

R Y T E C

Radio Control System 4[®]

Installation & Operating Instructions Manual



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Introduction

The Rytec radio control operates on AM radio technology. This instruction book will explain installation, operation and troubleshooting of radio controls.

NOTE: This manual is intended for the Radio Control only. Installation and operation information specific to your door is detailed in the Installation, Owner's and System 4 Drive and Control manuals that were shipped with the door.

The installation and operation of the radio control is not difficult providing you follow the procedures outlined in this manual. Any unauthorized changes to these procedures, or failure to follow the steps as outlined, will automatically void our warranty. Any changes to the working parts, assemblies, or specifications as written, not authorized by Rytec Corporation, will also cancel our warranty. The responsibility for the successful operation and performance of this radio control lies with the owner of the door.

DO NOT INSTALL, OPERATE, OR PERFORM MAINTENANCE ON THIS RADIO CONTROL UNTIL YOU READ AND UNDERSTAND THE INSTRUCTIONS IN THIS MANUAL.

If you have any questions, contact your Rytec representative or call the Rytec Technical Support Department at 800-628-1909. Always refer to the serial number of the door that your radio control is connected to when calling Technical Support. Refer to the installation manual or the Owner's manual provided with your door for the location of the serial number plate.

The wiring connections and schematics in this manual are for general information purposes only. A wiring schematic is provided with each individual door specifically covering the control panel and electrical components of that door. That schematic was shipped inside the control panel.

All electrical and mechanical work must be performed in accordance with local and state building codes by qualified installers and electricians.

This product is covered by the Rytec door warranty. The warranty is in the door Owner's manual.

How to use manual

Throughout this manual, the following key words are used to alert the reader of potentially hazardous situations, or situations where additional information to successfully perform the procedure is presented:

WARNING

WARNING is used to indicate the potential for personal injury, if the procedure is not performed as described.

CAUTION

CAUTION is used to indicate the potential for damage to the product or property damage, if the procedure is not followed as described.

IMPORTANT: IMPORTANT is used to relay information **CRITICAL** to the successful completion of the procedure.

NOTE: NOTE is used to provide additional information to aid in the performance of the procedure or operation of the door, but not necessarily safety related.

Installation

WARNING

The disconnect must be in the “OFF” position and properly locked and tagged before connecting the circuit board.

The antenna must be connected before installing the radio control into the control box. For a single wire antenna (supplied with receiver card-yellow or green wire), connect the antenna wire into the cable antenna terminal of the radio receiver board. For a 50 Ohm antenna (coaxial cable), connect the ground to the GND terminal then connect the antenna wire (bare conductor) to the 50 Ohm terminal. Reference figure 1 for board layout.

The radio control receiver is designed to plug into the Rytec System 4 control board. On the right side of the lower System 4 board are two vertical sets of two white connectors with five pins each. The radio control board will plug into the set of connectors that are about 2¼ in. apart with its components facing to the right. It will only fit in this one way.

Transmitter Set-up Procedure

The hand held R/C transmitters can be set to different frequencies via the 12 DIP switches inside. These DIP switches can be accessed by pressing in the locking tab on the bottom of the transmitter and pulling

the front and rear parts of the case apart. The factory default for the transmitters and receivers is switches 1, 2, 3, 8, 9, and 10 on. It is recommended this code be changed for security purposes. **Dip switches 11 & 12 must be turned ON** for the transmitter to operate.

When all transmitters have been changed to a new frequency, The receiver can be programmed to accept it.

Receiver Set-up Procedure

The receiver has two separate output channels that can each be programmed to interface with the System 4 controller differently. To program remote transmitters to work with channel 1, use the upper button on the receiver. Channel 2 is programmed with the bottom button.

Before programming new frequencies into the receiver, the existing frequencies must be erased. Press the receiver's appropriate program button until the red LED lights up, which should take about 10 seconds, and then release it. The receiver's LED will light up for 2 seconds to indicate the codes have been erased. Next, press & release the receiver's desired channel program button once, then within 5 seconds press & release the appropriate hand held transmitter button. This allows the receiver to “learn” the transmitter frequency. The relay should switch and the door should be activated to confirm that the frequency has been accepted. Use this procedure to program up to 64 unique transmitter frequencies.

Technical Data

Plug-in Receiver

Dimensions	4 x 2 x $\frac{3}{4}$ in.
Voltage	12-24 V DC
Current Consumption	$\approx$ 8 mA without RF module
Settings	53200 mode 35-110 ms
Connections	2x 5 pin Molex type for supply and signal 1x 3 screw terminals for antenna
Display	1x Red LED for function check
Controls	2x Learn Button

Hand-Held Transmitter

Dimensions	$3\frac{3}{4} \times 3\frac{3}{8} \times 1$ in
Voltage	9V Battery
Current Consumption	$\approx$ 35 mA
Operating Frequency	433 MHz AM
Modulation	AM
Modulation Factor	Shift +/- 20 kHz
Transmission Power	Typical <10 mW

Circuit Board Layout

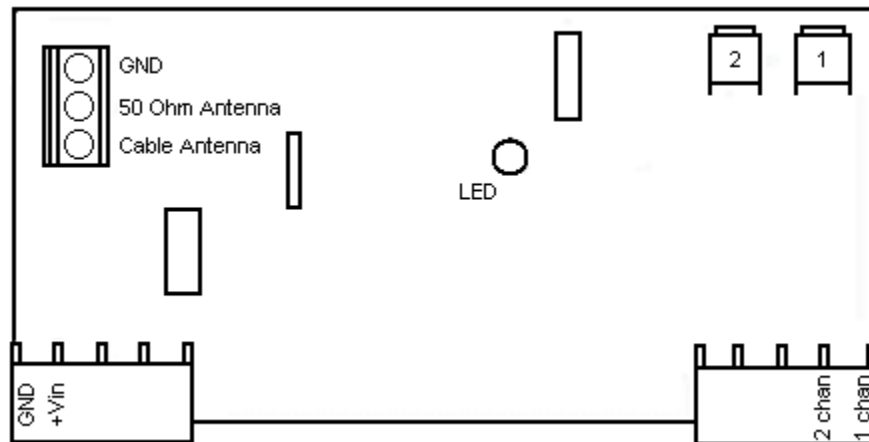


Figure 1

NOTE: Antenna provided with receiver card, yellow or green wire installed into cable antenna. For increased activation range extended radio antennas are available through Ryttec parts, part #00141027 mesh installed into GND terminal and conductor installed into 50 Ohm antenna terminal. Request service bulletin #212 for Coaxial cable extension.