

APRS on the Yaesu FT3D

This text is to expand on and simplify some of the instructions in the Yaesu FT3D manuals and not replace them so I have referred to them in many cases. All Yaesu Manuals can be downloaded from their website.

As is common with many modern devices the FD3D touch screen and some keys can do 2 functions by either doing a short touch or press and hold on the screen/key.

Similar to the Icom Manuals I have used- touch = a brief touch and PRESS = a longer press

INITIAL SETUP

Set your call sign

At switch on the FT3D will show the Yaesu name followed by two call signs and the sets Voltage. Typically on mine the top call is G8DLX and the one below it is G8DLX -7

The top one is that sent when using the F7W mode (commonly known as Fusion or C4FM).

The second one is the one we need to set for APRS. To do this PRESS the 'DISP' button then touch 'APRS' on the screen. Using the top rotary knob go down to option 23 then touch the 'DISP' button. Any previously entered call will show and can be edited using the touch screen. The -7 indicates you are on a handy, this is known as the Secondary Station Identifier or SSID. A list of other abbreviations can be found on page 5 of the FT3D APRS manual as are the Yaesu comments on setting the Call. Touching the PTT will save any changes and take you back to the front screen.

Set the GPS

The factory default is for this to be set to ON which is the normal setting for APRS so there is no need to change this unless it has been changed.

It is possible to make the GPS position slightly less accurate or input a manual one if you do not want to give your exact position.

To make it slightly less accurate PRESS 'DISP', touch 'APRS', turn the top knob to select 13 'BEACON INFO' touch 'DISP' to enter this option. Turn the top knob to select 'AMBIGUITY', touch 'DISP' the red arrow will move to 'OFF', use the top knob to turn this to '1 digit' then press the PTT to save & exit. By selecting '1 digit' the last digit of the position is missed off, it is also possible to select 2, 3 or 4 digit making the position even more inaccurate. See page 52 of the APRS Manual. The default is 'OFF'

If you want to input a manual position this can be done as page 4 of the APRS Manual. PRESS 'DISP', touch 'APRS', use the top knob to select option 24 'My POSITION', touch 'DISP' – at this point you have various options.

- a) To use the GPS use the top knob to select 'GPS', pressing the PTT will save & exit. This is the default setting.
- b) Turning the top knob to 'Manual' then touching 'DISP' will allow you to input a position manually. As page 4 of the APRS manual turning the top knob selects the LAT or LON then touching 'DISP' moves you to the next setting to be changed. Settings are done by turning the top knob. Typically 50 deg takes quite a few turns of the knob. Once you have entered the required position press the PTT to save and exit.

- c) Turning the top knob to select any of P1 to P10 followed by touching 'DISP' will show blank settings unless a previous position has been entered into that memory. Touching the 'P.WRITE' on the screen will enter the current GPS position into that memory. As usual pressing the PTT will save and exit.
- d) You can select any of the saved positions by following the info given in a) above but selecting the appropriate memory.

If using the memories mentioned above there does not seem to be a way of labelling them so you have to remember which location is in which memory.

I have managed to save the location of Rugby town centre into one of my memories by using the programming software for the FT3D. That location is 52° 22.37 n 1° 15.73 w

Turn the Modem on

PRESS 'DISP' touch 'APRS' Use the top knob to select option 4 'APRS MODEM' touch 'DISP' then select 1200bps by using the top knob. Touch the PTT to save and exit to the front screen.

Set the RX/TX Frequency

On this rig the APRS system works on the lower or B dial. Select the lower display by touching the lower part of the screen, it should then be the brighter part of the display. The actual frequency can be set using either memories or the VFO. The normal frequency used in the UK is 144.800MHz. On FT3D's I have programmed the APRS frequencies are in bank 5.

Once the APRS frequency has been set on the 'B' dial the set can be used on the 'A' dial and even left there. The APRS will still work on the 'B' dial.

Setting the digipeater route

The factory setting of 'WIDE1-1, WIDE2-1' in P3 is fine on this but it can be changed as on page 29 & 56 of the APRS manual. I normally leave mine on the default setting.

Using the setting in P2 of 'WIDE1-1' as page 56 will also work.

SENDING BEACONS

To enable the APRS system to send a signal back to you it needs to know which APRS repeater you are in range of. This is done by sending a beacon to the system either by setting the FT3D to send periodic signals so the APRS system can track you (As page 25 of the APRS manual) or by sending a beacon manually. At the moment we are not sure how long the system remembers which repeater you are in range of so sending beacons regularly may be needed.

To send a manual beacon touch 'FMW' on the bottom left of the screen followed by touching 'BCN-TX' which is second from left on the top of the displayed buttons. If your screen shows 'HOME' touch 'FWD' in the bottom right to change to the second screen.

When you touch 'BCN-TX' the red transmit light should show briefly as the signal is sent and then, if in range of a APRS repeater, you should get a signal back to acknowledge to system has received you.

SENDING MESSAGES TO ONE OTHER

Page 37 of the FT3D APRS manual gives good instructions on creating and editing messages to be sent.

The SSID (eg -7) should be added after the call sign.

From experiments we have done so far it appears that messages sent to a specific call sign are only received by that station but are viewable by anyone on the aprs.fi web site.

SENDING MESSAGES TO THE THURSDAY GROUP

As Ian's email of the 28/12/22 once you have mastered the above logging into the message group on Thursdays is simply a case of creating a message as above with the receiving station set as 'ANSRVR' and the message content as 'cq hotg Rugby ATS'

Further messages can then be sent to the Rugby group such as:-

'cq rats your free text'

Or to the Thursday group generally by:-

'cq hotg your free text'

CHECKING YOU MADE IT INTO THE SYSTEM

When you send any message or ping through a repeater such as MB7VR (which is the one at the Rugby club house) it will show you up on the map at www.aprs.fi If you are going to bookmark this page zoom into the required area before saving it, the location and area will then be saved.

To check if you logged into the Thursday net check on <https://aprs.fi/?c=message&call=ANSRVR&limit=50>

At the top of the screen you will see 'ANSRVR' in the call sign box the screen will be showing the last messages sent to the ANSRVR system, you can enter other call signs such as your own to see all messages sent by you and sent to you. When entering the call you need to include the full call including the Secondary Station Identifier (SSID) such as 'G8DLX -7' in which case only those calls with a SSID of -7 will show. A '*' can be used instead of the -7 so if other SSID's have been used they will all show.

A general search with just a '*' in the call sign box looks to bring up all messages sent via APRS and can be interesting.

I note that the screen shows the call signs in the reverse order giving the sending station first then the RX station instead of the correct one of called station then calling station!!!!