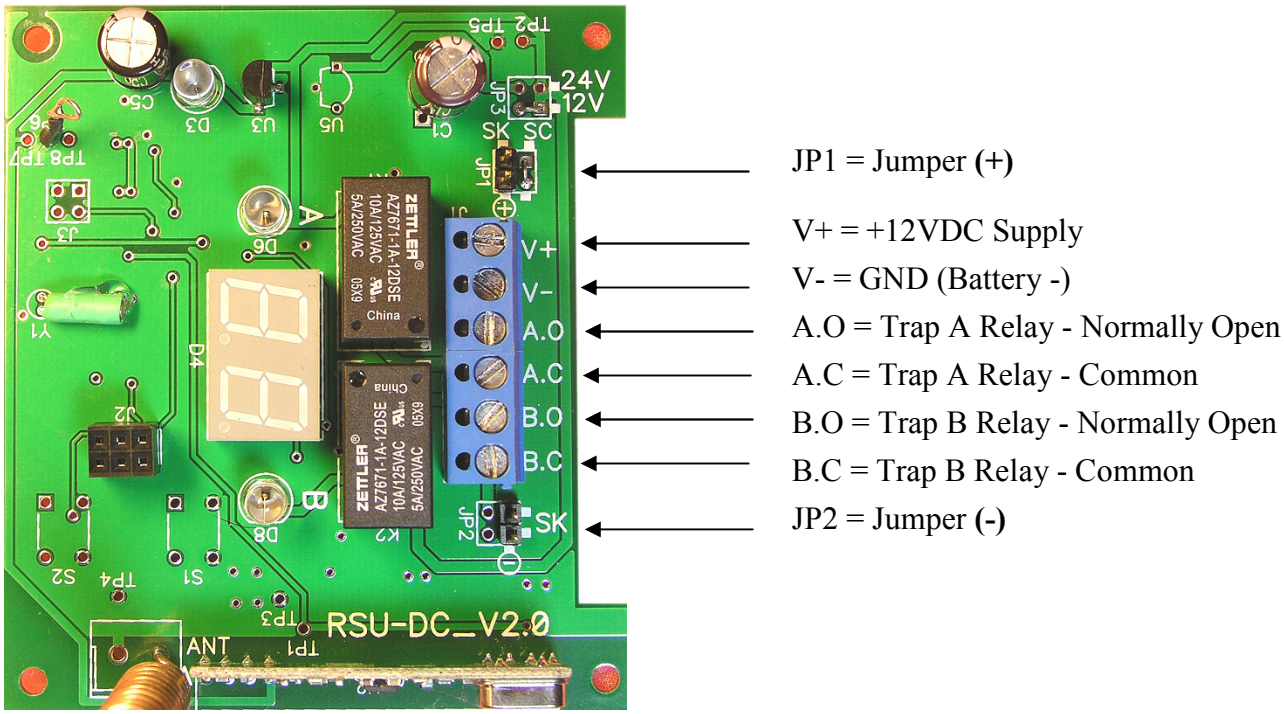
RSU-DC_V2.0 Configuration manual

Overview

The RSU-DC_V2.0 is a Remote Switching Unit designed for use with 12VDC Sporting Clays trap machines. Shunting or opening jumpers, and changing the wiring connected to the terminal block, the board can be configured for three possible power situations:

1. Direct: Power from a 12V battery, independent of the trap machines
2. Trap (+): Power from trap A with the DC Control Board or from traps where the switch must apply +12V to a low potential terminal in order to release a target.
3. Trap (-): Power from trap A without a DC control Board or from traps where the switch connects the Ground (battery -) to +12V in order to release a target.

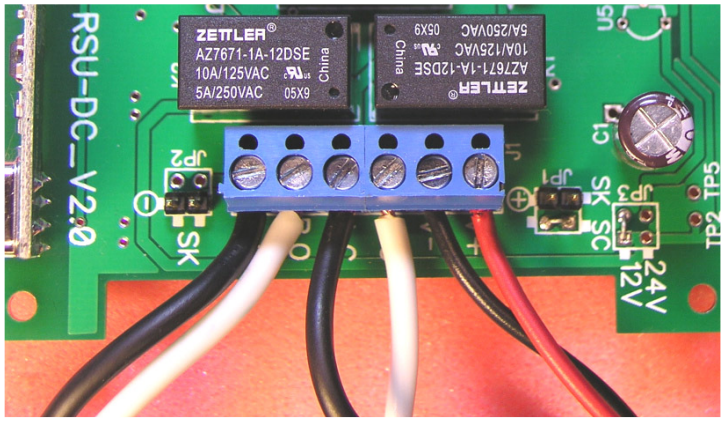


Note: the following wiring instructions assume the use of standard electrical cable having a Green wire, a White wire and a Black wire.

Direct Configuration

In the Direct configuration the RSU is powered directly from a 12V battery, independent of the trap machines. The housing requires holes for three cables (with cable glands): Power cable, Trap A cable and Trap B cable.

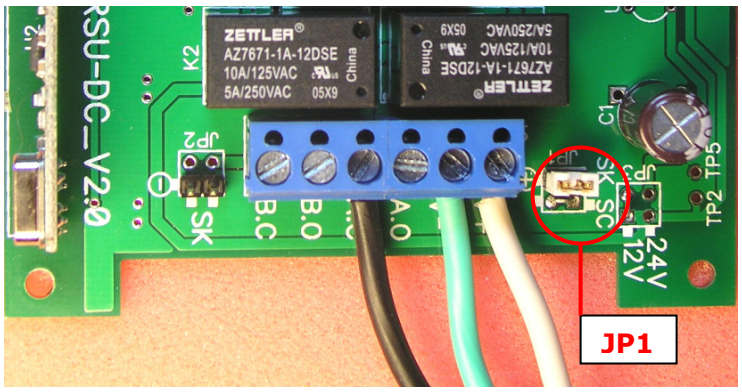
Wire	Source	RSU
Red Clip	12V Battery +	V+ (J1/1)
Black Clip	12V Battery -	V- (J1/2)
Trap A - White	A Pickle +	A.O (J1/3)
Trap A - Black	A Pickle -	A.C (J1/4)
Trap B - White	B Pickle +	B.O (J1/5)
Trap B - Black	B Pickle -	B.C (J1/6)
Trap A & B Green	NOT Connected	
		JP1 - OPEN
		JP2 - OPEN



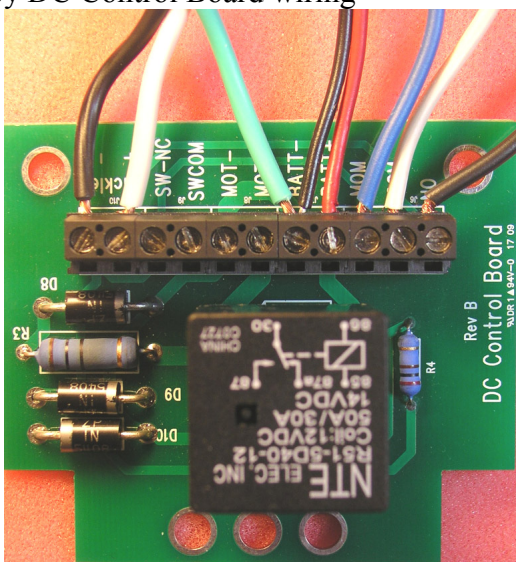
Trap (+) Configuration for Mattarelli with DC Control Board

In Trap (+) configuration, the RSU is powered from trap A with the DC Control Board or from traps where the switch must apply +12V to a low potential terminal to release a target. The housing requires two holes for two cables (with cable glands): Trap A cable and Trap B cable. For inverting the power supplying trap from A to B, consult the Setup manual.

Wire	Power Source Briley DC Control Board	RSU
Trap A - White	A Pickle +	V+ (J1/1)
Trap A - Green	A BAT-	V- (J1/2)
	NOT Connected	A.O (J1/3)
Trap A - Black	A Pickle -	A.C (J1/4)
Trap B - White	B Pickle +	B.O (J1/5)
Trap B - Black	B Pickle -	B.C (J1/6)
Trap B - Green	NOT Connected	
		JP1 - SHUNT
		JP2 - OPEN



View of the Briley DC Control Board wiring

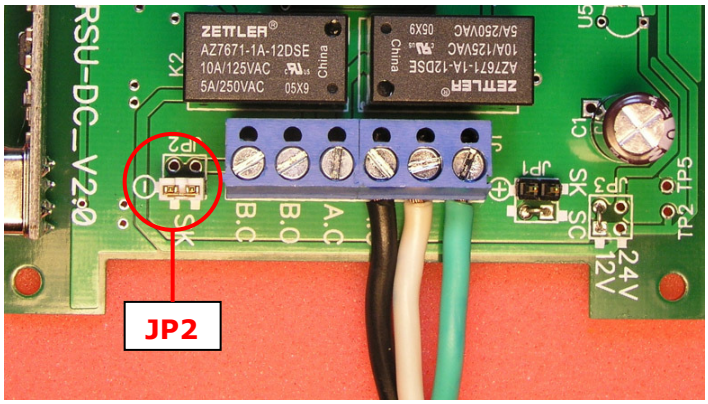


NOTICE: Do not power from 24Vdc Trap

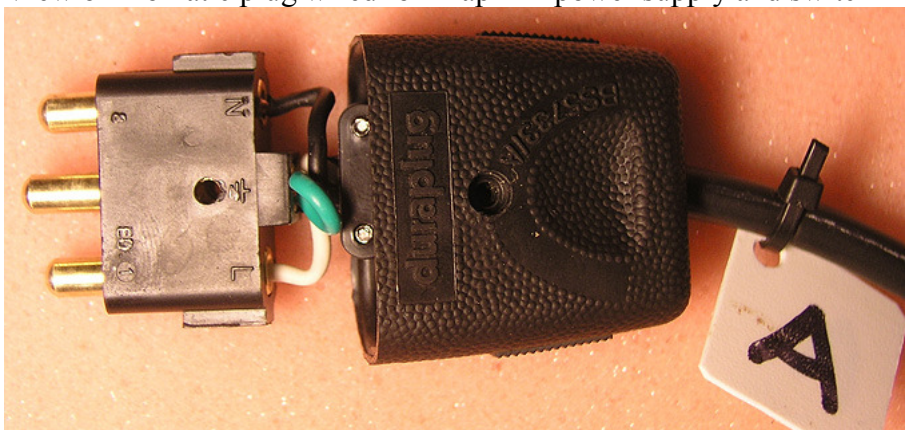
Trap (-) Configuration

In Trap (-) configuration, the RSU is powered from a trap A where the switch connects the Ground (battery -) to release a target.
The housing requires two holes for two cables (with cable glands): Trap A cable and Trap B cable.
For inverting the power supplying trap from A to B, consult the Setup manual.

Wire	**Power Source**		**RSU**
	Mattarelli	**Promatic Male Plug**	
Trap A - Green	From BAT+/Relay+	Center PIN (EARTH symbol)	V+ (J1/1)
Trap A - White	Directly from BAT-	PIN marked "L"	V- (J1/2)
Trap A - Black	From Relay-	PIN marked "N"	A.O (J1/3)
	Terminal A.C is NOT Connected		A.C (J1/4)
Trap B - White	B Pickle +	PIN marked "L"	B.O (J1/5)
Trap B - Black	B Pickle -	PIN marked "N"	B.C (J1/6)
Trap B - Green	NOT Connected, cut/insulate Green wire		
			JP1 - OPEN
			JP2 - SHUNT



View of Promatic plug wired for Trap A – power supply and switch



NOTICE: Do not power from 24Vdc Trap

RSU-DC_V2.0 Electrical Specification

Parameter

Supply voltage (Vdc)	Min. 9.0 Typ. 12.0 Max. 15.0	**Do not power from 24Vdc Trap**
Current Drain	Quiescent: 15mA 1 Relay: 32mA 2 Relays: 50mA	
Relay Fuse Max. Rating	Max. 24 Vdc	5.0 Amp @ 24Vdc

Relay Fuse protection (*)

Current (Amp)	Trip time (mS) @ 21°C
1.5	> 5000
2.5	< 500
3.0	< 200
5.0	< 50

(*) To protect both the RSU circuitry and any circuitry on the trap machine, the RSU relays are protected with resettable PTC fuses.
To avoid damage to the RSU, please observe the following limits:

- Do not connect Trap machines using more than 24Vdc
- Do not connect Trap machines using 115/240 Vac.
- Do not connect Trap machines with relay consuming more than 3.0 Amp