

HF PORTABLE TRANSCEIVERS

# FT-70F/G

**YAESU**





FT-70G

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**PROFESSIONAL GRADE,**

**SY**

## DESCRIPTION

The FT-70 series HF field portable manpack transceivers are designed to provide reliable, convenient medium-range communications under rugged field conditions. The frequency-synthesized, all solid-state circuitry and die-cast anodized aluminum front panel and battery pack make a highly portable, semi-weatherproof station weighing less than six kilograms, providing up to ten watts of multi-mode transmitter output power (5W on AM) between 2 and 30 MHz, and reception down to 500 kHz.

Channel selection from the front panel is by either an 11-channel rotary



FT-70F

switch (FT-70F, diode-matrix pre-settable), or thumbwheel switches (FT-70G) with 100 Hz resolution.

Synthesized, broad-band circuitry minimizes moving parts and tuning requirements, while automatically selected bandpass filters ensure high performance, sensitivity and pure spectral output. The FT-70F version can be

## OPTIONS

**CSC-70 Carrying Bag**  
**NC-70 Ni-Cd Battery Charger**  
 Quick: 2 hours,  
 Normal: 8 hours, and  
 Trickle, DC Power Supply  
 External Speaker  
**FNB-70 Ni-Cd Battery Pack**  
 Output: 12 V, 4 Ah  
 Weight : 2.3 kg  
**YA-70 Whip Antenna**  
 Length: 4.8 meters  
 Supplied w/Mounting Base,  
 Carrying Bag, Connection  
 Cables, and Counterpoise

**RSL-70 Whip Anten**  
 Length: 2.4 meters  
 Designed for use w/FC-70P  
 Supplied w/Counterpoise  
**FC-70M Antenna Tuner**  
 Wideband Manual Tuning  
 1.6 ~ 3.0 MHz (use w/YA-70)  
**FC-70P Antenna Tuner**  
 11-Preselectable Channels  
 1.6 ~ 30 MHz (use w/YA-70)  
 3.0 ~ 30 MHz (use w/RSL-70)  
**YH-70 Handset**  
**10F-2.4DL LSB Filter**



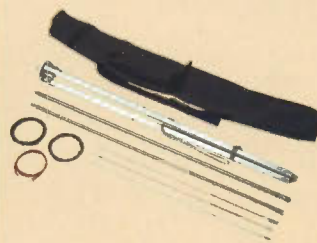
CSC-70 Carrying Bag



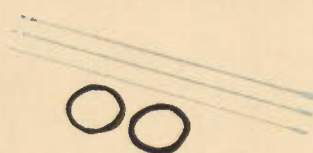
NC-70 Ni-Cd Battery Charger



FNB-70 Ni-Cd Battery Pack



YA-70 Whip Antenna



RSL-70 Whip Antenna



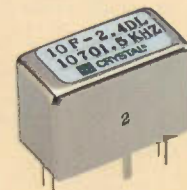
FC-70M Antenna Tuner



FC-70P Antenna Tuner



YH-70 Handset



10F-2.4DL LSB Filter

# ANTHESIZED FULL COVERAGE, SOLID STATE, SELF CONTAINED FIELD PORTABLE

programmed for semi-duplex operation.

Flexible operation for optimum communications under a wide range of propagation conditions are assured by SSB (USB, or optional LSB), semi break-in CW and AM modes, selectable from the front panel, along with high/low power selection and all-mode receiver squelch. Convenient operation is further facilitated by an operator-switchable noise blanker, multi-function meter (showing receive signal strength, relative transmit power or battery/supply voltage), and receiver offset (clarifier) control. A trans-

mitter tune switch is provided to simplify zero-beating by other stations, and tuning of the optional FC-70M wideband manual antenna tuner. To maximize charge life of the (optional) FNB-70 high-capacity rechargeable Ni-Cd battery pack, in addition to the high/low power switch, the meter lamp may be switched off when not needed during portable operation. A caution lamp indicates antenna mismatch or out-of-range frequency selection.

Aside from the FNB-70 battery pack, the FT-70 transceivers can also be powered from any external source of

12V DC capable of up to 4A. The NC-70 quick-charger is available for recharging the FNB-70 from the AC mains. Optional antennas are the RSL-70 Whip Antenna, which attaches directly to the control panel of the FC-70P; or the YA-70 Portable Tripod Whip with carrying case. The optional FC-70P 11-channel presettable antenna tuner and the FC-70M full-range manual antenna tuner are available for piggy-back mounting on either version of the transceiver. The YH-70 telephone-type handset and CSC-70 Backpack-style Carrying Case are also available as options.

# SPECIFICATIONS

## GENERAL

### Frequency Range

Transmitter: 2.0000 MHz ~ 29.9999 MHz

Receiver: 0.5000 MHz ~ 29.9999 MHz

### Frequency Tuning

FT-70G: 6-digit thumbwheel switch; 100 Hz steps

FT-70F: Diode matrix; 100 Hz steps

### Number of Channels

FT-70G: Continuous coverage; 100 Hz steps

FT-70F: 11 simplex or 11 semi-duplex

### Emission Type

USB, LSB (A3J/J3E), A3H (H3E), CW (A2/A2A)

### Antenna Impedance

50 ohms unbalanced

### Power Requirement

12 ~ 15 V DC Negative ground

### Power Consumption @ 13.8 V DC

Receive: 0.5A

Transmit (LOW) USB, LSB, CW: 2.4A

Transmit (HIGH) USB, LSB, CW: 3.3A

Transmit (LOW) A3H: 1.8A

Transmit (HIGH) A3H: 2.6A

### Operating Temperature

-10°C ~ +50°C

### Dimensions

242 (W) x 87 (H) x 277 (D) mm (w/o FNB-70)

242 (W) x 87 (H) x 319 (D) mm (with FNB-70)

### Weight

3.5 kg (w/o FNB-70)

5.8 kg (with FNB-70)

## TRANSMITTER

### Power Output

USB, LSB, CW: 10W/4W selectable

A3H: 5W/2W selectable

### Modulation Type

USB, LSB: Balanced modulation

A3H: Low level modulation

### Harmonics Radiation

Better than 50 dB below peak output

### Carrier Suppression

Better than 50 dB below peak output

### Unwanted Sideband Suppression

Better than 50 dB below peak output (1.5 kHz tone)

### Audio Response

Better than -6 dB From 350 to 2,650 Hz

### 3rd Order IMD Product

Better than -31 dB below peak output

### Frequency Stability

Within  $\pm 150$  Hz

### Microphone Impedance

600 ohms

### Tone Oscillator Frequency

1,500 Hz

## RECEIVER

### Type of Receiver

Double conversion superheterodyne

### Intermediate Frequency

1st IF: 47.055 MHz

2nd IF: 10.700 MHz

### Sensitivity (10 dB (S + N)/N)

2.0 ~ 30 MHz

USB, LSB, CW: Better than 0.4  $\mu$ V

A3H: Better than 1.5  $\mu$ V

0.5 ~ 2.0 MHz

USB, LSB, CW: Better than 4.0  $\mu$ V

A3H: Better than 15  $\mu$ V

### Selectivity (10 dB (S + N)/N)

2.4 kHz at -6 dB

5.0 kHz at -60 dB

### Image Rejection

1st: Better than 80 dB

2nd: Better than 70 dB

### Clarifier Range

More than  $\pm 300$  Hz

### Audio Output Power

More than 1.5W

(Into 8 ohms load, with less than 10% THD)

### Note:

An optional filter is required for LSB mode.

*Specifications subject to change without notice or obligation*



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