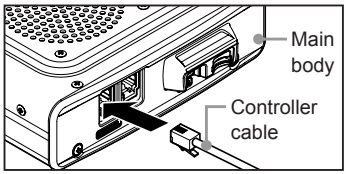
Connecting the Radio

Connecting the controller to the main body

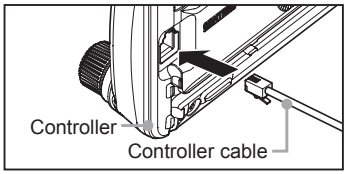
Caution

Make sure the power supply is switched OFF before connecting the cable between the controller and the main body.

1 Plug the connector of the controller cable into the [CONTROL] jack at the front of the main body until a click sound is heard



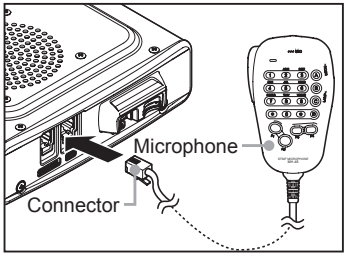
2 Plug the other connector of the controller cable into the [CONTROL] jack at the back of the controller until a click sound is heard



Connecting the microphone

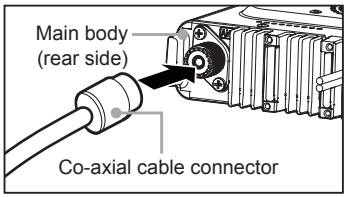
1 Plug the microphone connector into the [MIC] jack at the front of the main body until a click sound is heard

Tips
- To remove the microphone, pull the connector out while pressing the latch.
- Using the optional microphone extension kit "MEK-2", a microphone with a 8-pin connector can be used. A microphone extension cable (about 3 m long) is also included in MEK-2. Use it to install the microphone in locations which cannot be reached by the attached microphone cable.



Connecting the antenna

1 Attach the antenna co-axial cable to the [ANT] terminal at the back of the main body and tighten the connector



Connecting the Power Supply

Connecting the car battery

When using this radio as a mobile unit, connect the DC power supply cable to the negative ground 12 V car battery.

Cautions

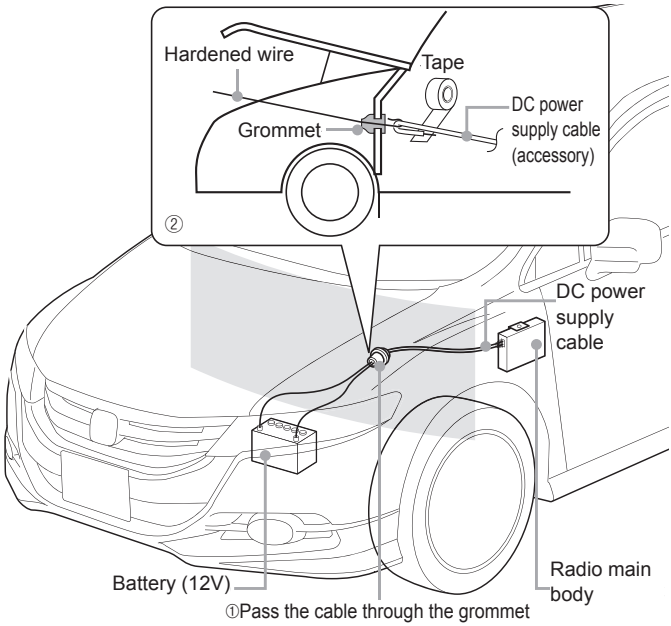
- Use the radio in a car with a negative ground 12 V DC system, where the minus (-) pole of the battery is connected to the car body.
- Do not connect the radio to the 24 V battery of a large vehicle.
- Do not use the cigarette lighter inside the car as a power source.

(1) Cable routing from inside the car to the engine compartment

Rout the DC power supply cable to the engine compartment, passing it through a grommet in the fire wall from the passenger side.

1. Feed a hardened wire from the engine compartment through the grommet into the interior of the car
2. Hook the end of the “feed” wire with the “bare wire” end of the provided DC power supply cable
3. Fold and bend the ends of the wires and wind insulation tape around them
4. Pull the “feed” wire back into the engine compartment

   The DC power supply cable will be pulled through the grommet into the engine compartment.
5. Peel off the tape and remove the DC power supply cable from the “feed” wire



(2) Connecting the power supply cable

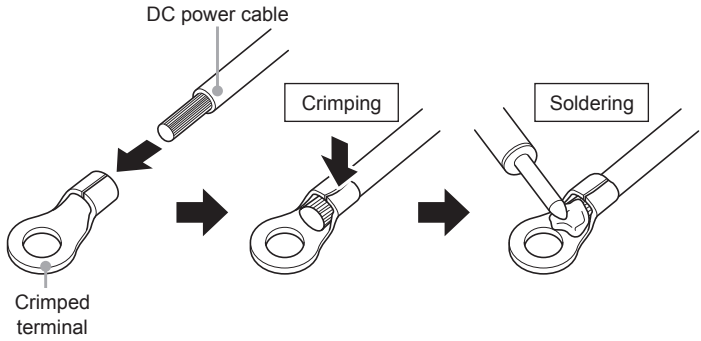
Cautions

- Do not use a DC power supply cable other than the one that is provided or specified.
- Do not rout the DC power supply cable where objects may be placed on top of it or persons may step on the cable.
- Do not use the DC power supply cable with the fuse holder cut off.
- Do not reverse the polarity (positive and negative) when connecting the battery.

1 Disconnect the minus (-) terminal from the battery

This prevents short-circuiting the 12 V DC voltage while working on the cables.

2 Obtain commercially available terminals and crimp or solder both the red (+) and black (-) wire ends of the DC power supply cable



3 Connect the red wire (+) of the DC power supply cable to the positive (+) terminal of the battery

Caution Fasten the DC power supply cable securely so that the terminals do not get disconnected.

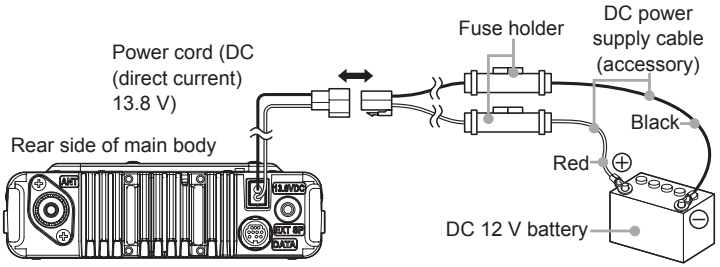
4 Reconnect the negative (-) terminal of the battery that was disconnected

5 Connect the black wire (-) of the DC power supply cable to the negative (-) terminal of the battery

Caution Fasten the DC power supply cable securely so that the terminals do not get disconnected.

6 Connect the DC power supply cable to the connector of the power cord of the main body

Press the plug into the connector until a click sound is heard.



Connecting the Power Supply

Connecting the external power supply equipment

When using this radio as a fixed station, use an external 12 V DC power source.

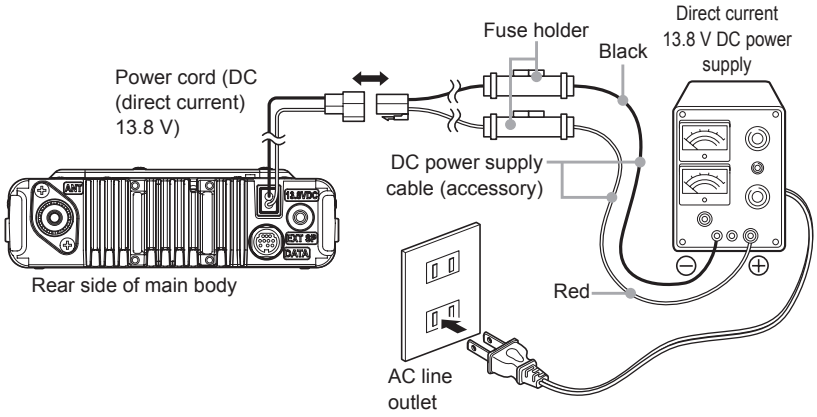
Cautions

- Use an external power source capable of supplying DC 13.8 V, a current capacity of 20 A or more (FTM-400XDR/DE).
- Make sure to switch OFF the power of the external power source before connecting.

1 Connect the red wire (+) of the provided DC power supply cable to the positive (+) terminal of the external power source, and the black wire (-) to the negative (-) terminal of the external power source

2 Connect the DC power supply cable to the connector of the power cord of the main body

Press the plug into the connector until a click sound is heard.



Setting Up the micro-SD Card

The following operations can be carried out by using a micro-SD card in this radio.

- Backing up the information and settings of the radio
- Saving the information in the memory channels
- Saving the settings in the set-up mode
- Saving the GPS log data
- Saving photos taken with the optional speaker microphone with camera “MH-85A11U”
- Saving data that has been downloaded using the GM function and WIRES-X function
- Exchanging the saved data among multiple radios

Micro-SD cards that can be used

2 GB, 4 GB, 8 GB, 16 GB and 32 GB micro-SDHC cards can be used in this radio.

Cautions

- The micro-SD or micro-SDHC cards are not provided with the product.
- Not all micro-SD and micro-SDHC cards sold commercially are guaranteed to work with this product.

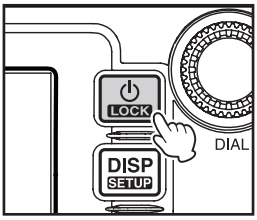
Things to note when using micro-SD cards

- Do not bend the micro-SD card or place heavy objects on top of it.
- Do not touch the terminal face of the micro-SD card with your bare hands.
- Micro-SD cards that are initialized in other devices may not record normally when used in this device. Re-initialize the micro-SD card in this radio when using a card that has been initialized in another device. (Refer to Page 35 on how to initialize the memory card)
- Do not pull the micro-SD card out, or switch the power to the radio OFF when reading or writing data to the card.
- Do not insert anything other than a micro-SD card into the micro-SD card slot of the radio.
- Do not pull out or insert the micro-SD card with unreasonable force.
- When a single micro-SD card is used for a long period of time, writing and deletion of data may become disabled. Use a new micro-SD card when data can no longer be written or erased.
- Note that Yaesu shall not be liable for any damages suffered as a result of data loss or corruption in use of the micro-SD card.

Setting Up the micro-SD Card

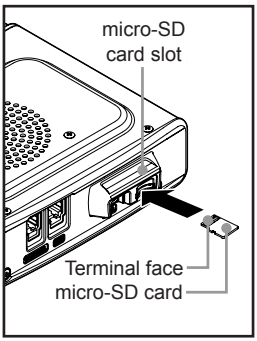
Installing the micro-SD card

1 Press [LOCK] for 2 seconds or longer to switch off the power to the main body



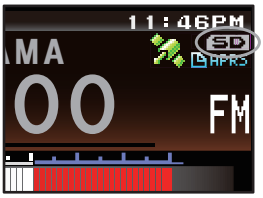
2 Insert the micro-SD card into the micro-SD card slot, with the terminal face on top, until a click sound is heard

Cautions
- Insert the micro-SD card in the correct direction.
- Do not touch the terminal of the micro-SD card with your hands.



After the power is switched on, the "SD" icon will be displayed at the top right of the display.

Tip It may take a while for the icon to appear depending on the card capacity.



Removing the micro-SD card

1 Press [LOCK] for 2 seconds or longer to switch off the power to the main body

2 Push in on the microSD card
A click sound will be heard and the micro-SD card will be pushed outward.

3 Pull the micro-SD card from the micro-SD card slot

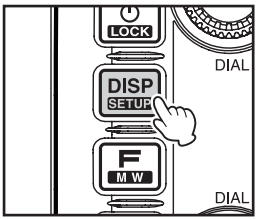
Initializing the micro-SD card

When using a new micro-SD card, initialize the micro-SD card according to the following procedure.

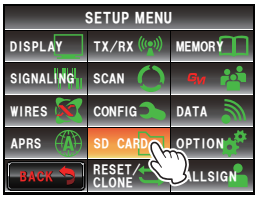
Caution

Upon initialization, all the data recorded in the micro-SD card will be erased. Check the contents of the micro-SD card before initialization.

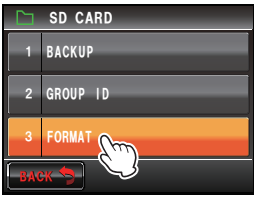
1 Press [DISP SETUP] for one second or longer
The set-up menu will be displayed.



2 Touch **[SD CARD]**
The menu list will be displayed.



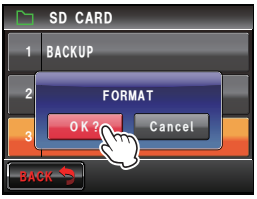
3 Touch **[3 FORMAT]**
The format confirmation screen will be displayed.



4 Touch **[OK?]**
The micro-SD card will be initialized.

Tip Touch **[Cancel]** to stop the initialization.

"Completed" will be displayed when initialization is completed and the screen will then return to the menu list.

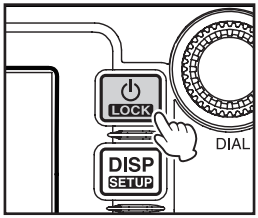


Receiving

Turning the power on

1 Press [LOCK] for 2 seconds or longer

The power will be switched on, and the display will appear on the screen.



Tips
- When switching the power on for the first time after purchasing, or after resetting, a screen requesting the call sign of your own station be entered, will be displayed.
- From the second time onwards, the call sign of your own station entered the first time will be displayed.

Switching the power off

1 Press [LOCK] for 2 seconds or longer

The screen display will disappear, and the power will be switched off.

Inputing the call sign

When switching the power on for the first time after purchasing, or after resetting the device, a screen requesting the call sign of your own station be entered will be displayed.
The call sign is used to identify the transmitting station when communicating in the digital mode.

1 Touch the blinking **[CALLSIGN]**

Tips The display will change to the character input screen automatically if there are no operations for about 3 seconds.

2 Touch a character key

The touched character will be displayed at the top of the screen.

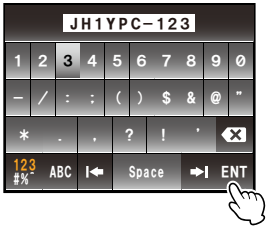
Enter each character of your call sign.

Tips
- Up to 10 characters (letters, numbers, and a hyphen) can be entered.
- Refer to Page 23 on how to operate the character input screen.

3 Touch **[ENT]**

The screen will change.

Thereafter, the entered call sign is displayed at the bottom of the power on screen, and the display will switch to the frequency display screen (dual band screen).



Switching the operating band

The two bands are displayed at the top and bottom of the dual band screen. The frequency and the modulation mode of the “operating band” can be changed. The band that is not in operation is called the “sub-band”.

1 Touch the frequency display area of the band that you would like to set as the operating band

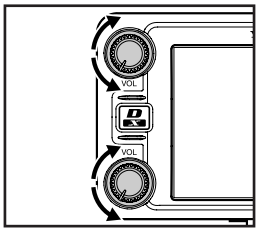
The characters of the tag and frequency will be displayed in white. The sub-band characters will be displayed in gray.

Tip The operating band can also be changed by pressing DIAL.

Adjusting the volume

1 Turn VOL.

The volume level will be displayed in the VOL meter below the frequency.



Adjusting the squelch level

Annoying noises can be muted when a signal cannot be detected. Band A and Band B squelch levels can be individually adjusted. Noise can be canceled more easily when the squelch level is increased but it may become more difficult to pick up weak signals. Adjust the squelch level as required.

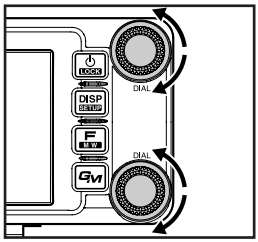
1 Touch **[SQL]**

When **[SQL]** turns orange, the VOL meter below the frequency will change to show the SQL level setting.

2 Turn DIAL to adjust the squelch level

The level will be displayed in the SQL meter.

Tip The SQL meter will return to the VOL meter if there is no operation for three seconds.

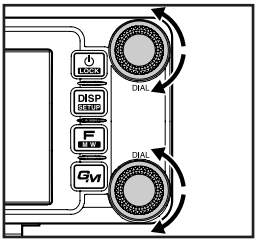


Tuning the radio

● Using the knobs

1 Turn DIAL

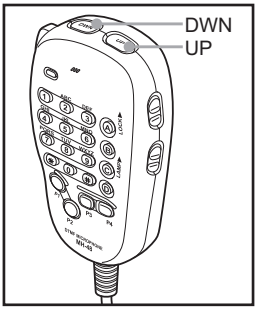
The frequency will increase when the knob is turned in a clockwise direction and decrease when turned in a counter-clockwise direction.



● Using the microphone keys

1 Press **[UP]** or **[DWN]**

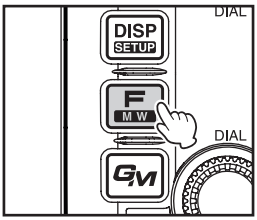
The frequency increases when **[UP]** is pressed, and decreases when **[DWN]** is pressed.



● Entering the numerical figures

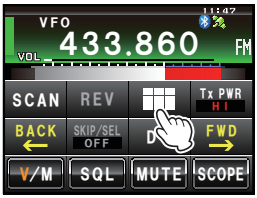
1 Press F

The function menu will be displayed.



2 Touch **[▦]**

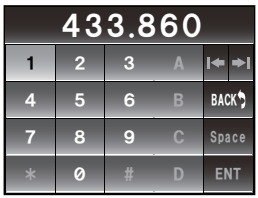
The number input screen will be displayed.



3 Touch a number key

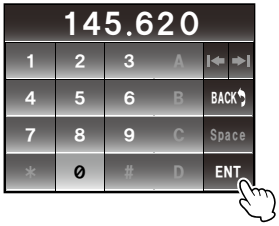
The touched number will be displayed at the top of the screen.

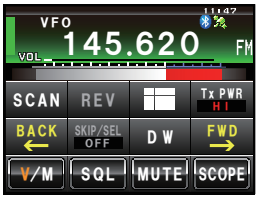
Tip Refer to Page 23 for operation of the number input screen.



4 Touch **[ENT]**

The display will return to the function menu and the entered frequency of the operating band will be displayed at the top of the screen.





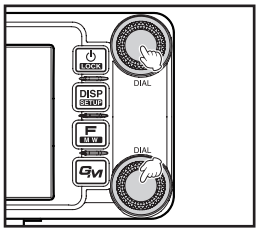
Changing the frequency steps

The frequency step while tuning with the knob or **[UP]**/**[DWN]** keys of the microphone, can be changed.

● Changing the frequency step to 1 MHz temporarily

1 Press (DIAL) of the operating band, or touch the frequency display area of the operating band

The MHZ field in the frequency display will blink.

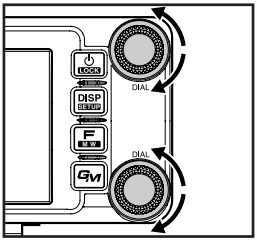


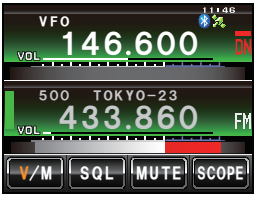
Receiving

2 Turn DIAL of the operating band

The frequency will change in 1 MHz steps

Tip When there is no operation for three seconds, the MHz field will stop blinking and the frequency step will return to the normal step.

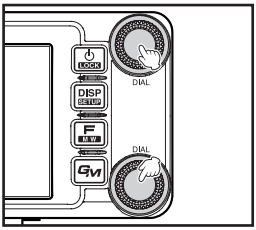




● Changing the frequency step to 5 MHz temporarily

1 Press DIAL for one second or longer

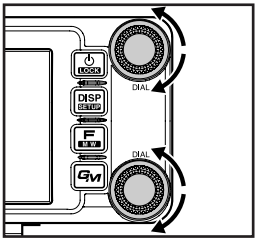
The kHz frequency digits will not be shown on the screen.



2 Turn DIAL

The frequency will change in steps of 5 MHz.

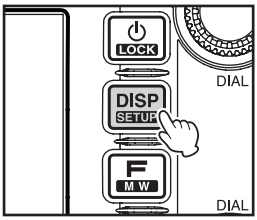
Tip When there is no operation for three seconds, the kHz digits will be displayed and the frequency step will return to the normal step.



● Changing the frequency step using the set-up menu

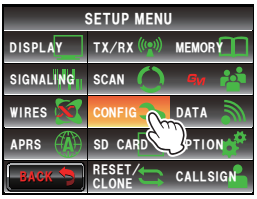
1 Press DISP SETUP for one second or longer

The set-up menu will be displayed.

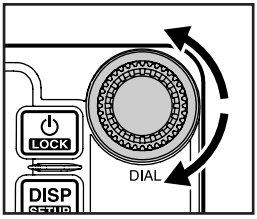


2 Touch **[CONFIG]**

The menu list will be displayed.

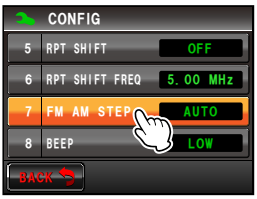


3 Turn DIAL or touch the screen to select **[7 FM AM STEP]**



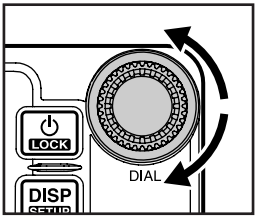
4 Touch **[7 FM AM STEP]**

The frequency step that is currently set up will change to orange.



5 Turn DIAL to select the frequency step

The setting will change in the following sequence:
AUTO → 5.00 KHz → 6.25 KHz → 8.33 KHz (air band only) → 10.00 KHz → 12.50 KHz → 15.00 KHz → 20.00 KHz → 25.00 KHz → 50.00 KHz → 100.00 KHz



Tip Factory default value: AUTO

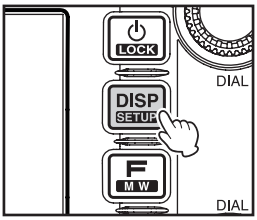
6 Touch **[7 FM AM STEP]**

The selected frequency step will be set, changing from orange to green.

7 Press DISP for one second or longer

The frequency step 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.



Switching the operating mode

The operating mode can be switched between the VFO mode where the frequency can be freely set, and the memory mode where the channels saved in the memory are recalled for operation.

1 Choose the operating band