MDB-RS232 Data Format Introduction

Download the “MDB Serial Com Test Tool” From website:
http://www.mdb-rs232.com/download/MDB-Serial-Tool.rar
if cann’t open this link ,then also can try: http://www.mdb2pc.com/download/MDB-Serial-Tool.rar

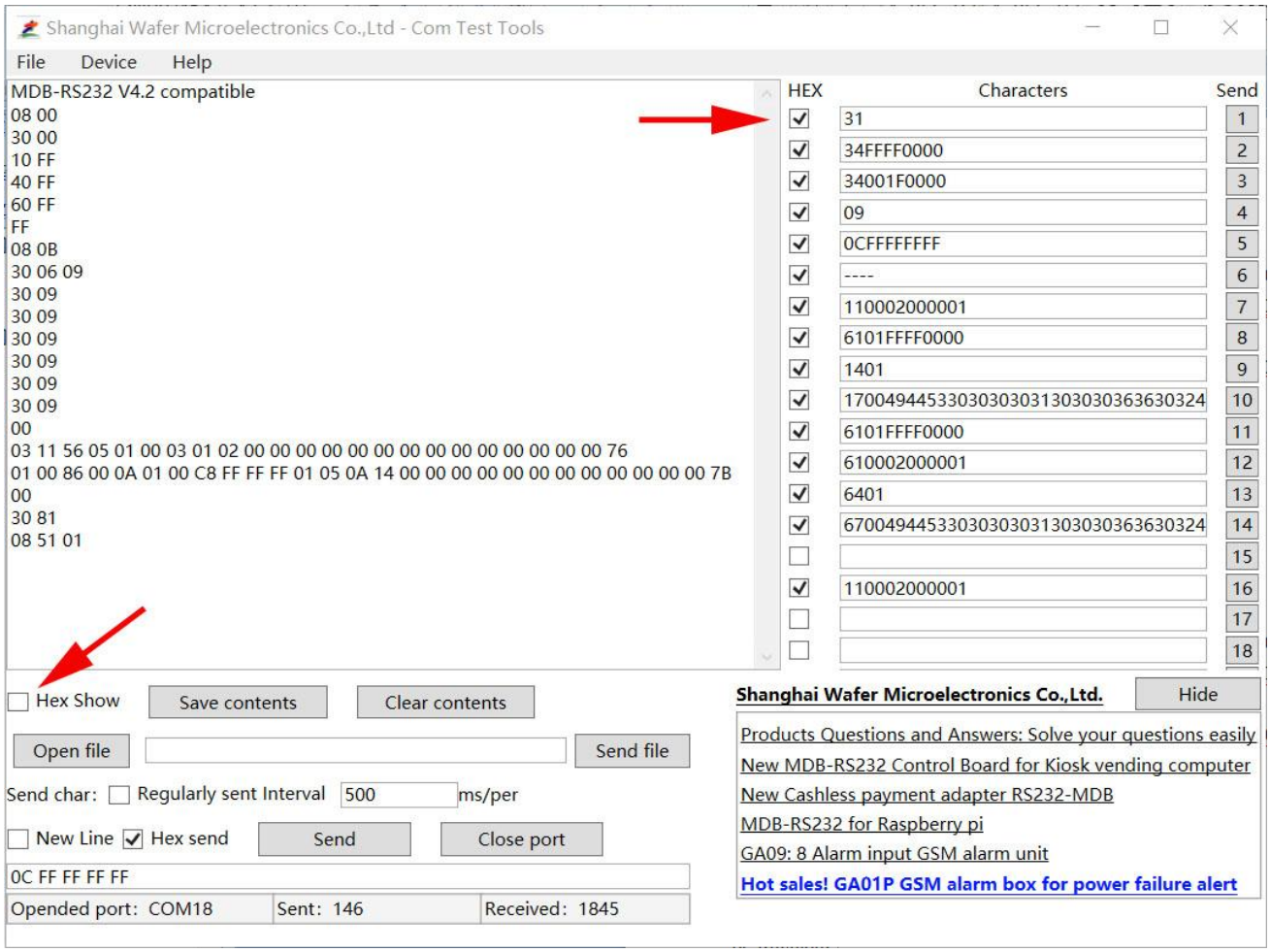
Communication format:

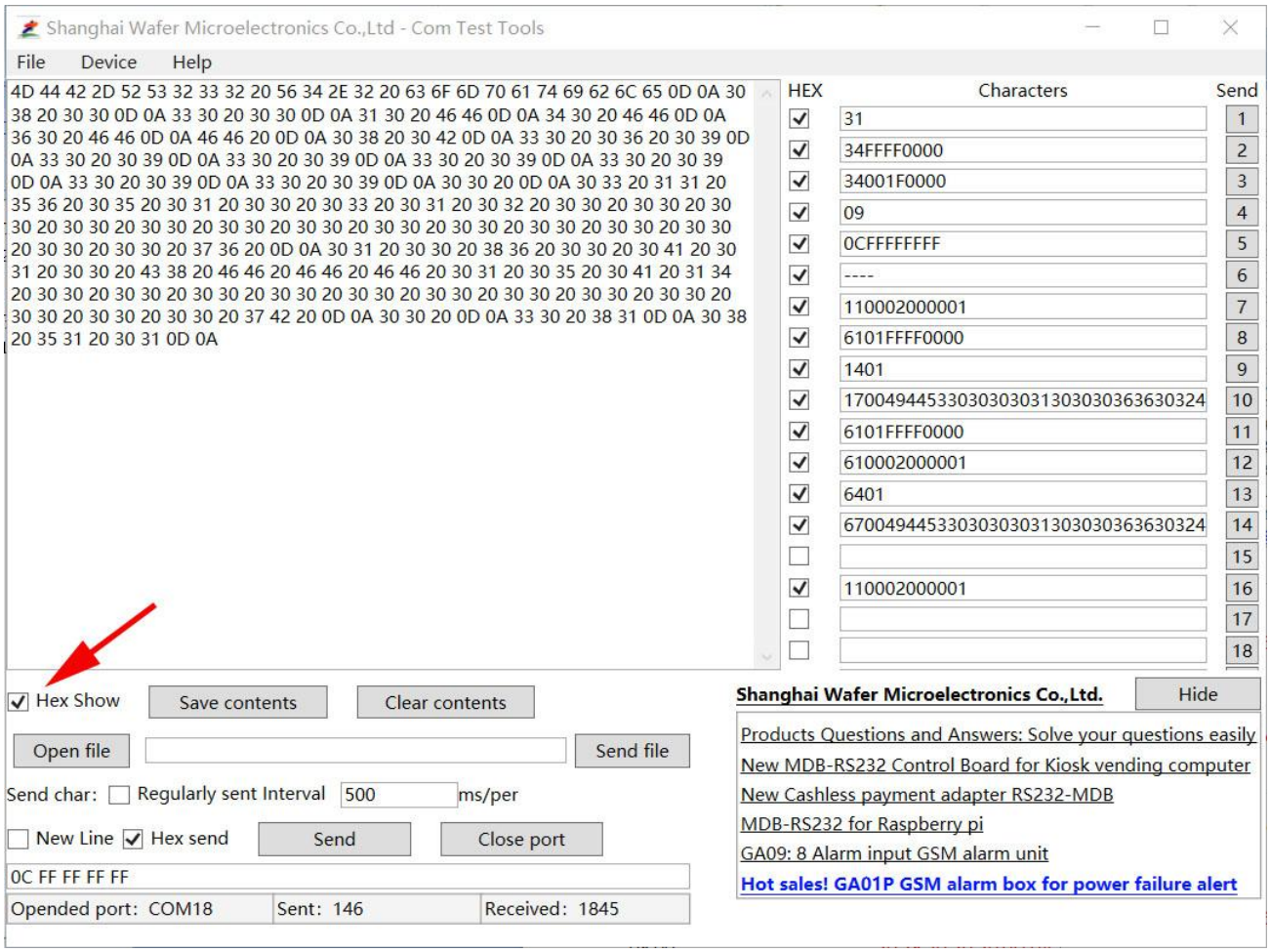
Baud rate: 9600 Start bit: 1
Data bits: 8 Parity: NO
Stop bit: 1
PC data Send: Hex
PC data Receive: ASCII

After connected the MDB bill acceptor and coin validator, and then start to power on the MDB-RS232 with **DC24V** Power module

1. Don't need to worry about which inside pin or outer ring of the plug is positive or negative. We have a conversion circuit inside the power connector.
2. The power supply **must be 24V**, and a **12V power supply cannot be used for testing**. The current of the power supply should preferably be greater than 3A)

After powered on, VMC board or Serial port test tool will receive a series of data:
(Just an example, the actual data may have some differences)





4D 44 42 2D 52 53 32 33 32 20 56 34 2E 32 20 63 6F 6D 70 61 74 69 62 6C 65 0D 0A 30 38 20 30 30 0D 0A 33 30 20 30 30 0D 0A 31 30 20 46 46 0D 0A 34 30 20 46 46 0D 0A 36 30 20 46 46 0D 0A 46 46 20 0D 0A 30 38 20 30 42 0D 0A 33 30 20 30 36 20 30 39 0D 0A 33 30 20 30 39 0D 0A 33 30 20 30 39 0D 0A 33 30 20 30 39 0D 0A 33 30 20 30 39 0D 0A 33 30 20 30 39 0D 0A 30 30 20 0D 0A 30 33 20 31 31 20 35 36 20 30 35 20 30 31 20 30 30 20 30 33 20 30 31 20 30 32 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 37 36 20 0D 0A 30 31 20 30 30 20 38 36 20 30 30 20 30 41 20 30 31 20 30 30 20 43 38 20 46 46 20 46 46 20 46 46 20 30 31 20 30 35 20 30 41 20 31 34 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 37 42 20 0D 0A 30 30 20 0D 0A 33 30 20 38 31 0D 0A 30 38 20 35 31 20 30 31 0D 0A

We need to convert these data into ASCII format, which can be directly and easily compared with the MDB protocol. If the serial port tool is used for testing, the Serial port tool will have an ASCII display mode, so that it is very easy to observe and understand the data format.

Device self-test and status report after power-on

MDB-RS232 V4.2 compatible	4D 44 42 2D 52 53 32 33 32 20 56 34 2E 32 20 63 6F 6D 70 61 74 69 62 6C 65 0D 0A
08 00	30 38 20 30 30 0D 0A
30 00	33 30 20 30 30 0D 0A
10 FF	31 30 20 46 46 0D 0A
40 FF	34 30 20 46 46 0D 0A
60 FF	36 30 20 46 46 0D 0A

FF	46 46 20 0D 0A
08 0B	30 38 20 30 42 0D 0A
30 06 09	30 36 20 30 39 0D 0A
30 09	33 30 20 30 39 0D 0A
30 09	33 30 20 30 39 0D 0A
30 09	33 30 20 30 39 0D 0A
30 09	33 30 20 30 39 0D 0A
30 09	33 30 20 30 39 0D 0A
30 09	33 30 20 30 39 0D 0A

The PC sends a command to disable, query the configuration, and the device will reply

PC Send:	0CFFFFFFFF
PC Receive: 00	30 30 20 0D 0A

PC Send: 09

PC Receive: 03 11 56 05 01 00 03 01 02 00 00 00 00 00 00 00 00 00 00 00 00 00 76

30 33 20 31 31 20 35 36 20 30 35 20 30 31 20 30 30 20 30 33 20 30 31 20 30 32 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 37 36 20 0D 0A

PC Send: 31

PC Receive: 01 00 86 00 0A 01 00 C8 FF FF FF 01 05 0A 14 00 00 00 00 00 00 00 00 00 00 00 00 7B

30 31 20 30 30 20 38 36 20 30 30 20 30 41 20 30 31 20 30 30 20 43 38 20 46 46 20 46 46 20 46 46 20 30 31 20 30 35 20 30 41 20 31 34 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 30 30 20 37 42 20 0D 0A

PC Send: 34FFFF0000

PC Receive: 00 30 30 20 0D 0A

If a payment is received, the device automatically reports the data to the PC.

When Bill acceptor received a Bill currency payment:

30 81 33 30 20 38 31 0D 0A

When Coin validator received a Coin payment:

08 51 01 30 38 20 35 31 20 30 31 0D 0A

From the above description, we can see that in order to better understand the data, we need to pay attention to a few points:

1. VMC don't need to poll each MDB device. This is done by the MDB-RS232
2. Any data string to PC ends with 0D 0A
2. The data sent from PC is in the HEX format, Corresponding to the MDB protocol
3. The PC received data is converted according to the ASCII format and then corresponds to the MDB protocol , For example, the hex data corresponding to ASCII 08 is 30 38
4. The data or status actively reported by the MDB device will be prefixed with the device ID: 08, 30, 10, 60 to indicate that the data comes from the coin acceptor, the bill acceptor, the cashless device 01 or the cashless device 02
4. The PC sends the query command. Because it is a response method, the data returned by the device is not prefixed with 08, 30, 10, 60
5. About the Parity byte:

Status automatically reported by MDB devices, Credit data, without parity bytes 08 51 01

The single-byte 00 returned by the MDB device does not require a check byte 00

When the MDB device replies to the PC command, if it is multi-byte data, the last byte is the sum check byte 03 11 56 05 01 00 03 01 02 00 00 00 00 00 00 00 00 00 00 00 00 00 00 76

(the above ASCII data needs to be summed in hexadecimal format)

03+11+56+05+01+00+03+01+02+00+00+00+00+00+00+00+00+00+00+00+00+00+00 = 76

Customer service:

Both pre-sales and after-sales can receive help and advice through our online skype technical support.

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