

YAESU

AIR BAND TRANSCEIVER

FTA-750 Spirit

FTA-550 Pro-X

FTA-450

Operating Manual

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IMPORTANT NOTICE!

FCC RF Exposure Compliance Requirements for Occupational Use Only:

The **FTA-750/FTA-550/FTA-450** have been tested and comply with the Federal Communications Commission (FCC) RF exposure limits for Occupational Use/Controlled Exposure Environment. In addition, both radios comply with the following Standards and Guidelines:

- FCC 96-326, Guidelines for Evaluating the Environmental Effects of Radio-Frequency Radiation.
- FCC OET Bulletin 65 Edition 97-01 (1997) Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- ANSI/IEEE C95.1-1992, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- ANSI/IEEE C95.3-1992, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave.
- **This radio is NOT approved for use by the general population in an uncontrolled environment. This radio is restricted to occupational use, work related operations only where the radio operator must have the knowledge to control its RF exposure conditions.**
- **When transmitting, hold the radio in a vertical position with its microphone 1 to 2 inches (2.5 to 5 cm) away from your mouth and keep the antenna at least 1 inch (2.5 cm) away from your head and body.**
- **The radio must be used with a maximum operating duty cycle not exceeding 50%, in typical Push-to-Talk configurations. DO NOT transmit for more than 50% of total radio use time (50% duty cycle). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded.**
The radio is transmitting when the “TX” icon is displayed on the upper left corner of the screen of the radio. You can cause the radio to transmit by pressing the PTT button.
- **Always use YAESU authorized accessories.**

NOTICE

There are no user-serviceable points inside this transceiver.
All service jobs must be referred to your Authorized Service Center.

INTRODUCTION

The YAESU **FTA-750/FTA-550/FTA-450** are compact, stylish, solid hand-held transceivers providing communication (transmit and receive) capability on the International Aircraft Communication Band (“COM” band: 118 to 136.975 MHz), and they additionally provide VOR and ILS navigation features on the “NAV” band (108 to 117.975 MHz).

The **FTA-750/FTA-550/FTA-450** boast a 1.7” x 1.7” (43.2 x 43.2 mm) full dot matrix LCD displaying a plenty of information in a row. The **FTA-750/FTA-550/FTA-450** include NOAA weather band monitoring and 200 memory channels. The channel configurations can be easily reprogrammed in minutes using the optional PC Programming Software and your PC. In addition, the **FTA-750** provides positioning and navigation features realized by the internal GPS unit.

We recommend that you read this manual in its entirety, so as to understand the many features of the **FTA-750/FTA-550/FTA-450** completely. Keep this manual handy, so you may use it for reference.

Note: The VOR, ILS, and GPS navigation features of the FTA-750/FTA-550 are for supplemental aids to navigation only, and are not intended to be a substitute for accurate (primary) VOR or landing service equipment. You assume full responsibility for the use of the FTA-750/FTA-550.

Congratulations!

You now have at your fingertips a valuable communications tool, a YAESU two-way radio! Rugged, reliable and easy to use, your YAESU radio will keep you in constant touch with your friends and colleagues for years to come, with negligible maintenance or down-time.

Please take a few minutes to read this manual carefully. The information presented here will allow you to derive maximum performance from your radio, in case questions arise later on.

We’re glad you joined the YAESU team. YAESU products cover the entire spectrum of radio communications applications, and our worldwide support network is here to serve you. Let us help you get your message across.

MODELS, ACCESSORIES AND OPTIONS

Models

- FTA-750L** Lithium-ion battery pack included
FTA-550L Lithium-ion battery pack included
FTA-450L Lithium-ion battery pack included
FTA-550 AA Battery Version
Rechargeable battery pack not included.
Requires “AA” batteries for operation.

Supplied Accessories

- | | |
|-----------------------------------|-------------------------------|
| Lithium-ion Battery Pack (7.4V) | SBR-12LI ^{*1} |
| AC Charger | SAD-11 ^{*1} |
| Charger Cradle | SBH-11 ^{*1} |
| Cigarette Lighter DC/DC Converter | SDD-12 |
| Helical Antenna | SRA-13A ^{*2} |
| Belt Clip | SHB-11 |
| Headset Adapter Cable | SCU-15 |
| Alkaline Battery Tray | SBT-12 |
| USB Cable | T9101606 |
| Ferrite Core | L9190192 |
| Operating Manual | |
| Warranty Card | |

*1 These accessories are not supplied with the
FTA-550 AA Battery Version.

*2 Antenna gain: 2.15 dBi
Impedance: 50 ohms

Available Options

- SSM-10A** Speaker Microphone
SEP-10A Earphone (available only with the **SSM-10A**)
YCE01 PC Programming Software
(Download the YCE01 PC Programming Software from the YAESU website.)

Availability of accessories may vary. Some accessories are supplied as standard per local requirements, while others may be unavailable in some regions. Consult your YAESU Dealer for details regarding these and any newly-available options.

Connection of any non-YAESU-approved accessory, should it cause damage, may void the Limited Warranty on this apparatus.

CONTROLS & CONNECTORS (TOP PANEL)

① **Antenna Jack**

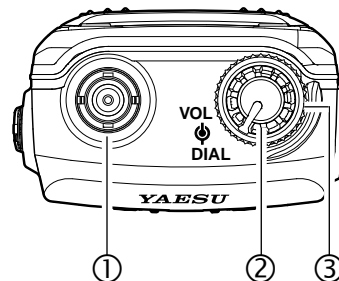
This BNC connector accepts the supplied flexible antenna, or an external antenna designed to provide 50 Ω impedance on the Aircraft Communication Band.

② **VOLUME (Inner) Knob**

Turn this (inner) control clockwise to increase the volume.

③ **DIAL Selector (Outer) Knob**

This (outer) 20-position detented rotary switch tunes the operating frequency or selects the memory channels.



CONTROLS & CONNECTORS (FRONT PANEL)

① LCD (Liquid Crystal Display)

The display shows selected operating conditions, as indicated on Pages 8 to 11.

② Microphone

Speak into this opening in a normal voice level, while pressing the **PTT** switch, to transmit.

③ Cursor Keys and **ENT** Key

The cursor keys [◀] and [▶] are used to select an item displayed on the LCD.
Press the **ENT** key to determine the selection or entered values.

④ Control Keys

Press the **MENU** key to display the MENU screen.
Press the **BACK** key to return the display to the previous screen.
Press the **SAVE** key to store the current channel information to the memory.
Press and hold the lock key [**On**] to enable the lock feature. Controls and keys will be disabled.
Press and hold again to disable the lock feature.

⑤ **COMM** Key

Press this key to enter the COMM mode instantly.

⑥ Numeric Keypad

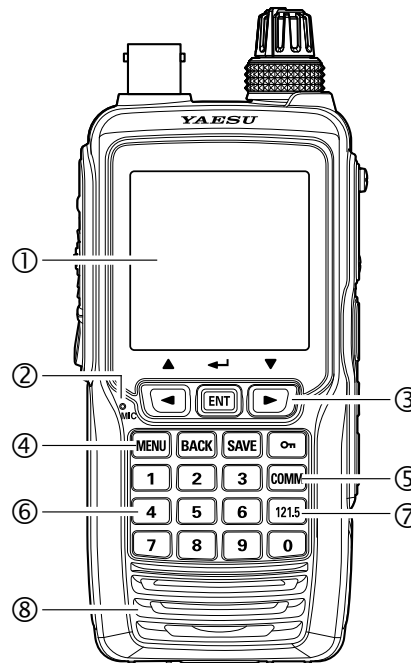
The keypad is used when setting frequencies.

⑦ **121.5** Key

Press and hold this key to access the emergency frequency (121.5 MHz) instantly.

⑧ Loudspeaker

The internal speaker is located in this position.



CONTROLS & CONNECTORS (LEFT SIDE)

① **POWER** Switch

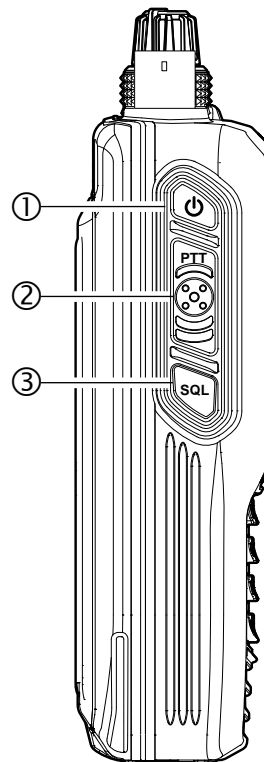
Press and hold this button to turn the radio on and off.

② **PTT** (Push To Talk) Switch

Press and hold this button to transmit when you are operating in the COM band. Release this button to return to the “Receive” mode. See Page 22 for details.

③ **SQL** (Squelch) Switch

This button may be pressed to “open” the squelch manually, allowing you to listen for very weak signals. Press and hold this button for 2 seconds to “open” the squelch continuously. Press this button again to resume normal (quiet) monitoring. See Page 20 for details.



CONTROLS & CONNECTORS (RIGHT SIDE)

① MIC/SP Jack

You may connect the supplied **SCU-15** Headset Adapter Cable or the optional **SSM-10A** Speaker/Microphone to this jack. To use this jack, you must first remove the cover from the transceiver body.



*Do not allow the **FTA-750/FTA-550/FTA-450** to get wet while the cover over the **MIC/SP** jack is removed.*

② DATA Jack

You may connect the optional USB cable to this jack. To use this jack, you must first lift the rubber cover away from the transceiver body.



*Do not allow the **FTA-750/FTA-550/FTA-450** to get wet while the rubber cover is removed.*

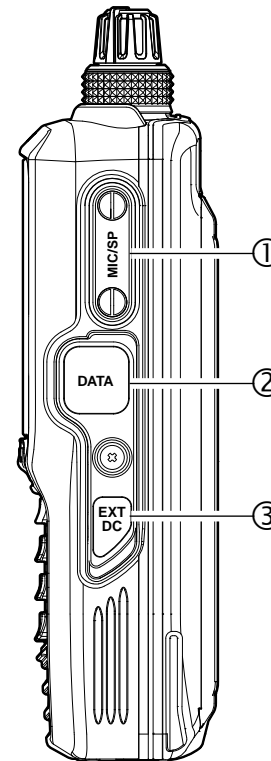
③ EXT DC Jack

When an external 9.5- to 10.5-Volt DC power source is available, you may connect the **SDD-12** Cigarette Lighter DC/DC Converter here.



*1) Do not allow the **FTA-750/FTA-550/FTA-450** to get wet while the rubber cover is removed.*

*2) Do not connect any accessory unapproved by **YAESU** to supply DC power.*



LCD DISPLAY (COM BAND)

“BUSY” icon appears during audio reception, or “TX” during transmission.

This field displays the operating frequency.

This field displays the icons indicating various statuses of the transceiver, such as “GPS on”, “Data Logger on”, “Timer on”, “Battery full”, etc.

This field displays the operation modes.

This field displays the tag name of the current channel.

This field displays the level of the audio volume or the squelch.

This field displays the channels you have previously used.

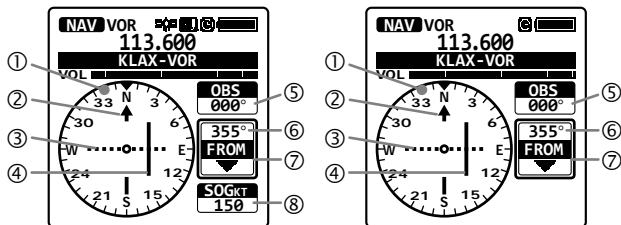


This field displays the icons indicating various statuses of functions, such as “VOX on”, “Split on”, etc.

“MEM” icon appears if the selected channel is programmed into the Scan Memory.

LCD DISPLAY (NAV BAND: EXCEPT FOR FTA-450)

VOR CDI SCREEN

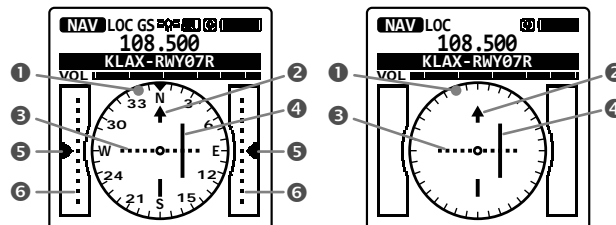


FTA-750

FTA-550

- ① Compass rose
- ② Course indicator (OBS direction)
- ③ Deviation marks
- ④ Course deviation needle
- ⑤ OBS (omni bearing selector) value
- ⑥ VOR value
- ⑦ TO/FROM indicator
- ⑧ SOG (speed over ground) value according to the GPS signal

ILS CDI SCREEN



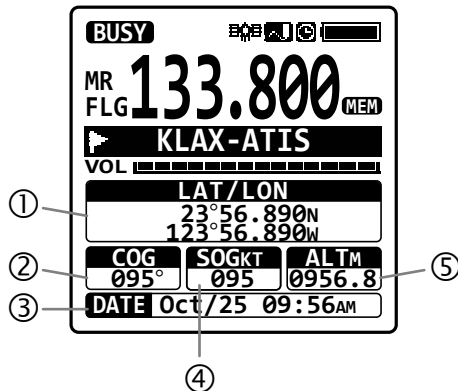
FTA-750

FTA-550

- ① Compass rose
- ② Course (runway) indicator
- ③ Deviation marks for localizer
- ④ Course deviation needle for localizer
- ⑤ Height deviation indicator for glide slope
- ⑥ Deviation marks for glide slope

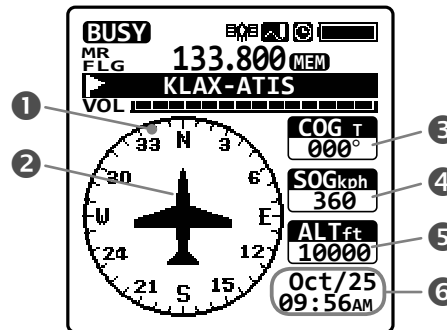
LCD DISPLAY (FTA-750 ONLY)

GPS INFORMATION SCREEN



- ① Latitude and longitude values
- ② COG (course over ground) value
- ③ Date obtained from the GPS signal
- ④ SOG (speed over ground) value
- ⑤ Altitude value

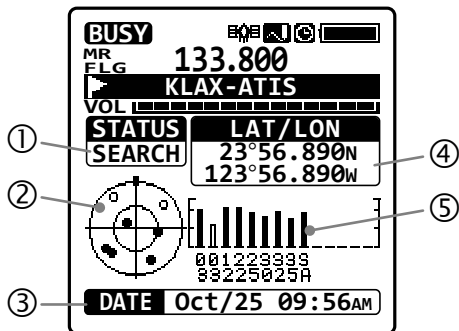
GPS COMPASS SCREEN



- ① Compass rose
- ② Course indicator
- ③ COG (course over ground) value
- ④ SOG (speed over ground) value
- ⑤ Altitude value
- ⑥ Date obtained from the GPS signal

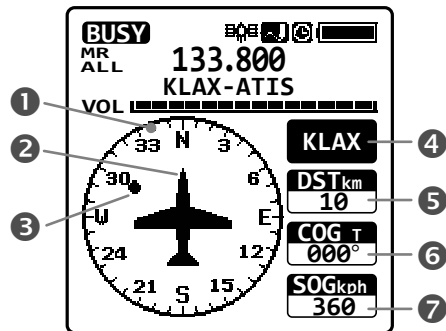
LCD DISPLAY (FTA-750 ONLY)

GPS STATUS SCREEN



- ① GPS receiver operation status
- ② Radar scope for captured GPS satellites
- ③ Date obtained from the GPS signal
- ④ Latitude and longitude values
- ⑤ GPS signal strength indicator

WAYPOINT NAVIGATION SCREEN



- ① Compass rose
- ② Course indicator
- ③ Destination indicator
- ④ Tag name of the destination
- ⑤ DST (distance) value
- ⑥ COG (course over ground) value
- ⑦ SOG (speed over ground) value

BEFORE YOU BEGIN

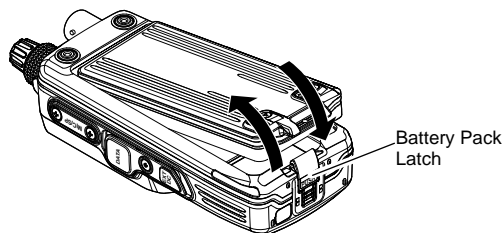
Battery Installation and Removal

- ❑ To install the battery, insert the battery pack **SBR-12LI** into the battery compartment on the back of the transceiver, press the end of the battery pack while pressing the battery pack latch on the bottom of the transceiver, then lock the pack by sliding the locking plate beside the latch until the entire “LOCK” appears.

Note:

Be sure that the rubber gasket on the **SBR-12LI** is not loose when inserting.

- ❑ To remove the battery, turn the transceiver off, slide the locking plate until the “UNLOCK” appears entirely, lift up the end of the battery pack by pressing the battery pack latch, then pull out the battery from the radio.



Do not attempt to open any of the rechargeable Lithium-ion packs, as personal injury or damage to the Lithium-ion pack could occur if a cell or cells become accidentally short-circuited.

Note:

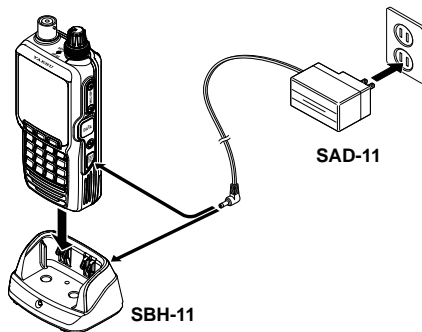
To remove the battery pack after the belt clip **SHB-11** is mounted (see Page 16), lift up the clip before you press the battery pack latch.

BEFORE YOU BEGIN


Battery Charging

It is necessary to charge the Lithium-ion battery fully before its first use. Follow the procedure below:

1. Install the Lithium-ion battery pack onto the transceiver. Ensure that the transceiver is switched off.
2. Insert the cable plug of the **SAD-11** Battery Charger into the jack located on the back of the **SBH-11** Charging Cradle, then plug the **SAD-11** into the AC line outlet.



3. Insert the transceiver into the **SBH-11**; the antenna jack should be at the left side when viewing the cradle from the front.
 - You may insert the cable plug of the **SAD-11** into the **EXT DC** jack located on the right

side of the transceiver directly. In this case, the “” icon will appear in the top right corner of the LCD display.

4. If the transceiver is inserted correctly, the RED indicator on the **SBH-11** will glow.
 - A fully-discharged pack will be charged completely in 4 hours, and then the GREEN indicator on the **SBH-11** will glow.
 - It takes 8 hours for full charge with the **SAD-11** connected to the transceiver directly.

Important Notes:

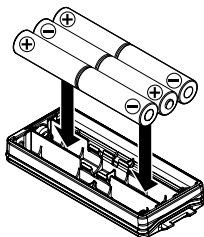
- The **SAD-11** is not designed to power the transceiver for operation (transmission).
- Do not leave the charger connected to the transceiver for continuous periods in excess of 24 hours. Long term overcharging can degrade the Lithium-ion battery pack and significantly shorten its useful life.
- If using a charger other than the **SAD-11**, **SBH-11**, or if using a battery pack other than the **SBR-12LI**, follow the appropriate instructions provided with the charger/battery. Contact your Dealer if you have any doubts about the appropriateness of the particular charger or battery pack you intend to use.

BEFORE YOU BEGIN

Alkaline Battery Tray Installation

The supplied **SBT-12** Battery Tray allows operation of the **FTA-750/FTA-550/FTA-450** using six “AA” size alkaline battery cells.

- ❑ When installing a cell, insert the (–) end first, then press in the (+) end so the cell snaps into place. Pay attention to the polarity indicated inside the case.



SBT-12
Alkaline Battery Tray




The SBT-12 must not be used with rechargeable cells. The SBT-12 does not contain the thermal and over-current protection circuits required when utilizing Ni-Cd and Ni-MH cells.

Note: Replace all six cells at the same time in case of low battery.

- ❑ To install the **SBT-12**, remove the Lithium-ion battery pack first from the transceiver, turn the open side of the **SBT-12** down, then insert it into the battery compartment.

Note: Be sure that the rubber gasket on the **SBT-12** is not loose when inserting.


Low Battery Indication

As your battery discharges during use, the voltage will gradually become lower. When the battery voltage reaches 6.0 Volts, the “

- Avoid recharging Lithium-ion batteries before the “Low Battery” indicator is observed, as this can degrade the charge capacity of your Lithium-ion battery pack. YAESU recommends that you carry an extra, fully-charged pack with you so you will not lose communications capability due to a depleted Lithium-ion battery.
- The fully-charged battery lasts for 12 hours on the **FTA-750**, 13.5 hours on the **FTA-550** or ??? hours on the **FTA-450** under the conditions below:
 Battery saver ... OFF
 Operation ratio ... TX:RX:Standby = 6:6:48 (sec)

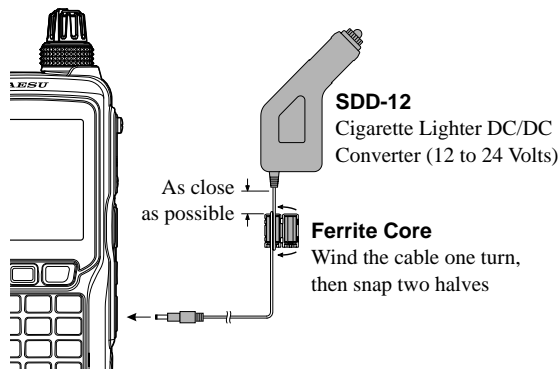
BEFORE YOU BEGIN

External DC Power Supply Connection

You may insert the cable plug of the optional **SDD-12** Cigarette Lighter DC/DC Converter into the **EXT DC** jack located on the right side of the transceiver. In this case, the “” icon will appear in the top right corner of the LCD display.

When making DC connections via the **SDD-12**, be absolutely certain to observe the proper voltage level and polarity guidelines.

- The **SDD-12** can be connected to 12 to 24 Volt DC power sources.



- For noise reduction from exogenous noise, wind one turn of the **SDD-12** cable around the ferrite core, and snap its two halves together, per the illustration

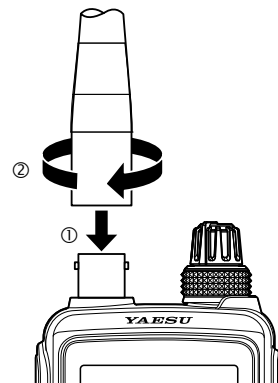
above. Attach the ferrite core as close as possible to the **SDD-12** body, as shown.



Do not connect any accessory unapproved by YAESU to supply DC power; otherwise the FTA-750/FTA-550/FTA-450 may be damaged.

Antenna Installation

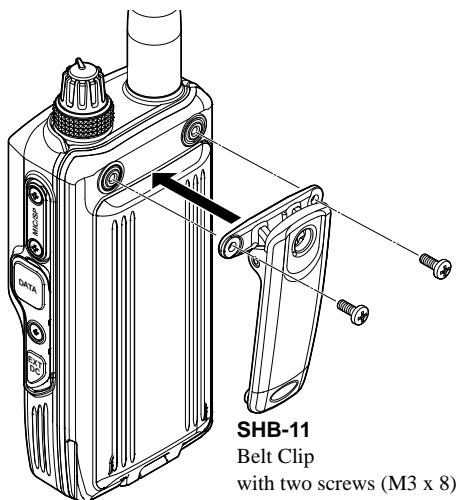
- To attach the supplied antenna to the **FTA-750/FTA-550/FTA-450**, grasp the base of the antenna firmly, and exert a moderate “pinching” pressure on the base as you press the antenna onto the radio’s antenna connector. While exerting this pressure, rotate the antenna clockwise 1/4 turn to lock the antenna in place.



BEFORE YOU BEGIN

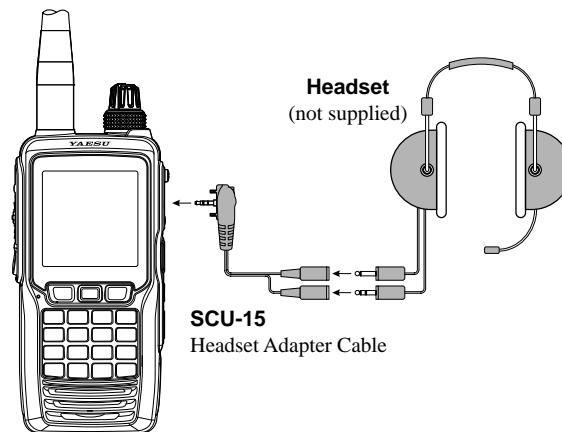
Belt Clip Installation

You may mount the clip to the rear of the **FTA-750/FTA-550/FTA-450** using the supplied screws.



Headset Connection

You may use an optional headset through the supplied **SCU-15** Headset Adapter Cable (see also Page 87).



1. Remove the cover and two screws of the **MIC/SP** jack located on the right side of the transceiver.
2. Insert the plug of the **SCU-15** to the **MIC/SP** jack.
3. Fix the plug with two screws attached to the **SCU-15**.
 - Either of the plug directions are acceptable as long as the both screws fit the screw holes.
4. Insert the plugs of the headset to the sockets of the **SCU-15**.

BEFORE YOU BEGIN

Precautions

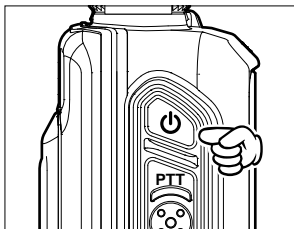
- The **FTA-750/FTA-550/FTA-450** are capable of two-way communication on channels used for critical aviation safety communications. Therefore, it is important that this radio be kept away from children or other unauthorized users at all times.
- Do not dispose of the Lithium-ion battery pack in a fire. Do not carry a Lithium-ion battery pack in your pocket, where keys or coins could short the terminals. This could create a serious fire/burn danger, and possibly cause damage to the Lithium-ion pack.
- The **FTA-750/FTA-550/FTA-450** are designed to have the waterproof capability equivalent to IPX5. Do not allow the radio to become submerged, and do not subject it to water spray under pressure.

BASIC OPERATION

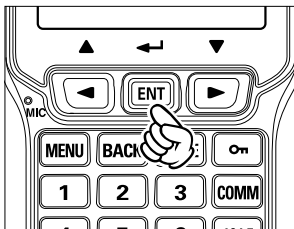
Reception (COM Band)

Turning the radio on and off

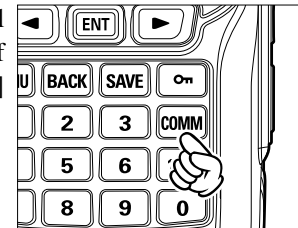
- ❑ *To turn the radio on,* press and hold the **POWER** switch. “WARNING” will be displayed.



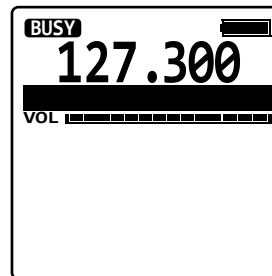
- ❑ If you agree with the warning message, press the [ENT] key.



- ❑ A channel frequency will appear on the display. If not, press the [COMM] key.



- ❑ The “BUSY” icon appears on the display when the audio signal is received on the current frequency.

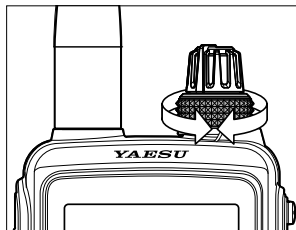


- ❑ *To turn the radio off,* press and hold the **POWER** switch.

BASIC OPERATION

Adjusting the frequency

- ❑ You may turn the **DIAL** selector (outer) knob on the top panel to choose the desired operating frequency. The channel frequency will appear on the LCD.

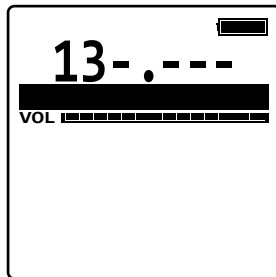


- ❑ Directly entering frequencies from the keypad is the easiest method if you know the frequency on which you wish to operate. Just enter the five digits of the frequency to move to that frequency.

For example, to set 134.35 MHz,
 press [1] → [3] → [4]
 → [3] → [5].

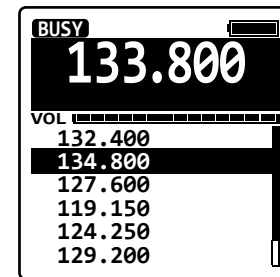
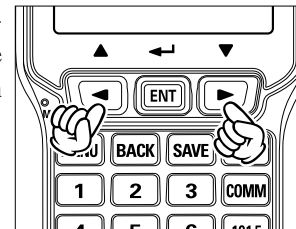
To set 118.275 MHz,
 you do not need to
 press the final “5” in the
 frequency as below:

[1] → [1] → [8] → [2]
 → [7].



- ❑ You may recall the operating frequency that you have used by pressing the [ENT] key. A list of frequencies you have used will appear below the VOL meter on the display.

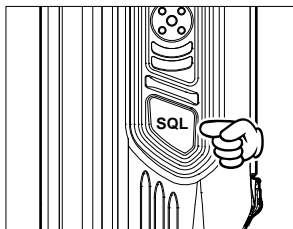
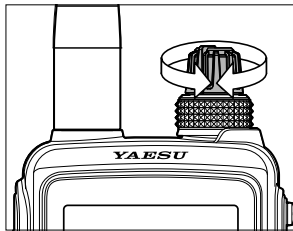
Select the desired frequency by pressing the [◀] or [▶] key, then press the [ENT] key.



BASIC OPERATION

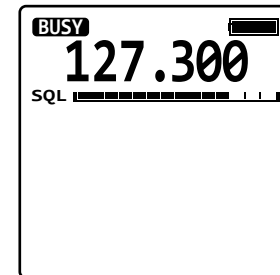
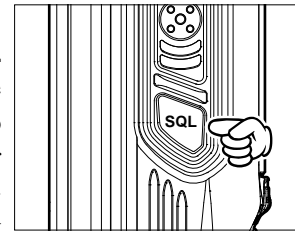
Adjusting the volume

- ❑ Rotate the **VOL** (inner) knob to set the volume level. If no signal is present, press the **SQL** switch; background noise will now be heard, and you may use this noise to set the **VOL** knob for the desired audio level. Press and hold the **SQL** switch to silence the noise and resume normal (quiet) monitoring.



Adjusting the squelch

- ❑ Press the **SQL** switch, then rotate the **DIAL** selector knob to set the squelch threshold (0 to 15) so that the receiver is just silenced. A higher number indicates that a higher signal level is required in order to open the squelch.



- ❑ Press and hold the **SQL** switch to set the squelch threshold to 0 (off).
- ❑ Your new setting will be saved each time you perform either of the operations above.

BASIC OPERATION

Monitor Switch

When listening to a very weak signal from an aircraft or ground station, you may observe the signal disappearing periodically as the incoming signal strength becomes too weak to override the squelch threshold setting.

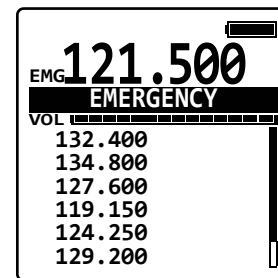
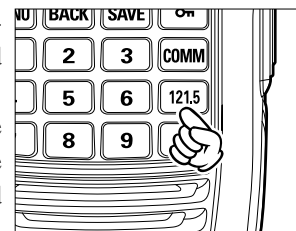
To disable the squelch temporarily, press and hold the **SQL** switch for 2 seconds. The squelch will remain open and you should have a better chance of hearing weak signals.

To return to normal operation, press the **SQL** momentarily.

Accessing the 121.5 MHz Emergency Frequency

The **FTA-750/FTA-550/FTA-450** can quickly access the 121.500 MHz emergency frequency. This function can be activated even when the keypad lock function (described on Page 46) is in use.

- To access the emergency frequency, press and hold the [121.5] key. After four beeps, the transceiver enters the emergency mode and the frequency is automatically tuned to 121.500 MHz.

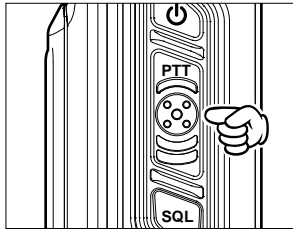


- To exit the emergency mode, press the [COMM] key. The message confirming the cancellation of the emergency mode will appear. Press the [◀] or [▶] key to select "YES", then press the [ENT] key.

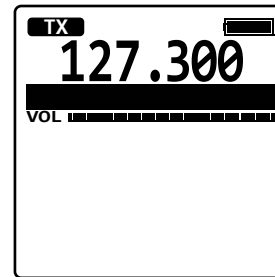
BASIC OPERATION

Transmission (COM Band)

- To transmit, press and hold the **PTT** switch. Speak into the microphone area of the front panel grille in a normal voice level.



The “TX” icon, which indicates that the **FTA-750/FTA-550/FTA-450** are in the transmit mode, appears on the display.

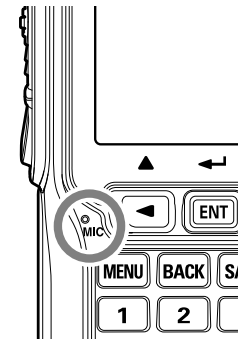


- To return to the receive mode, release the **PTT** switch.

Operating Advice: Use of Internal Microphone

Your **FTA-750/FTA-550/FTA-450** are sealed against water ingress, which includes waterproof seals around the microphone and speaker enclosure. This requires that you focus your speech in the direction of the microphone’s location, so as to ensure sufficient voice input to the radio. Refer to the illustration and observe the location of the internal microphone.

If you find it difficult to utilize the **FTA-750/FTA-550/FTA-450** conveniently and safely while speaking directly into the microphone, we recommend the use of the **SSM-10A** Speaker/Microphone (option), or an aftermarket aviation headset with boom microphone.



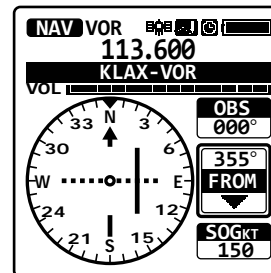
BASIC OPERATION

Operation Bands

When the **FTA-750/FTA-550/FTA-450** are turned on for the first time, it enters the COMM mode and displays the COM band screen. The COMM mode is the basic operation mode of the **FTA-750/FTA-550/FTA-450** that allows you to tune through either of the NAV (except for **FTA-450**) and COM bands using the **DIAL** knob or the keypad.

- **NAV band (108.000 - 117.975 MHz):**
 Band for navigation utilizing data signals emitted by VOR (VHF omnidirectional range) stations and ILS (instrument landing system) of airports.
- **COM band (118.000 - 136.975 MHz):**
 Band for communication utilizing audio signals.

When the **FTA-750/FTA-550** receive a data signal associated with VOR or ILS, the display will automatically switch to the NAV band screen which shows a CDI (course deviation indicator) based on the received signal, and “NAV”, which indicates that the **FTA-750/FTA-550** are on the NAV band, appears on the display.

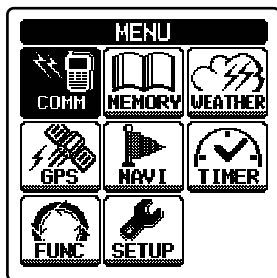
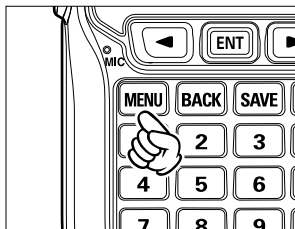


When receiving a VOR signal on the FTA-750

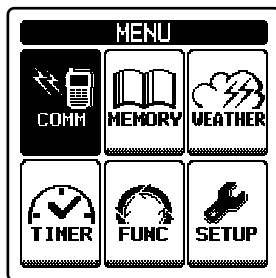
BASIC OPERATION

Operation Modes

The **FTA-750/FTA-550/FTA-450** operate in either of the modes below. You can switch the modes via the MENU screen displayed by pressing the [MENU] key on the front panel.



FTA-750



FTA-550

When turning on the **FTA-750/FTA-550/FTA-450**, the last mode you have used before turning off will automatically be entered.

- **COMM**
 The basic operating mode for communication. Navigation through the NAV band is also performed on this mode.
- **MR (MEMORY)**
 This mode provides you with the ability to store and recall as many as 200 channels in the radio's main memory bank.
- **WX (WEATHER) (USA/Canada Only)**
 The receive mode for the VHF weather channel broadcasts. 10 weather channels are pre-programmed at the factory.
- **GPS (FTA-750 only)**
 The position information and status of the GPS satellites according to the signals received by the built-in GPS unit are displayed during this mode.
- **NAVI (FTA-750 only)**
 Navigation to the waypoint (destination) memorized or manually input is carried out in this mode.
- **SETUP**
 This mode allows certain aspects of your radio's configuration to be customized for your personal operating conditions.

BASIC OPERATION

Convenient menu items

The MENU screen also includes the following items which provide advanced and convenient usage of the **FTA-750/FTA-550/FTA-450**.

○ **TIMER**

You may use the **FTA-750/FTA-550/FTA-450** as a countdown timer or a stopwatch through this menu.

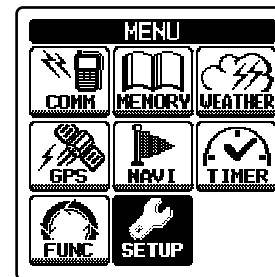
○ **FUNCTION**

Enables and disables various functions such as scan and dual watch features through this menu.

Resetting the Radio

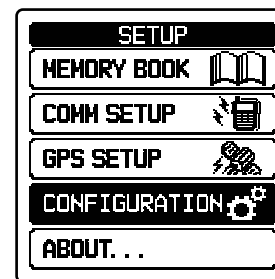
To clear all memories and other settings to factory defaults:

1. Press the **[MENU]** key to display the MENU screen.



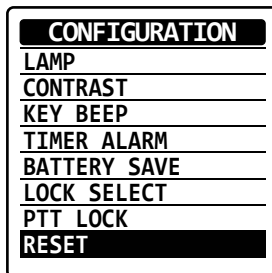
2. Select "SETUP" on the screen by pressing the [**◀**] or [**▶**] key, and then press the **[ENT]** key.

3. Select "CONFIGURATION" on the screen by pressing the [**◀**] or [**▶**] key, and then press the **[ENT]** key.



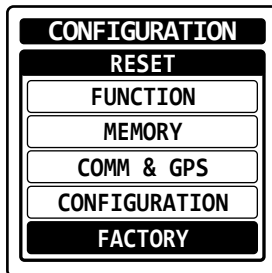
BASIC OPERATION

4. Select “RESET” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.

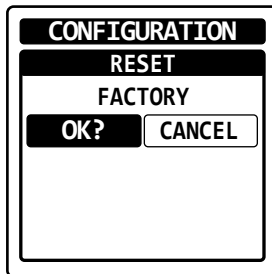


The initialization will start and then “COMPLETED!” will be displayed after the radio returns to factory default.

5. Select “FACTORY” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



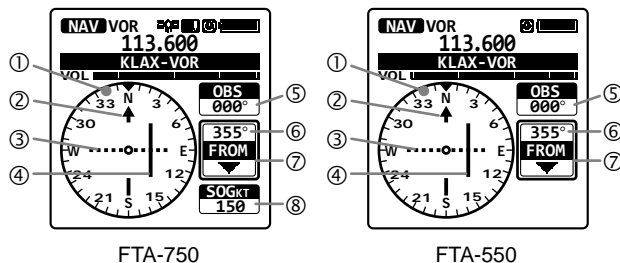
6. Select “OK?” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



ADVANCED OPERATION

Reception of VOR Signals (except for FTA-450)

When the **FTA-750/FTA-550** receive a VOR (VHF omnidirectional range) signal, the display will automatically switch to the NAV band screen which shows a CDI (course deviation indicator) based on the received signal, and “VOR”, which indicates that the **FTA-750/FTA-550** are receiving the VOR signal, appears on the display.



- ① Compass rose
- ② Course indicator (OBS direction)
- ③ Deviation marks
- ④ Course deviation needle
- ⑤ OBS (omni bearing selector) value
- ⑥ VOR value
- ⑦ TO/FROM indicator
- ⑧ SOG (speed over ground) value according to the GPS signal

- The OBS is set to 0 degree when you use the **FTA-750/FTA-550** for the first time.
 The last value you have set as the OBS will be displayed next time the NAV band screen appears.
- The upside of the compass rose always indicates the direction set as the OBS.
- When the OBS is set to a degree within the “TO” range relative to the VOR signal, the **FTA-750/FTA-550** displays a degree adding (or subtracting) 180° to (or from) the VOR signal as the VOR value.
- The SOG is displayed only when the internal GPS unit is activated and receives a fix in the **FTA-750**.

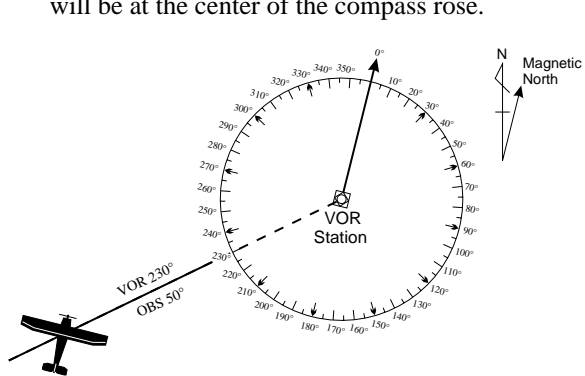
Note:

You may change the COM band receive frequency while receiving a VOR signal. If the [ENT] key is pressed during the tag name of the VOR station is selected, the recall screen listing the frequencies you have used will temporarily appear on the display, so that you may select a frequency from the list with the [◀] or [▶] key or change the frequency with the **DIAL** selector knob.

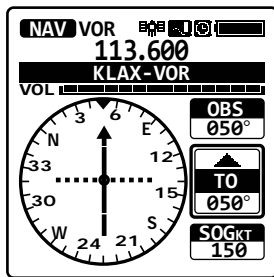
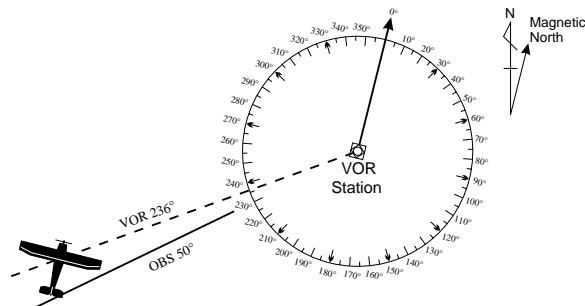
ADVANCED OPERATION

Reading the CDI

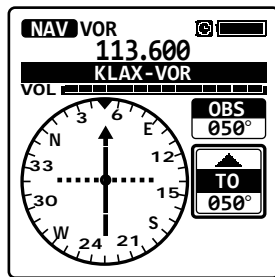
- If the OBS is set to 50° and your aircraft is at 230° from a certain VOR station, for example, you are “on course” and the course deviation needle of the CDI will be at the center of the compass rose.



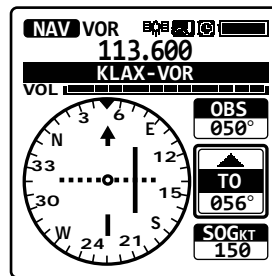
- If the OBS is set to 50° but your aircraft is at 236° from a certain VOR station, for example, you are “off course” and the course deviation needle of the CDI will be inside the right half of the compass rose.



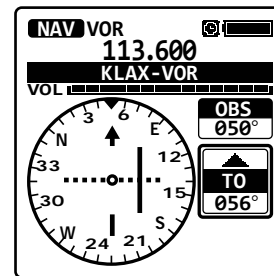
FTA-750



FTA-550



FTA-750



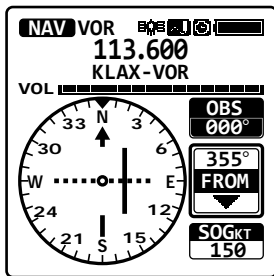
FTA-550

ADVANCED OPERATION

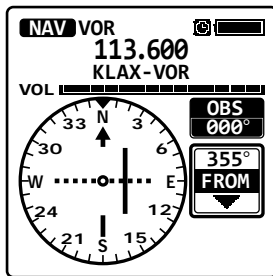
- The course deviation needle moves to the right if your aircraft is off course to the left of the OBS, or moves to the left if your aircraft is off course to the right of the OBS.
- The deviation marks indicate off-course level by 2 degrees up to 10 degrees per each side. If your deviation exceeds 10 degrees, the course deviation needle will stay at the position of the fifth mark (the end of the scale) of the left or right side.

Flying to a VOR station

1. Set the frequency to the desired VOR station.
2. Press the [◀] or [▶] key to select “OBS” on the screen.

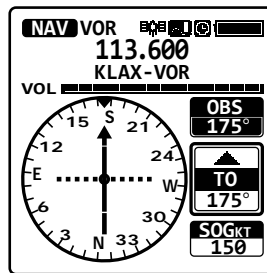


FTA-750

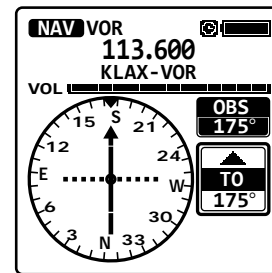


FTA-550

3. Enter the course to the VOR station with the keypad or the **DIAL** knob.

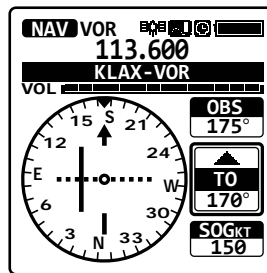


FTA-750

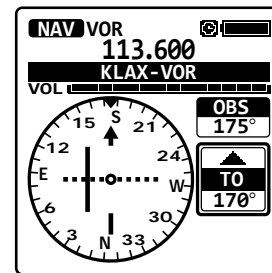


FTA-550

4. Correct your course until the course deviation needle on the screen is at the center of the compass rose.



FTA-750



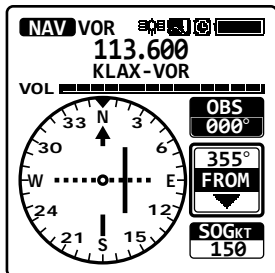
FTA-550

ADVANCED OPERATION

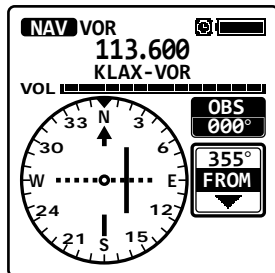
Flying to a desired course

If you know the direction of your destination from a specific VOR station, you may use the CDI to correct your course of flying.

1. Set the frequency to the desired VOR station.
2. Press the [◀] or [▶] key to select “OBS” on the screen.

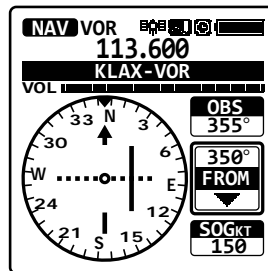


FTA-750

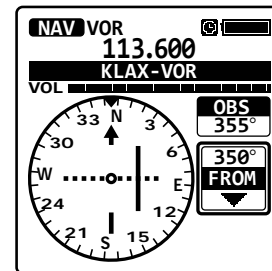


FTA-550

3. Enter the course from the VOR station with the keypad or the **DIAL** knob.
4. Correct your course until the course deviation needle on the screen is at the center of the compass rose.



FTA-750

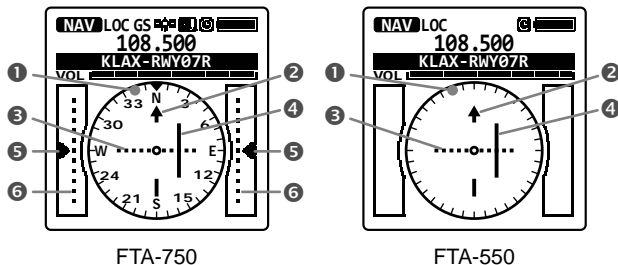


FTA-550

ADVANCED OPERATION

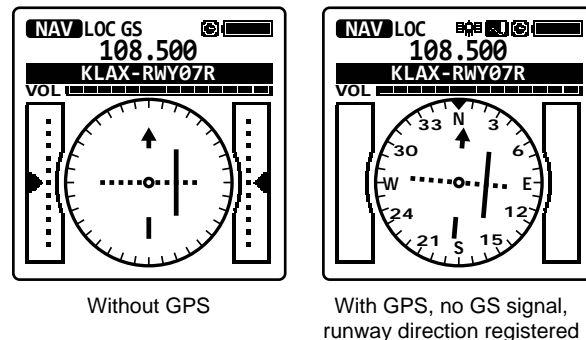
Reception of ILS Signals (except for FTA-450)

When the **FTA-750/FTA-550** receive an ILS (instrument landing system) signal, the display will automatically switch to the NAV band screen which shows a CDI (course deviation indicator) based on the received signal, and “LOC”, which indicates that the **FTA-750/FTA-550** are receiving the localizer signal, and “GS”, which indicates that the **FTA-750** is receiving the glide slope signal, appear on the display.



- ① Compass rose
- ② Course (runway) indicator
- ③ Deviation marks for localizer
- ④ Course deviation needle for localizer
- ⑤ Height deviation indicator for glide slope
- ⑥ Deviation marks for glide slope

- In the **FTA-750** when the internal GPS unit is not activated or cannot receive a fix even it is activated, or in the **FTA-550**, the upside of the compass rose always indicates the direction of the runway and no sign indicating the bearings is displayed on the compass rose.
- In the **FTA-750** when the internal GPS unit is activated and receives a fix, the compass rose rotates to display the approaching course up. The course indicator, deviation marks, and deviation needle also rotate to display the runway direction if registered in advance.



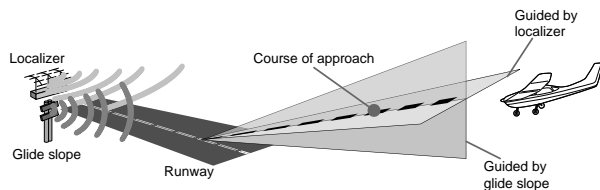
ADVANCED OPERATION

Note:

You may change the COM band receive frequency while receiving an ILS signal. If the [ENT] key is pressed while the tag name of the airport is selected, the recall screen listing the frequencies you have used will temporarily appear on the display, so that you may select a frequency from the list with the [◀] or [▶] key or change the frequency with the **DIAL** selector knob.

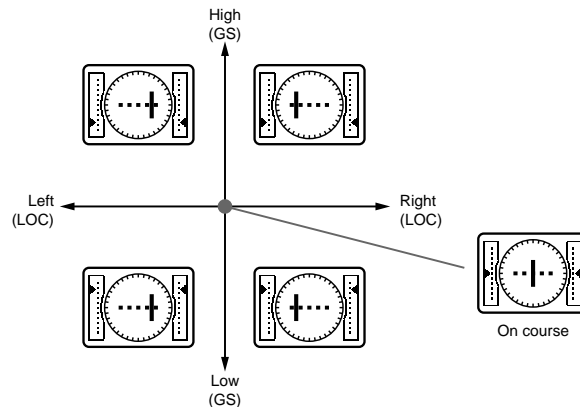
Terminology:

- The localizer signal guides the approach to the runway in horizontal direction.
- The glide slope signal guides the approach to the runway in vertical direction. Note that some airports are unequipped with the glide slope.



Reading the CDI

- The course deviation needle moves to the right if your aircraft is off course to the left of the runway, or moves to the left if your aircraft is off course to the right of the runway.
- The height deviation indicator moves up if your aircraft flies lower than the ideal altitude, or moves down if your aircraft flies higher than the ideal altitude.



CDI Examples Corresponding to Aircraft Location
 (Runway is to be at the back of the screen)

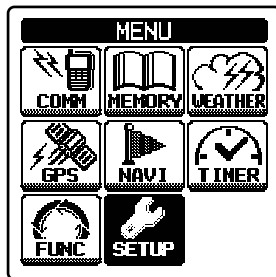
ADVANCED OPERATION

Split Operation

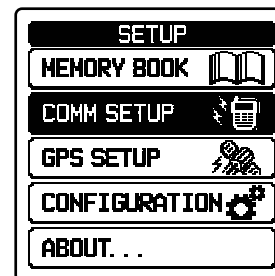
The split operation feature allows you to transmit a call to a flight service station using the COM band frequencies, while receiving a station in the NAV band. VOR stations equipped with this capability typically are shown, on navigation charts, with the voice calling frequency in parenthesis above the navigation frequency.

Programming a transmit frequency

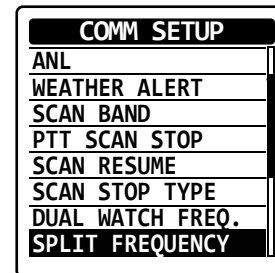
1. Press the [MENU] key to display the MENU screen.
2. Select “SETUP” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



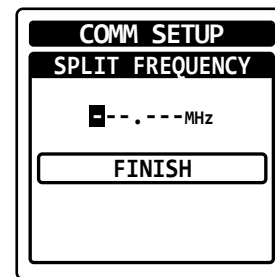
3. Select “COMM SETUP” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



4. Select “SPLIT FREQUENCY” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



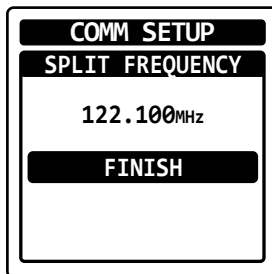
5. Enter the transmit frequency with the keypad.



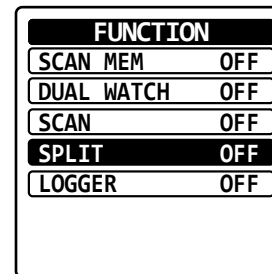
ADVANCED OPERATION

- Select “FINISH” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.

The frequency will be determined and the display will return to the COMM SETUP menu.

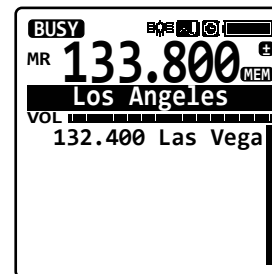


- Select “SPLIT” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



- If “ON” is displayed in the right hand of “SPLIT”, the **FTA-750/FTA-550/FTA-450** are already in the split mode.

The display will return to the previous screen and the “±” icon, which indicates that the **FTA-750/FTA-550/FTA-450** are in the split mode, will appear on the display.

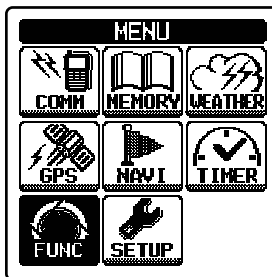


Note:

Only the COM band frequencies can be set as the transmit frequency.

Activating the split mode

- Press the [MENU] key to display the MENU screen.
- Select “FUNC” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



ADVANCED OPERATION

Operating in the split mode

- ❑ To transmit a voice call during the NAV band reception, press and hold the **PTT** switch, and speak into the microphone. The COM band screen will be displayed with the frequency you have set.
- ❑ To exit the split mode, select “SPLIT” and press the [ENT] key in the FUNCTION menu.

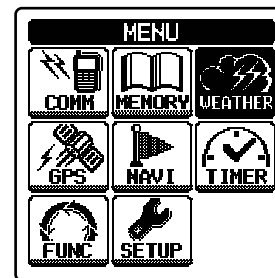
FUNCTION	
SCAN MEM	OFF
DUAL WATCH	OFF
SCAN	OFF
SPLIT	ON
LOGGER	OFF

Reception of Weather Channel Broadcasts

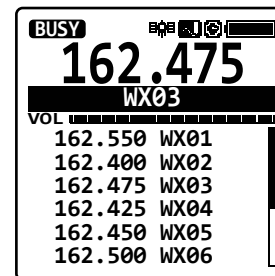
- Weather Channels for USA/ Canada only -

The **FTA-750/FTA-550/FTA-450** can receive VHF weather channel broadcasts, which may assist your flight planning. The **FTA-750/FTA-550/FTA-450** include a special bank capable of storing 10 weather channels, which simplifies access when you are in an unfamiliar location.

- ❑ To receive weather channels, press the [MENU] key, select “WEATHER” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



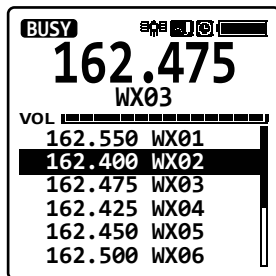
The last channel you have tuned will be received.



ADVANCED OPERATION

- ❑ You can also select a weather channel from the pre-programmed list with the **DIAL** selector knob.

To confirm the weather channel frequency selection, press the [ENT] key.

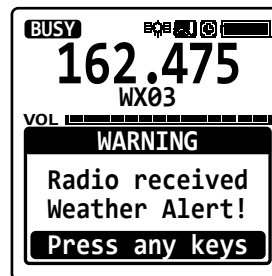


- ❑ To exit the WX mode, press the [MENU] key, select the mode other than “WEATHER” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.

Weather alert reception

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.

When the radio receives the weather alert on the operating frequency, it displays a warning as below on the screen and continues to make alarm sounds until either of the keys is pressed.



You may enable or disable the alarm function when receiving the weather alert signal via the COMM SETUP menu, if desired. See Page 72 for details.

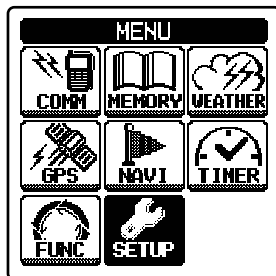
ADVANCED OPERATION

Dual Watch Operation

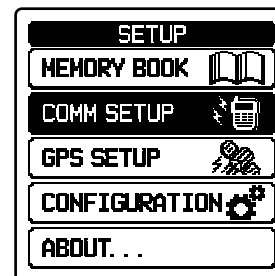
The dual watch feature automatically checks for activity on the P-ch (priority channel) set via the COMM SETUP menu while you are operating on another channel. During the dual watch operation, the current channel and the P-ch will be polled alternately for a 200 ms interval.

Setting the P-ch

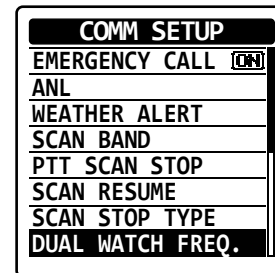
1. Press the [MENU] key to display the MENU screen.
2. Select “SETUP” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



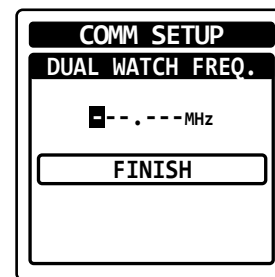
3. Select “COMM SETUP” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



4. Select “DUAL WATCH FREQ.” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.

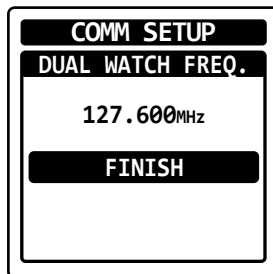


5. Enter the frequency you want to poll, with the keypad.



ADVANCED OPERATION

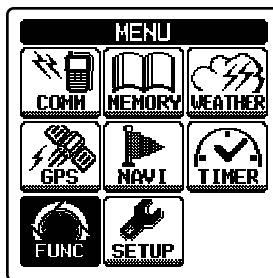
6. Select “FINISH” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



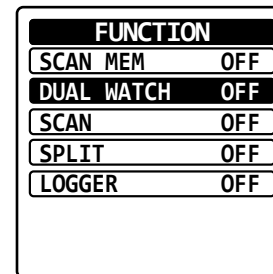
The frequency will be determined and the display will return to the COMM SETUP menu.

Starting the dual watch

1. Press the [MENU] key to display the MENU screen.
2. Select “FUNC” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



3. Select “DUAL WATCH” on the screen by pressing the [◀] or [▶] key, and then press the [ENT] key.



- If “ON” is displayed in the right hand of “DUAL WATCH”, the **FTA-750/FTA-550/FTA-450** are performing the dual watch.

The display will return to the previous screen and the “DW” icon, which indicates that the **FTA-750/FTA-550/FTA-450** are performing the dual watch, will appear on the display.

- When the radio encounters a signal in the current channel, it still polls both channels alternately with longer staying time on the current channel.
- When the radio encounters a signal in the P-ch, the radio stays on the P-ch until the signal disappears, and the frequency indication on the display blinks. After the signal disappears, the dual watch resumes.