Setting up an Icom IC-E2820 for DPRS

This document explains how to set up the GPS mode on an IC-E2820, for operation with DPRS, this method allows your position to be sent to other D-Star radios and the APRS servers.

The radio will be setup to send GPS data not GPS-A data, to use this mode you will need to follow the instructions below to create a text string that includes the symbol you wish to display, along with the checksum that is required by the APRS servers to display the data. The D-PRS calculator was created by Pete Lovell, and can be found here: www.aprs-is.net/DPRSCalc.aspx

Go to the web site, and fill in the boxes as follows to create your GPS message. Start by entering your callsign into the MyCall box, this must be the same callsign that you will have set in the MyCall of the IC-E2820 (in the example below the Northants D-Star club call has been used). Then move into the D-PRS Symbol box and select the symbol you wish to be displayed on the APRS maps (in the example below the Antenna symbol has been selected). The message you wish to have tagged against your callsign in APRS systems must be entered into the message box, this can only be 13 characters (in the example we have set this to "D-STAR DEMO").

MyCall 8 Char Max Right Space Padded	D-PRS Symbol	GPS(C1) Message
M0NDS	Antenna like Radio station Symbol: A Overlay:	D-STAR DEMO
D-PRS CallSSID:		**Input into TX Message C1:**
M0NDS		LR D-STAR DEMO*68

APRS is a registered trademark of APRS Software and Bob Bruninga, WB4APR.
Copyright © 2010 - Peter Loveall AE5PL
Hosted by AME Corp.

Now to the really important bit you need to copy the message down from the bottom right hand box, this is the message we will enter into the radio later. It is in the format 4 characters, followed by your message (up to 13 charactures), followed by an asterisk then followed by a two digit checksum. So in the example above, the LV is followed by 2 spaces, then the "D-STAR DEMO" message and then the asterisk and the checksum "68".

Well now the hard bit is out of the way, and we have a note of the GPS message, we can program the radio.

Firstly we need to press the F (function) button on the radio, and then using the right hand button under the display select "Menu". Using the rotary knob we then need to highlight "DV GPS", and press the knob to select this option.
Using the same method above we now need to change the settings in some of the sub menus.

GPS SENTENCE	-	RMC On, GGA On and the rest off
GPS TX	-	GPS (Not GPS-A)
GPS AUTO TX	-	OFF (this will cause the data to be sent only when you press the PTT)
GPS MESSAGE	-	Enter the whole message created above ie LR D-STAR DEMO*68

Lastly we need to enable the GPS transmission. Exit the menu system, and then press the F (function) button until the bottom line on the screen displays DATA POSI G-WR GMR R-WR, press the button below DATA, and the symbols G.D should appear at the top of the display in the centre. The GPS data will now be transmitted when you press the PTT in DV (Digital Voice) mode.

When the GPS has a valid signal the GPS letters on the display will stop flashing, and if you transmit to a local gateway connected repeater your information will be passed to the APRS network. One place to view this is www.aprs.fi