

YAESU
The radio

C4FM/FM 144/430MHz
DUAL BAND DIGITAL TRANSCEIVER

FT3DR
FT3DE

Operating Manual



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Features of the Yaesu FT3DR/DE Transceiver.

- Digital communication using Yaesu (C4FM (Quaternary FSK) system)
- Equipped with AMS (Automatic Mode Select) Function
The AMS (Automatic Mode Select) feature automatically selects the analog FM and C4FM digital modes, according to the signal of the other station.
- The DG-ID (Digital Group ID) feature (page 28), and the Group Monitor (GM) feature enable automatically locating, and communicating with other stations within contact range, that have the matching DG-ID number, (Group ID number from 00 to 99).
- Full color 320x240 dot LCD, high resolution TFT touch panel display
The communication status and settings of the FT3DR/DE are displayed in a straight-forward manner, achieving excellent operability.
- Equipped with Bluetooth® function as standard
Supports hands-free communication using the optional Bluetooth® headset SSM-BT10 or a commercially available product.
- WIRES-X connection support
- Supports WIRES-X portable digital node function
- Equipped with GM function
- Digital Personal ID (DP-ID) feature
- Simultaneous reception of two separate frequencies, on different bands, or within the same band (V+V/U+U)
- Wide-band reception (520kHz to 999.995MHz) (USA Cellular Blocked))
- Waterproof design equivalent to IPX5, which protects the transceiver from rain and splashes
- Large-capacity 1256 memory channels
- Display memory tags comprised of up to 16 alpha/numeric characters
- Convenient reception of preset receiver memory channels
- A wide variety of scan features
- Built-in GPS unit permitting display of the current location and heading information
- Ready for APRS® communication with world standard 1200 / 9600bps AX25 modem (B-band only)
- High-resolution band scope that displays 79 channels
- Smart Navigation function
- A variety of individual Selective Calling functions (Tone Squelch (CTCSS) and DCS etc.)
- Pager (EPCS) function to call only a specific station
- Simple high brightness LED light function
- Battery save function extends operating time
- Data terminal for communication with external equipment and firmware updates
- Compatible with microSD memory cards
- Snapshot function (optional camera/microphone MH-85A11U is required)


Thank you for purchasing the FT3DR/DE Transceiver. We urge you to read this manual in its entirety, and also the Advance Manual (available for download on the Yaesu website), to gain a full understanding of the amazing capability of the exciting new FT3DR/DE Transceiver.

WIRES-X, GM function and APRS instruction manuals are not included in the product package. They are available and may be downloaded from the Yaesu.com website.

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Quick Guide

① Turning the Power ON

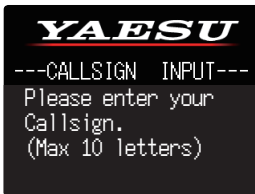
Install the charged battery pack and then press and hold the  switch.

② Inputting the Call sign

When turning the power ON for the first time after purchasing, input the call sign of your own station.




Input call sign may be changed from Set Mode [CALLSIGN] (page 87).

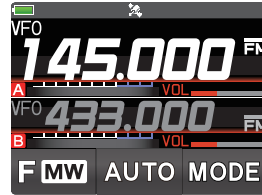
1. When turning the power ON for the first time after purchasing, the call sign input screen will be displayed.



2. Press the [DISP] key.



3. Input the call sign.
Rotate the **DIAL** knob to select each character.
Touch  to move the cursor to the right.
See "Text input screen" on page 89 to input a call sign.
4. Repeat step 3 to input the remaining call sign characters.
Touch  to move the cursor to the left.
Touch  to erase the character at the cursor position.
5. Press the **PTT** switch to conclude inputting.
Normal operation (VFO Mode) screen will be displayed.



③ Selecting the Operating Band

Press the [BAND] key.

④ Tuning the frequency

Rotate the **DIAL** knob.

⑤ Adjusting the volume

Rotate the **VOL** knob to adjust the volume to a comfortable level.

⑥ Adjusting the squelch setting

The squelch level may be adjusted to mute the background noise when no signal is received.

1. Press the **SQL** switch.
2. Rotate the **VOL** knob to adjust the squelch to a level at which the background noise is muted.
* When the squelch level is increased, the noise is more likely to be silenced, but it may become more difficult to receive weak signals.
3. Press the **SQL** switch to save the setting.

⑦ Selecting the Communication Mode

The communication mode is automatically selected to correspond to the signal being received.

Touch [MODE] to manually select the communication mode.

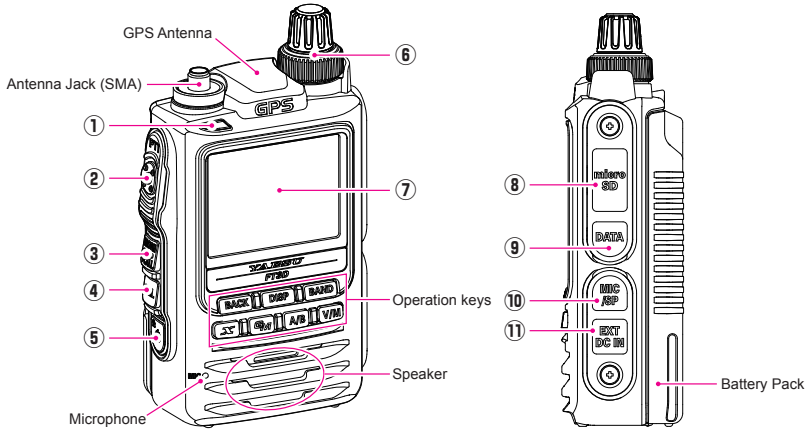
⑧ Transmitting/Receiving Signals

Talk into the microphone while holding the **PTT** switch on the side. Release the **PTT** switch to return to receive.



Set the Bluetooth® function

The FT3DR/DE equipped with the Bluetooth function. To use a Bluetooth headset, refer to "Bluetooth® Operation" on page 44 for setting.

Transceiver

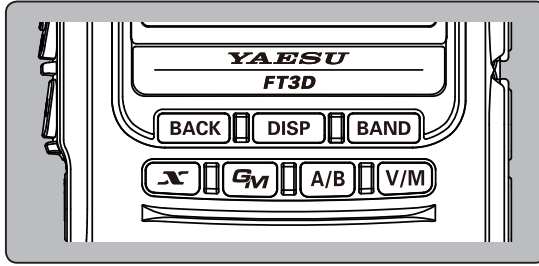


①	TX/BUSY LED Lights green on A-band receive, blue on B-band, and blue on A-band and B-band receive. Lights red during transmit.
②	PTT Switch Press and hold the PTT switch to transmit, and release it to receive.
③	MONI/T-CALL Switch USA/Asian version Press the MONI/T-CALL switch to open the squelch. European version Press the MONI/T-CALL switch to activates the T-CALL(1750 Hz).
④	SQL Switch Press the SQL switch, then rotate the VOL knob to adjust the squelch level.
⑤	Power (Lock) Switch • When the power is OFF, press and hold this switch to turn the Power ON. • When the power is ON, press and hold the switch again to turn the Power OFF. • When the power is ON, press this button briefly to engage, or release the key lock.
⑥	DIAL knob Rotate the DIAL Knob to change the frequency or select a memory channel. VOL knob Rotate the VOL Knob to adjust the audio volume level.
⑦	Full Color Touch screen display Touch to set the frequency and various other settings.
⑧	MicroSD Memory Card slot*

⑨	DATA Terminal* • Connect the optional camera-equipped microphone (MH-85A11U) to this terminal. • To use the clone function, connect to another FT3DR/DE with an optional clone cable (CT-168). • When updating the firmware, connect to a PC using a USB cable. * For instructions to update the firmware, access the Yaesu Website. • An external GPS may be connected to this terminal.
⑩	MIC/SP jack* Connect the optional speaker microphone or earpiece microphone to this jack. When an external microphone or cable is connected, the dust and splash protection does not function.  Do not connect any microphone which is not specified by Yaesu.
⑪	EXT DC IN jack* • To charge the battery pack, connect the battery charger (SAD-25) to this jack. • Connect an external power supply adapter with a cigarette lighter plug (SDD-13) or an external power cable (E-DC-6) to this jack.  Do not connect any battery charger which is not specified by Yaesu.

* When the included antenna and battery pack are installed and the MIC/SP jack, DATA terminal, micro SD card slot and EXT DC IN jack are securely covered with rubber caps, the FT3DR/DE meets the IPX5 waterproofing specifications.

Operation Keys



[BACK] key

Press to return to the previous screen.

[DISP] key

- Each press switches between the frequency display and the backtrack display.
- Press and hold to enter Set mode.

[BAND] key

Each press increases the frequency band.
Touch [F MW], then press the [BAND] key to switch the frequency bands in reverse order.

[X] key

- In normal mode, press to start WIRES-X.
- When WIRES-X is activated, press and hold for over one second to return to the normal mode.

[GM] key

- Press to turn the GM function ON/OFF.
- Press and hold to enter DG-ID number setting screen.

[A/B] key

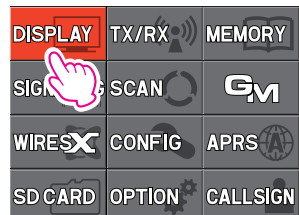
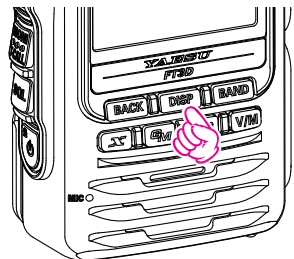
- Pressing each time switches between A-band and B-band.
- Each press switches between the Dual Band Receive mode and the Mono Band Receive mode.

[V/M] key

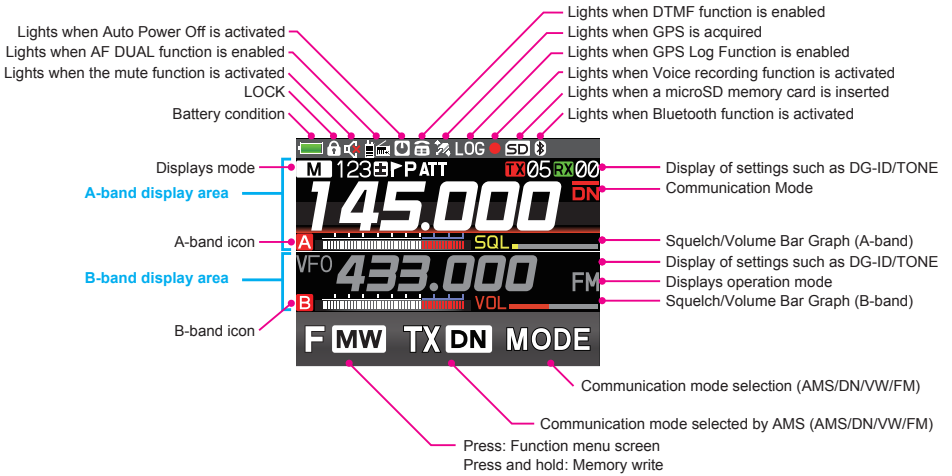
Each press switches between VFO mode and memory mode.

Changing the Transceiver settings

1. Press and hold the [DISP] key.
The SET MODE screen will be displayed.
2. Touch the desired item in Set Mode.
The Sub-menu screen will be displayed.
 - May also be operated by rotating the **DIAL** knob to select the desired item in Set Mode, and then press the [DISP] key.
3. Press the **PTT** switch to save the settings and return to normal operation.



Touch Screen Display



● Status Bar



The battery condition is displayed in 8 steps.



: Full battery power

: Battery is depleted. Charge battery.

: (When blinking) Charge battery immediately.



Appears when the lock function is enabled.



Appears when the Mute function for B-band is enabled.



Appears when the AF DUAL function is enabled.



Appears when the APO (Automatic Power-Off) function is enabled.



Appears when the DTMF Autodialer function is activated.



Appears when the Built-in GPS function is activated.

Appears: Satellites are acquired.

Blinks: Satellites cannot be acquired.



Appears when the Voice recording function is activated.



Appears when the GPS Log function is enabled.



Appears when a microSD card is inserted.

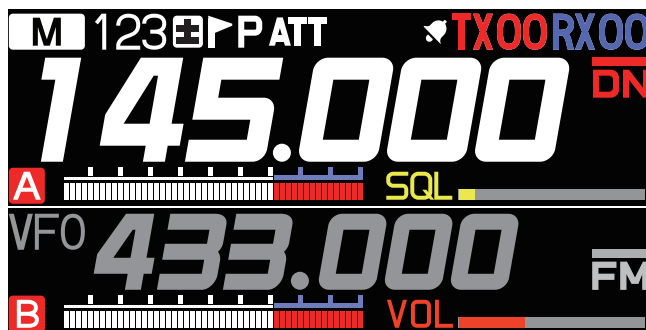


Appears when the Bluetooth function is activated.

Appears: Bluetooth device is connected.

Blinks: Bluetooth device not connected.

● A-band / B-band display area



A-band display modes



VFO : VFO mode
M 123 : Memory mode ("M" and channel number)
HM : Home Channel



- : Repeater minus (-) shift

+ : Repeater plus (+) shift

⊞ : Split operation



Specified Memory Channel

(Specify that only designated memory channels are scanned during memory scanning.)



Skip Memory Channel

(Permits designating undesired channels to be skipped during scanning.)



Priority Memory Channel

(The transceiver checks for signals on the frequency registered to the selected Priority Memory Channel, once every 5 seconds.)



ATT (attenuator) function

(When the desired signal is extremely strong, activate the attenuator to reduce the incoming signal from the antenna.)



Bell function is activated.



TX/RX DG-ID is displayed

TX00RX00 :TXxx (The transmit DG-ID number), RXxx (The receive DG-ID number)

Squelch type is displayed (For additional details, refer to the Advanced Manual.)

TN : Tone Encoder (tone frequency is displayed)

TSQ : Tone Squelch (tone frequency is displayed)

DCS : DCS (Digital Code Squelch) (DCS code is displayed)

RTN : Reverse Tone (tone frequency is displayed)

PR : Signal Squelch

PAG : Pager (EPCS)



The following can be set when the squelch expansion (see page 73) is on.

DC : Send the DCS code only during transmission.

T-D : Send the CTCSS tone signal during transmit, and wait for the DCS code in receive mode. (tone frequency is displayed)

D-T : Send the DCS code during transmit, and wait for the CTCSS tone signal in receive mode. (tone frequency is displayed)

Displays the operating mode (Digital mode is indicated by a red icon)

FM : FM (Analog) mode

DN : Normal digital mode (digital mode using C4FM modulation)

VW : Wide digital mode (digital mode using C4FM modulation)



FM : AMS (Automatic Mode Select) FM (Analog) mode

DN : AMS (Automatic Mode Select) DN mode

VW : AMS (Automatic Mode Select) VW mode

When AMS (Automatic Mode Select) function is activated, indicator is shown with a bar appearing above the mode.



A : A-band icon

B : B-band icon



: S meter (Displays received signal strength in 10 levels)



: PO meter (Displays transmit output in 4 levels when transmitting)



: Volume level



: SQL level

● Touch keys display area



Touch: To enter the Function Menu

Touch and hold: To activate the "Memory Write" mode

Each touch steps the transmit communication mode as follows:

→ AUTO → TX (FM) → TX (DN) → AUTO → ...



AUTO : Automatically selects the transmit mode to correspond to the received signal.

TX (FM) : Always transmits in the analog FM mode.

TX (DN) : Always transmits in the digital (DN) mode.

Each touch steps the communication mode as follows:

→ **FM** → **DN** → **VW*** → **FM** → **FM** → ...

The current communication mode is displayed on the upper right of the frequency.



FM : AMS function operation (A bar is displayed at the top of the communication mode icon, and the AMS function automatically displays the selected communication mode.)

DN : V/D Mode (Voice/Data simultaneous transmission mode)

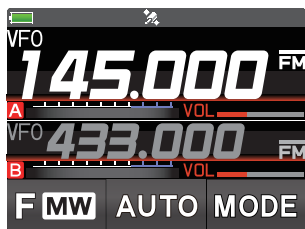
VW : Wide digital mode (high-quality digital communication)*

FM : FM (Analog) mode

* When the Set Mode item [TX/RX] → [2 DIGITAL] → [4 DIGITAL VW] is set to "ON" (factory default is "OFF"), the Voice FR (VW) may be selected.

● Dual Band Screen

A-band and B-band are displayed in a top-down fashion.
Both bands are received simultaneously.



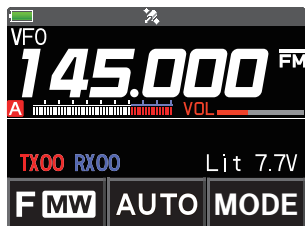
- Touch the frequency of the operation band (white display) to display the numeric keypad screen for frequency input.
- Touch the sub-band (gray display) frequency to change the operation band.



Press and hold the [A/B] key.

● Mono Band Screen

A-band or B-band is displayed.
Receives only the displayed band.



- Touch the frequency to display the numeric keypad screen for frequency input.
- The memory tag and battery voltage etc. are displayed on the lower segment.

● Function Menu Screen

Touch [F MW] to display the function menu screen.

Press the [BACK] key to return to the previous screen.

There are two function menus. Touch [FWD →] or [BACK ←] at the bottom right of the display to switch the screens.

Function Menu Screen 1



Touch [FWD →]



Touch [BACK ←]

Function Menu Screen 2




Touch [BACK ←] to display
“Function menu screen 1”.

Touch [FWD →] to display
“Function menu screen 2”.

● **BACKTRACK Screen**

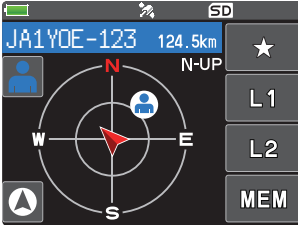
Either the backtrack screen or the GPS information screen that was displayed last will be displayed.

• Real-time navigation function

Touch [] at the top left of the screen to display the position and direction of the partner station in real time during communication in C4FM digital V/D mode. (The signal of the partner station must contain location information.)

• BACKTRACK function

May be register the departure point etc. up to 3 places (“★”, “L1”, “L2”) in advance and display the distance from the current location to the registered point in real time.

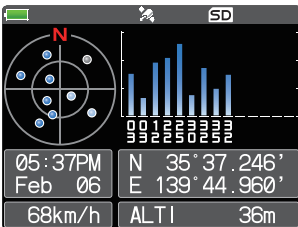


Touch the screen (other than the Touch keys)

● **GPS Screen**

The backtrack screen, or the GPS information screen, whichever was displayed last, will be displayed.

The GPS satellites status and numbers are shown.

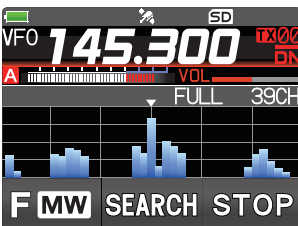


The following information is displayed.

- Direction and elevation of satellites, and their signal strengths
- Current latitude and longitude
- Moving Speed
- Altitude of current location

● **Band Scope Screen**

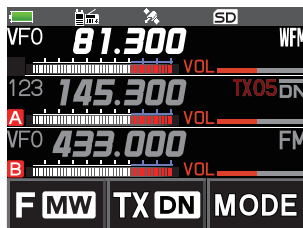
In VFO mode, the Band Scope searches the channels above and below the center receive frequency at high speed. The signal strengths are displayed on a graph, so the presence or absence of a signal on any channel is easily noted.



- The frequency may be changed by turning the **DIAL** knob.
- Touch [**SEARCH**] or [**STOP**] to begin or stop the search.
- The number of channels to search in Band Scope may be set to 19, 39 or 79. (See “Setting the Search Channel for the BAND SCOPE Function” (page 63)).

● AF DUAL Screen

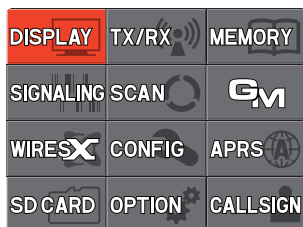
While receiving and listening to a radio broadcast, the A-band and B-band may also simultaneously be monitored for activity.



- When a signal is received on A-band or B-band, the broadcast audio is muted and the A or B band audio is heard.
- To end the AF DUAL function, touch [F MW] again, then touch [A. DUAL].

● SETUP MENU Screen

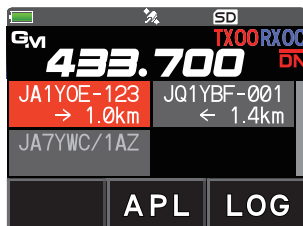
Set Mode allows selecting various functions from the displayed list and then setting the parameters of each function according to individual preferences.



- Press the **PTT** switch or press the [BACK] key several times to exit the set mode.

● GM (Group Monitor) Screen

Automatically listens for stations operating with GM function on the same frequency, or stations operating in DN mode that are within the communication range, and displays the call sign, direction, distance, within / outside.



- Members in the service area that can communicate are displayed in bright green.
- Select and touch a member station position to display it with multiple members centered around your own station on the compass screen.
- Touch [APL], to display the position with multiple members centering on your own station on the compass screen.
- Touch [LOG] to view previously sent or received messages and photos.

Safety Precautions (Be Sure to Read)

Be sure to read these important precautions, and use this product safely.

Yaesu is not liable for any failures or problems caused by the use or misuse of this product by the purchaser or any third party. Also, Yaesu is not liable for damages caused through the use of this product by the purchaser or any third party, except in cases where ordered to pay damages under the laws.

Types and meanings of the marks



DANGER

This mark indicates an imminently hazardous situation, which, if not avoided, could result in death or serious injury.



WARNING

This mark indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.




CAUTION


This mark indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury or only property damage.

Types and meanings of symbols



These symbols signify prohibited actions, which must not be done to use this product safely. For example:  indicates that the product should not be disassembled.



These symbols signify required actions, which must be done to use this product safely. For example:  indicates that the power plug should be disconnected.



DANGER



Do not use this product in an area where RF transmitters are prohibited, e.g., inside of a hospital, airplane, or train.
This product can affect electronic or medical devices.



Do not transmit with this device while carrying or using a medical appliance such as a cardiac pacemaker. When transmitting, use an external antenna and keep as far as possible away from the external antenna.
The radio wave emitted by the transmitter can cause the medical device to malfunction and result in injury or death.



Do not transmit with this device in a crowded place for the safety of persons using a medical device such as a cardiac pacemaker.
The radio wave emitted from this product can cause the medical device to malfunction and result in injury or death.



If thunder and lightning develop nearby when an external antenna is used, immediately turn this transceiver OFF, and disconnect the external antenna from it.
A fire, electrical shock, or damage may result.



Do not use this product or the battery charger anywhere inflammable gas is produced.
A fire or explosion can occur.



Do not use this product while riding a bicycle or driving a car. Accidents can result.
Be sure to stop the bicycle or car at a safe place before using this product.



Do not touch any material leaking from the LCD display or the battery pack with bare hands.
The chemical may adhere to your skin or enter your eye, and cause chemical burns. In such a case, consult the doctor immediately.



Do not solder or short-circuit the terminals of the battery pack.
A fire, leak, overheating, explosion, or ignition may result.
Do not carry the battery pack together with a necklace, hairpin, or small metal objects. A short circuit can result.

WARNING



Do not disassemble or make any alteration to this product.

An injury, electric shock, or failure may result.



Do not handle the battery pack or charger with wet hands. Do not insert or remove the power plug with wet hands.

An injury, leak, fire, or failure may result.



Keep the terminals of the battery pack clean.

If terminal contacts are dirty or corroded, a fire, leak, overheating, explosion, or ignition can result.



If smoke or a strange odor is emitted from the main body, battery pack, or battery charger, immediately turn the transceiver off; remove the battery pack, and remove the power plug from the outlet.

A fire, chemical leak, overheating, component damage, ignition, or failure may result. Contact the dealer from which you purchased this product or Yaesu Amateur Customer Support.



Do not bend, twist, pull, heat and modify the power cord and connection cables in an unreasonable manner.

This may cut or damage the cables and result in fire, electric shock and equipment failure.



Do not pull the cable when plugging and unplugging the power cord and connection cables.

Always hold the plug or connector when unplugging; if not, a fire, electric shock and equipment failure may result.



Do not use the device when the power cord and connection cables are damaged, or when the DC power connector cannot be plugged in tightly.

Contact Yaesu Amateur Customer Support or the retail store where this transceiver was purchased for assistance, as this may result in fire, electric shock and equipment failure.



Never cut the fuse holder off of the DC power cord.

This may cause a short circuit and result in ignition and fire.



Use only the specified type fuses.

Use of an incorrect fuse may result in fire and equipment failure.



Do not install the front panel, the transceiver or the wire cables near the automobile air bags.

In case of an accident, the transceiver may interfere with air bag deployment and result in extreme injury. The wire cables may also cause the air bag to malfunction.



Do not power this transceiver with a voltage other than the specified power supply voltage.

A fire, electric shock, or damage may result.



Do not make very long transmissions.

The main body of the transceiver may overheat, resulting component failure or operator burns.



Do not place the transceiver in wet or damp areas (e.g. near a humidifier).

This may result in fire, electric shock and equipment failure.



Do not use DC power cords other than the one enclosed or specified.

This may result in fire, electric shock and equipment malfunctions.



When connecting a DC power cord, be certain the positive and negative polarities are correct.

Reverse connection will result in equipment damage.



When transmitting, keep the transceiver at least 5.0 mm (3/16 inch) away from your body. Use only the supplied antenna. Do not use modified or damaged antennas.



Disconnect the power cord and connection cables before installing separately sold accessory items, or replacing the fuse.

This may result in fire, electric shock and equipment failure.



Follow the instructions provided when installing items sold separately and replacing the fuse.

This may result in fire, electric shock and equipment failure.



Use only the provided or specified screws.

Using screws of a different size, may result in fire, electric shock and component damage.



Do not place the transceiver in a confined space, such as a bookshelf which is not ventilated well.

This may result in overheating and fire, electric shock and equipment failure.



Do not operate the transceiver on a carpet or a blanket.

This may result in overheating and fire, electric shock and equipment failure.





If a foreign substance is spilled into the transceiver, turn it OFF immediately and remove the power plug from the outlet.


If used as it is, a fire, electrical shock, or damage may result.





CAUTION


-
-  **Do not place the transceiver on an unsteady or sloping surface, or in a location with extreme vibration.**
The transceiver may fall or drop, resulting in fire, injury and equipment damage.


 -  **Do not place this transceiver in a humid or dusty place.**
A fire or failure may result.


 -  **Do not use the transceiver near the radio relay equipment.**
Transmissions may affect radio communication.


 -  **Do not wipe the case using thinner and benzene etc.**
Use only a soft, dry cloth to wipe stains from the case.


 -  **Do not throw the transceiver, or subject it to strong impact forces.**
Physical abuse may result in component damage and equipment failure.


 -  **If the transceiver will not be used for an extended period, turn it OFF and remove the battery pack for safety.**


 -  **Keep magnetic cards and videotapes away from the transceiver.**
The data recorded on cash cards or videotapes may be erased.


 -  **Do not place this transceiver in direct sunlight or near a heater.**
The case may be deformed or discolored.


 -  **Be sure to check with the manufacturer of any hybrid or fuel-saving automobile regarding use of the transceiver in that car.**
Noise generated by an onboard electrical device (inverter, etc.) can disrupt the normal operation of the transceiver.


 -  **Do not operate the transceiver near the TV or radio.**
Radio disturbance can occur in the transceiver, the TV, or the radio.


 -  **Do not transmit near the television and radio.**
Transmissions may cause electromagnetic interference.


 -  **While transmitting, keep the antenna as far from you as possible.**
Long-time exposure to electromagnetic waves may have a negative impact on your health.


 -  **Do not dangle or throw the transceiver by holding its antenna.**
This may injure others and may also result in damage and failure of the transceiver.


 -  **Do not use the transceiver in a crowded place.**
The antenna may strike others and result in an injury.


 -  **Keep this product out of the reach of children.**
Injury to the child, or damage to the transceiver may result.

 -  **Do not use any products other than the specified options and accessories.**
Failure or miss operation may result.
-

-
-  **Install the hand strap and belt clip securely.**
Improper installation may cause the FT3DR/FT3DE to fall or drop, resulting in an injury or damage.

 -  **This product has a waterproof structure and conforms to "IPX5" when the included antenna and battery pack are installed and rubber caps are securely attached to the MIC/SP jack, EXT DC IN jack, and DATA terminal. If this transceiver gets wet, dry it with a soft cloth, do not leave it exposed to the moisture.**
Exposure to excessive moisture may degrade the transceiver performance, shorten its life, or cause a failure or electrical shock.

 -  **Before discarding a depleted battery pack, affix tape or insulating covering to its terminals.**

 -  **Do not use at extremely low atmospheric pressure.**
-

About Waterproofing Feature Conforming to IPX5

When the included antenna and battery pack are installed and the MIC/SP jack, EXT DC IN jack, DATA terminal, and micro SD slot are securely covered with rubber caps, this product is moisture and splash resistant. To ensure continued waterproofing protection, be sure to check the following points before use.

- Check for damages, deterioration, and dirt.

Antenna rubber, key switch rubber, MIC/SP jack, EXT DC IN jack, DATA terminal, micro SD slot rubber cap, and battery pack seal.

- Cleaning

When this product is contaminated with seawater, sand, or dirt, rinse with fresh water, and then wipe with a dry cloth immediately.

- Recommended maintenance interval

To insure continued water resistance and optimal performance, it is recommended that maintenance be performed annually, or when any damage or deterioration is found. Note that the maintenance service is subject to fees.

- Do not immerse this product in the following liquids:

Sea, pool, hot spring, water containing soap, detergent, or bath additive, alcohol, or chemicals.

- Do not leave this product for an extended time in the following places:

Bathroom, kitchen, or humid place

- Other precautions

Since this product is not totally waterproof, it cannot be immersed in water.

About this manual

To select an item displayed on the screen of the FT3DR/DE, either touch the item directly on the display, or rotate the **DIAL** knob to select the item, and then press the **[DISP]** key. In this manual, only the touch screen operation is described when either operation can be performed.

The following notation is also used in this manual.



This icon indicates cautions and information that should be read.



This icon indicates notes, tips and information that should be read.

Due to product improvements, some of the illustrations in the instruction manual may differ from the actual product. Please note.

Supplied Accessories and Options

Supplied Accessories

- Rechargeable Li-Ion Battery Pack (7.2 V, 2,200 mAh) **SBR-14LI**
- Battery Charger **SAD-25***
- Antenna
- Belt Clip
- USB Cable
- Operating Manual (This Manual)
- SBR-14LI Manual
- Battery Pack protective cap

* Depending on the transceiver version.



If any item is missing, contact the dealer from which you purchased the transceiver.

Available Options

- Speaker / Microphone **MH-34B4B**
- Earpiece Microphone **SSM-57A**
- VOX Headset **SSM-63A**
- Bluetooth® Headset **SSM-BT10**
- Microphone Adapter **CT-44**
- DC Cable with and Cigarette-Lighter Plug **SDD-13**
- DC Cable **E-DC-6**
- Soft Case **SHC-34**
- 3x "AA" Cell Battery Case **FBA-39**
- Li-Ion Battery Packs (7.2 V, 2,200 mAh)
(Equivalent of the supplied accessory) **SBR-14LI**
- Li-Ion Battery Packs (7.4 V, 1,100 mAh) **FNB-101LI**
- Battery Charger **SAD-25***
(Equivalent of the supplied accessory)
- Rapid Charger **CD-41**
- Speaker Microphone with Snapshot camera **MH-85A11U**
- Cloning Cable **CT-168**
- Data Cable **CT-170**
- PC connection cable **SCU-39**
- PC connection cable **CT-169**
- Data cable **CT-176**
- Belt Clip **SHB-13**
(Equivalent of the supplied accessory)
- BNC-to-SMA Adapter (BNCJ-SMAP) **CN-3**

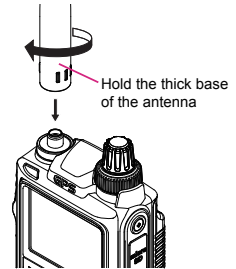
* Depending on the transceiver version.

Installing the Antenna

1. Turn the antenna clockwise until it is secured.



- Do not hold or twist the upper part of the antenna when installing or removing it. To do so may break the conductors inside the antenna.
- Do not key the transmit without installing the antenna. The transmitter components may be damaged.



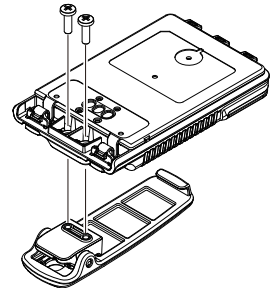
Attaching the Accessory Protective Cap/Belt Clip

● Attaching the Belt Clip

1. Attach the belt clip on the back of transceiver using the supplied screws (two).

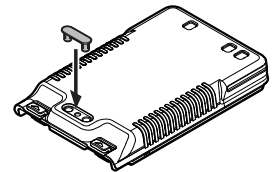


Be sure to use the supplied screws when attaching the belt clip. If any other screws are used, the belt clip cannot be secured firmly to the battery pack and the transceiver may drop off together with the battery pack; the transceiver and battery pack may fall off, causing injury, breakage and other damage.



● Attaching the Protective Cap

If the belt clip is not used, install the protective cap to cover the belt clip attaching screw holes on the battery pack.



Installing the Battery Pack

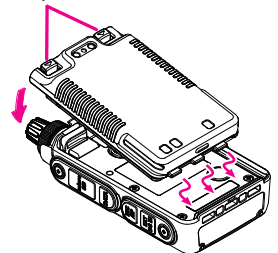
1. Insert the bottom tabs of the battery pack in the slots on the back side lower part of the transceiver.
2. Push the battery in until the battery latches click securely.



Charge the battery pack before using the transceiver for the first time after purchase, or when it has not been used for a long period of time.

Caution: Risk of explosion if battery is replaced by an incorrect typ. Dispose of used batteries according to the instructions.

Battery Latches



● Removing the Battery Pack

1. While pressing down the latches, remove the battery pack.

Charging the Battery Pack

Charging the Battery Pack using the Battery Charger (SAD-25)

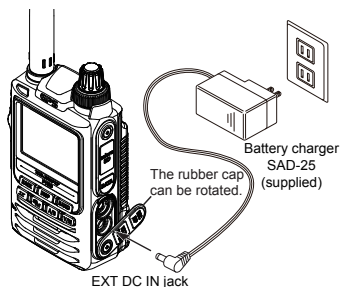
Using the supplied battery charger (SAD-25), it takes about 9 hours* to charge the SBR-14LI battery pack fully.

*Depending on the battery status, the charging time might be increased

1. Turn the transceiver OFF to install the battery pack.
2. Referring to the figure at the right, connect the battery charger plugs.

When the battery is being charged, the TX/BUSY Indicator lights red, and the display indicates "Now Charging". The charge level is indicated by a bar graph.

3. When charging is completed, the display will change to indicate "Complete" and the TX/BUSY Indicator will light green.



In the USA Version, the TX/BUSY LED is not lit when charging or when charging is complete. When the charge is complete, the transceiver turns off after 3 minutes.

- When charging is completed, the charging is automatically ended.
- Firmly insert the SAD-25 DC plug into the EXT DC IN terminal. If it is difficult to insert, turn the rubber cap.
- If "CHGERR" appears on the LCD during the charging and the battery pack is not charged after a lapse of 10 or more hours, stop charging the battery pack immediately. The battery pack is presumed to be at the end of its service life, or defective. In this case, replace the battery pack with a new one.
- Charge the battery pack within the temperature range from +41°F to +95°F (+5°C to +35°C).



Charging the Battery Pack using the Rapid Charger (CD-41)

For details on the Rapid Charger (CD-41), see Optional CD-41 manual

● Approximate Operating Time and Remaining Charge Level Indication

Approximate operating time for the transceiver with the fully charged battery pack or new AA alkaline batteries is as follows:

Band	Battery pack SBR-14LI	Battery pack FNB-101LI	Battery FBA-39	
Amateur Band	144 MHz Band	Approx. 9.5 hours	Approx. 4.5 hours	Approx. 12 hours
	430 MHz Band	Approx. 8 hours	Approx. 4 hours	Approx. 11 hours

The battery charge level calculations are based on an operating cycle of: Transmitting 6 seconds (5 W): Receiving 6 seconds (VOL Level 16): Stand By 48 seconds (RX SAVE 1:5) The actual times the transceiver will operate as indicated in the above table, varies depending on use, conditions, ambient temperature, etc.

External Power Supply

Connecting an External Power Supply for Use in Vehicle

The optional DC Cable with Cigarette-Lighter plug (SDD-13) allows power to be supplied from a motor vehicle type cigarette lighter socket.

Connecting to an External Power Supply Using a Power Cable

The optional DC cable (E-DC-6) allows the transceiver to be connected to an external DC power supply.

Using a microSD Memory Card

Using a microSD memory card with the transceiver allows the following functions.

- Backing up the transceiver data and information
- Saving memory information
- Voice recording and playback
- Saving image data captured with the optional camera-equipped microphone (MH-85A11U)
- Saving messages downloaded with the GM function or WIRES-X function
- Saving GPS log data

Usable microSD Memory Cards

This transceiver only supports the following capacity of microSD and microSDHD memory cards.

- 2GB • 4GB • 8GB • 16GB • 32GB

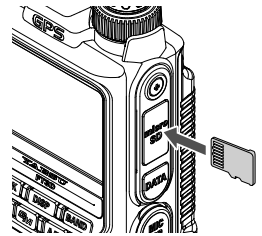


- microSD memory cards formatted on other devices may not properly save information when used with this transceiver. Format microSD memory cards again with this transceiver when using memory cards formatted with another device.
- Do not remove the microSD memory card or turn the transceiver Off, while saving data to a microSD memory card is in progress.

Mounting and Dismounting microSD Memory Card

1. Press and hold the Power (Lock) switch to turn the transceiver OFF.
2. Insert the microSD memory card into the card slot until a clicking sound is heard (as shown in the figure at the right).
3. Press and hold the Power (Lock) switch to turn the transceiver ON.

When the memory card is properly detected, “SD” lights on the display.



● Removing the microSD memory card

To remove the microSD memory card (inserted in step 2 above), push the memory card in until a clicking sound is heard, then remove the memory card.

Formatting a microSD Memory Card

Format a new microSD memory card following the steps below before use.



- A microSD memory card that was used in another device may not function properly, for example, it may not be recognized by the FT3DR/DE or reading, and writing may take an unusually long time. Use of the SD Memory Card Formatter provided by the SD Association may improve this. The SD Memory Card Formatter can be downloaded from this URL (<https://www.sdcard.org/downloads/formatter/index.html>).
- Formatting a microSD memory card erases all data saved on it. Before formatting the card, be sure to check for data and save it before formatting.

1. Press and hold the **[DISP]** key.
The “SETUP MENU” screen appears.
2. Touch **[SD CARD]**, and then touch **[4 FORMAT]**.
“FORMAT?” appears on the LCD.
3. Touch **[OK]**.
Initialization starts and “Waiting” appears.
 - To cancel formatting, select **[CANCEL]**.
4. When formatting is completed, a beep sounds and “COMPLETED” appears on the LCD.

Operation

Turning the Transceiver ON

1. Press and hold the Power (Lock) switch to turn the transceiver ON.

● Turning the transceiver OFF

Press and hold the Power (Lock) switch again to turn the transceiver OFF.



If the battery pack is removed or the external power supply is turned OFF, without turning the FT3DR/DE OFF, the display may remain on the screen for a while, this is not a malfunction.

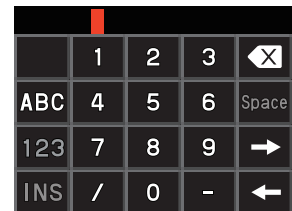
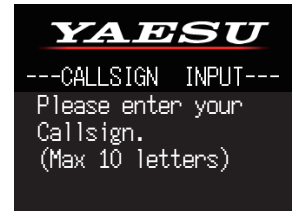
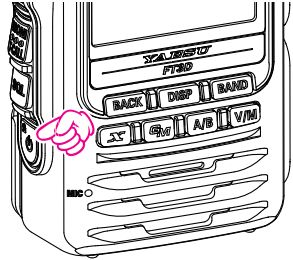
● Inputting the call sign

The first time the transceiver is turned ON after it is purchased; input your own call sign.

1. Press the **[DISP]** key to proceed to the call sign input screen.
 - When the transceiver is subsequently turned ON, the opening screen appears followed by the frequency screen.
2. Input the call sign (toggle the alphabet input screen, and the number input screen when necessary).
3. Saving the entered call sign:
4. Press the **[PTT]** switch or press and hold the **[DISP]** key.

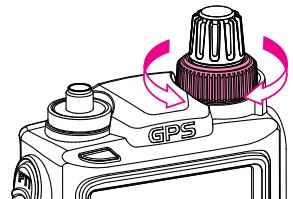


- Up to 10 characters (letters, numbers, and symbols) can be entered.
- Characters that may be entered for the call sign are the numbers 0-9, letters "A – Z" in upper case, the hyphen and the slash.



Adjusting the Volume Level

1. Rotate the **DIAL** knob to adjust the volume to a comfortable level.
 - The transceiver volume levels for the A-band and B-band are adjusted separately.
 - The transceiver volume levels for the AM broadcast band and the FM broadcast band are adjusted separately.



Adjusting the squelch setting

The squelch level may be adjusted to mute the background noise when no signal is present.

1. Press the SQL switch and then rotate the VOL knob to adjust to a level at which the background noise is muted.

SQL  appears on the display.

- The transceiver squelch levels for the A-band and B-band are adjusted separately.
- The transceiver squelch levels for the AM broadcast band and the FM broadcast band are adjusted separately.



- The default setting is “1”.
- When the squelch level is increased, the noise is more likely to be silenced, but it may become more difficult to receive weak signals.

2. Press the SQL switch to save the setting.

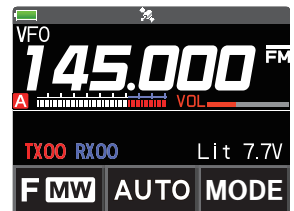
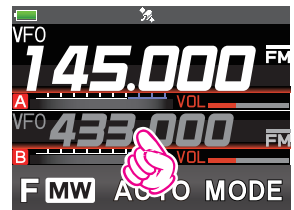
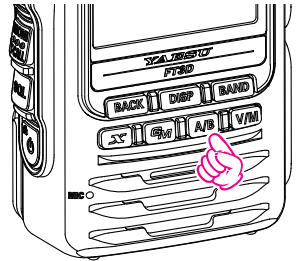
Toggling the Operating Band

Normally, both operating bands are displayed on the top half and bottom half of the transceiver touch screen. This is Dual band.

The operating band is selected, and the frequency and radio operating mode can be changed.

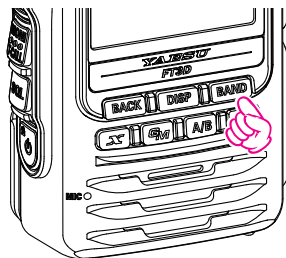
- The selected band (displayed in white letters) is the Operating band.
- The other band (displayed in gray letters) is the Sub-band.
- Each press of the [A/B] key toggles the Operating and Sub bands.
- The desired operating band may also be selected by touching the frequency display.

Pressing and holding the [A/B] key displays only the operating band, this is Mono-band.



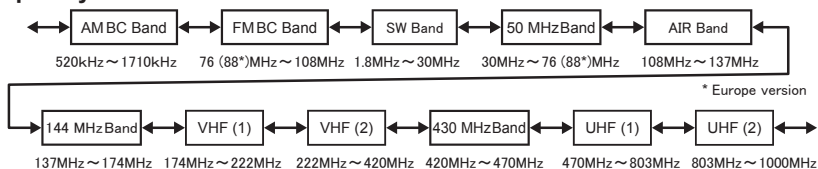
Selecting a Frequency Band

- Press the **[BAND]** key to select the desired frequency band.
 - Press the **[F MW]** key, then press the **[BAND]** key to select the frequency bands in reverse order.



The frequency bands that can be selected for each of the A and B bands are as follows:

● Frequency bands on A-band



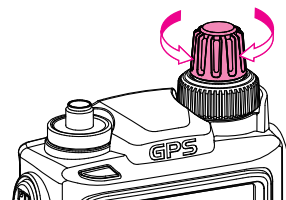
● Frequency bands on B-band



Tuning to a Frequency

● DIAL knob

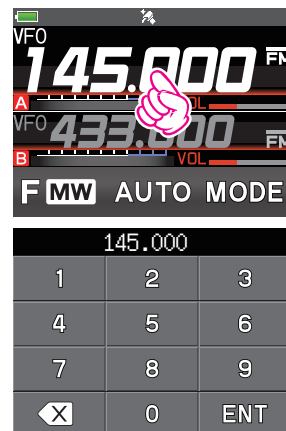
By pressing the **[F MW]** key and then rotating the **DIAL** knob, the frequency will change in 1 MHz steps.



● The numeric keys

- Touch the frequency displayed on the LCD.

The numeric keypad appears.



- Enter the frequency using the numeric keys.

Example: To input 145.520 MHz

[1] → **[4]** → **[5]** → **[5]** → **[2]**

Example: To input 430.000 MHz

[4] → **[3]** → **[ENT]**



While entering a frequency using the numeric keys, the entry may be canceled by pressing the **PTT** switch or the **[BACK]** key.

Changing the Frequency Step

The **DIAL** knob rotation frequency step may be changed. Normally, the factory default setting will provide a good frequency step.

1. Press and hold the **[DISP]** key, then touch **[CONFIG]**.
2. Touch **[18 STEP]** then rotate the **DIAL** knob to change the frequency step.
3. Press the **PTT** switch to save the setting and return to normal operation.



In the default setting, of the frequency step is set to "AUTO", which automatically provides a suitable frequency step according to the frequency band.

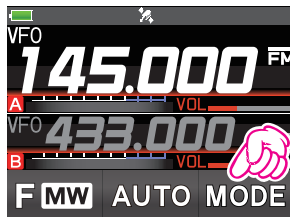
Selecting the Communication Mode

● Using AMS

The FT3DR/DE transceiver is equipped with the AMS (Automatic Mode Select) function which automatically selects the communication mode corresponding to the received signal.

To utilize the AMS function, touch **[MODE]** repeatedly to display "**FM**"*, "**DN**"* or "**VW**"* on the display. After receiving the signal, "FM" of "**FM**" will change to indicate the mode of the received signal.

*The display differs depending on the received signal.

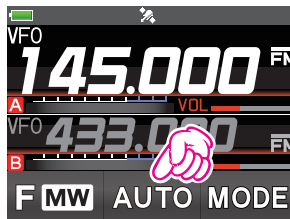


● Setting the transmit mode when using the AMS function

The AMS function will automatically set the receiver to the mode of the received signal, but the transmit mode may be fixed regardless of the received mode.

1. Touch **[AUTO]*** to tune to the desired transmit mode as follows.

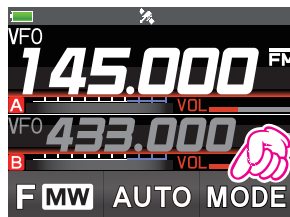
*The display differs depending on the transmit mode.



Transmit Mode	Receive and Transmit
AUTO (default)	Receive: Automatically selects the receive mode corresponding to the received signal. Transmit: Automatically transmits in the communication mode selected by the AMS function.
TX FM	Receive: Automatically selects the receive mode corresponding to the received signal. Transmit: Always transmits in the analog FM mode.
TX DN (TX DIGITAL)	Receive: Automatically selects the receive mode corresponding to the received signal. Transmit: Always transmits in the DN mode.

Fixing the Communication Mode

- To fix the transmit operation mode, touch [MODE] to switch the communication mode.



Communication Mode	Icon	Description of Modes
V/D Mode (Voice & Data are transmitted simultaneously)	DN	This is the standard digital mode. Calls are less prone to interruptions caused by detection and correction of the received digital voice signal.
Voice FR Mode* ¹ (Voice Full Rate Mode)	VW * ¹	High speed data communication using entire 12.5 kHz band. Enables high-quality voice communication.
FM Mode	FM	Analog communication using FM mode.
AM Mode (receive only)* ²	AM	The AM mode is for receive only.

*1 When the Set Mode [TX/RX] → [2 DIGITAL] → [4 DIGITAL VW] is set to “ON” (factory default is “OFF”), the Voice FR mode (VW) may be selected.

*2 When the Set Mode [TX/RX] → [1 MODE] → [3 RX MODE] is set to “AUTO” (factory default setting), AM mode is automatically selected within the AIR band (108 - 136.995 MHz).

Transmitting

- While pressing and holding the **PTT** switch, speak into the microphone.

The TX/BUSY indicator will glow red during transmission.

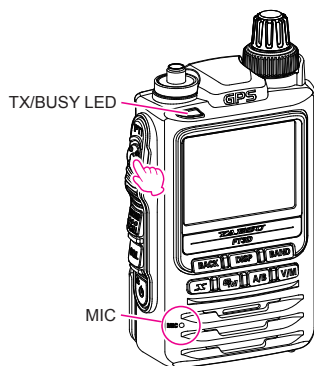


If the **PTT** switch is pressed when a frequency other than the amateur ham radio band is selected, an alarm tone (beep) will be emitted and “ERROR” appears on the LCD, disabling transmission.

- Release the **PTT** switch to return to receive mode.

When receiving a signal, the TX/BUSY Indicator lights according to the band of the received signal.

Receive Band	TX/BUSY LED
A-band receiving	Green
B-band receiving	Blue
Receiving A and B simultaneously	Light Blue



If transmission is continued for a long period, the transceiver overheats and the high temperature protection function is activated. As a result, the transmitting power level is automatically set to Low Power. If transmission continues while the high temperature protection function is active, the transceiver will be forcibly returned to the receive mode.

Changing the Transmit Power Level

1. Touch [F MW], then touch [TX PWR].
If [TX PWR] is not displayed, touch [BACK ←] to display [TX PWR] and then touch it.
2. Rotate the **DIAL** knob to select one of the following transmit power levels.

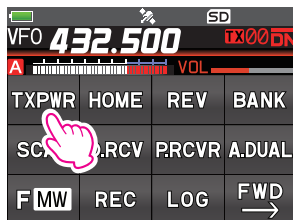
TX PO Level	PO Meter
HIGH (5W)*	
LOW3 (2.5W)	
LOW2 (1W)	
LOW1 (0.3W)	

*The default setting. When the optional alkaline battery case (FBA-39) is used, only LOW2 (about 0.9W) and LOW1 (about 0.3W) can be selected.


3. Press the **PTT** switch to save the setting and return to the normal operation.

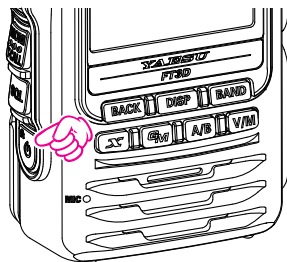


The transmission power level may be set separately for each frequency band.



Locking the Keys and DIAL knob

1. Press the Power (Lock) switch, “**LOCK**” is shown on the display for one second, the “” icon appears on the LCD, and then the keys and **DIAL** knob are locked.



- The keys, the **DIAL** knob, and the **PTT** switch may be selected to be locked using Set Mode [CONFIG] → [9 LOCK]. The default setting is the “**KEY&DIAL**” (the keys and the **DIAL** knob are locked).
- The **MONI/T-CALL** switch, **SQL** switch and the **VOL** knob cannot be locked.

2. Press the **POWER** (Lock) switch again, “**UNLOCK**” will be shown on the Display and the keys and the **DIAL** knob are unlocked.

Using the convenient Digital C4FM features

About the Digital Group ID (DG-ID) feature

1. Digital Group ID (DG-ID) function allows using the two-digit ID numbers to communicate only with specific group members. The desired DG-ID number from 00 to 99 is set in advance by all the group members. This ID number may be set separately for transmit and receive, when the same ID number is set for both transmit and receive, only group members with the same ID number will be heard. This feature may be used to limit communication only to group members that have the same DG-ID number. The GM function may also be utilized to automatically monitor whether or not group member stations with the same DG-ID number are operating within communication range.

The DG-ID number 00 detects signals with all ID numbers. Normally setting the ID number to "00" for both transmit and receive will permit reception of the signals from all other stations using the digital C4FM mode, regardless of the transmit DG-ID number settings of the other stations.

Also note that when the receive DG-ID number of the transceiver is set to a DG-ID number other than "00", received signals that do not have the same DG-ID number may not be heard.

2. When accessing a C4FM digital repeater controlled by a DG-ID number, set the transmit DG-ID number of the FT3DR/DE to that of the repeater input. Even in that case, if the receive DG-ID number of the FT3DR/DE is set to "00", all the downlink signals from the repeater may be received.

Communicating with the DG-ID feature



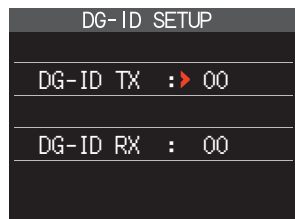
- Digital C4FM mode transceivers compatible with the DG-ID function are required in order to utilize this function.
- If the firmware is not compatible with the DG-ID function, update to the latest firmware to use the DG-ID function. The latest firmware is available on the YAESU website.

Setting the transmit and receive DG-ID number to "00" to communicate with all other stations using C4FM digital mode

1. Press and hold the **[GM]** key.

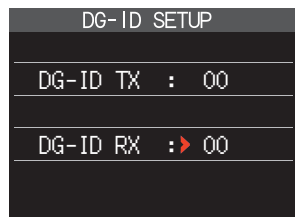
The DG-ID number setting screen will be displayed.

If the transmit DG-ID (DG-ID TX) number is not set to "00", press the **[GM]** key, and then rotate the **DIAL** knob to set "00".



2. Press the **[GM]** key again to select the receive DG-ID (DG-ID RX).

If the receive DG-ID number is not set "00", press the **[GM]** key then rotate the **DIAL** knob to set "00".



3. Press and hold the **[GM]** key, or press the **PTT** switch to save the setting and return to normal operations.
The setting is complete.
4. To check whether or not other stations are operating within communications range, press the **[GM]** key to turn the GM (Group Monitor) function ON.
 - The other stations must also have the GM (Group Monitor) function ON.
 - Refer to the separate Operating Manual GM Edition for details on how to use the GM function (download the manual from our YAESU website).
5. Press the **[GM]** key to turn the GM (Group Monitor) function OFF and return to normal operations.

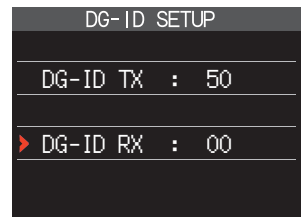
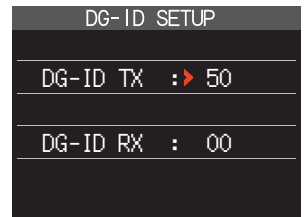
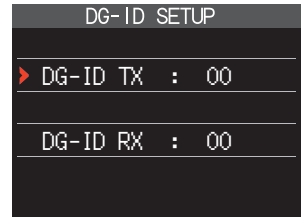


- While setting the DG-ID number, pressing and holding the **[DISP]** key will set the transmit and the receive DG-ID numbers to “00”.
- If the receive DG-ID is set to a number other than “00”, only signals with that DG-ID will be received. Normally, set the receive DG-ID number to “00” except when communication is desired only with group members.
- The transmit and receive DG-ID default number is set to “00”.

Communicate only with the specific members by setting the DG-ID number except for “00”

Example: Set the DG-ID number of to “50”

1. Press and hold the **[GM]** key.
The DG-ID number setting screen will be displayed.
2. Press the **[GM]** key, then rotate the **DIAL** knob to set the transmit DG-ID (DG-ID TX) to “50”.
3. Press the **[GM]** key again, then rotate the **DIAL** knob to select the receive DG-ID (DG-ID RX).



- Press the **[GM]** key, then rotate the **DIAL** knob to set the receive DG-ID (DG-ID RX) to "50".

DG-ID SETUP	
DG-ID TX	: 50
DG-ID RX	: ▶ 50

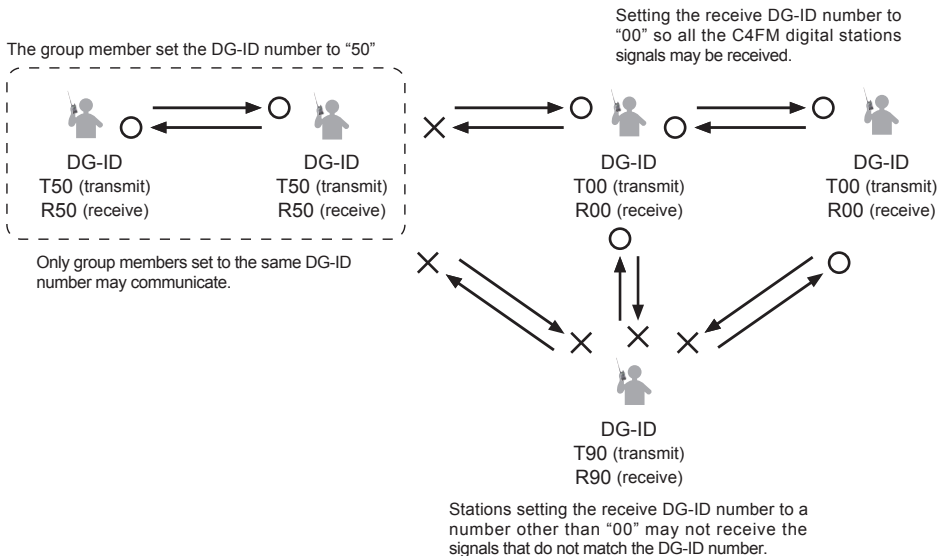
- Press and hold the **[GM]** key, or press the **PTT** switch to save the setting and return to normal operations.
- Press the **[GM]** key to turn the GM (Group Monitor) function ON and check whether or not other stations that are operating on frequency, with the GM (Group Monitor) function ON, and have the same GD-ID number setting, are in the communication range.
 - The other stations must also have the GM (Group Monitor) function ON.
- Press the **[GM]** key to turn the GM (Group Monitor) function OFF and return to normal operations.



- While setting the DG-ID number, pressing and holding the **[DISP]** key will set the transmit and the receive DG-ID numbers to "00".
- If the receive DG-ID is set to a number other than "00", only signals with that DG-ID will be received. Normally, set the receive DG-ID number to "00" except when communication is desired only with group members.



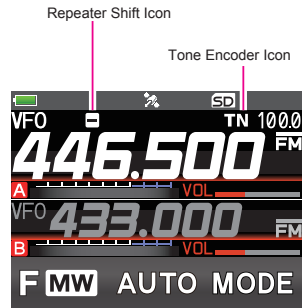
For example, if the transmit and receive DG-ID numbers of group members are all set to "50", communications with other DG-ID numbers are not received and only the group members setting the same DG-ID numbers may communicate. Also, the other stations set the receive DG-ID to any number except for "00", they will not be received the signals of your stations.



Communicating Via the Repeater

The transceiver includes an ARS (Automatic Repeater Shift) function which automatically sets the repeater operation when the receiver is tuned to the repeater frequency.

1. Set the downlink (output) frequency of the repeater.
2. “**−**” or “**+**” and “**TN**” icons may automatically appear above the frequency.
3. Speak into the microphone while pressing and holding the **PTT** switch.



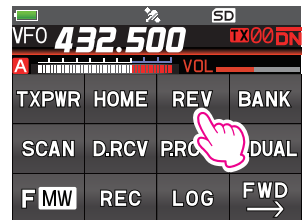
● The reverse state

The “reverse” state temporarily reverses the transmit and receive frequencies. This allows checking to find if direct communication with the other station is possible.

1. Touch [**F MW**], then touch [**REV**].

If [**REV**] is not displayed, touch [**BACK** ←] to display [**REV**] and touch it.

- The transmit and receive frequencies are temporarily reversed (“reverse” state).
- In the “reverse” state, the “**−**” or “**+**” blinks on the display.



2. Touch [**F MW**], then touch [**REV**] to exit from the “reverse” state.



- The repeater settings may be changed from the Set Mode.
Set Mode [CONFIG] → [15 RPT SHIFT]: Allows setting the repeater shift direction.
Set Mode [CONFIG] → [16 RPT SHIFT FREQ]: Allows changing the repeater shift offset.
Set Mode [SIGNALING] → [12 TONE SQL FREQ]: Allows setting the tone encoder frequency.
- The ARS function may be set to OFF in the Set Mode [CONFIG] → [14 RPT ARS].

● Tone Calling (1750 Hz)

If your transceiver is FT3DE (European version), press and hold in the MONI/T-CALL switch (just below the PTT switch) to generate a 1750 Hz burst tone to access the European repeater. The transmitter will automatically be activated, and a 1750 Hz audio tone will be superimposed on the carrier. Once access to the repeater has been gained, you may release the switch, and use the switch for activating the transmitter thereafter. If you need to access the repeaters which requires a 1750 Hz burst tone for access by the FT3DR (USA/Asian versions), you can set the switch to serve as a “Tone Call” switch instead. To change the configuration of this switch, use Set Mode [CONFIG] → [10 MONI/T-CALL].

Using the Memory

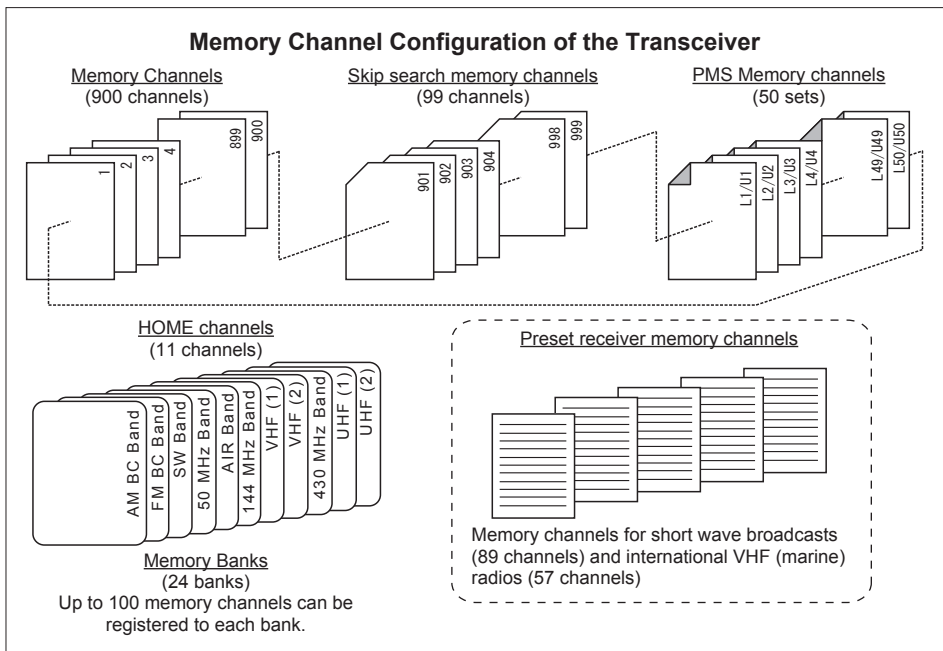
The FT3DR/DE transceiver incorporates a Large number of memory channels that can register the operating frequency, communication mode, and other operational information.

- 900 Memory Channels
- 99 Skip Search Memory Channels
- 11 Home Channels
- 50 pairs PMS Memory Channels
- Preset Receiver Memory Channels include the International VHF marine radio (57 channels) and Worldwide Wide Broadcasts (89 channels)

The operating frequency and other operational information can be registered to each regular memory channel, home channel, or PMS memory channel:

- Operating frequency
- Memory tag
- DCS information
- Memory channel skip information
- Operation Mode
- Repeater Shift
- ATT
- Operation Mode
- Repeater Shift
- Frequency Step
- TX/RX DG-ID
- S meter squelch
- Specified Memory Channel
- Transmitter output
- Tone information
- FM mode bandwidth

Memory channels can be sorted and registered into memory banks according to the intended use. The transceiver allows using 24 types of memory banks. A maximum of 100 memory channels can be registered in each memory bank.



Caution

The information registered to memory channels can be corrupted by incorrect operation, static electricity, or electrical noise. Also, it can be erased in the event of a failure or repair. Be sure to keep a record of the settings on paper or back up the data to the microSD memory card. For details on saving a backup onto a microSD memory card, see "Set Mode: SD CARD Menu Operations" on page 84.

Registering to Memory Channels

1. Set the frequency and the communication mode to be registered to a memory channel.
2. Touch and hold [F MW].

The memory channel number blinks.

The memory channel number next to the previously recalled memory channel is automatically selected.


- The memory channel number of the memory channel that has already been written blinks in red.

3. Rotate the **DIAL** knob to select the desired channel number.
4. Touch [M.WRITE].

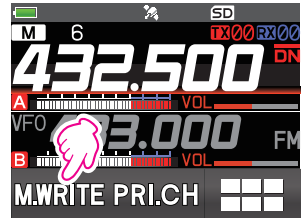
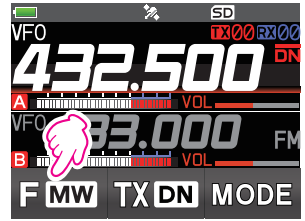
- If you attempt to register a frequency to a memory channel that already contains frequency data, "OVERWRITE?" will appear on the LCD. Touch [OK] twice to overwrite the memory channel.
- The memory tag input screen will be displayed on the LCD.

5. Input the memory tag.

If not entering a name tag → proceed to step 6.

- Use the numeric keys or the **DIAL** knob to input the characters.
- Touch  to move the cursor to right in the text input area.
- See "Text input screen" on page 89 to input a memory tag.

6. Press the **PTT** or [V/M] key, to save the data to memory and return to normal operations.




Recalling a Memory Channel

1. Press the [V/M] key.


The memory channel most recently used appears on the display.

2. Rotate the **DIAL** knob to select the desired memory channel.
Touch [F MW] and turn the **DIAL** knob to fast-forward 10 channels at a time.
3. Press the [V/M] key to exit the memory mode, and return to normal operations.

- When a memory tagged Memory channel is recalled, both memory tag and frequency will be displayed. (Memory tag is displayed only on the operating band.)
- Touch and hold the frequency display of the operating band to switch between memory tag display and normal frequency display.
- The data registered to a memory channel can be transferred to the operating band VFO by following the procedure below:
Touch and hold [F MW] → Touch  → Touch [V.WRITE] → "OVERWRITE?" appears → Touch [OK] twice.
- The transceiver may be placed into a Memory Channel Only mode, (which restricts the FT3DR/DE to operate only on the memory channels), by pressing the [V/M] key, while pressing the Power (Lock) switch to turn the transceiver ON. To cancel the Memory Channel Only mode, turn the transceiver OFF, then press the [V/M] key again, while pressing Power (Lock) switch to turn the transceiver ON.




Clearing Memories

1. Touch and hold [F MW].
2. Rotate the **DIAL** knob to select the memory channel from which the data is to be cleared.
3. Touch [], then touch [M.DEL].
Confirmation screen “DELETE?” is displayed.
4. Touch [OK] twice to clear the memory channel.



- Data on memory channel One, and the Home channel may not be cleared.
- The erased memory channel can be recovered by the following procedure.

Restore erased memory

1. Press the [V/M] key to enter the memory mode.
2. Touch and hold [F MW].
3. Rotate the **DIAL** knob to select the channel to be restored.
4. Touch [].
5. Touch [M.REV].
Confirmation screen “DELETE?” is displayed.
6. Touch [OK] to restore the memory channel.




Recalling the Home Channels

1. Touch [F MW], and then touch [HOME].
If [HOME] is not displayed, touch [BACK ←] to display [HOME] and then touch it.
 - “HOM” and the home channel frequency of the currently selected band appears on the LCD.
2. Press the [V/M] key, or touch [F MW] and then touch [HOME] to return to the previous frequency.



- While recalling the home channel, rotate the **DIAL** knob to transfer the home channel frequency to the operating band VFO.
- The home channel frequency can be set not to be transferred in the Set Mode [CONFIG] → [8 HOME VFO] (page 79).

Changing the Home Channel Frequency


1. Set the frequency and the operating mode to be stored as a home channel.
2. Touch and hold [F MW].
3. Touch [].
4. Touch [H.WRITE].
Confirmation screen “OVERWRITE?” is displayed.
5. Touch [OK] twice.
The beep sounds and the home channel frequency is changed.

Using Memory Tag

Memory name tags, such as a call sign or broadcast station name may be assigned to the memory channels and home channels. Input a memory tag using up to 16 characters. Alphabetic characters (upper and lowercase), Numbers and Symbols may be entered to the memory name tag.

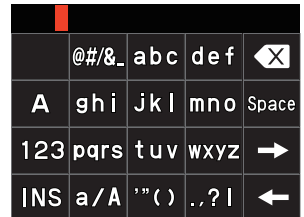
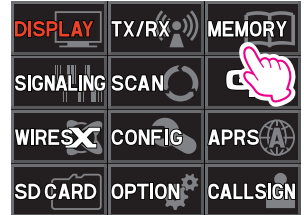
1. Press the [V/M] key to enter Memory mode.
2. Rotate the **DIAL** knob to Recall the memory channel to assign the name.

To assign a name to a home channel, recall the desired home channel.

3. Press and hold the [DISP] key, then touch [MEMORY].
4. Touch [3 MEMORY NAME].
 - Use the numeric keys or the **DIAL** knob to input the characters.
 - Touch  to move the cursor to the right in the text input area.
 - See “Text input screen” on page 89 to input a memory tag.



- When a memory tagged Memory channel is recalled, both the memory tag and the frequency will be displayed. (The Memory tag is only displayed on the operating band.)
- Touch and hold the frequency display of the operating band to switch between memory tag display and normal frequency display of all memory channels.



Scanning Function

The FT3DR/DE supports the following four scanning functions:

- VFO Scan
- Memory Channel Scan
- Programmable Memory Scan (PMS)
- Memory Bank Scan



For additional details on the Programmable Memory Scan (PMS) and Memory Bank Scan, refer to the Advanced Manual which may be downloaded from the Yaesu website.

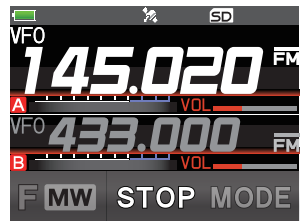
VFO Scan

VFO scan function scans the VFO frequencies, and detects signals.

1. Press the **[V/M]** key to enter the VFO mode.
2. Touch **[F MW]**, and then touch **[SCAN]**.

If **[SCAN]** is not displayed, touch **[BACK ←]** to display **[SCAN]** and then touch it.

- Scanning starts toward higher frequencies.
 - If the **DIAL** knob is rotated while scanning is in progress, the scanning will continue up or down in frequency according to the direction of the **DIAL** Knob rotation.
 - If the scanner halts on an incoming signal, the back light will turn ON and the decimal point between the “MHz” and “kHz” digits of the frequency display will blink. Scanning will resume in about five seconds.
3. Press the **PTT** switch or touch **[STOP]** to cancel the scanning.



- If the scan has paused on a signal, rotating the **DIAL** knob will cause scanning to resume instantly.
- If the transceiver is turned OFF while scanning, when the transceiver is turned ON, scanning will resume.
- **[SCAN] → [2 SCAN LAMP]** Sets whether or not the LCD is illuminated when scanning stops.



Memory Channel Scan

The receiver may be set to scan memory channels:

1. Recall a memory channel to begin memory scanning.
2. Touch **[F MW]**, and then touch **[SCAN]**.

If **[SCAN]** is not displayed, touch **[BACK ←]** to display **[SCAN]** and then touch it.

- Scanning starts toward higher memory channel numbers.
 - If the **DIAL** knob is rotated while scanning is in progress, the scanning will continue up or down in frequency according to the direction of the **DIAL** Knob rotation.
 - If the scanner halts on an incoming signal, the back light will turn ON and the decimal point between the “MHz” and “kHz” digits of the frequency display will blink. Scanning will resume in about five seconds.
3. Press the **PTT** switch or touch **[STOP]** to cancel the scanning.



If the scan has paused on a signal, rotating the **DIAL** knob will cause scanning to resume.

Setting the Receive Operation When Scanning Stops

1. Press and hold the **[DISP]** key, and then touch **[SCAN]**.
2. Touch **[4 SCAN RESUME]**, and then press the **[DISP]** key.
3. Rotate the **DIAL** knob to select the operation performed after the scan stops:
 - **2.0 S - 10.0 S**
The signal is received for a specified period of time, and then scanning resumes.
The scan resume time may be set from 2 to 10 seconds at 0.5 second intervals.
 - **BUSY**
The signal is received until the signal fades out. Two seconds after the signal fades out, scanning resumes.
 - **HOLD**
Scanning stops and tuning remains on the current receive frequency (Scanning does not resume).
4. Press the **PTT** switch to save the new setting and exit to normal operation.



The above setting is common for all scanning operation.

Weather Alert Scan

This feature checks the Weather Broadcast Memory Channels for signals that contain the presence of the NOAA Alert Tone while using VFO scan or Memory channel scan. When the Weather Alert Scan feature is engaged, the FT3DR/DE will check the Weather Broadcast Channels for activity every five seconds while scanning. If you watch the display carefully, you can observe the scanner periodically shift to the Weather Broadcast channel and quickly scan the Weather channels in search of the Alert Tone. If no Alert Tone is received, regular scanning will resume for another five seconds.

1. Press and hold the **[DISP]** key to enter the Set Mode.
2. Touch **[SIGNALING]**.
3. Rotate the **DIAL** knob to select Set Mode **[14 WX ALEAT]**.
4. Press the **[DISP]** key and then rotate the **DIAL** knob to select "ON".
5. Press the **PTT** switch to save the setting and return to normal operation.
6. Touch **[F MW]**, and then touch **[SCAN]**.
If **[SCAN]** is not displayed, touch **[BACK ←]** to display **[SCAN]** and then touch it.
 - Scanning starts searching upwards in frequency.
 - The display will remain on the VFO frequency, but every five seconds the transceiver will scan the Weather Broadcast Channels for activity.
7. While scanning the Weather channels, press the **PTT** switch and then press the **PTT** switch again.
 - Scanning starts within the Weather Broadcast Channels.
 - While scanning the Weather channels, press the **PTT** switch and then rotate the **DIAL** knob to select the desired Weather Broadcast Channel.
8. Press the **[V/M]** key return to normal operation.



For additional details on the following functions, refer to the Advanced Manual which may be downloaded from the Yaesu website.

Skip Memory Channels, and Specified Memory Channels

Two types of memory channels may be designated, “skip memory channels” and “specified memory channels” for effective memory channel scanning.

Skip memory channels: Permits designating undesired channels to be skipped during scanning. Alternatively, only designated memory channels may be set to be scanned during memory scanning.

Programmable Memory scan (PMS)

This function scans only the range of frequencies between the lower and upper limits registered in a pair of PMS Programmable Memory channels. 50 sets of PMS memory channels (L1/U1 to L50/U50) are available.

Dual Receive (DW) feature

The transceiver checks for signals on the frequency registered to the selected memory channel (Priority Memory Channel) once approximately every 5 seconds.

Convenient Preset Receiver Memory Channels

Weather Broadcast (10 channels), International VHF Marine Radio (57 channels) and Shortwave Broadcasts Stations (89 channels) are recorded in the preset receiver memory channels.

- **Weather Broadcast preset receiver memory channels [WX CH] are listed on:** page 40
The frequencies (10 channel) used for the VHF Weather Broadcast Station are registered to dedicated preset receiver memory channels.
- **International VHF Marine Radio preset receiver memory channels [INTVHF] are listed on:** page 41
The frequencies (57 channel) used for the international VHF (marine) radio are registered to dedicated preset receiver memory channels.
- **International World Wide Broadcast preset receiver memory channels [SW] are listed on:** page 42
Listen in to major broadcasts from around the world (89 channels in total).

Preset VHF Weather Broadcast Receiver Memory Channels

The frequencies (10 channels) used for the VHF Weather Broadcast Stations are registered in dedicated preset receiver memory channels.

1. Press the **[A/B]** key to set the A-band as the operating band.
2. Touch **[F MW]**, and then touch **[P.RCVR]**.
If **[P.RCVR]** is not displayed, touch **[BACK ←]** to display **[P.RCVR]** and touch it.
3. Press the **[BAND]** key to select **[WX CH]**.
4. Rotate the **DIAL** knob to select the desired channel.
 - For the available Weather Broadcast channels, see the following table.
 - To stop receiving the WX Channel Frequency, press the **[BACK]** key or touch **[F MW]** followed by **[P.RCVR]**.

WX Channel Frequency List

Memory channel No.	Frequency (MHz)	Memory channel No.	Frequency (MHz)
1	162.550	6	162.500
2	162.400	7	162.525
3	162.475	8	161.650
4	162.425	9	161.775
5	162.450	10	163.275

In the event of extreme weather disturbances, such as storms and hurricanes, the NOAA (National Oceanic and Atmospheric Administration) sends a weather alert accompanied by a 1050 Hz tone and subsequent weather report on one of the NOAA weather channels. You may enable the Weather Alert tone via Set Mode option **[SIGNALING] → [14 WX ALERT]**, if desired (See page 74).

Preset International VHF (Marine) Radio Receiver Memory Channels

The frequencies (57 channels) used for the international VHF Marine Radio are registered in dedicated preset receiver memory channels.

1. Press the **[A/B]** key to set the A-band as the operating band.
2. Touch **[F MW]**, and then touch **[P.RCVR]**.
If **[P.RCVR]** is not displayed, touch **[BACK ←]** to display **[P.RCVR]** and then touch it.
3. Press the **[BAND]** key to select **[INTVHF]**.
4. Rotate the **DIAL** knob to select the desired channel.
 - For the available international VHF channels, see the following table.
 - To stop reception of the international Marine Radio channels, press the **[BACK]** key or touch **[F MW]** followed by **[P.RCVR]**.



- The preset receiver memory channels cannot be rewritten with another frequency or data.
- To scan the preset receiver memory channels toward higher channel numbers, touch **[F MW]** followed by **[SCAN]**. To scan the preset receiver memory channels toward lower channel numbers, rotate the **DIAL** counterclockwise until it clicks once during scanning. When a signal is received during scanning, the scanning stops to receive the frequency for 5 seconds.
- To set the transceiver operation when scanning stops, see "Setting the Receive Operation When Scanning Stops" on page 37.

International VHF Marine radio frequencies registered in the preset receiver memory channels

Memory channel No.	Frequency (MHz)		Memory channel No.	Frequency (MHz)	
1	156.050	160.650*	60	156.025	160.625*
2	156.100	160.700*	61	156.075	160.675*
3	156.150	160.750*	62	156.125	160.725*
4	156.200	160.800*	63	156.175	160.775*
5	156.250	160.850*	64	156.225	160.825*
6	156.300		65	156.275	160.875*
7	156.350	160.950*	66	156.325	160.925*
8	156.400		67	156.375	
9	156.450		68	156.425	
10	156.500		69	156.475	
11	156.550		70	156.525	
12	156.600		71	156.575	
13	156.650		72	156.625	
14	156.700		73	156.675	
15	156.750		74	156.725	
16	156.800		75	156.775	
17	156.850		76	156.825	
18	156.900	161.500*	77	156.875	
19	156.950	161.550*	78	156.925	161.525*
20	157.000	161.600*	79	156.975	161.575*
21	157.050	161.650*	80	157.025	161.625*
22	157.100	161.700*	81	157.075	161.675*

Memory channel No.	Frequency (MHz)		Memory channel No.	Frequency (MHz)	
23	157.150	161.750*	82	157.125	161.725*
24	157.200	161.800*	83	157.175	161.775*
25	157.250	161.850*	84	157.225	161.825*
26	157.300	161.900*	85	157.275	161.875*
27	157.350	161.950*	86	157.325	161.925*
28	157.400	162.000*	87	157.375	
			88	157.425	

* indicates the frequency of the VHF marine base station. For example: if the preset receiver memory channel 1 is selected, the base station frequency 160.650 MHz appears and **[i]** lights up. Touching **[F MW]** followed by **[REV]** displays the Ship Station frequency 156.050 MHz appears and **[i]** blinks. The frequency lower than the base station frequency by 4.6 MHz is the Ship Station frequency and duplex operation may commence. To return to the base station frequency, press **[F MW]** followed by **[REV]**.



Preset Worldwide Shortwave Broadcast Receiver Memory Channels

The frequencies (89 channels) used for international worldwide broadcasting are registered to dedicated preset receiver memory channels.

1. Press the **[A/B]** key to set the A-band as the operating band.
2. Touch **[F MW]**, and then touch **[P.RCVR]**.
If **[P.RCVR]** is not displayed, touch **[BACK ←]** to display **[P.RCVR]** and then touch it.
3. Press the **[BAND]** key to select **[SW]**.
4. Rotate the **DIAL** knob to select the desired channel.
 - For the available international VHF channels, see the following table.
 - To stop receiving the Worldwide Shortwave Broadcast, press the **[BACK]** key, or touch **[F MW]** followed by **[P.RCVR]**.
 - Depending on time zone or signal strength, broadcasts may not be received.
 - There are broadcast stations other than those listed below that can also be received. In addition, the broadcast station frequency may be changed, it may be off-air or have become discontinued. For current details, please refer to a commercial available frequency list.

Worldwide Shortwave Broadcasts

CH Number	Frequency (MHz)	Name	Broadcast Station Name	CH Number	Frequency (MHz)	Name	Broadcast Station Name
1	6.030	VOA	USA	11	12.095	BBC	UK
2	6.160	VOA	USA	12	15.310	BBC	UK
3	9.760	VOA	USA	13	6.090	FRANCE	France
4	11.965	VOA	USA	14	9.790	FRANCE	France
5	9.555	CANADA	Canada	15	11.670	FRANCE	France
6	9.660	CANADA	Canada	16	15.195	FRANCE	France
7	11.715	CANADA	Canada	17	6.000	DEUTSCHE WELLE	Germany
8	11.955	CANADA	Canada	18	6.075	DEUTSCHE WELLE	Germany
9	6.195	BBC	UK	19	9.650	DEUTSCHE WELLE	Germany
10	9.410	BBC	UK	20	9.735	DEUTSCHE WELLE	Germany

CH Number	Frequency (MHz)	Name	Broadcast Station Name
21	5.990	ITALY	Italy
22	9.575	ITALY	Italy
23	9.675	ITALY	Italy
24	17.780	ITALY	Italy
25	7.170	TURKEY	Turkey
26	7.270	TURKEY	Turkey
27	9.560	TURKEY	Turkey
28	11.690	TURKEY	Turkey
29	9.660	VATICAN	Vatican
30	11.625	VATICAN	Vatican
31	11.830	VATICAN	Vatican
32	15.235	VATICAN	Vatican
33	5.955	NEDERLAND	Netherlands
34	6.020	NEDERLAND	Netherlands
35	9.895	NEDERLAND	Netherlands
36	11.655	NEDERLAND	Netherlands
37	5.985	CZECH LIBERTY	Czech Republic
38	6.105	CZECH LIBERTY	Czech Republic
39	9.455	CZECH PRAGUE	Czech Republic
40	11.860	CZECH LIBERTY	Czech Republic
41	9.780	PORTUGAL	Portugal
42	11.630	PORTUGAL	Portugal
43	15.550	PORTUGAL	Portugal
44	21.655	PORTUGAL	Portugal
45	9.650	SPAIN	Spain
46	11.880	SPAIN	Spain
47	11.910	SPAIN	Spain
48	15.290	SPAIN	Spain
49	6.055	NIKKEI	Japan (Nikkei)
50	7.315	NORWAY	Norway
51	9.590	NORWAY	Norway
52	9.925	NORWAY	Norway
53	9.985	NORWAY	Norway
54	6.065	SWEDEN	Sweden
55	9.490	SWEDEN	Sweden
56	15.240	SWEDEN	Sweden
57	17.505	SWEDEN	Sweden
58	6.120	FINLAND	Finland
59	9.560	FINLAND	Finland
60	11.755	FINLAND	Finland
61	15.400	FINLAND	Finland
62	5.920	RUSSIA	Russia
63	5.940	RUSSIA	Russia
64	7.200	RUSSIA	Russia
65	12.030	RUSSIA	Russia

CH Number	Frequency (MHz)	Name	Broadcast Station Name
66	7.465	ISRAEL	Israel
67	11.585	ISRAEL	Israel
68	15.615	ISRAEL	Israel
69	17.535	ISRAEL	Israel
70	6.045	INDIA	India
71	9.595	INDIA	India
72	11.620	INDIA	India
73	15.020	INDIA	India
74	7.190	CHINA	China
75	7.405	CHINA	China
76	9.785	CHINA	China
77	11.685	CHINA	China
78	6.135	KOREA	South Korea
79	7.275	KOREA	South Korea
80	9.570	KOREA	South Korea
81	13.670	KOREA	South Korea
82	6.165	JAPAN	Japan
83	7.200	JAPAN	Japan
84	9.750	JAPAN	Japan
85	11.860	JAPAN	Japan
86	5.995	AUSTRALIA	Australia
87	9.580	AUSTRALIA	Australia
88	9.660	AUSTRALIA	Australia
89	12.080	AUSTRALIA	Australia

Receive Mode: AM

Convenience Features

Bluetooth® Operation

The FT3DR/DE has built-in Bluetooth® functionality. Hands-free operation is possible using the optional Bluetooth® headset (SSM-BT10) or a commercially available Bluetooth® headset.



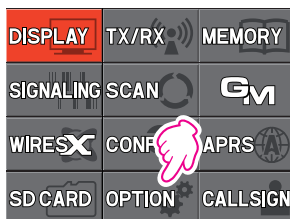
The operation of all commercially available Bluetooth® headsets cannot be guaranteed.

Pairing the Bluetooth® Headset

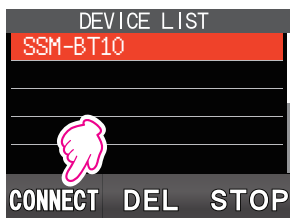
When using the Bluetooth® Headset for the first time, the Bluetooth Headset and the FT3DR/DE must be paired.

This step is only necessary when first connecting the headset.

1. To start the Bluetooth® headset in pairing mode.
SSM-BT10: Press and hold the Multi Function Button for 3 seconds, until the SSM-BT10 LED blinks red/blue alternately.
2. Press and hold the **[DISP]** key, and then touch **[OPTION]**.



3. Touch **[2 Bluetooth]**.
4. Touch **[SEARCH]**.
“Searching” is displayed and the model name of the found Bluetooth device is displayed in the list.
5. Rotate the **DIAL** knob to select the desired Bluetooth device.
6. Touch **[CONNECT]**.




7. When pairing is complete, the connected Bluetooth headset model name is displayed.
SSM-BT10: LED blinks blue.
8. Press the **PTT** switch to return to the normal operation.
 - While connected to a Bluetooth headset, the “” icon lights up on the FT3DR/DE screen, and the received audio and operation beep will be heard from the Bluetooth headset.

● Disable the Bluetooth function

To cancel Bluetooth operation, just repeat the above procedures, selecting “**OFF**” in step 4 above.

Subsequent Bluetooth[®] headset connection when the power is turned ON

- When the power is turned OFF while the Bluetooth headset is connected, the next time the power is turned ON, the same Bluetooth headset is searched for and automatically connected when found.
- If the Bluetooth headset cannot be found, the “” icon flashes on the screen. If the power of the same Bluetooth headset is turned ON in this state, it will connect automatically. If not, turn the FT3DR/DE and Bluetooth headset OFF and then ON again.
- To connect to other Bluetooth headsets, refer to the “Connect with another Bluetooth[®] headset” on page 46.

Hands-free VOX operation with a Bluetooth headset

When FT3DR/DE VOX (automatic voice transmission) function is turned ON, the Bluetooth headset can perform hands-free operation and transmit automatically just by talking.

Turn the VOX function ON according to “VOX Operation” instructions (page 47).

Transmit operation by pressing the button on the Bluetooth headset (when the VOX function is OFF)

When the VOX function is OFF, pressing the “Call button”* on the Bluetooth headset once will keep the FT3DR/DE in transmit and a call can be made using the Bluetooth headset.

Press the “Call button”* again to return the FT3DR/DE to receive.

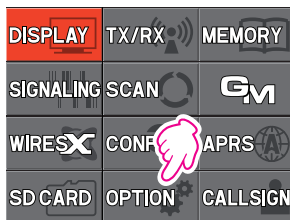
*The button name may differ depending on your Bluetooth headset.

SSM-BT10: When the Multi Function Key is pressed, a beep will sound and the FT3DR/DE will continuously transmit.

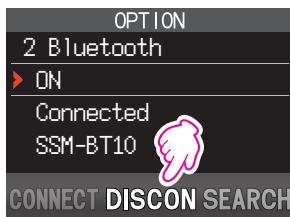
Press the Multi Function Key again, a beep will sound and the FT3DR/DE will return to receive mode.

Connect with another Bluetooth® headset

1. Press and hold the [DISP] key, and then touch [OPTION].



2. Touch [2 Bluetooth], and then rotate the DIAL knob to select [ON].



3. If already connected to a Bluetooth headset, touch [DISCON] to disconnect.

4. Touch [SEARCH].

Search Bluetooth devices to display them in the device list in the following order:

(1) Already registered, searched and found

Bluetooth devices: white letters

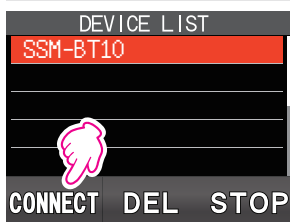
(2) Searched and found new

Bluetooth devices: white letters

(3) Already registered but not found by search

Bluetooth devices: gray letters

Touch [STOP] to cancel the search.



5. Rotate the DIAL knob to select the desired Bluetooth device.

6. Touch [CONNECT] to connect.

Remove a registered (paired) Bluetooth® device from the list

Select the Bluetooth device to be deleted in step 5 above, and touch [DEL].

Display device list

If [3 Bluetooth device list] is touched in step 2 above, Bluetooth devices that have already been registered are displayed in the device list without performing a search. Connect by turning the DIAL knob and selecting the Bluetooth headset to connect and then touch [CONNECT].

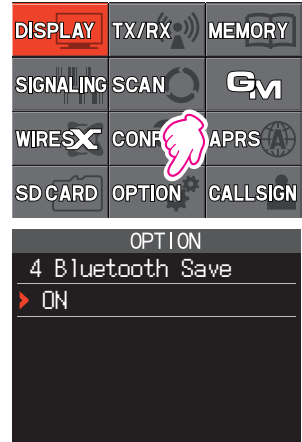
Bluetooth® battery save function

Turning on the Bluetooth Battery Saver feature extends the battery life of the standby Bluetooth headset.



When the Bluetooth battery save function is "ON", hands-free operation using VOX (Voice Operated Transmit) function is not possible. Press the SSM-BT10 [Multifunction] key to switch between transmit and receive. For details, refer to "Send by pressing the button on the Bluetooth headset (when the VOX function is off)" (page 47).

1. Press and hold the **[DISP]** key, and then touch **[OPTION]**.



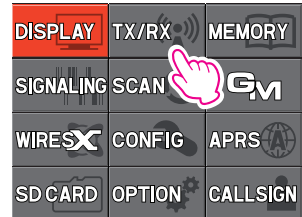
2. Touch **[4 Bluetooth Save]**, and then rotate the **DIAL** knob to select **[ON]**.
3. Press the **PTT** switch to return to normal operation.

VOX Operation

The VOX system provides automatic transmit/receive switching activated by voice input to the microphone or Bluetooth Headset. With the VOX system enabled, it is not necessary to press the **PTT** switch in order to transmit, and it is not necessary to use an accessory VOX headset in order to utilize VOX operation.

Setting VOX function

1. Press and hold the **[DISP]** key, and then touch **[TX/RX]**.



2. Touch **[AUDIO]**, and then touch **[4 VOX]**.
3. Press the **[DISP]** key, and then rotate the **DIAL** knob to select **“LOW”** or **“HIGH”**.
 - OFF:** VOX function OFF
 - LOW:** VOX function ON (VOX Gain Level **“LOW”**)
 - HIGH:** VOX function ON (VOX Gain Level **“HIGH”**)
4. Press the **PTT** switch to return to the normal operation.

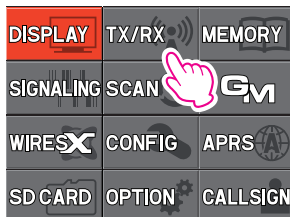
- **Disable the VOX function**

To cancel VOX and return to **PTT** operation, just repeat the above procedures, selecting **“OFF”** in step 3 above.

Set the VOX (Voice Operated Transmit) delay time

During transmissions using the VOX (Voice Operated Transmit) function, set the time to return to receive when speaking is paused:

1. Press and hold the **[DISP]** key, and then touch **[TX/RX]**.

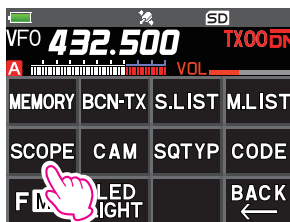


2. Touch **[AUDIO]**, and then touch **[4 VOX]**.
3. Rotate the **DIAL** knob to select **[DELAY]**.
4. Press the **[DISP]** key, and then rotate the **DIAL** knob to select the delay time (the transmit-receive delay after the cessation of speech).
0.5sec / 1.0sec / 1.5sec / 2.0sec / 2.5sec / 3.0sec
5. Press the **PTT** switch to return to normal operation.

Band Scope

The Spectrum Analyzer presents a view of operating activity on channels above and below the centered main band operating frequency.

1. Touch **[F MW]**, and then touch **[SCOPE]**.
If **[SCOPE]** is not displayed, touch **[FWD →]** to display **[SCOPE]** and then touch it.

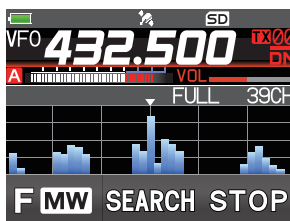


2. With the current operating frequency in the center, the signal strengths of 39 channels within the bandwidth are shown on a graph.

3. Touch **[STOP]**.

The band scope scanning stops.

- To resume band scope scanning, touch **[SEARCH]**.
4. To turn the Band Scope OFF, press the **[BACK]** key.



Change frequency

- When a signal on the scope screen is touched, the frequency in the vicinity becomes the receive frequency, and is set to the center frequency of the scope.
- The receive frequency may also be changed by turning the **DIAL** knob.

Change the number of channels displayed

- The number of channels to be displayed may be set to 19CH, 39CH or 79CH, by touching the channel display area at the top right of the scope screen.



-
- The band scope channel interval is the same as the VFO frequency step.
 - In the frequency range of 108 MHz to 580 MHz, “**FULL**” is displayed and scanning continues continuously. The received audio can be heard during the scan.
 - In frequency ranges other than 108 MHz to 580 MHz, “**1Time**” is displayed, and scanning is stopped after one scan. Received audio is not heard during scanning. If [**SEARCH**] is touched or the **DIAL** knob is turned to change the frequency, one scan will be performed automatically.
-



For additional details on the CAM (Club Channel Activity Monitor), refer to the Advanced Manual which may be downloaded from the Yaesu website.

CAM (Club Channel Activity Monitor) function

Up to 10 groups with 5 channels each, of frequently used memory channels may be registered, and then while receiving the current frequency, the status (signal strength) of the selected group of memory channels may be displayed. It is easy to identify on which channel the communication was made.

When a memory channel on the graph is touched, it will become the center operating frequency, so communication with friends may begin immediately.

Using the Voice Recording

With the voice recording function, the received audio of the other station, and/or the transmit audio of this unit is recorded on the microSD memory card. The recorded file can be played back with FT3DR/DE or the microSD memory card can be taken out and used on a PC.

Once recording is started, recording continues until recording is stopped, or the capacity of the microSD card is full.

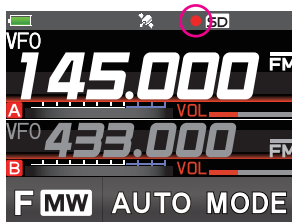
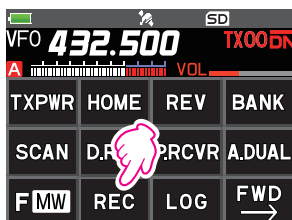
About the file


-
- The audio file is saved in the “VOICE” folder on the microSD card.
 - The file format is a Wave sound format file (extension: wav).
 - The file name is “YYMMDDmmhhss.wav” (YY: year, MM: month, DD: day, hh: hour, mm: minute, ss: second) depending on the date and time when the recording started.
-
- When using the microSD memory card for the first time, please refer to “Formatting a microSD Memory Card” on page 21 for formatting.
 - Since the date and time information is used for file names and file timestamps, when using the voice recording function, it is recommended to set the date and time of the transceiver in advance by referring to “19 Setting Clock Time” on page 82 It is recommended.
-



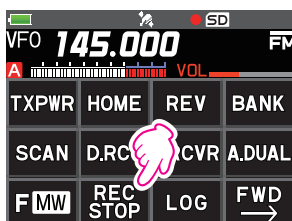
Recording the receive audio

1. Touch **[F MW]**, and then touch **[REC]**.
 If **[REC]** is not displayed, touch **[BACK ←]** to display **[REC]** and then touch it.
 - The display will indicate **“RECSTART”** and recording will begin.
 - During recording, **“●”** icon is displayed at the top of the screen.
 - With the factory default settings, the “A-band” received audio is recorded.
 - Recording will be paused about 3 seconds after the squelch of the band that is recording is closed. Recording will resume when a signal is received.
 - The band or bands to be recorded, and whether or not to include the transmit audio in the recording may be selected in the set mode.



 Recording is stopped when the transceiver is turned OFF.

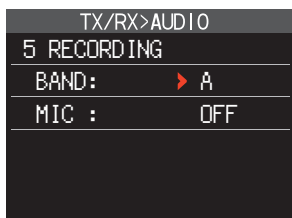
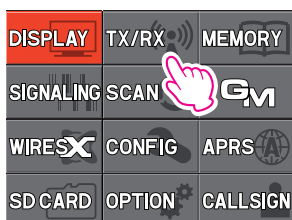
2. Touch **[F MW]**, and then touch **[REC STOP]**.
 The recording will be stop.



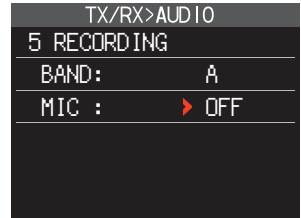
Setting the Recording function

The band or bands to be recorded, and whether or not to include the transmit audio in the recording may be selected:

1. Press and hold the **[DISP]** key, and then touch **[TX/RX]**.
2. Touch **[3 AUDIO]**, and then touch **[5 RECORDING]**.
3. Press the **[DISP]** key, and then rotate the **DIAL** knob to select the band to record.
 - A:** Record the A-band received audio
 - B:** Record the B-band received audio
 - A+B:** Record both A-band and B-band received audio

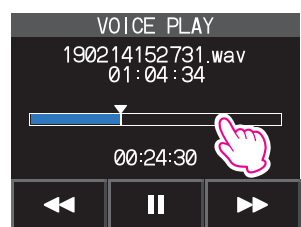
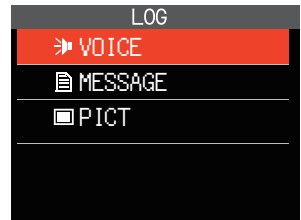
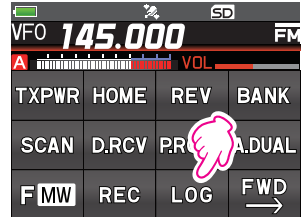


4. Press the **[BACK]** key, and then rotate the **DIAL** knob to select **"MIC"**.
5. Press the **[DISP]** key, and then rotate the **DIAL** knob to select **"ON"** or **"OFF"**.
 - ON:** Record both transmit and receive audio
 - OFF:** Record only the receive audio



Playback the recorded audio

1. Touch **[F MW]**, and then touch **[LOG]**.
If **[LOG]** is not displayed, touch **[BACK ←]** to display **[LOG]** and then touch it.
 2. Touch **[VOICE]**.
The recorded file will be displayed in a list.
 3. Touch the file to playback.
 - Playback will begin (The receiver audio will not be heard during playback).
 - Play back while recording is not possible.
 - Touch the bar graph to play from that point.
 - Touch **||** to pause playback.
 - Touch **◀◀ / ▶▶** to rewind or fast forward 5 seconds at a time.
- **Delete files**
Rotate the **DIAL** knob in step 3 to select the file to be deleted, and then touch **[DEL]**.




Taking Picture (Snapshot Function)

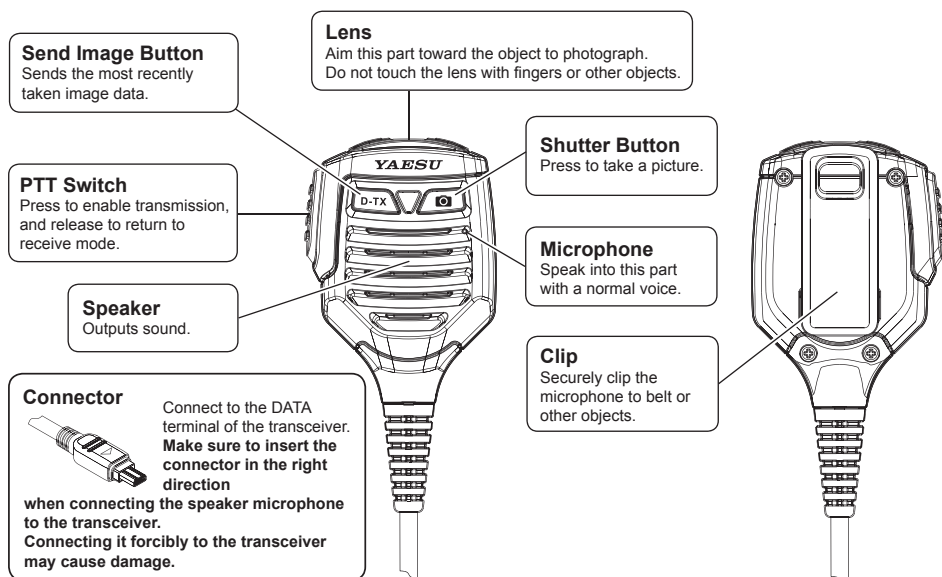
Pictures can be taken by connecting the optional camera-equipped speaker microphone (MH-85A11U).

Captured image data can be saved onto a microSD memory card inserted in the transceiver.

The saved data can be displayed on the screen and transmitted to other transceivers* as well.


In addition, the most recently captured image data can be transmitted to other transceivers* by pressing  (Send Image Button) on the camera-mounted speaker microphone.

* Refer to the Yaesu website or catalog for the compatible transceiver models.



- Make sure to keep at least 50 cm distance between the lens and the object. If the object is too close, the picture will be out of focus, resulting in a blurred picture.
- You can set the size (resolution) and image quality (compression ratio) of the image to be shot by the following operations.




- Press and hold the [DISP] key → [OPTION] → [1 USB CAMERA].
- If your station and the remote station are both in digital mode, you can transfer the image data most recently taken by pressing .
- Set the digital mode in advance to transfer images to other radios.
- Do not directly photograph objects with strong light, such as the sun or other bright objects. Doing so can cause malfunction.
- If the lens or the microphone gets dirty, use a dry, soft cloth to wipe off the contaminants.

Taking pictures

1. Connect the camera-equipped speaker microphone (MH-85A11U) to the DATA terminal of the transceiver.



- When connecting or disconnecting the MH-85A11U, turn off the FT3DR/DE.
 - When receiving an AM radio broadcast signal with the camera microphone connected, noise may occur, but this is not a malfunction.
-

2. Point the camera lens at the object to be photographed and press the shutter button on the microphone.
 - The captured image appears on the LCD.
 - Touch the image, to temporarily turn OFF the display of buttons and view the entire photo. Touch the image again to display the buttons.
3. To save the image onto the microSD memory card, touch **[SAVE]**.
Press the **[BACK]** key or touch **[DEL]** to return the display to the previous operating screen without saving the image.
4. To transmit the saved image to other transceivers, press the  (Send Image Button) on the MH-85A11U or touch **[SEND]**.
5. Press the **[BACK]** key or touch **[OK]** to return to the normal operation.

Viewing the Saved Image

1. Touch **[F MW]**, and then touch **[LOG]**.
If **[LOG]** is not displayed, touch **[BACK ←]** to display **[LOG]** and then touch it.
2. Touch **[PICT]**.
Displays the saved image data list.
3. Touch the image to be displayed.
 - Displays the selected image.
 - To transmit the image to other transceivers, touch **[SEND]** or **[FWD]**. When the transfer is complete, the screen in step 3 will return.
4. Press the **[BACK]** key several times to return to the previous operating screen.

WIRES-X function

WIRES (Wide-coverage Internet Repeater Enhancement System) is an Internet communication system which expands the range of amateur radio communication.

By connecting with a local WIRES-X Node station, the FT3DR/DE can communicate and exchange data via the internet with WIRES-X nodes worldwide.

Use the News Station function to write (upload) and read (download) digital data (text, images and audio).

When connected to a WIRES-X node station or room, the node name, room name, call sign of the other station, distance, and direction, are all displayed on this screen.



Example of display when connected to a room



For details, refer to the separate WIRES-X Instruction Manual which is available on the Yaesu website.

APRS (Automatic Packet Reporting System) function

The FT3DR/DE uses a GPS receiver to acquire and display its position location information. The APRS feature uses the location information to transmit the position information, data and messages, using the format developed by Bob Bruninga WB4APR.

Upon receiving an APRS report from a remote station, the direction and distance to the remote station from your station, the speed of the remote station, and other data sent by the remote station may be displayed on the LCD of your transceiver.



Example of display when an APRS signal is received

Setting several station parameters, such as the call sign and symbol is required before using the APRS function (initial settings).



For details, refer to the APRS Function Instruction Manual which is available on the Yaesu website.

GPS Function

FT3DR/DE is equipped with GPS (Global Positioning System) receiver.

When receiving signals from GPS satellites, the current position (latitude, longitude, altitude) can be calculated and displayed within a tolerance of several meters. In addition, GPS receives the exact time from the satellite atomic clock.



- When the GPS function is active, the power consumption increases by about 18 mA.
 - To turn the GPS function ON/OFF:
Press and hold the [DISP] key → [APRS] → [20 GPS POWER]
-



For additional details on the following Functions, refer to the Advanced Manual which may be downloaded from the Yaesu website.

Tone squelch feature

The tone squelch opens the speaker audio only when a signal containing the specified CTCSS tone is received. By matching the tone frequency with the partner stations, quiet standby monitoring is possible.

Digital Code squelch (DCS) feature

DCS (Digital Coded Squelch) function allows audio to be heard only when signals containing the same DCS code are received.

Digital Personal ID (DP-ID) feature

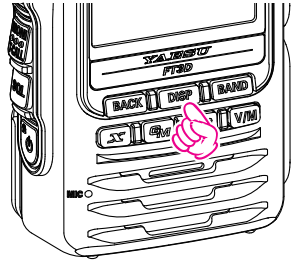
Digital Personal ID (DP-ID) feature opens the speaker audio only when a C4FM signal set to the same DP-ID in the Digital Mode is received.

Using Set Mode

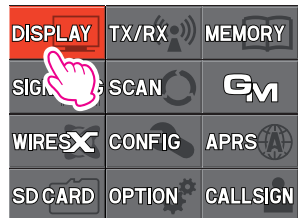
The Set Mode permits configuring the various functions according to individual operating needs and preferences.

Set Mode Operation

1. Press and hold the **[DISP]** key.
The SET MODE screen will be displayed.



2. Touch the desired item in Set Mode.
The Sub-menu screen will be displayed.
 - You can also turn the **DIAL** knob to indicate a menu item, and then press the **[DISP]** key to select it.



3. Touch the desired Set Mode Sub-menu.
 - Turn the **DIAL** knob to display a sub-menu that is not displayed, then touch it.
 - You can also turn the **DIAL** knob to indicate a menu item, and then press the **[DISP]** key to select it.
4. Rotate the **DIAL** knob to select the desired item to set.
[When there is no deeper level of menu items]
Go step 6.
[When there is deeper level of menu items]
5. Touch the desired item to set.
6. Rotate the **DIAL** to select the desired item to set.
7. Press the **PTT** switch to save the settings and return to normal operation.
On some setting screens, pressing **PTT** switch does not exit from Menu Mode. In this case, press the **[BACK]** key several times to return to the frequency display screen.

Tables of Set Mode Operations

Set mode no. / item	Description	Selectable options (Options in bold are the default settings)
DISPLAY		
1 TARGET LOCATION	Set what to display using the smart navigation function.	COMPASS / NUMERIC
2 COMPASS	Set the compass display of the smart navigation function.	HEADING UP / NORTH UP
3 BAND SCOPE	Set the number of search channels for the band scope function.	19ch / 39ch / 79ch
4 LAMP	Set the duration time of the backlight and keys to be lit.	KEY: OFF / 2 to 180 / CONTINUOUS KEY 30 sec SAVE: ON / OFF
5 LANGUAGE	Switch between Japanese/English for the menus and Set mode, etc.	ENGLISH / JAPANESE
6 LCD DIMMER	Set the brightness level of the LCD backlight and numeric keypad light.	LEVEL1 to LEVEL6
7 OPENING MESSAGE	Set the opening message type.	OFF / DC / MESSAGE
8 SENSOR INFO	Display the voltage.	DC
9 SOFTWARE VERSION	Display the software version.	Main / Sub / DSP
TX/RX		
1 MODE		
1 ANTENNA ATT	Switch the attenuator between ON or OFF.	ON / OFF
2 FM BANDWIDTH	Set the FM transmission modulation level.	WIDE / NARROW
3 RX MODE	Select the receive mode.	AUTO / FM / AM
2 DIGITAL		
1 DIGITAL POPUP	Set the POP UP time.	OFF / BAND2s / BAND4s / BAND6s / BAND8s / BAND10s / BAND20s / BAND30s / BAND60s / BAND CONTINUE
2 LOCATION SERVICE	Set whether or not to display your current location in digital mode.	ON / OFF
3 STANDBY BEEP	Switch the standby beep function between ON or OFF.	ON / OFF
4 DIGITAL VW	Turn the VW mode selection ON or OFF.	OFF / ON
3 AUDIO		
1 MIC GAIN	Adjust the microphone gain level.	LEVEL1 to LEVEL9 LEVEL5
2 MUTE	Set the muting level on the non operating band side when a signal is received on the operating band side.	OFF / MUTE 30% / MUTE 50% / MUTE 100%
3 RX AF DUAL	Set the resume time of radio reception in the AF Dual mode.	Transmit and receive 1 second to 10 seconds, Fixed, or transmission 1 second to 10 seconds. Transmit and receive 2 seconds
4 VOX	VOX function setting.	VOX: OFF / LOW / HIGH DELAY: 0.5 / 1.0 / 1.5 / 2.0 / 2.5 / 3.0 (sec)
5 RECORDING	Voice record function setting.	BAND: A / B / A+B MIC: ON / OFF
MEMORY		
1 BANK LINK	Set the memory bank link.	BANK1 to BANK24 BANK LINK ON / OFF
2 BANK NAME	Assign a name to each memory bank.	BANK1 to BANK24
3 MEMORY NAME	Input the memory channel tag.	Up to 16 letters

Set mode no. / item	Description	Selectable options (Options in bold are the default settings)
4 MEMORY PROTECT	Set whether to allow or prohibit memory channel registration.	ON / OFF
5 MEMORY SKIP	Set for skip memory / specify memory.	OFF / SKIP / SELECT
6 MEMORY WRITE	Set the automatic channel number increment when registering to a memory channel.	NEXT / LOWER
SIGNALING		
1 BELL	Set the bell function settings.	SELECT: OFF / BELL RINGER: 1time to 20times / CONTI
2 DCS CODE	Set the DCS code.	DCS 023 to DCS 754
3 DCS INVERSION	Select a combination of DCS inversion codes in terms of communication direction.	RX (Receive): NORMAL (Homeomorphic) / INVERT (Inversion) / BOTH (Both Phase) TX (Transmission): NORMAL (Homeomorphic) / INVERT (Inversion)
4 DTMF MODE	Set the transmission of DTMF code registered to a DTMF memory channel, DTMF code transmission delay time, and DTMF code transmission speed.	MODE: MANUAL / AUTO DELAY: 50ms / 250ms / 450ms / 750ms / 1000ms SPEED: 50ms / 100ms
5 DTMF MEMORY	Set the DTMF auto dialer channel and code (16 characters).	CH1 to CH10
6 PAGER	Turn the pager answerback Function ON/OFF, and specify a personal code (transmit/receive).	ANS-BACK: ON / OFF CODE-RX: 01 to 50 for each, 05 47 CODE-TX: 01 to 50 for each, 05 47
7 PR FREQUENCY	Set a non-communication squelch.	300Hz to 3000Hz 1600Hz
8 SQL LEVEL	Select a squelch level.	LEVEL 0 to LEVEL15 LEVEL 1 LEVEL 0 to LEVEL 8 LEVEL 1 (AM radio) LEVEL 0 to LEVEL 8 LEVEL 2 (FM radio)
9 SQL S-METER	Select an S-Meter squelch level.	OFF / LEVEL1 to LEVEL10
10 SQL EXPANTION	Set a squelch type separately for Receive and transmit.	ON / OFF
11 SQL TYPE	Select a squelch type.	OFF / TONE / TONE SQL / DCS / REV TONE / PR FREQ / PAGER / (D CD) / (TONE-DCS) / (D CD-TONE SQL) * The options in the parentheses are available when the SQL expansion is ON.
12 TONE SQL FREQ	Set a tone frequency.	67.0Hz to 254.1Hz 100.0Hz
13 TONE SEARCH	Set the audio output during tone search. Turn the muting function on/off and select a tone search speed.	MUTE: ON / OFF SPEED: FAST / SLOW
14 WX ALEAT	Enables/Disables the Weather Alert Feature.	ON / OFF
SCAN		
1 DW TIME	Set the priority memory channel monitoring interval.	0.1sec to 10sec 5.0sec
2 SCAN LAMP	Set whether or not to light up the scan lamp when scanning stops.	ON / OFF
3 SCAN RE-START	Set the scanning restart time.	0.1sec to 10sec 2.0sec
4 SCAN RESUME	Configure the scan stop mode settings.	SCAN: BUSY / HOLD / 2.0sec to 10sec 5.0sec DW: BUSY / HOLD / 2.0sec to 10.0sec
5 SCAN WIDTH	Set the scan mode operation.	VFO: ALL / BAND MEMORY: ALL CH / BAND BANK LINK: ON / OFF
6 PRIORITY REVERT	Turn the "Priority Channel Revert" feature ON or OFF during Dual Receive.	ON / OFF

Set mode no. / item	Description	Selectable options (Options in bold are the default settings)
GM		
* For details of the functions, refer to the GM Function Instruction Manual.		
1 DP-ID LIST	Displays the DP-ID list screen.	-
2 RADIO ID CHECK	Display the transceiver specific number (ID). (Uneditable)	-
WIRES-X		
* For details of the functions, refer to the WIRES-X Instruction Manual.		
1 RPT/WIRES FREQ	Set the frequency to be used for Repeater/WIRES.	MANUAL / PRESET
2 SEARCH SETUP	Set the WIRES ROOM selection method.	HISTORY / ACTIVITY
3 EDIT CATEGORY TAG	Edit category tags.	C1 to C5
4 REMOVE ROOM/NODE	Delete registered Category ROOMs.	C1 to C5
5 DG-ID	Set the DG-ID number for WIRES-X.	01 to 99 / AUTO
CONFIG		
1 APO	Set the length of time until the transceiver turns OFF automatically.	OFF / 30 min to 12 hour
2 BCLO	Turn on/off the busy channel lockout function.	ON / OFF
3 BEEP	Set the beep emitting function, and set whether or not to emit the beep sound when a band edge/CH1 is encountered.	SELECT: KEY&SCAN / KEY / OFF EDGE: ON / OFF
4 BEEP LEVEL	Beep volume setting.	HIGH / LOW
5 BUSY LED	Turn the BUSY indicator ON or OFF.	A BAND: ON / OFF B BAND: ON / OFF RADIO: ON / OFF
6 CLOCK TYPE	Set the clock shift function.	A / B
7 GPS LOG	Set the GPS log recording time interval.	OFF / 1sec / 2sec / 5sec / 10sec / 30sec / 60sec
8 HOME VFO	Enable/disable VFO transmission in Home Channel.	ENABLE / DISABLE
9 LOCK	Configure the lock mode setting.	KEY&DIAL / PTT / KEY&PTT / DIAL&PTT / ALL / KEY / DIAL
10 MONI/T-CALL	Select the function of the MONI/ T-CALL switch.	MONI / T-CALL* * European / Asian version
11 TIMER	Switch the timer between ON and OFF.	POWER ON: 00:00 - 23:59 POWER OFF: 00:00 - 23:59
12 PASSWORD	Input the password.	OFF / ON : - - -
13 PTT DELAY	Set the PTT delay time.	OFF / 20ms / 50ms / 100ms / 200ms
14 RPT ARS	Turn the ARS function ON or OFF.	ON / OFF
15 RPT SHIFT	Set the repeater shift direction.	SIMPLEX / -RPT / +RPT
16 RPT SHIFT FREQ	Set the repeater shift width.	0.000MHz to 150.000MHz
17 SAVE RX	Set the receive save time.	OFF / 0.05sec (1:1) to 20.0sec (1:400)
18 STEP	Set the channel step.	AUTO / 5.0KHz / 6.25KHz / (8.33KHz) / (9.0KHz) / 10.0KHz / 12.5KHz / 15.0KHz / 20.0KHz / 25.0KHz / 50.0KHz / 100KHz
19 DATE & TIME ADJ	Set the built-in clock.	-
20 TOT	Set the timeout timer.	OFF / 30sec - 3MIN - 10MIN
21 VFO MODE	Select the frequency selection range in the VFO mode.	ALL / BAND
22 DIAL KNOB CHANGE	Swap the Dial and VOL knob functions.	Upper knob: DIAL knob Lower knob: VOL knob

Set mode no. / item	Description	Selectable options (Options in bold are the default settings)
APRS		
* For details of the functions, refer to the APRS Instruction Manual.		
1 APRS AF DUAL	Turn the muting function ON or OFF when both the APRS function and AF dual function are active.	ON / OFF
2 APRS DESTINATION	Display the model code.	APY03D (Not editable)
3 APRS FILTER	Select the filter function.	Mic-E: ON / OFF POSITION: ON / OFF WEATHER: ON / OFF OBJECT: ON / OFF ITEM: ON / OFF STATUS: ON / OFF OTHER: ON / OFF ALTNET: ON / OFF
4 APRS MODEM	Set the APRS baud rate.	OFF / 1200bps / 9600bps
5 APRS MSG FLASH	Set the strobe to flash when there is an incoming message.	MSG: OFF / 2sec to 60sec / CONTINUOUS / EVERY 2s to EVERY 10m 4sec GRP: OFF / 2sec to 60sec / CONTINUOUS 4sec BLN: OFF / 2sec to 60sec / CONTINUOUS 4sec
6 APRS MSG GROUP	Group filtering for received messages.	G1: ALLxxxxxx G2: CQxxxxxx G3: QSTxxxxxx G4: YAESUxxxxxx G5: ----- B1: BLNxxxxxx B2: BLNxxxxxx B3: BLNxxxxxx
7 APRS MSG TEXT	Input the fixed text message.	1 to 8
8 APRS MUTE	Set the B-band AF muting function ON or OFF when APRS is active.	ON / OFF
9 APRS POPUP	Set the beacon type, message type and time for pop-up display.	The setting values of Mic-E, POSITION, WEATHER, OBJECT, ITEM, STATUS, OTHER, MY PACKET, MSG, GRP and BLN are as follows. OFF / ALL 2 s to ALL 60 s / ALL CNT / BND 2 s to BND 60 s / BND CNT ALL 10 s The setting values of MY MSG, DUP.BCN, DUP.MSG, ACK.REJ and OTHER MSG are as follows.: OFF / BND 2 s to BND 60 s BND 10 s

Set mode no. / item	Description	Selectable options (Options in bold are the default settings)
10 APRS RINGER	Set the bell ring on/off when a beacon or message is received.	Mic-E: ON / OFF POSITION: ON / OFF WEATHER: ON / OFF OBJECT: ON / OFF ITEM: ON / OFF STATUS: ON / OFF OTHER: ON / OFF MY PACKET: ON / OFF MSG: ON / OFF GRP: ON / OFF BLN: ON / OFF MY MSG: ON / OFF DUP.BCN: ON / OFF DUP.MSG: ON / OFF ACK.REJ: ON / OFF OTHER MSG: ON / OFF TX BCN: ON / OFF TX MSG: ON / OFF
11 APRS UNIT	Select the units for APRS display.	POSITION: MM.MM' / MM'SS" DISTANCE: km / mile SPEED: km/h / knot / mph ALTITUDE: m / ft TEMP: °C / °F RAIN: mm / inch WIND: m/s / mph
12 APRS TX DELAY	Set the data sending delay time.	100ms to 1000ms 300ms
13 BEACON INFO	Set the transmission beacon information.	AMBIGUITY: OFF / 1 digit / 2digit / 3digit / 4digit SPD/CSE: ON / OFF ALTITUDE: ON / OFF
14 BEACON INTERVAL	Set a beacon automatic sending interval.	30sec / 1min / 2min / 3min / 5min / 10min / 15min / 20min / 30min / 60min
15 BEACON STATUS TEXT	Input setting for status text.	S.TXT: ON / OFF TX RATE: 1/1 to 1/8 TEXT: Text 1 to Text 5
16 BEACON TX	Select automatic or manual sending of beacon.	AUTO / MANUAL / (SMART)
17 COM PORT SETTING	Set the COM port.	STATUS: ON / OFF SPEED: 4800 / 9600 / 19200 / 38400 INPUT: OFF / GPS OUTPUT: OFF / GPS / WAY.P WAYPOINT: NMEA9 / NMEA6 / NMEA7 / NMEA8 Mic-E: ON / OFF POSIT: ON / OFF WEATHER: ON / OFF OBJECT: ON / OFF ITEM: ON / OFF
18 DIGI PATH	Set the digital repeater route.	P1 OFF P2(1) 1 WIDE1-1 P3(2) 1 WIDE2-1 / 2 WIDE2-1 P4(2) 1..... / 2..... P5(2) 1..... / 2..... P6(2) 1..... / 2..... P7(2) 1..... / 2..... P8(8) 1..... to 8.....
19 GPS SETUP	Select a datum used for the GPS function.	DATUM: WGS-84 / Tokyo (Mean) PINNING: ON / OFF DGPS: ON / OFF
20 GPS POWER	Turn the GPS function ON/OFF.	GPS ON / GPS OFF

Set mode no. / item	Description	Selectable options (Options in bold are the default settings)
21 GPS TIME SET	Turn on/off the GPS time and date automatic acquisition function.	AUTO / MANUAL
22 GPS UNIT	Select the units for GPS display.	POSITION: MMM' / 'SS" SPEED: km/h / knot / mph ALTITUDE: m / ft
23 CALLSIGN (APRS)	Specify the call sign of your station.	-----
24 MY POSITION	Set your location.	GPS / Manual / P1 to P10
25 MY SYMBOL	Set your station symbol.	48 icons including 1 (/[Human/Person]) / 2(/b Bicycle) / 3(/> Car) / 4(YY Yaesu Radios)
26 POSITION COMMENT	Set up the position comment function.	Off Duty / En Route / In Service / Returning / Committed / Special / Priority / Custom 0 to 6 / EMERGENCY!
27 SmartBeaconing	Set the smart beaconing function.	STATUS: OFF / TYPE1 / TYPE2 / TYPE3 * For details on the following setting items for each type, refer to the APRS Instruction Manual. LOW SPD, HIGH SPD, SLOW RATE, FAST RATE, TURN ANGL, TURN SLOP, TURN TIME
28 TIME ZONE	Set the time zone.	UTC -13:00 to UTC 0:00 to UTC +13:00 UTC 0:00
SD CARD		
1 BACKUP	Save the data stored on the transceiver onto a microSD memory card or load the data from a microSD card.	Write to SD / Read from SD
2 MEMORY CH	Save or load the memory channel information onto or from a microSD memory card.	Write to SD / Read from SD
3 MEMORY INFO	Displays the total capacity and free space of the SD Memory Card.	-
4 FORMAT	Initialize microSD memory cards.	-
OPTION		
1 USB CAMERA	Set the USB camera resolution and Speaker.	SIZE: 160x120 / 320x240 QUALITY: LOW / NORMAL / HIGH SP SEL: CAMERA / INT SP
2 Bluetooth	Sets the Bluetooth function.	OFF / ON
3 DEVICE LIST	Bluetooth device list.	-
4 Bluetooth Save	Turn the Bluetooth save function ON or OFF	OFF / ON
CALLSIGN		
CALLSIGN	Set the call sign.	xxxxxxxxxx

Set Mode: DISPLAY Menu Operations

1 Setting What to Display Using the Smart Navigation Function

Set what to display on the smart navigation screen.

1. Press and hold the **[DISP]** key, and then touch **[DISPLAY]**.
2. Touch **[1 TARGET LOCATION]**.
3. Rotate the **DIAL** knob to select what is displayed on the screen.

COMPASS	Displays the compass.
NUMERIC	Displays the latitude and longitude.

Remark The default setting: COMPASS

2 Setting the Compass Display

Set the compass display.

1. Press and hold the **[DISP]** key, and then touch **[DISPLAY]**.
2. Touch **[2 COMPASS]**.
3. Rotate the **DIAL** knob to select the desired setting.

HEADING UP	The heading direction is indicated at the top of the compass.
NORTH UP	The north direction is indicated at the top of the compass.

Remark The default setting: HEADING UP

3 Setting the Search Channels for the BAND SCOPE Function

Set the number of channels to be displayed for the band scope when the BAND SCOPE function is used.

1. Press and hold the **[DISP]** key, and then touch **[DISPLAY]**.
2. Touch **[3 BAND SCOPE]**.
3. Rotate the **DIAL** knob to select the number of channels to search for.
19ch / 39ch / 79ch

Remark The default setting: 39ch

4 Changing the Lighting Condition

Change the LCD and key lighting condition.

1. Press and hold the **[DISP]** key, and then touch **[DISPLAY]**.
2. Touch **[4 LAMP]**.
3. Rotate the **DIAL** knob to select **[KEY]**, then press the **[DISP]** key.
4. Rotate the **DIAL** knob to select the lighting condition.

2 SEC (KEY) to 180 SEC (KEY)	When the DIAL is rotated or a key is pressed, the LCD and key lights remain illuminated for the set time.
CONTINUOUS	The LCD and key lights remain illuminated.
OFF	The LCD and keys do not light up.

Remark The default setting: 30 SEC (KEY)

5. Press the **[DISP]** key.
6. Rotate the **DIAL** knob to select **[SAVE]**, then press the **[DISP]** key.

7. Rotate the **DIAL** knob to select the lighting status after the set illumination time elapses.

OFF	After the illumination time selected for [KEY] elapses, the lights dim to [LEVEL 1] of the LCD dimmer setting.
ON	After the illumination time selected for [KEY] elapses, lights turn off.

Remark The default setting: OFF

i When [KEY] is set to CONTINUOUS, regardless of the [SAVE] setting, the illumination stays lit according to the LCD dimmer setting level.

5 Selecting the Display Language

Select the display language from Japanese and English.

1. Press and hold the [DISP] key, and then touch [DISPLAY].
2. Touch [5 LANGUAGE].
3. Rotate the **DIAL** knob to select the desired language.

JAPANESE	Japanese is selected.
ENGLISH	English is selected.

Remark The default setting: English

6 Adjusting the LCD Backlight and Key Button

Light Brightness Level

Adjust the brightness level of the LCD backlight and key button light.

1. Press and hold the [DISP] key, and then touch [DISPLAY].
2. Rotate the **DIAL** knob, then touch [6 LCD DIMMER]
3. Rotate the **DIAL** knob to select the desired brightness level.
4. Select from LEVEL 1 to LEVEL 6.

Remark The default setting: LEVEL 6

7 Changing the Opening Message Displayed Immediately after Power-on

You can select the message under the “YAESU” logo displayed when turning on the transceiver.

1. Press and hold the [DISP] key, and then touch [DISPLAY].
2. Rotate the **DIAL** knob, then touch [7 OPENING MESSAGE].
3. Rotate the **DIAL** knob to select the desired message referring to the following table.

OFF	Displays the receive frequency instead of the opening message immediately after turning on the power.
DC	Displays the power-supply voltage and time when turning on the power.
MESSAGE	Displays a message comprising up to 16 characters when turning on the power. Press the [DISP] key to switch the screen to the message registration screen. See “Text input screen” on page 89 to input the message you want to display.

8 Displaying the Battery Voltage

Display the battery voltage. When the optional external power supply adapter with a cigarette plug (SDD-13) is connected, the power supply voltage of this adapter is displayed.

1. Press and hold the **[DISP]** key, and then touch **[DISPLAY]**.
2. Rotate the **DIAL** knob, then touch **[8 SENSOR INFO]**.
3. The battery voltage is shown on the LCD.

-
- The indication differs depending on the type of the power supply used.



Battery pack: "**Lit**"

Battery case: "**Dry**"

External power supply adapter: "**Ext**"

- During mono band receive, the voltage can be displayed on the LCD constantly.
-

9 Displaying the Software Version

Display the software version.

1. Press and hold the **[DISP]** key, and then touch **[DISPLAY]**.
2. Rotate the **DIAL** knob, then touch **[9 SOFTWARE VERSION]**.
3. The software versions of "Main", "Sub" and "DSP" are shown.

Set Mode: TX/RX Menu Operations

1 MODE

1 Reducing Receiver Sensitivity Attenuator (ATT) Function

If the signal from the remote station is too strong or, a strong signal exists nearby that interferes with reception, use the attenuator (ATT) function to reduce interference.

1. Press and hold the [DISP] key, and then touch [TX/RX].
2. Touch [1 MODE].
3. Rotate the **DIAL** knob to select [1 ANTENNA ATT], then press the [DISP] key.
4. Rotate the **DIAL** knob to select the desired setting.

OFF	Disable the attenuator (ATT) function OFF.
ON	Enable the attenuator (ATT) function ON. The amount of attenuation by the attenuator (ATT) is about 10 dB.

2 Setting the Transmit Modulation Level

The transmit modulation level can be set to half of its usual level.
Select [OFF] for normal amateur operation.

1. Press and hold the [DISP] key, and then touch [TX/RX].
2. Touch [1 MODE].
3. Rotate the **DIAL** knob to select [2 FM BANDWIDTH], then press the [DISP] key.
4. Rotate the **DIAL** knob to select the desired setting.

OFF	Normal transmission modulation level
ON	The level is half of the normal transmit modulation level.

Remark The default setting: OFF

3 Switching the Receive Mode

Manually switch to a suitable mode (radio wave type) according to the frequency band, by selecting [1 MODE] → [3 RX MODE].
For details, see “Fixing the Communication Mode” on page 26.

2 DIGITAL

1 Setting the Pop-up Time of the Remote Station Information

Set the time duration to display the remote station information such as the call sign, on the LCD.

1. Press and hold the **[DISP]** key, and then touch **[TX/RX]**.
2. Touch **[2 DIGITAL]**.
3. Touch **[1 DIGITAL POPUP]**.
4. Rotate the **DIAL** knob to select the desired setting.

OFF	The remote station information is not displayed.
BND2s to 60s	Set the time duration to display the remote station information (2 to 60 seconds). BND2s / BND4s / BND6s / BND8s / BND10s / BND20s / BND30s / BND60s
BNDCNT	The remote station information is continuously displayed.

Remark The default setting: BAND 10 seconds

2 Displaying Your Location in Digital Mode

Set whether or not to display your location in digital mode.

1. Press and hold the **[DISP]** key, and then touch **[TX/RX]**.
2. Touch **[2 DIGITAL]**.
3. Touch **[2 LOCATION SERVICE]**.
4. Rotate the **DIAL** knob to select the desired setting.

ON	Displays your location.
OFF	Does not display your location.

Remark The default setting: ON

5. For details on the function, refer to the GM Function Instruction Manual.

3 Setting the Standby Beep

Set whether or not to emit the standby beep sound when the remote station completes transmission.

1. Press and hold the **[DISP]** key, and then touch **[TX/RX]**.
2. Touch **[2 DIGITAL]**.
3. Touch **[3 STANDBY BEEP]**.
4. Rotate the **DIAL** knob to select the desired setting.

ON	Emits the standby beep sound.
OFF	Does not emit the standby beep sound.

Remark The default setting: ON

4 Turn the VW mode selection ON or OFF.

Set the digital voice FR (VW) mode selection.

1. Press and hold the **[DISP]** key, and then touch **[TX/RX]**.
2. Touch **[2 DIGITAL]**.
3. Touch **[4 DIGITAL VW]**.
4. Rotate the **DIAL** knob to select the desired setting.

ON	The digital voice FR (VW) mode may be selected.
OFF	The digital voice FR (VW) mode may not be selected.

Remark The default setting: OFF

3 AUDIO

1 Adjusting the Microphone Sensitivity (Microphone Gain)

You can adjust the input level of the built-in microphone or an optional external microphone.

1. Press and hold the **[DISP]** key, and then touch **[TX/RX]**.
2. Touch **[3 AUDIO]**.
3. Touch **[1 MIC GAIN]**.
4. Rotate the **DIAL** knob to select the desired microphone sensitivity level.
5. Select a microphone gain level from LEVEL 1 to LEVEL 9.

Remark The default setting: LEVEL 5



- Increasing the microphone gain excessively can distort the sound or pick up the surrounding noise, impairing intelligibility.
- Be sure to check the microphone gain whenever the microphone is changed.

2 Muting Audio

In the dual receive mode, the audio being received on the non-operating band can be muted.

1. Press and hold the **[DISP]** key, and then touch **[TX/RX]**.
2. Touch **[3 AUDIO]**.
3. Touch **[2 MUTE]**.
4. Rotate the **DIAL** knob to select the desired mute setting.

OFF	Disable the muting audio.
MUTE 30%	Mute the audio level set to 30%.
MUTE 50%	Mute the audio level set to 50%.
MUTE 100%	Mute the audio level set to 100%.

3 Simultaneous Radio Broadcast Reception

Set the time to resume radio broadcast reception after transmit/receive when using simultaneously receive mode, by selecting **[3 AUDIO]** → **[3 RX AF DUAL]**.

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

4 Setting the VOX (automatic voice transmission) Function

Set the VOX function settings, by selecting **[3 AUDIO]** → **[4 VOX]**.

For details, see “VOX Operation” on page 47.

5 Setting the Voice Recording Function

Set the Voice Recording function settings, by selecting **[3 AUDIO]** → **[5 RECORDING]**.

For details, see “Using the Voice Recording” on page 49.

Set Mode: MEMORY Menu Operations

1 Setting Memory Bank Link

You can link multiple registered memory banks so that you can recall frequently used memory banks immediately.

1. Press and hold the **[DISP]** key, and then touch **[MEMORY]**.
2. Touch **[1 BANK LINK]**.
3. Rotate the **DIAL** knob to select the memory bank you want to link, then press the **[DISP]** key.
The checkbox is checked.
4. Repeat step 3 to link the memory banks one by one from BANK 1 to BANK 24.

2 Assigning Name to Memory Bank

By selecting **[2 BANK NAME]**, you can assign a name to each memory bank using up to 16 characters.

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

3 Assigning Name to Memory Channel

By selecting **[3 MEMORY NAME]**, you can assign a name such as a call sign and broadcast station name to each memory channel and home channel.

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

4 Memory Channel Protect Function

A memory channel may be protected so that a new frequency or memory channel tag name cannot be registered to it.

1. Press and hold the **[DISP]** key, and then touch **[MEMORY]**.
2. Touch **[4 MEMORY PROTECT]**.
3. Rotate the **DIAL** knob to select the desired setting.

OFF	Allows registering to registering to memory channels.
ON	Prohibits registering to memory channels.

Remark The default setting: OFF

5 Setting Memory Skip Function

By selecting **[5 MEMORY SKIP]**, you can set the scan method for scanning memory channels.

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

6 Setting the Memory Channels Used for Registration

Set whether to register to the lowest unused memory channel number following the channel number you most recently used, or to the lowest unused memory channel number.

1. Press and hold the **[DISP]** key, and then touch **[MEMORY]**.
2. Touch **[6 MEMORY WRITE]**.
3. Rotate the **DIAL** knob to select the desired setting.

NEXT	Registers to the smallest unused memory channel number which comes after the channel number you used most recently.
LOWER	Registers to the unused memory channel having the lowest memory number.

Remark The default setting: NEXT

Set Mode: SIGNALING Menu Operations

1 Notification of a Call from a Remote Station by the Bell

Set whether or not to alert you of a call from a remote station using the bell by selecting [1 BELL].

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

2 Selecting a DCS Code

Select the DCS code out of the 104 codes from 023 to 754 by selecting [2 DCS CODE].

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

3 Transmitting and Receiving a DCS Code with an Inverted Phase DCS INVERSION Function

The transmit and receive DCS code phase may be inverted when using the digital code squelch function.

1. Press and hold the [DISP] key, and then touch [SIGNALING].
2. Touch [3 DCS INVERSION].
3. Rotate the DIAL to select the phase combination for transmit/receive.

RX	Homeomorphic / Both Phase / Inverted Phase
TX	Homeomorphic / Inverted Phase

Remark The default setting: Receive [Homeomorphic], Transmit [Homeomorphic]

4 Setting the Transmission Method of the DTMF Code

Set the transmission method of the registered DTMF code by selecting [4 DTMF MODE].

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

5 Setting the DTMF Code

By selecting [5 DTMF MEMORY], the maximum of 16 digit DTMF code can be registered for a telephone number to make a call through the public telephone line from a phone patch.

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

6 Calling Only a Specific Station (New Pager Function)

When using transceivers with a group of friends, specifying individual personal codes permits directing a call to a specific station by selecting [6 PAGER].

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

7 Enabling No-communication Squelch Function PR FREQUENCY Function

Set a no-communication squelch frequency in steps of 100 Hz within the range from 300 Hz to 3000 Hz.

1. Press and hold the [DISP] key, and then touch [SIGNALING].
2. Touch [7 PR FREQUENCY].
3. Rotate the DIAL knob to select a no-communication squelch frequency.

4. Select a no-communication squelch frequency in steps of 100 Hz within the range from 300 Hz to 3000 Hz.

Remark The default setting: 1600 Hz

8 Adjusting the Squelch Level SQL LEVEL Function

Set the squelch level to mute the raspy noise heard when there is no signal.

1. Press and hold the [DISP] key, and then touch [SIGNALING].
2. Touch [8 SQL LEVEL].
3. Rotate the DIAL knob to adjust the squelch level from LEVEL 0 to LEVEL 15 (LEVEL 0 to LEVEL 8: AM and FM radio).

Remark The default setting: LEVEL1 (LEVEL 2: FM radio)

9 Setting the Squelch to Activate at a Specified Signal Strength S-Meter Squelch Function

You can set A-Band and B-Band individually to emit audio only when receiving a signal stronger than the S-meter Squelch level setting.

To adjust the S-Meter squelch, first set the operating band by pressing the [A/B] key.

1. Press and hold the [DISP] key, and then touch [SIGNALING].
2. Touch [9 SQL S-METER].
3. Rotate the DIAL knob to select the setting value referring to the table below.

Remark The default setting: OFF

Display	Operating Status
OFF	S-Meter squelch function is OFF. (By default, S-Meter squelch function is set to OFF.)
LEVEL1 to LEVEL 10	Outputs the audio of a signal as strong or stronger than the S-Meter level 1 to level 10.

10 Setting the Squelch Type for Transmit and Receive SQL EXPANSION Function

You can add squelch types to [11 SQL TYPE] for transmit and receive, respectively.

1. Press and hold the [DISP] key, and then touch [SIGNALING].
2. Rotate the DIAL knob, then touch [10 SQL EXPANSION].
3. Rotate the DIAL knob to select the desired setting.

ON	Add squelch types for transmit and receive, respectively.
OFF	Does not add squelch types for transmit and receive, respectively.

Remark The default setting: OFF

11 Setting the Type of Squelch

Select [11 SQL TYPE] to open the squelch only when a signal containing the specified tone or code is received.

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

12 Selecting a CTCSS Tone Frequency

Select [12 TONE SQL FREQ] to select the tone frequency from 50 types between 67.0 Hz and 254.1 Hz.

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

13 Setting the Sound and Speed During Tone Search

Tone Search Function

The audio may be muted during tone search. The operation speed of the tone search can also be changed.

1. Press and hold the [DISP] key, and then touch [SIGNALLING].
2. Rotate the DIAL knob, then touch [13 TONE SEARCH].
3. Rotate the DIAL knob to select [MUTE], then press the [DISP] key.
4. Rotate the DIAL knob to select the desired setting.

ON	Mutes the audio during the tone search operation.
OFF	Does not mute the audio during the tone search operation.

Remark The default setting: ON

5. Rotate the DIAL knob to select [SPEED], then press the [DISP] key.
6. Rotate the DIAL knob to select the desired setting.

FAST	Speed up the tone search operation.
SLOW	Slow down the tone search operation.

Remark The default setting: FAST

14 ON/OFF for the Weather Alert Feature

Setting the weather Alert Feature, used for notifying storms and hurricanes, ON or OFF.

1. Press and hold the [DISP] key, and then touch [SIGNALLING].
2. Rotate the DIAL knob, then touch [14 WX ALERT].
3. Rotate the DIAL knob to select the desired setting.

ON	Enables the Weather Alert Feature.
OFF	Disables the Weather Alert Feature.

Remark The default setting: OFF

Set Mode: SCAN Menu Operations

1 Setting the Surveillance Interval Time for Priority Channels

DW INTERVAL TIME Function

When the dual receive function is active, the interval time at which the priority channel is monitored can be set.

1. Press and hold the **[DISP]** key, and then touch **[SCAN]**.
2. Rotate the **DIAL** knob, then touch **[1 DW TIME]**.
3. Rotate the **DIAL** knob to select the monitoring interval from 0.1 SEC to 10 SEC.

Remark The default setting: 5.0 seconds

2 Setting the Illumination On/Off When Scanning Stops

LAMP Function

Set whether or not the LCD backlight is turned on when a signal is received during scanning.

1. Press and hold the **[DISP]** key, and then touch **[SCAN]**.
2. Rotate the **DIAL** knob, then touch **[2 SCAN LAMP]**.
3. Rotate the **DIAL** knob to select the desired setting.

ON	The LCD backlight will illuminate when a signal is received.
OFF	The LCD backlight will not illuminate when a signal is received.

Remark The default setting: ON

3 Setting the Time to Resume Scanning SCAN RE-START Function

Set the time interval to resuming scanning after a received signal ends during scanning.

1. Press and hold the **[DISP]** key, and then touch **[SCAN]**.
2. Rotate the **DIAL** knob, then touch **[3 SCAN RE-START]**.
3. Rotate the **DIAL** knob to select the time to resume scanning from 0.1 SEC to 10 SEC.

Remark The default setting: 2.0 seconds

4 Selecting a Receive Operation When Scanning Stops

Touch **[4 SCAN RESUME]** to set the receive operation for when scanning stops. For details, see “Setting the Receive Operation When Scanning Stops” on page 37.

5 Setting the Scanning Range

You can set the frequency range for scanning in VFO mode and Memory mode.

1. Press and hold the **[DISP]** key, and then touch **[SCAN]**.
2. Touch **[5 SCAN WIDTH]**.
3. Rotate the **DIAL** knob to select **[VFO]**, then press the **[DISP]** key.
4. Rotate the **DIAL** knob to select the desired setting referring to the table below.

ALL	Scans all bands from the current frequency within the 1.8 MHz to 999 MHz range.
BAND	Starting with the current frequency, scans within the current band.

5. Press the **[BACK]** key.
6. Rotate the **DIAL** knob to select **[MEMORY]**, then press the **[DISP]** key.

7. Rotate the **DIAL** knob to select the desired setting referring to the table below.

ALL CH	Scans all memory channels (1 to 900) starting with the currently specified memory channel. When “Selected memory channel” is selected, all specified memory channels are scanned.
BAND	Scans only the memory channels to which the frequencies are registered, within the same frequency band ^{*1} as the currently specified memory channel. When the memory channels are registered as the specified memory channels, scans only the specified memory channels to which the frequencies are registered, within the same frequency band. ^{*1}

*1: For the relationship between frequency bands and receive frequencies, see “Selecting a Frequency Band” on page 24.

8. Press the [**BACK**] key.
 9. Rotate the **DIAL** knob to select [**BANK LINK**], then press the [**DISP**] key.
 10. Rotate the **DIAL** knob to select the desired setting.

ON	During memory bank link scanning, memory channels registered in two or more previously specified banks can be scanned.
OFF	Only the memory channels assigned to the recalled memory bank are scanned.

Remark The default setting: ON

6 Setting the Priority Memory Channel transmit operation

Determines the operation of the **PTT** switch when pressed during the Dual Receive.

1. Press and hold the [**DISP**] key, and then touch [**SCAN**].
2. Touch [**6 PRIORITY REVERT**].
3. Rotate the **DIAL** knob to select the desired setting.

OFF	When a signal is received on Priority Memory Channel, dual receive pauses, press the PTT switch to deactivate the Dual Receive operation and transmit on the Priority Memory Channel. (The Dual Receive does not resume.)
ON	Press the PTT switch to transmit on the Priority Memory Channel. Release the PTT switch to receive the Priority Memory Channel for about five seconds, then Dual Receive operation continues.

Remark The default setting: OFF

Set Mode: GM Menu Operations

For details on how to set each item, refer to “FT3DR/DE GM Function Instruction Manual” which is available on Yaesu website.

Set Mode: WIRES-X Menu Operations

For details on how to set each item, refer to “FT3DR/DE WIRES-X Instruction Manual” which is available on Yaesu website.

Set Mode: CONFIG Menu Operations

1 Turn Power Off Automatically — Auto Power-Off Function

Set whether or not to turn the transceiver OFF automatically if there is no operation for a certain period of time.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Touch **[1 APO]**.
3. Rotate the **DIAL** knob to select the desired setting.

OFF	Does not turn the power OFF automatically.
30 minutes to 12 hours	Turns off the power when no operation is performed for a specified period of time.

Remark The default setting: OFF



- When the auto power-off function is active, **⏻** appears on the LCD.
- Once the time for automatic power-off is set, the new setting is retained. Unless “OFF” is selected in step 3, the next time the transceiver is turned on, if you perform no operation for the set period of time, the transceiver will automatically turn OFF.)

2 Preventing Accidental Transmission Busy Channel Lockout (BCLO) Function

Preventing transmissions when the receive channel is busy.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Touch **[2 BCLO]**.
3. Rotate the **DIAL** knob to select the desired setting.

OFF	Permits starting a transmission while receiving a signal.
ON	Disables transmissions while receiving a signal.

Remark The default setting: OFF

3 Setting the Key Operation Confirmation Sound

Set whether or not a beep sound is emitted to confirm when keys are operated, when scanning reaches the end of a frequency band, or when a band edge/CH1 is encountered.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Touch **[3 BEEP]**.
3. Rotate the **DIAL** knob to select **[SELECT]**, then press the **[DISP]** key.
4. Rotate the **DIAL** knob to select the desired setting referring to the table below.

KEY & SCAN	Emits the beep sound when a key is operated or scanning stops.
KEY	Emits the beep sound when a key is pressed.
OFF	Mutes the beep sound.

Remark The default setting: KEY & SCAN

5. Press the **[BACK]** key.
6. Rotate the **DIAL** knob to select **[EDGE]**, then press the **[DISP]** key.
7. Rotate the **DIAL** knob to select the desired setting referring to the table below.

OFF	No confirmation sound is emitted when a band edge/CH1 is encountered.
ON	Emits the confirmation sound when a band edge/CH1 is encountered.

Remark The default setting: OFF

4 Setting the BEEP volume

Set the volume of the beep sound.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Touch **[4 BEEP LEVEL]**.
3. Rotate the **DIAL** knob to select the desired setting.

HIGH	Volume level set to HIGH
LOW	Volume level set to LOW

Remark The default setting: HIGH

5 Turning off the BUSY Indicator

When listening to the radio continuously or to extend the remaining battery operating time, turn off the BUSY indicator to save battery power consumption.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Touch **[5 BUSY LED]**.
3. Rotate the **DIAL** knob to select "A BAND", "B BAND" or "RADIO", then press the **[DISP]** key.
4. Rotate the **DIAL** knob to select the desired setting.

ON	Turns the BUSY indicator ON.
OFF	Turns the BUSY indicator OFF.

Remark The default setting: ON

5. Press the **[BACK]** key.
6. To change the setting for other bands, repeat steps 3 to 5.

6 Setting the Clock Shift for the Micro Computer Clock Type Function

Set the micro computer Clock Shift function may be activated to eliminate an internally generated spurious high frequency signal. Select [A] for normal use.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Touch **[6 CLOCK TYPE]**.
3. Rotate the **DIAL** knob to select the desired setting.

A	Automatically switches the Clock Shift function between ON & OFF.
B	Activates the Clock Shift function constantly.

Remark The default setting: A

7 Setting a Time Interval for Saving GPS Position Information

Set the interval at which the current position GPS information is saved to the microSD memory card.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Touch **[7 GPS LOG]**.
3. Rotate the **DIAL** knob to select the time interval:
OFF / 1 SEC / 2 SEC / 5 SEC / 10 SEC / 30 SEC / 60 SEC
4. If OFF is selected, no GPS Information is saved onto the microSD memory card

Remark The default setting: OFF



- Data saved onto the microSD memory card is saved in GPSyymmddhhmmss.LOG format.
 - Saved data may be viewed by using OEM PC applications*.
- * Yaesu does not provide technical support for PC applications.

8 Permitting/Prohibiting Transfer of Home Channel Frequency to VFO

Set whether or not to permit tuning off of the home channel and transfer to the VFO.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Touch **[8 HOME VFO]**.
3. Rotate the **DIAL** knob to select the desired setting.

ENABLE	Turning the DIAL knob in home channel transfers from the home channel frequency to the VFO.
DISABLE	Turning the Dial on the home channel does not switch to the VFO.

Remark The default setting: ENABLE

9 Setting the LOCK Function

Select keys/**DIAL** to which you want to apply the lock function.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Touch **[9 LOCK]**.
3. Rotate the **DIAL** knob to select the desired setting.

KEY & DIAL	Locks the DIAL and keys on the front side of the transceiver.
PTT	Locks PTT switch.
KEY & PTT	Locks PTT switch and the keys on the front side of the transceiver.
DIAL & PTT	Locks the DIAL and PTT switch.
ALL	Locks the DIAL, PTT switch and the keys on the front side of the transceiver.
KEY	Locks the keys on the front side of the transceiver.
DIAL	Locks the DIAL.

Remark The default setting: KEY & DIAL

10 Setting the Operation of the MONI/T-CALL Key

Set how the transceiver functions when the **MONI/T-CALL** key is pressed.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Touch **[10 MONI/T-CALL]**.
3. Rotate the **DIAL** knob to select the desired setting.

MONI	Monitors frequencies.
T-CALL	Functions as the tone call.

Remark The default setting: NONI (USA version), T-CALL (European/Asian version)

11 Turning the Transceiver ON/OFF at the Specified Time Timer Function

You can turn the transceiver to ON or OFF at the specified time. Before using this function, adjust the clock referring to “19 Setting Clock Time” on page 82.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Rotate the **DIAL**, then touch **[11 TIMER]**.
3. Rotate the **DIAL** knob to select the desired option.

POWER ON	Turns the transceiver ON at the specified time.
POWER OFF	Turns the transceiver OFF at the specified time.

4. Press the **[DISP]** key.
5. Rotate the **DIAL** knob to set the hour, then press the **[DISP]** key.
6. Rotate the **DIAL** knob to set the minute, then press the **[DISP]** key.
7. Touch **[TIMER ON]** or **[TIMER OFF]** to set the timer function to ON or OFF.
8. Touch **[TIMER OFF]** to deactivate the timer function.

Remark The default setting: (TIMER OFF)

12 Password Function

A 4-digit password may be entered to prevent a third party from using the transceiver without permission. Once a password is set, the transceiver cannot be used unless the valid password is entered.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Rotate the **DIAL**, then touch **[12 PASSWORD]**.
3. Rotate the **DIAL** knob to select **[ON]**.

ON	Set the password.
OFF	Does not set the password.

Remark The default setting: OFF

4. Press the **[DISP]** key.
5. Use the numeric keypad to input the desired 4 letters using 0 to 9, A to D, * or #.
6. Press the **[DISP]** key.
7. The registered 4 letters appear.



- To deactivate the password function, select **[OFF]** in step 3, then press **PTT** switch.
- When the on-timer function is activated, the password function is disabled.

● Inputting the Password to Use the Transceiver

1. Press and hold the Power (Lock) switch to turn the transceiver ON.
The password input screen appears.
2. Use the numeric keypad on the display to input the password.
3. When the valid password is entered, the frequency display screen appears.

Remark If an invalid password is entered, the transceiver is turned OFF automatically.



- If you have forgotten the registered password, carrying out all resetting allows you to turn on the transceiver without entering the password.
- It should be noted that performing all resetting resets (initializes) all information such as the information registered to memory channels and various setting values. It is recommended that the password be written down on paper.

13 Setting the PTT Delay Time PTT DELAY Function

Set a timed delay before actual transmission begins after PTT switch is pressed.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Rotate the **DIAL**, then touch **[13 PTT DELAY]**.
3. Rotate the **DIAL** knob to select the desired setting.
OFF/20ms/50ms/100ms/200ms
4. Selecting OFF disables the PTT delay time function.

Remark The default setting: OFF

14 Setting the ARS Function RPT ARS Function

Enable or disable the automatic Repeater Shift operation ARS (Repeater operation is initiated by tuning to the repeater frequency).

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Rotate the **DIAL**, then touch **[14 RPT ARS]**.
3. Rotate the **DIAL** knob to select the desired setting.

ON	Enables the ARS function.
OFF	Disables the ARS function.

Remark The default setting: ON

15 Setting the Repeater Shift Direction RPT SHIFT Function

Set the TX frequency shift direction for repeater use.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Rotate the **DIAL**, then touch **[15 RPT SHIFT]**.
3. Rotate the **DIAL** knob to select the desired setting.

SIMPLEX	No TX frequency offset.
-RPT	Shifts TX to a lower frequency.
+RPT	Shifts TX to a higher frequency.

Remark The default setting differs depending frequency

16 Setting the frequency offset for Repeater Shift

RPT SHIFT FREQ Function

Set the repeater shift offset frequency.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Rotate the **DIAL**, then touch **[16 RPT SHIFT FREQ]**.
3. Rotate the **DIAL** knob to select the desired shift offset.
4. The offset frequency can be set in steps of 0.05 MHz between 0.000 MHz and 150.000 MHz.

Remark The default setting differs depending frequency

17 Disabling Receiver While No Signal Is Received

Receiver Battery Save Function

Sets the Receive OFF Battery save interval (sleep ratio) to reduce power consumption.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Rotate the **DIAL**, then touch **[17 SAVE RX]**.
3. Rotate the **DIAL** knob to select the desired setting (the time interval for disabling the receiver operation).

0.2 sec (1:1) to 1.0 sec (1:5)	In steps of 0.1 second
to 1.0 sec (1:5) to 10 sec (1:50)	In steps of 0.5 second
to 1.0 sec (1:50) to 60 sec (1:300 sec)	In steps of 5 second
OFF	Disables the Battery save function.

4. Selecting OFF disables this function.

Remark The default setting: 0.2 sec (1:1)

18 Changing the Frequency Step Manually

Rotate the **DIAL** knob to select **[18 STEP]** to set each frequency step, when the Dial Knob is turned manually.

For additional details, refer to the Advanced Manual which may be downloaded from the Yaesu website.

19 Setting Clock Time

Set the date and time function of the built-in clock of the FT3DR/DE.

In the factory settings, the date and time are automatically set when positioning the GPS signal, so in this case no manual setting is necessary.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Rotate the **DIAL**, then touch **[19 DATE & TIME ADJ]**.
3. Rotate the **DIAL** knob to select the year, month, day, hour and minute.
4. To activate the time signal (alarm goes off every hour on the hour), touch **[SIGNAL]**.
The checkbox will be checked.
5. Touch **[OK]**.

20 Limit the time of a continuous transmission (TOT Function)

Set the transceiver to automatically return to receive mode after transmitting continuously for a certain period of time. The TOT function limits inadvertent transmission of unnecessary signals, and unwanted battery power consumption (time-out timer function).

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Rotate the **DIAL**, then touch **[20 TOT]**.
3. Rotate the **DIAL** knob to set the time for the transceiver to automatically return to receive mode state in steps of 30 seconds.
OFF/30 SEC to 10 MIN
4. Selecting OFF disables the TOT function.

Remark The default setting: 3 MIN



- When the time-out timer function is active, a beep is emitted when a continuous transmission nears the set time. About 10 seconds later, the transceiver returns to the receive mode.
- The TOT setting is retained until “OFF” is selected in step 3 above.

21 Setting the Frequency Selection Range for Operation in VFO Mode VFO MODE Function

Sets the frequency tuning range while operating in VFO mode.

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Rotate the **DIAL**, then touch **[21 VFO MODE]**.
3. Rotate the **DIAL** knob to select the desired tuning range.

ALL	Tuning continues to the next band when reaching the end of a band.
BAND	Tuning continues to the other end of the current band when reaching the end of the band.

Remark The default setting: ALL

22 Swapping the Dial Knob Functions

1. Press and hold the **[DISP]** key, and then touch **[CONFIG]**.
2. Rotate the **DIAL**, then touch **[22 DIAL KNOB CHANGE]**.
3. Press the **[CHANGE]** key.
4. The VOL and **DIAL** knob functions are swapped.

Remark The default setting: the upper knob is **DIAL**.

Set Mode: APRS Menu Operations

For details on setting each item, refer to “FT3DR/DE APRS Instruction Manual” which is available on Yaesu website.

Set Mode: SD CARD Menu Operations

1 Saving/Loading Data to/from microSD Memory Card

Settings information can be saved to a microSD memory card, also the saved information can be loaded to the transceiver.

1. Press and hold the **[DISP]** key, and then touch **[SD CARD]**.
2. Rotate the **DIAL**, then touch **[1 BACKUP]**.
3. Rotate the **DIAL** knob to select the operation to be performed.

Write to SD	Saves the transceiver setting information to a microSD memory card.
Read from SD	Loads the information to the transceiver from a microSD memory card.

4. Press the **[DISP]** key.
A pop-up window appears on the LCD.
5. Touch **[OK]** twice.
6. When **[Write to SD]** is selected and data writing completes, a beep sounds and "COMPLETED" appears on the LCD.
7. When **[Read from SD]** is selected and data reading completes, a beep sounds, then the transceiver restarts with the settings read from the microSD memory card applied.

2 Saving/Loading Memory Channel Information to/from microSD Memory Card

Memory channel setting information can be saved onto a microSD memory card, or saved information can be loaded to the transceiver.

1. Press and hold the **[DISP]** key, and then touch **[SD CARD]**.
2. Rotate the **DIAL**, then touch **[2 MEMORY CH]**.
3. Rotate the **DIAL** knob to select the operation to be performed.

Write to SD	Saves the memory channel information saved on the transceiver onto a microSD memory card.
Read from SD	Loads the information to the transceiver from the microSD memory card.

4. Press the **[DISP]** key.
A pop-up window appears on the LCD.
5. Touch **[OK]** twice.
6. When **[Write to SD]** is selected and data writing completes, a beep sounds and "COMPLETED" appears on the LCD.
7. When **[Read from SD]** is selected and data reading completes, a beep sounds, then the transceiver restarts with the settings read from the microSD memory card applied.

3 Display microSD Memory Card Information

Display information from SD Memory Card.

1. Press and hold the **[DISP]** key, and then touch **[SD CARD]**.
2. Rotate the **DIAL**, then touch **[3 MEMORY INFO]**.

The bar graph and the following information will be displayed.

Used space: x,xxx MB

Free space: x,xxx MB

Capacity: x,xxx MB

4 Formatting a microSD Memory Card

Format a new microSD memory card.

For details, see “Formatting a microSD Memory Card” on page 21.

Set Mode: OPTION Menu Operations

1 Setting the Optional Microphone with Camera for Use

Image size and quality can be set for the optional microphone with camera (MH-85A11U).

1. Press and hold the **[DISP]** key, and then touch **[OPTION]**.
2. Touch **[1 USB CAMERA]**.
3. Rotate the **DIAL** knob to select **[SIZE]**, then press the **[DISP]** key.
4. Rotate the **DIAL** knob to select one of the following image size settings.
160*120 / 320*240

Remark The default setting: 160*120

5. Press the **[BACK]** key.
6. Rotate the **DIAL** knob to select **[QUALITY]**, then press the **[DISP]** key.
7. Rotate the **DIAL** knob to select one of the following image quality levels.
LOW / NORMAL / HIGH

Remark The default setting: LOW

8. Press the **[BACK]** key.
9. Rotate the **DIAL** knob to select **[SP SEL]**, then press the **[DISP]** key.
10. Rotate the **DIAL** knob to select the speaker.

CAMERA: The audio is routed to MH-85A11U speaker (internal speaker is OFF).

INT SP: The audio is routed to the internal speaker (MH-85A11U speaker is OFF).

Remark The default setting: CAMERA



- If image size is set to large or image quality is set to high, the data transmission time becomes longer.
- The transmission time varies depending on the image size.

2 Bluetooth

Make Bluetooth settings and connect to a Bluetooth headset.

For details, see “Bluetooth[®] Operation” on page 44.

3 Bluetooth Device List

Displays a list of registered or searched Bluetooth devices. You can select and connect a Bluetooth headset.

For details, see “Display device list” on page 46.

4 Bluetooth Save

Set this to reduce the battery consumption of the Bluetooth headset.

For details, see “Bluetooth[®] battery save function” on page 46.

Set Mode: CALLSIGN Menu Operations

1. Press and hold the **[DISP]** key, and then touch **[CALLSIGN]**.
2. Enter a call sign using the alphabet input screen and the ten key input screen.
 - The alphabet input screen can be switched to the number input screen by touching **[123]**.
 - The number input screen can be switched to the alphabet input screen by touching **[ABC]**.

 - Up to 10 characters can be entered.
 - Characters that may be entered for the call sign are the numbers 0-9, letters "A – Z" in upper case, the hyphen and the slash..

3. After inputting the call sign, press the **PTT** switch or press and hold the **[DISP]** key.

Restoring to Defaults (Reset)

Caution

When the All Reset function is performed, all data registered in the memory will be deleted. Be sure to note the settings on paper or back up the data on a microSD memory card. For details on how to save backup onto a microSD memory card refer to “Set Mode: SD CARD Menu Operations” on page 84.

All Reset

To restore all transceiver settings and memory content to the factory defaults.

1. Turn the transceiver **OFF**.
2. Press and hold the **[BACK]** key, the **[DISP]** key and the **[BAND]** key and turn the transceiver **ON** simultaneously.
The beep sounds and the confirmation screen is displayed.
3. Touch **[OK]**.
 - The beep will sound, and the transceiver will reset all factory defaults.
 - After resetting all defaults, the call sign input message appears on the LCD. Set the call sign.
 - To cancel the resetting, touch **[CANCEL]**.

Set Mode Reset

Reset only the Set mode parameters, and restore them to the default settings.

1. Turn the transceiver **OFF**.
2. Press and hold the **[BACK]** key and the **[DISP]** key and turn the transceiver **ON** simultaneously.
The beep sounds and the confirmation screen is displayed.
3. Touch **[OK]**.
 - The beep will sound, and the transceiver will reset all Set mode settings to defaults.
 - To cancel the resetting, touch **[CANCEL]**.
 - To reset all the following items, perform All Reset (see above).

[DISPLAY]	9 SQL S-METER	[APRS]
7 OPENING MESSAGE	11 SQL TYPE	6 APRS MSG GROUP
[TX/RX]	12 TONE SQL FREQ	7 APRS MSG TEXT
1-1 ANTENNA ATT	[SCAN]	13 BEACON INFO
1-2 FM BANDWIDTH	5 SCAN WIDTH	15 BEACON STATUS TEXT
1-3 RX MODE	[GM]	17 COM PORT SETTING
2-4 DIGITAL VW	1 DP-ID LIST	18 DIGI PATH
[MEMORY]	[WIRES-X]	19 GPS SETUP
1 BANK LINK	1 RPT/WIRES FREQ	23 CALLSIGN (APRS)
2 BANK NAME	2 SEARCH SETUP	24 MY POSITION
3 MEMORY NAME	3 EDIT CATEGORY TAG	25 MY SYMBOL
5 MEMORY SKIP	4 REMOVE ROOM/NODE	[OPTION]
[SIGNALING]	[CONFIG]	2 Bluetooth
1 BELL	6 CLOCK TYPE	3 DEVICE LIST
2 DCS CODE	12 PASSWORD	25 Bluetooth Save
3 DCS INVERSION	15 RPT SHIFT	[CALLSIGN]
5 DTMF MEMORY	16 RPT SHIFT FREQ	CALLSIGN
6 PAGER	18 STEP	
7 PR FREQUENCY		

Text input screen

When the radio is first turned on after restoring defaults, the keyboard screen is displayed to enter your own station call sign.

● Character input method

1. Touch a character on the screen to enter it.
2. Touch **[→]** to move the cursor to right in the text input area.
3. Repeat steps 1 and 2 to enter additional characters.
4. When input is complete, press the **PTT** switch to save the characters and return to normal operation.

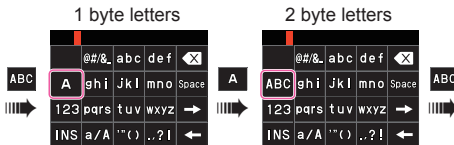
	@#/&_	abc	def	✕
A	ghi	jkl	mno	Space
123	pqrs	tuv	wxyz	→
INS	a/A	''(')	..?!	←

- Touch **[←]**/**[→]** to move the cursor to left/right in the text input area.
- Touch **[INS]** to insert a space at the cursor position.
- Touch **[✕]** to erase the character at the cursor position.
- Touch **[Space]** to enter a space at the cursor position.

Alphabet Input

Touch **[ABC]** to display the alphabet input screen.

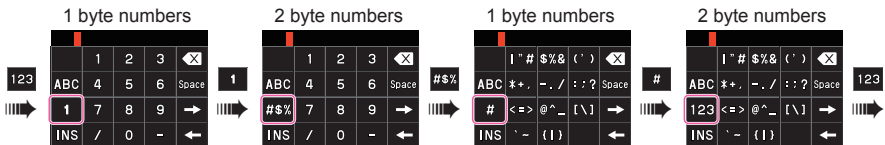
Each time **[A]** / **[ABC]** is touched, the screen changes as follows:



Number Input

Touch **[123]** key to display the numeric keypad input screen.

Each time the **[1]**, **[#&%]**, **[#]**, **[123]**, key is touched, the screen changes as follows:



Specifications

● General

Frequency Range	: TX 144 - 148 MHz or 144 - 146 MHz 430 - 450 MHz or 430 - 440 MHz : RX: A- Band 0.5 MHz - 999.995 MHz (USA Cellular Blocked) B- Band 108 MHz - 580 MHz
Channel Steps	: 5/6.25/8.33/9/10/12.5/15/20/25/50/100 kHz (8.33 kHz: only for Air band, 9 kHz: only for AM Radio)
Mode of Emission	: F1D, F2D, F3E, F7W
Frequency Stability	: ±2.5ppm (-4°F to +140°F [-20°C to +60°C])
Antenna Impedance	: 50Ω
Supply Voltage	: Nominal 7.2 V DC, Negative Ground (SBR-14LI) 7.4 V DC, Negative Ground (FNB-101LI) 10.5 - 16 V DC, Negative Ground (EXT DC JACK) Operating 5.5 - 8.4 V DC, Negative Ground (Li-ion Battery pack) 6 - 16 V DC, Negative Ground (EXT DC) 10.5 - 16 V DC, Negative Ground (EXT DC: for Charging) 3.6 - 4.5 V DC, Negative Ground (with FBA-39)
Current Consumption (Approx.)	: 140 mA (Mono Band Receive) 170 mA (Dual Band Receive) 86 mA (Mono Band Receive, Standby) 120 mA (Dual Band Receive, Standby) 67 mA (Mono Band Receive, Standby, Saver On "Save Ratio 1:10") 67 mA (Dual Band Receive, Standby, Saver On "Save Ratio 1:10") +18 mA (GPS On) + 6mA (Digital) 120mA (AM / FM Radio) 900 μA (Auto Power Off) 1.6 A (5 W TX, 144 MHz 7.2 V DC) 1.9 A (5 W TX, 430 MHz 7.2 V DC)
Operating Temperature Range	: -4°F to +140°F (-20°C to +60°C)
Case Size (W x H x D)	: 2.44" x 3.94" x 1.28" (62 x 100 x 32.5 mm) (with SBR-14LI, w/o knob, antenna & Belt clip)
Weight (Approx.)	: 9.95 oz (282 g) (with SBR-14LI & Antenna)
● Transmitter	
Output Power	: 5 W (@ 13.8 V or SBR-14LI) (LOW3: 2.5 W / LOW2: 1.0 W / LOW1: 0.3W) 0.9 W (FBA-39) (LOW1: 0.3 W)
Modulation Type	: F1D, F2D, F3E: Variable Reactance Modulation F7W: 4FSK (C4FM)
Spurious Emission	: At least 60 dB below (@TX Power HIGH, LOW3) At least 50 dB below (@TX Power LOW2, LOW1)

● Receiver

Circuit Type	: Double-conversion super heterodyne (AM /NFM) Direct-conversion (AM / FM Radio)
Intermediate Frequency	: 1st: A- Band 58.05 MHz 1st: B- Band 57.15 MHz 2nd: A- Band, B- Band 450 kHz
Sensitivity	: 0.5 - 30 MHz (AM)* ³ 3 μ V typ @10 dB SN 30 - 54 MHz (NFM)* ³ 0.35 μ V typ @12 dB SINAD 54 - 76* ¹ (88* ²) MHz (NFM)* ³ 1 μ V typ @12 dB SINAD 76* ¹ (88* ²) - 108 MHz (WFM)* ³ 1.5 μ V typ @12 dB SINAD 108 - 137 MHz (AM) 1.5 μ V typ @10 dB SN 137 - 140 MHz (NFM) 0.2 μ V @12 dB SINAD 140 - 150 MHz (NFM) 0.16 μ V @12 dB SINAD 150 - 174 MHz (NFM) 0.2 μ V @12 dB SINAD 174 - 222 MHz (NFM) 1 μ V @12 dB SINAD 222 - 225 MHz (NFM) 0.5 μ V @12 dB SINAD 300 - 350 MHz (NFM) 0.5 μ V @12 dB SINAD 350 - 400 MHz (NFM) 0.2 μ V @12 dB SINAD 400 - 470 MHz (NFM) 0.18 μ V @12 dB SINAD 470 - 580 MHz (NFM) 1.5 μ V @12 dB SINAD 580 - 800 MHz (NFM)* ³ 3 μ V @12 dB SINAD 800 - 999.995 MHz (NFM)* ³ 1.5 μ V @12 dB SINAD Digital Mode 0.19 μ V typ @BER1%
	* ¹ USA, Asia, Australia versions * ² Europe version * ³ A- Band only

Selectivity (-6 dB/-60 dB)	: NFM, AM 12 kHz/35 kHz
AF Output	: 700 mW (16 Ω for THD 10 % 7.4 V DC) internal speaker 300 mW (8 Ω for THD 10 % 7.4 V DC) external speaker jack

● Bluetooth

Version	: Version 4.2
Class	: Class 2
Output Power	: 2 dBm typ

Specifications are subject to change without notice, and are guaranteed within the 144/430 MHz amateur bands only.

YAESU LIMITED WARRANTY

Limited Warranty is valid only in the country/region where this product was originally purchased.

On-line Warranty Registration:

Thank you for buying YAESU products! We are confident your new radio will serve your needs for many years! Please register your product at www.yaesu.com - Owner's Corner

Warranty Terms:

Subject to the Limitations of the Warranty and the Warranty Procedures described below, YAESU MUSEN hereby warrants this product to be free of defects in materials and workmanship in normal use during the "Warranty Period." (the "Limited Warranty").

Limitations of Warranty:

- A. YAESU MUSEN is not liable for any express warranties except the Limited Warranty described above.
- B. The Limited Warranty is extended only to the original end-use purchaser or the person receiving this product as a gift, and shall not be extended to any other person or transferee.
- C. Unless a different warranty period is stated with this YAESU product, the Warranty Period is three years from the date of retail purchase by the original end-use purchaser.
- D. The Limited Warranty is valid only in the country/region where this product was originally purchased.
- E. During the Warranty Period, YAESU MUSEN will, at its sole option, repair or replace (using new or refurbished replacement parts) any defective parts within a reasonable period of time and free of charge.
- F. The Limited Warranty does not cover shipping cost (including transportation and insurance) from you to us, or any import fees, duties or taxes.
- G. The Limited Warranty does not cover any impairment caused by tampering, misuse, failure to follow instructions supplied with the product, unauthorized modifications, or damage to this product for any reasons, such as: accident; excess moisture; lightning; power surges; connection to improper voltage supply; damage caused by inadequate packing or shipping procedures; loss of, damage to or corruption of stored data; product modification to enable operation in another country/purpose other than the country/purpose for which it was designed, manufactured, approved and/or authorized; or the repair of products damaged by these modifications.
- H. The Limited Warranty applies only to the product as it existed at the time of the original purchase, by the original retail purchaser, and shall not preclude YAESU MUSEN from later making any changes in design, adding to, or otherwise improving subsequent versions of this product, or impose upon YAESU MUSEN any obligation to modify or alter this product to conform to such changes, or improvements.
- I. YAESU MUSEN assumes no responsibility for any consequential damages caused by, or arising out of, any such defect in materials or workmanship.
- J. TO THE FULLEST EXTENT PERMITTED BY LAW, YAESU MUSEN SHALL NOT BE RESPONSIBLE FOR ANY IMPLIED WARRANTY WITH RESPECT TO THIS PRODUCT.
- K. If the original retail purchaser timely complies with the Warranty Procedures described below, and YAESU MUSEN elects to send the purchaser a replacement product rather than repair the "original product", then the Limited Warranty shall apply to the replacement product only for the remainder of the original product Warranty Period.
- L. Warranty statutes vary from state to state, or country to country, so some of the above limitations may not apply to your location.

Warranty Procedures:

1. To find the Authorized YAESU Service Center in your country/region, visit www.yaesu.com. Contact the YAESU Service Center for specific return and shipping instructions, or contact an authorized YAESU dealer/distributor from whom the product was originally purchased.
2. Include proof of original purchase from an authorized YAESU dealer/distributor, and ship the product, freight prepaid, to the address provided by the YAESU Service Center in your country/region.

3. Upon receipt of this product, returned in accordance with the procedures described above, by the YAESU Authorized Service Center, all reasonable efforts will be expended by YAESU MUSEN to cause this product to conform to its original specifications. YAESU MUSEN will return the repaired product (or a replacement product) free of charge to the original purchaser. The decision to repair or replace this product is the sole discretion of YAESU MUSEN.

Other conditions:

YAESU MUSEN'S MAXIMUM LIABILITY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID FOR THE PRODUCT. IN NO EVENT SHALL YAESU MUSEN BE LIABLE FOR LOSS OF, DAMAGE TO OR CORRUPTION OF STORED DATA, OR FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES, HOW EVER CAUSED; INCLUDING WITHOUT LIMITATION TO THE REPLACEMENT OF EQUIPMENT AND PROPERTY, AND ANY COSTS OF RECOVERING, PROGRAMMING OR REPRODUCING ANY PROGRAM OR DATA STORED IN OR USED WITH THE YAESU PRODUCT.

Some Countries in Europe and some States of the USA do not allow the exclusion or limitation of incidental or consequential damages, or a limitation on how long an implied warranty lasts, so the above limitation or exclusions may not apply. This warranty provides specific rights, there may be other rights available which may vary between countries in Europe or from state to state within the USA.

This Limited Warranty is void if the label bearing the serial number has been removed or defaced.

Changes or modifications to this device that are not expressly approved by YAESU MUSEN could void the user's authorization to operate this device.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference including received, interference that may cause undesired operation.

The scanning receiver in this equipment is incapable of tuning, or readily being altered, by the User to operate within the frequency bands allocated to the Domestic public Cellular Telecommunications Service in Part 22.

The YAESU MUSEN is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

This device complies with ISED's applicable license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

DECLARATION BY MANUFACTURER

The Scanner receiver is not a digital scanner and is incapable of being converted or modified to a digital scanner receiver by any user.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

CAN ICES-3 (B) / NMB-3 (B)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy; and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC/IC radiation exposure limits and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that is deemed to comply without testing of specific absorption rate (SAR).

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

YAESU

Declaration of Conformity

Type of Equipment:	144/430MHz Digital/Analog Transceiver
Brand Name:	YAESU
Model Number:	FT3DR
Manufacturer:	YAESU MUSEN CO., LTD.
Address of Manufacturer:	Tennozu Parkside Building, 2-5-8 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-0002 Japan

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions; (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The technical documentation as required by the Conformity Assessment procedures is kept at the following address:

Company: Yaesu U.S.A.

Address: 6125 Phyllis Drive, Cypress, CA 90630, U.S.A.


Telephone: (714) 827-7600

EU Declaration of Conformity

We, Yaesu Musen Co. Ltd of Tokyo, Japan, hereby declare that this radio equipment FT3DE is in full compliance with EU Radio Equipment Directive 2014/53/EU. The full text of the Declaration of Conformity for this product is available to view at <http://www.yaesu.com/jp/red>

ATTENTION – Conditions of usage

This transceiver works on frequencies that are regulated and not permitted to be used without authorisation in the EU countries shown in this table. Users of this equipment should check with their local spectrum management authority for licensing conditions applicable for this equipment.

					
AT	BE	BG	CY	CZ	DE
DK	ES	EE	FI	FR	UK
GR	HR	HU	IE	IT	LT
LU	LV	MT	NL	PL	PT
RO	SK	SI	SE	CH	IS
LI	NO	–	–	–	–

Disposal of Electronic and Electrical Equipment

Products with the symbol (crossed-out wheeled bin) cannot be disposed as household waste.

Electronic and Electrical Equipment should be recycled at a facility capable of handling these items and their waste by-products.

Please contact a local equipment supplier representative or service center for information about the waste collection system in your country.



YAESU

The radio

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