



## 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**

The repeater has a built-in power supply unit (100–120V or 220–240V AC). A built-in backup system supports automatic switching to an external power supply (13.6V DC) if the AC power supply fails.

- **Built-in CTCSS, DTCS, 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.

- **16-digit alphanumeric display**

The 16-digit alphanumeric LCD displays channel number, channel name, decoded ID (with 2-Tone and DTMF), etc. Great for use as a base station.

- **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

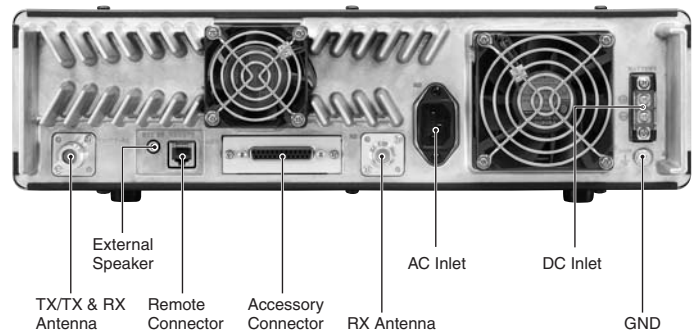
**Icom Inc.**

**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 × 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>9</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)

**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 have been tested to and passed the following MIL-STD requirements and strict environmental standards.

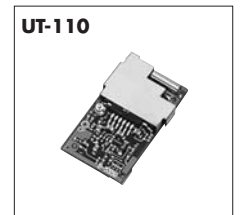
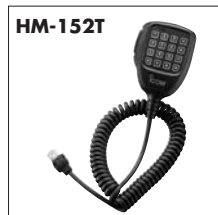
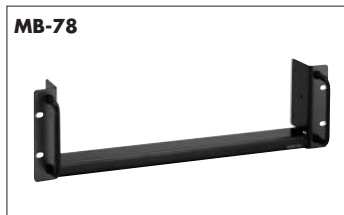
Standard	MIL 810 C		MIL 810 D		MIL 810 E		MIL 810 F	
	Method	Proc.	Method	Proc.	Method	Proc.	Method	Proc.
High Temp.	501.1	I	501.2	I, II	501.3	I, II	501.4	I, II
Low Temp.	502.1	I	502.2	I, II	502.3	I, II	502.4, 3	I, II
Vibration	514.2	VIII, X	514.3	I	514.4	I	514.5	I
Shock	516.2	I	516.3	I	516.4	I	516.5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

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.

**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 1/4 in).
- **HM-152 HAND MICROPHONE**
- **HM-152T 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.



**Icom Inc.**

1-1-32, Kami-minami, Hirano-ku, Osaka 547-0003, Japan Phone: +81 (06) 6793 5302 Fax: +81 (06) 6793 0013 URL: <http://www.icom.co.jp/world/index.html>

**Count on us!**

**Icom America Inc.**

Glenwood Centre #150-6165 Highway 17, Delta, B.C., V4K 5B8, Canada  
Phone : +1 (425) 454-8155  
Fax : +1 (425) 454-1509  
E-mail : sales@icomamerica.com  
URL : <http://www.icomamerica.com>

**Icom New Zealand**

146A Harris Road, East Tamaki, Auckland, New Zealand  
Phone : +64 (09) 274 4062  
Fax : +64 (09) 274 4708  
E-mail : inquiries@icom.co.nz  
URL : <http://www.icom.co.nz>

**Icom (UK) Ltd.**

Unit 9, Sea St., Herne Bay, Kent, CT6 8LD, U.K.  
Phone : +44 (01227) 741741  
Fax : +44 (01227) 741742  
E-mail : info@icomuk.co.uk  
URL : <http://www.icomuk.co.uk>

**Asia Icom Inc.**

6F No. 68, Sec. 1 Cheng-Teh Road, Taipei, Taiwan, R.O.C.  
Phone : +886 (02) 2559 1899  
Fax : +886 (02) 2559 1874  
E-mail : sales@asia-icom.com  
URL : <http://www.asia-icom.com>

Your local distributor/dealer:

**Icom Canada**

Glenwood Centre #150-6165 Highway 17, Delta, B.C., V4K 5B8, Canada  
Phone : +1 (604) 952-4266  
Fax : +1 (604) 952-0090  
E-mail : info@icomcanada.com  
URL : <http://www.icomcanada.com>

**Icom (Europe) GmbH**

Communication Equipment Himmelgeister Str. 100, D-40225 Düsseldorf, Germany  
Phone : +49 (0211) 346047  
Fax : +49 (0211) 333639  
E-mail : info@icom-europe.com  
URL : <http://www.icomeurope.com>

**Icom France s.a.s.**

Zac de la Plaine, 1 Rue Brindejone des Moulinais, BP 45804, 31505 Toulouse Cedex 5, France  
Phone : +33 (5) 61 36 03 03  
Fax : +33 (5) 61 36 03 00  
E-mail : icom@icom-france.com  
URL : <http://www.icom-france.com>

**Beijing Icom Ltd.**

10C07, Long Silver Mansion, No.88, Yong Ding Road, Haidian District, Beijing, 100039, China  
Phone : +86 (010) 5889 5391/5392/5393  
Fax : +86 (010) 5889 5395  
E-mail : bjicom@bjicom.com  
URL : <http://www.bjicom.com>

**Icom (Australia) Pty. Ltd.**

Unit 1 / 103 Garden Road, Clayton, VIC 3168 Australia  
Phone : +61 (03) 9549 7500  
Fax : +61 (03) 9549 7505  
E-mail : sales@icom.net.au  
URL : <http://www.icom.net.au>

**Icom Spain S.L.**

Ctra. Rubi, No. 88 "Edificio Can Castanyer" 08190, Sant Cugat del Valles, Barcelona, Spain  
Phone : +34 (93) 590 26 70  
Fax : +34 (93) 589 04 46  
E-mail : icom@icomspain.com  
URL : <http://www.icomspain.com>

**Icom Polska**

Sopot, 3 maja 54, Poland  
Phone : +48 (58) 550 7135  
Fax : +48 (58) 551 0484  
E-mail : icompolska@icompolska.com.pl  
URL : <http://www.icompolska.com.pl>