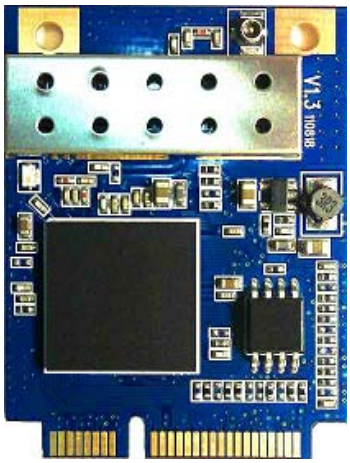
Serial Command Guide
For
WizFi630 Users

(Version 1.2)



This document describes usages for WizFi630 WIFI AP Module. Descriptions scope and boundary is limited as bellows

- Testing environments
- Networks operation mode
- Serial operation Modem
- Supplied software usages
- Serial command definition

☞ For more information, visit our website at http://www.wiznet.co.kr

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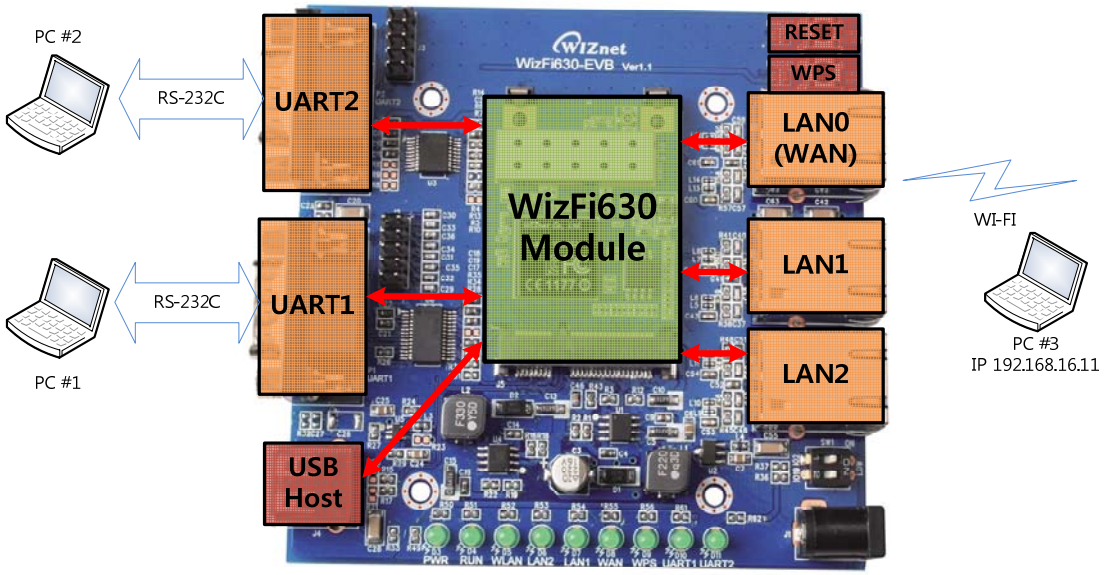
1. Test Environment Setup

1.1 System Setup



[Factory Default]
Network Mode : AP Mode
DHCP Server : Enabled
IP Address : 192.168.16.254
Net Mask : 255.255.255.0
WIFI SSID : WLAN-AP
Serial config : 38400/8/no/1/no flow ctrl

<WizFi630> 802.11 b/g/n WIFI AP Module
<PC#1> Serial Terminal Program running and connected to WizFi630's Serial Port #1
<PC#2> Serial Terminal Program running and connected to WizFi630's Serial Port #2
<PC#3> TCP Server application is running

1.2 WizFi630's default serial configuration.

A. WizFi630 Serial Port #1 enabled
B. Serial configuration : 38400 / 8 data / No Parity / 1 Stopbits / No Flow control
C. TCP Client Mode / Connection Port 5000
D. Aux Connection Disabled
E. WizFi630 Serial Port #2 disabled

1.3 PC #3 Setup.

A. PC#3's WIFI site survey and connect to ssid named "WLAN-AP"
B. Check IP address of PC#3
C. Check IP address at "CMD window", use ipconfig

1.4 PC #1 and PC#2 Serial Setup.

A. Connect Serial cable from PC #1 to WizFi630's Serial Port #1
B. Connect Serial cable from PC #2 to WizFi630's Serial Port #2

2. Simple serial command at serial terminal program

① <RF>
This command gets module's firmware version and normally used to check module is working or not

② <ATDT>
This command changes module's "serial working mode" as data mode
This is special command so do not type each character and <ATDT> copy and paste it at terminal program.

③ <+++>
This command changes module's serial working mode as "command mode".
In serial command, Incoming serial data is processed as serial command. In data mode, Incoming serial data is processed as data and it is sent remote network hosts. This is special command so do not type each character and <+++> copy and paste it at the terminal program..

④ <ATDT?>
This command responses module's current serial working mode.
Response "1" : serial server is data mode
Response "0" : serial server is command mode
This is special command so do not type each character and <ATDT?> copy and paste it at terminal program.

⑤ <WP>
This command set network TCP/UDP port number.
As network server mode, it works as network incoming port number
As network client mode, it is remote host network port number to connect server
Ex) <WP5000> // Set port # as 5000

⑥ <WX>
This command set remote host IP address.
When set, module connect remote host automatically. Ex) <WX192.168.16.11>

⑦ <RQ>
This command responses serial server's network connection status.
0: Not Connect
1: Connect as client
2: Connected as server
3: Connected as Client/Server

⑧ <WL>
This command saves configured data to flash.
When this command is processed, configured data is kept even if rebooting.

⑨ <abc11>;
This is not command and it is one of sample user data for test

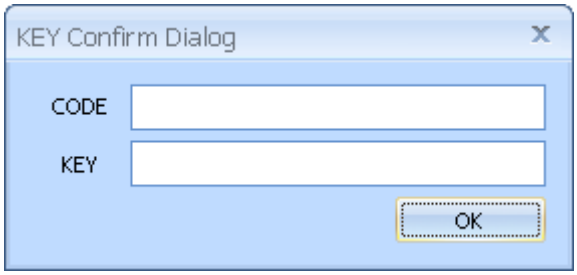
3. WIZSmartScript for WizFi630

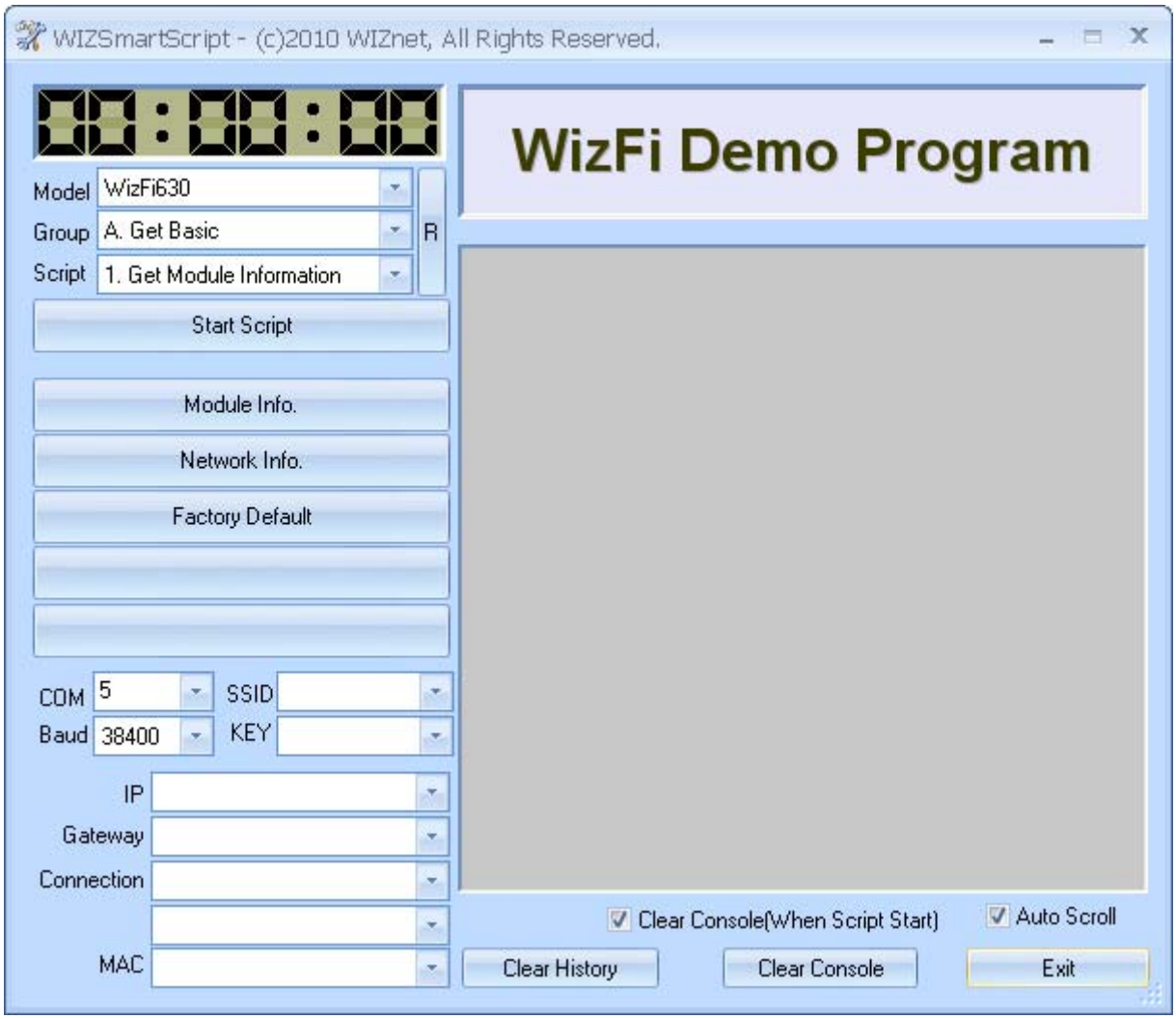
3.1 Run Program

① Execute the “WIZSmartScript.exe” file.

② If you run the WIZSmartScript program, you can see the KEY Confirm Dialog as shown below.

③ If you enter the received CODE and KEY, you can operate the program in normal mode.





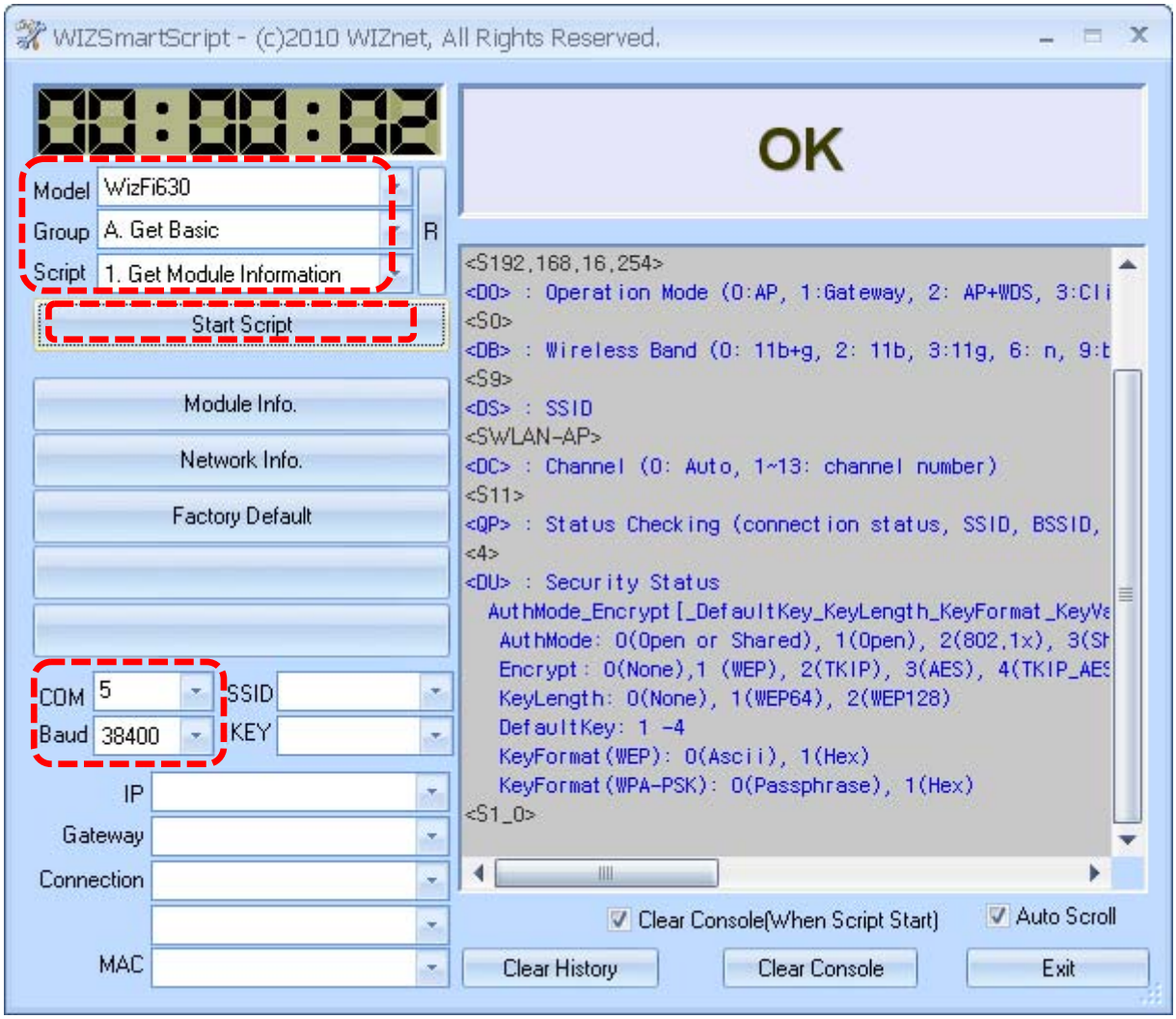
3.2 Get Basic

A. Get Module Information

① Input the COM port of PC and baud rate. (Default Baud Rate : 38400)

② Select “WizFi630” for Model, “A. Get Basic” for Group and “1. Get Module Information” for Script.

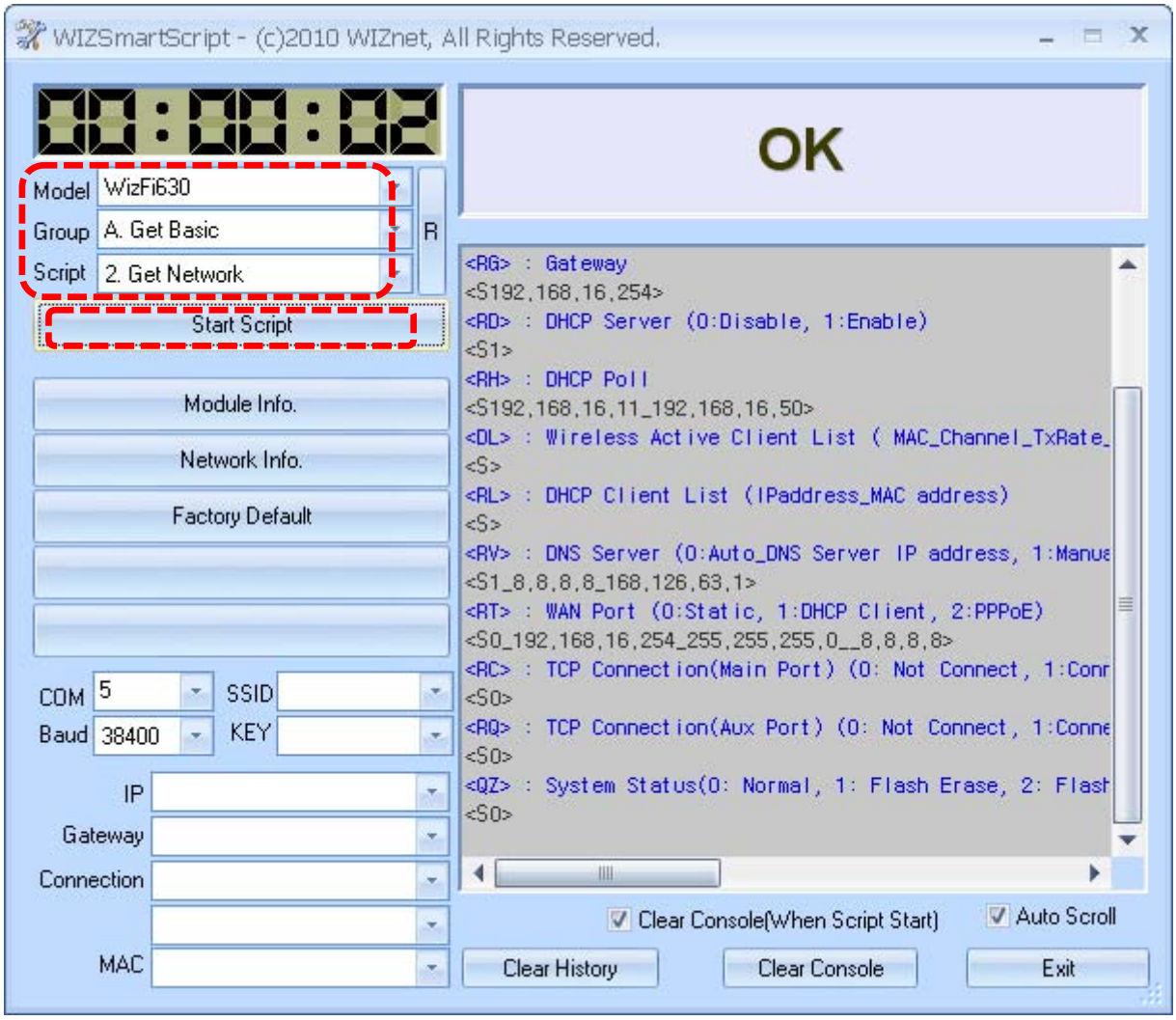
③ If you click “Start Script”, you can see the basic information of WizFi630 as below.



B. Get Network Information

① Select “WizFi630” for Model, “A. Get Basic” for Group and “2. Get Network” for Script.

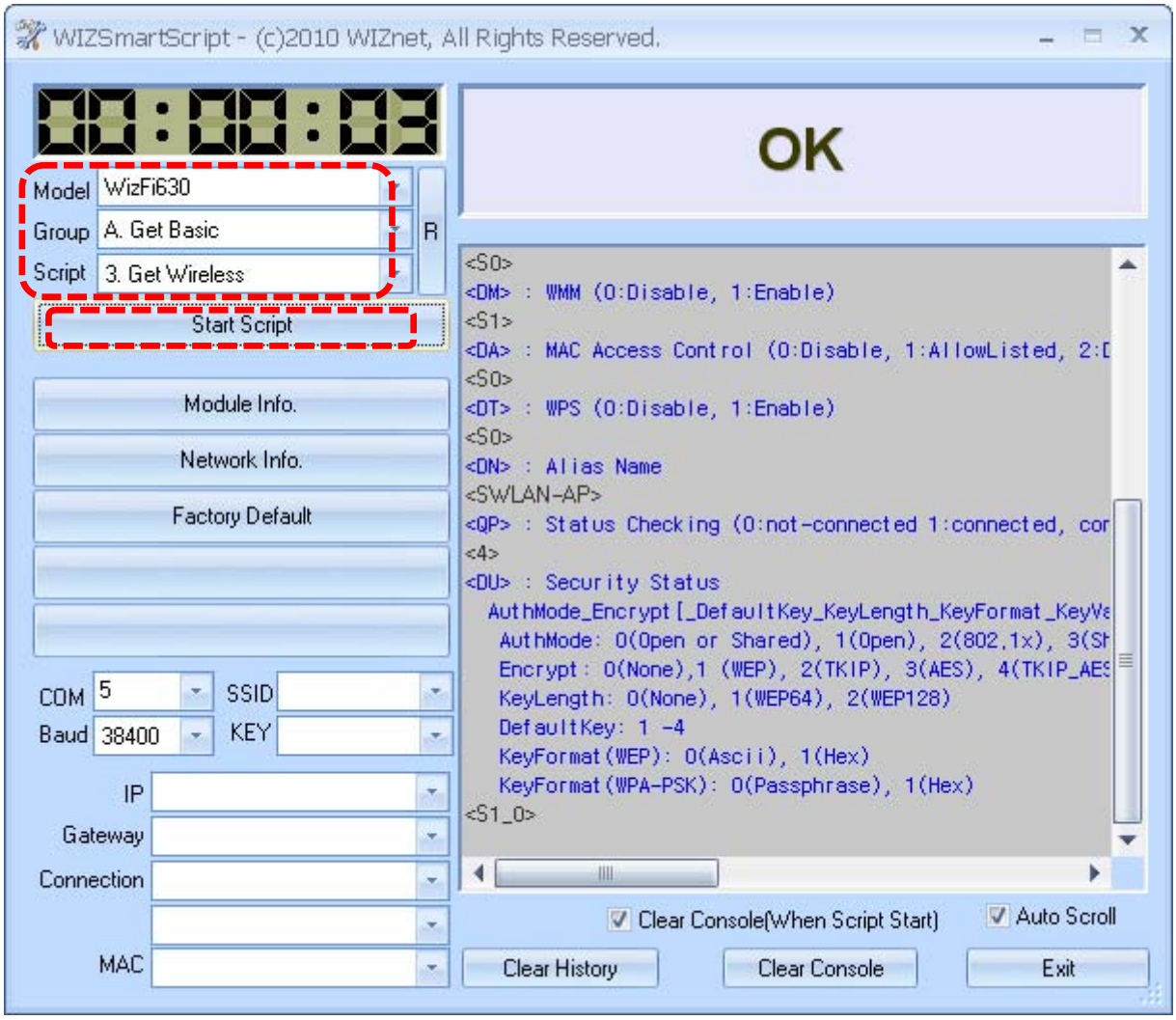
② If you click “Start Script”, you can see the network information of WizFi630 as below.



C. Get Wireless Information

① Select “WizFi630” for Model, “A. Get Basic” for Group and “3. Get Wireless” for Script.

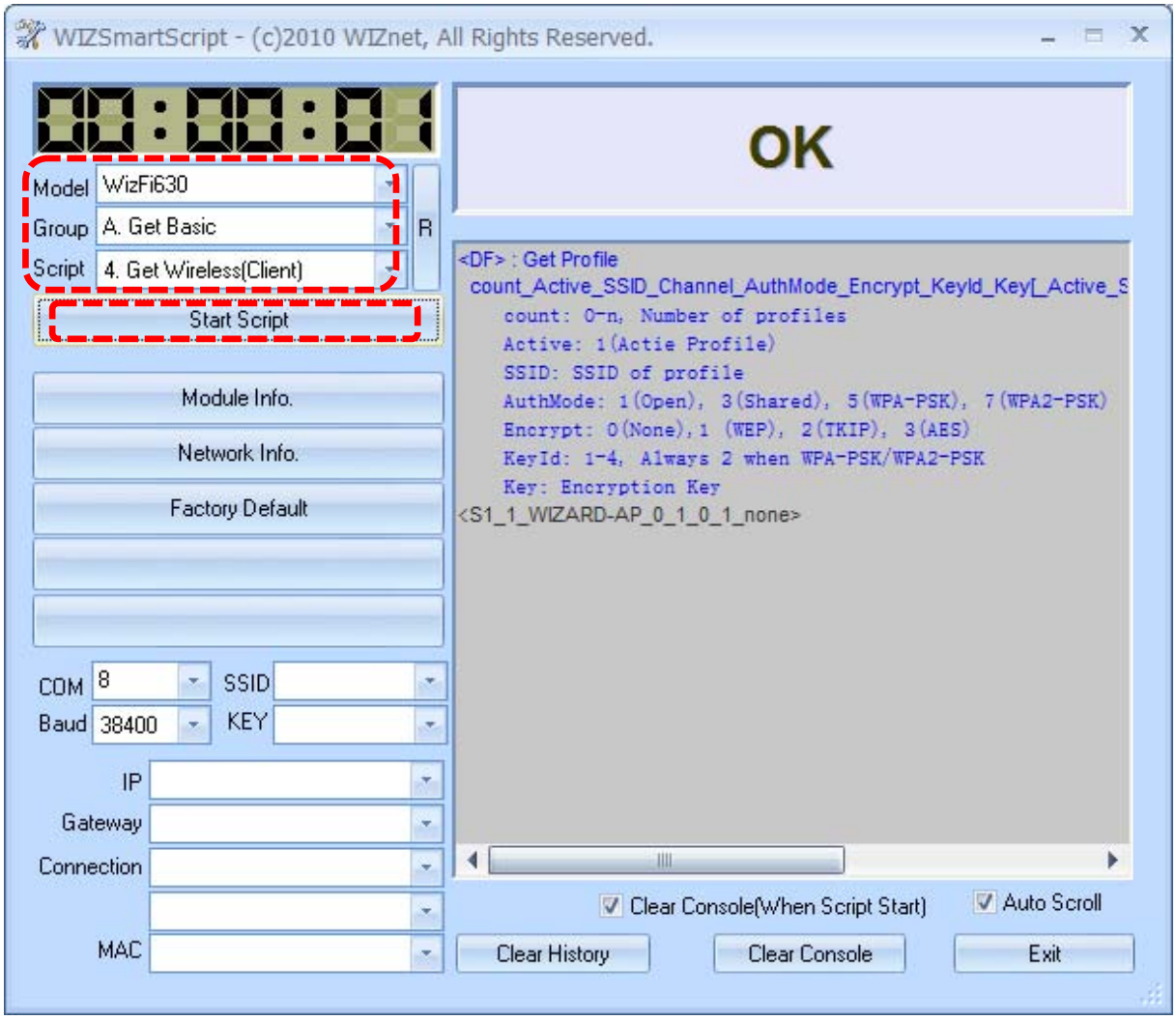
② If you click “Start Script”, you can see the wireless information of WizFi630 as below.



D. Get Wireless(Client) Information

① Select “WizFi630” for Model, “A. Get Basic” for Group and “4. Get Wireless (Client)” for Script.

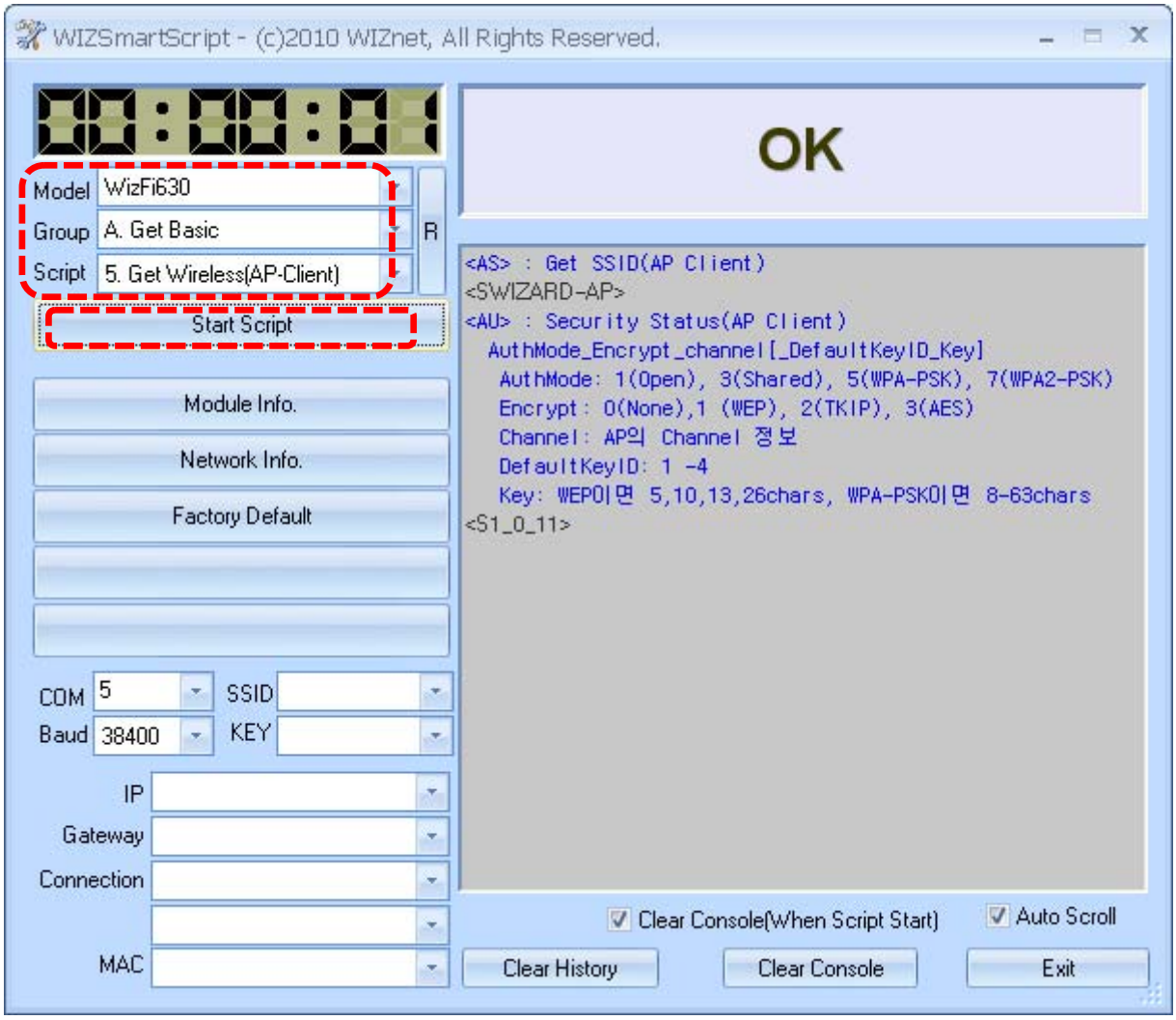
② If you click “Start Script”, you can see the wireless(Client) information of WizFi630 as below.



E. Get Wireless(AP-Client) Information

① Select “WizFi630” for Model, “A. Get Basic” for Group and “5. Get Wireless (Client-AP)” for Script.

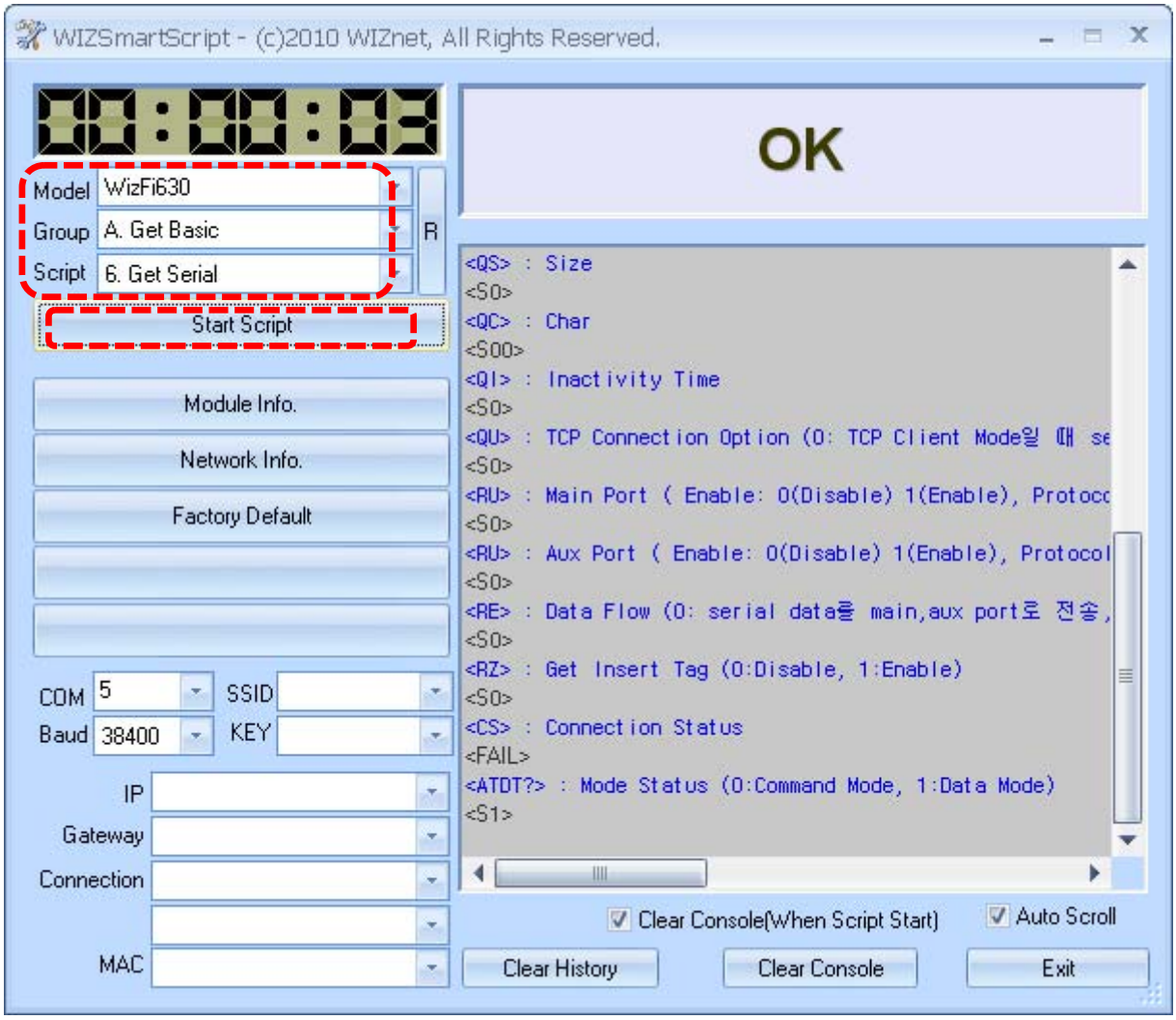
② If you click “Start Script”, you can see the wireless(AP-Client) information of WizFi630 as below.



F. Get Serial Information

① Select “WizFi630” for Model, “A. Get Basic” for Group and “6. Get Serial” for Script.

② If you click “Start Script”, you can see the serial information of WizFi630 as below.



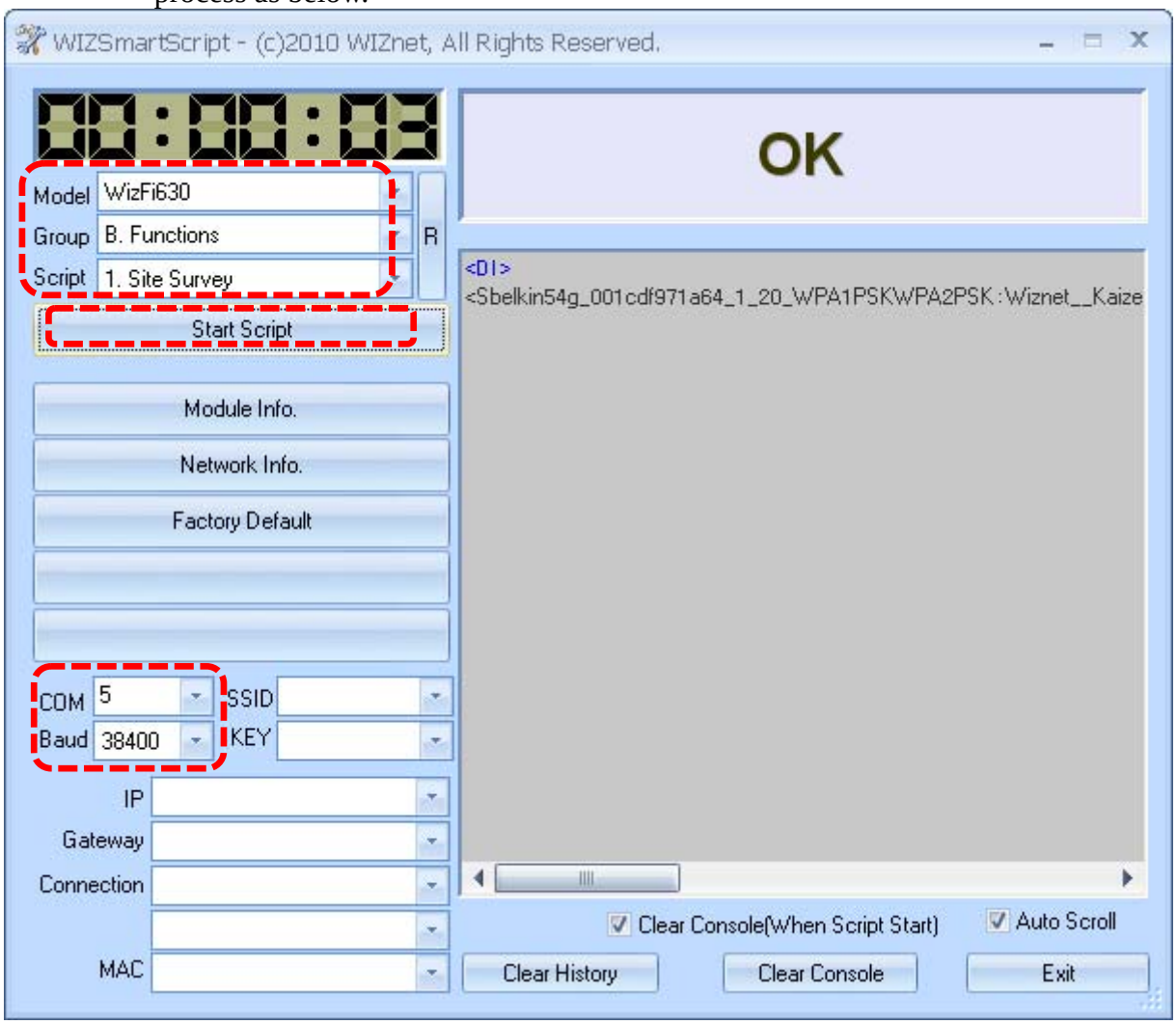
3.3 Functions

A. Site Survey(AP Scan)

① Input the COM port of PC and baud rate. (Default Baud Rate : 38400)

② Select “WizFi630” for Model, “B. Functions” for Group and “1. Site Survey” for Script.

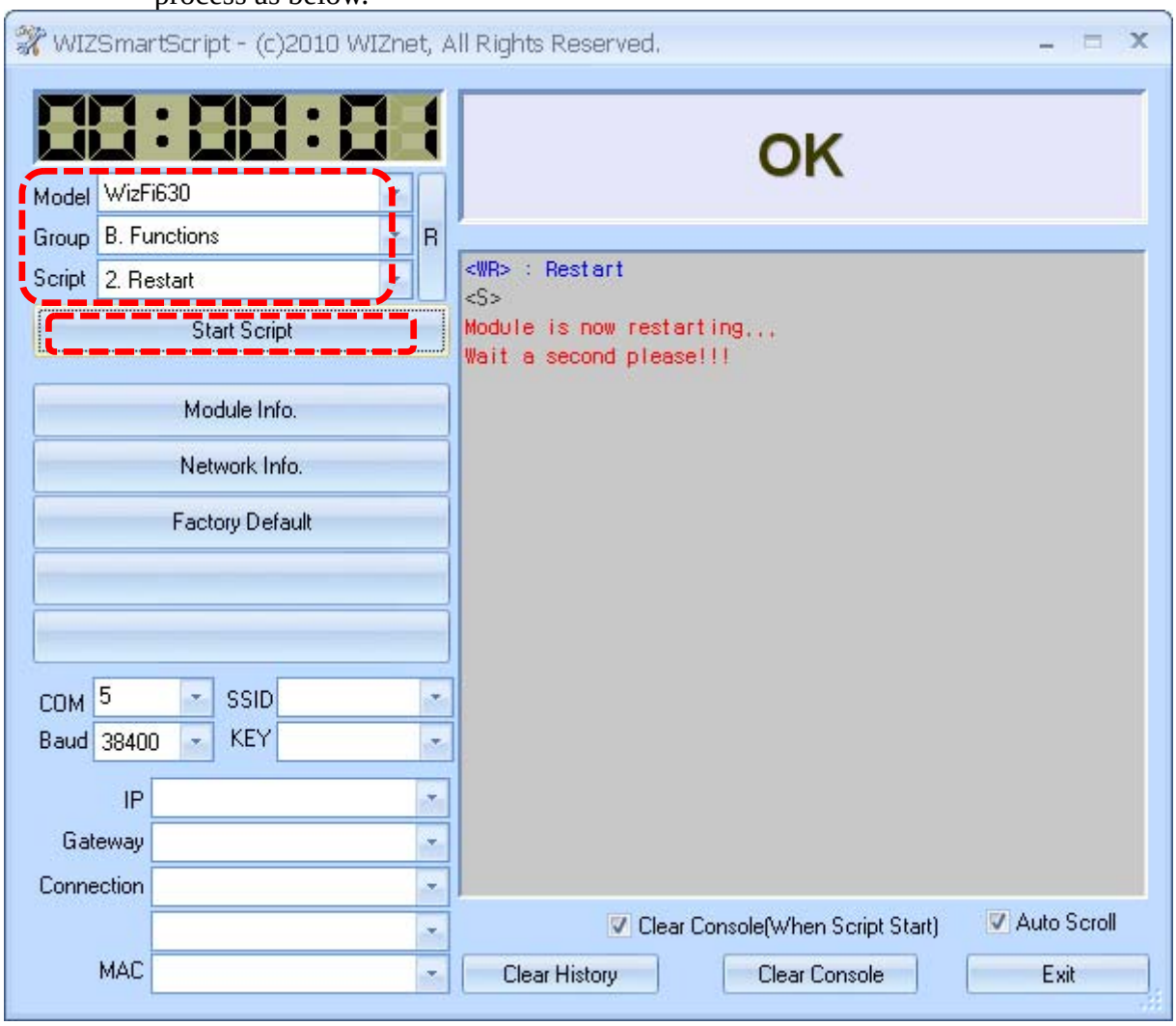
③ If you click “Start Script”, WizFi630 will find the APs and you can see the process as below.



B. Restart

① Select “WizFi630” for Model, “B. Functions” for Group and “2. Restart” for Script.

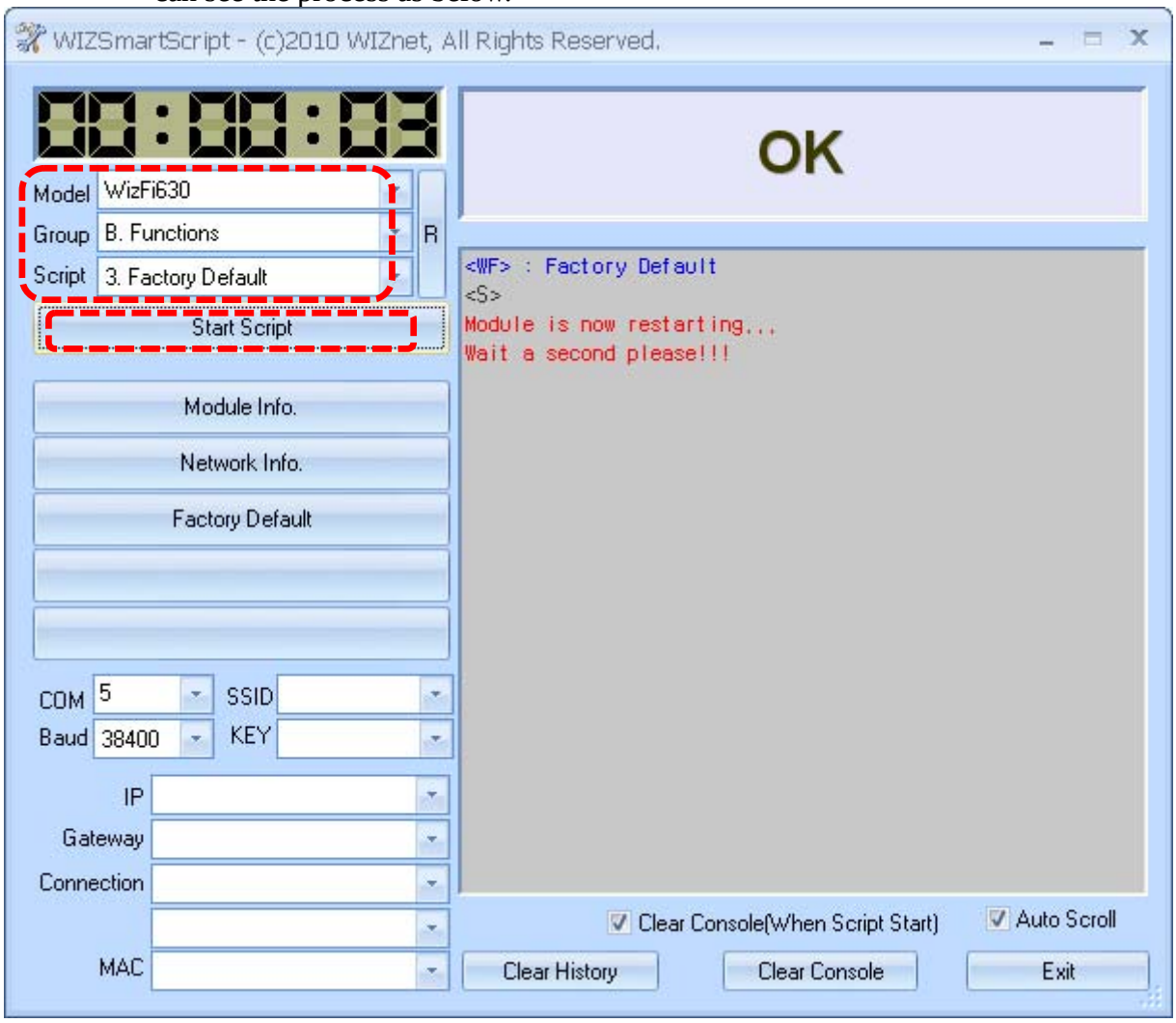
② If you click “Start Script”, WizFi630 will reboot and you can see the process as below.



C. Factory Default

① Select “WizFi630” for Model, “B. Functions” for Group and “3. Factory Default” for Script.

② If you click “Start Script”, WizFi630 will reset to factory default and you can see the process as below.

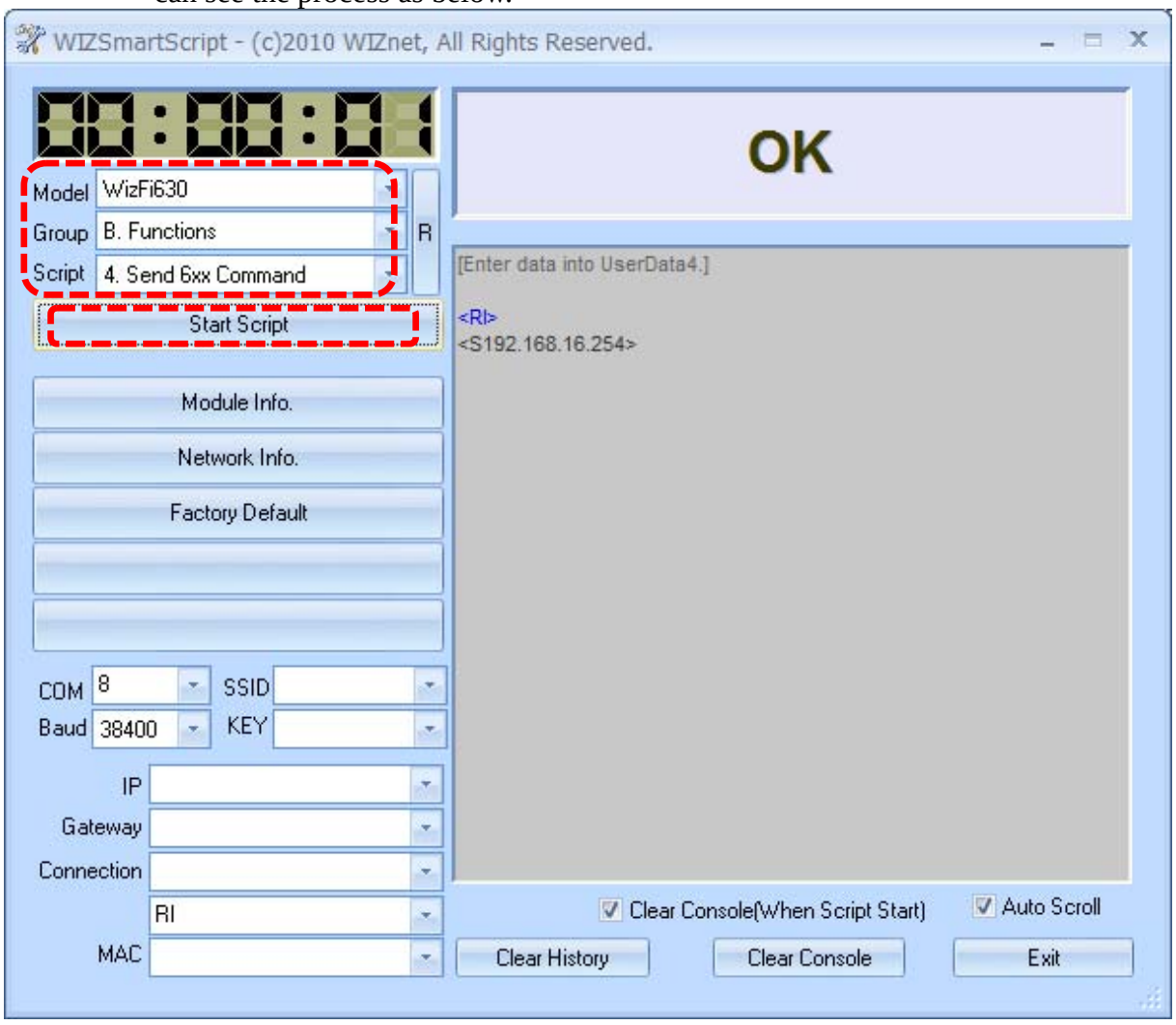


D. Send 6xx Command

① Select “WizFi630” for Model, “B. Functions” for Group and “4. Send 6xx Command” for Script.

② Enter the valid value into the blank field.

③ If you click “Start Script”, WizFi630 will send the user command and you can see the process as below.



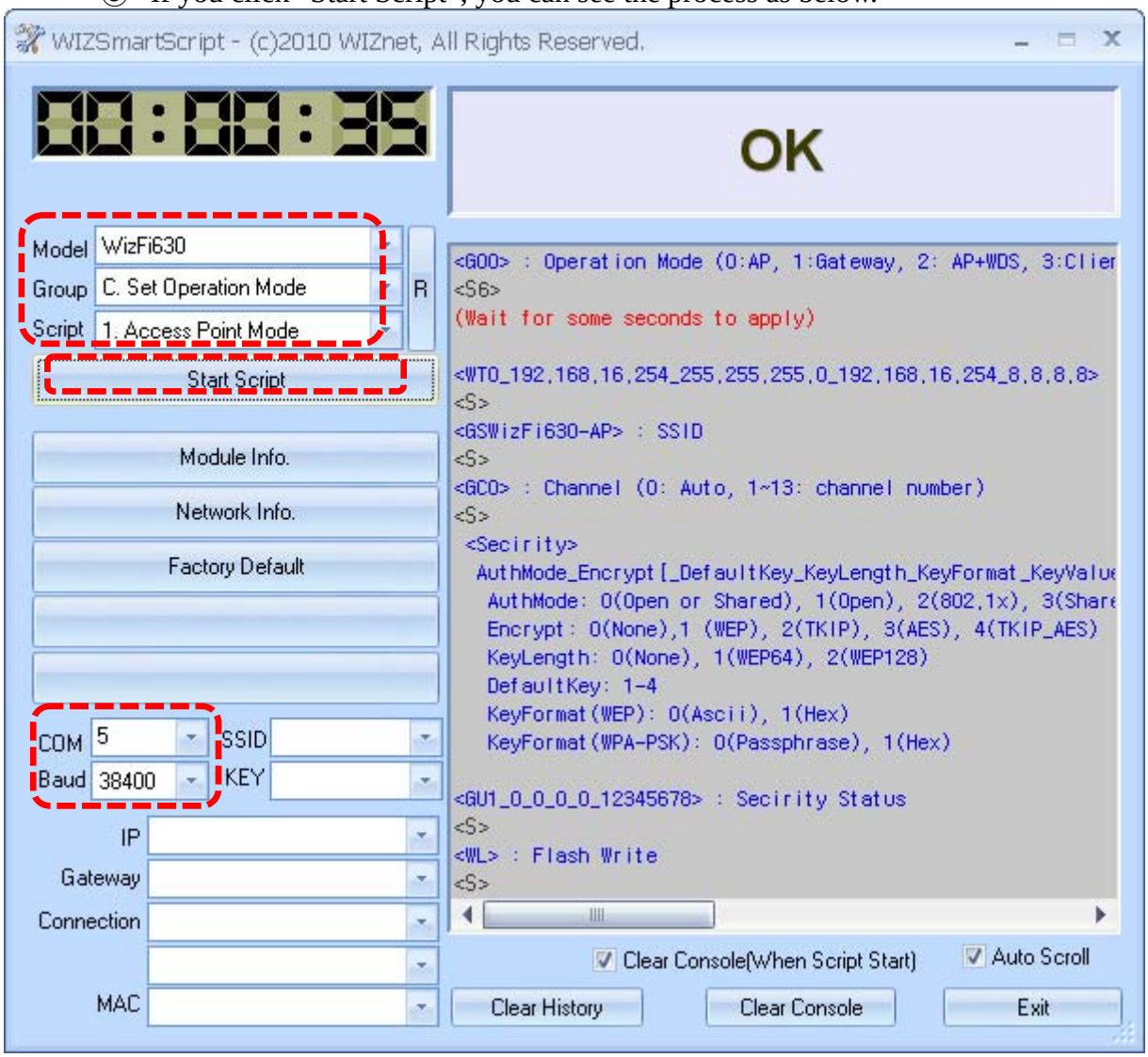
3.4 Set Operation Mode

A. Access Point Mode

① Input the COM port of PC and baud rate. (Default Baud Rate : 38400)

② Select “WizFi630” for Model, “C. Set operation Mode” for Group and “1. Access Point Mode” for Script.

③ If you click “Start Script”, you can see the process as below.



B. Gateway Mode

① Select “WizFi630” for Model, “C. Set operation Mode” for Group and “2. Gateway Mode” for Script.

② If you click “Start Script”, you can see the process as below.

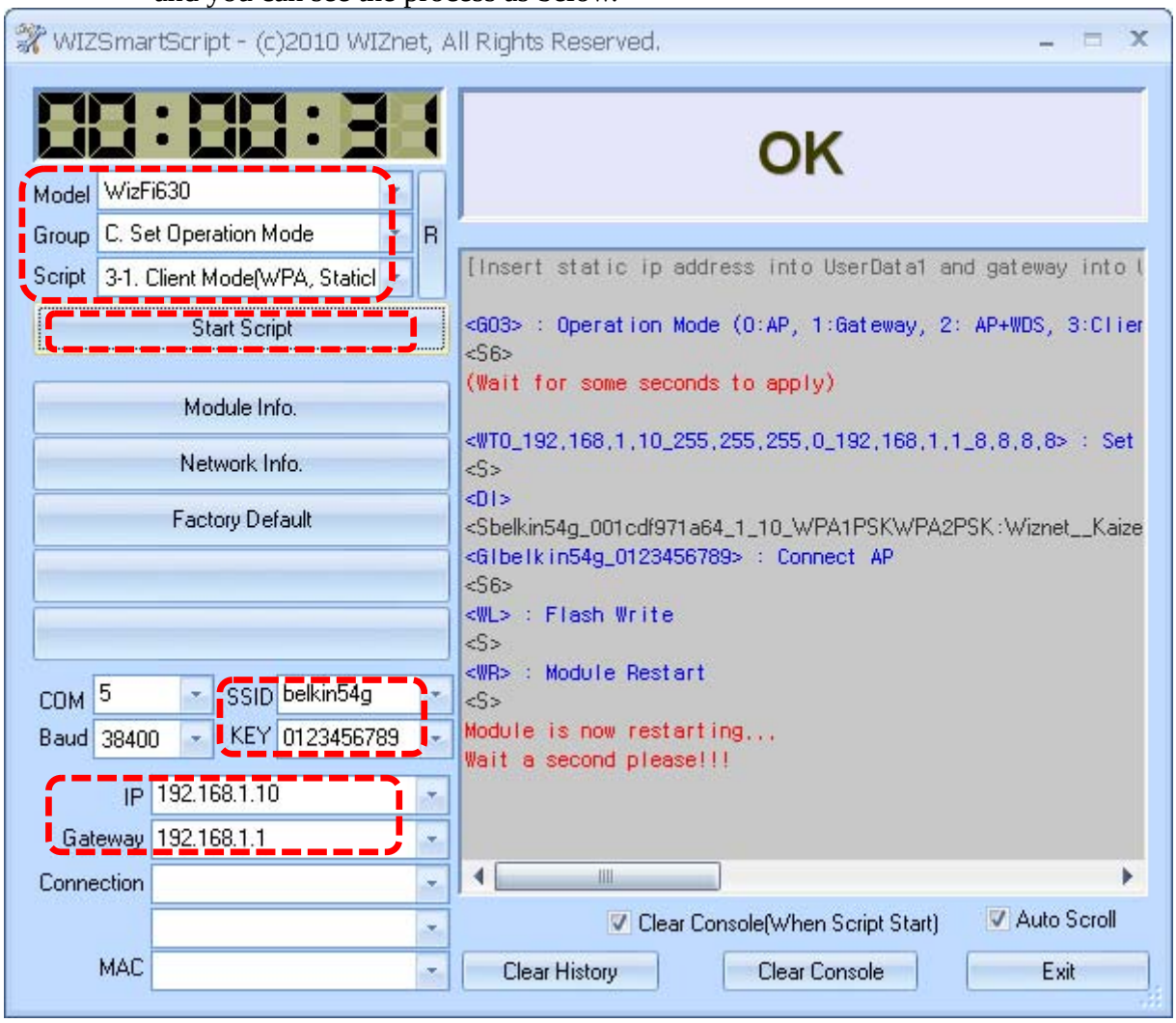
C. Client Mode(WPA, Static IP)

① Select “WizFi630” for Model, “C. Set operation Mode” for Group and “3. Client Mode(WPA, StaticIP)” for Script.

② Enter the valid value into the SSID and Key field.

③ Enter the valid value into the IP and Gateway field.

④ If you click “Start Script”, WizFi630 will associate to the AP with Static IP and you can see the process as below.

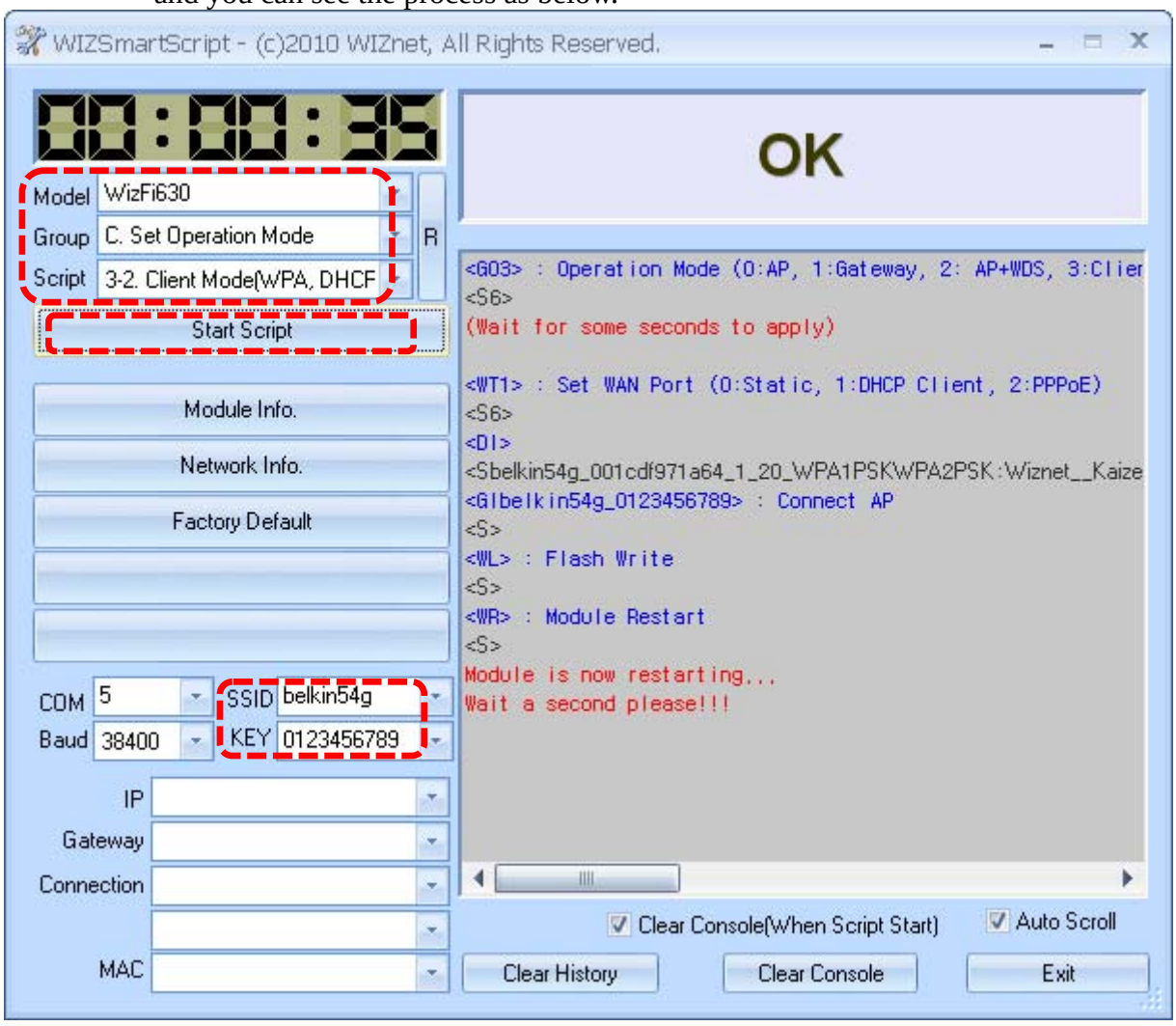


D. Client Mode(WPA, DHCP)

① Select “WizFi630” for Model, “C. Set operation Mode” for Group and “4. Client Mode(WPA, DHCP)” for Script

② Enter the valid value into the SSID and Key field.

③ If you click “Start Script”, WizFi630 will associate to the AP with DHCP and you can see the process as below.



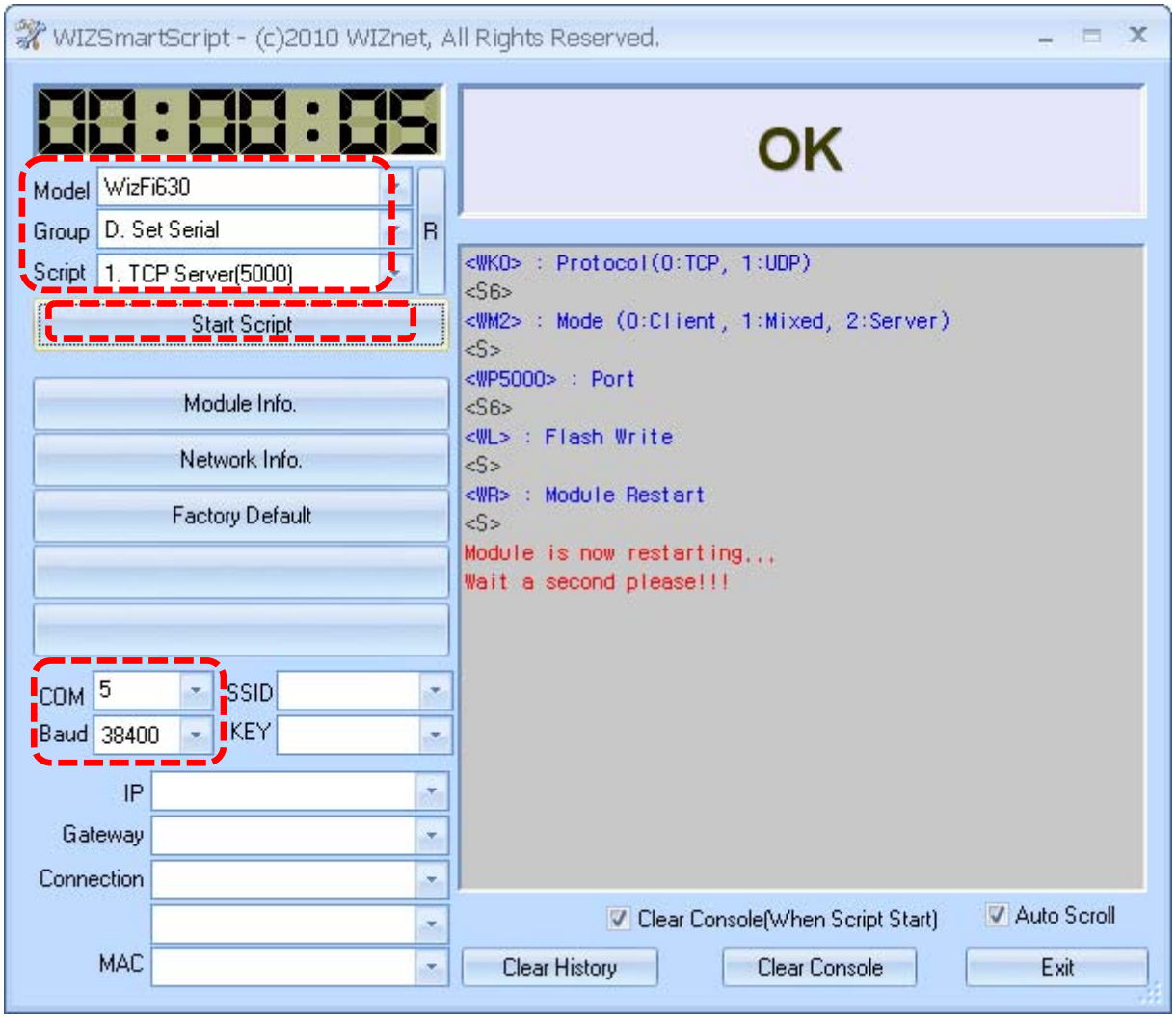
3.5 Set Serial

A. TCP Server(5000)

① Input the COM port of PC and baud rate. (Default Baud Rate : 38400)

② Select “WizFi630” for Model, “D. Set Serial” for Group and “1. TCP Server(5000)” for Script.

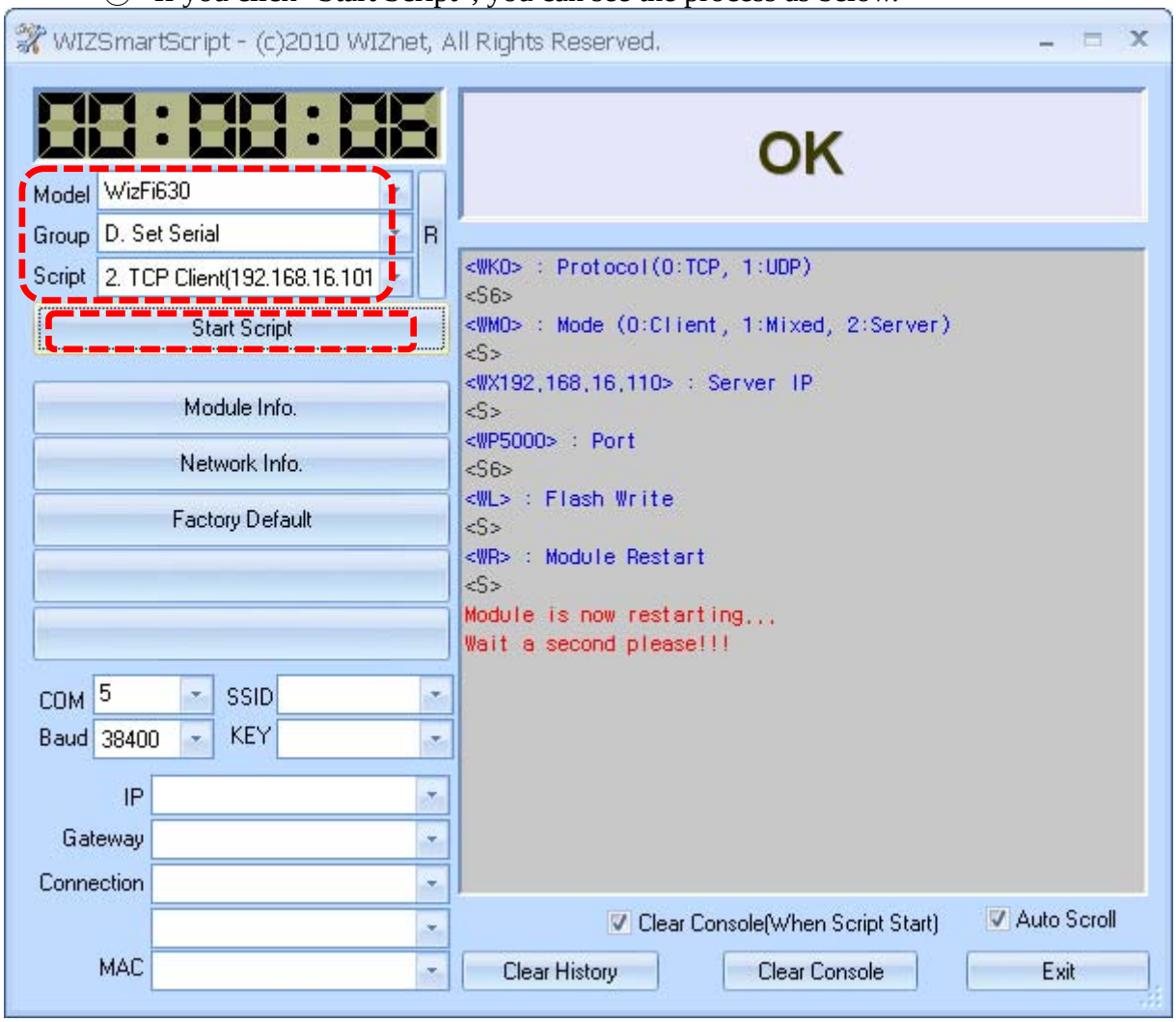
③ If you click “Start Script”, you can see the process as below.



B. TCP Client(192.168.16.101-5000)

① Select “WizFi630” for Model, “D. Set Serial” for Group and “2. TCP Client(192.168.16.101-5000)” for Script.

② If you click “Start Script”, you can see the process as below.



4. Serial command definitions

4.1 Network

Contents	OP	CMD	Command Syntax	Response Syntax	Time (ms)	Example	Contents
Version	Get	**RF**	<RF>	<Svx.x.x>	16	<Sv1.0.6>	Get Firmware Version
MAC Address	Get	**RA**	<RA>	<S0xx.xx.xx.xx.xx.xx_1xx.xx.xx.xx.xx.xx_2xx.xx.xx.xx.xx.xx> 0:Ethernet MAC address 1:Wireless MAC address 2:Ethernet MAC address(WAN)	16	<S00ba00000001_100ba00000002_200ba00000008>	Get MAC address module
IP Address	Get	**RI**	<RI>	<Sxxx.xxx.xxx.xxx>	16	<S192.168.1.254>	Get IP address
	Set	**WI**	<WIxxx.xxx.xxx.xxx>	<S>	172	<W192.168.1.254>	Change IP address
Subnet Mask	Get	**RS**	<RS>	<Sxxx.xxx.xxx.xxx>	16	<S255.255.255.0>	Get subnet mask
	Set	**WS**	<WSxxx.xxx.xxx.xxx>	<S>	109	<WS255.255.255.0>	Set subnet mask
Gateway	Get	**RG**	<RG>	<Sxxx.xxx.xxx.xxx>	16	<S192.168.1.254>	Get gateway
	Set	**WG**	<WGxxx.xxx.xxx.xxx>	<S>	78	<WG192.168.1.254>	Set gateway
DHCP Server	Get	**RD**	<RD>	<Sx> 1:Enable 0:Disable	16	<S1>	Get DHCP Server working status
	Set	**WD**	<WDx> 1:Enable 0:Disable	<Sx>	78	<WD1>	Set DHCP Server working status
DHCP Start/End IP	Get	**RH**	<RH>	<Sxxx.xxx.xxx.xxx_xxx.xxx.xxx.xxx>	16	<S192.168.1.100_192.168.1.200>	Start address_End address
	Set	**WH**	<WHxxx.xxxx.xxx.xxx_xxx.xxx.xxx.xxx>	<S>	156	<WH192.168.1.10_192.168.1.100>	
Wireless Active Client List	Get	**DL**	**<DL>**	<Sxxxxxxxxxxxx_xx_xx_xx[:xxxxxxxxxxxx_xx_xx_xx:...]> MAC Address_MCS_BW_SGI_RSSI0_RSSI1_RSSI2 MCS: 0-15, BW:0(20M), 1(40M), SGI(Short GI)	16	<S00089ff4da1e_1_54M_70>	Return connected clients information Client/Adhoc Mode: Not Support
DHCP Client List	Get	**RL**	<RL>	<Sxxx.xxx.xxx.xxx_xxxxxxxxxxxx[:xxx.xxx.xxx.xxx_xxxxxxxxxxxx:...]>	62	<S192.168.1.2_00089ff4da1e>	Return DHCP clients information

				IPaddress_MAC address			
DNS Server	Set	**WV**	<WV0> or <WV1_xxx.xxx.xxx.xxx[_xx.xx.xx.xx]> 0:Auto_DNS Server IP address 1:Manual	<S>	16	<WV1_ 61.41.153.2_203.248.252.2> or <WV0>	Set DNS server IP address
	Get	**RV**	<RV>	<Sx_xxx.xxx.xxx.xxx[_xx.xx.xx.xx]> 0:Auto_DNS Server IP address 1:Manual	16	<S1_ 61.41.153.2_203.248.252.2> or <S0>	Get DNS server IP address
WAN Port	Get	**RT**	<RT>	<S0_xxx.xxx.xxx.xxx_xxx.xxx.xxx.xxx_xxx.xxx.xxx.xxx_xxx.xxx.xxx.xxx> -Static: 0_Ipaddress_Subnet_Gateway_DNS <S1_xxx.xxx.xxx.xxx_xxx.xxx.xxx.xxx_xxx.xxx.xxx.xxx> -DHCP Client: 1_IPaddress_Subnet_Gateway <S2_User Name_Password> PPPoE: 2_UserName_Password **0:Static, 1:DHCP Client, 2:PPPoE**	16	<S0_182.29.231.10_255.255.255.0_ 182.29.231.1_182.29.231.150> or <S1_182.29.231.10_255.255.255.0_ 182.29.231.1> or <S2_username_password>	Get WAN port IP information
	Set	**WT**	<WT0_xxx.xxx.xxx.xxx_xxx.xxx.xxx.xxx_xxx.xxx.xxx.xxx_xxx.xxx_xxx.xxx.xxx.xxx> Static: 0_Ipaddress_Subnet_Gateway_DNS <WT1> DHCP Client: 1 <WT2_User Name_Password> PPPoE: 2_UserName_Password **0:Static, 1:DHCP Client, 2:PPPoE**	<S>	375	<WT0_182.29.231.10_255.255.255. 0_182.29.231.1_182.29.231.150> or <WT1> or <WT2_username_password>	Set WAN port information

TCP Connection	Get	**RC**	<RC>	<Sx> 0: Not Connect 1:Connect	16	<S1>	when protocol is TCP available (Main/Aux Port connection status)
	Get	**RQ**	<RQ>	<Sx> 0: Not Connect 1: Client Connect 2: Server Connect 3: Client/Server Connect	16	<S1>	when protocol is TCP available (Main Port connection status)
	Get	**RY**	<RY>	<Sx> 0: Not Connect 1: Client Connect 2: Server Connect 3: Client/Server Connect	16	<S1>	when protocol is TCP available (Aux Port connection status)
	Set	**WC**	<WC>	<S>	16	<WC>	Close TCP connection (Main/Aux Port)
	Set	**WQ**	<WQ>	<S>	16	<WQ>	Close TCP connection (Main Port)
	Set	**WY**	<WY>	<S>	16	<WY>	Close TCP connection (Aux Port)
System Status	Get	**QZ**	<QZ>	<Sx> 0: Normal 1: Flash Erase in process 2: Flash Write in process 3: F/W Upgrade in process	16	<S1>	Current System status for flash access
NTP Server	Get	**QN**	<QN>	<Sxxx> xxx: NTP Server		<Stime.bora.net>	Get NTP Server information
NTP Server	Set	**ON**	<ONserver>	<S>		<ONtime.bora.net>	Set NTP Server
System Time	Get	**QM**	<QM>	<Syear_month_day_hour_min_sec>		<S2011_9_14_10_10_30>	Get current system time

4.2 Wireless

Contents	OP	CMD	Command Syntax	Response Syntax	Time (ms)	Example	Contents
Wireless Band	Get	**DB**	<DB>	<Sx> 0: 11b+g, 2: 11b, 3:11g, 6: n, 9:b+g+n	16	<S9>	Get wireless band Client/Adhoc Mode: Not Support
	Set	**GB**	<GBx> 0: 11b+g, 2: 11b, 3:11g, 6: n, 9:b+g+n	<S>	78	<GB6>	Set wireless band information Client/Adhoc Mode: Not Support
Operation Mode	Get	**DO**	<DO>	<Sx> 0:AP, 1:Gateway, 3:Client, 4: Adhoc, 5: AP-Client GW, 6: AP-Client Multi-Bridge	16	<S0>	Get operation mode
	Set	**GO**	<GOx> 0:AP, 1:Gateway, 3:Client, 4: Adhoc, 5: AP-Client GW, 6: AP-Client Multi-Bridge	<S>	766	<GO1>	Change operation mode
SSID	Get	**DS**	<DS>	<Sxxxx~> 1~32 characters	32	<SWLANSSID>	Get SSID Client/Adhoc Mode: Not Support
	Set	**GS**	<GSxxxx~> 1~32 chars	<S>	94	<GSCHANGED_SSID>	Change SSID Client/Adhoc Mode: Not Support
Channel	Get	**DC**	<DC>	<Sx> 0: Auto 1~13: channel number	16	<S6>	Get Wireless operation channel Client/Adhoc Mode: Not Support
	Set	**GC**	<GCx> 0: Auto 1~13: channel number	<S>	156	<GC0>	Change wireless operation channel Client/Adhoc Mode: Not Support
WDS	Get	**DW**	<DW>	<Sx_x_xxxxxxxxxxx_xxx~> 3:disable,5:bridge,6:repeater,7:Lazy_count_MACaddress_Comment[_MACaddress_Comment_...]	16	<S1_3_1_000102030405_test1> or <S2_3_1_000102030405_test2>	Get WDS Client/Adhoc Mode: Not Support
	Set	**GW**	<GWx_x_x_xxxxxxxxxxx_xxx~> 3:disable,5:bridge,6:repeater,7:Lazy_ 1:add,2:delete_ count_MACaddress_Comment[_MACaddress_	<S>	141	<DW1_3_1_000102030405_test1> or <DW0_3_1_000102030405_test2>	Set WDS Client/Adhoc Mode: Not Support

			Comment_..]				
Tx Power	Get	**DP**	<DP>	<Sxxx> 1-100: power(%)	16	<S14>	Get Tx Power Client/Adhoc Mode: Not Support
	Set	**GP**	<GPxxx> 1-100: power(%)	<S>	94	<GP16> or <GP99>	Set Tx Power Client/Adhoc Mode: Not Support
Data Rate	Get	**DR**	<DR>	<Sxx> 20MHz: 7,14.5,21.5,28.5,43.5,57.5,65,72 40MHz: 15,30,45,60,90,120,135,150 b only: 1, 2, 5, 11 g only, bg mode: 1, 2, 5, 6, 9, 11, 12, 18, 24, 36, 48, 54	16	<S300>	Get Data Rate Client/Adhoc Mode: Not Support
	Set	**GR**	<GRxx> 20MHz: 7,14.5,21.5,28.5,43.5,57.5,65,72, 40MHz: 15,30,45,60,90,120,135,150, b only: 1, 2, 5, 11 g only, bg mode: 1, 2, 5, 6, 9, 11, 12, 18, 24, 36, 48, 54	<S>	94	<GR300>	Set Data Rate Client/Adhoc Mode: Not Support
Broadcast SSID	Get	**DH**	<DH>	<Sx> 0:Enable, 1:Disable	16	<S1>	Get Hidden SSID Client/Adhoc Mode: Not Support
	Set	**GH**	<GHx> 0:Enable, 1:Disable	<S>	94	<GH0>	Set Hidden SSID Client/Adhoc Mode: Not Support
WMM	Get	**DM**	<DM>	<Sx> 1:Enable, 0:Disable	16	<S1>	Get WMM Status Client/Adhoc Mode: Not Support
	Set	**GM**	<GMx> 1:Enable, 0:Disable	<S>	94	<GM1>	Set WMM Client/Adhoc Mode: Not Support
MAC Access Control	Get	**DA**	<DA>	<Sx_x_xxxxxxxxxxx_xxx~> 0:Disable, 1:AllowListed, 2:DenyListed[_count_MACaddress]	16	<S1_2_000b01000002_000b0100ff02>	Get MAC Access Control Client/Adhoc Mode: Not Support

	Set	**GA**	<GAx_x_x_xxxxxxxxxxxx_xxx~> 0:Disable,1:AllowListed,2:DenyListed,3:all_delete[_1:add,2:delete_count_MACaddress]	<S>	735	<GA2_2_000b01000002_000b0100ff02>	Set MAC Access Control Client/Adhoc Mode: Not Support
Site Survey (Sync Command)	Get	**DI**	<DI>	<Sxxxx_xxxxxxxxxxxx_xx_xx_x> SSID_BSSID_Channel_RSSI_Security when AP is hidden state, SSID shows blank.	2063	<Sxxxx_xxxxxxxxxxxx_xx_xx_x> SSID_BSSID_Channel_RSSI_Security when AP is hidden state, SSID shows blank.	Do the site survey and send site survey list. Get Site Survey
Site Survey Start (Async Command)	Set	**GQ**	<GQ>	<S>	32	<GQ>	Do the site survey start command.
Site Survey List (Async Command)	Get	**DQ**	<DQ>	<Sxxxx_xxxxxxxxxxxx_xx_xx_x> SSID_BSSID_Channel_RSSI_Security when AP is hidden state, SSID shows blank.	46	<Sxxxx_xxxxxxxxxxxx_xx_xx_x> SSID_BSSID_Channel_RSSI_Security when AP is hidden state, SSID shows blank.	Get the current Site(AP) List, This command should be worked together "GQ" command. Call "GQ" command and call DQ command after 2 second.
Connection AP	Set	**GI**	<ssid_key> Ssid: AP's SSID key: Encryption key Using <GI> command after <DI> (Site Survey) command. Need AP's authentication method is WEP and default KeyId is "1" Other authentication method or default KeyID, you can use <GU> command.	<S>	2078	<GItest1_12345>	Set Connection AP
WPS	Get	**DT**	<DT>	<Sx> 0:disable, 1:enable	16	<S0> or <S1>	Get WPS Status
	Set	**GT**	<GTx> 0:disable, 1:enable	<S>	156	<GT0> or <GT1>	Set WPS
Alias Name	Get	**DN**	<DN>	<Sxxx> Maximum 29 characters	16	<Swifi1>	Get Alias Name

	Set	**GN**	<GNxxx> Maximum 29 characters	<S>	78	<GNwifi>	Set Alias Name
Status Checking	Get	**QP**	<QP>	<Sx_xxxx_xxxxxxxxxxx_xx_xxM_xx> 0: not-connected, 1: connected connection status_SSID_BSSID_CHAN_RATE_RSSI	16	<S1_damosys__ip604__work_00089fbe7a84_1_54M_70>	Get Wireless Connection Status
Get Profile	Get	**DF**	<DF>	<Sx_x_x_x_x_x_x_x[_x_x_x_x_x_x_x_x[_x_x_x_x_x_x_x_x]..]> count_Active_SSID_Channel_AuthMode_Encrypt_KeyId_Key[_Active_SSID_Channel_AuthMode_Encrypt_KeyId_Key[...]] count: 0-n, Number of profile Active: 1(Actie Profile) SSID: SSID of profile AuthMode: 1(Open), 3(Shared), 5(WPA-PSK), 7(WPA2-PSK) Encrypt: 0(None),1 (WEP), 2(TKIP), 3(AES) KeyId: 1-4, Always "2" when WPA-PSK/WPA2-PSK Key: Encryption Key	16	<S0> or <S1_0_ccccccc_0_1_0_1_none> or <S2_0_aaaaaaaaa_0_3_1_1_12345_0_ccccccc_0_5_2_2_1234567890>	Get Profile Available at Client/Adhoc Mode
Set Profile	Set	**GF**	<Sx_x_x_x_x_x_x> add/del_SSID_Channel_AuthMode_Encrypt_KeyId_Key add/del: 1(add), 0(delete) SSID: SSID of profile AuthMode: 1(Open), 3(Shared), 5(WPA-PSK), 7(WPA2-PSK) Encrypt: 0(None),1 (WEP), 2(TKIP), 3(AES) KeyId: 1-4, Always "2" when WPA-PSK/WPA2-PSK Key: Encryption Key	<S>	1812	<GF1_test-ssid_0_1_0_1_dummy> or <GF1_test-ssid_0_3_1_1_12345> or <GF0_test-ssid_0_3_1_1_12345>	Set WIFI Profile Add WIFI profile and make it activate Available at Client/Adhoc Mode <!! This command will save data to flash automatically!!>
Get SSID (AP-Client)	Get	**AS**	<AS>	<Sxxxx> 1-32chars	31	<SWLAN-AP>	At AP-Client Mode, Set Client side's SSID
Set SSID (AP-Client)	Set	**PS**	<PSxxx> 1-32chars	<S>	78	<PSWLAN-AP>	At AP-Client Mode, Set Client side's SSID

AP Connect (AP-Client)	Set	**PI**	<ssid_key> Ssid: AP's SSID key: Encryption key Using <PI> command after <DI> (Site Survey) command. Need AP's authentication method is WEP and default KeyId is "1" Other authentication method or default KeyID, you can use <PU> command.	<S>	594	<PIssid_key>	At AP-Client Mode, connect to AP
Security Status (AP-Client)	Get	**AU**	<AU>	<Sx_x_x_x> AuthMode_Encrypt_channel[_DefaultKeyID_Key] AuthMode: 1(Open), 3(Shared), 5(WPA-PSK), 7(WPA2-PSK) Encrypt: 0(None),1 (WEP), 2(TKIP), 3(AES) Channel: AP's channel information DefaultKeyID: 1 -4 Key: 5,10,13,26chars when WEP, 8-63chars when WPA-PSK	16	<AU1_0_1> or <AU1_1_10_1_12345> or <AU3_1_9_1_12345> or <AU5_3_1_2_1234567890>	At AP-Client Mode, get Client's Security information Channel should be same with AP's Channel
Security Status (AP-Client)	Set	**PU**	<Sx_x_x_x> AuthMode_Encrypt_Channel[_DefaultKeyID_Key] AuthMode: 1(Open), 3(Shared), 5(WPA-PSK), 7(WPA2-PSK) Encrypt: 0(None),1 (WEP), 2(TKIP), 3(AES) Channel: AP's channel information DefaultKeyID: 1 -4 Key: 5,10,13,26chars when WEP, 8-63chars when WPA-PSK	<S>	328	<PU1_0_1> or <PU1_1_4_1_12345> or <PU5_3_10_2_12345678>	At AP-Client Mode, change Client's Security information. Channel should be same with AP's channel

4.3 Security

Contents	OP	CMD	Command Syntax	Response Syntax	Time (ms)	Example	Contents
Security Status	Get	**DU**	<DU>	<Sx_x_x_x_x_x_x_x> AuthMode_Encrypt[_DefaultKey_KeyLength_KeyFormat_KeyValue_radiusPasswd_radiusIP_radiusPort] AuthMode: 1(Open), 2(802.1x), 3(Shared), 4(WPA), 5(WPA-PSK), 6(WPA2), 7(WPA2-PSK), 8(WEPAUTO), 9(WPA1WPA2), a(WPAPSKWPA2PSK) Encrypt: 0(None),1 (WEP), 2(TKIP), 3(AES), 4(TKIP_AES) KeyLength: 0(None), 1(WEP64), 2(WEP128) DefaultKey: 1 -4 KeyFormat(WEP): 0(Ascii), 1(Hex) KeyFormat(WPA-PSK): 0(Passphrase), 1(Hex)	16	Using When AP/GW Mode, AuthMode: 1-a EncryptType: 0-4 Using When Client Mode, AuthMode: 1,3,5,7 EncryptType: 0-3 <S0_0> or <S1_1_1_1_0_12345>	Get Security Status Client/Adhoc Mode: Not Support
Security Control	Set	**GU**	<GUx_x_x_x_x_x_x_x> AuthMode_Encrypt[_DefaultKey_KeyLength_KeyFormat_KeyValue_radiusPasswd_radiusIP_radiusPort] AuthMode: 1(Open), 2(802.1x), 3(Shared), 4(WPA), 5(WPA-PSK), 6(WPA2), 7(WPA2-PSK), 8(WEPAUTO), 9(WPA1WPA2), a(WPAPSKWPA2PSK) Encrypt: 0(None),1 (WEP), 2(TKIP), 3(AES), 4(TKIP_AES) KeyLength: 0(None), 1(WEP64), 2(WEP128) DefaultKey: 1 - 4 KeyFormat(WEP): 0(Ascii), 1(Hex) KeyFormat(WPA-PSK): 0(Passphrase), 1(Hex)	<S>	406	<GU0_0> or <GU1_1_1_1_0_12345>	Change Security. It takes time min : 4 , max 10 seconds Client/Adhoc Mode: Not Support (Caution : it takes more than 4 seconds to be applied, please double check execution GU command after getting response via DU command.)

4.4 Serial

Contents	OP	CMD	Command Syntax	Response Syntax	Time (ms)	Example	Contents
Protocol	Get	**RK**	<RK>	<Sx> TCP_0, UDP_1	16	<S0>	Get Protocol
	Set	**WK**	<WKx> TCP_0, UDP_1	<S>	78	<WK1>	Set Protocol
Mode	Get	**RM**	<RM>	<Sx> 0:Client, 1:Mixed, 2:Server	16	<S0>	Get Mode
	Set	**WM**	<WMx> 0:Client, 1:Mixed, 2:Server	<S>	78	<RM0>	Set Mode
Server IP	Get	**RX**	<RX>	<Sxxx.xxx.xxx.xxx>	16	<S192.168.1.1>	Get Server IP
	Set	**WX**	<WXxxx.xxx.xxx.xxx>	<S>	78	<WX192.168.1.1>	Set Server IP
Port	Get	**RP**	<RP>	<Sxxxxx> 0~65535	16	<S1000>	Get Port
	Set	**WP**	<WPx> 0~65535	<S>	94	<WP1000>	Set Port
Baudrate_DataBit_Parity_Flow_Stopbits	Get	**RB**	<RB>	<Sxxxxx> [Baudrate]1: 115200, 2: 57600, 3: 38400, 4: 19200, 5: 9600, 6: 4800, 7: 2400,8: 1200, 0: 230400, 9: 460800, a: 921600 [data byte]7: 7bit,8:8bit [parity] 0: no parity, 1: Odd, 2: Even [Flow] 0: no, 1: Xon/Xoff, 2: RTS/CTS [Stopbits]; 1: 1stop, 2:2stop	16	<S18001>	Get Serial Setting

	Set	**WB**	<WBxxxxx> [Baudrate]1: 115200, 2: 57600, 3: 38400, 4: 19200, 5: 9600, 6: 4800, 7: 2400,8: 1200, 0: 230400, 9: 460800, a: 921600 [data byte]7: 7bit,8:8bit [parity] 0: no parity, 1: Odd, 2: Even [Flow] 0: no, 1: Xon/Xoff, 2: RTS/CTS [Stopbits]; 1: 1stop, 2:2stop	<S>	359	<WB38001>	Set Serial Setting
Domain Name	Get	**RW**	<RW>	<Sxxxx> Max 64 characters	16	<Sdamosys.dyndns.org>	Get Domain Name
	Set	**WW**	<Sxxxx> Max 64 characters	<S>	78	<Wwdamosys.dyndns.org>	Set Domain Name
Time	Get	**QT**	<QT>	<Sxxxxx> 0~65535	16	<S100>	Get Time
	Set	**OT**	<OTxxxxx> 0~65535	<S>	78	<QT10>	Set Time
Size	Get	**QS**	<QS>	<Sxxx> 0~255	16	<S10>	Get Size
	Set	**OS**	<OSxxx> 0~255	<S>	78	<OS10>	Set Size
Char	Get	**QC**	<QC>	<Sxx> 00~ff	16	<S2a>	Get Delimiter
	Set	**OC**	<OCxx> 00~ff	<S>	78	<OC2a>	Set Delimiter
Inactivity Time	Get	**QI**	<QI>	<Sxx> 00~60	16	<S10>	Get Inactivity Time
	Set	**OI**	<OIxx> 00~60	<S>	78	<OI10>	Set Inactivity Time
TCP Connection Option	Get	**QU**	<QU>	<Sx> 0: TCP Client Mode, Serial to LAN auto connection 1: TCP Client Mode, Serial to LAN connection made in serial data in	16	<S0>	Get TCP Connection Option

	Set	**OU**	<OU> 0: TCP Client Mode, Serial to LAN auto connection 1: TCP Client Mode, Serial to LAN connection made in serial data in	<S>	78	<OU0>	Set TCP Connection Option
Main Port	Get	**RO**	<RO>	<Sx_x_x_a.b.c.d_x> Enable[_Protocol_Mode_ServerIP or Domain_ServerPort] Enable: 0(Disable), 1(Enable), Disable (In disable, other data is ignored Protocol: 0(UDP), 1(TCP) Mode: 0(Server), 1(Client), 2(Mixed) ServerIP: a.b.c.d Domain: xxx.yyy.zzz ServerPort: 0-65535	16	<S0> or <S1_0_0_192.168.1.1_1000>	Get Main Port Status
	Set	**WO**	<WOx_x_x_a.b.c.d_x> Enable[_Protocol_Mode_ServerIP or Domain_ServerPort] Enable: 0(Disable), 1(Enable), Disable (In disable, other data is ignored Protocol: 0(UDP), 1(TCP) Mode: 0(Server), 1(Client), 2(Mixed) ServerIP: a.b.c.d Domain: xxx.yyy.zzz ServerPort: 0-65535	<S>	500	<WO0> or <WO1_0_0_192.168.1.1_1000>	Set Main Port Status

Aux Port	Get	**RU**	<RU>	<Sx_x_x_a.b.c.d_x> Enable[_Protocol_Mode_ServerIP or Domain_ServerPort] Enable: 0(Disable), 1(Enable) (In Disable, other data is ignored) Protocol: 0(UDP), 1(TCP) Mode: 0(Server), 1(Client) ServerIP: a.b.c.d Domain: xxx.yyy.zzz ServerPort: 0-65535	16	<S0> or <S1_0_0_192.168.1.1_1000>	Get Aux Port Status
	Set	**WU**	<WUx_x_x_a.b.c.d_x> Enable[_Protocol_Mode_ServerIP or Domain_ServerPort] Enable: 0(Disable), 1(Enable) (In Disable, other data is ignored) Protocol: 0(UDP), 1(TCP) Mode: 0(Server), 1(Client) ServerIP: a.b.c.d Domain: xxx.yyy.zzz ServerPort: 0-65535	<S>	437	<WU0> or <WU1_0_0_192.168.1.1_1000>	Set Aux Port Status
Data Flow	Get	**RE**	<RE>	<Sx> 0: send incoming serial data to LAN main and aux port 1: send incoming serial data to LAN main 2: send incoming serial data to LAN Aux	16	<S0>	CIMOS specific commands
	Set	**WE**	<WEx> 0: send incoming serial data to LAN main and aux port 1: send incoming serial data to LAN main 2: send incoming serial data to LAN Aux	<S>	16	<WE1>	CIMOS specific commands

Get Insert Tag	Get	**RZ**	<RZ>	<Sx_xxx_xxx> enable(0-1)[_mainport_delimeter1_auxport_delimeter] 0: disable(default) 1: enable delimeter mac 16 characters	16	<S0> or <S1_@_#>	
Insert Tag	Set	**WZ**	<WZx_xxx_xxx> enable(0-1)[_main-delimeter1_aux-delimeter] 0: disable(default) 1: enable delimeter max 16 characters	<S>	219	<WZ0> or <WZ1_@_#>	Set serial data tag for main and aux
Client Mode	Set	**CC**	<CCxxxx_xx> ip-address_port, ip-address: a.b.c.d, port: tcp port(0-65535)	<S>	281	<S192.168.1.1_1000>	set serial main port connection for specific client only
Connection Status	Get	**CS**	<CS>	<OK> : TCP is well connected <FAIL> : TCP is not connected	16	<OK> or <FAIL>	get serial main port connection for specific client only same with <RC> but response is different
Connection End	Set	**CQ**	<CQx> (0-65535)	<S>	219	<CQ1000>	Change serial main as TCP server mode. For specific client only
Data Mode	Set	**AT**	<ATDT>	<S>	110	<ATDT>	change serial server as Data(Normal) Mode
Command Mode	Set	**+++**	<+++>	<S>	110	<+++>	change serial server as Command Mode
Mode Status	Get	**AT**	<ATDT?>	<S0> or <S1> 0: command mode, 1: data mode	16	<ATDT?>	get current serial server mode
Escape Mode	Get	**QX**	<QX>	<Sx> 0: disabled, 1: enabled		<S1> or <S0>	get usage of Escape Sequence

Escape Mode	Set	**OX**	<OXx>	<S>		<OX0> or <OX1>	Set mode switch "use_hw_switch_pin". Serial mode switch can be control via GPIO if 0, only <ATDT> and <+++> command is available for mode switch
Flash Write	Set	**WL**	<WL>	<S>	1484	<WL>	Save committed command to module's flash. Saved data is available after rebooting.

4.5 Others

Contents	OP	CMD	Command Syntax	Response Syntax	Time (ms)	Example	Contents
Factory Default	Set	**WF**	<WF>	<S>	2844	<WF>	Set Factory Default
Restart	Set	**WR**	<WR>	<S>	16	<WR>	Set System Restart

4.6 Return Code

S	<S> or <Sxx...>	Command success
F	<F>	command operation failed
0	<0>	Command failed because of no '<'
1	<1>	No supported command is inputted
2	<2>	Command parameter is mismatch
3	<3>	Command failed because of no '>'
4	<4>	Not supported command in current running mode
5	<5>	No more job is requested In WDS : requested to add more than 4 In Profile: requested to add more than 2 In ACL :requested to add more than 16
6	<6>	Already configured with same data

4.7 Exception

In SSID, PSK, if parameter has "_", then it is processed "__". When response data has "__", then process it as"_" ex) <DS> --> <S11__22>: SSID: 11_22 <GS11_22> --> <S>: SSID: 11_22 <QP> --> <S1_11__22_000102030405_...>: SSID: 11_22
Flash Write: when every set command comes, it does not save it to flash. So send "WL" command to save it to flash

5. Accessing module via Web Browser

A. All of control is done via web

① Connect your PC to WizFi630 EVB via LAN or WIFI

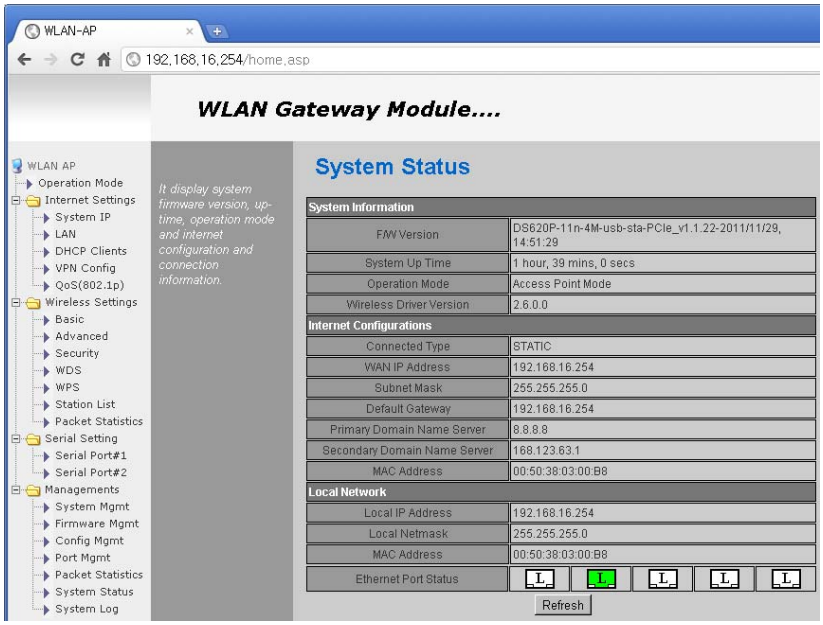
② Set your PC get the IP address automatically

③ Run Web Browser

④ Input http://192.168.16.254

⑤ User Account : admin / User Password : admin

⑥ Following is the web access picture



6. More information

- Website : www.wiznet.co.kr
- WizFi630-User Manual (software user manual)
- WizFi630 Data Sheet
- WizFi630 Series Application Notes