Thank you for purchasing Solidremote 202U 2-channel stand alone receiver. Familiarise yourself with the following instructions prior to commencing set up. Store this information in a safe place for future reference.

Short Introduction

202U receiver has two relays on board which provide normally open & normally closed voltage-free dry contact (doesn't output power) for controlling virtually any electronic device. In default standard mode, both relays can be set to any of three modes – pulse (momentary), hold (toggle) or interlock latching using DIP switches.

Setting Relay Operation in Standard Mode

Pulse / Momentary – Relay contact is active whilst transmitter button is pressed, min. active period is ~0.5s
Hold / Toggle – Relay changes state at each press of transmitter button. Hold, Release, Hold etc. (like an on/off switch)
Interlock Latching – Two relays interact with each other, Relay 1 on then Relay 2 off, Relay 2 on then Relay 1 off. (useful in small DC motor reverse polarity control)

<table>
<thead>
<tr>
<th>DIP Switch 1</th>
<th>ON</th>
<th>ON</th>
<th>OFF</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIP Switch 2</td>
<td>ON</td>
<td>OFF</td>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relay 1</td>
<td>Pulse</td>
<td>Hold</td>
<td>Interlock</td>
<td>Pulse</td>
</tr>
<tr>
<td>Relay 2</td>
<td>Hold</td>
<td>Hold</td>
<td>Latching</td>
<td>Pulse</td>
</tr>
</tbody>
</table>

To turn off both relays in this mode, press the special function button which is assigned to both relays 1&2 (programmed by press both PRG1 & PRG2 when storing transmitter code).

Storing Transmitter Code

1. Press and hold PRG1 (for Relay 1) or PRG2 (for Relay 2) or PRG1 and PRG2 (for both Relay 1 & 2) until SIG LED turned on.
2. Press the transmitter button you would like to control the channel once until SIG LED flashes, then release transmitter button.
3. The SIG LED will flash quickly three times, indicating that the code has been stored.
4. Release all PRG button on receiver.
5. Press the programmed transmitter button to test operation.

Remove Single Transmitter Code: Repeat steps 1-5 above. During removal process, SIG LED on step 3 will flash slowly three times (instead of quickly), indicating that the code has been removed.

Deleting All Stored Transmitter Codes

1. Turn power off to receiver.
2. Press and hold both PRG1 and PRG2 button.
3. While holding both PRG1 and PRG2 - turn power on again. After 5 seconds the SIG LED will illuminate to indicate receivers memory has been cleared.
4. Release PRG1 and PRG2. All the stored codes should now be deleted. Confirm this by pressing transmitters previously used to operate the device. There should be no response.

Receiver Function Diagram

![Receiver Function Diagram]

Technical Specifications

- Power Supply: 9V-24V AC or 9V-30V DC
- Frequency: 433.92MHz OOK
- Memory Capacity: 510 Transmitters (up to 14 buttons each)
- Antenna Impedance: 50 Ohms (RG58)
- ✔ Relay Contact Rating:
  - Resistive Load (cosΦ=1): 10A @ 14V DC or 10A @ 120V AC
  - Inductive Load (cosΦ=0.4 L/R=7msec): 6A @ 14VDC
- Temperature Rating: -4°F to 131°F (-20°C to 55°C)
- Weight: 0.25 lbs. (0.11kg)
- Physical Size: 4.33"L x 2.36"W x 1.37"H (11cmL x 6cmW x 3.5cmH)

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Basic Wiring Diagram

Wiring maybe complex depending on different applications, we just included two simple diagrams below to explain the basic idea.

⚠️ Basic electronics knowledge is required, customer needs to make sure all parts in diagram meets our specifications (for example, light bulb not exceeding 10A), or it may cause unexpected results or damage.

Following examples are using 202U’s Relay 1 for wiring, you can use Relay 2 of course, the idea is the same.

Basic wiring using separate power supplies

The following is a simple wiring diagram for controlling light bulb on & off using our 202U receiver.

The light bulb is using 110Vac mains power, while our receiver is using 12Vdc regulated power through power adapter or battery.

⚠️ Shared power source is not recommended for motor or other electronics which introduce noise into power line.

Although 202U doesn’t care about polarity, your target device may care, so inspect wiring carefully before power up, to avoid damage.

Onboard Simple Limit Switches

LS on receiver board stands for limit switch, LS1 & LS2 controls relay 1 & 2 respectively, they share a common connection COM, so the 3 blue terminals from up to down can be read as LS1 COM LS2.

For example, when LS1 is connected to COM (by external limit switch or other sensor outside), then relay 1 will be forced off, even if remote control tells it to stay on.

⚠️ Our limit switch is only for feedback control (to turn relay off), NOT for direct manual override control!

Discover new features in V5 online!

There are many new features in V5 version receiver, please check our full manual online.

It is available at solidremote.help website, the "SR-RCS-202U receiver manual" topic thread.

Thank you.

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Discover new features in V5 - Settings

To make full use of current hardware, and make our receiver as versatile as possible, we have introduced settings in V5 version.

- Settings change our receiver’s behaviour in normal working.
- Settings can be changed by customer ONLY during power on boot process (thus only one chance per boot).
- Different settings is achieved by different PRG button and DIP switches combination during above process.
- Once new settings is saved, it will retain even after powered off, unless you changed it again.
- Remember: DIP switches functions differently in settings mode and normal working mode.

Settings – How to change them?

1. Turn power off to receiver.
2. Set the DIP switches position according to manual below.
3. Press and hold either PRG1 or PRG2 button, NEVER both.
4. While holding either PRG1 or PRG2 - turn power on again. After 5 seconds the SIG LED will illuminate to indicate receiver has accepted & saved new settings.
5. Release PRG buttons. Our receiver should now run under new settings.

✔ You can see the above step is very similar to erase all transmitters step, one difference is you press EITHER PRG1 or PRG2 button in Step 3, NEVER BOTH.

Settings – What can I change? What is the difference between press PRG1 and PRG2?

✔ PRG1 and PRG2 controls different settings group, you will find all the settings available below, let’s start with PRG1 control group.

settings by using PRG1 Overview

PRG1 controls 3 independent settings, by set different DIP switches position during settings process, as shown in table below.

<table>
<thead>
<tr>
<th>DIP Switch 1</th>
<th>ON</th>
<th>Pulse / momentary mode delay is 1 second</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td></td>
<td>Pulse / momentary mode delay is 0.5 second</td>
</tr>
<tr>
<td>DIP Switch 2</td>
<td>ON</td>
<td>Uninterruptible Timed Mode (UTM) ON in timed output mode</td>
</tr>
<tr>
<td>OFF</td>
<td></td>
<td>UTM OFF in timed output mode</td>
</tr>
<tr>
<td>DIP Switch 3</td>
<td>ON</td>
<td>True latching working mode</td>
</tr>
<tr>
<td>OFF</td>
<td></td>
<td>Default standard working mode</td>
</tr>
</tbody>
</table>

① OFF position is factory default.
PRG1 & DIP Switch 1 Controls pulse / momentary mode delay

The delay period can be observed by press transmitter button to activate relay in pulse mode, then release transmitter button. The relay hold on period between transmitter button release → relay release is the delay.

The default value is 0.5s for well balance between fast response and high stability.
When you set to 1s, the perceived relay stability during pulse mode will be better, while the response speed for relay release is slower.

PRG1 & DIP Switch 2 Controls whether to turn on uninterruptible timed mode UTM

When uninterruptible timed mode (UTM) is ON, receiver will refuse to take any command when at least one relay channel’s timer is currently counting down (relay is still activating). When UTM setting is OFF, you can restart timer or cancel timer (turn off both relays) at any time.

✔ Above setting affects timed output mode ONLY (when DIP 3 is ON position, in normal working)

PRG1 & DIP Switch 3 Switch between standard and extended true latching working mode

True latching mode enables you to control each relay latching on/off independently (as opposed to interlock latching mode).

When this setting is OFF, our receiver is in standard mode, and the working mode settings can be seen on Page 1 of this manual Setting Relay Operation in Standard Mode
When setting is ON, our receiver is in true latching mode, the working mode has been changed to below.

Setting Relay Operation in True Latching Mode

<table>
<thead>
<tr>
<th>DIP Switch 1</th>
<th>DIP Switch 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON</td>
<td>ON</td>
</tr>
<tr>
<td>OFF</td>
<td>OFF</td>
</tr>
<tr>
<td>ON</td>
<td>OFF</td>
</tr>
<tr>
<td>OFF</td>
<td>ON</td>
</tr>
</tbody>
</table>

Relay 1
Reserved
Hold
True Latching ①
Pulse

① To turn off relay 1 in this mode, press the special function button which is assigned to both relays 1&2 (programmed by press both PRG1 & PRG2 buttons during storing transmitter code).

② To turn off relay 2 in these modes, press the special function button which is NOT assigned to any relay (the specific button is not assigned to any relay, but at least one other button on the same transmitter should be assigned to any relay).

✔ This setting does NOT affect timed output mode.

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**settings by using PRG2**  
PRG2 controls timer & timer only

**PRG2 & DIP Switches 1.2.3**  
These settings enables you to select one specific timing you want in timed output mode

Our timed output mode supports count down timing in 1~60 seconds as well as 1~60 minutes. (NOT continuous, only preset timer values in the range is available). See the lookup table below for all available values and their settings.

<table>
<thead>
<tr>
<th>Legend &amp; abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1 = DIP Switch 1</td>
</tr>
<tr>
<td>D2 = DIP Switch 2</td>
</tr>
<tr>
<td>D3 = DIP Switch 3</td>
</tr>
<tr>
<td>D1 ___ D2 ___ This setting is changed during boot period</td>
</tr>
<tr>
<td>D1 ___ D2 ___ DIP position is in normal working after boot</td>
</tr>
<tr>
<td>___ This is RELAY 1 timing value</td>
</tr>
<tr>
<td>___ This is RELAY 2 timing value</td>
</tr>
</tbody>
</table>

The timed output value ➔ DIP switches position lookup table

<table>
<thead>
<tr>
<th>D1 OFF / D2 OFF</th>
<th>D1 ON / D2 OFF</th>
<th>D1 OFF / D2 ON</th>
<th>D1 ON / D2 ON</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>16</td>
<td>18</td>
<td>20</td>
<td>22</td>
</tr>
<tr>
<td>31</td>
<td>33</td>
<td>35</td>
<td>37</td>
</tr>
<tr>
<td>46</td>
<td>48</td>
<td>50</td>
<td>52</td>
</tr>
</tbody>
</table>

↓

<table>
<thead>
<tr>
<th>D3 ON</th>
<th>D3 OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above value are in minutes</td>
<td></td>
</tr>
<tr>
<td>Above value are in seconds</td>
<td></td>
</tr>
</tbody>
</table>

For example,
If you need a timed output of 31 seconds (relay turn on for 31 seconds then auto turn off)
- set DIP 1 OFF, DIP 2 ON, DIP 3 OFF during boot (see Page 3 - Settings – How to change them?)
- set DIP 1 OFF, DIP 2 OFF, DIP 3 ON after boot, then activate relay #1

If you need a timed output of 52 minutes (relay turn on for 52 minutes then auto turn off)
- set DIP 1 ON, DIP 2 ON, DIP 3 ON during boot (see Page 3 - Settings – How to change them?)
- set DIP 1 ON, DIP 2 OFF, DIP 3 ON after boot, then activate relay #2

✔ Information: Timed output mode is entered by DIP Switch 3 in ON position, in normal working mode after boot.

⚠ Disclaimer: The timer accuracy depends on factors such as temperature etc, it should be in -0.6% ~ +1.0% range under -4°F to 131°F temp. (+/-0.3% range under 77°F room temperature) *Characterized value only, NOT tested in production.

It should be good enough for common purpose, but NOT SUITABLE for applications that requires very precise timing control.

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