



## VHF AND UHF FM REPEATERS

**IC-FR3000** (VHF FM Repeater)  
**IC-FR4000** (UHF FM Repeater)



- **50 Watt continuous full duty cycle operation**

This repeater looks as good as it performs. A rugged heatsink, large cooling fans and a high performance power module provide the repeater with a stable 50W at full duty cycle operation.

- **Automatic battery backup system**

A built-in backup system supports automatic switching to an external power supply (13.6V DC) if the AC power supply fails.

- **Multiple CTCSS & DTCS tone memories with multiple memory channels**

Up to 16 CTCSS/DTCS tones (TX/RX tones respectively) can be programmed in a channel. This feature allows you to share a channel with multiple user groups. You can also give priority/exclusive use to a specified group simply by programming different tones to another memory channel. Ideal for many different applications.

- **Built-in 2-Tone, 5-Tone, DTMF encoder & decoder**

Multiple signaling systems are equipped as standard. These systems are fully compatible with Icom F-series radios.

- **Internal space for duplexer and isolator**

The repeater has an internal space to install a duplexer and isolator\*. The controls of the duplexer are accessible from the front of the repeater without disassembly. Faster and easier maintenance and adjustment is possible.

\* Ask your dealer for details about available duplexers and isolators.

- **Telephone interconnect capability**

- **DTMF remote control capability**

You can control the repeater from a remote location over the air or over a phone line with DTMF.

- **Optional wall mount bracket, MB-77 and 19 inch rack mount bracket, MB-78**



19-inch rack mount, MB-78



Installation on a wall with the MB-77

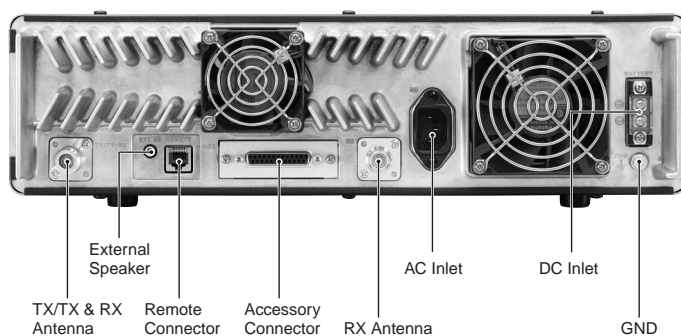
**Icom Inc.**

**ADDITIONAL FEATURES**

- Master/Slave backup operation by connecting two repeaters
- Self check function checks for internal errors and alerts with a beep sound or with a phone call
- Accessory connector (D-sub 25-pin) on the rear panel for trunking controller including LTR, PassPort, SmarTrunkII and MPT1327
- Compatible with VEGA tone remote control system
- 5-Tone relay function
- Optional Voice Scrambler UT-109 or UT-110
- CW ID transmitter (DTMF or 5-Tone also selectable)
- Password and kill/stun function for security
- 16-digit alphanumeric display convenient for base station operation
- A programmable button gives access to a customized function

All trademarks are the properties of their respective holders.

**REAR VIEW**



**SPECIFICATIONS**

**GENERAL**

- Frequency coverage :
  - IC-FR3000 148–172, 150–174MHz
  - IC-FR4000 400–430, 430–450, 450–480MHz
- Number of channels : 32 channels
- Channel spacing : 12.5/25kHz
- PLL channel step : 5, 6.25kHz
- VHF repeater operation : 2.5kHz
- Frequency stability :
  - VHF ±2.5ppm
  - UHF (U.S.A. version) ±1.5ppm
  - (Other versions) ±2.5ppm
- Operating temperature range : -30°C to +60°C; -22°F to +140°F
- Power supply voltage : 13.6V DC
  - 100–120V AC (50/60Hz)\*
  - 220–240V AC (50/60Hz)\*
  - (\* Depending on version)

- Current drain (at 13.6V DC) :
  - TX VHF (at 50W) 15A
  - UHF (at 50W) 20A
  - RX Max. audio 2A typ.
  - Stand-by 1A typ.
- Antenna impedance : 50Ω (Type-N x 2)
- Dimensions (W×H×D) : 410 × 110 × 360 mm; 16<sup>5</sup>/<sub>32</sub> × 4<sup>11</sup>/<sub>32</sub> × 14<sup>3</sup>/<sub>16</sub> in
- Weight : 12kg; 26.4lb (approx.)

**TRANSMITTER**

- Output power : 50W (high), 10W (low) selectable (at 13.6V DC)
- Max. frequency deviation : ±5.0/2.5kHz (wide, narrow)
- Spurious emissions : 70dB
- Adjacent channel power : 70/60dB (wide/narrow)
- Hum and noise : 40/34dB (wide/narrow)
- Microphone impedance : 600Ω (8-pin modular)

Measurements made in accordance with EIA/TIA-603-A. Compatibility of functions for use with a telephone line may not work in some countries. All stated specifications are subject to change without notice or obligation.

**RECEIVER**

- Sensitivity : 0.25µV typ. (at 12dB SINAD)
- Adjacent Ch, selectivity : 70/60dB (wide, narrow)
- Spurious response : 70dB
- Intermodulation rejection : 70dB
- Hum and noise ratio : 40/34dB (wide, narrow)
- Audio output power : 2.5W typ. at 10% distortion with a 4Ω load
- Ext. speaker connector : 2-conductor 3.5 (d) mm (1/8"/4Ω)

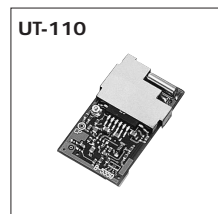
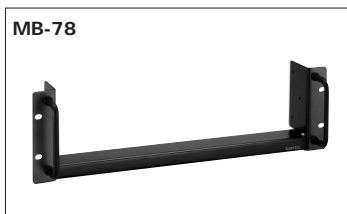
**Applicable U.S. Military Specifications**  
Icom makes rugged products that meet MIL-STD requirements and strict environmental standards as follows.

Standard	MIL 810 C		MIL 810 D		MIL 810 E		MIL 810 F	
	Method	Proc.	Method	Proc.	Method	Proc.	Method	Proc.
High Temp.	501.1	I	501.2	I, II	501.3	I, II	501.4	I, II
Low Temp.	502.1	I	502.2	I, II	502.3	I, II	502.4-3	I, II
Vibration	514.2	VIII, X	514.3	I	514.4	I	514.5	I
Shock	516.2	I	516.3	I	516.4	I	516.5	I

**OPTIONS**

Some options may not be available in some countries. Please ask your dealer for details.

- **MB-77 WALL MOUNT BRACKET**  
For mounting the repeater on a wall. Hinges provide easy maintenance while mounted.
- **MB-78 19" RACK MOUNT BRACKET**  
The 19 inch rack mount bracket is 3U height (133.5mm; 5<sup>1</sup>/<sub>4</sub> in).
- **HM-100N HAND MICROPHONE**
- **HM-100TN DTMF MICROPHONE**
- **SM-25 DESKTOP MICROPHONE**  
Convenient for dispatching. Equipped with a monitor switch.
- **UT-109 VOICE SCRAMBLER UNIT (Version 01)**  
Provides operating security. Up to 32 non-rolling scrambling codes are available.
- **UT-110 VOICE SCRAMBLER UNIT (Version 01)**  
Up to 1020 (255 codes × 4 groups) rolling scrambling codes are available.



Les spécifications et informations données dans ce document peuvent être modifiées sans préavis.

**ICOM FRANCE**  
Zac de la Plaine - 1, Rue Brindejonc des Moulinais  
BP 5804 - 31505 TOULOUSE CEDEX  
Tél : 05 61 36 03 03 - Fax : 05 61 36 03 00  
**WEB ICOM** : <http://www.icom-france.com>  
**E-mail** : [icom@icom-france.com](mailto:icom@icom-france.com)

