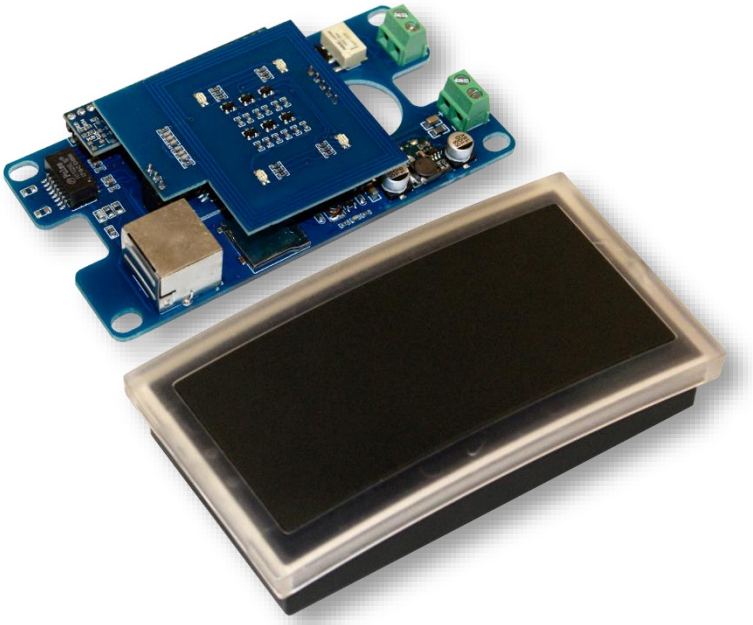
iDTRONIC
PROFESSIONAL RFID



ID Access 1500 Demo

Demo and Test Software Manual

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1 Installation

1.1 Mechanics

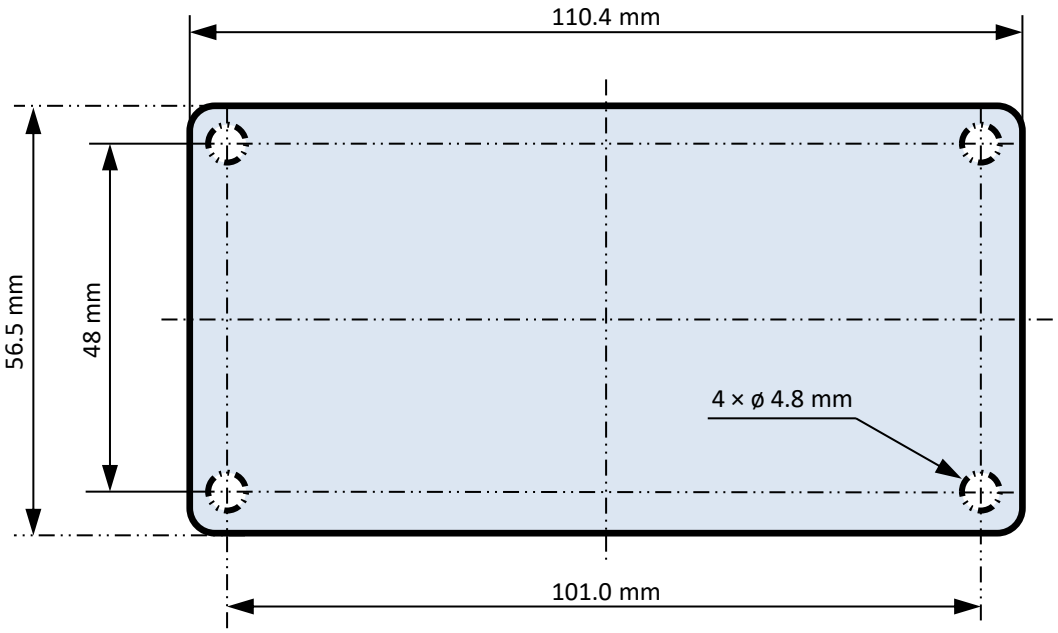


Figure 1 dimensional drawing of the electronics OEM-HF-R845-ET

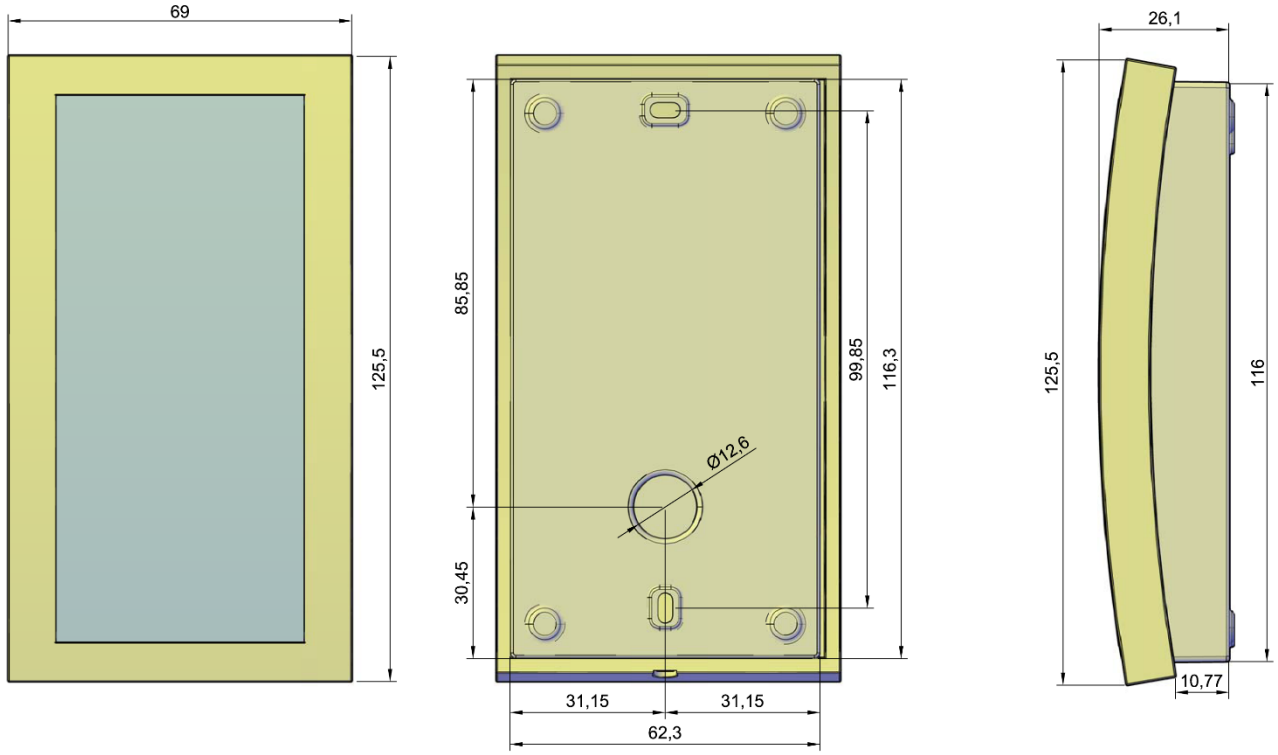


Figure 2 dimensional drawing of housing of ID Access 1500 + R-EA-WR-ET-HF-RO

1.2 Electrical Connection

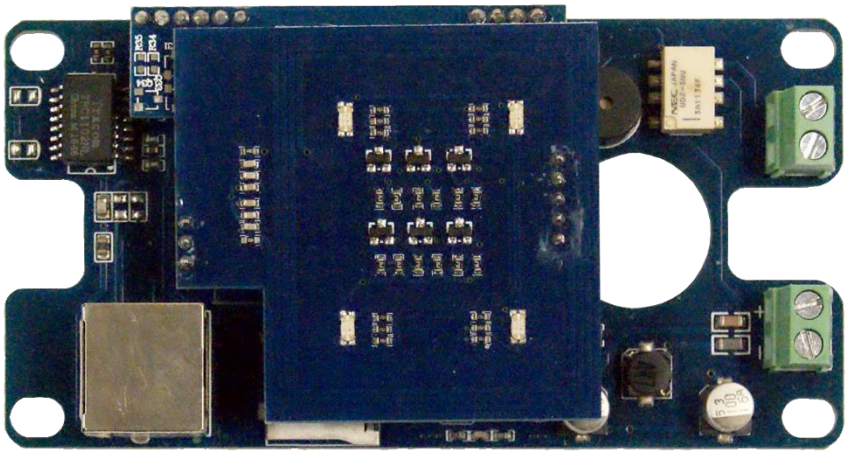


Figure 3 the antenna PCB on top can be removed

Remove the antenna PCB to gain an easy access to the Ethernet connector below.

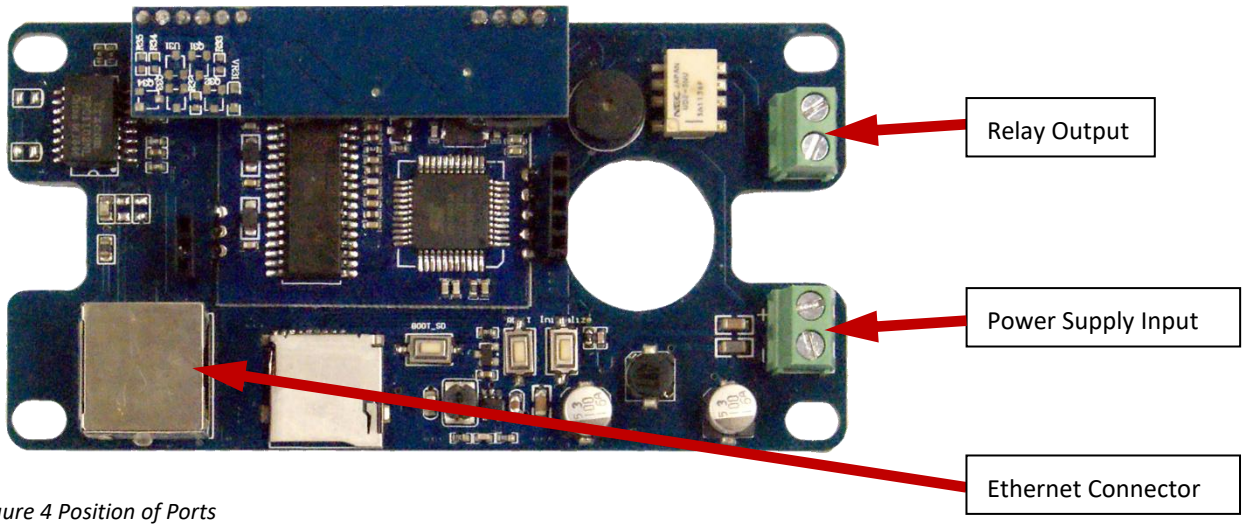


Figure 4 Position of Ports

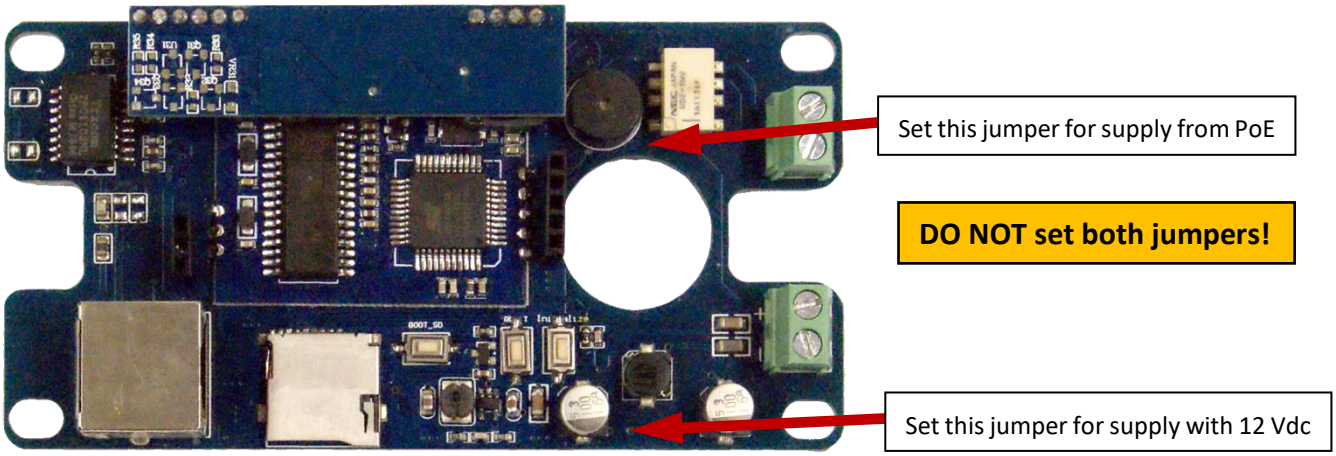


Figure 5 Position of Jumper for Power Supply Selection

1.3 Ethernet Connection · MAC Address

Factory default MAC address is: 08:90:90:90:90:20

Important Note

Each device can have the same MAC address on delivery. Every device in your network must have a unique MAC address. Before connecting it your network, check that the desired MAC address has been set. A device with the wrong settings may impede the functioning of your network.

1.4 Ethernet Connection · IP Address

Factory default IP address is: 192.168.1.20

Important Note

Do not connect any device to your network before it has been configured. Every device in your network must have a unique IP address. Before connecting it your network, check that the desired IP address has been set. A device may have any factory-set IP address. A device with the wrong settings may impede the functioning of your network.

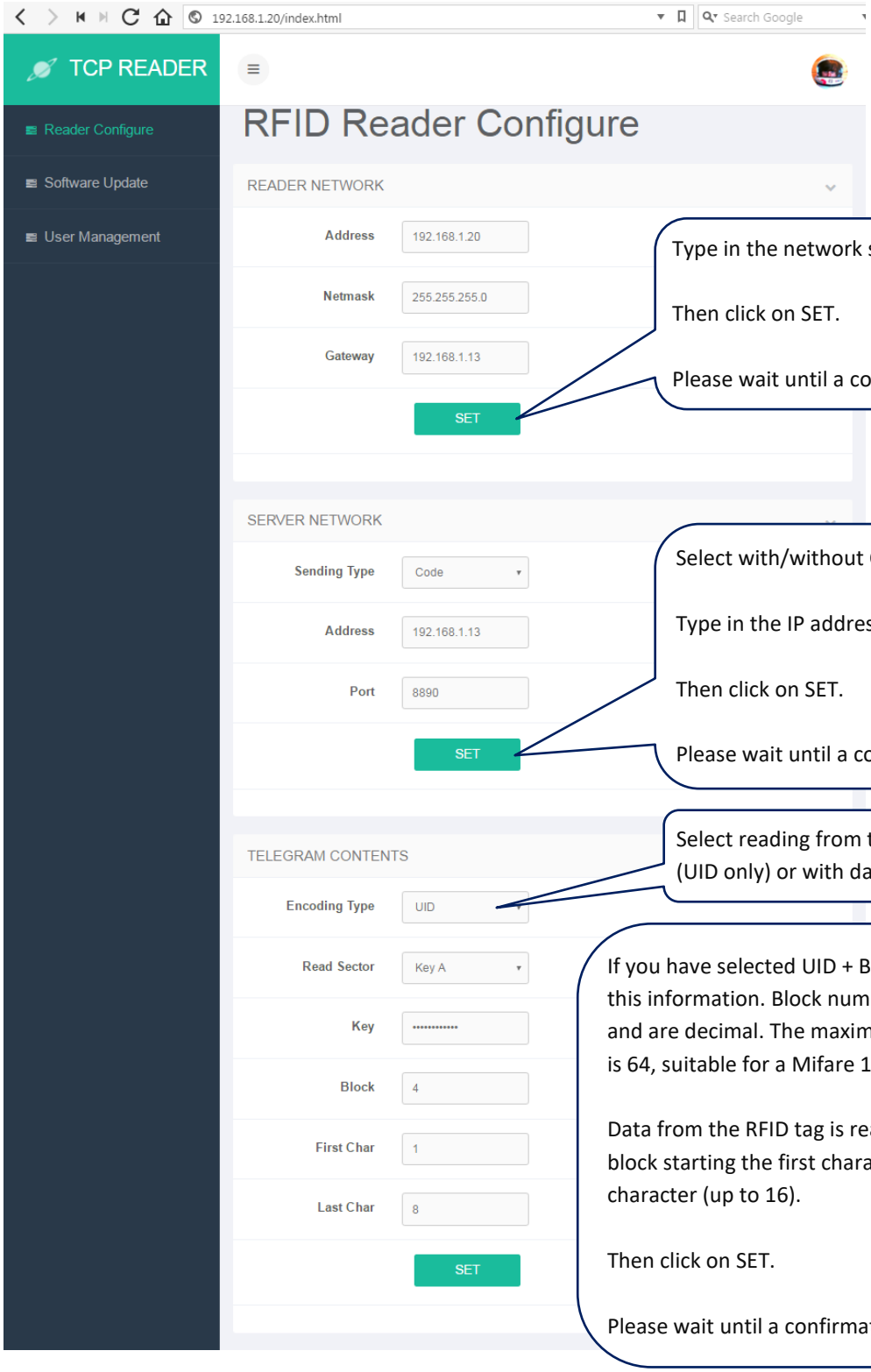
The next chapter describes how to change the IP and MAC address to suit your needs.

2 Initial Operation

Please set the MAC address *and* the IP address.

This is described in chapter 4.5.

2.1 Web Interface



Type in the network settings of the RFID device.

Then click on SET.

Please wait until a confirmation appears.

Select with/without CR at end of telegram.

Type in the IP address and port of the server.

Then click on SET.

Please wait until a confirmation appears.

Select reading from the RFID tag without (UID only) or with data (UID + BLOCK).

If you have selected UID + BLOCK, then specify this information. Block numbers start from “0” and are decimal. The maximum block number is 64, suitable for a Mifare 1 k tag type.

Data from the RFID tag is read in the specified block starting the first character until the last character (up to 16).

Then click on SET.

Please wait until a confirmation appears.

Factory default access name: smart
Factory default access password: 123456

Hint: If you open http://192.168.1.20/index.html directly, you don’t have to authenticate.

3 Function Description

All data is ASCII encoded.

Commands are received only on port 10001.

3.1 RFID Function

Read Mifare UID and send it to another Ethernet device. OR
Read Mifare UID and send it + CR to another Ethernet device.

Additional: Read a memory block from a start address (first char) to a stop address (last char) and send it to another Ethernet device. The telegram can contain these configurable data information:

- UID
- UID + CR
- UID + BLOCK_DATA
- UID + BLOCK_DATA + CR

3.2 Set Outputs

Send a command string as plain contents of an IP package to the device.
The command sent must be composed of 9 or 16 characters:

LRRRBBB or
LRRRBBBLLLTTT

The data fields in Detail

RRR	Relay activation time (steps of 1s, binary value)
BBB	Buzzer activation time (steps of 1s, binary value)
LLL	RGB colour of LED
TTT	LED activation time (steps of 1s, binary value)

LED Colour Coding

000	OFF
001	blue
010	green
011	cyan
100	red
101	violet
110	yellow
111	white

Examples

L111001

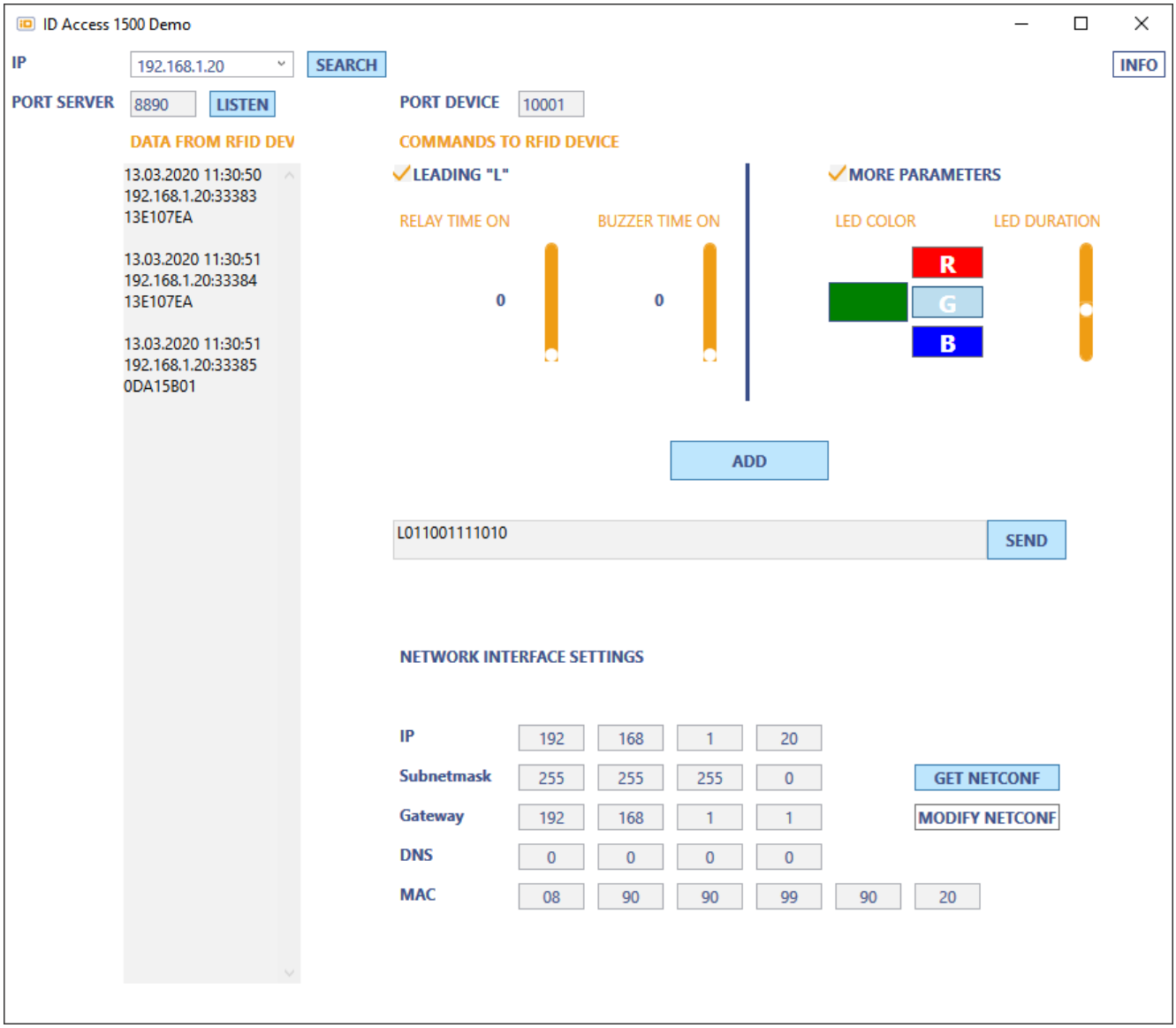
- ⇨ Activate relay for 7 s (0b111)
- ⇨ Activate buzzer for 1 s (0b001)

L101001010011

- ⇨ Activate relay for 5 s (0b101)
- ⇨ Activate buzzer for 1 s (0b001)
- ⇨ Let LED light green for 3 (0b011)

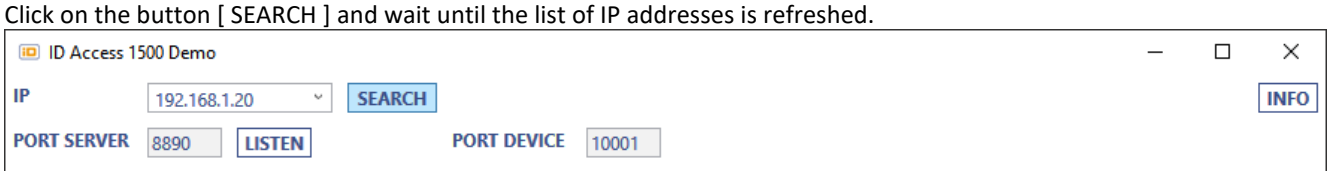
4 Test Operation and Configuration

4.1 Software Screen Overview



4.2 Search The Device

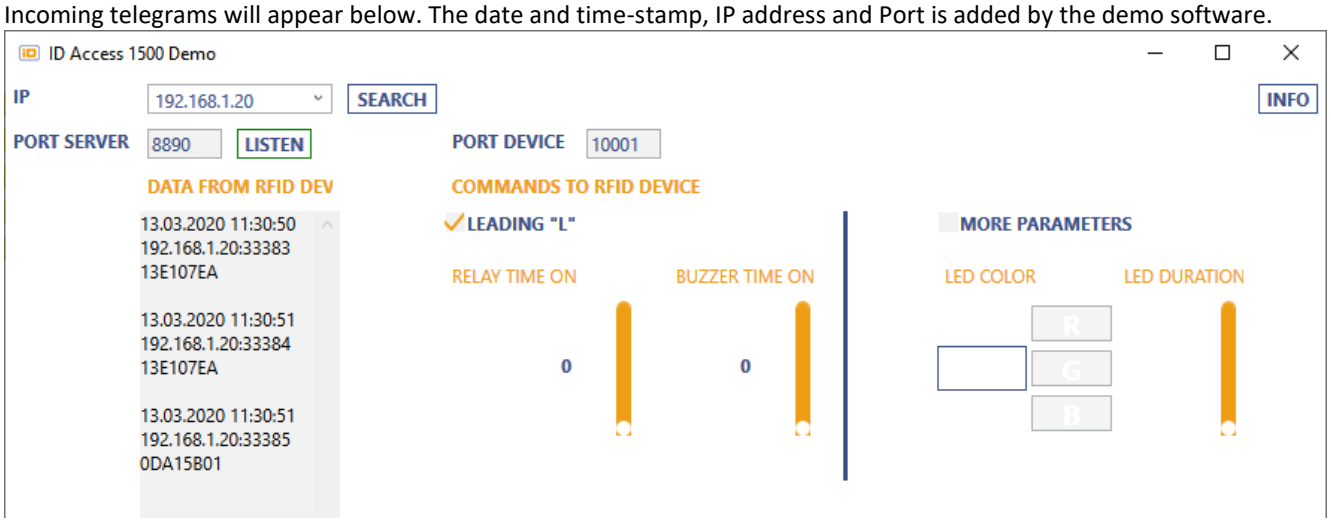
Click on the button [SEARCH] and wait until the list of IP addresses is refreshed.



Now select the desired device from the list:

Finally click on the button [LISTEN].

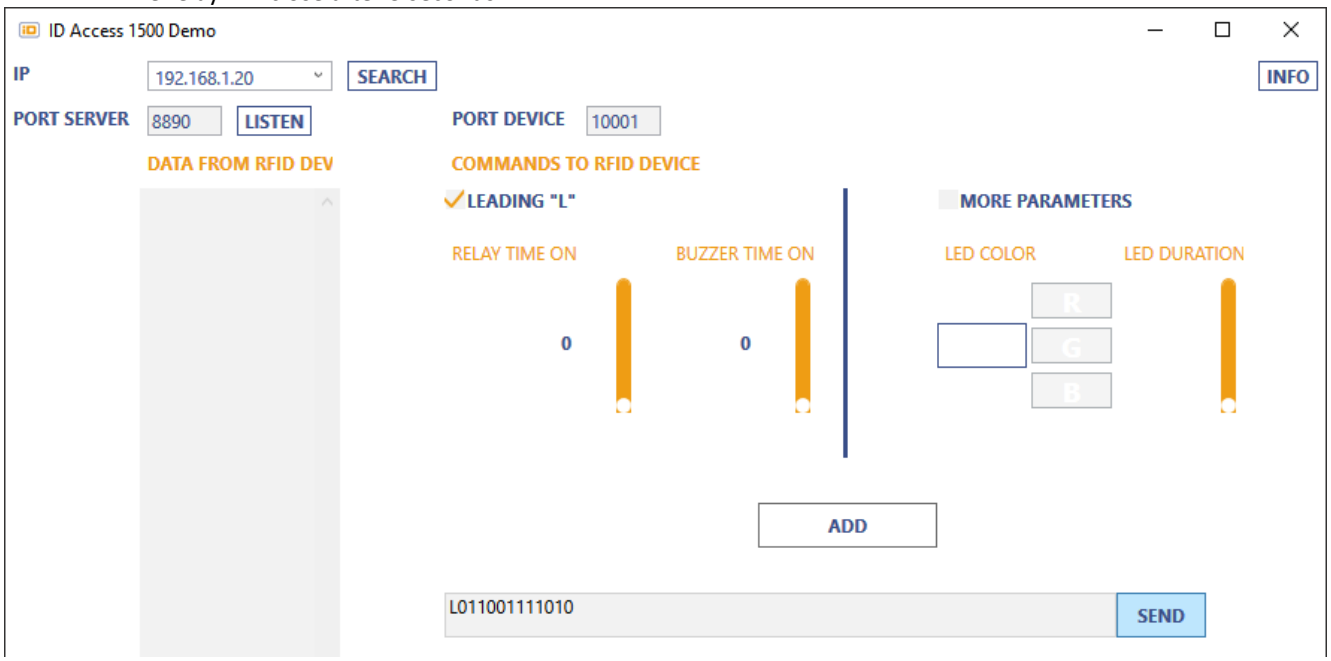
The button [LISTEN] changes the border colour to green. On a second click
Incoming telegrams will appear below. The date and time-stamp, IP address and Port is added by the demo software.



4.3 Send Standard Test Command

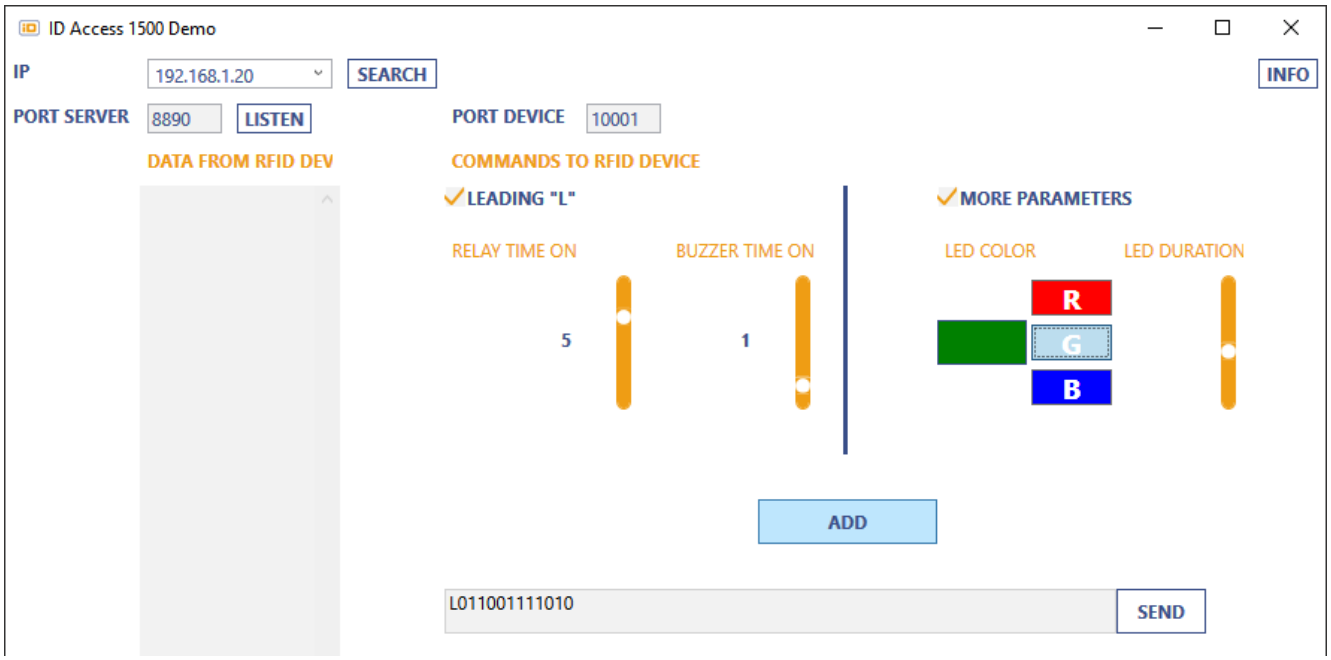
The demo software starts with a preconfigured test command. Click on the button [SEND] to transfer it to your RFID device.
The standard test command shall have this result:

- The buzzer signals for 1 sec
- The LEDs are all light up (white color) for 2 seconds
- The relay will close after 3 seconds

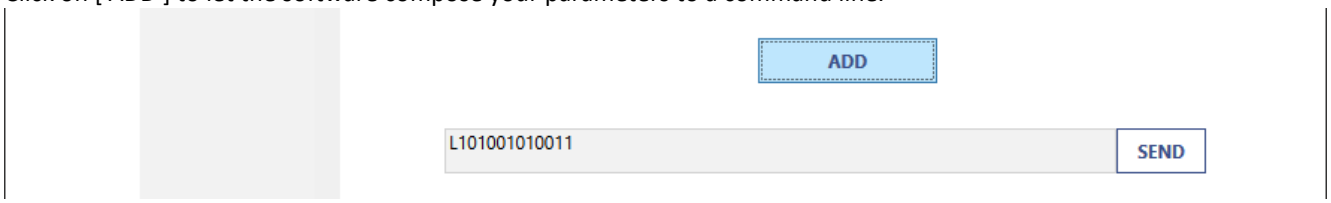


4.4 Compose Your Own Test Command

Use the sliders to change the duration of the relay and buzzer.
Checkmark “More parameters”, so you can set the LED colour and duration. Click on the buttons [R], [G] and [B] until your desired colour appears in the sample field left of the three colour buttons.



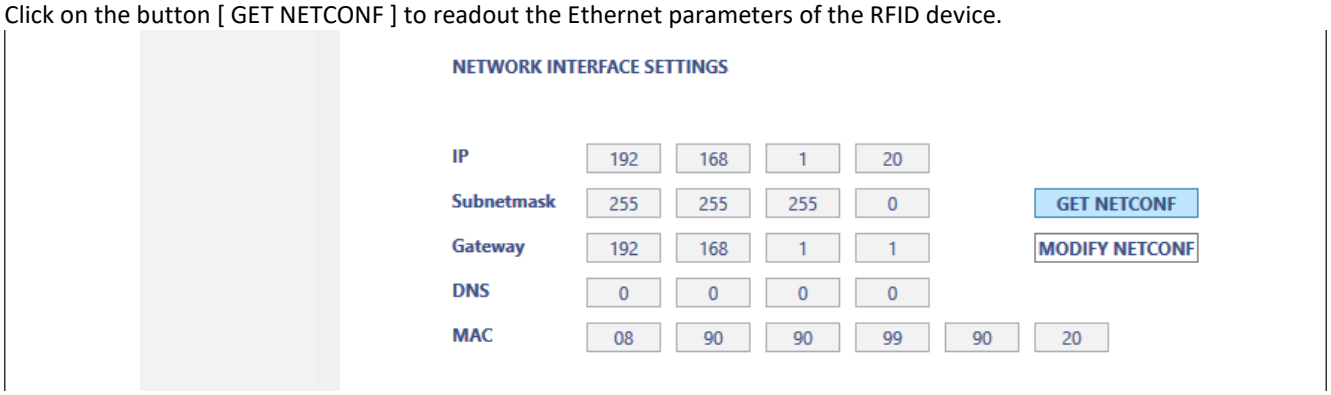
Click on [ADD] to let the software compose your parameters to a command line.



Now you can click on [SEND] to transfer your command to the RFID device.

4.5 Configure Ethernet Parameters

Click on the button [GET NETCONF] to readout the Ethernet parameters of the RFID device.



Change the settings to your desired values. Then program these into the RFID device with [MODIFY NETCONF].

Important Note

Each device can have the same MAC address on delivery. Every device in your network must have a unique MAC address. Before connecting it your network, check that the desired MAC address has been set. A device with the wrong settings may impede the functioning of your network.

5 Revision History

2017-04-04	0.1	Initial release.
2017-05-11	0.2	Value range of timing changed to 000…111 (app. up to 1.5 sec)
2017-05-12	0.3	Web interface access code added.
2017-05-26	0.4	Output Commands reworked.
2017-08-14	0.5	Output Commands updated, timing is now 4 digits
2017-09-21	0.6	Output Commands reworked.
2017-10-13	0.7	Output Commands reworked, FW V3.1
2018-03-01	0.8	Photos of real device, tiny text changes, test operation added
2018-08-02	0.9	Configure MAC address added.
2019-02-19	1.0	Warning to set the MAC address added
2010-10-08	1.1	Dimensional Drawings added
2020-03-13	2.0	New Demo and Configuration Software added, Technical Data Added
2020-07-16	2.1	Next complete version of demo software updated, old version removed. New hardware with jumper to select supply added.

6 Technical Specifications

Mechanical Specifications	
Dimensions	110 × 56 × 18 mm (without cabling, without housing)
Weight	6 g
PCB Material	FR4, blue

Electrical Specifications			
Power Supply	12 Vdc (±5 % regulated) or PoE		
Power Consumption	< 180 mA (RFID active, relay ON)		
Operating Frequency	13.56 MHz		
Antenna	Internal		
Interfaces	Ethernet TCP/IP		
Output	Relay:	Max. switching power:	30W/37.5VA
		Max. switching voltage:	220Vdc/250Vac
		Max. switching current:	1A
		Max. carrying current:	1A
		Initial contact resistance:	Maximum 100 mΩ (initial)
		Contact material:	Silver alloy with gold overlay

Environmental Conditions	
Operating Temperature	-20 °C … +80 °C
Storage Temperature	-40 °C … +85 °C
Humidity	up to 95 %, non condensing
MTBF	200‘000 h

Supported Standards / Tags	
ISO 14443 A and compatible	ISO 14443 A (NXP MIFARE Ultralight® / Ultralight® C, MIFARE® Classic Mini/1K/4K)

Environmental Conditions	
Operating Temperature	-10 °C … +70 °C
Storage Temperature	-20 °C … +80 °C
Humidity	up to 95 %, non condensing
MTBF	200‘000 h

Applicable Standards	
EMC	EN 301489-1:2012-04 (v1.9.21) EN 301489-3:2013-12 (V1.6.1)
Radio Regulation	EN 300330-1:2015-08 (V1.8.1) EN 300330-2:2015-08 (V1.6.1)
Safety	EN 60950-1:2014-08 EN 62369-1:2010-03 EN 50364:2010-11
RoHS	EC Guideline 2011/65/EU and amendment 2015/863 EN 50581:2012 (valid till 2024-07-07) EN 63000:2018
REACH	EU Guideline 1907/2006, updated by 2018/2005/EU