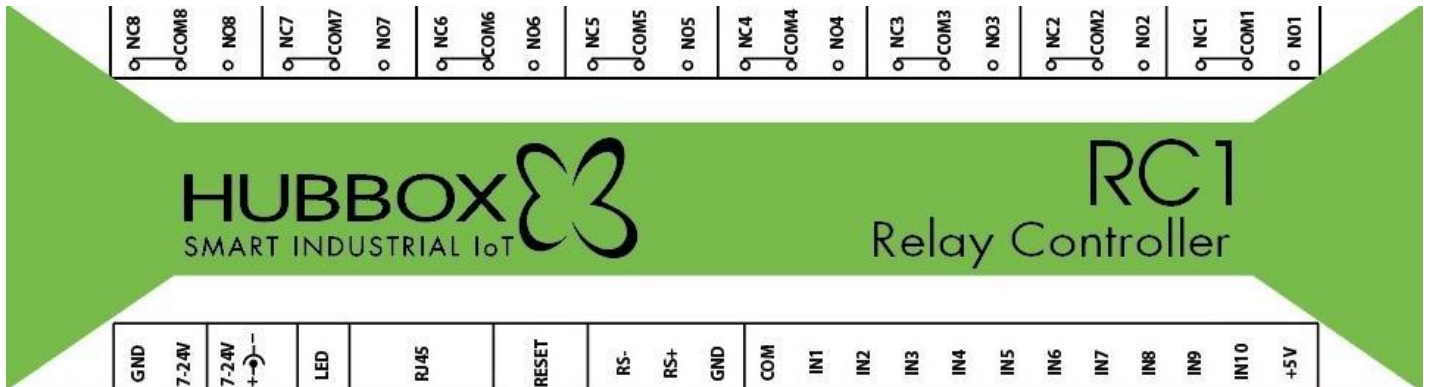# HUBBOX RC1 Relay Controller (10IN/8OUT) MODBUS TCP - User Guide


First Setup

1-   Power Supply: DC 7~24V. DC socket or wiring terminal can be selected to input power. DC Connector Size(Outside Diameter x Inside Diameter): 5.5x2.1mm

2-   Working Temperature Range: -40~85℃

3-   8 independent relay outputs. Maximum AC rating of 250V, and a maximum DC rating of 30V. Can work in two modes NO(normally open) and NC(normally closed) with shared COM input.

4-   10 channels of independent 5~24V DC input. In trigger mode inputs can trigger corresponding relays.

5-   RC1 can remember the last state in case of power failure. Applies the last state when powered up.

6-   Reset pin can be used for factory settings. Keep pressed for 10 seconds, release after green LED blinks. Default ip address is "192.168.24.251"

RC1 Configuration Manager Software

Download page: https://www.hubbox.io/en/download
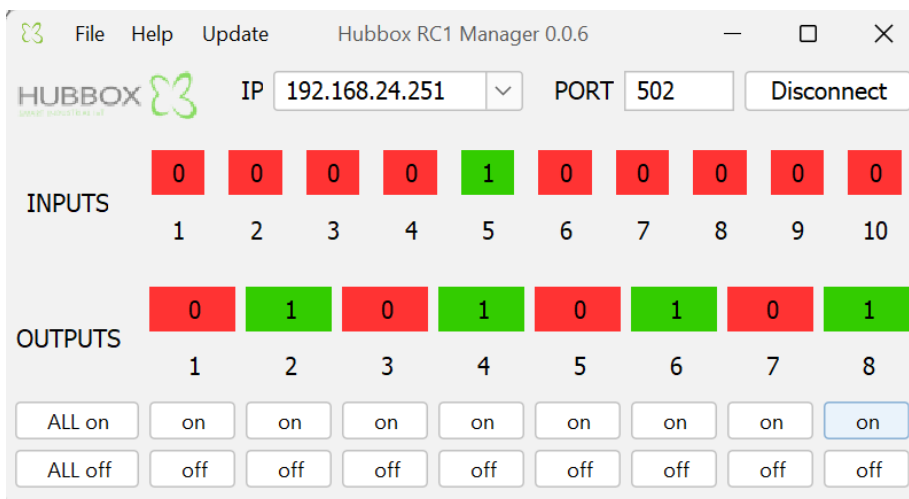
IP   ：The ip address of the RC1 device you connect to. (Default 192.168.24.251)

PORT   ：The modbus TCP port number. (Default 502)

INPUTS   ：10 digital input statuses on RC1.

OUTPUTS ：8 relays on RC1. ON and OFF buttons control each relay.

File / Device Configuration ：

IP	：Change the IP Address of the RC1 device. Default ip: 192.168.24.251
Subnet	：Change the Subnet mask
Gateway	：Change the Gateway address.
MAC	：Change the MAC address of RC1 device.

Input Mode
1) **Normal :** Default option, inputs does not affect output relays.
2) **Trigger :** Input is forwarded to output relay.

Output Mode
1) **Remember Last State :** In case of a power failure state of relays are stored. And restored when powered on.

2) **Reset :** In case of a power failure relays states resets to "off"

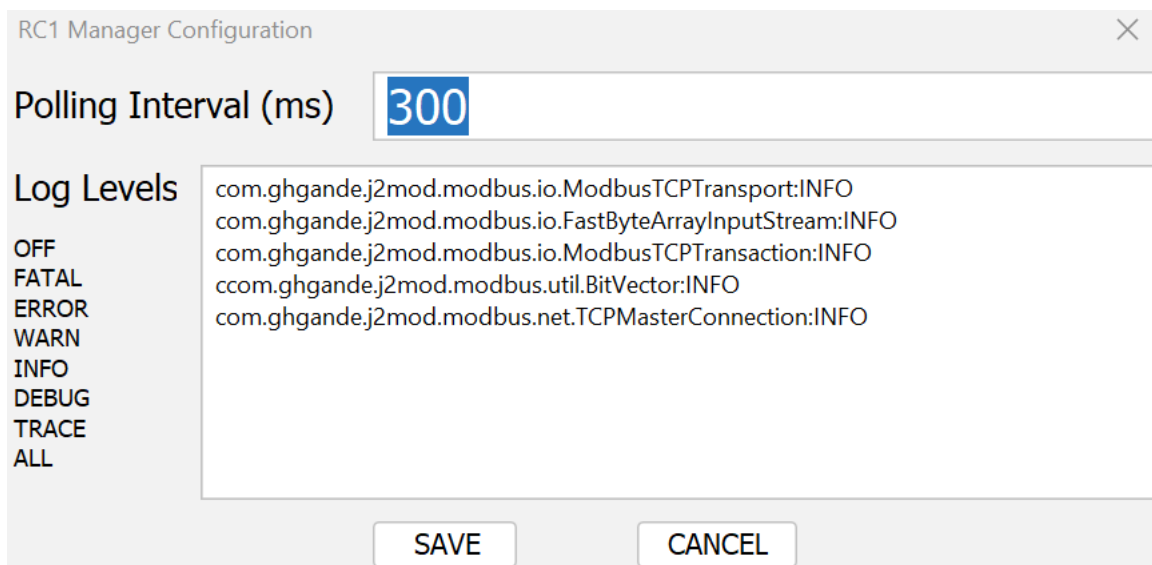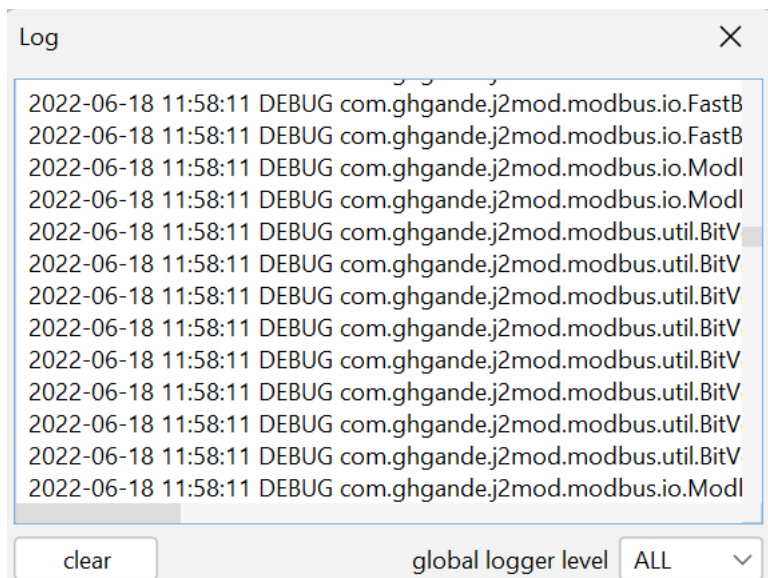|	
HW Version	：Hardware version
SW Version	：Software version
SAVE	：Save the changes.
CANCEL	：Cancel changes and close
FACTORY RESET	：Fabrika ayarlarına geri çevirir.
REBOOT	：Restarts the device.

File / App Settings ：

Polling Intervals (ms) : Time to wait between requests from Manager Application to RC1
Log Levels : Logging levels

Log : Log records of Manager Application

HUBBOX RC1 – "Update" Menu

Auto Check Updates : If checked, the Manager Application checks software updates automatically.
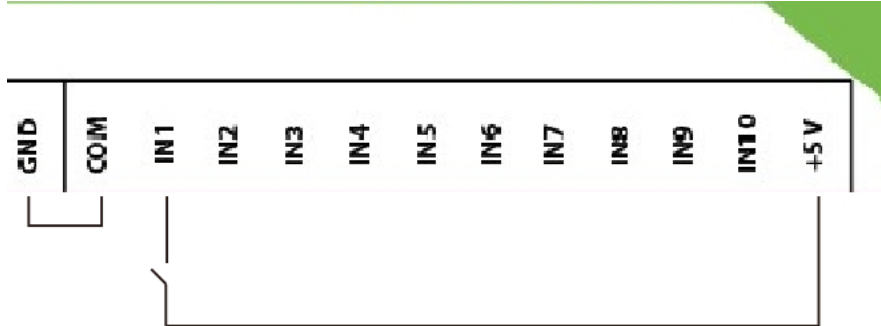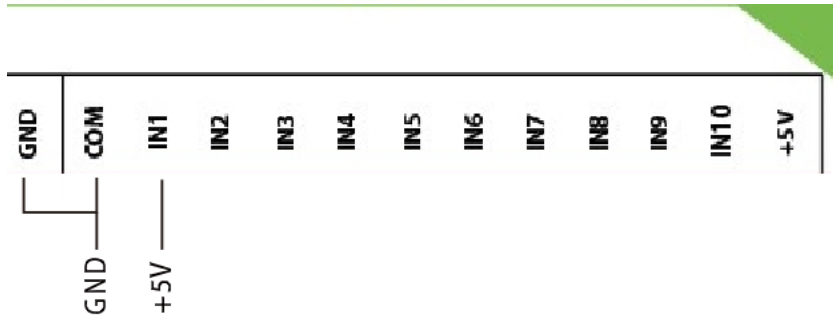**Update** : Manual check for a software update.

RC1 MODBUS TCP Table

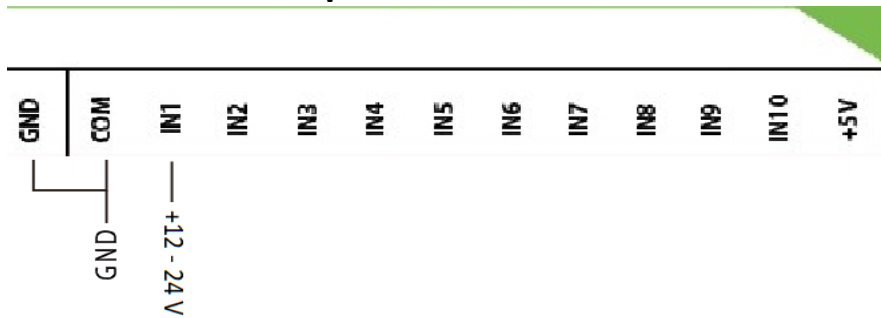| Read Function Code	Write Function Code	Adres	type	Coils - output role	Read Write
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	1	bool	Out 1	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	2	bool	Out 2	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	3	bool	Out 3	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	4	bool	Out 4	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	5	bool	Out 5	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	6	bool	Out 6	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	7	bool	Out 7	R/W
01 : Read Coils(0x)	05:Write Single Coil, 15 Write Multiple Coils	8	bool	Out 8	R/W
				Discrete inputs - input	
01 : Read Coils(0x)		10001	bool	Input 1	R
01 : Read Coils(0x)		10002	bool	Input 2	R
01 : Read Coils(0x)		10003	bool	Input 3	R
01 : Read Coils(0x)		10004	bool	Input 4	R
01 : Read Coils(0x)		10005	bool	Input 5	R
01 : Read Coils(0x)		10006	bool	Input 6	R
01 : Read Coils(0x)		10007	bool	Input 7	R
01 : Read Coils(0x)		10008	bool	Input 8	R
01 : Read Coils(0x)		10009	bool	Input 9	R
01 : Read Coils(0x)		10010	bool	Input 10	R
				Holding Registers	
03 : Read Holding Register (4x)		40001	uint16	HW version	R
03 : Read Holding Register (4x)		40002	uint16	Software version	R
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40003	uint16	0: success, 1: Fault, 2:FactoryReset(slow flash), 3:ApplyConfigSetting, 4:Reboot (fast flash)	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40004	uint16	IP 3	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40005	uint16	IP 2	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40006	uint16	IP 1	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40007	uint16	IP 0	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40008	uint16	Subnet 3	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40009	uint16	Subnet 2	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40010	uint16	Subnet 1	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40011	uint16	Subnet 0	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40012	uint16	Gateway 3	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40013	uint16	Gateway 2	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40014	uint16	Gateway 1	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40015	uint16	Gateway 0	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40016	uint16	MAC 5	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40017	uint16	MAC 4	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40018	uint16	MAC 3	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40019	uint16	MAC 2	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40020	uint16	MAC 1	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40021	uint16	MAC 0	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40022	uint16	input mode 0:default 1:trigger	R/W
03 : Read Holding Register (4x)	06:Write Single Register, 16 : Write Multiple Registers	40023	uint16	0:out volatile 1:out non volatile	R/W

Input and Output Wiring and Usage

1. Digital input button or trigger relay

GND | COM | IN1 | IN2 | IN3 | IN4 | IN5 | IN6 | IN7 | IN8 | IN9 | IN10 | +5 V

2. 5V input

GND | COM | IN1 | IN2 | IN3 | IN4 | IN5 | IN6 | IN7 | IN8 | IN9 | IN10 | +5 V

GND

+5V

3. 12V – 24V input

GND | COM | IN1 | IN2 | IN3 | IN4 | IN5 | IN6 | IN7 | IN8 | IN9 | IN10 | +5+

GND

+12 - 24 V

4. Relay wiring

N

L

NC1

COM1

NO1