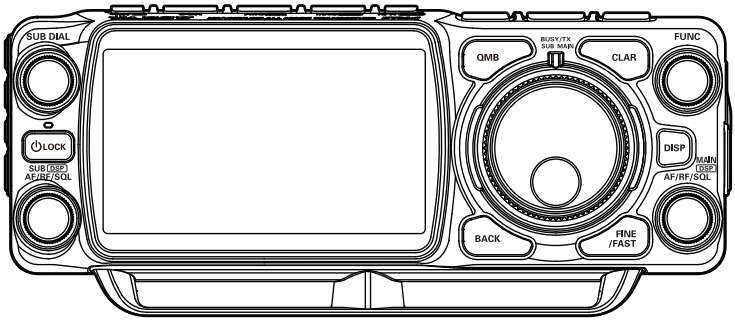
YAESU

Radio for Professionals

HF/50/144/430MHz ALL MODE TRANSCEIVER

FTX-1series

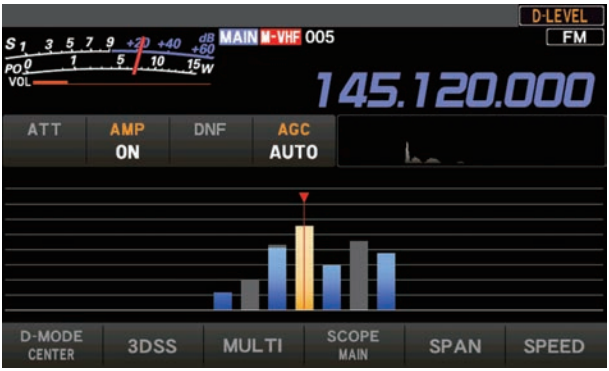
Advance Manual



Contents

Memory Channel Scope

The Memory Channel Scope presents a view of operating activity on channels above and below the current memory channel as the center.



1. Press the **SUB DIAL** knob to change MAIN-side.
2. Press the [**V/M** (MW)] key to enter the memory mode.
3. Long touch on the scope area.
   With the current memory channel in the center, the signal strengths of 43 channels bandwidth are shown on a graph.

   • When a signal on the scope screen is touched, the memory channel becomes the receive channel, and is set to the center memory channel of the scope.
   • The receive memory channel may also be changed by turning the **MAIN DIAL** knob.
4. To turn the Memory Channel Scope OFF, press the [**V/M** (MW)] key.

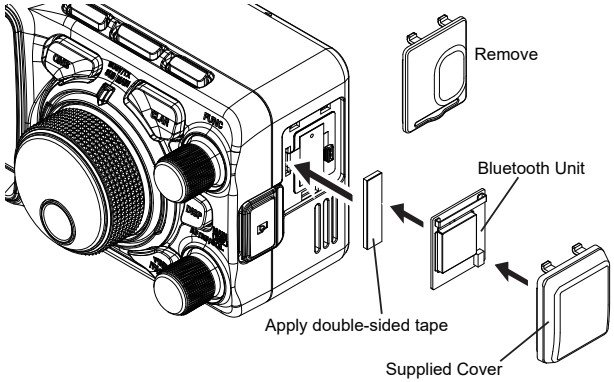
Bluetooth Operation

The FTX-1 can be equipped with the Bluetooth function by installing the optional Bluetooth unit “BU-6”. Hands-free operation is possible using the optional Bluetooth headset (SSM-BT20) or a commercially available Bluetooth headset.

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

Installing the Bluetooth unit “BU-5”

1. Turn the transceiver OFF.
2. Remove the Bluetooth unit cover from the transceiver.
3. Apply double-sided tape to Bluetooth unit.
   Double-sided tape is included with the BU-6.
4. Align the Bluetooth unit connector with the connector on the board and install.
5. Carefully attach the supplied cover.

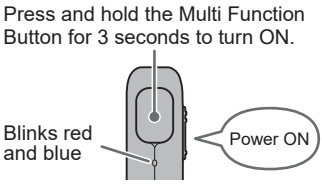


Pairing the Bluetooth Headset

When using the Bluetooth Headset for the first time, the Bluetooth Headset and the FTX-1 must be paired.
This step is only necessary when first connecting the headset.

1. To start the Bluetooth headset in pairing mode.

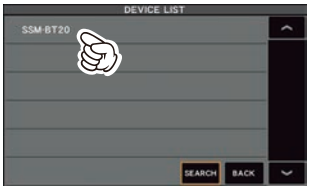
   SSM-BT20: Press and hold the Multi-function Button for 3 seconds, until the SSM-BT20 LED blinks red/blue alternately.



2. Press and hold the [**FUNC**] knob.
3. Select [OPERATION SETTING] → [OPTION].
4. Touch [DONE] on the [Bluetooth] item.
5. Touch [Bluetooth] set to “ON”.
6. Touch [DONE] on the [DEVECE LIST] item.
7. The DEVECE LIST screen will be displayed.
8. Touch [SEARCH].

The search starts, and the model name of the found Bluetooth device is displayed in the list.

9. When the headset to be connected is displayed, touch the Bluetooth head set to be connected.



While connected to a Bluetooth headset, the "ᛒ" icon lights up on the FTX-1 screen, and the received audio and operation beep will be heard from the Bluetooth headset.
• The LED of SSM-BT20 blinks blue. The pairing is completed.

Disable the Bluetooth Function

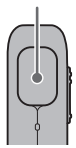
To cancel the Bluetooth operation, just repeat the above procedures, selecting "OFF" in step 5 above.

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

When the VOX function is OFF, pressing the "Call button"* on the Bluetooth headset once will engage the FTX-1 in transmit, and then a call can be made using the Bluetooth headset.
Press the "Call button"* again to return the FTX-1 to receive.
*The button name may differ depending on your Bluetooth headset.

1. To start the Bluetooth headset in pairing mode.

SSM-BT20: When the Multi-function Key is pressed, a beep will sound and the FTX-1 will continuously transmit.
Press the Multi-function Key again, a beep will sound and the FTX-1 will return to receive mode.



Hands-free VOX operation with a Bluetooth headset

When FTX-1 VOX (automatic voice transmission) function is turned ON, the Bluetooth headset can perform hands-free operation and transmit automatically just by talking. Turn the VOX function ON according to "VOX Operation" (see page 25).

Bluetooth received audio output

When a Bluetooth headset is connected, the received audio can automatically be output from the headset only, or from both the headset and the transceiver speaker.

1. Press and hold the [**FUNC**] knob.
2. Select [OPERATION SETTING] → [OPTION].
3. Touch [DONE] on the [Bluetooth] item.
4. Select [AUDIO].
5. Rotate the [**FUNC**] knob, or touch "<" or ">" on either side of the value to select "FIX" or "AUTO".

   AUTO: The received audio comes from only the Bluetooth headset.
   FIX: The received audio comes from both the Bluetooth headset and the speaker of this transceiver.

   Factory default value: "FIX".
6. Press the [**FUNC**] knob, or wait for about 3 seconds to save the setting.
7. Press the [**BACK**] key several times to return to normal operation.

Parametric Microphone Equalizer

The FTX-1 includes a unique Three-Band Parametric Microphone Equalizer that provides precise, in- dependent control over the low, mid and treble ranges in the voice waveform. One group of settings may be utilized when the Speech Processor is Off, and an alternate group of settings when the Speech Processor is On (SSB mode only).

Parametric microphone equalizer function is activated only in LSB, USB, AM, AM-N, FM and FM-N modes.

Setup the Parametric Microphone Equalizer

1. Set the RF output power to minimum value.

   We recommend connecting a dummy load to one of the Antenna jacks, and monitoring the signal on a separate receiver, to prevent interference to other users.

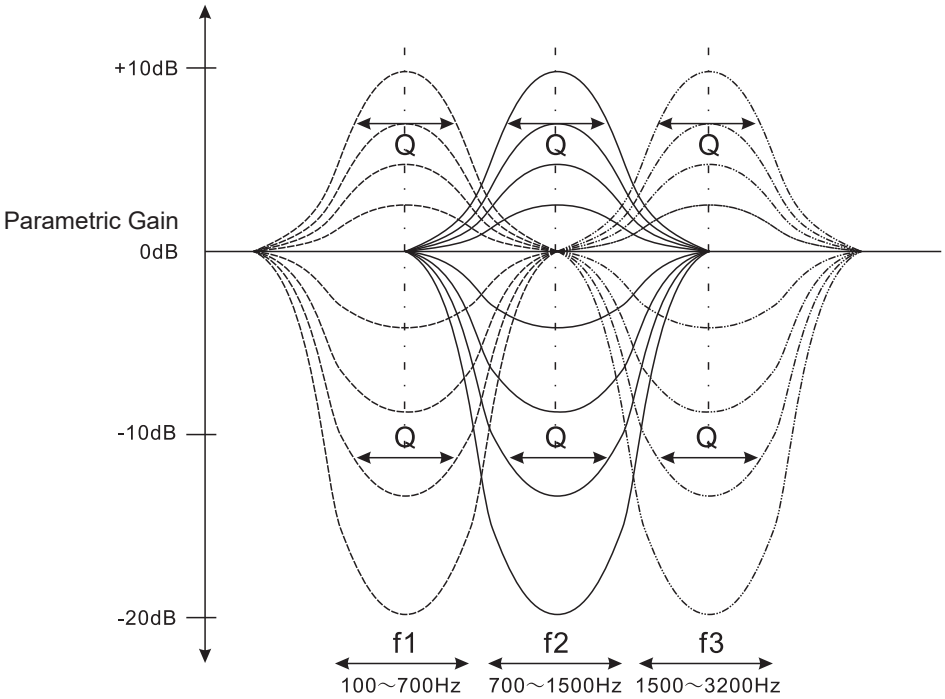
2. Press and hold the [**FUNC**] knob.
3. Touch [MIC EQ].
   Parametric Microphone Equalizer function is activated.
   • To adjust the Parametric Microphone Equalizer with the Speech Processor engaged, activated the Speech Processor.
4. Touch [MONI LEVEL].

5. Rotate the [**FUNC**] knob to adjust the Monitor level.
6. Select [OPERATION SETTING] → [TX AUDIO].
7. Rotate the [**FUNC**] knob to find Menu items [PRMTRC EQ1 FREQ] through [PRMTRC EQ3 BWTH]; these parameters apply to the adjustment of the Parametric Microphone Equalizer when the Speech Processor is disabled.
   Menu items [P PRMTRC EQ1 FREQ] through [P PRMTRC EQ3 BWTH] apply to the adjustment of the Parametric Microphone Equalizer when the Speech Processor is engaged.
8. Rotate the [**FUNC**] knob, or touch “<” or “>” on either side of the value to adjust a particular Menu item.
9. Press and hold the PTT switch, and speak into the microphone while listening to the ef fect of the adjustments being made. Because the overall sound will change with each adjustment, make several passes through each adjustment area, to be sure that the optimum settings are achieved.
   • The best way to hear the effects of the adjustments is to wear headphones (connected to the monitor receiver) while listening to the transmitted signal.
10. When all adjustments are satisfactory, press the [**FUNC**] knob, or wait for about 3 seconds to save the setting.
11. Press the [BACK] key several times to return to normal operation.

Activate the Parametric Microphone Equalizer

1. Adjust the MIC gain.
2. Press and hold the [**FUNC**] knob.
3. Touch [MIC EQ].
   Parametric Microphone Equalizer function is activated.
4. Press the PTT switch on the microphone, and speak into the microphone in a normal voice level.

To cancel the Parametric Microphone Equalizer function, repeat steps 2 and 3 above, and choose “OFF” in step 3.



3-Stage Parametric Equalizer Adjustments (Speech Processor: “OFF”)

Center Frequency	PRMTRC EQ1 FREQ	(Low) OFF / “100” (Hz) - “700” (Hz)	OFF
	PRMTRC EQ2 FREQ	(Mid) OFF / “700” (Hz) - “1500” (Hz)	
	PRMTRC EQ3 FREQ	(High) OFF / “1500” (Hz) - “3200” (Hz)	
Parametric Gain	PRMTRC EQ1 LEVEL	(Low) “-20” (dB) - “+10” (dB)	+5
	PRMTRC EQ2 LEVEL	(Mid) “-20” (dB) - “+10” (dB)	
	PRMTRC EQ3 LEVEL	(High) “-20” (dB) - “+10” (dB)	
Q (Bandwidth)	PRMTRC EQ1 BWTH	(Low) “0” - “10”	10
	PRMTRC EQ2 BWTH	(Mid) “0” - “10”	
	PRMTRC EQ3 BWTH	(High) “0” - “10”	

3-Stage Parametric Equalizer Adjustments (Speech Processor: “ON”)

Center Frequency	P PRMTRC EQ1 FREQ	(Low) OFF / “100” (Hz) - “700” (Hz)	OFF
	P PRMTRC EQ2 FREQ	(Mid) OFF / “700” (Hz) - “1500” (Hz)	
	P PRMTRC EQ3 FREQ	(High) OFF / “1500” (Hz) - “3200” (Hz)	
Parametric Gain	P PRMTRC EQ1 LEVEL	(Low) “-20” (dB) - “+10” (dB)	0
	P PRMTRC EQ2 LEVEL	(Mid) “-20” (dB) - “+10” (dB)	
	P PRMTRC EQ3 LEVEL	(High) “-20” (dB) - “+10” (dB)	
Q (Bandwidth)	P PRMTRC EQ1 BWTH	(Low) “0” - “10”	2
	P PRMTRC EQ2 BWTH	(Mid) “0” - “10”	1
	P PRMTRC EQ3 BWTH	(High) “0” - “10”	

Center Frequency: The center frequency of each of the three bands may be adjusted.
Gain: The amount of enhancement (or suppression) within each band may be adjusted.
Q: The bandwidth over which the equalization is applied may be adjusted.

Adjustable Receiver Audio Filter

The FTX-1 incorporates an adjustable receiver audio filter, that affords precision control of the lower and upper audio ranges independently.

1. Press and hold the [**FUNC**] knob.
2. Select [CW SETTING] for CW mode and [RADIO SETTING] for other modes.
3. Select the Mode and Menu Item you want to set (see table below).
4. Rotate the [**FUNC**] knob, or touch "<" or ">" on either side of the value to adjust the receiver audio response as desired.
5. Press the [**FUNC**] knob, or wait for about 3 seconds to save the setting.
6. Press the [BACK] key several times to return to normal operation.

Menu Item			Available Values	Default
RADIO SETTING	MODE SSB	LCUT FREQ	OFF/100Hz - 1000Hz (50Hz step)	100Hz
		LCUT SLOPE	6dB/oct / 18dB/oct	6dB/oct
		HCUT FREQ	700Hz - 4000Hz (50Hz step)/OFF	3000Hz
		HCUT SLOPE	6dB/oct / 18dB/oct	6dB/oct
	MODE AM	LCUT FREQ	OFF/100Hz - 1000Hz (50Hz step)	OFF
		LCUT SLOPE	6dB/oct / 18dB/oct	6dB/oct
		HCUT FREQ	700Hz - 4000Hz (50Hz step)/OFF	OFF
		HCUT SLOPE	6dB/oct / 18dB/oct	6dB/oct
	MODE FM	LCUT FREQ	OFF/100Hz - 1000Hz (50Hz step)	300Hz
		LCUT SLOPE	6dB/oct / 18dB/oct	18dB/oct
		HCUT FREQ	700Hz - 4000Hz (50Hz step)/OFF	3000Hz
		HCUT SLOPE	6dB/oct / 18dB/oct	18dB/oct
	MODE DATA	LCUT FREQ	OFF/100Hz - 1000Hz (50Hz step)	100Hz
		LCUT SLOPE	6dB/oct / 18dB/oct	18dB/oct
		HCUT FREQ	700Hz - 4000Hz (50Hz step)/OFF	3200Hz
		HCUT SLOPE	6dB/oct / 18dB/oct	18dB/oct
	MODE RTTY	LCUT FREQ	OFF/100Hz - 1000Hz (50Hz step)	300Hz
		LCUT SLOPE	6dB/oct / 18dB/oct	18dB/oct
		HCUT FREQ	700Hz - 4000Hz (50Hz step)/OFF	3000Hz
		HCUT SLOPE	6dB/oct / 18dB/oct	18dB/oct
CW SETTING	MODE CW	LCUT FREQ	OFF/100Hz - 1000Hz (50Hz step)	250Hz
		LCUT SLOPE	6dB/oct / 18dB/oct	18dB/oct
		HCUT FREQ	700Hz - 4000Hz (50Hz step)/OFF	1200Hz
		HCUT SLOPE	6dB/oct / 18dB/oct	18dB/oct

Change the sound quality of the received audio

You can change each of the high, mid, and low frequencies of the received audio to your liking. It can be set for each mode.

1. Press and hold the [**FUNC**] knob.
2. Select [CW SETTING] for CW mode and [RADIO SETTING] for other modes.
3. Select the Mode and Menu Item you want to set (see table below).
4. Rotate the [**FUNC**] knob, or touch "<" or ">" on either side of the value to adjust the receiver audio response as desired.
5. Press the [**FUNC**] knob, or wait for about 3 seconds to save the setting.
6. Press the [BACK] key several times to return to normal operation.

Menu Item			Available Values	Default
RADIO SETTING	MODE SSB MODE AM MODE FM MODE DATA MODE RTTY	High audio ranges setting → **AF TREBLE GAIN**	-20 - 10	0
		Middle audio ranges setting → **AF MIDDLE TONE GAIN**		
		Low audio ranges setting → **AF BASS GAIN**		
CW SETTING	MODE CW	High audio ranges setting → **AF TREBLE GAIN**		
		Middle audio ranges setting → **AF MIDDLE TONE GAIN**		
		Low audio ranges setting → **AF BASS GAIN**		

Digital Group ID (DG-ID) feature

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

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

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

When accessing a C4FM digital repeater controlled by a DG-ID number, set the transmit DG-ID number of the FTX-1 to that of the repeater input. Even in that case, if the receive DG-ID number of the FTX-1 is set to “00”, all the downlink signals from the repeater may be received.

Communicating with the DG-ID feature

Digital C4FM mode transceivers compatible with the DG-ID function are required in order to utilize this function.

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

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

1. Press and hold the [**FUNC**] knob.
2. Touch [DG-ID TX], and then rotate the [**FUNC**] knob to set transmit DG-ID (DG-ID TX) number to “50”.

3. Touch [DG-ID RX], and then rotate the [**FUNC**] knob to set receive DG-ID (DG-ID RX) number to “50”.

4. Press the [**FUNC**] knob, or wait for about 3 seconds to save the setting.
5. Press the [BACK] key several times to return to normal operation.

Tuning to the same frequency and setting the same DG-ID for all the group members will enable communication between the members and exclude other signals.

Digital Personal ID (DP-ID) feature

About the Digital Personal ID (DP-ID) feature

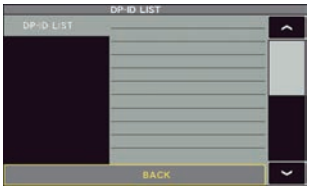
When operating in digital C4FM communications, each transceiver is programmed with, and sends its own individual ID information (Radio ID) in each transmission. The DP-ID function and the individual identification information, makes possible group communications between stations that are within communications range. The Digital Personal ID (DP-ID) feature opens the speaker audio only when a signal set to the same DP-ID in the Digital Mode is received, even if each transceiver is set to a different Digital Group ID (DG-ID) number.

To utilize this function, Digital C4FM mode transceivers compatible with the DG-ID function are required.

Registering the DP-ID of other stations

- Once registered, the DP-ID is stored until deleted.
- Register each other's DP-ID with nearby transceivers.
- When setting the DG-ID code to “00”, the transceiver will receive signals from all digital C4FM stations. To utilize the DP-ID function, it is necessary to set the receive DG-ID code to a number other than “00”.

1. Press and hold the [**FUNC**] knob → [**RADIO SETTING**] → [**DIGITAL**] → [**DP-ID LIST**] → Touch [**DONE**].
   - The DP-ID list is displayed.
   - If several DP-IDs are displayed, rotate the [**FUNC**] knob to register the desired DP-ID.



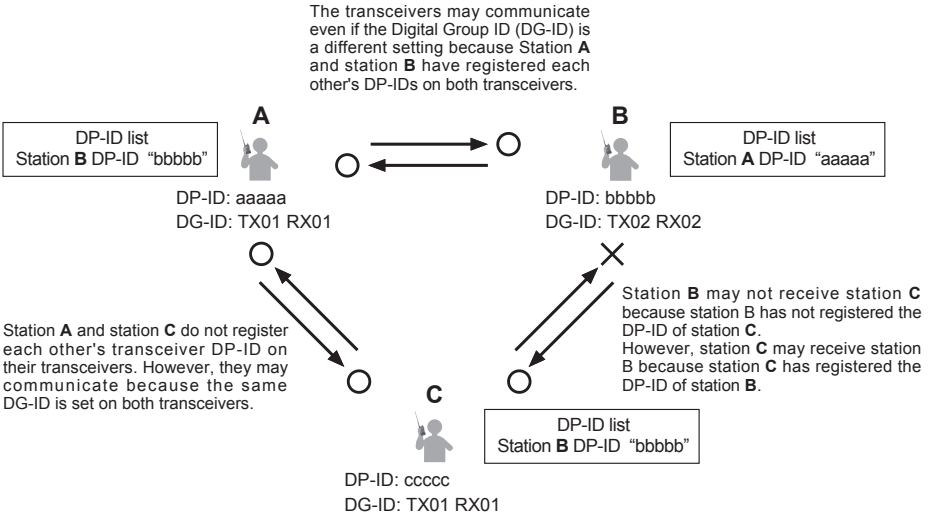
2. A transmission in the digital C4FM mode from another transceiver will register the DP-ID.
   When a signal from the other station is received, the call sign and “REGISTRATION?” are displayed on the LCD.

- When a signal from another registered transceiver is received, nothing is displayed on the LCD.
- When a transceiver is previously registered with a different call sign, the DP-ID listing is changed to the newly registered call sign.

3. Touch [**OK**] or press the [**FUNC**] knob to save the setting.
4. Touch display.
   - When registering the DP-ID is complete, the display returns to the DP-ID list screen.
   - If not registering a DP-ID, rotate the [**FUNC**] knob to select [**CANCEL**] then press the [**FUNC**] knob.
   - If registering several DP-IDs, repeat step 2 and 3.

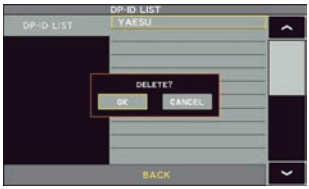
5. Press the [**BACK**] several times to return to normal operation.
   • All the other communicating stations should similarly register the DP-IDs to the DP-ID lists of their transceivers.
   • The DP-ID setting is complete.

To communicate using the DP-ID function, register the DP-ID of each other's transceiver on both transceivers. By registering the DP-ID, users may communicate even if the Digital group ID (DG-ID) is a different setting.



Deleting a registered DP-ID

1. Press and hold the [**FUNC**] knob → [**RADIO SETTING**] → [**DIGITAL**] → [**DP-ID LIST**] → Touch [**DONE**].
   The DP-ID list is displayed.
2. Touch or rotate the [**FUNC**] knob to select the call sign of the other transceiver, then press the [**FUNC**] knob.
   Confirmation screen "**DELETE**?" is displayed.



3. Touch [**OK**] or press the [**FUNC**] knob to delete.
   • If not deleting in the DP-ID list, select [**CANCEL**] then press the [**FUNC**] knob.
   • If deleting several DP-IDs, press the [**FUNC**] knob, then repeat step 2 and 3.
4. Press the [**BACK**] several times to return to normal operation.

Communicating with specified stations in the Analog FM mode

Selecting the squelch type in the analog FM mode

1. Press and hold the [**FUNC**] knob.
2. Touch or rotate the [**FUNC**] knob to select [**SQL TYPE**].
3. Rotate the [**FUNC**] knob to select the type of squelch, refer to the table below.
4. Press the [**BACK**] key several times to return to normal operation.

Tone squelch (CTCSS) and DCS functions do not operate in the C4FM digital mode.

Squelch type	Description
OFF	Deactivates the CTCSS and DCS functions. Returns to the normal squelch operation in the Analog FM mode.
ENC (TONE ENC)	Activates the CTCSS tone for Analog FM Transmissions. Receives with normal squelch operation.
TSQ (TONE SQL)	Activates the CTCSS tone squelch function on Analog FM receive.
DCS	Activates the Digital Code Squelch (DCS) function. The DCS code may be selected from 104 codes (from 023 to 754).
PR FREQ	Activates the no-communication squelch function for radios. The no-communication signal tone frequencies may be specified within the range of 300 Hz to 3000 Hz in steps of 100 Hz.
REV TONE	Activates the reverse tone function. Used to monitor communications based on the squelch control system. When a signal contains the designated tone, the squelch is not opened, and when the tone signal disappears, the squelch opens, and communication starts.

- The squelch type may be set for each frequency band (BAND).
- The CTCSS and DCS squelch settings are also active during scanning. If scanning is performed with the CTCSS and DCS squelch function activated, scanning stops only when a signal containing the specified CTCSS tone or DCS code is received.

Tone squelch feature

The tone squelch opens the speaker audio only when a signal containing the specified CTCSS tone is received. The receiver will be quiet while waiting for a call from a specific station.

The Tone squelch feature only works in Analog FM mode or AMS function.

Setting CTCSS Tone frequency

The tone may be selected from 50 frequencies (67.0 Hz to 254.1 Hz).

1. Press and hold the [**FUNC**] knob.
2. Touch [**SQL TYPE**].
3. Rotate the [**FUNC**] knob to select [**TSQ**].
4. Touch [**TONE FREQ**].
5. Rotate the [**FUNC**] knob to select the tone frequency.
6. Press the [**BACK**] key several times to return to normal operation.

- The tone frequency setting is common with the squelch types as follows: “ENC (TONE ENC)”, “TSQ (TONE SQL)”, “REV TONE (REVERSE TONE)”
- The default setting is “100.0 Hz”

Digital Code Squelch (DCS) feature

The Digital Code Squelch opens the speaker audio only when a signal containing the specified DCS code is received.

The DCS feature only works in Analog FM mode or AMS function.

Setting the DCS CODE

The DCS code may be selected from 104 types (from 023 to 754).

1. Press and hold the [**FUNC**] knob.
2. Touch [**DCS**].
3. Rotate the [**FUNC**] knob to select the DCS code.
4. Press the [**BACK**] key several times to return to normal operation.

- The DCS code set in the above operation is common for all transmissions with a DCS Code (“DCS”, “D-ENC (DCS ENC)”, “T-DCS (TONE DCS)”, “D-TSQ (DCS TSQL)”).
- The default DCS code is “023”.

Convenient memory function

Split Memory

Separate frequencies for transmit and receive can be registered for each memory channel.

1. Set the receive frequency, mode, and status, as desired.
2. Press and hold the [**V/M** (MW)] key.
   The memory channel list will be displayed.
3. From the channel list, touch and select the desired memory channel Alternately, the memory channel may be selected by rotating the [**FUNC**] knob.
4. Press and hold the [**V/M** (MW)] key to store the receive frequency and other data into the selected memory channel.
5. Touch [SPLIT MEMORY], to display the frequency input screen.

6. Enter the transmit frequency using the numeric keys.
7. Touch [ENT] to store the transmit frequency.

When a split-frequency memory channel is recalled, "[+]" is displayed on the LCD.

Programmable Memory Channel Scan (PMS)

Registering to the Programmable Memory Channels

50 sets of PMS memory channels (P-01L/P-01U to P-50L/P-50U) are available.

- Register the lower and upper frequencies of the frequency range in a pair of Programmable Memory Channels.

  P-nnL: Lower limit memory channel
  P-nnU: Upper limit memory channel
- PMS memory channels appear after the “last” memory channel (“M-999”).
- For more details on registering frequencies to the memory channels, see “Memory Storage” in the Operating Manual.

- Make sure to use the corresponding numbers for the lower and upper limit memory channels.
- Set the Programmable Memory scanning (PMS) lower and upper limits as follows:
  - The lower and upper limit memory channels must be within the same frequency band.
  - The lower and upper limit memory channels must not be registered in reverse.

Performing Programmable Memory Channel Scan

The programmable memory channel scan allows scanning a specified frequency range within the same frequency band.

1. Press the [**V/M** (MW)] key to enter the memory mode.
2. Recall the PMS memory channel to which the lower limit (P-nnL) or upper limit (P-nnU) of the frequency band is registered.
3. Press and hold the [**M►V** (MT)] key.
4. Press and hold the [**UP**] or [**DWN**] switch of the microphone.
   - Programmable memory channel scanning starts.
   - If the **MAIN DIAL**/**SUB DIAL** knob is rotated while scanning is in progress, the scanning will continue up or down in frequency according to the direction of the **MAIN DIAL**/**SUB DIAL** knob rotation.
5. Press the **PTT** switch, to cancel the scanning.
   In this state (displayed as “**PMS**” at the upper of the display), the frequency can be changed only in the range stored by the lower an-d upper PMS memories, by rotating the **MAIN DIAL**/**SUB DIAL** knob.

● **Disable the PMS function**

1. Press the [**V/M** (MW)] key.
   Returns to the normal memory mode.

Receiving Weather Broadcast Channels

This transceiver includes the preprogrammed VHF Weather Broadcast Station Memory Channel Bank, and can receive the broadcast by recalling a desired channel.
The following channels are stored in the transceiver weather station memory bank:

Channel No.	Frequency
WX-01	162.550MHz
WX-02	162.400MHz
WX-03	162.475MHz
WX-04	162.425MHz
WX-05	162.450MHz

Channel No.	Frequency
WX-06	162.500MHz
WX-07	162.525MHz
WX-08	161.650MHz
WX-09	161.775MHz
WX-10	163.275MHz

Recalling the weather channels

Rotate the MAIN DIAL/SUB DIAL knob to select an weather channel

1. Press the [**V/M** (MW)] key.
2. Rotate the **MAIN DIAL**/**SUB DIAL** knob, to select the desired weather channel.

Touch the display to select an weather channel

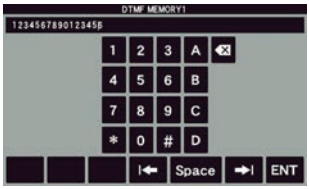
1. Press and hold the [**V/M** (MW)] key.
   The memory channel list will be displayed.
2. From the channel list, touch and select the desired weather channel.
   Alternately, the memory channel may be selected by rotating the [**FUNC**] knob.
3. Press the [**FUNC**] knob.

DTMF Operation

DTMF (Dual Tone Multi Frequencies) are the tone signals sent to make telephone calls, or control repeaters and network links. Up to 9 registers of 16-digit DTMF tone codes can be stored as telephone numbers to make calls through the public telephone network using a phone patch or to connect through the WIRES-X analog node station.

Registering the DTMF memory

1. Press and hold the [**FUNC**] knob.
2. Select [RADIO SETTING] → [MODE FM].
3. Rotate the [**FUNC**] knob to select the desired channel (DTMF MEMORY1 to 9) to register the DTMF code, then press the [**FUNC**] knob.
   The DTMF memory channel input screen is displayed.
4. Touch the numeric keypad of the screen to input the DTMF code up to a maximum of 16 digits.



5. Touch [**ENT**] to save the DTMF code.
6. Press the [**BACK**] key several times to return to normal operation.

Transmitting DTMF code automatically using DTMF memory

1. Press and hold the [**FUNC**] knob.
2. Touch [DTMF] or rotate the [**FUNC**] knob to select [DTMF] and then press the [**FUNC**] knob.
   The DTMF CODE screen is displayed.
3. Touch or rotate the [**FUNC**] knob to select the desired DTMF memory (1 to 9).
   - The DTMF code registered in the DTMF memory channel is automatically transmitted.
   - The transmission continues until the DTMF code is completed. The transceiver is automatically returned to receive mode.
4. Press the [**BACK**] key several times to return to normal operation.

Manually Transmitting the DTMF Code

1. Press and hold the [**FUNC**] knob.
2. Touch [DTMF] or rotate the [**FUNC**] knob to select [DTMF] and then press the [**FUNC**] knob.
   The DTMF CODE screen is displayed.
3. While pressing and holding the **PTT** switch, use the numeric keypad of the display and touch each digit of the DTMF code in sequence to transmit the code.

Using the GPS function

Requires optional “FGPS-5” GPS antenna unit to use the GPS function.

The GPS information can be used as described in the following examples:

The location can be set to frequently contacted stations. Then display the position, and distance, and other information for each members call sign on the screen.

→ Refer to the separate “Operating Manual GM Edition”

Exchange position information and messages through data communications with other stations.

→ Refer to the separate “Operating Manual APRS Edition”

Positioning Using GPS

The GPS receiver function is enabled (requires optional “FGPS-5”) when the power of the **FTX-1** is turned ON. The satellite search will begin and the “ ” icon will be shown at the top of the display. The **FTX-1** automatically obtains the internal clock setting, and the location information setting from the GPS data.

- It may take several minutes to acquire the GPS satellites.
- When three or more satellites cannot be acquired, the “ ” icon will disappear. In this case, positioning is not possible, and the position information cannot be used.

About Positioning by GPS

“Positioning” refers to calculation of the current position from the satellite orbit information and radio propagation time. At least 3 satellites must be acquired for successful positioning. If positioning fails, move away from buildings as far as possible away buildings and position the GPS receiver in an area with open sky.

● **About errors**

The measurement environment may result in positioning errors of several hundred meters. Under favorable conditions, positioning can be performed successfully using only three satellites. However, under the following poor conditions, the positioning accuracy can decrease, or positioning can fail:

- Between tall buildings
- Narrow paths between buildings
- Indoors or near large buildings
- Between trees such as in forests or woods
- Under elevated roads or high voltage power lines
- Inside a tunnel or underground
- Through heat reflective glass
- Areas with strong magnetic fields

● **When not in use for a long time**

When using the GPS functions for the first time after purchase, or when it has been unused in a while, a few minutes may be required to acquire the satellites. Also, if the GPS function has been turned OFF for several hours, a few minutes may be required to search for satellites.

Functions used as needed

VOX Operation

The VOX (Voice Operated Transmit) system may be used for hands-free activation of the transmitter, by the voice input to the microphone or Bluetooth Head-set.

Setting VOX Function

1. Press and hold the [**FUNC**] knob.
2. Select [OPERATION SETTING] → [TX GNRL].
3. Rotate the [**FUNC**] knob to select [VOX SELECT].
4. Rotate the [**FUNC**] knob, or touch "<" or ">" on either side of the value to select "MIC" or "Bluetooth".
   MIC: The sound is automatically transmitted by voice from the connected microphone.
   Bluetooth: The sound is automatically transmitted by voice from the connected Bluetooth headset.
5. Press the [**FUNC**] knob, or wait for about 3 seconds to save the setting.
6. Press the [**BACK**] key several times to return to normal operation.
7. Press and hold the [**FUNC**] knob.
8. Touch [VOX].
9. While the VOX function is activated, the "**VOX**" will be displayed.
   When VOX function is activated, the sound is automatically transmitted by voice from the connected Microphone or Bluetooth headset.

Disable the VOX Function

To cancel VOX and return to PTT operation, repeat steps 7 and 8 above.

Set the VOX Gain

The VOX Gain may be adjusted to prevent accidental transmitter activation in a noisy environment.

1. Press and hold the [**FUNC**] knob.
2. Touch [VOX GAIN].
3. While speaking into the microphone or Bluetooth head-set, rotate the [**FUNC**] knob, or touch "<" or ">" on either side of the value to the point where the transmitter is quickly activated by your voice, without background noise causing the transmitter to activate.
4. Press the [**FUNC**] knob, or wait for about 3 seconds to save the setting.
5. Press the [**BACK**] key several times to return to normal operation.

Set the VOX (Voice Operated Transmit) delay time

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

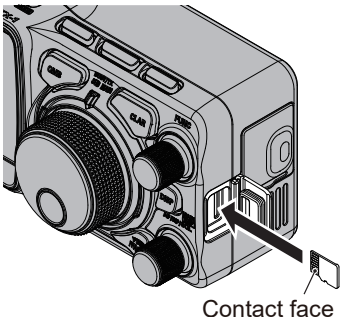
1. Press and hold the [**FUNC**] knob.
2. Touch [VOX DELAY].
3. Rotate the [**FUNC**] knob to select the delay time (the transmit-receive delay after the cessation of speech).
   30ms / 50ms / 100ms to 3000ms
   Factory default value: "500ms".
4. Press the [**FUNC**] knob, or wait for about 3 seconds to save the setting.
5. Press the [**BACK**] key several times to return to normal operation.

Screen capture

The display on the TFT screen may be saved on the microSD card.

When performing screen capture, a commercially available microSD card is necessary.

1. Turn OFF the transceiver.
2. Insert the microSD card into the SD card slot, with the contact face on the front, until a click sound is heard.



3. Display the screen that is to be saved.
4. Hold down the [S-DX] key until “SCREEN SHOT” appears on the screen.
   Screen data is saved to the microSD card.

Data saved on the microSD card can be displayed on a personal computer or similar viewer.

Data form	bmp (Bitmap format)
Image size	800×480
File Name	yyyymmdd_hhmmss.bmp The captured date and time will be the file name. y (year), m (month), d (day), h (hour), m (minute), s (second)
Data storage location	“Capture” folder Folder structure in microSD card FTX-1 ├ Capture ├ MemList ├ Menu ├ PlayList └ QSOLog

Display the SD Card Information

The memory free space of the microSD card may be checked:

1. Press and hold the [**FUNC**] knob.
2. Select [EXTENSION SETTING] → [SD CARD].
3. Touch “DONE” of the [INFORMATIONS] item.
   The capacity and free space of the microSD card are displayed.

4. Touch [BACK] to return to the “EXTENSION SETTING” menu screen.
5. Press the [BACK] key several times to return to normal operation.

Memory Operation on “HOME” Channel Memories

Five special one-touch “HOME” channels are available, for special frequencies you use often. Special “Home” channels are available for HF (any frequency between 1.8 and 29.7 MHz), 50 MHz, AIR band, 144 MHz, and 430 MHz.

Recalling the Home Channel

1. Press and hold the [**FUNC**] knob.
2. Touch [HOME] or rotate the [**FUNC**] knob to select [HOME] and then press the [**FUNC**] knob.
   The home channel frequency will be shown in the display.
   In the default setting, the Home channel frequencies of each band are set as follows.

   HF band: 29.600MHz
   50MHz band: 51.525MHz
   AIR band: 118.000MHz
   144MHz band: 146.520MHz
   430MHz band: 446.000MHz

Changing the Frequency of the Home Channel

The default frequency setting of the home channel when shipped from the factory can be changed.

1. Set the desired frequency.
2. Press and hold the [V/M (MW)] key.
   The memory channel list will be displayed.
3. Rotate the [**FUNC**] knob to select “HOME”.
4. Press and hold the [V/M (MW)] key to store the frequency and other data into the HOME channel.
5. Touch [BACK], the memory is stored and the screen returns to normal.

Screen Saver

A Screen saver, to prevent burning of the TFT screen will operate after a set time, if no transceiver function is operated.

1. Press and hold the [**FUNC**] knob.
2. Touch [DISPLAY SETTING] or rotate the [**FUNC**] knob to select [DISPLAY SETTING] and then press the [**FUNC**] knob.
3. Touch [SCREEN SAVER] / [SCREEN SAVER(BAT)] or rotate the [**FUNC**] knob to select [SCREEN SAVER] / [SCREEN SAVER(BAT)] and then press the [**FUNC**] knob.
   • Set to [SCREEN SAVER(BAT)] when using the SBR-52LI for operation.
4. Rotate the [**FUNC**] knob, or touch "<" or ">" on either side of the value to select the time until the screen saver is employed.
5. Press the [**FUNC**] knob, or wait for about 3 seconds to save the setting.
6. Press the [BACK] key several times to return to normal operation.

Inputting the Call Sign

Registered call signs names, and characters can be displayed on the opening screen when the power is turned ON.

1. Press and hold the [**FUNC**] knob.
2. Touch [DISPLAY SETTING] or rotate the [**FUNC**] knob to select [DISPLAY SETTING] and then press the [**FUNC**] knob.
3. Touch [MY CALL] or rotate the [**FUNC**] knob to select [MY CALL] and then press the [**FUNC**] knob.
4. Touch a character key.
   • The touched character will be displayed at the top of the screen. Enter each character of your call sign.
   • Up to 10 characters (letters, numbers, and symbols) can be entered.
5. Touch [ENT] to save the new setting and exit to "DISPLAY SETTING" menu screen.
6. Press the [BACK] key several times to return to normal operation.

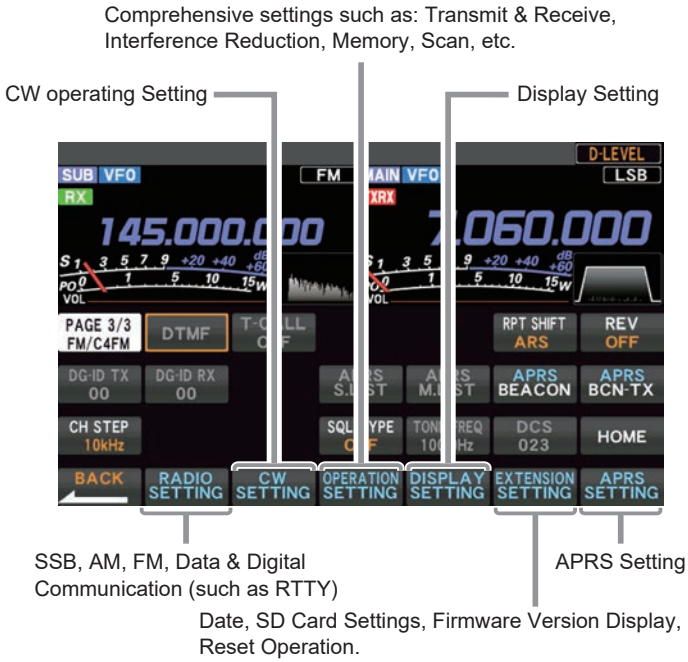
Updating the transceiver firmware

When updated firmware is available, the transceiver can be updated by connecting it to a personal computer. Download the latest version of the firmware and the firmware installation manual from the YAESU website.

Setting Menu

The Setting Menu permits configuring the various functions to accommodate individual operating needs and preferences.

Using the Menu



1. Press and hold the [**FUNC**] knob.
   The function Menu screen will be displayed.
2. Touch the category item that is to be set (see above).
   Or rotate the [**FUNC**] knob to select the category item in the function Menu, then press the [**FUNC**] knob.
3. Rotate the [**FUNC**] knob to select the desired item, then touch the item, or rotate the [**FUNC**] knob to select the desired item, then press the [**FUNC**] knob.
4. Rotate the [**FUNC**] knob, or touch “<” or “>” on either side of the value setting that is to be changed.
5. Press the [**FUNC**] knob, or wait for about 3 seconds to save the setting.
6. Press the [BACK] key several times to return to normal operation.

Tables of Setup Menu Operations

Menu Function		Available Settings (Default: Bold)
RADIO SETTING		
MODE SSB	AF TREBLE GAIN	-20 - **0** - 10
	AF MIDDLE TONE GAIN	-20 - **0** - 10
	AF BASS GAIN	-20 - **0** - 10
	AGC FAST DELAY	20 - **300** - 4000 (20msec/step)
	AGC MID DELAY	20 - **1000** - 4000 (20msec/step)
	AGC SLOW DELAY	20 - **3000** - 4000 (20msec/step)
	LCUT FREQ	OFF / **100** - 1000 (50Hz/step)
	LCUT SLOPE	**6dB/oct** / 18dB/oct
	HCUT FREQ	700 - **3000** - 4000 (50Hz/step) /OFF
	HCUT SLOPE	**6dB/oct** / 18dB/oct
	USB OUT LEVEL	0 - **50** - 100
	TX BPF SEL	50-3050 / **100-2900** / 200-2800 / 300-2700 / 400-2600
	MOD SOURCE	MIC / USB / Bluetooth / **AUTO**
	USB MOD GAIN	0 - **50** - 100
	RPTT SELECT	**OFF** / RTS / DTR
	NAR WIDTH	300 / 400 / 600 / 850 / 1100 / 1200 / **1500** / 1650 / 1800 / 1950 / 2100 / 2250 / 2400 / 2450 / 2500 / 2600 / 2700 / 2800 / 2900 / 3000 / 3200 / 3500 / 4000 (Hz)
	CW AUTO MODE	**OFF** / 50M / ON
MODE AM	AF TREBLE GAIN	-20 - **0** - 10
	AF MIDDLE TONE GAIN	-20 - **0** - 10
	AF BASS GAIN	-20 - **0** - 10
	AGC FAST DELAY	20 - **1000** - 4000 (20msec/step)
	AGC MID DELAY	20 - **2000** - 4000 (20msec/step)
	AGC SLOW DELAY	20 - **4000** (20msec/step)
	LCUT FREQ	**OFF** / 100 - 1000 (50Hz/step)
	LCUT SLOPE	**6dB/oct** / 18dB/oct
	HCUT FREQ	700 - 4000 (50Hz/step) / **OFF**
	HCUT SLOPE	**6dB/oct** / 18dB/oct
	USB OUT LEVEL	0 - **50** - 100
	TX BPF SEL	**50-3050** / 100-2900 / 200-2800 / 300-2700 / 400-2600
	MOD SOURCE	MIC / USB / Bluetooth / **AUTO**
	USB MOD GAIN	0 - **50** - 100
	RPTT SELECT	**OFF** / RTS / DTR
MODE FM	AF TREBLE GAIN	-20 - **0** - 10
	AF MIDDLE TONE GAIN	-20 - **0** - 10
	AF BASS GAIN	-20 - **0** - 10
	AGC FAST DELAY	**20** - 4000 (msec) (20msec/step)
	AGC MID DELAY	20 - **240** - 4000 (msec) (20msec/step)
	AGC SLOW DELAY	20 - **500** - 4000 (msec) (20msec/step)
	LCUT FREQ	OFF / 100 - **300** - 1000 (Hz) (50Hz/step)
	LCUT SLOPE	6dB/oct / **18dB/oct**

Menu Function		Available Settings (Default: Bold)
	HCUT FREQ	700 - **3000** - 4000 (Hz) (50Hz/step) /OFF
	HCUT SLOPE	6dB/oct / **18dB/oct**
	USB OUT LEVEL	0 - **50** - 100
	MOD SOURCE	MIC / USB / Bluetooth / **AUTO**
	USB MOD GAIN	0 - **50** - 100
	RPTT SELECT	**OFF** / RTS / DTR
	RPT SHIFT	– / **SIMP** / + / ARS
	RPT SFT FREQ(28MHz)	0 - **100** - 1000 (kHz) (10kHz/step)
	RPT SFT FREQ(50MHz)	0 - **500** - 4000 (kHz) (10kHz/step)
	RPT SFT FREQ(144MHz)	**0.00** - 100 (MHz) (50kHz/step)
	RPT SFT FREQ(430MHz)	0.00 - **5.00** - 100 (MHz) (50kHz/step)
	SQL TYPE	**OFF** / ENC / TSQ / DCS / PR FREQ / REV TONE
	TONE FREQ	67.0 - **100.0** - 254.1 (Hz)
	DCS CODE	**023** - 754
	DCS RX REVERS	**NORMAL** / REVERS / BOTH
	DCS TX REVERS	**NORMAL** / REVERS
	PR FREQ	300 - **1600** - 3000 (Hz) (100Hz/step)
	DTMF DELAY	50 / 250 / **450** / 750 / 1000 (ms)
	DTMF SPEED	**50** / 100 (ms)
	DTMF MEMORY1 - 9	–
MODE DATA	AF TREBLE GAIN	-20 - **0** - 10
	AF MIDDLE TONE GAIN	-20 - **0** - 10
	AF BASS GAIN	-20 - **0** - 10
	AGC FAST DELAY	20 - **160** - 4000 (20msec/step)
	AGC MID DELAY	20 - **500** - 4000 (20msec/step)
	AGC SLOW DELAY	20 - **1500** - 4000 (20msec/step)
	LCUT FREQ	OFF / **100** - 1000 (50Hz/step)
	LCUT SLOPE	6dB/oct / **18dB/oct**
	HCUT FREQ	700 - **3200** - 4000 (50Hz/step) /OFF
	HCUT SLOPE	6dB/oct / **18dB/oct**
	USB OUT LEVEL	0 - **50** - 100
	TX BPF SEL	**50-3050** / 100-2900 / 200-2800 / 300-2700 / 400-2600
	MOD SOURCE	MIC / USB / Bluetooth / **AUTO**
	USB MOD GAIN	0 - **50** - 100
	RPTT SELECT	**OFF** / RTS / DTR
	NAR WIDTH	50 / 100 / 150 / 200 / 250 / **300** / 350 / 400 / 450 / 500 / 600 / 800 / 1200 / 1400 / 1700 / 2000 / 2400 / 3000 / 3200 / 3500 / 4000 (Hz)
	PSK TONE	**1000** / 1500 / 2000 (Hz)
	DATA SHIFT (SSB)	0 - **1500** - 3000 (10Hz/step)
MODE RTTY	AF TREBLE GAIN	-20 - **0** - 10
	AF MIDDLE TONE GAIN	-20 - **0** - 10
	AF BASS GAIN	-20 - **0** - 10
	AGC FAST DELAY	20 - **160** - 4000 (20msec/step)
	AGC MID DELAY	20 - **500** - 4000 (20msec/step)

Menu Function		Available Settings (Default: Bold)
	AGC SLOW DELAY	20 - **1500** - 4000 (20msec/step)
	LCUT FREQ	OFF / 100Hz - **300Hz** - 1000Hz (50Hz/step)
	LCUT SLOPE	6dB/oct / **18dB/oct**
	HCUT FREQ	700Hz - **3000Hz** - 4000Hz (50Hz/step) / OFF
	HCUT SLOPE	6dB/oct / **18dB/oct**
	USB OUT LEVEL	0 - **50** - 100
	RPTT SELECT	**OFF** / RTS / DTR
	NAR WIDTH	50 / 100 / 150 / 200 / 250 / **300** / 350 / 400 / 450 / 500 / 600 / 800 / 1200 / 1400 / 1700 / 2000 / 2400 / 3000 / 3200 / 3500 / 4000 (Hz)
	MARK FREQUENCY	1275 / **2125** (Hz)
	SHIFT FREQUENCY	**170** / 200 / 425 / 850 (Hz)
	POLARITY TX	**NOR** / REV
DIGITAL	DIGITAL POPUP	OFF / 2 - **10** - 60 / CONTINUE
	LOCATION SERVICE	OFF / **ON**
	STANDBY BEEP	OFF / **ON**
	DP-ID LIST	–
	RADIO ID	– (cannot be edited)

CW SETTING		
MODE CW	AF TREBLE GAIN	-20 - **0** - 10
	AF MIDDLE TONE GAIN	-20 - **0** - 10
	AF BASS GAIN	-20 - **0** - 10
	AGC FAST DELAY	20 - **160** - 4000 (msec) (20msec/step)
	AGC MID DELAY	20 - **500** - 4000 (msec) (20msec/step)
	AGC SLOW DELAY	20 - **1500** - 4000 (msec) (20msec/step)
	LCUT FREQ	OFF / 100 - **250** - 1000 (Hz) (50Hz/step)
	LCUT SLOPE	6dB/oct / **18dB/oct**
	HCUT FREQ	700 - **1200** - 4000 (Hz) (50Hz/step) /OFF
	HCUT SLOPE	6dB/oct / **18dB/oct**
	USB OUT LEVEL	0 - **50** - 100
	RPTT SELECT	**OFF**/RTS/DTR
	NAR WIDTH	50 / 100 / 150 / 200 / **250** / 300 / 350 / 400 / 450 / 500 / 600 / 800 / 1200 / 1400 / 1700 / 2000 / 2400 / 3000 / 3200 / 3500 / 4000 (Hz)
	PC KEYING	**OFF** / RTS / DTR
	CW BK-IN TYPE	**SEMI** / FULL
	CW FREQ DISPLAY	DIRECT FREQ / **PITCH OFFSET**
	QSK DELAY TIME	**15** / 20 / 25 / 30 (msec)
	CW INDICATOR	OFF / **ON**
KEYER	KEYER TYPE	OFF / BUG / ELEKEY-A / **ELEKEY-B** / ELEKEY-Y / ACS
	KEYER DOT/DASH	**NOR** / REV
	CW WEIGHT	2.5 - **3.0** - 4.5
	NUMBER STYLE	**1290** / AUNO / AUNT / A2NO / A2NT / 12NO / 12NT
	CONTEST NUMBER	**1** - 9999
	CW MEMORY 1 - 5	**TEXT** / MESSAGE

Menu Function		Available Settings (Default: Bold)
	REPEAT INTERVAL	1 - **5** - 60 (sec)

OPERATION SETTING		
GENERAL	BEEP LEVEL	0 - **30** - 100
	RF/SQL VR	RF / SQL / **AUTO**
	TUN/LIN PORT SELECT	**OPTION** / BAND DATA / CAT-3 / GPO
	TUNER SELECT	**OPTION** / ATAS
	CAT-1 RATE	4800 / 9600 / 19200 / **38400** / 115200 (bps)
	CAT-1 TIME OUT TIMER	**10** / 100 / 1000 / 3000 (msec)
	CAT-1 CAT-3 STOP BIT	**1bit** / 2bit
	CAT-2 RATE	**4800** / 9600 / 19200 / 38400 / 115200 (bps)
	CAT-2 TIME OUT TIMER	**10** / 100 / 1000 / 3000 (msec)
	CAT-3 RATE	4800 / 9600 / 19200 / **38400** / 115200 (bps)
	CAT-3 TIME OUT TIMER	**10** / 100 / 1000 / 3000 (msec)
	TX TIME OUT TIMER	**OFF** / 1 - 30 (min)
	REF FREQ FINE ADJ	-25 - **0** - 25
	CHARGE CONTROL	OFF / **ON**
	SUB BAND MUTE	**OFF** / ON
	SPEAKER SELECT	Auto / INT / **BOTH**
	DITHER	OFF / **ON**
BAND/SCAN	QMB CH	**5ch** / 10ch
	BAND STACK	OFF / **ON**
	BAND EDGE	**OFF** / ON
	SCAN RESUME	**BUSY** / HOLD / 1sec / 3sec / 5sec
RX DSP	IF NOTCH WIDTH	NARROW / **WIDE**
	NB REJECTION	LOW / **MID** / HIGH
	NB WIDTH	NARROW / **MEDIUM** / WIDE
	APF WIDTH	NARROW / **MEDIUM** / WIDE
	CONTOUR LEVEL	-40 - **15** - 0 - 20
	CONTOUR WIDTH	1 - **10** - 11
TX AUDIO	AMC RELEASE TIME	FAST / **MID** / SLOW
	PRMTRC EQ1 FREQ	**OFF** / 100 - 700 (100Hz/step)
	PRMTRC EQ1 LEVEL	-20 - 0 - **5** - 10
	PRMTRC EQ1 BWTH	0 - **10**
	PRMTRC EQ2 FREQ	**OFF** / 700 - 1500 (100Hz/step)
	PRMTRC EQ2 LEVEL	-20 - 0 - **5** - 10
	PRMTRC EQ2 BWTH	0 - **10**
	PRMTRC EQ3 FREQ	**OFF** / 1500 - 3200 (100Hz/step)
	PRMTRC EQ3 LEVEL	-20 - 0 - **5** - 10
	PRMTRC EQ3 BWTH	0 - **10**
	P PRMTRC EQ1 FREQ	**OFF** / 100 - 700 (100Hz/step)
	P PRMTRC EQ1 LEVEL	-20 - **0** - 10
	P PRMTRC EQ1 BWTH	0 - **2** - 10
	P PRMTRC EQ2 FREQ	**OFF** / 700 - 1500 (100Hz/step)
	P PRMTRC EQ2 LEVEL	-20 - **0** - 10

Menu Function		Available Settings (Default: Bold)
	P PRMTRC EQ2 BWTH	0 - **1** - 10
	P PRMTRC EQ3 FREQ	**OFF** / 1500 - 3200 (100Hz/step)
	P PRMTRC EQ3 LEVEL	-20 - **0** - 10
	P PRMTRC EQ3 BWTH	0 - **1** - 10
TX GNRL	MAX POWER(BAT)	0.5 - **6.0** (W)
	QRP MODE	**OFF** / ON
	HF MAX POWER	0.5 - **10.0** (W)
	50M MAX POWER	0.5 - **10.0** (W)
	70M MAX POWER	0.5 - **6.0** (W)
	144M MAX POWER	0.5 - **10.0** (W)
	430M MAX POWER	0.5 - **10.0** (W)
	AM HF/50 MAX POWER	0.5 - **2.5** (W)
	AM V/U MAX POWER	0.5 - **2.5** (W)
	VOX SELECT	**MIC** / USB / BLUETOOTH
	EMERGENCY FREQ TX	**OFF** / ON
	TX INHIBIT	**OFF** / ON
	METER DETECTOR	**AVERAGE** / PEAK
KEY/DIAL	SSB/CW DIAL STEP	5 / 10 / **20** (Hz)
	RTTY/PSK DIAL STEP	5 / **10** / 20 (Hz)
	FM DIAL STEP	5 / 10 / 20 / **Auto** (Hz)
	CH STEP	1 / 2.5 / 5 / **10** (kHz)
	AM CH STEP	2.5 / **5** / 9 / 10 / 12.5 / 25 (kHz)
	FM CH STEP	**5** / 6.25 / 10 / 12.5 / 20 / 25 (kHz)
	MAIN STEPS PER REV.	50 / 100 / **200**
	MIC P1 - MIC P4	LOCK / QMB / A/B / V/M / TUNER / VOX/MOX /MODE / ZIN_SPOT / SPLIT / FINE / NAR / NB /DNR / FREQ UP / FREQ DOWN / BAND UP /BAND DOWN / ATT / IPO / DNF / AGC MIC P1: **LOCK** MIC P2: **QMB** MIC P3: **BAND UP** MIC P4: **V/M** MIC UP: **FREQ UP** MIC DOWN: **FREQ DOWN**
	MIC UP	
	MIC DOWN	
	MIC SCAN	OFF / **ON**
OPTION	TUNER TYPE SEL ANT1	**INT** / INT(FAST) / EXT / ATAS
	TUNER TYPE SEL ANT2	**INT** / INT(FAST) / EXT / ATAS
	ANT2 OPERATION	**TRX** / TX-ANT1,RX-ANT2 / TRX-ANT1,RX-ANT2 /
	HF ANT SELECT	**ANT1** / ANT2
	HF MAX POWER	5 - **100** (W)
	50M MAX POWER	5 - **100** (W)
	70M MAX POWER	5 - **50** (W)
	144M MAX POWER	5 - **50** (W)
	430M MAX POWER	5 - **50** (W)
	AM MAX POWER	5 - **25** (W)
	AM V/U MAX POWER	5 - **13** (W)
	GPS	OFF / **ON**

Menu Function		Available Settings (Default: Bold)
	GPS PINNING	OFF / **ON**
	GPS BAUDRATE	4800 / 9600 / 19200 / 38400 / 115200
	BLUETOOTH	OFF / **ON**
	BLUETOOTH DEVICE LIST	DISCONNECT / **CONNECT**
	BLUETOOTH AUDIO	**FIX** / AUTO

DISPLAY SETTING		
DISPLAY	MY CALL	Max 10 characters (**FTX-1**)
	MY CALL TIME	OFF / **1** / 2 / 3 / 4 / 5 (sec)
	POP-UP TIME	FAST / **MID** / SLOW
	SCREEN SAVER	OFF / 1 / 2 / 5 / 15 / 30 / **60** (min)
	SCREEN SAVER(BAT)	OFF / 1 / 2 / **5** / 15 / 30 / 60 (min)
	SAVER TYPE	Logo / DIMMER / **DISP OFF**
	AUTO POWER OFF	**OFF** / 0.5 - 12 (hour) (0.5hour/step)
	LED DIMMER	OFF / 1 - **20**
UNIT	POSITION UNIT	**MM.MM** / MM.ss
	DISTANCE UNIT	km / **mile**
	SPEED UNIT	km/h / knot / **mph**
	ALTITUDE UNIT	m / **ft**
	TEMP UNIT	c / **f**
	RAIN UNIT	mm / **INCH**
	WIND UNIT	m/s / **mph**
SCOPE	RBW	**HIGH** / MID / LOW
	SCOPE CTR	FILTER / **CARRIER**
	2D DISP SENSITIVITY	NORMAL / **HI**
	3DSS DISP SENSITIVITY	NORMAL / **HI**
	AVERAGE	**OFF** / 2 / 4 / 8
VFO IND COLOR	VMI COLOR MAIN	**BLUE** / GREEN / WHITE / NONE
	VMI COLOR SUB	BLUE / GREEN / **WHITE** / NONE
	VMI COLOR CLAR/SPLIT	**RED** / NONE

EXTENSION SETTING		
DATE&TIME	TIME ZONE	-12.0 - **0.0** - 14.0
	DAY	–
	MONTH	–
	YEAR	–
	HOUR	–
	MINUTE	–
	GPS TIME SET	**AUTO** / MANUAL
MY POSITION	MY POSITION	**GPS** / MANUAL
	MY POSITION LATITUDE	**N 00° 00.00'(00")**
	MY POSITION LONGTUDE	**E 000° 00.00'(00")**
SD CARD	MEM LIST LOAD	–
	MEM LIST SAVE	–
	MENU LOAD	–

Menu Function		Available Settings (Default: Bold)
	MENU SAVE	–
	INFORMATIONS	–
	FIRMWARE UPDATE	–
	FORMAT	–
SOFT VERSION	–	–
CALIBRATION	CALIBRATION	–
RESET	MEMORY CLEAR	–
	MENU CLEAR	–
	ALL RESET	–
CERTIFICATION	–	–

APRS SETTING		
GENERAL	MODEM SELECT	**OFF** / AUTO / MAIN / SUB
	MODEM TYPE	1200bps / **9600bps**
	APRS TX DELAY	100 / 200 / **300** / 400 / 500 / 750 / 1000（ms）
	CALLSIGN (APRS)	* * * * * * - * *
	APRS DESTINATION	APYX01 (FIX)
MSG TEMPLATE	MESSAGE TEXT1	–
	MESSAGE TEXT2	–
	MESSAGE TEXT3	–
	MESSAGE TEXT4	–
	MESSAGE TEXT5	–
	MESSAGE TEXT6	–
	MESSAGE TEXT7	–
	MESSAGE TEXT8	–
MY SYMBOL	MY SYMBOL	**ICON1** / ICON2 / ICON3
	ICON1	**/> (Car)**
	ICON2	**/R (REC.Vehicle)**
	ICON3	**/- (house QTH(VHF))**
DIGI PATH	PATH SELECT	**WIDE1-1** / WIDE1-1.WIDE2-1
BEACON SET.	BEACON TYPE	**OFF** / AUTO
	INFO AMBIGUITY	**OFF** / 1dig / 2dig / 3dig / 4dig
	INFO SPEED/COURCE	OFF / **ON**
	INFO ALTITUDE	OFF / **ON**
	POSITION COMMENT	**Off duty** / En Route / In Service / Returning / Committed / Special / Priority / Custom 0 to Custom 6 / EMERGENCY!
AUTO BEACON	INTERVAL TIME	30sec / 1min / 2min / 3min / **5min** / 10min / 15min / 20min / 30min / 60min
BEACON TEXT	STATUS TEXT SELECT	**OFF** / TEXT1 to TEXT5
	TX RATE	**1/1** to 1/8
	STATUS TEXT1	–
	STATUS TEXT2	–
	STATUS TEXT3	–
	STATUS TEXT4	–
	STATUS TEXT5	–

Menu Function		Available Settings (Default: Bold)
LIST SETTING	STATION LIST SORT	**TIME**
STATION LIST	Mic-E	OFF / **ON**
	POSITION	OFF / **ON**
	WEATHER	OFF / **ON**
	OBJECT	OFF / **ON**
	ITEM	OFF / **ON**
	STATUS	OFF / **ON**
	OTHER	**OFF** / ON
	ALTNET	**OFF** / ON
POPUP	BEACON	OFF / 3sec / 5sec / **10sec** / HOLD
	MESSAGE	OFF / 3sec / 5sec / **10sec** / HOLD
RINGER	TX BEACON	OFF / **ON**
	RX BEACON	OFF / **ON**
	TX MESSAGE	**OFF** / ON
	RX MESSAGE	**OFF** / ON
	MY PACKET	OFF / **ON**

RADIO SETTING
- MODE SSB -

AF TREBLE GAIN

Function: Sets the amount of gain in the treble range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the treble range can be set in the range of -20 to +10.

AF MIDDLE TONE GAIN

Function: Setting the amount of gain in the middle range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the middle range can be set in the range of -20 to +10.

AF BASS GAIN

Function: Setting the amount of gain in the bass range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the bass range can be set in the range of -20 to +10.

AGC FAST DELAY

Function: Sets the AGC-FAST DELAY voltage decay characteristics for SSB mode.
Available Values: 20 - 4000msec
Default Setting: 300msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC MID DELAY

Function: Sets the AGC-MID DELAY voltage decay characteristics for SSB mode.
Available Values: 20 - 4000msec
Default Setting: 1000msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC SLOW DELAY

Function: Sets the AGC-SLOW DELAY voltage decay characteristics for SSB mode.
Available Values: 20 - 4000msec
Default Setting: 3000msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

LCUT FREQ

Function: Sets the low-frequency cutoff audio filter in SSB mode.
Available Values: OFF / 100Hz - 1000Hz
Default Setting: 100Hz
Description: The cutoff frequency can be set at 50Hz increments between 100Hz and 1000Hz.

LCUT SLOPE

Function: Sets the slope of the low-frequency cutoff audio filter in SSB mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 6dB/oct

HCUT FREQ

Function: Sets the high-frequency cutoff audio filter in SSB mode.
Available Values: 700Hz - 4000Hz / OFF
Default Setting: 3000Hz
Description: The cutoff frequency can be set at 50Hz increments between 700Hz and 4000Hz.

HCUT SLOPE

Function: Sets the slope of the high-frequency cutoff audio filter in SSB mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 6dB/oct

USB OUT LEVEL

Function: Sets the level of the receive SSB signal output from the USB jack.
Available Values: 0 - 100
Default Setting: 50

TX BPF SEL

Function: Selects the audio passband of the DSP modulator on the SSB mode.
Available Values: 50-3050 / 100-2900 / 200-2800 / 300-2700 / 400-2600 (Hz)
Default Setting: 100-2900 Hz

MOD SOURCE

Function: Selects the transmit audio input jack in the SSB mode.
Available Values: MIC / USB / Bluetooth / AUTO
Default Setting: AUTO
Description:
MIC: Audio is input from the MIC jack on the field head.
USB: Disables the microphone circuit on the field head and inputs audio/data from the USB jack on the field head.
Bluetooth: Disables the microphone circuit on the field head and inputs audio/data from the Bluetooth.
AUTO: Modulation is automatically selected according to the transmission method.
PTT: The MIC jack on the front panel.
MOX: The MIC jack on the front panel.
CAT: The USB jack on the rear panel.
RTS: The USB jack on the rear panel.
DTR: The USB jack on the rear panel.
VOX: Terminal set with “VOX SELECT”.

USB MOD GAIN

Function: Sets the level of the SSB signal input when “MOD SOURCE” is set to “USB”.
Available Values: 0 - 100
Default Setting: 50

RPTT SELECT

Function: Sets the PTT control for the SSB transmit signal.
Available Values: OFF / RTS / DTR
Default Setting: OFF
Description:
OFF: No PTT control.
RTS: Controls the SSB transmit signal from the USB virtual COM/RTS ports.
DTR: Controls the SSB transmit signal from the USB virtual COM/DTR ports.

NAR WIDTH

Function: Sets the IF BANDWIDTH of the digital filter when the [NAR] key is pressed in LSB/USB mode.
Available Values: 300 / 400 / 600 / 850 / 1100 / 1200 / 1500 / 1650 / 1800 / 1950 / 2100 / 2250 / 2400 / 2450 / 2500 / 2600 / 2700 / 2800 / 2900 / 3000 / 3200 / 3500 / 4000 (Hz)
Default Setting: 1500Hz

CW AUTO MODE

Function: Enables/disables CW keying while operating on SSB.
Available Values: OFF / 50M (50MHz) / ON
Default Setting: OFF
Description:
OFF: Disables CW keying while operating on SSB.
50M: Enables CW keying while operating SSB on 50 MHz (but not HF).
ON: Enables CW keying while operating SSB on all TX bands.

RADIO SETTING
- MODE AM -

AF TREBLE GAIN

Function: Sets the amount of gain in the treble range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the treble range can be set in the range of -20 to +10.

AF MIDDLE TONE GAIN

Function: Setting the amount of gain in the middle range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the middle range can be set in the range of -20 to +10.

AF BASS GAIN

Function: Setting the amount of gain in the bass range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the bass range can be set in the range of -20 to +10.

AGC FAST DELAY

Function: Sets the AGC-FAST DELAY voltage decay characteristics for AM mode.
Available Values: 20 - 4000msec
Default Setting: 1000msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC MID DELAY

Function: Sets the AGC-MID DELAY voltage decay characteristics for AM mode.
Available Values: 20 - 4000msec
Default Setting: 2000msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC SLOW DELAY

Function: Sets the AGC-SLOW DELAY voltage decay characteristics for AM mode.
Available Values: 20 - 4000msec
Default Setting: 4000msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

LCUT FREQ

Function: Sets the low-frequency cutoff audio filter in AM mode.
Available Values: OFF / 100Hz - 1000Hz
Default Setting: OFF
Description: The cutoff frequency can be set at 50Hz increments between 100Hz and 1000Hz.

LCUT SLOPE

Function: Sets the slope of the low-frequency cutoff audio filter in AM mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 6dB/oct

HCUT FREQ

Function: Sets the high-frequency cutoff audio filter in AM mode.
Available Values: 700Hz - 4000Hz / OFF
Default Setting: OFF
Description: The cutoff frequency can be set at 50Hz increments between 700Hz and 4000Hz.

HCUT SLOPE

Function: Sets the slope of the high-frequency cutoff audio filter in AM mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 6dB/oct

USB OUT LEVEL

Function: Sets the level of the receive AM signal output from the USB jack.
Available Values: 0 - 100
Default Setting: 50

TX BPF SEL

Function: Selects the audio passband of the DSP modulator on the AM mode.
Available Values: 50-3050 / 100-2900 / 200-2800 / 300-2700 / 400-2600 (Hz)
Default Setting: 50-3050 Hz

MOD SOURCE

Function: Selects the transmit audio input jack in the AM mode.
Available Values: MIC / USB / Bluetooth / AUTO
Default Setting: AUTO
Description:
MIC: Audio is input from the MIC jack on the field head.
USB: Disables the microphone circuit on the field head and inputs audio/data from the USB jack on the field head.
Bluetooth: Disables the microphone circuit on the field head and inputs audio/data from the Bluetooth.
AUTO: Modulation is automatically selected according to the transmission method.
PTT: The MIC jack on the front panel.
MOX: The MIC jack on the front panel.
CAT: The USB jack on the rear panel.
RTS: The USB jack on the rear panel.
DTR: The USB jack on the rear panel.
VOX: Terminal set with “VOX SELECT”.

USB MOD GAIN

Function: Sets the level of the AM signal input when “MOD SOURCE” is set to “USB”.
Available Values: 0 - 100
Default Setting: 50

RPTT SELECT

Function: Sets the PTT control for the AM transmit signal.
Available Values: OFF / RTS / DTR
Default Setting: OFF
Description:
OFF: No PTT control.
RTS: Controls the AM transmit signal from the USB virtual COM/RTS ports.
DTR: Controls the AM transmit signal from the USB virtual COM/DTR ports.

RADIO SETTING
- MODE FM -

AF TREBLE GAIN

Function: Sets the amount of gain in the treble range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the treble range can be set in the range of -20 to +10.

AF MIDDLE TONE GAIN

Function: Setting the amount of gain in the middle range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the middle range can be set in the range of -20 to +10.

AF BASS GAIN

Function: Setting the amount of gain in the bass range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the bass range can be set in the range of -20 to +10.

AGC FAST DELAY

Function: Sets the AGC-FAST DELAY voltage decay characteristics for FM mode.
Available Values: 20 - 4000msec
Default Setting: 20msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC MID DELAY

Function: Sets the AGC-MID DELAY voltage decay characteristics for FM mode.
Available Values: 20 - 4000msec
Default Setting: 240msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC SLOW DELAY

Function: Sets the AGC-SLOW DELAY voltage decay characteristics for FM mode.
Available Values: 20 - 4000msec
Default Setting: 500msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

LCUT FREQ

Function: Sets the low-frequency cutoff audio filter in FM mode.
Available Values: OFF / 100Hz - 1000Hz
Default Setting: 300 Hz
Description: The cutoff frequency can be set at 50Hz increments between 100Hz and 1000Hz.

LCUT SLOPE

Function: Sets the slope of the low-frequency cutoff audio filter in FM mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 18dB/oct

HCUT FREQ

Function: Sets the high-frequency cutoff audio filter in FM mode.
Available Values: 700Hz - 4000Hz/OFF
Default Setting: 3000Hz
Description: The cutoff frequency can be set at 50Hz increments between 700Hz and 4000Hz.

HCUT SLOPE

Function: Sets the slope of the high-frequency cutoff audio filter in FM mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 18dB/oct

USB OUT LEVEL

Function: Sets the level of the receive FM signal output from the USB jack.
Available Values: 0 - 100
Default Setting: 50

MOD SOURCE

Function: Selects the transmit audio input jack in the FM mode.
Available Values: MIC / USB / Bluetooth / AUTO
Default Setting: AUTO
Description:

MIC: Audio is input from the MIC jack on the field head.

USB: Disables the microphone circuit on the field head and inputs audio/data from the USB jack on the field head.

Bluetooth: Disables the microphone circuit on the field head and inputs audio/data from the Bluetooth.

AUTO: Modulation is automatically selected according to the transmission method.
- **PTT**: The MIC jack on the front panel.
- **MOX**: The MIC jack on the front panel.
- **CAT**: The USB jack on the rear panel.
- **RTS**: The USB jack on the rear panel.
- **DTR**: The USB jack on the rear panel.
- **VOX**: Terminal set with “VOX SELECT”.

USB MOD GAIN

Function: Sets the level of the FM signal input when “MOD SOURCE” is set to “USB”.
Available Values: 0 - 100
Default Setting: 50

RPTT SELECT

Function: Sets the PTT control for the FM transmit signal.
Available Values: OFF / RTS / DTR
Default Setting: OFF
Description:
OFF: No PTT control.
RTS: Controls the FM transmit signal from the USB virtual COM/RTS ports.
DTR: Controls the FM transmit signal from the USB virtual COM/DTR ports.

RPT SHIFT

Function: Sets the direction of the repeater transmit shift setting.
Available Values: - / SIMP / + / ARS
Default Setting: SIMP
Description:
-: Shifts to the lower frequency offset.
SIMP: The frequency does not shift.
+: Shifts to the higher frequency offset.
ARS: The auto repeater shift function is enabled.

RPT SFT FREQ(28MHz)

Function: Sets the RPT offset frequency on the 28MHz band.
Available Values: 0 - 1000kHz
Default Setting: 100kHz
Description: The RPT offset frequency can be set at 10kHz increments between 0kHz and 1000kHz.

RPT SFT FREQ(50MHz)

Function: Sets the RPT offset frequency on the 50MHz band.
Available Values: 0 - 4000kHz
Default Setting: 500kHz
Description: The RPT offset frequency can be set at 10kHz increments between 0kHz and 4000kHz.

RPT SFT FREQ(144MHz)

Function: Sets the RPT offset frequency on the 144MHz band.
Available Values: 0 - 100MHz
Default Setting: 0.60MHz
Description: The RPT offset frequency can be set at 50kHz increments between 0MHz and 100kHz.

RPT SFT FREQ(430MHz)

Function: Sets the RPT offset frequency on the 430MHz band.
Available Values: 0 - 100MHz
Default Setting: 5.00MHz
Description: The RPT offset frequency can be set at 50kHz increments between 0MHz and 100kHz.

SQL TYPE

Function: Sets the squelch type in the analog FM mode.
Available Values: OFF / ENC / TSQ / DCS / PR FREQ / REV TONE
Default Setting: OFF
For details, see “Selecting the squelch type in the analog FM mode” (see page 18).

TONE FREQ

Function: Setting of the CTCSS Tone Frequency.
Available Values: 50 standard CTCSS tones
Default Setting: 100.0Hz

DCS CODE

Function: Setting of the DCS Code.
Available Values: 104 standard DCS codes
Default Setting: 023

DCS RX REVERS

Function: The receive DCS code phase may be inverted when using the digital code squelch function. To select the phase combination for receive.
Available Values: NORMAL / REVERS / BOTH
Default Setting: NORMAL

DCS TX REVERS

Function: The transmit DCS code phase may be inverted when using the digital code squelch function. To select the phase combination for transmit.
Available Values: NORMAL / REVERS
Default Setting: NORMAL

PR FREQ

Function: Set a no-communication squelch frequency in steps of 100 Hz within the range from 300 Hz to 3000 Hz.
Available Values: 300 Hz to 3000 Hz
Default Setting: 1600 Hz

DTMF DELAY

Function: Selects the DTMF Autodialer Delay Time.
Available Values: 50ms / 250ms / 450ms / 750ms / 1000ms
Default Setting: 450ms

DTMF SPEED

Function: Selects the DTMF Autodialer Sending Speed.
Available Values: 50ms / 100ms
Default Setting: 50ms

DTMF MEMORY1-10

The maximum of 16 digit DTMF code can be registered for a telephone number to make a call through the public telephone line from a phone patch.
For details, see “Registering the DTMF memory” (see page 23).

RADIO SETTING
- MODE DATA -

AF TREBLE GAIN

Function: Sets the amount of gain in the treble range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the treble range can be set in the range of -20 to +10.

AF MIDDLE TONE GAIN

Function: Setting the amount of gain in the middle range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the middle range can be set in the range of -20 to +10.

AF BASS GAIN

Function: Setting the amount of gain in the bass range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the bass range can be set in the range of -20 to +10.

AGC FAST DELAY

Function: Sets the AGC-FAST DELAY voltage decay characteristics for PSK/DATA mode.
Available Values: 20 - 4000msec
Default Setting: 160msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC MID DELAY

Function: Sets the AGC-MID DELAY voltage decay characteristics for PSK/DATA mode.
Available Values: 20 - 4000msec
Default Setting: 500msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC SLOW DELAY

Function: Sets the AGC-SLOW DELAY voltage decay characteristics for PSK/DATA mode.
Available Values: 20 - 4000msec
Default Setting: 1500msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

LCUT FREQ

Function: Sets the low-frequency cutoff audio filter in DATA mode.
Available Values: OFF / 100Hz - 1000Hz
Default Setting: 100
Description: The cutoff frequency can be set at 50Hz increments between 100Hz and 1000Hz.

LCUT SLOPE

Function: Sets the slope of the low-frequency cutoff audio filter in DATA mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 18dB/oct

HCUT FREQ

Function: Sets the high-frequency cutoff audio filter in DATA mode.
Available Values: 700Hz - 4000Hz / OFF
Default Setting: 3200Hz
Description: The cutoff frequency can be set at 50Hz increments between 700Hz and 4000Hz.

HCUT SLOPE

Function: Sets the slope of the high-frequency cutoff audio filter in DATA mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 18dB/oct

USB OUT LEVEL

Function: Sets the level of the receive DATA signal output from the USB jack.
Available Values: 0 - 100
Default Setting: 50

TX BPF SEL

Function: Selects the audio passband of the DSP modulator on the DATA mode.
Available Values: 50-3050 / 100-2900 / 200-2800 / 300-2700 / 400-2600 (Hz)
Default Setting: 50-3050 Hz

MOD SOURCE

Function: Selects the transmit audio input jack in the DATA mode.
Available Values: MIC / USB / Bluetooth / AUTO
Default Setting: AUTO
Description:
MIC: Audio is input from the MIC jack on the field head.
USB: Disables the microphone circuit on the field head and inputs audio/data from the USB jack on the field head.
Bluetooth: Disables the microphone circuit on the field head and inputs audio/data from the Bluetooth.
AUTO: Modulation is automatically selected according to the transmission method.
PTT: The MIC jack on the front panel.
MOX: The MIC jack on the front panel.
CAT: The USB jack on the rear panel.
RTS: The USB jack on the rear panel.
DTR: The USB jack on the rear panel.
VOX: Terminal set with “VOX SELECT”.

USB MOD GAIN

Function: Sets the level of the DATA signal input when “MOD SOURCE” is set to “USB”.
Available Values: 0 - 100
Default Setting: 50

RPTT SELECT

Function: Sets the PTT control for the DATA transmit signal.
Available Values: OFF / RTS / DTR
Default Setting: OFF
Description:
OFF: No PTT control.
RTS: Controls the DATA transmit signal from the USB virtual COM/RTS ports.
DTR: Controls the DATA transmit signal from the USB virtual COM/DTR ports.

NAR WIDTH

Function: Sets the IF BANDWIDTH of the digital filter when the [**N/W** MODE] key is pressed in DATA mode.
Available Values: 50 / 100 / 150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 800 / 1200 / 1400 / 1700 / 2000 / 2400 / 3000 / 3200 / 3500 / 4000 (Hz)
Default Setting: 300Hz

PSK TONE

Function: Set the PSK tone
Available Values: 1000 / 1500 / 2000 (Hz)
Default Setting: 1000Hz

DATA SHIFT(SSB)

Function: Sets the carrier point in DATA mode.
Available Values: 0 - 3000 (Hz)
Default Setting: 1500Hz
Description: The frequency can be set in steps of 10Hz.

RADIO SETTING
- MODE RTTY -

AF TREBLE GAIN

Function: Sets the amount of gain in the treble range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the treble range can be set in the range of -20 to +10.

AF MIDDLE TONE GAIN

Function: Setting the amount of gain in the middle range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the middle range can be set in the range of -20 to +10.

AF BASS GAIN

Function: Setting the amount of gain in the bass range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the bass range can be set in the range of -20 to +10.

AGC FAST DELAY

Function: Sets the AGC-FAST DELAY voltage decay characteristics for RTTY mode.
Available Values: 20 - 4000msec
Default Setting: 160msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC MID DELAY

Function: Sets the AGC-MID DELAY voltage decay characteristics for RTTY mode.
Available Values: 20 - 4000msec
Default Setting: 500msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC SLOW DELAY

Function: Sets the AGC-SLOW DELAY voltage decay characteristics for RTTY mode.
Available Values: 20 - 4000msec
Default Setting: 1500msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

LCUT FREQ

Function: Sets the low-frequency cutoff audio filter in RTTY mode.
Available Values: OFF / 100Hz - 1000Hz
Default Setting: 300Hz
Description: The cutoff frequency can be set at 50Hz increments between 100Hz and 1000Hz.

LCUT SLOPE

Function: Sets the slope of the low-frequency cutoff audio filter in RTTY mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 18dB/oct

HCUT FREQ

Function: Sets the high-frequency cutoff audio filter in RTTY mode.
Available Values: 700Hz - 4000Hz / OFF
Default Setting: 3000Hz
Description: The cutoff frequency can be set at 50Hz increments between 700Hz and 4000Hz.

HCUT SLOPE

Function: Sets the slope of the high-frequency cutoff audio filter in RTTY mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 18dB/oct

USB OUT LEVEL

Function: Sets the level of the receive RTTY signal output from the USB jack.
Available Values: 0 - 100
Default Setting: 50

RPTT SELECT

Function: Sets the PTT control for the RTTY transmit signal.
Available Values: OFF / RTS / DTR
Default Setting: OFF
Description:
OFF: No PTT control.
RTS: Controls the RTTY transmit signal from the USB virtual COM/RTS ports.
DTR: Controls the RTTY transmit signal from the USB virtual COM/DTR ports.

NAR WIDTH

Function: Sets the IF BANDWIDTH of the digital filter when the [NAR] key is pressed in RTTY mode.
Available Values: 50 / 100 / 150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 800 / 1200 / 1400 / 1700 / 2000 / 2400 / 3000 / 3200 / 3500 / 4000 (Hz)
Default Setting: 300Hz

MARK FREQUENCY

Function: Sets the mark frequency for RTTY mode.
Available Values: 1275 / 2125 (Hz)
Default Setting: 2125Hz

SHIFT FREQUENCY

Function: Sets the shift width for RTTY mode.
Available Values: 170 / 200 / 425 / 850 (Hz)
Default Setting: 170Hz

POLARITY TX

Function: Sets the shift direction for transmitting in RTTY mode.
Available Values: NOR / REV
Default Setting: NOR
Description:
NOR: The space frequency will be lower than the mark frequency.
REV: The mark frequency will be lower than the space frequency

RADIO SETTING
- DIGITAL -

DIGITAL POPUP

Function: Set the time duration to display the remote station information (such as the call sign) on the LCD.
Available Values: OFF / 2 - 60 (sec) / CONTINUE
Default Setting: 10 sec
Description:
OFF: The remote station information is not displayed.
2 - 60 (sec): Set the time duration to display the remote station information.
CONTINUE: The remote station information is continuously displayed.

LOCATION SERVICE

Function: Set whether to transmit this station position in digital mode.
Available Values: OFF / ON
Default Setting: ON

STANDBY BEEP

Function: Set whether or emit the standby beep sound when the remote station completes transmission.
Available Values: OFF / ON
Default Setting: ON

DP-ID LIST

The DP-ID list is displayed.
For details, see “Digital Personal ID (DP-ID) feature” (see page 16).

RADIO ID

Display of RADIO ID.
Description: In the GM function, each transceiver transmits its own ID along with the call sign.
RADIO ID is a 5-digit code consisting of alphanumeric characters that are written into the transceiver during factory production.
The RADIO ID cannot be edited.

CW SETTING
- MODE CW -

AF TREBLE GAIN

Function: Sets the amount of gain in the treble range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the treble range can be set in the range of -20 to +10.

AF MIDDLE TONE GAIN

Function: Setting the amount of gain in the middle range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the middle range can be set in the range of -20 to +10.

AF BASS GAIN

Function: Setting the amount of gain in the bass range of the received audio.
Available Values: -20 to +10
Default Setting: 0
Description: The amount of gain in the bass range can be set in the range of -20 to +10.

AGC FAST DELAY

Function: Sets the AGC-FAST DELAY voltage decay characteristics for CW mode.
Available Values: 20 - 4000msec
Default Setting: 160msec
Description: Sets the AGC voltage decay characteristics in 20 msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC MID DELAY

Function: Sets the AGC-MID DELAY voltage decay characteristics for CW mode.
Available Values: 20 - 4000msec
Default Setting: 500msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

AGC SLOW DELAY

Function: Sets the AGC-SLOW DELAY voltage decay characteristics for CW mode.
Available Values: 20 - 4000msec
Default Setting: 1500msec
Description: Sets the AGC voltage decay characteristics in 20msec steps after the input signal level becomes lower than the AGC detection level and the HOLD time has expired.

LCUT FREQ

Function: Sets the low-frequency cutoff audio filter in CW mode.
Available Values: OFF / 100Hz - 1000Hz
Default Setting: 250Hz
Description: The cutoff frequency can be set at 50Hz increments between 100Hz and 1000Hz.

LCUT SLOPE

Function: Sets the slope of the low-frequency cutoff audio filter in CW mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 18dB/oct

HCUT FREQ

Function: Sets the high-frequency cutoff audio filter in CW mode.
Available Values: 700Hz - 4000Hz / OFF
Default Setting: 1200Hz
Description: The cutoff frequency can be set at 50Hz increments between 700Hz and 4000Hz.

HCUT SLOPE

Function: Sets the slope of the high-frequency cutoff audio filter in CW mode.
Available Values: 6dB/oct / 18dB/oct
Default Setting: 18dB/oct

USB OUT LEVEL

Function: Sets the level of the receive CW signal output from the USB jack.
Available Values: 0 - 100
Default Setting: 50

RPTT SELECT

Function: Sets the PTT control for the CW transmit signal.
Available Values: OFF / RTS / DTR
Default Setting: OFF
Description:
OFF: No PTT control.
RTS: Controls the CW transmit signal from the USB virtual COM/RTS ports.
DTR: Controls the CW transmit signal from the USB virtual COM/DTR ports.

NAR WIDTH

Function: Sets the IF BANDWIDTH of the digital filter when the [NAR] key is pressed in CW mode.
Available Values: 50 / 100 / 150 / 200 / 250 / 300 / 350 / 400 / 450 / 500 / 600 / 800 / 1200 / 1400 / 1700 / 2000 / 2400 / 3000 / 3200 / 3500 / 4000 (Hz)
Default Setting: 250Hz

PC KEYING

Function: Sets the RTTY/DATA jack for PC keying.
Available Values: OFF / RTS / DTR
Default Setting: OFF
Description:
OFF: Disables PC keying from DATA PTT (pin 3) of the RTTY/DATA jack.
RTS: Controls the transmit from the USB virtual COM/RTS ports.
DTR: Controls the transmit from the USB virtual COM/DTR ports.

CW BK-IN TYPE

Function: Sets the CW brake-in function.
Available Values: SEMI / FULL
Default Setting: SEMI
Description:
SEMI: A brief delay is provided after the CW keying operation, before the transceiver returns to receive mode.
The receiver recovery time may be changed using “CW BK-IN DELAY”.
FULL: The transceiver immediately returns to receive mode after every CW key-up (QSK mode).

CW FREQ DISPLAY

Function: Sets the PITCH frequency offset.
Available Values: DIRECT FREQ / PITCH OFFSET
Default Setting: PITCH OFFSET
Description: Sets the displayed frequency offset when switching the transceiver mode between SSB and CW.
DIRECT FREQ: Displays the same frequency in CW mode as in SSB mode without any offset added.
PITCH OFFSET: Displays the frequency in CW mode with the pitch offset added. When CW BFO is set to USB, the displayed frequency will be increased and when CW BFO is set to LSB, the displayed frequency will be decreased with pitch offset added.

QSK DELAY TIME

Function: Sets the time delay before transmitting the keying signal.
Available Values: 15 / 20 / 25 / 30 msec
Default Setting: 15 msec
Description: The QSK mode delay time before transmitting the CW signal may be set in 5msec steps.
Notes:
• When the keying speed of the CW is “45 wpm” or more, delay time will be “15 msc” regardless of the delay time setting.
• This setting is valid in all communication modes and the set TX delay time works effectively for the TX GND pin of the LINEAR jack on the Field head rear panel.

CW INDICATOR

Function: Bar display settings shown below the filter function display in CW mode.
Available Values: OFF / ON
Default Setting: ON
Description: In CW mode, the bar shown below the filter function display may be set to ON or OFF.

CW SETTING
- KEYER -

KEYER TYPE

Function: Selects the desired keyer operation mode for the device connected to the rear panel KEY jack.
Available Values: OFF / BUG / ELEKEY-A / ELEKEY-B / ELEKEY-Y / ACS
Default Setting: ELEKEY-B
Description:
OFF: Disables the keyer function.
BUG: Functions as a “BUG key”. Only the “Dot” side is automatically generated (the “Dash” side is generated manually).
ELEKEY-A: A code element (“Dot” or “Dash” side) is transmitted upon pressing both sides of the paddle.
ELEKEY-B: Pressing both sides of the paddle transmits the currently generated “Dash” side followed by “Dot” side (or reverse order).
ELEKEY-Y: Pressing both sides of the paddle transmits the currently generated “Dash” side followed by “Dot” side (or reverse order).
While transmitting the “Dash” side, the first transmitted “Dot” side will not be stored.
ACS: Functions as the “Keyer with automatic spacing control feature” which sets spacing between characters precisely to be the same length as a dash (three dots in length).

KEYER DOT/DASH

Function: Selects the keyer paddle wiring configuration for the KEY jack on the front panel.
Available Values: NOR / REV
Default Setting: NOR
Description:
NOR: Tip = Dot, Ring = Dash, Shaft = Ground.
REV: Tip = Dash, Ring = Dot, Shaft = Ground.

CW WEIGHT

Function: Adjusts the keyer CW weight.
Available Values: 2.5 - 4.5
Default Setting: 3.0
Description: Sets the “Dot”:“Dash” ratio for the built-in electronic keyer.

NUMBER STYLE

Function: Selects the contest number “Cut” format for an imbedded contest number.
Available Values: 1290 / AUNO / AUNT / A2NO / A2NT / 12NO / 12NT
Default Setting: 1290
Description: Abbreviates numbers “One”, “Two”, “Nine” and “Zero” using Morse code when sending the contest number.
1290: Does not abbreviate the contest number.
AUNO: Abbreviates to “A” for “One”, “U” for “Two”, “N” for “Nine”, and “O” for “Zero”.
AUNT: Abbreviates to “A” for “One”, “U” for “Two”, “N” for “Nine”, and “T” for “Zero”.
A2NO: Abbreviates to “A” for “One”, “N” for “Nine”, and “O” for “Zero”. Does not abbreviate number “Two”.
A2NT: Abbreviates to “A” for “One”, “N” for “Nine”, and “T” for “Zero”. Does not abbreviate number “Two”.
12NO: Abbreviates to “N” for “Nine”, and “O” for “Zero”. Does not abbreviate numbers “One” and “Two”.
12NT: Abbreviates to “N” for “Nine”, and “T” for “Zero”. Does not abbreviate numbers “One” and “Two”.

CONTEST NUMBER

Function: Enters the initial contest number that will increment/decrement each time the CW message is sent during contest QSOs.
Available Values: 1 - 9999
Default Setting: 1

CW MEMORY 1 - 5

Function: Selects the registration method for the contest keyer “CW MEMORY 1” to “CW MEMORY 5”.
Available Values: TEXT / MESSAGE
Default Setting: TEXT
Description:
TEXT: The touch panel to enter text.
MESSAGE: Use the keyer to register text to the contest memory keyer.

REPEAT INTERVAL

Function: Sets the interval time between each repition of the beacon message.
Available Values: 1 - 60 (sec)
Default Setting: 5 sec
Description: Set the interval for transmitting the CW code registered in the contest memory keyer as a beacon.
On the “CW MESSAGE MEMORY” screen, press and hold the number registered with the code to be sent.
The CW Morse code message will be transmitted at the set intervals.

OPERATION SETTING
- GENERAL -

BEEP LEVEL

Function: Sets the beep volume level.
Available Values: 0 - 100
Default Setting: 30
Description: The higher the setting, the louder the sound becomes.

RF/SQL VR

Function: Selects the operation mode of the RF/SQL knob.
Available Values: RF / SQL / AUTO
Default Setting: AUTO
Description:
RF: Functions as the RF gain adjustment knob.
SQL: Functions as the Squelch level adjustment knob.
AUTO: Functions as the squelch level adjustment knob in FM, FM-N, DATA-FM and D-FMN modes, and as the RF gain adjustment knob in other modes.

TUN/LIN PORT SELECT

Function: Selects the function of the Field head TUNER/LINEAR terminal.
Available Values: OPTION / BAND DATA / CAT-3 / GPO
Default Setting: OPTION
Description: Select the antenna tuner to be used.
OPTION: Select this item when using an external antenna tuner (the optional FC-80, SPA-1).
BAND DATA: Select this item when using a Power Amplifier.
CAT-3: Select this item when used as a CAT terminal.
GPO: H/L signal is output by CAT command “GP”.

TUNER SELECT

Function: External antenna tuner settings.
Available Values: OPTION / ATAS
Default Setting: OPTION
Description: Select the antenna tuner to be used.
OPTION: Select this item when using an external antenna tuner (the optional FC-80, etc.).
ATAS: Select this item when using the active tuning antenna system ATAS-120A.

CAT-1 RATE

Function: Sets the baud rate for a CAT command input of the USB jack (Enhanced COM Port).
Available Values: 4800 / 9600 / 19200 / 38400 / 115200 bps
Default Setting: 38400 bps

CAT-1 TIME OUT TIMER

Function: Sets the Time-Out Timer for a CAT command input.
Available Values: 10 / 100 / 1000 / 3000 (msec)
Default Setting: 10msec
Description: Sets the Time-Out Timer countdown time for a CAT command input of the USB jack (Enhanced COM Port).

CAT-1 CAT-3 STOP BIT

Function: Stop bit setting when operating with CAT-1 and CAT-3. The stop bit of CAT-2 is “1bit” and cannot be “2bit”.
Available Values: 1bit / 2bit
Default Setting: 1bit

CAT-2 RATE

Function: Sets the baud rate for a CAT-2 command input of the USB jack (Standard COM Port).
Available Values: 4800 / 9600 / 19200 / 38400 / 115200 bps
Default Setting: 4800 bps

CAT-2 TIME OUT TIMER

Function: Sets the Time-Out Timer for a CAT-2 command input.
Available Values: 10 / 100 / 1000 / 3000 (msec)
Default Setting: 10msec
Description: Sets the Time-Out Timer countdown time for a CAT-2 command input of the USB jack (Standard COM Port).

CAT-3 RATE

Function: Sets the baud rate for a CAT-3 command input of the TUNER/LINEAR jack.
Available Values: 4800 / 9600 / 19200 / 38400 / 115200 bps
Default Setting: 38400 bps

CAT-3 TIME OUT TIMER

Function: Sets the Time-Out Timer for a CAT-3 command input.
Available Values: 10 / 100 / 1000 / 3000 (msec)
Default Setting: 10 msec
Description: Sets the Time-Out Timer countdown time for a CAT-3 command input of the TUNER/LINEAR jack.

TX TIME OUT TIMER

Function: Sets the Time-Out Timer countdown time.
Available Values: OFF / 1 - 30 min
Default Setting: OFF
Description: When the time-out timer function is active, a beep is emitted when a continuous transmission nears the set time. About 10 seconds later, the transceiver is forced to return to the receiving mode.

REF FREQ FINE ADJ

Function: Adjusts the reference oscillator.
Available Values: -25 - 0 - 25
Default Setting: 0
Description: The frequency may be calibrated by connecting a frequency counter to the transceiver, or by receiving a standard frequency such as WWV or WWVH.

CHARGE CONTROL

Function: Set whether to charge the battery (SBR-52LI) when the transceiver is turned ON.
Available Values: OFF / ON
Default Setting: ON

SUB BAND MUTE

Function: While receiving signals in the MAIN-side and SUB-side at the same time, the SUB-side can be automatically muted or not muted.
Available Values: OFF / ON
Default Setting: OFF (Disable the muting audio.)

SPEAKER SELECT

Function: Speaker operation settings when external speakers are connected.
Available Values: Auto / INT / BOTH
Default Setting: BOTH
Auto: The received audio is heard only through the External speaker.
INT: The received audio is heard from only the Internal speaker.
BOTH: The received audio is heard from both the Internal speaker and the External speaker.

DITHER

Function: Enable/Disable the dithering.
Available Values: OFF / ON
Default Setting: ON

OPERATION SETTING
- BAND/SCAN -

QMB CH

Function: Number of channels setting of the Quick Memory bank.
Available Values: 5ch / 10ch
Default Setting: 5ch
Description: Set the number of channels that can be registered in the Quick Memory Bank.

BAND STACK

Function: Enable/Disable the band stack function.
Available Values: OFF / ON
Default Setting: ON
Description:
ON: Enable the band stack function.
OFF: Disable the band stack function.

BAND EDGE

Function: Sets the frequency tuning range while operating in VFO mode.
Available Values: OFF / ON
Default Setting: OFF
Description:
ON: Tuning continues to the other end of the current band when reaching the end of the band.
OFF: Tuning continues to the next band when reaching the end of a band.

SCAN RESUME

Function: Set the time interval to resume scanning after a received signal ends during scanning.
Available Values: BUSY / HOLD / 1sec / 3sec / 5sec
Default Setting: BUSY
Description:
BUSY: Continue receiving the frequency until the signal disappears.
HOLD: Stop scanning and receive that frequency.
1sec / 3sec / 5sec: Restart scanning after receiving the frequency for the set amount of time.

OPERATION SETTING
- RX DSP -

IF NOTCH WIDTH

Function: Sets the attenuation bandwidth characteristic of the DSP IF notch filter.
Available Values: NARROW / WIDE
Default Setting: WIDE
Description: Sets the attenuation bandwidth characteristic setting of the DSP IF notch filter to “NARROW” or “WIDE”.

NB REJECTION

Function: Selects the level of noise attenuation.
Available Values: LOW / MID / HIGH
Default Setting: MID

NB WIDTH

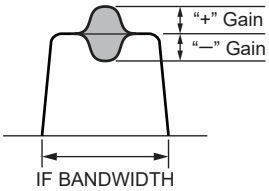
Function: Sets the duration of the noise blanking pulse to match various types of noise compatible with the noise blanker function.
Available Values: NARROW / MEDIUM / WIDE
Default Setting: MEDIUM
Description: Reduces long duration noise as well as pulse noise by changing the setting.

APF WIDTH

Function: Sets the bandwidth of the Audio Peak Filter.
Available Values: NARROW / MEDIUM / WIDE
Default Setting: MEDIUM
Description: In CW mode the APF peak center frequency is set according to the CW PITCH frequency and the chosen APF bandwidth value. In order to listen to the desired signal comfortably, select one of the three bandwidths of the peak filter.

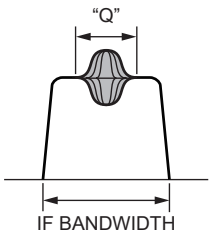
CONTOUR LEVEL

Function: Adjusts the GAIN of the CONTOUR circuit.
Available Values: -40 - 0 - 20
Default Setting: -15



CONTOUR WIDTH

Function: Sets the bandwidth (“Q”) of the CONTOUR circuit.
Available Values: 1 - 11
Default Setting: 10



OPERATION SETTING
- TX AUDIO -

AMC RELEASE TIME

Function: AMC level adjustment tracking speed setting
Available Values: FAST / MID / SLOW
Default Setting: MID
Description: Set the input audio level tracking speed of the AMC function.

PRMTRC EQ1 FREQ

Function: Sets the center frequency of the low range for the 3 band parametric microphone equalizer.
Available Values: OFF / 100 - 700 (Hz)
Default Setting: OFF
Description: Selects the center frequency setting of the low range of the 3 Band Parametric Microphone Equalizer in 100Hz steps between “100Hz” and “700Hz”.

PRMTRC EQ1 LEVEL

Function: Sets the gain for the low range of the 3 Band Parametric Microphone Equalizer.
Available Values: -20 - 0 - 10 (dB)
Default Setting: 5
Description: Selects the gain setting for the low range of the 3 Band Parametric Microphone Equalizer between “-20 dB” and “+10 dB”.

PRMTRC EQ1 BWTH

Function: Sets the width (“Q”) for the low range of the 3 Band Parametric Microphone Equalizer.
Available Values: 0 - 10
Default Setting: 10
Description: Selects the width (Q) setting for the low range for the 3 Band Parametric Microphone Equalizer between “0” and “10”.

PRMTRC EQ2 FREQ

Function: Sets the center frequency for the middle range of the 3 Band Parametric Microphone Equalizer.
Available Values: OFF / 700 - 1500 (Hz)
Default Setting: OFF
Description: Selects the center frequency setting for the middle range of the 3 Band Parametric Microphone Equalizer in 100Hz steps between “700Hz” and “1500Hz”.

PRMTRC EQ2 LEVEL

Function: Sets the gain for the middle range of the 3 Band Parametric Microphone Equalizer.
Available Values: -20 - 0 - 10 (dB)
Default Setting: 5
Description: Selects the gain setting for the middle range of the 3 Band Parametric Microphone Equalizer between “−20 dB” and “+10 dB”.

PRMTRC EQ2 BWTH

Function: Sets the width (“Q”) for the middle range of the 3 Band Parametric Microphone Equalizer.

Available Values: 0 - 10

Default Setting: 10

Description: Selects the width (“Q”) setting for the middle range of the 3 Band Parametric Microphone Equalizer between “0” and “10”.

PRMTRC EQ3 FREQ

Function: Sets the center frequency for the high range of the 3 Band Parametric Microphone Equalizer.

Available Values: OFF / 1500 - 3200 (Hz)

Default Setting: OFF

Description: Selects the center frequency setting for the high range of the 3 Band Parametric Microphone Equalizer in 100Hz steps between “1500Hz” and “3200Hz”.

PRMTRC EQ3 LEVEL

Function: Sets the gain for the high range of the 3 Band Parametric Microphone Equalizer.

Available Values: -20 - 0 - 10 (dB)

Default Setting: 5

Description: Selects the gain setting for the high range of the 3 Band Parametric Microphone Equalizer between “-20 dB” and “+10 dB”.

PRMTRC EQ3 BWTH

Function: Sets the width (“Q”) for the high range of the 3 Band Parametric Microphone Equalizer.

Available Values: 0 - 10

Default Setting: 10

Description: Selects the width (“Q”) setting for the high range of the 3 Band Parametric Microphone Equalizer between “0” and “10”.

P PRMTRC EQ1 FREQ

Function: Sets the center frequency of the low range for the 3 Band Parametric Microphone Equalizer when the Speech Processor is activated.

Available Values: OFF / 100 - 700 (Hz)

Default Setting: OFF

Description: Activates when the Speech Processor is “ON”, and selects the center frequency setting for the low range of the 3 Band Parametric Microphone Equalizer in 100Hz steps between “100Hz” and “700Hz”.

P PRMTRC EQ1 LEVEL

Function: Sets the gain for the low range of the 3 Band Parametric Microphone Equalizer when the Speech Processor is activated.

Available Values: -20 - 0 - 10 (dB)

Default Setting: 0

Description: Activates when the Speech Processor is “ON” and selects the gain setting for the low range of the 3 Band Parametric Microphone Equalizer between “-20 dB” and “+10 dB”.

P PRMTRC EQ1 BWTH

Function: Sets the width (“Q”) for the low range of the 3 Band Parametric Microphone Equalizer when the Speech Processor is activated.

Available Values: 0 - 10

Default Setting: 2

Description: Activates when the Speech Processor is “ON”, and selects the width (“Q”) setting for the low range of the 3 Band Parametric Microphone Equalizer between “0” and “10”.

P PRMTRC EQ2 FREQ

Function: Sets the center frequency for the middle range of the 3 Band Parametric Microphone Equalizer when the Speech Processor is activated.

Available Values: OFF / 700 - 1500 (Hz)

Default Setting: OFF

Description: Activates when the Speech Processor is “ON”, and selects the center frequency setting for the middle range of the 3 Band Parametric Microphone Equalizer in 100Hz steps between “700Hz” and “1500Hz”.

P PRMTRC EQ2 LEVEL

Function: Sets the gain for the middle range of the 3 Band Parametric Microphone Equalizer when the Speech Processor is activated.

Available Values: -20 - 0 - 10 (dB)

Default Setting: 0

Description: Activates when the Speech Processor is “ON”, and selects the gain setting for the middle range of the 3 Band Parametric Microphone Equalizer between “-20 dB” and “+10 dB”.

P PRMTRC EQ2 BWTH

Function: Sets the width (“Q”) for the middle range of the 3 Band Parametric Microphone Equalizer when the Speech Processor is activated.

Available Values: 0 - 10

Default Setting: 1

Description: Activates when the Speech Processor is “ON”, and selects the width (“Q”) setting for the middle range of the 3 Band Parametric Microphone Equalizer between “0” and “10”.

P PRMTRC EQ3 FREQ

Function: Sets the center frequency for the high range of the 3 Band Parametric Microphone Equalizer when the Speech Processor is activated.

Available Values: OFF/1500 - 3200 (Hz)

Default Setting: OFF

Description: Activates when the Speech Processor is “ON”, and selects the center frequency setting for the high range of the 3 Band Parametric Microphone Equalizer in 100Hz steps between “1500Hz” and “3200Hz”.

P PRMTRC EQ3 LEVEL

Function: Sets the gain for the high range of the 3 Band Parametric Microphone Equalizer when the Speech Processor is activated.

Available Values: -20 - 0 - 10 (dB)

Default Setting: 0

Description: Activates when the Speech Processor is “ON”, and selects the gain setting for the high range of the 3 Band Parametric Microphone Equalizer between “-20 dB” and “+10 dB”.

P PRMTRC EQ3 BWTH

Function: Sets the width (“Q”) for the high range of the 3 Band Parametric Microphone Equalizer when the Speech Processor is activated.

Available Values: 0 - 10

Default Setting: 1

Description: Activates when the Speech Processor is “ON”, and selects the width (‘Q”) setting for the high range of the 3 Band Parametric Microphone Equalizer between “0” and “10”.

OPERATION SETTING
- TX GNRL -

MAX POWER(BAT)

Function: Sets the transmit RF power output when using the SBR-52LI for operation.
Available Values: 0.5 - 6.0W
Default Setting: 6.0W

QRP MODE

Function: To set the maximum transmission output to “5W” on all bands.
Available Values: OFF / ON
Default Setting: **OFF**

HF MAX POWER

Function: Sets the transmit RF power output of the HF band for the FTX-1 Field.
Available Values: 0.5 - 10.0W
Default Setting: 10.0W

50M MAX POWER

Function: Sets the transmit RF power output of the 50 MHz band for the FTX-1 Field.
Available Values: 0.5 - 10.0W
Default Setting: 10.0W

70M MAX POWER

Function: Sets the transmit RF power output of the 70 MHz band for the FTX-1 Field.
Available Values: 0.5 - 6.0W
Default Setting: 6.0W

144M MAX POWER

Function: Sets the transmit RF power output of the 144 MHz band for the FTX-1 Field.
Available Values: 0.5 - 10.0W
Default Setting: 10.0W

430M MAX POWER

Function: Sets the transmit RF power output of the 430 MHz band for the FTX-1 Field.
Available Values: 0.5 - 10.0W
Default Setting: 10.0W

AM HF/50 MAX POWER

Function: Sets the transmit RF power output of the AM mode for HF and 50 MHz band for the FTX-1 Field.
Available Values: 0.5 - 2.5W
Default Setting: 2.5W

AM V/U MAX POWER

Function: Sets the transmit RF power output of the AM mode for 144 MHz and 430 MHz band for the FTX-1 Field.
Available Values: 0.5 - 2.5W
Default Setting: 2.5W

VOX SELECT

Function: Selects the function of the VOX operation.
Available Values: MIC / USB / BLUETOOTH
Default Setting: MIC
Description:
MIC: Operates via input from the MIC jack (microphone).
USB: Operates via input from the USB jack.
BLUETOOTH: Operates via input from the Bluetooth.

EMERGENCY FREQ TX

Function: Enables TX/RX operation on the Alaska Emergency Channel, 5167.5kHz.
Available Values: OFF / ON
Default Setting: OFF
Description: When this Menu Item is set to “ON”, the spot frequency of 5167.5 kHz will be enabled.
Important: The use of this frequency is restricted to stations operating in or near Alaska, and only for emergency purposes (never for routine operations). See §97.401(c) of the FCC regulations.

TX INHIBIT

Function: Enable/Disable the TX INHIBIT function.
Available Values: OFF / ON
Default Setting: OFF
Description:
ON: Enable the TX INHIBIT function.
OFF: Disable the TX INHIBIT function.

METER DETECTOR

Function: Setting of the PO meter display.
Available Values: AVERAGE / PEAK
Default Setting: AVERAGE
Description: Select the transmit power output indication method.
AVERAGE: Displays the average transmit power.
(Even if the transmit power is 10W, the meter rarely swings to 10W.)
PEAK: Displays the maximum transmit power.
(When the transmit output power is 10W, the meter swings up to 10W.)

OPERATION SETTING
- KEY/DIAL -

SSB/CW DIAL STEP

Function: Setting of the MAIN/SUB dial tuning speed in the SSB and CW mode.
Available Values: 5 / 10 / 20 (Hz)
Default Setting: 20Hz

RTTY/PSK DIAL STEP

Function: Setting of the MAIN/SUB dial knob tuning speed in the RTTY and PSK mode.
Available Values: 5 / 10 / 20 (Hz)
Default Setting: 10Hz

FM DIAL STEP

Function: Setting of the MAIN/SUB dial knob tuning speed in the FM mode.
Available Values: 5 / 10 / 20 (Hz) / Auto
Default Setting: Auto

CH STEP

Function: Selects the tuning steps for the MAIN/SUB dial knob.
Available Values: 1 / 2.5 / 5 / 10 (kHz)
Default Setting: 10kHz

AM CH STEP

Function: Selects the tuning steps for the MAIN/SUB dial knob in the AM mode.
Available Values: 2.5 / 5 / 9 / 10 / 12.5 / 25 (kHz)
Default Setting: 5kHz

FM CH STEP

Function: Selects the tuning steps for the MAIN/SUB dial knob in the FM mode.
Available Values: 5 / 6.25 / 10 / 12.5 / 20 / 25 (kHz)
Default Setting: 5kHz

MAIN STEPS PER REV.

Function: Setting the steps per rotation of the MAIN dial.
Available Values: 50 / 100 / 200
Default Setting: 200

MIC P1 - MIC P4

Function: The functions of the [P1] / [P2] / [P3] / [P4] keys can be assigned the other functions.
Available Values: LOCK / QMB / >< / V_M / TUNER / VOX_MOX / MODE / ZIN_SPOT / SPLIT / FINE / NAR / NB / DNR / FREQ UP / FREQ DOWN / BAND UP / BAND DOWN / ATT / IPO / DNF / AGC /
Default Setting:
MIC P1: LOCK
MIC P2: QMB
MIC P3: BAND UP
MIC P4: V/M

MIC UP

Function: The functions of the [UP] key of the supplied microphone can be assigned the other functions.
Available Values: Same as MIC P1 to MIC P4.
Default Setting: FREQ UP

MIC DOWN

Function: The functions of the [DWN] key of the supplied microphone can be assigned the other functions.
Available Values: Same as MIC P1 to MIC P4.
Default Setting: FREQ DOWN

MIC SCAN

Function: Activates the microphone automatic scanning function.
Available Values: OFF / ON
Default Setting: ON
Description: Sets the operation of the UP/DWN keys on the microphone.
ON: Starts scanning automatically by pressing and holding the UP/DWN key for 1 second or more (Scanning continues even after releasing the button). To stop scanning, press the UP/DWN key again briefly or press the PTT button to transmit.
OFF: Scans only while pressing and holding the UP/DWN key. To stop scanning, release the button.

OPERATION SETTING
- OPTION -

TUNER TYPE SEL ANT1

Function: Internal and external antenna tuner settings of the ANT1 connector.
Available Values: INT / INT(FAST) / EXT / ATAS
Default Setting: INT
Description: Select the antenna tuner to be used of the ANT1 connector.
INT: Select this item when using the internal antenna tuner. (An external antenna tuner cannot be used.)
INT(FAST): Select this item when using the internal antenna tuner. Tuning is performed at a higher speed than normal, although accuracy is slightly reduced. (An external antenna tuner cannot be used.)
EXT: Select this item when using an external antenna tuner (the optional FC-40, etc.).
ATAS: Select this item when using the active tuning antenna system ATAS-120A.

TUNER TYPE SEL ANT2

Function: Internal and external antenna tuner settings of the ANT2 connector.
Available Values: INT / INT(FAST) / EXT / ATAS
Default Setting: INT
Description: Select the antenna tuner to be used of the ANT2 connector.
INT: Select this item when using the internal antenna tuner. (An external antenna tuner cannot be used.)
INT(FAST): Select this item when using the internal antenna tuner. Tuning is performed at a higher speed than normal, although accuracy is slightly reduced. (An external antenna tuner cannot be used.)
EXT: Select this item when using an external antenna tuner (the optional FC-40, etc.).
ATAS: Select this item when using the active tuning antenna system ATAS-120A.

ANT2 OPERATION

Function: Selects the operation mode of the ANT2 connector.
Available Values: TRX / TX-ANT1,RX-ANT2 / TRX-ANT1,RX-ANT2
Default Setting: TRX

	TX Antenna (output)	RX Antenna (input)
TRX	ANT2	
TX-ANT1, RX-ANT2	ANT1	ANT2
TRX-ANT1, RX-ANT2	ANT1	ANT1 / ANT2

HF ANT SELECT

Function: Select the antenna connector to be used on HF/50MHz, either “ANT1” or “ANT2”.
Available Values: ANT1 / ANT2
Default Setting: ANT1

HF MAX POWER

Function: Sets the transmit RF power output of the HF band for the FTX-1 optima or FTX-1 Field with the SPA-1.
Available Values: 5 - 100W
Default Setting: 100W

50M MAX POWER

Function: Sets the transmit RF power output of the 50 MHz band for the FTX-1 optima or FTX-1 Field with the SPA-1.
Available Values: 5 - 100W
Default Setting: 100W

70M MAX POWER

Function: Sets the transmit RF power output of the 70 MHz band for the FTX-1 optima or FTX-1 Field with the SPA-1.
Available Values: 5 - 50W
Default Setting: 50W

144M MAX POWER

Function: Sets the transmit RF power output of the 144 MHz band for the FTX-1 optima or FTX-1 Field with the SPA-1.
Available Values: 5 - 50W
Default Setting: 50W

430M MAX POWER

Function: Sets the transmit RF power output of the 430 MHz band for the FTX-1 optima or FTX-1 Field with the SPA-1.
Available Values: 5 - 50W
Default Setting: 50W

AM MAX POWER

Function: Sets the transmit RF power output of the AM mode for the FTX-1 optima or FTX-1 Field with the SPA-1.
Available Values: 5 - 25W
Default Setting: 25W

AM V/U MAX POWER

Function: Sets the transmit RF power output of the AM mode for 144 MHz and 430 MHz band for the FTX-1 optima or FTX-1 Field with the SPA-1.
Available Values: 5 - 13W
Default Setting: 13W

GPS

Function: ON/OFF setting for the GPS function.
Available Values: OFF / ON
Default Setting: ON

GPS PINNING

Function: Select the pinning item of the GPS function.
Available Values: OFF / ON
Default Setting: ON
ON: The latitude and longitude data is fixed when the movement speed of this device is 0.
OFF: The latitude and longitude are constantly calculated when the movement speed of this device is 0.

GPS BAUDRATE

Function: Sets the GPS baud rate.
Available Values: 4800bps / 9600bps / 19200bps / 38400bps / 115200bps
Default Setting: 9600bps

BLUETOOTH

Make Bluetooth settings and connect to the optional Bluetooth Headset SSM-BT20.
For details, see “Bluetooth Operation” (see page 7).

DISPLAY SETTING
- DISPLAY -

MY CALL

Function: Programs a Call Sign or Name.
Available Values: Up to 10 alphanumeric characters
Default Setting: FTX-1
Description: Set characters to be displayed on the power ON opening screen.

MY CALL TIME

Function: Set the time for displaying characters registered in “MY CALL”.
Available Values: OFF / 1 / 2 / 3 / 4 / 5 (sec)
Default Setting: 1sec
Description: Set the time “My Call is displayed on the opening screen after power ON.

POP-UP TIME

Function: Sets the display time of the pop-up screen when setting various functions
Available Values: FAST / MID / SLOW
Default Setting: MID
Description:
FAST: Pop-up screen display time is shorter than normal.
MID: Pop-up screen display time is normal.
SLOW: Pop-up screen display time is longer than normal.

SCREEN SAVER

Function: Time setting before the screen saver to activate.
Available Values: OFF / 1 / 2 / 5 / 15 / 30 / 60 (min)
Default Setting: 60min
Description: If the transceiver is not operated for the set time, a screen saver will activate to prevent TFT screen burn-in.

SCREEN SAVER(BAT)

Function: Time setting before the screen saver activates when using the SBR-52LI for operation.
Available Values: OFF / 1 / 2 / 5 / 15 / 30 / 60 (min)
Default Setting: 5min
Description: If the transceiver is not operated for the set time when using battery (SBR-52LI) power, a screen saver will activate to prevent TFT screen burn-in.

SAVER TYPE

Function: Sets the Screen Saver type.
Available Values: Logo / DIMMER / DISP OFF
Default Setting: DISP OFF
Description:
Logo: The “YAESU” logo appears.
DIMMER: The screen dims.
DISP OFF: The screen turns OFF.

AUTO POWER OFF

Function: The transceiver can be set to automatically power OFF when there is no operation for a period.
Available Values: OFF / 0.5 to 12.0 (hour)
Default Setting: OFF

LED DIMMER

Function: Sets the key LED brightness level.
Available Values: OFF / 1 - 20
Default Setting: 20
Description: The higher the setting, the brighter the illumination becomes.

DISPLAY SETTING
- UNIT -

POSITION UNIT

Function: Unit display of minute of Longitude/Latitude (dd°mm'ss" can be changed. mm' is displayed in 1/100 minute and ss" in seconds.
Available Values: MM.MM / MM.ss
Default Setting: MM.MM

DISTANCE UNIT

Function: Set the measurement unit for distance.
Available Values: km / mile
Default Setting: mile

SPEED UNIT

Function: Set the measurement unit for speed.
Available Values: km/h / knot / mph
Default Setting: mph

ALTITUDE UNIT

Function: Set the measurement unit for altitude.
Available Values: m / ft
Default Setting: ft

TEMP UNIT

Function: Set the measurement unit for temperature.
Available Values: °C / °F
Default Setting: °F

RAIN UNIT

Function: Set the measurement unit for precipitation.
Available Values: mm / INCH
Default Setting: INCH

WIND UNIT

Function: Set the measurement unit for Wind speed.
Available Values: m/s / mph
Default Setting: mph

DISPLAY SETTING
- SCOPE -

RBW

Function: Sets the resolution of Spectrum Scope display.
Available Values: HIGH / MID / LOW
Default Setting: HIGH
Description: When set to HIGH, the image is finely divided.

SCOPE CTR

Function: Sets the scope screen center and marker position.
Available Values: FILTER / CARRIER
Default Setting: CARRIER
Description:
FILTER: Relative to the center of the filter.
CARRIER: Based on signal carrier points.

2D DISP SENSITIVITY

Function: Change the Waterfall Display sensitivity.
Available Values: NORMAL / HI
Default Setting: HI
Description:
NORMAL: Display at normal sensitivity.
HI: Display at high sensitivity.

3DSS DISP SENSITIVITY

Function: Change the 3DSS Display sensitivity.
Available Values: NORMAL / HI
Default Setting: HI
Description:
NORMAL: Display at normal sensitivity.
HI: Display at high sensitivity.

AVERAGE

Function: Set the Scope display averaging function between 2 to 8, or OFF.
Available Values: OFF / 2 / 4 / 8
Default Setting: OFF
OFF: The Scope display refreshes at each sweep interval. Assists in displaying critical spectrum view information.
2 / 4 / 8: The Scope display averages 2 to 8 sweeps to smooth the spectrum view.

DISPLAY SETTING
- VFO IND COLOR -

VMI COLOR VFO

Function: Sets the color of VMI (VFO mode indicator) when operating on VFO mode.
Available Values: BLUE / GREEN / WHITE / NONE
Default Setting: BLUE

VMI COLOR MEMORY

Function: Sets the color of VMI (VFO mode indicator) when operating on Memory mode.
Available Values: BLUE / GREEN / WHITE / NONE
Default Setting: WHITE

VMI COLOR CLAR

Function: Sets the color of VMI (VFO mode indicator) when operating in Clarifier Function.
Available Values: RED / NONE
Default Setting: RED

EXTENSION SETTING
- DATA&TIME -

TIME ZONE

FUNCTION: Sets the time zone.
Available Values: -12.0 - 0.0 - +14.0
Default Setting: 0.0
Description: Sets the time difference with respect to the UTC (Coordinated Universal Time) in 30 minute increments.

DAY

Set the date (Day).

MONTH

Set the date (Month).

YEAR

Set the date (Year).

HOUR

Set the time (Hour).
Set to 24-hour format.

MINUTE

Set the time (Minute).

GPS TIME SET

FUNCTION: ON/OFF of the GPS time and date automatic acquisition function.
Available Values: AUTO / MANUAL
Default Setting: AUTO
Description:

AUTO: Time data for the internal clock is automatically obtained from the GPS function.

MANUAL: GPS time data is not used, and time set manually to the internal clock of this transceiver is prioritized.

EXTENSION SETTING - MY POSITION -

MY POSITION

Function: Setting the station position.
Available Values: GPS / MANUAL
Default Setting: GPS
Description: Set whether position information for your station is obtained via GPS, or manually entered.
GPS: Acquire the station position automatically via GPS.
MANUAL: Manually set the station position.

MY POSITION LATITUDE

Function: Setting the latitude of your station.

MY POSITION LONGTUDE

Function: Setting the longitude of your station.

EXTENSION SETTING
- SD CARD -

MEM LIST LOAD

Function: Load the Memory Channel information saved on the SD memory card into the transceiver.

MEM LIST SAVE

Function: Save the Memory Channel information to the SD memory card.

MENU LOAD

Function: Load the Setting Menu information saved on the SD memory card into the transceiver.

MENU SAVE

Function: Save the Setting Menu information to the SD memory card.

INFORMATIONS

Function: Display information from microSD Memory Card.
Description: Displays the total capacity and free space of the microSD Memory Card.

FIRMWARE UPDATE

Function: Update the firmware of the FTX-1.
Description: When a new firmware update for the FTX-1 is available, go to the YAESU web site to download the programming data and update the FTX-1 Firmware.

FORMAT

Function: Format (initialize) the microSD memory card.
Description: Format a microSD Memory Card for use with this transceiver.

EXTENSION SETTING
- SOFT VERSION -

SOFT VERSION

Description: Displays the software version.

EXTENSION SETTING
- CALIBRATION -

CALIBRATION

Function: Display touch position calibration.
Description: If the touch position and the operation are different, that is touch does not work or another function works, perform touch position calibration of the TFT display.

1. Select [CALIBRATION] then press the [**FUNC**] knob.
2. Touch [DONE].
3. Touch “+” at the top left of the display.
4. Touch “+” displayed at another place.
5. Repeat step 3 and finally touch “+” in the center of the display to complete the calibration.

EXTENSION SETTING
- RESET -

MEMORY CLEAR

Function: Memory reset
Description: Only the information stored in the Memory Channel is initialized (all erased).

The contents of the memory channel “M-001” will return to the initial setting “7.000.000 MHz, LSB” and cannot be deleted.

Memory information can be saved on the microSD card.

MENU CLEAR

Function: Setting Menu reset
Description: Only the contents of the Setting Menu is initialized (factory default).

Information in the setting menu can be saved on the microSD card.

ALL RESET

Function: ALL reset
Description: The Memory, Setting Menu and all other settings are initialized and set to the factory default.

APRS

The APRS of the transceiver is a communication system for data such as messages and station positions using the APRS format. Refer to the separate Operating Manual APRS Edition for details (download the manual from the YAESU website).

YAESU

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