Turning illumination off when scanning stops
SCAN LAMP Function

You can set the backlight of LCD to turn ON or OFF when a signal is received during scanning.
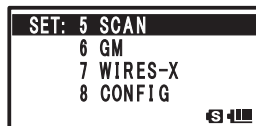
Enter the Set mode:

1 Press and hold $\overset{\text{SET}}{\boxed{\text{DISP}}}$ for over 1 second.

2 Turn $\boxed{\text{DIAL}}$ to select [5 SCAN].

3 Press $\boxed{\text{ENT}}$.

4 Turn $\boxed{\text{DIAL}}$ to select [2 SCAN LAMP].

5 Press $\boxed{\text{ENT}}$.

6 Turn $\boxed{\text{DIAL}}$ to select [OFF].

ON: The LCD backlight will light when a signal is received.

OFF: The LCD backlight will not light when a signal is received.

Remark   Default: ON

7 Press $\overset{\text{PTT}}{\boxed{\circledcirc}}$ to save the backlight ON or OFF setting when scanning stops, and exit the Set mode.

```
SET: 5 SCAN
     6 GM
     7 WIRES-X
     8 CONFIG
```

```
 2  SCAN LAMP
 3  SCAN RE-START
 4  SCAN RESUME
 5  SCAN WIDTH
```

```
 2  SCAN LAMP

 ►   OFF
```

Setting the time to resume scan
SCAN RE-START Function

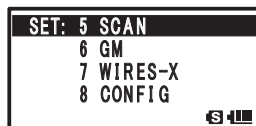You can set the time to resume scanning after a signal is received during scanning.

Enter the Set mode:

1 Press and hold $\overset{\text{SET}}{\boxed{\text{DISP}}}$ for over 1 second.

2 Turn $\boxed{\text{DIAL}}$ to select [5 SCAN].

3 Press $\boxed{\text{ENT}}$.

4 Turn $\boxed{\text{DIAL}}$ to select [3 SCAN RE-START].

5 Press $\boxed{\text{ENT}}$.

6 Turn $\boxed{\text{DIAL}}$ to select the time to resume scanning.

Select from 0.1 SEC to 10 SEC.

Remark   Default: 2 seconds

7 Press $\overset{\text{PTT}}{\boxed{\circledcirc}}$ to set the resume scanning time, and exit the Set mode.

```
SET: 5 SCAN
     6 GM
     7 WIRES-X
     8 CONFIG
```

```
 3  SCAN RE-START
 4  SCAN RESUME
 5  SCAN WIDTH
 1  DW TIME
```

```
 3  SCAN RE-START

 ►   5.0sec
```

Functions Used As Needed

Set Mode

Selecting a reception method when scanning stops

Set the reception method for when scanning stops.

For more details, see "Selecting a Reception Method When Scanning Stops" on page P. 59.

Setting the range for SCAN

You can set the frequency range for scanning with the SCAN Function.

Enter the Set mode:

1 Press and hold $\overset{SET}{DISP}$ for over 1 second.

2 Turn $\overset{\text{DIAL}}{\text{[wheel]}}$ to select [5 SCAN].

3 Press ENT.

4 Turn $\overset{\text{DIAL}}{\text{[wheel]}}$ to select [5 SCAN WIDTH].

5 Press ENT.

6 Turn $\overset{\text{DIAL}}{\text{[wheel]}}$ to select [VFO].

7 Press ENT.

8 Turn $\overset{\text{DIAL}}{\text{[wheel]}}$ to select the range for scanning.
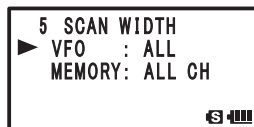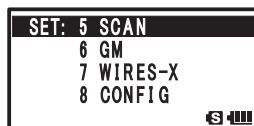
Specify the scanning range with reference to the next list.

9 Press $\overset{SET}{DISP}$.

10 Turn $\overset{\text{DIAL}}{\text{[wheel]}}$ to select [MEMORY].

11 Press ENT.

12 Turn $\overset{\text{DIAL}}{\text{[wheel]}}$ to select the range for scanning.

```
SET: 5 SCAN
     6 GM
     7 WIRES-X
     8 CONFIG
                    S [batt]
```

```
5 SCAN WIDTH
1 DW TIME
2 SCAN LANP
3 SCAN RE-START
                    S [batt]
```

```
5 SCAN WIDTH
► VFO  : ALL
  MEMORY: ALL CH
                    S [batt]
```

| Mode	Display*	Operation Status
VFO Mode	ALL	Scans all bands within the range from the current frequency to 108-999 MHz.
	BAND	Scans the current band (see the table on the next page) starting with the current frequency.
Memory Mode	ALL CH	Scans all memory channels (1-900) of the currently selected memory channel. When selected memory channels are specified, all of them are scanned (See page 59).
	BAND	Scans only the memory channels to which frequencies in the same frequency band*1 are registered. When the selected memory channels are specified, scans only the selected memory channels to which frequencies in the same frequency band*1 are registered (See page 61).

*1 For the relationship between frequency bands and reception frequencies, see the table at the bottom of page 28.

13 Press $\overset{PTT}{[mic]}$ to save the range for scanning, and exit the Set mode.

Turning off the power automatically
APO Function

The transceiver may be set to turn off automatically if there is no operation for a certain period of time.
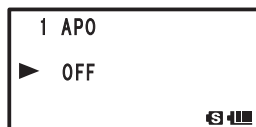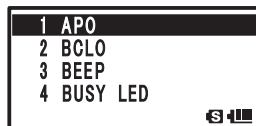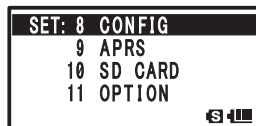
Enter the Set mode:

1 Press and hold $\overset{SET}{\boxed{\text{DISP}}}$ for over 1 second.

2 Turn $\boxed{\text{DIAL}}$ to select [8 CONFIG].

3 Press $\boxed{\text{ENT}}$.

4 Turn $\boxed{\text{DIAL}}$ to select [1 APO].

5 Press $\boxed{\text{ENT}}$.

6 Turn $\boxed{\text{DIAL}}$ to set the time.

Set the time for the transceiver to turn off automatically in steps of 30 minutes.

OFF/30 MIN/1 HOUR to 12 HOURS

Remark Default: OFF

7 Press $\overset{PTT}{\circledast}$ to save the auto power-off function setting, and exit the Set mode. The transceiver will be automatically turned off if there is no operation for the set period of time.

Tips

- When the auto power-off function is active, the ⏱ icon appears on the LCD.
- Once the time for automatic power-off is set, it is retained until "OFF" is selected in step 6 of the above-mentioned procedure. (The next time you turn the transceiver on, if you perform no operation for the set period of time, the transceiver will automatically turn itself off.)
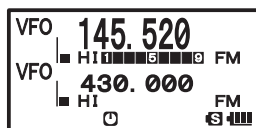
Set Mode

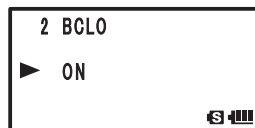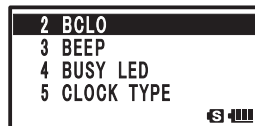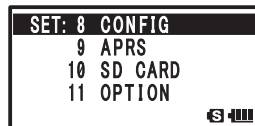## Preventing accidental transmission
Busy Channel Lockout (BCLO) Function

You can prevent accidental transmission during signal reception.

Enter the Set mode:

1 Press and hold $\overset{SET}{\text{DISP}}$ for over 1 second.

2 Turn $\overset{\text{DIAL}}{\text{▥}}$ to select [8 CONFIG].

3 Press [ENT].

4 Turn $\overset{\text{DIAL}}{\text{▥}}$ to select [2 BCLO].

5 Press [ENT].

6 Turn $\overset{\text{DIAL}}{\text{▥}}$ to select [ON].

   Remark   Default: OFF

7 Press $\overset{PTT}{\text{⬡}}$ to save the BCLO function setting, and exit the Set mode.

```
SET: 8 CONFIG
     9  APRS
    10  SD CARD
    11  OPTION
                    S ▥
```

```
 2  BCLO
 3  BEEP
 4  BUSY LED
 5  CLOCK TYPE
                    S ▥
```

```
 2  BCLO

►    ON

                    S ▥
```

Muting the key operation confirmation tone

The operation confirmation sound (beep sound) that is heard when keys are operated, or when scanning reaches the end of a frequency band, can be turned off.

Enter the Set mode:

1 Press and hold $\overset{SET}{\text{DISP}}$ for over 1 second.

2 Turn $\overset{\text{DIAL}}{\text{▥}}$ to select [8 CONFIG].

3 Press [ENT].

4 Turn $\overset{\text{DIAL}}{\text{▥}}$ to select [3 BEEP].

5 Press [ENT].

6 Turn $\overset{\text{DIAL}}{\text{▥}}$ to select [SELECT].

7 Press [ENT].

8 Turn $\overset{\text{DIAL}}{\text{▥}}$ to select [OFF].

   Remarks   Default: KEY&SCAN

```
SET: 8 CONFIG
     9  APRS
    10  SD CARD
    11  OPTION
                    S ▥
```

```
 3  BEEP
 4  BUSY LED
 5  CLOCK TYPE
 6  GPS LOG
                    S ▥
```
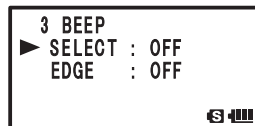
```
 3  BEEP
► SELECT : OFF
  EDGE   : OFF

                    S ▥
```

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

9 Press $\overset{SET}{\text{DISP}}$.
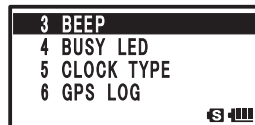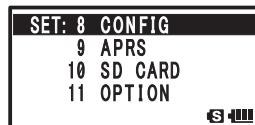
10 Turn $\overset{\text{DIAL}}{\text{▥}}$ to select [EDGE].

11 Press [ENT].

12 Turn $\overset{\text{DIAL}}{\text{▥}}$ to select [OFF].

13 Press $\overset{PTT}{\text{⬡}}$ to exit from the Set mode.

Turning off the BUSY Indicator

When you listen to the radio continuously or when the remaining battery level has become low, you can turn off the BUSY indicator to save battery power consumption.

Enter the Set mode:

1 Press and hold $\overset{SET}{\boxed{DISP}}$ for over 1 second.

2 Turn $\boxed{DIAL}$ to select [8 CONFIG].

3 Press $\boxed{ENT}$.

4 Turn $\boxed{DIAL}$ to select [4 BUSY LED].

5 Press $\boxed{ENT}$.

6 Turn $\boxed{DIAL}$ to select a band.

Select a band from among [A BAND], [B BAND], and [RADIO].

7 Press $\boxed{ENT}$.

8 Turn $\boxed{DIAL}$ to select [OFF].

 Remark Default: ON

9 Press $\overset{PTT}{\textcircled{\tiny{::}}}$.

The BUSY indicator is turned off, and exits from the Set mode.

```
SET: 8 CONFIG
    9 APRS
   10 SD CARD
   11 OPTION
```

```
 4 BUSY LED
  5 CLOCK TYPE
  6 GPS LOG
  7 HOME VFO
```

```
 3 BUSY LED
► A BAND : OFF
  B BAND : ON
  RADIO  : ON
```
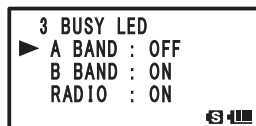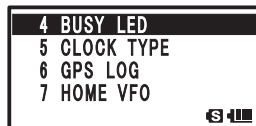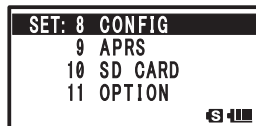
Setting the clock shift for the micro computer Clock Type Function

The micro computer Clock Shift function may be set to reduce internal high frequency spurious interference signals. Select [A] for normal use.

Enter the Set mode:

1 Press and hold $\overset{SET}{\boxed{DISP}}$ for over 1 second.

2 Turn $\boxed{DIAL}$ to select [8 CONFIG].

3 Press $\boxed{ENT}$.

4 Turn $\boxed{DIAL}$ to select [5 CLOCK TYPE].

5 Press $\boxed{ENT}$.

6 Turn $\boxed{DIAL}$ to select a clock type.

A: The Clock Shift function is automatically turned on or off.

B: The Clock Shift function is continually active.

 Remark Default: A

7 Press $\overset{PTT}{\textcircled{\tiny{::}}}$ to save the Clock Type setting, and exit the Set mode.

```
SET: 8 CONFIG
    9 APRS
   10 SD CARD
   11 OPTION
```

```
 5 CLOCK TYPE
  6 GPS LOG
  7 HOME VFO
  8 LED LIGHT
```

```
 5 CLOCK TYPE

► A
```

Functions Used As Needed

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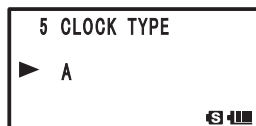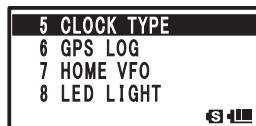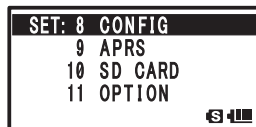
Set Mode

Setting interval to save GPS position information

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

Enter the Set mode:

1 Press and hold $\overset{\text{SET}}{\text{DISP}}$ for over 1 second.

2 Turn $\overset{\text{DIAL}}{\text{IIII}}$ to select [8 CONFIG].

3 Press [ENT].

4 Turn $\overset{\text{DIAL}}{\text{IIII}}$ to select [6 GPS LOG].

5 Press [ENT].

```
SET: 8 CONFIG
      9  APRS
     10  SD CARD
     11  OPTION
                    S
```

6 Turn $\overset{\text{DIAL}}{\text{IIII}}$ to select an interval to save GPS position information.

OFF / 1 SEC / 2 SEC / 5 SEC /10 SEC / 30 SEC / 60 SEC

Information is not recorded to the microSD memory card if OFF is selected.

Remark Default: OFF

```
 6  GPS LOG
 7  HOME VFO
 8  LED LIGHT
 9  LOCK
                    S
```

7 Press $\overset{\text{PTT}}{\circledcirc}$ to save the GPS information saving interval setting, and exit the Set mode.

```
 6  GPS LOG

▶   OFF

                    S
```
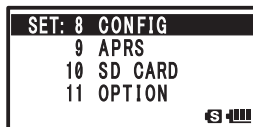
Tips

- Data saved to the microSD memory card is saved in xxx.LOG format.
- Saved data can be viewed with PC applications*.
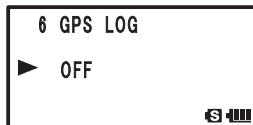 * PC applications are not supported by our company.

Permitting Transfer of Home Channel Frequency to VFO

You can use the set operation to transfer home channel frequency information to the VFO.

Enter the Set mode:

1 Press and hold $\overset{\text{SET}}{\text{DISP}}$ for over 1 second.

2 Turn $\overset{\text{DIAL}}{\text{IIII}}$ to select [8 CONFIG].

3 Press [ENT].

4 Turn $\overset{\text{DIAL}}{\text{IIII}}$ to select [7 HOME VFO].

5 Press [ENT].

```
SET: 8 CONFIG
      9  APRS
     10  SD CARD
     11  OPTION
                    S
```

6 Turn $\overset{\text{DIAL}}{\text{IIII}}$ to select Unlock or Lock.

ENABLE: Turning $\overset{\text{DIAL}}{\text{IIII}}$ in home channel transfers the home channel frequency to VFO.

DISABLE: The home channel frequency cannot be transferred.

Remark Default: ENABLE

```
 7  HOME VFO
 8  LED LIGHT
 9  LOCK
10  MONI/T-CALL
                    S
```

7 Press $\overset{\text{PTT}}{\circledcirc}$ to save the frequency transfer ENABLE/DISABLE/Unlock setting, and exit the Set mode.

```
 7  HOME VFO

▶   ENABLE

                    S
```
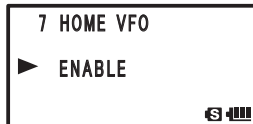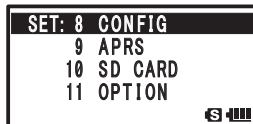
Using the White LED as a Flashlight

The white LED may be used as a flashlight.

Enter the Set mode:

1 Press and hold $\overset{SET}{\boxed{DISP}}$ for over 1 second.

2 Turn $\overset{}{\underset{DIAL}{\boxed{}}}$ to select [8 CONFIG].

3 Press $\boxed{ENT}$.

4 Turn $\overset{}{\underset{DIAL}{\boxed{}}}$ to select [8 LED LIGT].

5 Press $\boxed{ENT}$.

The white LED lights as a flashlight.

6 Press $\overset{SET}{\boxed{DISP}}$.

The LED goes out.

7 Press $\overset{PTT}{\textcircled{\tiny\Box}}$ to exit from the Set mode.

```
SET: 8 CONFIG
     9 APRS
    10 SD CARD
    11 OPTION
```

```
 8 LED LIGHT
   9 LOCK
  10 MONI/T-CALL
  11 TIMER
```

```
 8 LED LIGHT

►   LED LIGHT
```
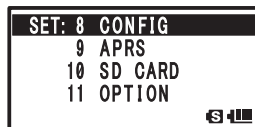
Setting the conditions for locking
LOCK Function

Conditions for activating Lock Function, such as keys, $\overset{}{\underset{DIAL}{\boxed{}}}$, and $\overset{PTT}{\textcircled{\tiny\Box}}$, can be set.

Enter the Set mode:

1 Press and hold $\overset{SET}{\boxed{DISP}}$ for over 1 second.

2 Turn $\overset{}{\underset{DIAL}{\boxed{}}}$ to select [8 CONFIG].

3 Press $\boxed{ENT}$.

4 Turn $\overset{}{\underset{DIAL}{\boxed{}}}$ to select [9 LOCK].

5 Press $\boxed{ENT}$.

6 Turn $\overset{}{\underset{DIAL}{\boxed{}}}$ to select the keys and switches to lock.

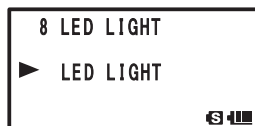KEY & DIAL: Locks the keys and $\overset{}{\underset{DIAL}{\boxed{}}}$ on the front of the transceiver.

PTT: Locks $\overset{PTT}{\textcircled{\tiny\Box}}$.

KEY & PTT: Locks the keys and $\overset{PTT}{\textcircled{\tiny\Box}}$ on the front of the transceiver.

DIAL & PTT: Locks $\overset{}{\underset{DIAL}{\boxed{}}}$ and $\overset{PTT}{\textcircled{\tiny\Box}}$.

ALL: Locks the keys, $\overset{}{\underset{DIAL}{\boxed{}}}$, and $\overset{PTT}{\textcircled{\tiny\Box}}$ on the front of the transceiver.

KEY: Locks the keys on the front of the transceiver.

DIAL: Locks $\overset{}{\underset{DIAL}{\boxed{}}}$.

Remark Default: KEY&DIAL

7 Press $\overset{PTT}{\textcircled{\tiny\Box}}$.

The keys and switches to lock are set, and exits from the Set mode.

```
SET: 8 CONFIG
     9 APRS
    10 SD CARD
    11 OPTION
```

```
 9 LOCK
  10 MONI/T-CALL
  11 TIMER
  12 PASSWORD
```

```
 9 LOCK

►   KEY&DIAL
```

Functions Used As Needed

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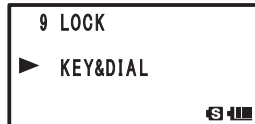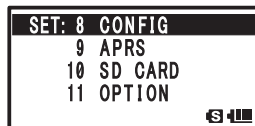
Setting the operation of [MONI T-CALL]

The function for when [MONI T-CALL] is pressed can be set.

Enter the Set mode:

1 Press and hold $\overset{SET}{DISP}$ for over 1 second.

2 Turn $\overset{}{DIAL}$ to select [8 CONFIG].

3 Press [ENT].

4 Turn $\overset{}{DIAL}$ to select [10 MONI/T-CALL].

5 Press [ENT].

6 Turn $\overset{}{DIAL}$ to select the function.

MONI: Pressing [MONI T-CALL] monitors frequency.

T-CALL: Pressing [MONI T-CALL] functions as tone call.

Remark Default: Depends on the transceiver version.

7 Press [ENT].

The function for [MONI T-CALL] is set.

8 Press $\overset{PTT}{\circledcirc}$ to save the setting and exit the Set mode.

```
SET: 8 CONFIG
    9 APRS
   10 SD CARD
   11 OPTION
                    S
```

```
10 MONI/T-CALL
11 TIMER
12 PASSWORD
13 PTT DELAY
                    S
```

```
10 MONI/T-CALL

▶  MONI
                    S
```
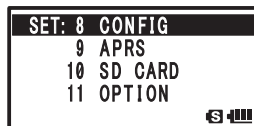
Turning on/off the transceiver at the specified time
Timer Function

You can turn the transceiver to turn on/off at the set time. Before using this function, adjust the clock. See "Setting clock time" on page 34.

Enter the Set mode:

1 Press and hold $\overset{SET}{DISP}$ over 1 second.

2 Turn $\overset{}{DIAL}$ to select [8 CONFIG].

3 Press [ENT].

4 Turn $\overset{}{DIAL}$ to select [11 TIMER].

5 Press [ENT].

6 Turn $\overset{}{DIAL}$ to select [ON] or [OFF].

ON: Turns on the transceiver at the specified time.

OFF: Turns off the transceiver at the specified time.

7 Press [ENT].

8 Turn $\overset{}{DIAL}$ to specify hours.

9 Press [ENT].

10 Turn $\overset{}{DIAL}$ to specify minutes.

11 Press [ENT].

12 Turn $\overset{}{DIAL}$ to switch between ON/OFF of the timer.

13 Press $\overset{SET}{DISP}$.

The timer function is turned on.

14 Press $\overset{PTT}{\circledcirc}$ to exit from the Set mode.

```
SET: 8 CONFIG
    9 APRS
   10 SD CARD
   11 OPTION
                    S
```

```
11 TIMER
12 PASSWORD
13 PTT DELAY
14 RPT ARS
                    S
```

```
11 TIMER

▶  ON : 08:00 ON
   OFF: 00:00 OFF
                    S
```

```
11 TIMER

   ON : 06:00 ON
▶  OFF: 23:00 OFF
                    S
```

Functions Used As Needed

132
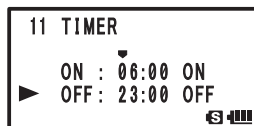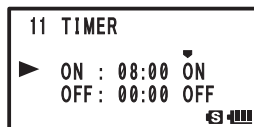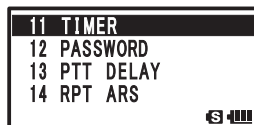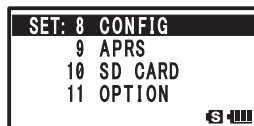
Password Function

You can enter a 4-character password to prevent a third party from using your transceiver without permission. Once a password is entered, the transceiver cannot be turned on until the valid password is entered.

Enter the Set mode:

1 Press and hold $\overset{\text{SET}}{\text{DISP}}$ for over 1 second.

2 Turn $\overset{}{\text{DIAL}}$ to select [8 CONFIG].

3 Press [ENT].

4 Turn $\overset{}{\text{DIAL}}$ to select [12 PASSWORD].

5 Press [ENT].

6 Press [ENT].

7 Turn $\overset{}{\text{DIAL}}$ to enter the first character of the password.

Enter the first character (0-9. A to D, $*$, and #) of the password.

8 Press [ENT].

The cursor moves to the next character position.

9 Repeat steps 7 and 8 to enter the remaining three characters.

10 Press [ENT].

11 Turn $\overset{}{\text{DIAL}}$ to select [ON].

Remark Default: OFF

12 Press $\overset{\text{PTT}}{\circledS}$ to save the password setting, and exit the Set mode.

```
SET: 8 CONFIG
    9 APRS
   10 SD CARD
   11 OPTION
```

```
12 PASSWORD
13 PTT DELAY
14 RPT ARS
15 RPT SHIFT
```

```
12 PASSWORD
► OFF 1234
```

```
12 PASSWORD
► ON 1234
```

Tips

- To cancel the password function, execute the above-mentioned steps 1 to 5, select "OFF" with $\overset{}{\text{DIAL}}$, and then press $\circledS$ over 1 second.
- Keypad keys cannot be used to enter the password.
- When the on-timer function is active, the password function is ineffective.

•Turning on the transceiver using a password

1 Press and hold $\overset{\text{PTT}}{\textcircled{\tiny \textdegree}}$ for over 1 second.

The password entry screen appears.

2 Enter the password using keypad keys.

Enter the registered 4-character password.
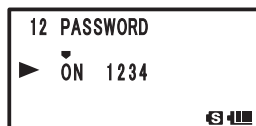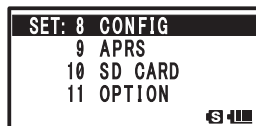
When the valid password is entered, the frequency display screen appears.

Remark When an invalid password is entered, the transceiver is turned off automatically.

Caution

If you've forget 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.

Functions Used As Needed

133

Setting the PTT delay time
PTT DELAY Function

You can set the time for actual transmission to start after ⓑⓣⓣ is pressed.

Enter the Set mode:

1 Press and hold $\overset{\text{SET}}{\text{DISP}}$ for over 1 second.

2 Turn $\overset{\text{DIAL}}{\text{DIAL}}$ to select [8 CONFIG].

3 Press [ENT].

4 Turn $\overset{\text{DIAL}}{\text{DIAL}}$ to select [13 PTT DELAY].

5 Press [ENT].

6 Turn $\overset{\text{DIAL}}{\text{DIAL}}$ to select the time.

OFF/20ms/50ms/100ms/200ms

Remark Default: OFF

7 Press ⓑⓣⓣ to save the PTT delay time setting, and exit the Set mode.

```
SET: 8 CONFIG
     9 APRS
    10 SD CARD
    11 OPTION
                    S ▪
```

```
13 PTT DELAY
14 PRT ARS
15 PRT SHIFT
16 PRT SHIFT FREQ
                    S ▪
```

```
13 PTT DELAY

►   OFF

                    S ▪
```
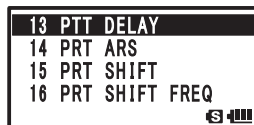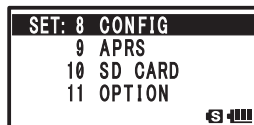
Setting the ARS function
RPT ARS Function

You can set the operation of ARS (Tuning in to the repeater frequency automatically enables the repeater).

Enter the Set mode:

1 Press and hold $\overset{\text{SET}}{\text{DISP}}$ for over 1 second.

2 Turn $\overset{\text{DIAL}}{\text{DIAL}}$ to select [8 CONFIG].

3 Press [ENT].

4 Turn $\overset{\text{DIAL}}{\text{DIAL}}$ to select [14 RPT ARS].

5 Press [ENT].

6 Turn $\overset{\text{DIAL}}{\text{DIAL}}$ to select ON/OFF.

ON: ARS is functional.

OFF: ARS is not functional.

Remark Default: ON

7 Press ⓑⓣⓣ to save the ARS function ON/OFF setting, and exit the Set mode.

```
SET: 8 CONFIG
     9 APRS
    10 SD CARD
    11 OPTION
                    S ▪
```

```
14 RPT ARS
15 RPT SHIFT
16 RPT SHIFT FREQ
17 SAVE RX
                    S ▪
```

```
14 RPT ARS

►   ON

                    S ▪
```
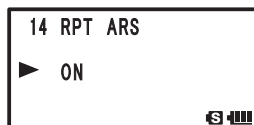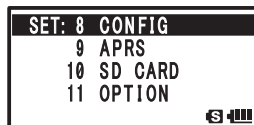
Setting the direction for repeater shift
RPT SHIFT Function

You can set the direction of repeater shift.

Enter the Set mode:

1 Press and hold $\overset{SET}{\text{DISP}}$ for over 1 second.

2 Turn $\overset{\text{DIAL}}{\text{🎛}}$ to select [8 CONFIG].

3 Press $\boxed{\text{ENT}}$.

4 Turn $\overset{\text{DIAL}}{\text{🎛}}$ to select [15 RPT SHIFT].

5 Press $\boxed{\text{ENT}}$.

6 Turn $\overset{\text{DIAL}}{\text{🎛}}$ to select the shift direction.

SIMPLEX: Does not shift.

–RPT: Shifts toward lower frequencies.

+RPT: Shifts toward higher frequencies.

Remark Default setting differs depending frequency

7 Press $\overset{PTT}{\text{🎛}}$ to save the repeater shift direction setting, and exit the Set mode.

```
SET: 8 CONFIG
    9 APRS
   10 SD CARD
   11 OPTION
                   🆂 🔋
```

```
15 RPT SHIFT
16 RPT SHIFT FREQ
17 SAVE RX
18 STEP
                   🆂 🔋
```

```
15 RPT SHIFT

►   SIMPLEX

                   🆂 🔋
```

Setting the range for repeater shift
RPT SHIFT FREQ Function

You can set the repeater shift range.

Enter the Set mode:

1 Press and hold $\overset{SET}{\text{DISP}}$ for over 1 second.

2 Turn $\overset{\text{DIAL}}{\text{🎛}}$ to select [8 CONFIG].

3 Press $\boxed{\text{ENT}}$.

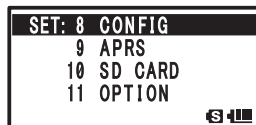**4** Turn $\overset{\text{DIAL}}{\text{🎛}}$ to select [16 RPT SHIFT FREQ].

5 Press $\boxed{\text{ENT}}$.

6 Turn $\overset{\text{DIAL}}{\text{🎛}}$ to select shift range.

The range can be set in steps of 50 kHz between 0.0000 MHz and 150.000 MHz.

Pressing $\overset{MW}{\text{🄵}}$ and then turning $\overset{\text{DIAL}}{\text{🎛}}$ allows you to set frequencies in steps of 1 MHz.

Remark Default setting differs depending frequency

7 Press $\overset{PTT}{\text{🎛}}$ to save the repeater shift range setting, and exit the Set mode.

```
SET: 8 CONFIG
    9 APRS
   10 SD CARD
   11 OPTION
                   🆂 🔋
```

```
16 RPT SHIFT FREQ
17 SAVE RX
18 STEP
19 DATE & TIME ADJ
                   🆂 🔋
```

```
16 RPT SHIFT FREQ

►   5.000MHz

                   🆂 🔋
```

Functions Used As Needed

135
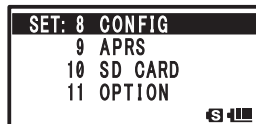
Set Mode

Disabling reception while no signal is received
Reception Save Function

To reduce power consumption, the reception function can be turned off when not receiving a signal.

Enter the Set mode:

1 Press and hold ⌷ͭ for over 1 second.

2 Turn 🎛 to select [8 CONFIG].

3 Press [ENT].

4 Turn 🎛 to select [17 SAVE RX].

5 Press [ENT].

6 Turn 🎛 to select the time.

Select the time for the reception to be turned off automatically.

0.2 SEC (1:1) to 1.0 SEC (1:5)	(Step: 0.1 sec)
to 1.0 SEC (1:5) to 10 SEC (1:50)	(Step: 0.5 sec)
to 1.0 sec (1:50) to 60 sec (1:300 sec)	step 5 sec
OFF	

Remark Default: 0.2 sec (1:1)

```
SET: 8  CONFIG
    9  APRS
   10  SD CARD
   11  OPTION
```

```
17 SAVE  RX
18 STEP
19 DATE & TIME ADJ
20 TOT
```

```
17 SAVE  RX

►   0.2 sec( 1:  1  )
```

7 Press 🔘 to save the Reception Save function setting, and exit the Set mode.
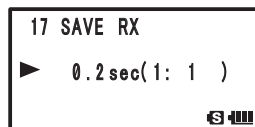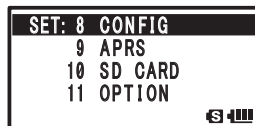
Changing the frequency step manually

Frequency step can be set so that it can be changed manually.
For more details, see "Changing the Frequency Step Manually" on page 37.

Setting clock time

Set the time for the internal clock of this transceiver.
For details, see "Setting clock time" on page 34.

Restricting the continuous transmission time
TOT Function

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

Enter the Set mode:

1 Press and hold ⌷ͭ for over 1 second.

2 Turn 🎛 to select [8 CONFIG].

3 Press [ENT].

```
SET: 8  CONFIG
    9  APRS
   10  SD CARD
   11  OPTION
```
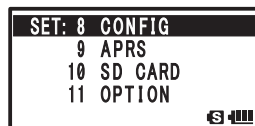
4 Turn 🎛 to select [20 TOT].

5 Press [ENT].

6 Turn 🎛 to select the time.

Set the time for the transceiver to automatically return to the reception state in steps of 30 seconds.

OFF/30 SEC to 10 MIN

Remark Default: OFF

```
20 TOT
21 VFO MODE
22 VIBRATOR
 1 APO
```

```
 20 TOT

► OFF
```

7 Press 🎙 to save the TOT function setting, and exit the Set mode.

Tips
- When the time-out timer function is active, a beep is emitted when it comes near the set time. About 10 seconds later, the transceiver returns to the reception state.
- Once the time is set, it is retained until "OFF" is selected in step 6 of the above-mentioned procedure.

Setting the frequency selection range for operation in the VFO mode
VFO MODE Function

You can set the frequency selection range for operating in the VFO mode.

Enter the Set mode:

1 Press and hold [DISP] over 1 second.

2 Turn 🎛 to select [8 CONFIG].

3 Press [ENT].

4 Turn 🎛 to select [21 VFO MODE].

5 Press [ENT].

6 Turn 🎛 to select a frequency range.

ALL: Switches to the next band when the end of a band is reached.

BAND: Moves to the other end of the band when the end of that band is reached.

Remark Default: BAND

```
SET: 8 CONFIG
   9 APRS
  10 SD CARD
  11 OPTION
```

```
21 VFO MODE
22 VIBRATOR
 1 APO
 2 BCLO
```

```
21 VFO MODE

► ALL
```

7 Press 🎙 to save the frequency selection range setting, and exit the Set mode.
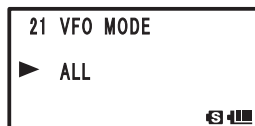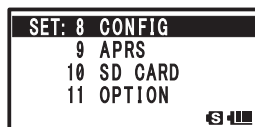
Set Mode

Notification of a call from a remote station by vibration

The vibrator function may be set to notify you of a call from a remote station.
For details, see "Notification of Call from the Remote Station by Vibration of the Vibrator" on page 88.

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.

Enter the Set mode:

1 Press and hold $\overset{SET}{\boxed{DISP}}$ over 1 second.

2 Turn $\overset{}{\underset{DIAL}{\boxed{}}}$ to select [10 SD CARD].

3 Press $\boxed{ENT}$.

4 Turn $\overset{}{\underset{DIAL}{\boxed{}}}$ to select [1 BACKUP].

5 Press $\boxed{ENT}$.

6 Turn $\overset{}{\underset{DIAL}{\boxed{}}}$ to select [Write to SD] or [Read from SD].

Write to SD: Saves the setting information of your transceiver to the microSD memory card.

Read from SD: Loads the setting information to your transceiver from the microSD memory card.

Cancel: Stops save or load.

7 Press $\boxed{ENT}$.

[OK?] appears on the LCD.

8 Press $\boxed{ENT}$.

The write or read is performed and [Completed] appears when finished.

9 Press $\overset{PTT}{\circledcirc}$ to exit from the Set mode.

```
SET:10 SD CARD
     11 OPTION
     12 CALLSIGN
      1 DISPLAY
                    ⑤ ▥
```

```
 1 BACKUP
 2 MEMORY CH
 3 GROUP ID
 4 FORMAT
                    ⑤ ▥
```

```
 1 BACKUP

   Write to SD
   Read from SD
                    ⑤ ▥
```

```
Write to SD      ➡ 🗀

        OK?
      Cancel
                   ⑤ ▥
```
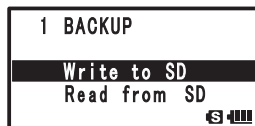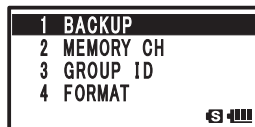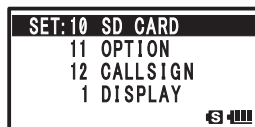
Blinks when writing

Saving/ Loading memory channel information to/from microSD memory card

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

Enter the Set mode:

1 Press and hold $\overset{SET}{\boxed{DISP}}$ for over 1 second.

2 Turn $\overset{}{\underset{DIAL}{\boxed{}}}$ to select [10 SD CARD].

3 Press $\boxed{ENT}$.

```
SET:10 SD CARD
     11 OPTION
     12 CALLSIGN
      1 DISPLAY
                    ⑤ ▥
```

Functions Used As Needed

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4 Turn ⌨ DIAL to select [2 MEMORY CH].

5 Press ENT.

6 Turn ⌨ DIAL to select [Write to SD] or [Read from SD].

Write to SD: A beep is heard and [Completed] appears when writing to SD finished.

Read from SD: A beep is heard when loading from SD finished and the transceiver restarts with the settings read from the microSD memory card. (The operation in step 9 is not required.)

Cancel: Stops save or load.

7 Press ENT.

[OK?] appears on the LCD.

8 Press ENT.

The write or read is performed and [Completed] appears when finished.

9 Press PTT ⊙ to exit from the Set mode.

```
1 BACKUP
2 MEMORY CH
3 GROUP ID
4 FORMAT
           S ▪▭
```

```
2 MEMORY CH

  Write to SD
  Read from SD
           S ▪▭
```

```
Write to SD      ➜ 🗂

        OK?
       Cancel
             ░S▪▭
```
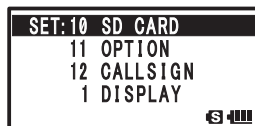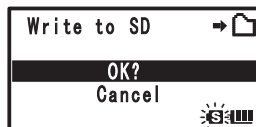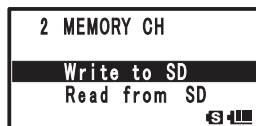
Blinks when writing

Saving/ Loading GROUP ID information to/from microSD memory card

Group ID setting information can be saved to a microSD memory card, or saved information can be loaded to this transceiver.

Enter the Set mode:

1 Press and hold SET DISP for over 1 second.

2 Turn ⌨ DIAL to select [10 SD CARD].

3 Press ENT.

4 Turn ⌨ DIAL to select [3 GROUP ID].

5 Press ENT.

6 Turn ⌨ DIAL to select [Write to SD] or [Read from SD].

Write to SD: Saves the Group ID information to your transceiver to the microSD memory card.

Read from SD: Loads the Group ID information to your transceiver from the microSD memory card.

Cancel: Stops save or load.

7 Press ENT.

[OK?] appears on the LCD.

```
SET:10 SD CARD
   11 OPTION
   12 CALLSIGN
    1 DISPLAY
           S ▪▭
```

```
1 BACKUP
2 MEMORY CH
3 GROUP ID
4 FORMAT
           S ▪▭
```

```
3 GROUP ID

  Write to SD
  Read from SD
           S ▪▭
```

Functions Used As Needed

139
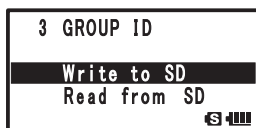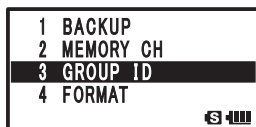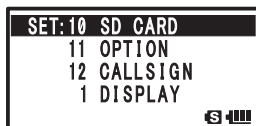
8 Press [ENT].

Write to SD: A beep is heard and [Completed] appears when writing to SD finished.

Read from SD: A beep is heard when loading from SD finished and the transceiver restarts with the settings read from the microSD memory card. (The operation in step 9 is not required.)

```
Write to SD      →📁

       OK?
     Cancel       📶📶
```
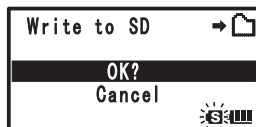
Blinks when writing

9 Press 📢 to exit from the Set mode.

Formatting a microSD memory card

Format a new microSD.

For more details, see "Formatting a microSD memory card" on page 24.

Setting the optional microphone with camera for use

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

Enter the Set mode:

1 Press and hold [DISP] for over 1 second.

2 Turn 🎚 to select [11 OPTION].

3 Press [ENT].

4 Turn 🎚 to select [1 USB CAMERA].

5 Press [ENT].

6 Turn 🎚 to select [SIZE].

7 Press [ENT].

8 Turn 🎚 to select an image size.

320×240

160×120

9 Press [ENT].

10 Turn 🎚 to select [QUALITY].

11 Press [ENT].

12 Turn 🎚 to select an image quality.

LOW: Low image quality

NORMAL: Intermediate image quality

HIGH: High image quality

13 Press 📢 to exit from the Set mode.

```
SET:11 OPTION
   12 CALLSIGN
    1 DISPLAY
    2 TX/RX
                📶📶
```

```
1 USB CAMERA


                📶📶
```

```
1 USB CAMERA
► SIZE   : 320*240
  QUALITY : LOW
                📶📶
```

```
1 USB CAMERA
  SIZE   : 320*240
► QUALITY : LOW
                📶📶
```
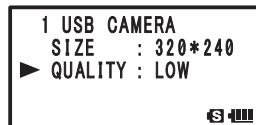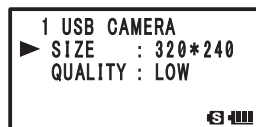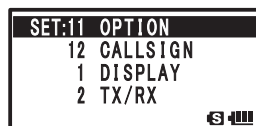
Caution

- 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 content of an image.
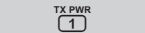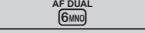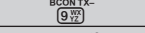
Registering CALLSIGN

The CALLSIGN used in the digital mode can be registered with up to 10 alphanumeric characters.

Enter the Set mode:

1 Press and hold $\overset{SET}{DISP}$ for over 1 second.

2 Turn $\overset{}{DIAL}$ to select [12 CALLSIGN].

3 Press $\boxed{ENT}$.

4 Enter the characters using keypad keys.

Enter a callsign using keypad keys with reference to the following table.

```
SET: 12 CALLSIGN
     1 DISPLAY
     2 TX/RX
     3 MEMORY
                  S
```

```
  Please enter
  Your Callsign
 (Max 10 letters)
 [ ▮          ]
                  S
```

Numeric key	A, 0 (Alphanumeric)
TX PWR **1**	1
SCAN **2ABC**	ABC2
P. RCVR **3DEF**	DEF3
HOME **4GHI**	GHI4
REV **5JKL**	JKL5
AF DUAL **6MNO**	MNO6
LOG **7PQRS**	PQRS7
8TUV	TUV8
BCON TX– **9WXYZ**	WXYZ9
S.LIST–APRS **0**	0
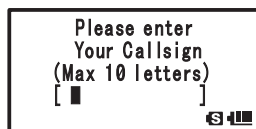
Tip •Pressing $\boxed{ENT}$ moves the cursor to the right.

•Press the $\overset{WIRES-X}{\boxed{\cdots}}$ to move the corsor back to the left.

•Press the $\overset{MW}{\boxed{\cdots}}$ to delete the letter or number at the current cursor position.

5 Press $\boxed{ENT}$.

The cursor moves.

6 Repeat steps 4 and 5 to enter the CALLSIGN.

7 Press $\overset{PTT}{\boxed{\cdots}}$ to save the CALLSIGN setting and exit the Set mode.

Functions Used As Needed

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Set Mode

Using the transceiver for packet communication

You can perform packet communication with your transceiver by connecting TNC (Terminal Node Controller) using an optional connection cable (CT-44).
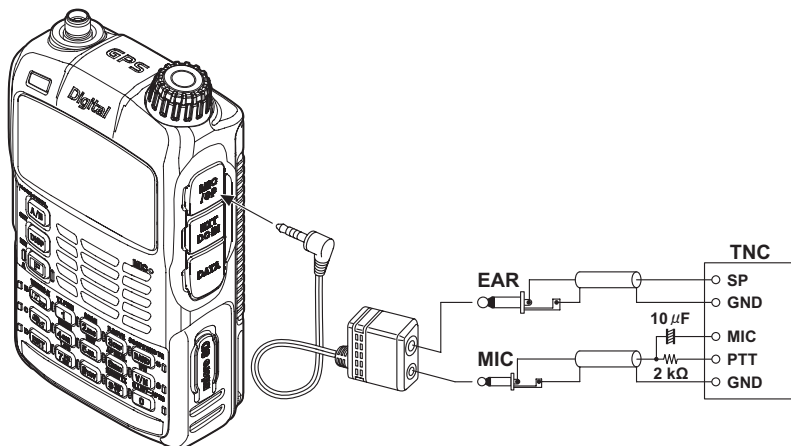
After TNC is connected, set the level of output to TNC by adjusting the sound volume level of your transceiver.

Also adjust the level of input to your transceiver using the output level adjustment volume on the TNC (Input level cannot be adjusted on your transceiver)

Caution

● When sending a vast volume of data, the transmission takes a longer time and the transceiver may be overheated.

If the transmission is continued for a long time, the overheat prevention circuit will operate and the transmission power decreases. If the transmission is continued further, the transmission will be automatically stopped to prevent the transceiver from overheating and consequently malfunctioning. The transceiver will return to the receive mode.

When the transceiver returns to the receive mode after the overheat prevention circuit has operated, turn the transceiver off, or keep it in the receive mode until the temperature cools.

Tips

• Set the Receive Battery Save function to OFF during packet communication by selecting [8 CONFIG] → [17 SAVE RX] in the Set mode.

• The reception can be interfered with a noise generated from PC.

If the transceiver can not receive normally, disconnect it from the PC and reconnect it to the PC using a photocoupler or noise filter.

• To connect the TNC and PC, refer to the TNC instruction manual.

Functions Used As Needed

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Clone Operation

Data and various settings saved in your transceiver can be copied to another FT1XDR/DE transceiver.
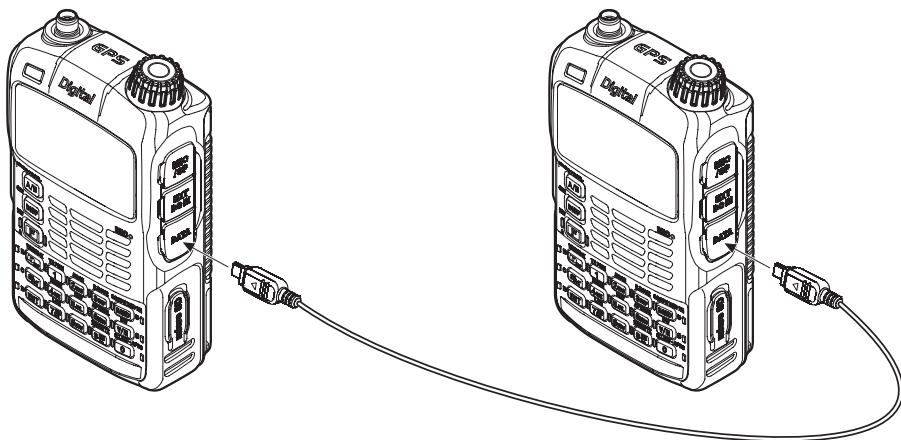
1 Turn off the power of both FT1XDR/DE transceivers and connect an optional clone cable (CT-168) to the DATA terminal of each transceiver.

2 Press ⏻ while pressing 🔳 on each transceiver.
The two transceivers are turned on and placed in the clone mode.

3 Press [WIRES-X] on the receiving side transceiver and [SCOPE BND DN / BAND] on the transmission side.

CLONE

Copying data starts.

When copying starts, the display on the receiving transceiver changes from [--WAIT--] to [--RX--]. When data transmission begins from the sending transceiver, the data transmission indicator appears on the LCD, indicating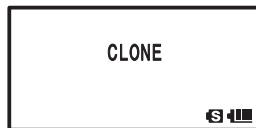 the data transfer is in progress. The indicator appears on the receiving transceiver, as well when data reception starts.
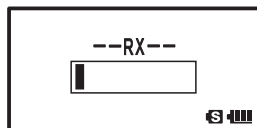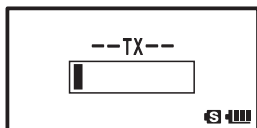
Tips When copying is completed, the reception side transceiver returns to the normal mode. The indication on the LCD of the transmission side transceiver returns from [--TX--] to [CLONE].

4 Turn off the power of both transceivers and disconnect the clone cable.

Caution
- When the [ERROR] appears on the LCD during data transfer, copying cannot be completed. Check the clone cable connection, and redo the clone operation from the beginning.
- Time data cannot be copied.

Functions Used As Needed

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Set Mode

Connecting an external device

Using the DATA terminal, the transceiver can support various functions by setting "GPS", the internal GPS unit begins outputting the position information data. The position information of the transceiver can be transferred at approximately 1 second intervals to the computer so that the position of the transceiver can be displayed in real-time on programs such as map software.

Tips
- For properties such as communication speed and Input/Output between COM ports.
- For more details, see the Set mode option, [9 APRS] → [17 COM PORT SETTING].

▌ Connecting to a PC

Connecting a PC to the data terminal of the FT1XDR/DE using the PC Connection Cable (SCU-19) accessory will enable data transmission or updating firmware as described below.

a. Transmit position location information received by the FT1XDR/DE internal GPS unit.

By setting [OUTPUT] in [17 COM PORT SETTING] of Set mode option [9 APRS] to details on settings, see Set mode option [17 COM PORT SETTING] in the APRS Instruction Manual.

- To show information, software operating with NMEA-0183 specified GGA and RMC sentence is required.

b. FT1XDR/DE Firmware Updates

When a new firmware update for the FT1XDR/DE is available, go to the YAESU homepage to download the programming data and update the FT1XDR/DE to its newest state.
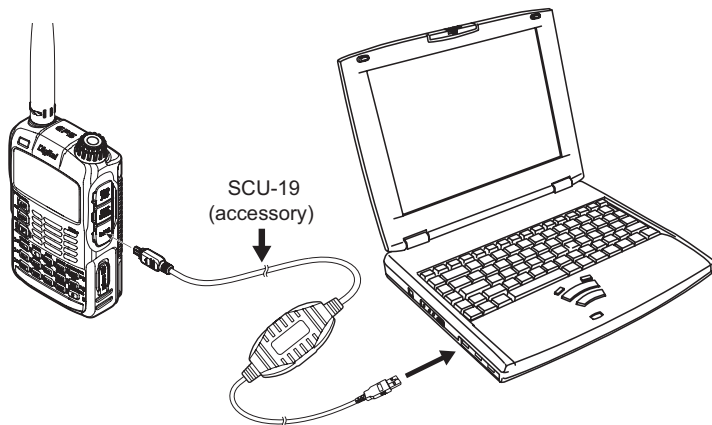

SCU-19
(accessory)

Tip
To use the SCU-19, install a dedicated driver to the PC. For downloading the dedicated driver and installation manual, please go to the YAESU website homepage (http://www.yaesu.com).

Functions Used As Needed

Connecting the FT1XDR/DE to external devices

Position information data can be exchanged between commercially sold GPS receivers or other external devices by using the optional Data Cable (CT-170) or the Data Cable 2.5Φ (CT-176).


CT-170 (option)
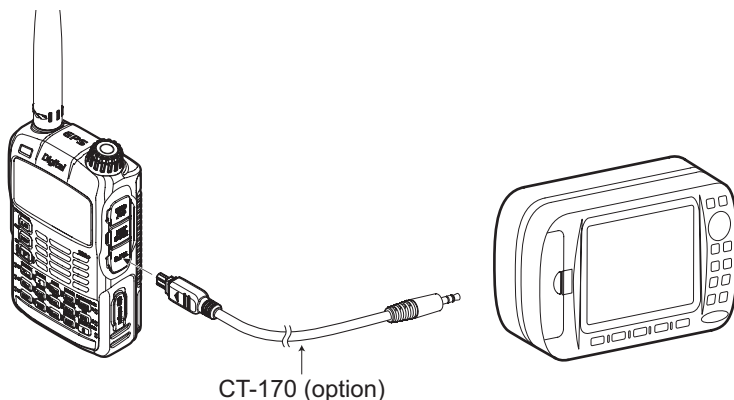
Tip

Connect the Data Cable (CT-170) and the Data Output Cable (CT-176) by referring to the instruction manual for the GPS device to be used, and cable specifications on the next page.

Data Cable (CT-170)

⑦ RXD (Serial data input [FT1XDR/DE ← External Equipment])
⑧ TXD (Serial data output [FT1XDR/DE → External Equipment])
⑪ GND

① RXD (Serial data input [FT1XDR/DE ← External Equipment])
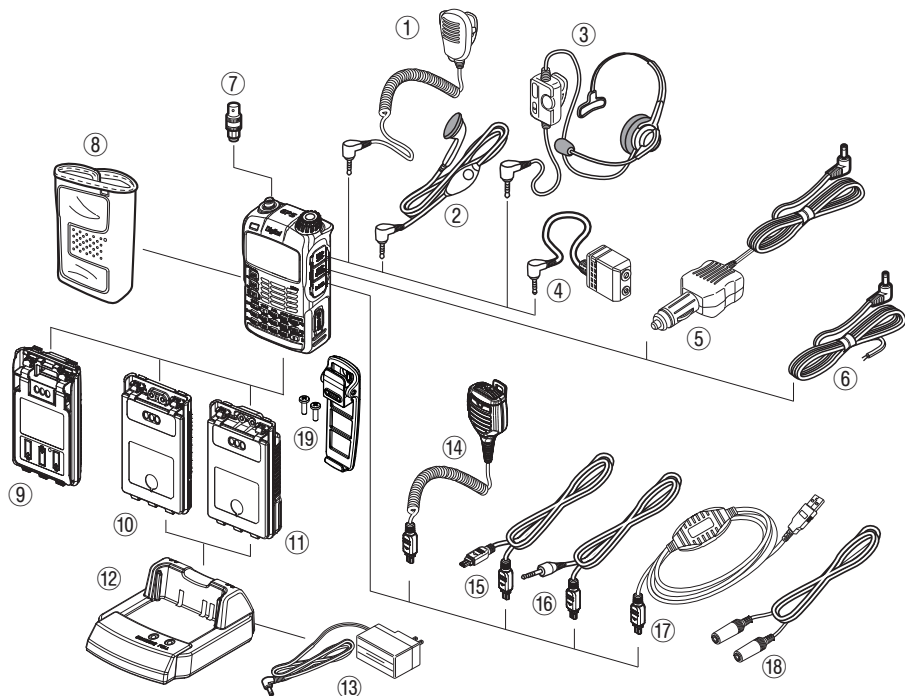② TXD (Serial data output [FT1XDR/DE → External Equipment])
③ GND

Data Cable (2.5Φ) (CT-176)
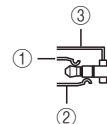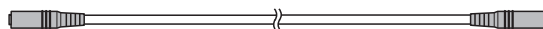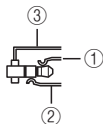
① RXD (Serial data input [FT1XDR/DE ← External Equipment])
② TXD (Serial data output [FT1XDR/DE → External Equipment])
③ GND

① TXD (Serial data output [FT1XDR/DE → External Equipment])
② RXD (Serial data input [FT1XDR/DE ← External Equipment])
③ GND

Functions Used As Needed

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Optional Parts

① Speaker / Microphone (MH-34B4B)
② Earpiece Microphone (MH-37A4B)
③ VOX Headset (SSM-63A)
④ Microphone Adapter (CT-44)
⑤ DC Cable w/ Noise Filter (SDD-13)
   (USA/EXP market only)
⑥ DC Cable (E-DC-6) (USA/EXP market only)
⑦ BNC-to-SMA Adapter (CN-3)
⑧ Soft Case (CSC-97)
⑨ 3x "AA" Cell Battery Case (FBA-39)
⑩ Lithium Ion Battery Packs (FNB-101LI, 7.4 V, 1100 mAh)
⑪ Lithium Ion Battery Packs
   (SBR-14LI, 7.2 V, 2200 mAh)
⑫ Rapid Charger (CD-41)
⑬ Battery Charger (PA-48B/C/U*)
   Battery Charger (SAD-11B; for USA market)
⑭ Speaker Microphone with Snapshot camera
   (MH-85A11U)
⑮ Clone Cable (CT-168)
⑯ Data Cable (CT-170)
⑰ PC Connection Cable (SCU-19)
⑱ Data Cable (2.5Φ) (CT-176)
⑲ Belt Clip (SBH-13)

* "B" suffix is for use with 120 VAC (Type-A plug), "C" suffix is for use with 230-240 VAC (Type-C plug), and "U" suffix is for use with 230 VAC (Type-BF plug).

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.

If you suspect malfunction Check the following items before requesting for repair.

The transceiver does not turn on.

- Is the battery is depleted?
- Charge the battery pack after purchase, and when the transceiver has not been used for a long time.
- Is the battery pack properly set?
  Refer to "Mounting the battery pack" and securely mount the battery pack.
- Is the external power supply properly connected?
  When using a external power supply, connect an external power supply adapter with a cigarette lighter plug (SDD-13) or an external power cable (E-DC-6) to this jack.
- Is the voltage of the battery pack or the SDD-13 correct?
  Be sure that there is a charge left in the battery pack (do not completely discharge). Check that the output voltage of the SDD-13 is approximately 12V.

There is no sound

- Is the level of squelch (or S meter squelch) set too high?
  Press the Monitor Switch and check that you can hear white noise.
  Adjust the level of squelch (or S meter squelch) when receiving a weak signal.
- Is the volume low?
  Turn $\text{\fbox{DIAL}}$ clockwise while pressing $\text{\fbox{VOL}}$ to increase the sound volume.
- Is the tone squelch or DCS on?
  When the tone squelch or DCS is on, the sound is not output until the transceiver receives a signal containing the same tone frequency or DCS code set.

There is no transmission of radio waves.

- Are you pressing the $\overset{\text{PTT}}{\circledast}$ switch properly?
- Is the PTT lock on?
- Is the Busy TX Block (BCLO function) on?
  When the Busy TX Block (BCLO Function) is on, transmission cannot be done when receiving a signal even if $\overset{\text{PTT}}{\circledast}$ is pressed. Wait until signal being received stops and then press $\overset{\text{PTT}}{\circledast}$.
- Is the transmission frequency on an ham radio band?
  Transmission cannot be performed on the AM Radio Broadcast Band/ Short Wave Radio Band/ FM Radio Broadcast Band/ Air Band/ Information Radio Band.
- Is the voltage of the battery pack or external power source correct?
  Check the remaining charge on the battery pack.
  In addition, using a power supply where voltage drops during transmission will prevent the FT1XDR/DE from operating on full capability.

The keys or $\text{\fbox{DIAL}}$ does not respond.

- Is the Key Lock or DIAL Lock on?

If you suspect malfunction

The battery pack cannot be charged or battery power depletes immediately after charging.

• Is the battery pack being charged with a charger specified by Yaesu?
Charge the battery pack using the accessory battery charger (PA-48B or SAD-11B) or the rapid charge cradle (CD-41).
When using a external power supply, use the external power supply adapter with a cigarette lighter plug (SDD-13) or an external power cable (E-DC-6).

• Is the battery pack in use exhausted?
If the "Charging Error" appears on the LCD when charging, there is a chance the battery pack is over discharged. If the error is repetitively displayed after charging the battery pack several times, the battery pack may have reached its service life or defective. Battery packs are consumables. Please replace the battery pack with a new one immediately. Battery packs can be charged and reused up to approximately 300 times.

Depending on the combination for simultaneous reception, there may be internal beats from high frequencies caused by the internal oscillator. This is not a malfunction. (See the calculation formula below: "n" is for the arbitrary integer). Depending on the combination for simultaneous reception, there may be fluctuations in reception sensitivity.

• Reception Frequency = 16 MHz $\times$ n multiplicative
• Reception Frequency = 15.6 MHz $\times$ n multiplicative
• Reception Frequency = 4.9152 MHz $\times$ n multiplicative
• Reception Frequency = 15.6 MHz $\times$ n multiplicative
• Reception Frequency = 18.432 MHz $\times$ n multiplicative
• Upper Side (A-Band) Frequency = (Lower Side (B-band) Frequency ± 46.35 MHz) $\times$ n multiplicative
• Upper Side (A-Band) Frequency = (Lower Side (B-band) Frequency ± 47.25 MHz) $\times$ n multiplicative @ Upper Side (A-band) Mode = NFM

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Appendix

*web: Please download the instruction manuals for GM function and APRS from our home page.

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Appendix

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Specifications

●General

Frequency Range

A (Main) Band RX:	0.5 ~ 1.8 MHz (AM Radio)
	1.8 ~ 30 MHz (SW Radio)
	30 ~ 76 MHz (50 MHz HAM: USA version)
	30 ~ 88 MHz (50 MHz HAM: EXP/EU version)
	76 ~ 108 MHz (FM Radio: USA version)
	88 ~ 108 MHz (FM Radio: EXP/EU version)
	108 ~ 137 MHz (Air Band)
	137 ~ 174 MHz (144 MHz HAM)
	174 ~ 222 MHz (VHF Band)
	222 ~ 420 MHz (GEN1)
	420 ~ 470 MHz (430 MHz HAM)
	470 ~ 774 MHz (UHF Band: USA version)
	470 ~ 800 MHz (UHF Band: EXP/EU version)
	803 ~ 999 MHz (GEN2, Cellular Blocked: USA version)
	800 ~ 999 MHz (GEN2: EXP/EU version)
B (Sub) Band RX:	108 ~ 137 MHz (Air Band)
	137 ~ 174 MHz (144 MHz HAM)
	174 ~ 222 MHz (VHF Band)
	222 ~ 420 MHz (GEN1)
	420 ~ 470 MHz (430 MHz HAM)
	470 ~ 580 MHz (UHF Band)
TX:	144 ~ 146 MHz or 144 ~ 148 MHz
	430 ~ 440 MHz or 430 ~ 450 MHz
Channel Steps:	5/6.25/8.33/9/10/12.5/15/20/25/50/100 kHz
Frequency Stability:	±2.5 ppm (–20 °C to +60 °C [–4 °F to +140 °F])
Emission Type:	F1D, F2D, F3E, F7W
Supply Voltage:	Nominal: 7.4 V DC (Negative Ground)
Operating:	4 – 14 V (Negative Ground, EXT DC JACK)
	11 – 16 V (Negative Ground, EXT DC JACK with SDD-13)
	7.4 V DC (Negative Ground)
Current Consumption:	150 mA (Mono band Receive)
	220 mA (Dual band Receive)
	100 mA (Mono band Receive, Standby)
	150 mA (Dual band Receive, Standby)
	45 mA (Mono band Receive, Standby, Saver On "Save Ratio 1:5")
	45 mA (Dual band Receive, Standby, Saver On "Save Ratio 1:5")
	+30 mA (GPS On)
	+65 mA (Digital)
	600 μA (Auto Power Off)
	1.7 A (5 W TX, 144 MHz 7.4 V DC)
	2.0 A (5 W TX, 430 MHz 7.4 V DC)
Operating Temperature:	–20 °C to +60 °C [–4 °F to +140 °F]
Case Size (W × H × D):	60 × 95 × 32.5 mm (2.4″ × 3.7″ × 1.28″) w/o knob & antenna
Weight (Approx.):	290 g (10.23 oz) with SBR-14LI & Antenna

Specifications

•Transmitter

RF Power Output:	5 W (@ 7.4 V or EXT DC)
Modulation Type:	F1D, F2D, F3E: Variable Reactance modulation
	F7W: 4 FSK (C4FM)
Spurious Emission:	At least 60 dB below (@TX Power Hi, L3, L2)
	At least 50 dB below (@TX Power L1)

•Receiver

Circuit Type:	AM, NFM: Double-Conversion Super heterodyne
	AM/FM Radio: Single-Conversion Super heterodyne
Intermediate Frequencies:	1st: 47.25MHz (AM, NFM A Band)
	1st: 46.35MHz (AM, NFM B Band)
	2nd: 450 kHz (AM, NFM)
	1st: 130 kHz (AM/FM Radio)
Sensitivity:	3 μV for 10 dB SN (0.5 ~ 30 MHz, AM)
	0.35 μV TYP for 12 dB SINAD (30 ~ 54 MHz, NFM)
	1 μV TYP for 12 dB SINAD (54 ~ 76 (88) MHz, NFM)
	1.5 μV TYP for 12 dB SINAD (76 (88) ~ 108 MHz, WFM)
	1.5 μV TYP for 10 dB SN (108 ~ 137 MHz, AM)
	0.2 μV for 12 dB SINAD (137 ~ 140 MHz, NFM)
	0.16 μV for 12 dB SINAD (140 ~ 150 MHz, NFM)
	0.2 μV for 12 dB SINAD (150 ~ 174 MHz, NFM)
	1 μV for 12 dB SINAD (174 ~ 222 MHz, NFM)
	0.5 μV for 12 dB SINAD (300 ~ 350 MHz, NFM)
	0.2 μV for 12 dB SINAD (350 ~ 400 MHz, NFM)
	0.16 μV for 12 dB SINAD (400 ~ 470 MHz, NFM)
	1.5 μV for 12 dB SINAD (470 ~ 540 MHz, NFM)
	3 μV TYP for 12 dB SINAD (540 ~ 800 MHz, NFM)
	1.5 μV TYP for 12 dB SINAD (800 ~ 999 MHz, NFM, Cellular Blocked)
	0.19 μV TYP for BER 1% (Digital Mode)
Selectivity:	NFM, AM 12 kHz / 35 kHz (–6 dB / –60 dB)
AF Output:	200 mW (8 Ω for 10 % THD 7.4 V)
	400 mW (8 Ω for 10 % THD 13.8 V)

Specifications are subject to change without notice, and are guaranteed within the 144/222 (USA version)/430 MHz amateur bands only.

Appendix

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1. Changes or modifications to this device not expressly approved by YAESU MUSEN could void the user's authorization to operate this device.
2. 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.
3. 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.

Part 15.21: Changes or modifications to this device not expressly approved by YAESU MUSEN could void the user's authorization to operate this device.

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.

Attention in case of use

This transceiver works on frequencies which are not generally permitted.

As for the actual usage, the user has to possess an amateur radio licence.

Usage is allowed only in the frequency bands which are allocated for amateur radios.

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

Disposal of your Electronic and Electric Equipment

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

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

In EU countries, please contact your local equipment supplier representative or service center for information about the waste collection system in your country.

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YAESU
The radio

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