) or Reversal on Idle (ROI) to ensure immediate disconnect when the caller hangs up.





The VI-4950 Interface has an internal eight-way dipswitch with the following possible selections:

SWITCH	OFF	ON
1	Ignore line reversal/open circuit	<i>Disconnect on receipt of line reversal or open circuit (COD)</i>
2	<i>Keep connection on continuous tone</i>	Disconnect after 8 seconds of continuous tone
3	<i>Keep connection during random tones</i>	Disconnect after 20 seconds of random tones
4	Keep connection during silence	<i>Disconnect after 5 seconds of complete silence</i>
5	No total time limit on calls	<i>Disconnect after a total of 30 minutes</i>
6	Not connected	Not connected
7	Not connected	Not connected
8	Not connected	Not connected

Factory defaults are shown in *Italics*.

SPECIFICATIONS

Power Source	Telephone line $\geq 22\text{Vdc}$ open circuit, $\geq 15\text{mA}$ short circuit
Input/Output Impedance	$220\ \Omega + 120\ \text{nF} // 820\ \Omega$ (Complex BN 12)
Input Level	1 V p-p (350 mV RMS) (-6.8 dBm) nominal
Output Level	1 V p-p (350 mV RMS) (-6.8 dBu) nominal
Automatic Disconnect	Line Reversal on Idle or Open Circuit for $\geq 90\text{ms}$

COD APPLICATION NOTE

Calling Party Disconnect or Cut Off on Disconnect (COD)

This application note will insure the VI-4950 will not Tie-Up the line after the calling party hangs up after accessing the PA.

Many PABX's, key systems and other Telecom equipment can sometimes be tied-up to a local Central Office line indefinitely unless precautions are taken. To prevent a line from being tied up and going to lock out, the Telecommunications industry has agreed on a method to release a call when the calling party disconnects (hangs up). This method is the Calling Party Disconnect. Some CPE providers are not aware that the local telephone company can apply an option to a line that will force the local loop open (or reverse the polarity) each time the calling party hangs up. Alternately the CPE provider will sometimes provide a timed disconnect to prevent a line from being tied-up. The VI-4950 uses both methods combined to prevent the Main Access line from becoming tied up. They are the timed released method and the calling party disconnect (COD), line reversal (ROI) or open loop method.

1. The timed released method is normally 30 minutes on the VI-4950. This means that after 30 minutes the Master timer in the VI-4950 will reset and cause it to go on-hook (hang-up on the local line). This is basically a backup for the COD method described next.

2. The calling party disconnect (COD) method is the main reset of the VI-4950 that comes from the Telephone Company upon the far end (calling party) hanging up. Normally the central office switch at the Telephone Company will not send an open loop on far end hang-ups. Therefore the line must have the option Calling Party Disconnect added to the local switch. The option name in the Nortel DMS-100 is COD (Cutoff on Disconnect). If the local switch is a Lucent 5ESS, the office wide Special Feature 515 will provide an open loop. Ericsson AXE & Alcatel System 12 exchanges offer Reversal on Idle. At any rate the local line can be tested with a DC voltmeter by measuring across the Tip & Ring. The voltage will normally be around 48V when the line is not in use and somewhere between 5 and 20 Volts when off hook or in use. When the far end hangs up, the line should go quickly to 0 (zero) Volts if COD is on the line. Since this zero voltage condition only lasts approximately 800ms, sometimes this can't be easily seen with a digital voltmeter. Therefore an older type analog voltmeter should be used to view the instantaneous rapid drop in voltage. Almost immediately the idle voltage of 48V will be re-applied. In summary, all VI-4950s should be installed with the Main Access line wired to a Telephone Line that has the option Calling Line Disconnect. If the COD option is not available then the activity timer will reset the VI-4950 within 5 seconds of silence or after a total time of 30 minutes.

