

# ModBus Commander

User Manual

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Honeywell HPS

# Honeywell

THE POWER OF **CONNECTED**

## 1 Synopsis

Example: `mbc -u 2`

Options:

<code>--help</code>	Show <b>help</b>	[boolean]
<code>--version</code>	Show version number	[boolean]
<code>--server, -s</code>	server IP address	[default: "localhost"]
<code>--port, -p</code>	tcp port number of server	[default: 502]
<code>--dev, -d</code>	name of serial device	
<code>--baudrate, -b</code>	serial baudrate	[default: 9600]
<code>--unit-id, -u</code>	modbus server address (a.k.a, unit id)	[required]
<code>--file, -f</code>	run script from file	
<code>--gport, -g</code>	tcp port to access web gui	[default: 3000]

## 2 Run From Command Line

### 2.1 Connect to TCP

```
mbc -u 2 -s 192.168.0.100
```

By default, it connects to tcp port 502. The port can be changed by '-p'.

### 2.2 Connect to RS485

```
mbc -u 2 -d /dev/tty/USB0 -b 9600
```

### 2.3 Examples Of Commands

After the program started, it print a prompt. You can input ModBus command to execute. The following are some examples.

#### 2.3.1 Read holding registers

```
fc3 0 100
```

This read 100 holding registers starting from address 0. The out put is like below:

```
0000: 6f53 5be8 18c7 2a15 6835 9415 ead8 32b9 0117 a660 c39f e30f c964 57be ac8b 8a8
0010: 4245 cd57 6fb8 ea7b af1d 6faa 9de9 5cec 5258 510b 734d 2265 5122 c6ec 7965 6ef
0020: 9fd0 b05d 3abd 20bf 171c 819f b312 29e4 5350 5e97 571b b04a 8e36 f006 ddd2 8f7
0030: 2957 f67a f0d4 11bb 8208 a6e8 6e77 2015 f9ea a7d5 556d 3f9e 69a1 a41c ad75 083
0040: 055f 592b ecb4 f84b b07e 0d63 7b2c 2871 ad49 a440 495f 074d eec9 f250 29e1 ae0
0050: 876e 3f5d a750 b2a1 9059 73ef a4b9 324c c140 bdc8 a198 100f acdb 5c04 a6fd 6f6
0060: 8448 8b81 12cf 1e00
```

### 2.3.2 Write holding registers

```
fc6 102 0x1234
```

This write value 0x1234 to holding register 102.

### 2.3.3 Read coils

```
fc1 16 32
```

This read 32 coils values starting from address 16. The output is,

```
0000:          11110110 00010111 11011010 11100011
```

## 2.4 Commands list

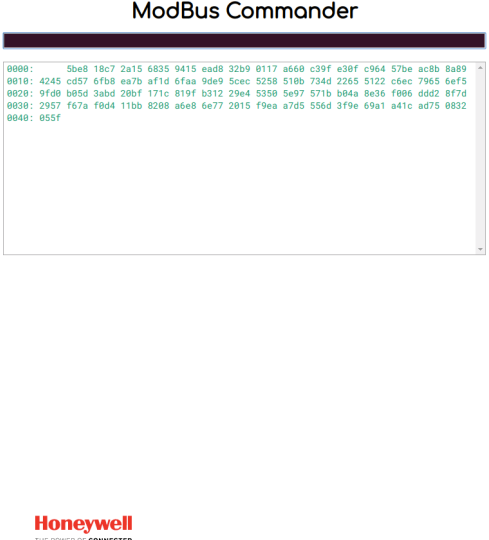
Below lists all the commands:

```
fc1    <start addr> <quantity of coils>
fc2    <start addr> <quantity of discrete inputs>
fc3    <start addr> <quantity of holding registers>
fc4    <start addr> <quantity of input registers>
fc5    <addr> <coil-value>
fc6    <addr> <holding-register-value>
fc15   <addr> <coil-value ...>
fc16   <addr> <holding-register-value ...>
echo   string
delay  msec
```

## 3 Run From WEB GUI

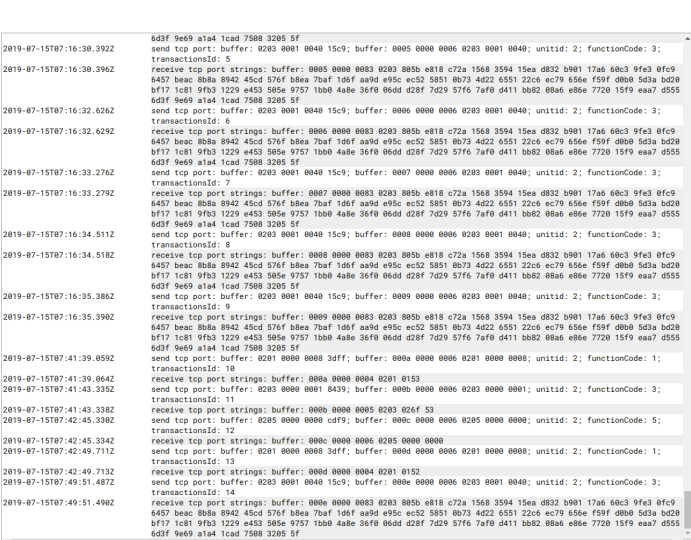
You can also use its WEB GUI by opening <http://localhost:3000>. It uses the same commands set with the command line mode as described. In WEB GUI mode, you can also watch program's trace information.

The WEB GUI only tested in Google Chrome.



**ModBus Commander**

0000: 5b08 18c7 2a15 6825 9415 ead8 32b9 0117 a648 c39f a30f c964 57be ac8b 8a89  
0010: 4245 cd57 6fb8 ea7b af1d 6faa 9de9 5ec5 510b 734d 2265 5122 c6ec 7965 eef5  
0020: 9fd0 b05d 3abd 20bf 171c 819f b312 29e4 5350 5e97 571b b04a 8e36 f006 ddd2 8f7d  
0030: 2957 f67a fd04 11bb 8208 a6e8 6e77 2015 f9ea a7d5 556d 3f9e 69a1 a41c ad75 8832  
0040: 055f



2019-07-15T07:16:30.392Z 6d3f 9e69 a1a4 1cad 7508 3205 5f  
send top port: buffer: 0203 0001 0040 15c9; buffer: 0005 0000 0006 0203 0001 0040; unitid: 2; functionCode: 3;  
transactionId: 5  
receive top port strings: buffer: 0005 0000 0003 0203 0005 e818 c72a 1568 3594 15ea d832 0b01 17a6 60c3 9fa3 0fc9  
6457 beac 8b8a 8942 45cd 576f b8ea 7ba7 1d6f a9d e95c ec52 5851 0b73 4d22 6551 22c6 ec79 650e f59f d808 5d3a bd20  
b177 1c81 9fb3 1229 e453 585e 9757 1b0b 4a8e 36f0 06dd d28f 7029 57f6 7a70 0411 b082 08a6 e80e 7720 15f9 eaa7 d555  
6d3f 9e69 a1a4 1cad 7508 3205 5f  
send top port: buffer: 0203 0001 0040 15c9; buffer: 0006 0000 0006 0203 0001 0040; unitid: 2; functionCode: 3;  
transactionId: 6  
receive top port strings: buffer: 0006 0000 0003 0203 0005 e818 c72a 1568 3594 15ea d832 0b01 17a6 60c3 9fa3 0fc9  
6457 beac 8b8a 8942 45cd 576f b8ea 7ba7 1d6f a9d e95c ec52 5851 0b73 4d22 6551 22c6 ec79 650e f59f d808 5d3a bd20  
b177 1c81 9fb3 1229 e453 585e 9757 1b0b 4a8e 36f0 06dd d28f 7029 57f6 7a70 0411 b082 08a6 e80e 7720 15f9 eaa7 d555  
6d3f 9e69 a1a4 1cad 7508 3205 5f  
send top port: buffer: 0203 0001 0040 15c9; buffer: 0007 0000 0006 0203 0001 0040; unitid: 2; functionCode: 3;  
transactionId: 7  
receive top port strings: buffer: 0007 0000 0003 0203 0005 e818 c72a 1568 3594 15ea d832 0b01 17a6 60c3 9fa3 0fc9  
6457 beac 8b8a 8942 45cd 576f b8ea 7ba7 1d6f a9d e95c ec52 5851 0b73 4d22 6551 22c6 ec79 650e f59f d808 5d3a bd20  
b177 1c81 9fb3 1229 e453 585e 9757 1b0b 4a8e 36f0 06dd d28f 7029 57f6 7a70 0411 b082 08a6 e80e 7720 15f9 eaa7 d555  
6d3f 9e69 a1a4 1cad 7508 3205 5f  
send top port: buffer: 0203 0001 0040 15c9; buffer: 0008 0000 0006 0203 0001 0040; unitid: 2; functionCode: 3;  
transactionId: 8  
receive top port strings: buffer: 0008 0000 0003 0203 0005 e818 c72a 1568 3594 15ea d832 0b01 17a6 60c3 9fa3 0fc9  
6457 beac 8b8a 8942 45cd 576f b8ea 7ba7 1d6f a9d e95c ec52 5851 0b73 4d22 6551 22c6 ec79 650e f59f d808 5d3a bd20  
b177 1c81 9fb3 1229 e453 585e 9757 1b0b 4a8e 36f0 06dd d28f 7029 57f6 7a70 0411 b082 08a6 e80e 7720 15f9 eaa7 d555  
6d3f 9e69 a1a4 1cad 7508 3205 5f  
send top port: buffer: 0203 0001 0040 15c9; buffer: 0009 0000 0006 0203 0001 0040; unitid: 2; functionCode: 3;  
transactionId: 9  
receive top port strings: buffer: 0009 0000 0003 0203 0005 e818 c72a 1568 3594 15ea d832 0b01 17a6 60c3 9fa3 0fc9  
6457 beac 8b8a 8942 45cd 576f b8ea 7ba7 1d6f a9d e95c ec52 5851 0b73 4d22 6551 22c6 ec79 650e f59f d808 5d3a bd20  
b177 1c81 9fb3 1229 e453 585e 9757 1b0b 4a8e 36f0 06dd d28f 7029 57f6 7a70 0411 b082 08a6 e80e 7720 15f9 eaa7 d555  
6d3f 9e69 a1a4 1cad 7508 3205 5f  
send top port: buffer: 0201 0000 0008 3aff; buffer: 000a 0000 0006 0201 0000 0008; unitid: 2; functionCode: 1;  
transactionId: 10  
receive top port strings: buffer: 000a 0000 0004 0201 0153  
send top port: buffer: 0203 0000 0001 0439; buffer: 000b 0000 0006 0203 0000 0001; unitid: 2; functionCode: 3;  
transactionId: 11  
receive top port strings: buffer: 000b 0000 0005 0203 026f 53  
send top port: buffer: 0205 0000 0000 cdf; buffer: 000c 0000 0006 0205 0000 0000; unitid: 2; functionCode: 5;  
transactionId: 12  
receive top port strings: buffer: 000c 0000 0006 0205 0000 0000  
send top port: buffer: 0201 0000 0008 3aff; buffer: 000d 0000 0006 0201 0000 0008; unitid: 2; functionCode: 1;  
transactionId: 13  
receive top port strings: buffer: 000d 0000 0004 0201 0152  
send top port: buffer: 0203 0001 0040 15c9; buffer: 000e 0000 0006 0203 0001 0040; unitid: 2; functionCode: 3;  
transactionId: 14  
receive top port strings: buffer: 000e 0000 0003 0203 0005 e818 c72a 1568 3594 15ea d832 0b01 17a6 60c3 9fa3 0fc9  
6457 beac 8b8a 8942 45cd 576f b8ea 7ba7 1d6f a9d e95c ec52 5851 0b73 4d22 6551 22c6 ec79 650e f59f d808 5d3a bd20  
b177 1c81 9fb3 1229 e453 585e 9757 1b0b 4a8e 36f0 06dd d28f 7029 57f6 7a70 0411 b082 08a6 e80e 7720 15f9 eaa7 d555  
6d3f 9e69 a1a4 1cad 7508 3205 5f

## 4 Command History

In either command line mode or WEB GUI mode, all executed commands are saved and can be always brought back to execute again by pressing Up key on the keyboard.

## 5 Scripting

With the `'-f'` option in the command mode, the program can load a command file and executes all the commands defined in the file one by one. Some special commands such as `echo` and `delay` could be useful when put in a command file.

## 6 Installation

You firstly need to install nodejs from <http://nodejs.org>, the current LTS version is 10.16.0.

Then you can unarchive the distributed archive file to any folder and run the below command inside the directory to get all the dependencies installed:

```
$ npm install
```

Now you can start the program inside the directory. On Linux:

```
$ ./bin/mbc [OPTIONS]
```

And on Windows:

```
c:\work\> src/mbc.js [OPTIONS]
```