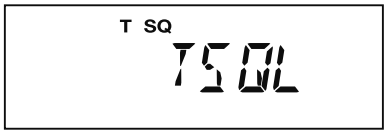
CTCSS Operation

This radio is equipped with the CTCSS (Continuous Tone-coded Squelch System which allows audio to be heard only when receiving signals containing the same frequency tone as the tone that has been set in the tone squelch menu. By matching the tone frequency with the partner station in advance, a quiet standby monitoring is possible.

Caution: CTCSS does not function in digital mode. To transmit a signal using a CTCSS code, use the [**D/A**(**GM**)] key to switch the communication mode to AMS (Auto Mode Select function) or analog (FM) mode.

1. Press and hold in the [**MHz**(**SETUP**)] key for over 1 second.
   The Setup menu appears.
2. Rotate the **DIAL** knob to select "**SQL TYPE 42**", then press the [**MHz**(**SETUP**)] key.
3. Rotate the **DIAL** knob to select "**TSQL**", then press and hold in the [**MHz**(**SETUP**)] key for over 1 second.



   Displays " **T SQ** " on the screen. The squelch opens only when receiving tone signals of the set frequency.

Note: From the Setup Menu, you can change the CTCSS setting.

TONE FRQ 45 ➠ The tone frequency can be selected from 50 frequencies.

BELL 6 ➠ A bell tone (beep) may be set to sound when signals containing a corresponding CTCSS tone are received.

Tone Search

In operating situations where you don't know the CTCSS tone being used by another station or stations, you can command the radio to listen to the incoming signal and scan in search of the tone being used.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

DCS Operation

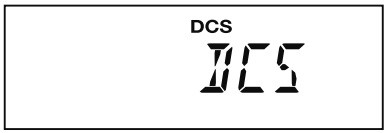
This radio is equipped with a DCS (Digital Coded Squelch) function that allows audio to be heard only when signals containing the corresponding DCS code are received. By matching the DCS code with the partner stations beforehand, a quiet receive standby is possible.

Caution: DCS does not function in digital mode. To transmit a signal with a DCS code, use the [**D/A**(**GM**)] key to switch the communication mode to AMS (Auto Mode Select function) or analog (FM) mode.

1. Press and hold in the [**MHz**(**SETUP**)] key for over 1 second.
   The Setup menu appears.
2. Rotate the **DIAL** knob to select "**SQL TYPE 42**", then press the [**MHz**(**SETUP**)] key.

Advanced Operation

3. Rotate the **DIAL** knob to select "**DCS**", then press and hold in the [**MHz**(**SETUP**)] key for over 1 second.



Displays " **DCS** " on the screen. The squelch opens only when receiving a signal containing the corresponding DCS code.

Note: From the Setup Menu, you can change the DCS setting.

DCS CODE 9 ➠ The DCS code can be selected from 104 codes.

BELL 6 ➠ A bell tone (beep) may be set to sound when signals containing a corresponding DCS code are received.

DCS Search

In operating situations where you don't know the DCS code being used by another station or stations, you can command the radio to listen to the incoming signal and scan in search of the code being used.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

EPCS (Enhanced Paging & Code Squelch) Operation

Use the pager code consisting of 2 CTCSS tones to exchange communications with specified stations.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

Split Tone Operation

The FTM-3200R can be operated in a "Split Tone" configuration, to enable operation on repeaters using a mix of both CTCSS and DCS control via the Setup menu.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

DTMF Operation

DTMF tones (Dual Tone Multi Frequencies) are the tones you hear when dialing from a telephone keypad. The FTM-3200DR transceiver can transmit the DTMF codes by using the keys on the microphone or recalling registered numbers from memories.
The maximum of 16-digit DTMF codes can be registered in up to 10 memory channels.
It is convenient to register telephone patch numbers, and network linking sequences to the DTMF memory channels.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

Memory Operation

The FTM-3200R provides a wide variety of memory system resources. These include:

- ❒ 199 “basic” memory channels, numbered “1” through “199”.
- ❒ A “Home” channel, providing storage and quick recall of one prime frequency.
- ❒ 10 sets of band-edge memories, also known as “Programmable Memory Scan” channels, labeled “L0/U0” through “L9/U9”.

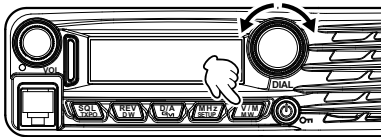
Each memory may be appended with an alpha-numeric label of up to 8 characters, for quick channel recognition.

Memory Storage

1. In the VFO mode, select the desired frequency, repeater shift, CTCSS/DCS tone, and TX power level.
2. Press and hold in the [**V/M**(**MW**)] key for 1 second.

   A memory number will appear in the bottom right corner of the display.

   Note: If the channel number is blinking, there currently is no data stored on that channel; if the channel number is not blinking, that channel is currently “occupied” by other frequency data.



3. Within five seconds of pressing the [**V/M**(**MW**)] key, use the **DIAL** knob to select the desired memory into which you wish to store the frequency.
4. Press the [**V/M**(**MW**)] key again, this time momentarily, to store the displayed data into the selected memory channel slot.
5. To store other frequencies, repeat steps 1 through 4, remembering to set the repeater shift, CTCSS/DCS tone, and TX power level, as appropriate.

Split Memory

A separate transmit frequency may be registered to a memory channel to which a receive frequency has already been registered.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

Naming a Memory Channel

You may wish to append an alpha-numeric “Tag” (label) to a memory or memories, to aid in recollection of the channel’s use (such as club name, etc.).

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

Memory Only Mode

Once memory channel programming has been completed, you may place the radio in a “Memory Only” mode, whereby VFO operation is impossible.

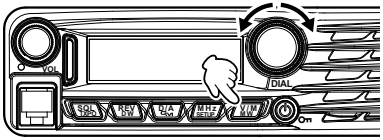
Note: For details, refer to the Advanced Manual (download from the Yaesu website).

Memory Operation

Memory Recall

Once you have stored the memory or memories desired, you must now switch from the "VFO" mode to the "Memory Recall" mode, so you can operate on the just-stored memory channels.

1. Press the [**V/M**(**MW**)] key, repeatedly if necessary, until the " **MR** " icon and a memory channel number appear on the display; this indicates that the "Memory Recall" mode is now engaged.
2. When more than one memory has been stored, use the **DIAL** knob to select any of the programmed memories for operation.



Note: Alternatively, the microphone's [**UP**] or [**DWN**] button may be used to step or scan through the available memories. When using the microphone's buttons, press the button momentarily to move one step up or down; press and hold in the [**UP**] or [**DWN**] button for one second to begin memory scanning.

Memory Recall from the Microphone's Keypad

While operating in the Memory Recall mode, the keypad of the MH-48A6J Microphone may be used for direct recall of memory channels.

To do this, press the Channel Number you wish to recall, then press the [**#**] key.

For example:
To recall Memory Channel "**5**", press [**5**] ➠ [**#**]
To recall Memory Channel "**123**", press [**1**] ➠ [**2**] ➠ [**3**] ➠ [**#**]

You may also recall Programmable Memory Scan (PMS) channels ("L0/U0" through "L9/U9") using the following numbers:

L1	201	L6	211
U1	202	U6	212
L2	203	L7	213
U2	204	U7	214
L3	205	L8	215
U3	206	U8	216
L4	207	L9	217
U4	208	U9	218
L5	209	L0	219
U5	210	U0	220

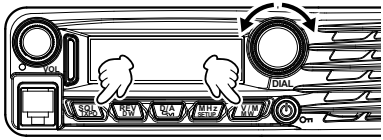
Moving Memory Data to the VFO

Data stored on memory channels can easily be moved to the VFO.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

Masking Memories

There may be situations where you want to “Mask” memories so they are not visible during memory selection or scanning. (except for Memory Channel “1”, the Priority Channel, and the Home Channel).



1. In the Memory Recall mode, press and hold in the [**V/M**(**MW**)] key for 1 second, then rotate the **DIAL** knob to select the memory channel you wish to mask.
3. Press the [**SQL**(**TXPO**)] key.
   The erase confirmation screen appears.
4. Press the [**SQL**(**TXPO**)] key.
   The previously selected memory will be “masked”.

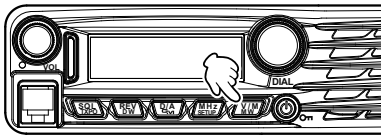
Note: Press the [**V/M**(**MW**)] key to cancel the memory mask.

<u>Un Masking Memory</u>

1. To Unmask a hidden memory, in the Memory Recall mode, press and hold in the [**V/M**(**MW**)] key for 1 second.
2. Rotate the **DIAL** knob to select the masked memory’s number.
3. Press the [**SQL**(**TXPO**)] key to restore the memory channel’s data.

HOME Channel Memory

A convenient one-touch “Home” channel memory is available to simplify return to your most often used frequency.



To recall the Home channel, just press the [**V/M**(**MW**)] key, repeatedly if necessary, until the “ **HM** ” icon appears on the display; this indicates that the Home Channel has been recalled.

Note: When shipped from factory, the Home Channel set to 146.520 MHz (USA version) or 144.000 MHz (EXP version).

<u>Changing the frequency of the home channel</u>

The default frequency setting of the home channel can be changed.

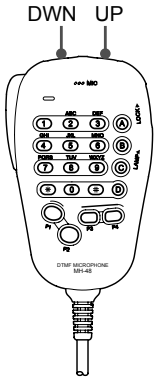
1. In the VFO mode, tune to the desired Home channel frequency.
2. Press and hold in the [**V/M**(**MW**)] key for 1 second, then press the [**REV**(**DW**)] key.
   The overwrite confirmation screen appears.
4. Press the [**REV**(**DW**)] key.
   The home channel frequency is overwritten.

Scanning

Basic Scanner Operation

Before activating the scanner, make sure that the Squelch is set to silence the back ground noise when no signal is present. Scanning is not possible while the Squelch is open (if noise or signals are being heard).

Scanning may be started or stopped using the microphone's [**UP**] or [**DWN**] button.



The following techniques are used for scanning:

- ❒ Pressing and holding in either the [**UP**] or [**DWN**] button for one second in the ***VFO mode*** will cause upward or downward band scanning, respectively, to begin.
- ❒ Pressing and holding in either the [**UP**] or [**DWN**] button for one second in the ***Memory mode*** will cause memory channel scanning toward a higher- or lower-numbered memory channel, respectively.
- ❒ Scanning pauses when a signal opens the squelch, and the decimal point on the display will blink. You can choose one of three scan-resume modes (described later).
- ❒ To halt the scan manually, the easiest way is to push the **PTT** switch on the microphone momentarily (no transmission will occur while you are scanning). The scan may also be halted manually by pressing the microphone's [**UP**] or [**DWN**] button, or the [**V/M**(**MW**)] key.

Scan Resume Options

Select one of the 3 scan resume modes to be performed after the scanning stops.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

Memory Skip Scanning

Memory channels which you do not want to receive can be skipped during scanning.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

Preferential Memory Scan

Set up a "Preferential Scan List" of channels which you can "flag" within the memory system.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

Programmable Memory Scan (PMS)

Using the dedicated PMS memory channels, only the frequencies within the specified frequency range will be scanned.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

Priority Channel Scanning (Dual Watch)

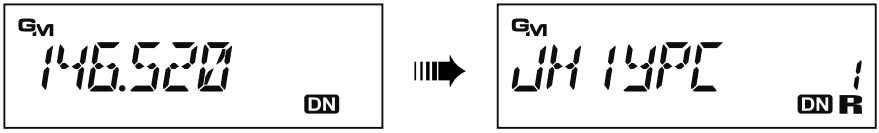
Scanning features include a two-channel scanning capability which allows you to operate on a VFO, Memory channel, or Home channel, while periodically checking a user defined Memory Channel for activity.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

What is the GM (Group Monitor) Function?

The GM function automatically monitors for any other stations with the GM function in operation on the same frequency, or stations transmitting in DN mode, within communication range. In addition to notifying you of the group members within your communication range, the GM function also displays the detected call sign on the transceiver screen.

Caution: The GM function does not work while in the analog (FM) mode.



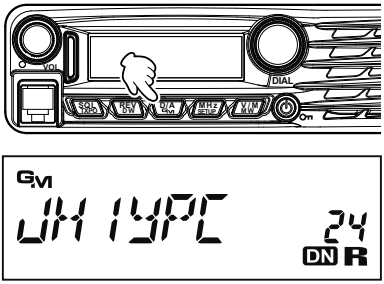
Displaying all the stations using the GM function

1. Tune to the designated frequency.
2. Press and hold in the [**D/A**(**GM**)] key for 1 second.

   The GM function activates and displays up to 24 stations using the GM mode on the same frequency, or stations operating in DN mode, within the communication range.

   Note: Displays " R "for stations within your communication range.

   Displays " R " (blinks) for stations outside your communication range.



3. Press and hold in the [**D/A**(**GM**)] key for 1 second to disable the GM function and return to the frequency screen.

Miscellaneous Settings

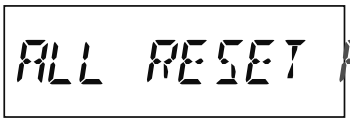
Reset Procedure

In some instances of erratic or unpredictable operation, the cause may be corruption of data in the microprocessor (due to static electricity, etc.). If this happens, resetting of the micro processor may restore normal operation. Note that all memories will be erased if you do a complete microprocessor reset, as described below.

Microprocessor Resetting

To clear all memories and other settings to factory defaults:

1. Turn the radio off.
2. Press and hold in the [**D/A**(**GM**)], [**MHz**(**SETUP**)], and [**V/M**(**MW**)] keys while turning the radio on. The "ALL RESET PUSH V/M KEY" notation will scroll on the display.



3. Press the [D/MR(MW)] key momentarily to reset all settings to their factory defaults(-press any other key to cancel the Reset procedure).

Set Mode Resetting

To reset the Set (Menu) mode settings to their factory defaults, while leaving other settings unchanged:

1. Turn the radio off.
2. Press and hold in the [**D/A**(**GM**)] and [**MHz**(**SETUP**)] keys while turning the radio on. The "SET MODE RESET PUSH V/M KEY" notation will scroll on the display.

3. Press the [D/MR(MW)] key momentarily to reset the Set (Menu) mode settings to their factory defaults (press any other key to cancel the Reset procedure).

Programming the Key Assignments

Default FTM-3200DR key functions have been assigned to the Microphone's [**P1**]/[**P2**]/[**P3**]/[**P4**] keys at the factory. These may be changed by the user, if you wish to assign quick access to another function.

Note: For details, refer to the Advanced Manual (download from the Yaesu website).

Keyboard Beeper

A key/button beeper provides useful audible feedback whenever a key/button is pressed. If you want to turn the beeper off (or back on again).

Note: See Setup Menu Item "**BEP KEY 3**" on page xx.

Miscellaneous Settings

Display Brightness

You can adjust the display brightness.

Note: See Setup Menu Item "**LCD DMMR 22**" on page xx.

Time-Out-Timer (TOT)

The "Time-Out Timer" (TOT) feature is designed to force the transceiver into the "receive"-mode after a preset time period of continuous transmission (the default is 3 minutes).

Note: See Setup Menu Item "**TOT 46**" on page xx.

Automatic Power Off (APO)

The "Automatic Power-Off" (APO) feature will turn the radio completely off after a user defined period of PTT or key/button inactivity.

Note: See Setup Menu Item "**APO 1**" on page xx.

Busy Channel Lock-Out (BCLO)

The BCLO feature prevents the radio's transmitter from being activated if a signal strong enough to break through the "noise" squelch is present.

Note: See Setup Menu Item "**BCLO 2**" on page xx.

TX Deviation Level

You can reduce the receiver bandwidth and microphone deviation level when operating on tightly-clustered frequencies (channel spacing of 12.5 or 15 kHz). This will reduce the transmitter deviation, thus minimizing interference to other users.

Note: See Setup Menu Item "**W/N DEV 52**" on page xx.

MIC Gain Setting

At the factory, a microphone gain has been programmed that should be satisfactory for the supplied MH-48A6J Microphone. If you use an after-market microphone or connect a TNC, you may wish to set a different Mic Gain level.

Note: See Setup Menu Item "**MIC GAIN 24**" on page xx.

Displaying the Supply Voltage

Display the Power Supply voltage.

Note: See Setup Menu Item "**DC VOLT 8**" on page xx.

Displaying the Temperature

Indicates indicate the current temperature inside the transceiver's case.

Note: See Setup Menu Item "**TEMP 44**" on page xx.

Packet Operation

The FTM-3200R may be used for 1200 bps Packet operation, using most all commonly available Terminal Node Controllers (TNCs). Connections between the transceiver and the TNC are accomplished via the front panel Microphone connector and rear panel External Speaker jack, per the diagram below.

The audio level from the receiver to the TNC may be adjusted by using the VOL knob, as with voice operation. The input level to the FTM-3200R from the TNC may be adjusted via Setup Menu Item "**MIC GAIN 24**" see page xx for details.

Be sure to turn the transceiver and TNC off before connecting the cables, so as to prevent voltage spikes from possibly damaging your transceiver.

Remember to readjust the default microphone input level to "**LEVEL 5**" (Setup Menu Item "**MIC GAIN 24**") when Packet operation is finished.

Cloning

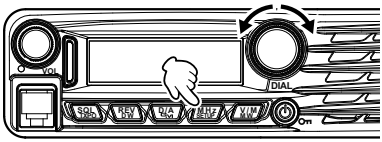
The FTM-3200R includes a convenient “Clone” feature, which allows the memory and configuration data from one transceiver to be transferred to another FTM-3200R.
This can be particularly useful when configuring a number of transceivers for a public service operation.
Here is the procedure for Cloning one radio’s data to another:

1. Turn both radios off.
2. Connect the user-constructed cloning cable between the MIC jacks of the two radios.
3. Press and hold in the [LOW(A/N)] key while turning the radios on. Do this for both radios (the order of switch-on does not matter). “CLONE” will appear on the displays of both radios when the Clone mode is successfully activated in this step.
4. On the Destination radio, press the [D/MR(MW)] key (“- -WAIT- -” will appear on the LCD).
5. Press the [MHz(SET)] key on the Source radio; “- - - -TX- - - -” will appear on the Source radio, and the data from this radio will be transferred to the other radio.
6. If there is a problem during the cloning process, “ERROR” will be displayed. Check your cable connections and battery voltage, and try again.
7. If the data transfer is successful, “CLONE” will appear on both displays.
8. Press any key to exit to normal operation.
9. Turn both radios off and disconnect the cloning cable.

Setup (Menu) Mode

The FTM-3200R Setup (Menu) mode, already described in parts of many previous chapters, is easy to activate and set. It may be used for configuration of a wide variety of transceiver parameters, some of which have not been detailed previously. Use the following procedure to activate the Setup (Menu) mode:

1. Press and hold in the [**MHz**(**SETUP**)] key for 1 second to enter the Setup menu.
2. Rotate the **DIAL** knob to select the Menu Item to be adjusted.
3. Press the [**MHz**(**SETUP**)] key momentarily to enable adjustment of the selected Menu item, then rotate the **DIAL** knob to perform the actual adjustment.
4. After completing your selection and adjustment, press and hold in the [**MHz**(**SETUP**)] key for 1 second to exit the Setup menu and resume normal operation.



Menu Item	Function	Available Values	Default
1: APO	Enables/Disables the Automatic Power Off feature.	0.5H to 12H (0.5H step)/ OFF	OFF
2: BCLO	Enables/Disables the Busy Channel Lock-Out feature.	ON/OFF	OFF
3: BEP KEY	Enables/Disables the key beeper.	KEY+SCAN/KEY/OFF	KEY+SCAN
4: BEP EDGE	Enables/Disable the Band-edge beeper while scanning.	ON/OFF	OFF
5: BEP STBY	Enables/Disable the Standby beep	ON/OFF	ON
6: BELL	Selects the CTCSS/DCS/EPCS Bell Ringer repetitions.	1 to 20/CONTINUE/OFF	OFF
7: CLK TYPE	Shifting of the CPU clock frequency.	A/B	A
8: DC VOLT	Indicates the DC Supply Voltage.	---	---
9: DCS CODE	Setting of the DCS code.	104 standard DCS codes	023
10: DCS INV	Select a combination of DCS inversion codes in terms of communication direction.	NORMAL/INVERT/ BOTH	NORMAL
11: DIG AMS	Sets the transmission mode	TXMANUAL/TX FMFIX/ TX DNFIX/AUTO	TXMANUAL
12: DI POPUP	Sets the information pop-up time	2/4/6/8/10/20/30/60/ CONTINUE/OFF	10 SEC
13: DSQ CODE	Sets the squelch code in digital mode.	001 to 126	CODE 001
14: DSQ TYPE	Sets the squelch type in digital mode.	OFF/CODE/BREAK	OFF
15: DT AUTO	Enables/Disables the DTMF Autodialer feature.	MANUAL/AUTO	MANUAL

Setup (Menu) Mode

Menu Item	Function	Available Values	Default
16: DT DELAY	Setting of the DTMF Autodialer's TX Delay Time.	50/250/450/750/1000	450 MS
17: DT SET	Loading of the DTMF Autodialer Memories.	---	---
18: DT SPEED	Setting of the DTMF Autodialer Sending Speed.	50/100	50 MS
19: DW RVRT	Enables/Disables the "Priority Channel Revert" feature.	ON/OFF	OFF
20: GM RINGR	Enables/Disables the alert sound when detecting stations within communication range	IN RANGE/ALWAYS/OFF	IN RANGE
21: GM INTVL	Selects the automatic sending interval.	NORMAL/LONG	NORMAL
22: LCD DMMR	Setting of the front panel display's illumination level.	LEVEL 1/2/3/4	LEVEL 4
23: LOCK	Selects the Control Locking Lockout combination.	KEY+DIAL/PTT/KEY+PTT/DIAL+PTT/ALL/KEY/DIAL	KEY+DIAL
24: MIC GAIN	Adjust the microphone gain level.	LEVEL 5 to 9	LEVEL 5
25: MEM NAME	Programming an Alpha/Numeric label for a Memory Channel.	---	---
26: MW MODE	Selects the method of selection of channels for Memory Storage.	NEXT CH/LOWER CH	NEXT CH
27: OPEN MSG	Selects the Opening Message that appears when the radio is powered ON.	OFF/DC/MESSAGE	MESSAGE
28: PAG CD-R	Setting the Receiver Pager Code for the Enhanced CTCSS Paging & Code Squelch function.	---	05 47
29: PAG CD-T	Setting the Transmitting Pager Code for the Enhanced CTCSS Paging & Code Squelch function.	---	05 47
30: PAG P1	Programming the function assigned to Microphone's [**P1**] key.	SQL OFF HOME WX CH CD SRCH SCAN T CALL TX POWER DIG/ANA GM Setup Menu Item #1 to 53	SQL OFF
31: PAG P2	Programming the function assigned to Microphone's [**P2**] key.		HOME
32: PAG P3	Programming the function assigned to Microphone's [**P3**] key.		CD SRCH
33: PAG P4	Programming the function assigned to Microphone's [**P4**] key.		Depends on the transceiver version.
34: RADIO ID	Displays the transceiver IDs	※※※ (uneditable)	---
35: RF SQL	Adjusts the RF Squelch threshold level.	ON/OFF	OFF
36: RPT ARS	Activates/Deactivates the Automatic Repeater Shift feature.	ON/OFF	ON
37: RPT FREQ	Sets the magnitude of the Repeater Shift.	0.00 - 99.95 (MHz)	0.60 MHz
38: RPT SFT	Sets the Repeater Shift direction.	-RPT/+RPT/SIMP	SIMP
39: SCAN RSM	Selects the Scan Resume mode.	BUSY/HOLD/2-10 (SEC)	5.0 SEC

Setup (Menu) Mode

Menu Item	Function	Available Values	Default
40: SCAN SKP	Selects the Memory Scan mode.	OFF/SKIP/SELECT	OFF
41: SQL EXP	Sets the squelch type separately for transmission and reception.	ON/OFF	OFF
42: SQL TYPE	Selects the Tone Encoder and/or Decoder mode.	TONE/TSQ/DCS/RV TONE/PAG/OFF	OFF
43: STEP	Sets the Synthesizer steps.	AUTO/5/6.25/10/12.5/15 /20/25/50/100 (Hz)	AUTO
44: TEMP	Indicats the current temperature inside the transceiver's case.	F/C	USA: F EXP: C
45: TONE FRQ	Setting of the CTCSS Tone Frequency.	67.0 to 254.1 (Hz)	100.0 HZ
46: TOT	Sets the Time-Out Timer.	0.5 to 10.0 (MIN)	3.0 MIN or OFF
47: TS MUTE	Enables/Disables the receiver audio output during the Tone Search Scanner is activated.	ON/OFF	ON
48: TS SPEED	Selects the Tone Search Scanner speed.	FAST/SLOW	FAST
49: VER DISP	Displays the transceiver software version	CPU x.xx DSP x.xx	---
50: WX ALERT	Enables/Disables the Weather Alert feature.	ON/OFF	OFF
51: WX VOL	Selects the audio output level of the Weather Alert.	NOR.VOL/MAX.VOL	NOR VOL
52: W/N DEV	Reduction of the Microphone Gain/Deviation and receiver bandwidth.	WIDE/NARROW	WIDE
53: MY CALL	Sets your station call sign	×××××××××××	---

Specifications

General

Frequency Range:	Tx 144 - 148 MHz
	Rx 136 - 174 MHz
Channel Step:	5/6.25/10/12.5/15/20/25/50/100 kHz
Standard Repeater Shift:	±600 kHz
Frequency Stability:	±2.5 ppm [-4 °F to +140 °F (-20 °C to +60 °C)]
Modes of Emission:	F3E/F7W
Antenna Impedance:	50 Ohms, unbalanced
Supply voltage:	13.8 V DC ±15 %, negative ground
Current Consumption (typical):	Rx: less than 0.7 A, less than 0.5 A (squelched)
	Tx: 15 A (65 W) /10 A (30 W) /5 A (5 W)
Operating Temperature Range:	-4° F to +140° F (-20° C to +60° C)
Case Size (WxHxD):	6.1” x 1.7” x 6.1” (154 x 43 x 155 mm) (w/o knobs)
Weight (Approx.):	2.86 lb (1.3 kg)

Transmitter

Output Power:	65/30/5 W
Modulation Type:	F3E: Variable Reactance
	F7W: 4FSK (C4FM)
Maximum Deviation:	±5 kHz (Wide)
	±2.5 kHz (Narrow)
Spurious Radiation:	Better than -60 dB
Microphone Impedance:	2 k Ohms

Receiver

Circuit Type:	Double Conversion Superheterodyne
Ifs:	1st 47.25 MHz, 2nd 450 kHz
Sensitivity (for 12dB SINAD):	0.20 µV (Ham band, wide)
	0.22 µV (Ham band, narrow)
Sensitivity (for Digital):	0.22 µV (BER 1 %)
Selectivity (–6/–60dB):	12 kHz/28 kHz
Maximum AF Output:	3 W @ 13.8 V, 10 % THD (EXP SP)

Rated values are at normal temperature and pressure.
Ratings and specifications are subject to change without notice.

Specifications

1. Changes or modifications to this device not expressly approved by YAESU MUSEN could void the user's authorization to operate this device.
2. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference including received, interference that may cause undesired operation.
3. The scanning receiver in this equipment is incapable of tuning, or readily being altered, by the User to operate within the frequency bands allocated to the Domestic public Cellular Telecommunications Service in Part 22.

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

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

DECLARATION BY MANUFACTURER

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

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

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

YAESU
The radio

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Printed in Japan
1601A-0O

EH052N100