

VHF AND UHF 100W BASE/REPEATERS

Icom America Systems

IAS-100W_V IAS-100W_U

The Power of 100 Watts.





Our 100 Watt repeater offers more features for less.

When an emergency breaks, you can't afford to spend time worrying about your communication system's performance or capabilities. That's why Icom America Systems (IAS) offers more standard features and hardware in our 100 Watt system than any of our competitors -- **for less money!** Unlike other standard packages, your 100 Watt repeater/base will arrive ready-to-use and

custom-built to your specific communication needs. It's compatible with your existing equipment, or it can be the foundation for your communications' network. We take the guesswork out of setting up a communication system out of your hands so you can focus on what you do best -- **saving lives and averting crises.**

The standard package includes:

- 100 Watt 100 percent duty cycle
- Multiple CTCSS & DTCS tone memories with multiple memory channels
- Telephone interconnect capability
- DTMF remote control capability
- Interface cabling with silver plated connectors (custom-made)
- Built-in battery back-up capabilities
- Mounting bracket capable of being mounted in rack or cabinet
- Tech support

IAS gets you more!

The standard package also includes:

- A.C. surge suppression panel
- Complete tuning, aligning, assembly, programming and staging for your system done in our laboratory
- Crating and packaging for shipment
- Operations, instructions and service manuals
- As-built drawing packages
- Quick connect grounding system; engineered to meet industry standards

The foundation of powerful communication.

Offers more

Options*

Programming software and cables:

- Allows you to edit/program the features and settings of the FR3000/4000
- Programming cable and adapter also required
- Each component (software, cable and adapter) sold separately

Microphone

- Available as standard or DTMF

Service manual CD

- Contains schematics and detailed theory of operation

Duplexer

- Required if your repeater is using a single antenna

IAS Antenna Switch

- Needed for base operations for both the FR3000/4000
- 19" rack-mountable, sold separately

Cabinets

- Available in 30", 46", and 60" sizes
- Includes locking, ventilating doors and cable access ports
- Factory assembled

Racks

- Available in 28", 48", 63", and 70" sizes
- Includes custom assembly and mounting factory-assembled hardware

Remote Control Tone Termination Panel

- Allows remote control access to your repeater/base
- Rack mount available
- Tone remote desk sets available

**This list includes the most commonly requested additions to the standard package, and does not encompass our full list of options available. Call us to find out which options you require to meet your specific communication needs.*



Communication systems.

ADDITIONAL FEATURES

- Master/Slave backup operation by connecting two repeaters/bases
- 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
- Tone and DC remote capabilities
- 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.

SPECIFICATIONS

GENERAL

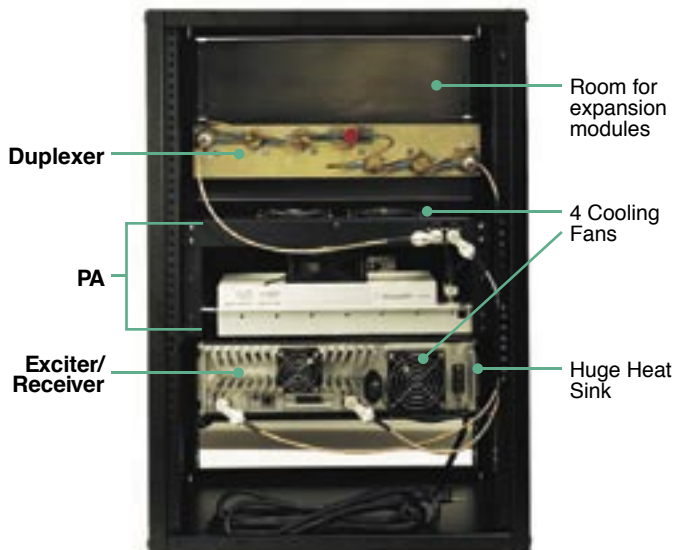
- Frequency coverage:
 - IC-FR3000: 148–172MHz, 150–174MHz
 - IC-FR4000: 400–430MHz, 430–450MHz, 450–480MHz
- Number of channels: 32 channels
- Channel spacing: 12.5/25kHz
- PLL channel step: 5, 6.25kHz (2.5kHz, VHF repeater operation only)
- Frequency stability:
 - IC-FR3000: ±2.5ppm
 - IC-FR4000: ±1.5ppm (U.S.A. version), ±2.5ppm (Other versions)
- Operating temperature range: –30°C to +60°C; –22°F to +140°F
- Power supply voltage: (depending on version)
 - 100–120V AC (50/60Hz), 220–240V AC (50/60Hz), 13.6V DC
- Current drain (at 13.6V DC):
 - TX IC-FR3000 (at 50W) 15A
 - IC-FR4000 (at 50W) 20A
 - RX Max. audio 2A typ.
 - Stand-by 1A typ.
- Antenna impedance: 50Ω (Type-N×2)
- Dimensions (WxHxD): 410 x110 x360 mm; 16 5/32 x4 11/32 x14 3/16 in
- Weight: 12kg; 26.4lb (approx.)

PA SPECIFICATIONS - VHF HIGH BAND CONTINUOUS DUTY

AMPLIFIER

- Max. rated load VSWR for continuous duty operation: 1.2:1 (<5% reflected power)
- Max. VSWR rating without damage: 5:1 all phase angles. VSWR or thermal protection may operate above 2:1 VSWR
- Input/output connectors: Type N FEMALE standard UHF FEMALE optional Meets FCC requirements Meets FCC requirements
- Spurious Outputs: Meets FCC requirements
- Harmonics: Meets FCC requirements
- Operating Temperature range: 0 - 50°C
- Input Return Loss: > 10 dB
- Cooling: Fan cooled

REAR VIEW



RECEIVER

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

TRANSMITTER

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

Icom America Systems

Systems for People Who Make Smart Choices

2380 116th Ave NE
 Bellevue, WA 98004
 Voice: 425-454-8155
 Fax 425-454-1509
 www.icomamerica.com
 sales@icomamerica.com

GSA contract #GS-35F-0109L

