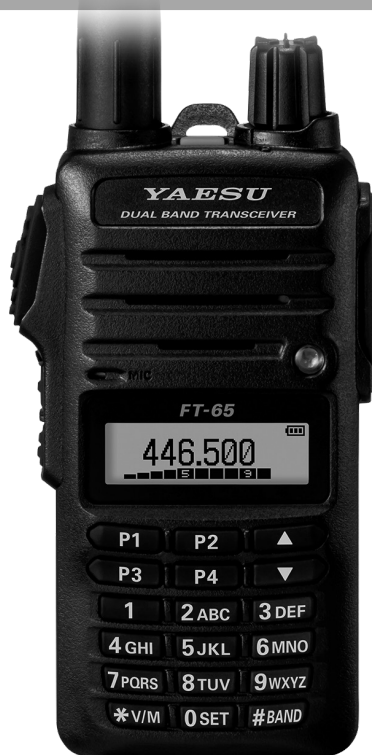



YAESU
The radio

144/430 MHz
DUAL BAND TRANSCEIVER

FT-65R
FT-65E

Advance Manual



Clicking (tapping) the  at the bottom right of the current browsing page, will return to the contents page at any time.





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About this manual

This manual provides information to assist in using the many FT-65R/E useful and convenient features.

Refer to this Advance Manual along with the Operating Manual.

This manual contains symbols and conventions to call attention to important information.

Symbols	Description
	This icon indicates cautions and alerts the user should be aware of.
	This icon indicates helpful notes, tips and information.
	This icon indicates other pages containing relevant information.

- The settings of the transceiver at the time of purchase are referred to as the “default” or “default setting”.
- The names of Set Mode items that are displayed on the LCD, and the transceiver key names, are presented in bold characters in this manual.



RF Squelch

A special RF Squelch feature may be set so that only signals exceeding a certain S-meter level will open the squelch.

1. Press and hold the **F** key to enter the Set Mode.
2. Press the [**▲**] or [**▼**] key to select Set Mode Item “**26 RF SQL**”.
3. Press the **F** key to enable adjustment of this item.
4. Press the [**▲**] or [**▼**] key to select the desired signal strength level for the squelch threshold (**S-1**, **S-2**, **S-3**, **S-4**, **S-5**, **S-6**, **S-8**, **S-FULL**, or **OFF**).
5. Press the **PTT** switch to save the new setting and return to normal operation.

26 RF SQL

→OFF



Checking the Battery Voltage

The **FT-65R/E** microprocessor includes programming which will measure the current battery voltage.

1. Press and hold the **F** key to enter the Set Mode.
2. Press the [**▲**] or [**▼**] key to select Set Mode Item "10 DC VOLT".
3. Press the **F** key to display the current DC Voltage.
4. Press the **PTT** switch to return to normal operation.

10 DC VOLT

7.4V



Also on turning the transceiver ON, the current battery voltage appears briefly.



VOX Operation (with earpiece mic or Internal / External mic)

The VOX system provides automatic transmit/receive switching based on voice input to a VOX compatible headset or internal/external microphone. With the VOX system enabled, you do not need to press the **PTT** switch in order to transmit.

1. Press and hold the **F** key to enter the Set Mode.
2. Press the [**▲**] or [**▼**] key to select Set Mode Item “**35 VOX**”.
3. Press the **F** key to enable adjustment of this item.
4. Press the [**▲**] or [**▼**] key to select “**VOX ON**” or “**VOX OFF (default setting)**”.
5. Press the **PTT** switch to save the new setting and return to normal operation.

When the VOX system is activated, the “**VOX**” icon will appear on the display.



35 VOX
→VOX ON



VFO Split Mode

When working on repeaters with odd splits, or communicating with astronauts on orbiting space vehicles, it may be necessary to use nonstandard splits between the receive and transmit frequencies. If the application is infrequent enough not to warrant the dedication of a memory channel for this purpose, the “VFO Split” mode may be used. Here is the procedure for going Split:

1. Turn the transceiver OFF.
2. Press and hold the **MONI/T.CALL** key and the **PTT** switch simultaneously, while turning the transceiver ON.

The Preferred Operating Mode will display on the LCD.

3. Press the [**▲**] or [**▼**] key to select Preferred Operating Mode Item “**F8:DUAL DISP**”.
4. Press the **F** key momentarily to activate the Dual Display Mode.
5. Press and hold the **F** key to enter the Set Mode.
6. Press the [**▲**] or [**▼**] key to select Set Mode Item “**34 VFO.SPL**”.
7. Press the **F** key to enable adjustment of this item.
8. Press the [**▲**] or [**▼**] key to select “**VSP.ON**”.
9. Press the **PTT** switch to save the new setting and return to normal operation.

34 VFO . SPL
→VSP . ON

10. Press the [***V/M**] key twice, as needed, to select VFO-A.
11. Set VFO-A for the desired receiving (downlink) frequency (e.g.145.800 MHz).
12. Press the [***V/M**] key to set VFO-B for desired transmit (uplink) frequency (e.g. 144.475 MHz).
13. Press the [***V/M**] key twice to re-establish VFO-A as the “Main” (receive) VFO.

The transceiver will now be operating in the Split mode.

14. When the **PTT** switch is pressed to transmit, VFO-A and VFO-B will reverse positions.

To modify the VFO-B (transmit) frequency (for Doppler Shift correction, etc.), just press the [***V/M**] key, make the necessary change, and then press the [***V/M**] key once more to restore VFO-A to the “receive VFO” position.



Using the Squelch Feature

Many repeater systems require a very-low-frequency audio tone be superimposed on the FM carrier in order to activate the repeater. This helps prevent false activation of the repeater by radar or spurious signals from other transmitters. This tone system, called “CTCSS” (Continuous Tone Coded Squelch System), is included in the **FT-65R/E**. The CTCSS is very easy to activate.

Selecting the Squelch Type

- Press the **F** key and, then the **[P3]** key to activate the Set Mode Item “**SQL TYPE**”.



It is the same as following steps to access the Set Mode.

Press and hold the **F** key → Press the **[▲]** or **[▼]** key to select Set Mode Item “**29 SQL TYPE**”

- Press the **[▲]** or **[▼]** key to select one of the modes described below.

SET : SQL TYPE
→OFF

Display	Description	
OFF (default setting)	Disables transmit/receive tone squelch function.	-
R-TONE	Enables receive only tone squelch function (the RTN icon appears on the LCD display).	-
T-TONE	Enables transmit only tone squelch function (the TTN icon appears on the LCD display).	-
TSQL	Enables the tone squelch receive function (the TSQ icon appears on the LCD display). Mutes the FT-65R/E receiver until it receives a call from another transceiver sent with a matching CTCSS tone.	-
REV TN	Enables the reverse tone squelch function (the blinking TSQ icon appears on the LCD display). Use to monitor communications based on the squelch control system in which a received signal containing the selected tone will be muted, and signals not containing the selected tone will be heard.	-
DCS	Enables the digital code squelch function (the DCS icon appears on the LCD display). Sends a DCS code signal when transmitting, and waits for a DCS code when receiving.	10
PAGER	Enables the pager function (the PER icon appears on the LCD display). When communicating via transceivers with your friends, specify personal codes (each code is composed of two tones) so that you can call only specific stations.	11

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



Using the Squelch Feature

Setting CTCSS Tone frequency

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

1. Press and hold the **F** key to enter the Set Mode.
2. Press the [▲] or [▼] key to select Set Mode Item "**8 CTCSS**"
3. Press the **F** key to enable adjustment of this item.
4. Press the [▲] or [▼] key to select the "**TX**" or "**RX**", then press the **F** key.

Display	Description	8 CTCSS TONE →TX: 100.0Hz RX: 100.0Hz
TX	To set the tone frequency on transmitting.	
RX	To set the tone frequency on receiving.	

5. Press the [▲] or [▼] key until the needed Tone Frequency is displayed. (Obtain the correct tone from the repeater owner/operator if you don't know it).

CTCSS TONE FREQUENCY (Hz)					
67.0	69.3	71.9	74.4	77.0	79.7
82.5	85.4	88.5	91.5	94.8	97.4
100.0	103.5	107.2	110.9	114.8	118.8
123.0	127.3	131.8	136.5	141.3	146.2
151.4	156.7	159.8	162.2	165.5	167.9
171.3	173.8	177.3	179.9	183.5	186.2
189.9	192.8	196.6	199.5	203.5	206.5
210.7	218.1	225.7	229.1	233.6	241.8
250.3	254.1	—	—	—	—

6. When you have made your selection, press the **F** key to save the desired tone frequency.
7. Press and hold the **F** key to move the upper menu contents in the Set Mode.
8. Press the **PTT** switch to return to normal operation.



Using the Squelch Feature

Setting DCS CODE number

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

1. Press and hold the **F** key to enter the Set Mode.
2. Press the [▲] or [▼] key to select Set Mode Item **"11 DCS CODE"**
3. Press the **F** key to enable adjustment of this item.
4. Press the [▲] or [▼] key to select "TX" or "RX", then press the **F** key.

11 DCS CODE
→TX: 023
RX: 023

5. Press the [▲] or [▼] key to select the desired DCS Code (a three digit number). Ask the repeater owner/operator if you don't know the DCS Code; if you are working simplex, just set up the DCS Code to be the same as that used by your friend(s).

DCS CODE									
023	025	026	031	032	036	043	047	051	053
054	065	071	072	073	074	114	115	116	122
125	131	132	134	143	145	152	155	156	162
165	172	174	205	212	223	225	226	243	244
245	246	251	252	255	261	263	265	266	271
274	306	311	315	325	331	332	343	346	351
356	364	365	371	411	412	413	423	431	432
445	446	452	454	455	462	464	465	466	503
506	516	523	526	532	546	565	606	612	624
627	631	632	654	662	664	703	712	723	731
732	734	743	754	—	—	—	—	—	—

6. When you have made your settings, press the **F** key to save the desired DCS Code.
7. Press and hold the **F** key to move the upper menu contents in the Set Mode.
8. Press the **PTT** switch to return to normal operation.

CTCSS/DCS/PAGER/ARTS Bell Operation

During CTCSS Decode, DCS, PAGER, ARTS operation, you may set up the Transceiver such that a ringing "bell" sound alerts you to the fact that a call is coming in.

1. Press and hold the **F** key to enter the Set Mode.
2. Press the [▲] or [▼] key to select Set Mode Item **"6 BELL"**
3. Press the **F** key to enable adjustment of this item.
4. Press the [▲] or [▼] key to set the desired number of Bell rings.

6 BELL
→OFF

The available choices are **"1Time"**, **"3Times"**, **"5Times"**, **"8Times"**, **"CONTINUE"** (continuous ringing), or **"OFF (default setting)"**.

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



Using the Squelch Feature

EPCS (Enhanced Paging & Code Squelch)

The **FT-65R/E** includes an Enhanced CTCSS tone encoder/decoder and a dedicated microprocessor providing paging and selective calling features. The squelch permits directing calls to specific stations (Paging), and receiving only the calls directed to stations programmed with a similar code (Code Squelch).

The paging and code squelch systems use two pairs of (alternately switched) CTCSS tones which are stored in the pager memories. Basically, the receiver remains silent until it receives the CTCSS tone pair that matches those stored in the Receiver Pager Memory. The squelch then opens so the caller is heard, and the paging ringer (if activated) immediately sounds. When the **PTT** switch is pressed to transmit, the CTCSS tone pair which is stored in the Transmitting Pager Memory will be transmitted automatically.

On the paged transceiver, the squelch will close automatically after the incoming page ends. Meanwhile, on the paging transceiver, the Enhanced Paging and Code Squelch system will be disabled after the **PTT** switch is released, after the paging transmission. The Enhanced Paging and Code Squelch system may be re-activated again using Set Mode Item **"21 PAGER"**, if desired.

Storing the CTCSS Tone Pairs for EPCS Operation

1. Press and hold the **F** key to enter the Set Mode.
2. Press the **[▲]** or **[▼]** key to select Set Mode Item **"21 PAGER"**
3. Press the **F** key to enable adjustment of this item.
4. Press the **F** key.

The first TX tone number will blink.

21 PAGER			
→TX	:	05	47
RX	:	05	47
ACK	:	OFF	

5. Press the numeric keys to input the CTCSS Tone number which corresponds to the first tone of the CTCSS Tone Pair.

The tone numbers are listed below.

CTCSS TONE NUMBER									
No.	Hz	No.	Hz	No.	Hz	No.	Hz	No.	Hz
01	67.0	11	94.8	21	131.8	31	171.3	41	203.5
02	69.3	12	97.4	22	136.5	32	173.8	42	206.5
03	71.9	13	100.0	23	141.3	33	177.3	43	210.7
04	74.4	14	103.5	24	146.2	34	179.9	44	218.1
05	77.0	15	107.2	25	151.4	35	183.5	45	225.7
06	79.7	16	110.9	26	156.7	36	186.2	46	229.1
07	82.5	17	114.8	27	159.8	37	189.9	47	233.6
08	85.4	18	118.8	28	162.2	38	192.8	48	241.8
09	88.5	19	123.0	29	165.5	39	196.6	49	250.3
10	91.5	20	127.3	30	167.9	40	199.5	50	254.1

6. Press the **F** key to input the second TX tone.

The second TX tone number will blink.



Using the Squelch Feature

- Press the numeric keys to input the CTCSS Tone number which corresponds to the second tone of the CTCSS Tone Pair.
- Press the **F** key to complete TX tone number.
- Press the [**▲**] or [**▼**] key to select "**RX**", then press the **F** key.
To set the RX tone number, repeat the above procedure.
- Press the **PTT** switch to save the new setting and return to normal operation.

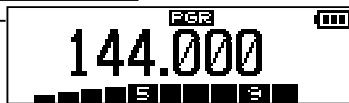


- The default Tone number: **[05 47]**
- Even if the first and second parts of your personal code are reversed, i.e., **[47 05]** from **[05 47]** they are still recognized as the same code.

Activating the Enhanced Paging & Code Squelch System

- To activate the EPCS function, see page 8 "Selecting the Squelch Type".

The **PGR** icon will appear on the LCD display.



While the EPCS function is activated, the CTCSS and DCS settings are disabled.

- Press the **PTT** switch to activate the EPCS function.
- To disable the EPCS function, just repeat the above procedure, Press the [**▲**] or [**▼**] key to select "**OFF**" in step 1 above.



During EPCS operation, the **FT-65R/E** may be set up to sound a ringing "bell" alert when an EPCS call is coming in, as described previously. See page 10 for details.

Being Called by the Remote Station (Standby Operation)



If the "bell" alert is turned on, when an EPCS call is received from a remote station the "PAGING" announcement will be shown on the LCD display and the bell will sound.



Using the Squelch Feature

Paging Answer Back

When the **PTT** switch is pressed in response to answer a paging call, the **FT-65R/E** transmits the same CTCSS tone pair. This tone pair will open the Code Squelch of the calling station. If preferred, the **FT-65R/E** may be setup to respond to the pager calls automatically (“transpond”).

1. Press and hold the **F** key to enter the Set Mode.
2. Press the [▲] or [▼] key to select Set Mode Item “**21 PAGER**”
3. Press the **F** key to enable adjustment of this item.
4. Press the [▲] or [▼] key to select “**ACK**”, then press the **F** key.
5. Press the [▲] or [▼] key to select “**ON**”, then press the **F** key.
6. Press the **PTT** switch to save the new setting and return to normal operation.

21 PAGER
TX :05 47
RX :05 47
→ACK :OFF

-
- Even if the “**ACK**” is “**ON**”, also change the Set Mode Item “**SQL TYPE**” to “**PAGER**”, to activate the Paging Answer Back feature.



- The Paging Answer Back feature constitutes a form of “remote control” operation that may be restricted to certain frequencies. U.S. users should confirm the current status of §97.201(b) of the FCC’s rules governing the Amateur service before utilizing this feature on the 144 MHz band.
-



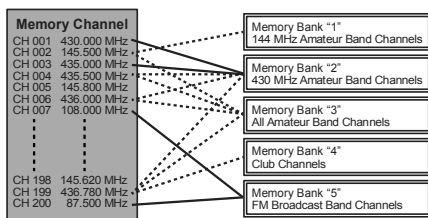
Memory Bank Operation

The large number of memories available in the **FT-65R/E** could be difficult to manage without some means of organizing them. Fortunately, the **FT-65R/E** includes a provision to divide the memories into as many as ten Memory Groups. The memories can be categorized in a manner convenient for the operator.

Assigning Memories to a Memory Bank



- Each memory channel may be assigned into several Memory Banks.
- The PMS memory channels (L1/U1 through L10/U10) may not be assigned to a Memory Bank.



1. Recall the memory channel to be assigned to a Memory Bank.
2. Press and hold the **[#BAND]** key, then press the **[▲]** or **[▼]** key to select the Memory Bank number ("BANK 1" to "BANK10") as the Memory Bank to assign for this channel.



About icons on the Memory Bank

- Bank Number blinking: Assignable
- Bank Number not blinking: Assigned
- "SEL" icon blinking: Selecting ON



"SEL" Icon

Bank Number

3. Press and hold the **F** key to copy the memory channel data into the Memory Bank. The blinking Bank Number stops blinking.
4. Press the **PTT** switch to return to the memory channel.

Memory Bank Recall

1. Press the **[*V/M]** key, if needed, to enter the Memory mode.
2. Press and hold the **[#BAND]** key, then press the **[▲]** or **[▼]** key to select the desired Memory Bank ("BANK 1" through "BANK10").
3. Press the **[*V/M]** key momentarily; now, press the **[▲]** or **[▼]** key to select the memory channel.
 - Only memory channels assigned in the current memory Bank will be available.
 - The **[BANK]** indication will appear at the left side of the frequency display while operating within a Memory Bank.
 - The memory channel number appears above the **[BANK]** icon.
- To change to another Memory Bank, press and hold the **[#BAND]** key.



Memory Bank Operation

Returning To Memory mode from Memory Bank operation

1. While in the Memory Bank Mode, press and hold the [#BAND] key, and then press the [▲] or [▼] key to select "NO BANK".
2. Press the [*V/M] key to return to Memory Mode.



Removing a Memory channel from a Memory Bank

1. Recall the Memory Bank that contains the memory channel to delete.
2. Press the [▲] or [▼] key to select the Memory channel to delete, then press and hold the [#BAND] key.

The Memory channel to be deleted from the Memory Bank will appear on the LCD.



3. Press and hold the **F** key to remove the memory channel.
 - If assigned memory channels still remain in the Memory Bank, the display will return to a Memory Bank channel.
 - If there is no assigned memory channel in the Memory Bank, the display will return to the Memory channel.



Memory Only Mode

Once memory channel programming has been completed, the transceiver may be placed in a “Memory Only” mode, whereby VFO operation is impossible.

1. Turn the transceiver **OFF**.
2. Press and hold the **MONI/T.CALL** key and the **PTT** switch simultaneously, while turning the transceiver ON.

When the LCD backlight is on, release the **MONI/T.CALL** key and the **PTT** switch.

3. Press the [▲] or [▼] key to select “F5:MEM-ONLY”.



F5:MEM-ONLY
F6:VHF-ONLY
F7:UHF-ONLY
F8:DUAL DISP

4. Press the **F** key momentarily to complete the procedure.

To return to normal operation, repeat the above power-on procedure.



Memory scanning

Memory scanning is likewise easy to initiate:

1. Select the Memory mode by pressing the [***V/M**] key, if necessary.
2. Press and hold either the [**▲**] or [**▼**] key to initiate upward or downward scanning, respectively.
3. When the scanner encounters a signal strong enough to open the squelch, scanning will halt temporarily; the decimal point of the frequency display will blink during this “Resuming” condition.
4. Scanning will then resume according to the Scan-Resume mode selected in Set Mode “**25 RESUME**” (See Page 36).
5. To cancel scanning, press the **PTT** switch or the [***V/M**] key.

How to Skip (Omit) a Channel during Memory Scan Operation

Some continuous-carrier stations like a Weather Broadcast station will seriously impede scanner operation when using the “Carrier Drop” Scan Resume mode, as the incoming signal will not pause long enough for the transceiver to resume scanning. Such channels may be “Skipped” during scanning, if desired:

1. Press and hold the **F** key to enter the Set mode.
2. Press the [**▲**] or [**▼**] key to select Set Mode Item “**28 SKIP**”.
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the [**▲**] or [**▼**] key to select a channel to skip, and then press the **F** key.

The selected Memory Channel will be inversely displayed by black.

5. Press the **PTT** switch to return to normal operation.



28 SKIP SCAN
→ 24: LONDON
25: 145.215
26: 61.590w



When the “skipped” memory channel is manually recalled, the “**M**” icon will appear below the memory channel number, indicating it is to be ignored during scanning.



024 **M** LONDON



Weather Alert Scan

This feature allows monitoring the Weather Broadcast Memory Channels for the presence of the NOAA Alert Tone while operating in VFO scan, or Memory channel scan.

CH	Frequency	CH	Frequency
01	162.550 MHz	06	162.500 MHz
02	162.400 MHz	07	162.525 MHz
03	162.475 MHz	08	161.650 MHz
04	162.425 MHz	09	161.775 MHz
05	162.450 MHz	10	163.275 MHz

When the Weather Alert Scan feature is engaged in the VFO mode, or the Memory mode, the **FT-65R/E** will check the Weather Broadcast Memory Channels for the NOAA Alert Tone every five seconds while scanning. the display will be observed periodically shifting from the scanner to the Weather Broadcast bank, and scanning the Weather channels quickly in search of the Alert Tone, after which regular scanning will resume for another five seconds.

To scan only the Weather Broadcast channels, press and hold the [**1**] key, and then press the **PTT** switch (or press and hold the [**▲**] or [**▼**] key).

1. Press and hold the **F** key to enter the Set Mode.
2. Press the [**▲**] or [**▼**] key to select Set Mode Item “**38 WX ALERT**”.
3. Press the **F** key momentarily to enable adjustment of this item.
4. Press the [**▲**] or [**▼**] key to select “**ALT . ON**” or “**ALT . OFF (default setting)**”.

38 WX ALERT
→ALT . OFF

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



- When scanning the Weather Broadcast Channels, the transceiver will remain muted until the Alert Tone is received. This yields a long period of monitoring time, as no power will be consumed for audio output while scanning for the Alert Tone is in progress.
- When the scanner encounters an Alert Tone, the scanning will stop. The “ALARM” message will appear on the display and the transceiver will sound a beep.



Programmable (Band Limit) Memory Scan (PMS)

This feature allows setting sub-band limits for either scanning or manual VFO operation. For example, you might wish to set up a limit (in North America) of 144.300 MHz to 148.000 MHz to prevent encroachment into the SSB/CW “Weak Signal” portion of the band below 144.300 MHz. Here’s how to do this:

1. Set the transceiver to the VFO mode by pressing the [***V/M**] key, if necessary.
2. Set 144.300 MHz into Memory Channel L01 (the “L” designates the Lower sub-band limit).
3. Likewise, set 148.000 MHz into Memory Channel U01 (the “U” designates the Upper sub-band limit).
4. Press and hold the [**#BAND**] key.
5. Press the [**▲**] or [**▼**] key to select the “**PMS-1**”



PMS-(number) will change depending on the currently-selected PMS frequency pair.

6. Press the **PTT** switch to return to normal operation.



For more details on programmed mode (VFO) scan, refer to the **FT-65R/E** Operating Manual.

7. Confirm the transceiver is in the VFO mode, press the [**#BAND**] key after pressing the **F** key. The **PMS** icon will appear on the LCD display and the scanning starts just within the programmed range.



10 pairs of Band Limit memories, labeled L01/U01 through L10/U10 are available. Therefore upper and lower operating limits may be set for multiple segments on a number of bands, if you like.



“Priority Channel” Scanning

The **FT-65R/E** scanning features include a two-channel scanning capability which allows operation on a VFO or Memory channel, while periodically checking a user-defined Memory Channel for activity. If a signal is received on the Memory Channel which is strong enough to open the Squelch, the scanner will pause on that channel in accordance with the Scan-Resume mode set via Set Mode Item **“25 RESUME”**.

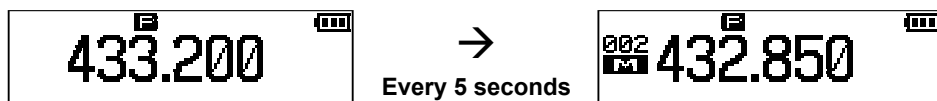


For more details on the Scan-Resume mode, see page 36.

VFO Priority

1. Recall the memory channel that is to be set as the “Priority” frequency.
2. Set the transceiver to the VFO mode by pressing the [***V/M**] key.
3. Press the **F** key, then press the [***V/M**] key to activate the VFO Priority mode.

The display will remain on the VFO frequency, but every five seconds the transceiver will check the Priority Channel (memory channel) for activity.

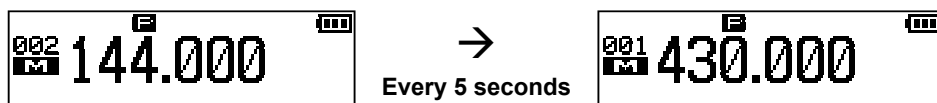


4. To disable the VFO Priority Mode press the **F** key, and then press the [***V/M**] key.

Memory Channel Priority

1. Store the frequency you wish to be the “Priority” Channel into memory channel “001”.
2. Set the transceiver for operation on another memory channel.
3. Press the **F** key, then press the [***V/M**] key to activate the Memory Priority mode.

The display will remain on the current memory channel frequency, but every five seconds the transceiver will check the Priority Channel (memory channel) for activity.



4. Press the **F** key, then press the [***V/M**] key again to disable the Memory Priority Mode.



When the Memory Bank feature is activated, the **FT-65R/E** will check the lowest memory channel number in the current Memory Bank as the priority channel.

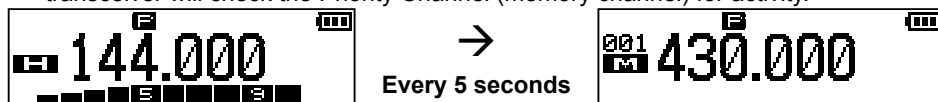


Scanning

HOME Channel Priority

1. Recall the memory channel to be used as the “Priority” frequency.
2. Set the Transceiver for operation on a HOME channel by pressing the **F** key followed by the [**P1**] key.
3. Press the **F** key, then press the [***V/M**] key to activate the HOME Channel Priority mode.

The display will remain on the HOME channel frequency, but every five seconds the transceiver will check the Priority Channel (memory channel) for activity.

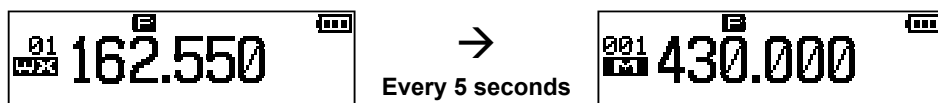


4. Press the **F** key, then press the [***V/M**] key again to disable the HOME Priority mode.

WX Channel Priority

1. Recall the memory channel to be used as the “Priority” frequency.
2. Set the Transceiver for operation on a WX channel by pressing and holding the [**1**] key.
3. Press the **F** key, then press the [***V/M**] key to activate the WX Priority mode.

The display will remain on the WX channel frequency, but every five seconds the transceiver will check the Priority Channel (memory channel) for activity.



Priority Revert Mode

During Priority channel operation, a special feature is available which will allow moving to the Priority channel instantly, without waiting for activity to appear on the Priority channel. When this feature is enabled, and Priority monitoring is engaged, just press the **PTT** switch; operation will instantly revert to the Priority channel.

1. Press and hold the **F** key to enter the Set Mode.
2. Press the [**▲**] or [**▼**] key to select Set Mode Item “23 PRI. RVT”.
3. Press the **F** key to enable adjustment of this item.
4. Press the [**▲**] or [**▼**] key to select “RVT . ON” or “RVT . OFF (default setting)”.
5. Press the **PTT** switch to save the new setting and return to normal operation.

23 PRI . RVT
→RVT . OFF



Automatic Lamp Illumination on Scan Stop

The **FT-65R/E** will automatically illuminate the LCD/Keypad Lamp whenever the scanner stops on a signal; this allows you to see the frequency of the incoming signal better at night. Note that this will, of course, increase the battery consumption, so be sure to switch it off during the day (the default setting is "**ON**").

1. Press and hold the **F** key to enter the Set Mode.
2. Press the [**▲**] or [**▼**] key to select Set Mode Item "**27 SCN. LAMP**".
3. Press the **F** key to enable adjustment of this item.
4. Press the [**▲**] or [**▼**] key to select "**OFF**".
5. Press the **PTT** switch to save the new setting and return to normal operation.

27 SCN. LAMP
→ON



Emergency Channel Operation

The **FT-65R/E** includes an “Emergency” feature which may be useful if you have someone monitoring on the same frequency as your transceiver’s VHF “Home” channel. See **FT-65R/E** Operating Manual for details on setting the Home channel.

The “Emergency” feature is activated by pressing and holding the **Emergency** key for 3 seconds. When this is done:

- (A) The transceiver is placed on the VHF amateur band Home channel;
- (B) A loud “Alarm” sounds (the volume is controlled by the **PWR/VOL** knob);
- (C) The LED Flashes with the SOS signal;
- (D) Pressing the **PTT** switch will temporarily disable the Emergency “Alarm” sound and the LED Flash-Light SOS signal, while transmitting on the VHF Home channel;
- (E) Two seconds after the **PTT** switch is released, the Emergency Alarm and LED Flash will resume.

To disable the “Emergency” feature, press the Emergency key momentarily or turn the transceiver off by rotating the **PWR/VOL** knob fully counter-clockwise into the click-stop position.

Use this feature if you are out for a walk and want a quick way of alerting a family member of a dangerous situation. The alarm sound may discourage an attacker and allow you to escape.



-
- Be sure to arrange with a friend or family member to be monitoring on the same emergency frequency, as there will be no identification sent via the Emergency alarm sound. Do not transmit the alarm tone except in a true emergency!
 - Even when the transceiver is operating in the “**F7:UHF-ONLY**” mode (See **FT-65R/E** Operating Manual for details on the Preferred Operating mode), the transceiver will transmit on the VHF Home channel when the **PTT** switch is pressed.
-



ARTS (Automatic Range Transponder System)

The ARTS feature uses DCS signaling to inform both parties when onther ARTS-equipped station is within communications range. This may be particularly useful during Search-and Rescue situations, where it is important to stay in contact with the other members of the group.

The stations must set up their DCS codes to the same code number, and then activate their ARTS feature using the command appropriate for their transceiver. Alert ringers may be activated, if desired.

Whenever the **PTT** switch is pressed, or every 15 or 25 seconds after ARTS is activated, the transceiver will transmit a signal which includes a (subaudible) DCS code for about one second. If another ARTS enabled transceiver is in range, the beeper will sound and the display will show "**IN.RNG**". When the other transceiver is out of range, "**OUT.RNG**" is shown when the ARTS function is in operation.

Whether or not the **PTT** switch is pressed, the polling will continue every 15 or 25 seconds until the ARTS transponder is deactivated. Moreover, the transceiver may be programmed to transmit a callsign, via CW, every 10 minutes, to comply with identification requirements. When ARTS is deactivated, DCS will also be deactivated (if it was not being used previously in non-ARTS operation).



If you move out of range for more than one minute (four pollings), the transceiver will sense that no signal has been received, three beeps will sound, and the display will revert to "**OUT.RNG**". If you move back into range, the transceiver will again beep, and the display will change back to the "**IN.RNG**" indication.

During ARTS operation, it is not possible to change the operating frequency or other settings. In order to resume normal operation, ARTS must be terminated. This is a safety feature designed to prevent accidental loss of contact due to channel change, etc.

Basic ARTS Setup and Operation

1. Set all the transceivers to the same DCS code number, per the instructions on page 10.
2. Press and hold the **[2]** key.
 - "**OUT.RNG**" will be displayed on the LCD.
 - ARTS polling will begin.
3. Every 25 seconds, the transceiver will transmit a "polling" call to the other station.



ARTS™ (Automatic Range Transponder System)

When that station responds with its own ARTS polling signal, the display will change to "IN.RNG" to confirm that the other station's polling code response was received.



4. Press the **F** key (or press and hold the **[2]** key) to exit ARTS operation and resume normal transceiver operation.

ARTS Polling Time Options

The ARTS feature may be programmed to poll every 25 seconds (default value) or 15 seconds. The default value provides maximum battery conservation, because the polling signal is sent out less frequently. To change the polling interval:

1. Press and hold the **F** key to enter the Set mode.
2. Press the **[▲]** or **[▼]** key to select Set Mode Item **"2 ARTS"**.
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the **[▲]** or **[▼]** key to select **"INTV"**, then press the **F** key to enable adjustment of the polling time option.



5. Press the **[▲]** or **[▼]** key to select the desired polling interval (15 or 25 seconds).
6. Press the **PTT** switch to save the new setting and return to normal operation.

ARTS Alert Beep Options

The ARTS feature permits two types of alert beeps (or may be turned off), to notify users of the current status of corresponding ARTS stations. Depending on the situation and the potential annoyance associated with frequent beeps, choose the Beep mode which best suits the operating setting. The choices are:

Display	Description
OFF	No beeps. Display only. While within range "IN.RNG" will appear on the LCD, while out of range "OUT.RNG" will appear.
INRANG	Beeps sound only when the transceiver first confirms a station is within range, but does not re-confirm with beeps thereafter. Display is the same function as "OFF".
ALWAYS	Each time a polling transmission is received from the other station, the alert beeps will sound. Display is same function as "OFF".

1. Press and hold the **F** key to enter the Set mode.
2. Press the **[▲]** or **[▼]** key to select Set Mode Item **"2 ARTS"**.
3. Press the **F** key to enable adjustment of this Set Mode Item.



ARTS™ (Automatic Range Transponder System)

4. Press the [▲] or [▼] key to select “BEEP”, then press the **F** key to enable adjustment of the ARTS Alert Beep options.

2 ARTS
→BEEP : OFF
INTV : 25SEC

5. Press the [▲] or [▼] key to select one of the options described above.
6. Press the **PTT** switch to save the new setting and return to normal operation.

CW Identifier Setup

The transceiver may be programmed to send a CW identification (“DE (your callsign) K”) every ten minutes during ARTS operation. The callsign field may contain up to 6 characters.

1. Press and hold the **F** key to enter the Set mode.
2. Press the [▲] or [▼] key to select Set Mode Item “9 CW ID”.
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the **F** key, then press the [▲] or [▼] key to select “TX : ON”
5. Press the **F** key to save the new setting.

9 CW ID
→TX : ON
ID : -----

6. Press the [▲] or [▼] key to select the “ID”.
7. Press the Alphabet/Numeric keys to input the callsign.
 - After inputting a character of the callsign, press the [▲] key to move the cursor to the next character position.
 - To correct a mistake, press the [▼] key repeatedly until the cursor returns to the character position.



To check the work by monitoring the callsign, press the **MONI/T.CALL** key.

8. When you have finished entering the entire callsign and it contains less than 6 characters, press and hold the **F** key to save the callsign.
9. Press the **PTT** switch to save the new setting and return to normal operation.



To monitor and check the entered callsign, repeat steps 1 - 6 above, then press the **MONI/T.CALL** key.



DTMF Operation

The **FT-65R/E** keypad allows easy DTMF dialing for Autopatch, and repeater control purposes. Besides numerical digits [0] through [9], the keypad includes the [*] and [#] characters, plus the [A], [B], [C], and [D] tones often used for repeater control.

Manual DTMF Tone Generation

The DTMF tones may be generated manually during transmission.

1. Press and hold the **F** key to enter the Set mode.
2. Press the [▲] or [▼] key to select Set Mode Item “**12 DTMF SET**”.
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the **F** key, then press the [▲] or [▼] key to select “**MANUAL**”

Display	Description	12 DTMF SET →MODE : MANUAL DELAY : 450mS SPEED : 50mS
MANUAL (default setting)	Manual DTMF Tone Generation	
AUTO	Autodial memory DTMF Tone Generation	

5. Press the **F** key to save the new setting.
6. Press the **PTT** switch to return to normal operation.
7. While pressing the **PTT** switch to transmit, enter the desired number on the keypad.

Each DTMF code is a combination of 2 frequencies.

	1209Hz	1336Hz	1477Hz	1633Hz
697Hz	1 (1)	2 (2ABC)	3 (3DEF)	A (P1)
770Hz	4 (4GHI)	5 (5JKL)	6 (6MNO)	B (P2)
852Hz	7 (7PQRS)	8 (8TUV)	9 (9WXYZ)	C (P3)
941Hz	* (*VIM)	0 (0SET)	# (#BAND)	D (P4)

DTMF Autodialer

To allow storing telephone numbers for autopatch use, nine DTMF Autodial memories are provided. Short autopatch commands may also be stored, to avoid having to send them manually.

1. Press and hold the **F** key to enter the Set mode.
2. Press the [▲] or [▼] key to select Set Mode Item “**13 DTMF WRT**”.
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the [▲], [▼] or [1] to [9] key to select the desired Memory register to store this DTMF string.

13 DTMF WRT
1 -----

5. Press the **F** key momentarily to begin the DTMF Memory entry into the selected register.



DTMF Operation

6. Press the [1] - [0] key, the [P1] - [P4] key, [*V/M], [#BAND], or use the [▲] and [▼] keys to select the first digit of the DTMF string.
7. Press the **F** key to accept the first digit and move to the next digit of the DTMF string.
8. Repeat step 6 - 7 to complete the telephone number.

To correct a mistake, press the **F** key repeatedly (or press and hold the **F** key and then press the **F** key) until the cursor returns to the first character position and then begin the DTMF Memory entry again.

9. Press and hold the **F** key to save the telephone number.
10. Press the **PTT** switch to return to normal operation.



To monitor and check the entered DTMF strings, repeat steps 1- 4 above, then press the [▲] or [▼] key to select the input register, and then press the **MONI/T.CALL** key.

Sending the DTMF code by Autodialer

1. Press and hold the **F** key to enter the Set mode.
2. Press the [▲] or [▼] key to select Set Mode Item “12 DTMF SET”.
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the **F** key, then press the [▲] or [▼] key to select “**AUTO**”.

12 DTMF SET
→ MODE : AUTO
DELAY : 450ms
SPEED : 50ms

5. Press the **F** key to save the new setting.
6. While pressing the **PTT** switch to transmit, press a registered DTMF Memory key [1] - [9].
7. Release the **PTT** switch.

The DTMF tone signals will continue to be transmitted until the number is completed.



To change the DTMF Autodialer sending delay and speed, use the Set Mode Item “12 DTMF SET”. See page 36 for details.



Miscellaneous Settings

Password

The **FT-65R/E** includes a password feature which can minimize the chance of the transceiver being used by an unauthorized party.

When the password feature is activated, the Transceiver will ask for the four-digit password to be entered when it is first turned on. The password must be entered from the keypad.

Setting a Password and Turning the Password Feature ON or OFF

1. Press and hold the **F** key to enter the Set mode.
2. Press the **[▲]** or **[▼]** key to select Set Mode Item **"22 PASSWORD"**.
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. If a previous password is stored, press the **F** key to clear the password.
5. Press a **[1] - [0]** key, or use the **[▲]** and **[▼]** keys to select the first digit (0-9) of the desired number.

If using the **[▲]** and **[▼]** keys, press the **F** key to accept the first digit and move to the next position.



6. Repeat step 5 until the password is completed.

- After inputting the correct 4 digit password, the cursor will move to the **"OFF"** or **"ON"** position.
- To correct a mistake, press the **F** key repeatedly until the cursor returns to the first digit position.



- We recommend that you write down the password number, and keep it in a safe place in the event it is forgotten.
- If the password is forgotten, the transceiver may be turned ON by performing the **"All Reset"** procedure (see the Operating Manual). However, the **"All Reset"** procedure will clear the password, as well as all memories, and will restore all other settings to factory defaults.

7. Press the **[▲]** or **[▼]** key to select **"OFF"** or **"ON"**.
8. Press the **PTT** switch to save the new setting and return to normal operation.

Changing the Channel Steps

The **FT-65R/E** synthesizer tunes the operating frequency in optional channel steps of: 5; 6.25; 10; 12.5; 15; 20; 25; 50; or 100 kHz per step, as well as an automatic (**"AUTO"**) step selection based on the current operating frequency. The **FT-65R/E** is set up at the factory in the **"AUTO"** configuration, which probably is satisfactory for most operation. However, another step setting may be important to your operating requirements. The tuning step increments are easily changed using the following procedure:

1. Press and hold the **F** key to enter the Set mode.
2. Press the **[▲]** or **[▼]** key to select Set Mode Item **"30 STEP"**.
3. Press the **F** key to enable adjustment of this Set Mode Item.



Miscellaneous Settings

- Press the [▲] or [▼] key to select a different channel step size.

30 STEP
→AUTO

- Press the **PTT** switch to save the setting and exit to normal operation.

TX Battery Saver

The **FT-65R/E** also includes a useful Transmit Battery Saver, which will automatically lower the power output level when the last signal received was very strong. For example, when operating in the immediate vicinity of a repeater station, there is generally no reason to use the High Power output in order to achieve full-quieting access to the repeater. With the Transmit Battery Saver enabled, the automatic selection of Low Power operation conserves battery drain significantly.

- Press and hold the **F** key to enter the Set mode.
- Press the [▲] or [▼] key to select Set Mode Item **"33 TX SAVE"**.
- Press the **F** key to enable adjustment of this Set Mode Item.
- Press the [▲] or [▼] key to select **"SAVE ON"** or **"SAVE OFF"** (default setting).

33 TX SAVE
→SAVE OFF

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

Disabling the TX/BUSY LED Indicator

Further battery conservation may be accomplished by disabling the TX indicator while transmitting and disabling the BUSY indicator while receiving a signal. Use the following procedure:

- Press and hold the **F** key to enter the Set mode.
- Press the [▲] or [▼] key to select Set Mode Item **"17 LED"**.
- Press the **F** key to enable adjustment of this Set Mode Item.
- Press the [▲] or [▼] key to select the desired **"TX"** or **"BUSY"** item.

17 LED
→TX : ON
BUSY : ON

Display		Description
TX	ON (default setting)	Enables the TX LED while transmitting.
	OFF	Disables the TX LED while transmitting.
BUSY	ON (default setting)	Enables the BUSY LED while receiving.
	OFF	Disables the BUSY LED while receiving.

- Press the **F** key to enable adjustment of each Item.
- Press the **PTT** switch to save the new setting and return to normal operation.



Miscellaneous Settings


Automatic Power-Off (APO) Feature

The APO feature helps conserve battery life by automatically turning the transceiver off after a user-defined period of time wherein there has been no key activity. The available selections for the time before power-off are 0.5 to 12.0 hours in 0.5 hour multiples, as well as APO Off. The default APO setting is OFF. Use the following procedure to activate APO:

1. Press and hold the **F** key to enter the Set mode.
2. Press the **[▲]** or **[▼]** key to select Set Mode Item “**1 APO**”.
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the **[▲]** or **[▼]** key to select the desired time period after which the transceiver will automatically shut down.

1 APO
→OFF

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

When the APO is activated, the “” icon will appear at the right side on the LCD. If there is no key button activity within the programmed time interval, the transceiver will automatically shut down.



When the power is on, the APO timer count is reset whenever the timer setting is changed.

Transmitter Time-Out Timer (TOT)

The TOT feature limits continuous transmission to a prescribed time between 1 to 30 minutes. This will promote battery conservation by not allowing excessively long transmissions. In the event of a stuck **PTT** switch (for instance, if the microphone or earpiece is wedged between car seats), the TOT can prevent interference to other users as well as battery depletion. The default TOT setting is 3 minutes. Use the following procedure to activate the timer:

1. Press and hold the **F** key to enter the Set mode.
2. Press the **[▲]** or **[▼]** key to select Set Mode Item “**31 TOT**”.
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the **[▲]** or **[▼]** key to set the Time-Out Timer to the desired “Maximum TX” time (1 to 30 minutes, or OFF). The default setting is 3 minutes.

31 TOT
→ 3min

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



Miscellaneous Settings

Busy Channel Lock-Out (BCLO)

The BCLO feature prevents the transmitter from being activated if a signal strong enough to break through the “noise” squelch is present. On a frequency where active stations using different CTCSS or DCS codes may not be heard, (because your transceiver may be muted by its own Tone Decoder). BCLO prevents transmissions from disrupting the other users communications accidentally. The default setting is OFF; to activate or change the BCLO setting, follow the below procedure:

1. Press and hold the **F** key to enter the Set mode.
2. Press the [**▲**] or [**▼**] key to select Set Mode Item “**4 B-CH. L/O**”.
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the [**▲**] or [**▼**] key to select “**ON**” or “**OFF**”.
5. Press the **PTT** switch to save the new setting and return to normal operation.

4 B-CH. L/O
→OFF

Changing the TX deviation Level

In many areas of the world, channel congestion has required that operating channels be closely spaced. Closer channel spacing may require reduced deviation levels to preclude adjacent channel interference. To change the **FT-65R/E** TX deviation level, follow the below procedure:

1. Press and hold the **F** key to enter the Set mode.
2. Press the [**▲**] or [**▼**] key to select Set Mode Item “**37 WIDE/NAR**”.
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the [**▲**] or [**▼**] key to select “**NARROW**”.

37 WIDE/NAR
→NARROW

Display	Description
WIDE (default setting)	Wide (±5 kHz) TX Deviation.
NARROW	Narrow (±2.5 kHz) TX Deviation.

If “**Narrow**” is selected (HALF DEVIATION active), the transmitter deviation will be approximately ±2.5 kHz, and the received audio output level will be increased, for easier listening on the narrow signal.

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



Miscellaneous Settings

Voice Comander Feature

The voice compander feature reduces noise components from the transmitted audio to provide clearer communications.

1. Press and hold the **F** key to enter the Set mode.
2. Press the [**▲**] or [**▼**] key to select Set Mode Item "**7 COMPANDE**".
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the [**▲**] or [**▼**] key to select "**ON**" or "**OFF**" (default setting)".
5. Press the **PTT** switch to save the new setting and return to normal operation.

7 COMPANDE
→OFF

Inversion Scramble (Asian version only)

The Inversion scramble feature prevents others from easily listening to the audio. When activated, the transceiver distorts the voice so others listening without Inversion Scramble enabled, will not be able to clearly hear the conversation.



To use this feature, the other (**FT-65R/E**) station must also complete the following procedure to set Inversion Scramble.

1. Press and hold the **F** key to enter the Set mode.
2. Press the [**▲**] or [**▼**] key to select Set Mode Item "**39 SCRAMBLE**".
3. Press the **F** key to enable adjustment of this Set Mode Item.
4. Press the [**▲**] or [**▼**] key to select "**SCRB.ON**" or "**SCRB.OFF**" (default setting)".
5. Press the **PTT** switch to save the new setting and return to normal operation.

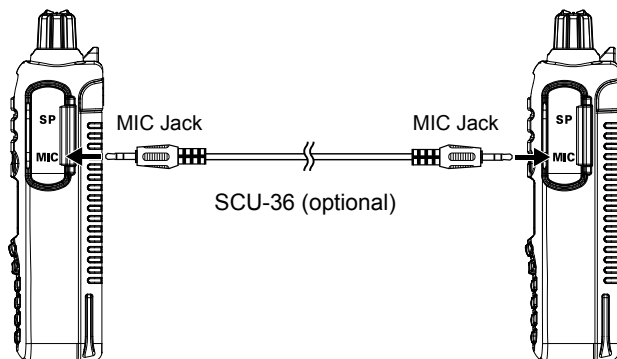
39 SCRAMBLE
→SCRB . OFF



Cloning

The **FT-65R/E** includes a convenient “Clone” feature, which allows the memory and configuration data from one transceiver to be transferred to another **FT-65R/E**. This can be particularly useful when configuring a number of transceivers for a public service operation. Here is the procedure for cloning data from one transceiver to another:

1. Turn both transceivers OFF.
2. Connect the optional **SCU-36** Cloning Cable between the MIC jacks of the two transceivers.



3. Press and hold the **MONI/T.CALL** key and the **PTT** switch simultaneously, while turning the transceiver ON.

Do this for both transceivers (the order of switch-on does not matter).

4. Press the **[▲]** or **[▼]** key on each transceiver to select “**F9 : CLONE**”, then press the **F** key momentarily.

When the Clone mode is successfully activated in this step, “**CLONE**” message will appear on the displays of both transceivers.

CLONE

5. Press the **PTT** switch on the Source transceiver.

- “**--TX--**” will appear on the Source transceiver, and the data from this transceiver will be transferred to the destination transceiver.

--TX--

- “**--RX--**” will appear on the destination transceiver.

--RX--

- The data from the source transceiver will be transferred to the destination transceiver.

6. If there is an error during the cloning process, “**CLONE ERR**” will be displayed. Check the cable connections and battery voltage, and try again.

CLONE ERR

7. If the data transfer is successful, “**CLONE OK**” will appear on both displays.
8. Turn both transceivers off and disconnect the cloning cable.




Set (Menu) Mode

Many **FT-65R/E** functions have already been described in previous chapters. The Set Mode Menu is used to configure the transceiver parameters, some of which have not been detailed previously. Use the following procedure to activate the Set Mode and configure the **FT-65R/E** function parameters:

1. Press and hold the **F** key to enter the Set Mode.
2. Press the **[▲]** or **[▼]** key to select the Set Mode Item to be adjusted.
3. Press the **F** key momentarily to enable adjustment of the Set Mode Item.
4. Press the **[▲]** or **[▼]** key to adjust or select the parameter to be changed on the selected Set Mode Item.
5. After completing the selection and adjustment, press the **PTT** switch momentarily to save the new setting and exit to normal operation.




Press and hold the **F** key to move from the lower menu contents to the upper menu in the Set Mode.

Item (lower menu item)	Function	Values	Default Value	
1 APO	Setting of the Automatic Power-Off feature.	OFF / 0.5H to 12.0H (Step 0.5H)	OFF	31
2 ARTS	Selects the Beep option and the Polling Interval during ARTS operation.	BEEP= INRANG / ALWAYS / OFF INTV= 25SEC / 15SEC	BEEP=OFF INTV= 25SEC	24
3 BATTSAVE	Selects the Receive-mode Battery Saver interval ("sleep" ratio).	200mS / 300mS / 500mS / 1SEC / 2SEC / OFF	200mS	-
4 B-CH.L/O	Enables/disables the Busy Channel Lock-Out feature.	OFF / ON	OFF	32
5 BEEP	Beep function Enable/Disable on pressing the keypad, or stopping the receiver scanning. KEY+SC : The beeper sounds when any key is pressed, or when the scanner stops. KEY : The beeper sounds when any key is pressed. OFF : Beeper is disabled.	KEY+SC / KEY / OFF	KEY+SC	-
6 BELL	Select the number of CTCSS/DCS/PAGER/ARTS Bell ringer repetitions.	OFF / 1Time / 3Times / 5Times / 8Times / CONTINUE	OFF	10
7 COMPANDE (COMPANDER)	Enables/disables the Voice Compander feature.	OFF / ON	OFF	32
8 CTCSS (CTCSS TONE)	Setting the CTCSS Frequency TX and RX.	50 CTCSS tones / OFF	TX=100.0Hz RX=100.0Hz	9
9 CW ID	CW Identifier during ARTS operation.	TX= OFF / ON ID= ----- (6 characters)	TX= OFF ID= blank	26
10 DC VOLT	displays Battery DC Voltage.	-	-	5
11 DCS CODE	Setting the DCS CODE TX and RX.	104 DCS CODEs / OFF	TX=023 RX=023	10



Set (Menu) Mode

Item (lower menu item)	Function	Values	Default Value	
12 DTMF SET	Selects the MANUAL or AUTO DTMF tones. Setting the DTMF autodialer sending delay time and Speed.	MODE= MANUAL / AUTO DELAY= 50mS / 250mS / 450mS / 750mS / 1000mS SPEED= 50mS / 100mS	M=MANUAL D=450mS S=50mS	27
13 DTMF WRT	Programing to DTMF autodialer.	-	-	27
14 EDG.BEEP	Enables/disables the Band-edge beeper while selecting the frequency via the [▲] or [▼] key.	BEEP OFF / BEEP ON	BEEP OFF	-
15 KEY LOCK	Keyboard Lock function.	KEY / PTT / P+K	KEY	-
16 LAMP	Selects the LCD/Keypad Lamp mode.	5secKEY / 10secKEY / 30secKEY / CONT / OFF	5secKEY	-
17 LED	Selects the enable or disable TX/ BUSY LED function.	TX= ON / OFF BUSY= ON/ OFF	TX=ON BUSY=ON	30
18 MEM DEL (MEM DELETE)	Deletes Memory Channel.	-	-	-
19 MON/T-CL (MON/T-CALL)	Selects the MONI or T.CALL switch function. MONI : Pressing the MONI key causes the Noise/Tone Squelch to be over-riden, allowing weak (or non-encoded) signals to be heard. T-CALL : Pressing the MONI key activates a 1750-Hz burst tone, used for repeater access in many countries (especially in Europe).	MONITOR / T-CALL1750 / T-CALL2100 / T-CALL1000 / T-CALL1450	MONITOR (*) or T-CALL1750 (*)	-
20 NAME TAG	Renames Alpha-Numeric "Tags" for the Memory channels.	-	-	-
21 PAGER	Setting the TX CTCSS of 2 tone and the RX CTCSS of 2 tone. Enables/disables the Answer Back function.	TX: *** RX: *** ACK : ON / OFF	TX=05 47 RX=05 47 ACK=OFF	11
22 PASSWORD	Enables/disables the Password feature	OFF / ON	OFF	29
23 PRI.RVT	Enables/disables the Priority Revert feature.	RVT.OFF / RVT. ON	RVT.OFF	21
24 REPEATER	ARS / MODE / SHIFT function setting.	ARS= ON / OFF MODE=SIMPLEX / +REP / -REP SHIFT= 0.05 MHz - 99.95 MHz (per 50 kHz)	ARS=ON MODE=SIMPLEX SHIFT=**.*M (*)	-
25 RESUME	Selects the Scan Resume mode.	BUSY / HOLD / TIME	BUSY	20
26 RF SQL	Adjusts the RF Squelch threshold level.	S-1 / S-2 / S-3 / S-4 / S-5 / S-6 / S-8 / S-FULL / OFF	OFF	4
27 SCN.LAMP	Enables/Disables the Scan lamp while paused.	ON / OFF	ON	22
28 SKIP (SKIP SCAN)	Selects the Memory Scan "Skip" channel-selection mode.	-	-	17



Set (Menu) Mode

Item (lower menu item)	Function	Values	Default Value	
29 SQL TYPE	Selects the Tone Encoder and/or Decoder mode.	OFF / R-TONE / T-TONE / TSQ L / REV TN / DCS / PAGER	OFF	8,13
30 STEP	Setting of the frequency steps.	5 / 6.25 / 10 / 12.5 / 15 / 20 / 25 / 50 / 100 kHz, or AUTO	AUTO	29
31 TOT	Setting of the TOT time.	1 min - 30 min (per 1 min) or OFF	3min	31
32 TX PWR	Selects TX Power.	HI(5W) / MID(2.5W) / LOW(0.5W)	HI(5W)	-
33 TX SAVE	Enables/Disables the Transmitter Battery Saver.	SAVE OFF / SAVE ON	SAVE OFF	30
34 VFO.SPL	Enables or disables "VFO Split" operation.	VSP.OFF / VSP.ON	VSP.OFF	7
35 VOX	Enable / Disable VOX function.	VOX OFF / VOX ON	VOX OFF	6
36 WFM.RCV	Broadband FM Transceiver(WFM) function Enables/Disables.	WFM.ON / WFM.OFF	WFM.ON	-
37 WIDE/NAR	Select Wide (± 5 kHz) or Narrow (± 2.5 kHz) TX Deviation. If "Narrow" is selected, the receiver audio level is increased slightly to compensate for the reduced deviation. The receiver IF filter bandwidth is not changed via this setting.	WIDE / NARROW	WIDE	32
38 WX ALERT	Enables/Disables the Weather Alert Scan feature.	ALT.OFF / ALT. ON	ALT.OFF	18
39 SCRAMBLE(*)	Inversion scrambling (Encryption).	SCRB.OFF/SCRB.ON	SCRB.OFF	33

(*) : This function displays depending on the transceiver version.





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