

# Optional Accessories

## FC-40 External Automatic Antenna Tuner (for Wire Antenna)

The FC-40 makes use of the control circuitry built into the transceiver, which allows the operator to control and monitor automatic operation of the FC-40, which mounts near the antenna feedpoint. The FC-40 uses specially selected, thermally stable components, and is housed in a waterproof case to withstand severe environmental conditions with high reliability.

A carefully-chosen combination of solid-state switching components and high-speed relays allows the FC-40 to match a wide variety of antennas to within a 2:1 SWR on any amateur band frequency (160 through 6 meters), typically in less than eight seconds. Transmitter power required for matching may be as little as 4 - 60 Watts, and matching settings are automatically stored in memory for instant recall when the same frequency range is selected later.

Please see the FC-40 Operating Manual for detailed information.



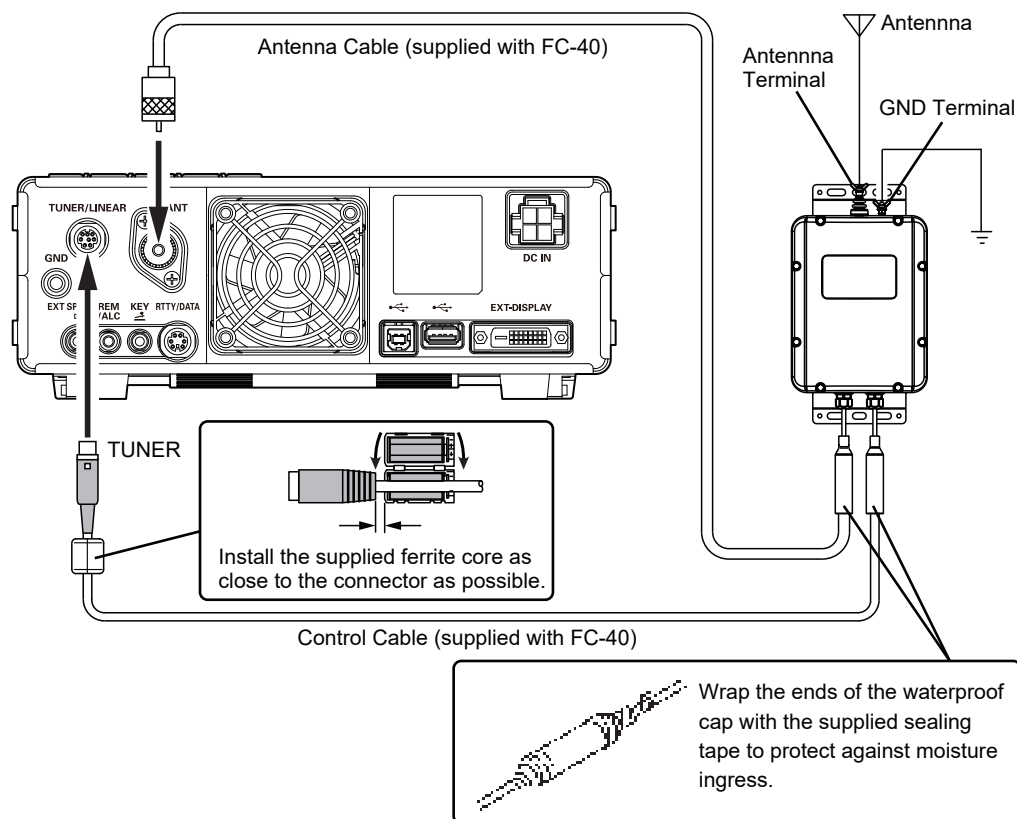
Depending on the installation and location of some antennas, it may not be possible to tune to a low SWR.

### • Interconnections to FT-710

After mounting the FC-40, connect the cables from the FC-40 to the ANT and TUNER jacks on the rear panel of the FT-710 Transceiver.



Turn OFF the external power supply switch and the FT-710 power supply switch first before connecting the cables.



## • Setup the transceiver

The optional FC-40 Automatic Antenna Tuner provides automatic tuning of a coaxial line to present nominal 50-ohm impedance to the FT-710's ANT jack.

Before tuning can begin, the FT-710 must be configured to recognize that the FC-40 is being used. Configuration is done using the Setting Menu Mode:

1. Press the [FUNC] knob.
2. Select [OPERATION SETTING] → [GENERAL] → [TUNER TYPE SELECT].
3. Rotate the [FUNC] knob, or touch "<" or ">" on either side of the value to select "EXT".
4. Press the [FUNC] knob to save the new setting.
5. Touch [BACK] several times to return to normal operation.

## • Tuning Operation

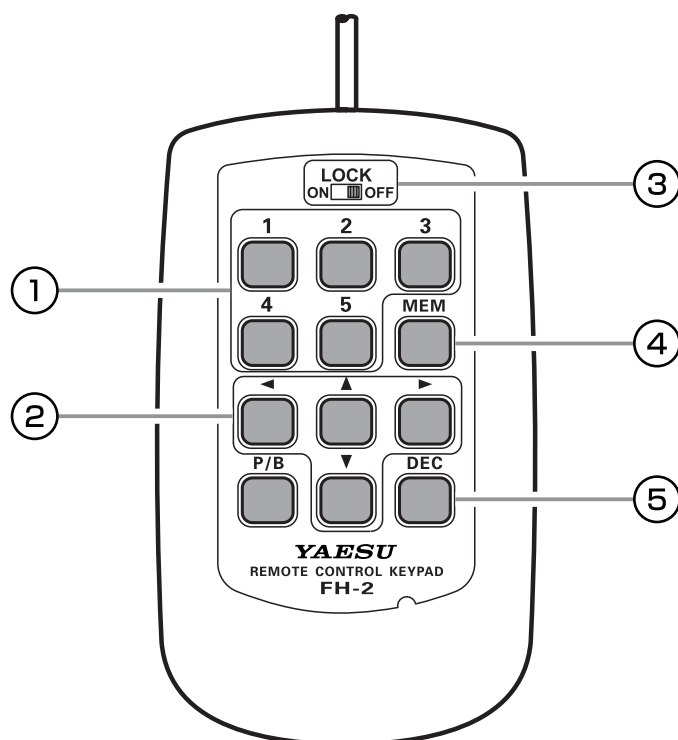
1. Press the [TUNE] key.  
A "TUNE" icon will appear in the display; and the tuner function is activated.
2. Press and hold the [TUNE] key to begin automatic tuning.
  - The transmitter will be engaged, and the "TUNER" icon will blink while tuning is in progress.
  - When the optimum tuning point has been reached, the transceiver will return to receive, and the "TUNER" icon will again glow steadily (instead of blinking).

- Be sure to connect a good earth ground to the GND terminal of the FC-40.
- The carrier signal transmits continuously while tuning is in progress. Please monitor the operating frequency before beginning the tuning process. Be sure you are not interfering with others who may already be using the frequency.
- It is normal to hear the sound of the relays while tuning is in progress.
- If the impedance cannot be matched by the FC-40 better than 2:1, and the "HI-SWR" icon blinks, the microprocessor will not retain the tuning data for that frequency, as the FC-40 presumes that you will want to adjust or repair the antenna system to correct the high SWR condition.

## FH-2 Remote Control Switches

With the optional remote-control keypad FH-2 voice messages may be recorded and transmitted (Voice Memory). The FH-2 is also the control of the Contest Memory Keyer during CW operation.

- SSB / AM / FM modes have five voice memory channels (90 seconds each) for storage and playback, of voice recordings.
- The CW Memory Keyer has 5 channels each for the MESSAGE Memory and the TEXT Memory.



### ① Voice Memory: 5 Memory

#### Channels for the Memory Keyer

In the case of Voice Memory, up to 90 seconds of audio may be stored on each channel.

“MESSAGE Memory” and “TEXT Memory” are available for the Contest Memory Keyer.

Each “MESSAGE Memory” channel is capable of retaining a 50-character CW message using the PARIS standard for characters and word length.

Each “TEXT Memory” channel is capable of retaining a maximum of 50 characters.

### ② Cursor Keys

When programming the Contest Memory Keyer, these keys are used to move the cursor and select the text characters.

The cursor may be moved in 4 different directions (up/down/right/left).

NOTE: Usually, these keys are used for changing the VFO frequency. Press the [▲]/[▼] keys to change the frequency in the same increments as the microphone [UP]/[DWN] switches. Press the [◀]/[▶] keys to change the frequency by 100 kHz steps.

### ③ LOCK Switch

The FH-2 key keys may be locked by setting this switch to “ON”.

### ④ MEM Key

Press this key to store either a Voice Memory, or a Contest Keyer Memory.

### ⑤ DEC Key

When utilizing the sequential contest number capability of the Contest Keyer, press this key to decrement (decrease) the current Contest Number by one digit (i.e. to back up from #198 to #197, etc.).

\*No function is assigned to the [P/B] key.

# Resetting the Microprocessor

Memory channels, setting menus, and various settings can be initialized and returned to their factory defaults.



1. Display the reset item selection screen.  
Press the [FUNC] knob → touch [EXTENSION SETTING] → touch [RESET]
2. Touch “DONE” of the item you want to reset (see below).  
Or Select an item with the [FUNC] knob and press the [FUNC] knob.  
A confirmation screen for reset execution is displayed.

## **MEMORY CLEAR (Memory Reset)**

Only the contents of the memory channel are initialized (factory default).

All stored information will be erased, but channel M-01 will return to the initial setting of 7.000.000 MHz, LSB.

## **MENU CLEAR (Setting Menu Reset)**

Only the contents of the setting menu are returned to their default values (factory default).

## **ALL RESET (All Reset)**

Initializes all settings of this unit, including various settings, memories, and setting menus, and re-stores the factory settings.

3. Touch [OK] or select [OK] with the [FUNC] knob and press the [FUNC] knob to execute the reset.  
To cancel the reset, touch [CANCEL] or select [CANCEL] with the [FUNC] knob and press the [FUNC] knob.
4. The power is turned OFF once and then turned ON automatically.  
The reset is complete.

# Specifications

## General

Tx Frequency Range:	1.8MHz - 54MHz (Amateur bands only) 70MHz - 70.5MHz (UK Amateur bands only)
Rx Frequency Range:	30kHz - 75MHz (operating) 1.8MHz - 29.699999MHz (specified performance, Amateur bands only) 50MHz - 53.999999MHz (specified performance, Amateur bands only) 70MHz - 70.499999MHz (specified performance, UK Amateur bands only)
Emission Modes:	A1A (CW), A3E (AM), J3E (LSB, USB), F3E (FM),
Frequency Steps:	1/10Hz (SSB, CW), 10/100Hz (AM, FM)
Antenna Impedance:	50Ω, unbalanced (Antenna Tuner "OFF") HF: 16.7 - 150Ω, unbalanced (Antenna Tuner "ON") 50MHz: 25 - 100Ω, unbalanced (Antenna Tuner "ON")
Operating Temperature Range:	+32°F to +122°F (0°C to +50°C)
Frequency Stability:	±0.5ppm (after 1 minute @ +32°F to +122°F [0°C to +50°C])
Supply Voltage:	DC13.8V ± 15% (Negative Ground)
Power Consumption (approx.)	Rx (no signal) 1.8A Rx (signal present) 2.2A Tx (100W) 21A
Dimensions (WxHxD):	9.5" x 3.6" x 11.4" (242 x 91 x 290mm)
Weight (approx.):	9.9 lbs (4.5kg)

## Transmitter

Power Output:	5 - 100W (5 - 25W AM carrier)
Modulation Types:	J3E (SSB): Balanced A3E (AM): Low-Level (Early Stage) F3E (FM): Variable Reactance
Maximum FM Deviation:	±5.0kHz / ±2.5kHz (Narrow)
Harmonic Radiation:	Better than -50dB (1.8MHz - 29.7MHz Amateur bands) Better than -63dB (50MHz Amateur band) Better than -60dB (70MHz UK Amateur band)
SSB Carrier Suppression:	At least 60dB below peak output
Undesired Sideband Suppression:	At least 60dB below peak output
3rd-order IMD:	-31dB @14MHz 100W PEP
Bandwidth:	3kHz (LSB, USB), 500Hz (CW), 6kHz (AM), 16kHz (FM)
Audio Response (SSB):	Not more than -6dB from 300 to 2700Hz
Microphone Impedance:	600Ω (200 to 10kΩ)

## Receiver

Circuit Type:	Direct Sampling Superheterodyne		
Intermediate Frequencies:	24kHz / 18kHz		
Sensitivity (typ):	SSB/CW (2.4kHz, 10dB S+N/N)		
	1.8MHz - 30MHz	0.16μV (AMP2 "ON")	
	50MHz - 54MHz	0.125μV (AMP2 "ON")	
	70MHz - 70.5MHz	0.16μV (AMP2 "ON")	
	AM (BW: 6kHz, 10dB S+N/N, 30% modulation @400Hz)		
	0.5MHz - 1.8MHz	7.9μV	
	1.8MHz - 30MHz	2μV (AMP2 "ON")	
	50MHz - 54MHz	1μV (AMP2 "ON")	
	70MHz - 70.5MHz	2μV (AMP2 "ON")	
	FM (1kHz 3.5kHz DEV BW: 12kHz, 12dB SINAD)		
	28MHz - 30MHz	0.25μV (AMP2 "ON")	
	50MHz - 54MHz	0.2μV (AMP2 "ON")	
	70MHz - 70.5MHz	0.25μV (AMP2 "ON")	
Selectivity (typ):	Mode	-6dB	-60dB
	CW (BW=0.5kHz)	0.5kHz or better	0.75kHz or less
	SSB (BW=2.4kHz)	2.4kHz or better	3.6kHz or less
	AM (BW=6kHz)	6kHz or better	15kHz or less
	FM (BW=12kHz)	12kHz or better	25kHz or less
Image Rejection:	70dB or better (1.8MHz - 28MHz Amateur bands)		
	60dB or better (50MHz Amateur band)		
	60dB or better (70MHz UK Amateur band)		
Maximum Audio Output:	2.5W into 4Ω with 10% THD		
Audio Output Impedance:	4 to 16Ω (4Ω: nominal)		
Conducted Radiation:	Less than 4nW		

***Specifications are subject to change, in the interest of technical improvement, without notice or obligation, and are guaranteed only within the amateur bands.***

# YAESU LIMITED WARRANTY

Limited Warranty is valid only in the country/region where this product was originally purchased.

## On-line Warranty Registration:

Thank you for buying YAESU products! We are confident your new radio will serve your needs for many years! Please register your product at [www.yaesu.com](http://www.yaesu.com) - Owner's Corner

## Warranty Terms:

Subject to the Limitations of the Warranty and the Warranty Procedures described below, YAESU MUSEN hereby warrants this product to be free of defects in materials and workmanship in normal use during the "Warranty Period." (the "Limited Warranty").

## Limitations of Warranty:

- A. YAESU MUSEN is not liable for any express warranties except the Limited Warranty described above.
- B. The Limited Warranty is extended only to the original end-use purchaser or the person receiving this product as a gift, and shall not be extended to any other person or transferee.
- C. Unless a different warranty period is stated with this YAESU product, the Warranty Period is three years from the date of retail purchase by the original end-use purchaser.
- D. The Limited Warranty is valid only in the country/region where this product was originally purchased.
- E. During the Warranty Period, YAESU MUSEN will, at its sole option, repair or replace (using new or refurbished replacement parts) any defective parts within a reasonable period of time and free of charge.
- F. The Limited Warranty does not cover shipping cost (including transportation and insurance) from you to us, or any import fees, duties or taxes.
- G. The Limited Warranty does not cover any impairment caused by tampering, misuse, failure to follow instructions supplied with the product, unauthorized modifications, or damage to this product for any reasons, such as: accident; excess moisture; lightning; power surges; connection to improper voltage supply; damage caused by inadequate packing or shipping procedures; loss of, damage to or corruption of stored data; product modification to enable operation in another country/purpose other than the country/purpose for which it was designed, manufactured, approved and/or authorized; or the repair of products damaged by these modifications.
- H. The Limited Warranty applies only to the product as it existed at the time of the original purchase, by the original retail purchaser, and shall not preclude YAESU MUSEN from later making any changes in design, adding to, or otherwise improving subsequent versions of this product, or impose upon YAESU MUSEN any obligation to modify or alter this product to conform to such changes, or improvements.
- I. YAESU MUSEN assumes no responsibility for any consequential damages caused by, or arising out of, any such defect in materials or workmanship.
- J. TO THE FULLEST EXTENT PERMITTED BY LAW, YAESU MUSEN SHALL NOT BE RESPONSIBLE FOR ANY IMPLIED WARRANTY WITH RESPECT TO THIS PRODUCT.
- K. If the original retail purchaser timely complies with the Warranty Procedures described below, and YAESU MUSEN elects to send the purchaser a replacement product rather than repair the "original product", then the Limited Warranty shall apply to the replacement product only for the remainder of the original product Warranty Period.
- L. Warranty statutes vary from state to state, or country to country, so some of the above limitations may not apply to your location.

## Warranty Procedures:

- 1. To find the Authorized YAESU Service Center in your country/region, visit [www.yaesu.com](http://www.yaesu.com). Contact the YAESU Service Center for specific return and shipping instructions, or contact an authorized YAESU dealer/distributor from whom the product was originally purchased.
- 2. Include proof of original purchase from an authorized YAESU dealer/distributor, and ship the product, freight prepaid, to the address provided by the YAESU Service Center in your country/ region.
- 3. Upon receipt of this product, returned in accordance with the procedures described above, by the YAESU Authorized Service Center, all reasonable efforts will be expended by YAESU MUSEN to cause this product to conform to its original specifications. YAESU MUSEN will return the repaired product (or a replacement product) free of charge to the original purchaser. The decision to repair or replace this product is the sole discretion of YAESU MUSEN.

## Other conditions:

YAESU MUSEN'S MAXIMUM LIABILITY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID FOR THE PRODUCT. IN NO EVENT SHALL YAESU MUSEN BE LIABLE FOR LOSS OF, DAMAGE TO OR CORRUPTION OF STORED DATA, OR FOR SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES, HOW EVER CAUSED; INCLUDING WITHOUT LIMITATION TO THE REPLACEMENT OF EQUIPMENT AND PROPERTY, AND ANY COSTS OF RECOVERING, PROGRAMMING OR REPRODUCING ANY PROGRAM OR DATA STORED IN OR USED WITH THE YAESU PRODUCT.

Some Countries in Europe and some States of the USA do not allow the exclusion or limitation of incidental or consequential damages, or a limitation on how long an implied warranty lasts, so the above limitation or exclusions may not apply. This warranty provides specific rights, there may be other rights available which may vary between countries in Europe or from state to state within the USA.

This Limited Warranty is void if the label bearing the serial number has been removed or defaced.



## **Declaration of Conformity**

Type of Equipment: HF/50MHz TRANSCEIVER

Brand Name: YAESU

Model Number: FT-710

Manufacturer: YAESU MUSEN CO., LTD.

Address of Manufacturer: Tennozu Parkside Building, 2-5-8 Higashi-Shinagawa,  
Shinagawa-ku, Tokyo 140-0002 Japan

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 received, including interference that may cause undesired operation.

The technical documentation as required by the Conformity Assessment procedures is kept at the following address:

Company: Yaesu U.S.A.

Address: 6125 Phyllis Drive, Cypress, CA 90630, U.S.A.

Telephone: (714) 827-7600

- Changes or modifications to this device that are not expressly approved by YAESU MUSEN could void the user's authorization to operate this device.
- 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.
- 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.
- The YAESU MUSEN is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

This device complies with ISSED's applicable 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)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy; and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

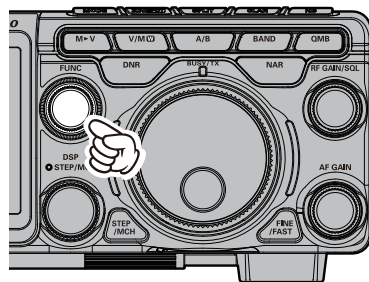
If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ☐ Reorient or relocate the receiving antenna.
- ☐ Increase the separation between the equipment and receiver.
- ☐ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ☐ Consult the dealer or an experienced radio/TV technician for help.



## Display the Certifications of FCC and CANADA

1. Press the [FUNC] knob.



2. Touch [EXTENSION SETTING].

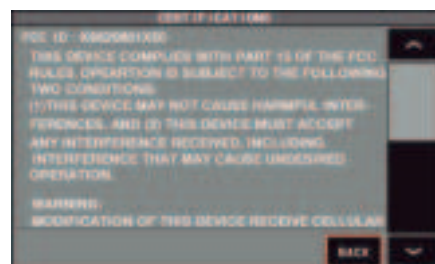


3. Select [CERTIFICATIONS], then touch "DONE" of the "CERTIFICATIONS" item.



The Certifications of FCC and CANADA are displayed.

4. Touch "BACK" to return to the Setting Menu screen.
5. Touch [BACK] several times to return to normal operation.




### EU Declaration of Conformity

We, Yaesu Musen Co. Ltd of Tokyo, Japan, hereby declare that this radio equipment FT-710 is in full compliance with EU Radio Equipment Directive 2014/53/EU. The full text of the Declaration of Conformity for this product is available to view at <http://www.yaesu.com/jp/red>

#### ATTENTION – Condition of use

This transceiver operates on frequencies that are regulated. Use of the Transmitter in the EU countries shown in the accompanying table is not permitted without authorization. Users should consult their local spectrum management authority for licensing conditions applicable to this equipment.

					
AT	BE	BG	CY	CZ	DE
DK	ES	EE	FI	FR	UK
EL	HR	HU	IE	IT	LT
LU	LV	MT	NL	PL	PT
RO	SK	SI	SE	CH	IS
LI	NO	—	—	—	—

#### Disposal of Electronic and Electrical Equipment

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

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

Please contact a local equipment supplier representative or service center for information about the waste collection system in your country.





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