HOW TO RESOLVE A CONNECTION PROBLEM

Entel

GENERAL DESCRIPTION:

This bulletin aims to resolve connection issues if you are having a problem connecting to an Entel Radio.

1   IS THE RADIO IN THE CORRECT MODE?

The first thing to check with a radio that won't connect is whether it is in the correct mode for your task.

- **Flash Mode:** If you are upgrading the bootloader or firmware the radio will need to be in flash mode first.

- **Programming Mode:** If you are updating the radio's function image, trying to tune the radio, configure the radio's settings or channel data the radio will need to be in programming mode.

FLASH MODE:

If the radio is in Flash Update Mode when you power the radio up, it will not emit any start-up beeps, the radio's LED should constantly glow **GREEN** and the radio's LCD (if applicable) should display 'Entel Upgrade System Version' and the version number of the radio's bootloader. You can check if the radio in flash mode as if you try and transmit by pressing the PTT the radio's LED will not glow **RED**.

FLASH MODE: FOR FIRMWARE AFTER 2.0.3.0 USE THE UPGRADE MODE:

To put a radio with firmware that is after 2.0.3.0 into flash mode:

1.1   Put the radio in 'Programming Mode' by turning the radio on while holding the lower button on the side of the radio. This will cause the radio to beep once and the LED to flash between Orange and Green.

1.2   On Flash Writer select the firmware for the radio by pressing the source '…' button and then selecting the firmware file for the model of radio.

1.3   On Flash Writer press the 'Upgrade mode' button.

1.4   The radio's LCD will now display 'To upgrade. RESET POWER'.

1.5   Reset the Radios Power and it will now power-up in flash mode.

If you are still unable to establish a connection it is likely that the firmware in the radio is before 2.0.3.0 and does not support the upgrade mode.

FLASH MODE: (CONTINUED)

FOR FIRMWARE BEFORE 2.0.3.0 USE THE 4,3,2,1 METHOD:

1.6   **Special instructions for non-display radios only:**

- Ensure the radio's first 7 channels are programmed with channel data.
- Change the channel to channel 3.

1.7   Turn the radio on and wait for the radio to boot fully, this will be signalled by 1 sharp beeps followed by several quick beeps.

1.8   Swiftly but accurately turn the channel selector 4 positions clockwise, 3 positions anti-clockwise, 2 positions clockwise, 1 position anti-clockwise and then for:

- HX4 Series 2 press the PTT button (the large transmit button on the left side of the radio) and the radio should beep twice.
- HT Series 2 momentarily press the Power Button.

1.9   Turn the radio off and after a couple of seconds on again.

1.10 On LCD models you should see 'Entel Upgrade System' and version number (normally v1.6). The LED should constantly glow **GREEN**, except on older versions (before v1.6) where the radios LED will extinguish. To test if the radio is in flash update mode press the PTT, if the LED goes **RED** the radio is not in flash update mode.

Now go to Step 6.

This process can sometimes be a little difficult and may take several tries.
Now go to Step 6.

PROGRAMMING MODE:

If the radio is in programming mode when it powers up the radio will emit 1 single sharp beep instead of the normal start-up beeps, the LED will alternate between **GREEN** and **ORANGE** and the LCD (if applicable) will display 'Programming Mode … Progress'. You can check if the radio in Programming mode as if you try and transmit by pressing the PTT the radio's LED will not glow **RED**.

To put a radio into 'Programming Mode' turn the radio on while holding the lower button on the side of the radio.

2   IS THE MODEL OF RADIO INSTALLED ON ENTEL PROGRAMMER?

Before a model can be programmed using Entel Programmer, that model's DLL file must be installed to Entel Programmer. You can check what models are installed by:

2.1   Selecting 'About' then 'Update/Show Version Info' in the Entel Programmer Menu Bar.

2.2   The Update Window will appear and display the status of all the models available. Find the model e.g. HT446E and then check the DLL in the Installed field has been installed and that it is the same version as the Latest Available.
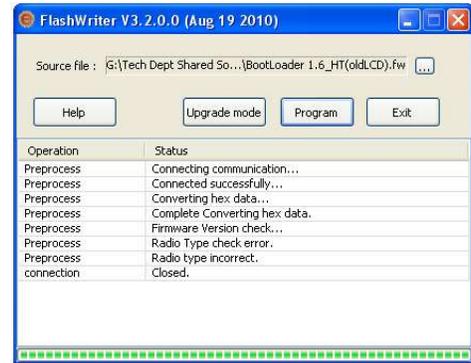
Model Name	DLL	Installed FW	Help Files	DLL	Latest available FW	Help Files	Updated
HT446E	v2.0.3.4	v2.0.3.4	Not Installed	v2.0.3.4	v2.0.3.4	Not released yet	OK

If the model has not been installed or for more information on managing the models in entel programmer refer to the support document "Managing Models In ENTEL Programmer".

3   RADIO TYPE INCORRECT:

If when you are attempting to update the firmware or bootloader of the radio the Flash Writer application displays:
"Radio Type check error. Radio type incorrect"

Then the firmware or bootloader that you are trying to update with is not compatible with the radio. This is usually caused by attempting to flash a model of radio with another model's firmware.
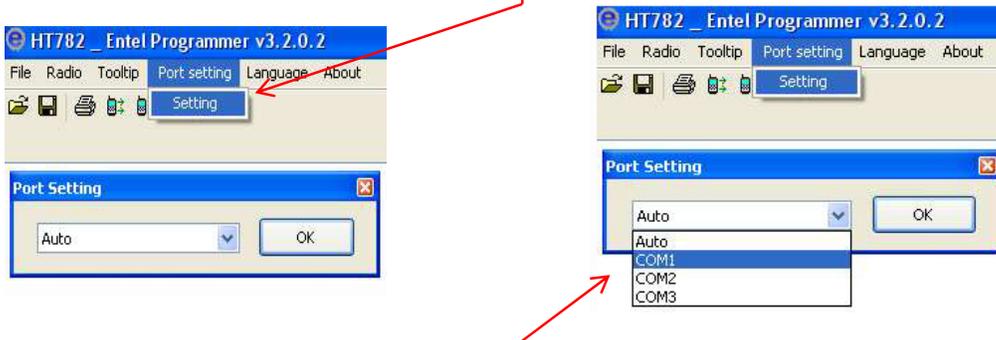
4   CHECK PORT SETTINGS:

In Entel Programmer, the port setting should by default be set to "Auto", so that Entel Programmer will automatically detect the correct port for the programming lead.

4.1 Checking the Port Status:

In the Entel Programmer Menu bar select 'Port setting\Setting', to display the 'Port Setting' window, then using the drop down box check the "Auto"' option is selected.
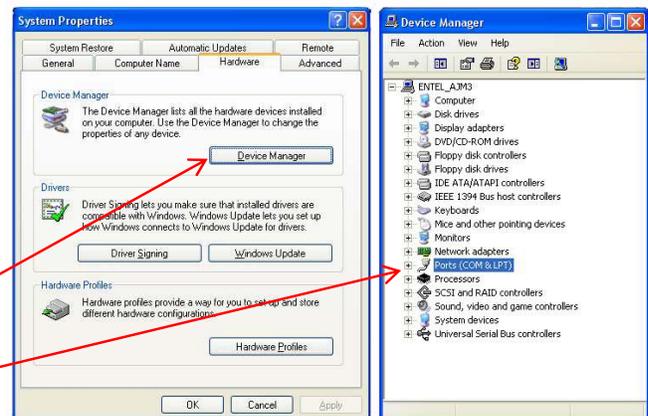
Additionally check that your port is being detected by selecting the drop down list and checking that the port has been detected (by default the serial port is COM1).

4.2   If you have a Serial Port but are using a USB-to-Serial Converter:

If your computer has a Serial Port, but you are choosing to use a USB-to-Serial converter, you may experience a connection issue caused by Entel Programmer automatically selecting the serial port by default rather than using the USB device.

Change the port setting from "Auto" to the port number for the USB device, if you do not know the port number for the USB device you can find it by (Windows XP):

▪ Select 'Start' and then right click 'My Computer' and select 'Properties'.
▪ On the 'System Properties' window select the 'Hardware' tab and the 'Device Manager' button.
▪ On the Device Manager window expand the 'Ports (COM and LPT)' menu item and a list of the ports will be displayed, in brackets for the USB device will be its COM number.

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5   CHECK THE USB-TO-SERIAL PORT DRIVER:

If the programming lead is connected to the PC's USB port via a USB-to-SERIAL converter, instead of a serial port it is recommend that our USB driver is used to ensure compatibility. This driver can be installed with Entel Programmer or downloaded directly from: www.entel.co.uk/updates.

6   HARDWARE MISMATCH:

Has another radio and/or another programming lead been tried?

Has the programming lead being used been checked that it is suitable for the radio being programmed?

The model of the programming lead can be clearly seen on the serial connector of the cable.

Model:	Lead Type:	Radios:
CPROG HX 2.0	Serial-to-Hexagonal 13 pin	All Series 2 HX Radios.
CPROG HT2.0	Serial-to-Circular 12 pin	All Series 2 HT Radios.
CPROG HT1.0	Serial-to-Phono	All Series 1 HT Radios (all radios that use HT Manager)
CPROG400	Serial-to-Phono	All Series 1 HX Radios (requires CPROG400G)
CPROG RP	Serial-to-RJ45	All base stations.
CPROG 700	Serial-to-USB	The Serial to USB adapter lead produced by Entel.

7   CHECK THE RADIO'S CONNECTION:

Check all of the connections are secure and clean:

7.1   Check the connection between the radio and the PC.

7.2   Turn the radio off, remove the battery, wipe the battery connectors and ensure that they are clean.

7.3   If a USB-to-Serial converter is being used:

- While your computer is ON safely remove the USB converter (in Windows XP select the 'Safely Remove Hardware' icon on the Task Bar next to your clock).

- Disconnect the USB converter from the PC, make sure that it is clean, reconnect the USB converter into the computer and make sure that the operating system detects the device and correctly recognises what type of device it is.

- Next check the connection between the USB-to-Serial converter and the serial port of the programming lead, by separating the converter and programming lead, make sure both devices are clean, that none of the pins on the USB-to-Serial converters male serial connector have been bent, broken or damaged.

- Now reconnect the USB's serial converter and the programming lead to the serial port and tighten the screws on both sides of the connectors to make sure they fit tightly.

- OR remove the programming lead from the serial port, make sure both devices are clean, that none of the pins on the Serial Connector of the programmer lead have been bent, broken or damaged.

7.4   Disconnect the programming lead from the accessory port of your radio, clean the accessory port and the accessory connector of the programming lead and check that the 3 pins of the programming lead are clean and that none of them have been damaged. Next reconnect the programming lead to the radio make sure that programming lead has been secured only finger-tight using the accessory screw on the programming lead.

7.5   Next place the radio in 'Programming Mode' by turning the radio on while holding the lower button on the side of the radio until it beeps once and the LED to flash between **GREEN** and **ORANGE**.

7.6   Using Entel Programmer on the Menu Bar select 'Radio \ Read'.

You should now be able to read from the radio.

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8   STILL HAVING PROBLEMS?

If you are still experiencing problems, send details of the problem including the answers for the following questions to: technical@entel.co.uk

8.1   What Operating System are you using (E.g. Windows XP, Windows 7)?

8.2   What version of Entel Programmer are you using e.g. EP v2.0.0.0, EP v2.9.9.9, EP v3.2.0.0, EPv3.2.0.2 etc?

8.3   Are you using an extension lead between your PC and programming lead?

8.4   What type of computer are you using; a desktop PC or a laptop?

8.5   If you are using a USB-to-serial converter but the driver we provided did not work what is the manufacturer name and model no of the adapter you are using?

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