COMMUNICATIONS RECEIVER IC-R30

#### **SPECIFICATIONS**

	·					
GENERA	L					
Frequency coverage	USA	<a band=""> 0.100000 – 821.999990, 851.000000 – 866.999990, 896.000000 – 3304.999990 MHz* <b band=""> 108.000000 – 520.000000 MHz * Depending on the receiver version. 0.100000–3304.999990 MHz guaranteed.</b></a>				
, ,	EUR	<a band=""> 0.100000 - 3304.999990 MHz <b band=""> 108.000000 - 520.000000 MHz</b></a>				
Mode	<a band=""></a>	≤1300 MHz FM, FM-N, WFM, AM, AM-N, SSB, CW, CV D-STAR (DV), P25, dPMR, NXDN-VN, NXDN-N, I >1300 MHz FM, FM-N, WFM, AM, AM-N				
	<b band=""></b>	FM, FM-N, AM, AM-N, D-STAR (DV), P25, dPMR, NXDN-VN, NXDN-N, DC				
Antenna impedance		50 Ω (SMA)				
Number of memory channels		2000 regular (100 groups), 200 auto memory write scan, 100 skip, 300 GPS memories				
Frequency stability		Less than ±2.5 ppm (-20 °C to 60 °C; -4 °F to 140 °F)				
Tuning steps		0.01, 0.1, 1, 3.125, 5, 6.25, 8.33*, 9*, 10, 12.5, 15, 20, 25, 30, 50, 100, 125, 200 kHz  * May be available, depending on the operating band and mode.				
Power supply requirements		3.6 V DC (with BP-287), 5.0 V DC ±5% (USB)				
Battery life		8 hours 20 minutes (Approximate) (with BP-287, continuous receive, 100 mW audio, GPS OFF, Bluetooth OFF)				
Current drain (at 3.6 V DC)		AF rated power 330 mA typical Receive standby 200 mA typical Power saved 100 mA typical (FM mode single receive, voice recording OFF, GPS OFF, back light OFF)				
Dimensions (Projections not included.)		58 (W) × 143 (H) × 30.5 (D) mm 2.3 (W) × 5.6 (H) × 1.2 (D) in				
Weight (Approximate)		310 g, 10.9 oz (With antenna and BP-287 battery pack), 200 g, 7.1 oz (main unit)				
Operating temperature range		-20 °C to 60 °C, -4 °F to 140 °F				
Bluetooth®		Version: Bluetooth® Ver 4.2, Profile: HFP, HSP, SPP				
GNSS		GPS, QZSS				
II stated sp	ecifications	are subject to change without notice or obligation.				

All stated specifications are subject to change without notice or obligation

#### Applicable U.S. Military Specifications

Standard	MIL 810G			
Standard	Method	Procedure		
ow Pressure	500.5	I, II		
High Temperature	501.5	I, II		
ow Temperature	502.5	I, II		
emperature Shock	503.5	I–C		
Solar Radiation	505.5	I		
Rain Blowing/Drip	506.5	I, III		
lumidity	507.5	II		
alt Fog	509.5	-		
oust Blowing	510.5	I		
mmersion	512.5	I		
/ibration	514.6	I		
Shock	516.6	I, IV		

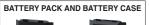
Ingress Protection Standard	
Dust and Water	IP57 (Dust-protection and Waterproof* protection) * One meter depth for 30 minutes.

Receiving system		Triple conversion superheterodyne + Down converter (A band except WFM) Double conversion superheterodyne (A band WFM, B band)							
Intermediate frequency	<a band=""></a>	1st IF : 266.65/266.7/266.75 MHz 2nd IF : 58.0500 MHz (Except WFM), 10.7000 MHz (WFM) 3rd IF : 0.4500 MHz (Except WFM)							
	<b band=""></b>	1st IF : 46.3500 MHz 2nd IF : 0.4500 MHz							
Sensitivity  Available frequencies and modes differ, depending on A band and B band.	SSB/CW (10 dB S/N)	0.495000 - 1.899990 MHz : Less than 0.4 μV 1.900000 - 14.999990 MHz : Less than 0.25 μV 50.000000 - 25.999990 MHz : Less than 0.25 μV 144.000000 - 147.999990 MHz : Less than 0.25 μV 430.000000 - 449.999990 MHz : Less than 0.32 μV 30.000000 - 30.32 μV 30.0000000 - 30.32 μV 30.0000000 - 30.32 μV 30.0000000 - 30.00000000000000000000000							
	AM (10 dB S/N)	0.495000 - 1.899990 MHz : Less than 2.2 μV 1.900000 - 14.999990 MHz : Less than 1.4 μV 15.000000 - 29.999990 MHz : Less than 1.4 μV 118.000000 - 136.999990 MHz : Less than 1.4 μV							
	FM (12 dB SINAD)	28.00000 - 221,999990 MHz : Less than 0.4 μV 222.000000 - 832.999990 MHz : Less than 0.56 μV 1300.000000 - 1999,999990 MHz : Less than 1.8 μV 2000.000000 - 2699,999990 MHz : Less than 1.8 μV 2700.000000 - 3304,999990 MHz : Less than 18 μV							
	WFM (12 dB SINAD)	76.000000 - 107.999990 MHz : Less than 1.8 μV							
	D-STAR (DV) (1% BER)	28.000000 - 29.999990 MHz : Less than 0.71 μV 50.000000 - 53.999990 MHz : Less than 0.71 μV 144.000000 - 147.999990 MHz : Less than 0.71 μV 430.000000 - 449.999990 MHz : Less than 1 μV 1260.000000 - 1299.999990 MHz : Less than 1 μV							
	NXDN/ dPMR/DCR (1% BER)	136.000000 - 173.999990 MHz : Less than 0.71 μV 350.000000 - 379.999990 MHz : Less than 1 μV 380.000000 - 511.999990 MHz : Less than 1 μV							
	P25 (5% BER)	136.000000 - 173.999990 MHz : Less than 0.4 μV 400.000000 - 469.999990 MHz : Less than 0.56 μV 763.000000 - 832.999990 MHz : Less than 0.71 μV 833.000000 - 869.999990 MHz : Less than 0.71 μV							
Selectivity	SSB/CW	More than 1.8 kHz/-6 dB							
	AM/FM	More than 12 kHz/-6 dB, Less than 30 kHz/-60 dB (below 1305 MHz) Less than 30 kHz/-40 dB (above 1305 MHz)							
	WFM	More than 150 kHz/-6 dB							
Audio output	Internal SP	More than 400 mW (16 Ω load, at 10% distortion)							
power	External SP	More than 200 mW (8 Ω load, at 10% distortion)							

DUALWATCH CAPABILITY							
		B band					
		FM/FM-N	AM/AM-N	D-STAR	P25/NXDN/dPMR/DCR		
	FM (FM/FM-N/WFM)	~	~	~	V		
	AM (AM/AM-N)	~	~	~	V		
A band	SSB (LSB/USB), CW (CW/CW-R)	~	~	-	-		
	D-STAR (DV)	~	~	†	-		
	P25/NXDN/dPMR/DCR	~	~	-	-		

 <sup>✓:</sup> Dualwatch, dual recording possible †: Main band has priority, if two DV signals come in at the same time.
 -: Single receive only.

# OPTIONS





**BP-287** Li-ion, **BP-293**3.6 V 3280 mAh (typ.), AA (LR6) × 3 battery 3120 mAh (min.) . case.

Same as supplied.



BC-223 BC-123SA/SE Charges the BP-287 in 4 hours (approximate). Same as supplied.











PROGRAMMING SOFTWARE

CS-R30

Programming software for a Windows® PC

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# **IC-R30**

# **COMMUNICATIONS RECEIVER**





Receives and Decodes Various Digital Protocols



Decodes Digital Protocols (P25, NXDNTM, dPMRTM, D-STAR, DCR)

4 SCAN 5 SCOPE 6 SKIP

0.1 – 3304.999 MHz Wideband Coverage GPS, Bluetooth®, USB Charging and microSD Card Slot

200 Channel Per Second High Speed Scan

# Digital and Analog Wideband Communica tions Receiver with Dualwatch and Dual Band Recording Functions



# Superior Performance

## **Decodes Digital Protocols**

The IC-R30 decodes various digital protocol signals. including P25 (Phase 1), NXDN™, dPMR™, D-STAR (Digital Smart Technology for Amateur Radio) and Japanese domestic DCR (Digital Convenience Radio).

# 0.1–3304.999 MHz Wideband Coverage

The IC-R30 covers a wide frequency range from 0.1 to 3304.999 MHz, and receives conventional analog signals such as AM, FM, WFM, USB, LSB and CW as well as digital modes\*. A ferrite bar antenna for AM broadcasts is built-in, and the earphone cable can be used as an external antenna for FM broadcasts.

\* SSB, CW and digital modes: 0.1 MHz-1.3 GHz. Usable frequencies and modes differ, depending on the selected A or B band. See specifications for details.

## **Dualwatch Operation**

The radio can receive on different bands and different modes. For example, HF and UHF signals can be monitored simultaneously. You can scan for other active channels on the B band, while receiving the main signal on the A band.



# **Dual Band Recording Function**

The audio of the two bands received while in the Dualwatch mode can be individually recorded onto a microSD card\* in the WAV format. The recorded audio can be played back on the receiver or a PC. In addition, frequency, mode, S-meter reading, time, current position data and altitude can be saved with received

\* A microSD/microSDHC card is required

FREQ: 145.000 S-MET:S5 START: 2018/03/15 12:00:00

135°34, 29'E GL:PM74S0

DATE: 2018/03/15 12:00:14

#### 2.3" Large LCD and Intuitive User Interface

A 2.3 inch large, dot-matrix display is used in the IC-R30. Screens with large amounts of information are clearly and logically arranged. The four direction keypad provides straight-forward operation of all functions.



# Convenient Features

#### High Speed Scan – 200 Channels/Second

The IC-R30 scans approximately 200 channels per second in the A band, and 150 channels per second in the B band. You can quickly find and lock in to a desired signal. The IC-R30 has variety of scan functions.

#### Near station scan

Using GPS location information and the Memory channels\*, the IC-R30 can display and scan up to 50 stations within 160 km from your current location, in proximity order.

\* The position data of the stations must be programmed in advance.

#### Auto memory write scan

Automatically stores received frequencies (up to 200 Ch) during a Programmed scan.

# **Priority scan**

Checks for signals on a frequency every 5 seconds, while operating on a VFO frequency or scanning.

Detects a sub-audible tone frequency or the DTCS code in a received signal.

Program scan, Memory scan, Memory mode scan, Group scan, Group link scan and more

# Integrated GPS Receiver

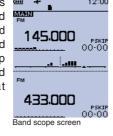
The integrated GPS receiver GPS POSITION 1/5 displays your current position data, course, speed and altitude on the display. GPS data can also be saved in recorded audio files. The IC-R30 can list up up to 50 stations within 160 km from your current location\*.

\* The position data of each station must be preprogrammed in the Memory channels.

# 34°37.38'N 135°34.29'E GL:PM74S0 ALT:16m SPEED: 1. 1km/h TIME: 3:39:21 GPS position screen

# **Band Scope Function**

The band scope function enables ..... you to visually search a specified MAI frequency range around the received signal and see the relative received signal strength level. You can jump to the desired signal on the band scope to set the radio to that frequency.



# Speech Function

The Speech function reads out the operating frequency and mode when you rotate the dial knob, or press the [SPEECH] button. This function is convenient for making radio adjustments with the Bluetooth® headset without having to look at the radio.



# Solid Fundamentals

## IP57 Rugged Construction

The IC-R30 has superior IP57 waterproof protection (1 m depth of water for 30 minutes). It can be used in harsh outdoor environments. The radio also passes MIL-STD-810-G specifications.

# Up to 8.3 Hours of Long Battery Life

The supplied BP-287 Li-ion battery pack provides 8 hours and 20 minutes\* of operation. The optional BP-293 battery case, with AA (LR6) alkaline cells, can be used in as a convenient backup battery.

\* The Dualwatch function is ON (A band: continuously receiving, B band: standing by), the Power Save function is set to "Auto (Short)," the internal speaker's volume is set to "20," the GPS function is ON, and the Bluetooth function is OFF.

Actual size

21.600

434.400

MR 01-02 DUP+ ●REC

6

VFO/MR

3 MODE

6 SKIP

O ●REC F-INP

IC-R30

MAIN

DUAL

## USB Charging and PC Connection

The built-in USB port has a range of convenient uses. You can charge the IC-R30 in approximately 5 hours,\* carry out data transfer (including loading Memory channels) and CI-V remote control.

\* Using with a 1 A USB charger. The IC-R30 is Power OFF.



# microSD Card Slot for Voice and Data Storage

You can use a microSD card\* for data storage. Recording/playback of received audio, RX history log, radio settings and GPS logger data can all be loaded onto the microSD card.



\* A microSD/microSDHC is required (up to 32 GB).

# Wireless Operation with a Bluetooth® Headset

With the optional VS-3 Bluetooth® headset, you can wirelessly listen to received audio. The VS-3 has volume UP/DOWN buttons and four programmable buttons to remotely control certain functions.

Volume DOWN

# **And More**

2000 regular Memory channels (with an 8-character name) · DTCS and CTCSS tone squelch · VSC (Voice Squelch Control) (FM, FM-N, WFM, AM, AM-N) · AFC (Auto Frequency Control) (FM, FM-N, WFM) · Noise blanker (SSB, CW) · ANL (Auto Noise Limiter) (AM, AM-N) · RF gain control (10 steps) · ATT function (3 steps) · Key lock function · Monitor function · Power save function (3 steps) · Volume or frequency setting with dial or side buttons · Quick menu function · Clock

# **CS-R30 Optional Programming Software**

Using the CS-R30, you can smoothly edit the following settings on a PC;

· Memory channels

Groups Auto memory write channel groups Scan edges

GPS memories

· Program scan link name Radio settings and digital settings

OS: Microsoft® Windows®10, Windows®8.1 (\* Except for Windows® RT) or ,



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