

Intrinsically Safe Professional Two-Way Radio

BR850-IS



INTRINSICALLY SAFE The RCA BR850-IS is SGS certified to the requirements of ANSI/UL913 5th Edition for use in Class I, II, III, Division 1; Groups C, D, E, F, G; Temp T3C hazardous locations.

AUTO CONTACT The feature is especially helpful in high-demanding communication environments, such as climbing, exploration, and rescue work. The radio beeps when the user is moving out of communication range.

BATTERY POWER INDICATOR When you press the function key, the radio sounds "1", "2", "3", or "4" to indicate the current battery level of very low, low, satisfactory, or high respectively.

POWER ON SELF-TEST The radio itself checks its status automatically when power is on, and emits a corresponding alert if an error occurs (e.g. CPU error or EEPROM error), allowing the user to early detect unit faults.

EMBEDDED MESSAGE & SERIAL NUMBER The radio's memory can store messages including service and programming records, for ease of maintenance and servicing, plus this feature also makes the unit identifiable by its Serial Number.

STUN/KILL & REVIVE This feature provides enhanced security to prevent unauthorized use of lost or stolen units, by remotely inhibiting of either transmit or transmit/receive. A stunned radio will return to operational use once again after receiving the revive code.

HIGH VOLUME A powerful 0.5W speaker ensures clear, crisp sound, in noisy environments.

2-TONE / 5-TONE ENCODE & DECODE Signalling system is radio dependent. 5-Tone models and 2-Tone models are available.

ADVANCED SECURITY FEATURES

LONE WORKER The lone worker feature provides added security and safety for individuals who work remotely from their team. Should a user not respond to a regular warning tone, a defined emergency procedure is activated, sounding an emergency alarm or transmitting an emergency signal to the control center.

SAFETY CHECK Allows the control center or other authorized radios to check your radio status. Should the user not respond to a safety check signal, then a defined emergency procedure is activated, sounding an emergency alarm or transmitting an emergency signal to the control center.

MAN DOWN Providing even greater safety for employees in hazardous environments, the BR850-IS has a Man Down feature. In case you are suffering an attack or other accidents, and the radio falls over for a predetermined time period, this feature automatically summons assistance by sounding an emergency alarm or transmitting an emergency signal to the control center. You need to place the radio vertically, to exit the emergency mode.

SOFT POWER-OFF If you turn the radio off while it operates in emergency mode, the radio shall continue transmitting Emergency ID to the control center after you turn the radio off. After the emergency procedure is completed, the radio shall automatically power off.

BUILT-IN SCRAMBLER The scrambler feature provides enhanced security for your important public safety and private security communications.

WHISPER When discretion is key, the Whisper feature means that even the quietest message can be transmitted and understood. Selectable gain levels allow your radio to suit every working condition.

SIGNALING RCA's RDC2400 and MDC1200 signaling.



ANSI/UL 913
CSA C22.2 No. 157



BR850 SPECIFICATIONS

Features and Options

- The RDC2400 signaling is exclusive to RCA, and contributes to the system to achieve features including ANI (Automatic Number Identification), Call Timer, Record, Record Inquiry, Selective Call (Individual Call, Group Call, Zone Call, Broadcast), Alert Call (Individual Call, Group Call, Zone Call, Broadcast), Kill/Stun/Revive, Status Inquiry, Safety Check, Status Message, Short Message and Data Transmission.
- The MDC1200 Signaling allows functions including PTT ID Encode & Decode, Emergency Encode, Radio Check Encode & Decode, Kill & Revive Decode, Selective Call (Individual Call, Group Call, Fleet Call, Broadcast), Alert Call (Individual Call, Group Call, Fleet Call, Broadcast), Status Message Encode, and Fixed Message Encode.
- 2 Programmable Side Keys
- 1 Programmable Top
- Lone Worker
- Safety Check
- Man Down
- Soft Power-Off
- Scrambler
- Wisper / Gain Levels Adjustment
- LED Indicator
- Voice Channel Announce
- Meets IP Standard IP65
- Meets MIL-STD 810 C,D,E,F,G



GENERAL SPECIFICATIONS

Model	RB850-IS TM	
Channel Numbers	16	
Channel Spacing	Analog: 12.5 KHz / 25 KHz	
Operating Voltage	DC 7.4V	
Frequency	UHF: 400-470Mhz	
Operating Temperature	-4°F ~ +122°F (-20 °C ~ +50 °C)	
Storage Temperature	-4°F ~ +140°F (-20 °C ~ +60 °C)	
Weight	15 oz. / 426g (with battery B850LI-IS)	
Size: HxWxD (inches)	4.98" x 2.16" x 1.5" (without antenna)	
Waterproof Level	IP54 Dust and Water Resistant	
Battery	B850LI-IS	7.4V 1700mAh Lithium-Ion Battery; 12.58 Wh
Battery Life (5:5:90 duty cycle)	Up to 10 Hours	

RECEIVER

Frequency Stability	± 2.5 ppm
Intermodulation	65dB
Adjacent Channel Selectivity	70dB @ 25KHz / 60dB @ 12.5 KHz
Spurious Response Rejection	70dB
Block	84dB
Rated Audio Power	0.5W
Audio Distortion	≤3%

TRANSMITTER

Transmit Power	Low - 1W / Medium - 2W / High - 3.5W (UHF)
FM Noise	-40db @ 12.5 KHz / -45db @ 25 KHz
Sensitivity	0.25/0.35µV
Transmit Spurious Radiation	-36dBm@<1GHz, -30dBm@>1GHz
Adjacent Channel Power	-60dB@12.5KHz
Modulation Limit	2.5KHz @ 12.5 KHz / 2.5KHz @ 25 KHz
Idle Slot Power	-57dBm
Audio Response	+1dB--(-3)dB
Rated Audio Distortion	≤5%
Emission Designator	Analog 11K0F3E, 16K0F3E



Remote Speaker Mic
SM850L-IS



High Capacity Li-Ion
1700 mAh 7.4V
B850LI-IS



Single Unit
Rapid Charger
CH850RP



Six Bank
Rapid Charger
CH850RP6



Leather Holster w/
Fixed Belt Loop
HL850FL



Leather Holster w/
Swivel Belt Loop
HL850SL



Stubby Antenna
AN250U-3 (UHF)
AN250V-3 (VHF)



Belt Clip
BC850

For more information, visit
RCACommunicationsSystems.com