

## VHF AND UHF REPEATERS

# Icom America Systems

**CY-F121SP** (VHF, with power supply)

**CY-F121SDP** (VHF, with duplexer & power supply)

**CY-F221SP** (UHF, with power supply)

**CY-F221SDP** (UHF, with duplexer & power supply)



## POWERFUL AND VALUE RICH

- **Compact size**
- **50 Watts (45 UHF)**
- **Affordable price**

### Features

- Built-in power supply: 13.8 VDC in or 110 VAC in or 220 VAC in
- Built-in battery back up and battery charging capabilities
- Built-in heavy duty A/C EMI filtering
- Built-in duplexer (optional)
- Built-in RF pre-selector (optional)
- 3 RU tall, built-in rack handles
- 19" Standard rack or cabinet mounting
- Built-in, automatic, heavy duty cooling fan (CPU controlled)
- Powder-coated steel chassis
- Built-in repeater controller
- Utilizes N style bulkhead connectors
- Built-in grounding stud
- Designed for max air cross-flow: 120 CFM for excellent ventilation
- Each unit is thoroughly tuned-tested and staged prior to shipment
- DB-25 rear connector for interfacing external equipment
- DC terminal strip for easy BBU connection



*Clean internal layout is easy to access and maintain. Repeater, duplexer, pre-selector and power supply, all in one box.*



*A large, continuously-running fan on the rear panel keeps the unit running cool. All connections are clear and well-marked.*

## ADDITIONAL FEATURES

### Built-in controller with controls:

- Transmit and receive audio path - level adjust
- PTT control of transmitter
- Transmitter hang ON time delay from 0 to 7.5 seconds
- Cooling fan runs continuously to keep the unit running cool

### Other features

- Power on password
- Accessory connector (ACC) connects to remote controllers
- A/C power cord included

## SPECIFICATIONS

GENERAL		TRANSMITTER		RECEIVER	
• Frequency coverage:	IC-F121S 136-174MHz IC-F221S 400-430MHz 440-490MHz	• RF Output power:	25W/10W/2.5W [25W] (High/Low2/Low1) 50W/25W/4.5W [45W] 50W/25W/5W [50W]	• Receive system:	Double-conversion superheterodyne system
• Number of channels:	Max. 8 channels (4 channels x 2 banks)	• Modulation system:	Variable reactance frequency modulation	• Intermediate freq.:	1st: 46.35MHz, 2nd: 450kHz
• Channel spacing:	12.5/25kHz (narrow/wide)	• Max. freq. deviation:	±2.5/5.0kHz (narrow/wide)	• Sensitivity:	0.25µV at 12dB SINAD
• Antenna connector:	SO-293 (50Ω)	• Frequency error:	IC-F121S ±5.0 ppm IC-F221S ±2.5 ppm	• Squelch sensitivity:	0.25µV
• Power supply voltage:	13.2V DC nominal [25W] (Negative ground) 13.6V DC nominal [50W]	• Spurious emission:	70dB typical	• Adjacent channel selectivity (typical):	65/75dB (narrow/wide)
• Current drain (approx.):	TX [25W] 7.0A [45W] [50W] 13.0A Max audio 1.2A Standby 0.3A	• Adjacent channel power:	60/70dB (narrow/wide)	• Spurious response:	75dB
• Operating temp. range:	-30°C to +60°C; (-22°F to +140°F)	• Audio freq. response:	+2 dB to -8 dB of 6 dB/octave range from: 300Hz to 2550/3000Hz (narrow/wide)	• Intermodulation (typ.):	74dB
• Dimensions (Projections not included):	[25W] 480(W) x 133(H) x 364(D)mm; 18.90"(W) x 5.24"(H) x 14.33"(D) [45W][50W] 480(W) x 133(H) x 364(D)mm; 18.90"(W) x 5.24"(H) x 14.33"(D)	• Audio harmonic dist.:	3% typ. at 1kHz, 40% deviation	• Hum and Noise (typ.):	40/45dB (narrow/wide)
• Weight:	8.6 kg; 18 lb. [25W] 8.6 kg; 18 lb. [45W][50W]	• FM hum and noise:	40 dB (narrow) 46 dB (wide)	• Audio output power:	4W typ. at 10% distortion with a 4Ω load
		• Limiting character of modulation:	70-100% of max deviation	• Ext. SP connector:	2-conductor 3.5 (d) mm (1/8")/4Ω
		• Microphone connector:	8-pin modular (600Ω)		

All specifications subject to change without notice or obligation.

## OPTIONS



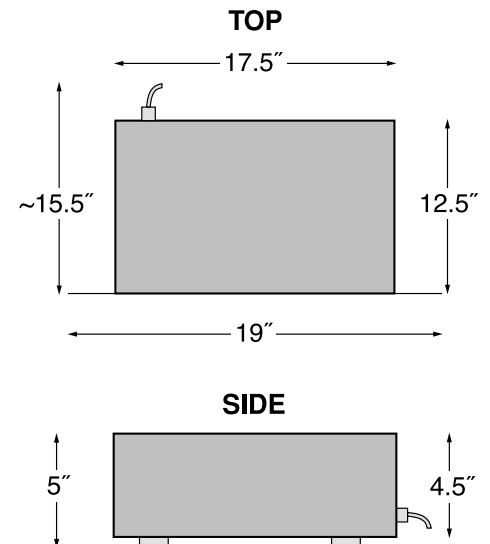
*Built-in duplexer (left)  
Built-in RF pre-selector (right)*



**HM-100TN**  
DTMF Microphone



**SM-25**  
Desktop Microphone  
*Convenient for dispatching,  
equipped with monitor switch*



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All specifications are subject to change without notice. Optional duplexer and preselector specifications not listed.  
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