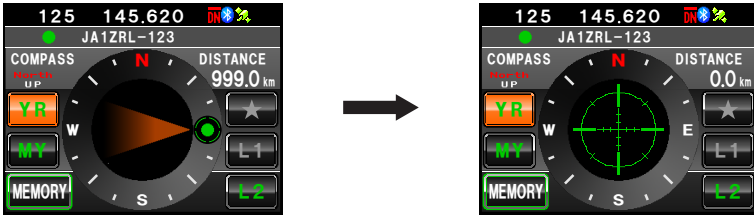When a partner station comes within 50 meters of your location, a beep will sound, the compass needle display will disappear, and the scope scale will appear in green



## Using the backtrack function

### ▌ Saving the destination

A maximum of three locations can be saved in the memory.

● **Registering the current location (departure point)**

**1** Switch to the Compass screen

**2** Touch **[MY]**

The display will turn orange in color.



**3** Touch **[MEMORY]**

Tip    This symbol is not active be touched when there is no position information.

**[★]**, **[L1]** and **[L2]** will blink.

**Using the Smart Navigation Function**

**4** Touch **[★]**, **[L1]** or **[L2]**

The position information will be saved in the memory and the touched location will turn orange in color.

**Tip**

When position information is already registered in **[★]**, **[L1]** and **[L2]**, the text will be displayed in green color.

### ● Registering the locations of other stations

When position information is included in the data of other stations received through digital communications, it can be saved in the memory.
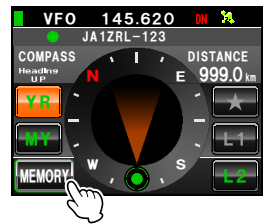
**1** Switch to the Compass screen

**2** Touch **[YR]**

The display will turn orange in color.

**3** Touch **[MEMORY]**

**[★]**, **[L1]** and **[L2]** will blink.

**4** Touch **[★]**, **[L1]** or **[L2]**

The position information will be saved in the memory and the touched location will turn orange in color.

**Tip**

When position information is already registered in **[★]**, **[L1]** and **[L2]**, the text will be displayed in green color.

## Displaying the position of the destination in real time

**1** Switch to the Compass screen

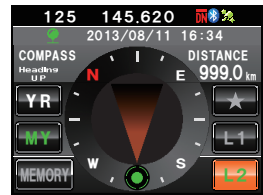**2** Touch **[★]**, **[L1]** or **[L2]**

Tip     This symbol is not active when position information has not been saved in the memory.

The direction of the compass needle will change following the position information that has been saved in the memory and a green circle will be displayed at the tip to show the direction of the destination.

The distance to the destination will also be displayed.

**3** Move while keeping the tip of the compass needle to point towards the top

Tip     When the destination registered after touching **[MY]** is selected, the date and time of the registration will also be displayed.
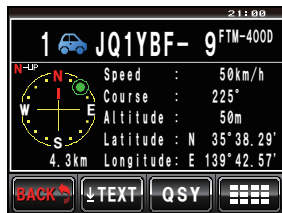
## What is the APRS Function?

There is a verity of methods to display GPS position information using amateur radios. APRS (Automatic Packet Reporting System) uses a format that is advocated by Bob Bruninga WB4APR. This system performs data communications for messages and position information.

When an APRS signal is received from a partner station, the direction, distance, speed etc. of the partner station in relation to your own station will be shown in the display of this radio.



When using the APRS function, the call sign and symbol etc. of your own station need to be set (initial settings).

Refer to the separate Operating Manual APRS Edition for details (download the manual from our YAESU website).

## What is the GM Function?

The GM (group monitor) function automatically checks to find if there are any stations with the GM function in operation on the same frequency within communication range.

The FTM-400XDR/DE can then display the position and distance and other information for each group member call sign on the screen.

Besides letting you know who is within your sphere of communication, this function is also convenient for instantly checking the relative positions of all the members in the group

Furthermore, this function can also be used to send data such as messages and images among the group members.

**Tips**
- The GM function operates only on Band A.
- The GM function does not work in the analog mode. When the GM function is activated, Band A will automatically switch to the DN mode.
- When sending image data with the GM function in operation, the mode will automatically switch to the FR mode (high speed data communication mode). At the end of the data transmission, the mode will automatically revert to the original V/D mode (simultaneous voice/data communication mode).

## Basic Methods to use the GM function

There are two ways to use the GM function:
(1) Displays all stations where the GM function is in operation in communications range
   (maximum of 24 stations can be displayed)
(2) Registers the ID of partners in the group and displays only the partners

An explanation of the two methods of starting the GM operation will be given.
Refer to the separate Operating Manual GM Edition for other details on how to use the
function (download the manual from our YAESU website).

### ● Displaying all the stations where the GM function is in operation

**1** Tune the frequency in Band A

**2** Press [GM]

Up to 24 stations operating within the sphere
of communication where the GM function is in
operation.

> Tips • Stations within the sphere of communications are
>   displayed in green.
> • Stations outside the sphere of communications are
>   displayed in grey.
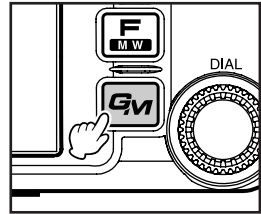
### ● Displaying only partners registered in the group

When a group that has been created beforehand is selected from the group list and the
screen is touched, the status of the members registered in that group will be displayed.
A total of up to 16 groups can be created. Names such as "Touring", "Camp" etc. can be
assigned to the groups. Up to 24 stations can be registered as members in each group.

**1** Tune in the frequency of Band A

**2** Press [GM]
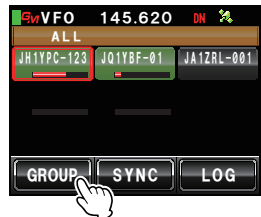
**3** Touch **[GROUP]**

**4** Turn ⚙ or touch the screen to select a group

**5** Touch the screen to select the group

Up to 24 group members with the GM function in operation at the same frequency will be displayed.

**6** Touch **[GROUP]**

The display will return to the group list.

**7** Press ⚐

The GM function will be turned off and the display will return to the previous screen.

Tip   The communications mode will automatically switch to the DN mode of the AMS.

## Communicating with Specified Partner Stations

### Using the tone squelch

This radio is equipped with the CTCSS (Continuous Tone-coded Squelch System) which allows audio to be heard only when receiving signals containing the same frequency tone as the tone that has been set in the tone squelch menu. By matching the tone frequency with the partner station in advance, a quiet standby is possible.

**Caution**

CTCSS does not work in the digital mode. Use the 🔲 key at the beginning to switch the communication mode to the auto-mode select function (AMS), or to the analog mode.

### ▌ Setting the tone frequency

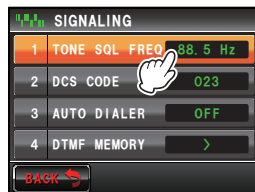The tone can be selected from 50 frequencies between 67.0 Hz and 254.1 Hz.

**1** Press 🔳 for one second or longer

The set-up menu will be displayed.

**2** Touch **[SIGNALING]**

The menu list will be displayed.
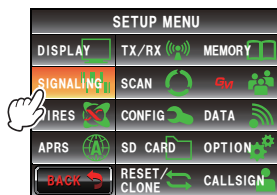
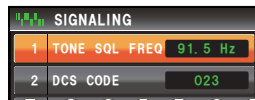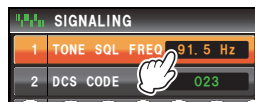**3** Turn 🎛️A or touch the screen to select **[1 TONE SQL FREQ]**

**4** Touch **[1 TONE SQL FREQ]**

The characters of the set value will turn orange in color.

**5** Turn 🎛️A to select the frequency

Tip   Factory default value: 88.5 Hz

**6** Touch **[1 TONE SQL FREQ]**

The characters of the set value will turn green in color.

**7** Press 🖭 for one second or longer

The tone frequency will be set and the display will return to the previous screen.

Tip   The display can also be returned to the previous screen by touching **[BACK]** twice.

### Using the tone squelch

**1** Press 🔳

The function menu will be displayed.

**2** Touch **[SQL]** to display "T-TRX"

Tips • When **[SQL]** is not displayed in the menu, use **[BACK]** or **[FWD]** to change the menu.

• The squelch type changes in the following sequence each time it is touched.
"NOISE" "T-TX" "T-TRX" "T-REV" "D-TRX" "PRGM" "PAGER" "D-TX"* "TT/DR"* "DT/TR"*

*These squelch types will be displayed when **[SIGNALING]** → **[8 SQL EXPANSION]** is set to "ON" in the set-up menu.

The squelch will open only when receiving a tone signal of the set frequency.

**Tip**

A bell can be rung (beep) when signals containing the same tone code are received (☞P.110).

### Transmitting the tone signal

**1** Press 🔳

The function menu will be displayed.

**2** Touch **[SQL]** to display "T-TX"

## Communicating with Specified Partner Stations

**3** Press the microphone [PTT]

Radio waves including the tone signal will be transmitted while [PTT] is being pressed.

**Tip**

When alternating between transmit and receive repeatedly, set **[SQL]** in the function menu to "T-TRX".

## Using digital code squelch

This radio is equipped with a DCS (Digital Coded Squelch) function that allows audio to be heard only when signals containing the same DCS code are received. By matching the DCS code with the partner station beforehand, a quiet receive standby is possible.

**Caution**

DCS does not work in the digital mode. Use the 🅐 key at the beginning to switch the communication mode to the auto-mode select function (AMS) or analog mode.

### Setting the DCS code

The DCS code can be selected from 104 digital codes 023 to 754.

**1** Press 🔲 for one second or longer

The set-up menu will be displayed.

**2** Touch **[SIGNALING]**

The menu list will be displayed.
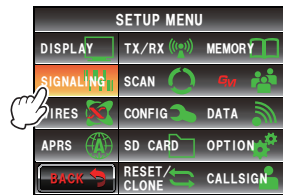
**3** Turn 🅐, or touch the screen to select **[2 DCS CODE]**

**4** Touch **[2 DCS CODE]**

The characters of the set value will turn orange in color.