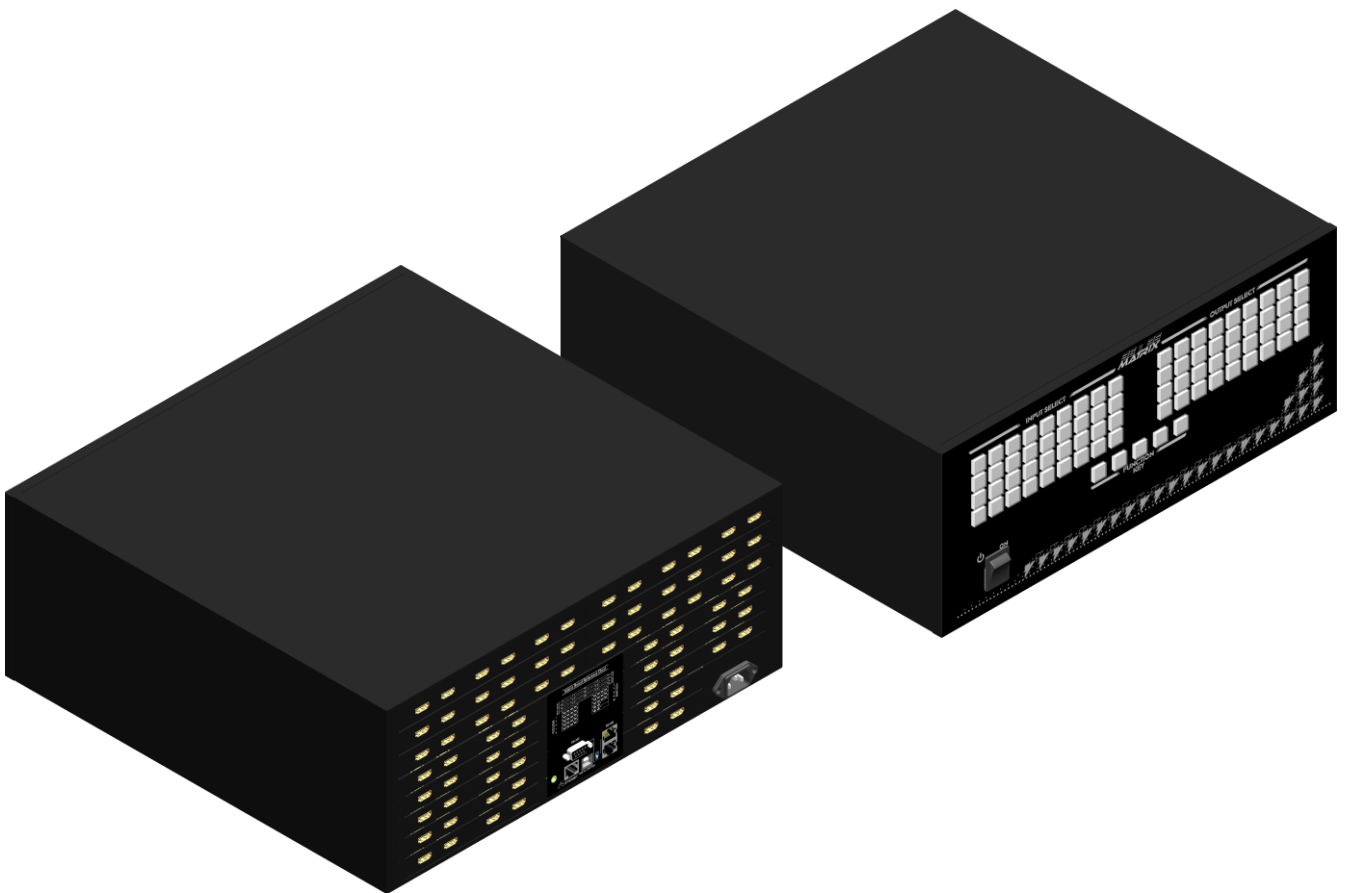




# 36x36 HDMI Matrix Switcher with Full 3D Support



P/N: AV-GM07N3-S1

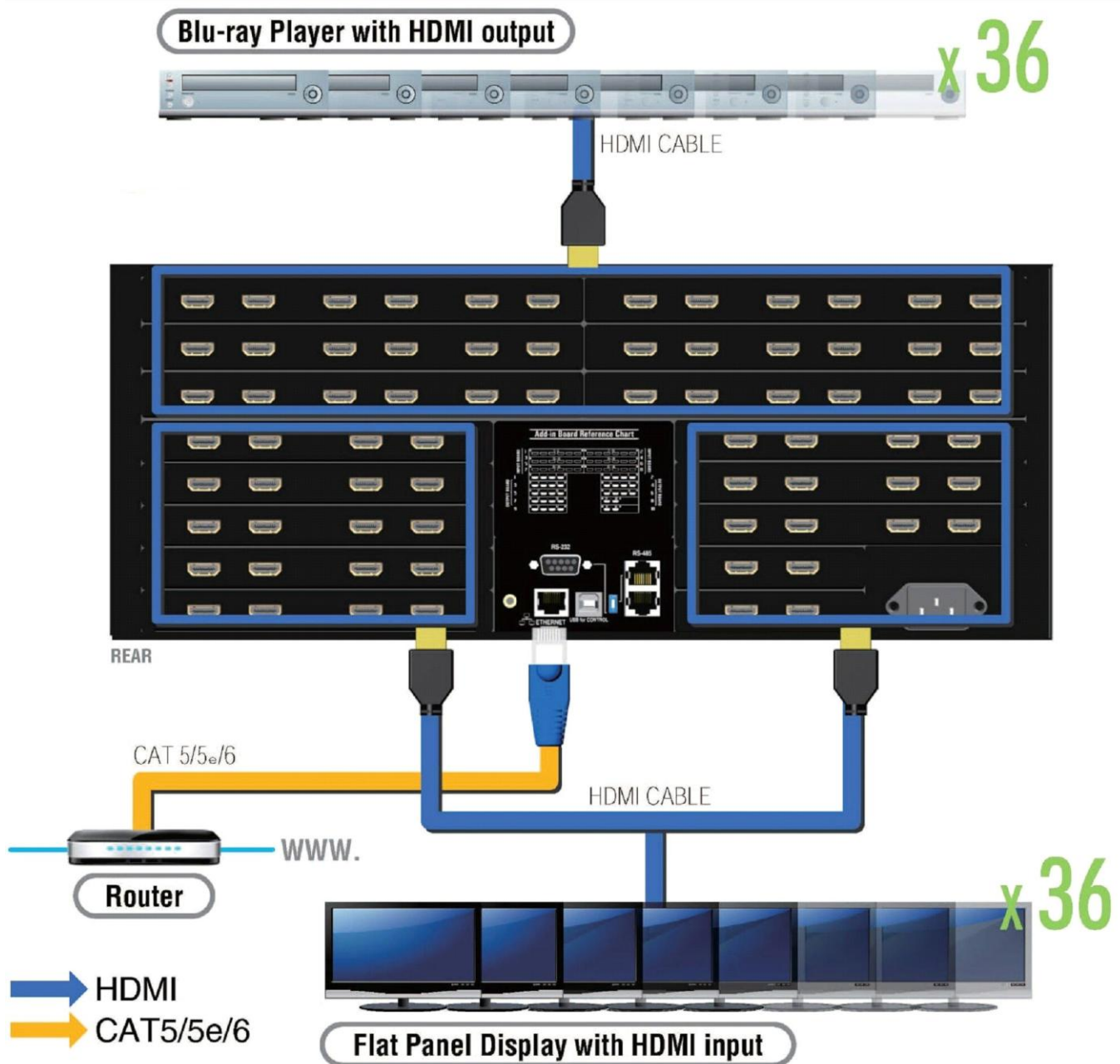


## Safety and Notice

The AV-GM07N3-S1 36x36 HDMI Matrix Switcher with Full 3D Support has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the AV-GM07N3-S1 should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

The 36x36 HDMI Matrix Switcher with Full 3D Support HDMI Matrix provides the most flexible and cost effective solution in the market to route high definition video sources plus multi-channel (up to 7.1 channel) digital audio from any of the four HDMI sources to the any four displays at the same time. This solution is well suited for use in home theater, conference room presentation systems, or other similar setting or application.



# Features

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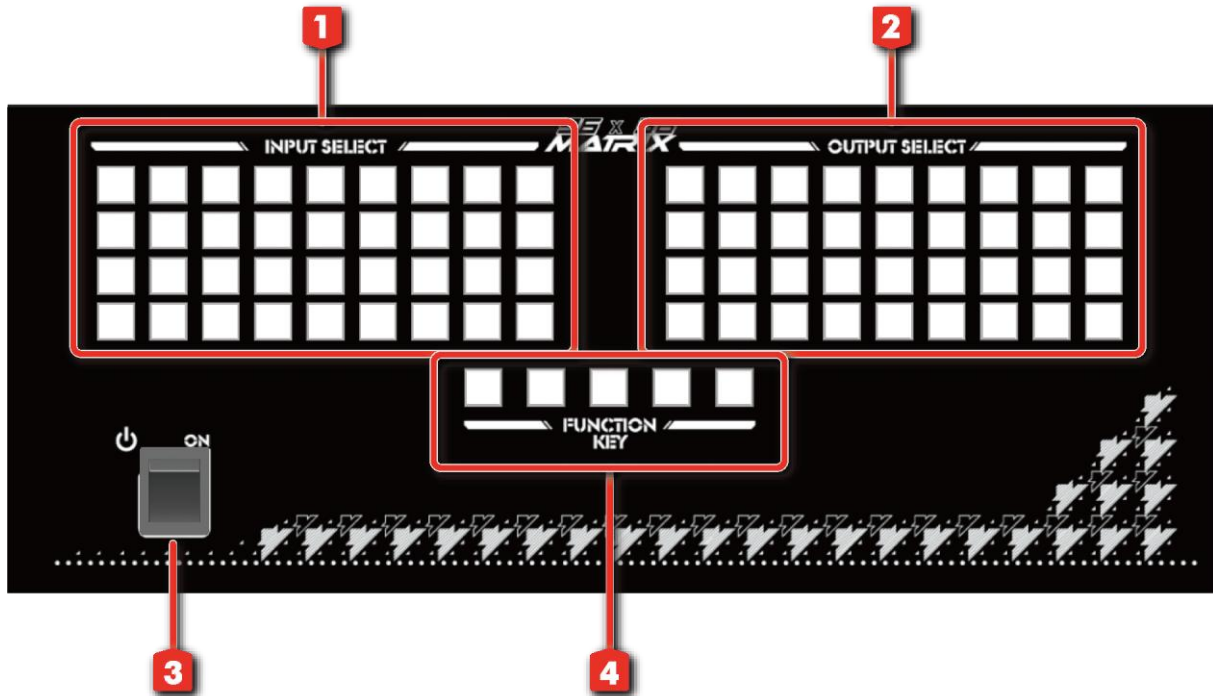
- Support HDMI Deep Color & full 3D
- HDCP compliant.
- Allows any source to be displayed on multiple displays at the same time.
- Allows any HDMI display to view any HDMI source at any time.
- Supports 7.1 channel digital audio.
- Supports default HDMI EDID and learns the EDID of displays.
- The matrix master can switch every output channels to any HDMI inputs by push-in button, Ethernet or RS-232 control.
- Easy installation with rack-mounting and wall-mounting designs for master and receiver respectively.
- Fast channel switch response time.

# Specifications & Package Contents

Model Name		AV-GM07N3-S1
<b>Technical</b>		
Role of usage	True 36x36 matrix	
HDMI compliance	HDMI Deep Color & full 3D	
HDCP compliance	Yes	
Video bandwidth	Single-link 225MHz [6.75Gbps]	
Video support	480i / 480p / 720p / 1080i / 1080p60 12-bit color	
Audio support	Surround sound (up to 7.1ch) or stereo digital audio	
ESD protection	[1] Human body model — ±19kV [air-gap discharge] & ±12kV [contact discharge] [2] Core chipset — ±8kV	
PCB stack-up	multi-layer board [impedance control — differential 100Ω; single 50Ω]	
Input	36x HDMI + 1x RS-232 + 2x RS485 + 1x LAN + 1x USB + 1x IR	
Output	36x HDMI	
HDMI Input selection	Push button / RS-232 / LAN	
HDMI connector	Type A [19-pin female]	
RS-232 connector	DE-9 [9-pin D-sub female]	
DIP switch	Use for RS232 interface	
<b>Mechanical</b>		
Housing	Metal enclosure	
Dimensions (L x W x H)	Model	440 x 424 x 175mm [1'5" x 1'5" x 7"]
	Package	572 x 607 x 330mm [1'11" x 2' x 1'1"]
Weight	Model	15kg [33 lbs]
	Package	16kg [35 lbs]
Fixedness	1U rack - mount with ears and wall hanging holes	
Power supply	AC Power 100-240V	
Power consumption	116 Watts [max]	
Operation temperature	0~40°C [32~104°F]	
Storage temperature	-20~60°C [-4~140°F]	
Relative humidity	20~90% RH [no condensation]	
<b>Package Contents</b>	1x AV-GM07N3-S1 2x Rack-mounting ears	1x User Manual 1x UL AC power cord

## Front Panel

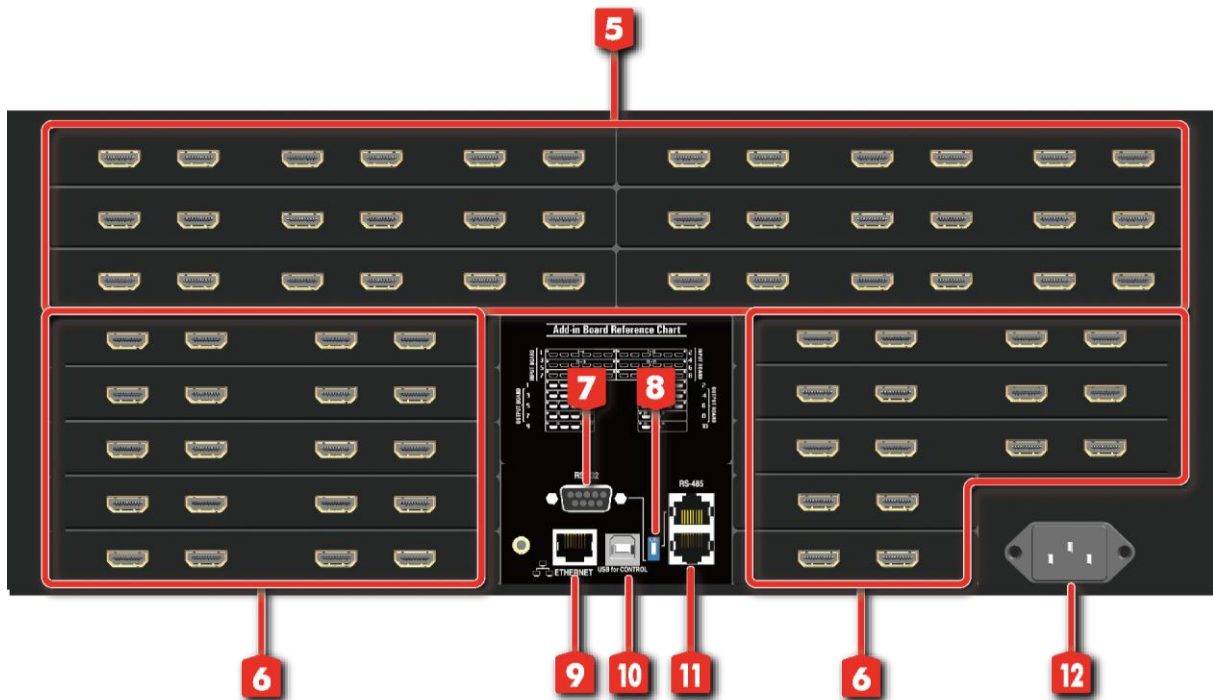
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1. Input selection group: Input channel selection.
2. Output selection group: Output channel selection.
3. Power: Power on/off switcher.
4. Function Keys: Input/Output mode select & Save/Load channel status & EDID setting buttons.

# Rear Panel

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- 5. HDMI Input: HDMI input port.
- 6. HDMI Output: HDMI output port.
- 7. RS-232: Serial control.
- 8. Dip switch: RS-232/485 control switch.
- 9. RJ-45: LAN(Ethernet) control.
- 10. USB: USB Type-B (RS232 interface) control.
- 11. RS-485: Far distance RS232 control interface.
  - RJ45: pin1 – 485 TX-B
  - pin2 – 485 TX-A
  - pin3 ~ pin6 – GND
  - pin7 – 485 RX-A
  - pin8 – 485 RX-B
- 12. Power: Connect power core.

**Note :**

RS232 Control: The USB, RS232 and RS485 ports share one UART port.

The priority of USB, RS232, and RS485 is as below:

USB port > RS232(RS485)

For example, if you connect USB line from control source, the RS232(RS485) port will be useless. This also means that if you want to use RS232 or RS485 port to control device, the USB port can't be connected.

However, RS232 or RS485 can be selected by the DIP switch.

➡ DIP switch OFF(Down) : RS232.

➡ DIP switch ON(Up) : RS485.

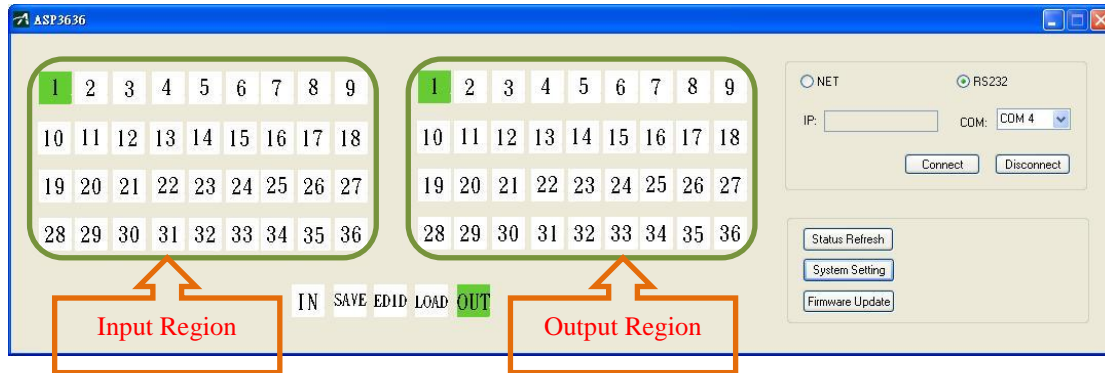
Besides, if you want to control from USB port, please install the driver into your control source like PC.



## HDMI 36 x 36 Matrix Button Examples

Button Control Path: 1 – Host Button

2 – Software



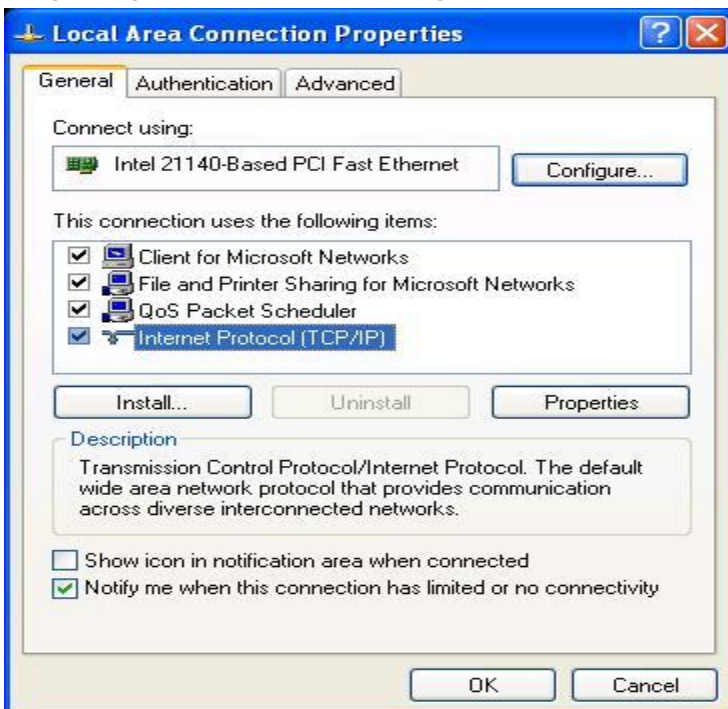
### #Firmware Update Module

Update .hex file

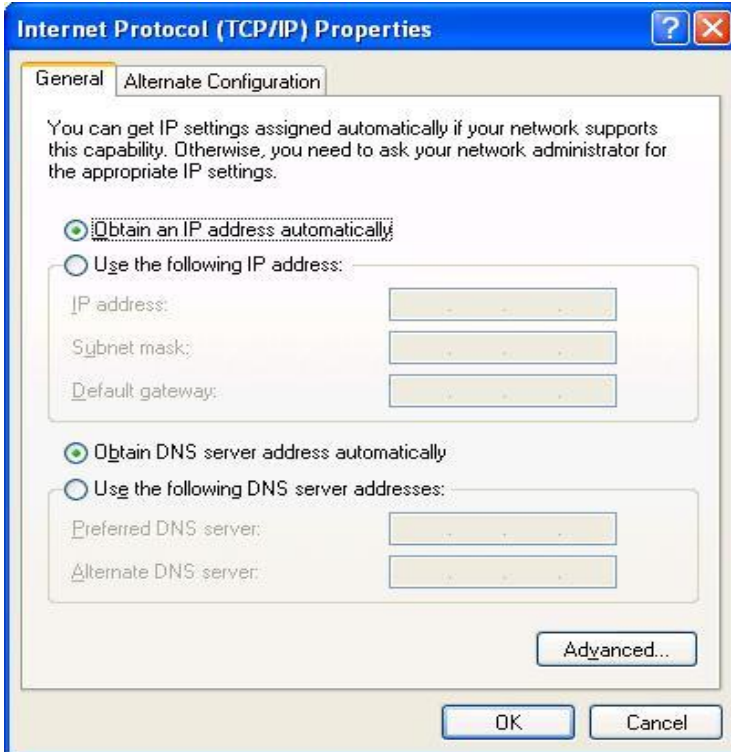
Step1: The 36x36 matrix maintain power off status.

Step2: Connect the 36x36 matrix and the PC with Ethernet interface.

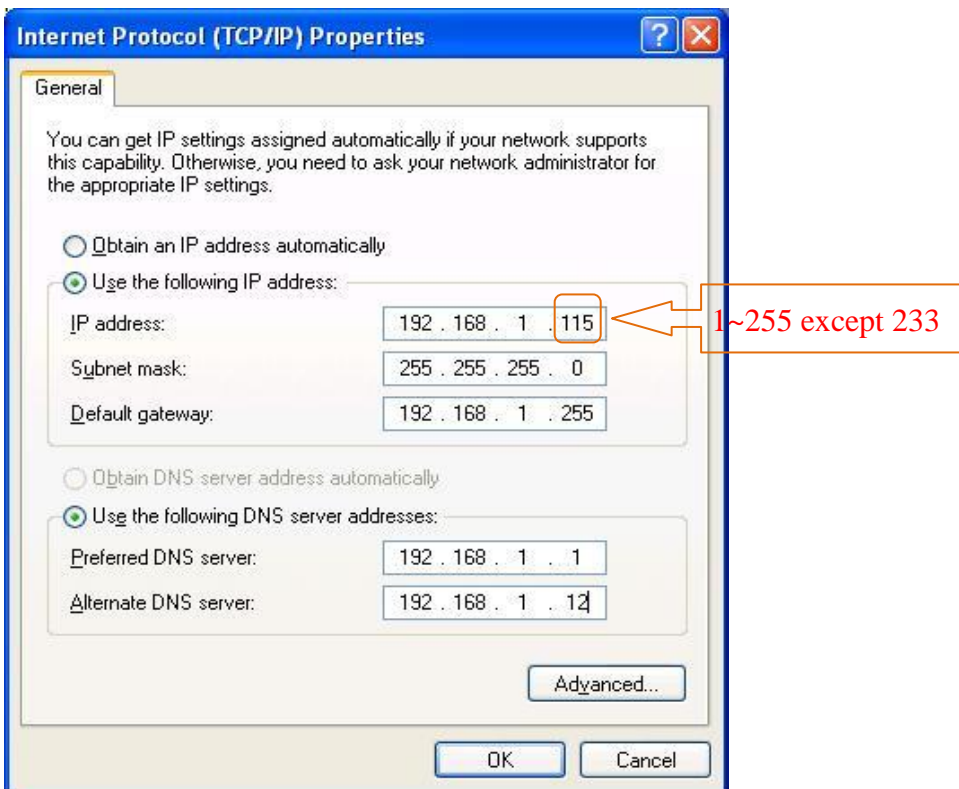
Step3: Open PC TCP/IP setting



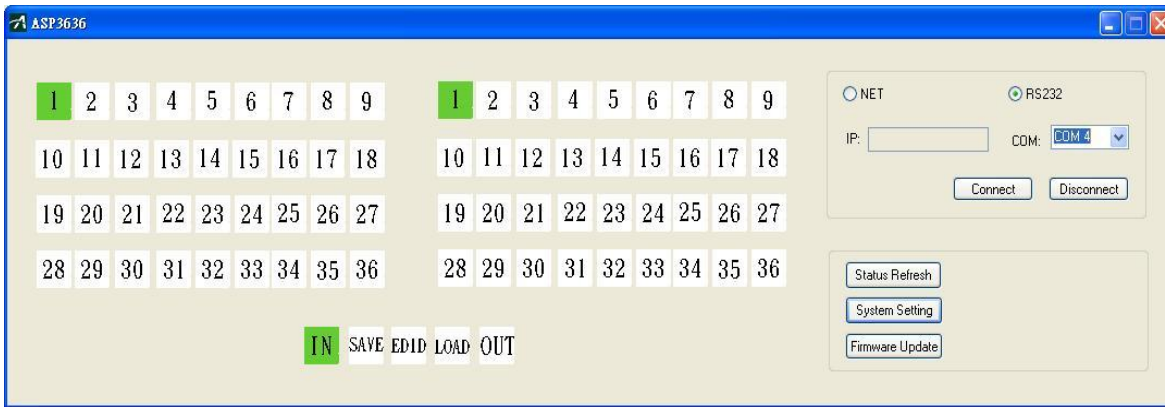
If your PC network domain is 192.168.1.XXX(XXX is from 1~255, 233 is not included), you can set TCP/IP like this.



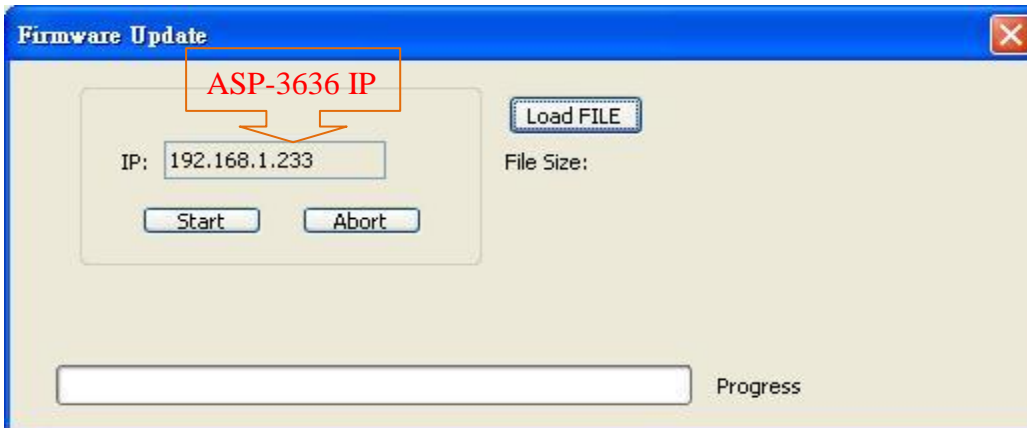
If your PC network domain is not 192.168.1.XXX, please **“directly”** connect your PC and ASP-3636 with a LAN cable and set IP like this.



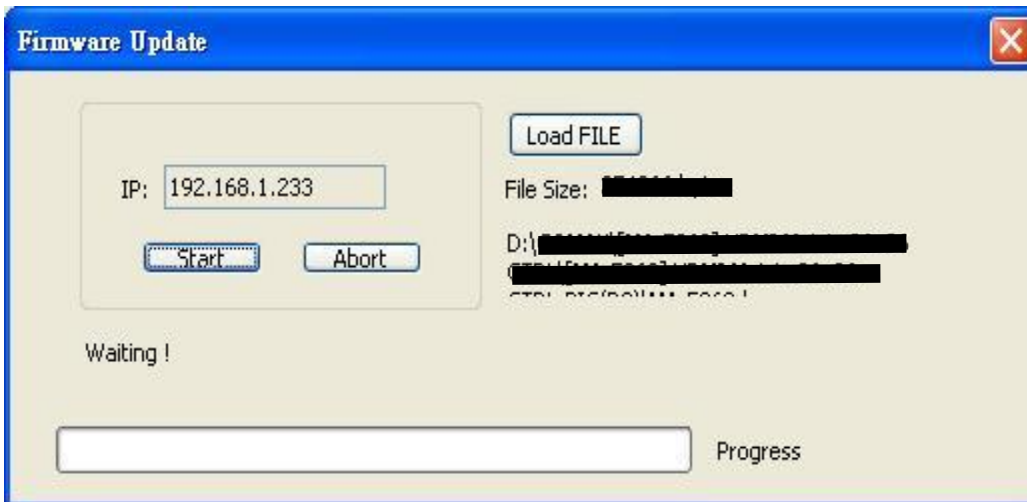
Step4: Open the software.



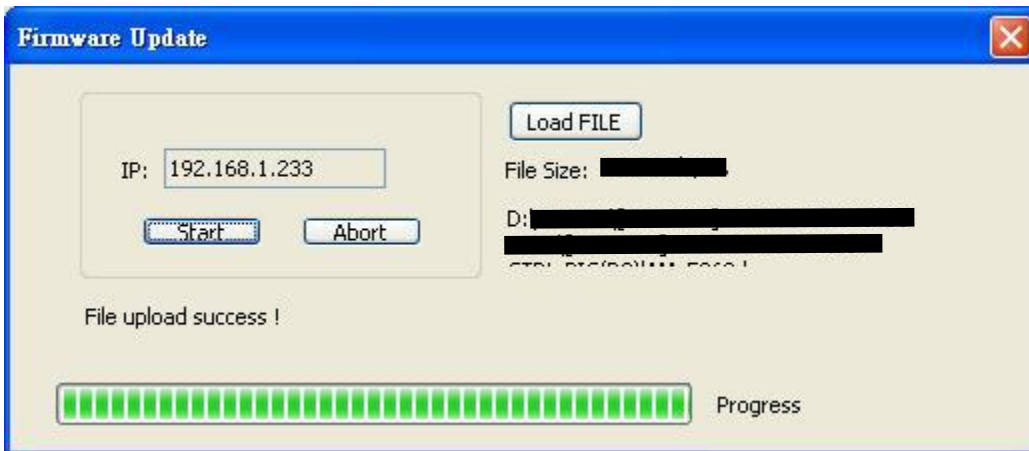
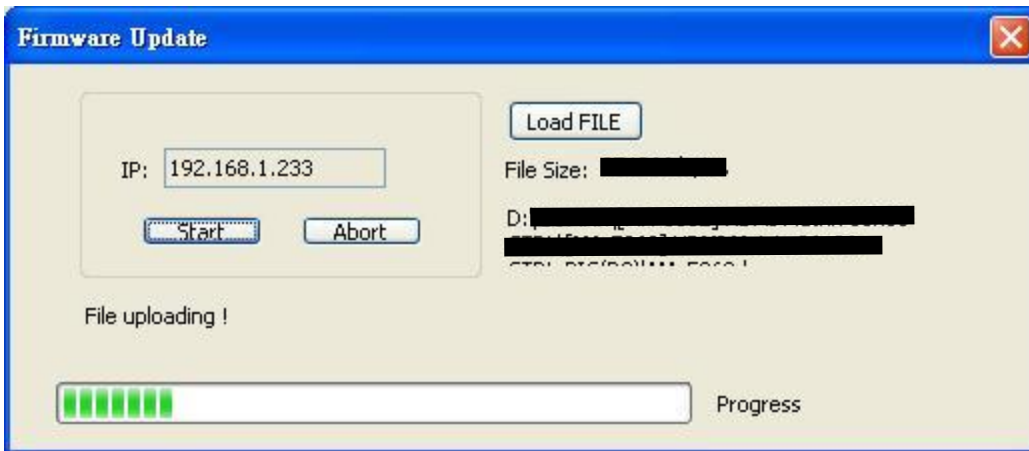
Step5: Press Firmware Update button.



Step6: Load .hex file and press start.



## Step7: Power on the AV-GM07N3-S1



Step8: Please reset the 36x36 matrix when firmware update finished.

\*\*1. The 36x36 matrix .hex firmware update IP is fixed. 192.168.1.233.

Please confirm the PC is the same network domain as the 36x36 matrix.

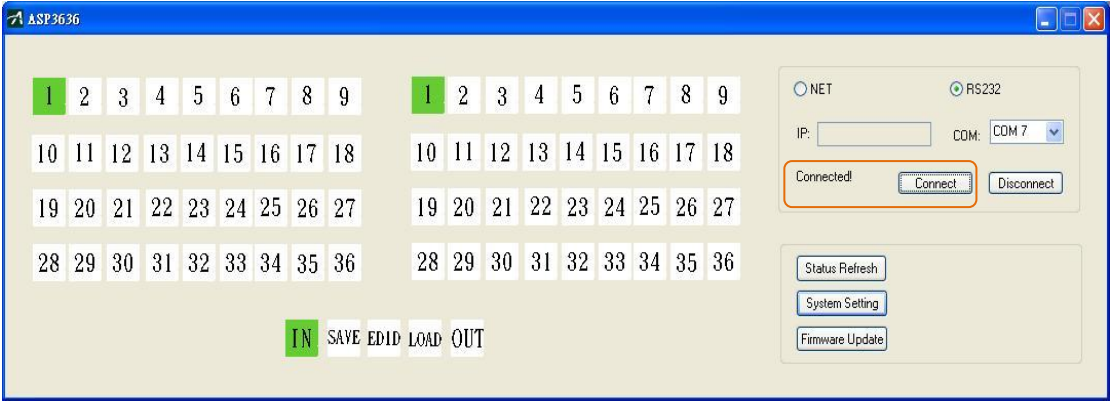
2. Sometimes the .hex firmware update can't start or interrupt in the processing, please retry again.

## Update .bin file

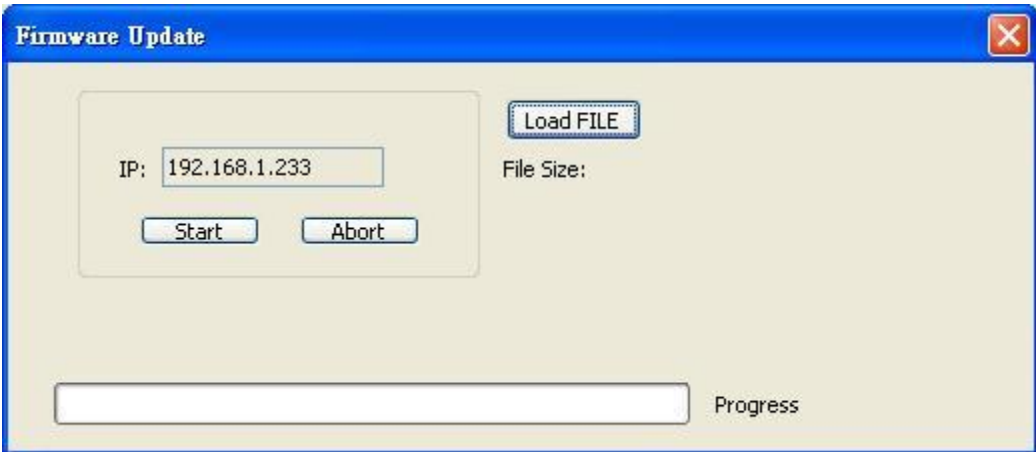
Step1: The 36x36 matrix maintain power on status.

Step2: Connect the 36x36 matrix and the PC with RS232 interface.

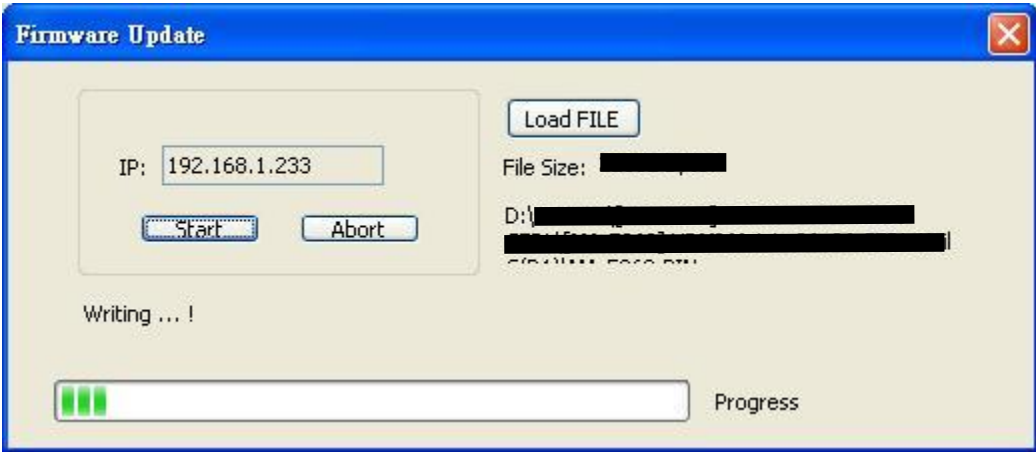
Step3: Open the software and select the COM port to connect.

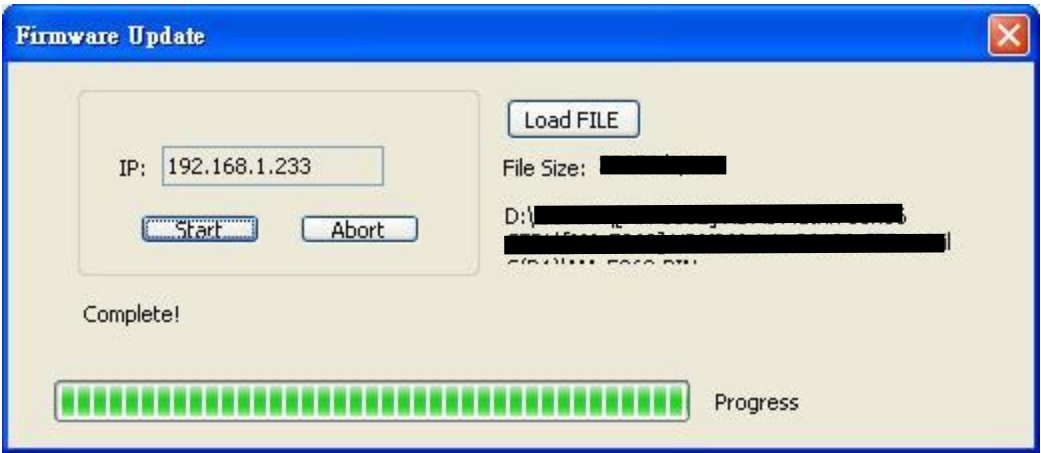


Step4: Press Firmware Update button.



Step5: Load .bin file and start to update.





Step6: Please reset(power off then power on) the 36x36 matrix when firmware update finished.

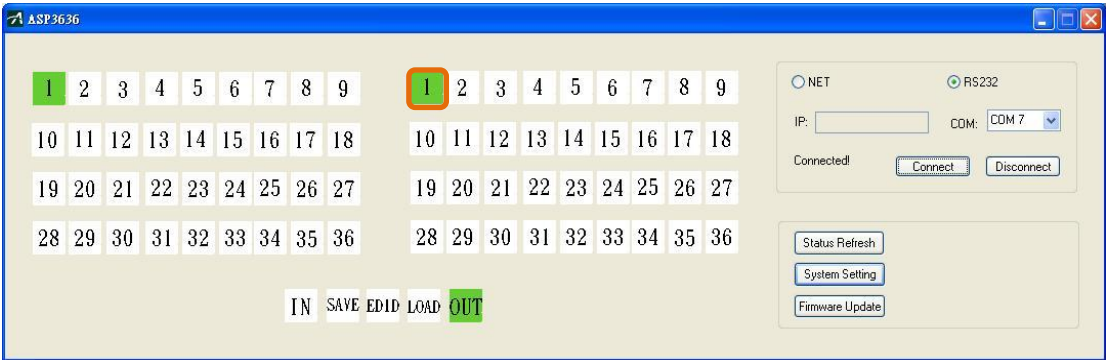
#Observe output status

Step 1: Press output button, if output button light, you can skip this step.

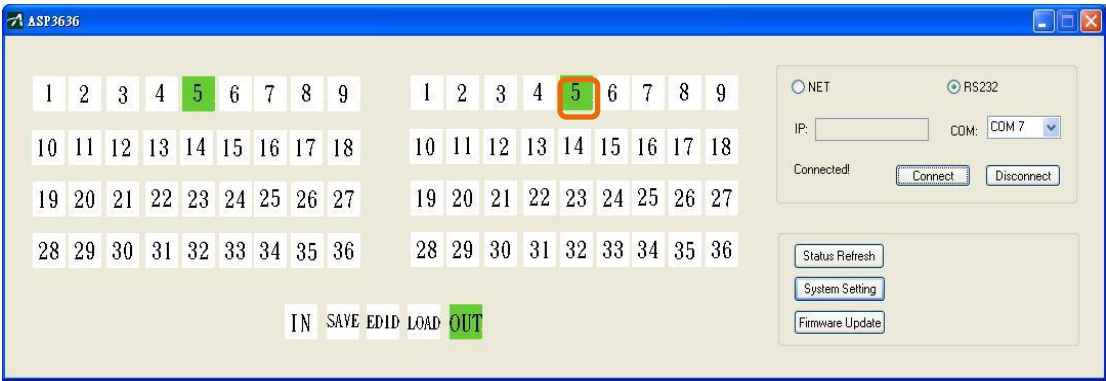


Step 2: Press output button X, if output region X light, you can skip this step.

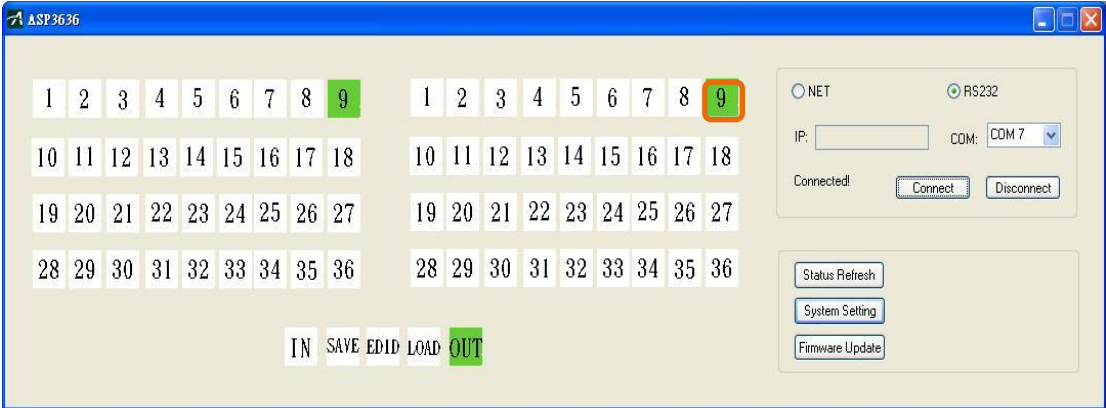
Output 1 <-> Input 1



Output 5 <-> Input 5



Output 9 <-> Input 9



#Set different input to specific output

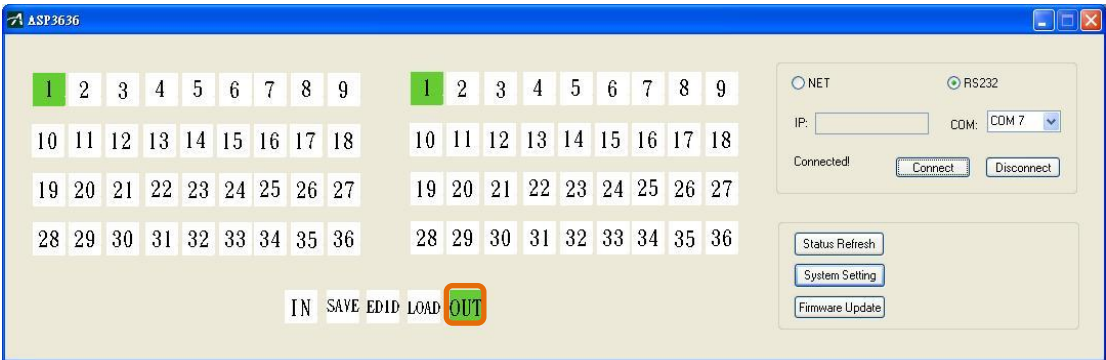
Now status: Input 1 <-> Output 1

Input 2 <-> Output 2

Desired status: Input3 <-> Output 1

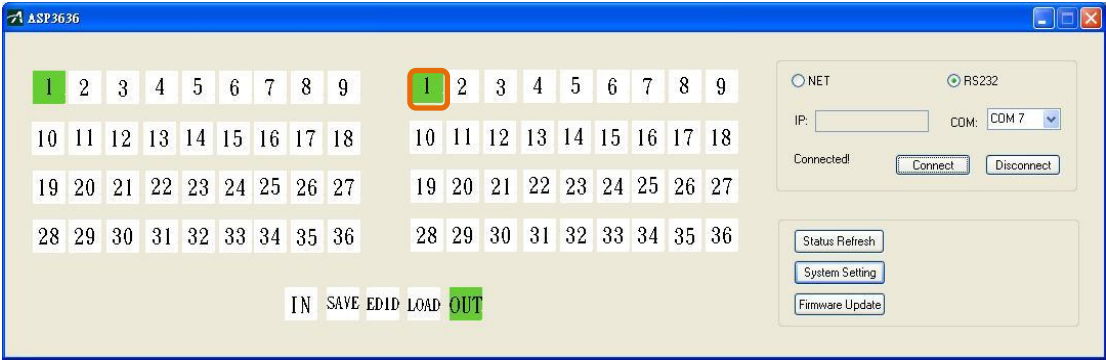
Input 4 <-> Output 2

Step 1: Press output button, if output button light, you can skip this step.

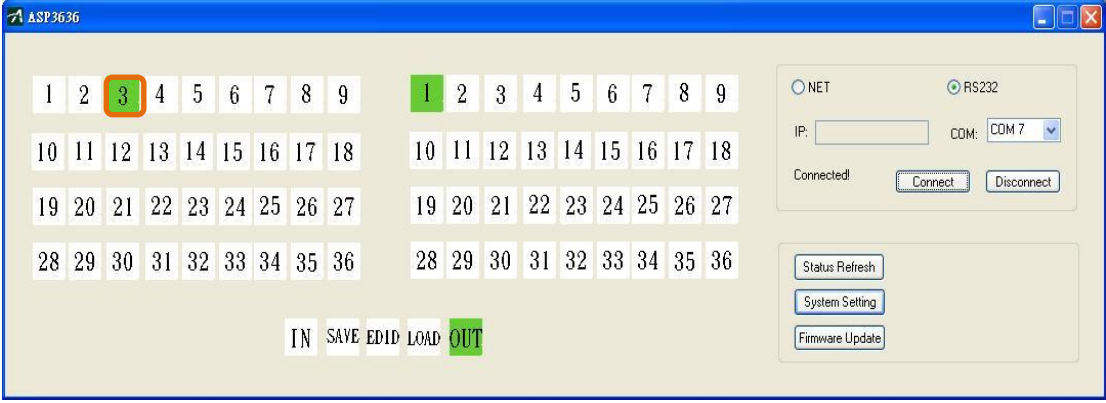


Step 2: Press output region 1, if output region 1 light, you can skip this step.

Output 1 <-> Input 1



Step 3: Press input region 3, if input region 3 light, you can skip this step.  
Output 1 <-> Input 3

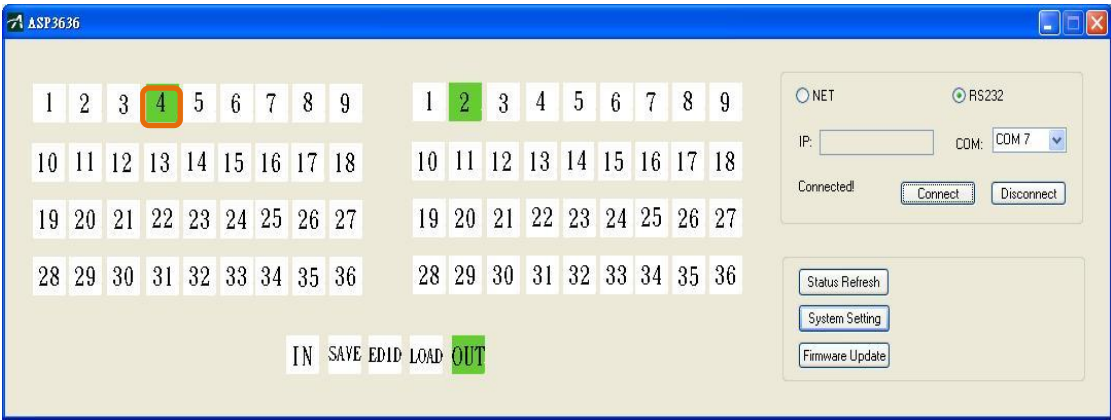


Step 4: Press output region 2, if output region 2 light, you can skip this step.  
Output 2 <-> Input 2



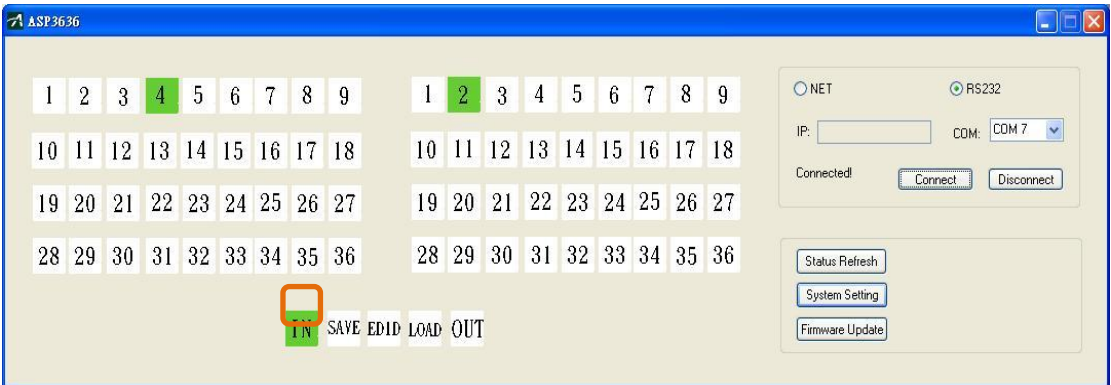
Step 5: Press input region 4, if input region 4 light, you can skip this step.  
Output 2 <-> Input 4



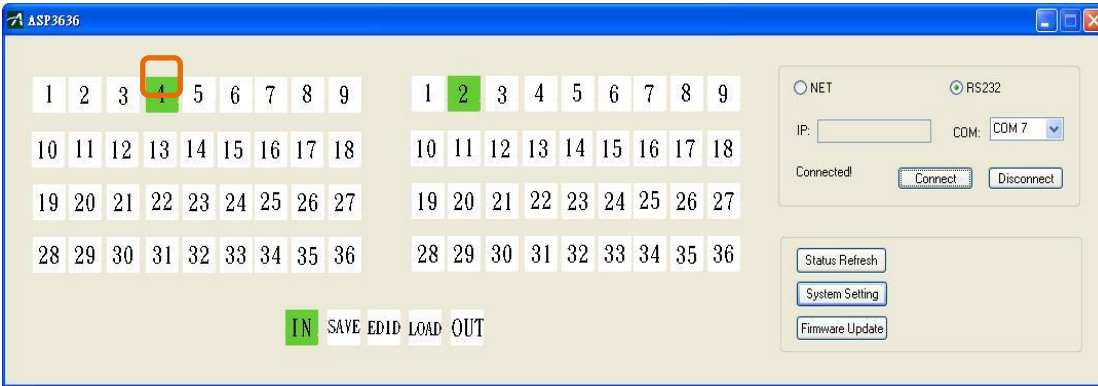


**#Observe input status**

Step 1: Press input button, if input button light, you can skip this step.



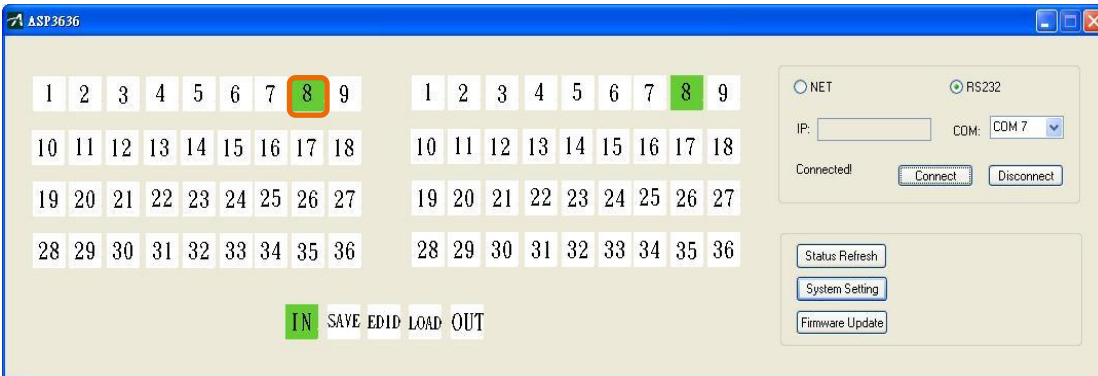
Step 2: Press output button X, if output region X light, you can skip this step.  
Input 4 <-> Output 2



### Input 7 <-> Output 7



### Input 8 <-> Output 8



#Set different outputs to the specific input

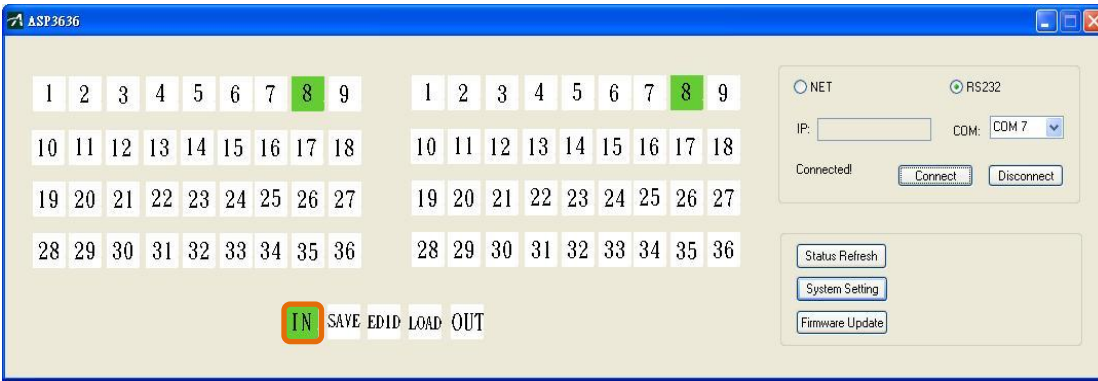
Now status: Input 24 <-> Output 24

Input 7 <-> Output 7

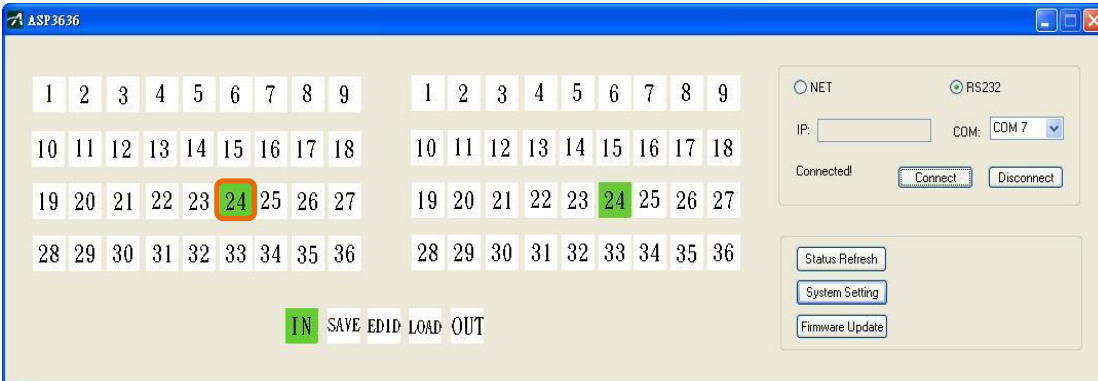
Desired status: Input 24 <-> Output 11, 12, 13, 14, 15

Input 7 <-> Output 16, 17, 18

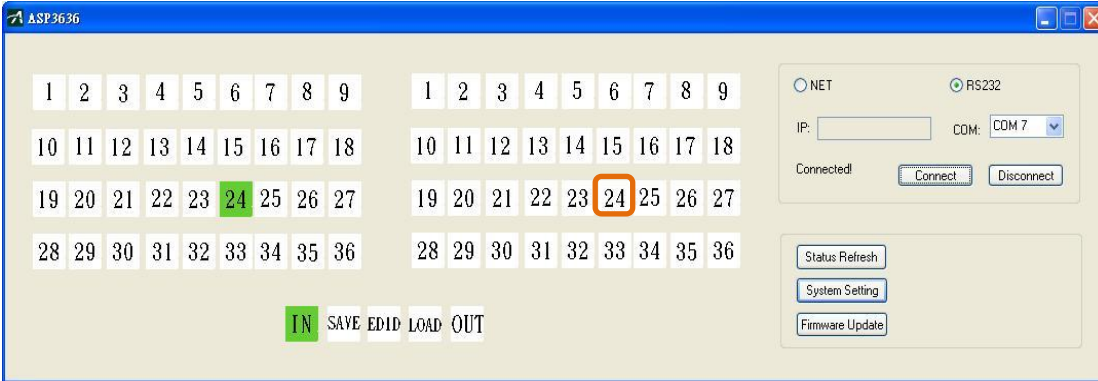
Step 1: Press input button, if input button light, you can skip this step.



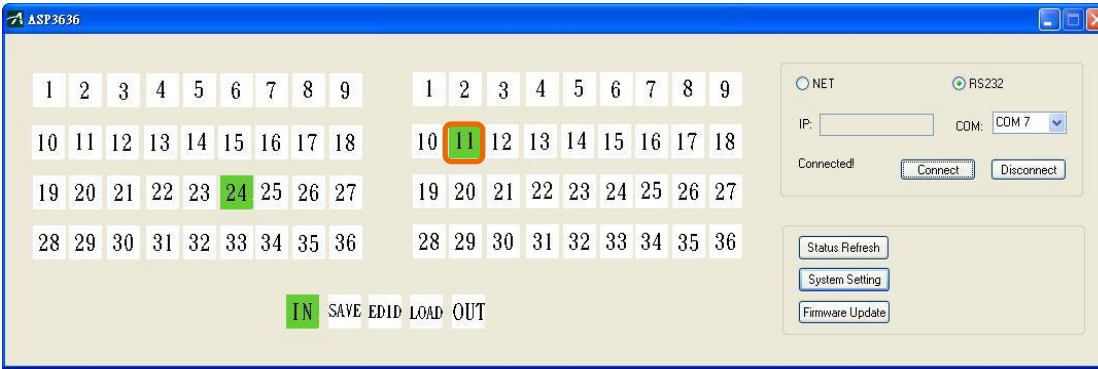
Step 2: Press input region 24, if input region 24 light, you can skip this step.  
 Input 24 <-> Output 24



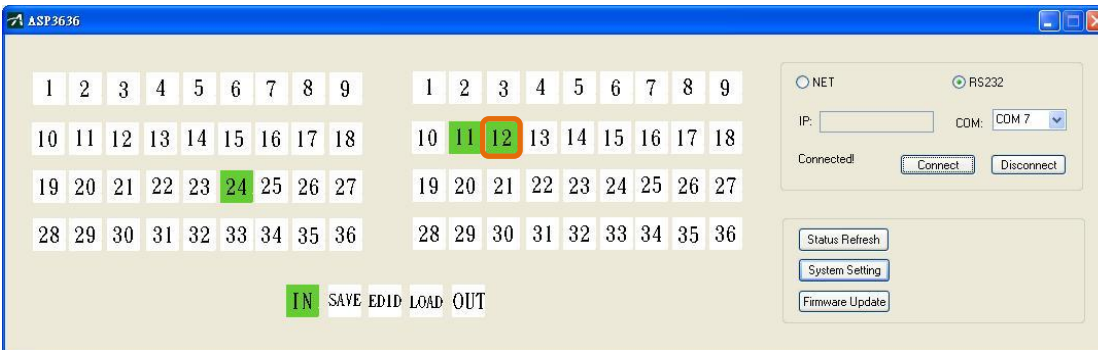
Step 3: Press output region 24, if output region 24 dim, you can skip this step.  
 Input 24 <-> Output None



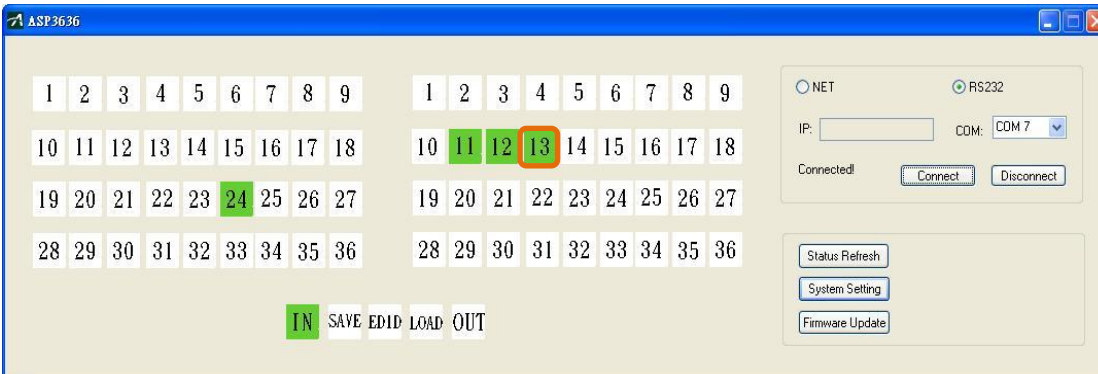
Step 4: Press output region 11, if output region 11 light, you can skip this step.  
 Input 24 <-> Output 11



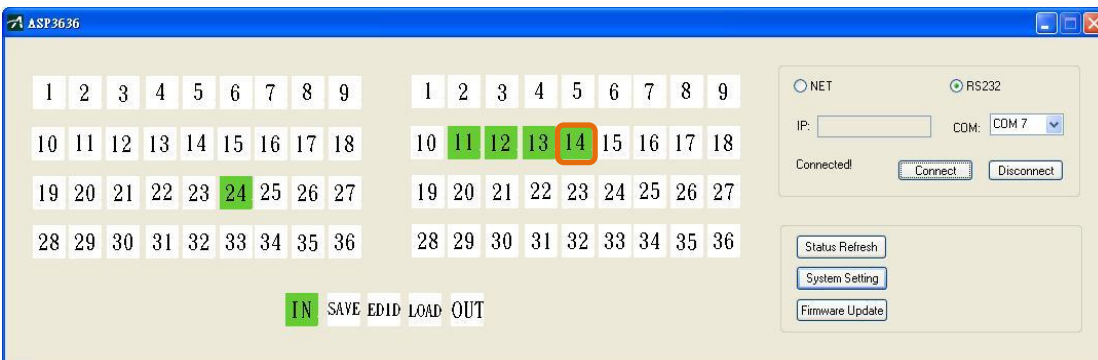
Step 5: Press output region 12, if output region 12 light, you can skip this step.  
 Input24 <-> Output 11, 12



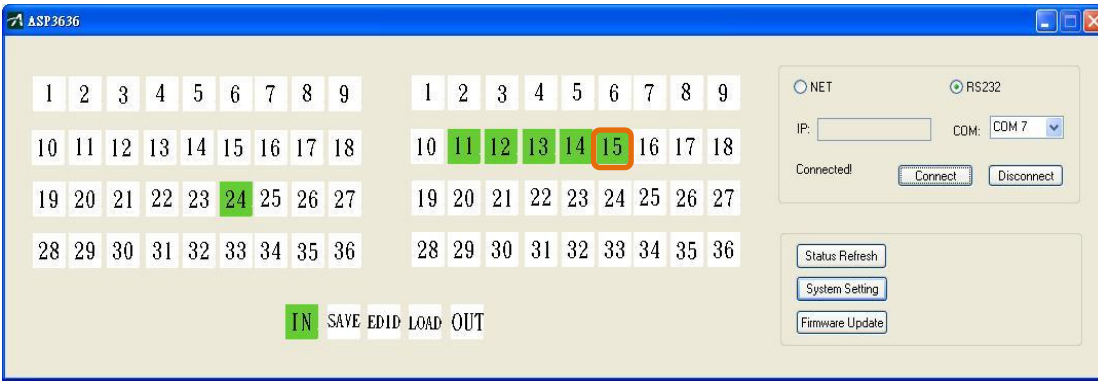
Step 6: Press output region 13, if output region 13 light, you can skip this step.  
 Input 24 <-> Output 11, 12, 13



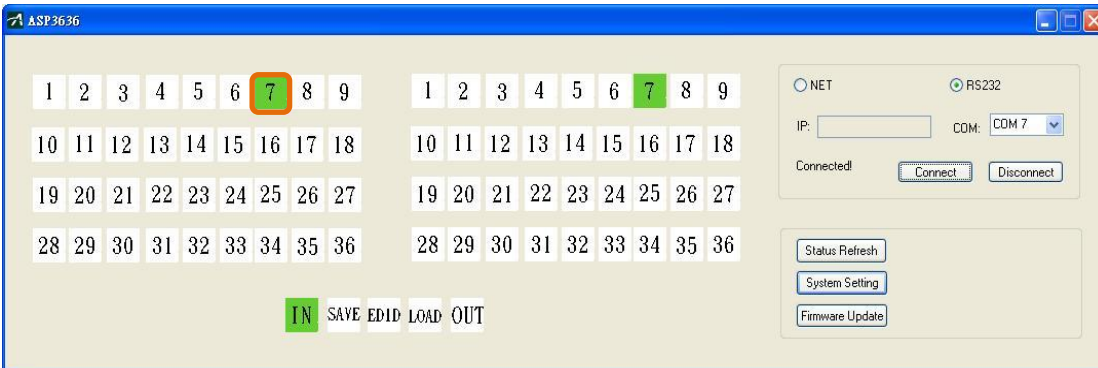
Step 7: Press output region 14, if output region 14 light, you can skip this step.  
 Input 24 <-> Output 11,12,13,14



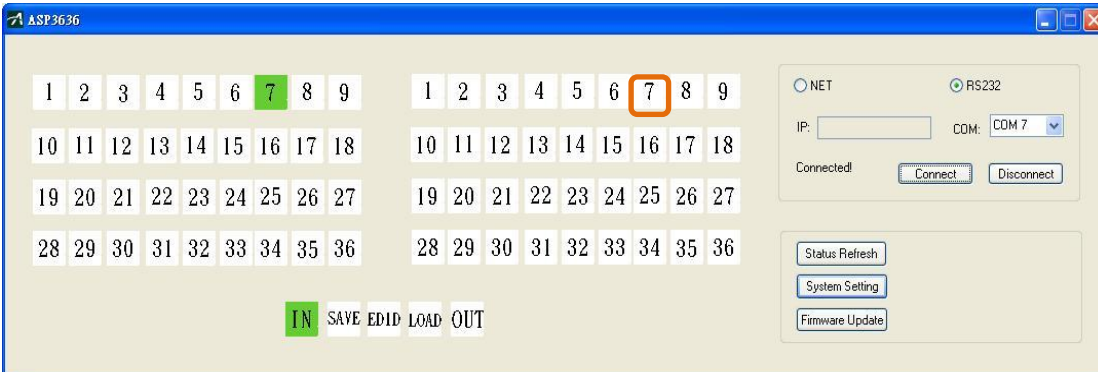
Step 8: Press output region 15, if output region 15 light, you can skip this step.  
 Input 24 <-> Output 11, 12, 13, 14, 15



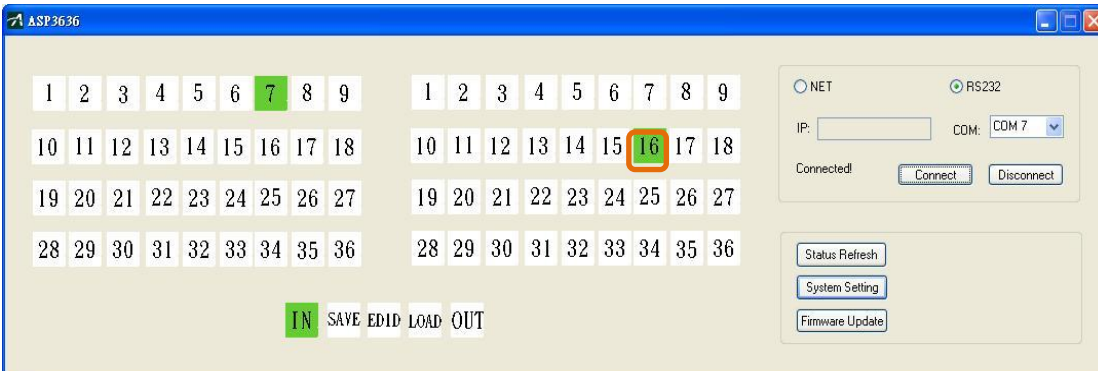
Step 9: Press input region 7.  
Input 7 <-> Output 7



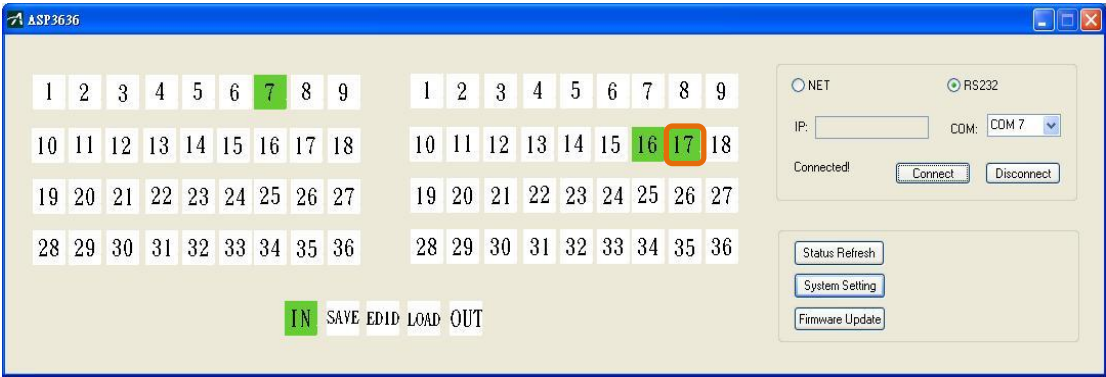
Step 10: Press output region 7, if output region 7 dim, you can skip this step.  
Input 7 <-> Output None



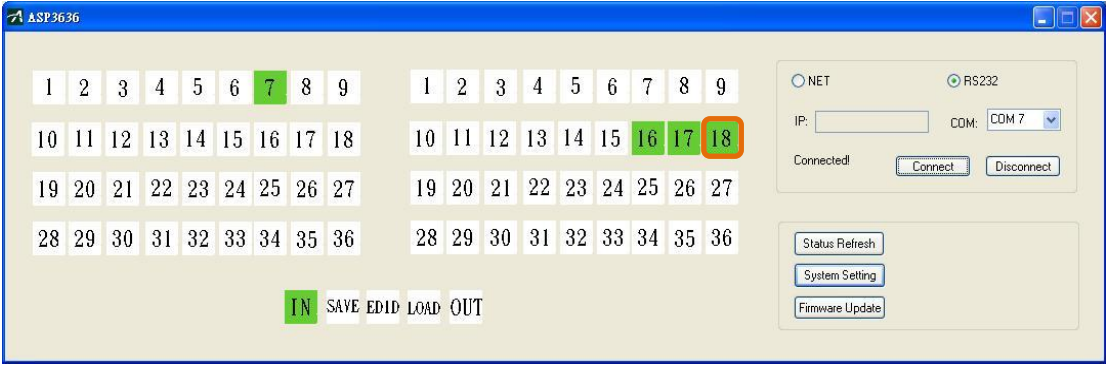
Step 11: Press output region 16, if output region 16 light, you can skip this step.  
Input 7 <-> Output 16



Step 12: Press output region 17, if output region 17 light, you can skip this step.  
Input 7 <-> Output 16, 17



Step 13: Press output region 18, if output region 18 light, you can skip this step.  
 Input 7 <-> Output 16, 17, 18



#Cancel outputs for the specific input

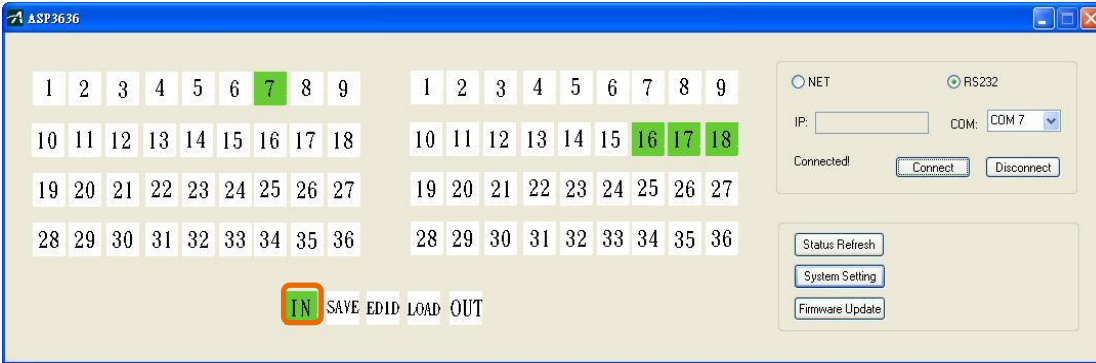
Now status: Input 24 <-> Output 11, 12, 13, 14, 15

Input 7 <-> Output 16, 17, 18

Desired status: Input 24 <-> Output 11, 12, 13

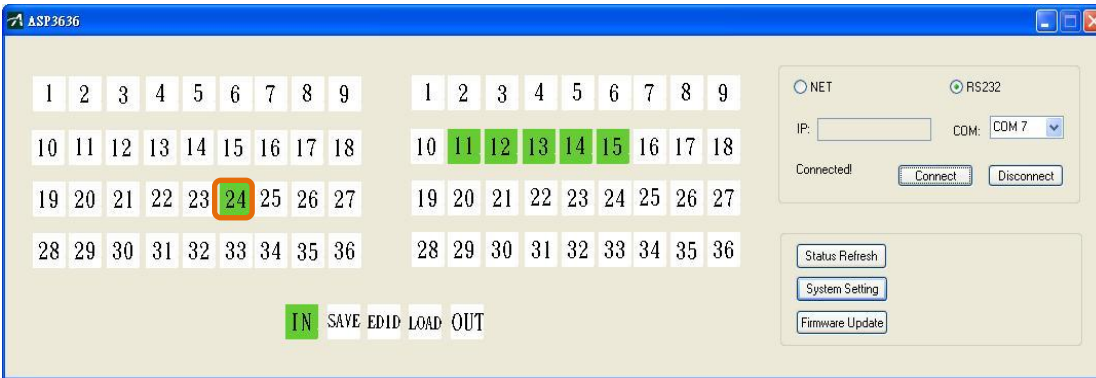
Input 7 <-> Output 16, 17

Step 1: Press input button, if input button light, you can skip this step.



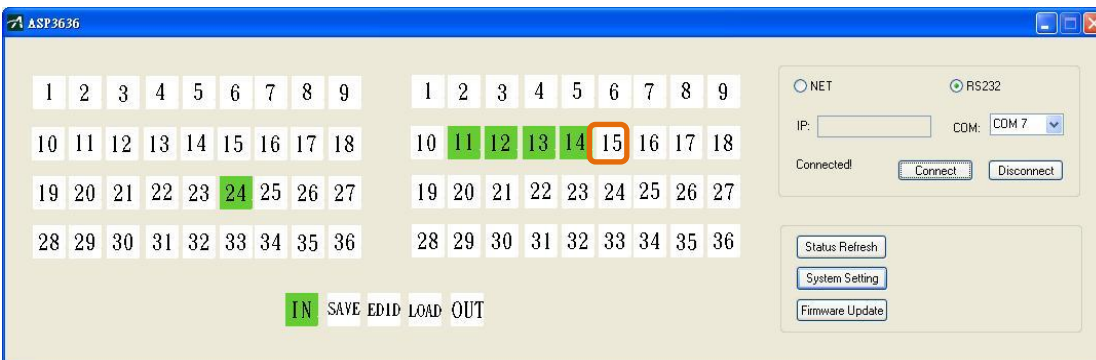
Step 2: Press input region 24, if input region 24 light, you can skip this step.

Input 24 <-> Output 11, 12, 13, 14, 15



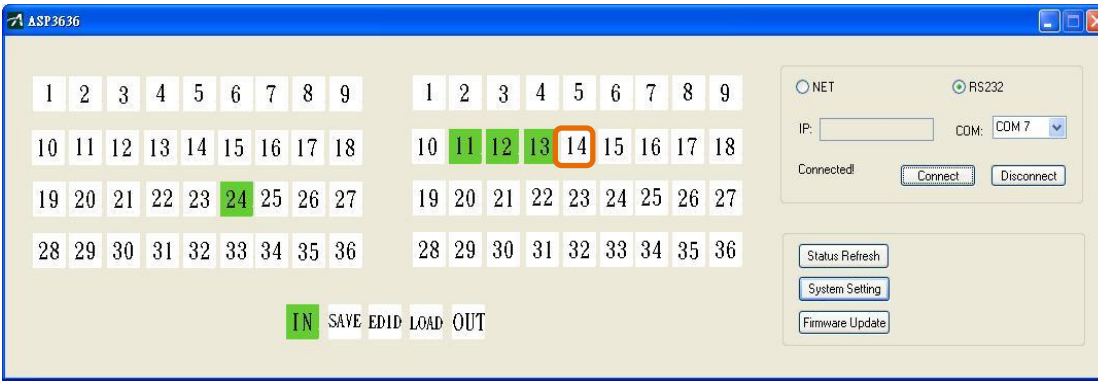
Step 3: Press output region 15, if output region 15 dim, you can skip this step.

Input 24 <-> Output 11, 12, 13, 14

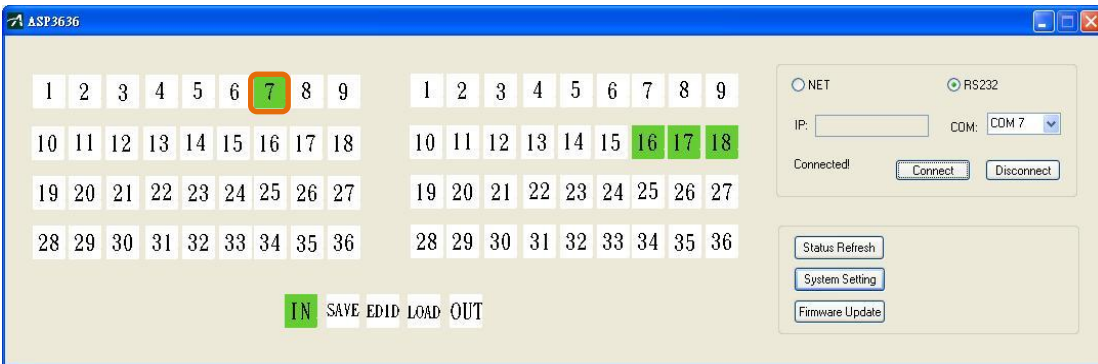


Step 4: Press output region 14, if output region 14 dim, you can skip this step.

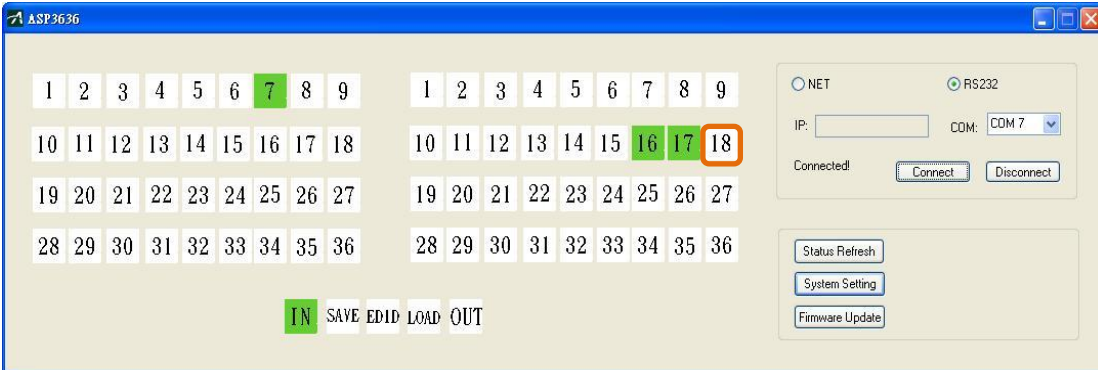
Input 24 <-> Output 11, 12, 13



Step 5: Press input region 7  
 Input 7 <-> Output 16, 17, 18



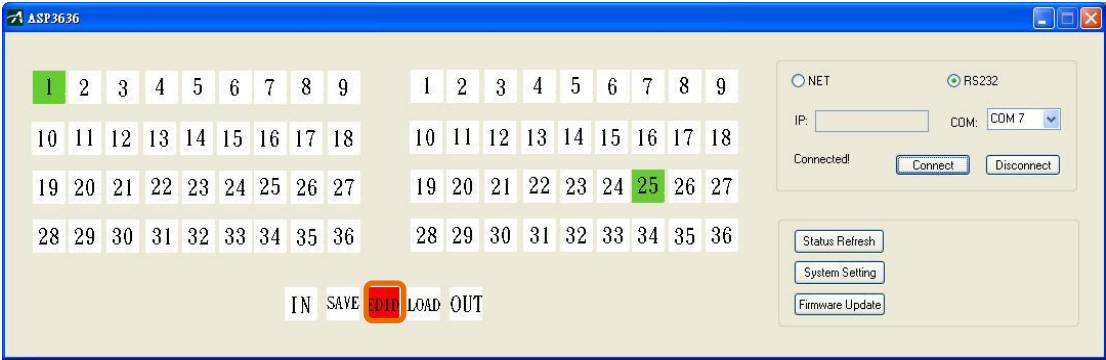
Step 6: Press output region 18, if output region 18 dim, you can skip this step.  
 Input 7 <-> Output 16, 17



#Observe each input EDID

Step 1: Press EDID button, if EDID button light red, you can skip this step.

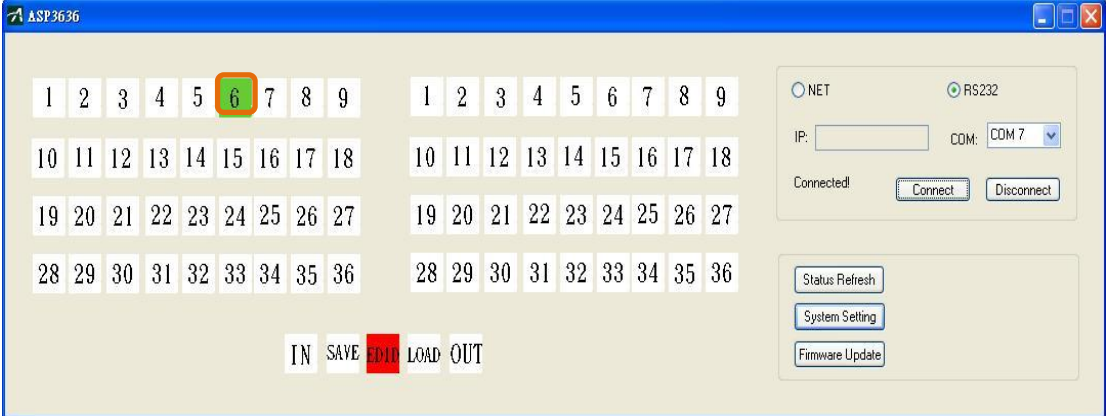




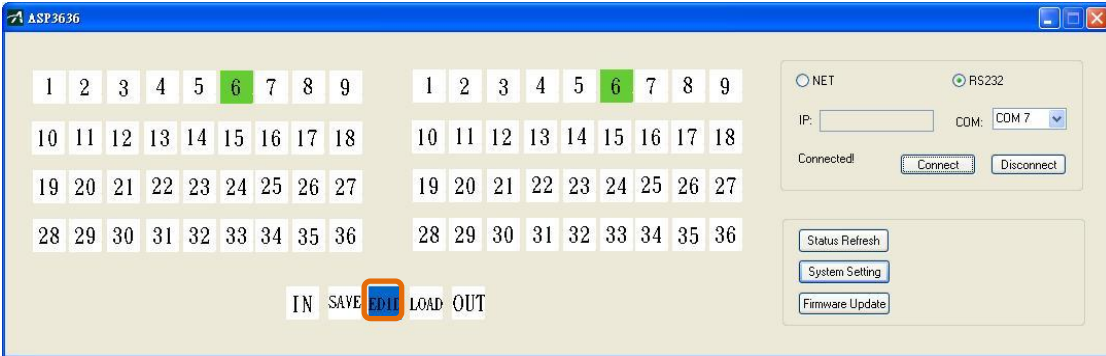
Step 2: Press input region X, if input region X light, you can skip this step.  
 Input 5 EDID <-> Default EDID number 25



Step 3: Press input region X, if input region X light, you can skip this step.



Step 4: Press EDID button, if EDID button light blue, you can skip this step.  
 Input 6 EDID <-> Output number 6 EDID



#Set each input EDID

RED	Color	Audio	Resolution	2D/3D
-----	-------	-------	------------	-------

1	36 bits	Bitstream	Full HD	3D
2	36 bits	Multi Ch	Full HD	3D
3	36 bits	2Ch	Full HD	3D
4	30 bits	Bitstream	Full HD	3D
5	30 bits	Multi Ch	Full HD	3D
6	30 bits	2Ch	Full HD	3D
7	24 bits	Bitstream	Full HD	3D
8	24 bits	Multi Ch	Full HD	3D
9	24 bits	2Ch	Full HD	3D
10	36 bits	Bitstream	HD	3D
11	36 bits	Multi Ch	HD	3D
12	36 bits	2Ch	HD	3D
13	30 bits	Bitstream	HD	3D
14	30 bits	Multi Ch	HD	3D
15	30 bits	2Ch	HD	3D
16	24 bits	Bitstream	HD	3D
17	24 bits	Multi Ch	HD	3D
18	24 bits	2Ch	HD	3D
19	36 bits	Bitstream	Full HD	2D
20	36 bits	Multi Ch	Full HD	2D
21	36 bits	2Ch	Full HD	2D
22	30 bits	Bitstream	Full HD	2D
23	30 bits	Multi Ch	Full HD	2D
24	30 bits	2Ch	Full HD	2D
25	24 bits	Bitstream	Full HD	2D
26	24 bits	Multi Ch	Full HD	2D
27	24 bits	2Ch	Full HD	2D
28	36 bits	Bitstream	HD	2D
29	36 bits	Multi Ch	HD	2D
30	36 bits	2Ch	HD	2D
31	30 bits	Bitstream	HD	2D
32	30 bits	Multi Ch	HD	2D
33	30 bits	2Ch	HD	2D
34	24 bits	Bitstream	HD	2D
35	24 bits	Multi Ch	HD	2D
36	24 bits	2Ch	HD	2D

Now status: Input 31 EDID <-> RED number 25

25	24 bits	Bitstream	Full HD	2D
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Input 32 EDID <-> RED number 25

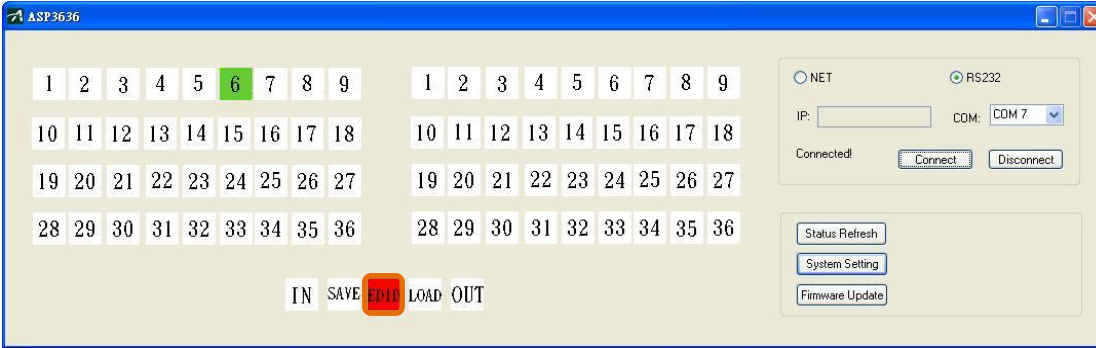
25	24 bits	Bitstream	Full HD	2D
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Desired status: Input 31 <-> RED number 22

22	30 bits	Bitstream	Full HD	2D
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Input 32 <-> BLUE number 1(Output 1 record EDID)

Step 1: Press EDID button, if EDID button light red, you can skip this step.



Step 2: Press input region 31, if input region 31 light, you can skip this step.

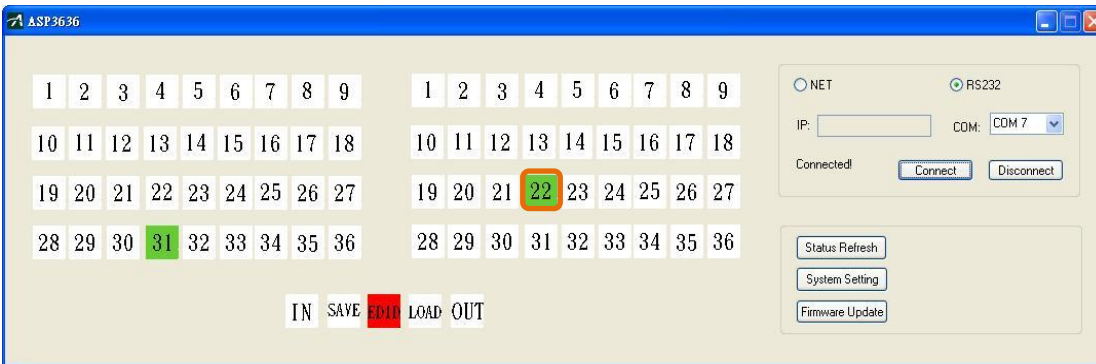
Input 31 EDID <-> default EDID number 25



Step 3: Press output region 22, if output region 22 light, you can skip this step.

Input 31 EDID <-> default EDID number 22

**\*\*This process will perform about 10 seconds; output region 22 will be dim and light three times on the machine when finished.**

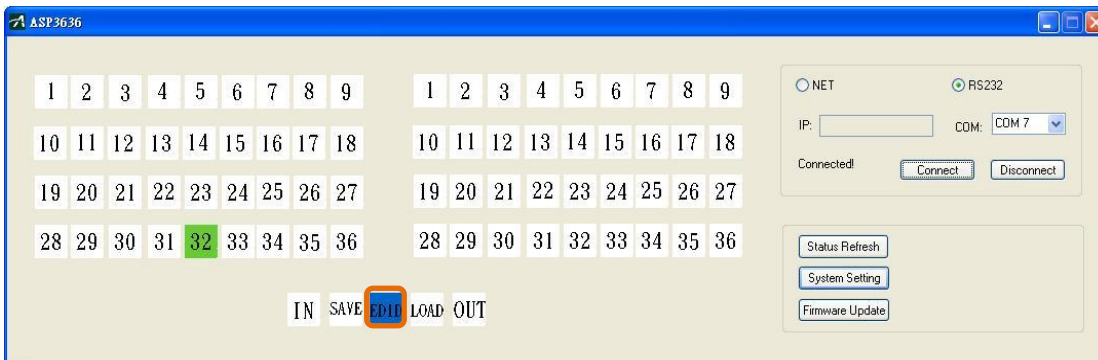


Step 4: Press input region 32, if input region 32 light, you can skip this step.

Input 32 EDID <-> default EDID number 25

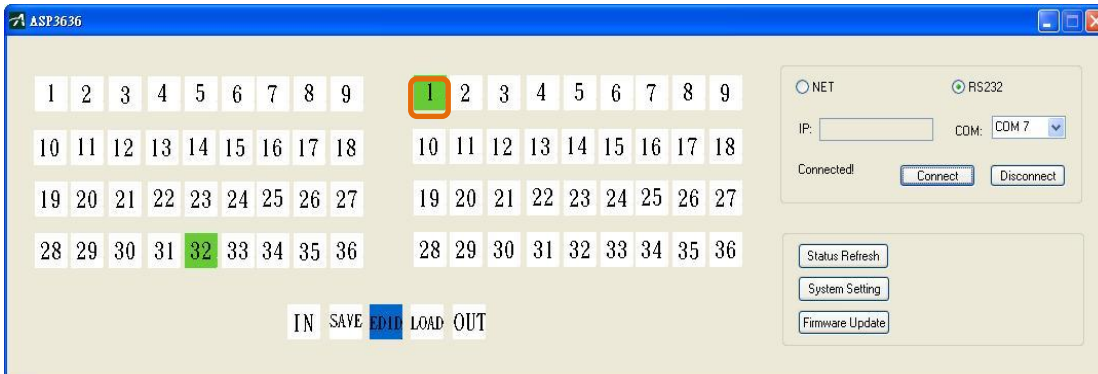


Step 5: Press EDID button, if EDID button light blue, you can skip this step.



Step 6: Press output region 1, if output region 1 light, you can skip this step.

Input 32 EDID <-> Output number 1 EDID



\*\*This process will perform about 10 seconds; output region 1 will be dim and light three times on the machine when finished.

#Save/Load Button Application

**\*\*The Save button & Load button only effective in channel setting, not include EDID setting.**

Now status: Output 34 <-> Input 34

Output 35 <-> Input 35

Output 36 <-> Input 36

Next status: Output 34 <-> Input 36

Output 35 <-> Input 34

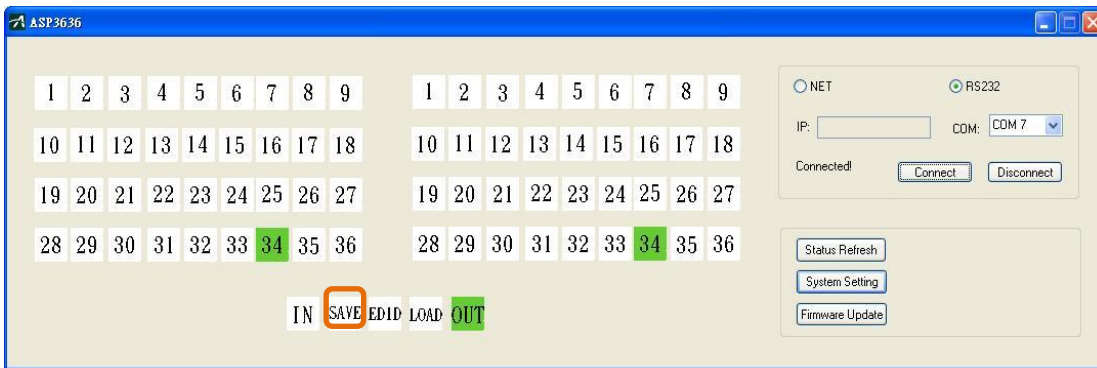
Output 36 <-> Input 35

Return status: Output 34 <-> Input 34

Output 35 <-> Input 35

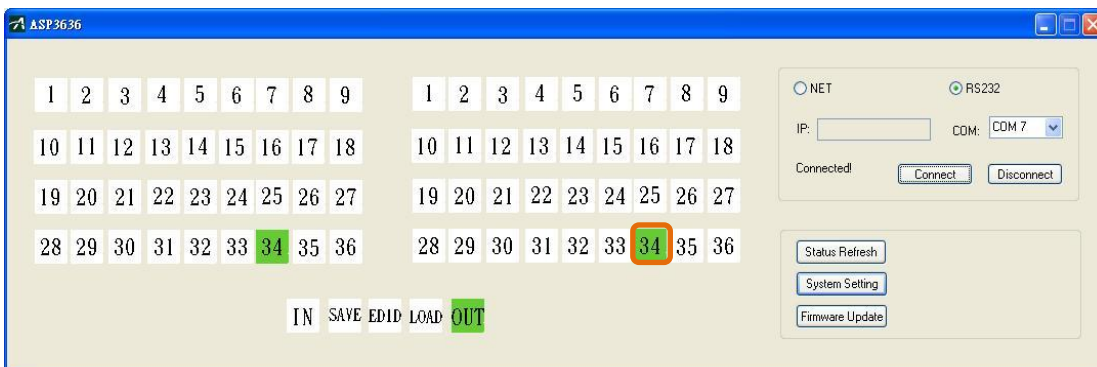
Output 36 <-> Input 36

Step 1: Press the Save button, the Save button will be light and dim, represent OK.



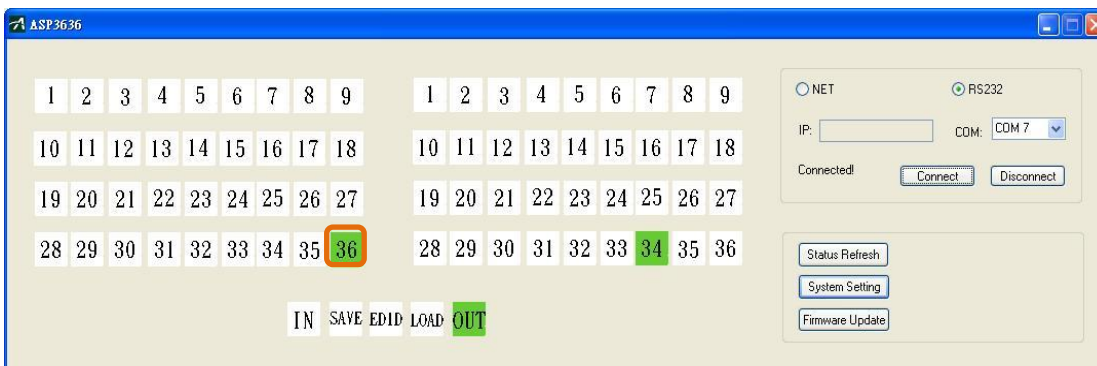
Step 2: Press output region 34, if output region 34 light, you can skip this step.

Output 34 <-> Input 34, Output 35 <-> Input 35, Output 36 <-> Input 36



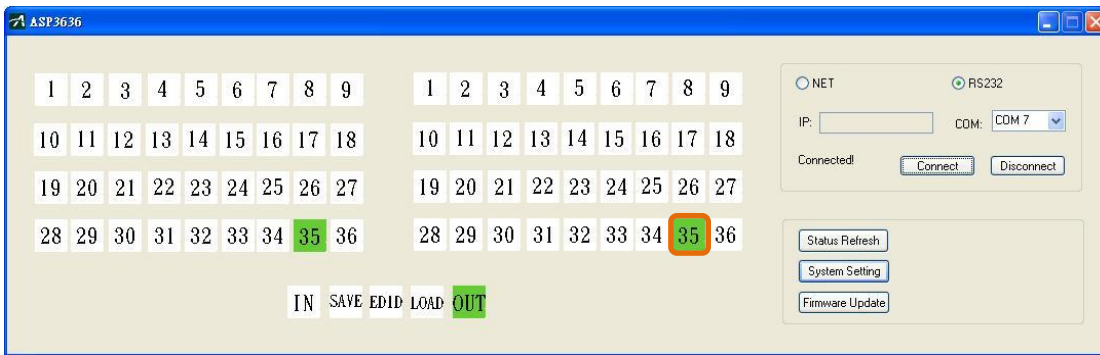
Step 3: Press input region 36.

Output 34 <-> Input 36, Output 35 <-> Input 35, Output 36 <-> Input 36



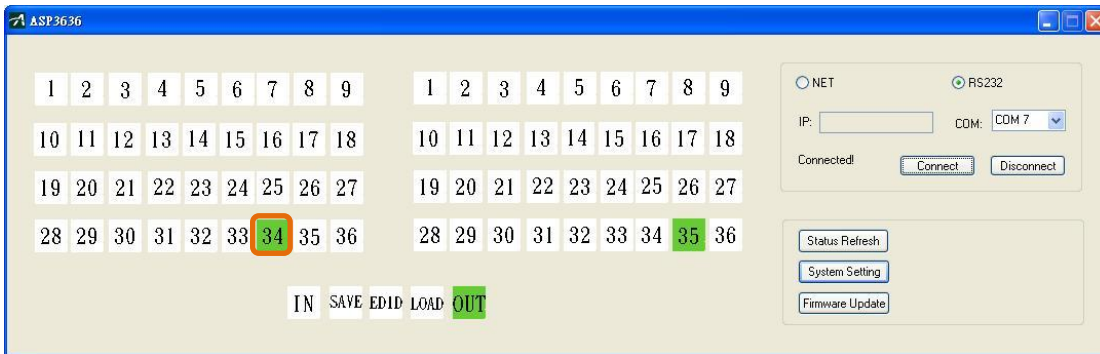
Step 4: Press output region 35

Output 34 <-> Input 36, Output 35 <-> Input 35, Output 36 <-> Input 36



Step 5: Press input region 34.

Output 34 <-> Input 36, Output 35 <-> Input 34, Output 36 <-> Input 36



Step 6: Press output region 36

Output 34 <-> Input 36, Output 35 <-> Input 34, Output 36 <-> Input 36



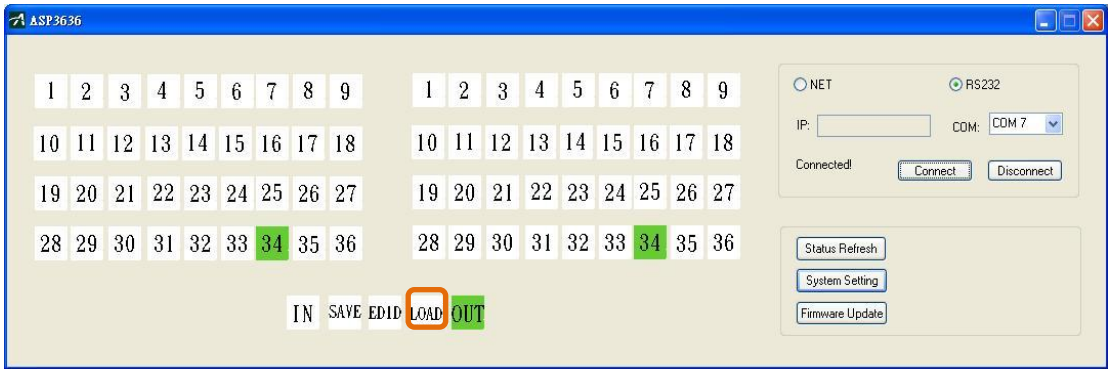
Step 7: Press input region 35.

Output 34 <-> Input 36, Output 35 <-> Input 34, Output 36 <-> Input 35



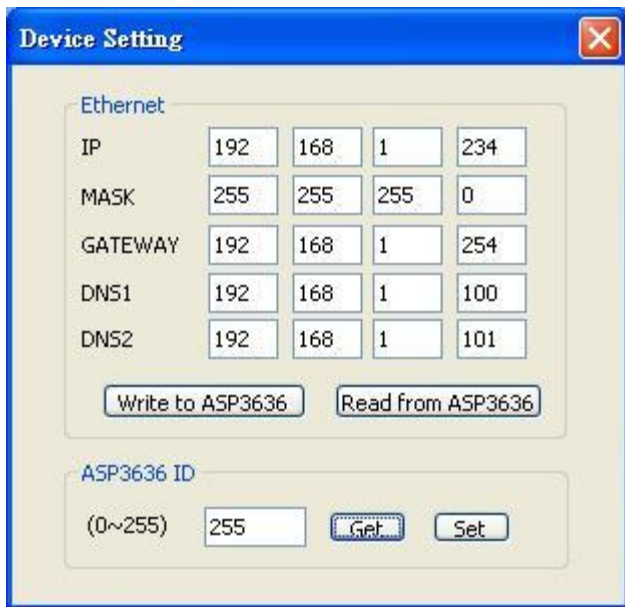
Step 7: Press Load button

Output 34 <-> Input 34, Output 35 <-> Input 35, Output 36 <-> Input 36



#Set/get ethernet status & set/get ID

\*\*At the RS232 connection mode



## HDMI 36x36 Matrix Command Control

### The Command Protocol Format (RS-232 Serial Port) (Ethernet Port)

#### Serial Port Setting:

Baud rate : 115200 bps

Data bit : 8 bits

Parity : None

Ethernet Port Setting: Demo IP – 192.168.1.234



The Sample			
Function Description: The command format and rules introduction.			
Command			
Byte	Name	Value	Comment
0	Command Length		
1	Check Code 1		
2	Check Code 2		
3	Check Code 3		
4	Check Code 4		
5	Device ID		
6	Command ID		
7	Command Parameter 1		
8	Command Parameter 2		
n-1	Command Parameter m		
n	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xaa/0x55	ACK: 0xaa Command Value is right NACK: 0x55 Command Value is error.
Receive			
0	Receive Length		
1	Receive Parameter 1		
2	Receive Parameter 2		
3	Receive Parameter 3		
n-1	Receive Parameter m		
n	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);

# Demonstration

**TCP Test**

IP: 192.168.1.234    Connect     ASCII  
 Disconnect     HEX

send: Device ID connect success

0x08 0x4D 0x41 0x53 0x62 0xFF 0x01 0x4B    Checksum    Send

Annotations: Length (0x08), Check Code (0x4D), Command (0x41)

receive: Right

0x44 0x26    Length

0x01 0x02 0x03 0x04 0x05 0x06 0x07 0x08 0x09 0x0A 0x0B 0x0C  
 0x0D 0x0E 0x0F 0x10 0x11 0x12 0x13 0x14 0x15 0x16 0x17 0x18  
 0x19 0x1A 0x1B 0x1C 0x1D 0x1E 0x1F 0x20 0x21 0x22 0x23 0x24  
 0xC0    Checksum    Data

**MFC SerialComport (Appstest)**

Static: ComPort: 7    Setting    Timeout: 10 time(s)    Static: DTR: 1    Clear  
 BaudRate: 115200    Close    500 ms    RTS: 0    Set

Receive: Right

0xaa 0x26    Length

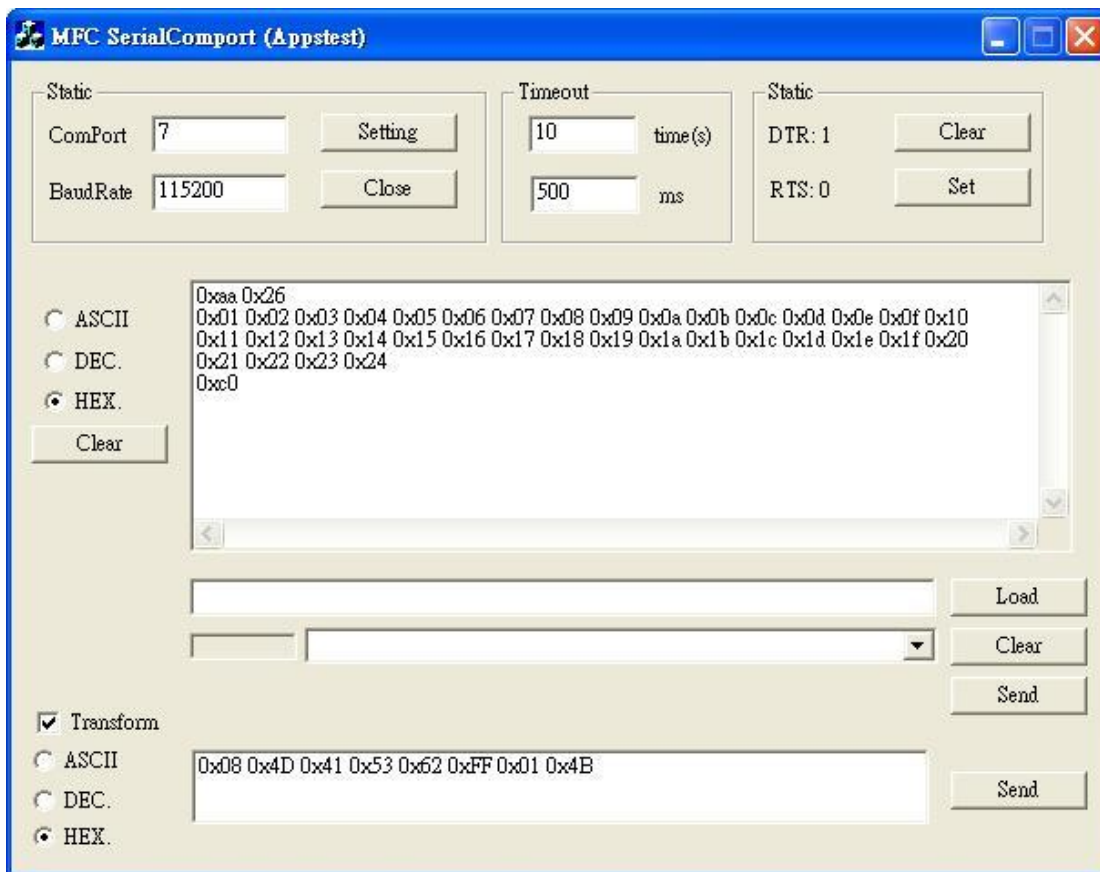
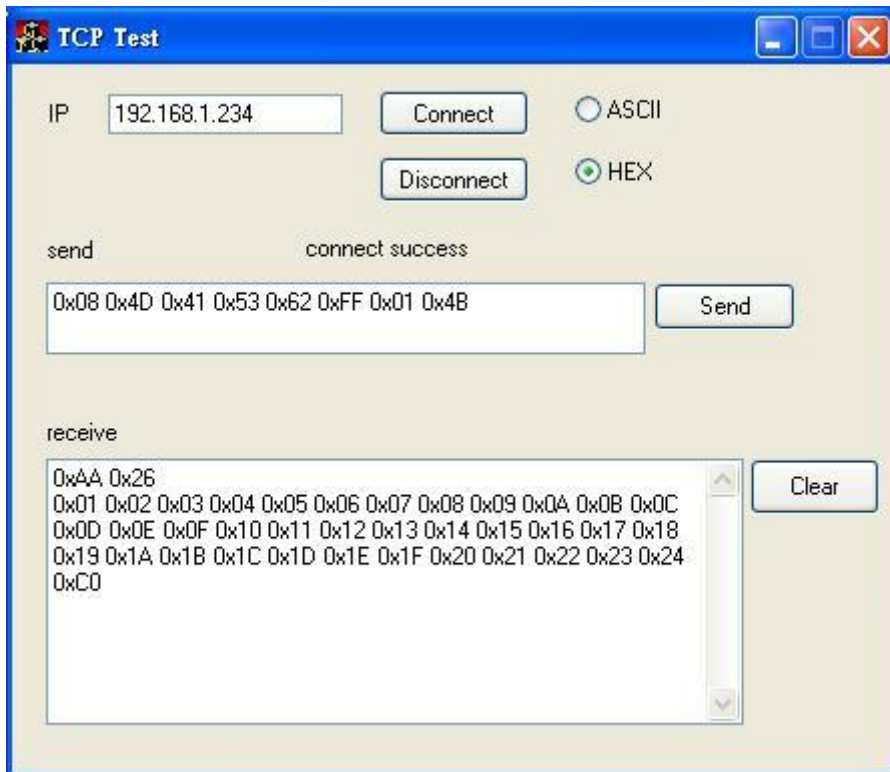
0x01 0x02 0x03 0x04 0x05 0x06 0x07 0x08 0x09 0x0a 0x0b 0x0c 0x0d 0x0e 0x0f 0x10  
 0x11 0x12 0x13 0x14 0x15 0x16 0x17 0x18 0x19 0x1a 0x1b 0x1c 0x1d 0x1e 0x1f 0x20  
 0x21 0x22 0x23 0x24  
 0xC0    Checksum    Data

Send: Device ID

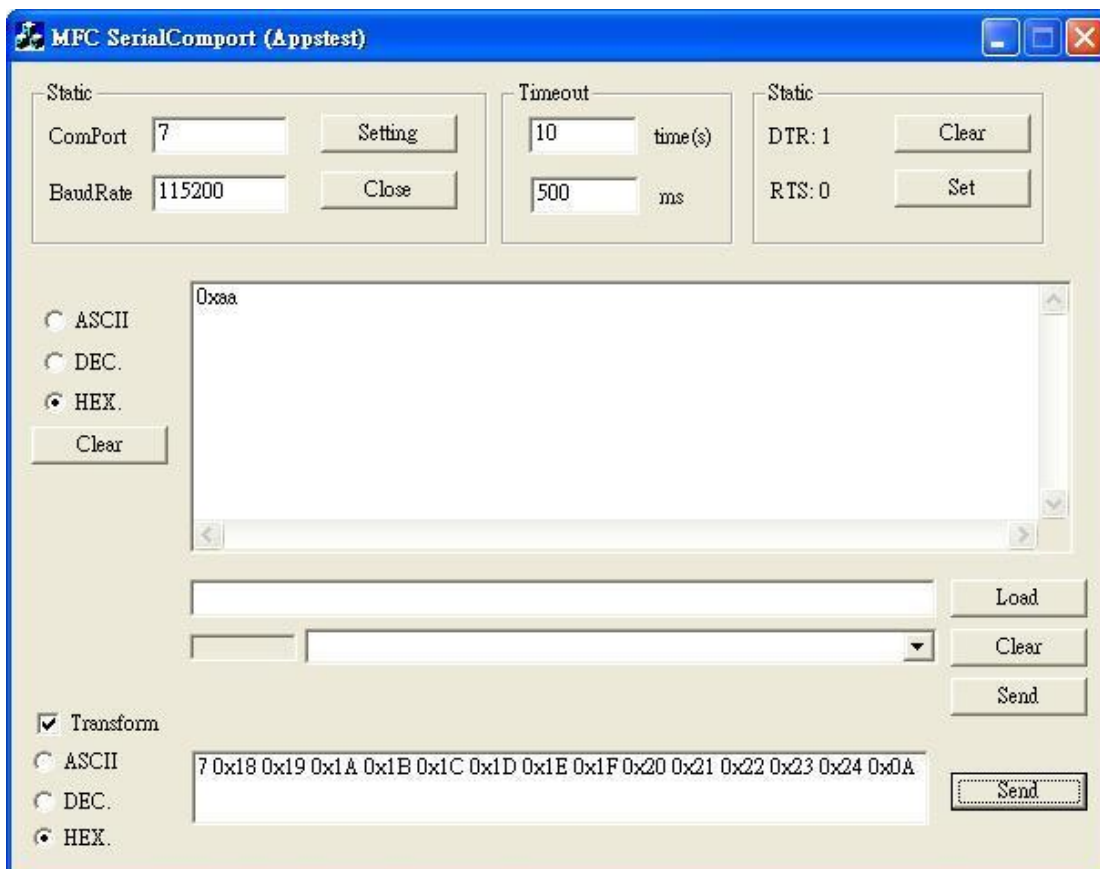
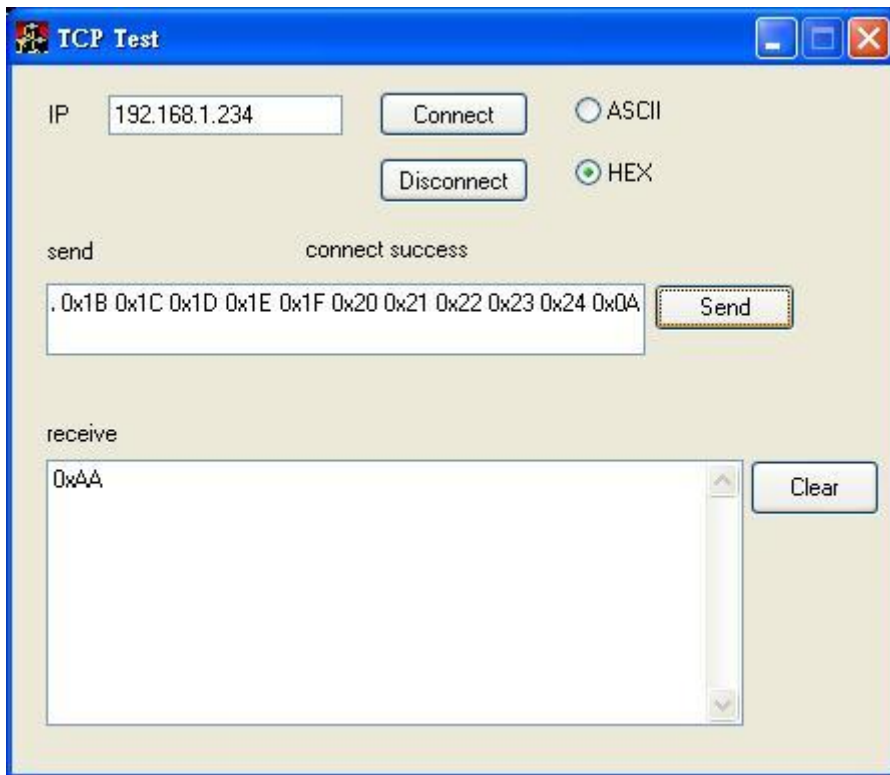
0x08 0x4D 0x41 0x53 0x62 0xFF 0x01 0x4B    Checksum    Send

Annotations: Length (0x08), Check Code (0x4D), Command (0x41)

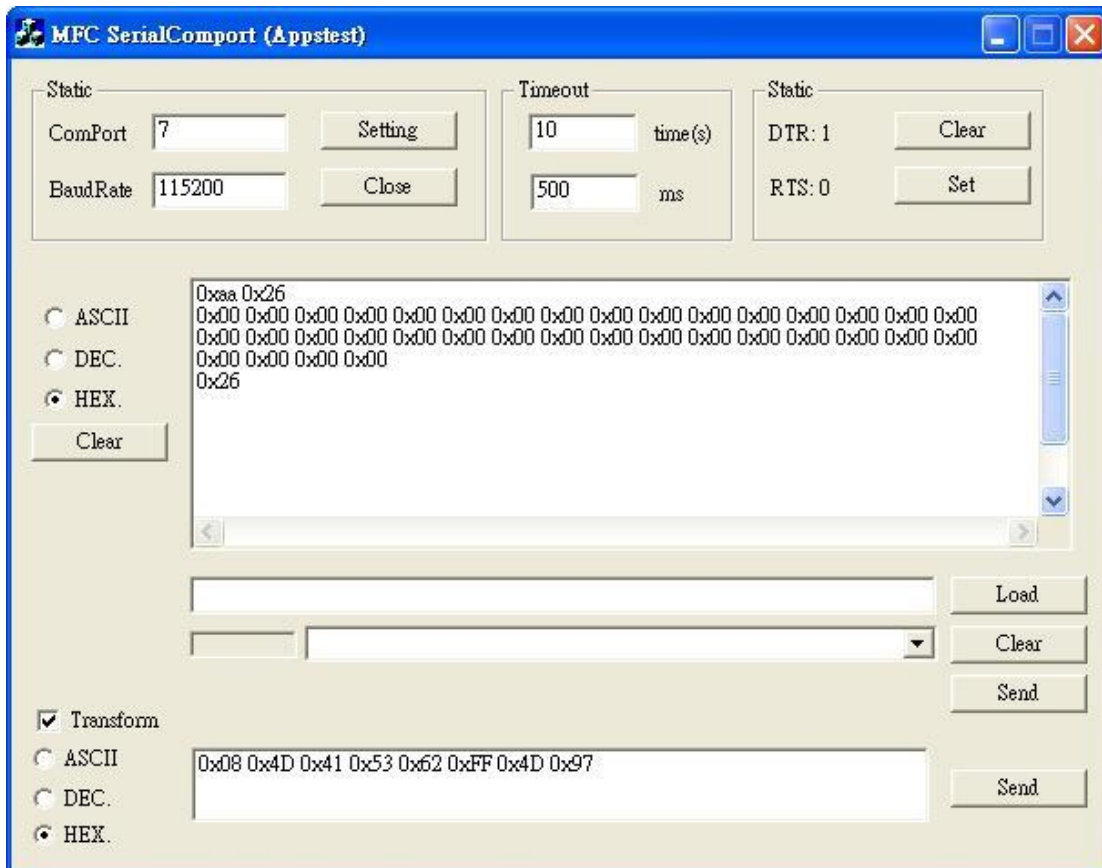
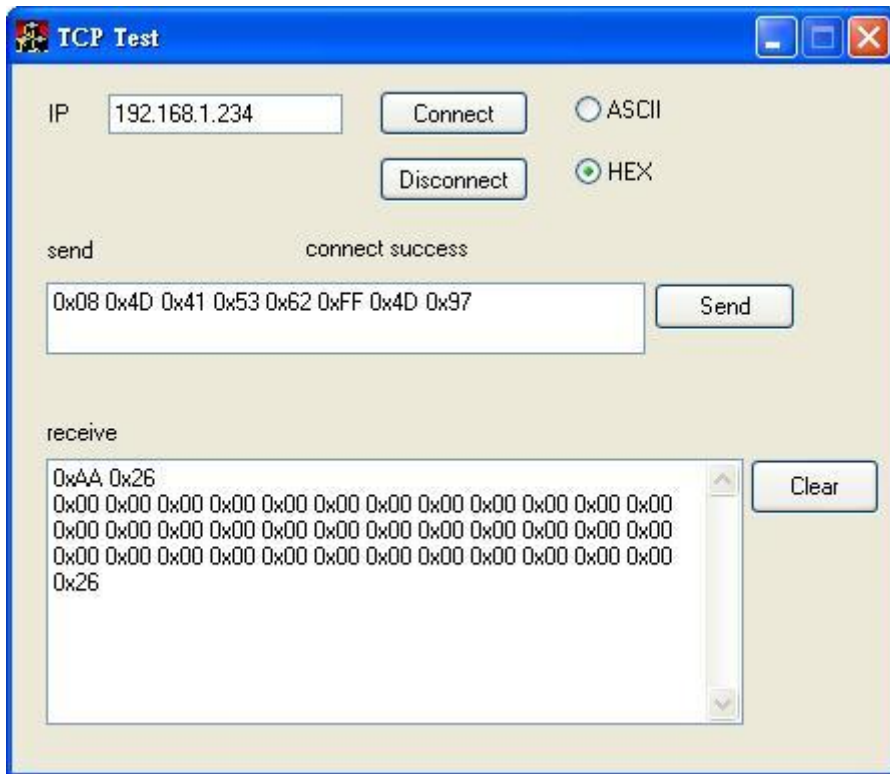
Get Video Output Channel			
Function Description: Get video output signal is from what input signal.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x01	
7	Check Sum		BYTE CheckSum = 0; for(int i =0; i<7; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
0	Receive Length	0x26	
1	Receive Parameter 1	A1	Output channel "1" signal is from Input channel A1
2	Receive Parameter 2	A2	Output channel "2" signal is from Input channel A2
.	.	.	.
.	.	.	.
.	.	.	.
36	Receive Parameter 36	A36	Output channel "36" signal is from Input channel A36
37	Check Sum	0x26+ A1+ A2+...+ A36	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);



Set Video Output Channel			
Function Description: Set video output signal is from what input signal.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x2C	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x02	
7	Command Parameter 1	A1	Set output channel "1" signal is from Input channel A1
8	Command Parameter 2	A2	Set output channel "2" signal is from Input channel A2
.	.	.	.
.	.	.	.
.	.	.	.
42	Command Parameter 36	A36	Set output channel "36" signal is from Input channel A36
43	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
No Receive			



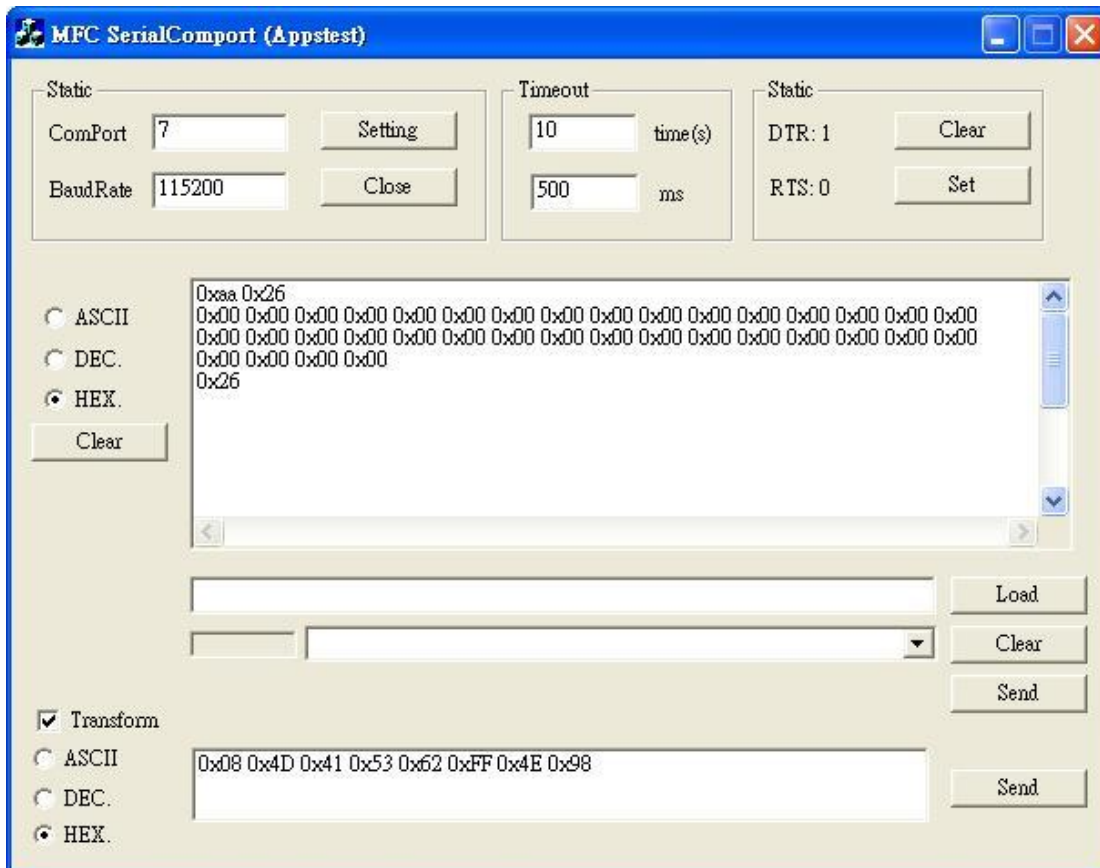
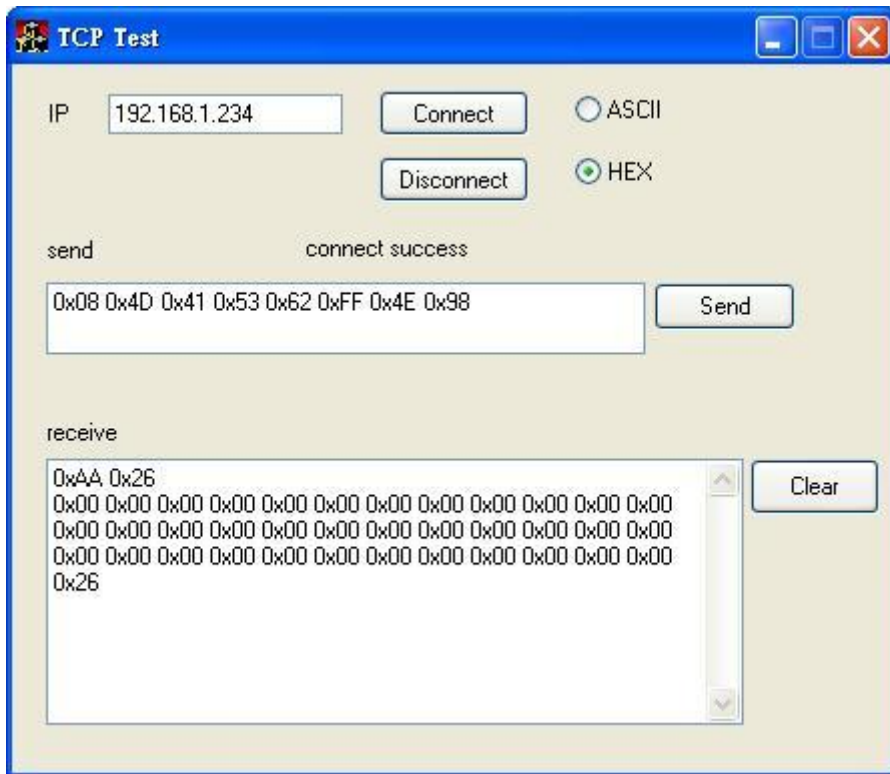
Check Video Input Signal			
Function Description: Check each video input has signal or not.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x4D	
7	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
0	Receive Length	0x26	
1	Receive Parameter 1	(0x00    0x01)	0x01: Signal input channel "1" 0x00: No signal input
2	Receive Parameter 2	(0x00    0x01)	0x01: Signal input channel "2" 0x00: No signal input
.	.	.	.
.	.	.	.
.	.	.	.
36	Receive Parameter 36	(0x00    0x01)	0x01: Signal input channel "36" 0x00: No signal input
37	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);



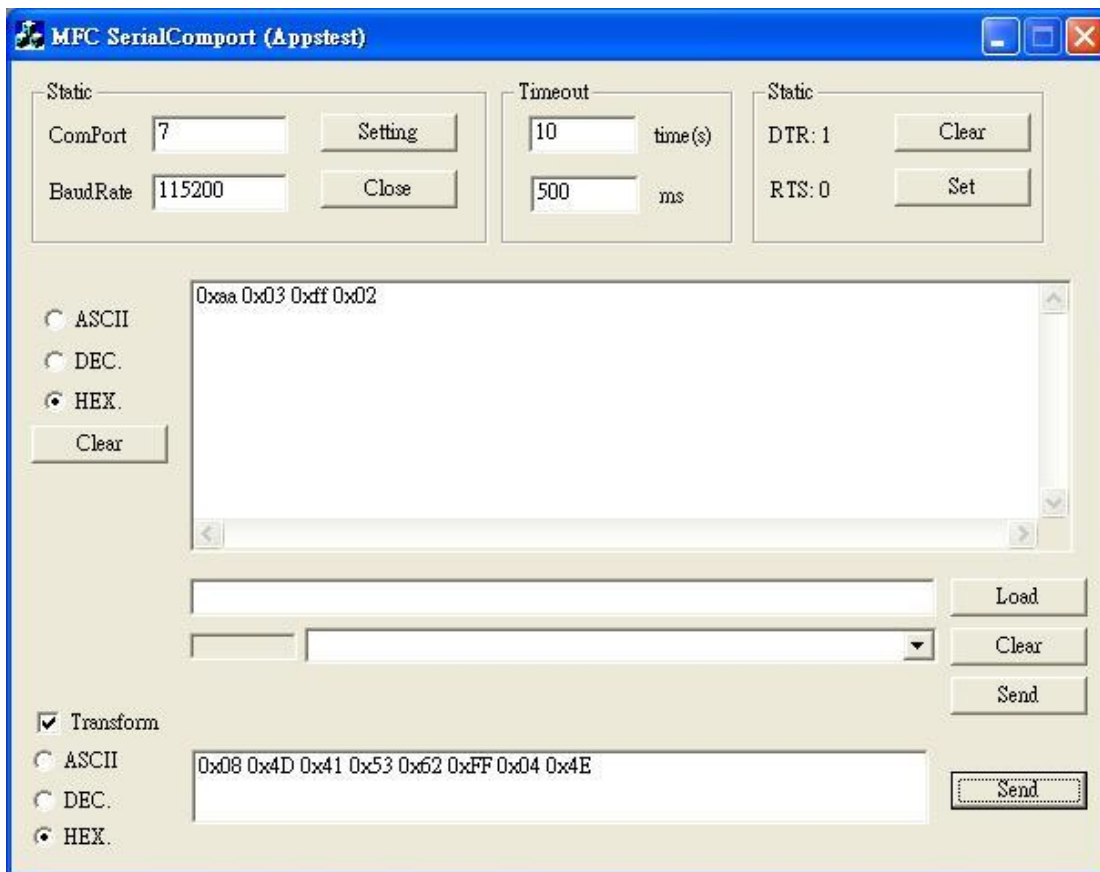
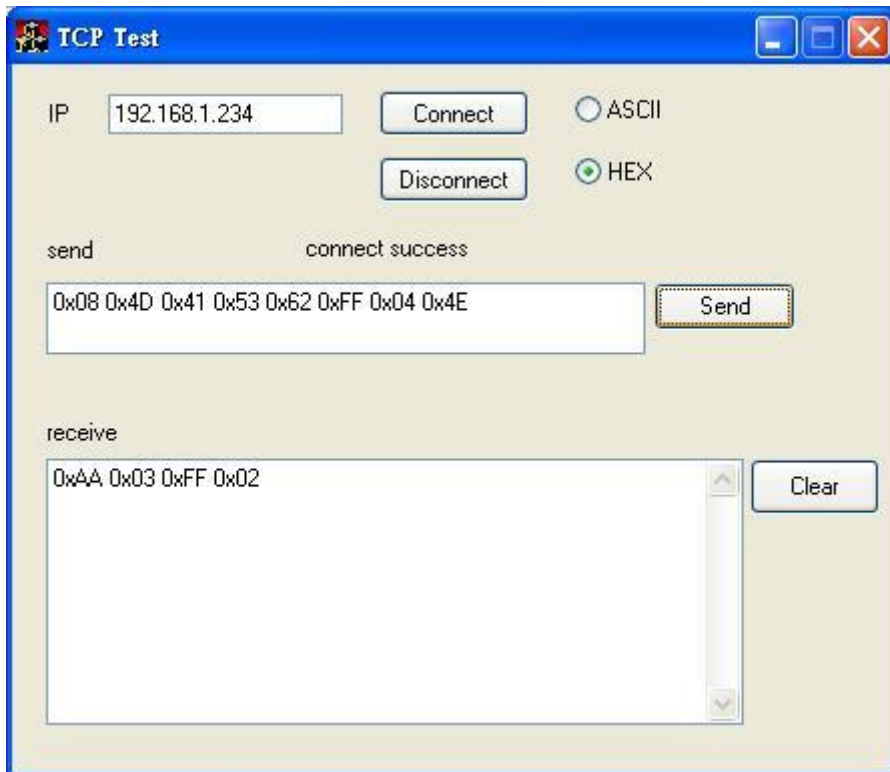


Check Video Ouput Link			
Function Description: Check each video output link display or not.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x4E	
7	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
0	Receive Length	0x26	
1	Receive Parameter 1	(0x00    0x01)	0x01: Output channel "1" link 0x00: No link display
2	Receive Parameter 2	(0x00    0x01)	0x01: Output channel "2" link 0x00: No link display
.	.	.	.
.	.	.	.
.	.	.	.
36	Receive Parameter 36	(0x00    0x01)	0x01: Output channel "36" link 0x00: No link display
37	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);

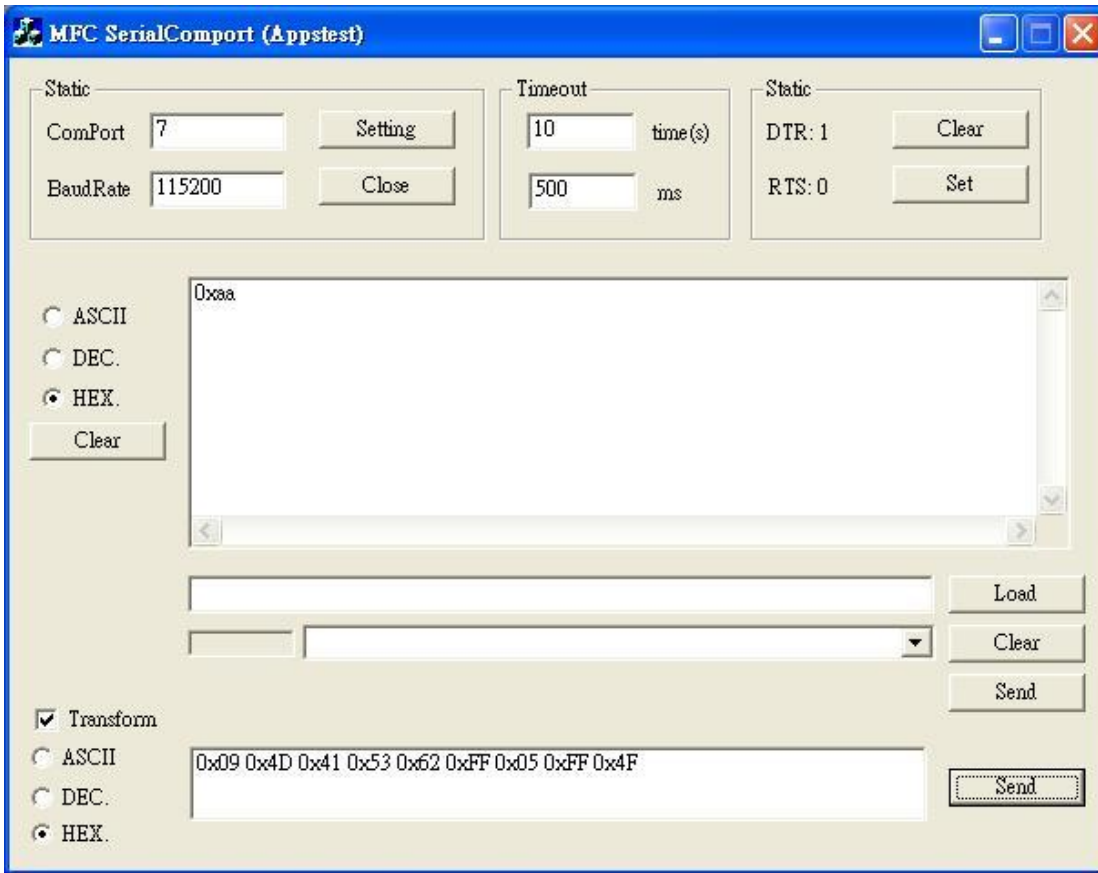
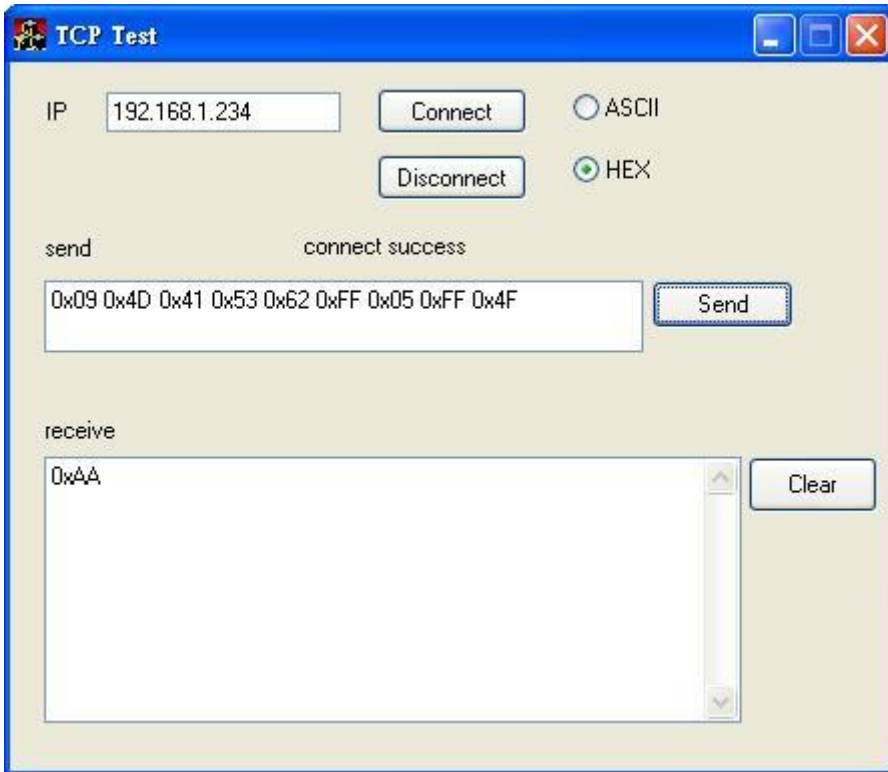
This command will take several times.



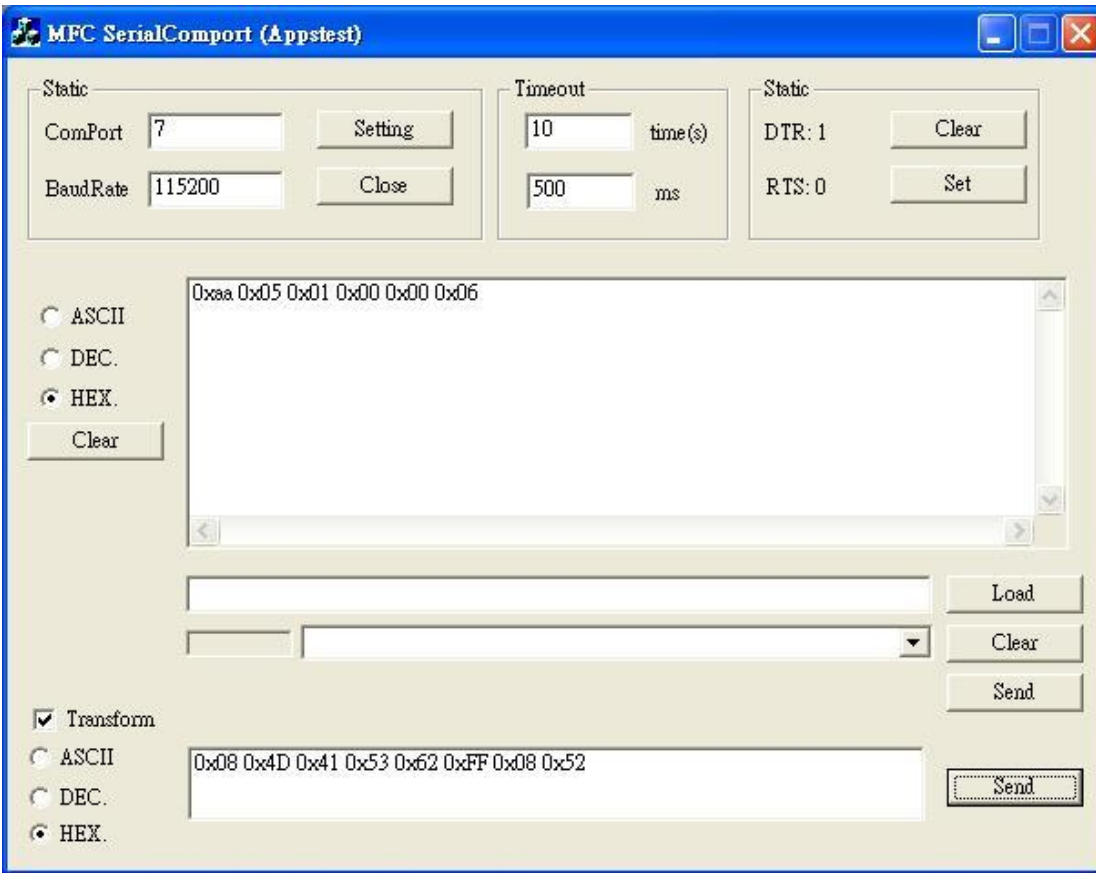
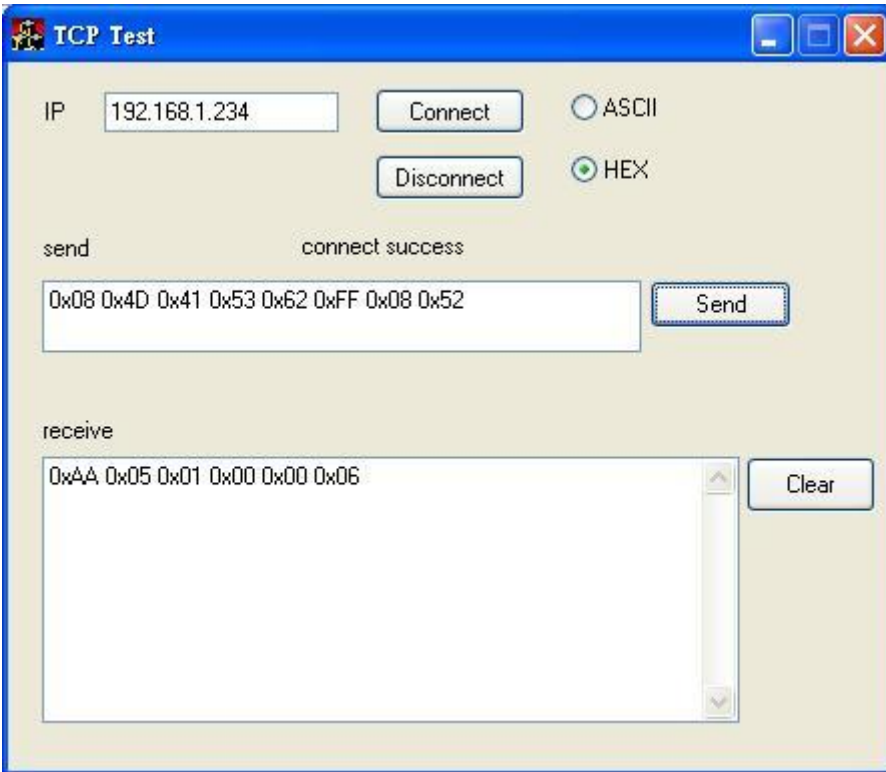
Get Device ID			
Function Description: Get Device ID			
Command			
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID	0xFF	
6	Command ID	0x04	
7	Check Sum	0x4E	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
0	Receive Length	0x03	
1	Receive Parameter 1	A1	Device ID is A1
2	Check Sum	0x03+ A1	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);



Set Device ID			
Function Description: Set Device ID			
Command			
Byte	Name	Value	Comment
0	Command Length	0x09	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID	0xFF	
6	Command ID	0x05	
7	Command Parameter 1	A1	Set Device ID to A1
8	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
No Receive			



Get Firmware Version			
Function Description: Get Firmware Version charater.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x08	
7	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
0	Receive Length	0x05	
1	Receive Parameter 1	A1	ASCII Data for Describe Firmware Version
2	Receive Parameter 2	A2	
3	Receive Parameter 3	A3	
4	Check Sum	0x05+ A1+ A2+ A3	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);





## Get Input & Output Channel

### Function Description:

Get input and output channel number information.

### Command

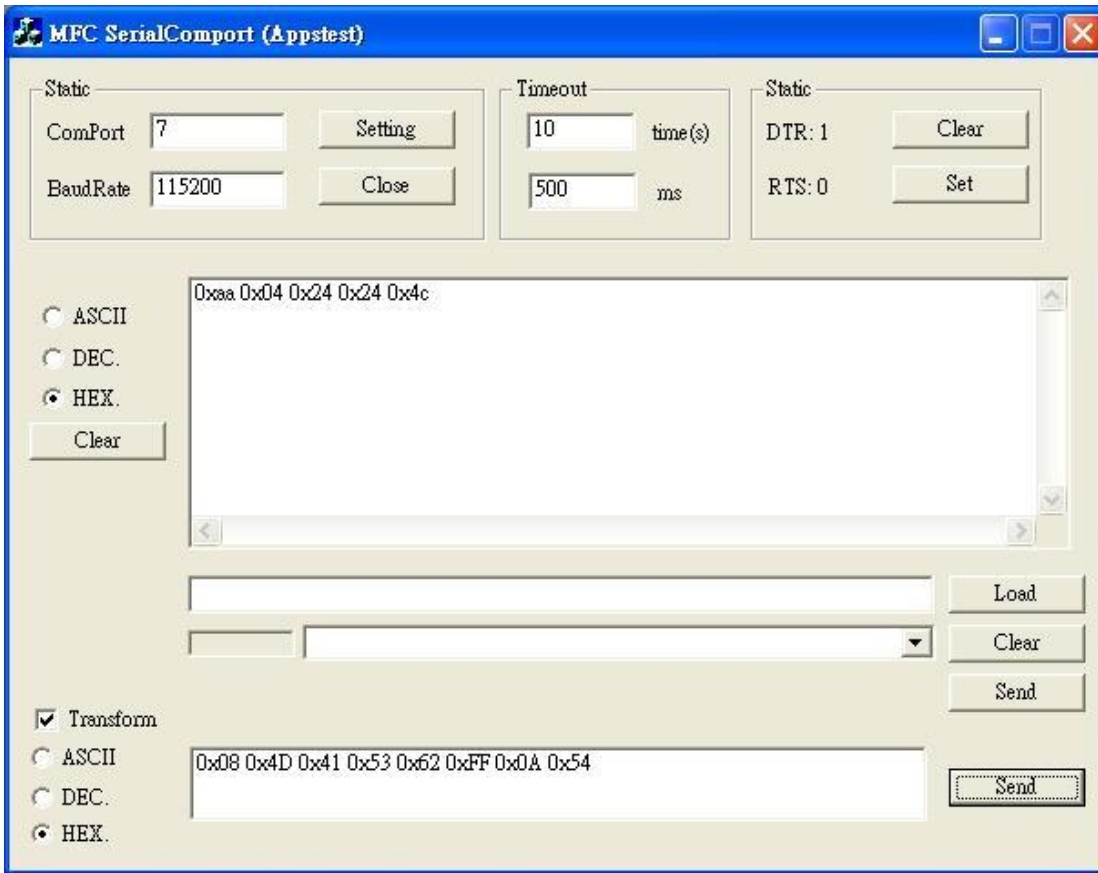
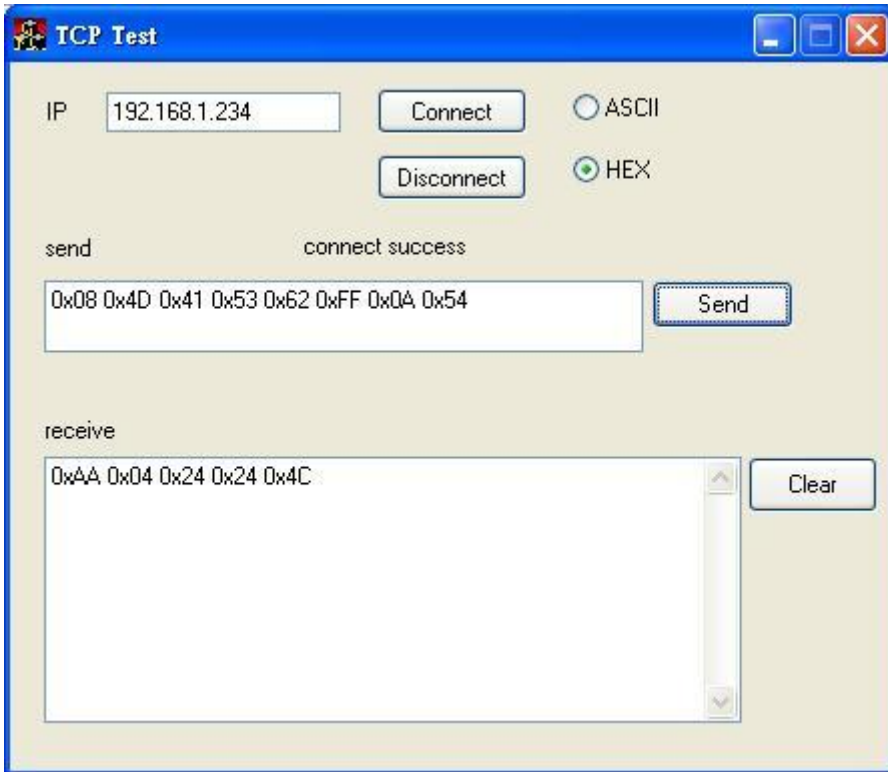
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x0A	
7	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);

### Acknowledgement character

0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
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### Receive

0	Receive Length	0x04	
1	Receive Parameter 1	A1	Video Input Number A1
2	Receive Parameter 2	A2	Video Output Number A2
3	Check Sum	0x04+A1+A2	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);



## Get Single Video Output Channel

### Function Description:

Get Single video output signal is from what input signal.

### Command

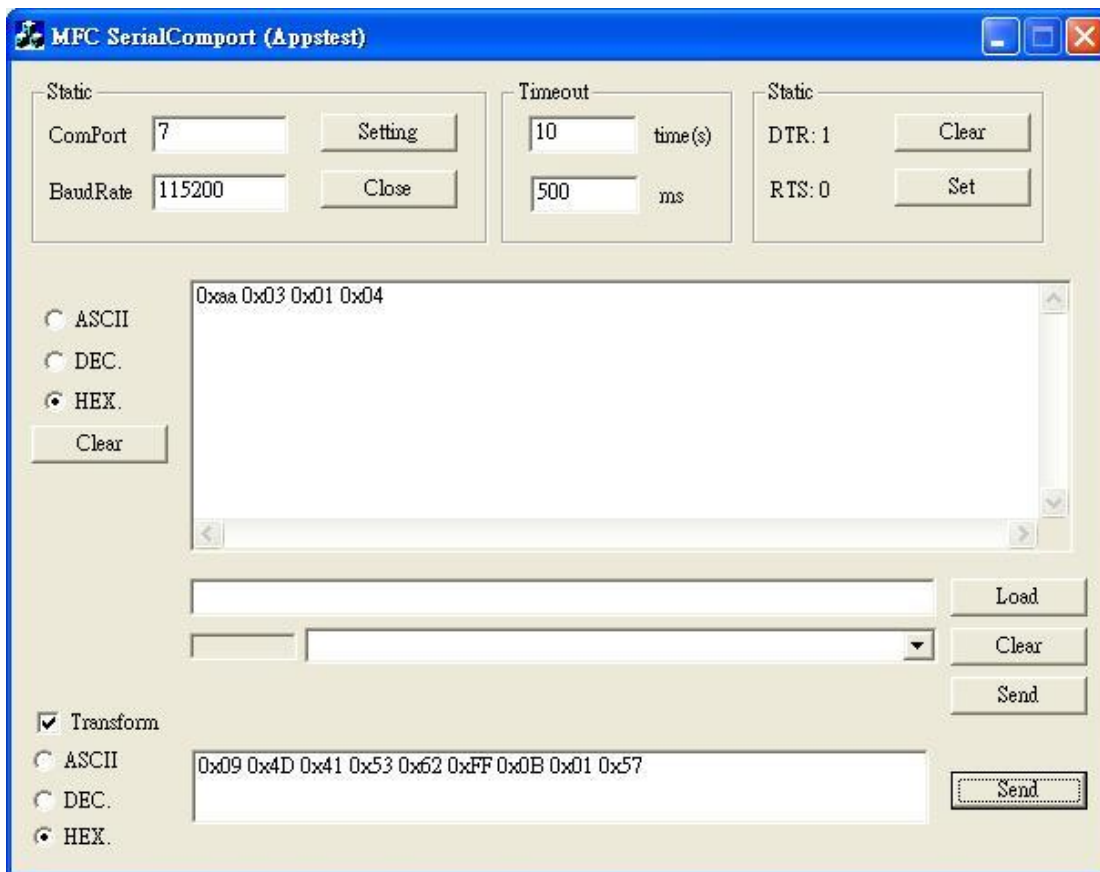
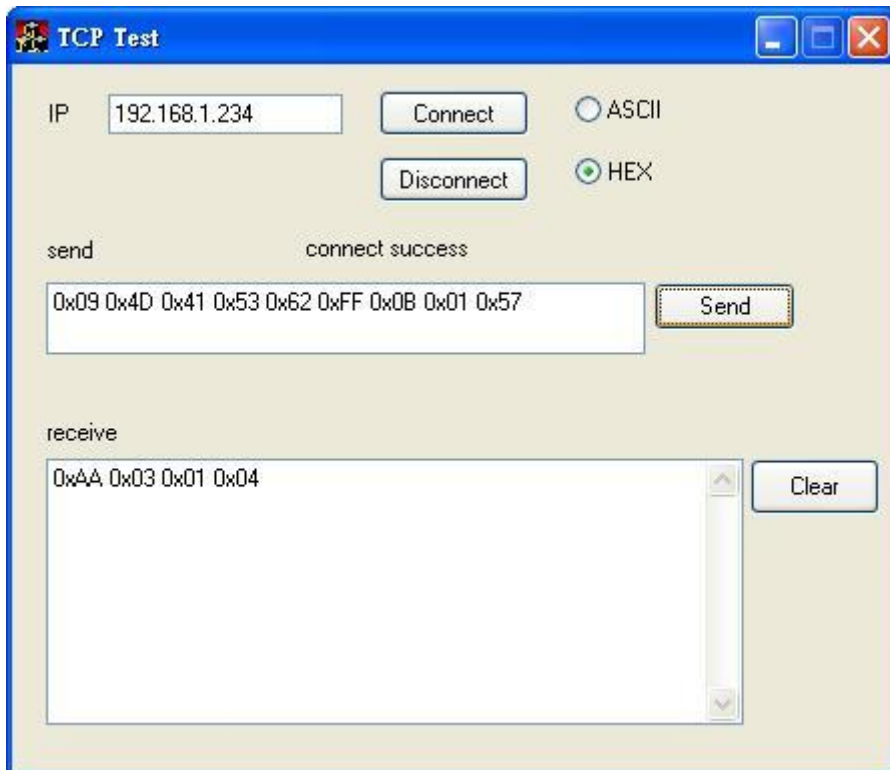
Byte	Name	Value	Comment
0	Command Length	0x09	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x0B	
7	Command Parameter 1	A1	The Output Channel <span style="color: red;">A1</span>
8	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);

### Acknowledgement character

0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
---	----------	-----------	--

### Receive

0	Receive Length	0x03	
1	Receive Parameter 1	A1	Video Input Number <span style="color: red;">A1</span>
2	Check Sum	0x03+ <span style="color: red;">A1</span>	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);



## Set Single Video Output Channel

### Function Description:

Set Single video output signal is from what input signal.

### Command

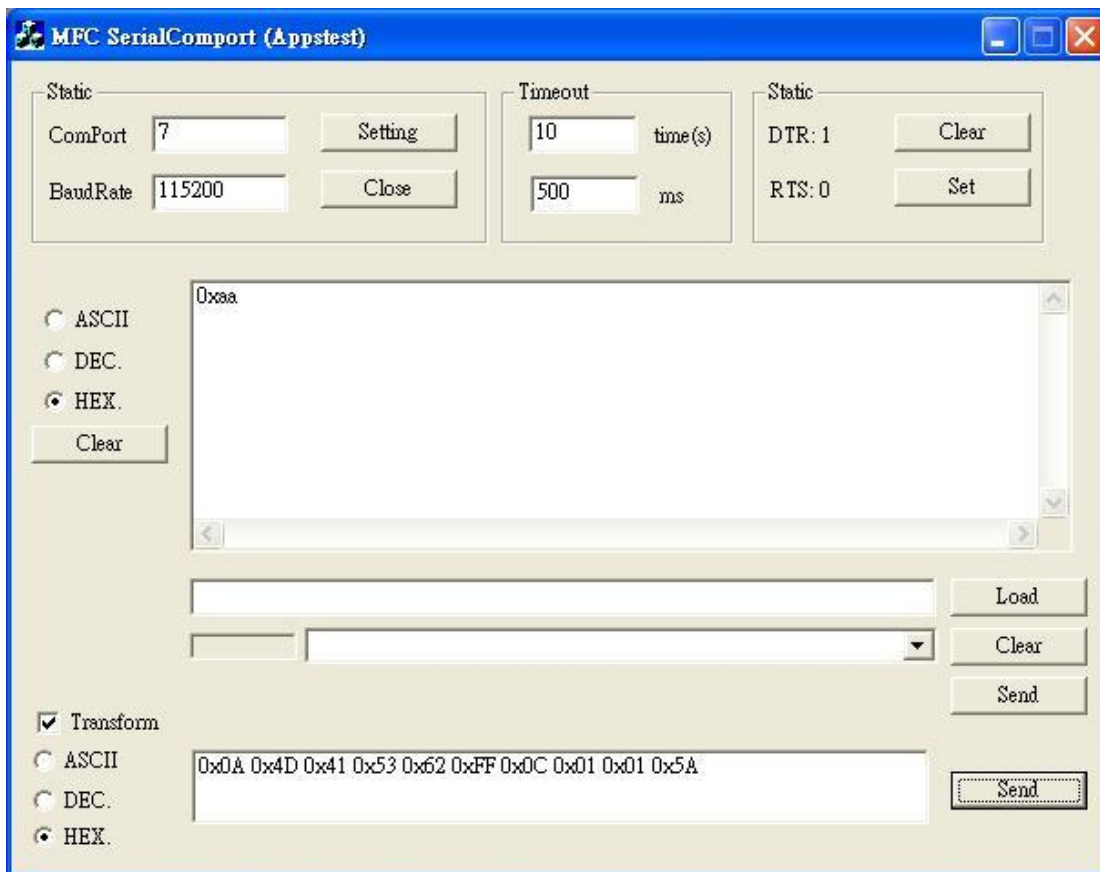
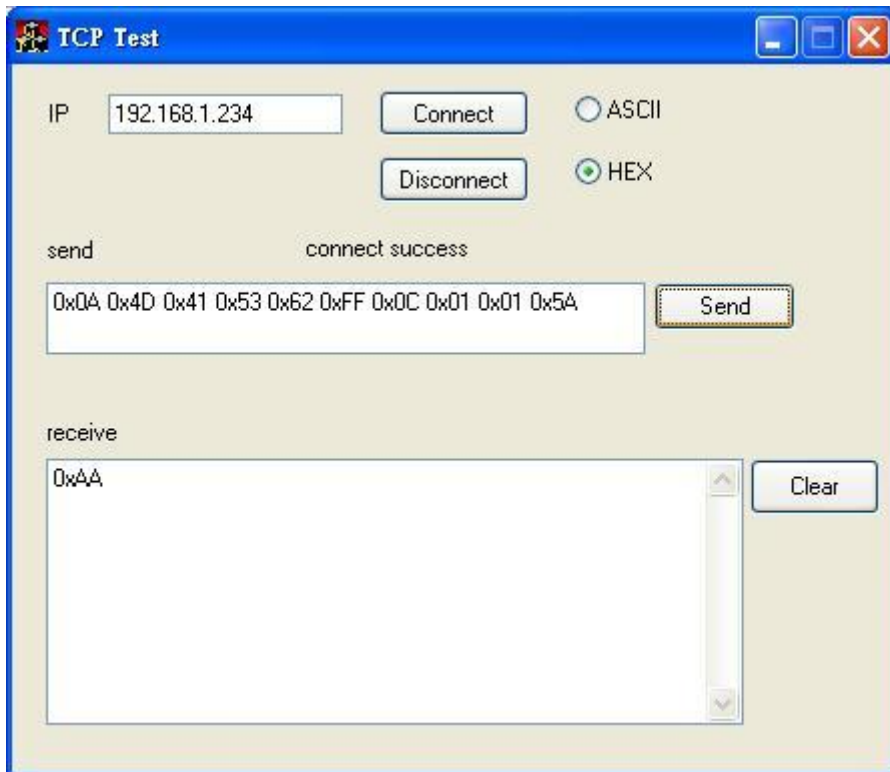
Byte	Name	Value	Comment
0	Command Length	0x0A	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x0C	
7	Command Parameter 1	A1	The Output Channel <span style="color: red;">A1</span>
8	Command Parameter 2	A2	The Input Channel <span style="color: red;">A2</span>
9	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);

### Acknowledgement character

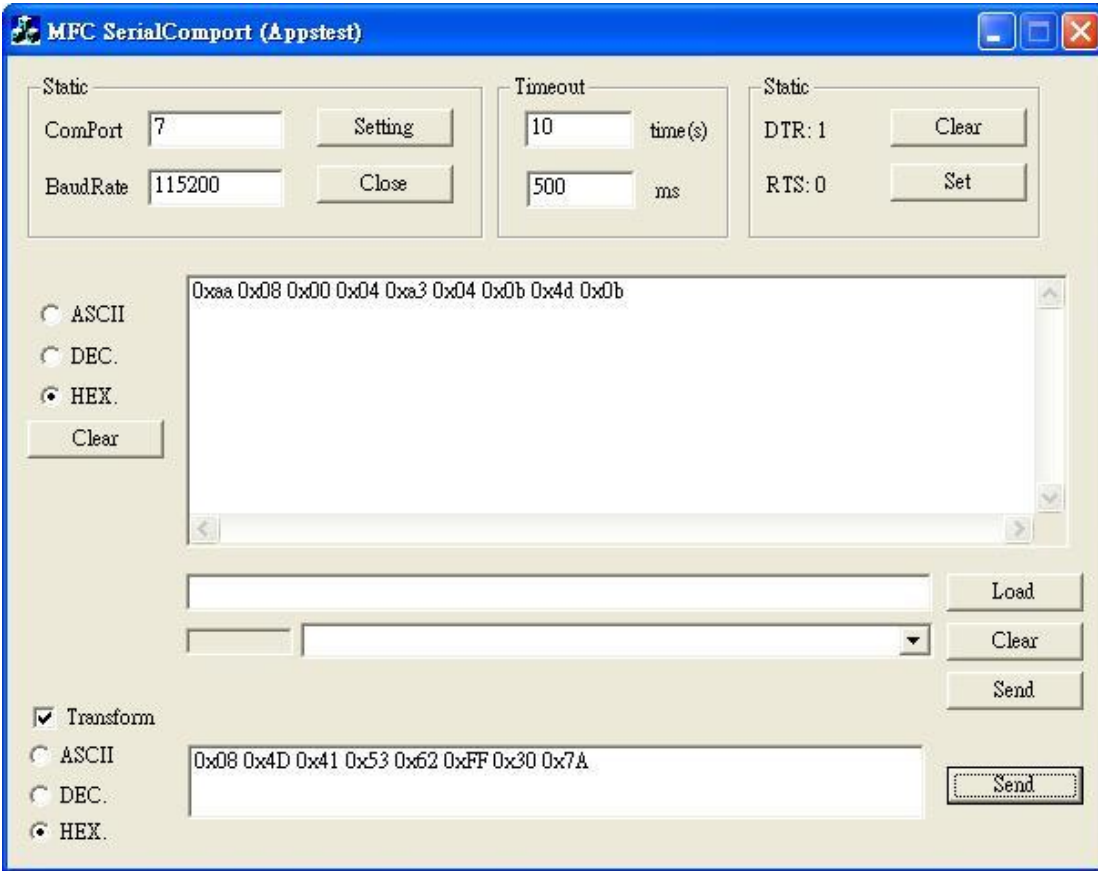
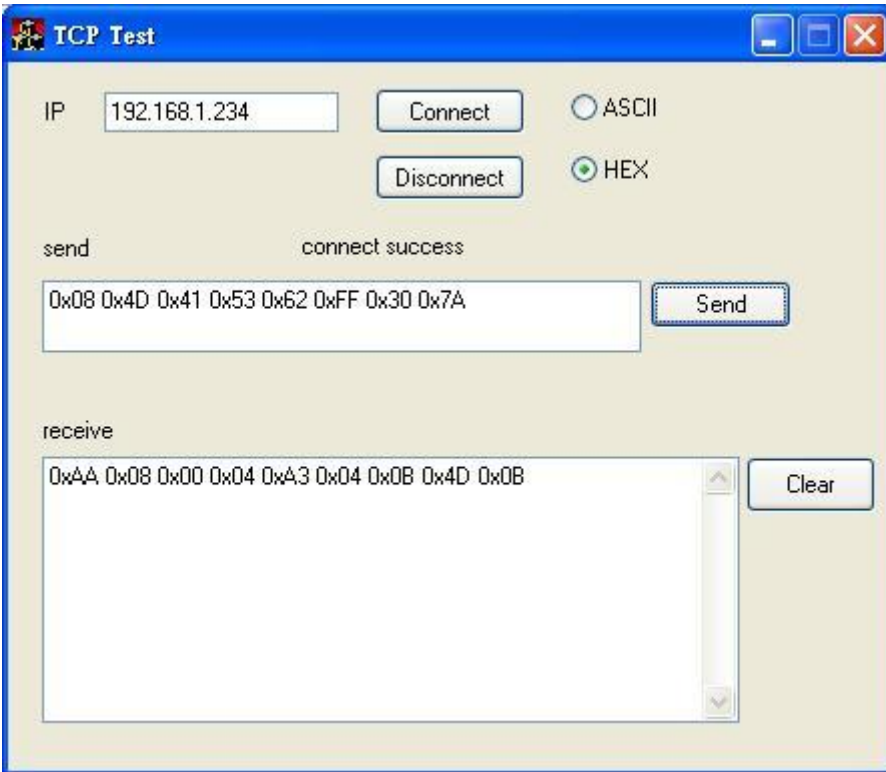
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
---	----------	-----------	--

### Receive

No Receive

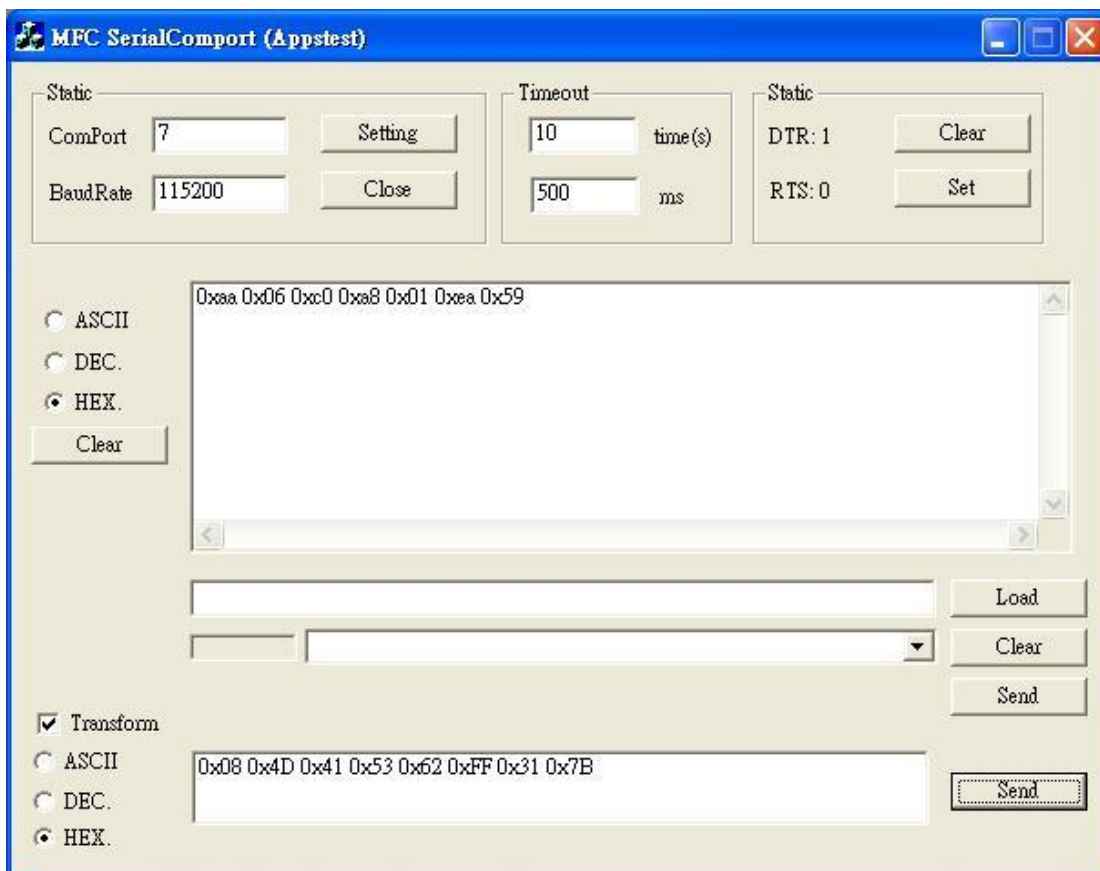
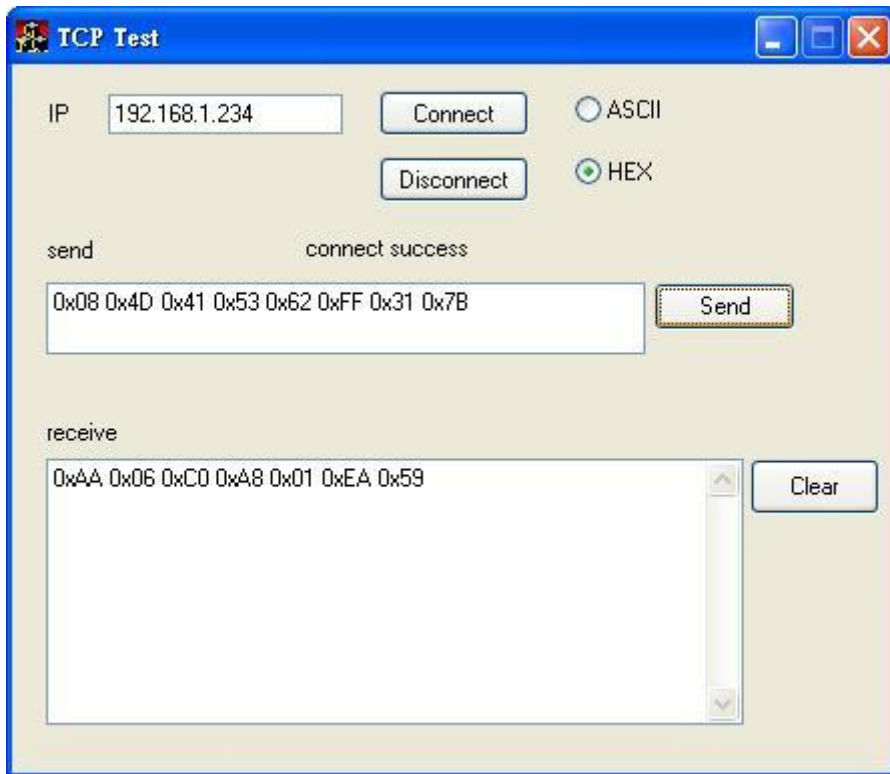


Get Machine MAC Address			
Function Description: Get Ethernet MAC address.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x30	
7	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
0	Receive Length	0x08	
1	Receive Parameter 1	A1	MAC Address 1 A1
2	Receive Parameter 2	A2	MAC Address 2 A2
3	Receive Parameter 3	A3	MAC Address 3 A3
4	Receive Parameter 4	A4	MAC Address 4 A4
5	Receive Parameter 5	A5	MAC Address 5 A5
6	Receive Parameter 6	A6	MAC Address 6 A6
7	Check Sum	0x08+A1+A2+ A3+ A4+ A5+ A6	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);

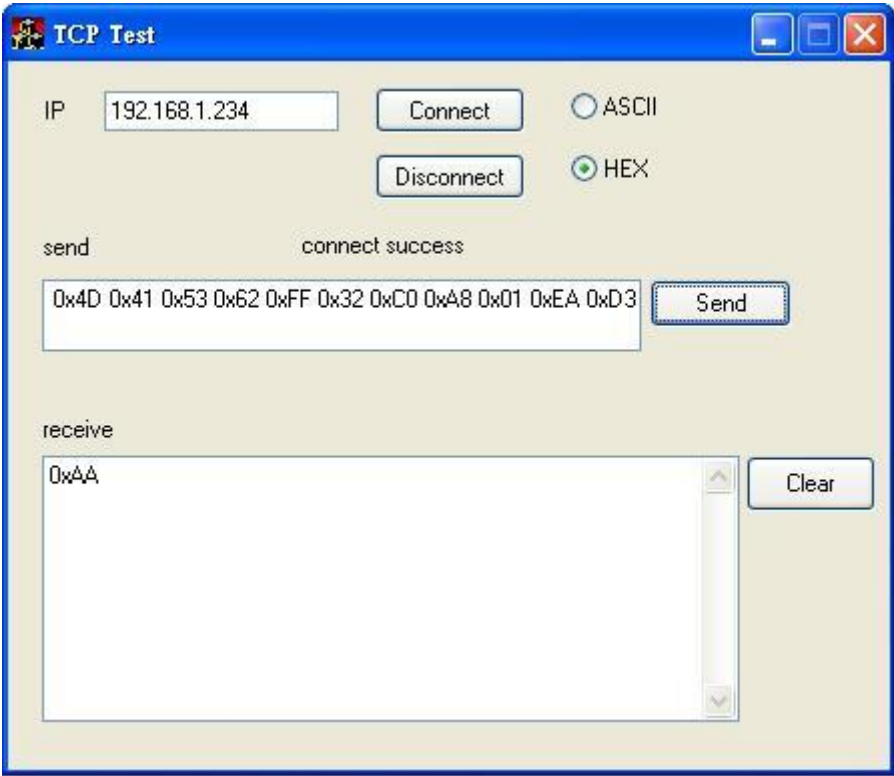


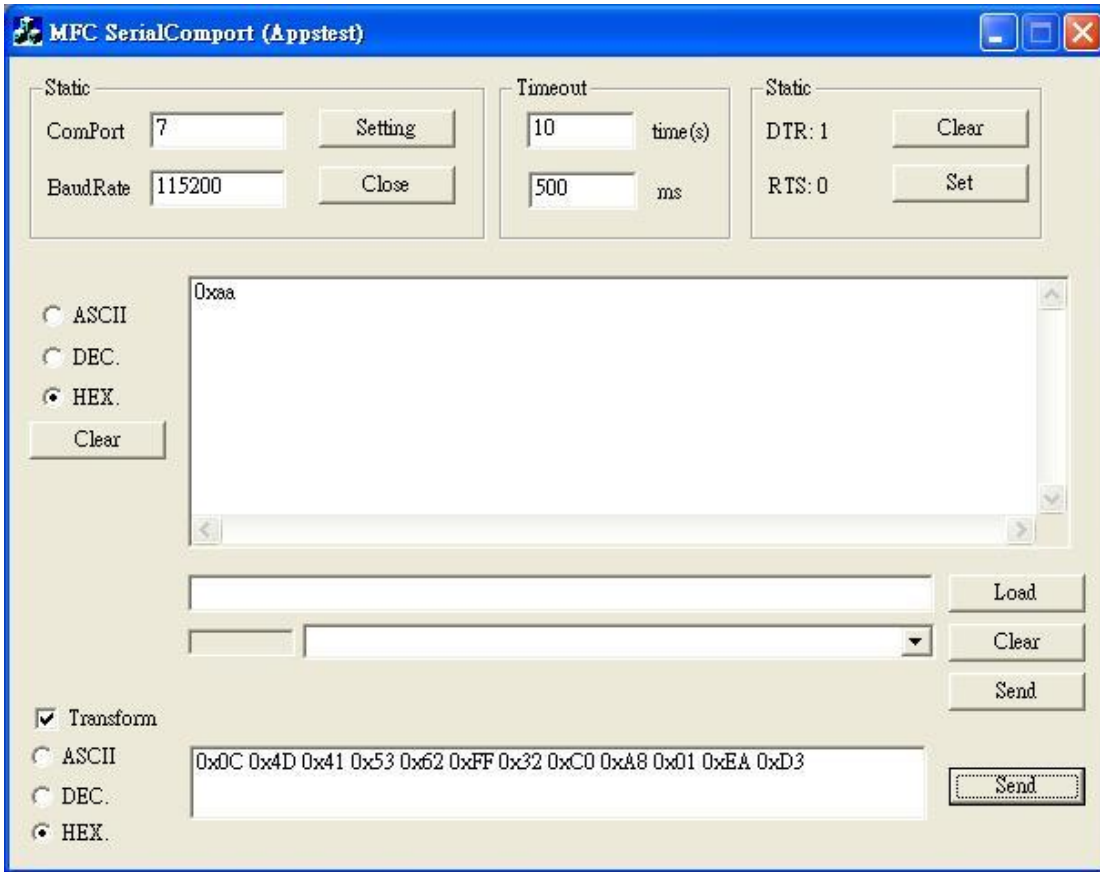


Get IP Address			
Function Description: Get Ethernet IP address.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x31	
7	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
0	Receive Length	0x06	
1	Receive Parameter 1	A1	IP Address 1 A1
2	Receive Parameter 2	A2	IP Address 2 A2
3	Receive Parameter 3	A3	IP Address 3 A3
4	Receive Parameter 4	A4	IP Address 4 A4
7	Check Sum	0x06+A1+A2+ A3+ A4	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);



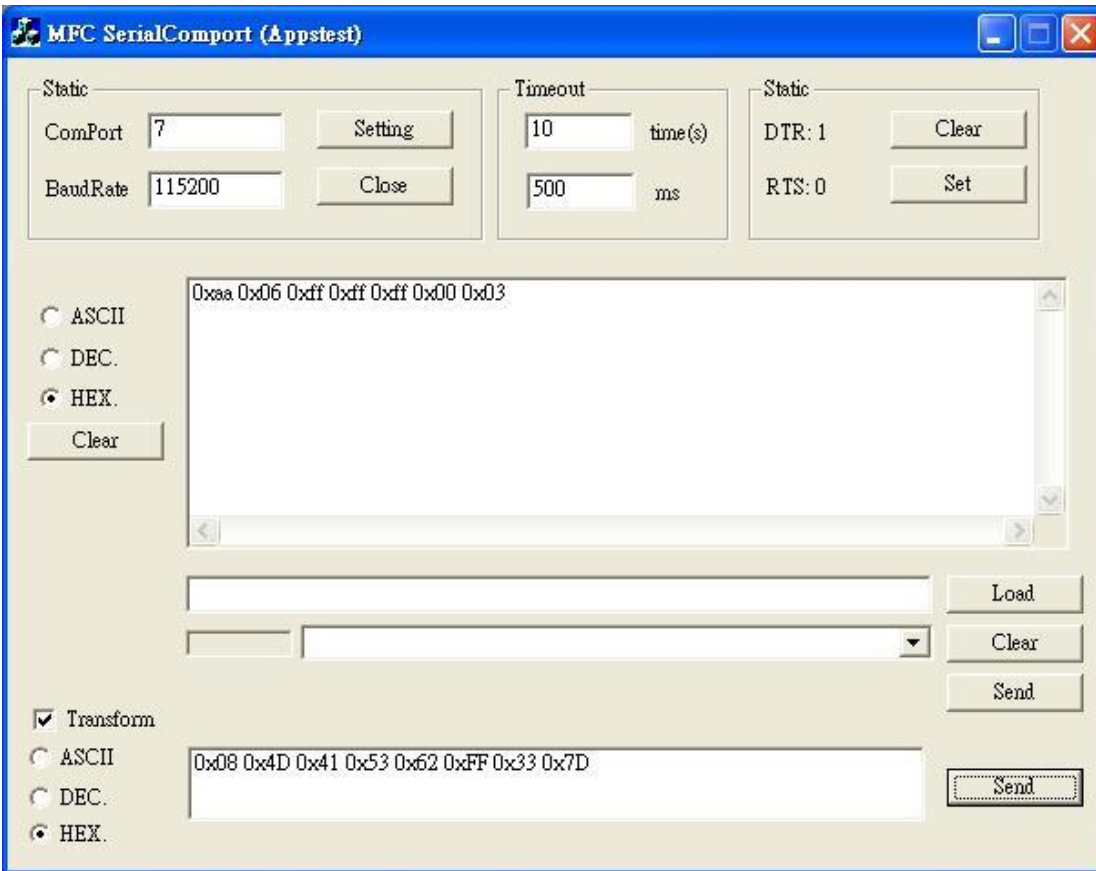
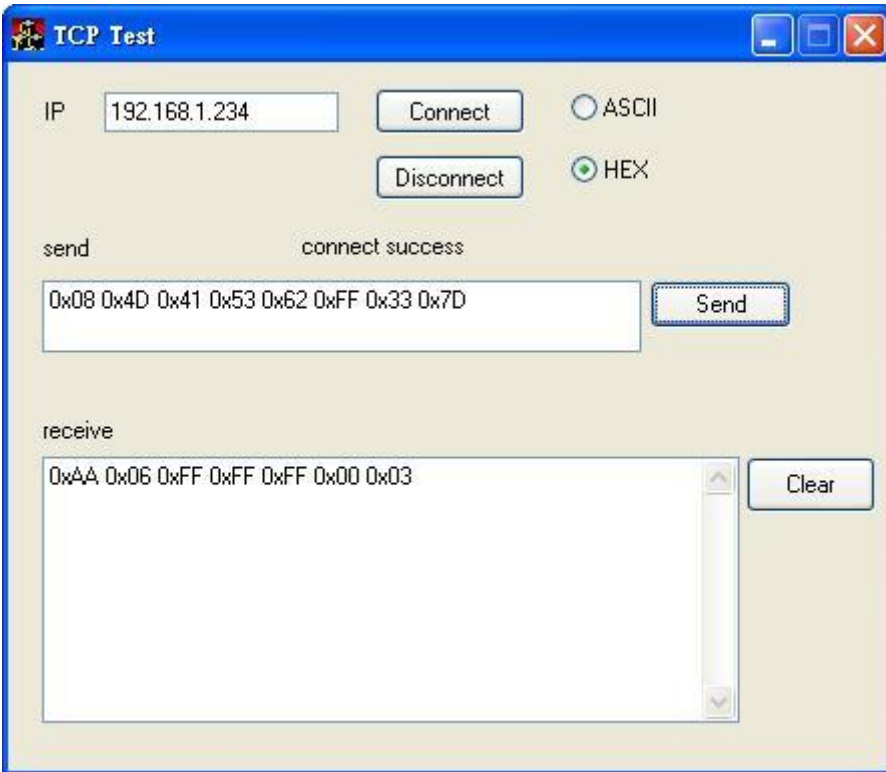
Set IP Address			
Function Description: Set ethernet IP Address.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x0C	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x32	
7	Command Parameter 1	A1	Set IP Address 1 A1
8	Command Parameter 2	A2	Set IP Address 2 A2
9	Command Parameter 3	A3	Set IP Address 3 A3
10	Command Parameter 4	A4	Set IP Address 4 A4
11	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
No Receive			





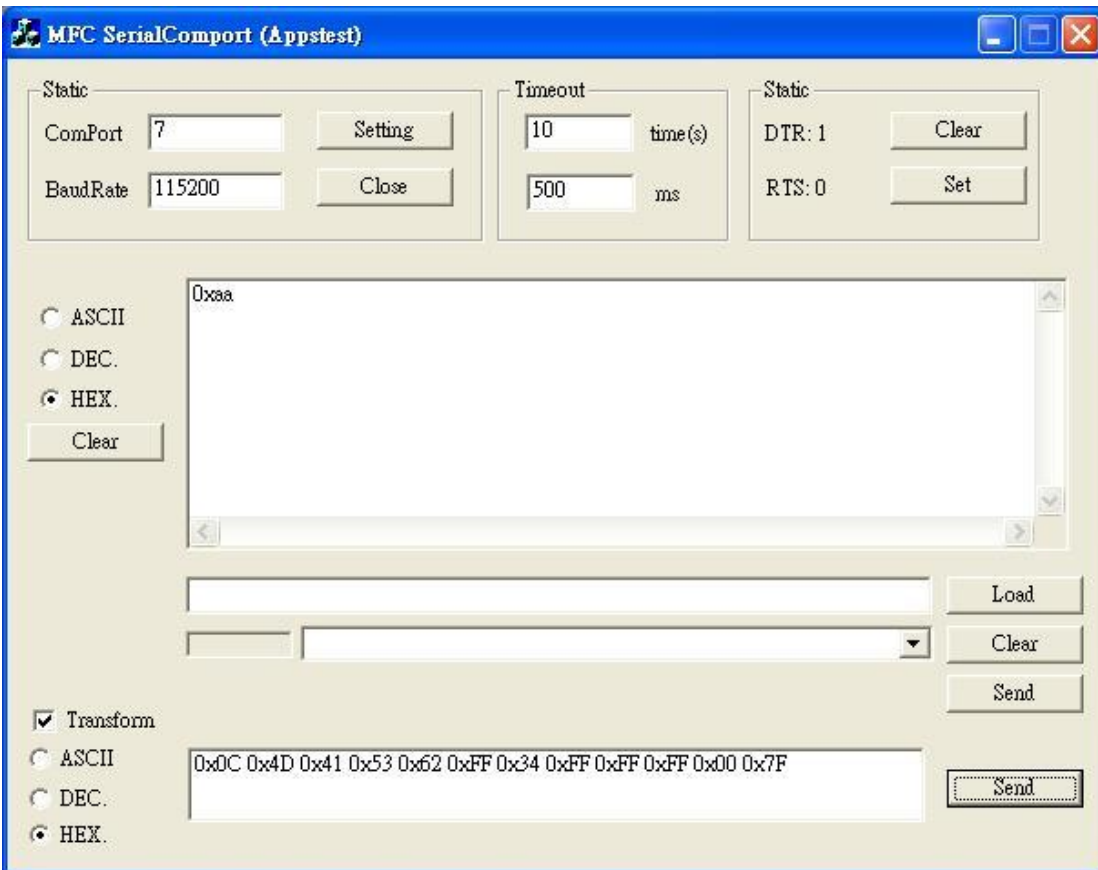
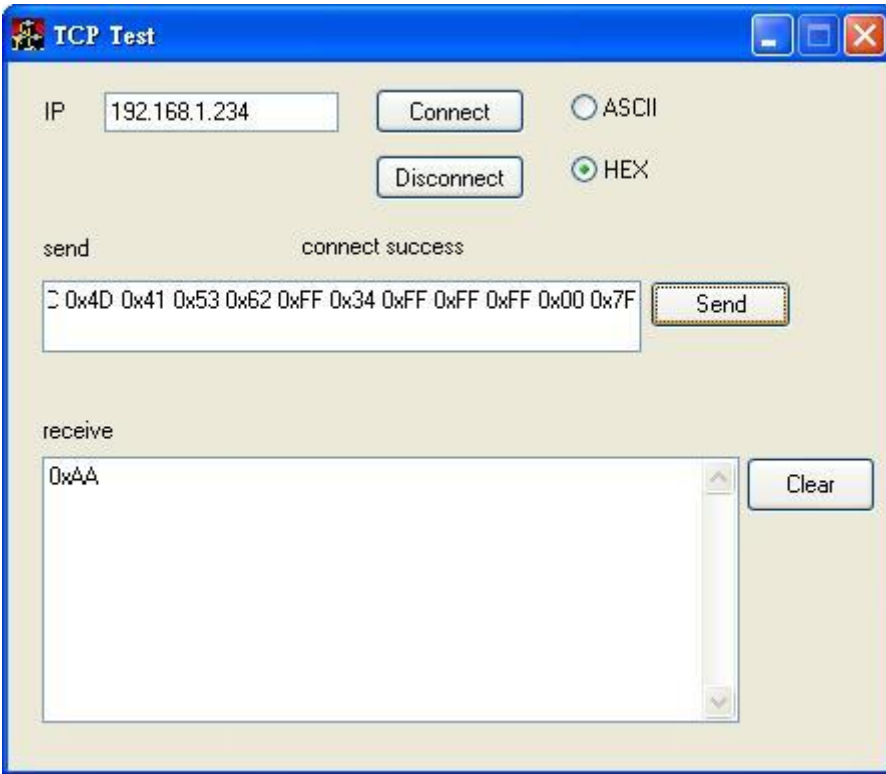
Get Subnetmask			
Function Description: Get Ethernet subnetmask.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x33	
7	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right

			NACK: 0x55 Command Value is error.
Receive			
0	Receive Length	0x06	
1	Receive Parameter 1	A1	Subnetmask Byte1 A1
2	Receive Parameter 2	A2	Subnetmask Byte 2 A2
3	Receive Parameter 3	A3	Subnetmask Byte 3 A3
4	Receive Parameter 4	A4	Subnetmask Byte 4 A4
7	Check Sum	0x06+A1+A2+ A3+ A4	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);

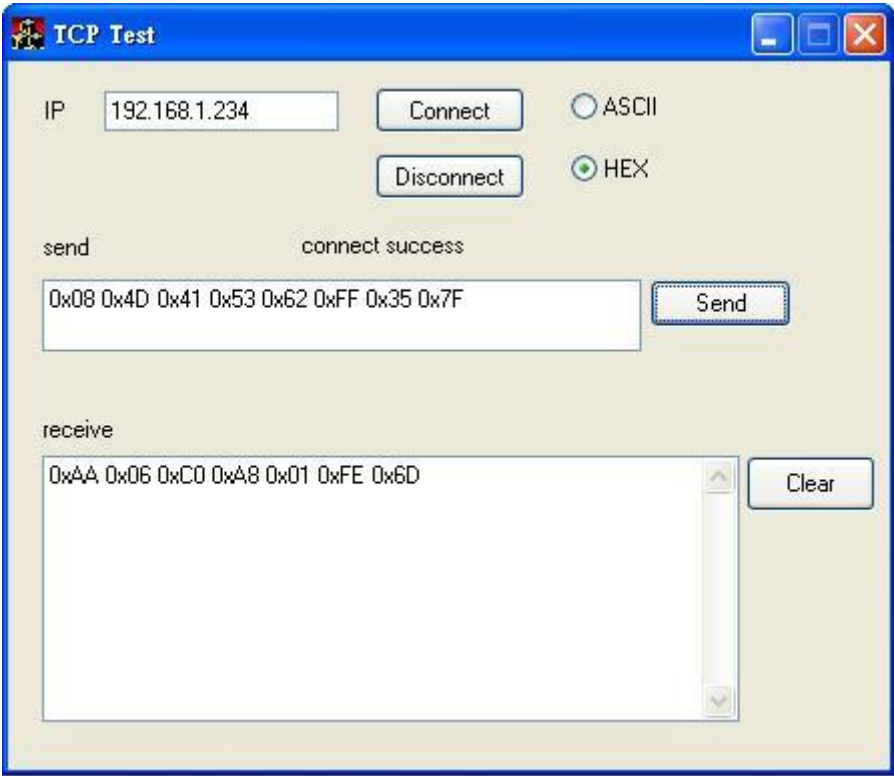


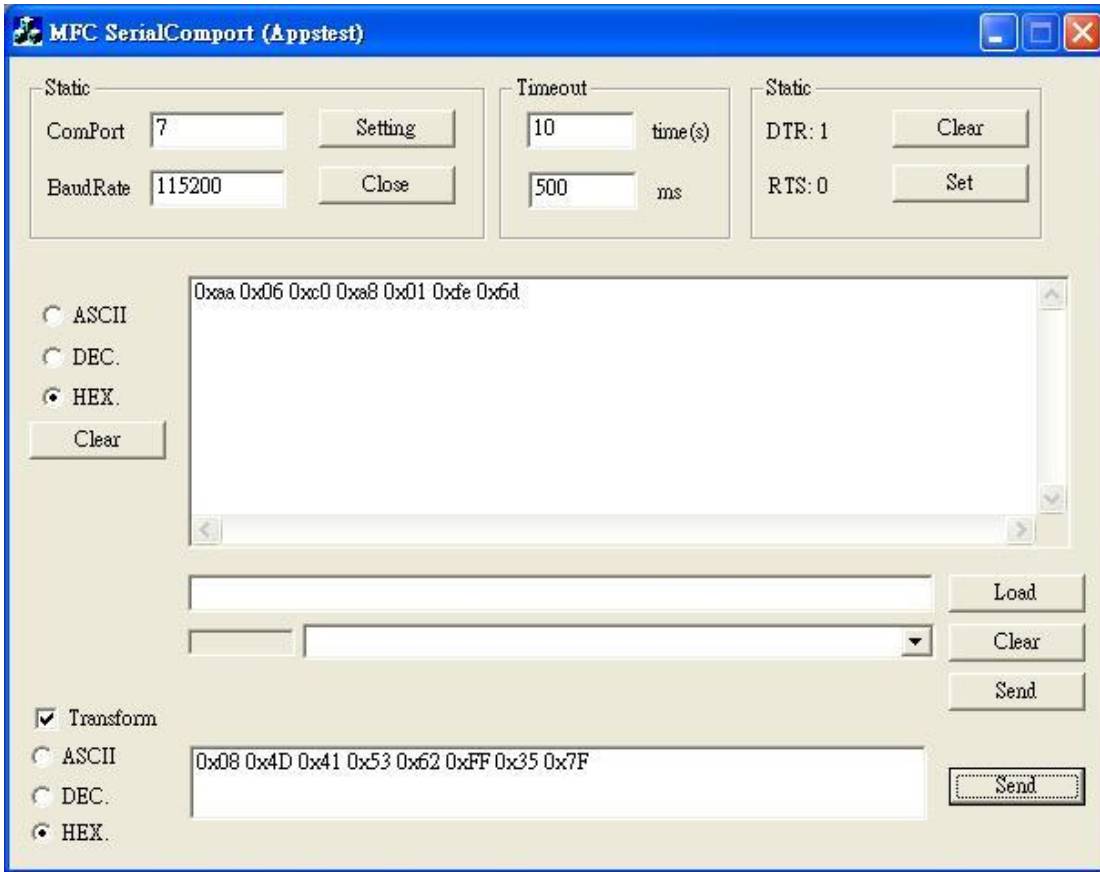
Set Subnetmask			
Function Description: Set Ethernet subnetmask.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x0C	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x34	
7	Command Parameter 1	A1	Set subnetmask Byte1 A1
8	Command Parameter 2	A2	Set subnetmask Byte2 A2
9	Command Parameter 3	A3	Set subnetmask Byte3 A3
10	Command Parameter 4	A4	Set subnetmask Byte4 A4
11	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
No Receive			





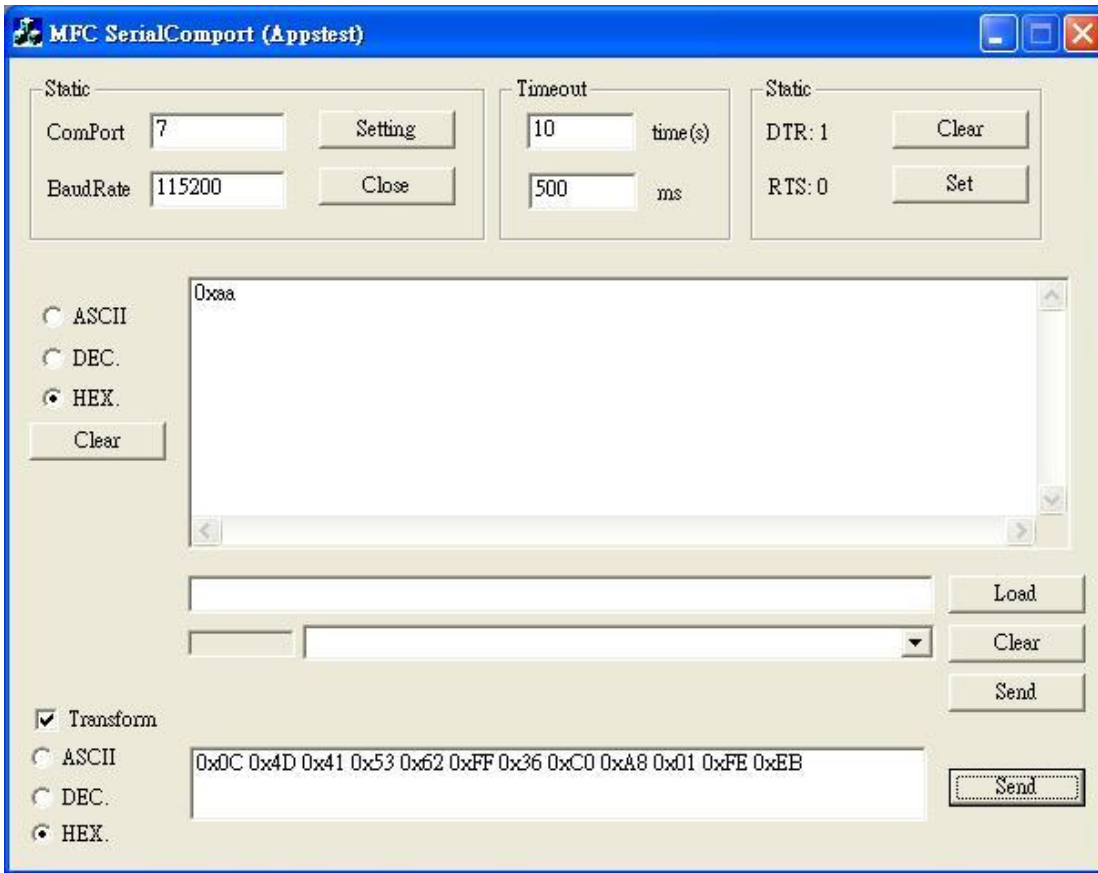
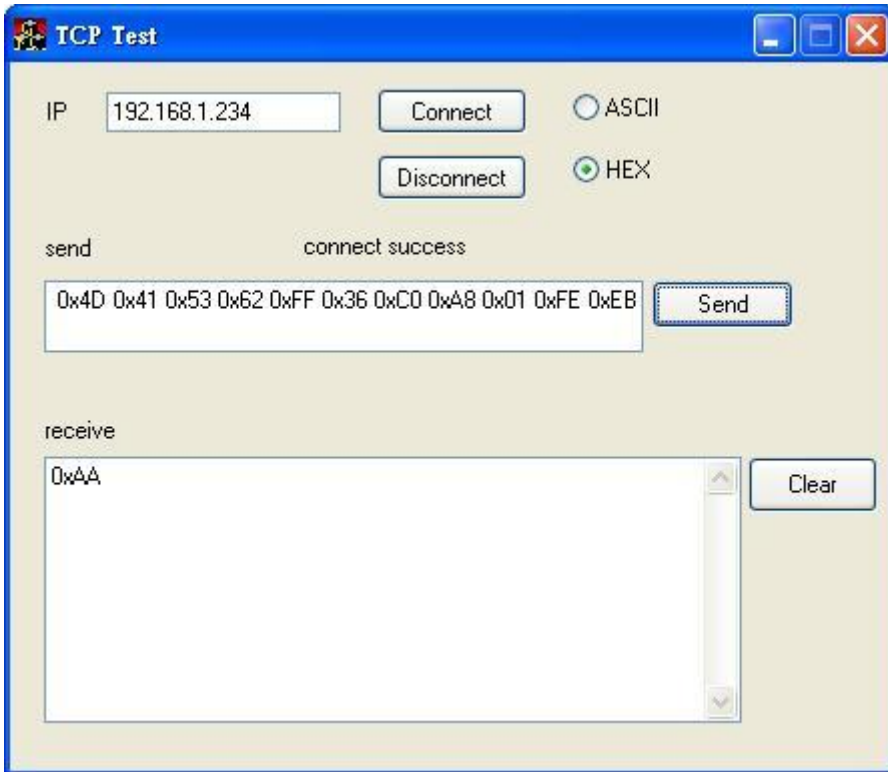
Get Default Gate			
Function Description: Get Ethernet default gate.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x35	
7	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
0	Receive Length	0x06	
1	Receive Parameter 1	A1	Default gate Byte 1 A1
2	Receive Parameter 2	A2	Default gate Byte 2 A2
3	Receive Parameter 3	A3	Default gate Byte 3 A3
4	Receive Parameter 4	A4	Default gate Byte 4 A4
7	Check Sum	0x06+A1+A2+ A3+ A4	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);



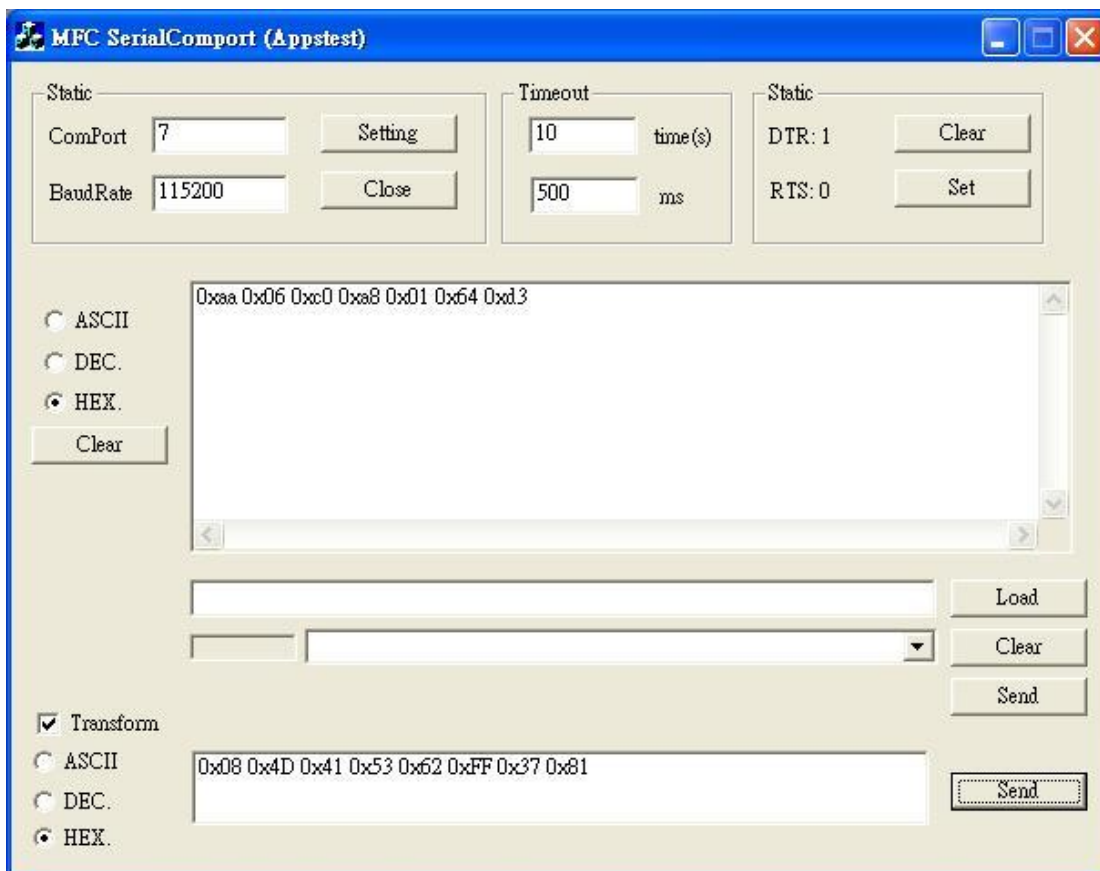
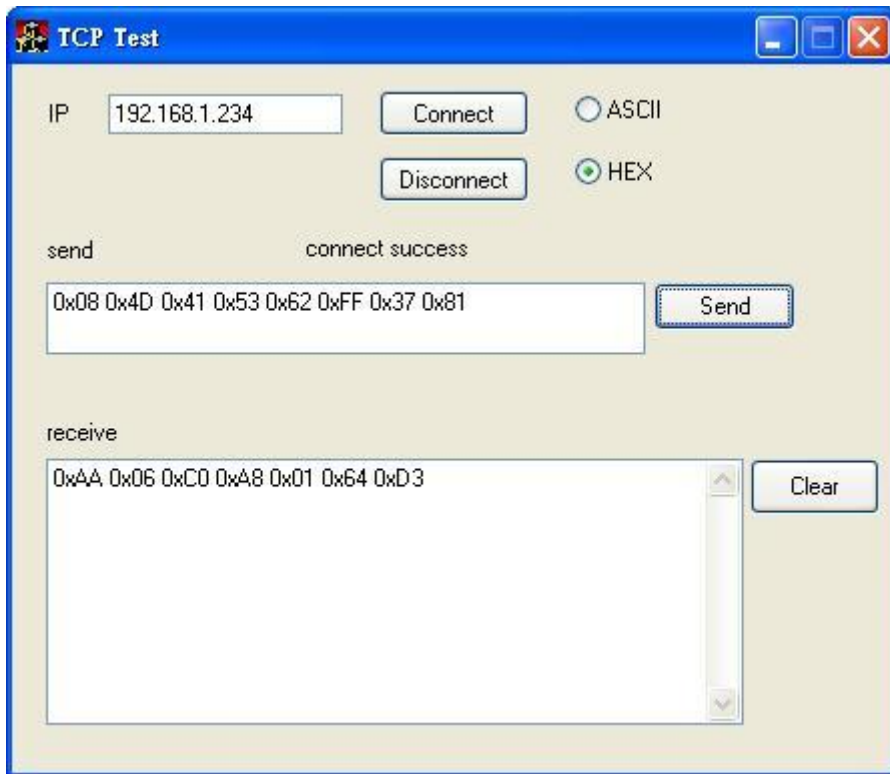


Set Default Gate			
Function Description: Set Ethernet default gate.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x0C	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x36	
7	Command Parameter 1	A1	Set default gate Byte1 A1
8	Command Parameter 2	A2	Set default gate Byte2 A2
9	Command Parameter 3	A3	Set default gate Byte3 A3

10	Command Parameter 4	A4	Set default gate Byte4 A4
11	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
No Receive			

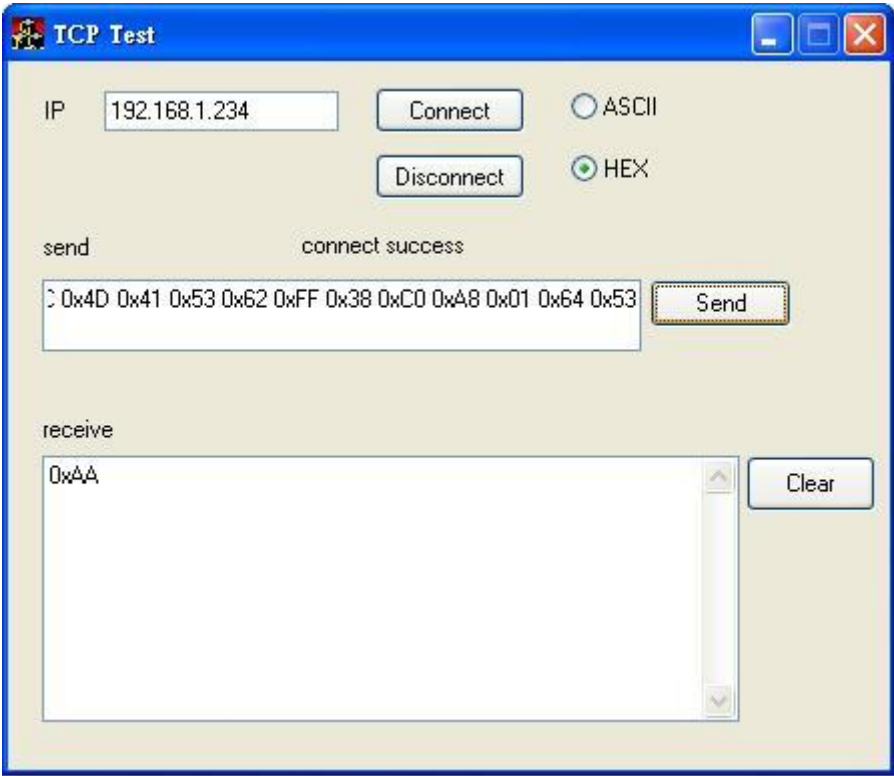


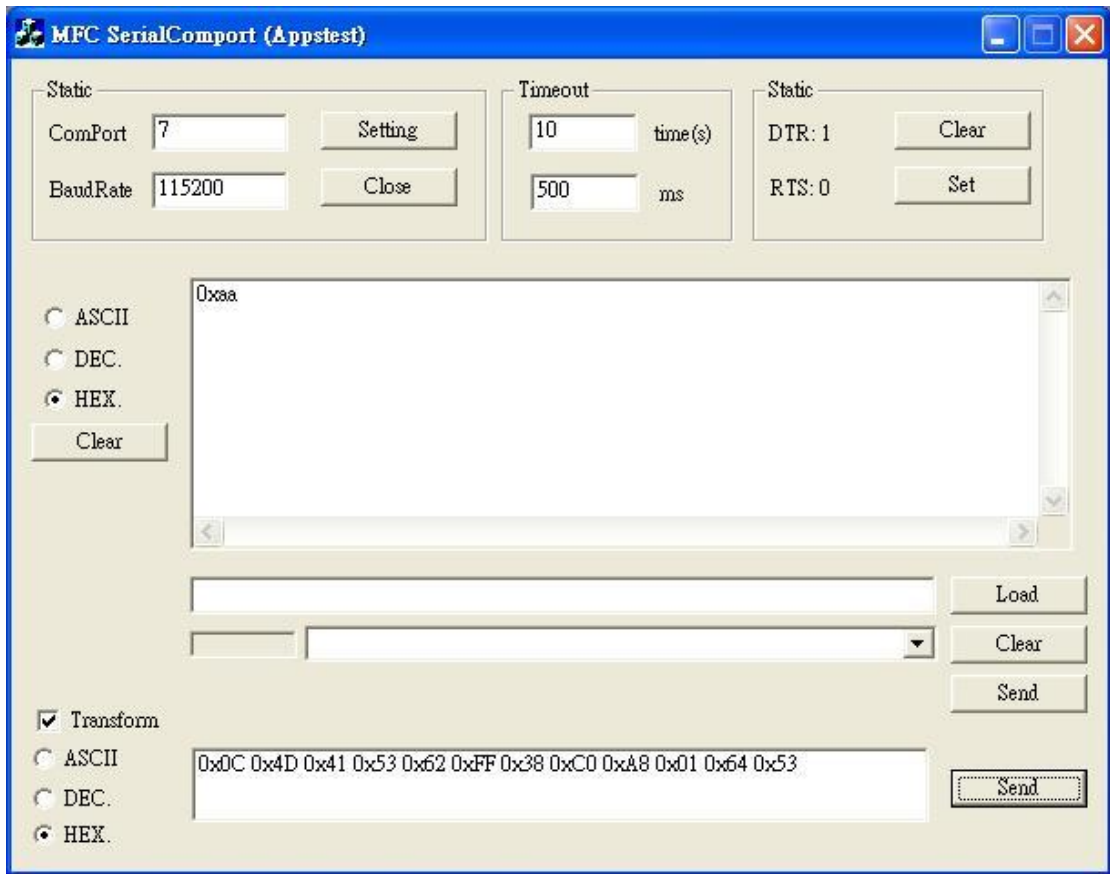
Get Primary DNS Address			
Function Description: Get Ethernet primary DNS.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x37	
7	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
0	Receive Length	0x06	
1	Receive Parameter 1	A1	Primary DNS Byte 1 A1
2	Receive Parameter 2	A2	Primary DNS Byte 2 A2
3	Receive Parameter 3	A3	Primary DNS Byte 3 A3
4	Receive Parameter 4	A4	Primary DNS Byte 4 A4
7	Check Sum	0x06+A1+A2+ A3+ A4	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);





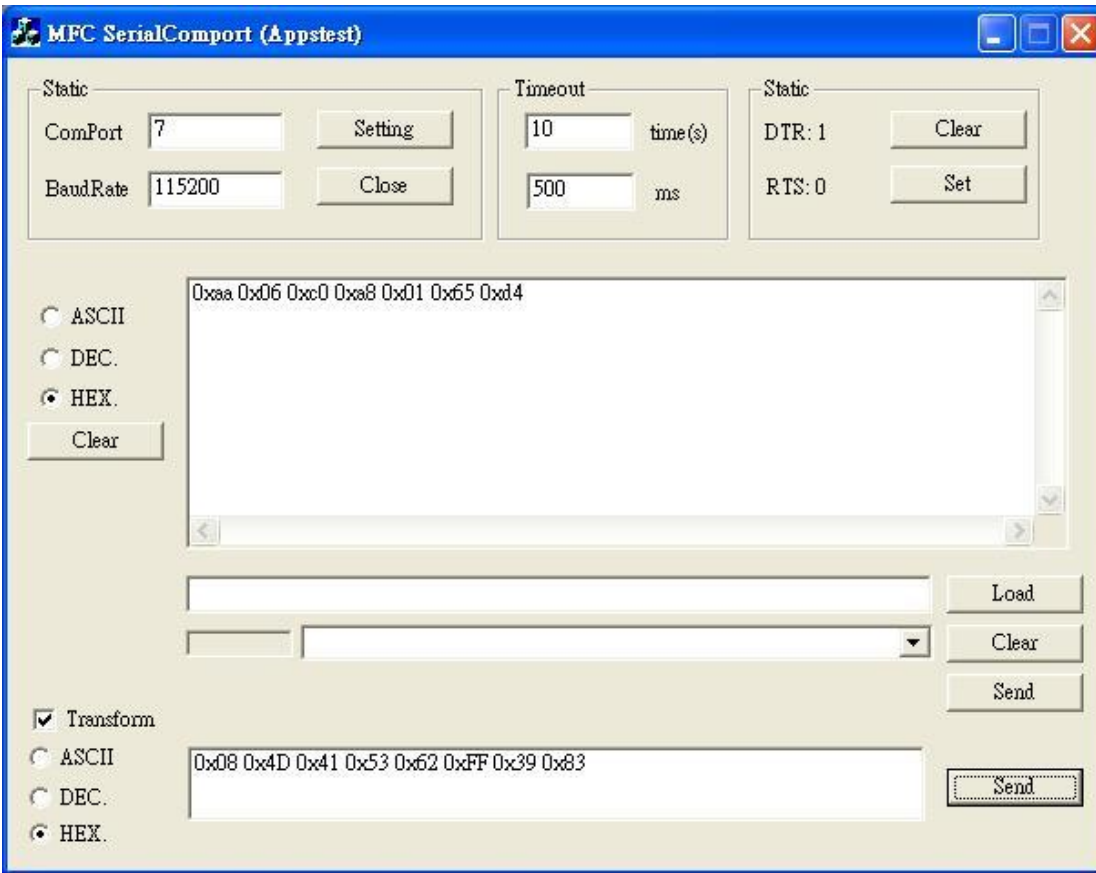
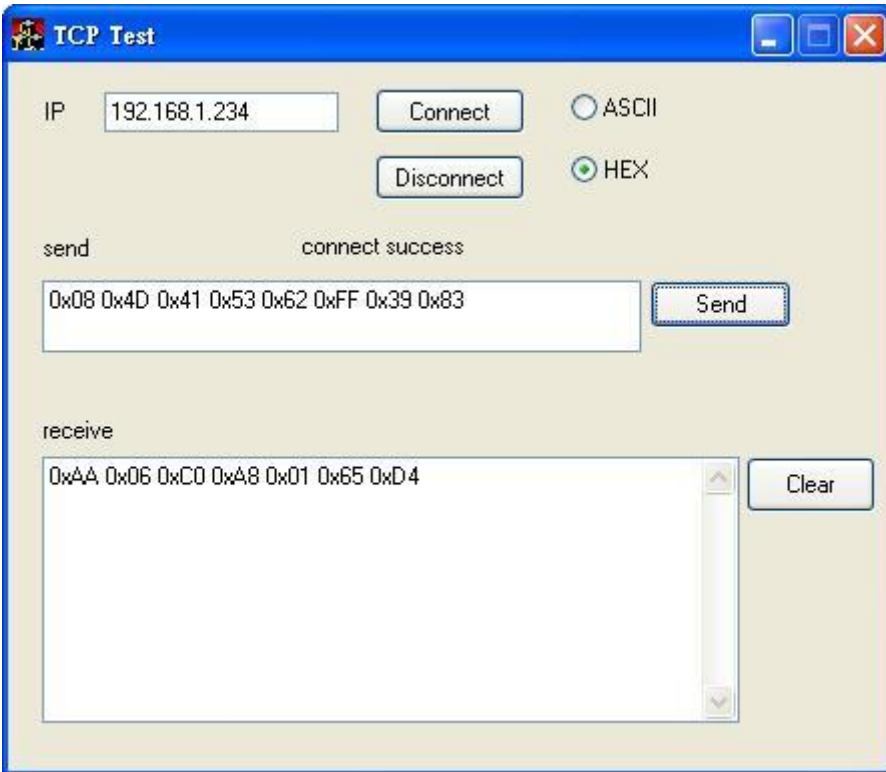
Set Primary DNS Byte			
Function Description: Set Ethernet primary DNS byte.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x0C	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x38	
7	Command Parameter 1	A1	Set primary DNS Byte1 A1
8	Command Parameter 2	A2	Set primary DNS Byte2 A2
9	Command Parameter 3	A3	Set primary DNS Byte3 A3
10	Command Parameter 4	A4	Set primary DNS Byte4 A4
11	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
Receive			
No Receive			





Get Secondary DNS Address			
Function Description: Get Ethernet secondary DNS.			
Command			
Byte	Name	Value	Comment
0	Command Length	0x08	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x39	
7	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);
Acknowledgement character			
0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right

			NACK: 0x55 Command Value is error.
Receive			
0	Receive Length	0x06	
1	Receive Parameter 1	A1	Secondary DNS Byte 1 A1
2	Receive Parameter 2	A2	Secondary DNS Byte 2 A2
3	Receive Parameter 3	A3	Secondary DNS Byte 3 A3
4	Receive Parameter 4	A4	Secondary DNS Byte 4 A4
7	Check Sum	0x06+A1+A2+ A3+ A4	BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);



## Set Secondary DNS Byte

Function Description:  
Set Ethernet secondary DNS byte.

### Command

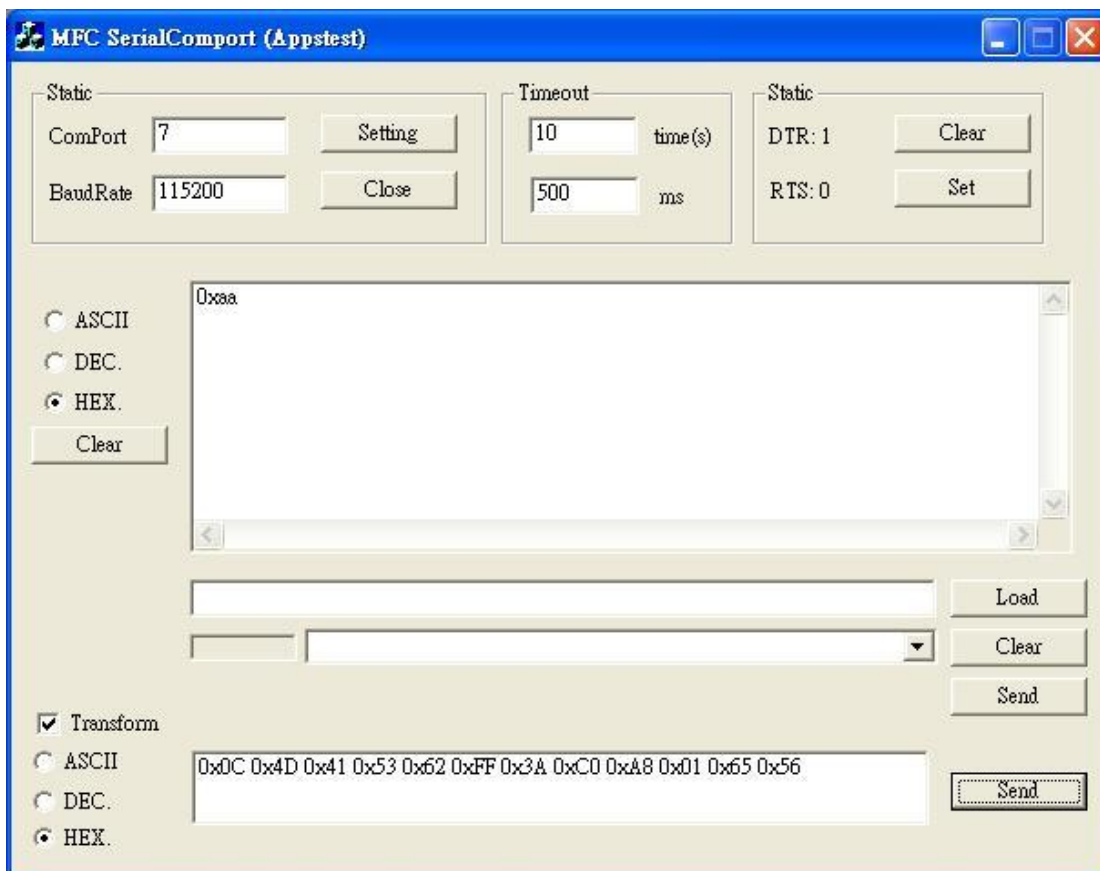
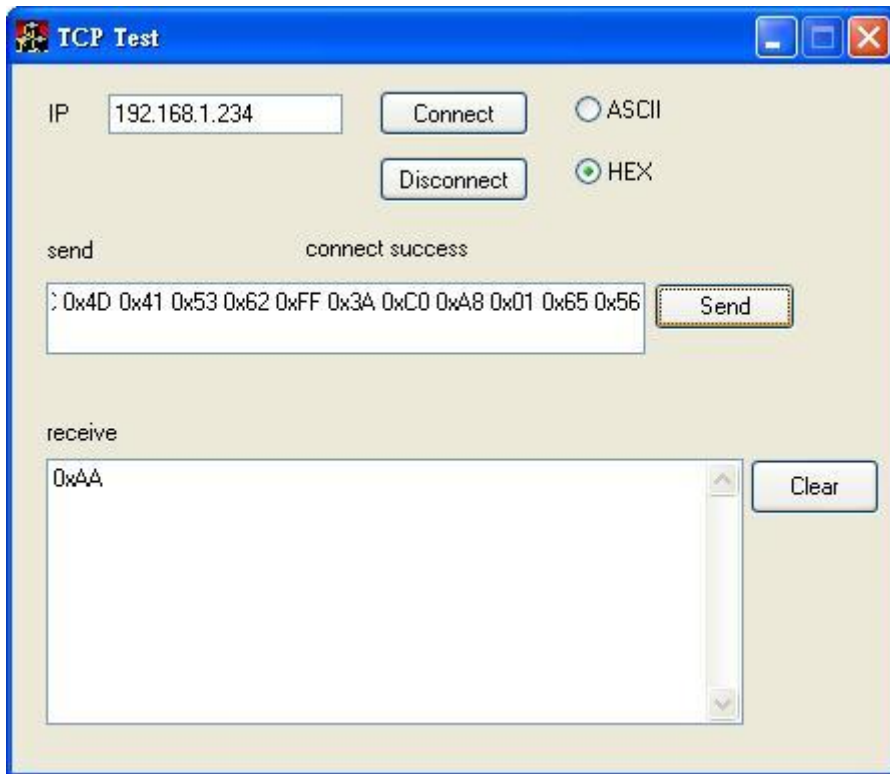
Byte	Name	Value	Comment
0	Command Length	0x0C	
1	Check Code 1	0x4D	
2	Check Code 2	0x41	
3	Check Code 3	0x53	
4	Check Code 4	0x62	
5	Device ID		Default : 0xFF
6	Command ID	0x3A	
7	Command Parameter 1	A1	Set secondary DNS Byte1 A1
8	Command Parameter 2	A2	Set secondary DNS Byte2 A2
9	Command Parameter 3	A3	Set secondary DNS Byte3 A3
10	Command Parameter 4	A4	Set secondary DNS Byte4 A4
11	Check Sum		BYTE CheckSum = 0; for(int i =0; i<n; i++ ) CheckSum += Byte(i);

### Acknowledgement character

0	ACK/NACK	0xAA/0x55	ACK: 0xAA Command Value is right NACK: 0x55 Command Value is error.
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### Receive

No Receive



## Limited Warranty

The SELLER warrants the **36x36 HDMI Matrix Switcher with Full 3D Support** to be free from defects in the material and workmanship for 3 years from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 3 years warranty period, the SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. Also, the technical information contained herein regarding the AV-GM07G3-S1 features and specifications is subject to change without further notice.





**Support**

For more info or tech support  
<http://www.siig.com/support>

April, 2018