



## VHF AND UHF DIGITAL TRANSCEIVERS

### IC-F3230DT

VHF Transceiver with Full Keypad

### IC-F4230DT

UHF Transceiver with Full Keypad

### IC-F3230DS

VHF Transceiver with Simple Keypad

### IC-F4230DS

UHF Transceiver with Simple Keypad

# IDAS™ Multi-site Trunking Radio with Superior Waterproof Protection



#### IDAS™ digital mode operation

The IC-F3230D series provides NXDN™ CAI-based IDAS digital mode operation. It is compatible with IDAS multi-site and single-site trunking and IDAS multi-site conventional.

#### IP67 waterproof and dust-tight protection

The IC-F3230D series provides outstanding protection against water and dust equivalent to IP67. The IC-F3230D series can withstand 1m depth of water for 30 minutes and its dust-tight construction prevents the ingress of powder dust, sand, mud and other objects.

#### Easy to hear in noisy areas

The built-in bridge-tied load (BTL) amplifier delivers a powerful 1000mW\* audio output from the large speaker. In addition, the digital modulation provides distinct clarity even at the fringes of the communication range.

\* Typical with internal speaker

#### Channel announcement

When you change the operating channel, the radio announces the channel number. Convenient for making radio adjustments without having to look at the radio.

#### 8-character LCD

An 8-character alphanumeric LCD with user-friendly icons shows a variety of information and operating status such as caller's name, received message, etc.

#### Roaming scan

In the multi-site trunking mode, if the signal condition worsens as the radio user moves, the roaming scan automatically finds a new site to retain the communication link and quality.

#### IDAS™ digital mode features

- Up to 500 individual and up to 500 group ID aliases (Each for single-site/multi-site/conventional)
- PTT ID and ANI
- Status
- Radio check (RX)
- Call alert
- Emergency
- ATB (All Trunks Busy) ring back
- SDM (Short Data Message)
- RAN (Radio Access Number)
- Stun/kill/revive (RX)
- Remote monitor (RX)
- Digital voice scrambler

\* TX: Transmit, RX: Receive

#### Other features

- CTCSS/DTCS encoder/decoder\*
- Up to 128 memory channel with 8 zones
- Optional HM-168LWP, waterproof speaker-mic
- Low battery alert
- Voting scan
- Talk around function
- Surveillance function
- 2-step power save
- Time out timer
- Lone worker function
- Forced narrow function\*

\* Analog mode only.

Note: IC-F3230DT/F4230DT is NOT available in some countries. (Not available in the USA.)



IC-F3230DS

IC-F4230DT



## SPECIFICATIONS

	IC-F3230DT/DS	IC-F4230DT/DS
<b>GENERAL</b>		
Frequency coverage (MHz)	136-174	350-400, 400-470 450-512, 450-520
Number of channels	128 channels/8 zones	
Type of emission	16K0F3E*/11K0F3E/8K50F3E/4K00F1E/F1D	
Channel spacing	25*/12.5/6.25 kHz	
Power supply requirement	7.5V DC nominal	
Current drain TX (approx.)	1.3A (High)	
RX	400mA/100mA (Max. audio/Standby)	
Antenna impedance	50Ω	
Operating temperature range	-30°C to +60°C; -22°F to +140°F (Radio specifications)	
Dimensions (W×H×D)	53×120×37 mm; 2.09×4.72×1.46 in (With BP-232WP)	
Weight (approx.)	340g; 12oz (With MB-94R, BP-232WP & antenna)	
<b>TRANSMITTER</b>		
Output power (at 7.5V DC)	5W, 2W, 1W (Hi, L2, L1)	4W, 2W, 1W (Hi, L2, L1)
Max. frequency deviation	±5.0/±2.5kHz (Wide/Narrow)	
Frequency stability	±1.0ppm	
Spurious emissions	75dB typ.	
FM Hum and Noise	52/46dB typ. (W/N)	46/40dB typ. (W/N)
Audio harmonic distortion	1.0/2.0% typ. (AF 1kHz 40% deviation, W/N)	
FSK error	2% typ.	
Ext. microphone connector	3-conductor 2.5 (d) mm (1/10")/2.2kΩ	
<b>RECEIVER</b>		
Sensitivity (Analog 12dB SINAD)	0.23μV typ.	0.24μV typ.
(Digital 5% BER)	0.18μV typ.	0.18μV typ.
Adjacent channel selectivity	77/71/58dB typ. (W/N/D)	74/67/58dB typ. (W/N/D)
Spurious response rejection	90dB typ.	80dB typ.
Intermodulation rejection	75/75/70dB typ. (W/N/D)	76/76/72dB typ. (W/N/D)
Hum and noise	48/42dB typ. (W/N)	46/40dB typ. (W/N)
Audio output power (at 5% distortion, 8Ω load)	1000mW typ. (Internal SP) 400mW typ. (External SP)	
Ext. speaker connector	2-conductor 3.5 (d) mm (1/8")/8Ω	

Measurements made in accordance with EIA/TIA-603.

All stated specifications are subject to change without notice or obligation.

\* 25kHz bandwidth is no longer available for FCC Part 90 licensees for USA versions. Ask your dealer if you need 25kHz bandwidth.

### Applicable U.S. Military Specifications & IP Rating

Standard	MIL 810G	
	Method	Procedure
Low Pressure	500.5	I, II
High Temperature	501.5	I, II
Low Temperature	502.5	I, II
Temperature Shock	503.5	I-C
Solar Radiation	505.5	I
Rain Blowing/Drip	506.5	I, III
Humidity	507.5	II
Salt Fog	509.5	-
Dust Blowing	510.5	I
Immersion	512.5	I
Vibration	514.6	I
Shock	516.6	I, IV

Also meets equivalent MIL-STD-810-C, -D, -E and -F.

Ingress Protection Standard (IC-F3230DT/DS, F4230DT/DS with BP-232WP)	
Dust & Water	IP67 (Dust-tight and waterproof protection)

Supplied accessories: (\* May differ or not supplied according to version)

- Battery pack, BP-232WP
- Belt clip, MB-94R
- Antenna
- Desktop charger, BC-160\*
- AC adapter, BC-145SA/SE\*

## OPTIONS

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

### BATTERY PACK AND CASES



Battery packs and cases	Type	Capacity	Operating time*
BP-232WP	Li-Ion 7.4V	2250mAh (min.) 2300mAh (typ.)	19/17 hours (VHF/UHF)
BP-240	LR03 (AAA) batteries × 6		-
BP-261	LR6 (AA) batteries × 6		-

\* Approx. Tx: Rx: standby = 5:5:90. Power save function ON.

### REGULAR CHARGER



Charges the BP-232WP in 8-10 hours (approx.).

### RAPID CHARGER



Charges the BP-232WP in 3 hours (approx.).

### RAPID CHARGER



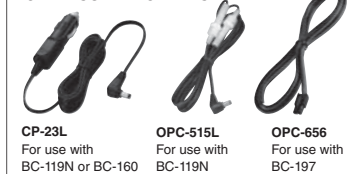
Charges the BP-232WP in 3 hours (approx.).

\* BC-145/BC-147SA for 120V AC. SE for 230V AC. SV for 240V AC. BC-145SUK for 230V AC.

### MULTI-CHARGER



### CIGARETTE LIGHTER CABLE & POWER SUPPLY CABLES



CP-23L For use with BC-119N or BC-160  
OPC-515L For use with BC-119N  
OPC-656 For use with BC-197

### SPEAKER-MICROPHONES



### EARPHONE-MICROPHONE



### BELT CLIPS



MB-93 Swivel type  
MB-94R Alligator type  
Same as supplied.

### LEATHER BELT HANGERS



MB-96N  
MB-96F

### CHARGER BRACKET



MB-130  
For use with BC-160

### STUBBY ANTENNAS

- FA-SC56VS: 150-162MHz
- FA-SC57VS: 160-174MHz
- FA-SC73US: 450-490MHz

### HIGH GAIN ANTENNAS

- FA-SC62V: 150-160MHz
- FA-SC63V: 155-165MHz

- FA-SC72U: 470-520MHz
- FA-SC01U: 350-400MHz
- FA-SC03U: 380-430MHz

### CUT ANTENNAS

- FA-SC61VC: 136-174MHz
- FA-SC61UC: 380-520MHz

### ANTENNAS

- FA-SC25V: 136-150MHz
- FA-SC55V: 150-174MHz
- FA-SC25U: 400-430MHz
- FA-SC57U: 430-470MHz

### CHARGER ADAPTER

- AD-122
- AD-122 charger adapter is supplied with the BC-197, depending on BC-197's version.

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