



Operating Instructions

Audio Record Simplex Repeater Controller

Model No. RC-S 120



IMPORTANT NOTICE

Please retain the warranty certificate printed on the last page of this booklet.

Model shown is RC-S120.

USER'S MANUAL

Thank you for purchasing our Radio record simplex repeater Controller with connector Cable.

Please read this manual carefully before use. The information presented herein will help you to derive maximum performance from your repeater controller.

SUPPLIED ITEM

Packing List

- 1 x RC-S120 Radio Record Simplex Repeater Controller
- 1 x 100~240V Wall Charger
- 1 x USB Power Cable
- 1 x Repeater Controller Cable (Can change by your request.)
- 1 x This English User's Manual



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OPTIONAL ACCESSORIES



46-GM
• for Motorola GM300



46-K
• for Kenwood



46-M
• for Motorola GP300



46-MU



46-MT
• for Motorola Talkabout



46-S
• for ICOM



46-S2
• for Midland



46-Y
• for Yaesu



46-Y7



US Plug USB Wall Charger



AUS Plug USB Wall Charger



UK Plug USB Wall Charger



AC USB PSU US Plug



AC USB PSU EURO Plug



USB Power Cable



Protected Battery TR14500 800MAH

SAFETY INFORMATION

Electrical shock hazard

- Never attempt to connect the unit to any power network other than one for which it was intended.
- Do not open the housing of the units.
- Switch OFF the unit, and then disconnect the unit from the external power supply and from all other devices if a fault occurs.
- Install the unit only in a dry place protected against the elements.
- If you are uncertain about the safe operation of the unit, shut it down immediately and secure it to prevent any unauthorized start-up. Safe operation is no longer possible, for example,
 - If damage is visible to the unit or the cables,
 - If the unit no longer operates correctly,
 - If objects have penetrated inside the unit,
 - After long storage under improper conditions
- Power input cannot higher than DC+24V.

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INTRODUCTION

Radio record simplex repeater Controller

The RC-S120 is a multi-unction voice recorder device that connects to virtually any handheld, base, or mobile radio. It features capacity than exceptional any voice other recording comparable quality device on and the higher market.

INSTALLATION

Simplex Repeater

A simplex repeater records incoming transmissions and retransmits them on the same frequency. This has the effect of doubling the time required to transmit a message, but while a traditional repeater typically costs thousands of dollars and might be semi-portable at best, a simplex repeater can be set up with a single handheld radio and operated from batteries. This makes it perfect for disaster response, home or campground use, and any place where radio range needs to be extended but the cost and complexity of a traditional repeater can't be justified.



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Have the system checked by qualified, specialist personnel in such cases.

Installation and operation

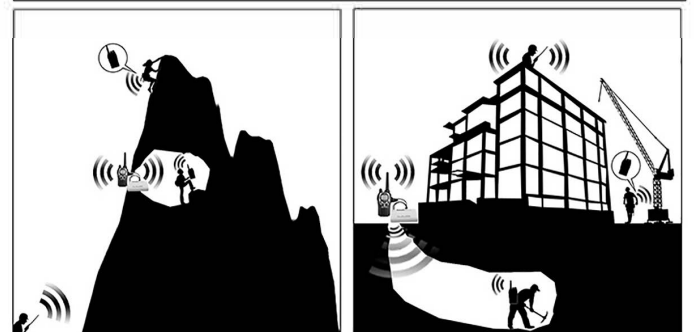
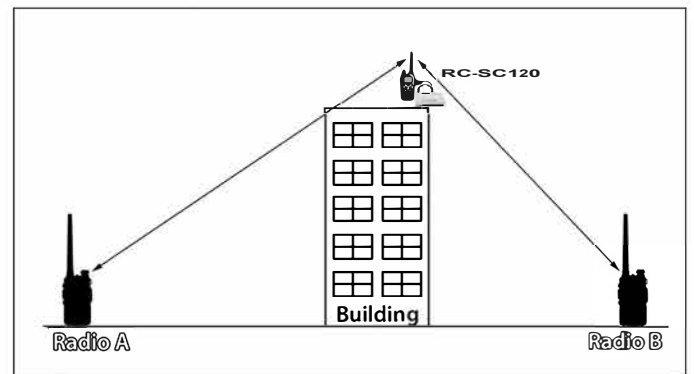
- Before installing or operating the system, ensure that you have read and understood the documentation for other equipment connected to the unit. These contain important safety notices and information concerning permissible applications.
- Perform only the installation and operating work described in this guide. All other work beyond this may lead to injuries to persons and damage to the system or other equipment.

Repairs and maintenance

Never open the housing of the SR-112. The unit contains no parts which you can repair or replace. Ensure that only qualified, specialist personnel (electrical technicians) are permitted to carry out maintenance or repair work.



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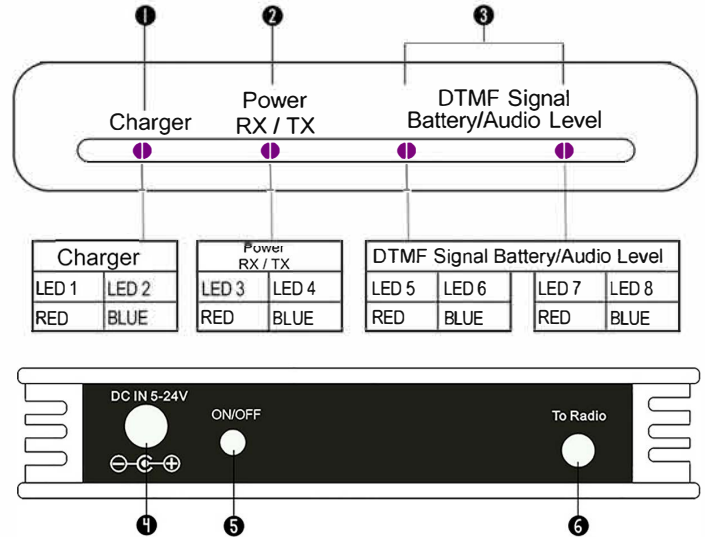
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Major Features

- Up to 180 seconds total recording time
- DTMF remote control for all functions
- Auto repeat message
- Operates from 14500 3.7V Li-ion or external 5-24 V DC supply
- build-in rechargeable Lithium-ion battery support 72 hours long life operation
- User to change the DTMF remote control password by radio
- User set the Repeater Operates On/Off by DTMF
- Audio output adjustable in hardware and by remote command
- Auto Battery level display (20%~100%)
- Provides audio Input level display (for adj. best sound)
- Provides signal roger beep setting
- DTMF signal dispaly
- Works with most popular CB,FRS, PMR, Amateur radios, Mobile Radio (optional of Cable)
- 1 year warranty on complete unit, 5 years on flash memory



- 1 Charger LED Display
- 2 Power (RX / TX) STATUS
- 3 DTMF Signal STATUS
Battery / Audio Level LED Display
- 4 Charging and DC input
- 5 ON/OFF Switch (Factory Reset)
- 6 Connect Radio (SP/MIC/PTT out)



Description

Ⓞ / Ⓞ = Light Off ● = Light On ● = Light Blink

Mode	Charger	Power RX / TX	DTMF Signal Battery/Audio Level
Charging	RED	Ⓞ	Ⓞ
Battery Full	BLUE	Ⓞ	Ⓞ
Power On in work mode	Ⓞ	RED (Blink)	Ⓞ
Sleep Mode	Ⓞ	BLUE (Blink)	Ⓞ
Radio is Receiving	Ⓞ	RED	AudioLevel (page 12)
Radio is Transmitting	Ⓞ	BLUE	Ⓞ

Battery Level



Table 1

Description	Battery Level
> 4.0 V	RED ● BLUE RED ● BLUE
3.7 - 4.0 V	RED ● BLUE RED ●
3.3 - 3.7 V	RED ● BLUE Ⓞ
3.0 - 3.3 V	RED ●
< 3.0 V	RED (blink) ●

*Battery voltage level Display when Power On. (Without charger connect.)

Audio in Level



Table 2

Description	Audio Level
> 1.8 Vrms	RED ● BLUE RED ● BLUE
> 1.4 Vrms	RED ● BLUE RED ●
> 0.8 Vrms (*The best Audio Level.)	RED ● BLUE Ⓞ
> 0.2 Vrms	RED ●
< 0.2 Vrms	Ⓞ

*Audio input level Display for Radio Received.

DTMF Signal Display



Table 3 (* Press # # 0 first, then press another key.)

Description	DTMF Signal	
1	RED	BLUE
3	BLUE	BLUE
3	RED	BLUE
4	BLUE	RED
3	RED	RED
6	BLUE	RED
7	RED	RED
8	BLUE	BLUE
8	RED	BLUE
8	BLUE	BLUE
8	RED	BLUE
6	BLUE	RED

DTMF Remote Control Function

Table 4

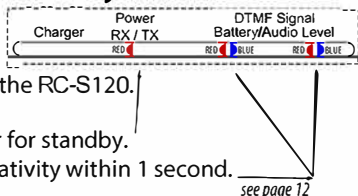
Code	Sub-menu	
##0	Test DTMF, display DTMF signal(see Table 3)	page 13
##1+8888	Enable Record Function(Standby mode) *Factory P/W 8888	page 15
##2+8888	Disable Record Function(sleep mode)	
##3+8888+1234	Change Password-step 1 of 2	page 16
##4+1234	Change Password-step 2 of 2	

Code	Sub-menu	
##51+n	Delay time after release PTT, n=1-9 (unit 0.1second)	
##52+n	Delay time after playback, n=1-9 (unit 0.1second)	
##53+n	Record level, n=1-9, default value =5	
##54+n	Playback level, n=1-9, default value =5	
##59+n	n=1 for Enable Roger , n=0 for Disable Roger	
##61+n	n=0, Disable Repeat Message n=1, Repeat message ONCE for every 15 minutes n=2, Repeat message ONCE for every 30 minutes n=3, Repeat message ONCE for every 45 minutes n=4, Repeat message ONCE for every 60 minutes (*Status Blue LED blink once within 10 seconds.)	Page 17
##62 (Repeat message testing)	Repeat Message TWICE within 20secs (for Mode ##611) Repeat Message TWICE within 40secs (for Mode ##612) Repeat Message TWICE within 60secs (for Mode ##613) Repeat Message TWICE within 80secs (for Mode ##614) (*Status Blue LED blink once within 10 seconds.)	Page 17
##71	Replay last Message	
##81	Record Message 1, maximum record time = 60second (After Enter ##81, the voice will record to Message 1)	Page 16
##82	Playback Message 1	
##83	Record Message 2, maximum record time = 60second (After Enter ##83, the voice will record to Message 2)	
##84	Playback Message 2	
##85	Record Message 3, maximum record time = 30second (After Enter ##85, the voice will record to Message 3)	
##86	Playback Message 3	

OPERATION

Normal operation with build-in battery

● “ON/OFF” (5 in page 10)



This switch is used to turn ON/OFF the RC-S120.
- Power ON
The Power Led Blink with Red color for standby.
Battery Level Leds with indicate relativity within 1 second.
- Power OFF
Push this switch until 3 of RED LED light off.

● “To Radio”(6 in page 10)

This terminal is used to connect a radio tranceiver unit.

● “DC IN 5-24V”(4 in page 10)

This indicator is used to indicate the battery charging and external DC input status. (5.5mm plug center pole is DC.)
(This terminal is used to connect an external DC+5-24V power supply.)

● Sleeping Mode

- Turn ON the power of the radio receiver unit.
- Push and hold the PTT switch of any radio unit with DTMF function.
Press # # # + 8 8 8 8 then turn to Sleeping Mode.
(Mode) (Password)

● Working Mode (By Password)

- Turn ON the power of the radio tranceiver unit.
- Push and hold the PTT switch of any radio unit with DTMF function.
Press # # # 1 + 8 8 8 8 then turn to Working Mode.
(Mode) (Password)

Setup Repeater Messages

- Turn ON the power of the radio receiver unit.
- The Status Indicator of the RC-S120 will BLINK with RED COLOR
- Push and hold the PTT switch of any radio unit with DTMF function (Besides the radio receiver units installed with the SR-112.)

Keep pressing PPT button to speak message.
Record the Message 1: Press # # 8 1 .
The maximum record time is 60 seconds.
Pavback the Massaae 1: Press 2 # 8 2 .
Keep pressing PPT button to speak message.
Record the Message 2: Press # # 8 8 .
The maximum record time is 60 seconds.
Pavback the Message 2: Press # # 8 4 .
Keep pressing PPT button to speak message.
Record the Message 3: Press # # 8 8 .
The maximum record time is 30 seconds.
Pavback the Message 3: Press # # 8 8 .

Setup a new Password

- Turn ON the power of the radio receiver unit.
- Turn ON the power of the RC-S120. The Status Indicator of the RC-S120 will BLINK with RED COLOR
- Push and hold the PTT switch of any radio unit with DTMF function (Besides the radio receiver units installed with the RC-S120.)
- It need 2 steps to Change the Password.

Step 1: (for example)

8 8 3 + 8 8 8 8 + 3 8 3 4
(Mode) (Factory password) (New pasword)

Step 2: (for example)

8 8 4 + 3 8 3 8
(Mode) (New password)

Auto send message setting

- Turn ON the power of the radio receiver unit.
- The Status Indicator of the RC-S 120 will BLINK with RED COLOR
- Push and hold the PTT switch of any radio unit with DTMF function (Besides the radio receiver units installed with the RC-120.).

● Press **# # 6 0 ±**

1	(Repeat message once for every 15 minutes.) /
3	(Repeat message once for every 30 minutes.) /
2	(Repeat message once for every 45 minutes.) /
4	(Repeat message once for every 60 minutes.) .

(*The status will blink in blue every 10 secs.)

- Press **# # 0 1 ± 0** Disable Repeat Message.

Auto send message Testing

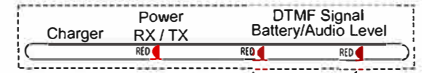
- Press **# # # 2** for testing your last setup.
(*The status will blink in blue every 10 seconds.)
If you press **##611** before , this function will repeat your message twice within 20 seconds.
If you press **##612** before , this function will repeat your message twice within 40 seconds.
If you press **##613** before , this function will repeat your message twice within 60 seconds
If you press **##614** before , this function will repeat your message twice within 80 seconds

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SPECIFICATION

Power Supply :	Build-in 3.7V 900mAh Li-Ion Battery (14500)
Charging & External Power Supply :	DC +5V-24V
DTMF Remote Control Protection :	User define 4-digit Password Protection
Message Recording Time :	180 seconds
StandbyTime :	72 hours
Indicators :	Status LED and External Power Supply Input LED
Dimensions :	110 x 80 x 25 mm
Weight :	84g (Body without accessory.)

FACTORY RESET



Press the "ON/OFF" switch and hold it until three RED LED light on.

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Trouble Shooting



PROBLEM	SOLUTION
No System LED	Confirm that you have +5V-24V DC power connected to the correct pins. Be sure that the power to the controller is stable and Repeater Controller is on. If the unit has adequate voltage, and the system ON/OFF is on, there may be some type of hardware failure.
Insufficient Charge	Battery charger or Battery maybe defective, you need to be replaced.
Battery Life Too Short When It Full Charge	Battery is defective or has been damaged and need replacing.
Repeater Controller No Reaction	Radio problem (page 07) or Radio Volume is too low. (page 12)
Response Error	If the radio received a lot of noise, turn Radio to another channel, or using Radio CTCSS / DCS to prevent reaction errors.
DTMF No Reaction	Radio without DTMF Function. Radio Audio Out Level is too low or too high. (page 12)
No Reaction of DTMF Key	Audio Out Level is too low or too high. (page12) Please testing your mode of DTMF. (page13)
Receive Distance Too short	Radio RF power is too low, increase the power, or use higher output power transceiver.

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We provide radio repair service for all the radios that bought from our store with warranty label, Free for charge .

Body : 1 year warranty

Accessories : 3 months warranty(Battery charger,PSU...)

Model	Serial No.
Dealer	Purchase Date
Tel No.	Fax No.
Name and address of dealer	