



Maxon® SD-125

Rev 1.0 18-July-2002

RADIO:

Maxon SD-125

REQUIREMENTS:

Nexion universal radio cable (supplied) and 9-pin male D connector (not supplied), wired as follows...

Nexion NX1500 Cable End			
HDDB9	Description	I/O	Cable Colour
Pin 1	Receive Audio	In	Black
Pin 2	Transmit Audio	Out	Brown
Pin 6	Ground	-	Dark Green
Pin 8	Busy Connection	In	Violet
Pin 9	PTT	Out	White
Pin 10	Data Mute	Out	Grey
Pin 12	Power	In	Lite Green

Maxon SD-125 Cable End			
DB9	Description	I/O	Cable Colour
Pin 2	Discriminator Audio	Out	Black
Pin 1	Transmit Audio	In	Brown
Pin 4	Ground	-	Dark Green
Pin 6	Radio Busy Indicator	Out	Violet
Pin 3	PTT	In	White
Feature Not Used/Available			
Pin 5	12V DC Power	Out	Lite Green

SD-125 TRANSCEIVER

- Step 1** Program the SD-125 as required, i.e. Tx/Rx frequencies, etc.
- Step 2** Confirm the SD-125 is fully functional (i.e. test Tx/Rx and align if required).

NX1500 MODEM

- Step 3** Connect the SD-125 to the Nexion modem using the universal radio cable (wired as above) and connect to a 12V DC power supply.
- Step 4** Connect the PC to the Nexion modem. This serial cable can be purchased from Nexion or assembled using the instructions in the Nexion Modem Installation Guide. Using any terminal program, set the appropriate Com Port on the terminal program to 19,200bps, 8 Data, 1 Stop and No Parity. Also ensure Hardware hand shaking is enabled. To check if connected properly, type ATI, which will return the serial number and version of the attached modem.
- Step 5** Using the terminal program, set the TX modulation level, type AT S115=5 <ENTER>, then type AT&W <ENTER>.
- Step 6** Using the terminal program, set the RX audio receive level, type AT S114=1 <ENTER>, then type AT&W <ENTER>.
- Step 7** Using a terminal program, program the modem as required, in particular Fleet, Group and Individual addresses. See Nexion Modem Installation Guide for further programming information.

GENERAL:

- Step 8** To confirm the changes made to the modem have been saved, switch the modem's power off (wait 2 seconds) and back on. Using the terminal program, type AT&V, which will display all the S register settings. If any settings differ, repeat steps 5 through 7.
- Step 9** Using a terminal program, key the transmitter by using the AT&T3 command on the PC terminal program (Modem will transmit a 1.5Khz test tone).



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- Step 10** Modem TX – Monitor on a communications test set. With the S115 register set to 5, there should be approximately 3Khz deviation on a 25Khz channel. Also, note the TX signal purity. If there is signal distortion, either adjust the SD-125 deviation control or increase the value of register S115 (this increases the level of attenuation) until the transmitted signal is clean and provides minimal distortion.
- Step 11** Key the transmitter by using the AT&T2, AT&T4, etc command on the PC terminal program as this will key the transmitter with different test tones. Perform Step 10 again; making sure the signal distortion is within the SD-125 specifications. Use the AT&T command to de-key the transmitter.
- Step 12** Modem RX – Using another modem to transmit data (test using 4,800bps data speed – S register 108=1), use the AT%Q reading to determine level and quality as per the Nexion Modem Installation Guide.
- Step 13** After all tests have been completed, reset the modem with an ATZ <ENTER> command.
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