# In Room Control Panel

## User Programmable

## Touch Control Panel


Model: **A934-312C-001**

09.01.2017

# User Operation Guide

## PRODUCT DESCRIPTION

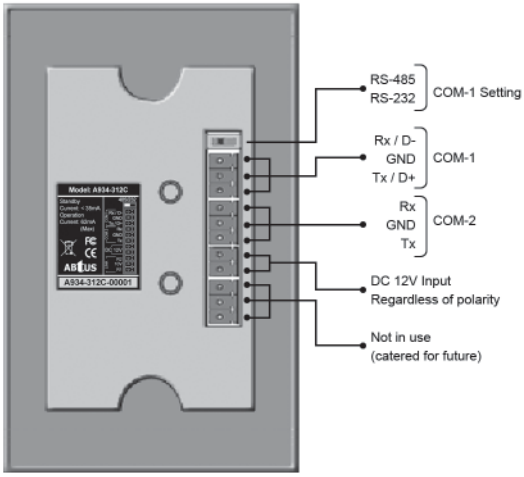
The ABtUS **A934-312C-001** touch control panel uses a standard 4-wire resistive touch panel, which allows up to a total of 32 command codes with complete user programmable software.

The user friendly Software allows customized programming such as macros setting, feed-backs, control commands, etc. Another characteristic of the panel is the panel button lay-out and design, it can be easily customized and printed on standard transparencies with icons or clear text buttons

## PRODUCT HIGHLIGHTS

- Automatic backlight fade out
- Macro definitions setting can be assign for every single button (up to 16 different order)
- Default 3x4 matrix of 12 touch buttons
- With 1 x RS-232 or 1x RS-485 (selectable) and 1x RS-232
- Ultra low power consumption

## SETTING UP

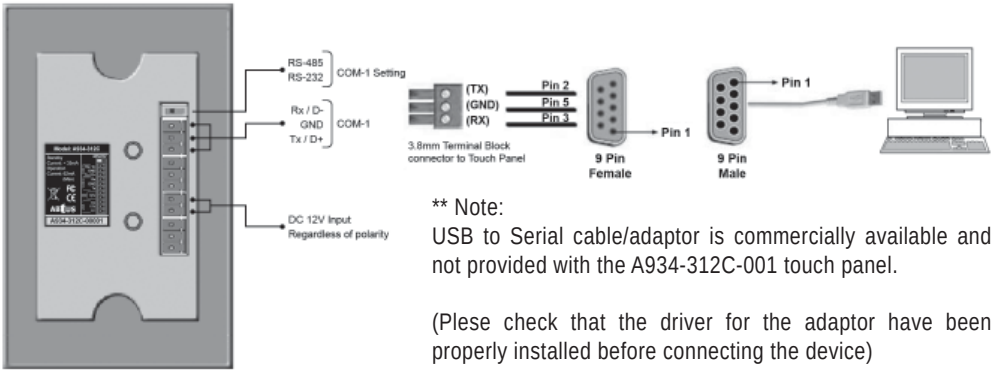



### TYPICAL APPLICATIONS

Any professional control system requiring multiple AV lighting/dimming or environmental control. ●Schools (Media Classrooms) ● Churches ● Corporate Applications (Meeting Rooms) ● Home Automation ● Home Theaters ● Hotels In Room Control

## SETTING UP

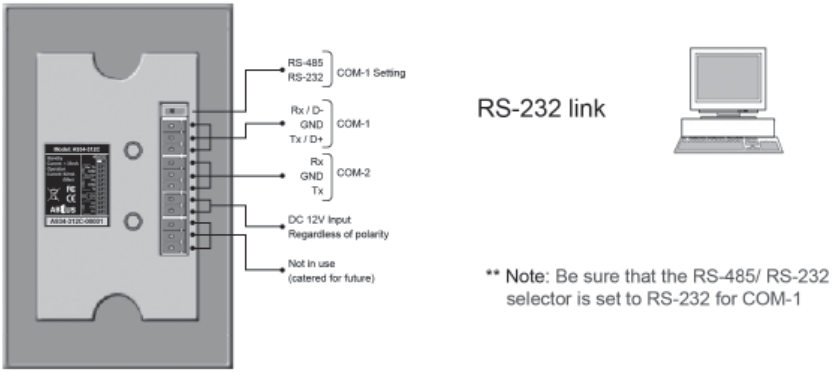
Connecting of cables to A934-312C-001




** Note:
USB to Serial cable/adaptor is commercially available and not provided with the A934-312C-001 touch panel.

(Plese check that the driver for the adaptor have been properly installed before connecting the device)

Connecting of cables to A934-312C-001

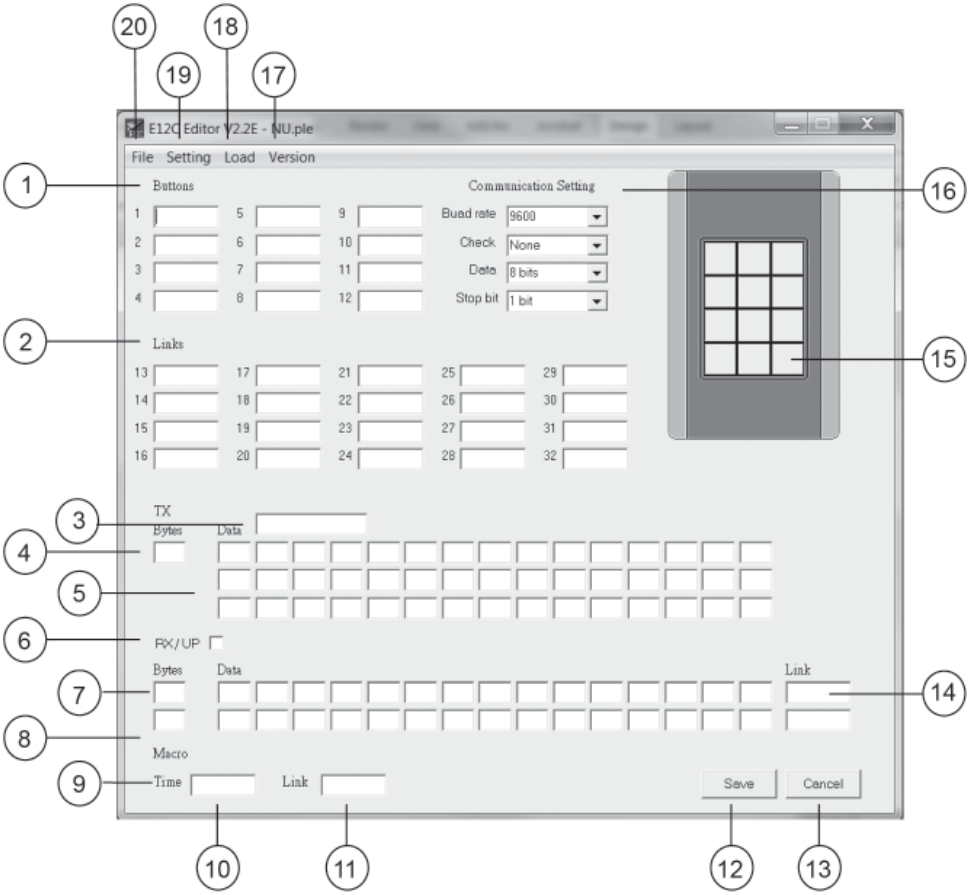



** Note: Be sure that the RS-485/ RS-232 selector is set to RS-232 for COM-1

Downloading of Software
The programming software can be download from “download center” in ABtUS Singapore’s website.

## TOUCH PANEL PROGRAMMING SOFTWARE E12C EDITOR

Model: E12C Editor Version 2.2E



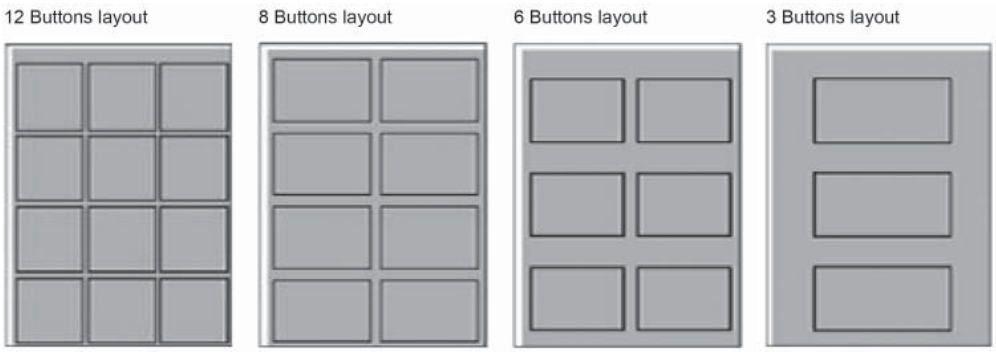
## TOUCH PANEL PROGRAMMING SOFTWARE E12C EDITOR

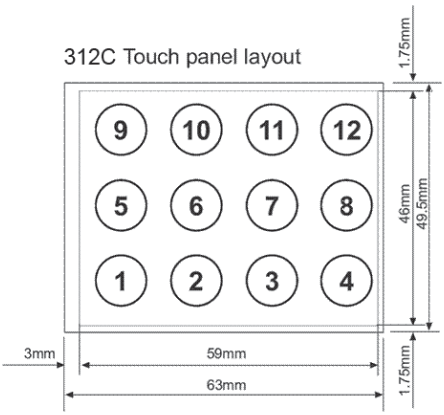
| | | |
|---|---|---|
| 1 | **Buttons** | Physical “Button” location number and “Function” entry<br>(Button number 1 to 12) |
| 2 | **Links** | Virtual “Button” location number and “Function” entry<br>(Button number 13 to 32) |
| 3 | **Button Parameter Setup** | *Each button is allowed to have a independent parameter setting<br>Baud Rate: 1200 to 38400<br>Parity: None, Odd or Even<br>Data Bit: 8 bits or 7 bits<br>Stop Bit: 1 bits or 2 bits |
| 4 | **TX Bytes** | Total length for the Data entered<br>(*Max. 35 bytes = 2D in Hex per function) |
| 5 | **Data** | Function/Command code entry (*Hex code ONLY) |
| 6 | **TX/UP** | RX/UP “Check” for “Push” and “Pop” Command link<br>“Push” TX data link in Physical or Virtual button<br>“Pop” TX data link in RX/UP (*Only one command is allow)<br>RX/UP “uncheck” for Return Command link<br>(** Max two return command are allowed) |
| 7 | **RX/UP Bytes** | Total length for the Data entered<br>(*Max. 35 bytes = 0F in Hex per function) |
| 8 | **RX/UP Data** | Function/Command code entry (*Hex code ONLY) |
| 9 | **Marco** | Macro Setting |
| 10 | **Macro Delay** | Delay time for Macro function (*1 to 15sec)<br>With interval of 1=0.5sec |
| 11 | **Marco Link** | Macro link “Physical” or “Virtual” button number |
| 12 | **Save** | Save each button function and command setup |
| 13 | **Cancel** | Cancel any button function and command setup changed |
| 14 | **RX/UP Link** | RX/UP link “Physical” or “Virtual” button number |
| 15 | **Location Indication** | Indicate the physical location on the touch panel |
| 16 | **Communication Setting** | Parameter setup (default)<br>Baud Rate: 1200 to 38400<br>Parity: None, Odd or Even<br>Data Bit: 8 bits or 7 bits<br>Stop Bit: 1 bit or 2 bits |
| 17 | **Version** | Software Version |
| 18 | **Load** | Upload the configuration and setup to the Touch Panel |
| 19 | **Setting** | Com port setting |
| 20 | **File** | New file, Open file and Save file |

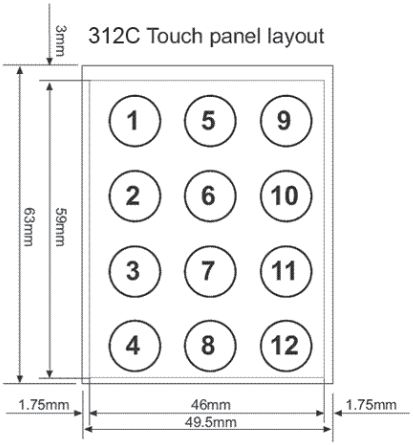
## BUTTONS LAYOUT

**The UI layout on the touch panel can be configure into the following:**

*To configure the UI layout, a separate is required to be loaded. Firmware could be obrained from ABtUS Singapore on request.*



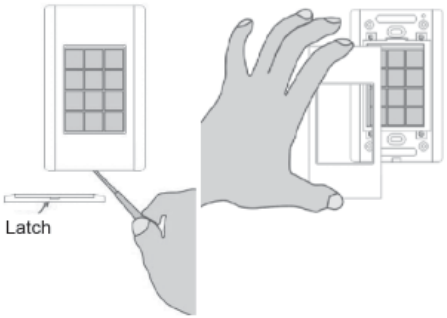




Note:
Physical UI Layout Size: 63mm × 49.5mm
Active Widows Area: 59mm × 46mm

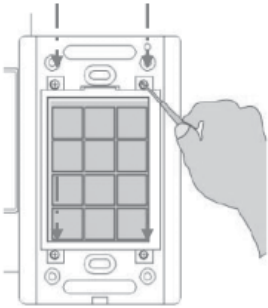
## REPLACEMENT OF UI DESIGNS

**Procedure of having the designed UI replaced:**

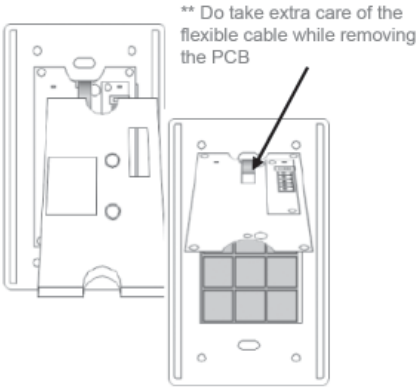
Step 1 : Lift the "Front cover" up with a small flat screw driver and removed it as shown



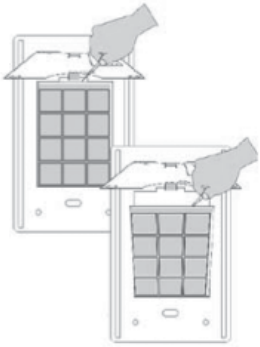

Step 2 : Removed the four screws as shown



Step 3 : Removed the "Back Cover" and the PCB as Shown.

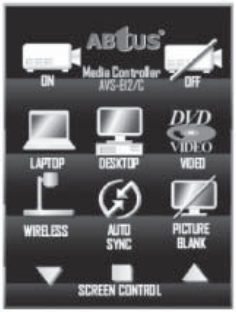



Step 4 : Remove and replace the UI design printed as shown



**Example: UI layout design in Landscape and Portrait**

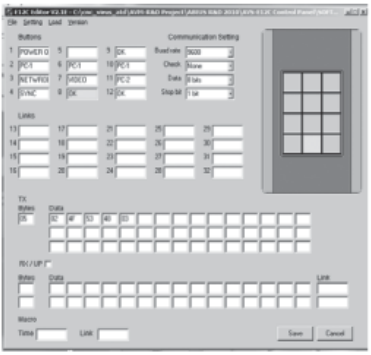
**UI designed is completely customizable. Users can design their own labels to be printed on transparencies (63×49.5mm) and cut out for use.*

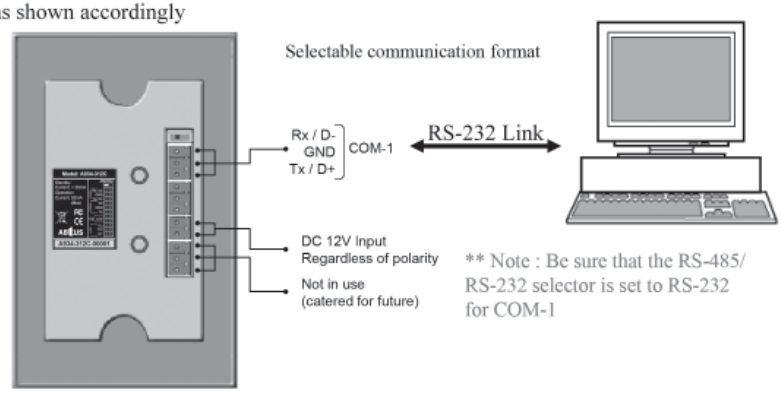

## UPLOADING OF PROGRAM

Once a programming setup is done, program can be uploaded to the Touch Control panel accordingly :

Step 1 : Run the application software **E12C Editor V2.2E**



Step 2 : Set up the connection between the Touch Control Panel and PC as shown accordingly



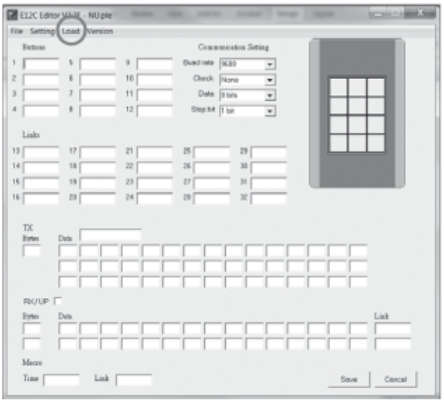

Step 3 : Entering "Loading Mode"

Apply DC power supply input while pressing and holding the highlight area of the Touch Panel as shown. The backlight will now be flashing. Release and the panel is now is "Loading Mode"

** Note: Panel will return to it normal mode after 5 sec time out.

## UPLOADING OF PROGRAM

Step 4: Click "Load" on the application software within 5 seconds from steps 3




Step 5: Software will now try to look for connected devices (Touch Control Panel)
Once done, uploading will start and the Touch Panel back light will stop flashing and start "Beeping". A "Loading..." Pop up window will appear as below


Step 6: A "Device not found" window will shown if connection is unsuccessful.
*Please check RS-232 connector cable as well as the RS-485/RS-232 selector
(*Be sure that the setting is at RS-232)


Step 7: A "Loading successful" window will appear once the program is successfully uploaded
The touch panel back light will start flashing and "Beep" for four times to confirm that the loading have been successfully done.

## EXAMPLE: PROGAMMING TO CONTROL A MEDIA PROJECTOR

Programming of touch panel as a controller controlling a Media Projector with the UI design as shown:

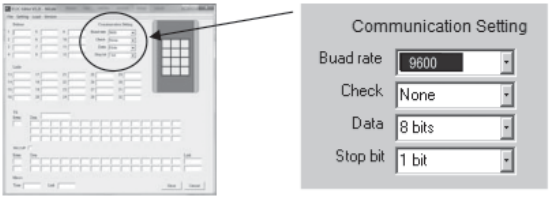
Button #1 Power On Command (Hex):
**43 30 30 0D** (19200, 8 data bit, Non party and 1 stop bit)
Button #2 Power Off Command (Hex):
**43 30 31 0D** (19200, 8 data bit, Non party and 1 stop bit)
Button #3 Input RGB-1 Command (Hex):
**43 30 32 0D** (19200, 8 data bit, Non party and 1 stop bit)
Button #4 Input RGB-2 Command (Hex):
**43 30 33 0D** (19200, 8 data bit, Non party and 1 stop bit)

** Setting different Baud Rate for each button
Button #5 Switcher Power On Command (Hex):
**43 30 30 0D** (**38400**, 8 data bit, Non party and 1 stop bit)

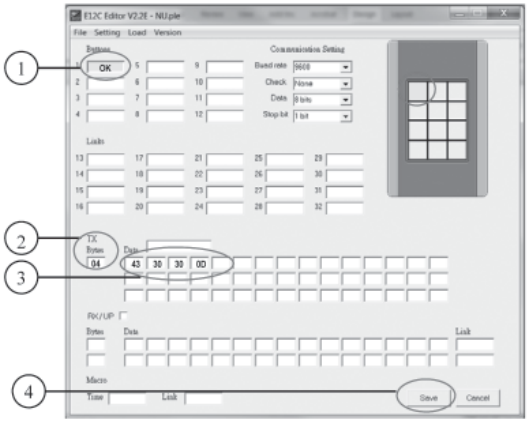
** The codes are for the purpose of examples only. Please obtain the hex codes from the individual equipment supplier*

Step 1 : Run the application software **E212C Editor V2.2E and select "New" to create a New Project**

Step 2 : Setup the Parameter accordingly as shown :




Step 3 : Setting up the "Power ON" code to it relevant button location (location #1) :



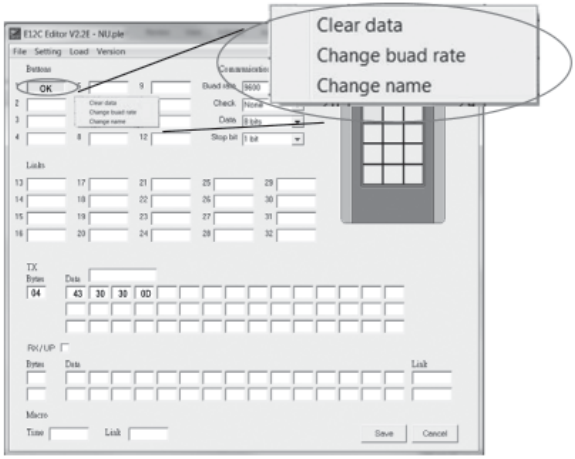

1 Select the button location (Location #1) the button will be high lighted as shown.
2 Key **04** in "TX Bytes"
3 Key in **43 30 30 0D** (Power On Command code) in the "Data"
4 Clip on "Save" to confirm setting and "OK" will appear in high lighted box

Step 4 : Repeat sequence in Step number 3 for the rest of the buttons number 1 to 5 setup accordingly.

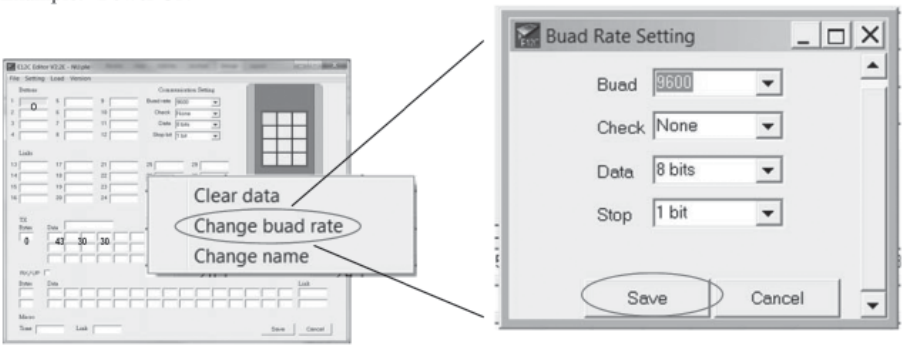
## EXAMPLE: PROGAMMING TO CONTROL A MEDIA PROJECTOR

Once all the button command code have been set, the “function name” and “Baud rate setting” of each button can then be “Name” and ‘Set” accordingly.

Step 5 : Right Clip on the Button that you whish have the “Function Name” or Baud Rate setting change.
Select “Change name” from the pop up window
Key in the function name within the high lighted button and press “Enter”
Example: “Power ON”




Right Clip on the Button that you whish have the “Baud Rate setting” change.
Select “Change baud rate” from the pop up window
Select the baud rate setting accordingly and clip on “SAVE”
Example: “Power ON”




Step 6 : Once completed, the setup can be saved for future reference.
Click on “File” and then “Save File”

Once all of the above is completed, the “program” can then be uploaded to the Touch Control Panel accordingly. Please refer to the procedure in “Upload of Program” for further instructions.

## VIRTUAL MARCO SETTING

Button 13 to 32 are virtual link buttons that are not to be confused with the 12 physical buttons. Button 1 to 12 allows a total 32 commands to be configured within this touch control panel.

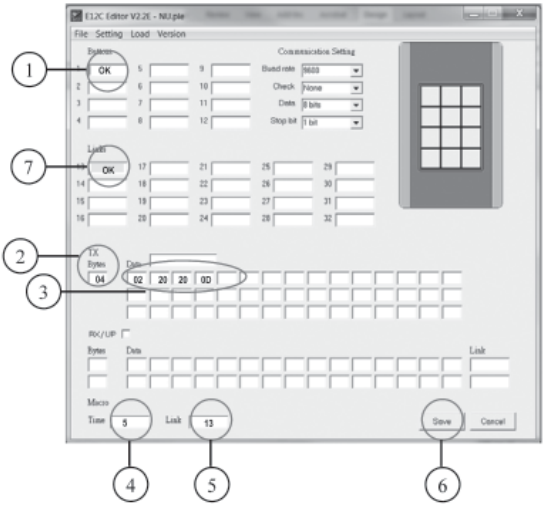
**Example: Programming to power on both an AV switcher and projector with 1 button**

Links Button # 1 to button # 13 with time delay of 5sec :

Button #1 Power On Command for projector (Hex):
**43 30 30 0D** (9600, 8 data bit, Non party and 1 stop bit)

Button #13 Power On Command AV switcher (Hex):
**02 20 20 0D** (9600, 8 data bit, Non party and 1 stop bit)

Function will be performed as followed:
When Button #1 is pressed, "Projector Power ON: **43 30 30 0D**" will be send followed by "AV Switcher Power ON: **02 20 20 0D**" after 5sec



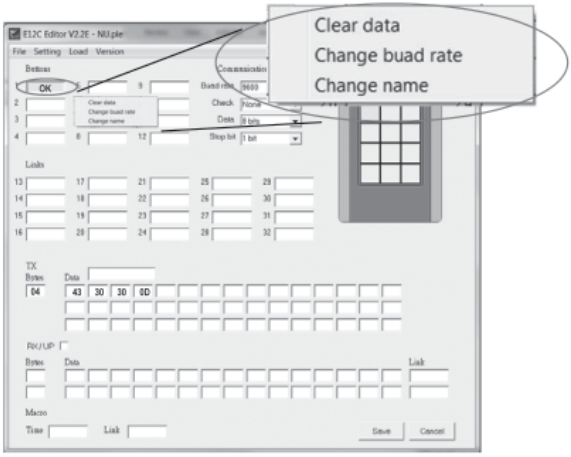

1 Select the button location (Location #1)
The button will be high lighted as shown.
2 Key **04** in "TX Bytes"
3 Key in **43 30 30 0D**
(Power on Command code) in "Data"
4 Enter "6" delay 5sec (*alllows 1 to 99sec)
5 Enter links button # 13
6 Click on "Save" to apply setting
and "OK" will appear in the highlighted box

Setting of virtual button # 13
5 Select the button location (Location #13)
The button will be high lighted as shown.
6 Key **04** in "TX Bytes"
7 Key in **02 20 20 0D**
(AV Switcher Power On Command code)
in "Data"
8 Click on "Save" to apply setting and
"OK" will appear in hightlighted box

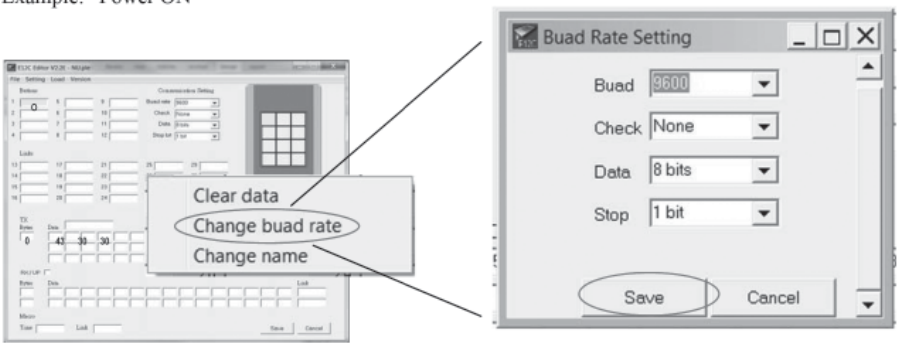
## VIRTUAL MARCO SETTING

Once all button command codes have been set, the function name and Baud Rate setting for each button can then be “Name” and set accordingly.

Step 5: Right Click on the Button that you wish have the “Function Name” or Baud Rate setting changed.
Select “Change name” from the pop up window
Key in the function name withing the high lighted button and press “Enter”
Example: “Power ON”




Right Click on the Button that you wish have the “Baud Rate setting” changed.
Select “Change baud rate” from the pop up window
Select the baud rate setting accordingly and click on “SAVE”
Example: “Power ON”




Step 6: Once completed, the setup can be saved for future reference.
Click on “File” and the “Save File”

Once all of the above is completed, the program” can then be uploaded to the Touch Control Panel accordingly. Please refer to the proceduce in “Upload Program” for further instructions.

## RX/UP SETTING

"RX": The command transmitted can be set based on the RX return command whereas "UP" will acts as a "PUSH" and "POP" action.

Example: press andhold for dimming up of lights and release to stop dimming.

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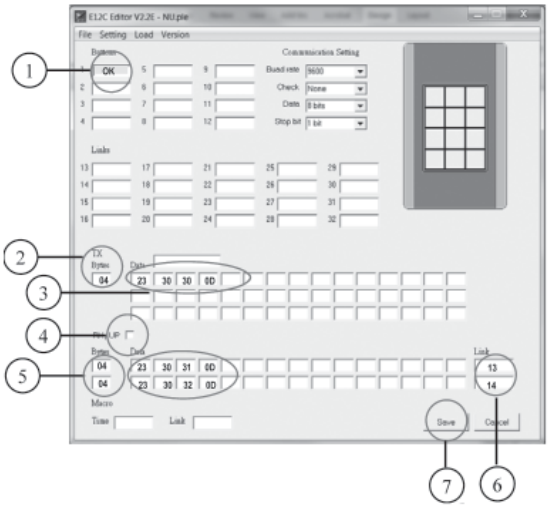
Setting a Button Location #1 as a "Power ON" and "Power Off" function with status returned:

Command of controlled device are as followed:

| | | | |
|---|---|---|---|
| Power On (Hex): | **43 30 32 0D** | Request Power Status (Hex): | **23 30 30 0D** |
| Power Off (Hex): | **43 30 31 0D** | Status ON Return (Hex): | **23 30 32 0D** |
| | | Status OFF Return (Hex): | **23 30 31 0D** |

Function performed will be as followed:
When Buttton #1 is pressed, panel will send a status request on the power status "**23 30 30 0D**" and will follow with a Power ON command if return status = OFF "**23 30 31 0D**" and Power OFF command if return status = ON "**23 30 32 0D**"




1 Select the button location (Location #1) the button will be high lighted as shown.
2 Key **04** in "TX Bytes"
3 Key in **23 30 30 0D** (Request Power Status Command code) in the "Data"
4 Click on "Save" to apply settings
5 Select link button # 13 and enter "Power ON" command and "Power OFF" at # 14
6 Click on "Save: to apply settings and "OK" will appear in a highlighted box
7 Key in the returned Data for both "Power ON" and "Power OFF" in "Item #5"
8 Set the "Link" button accordingly
9 If return status is "Power OFF" link to "Button" 13 ("power ON". Command)
10 If return status is "Power ON" link to "Button" 14 ("power OFF". Command)

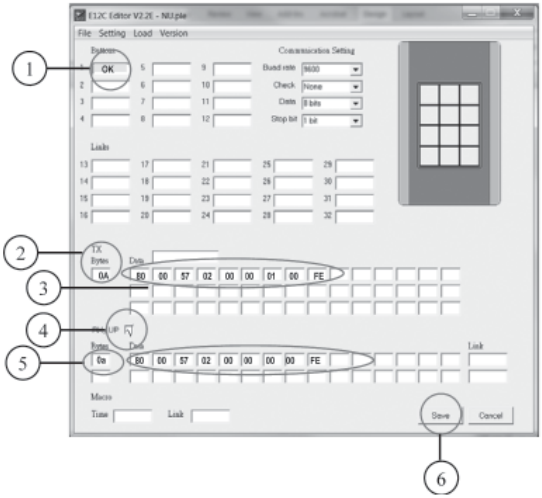
## PROGRAMMING

Example: Programming to achieve continuous dimming (up/down) of lights on pressing and holding of button

Setting a Button Location #1 as a "Push" and "Pop" function:

Command of controlled device are as followed:
Dimming Up (Hex): **80 00 57 02 00 00 01 00 FE**
Dimming Stop (Hex): **80 00 57 02 00 00 00 00 FE**

Function performed will be as followed:
Press and hold Button #1, panel will send Dimming UP command to Dimmer to "Dim-up"
A "Dimming Stop" command will be sent automatically once the button is released.

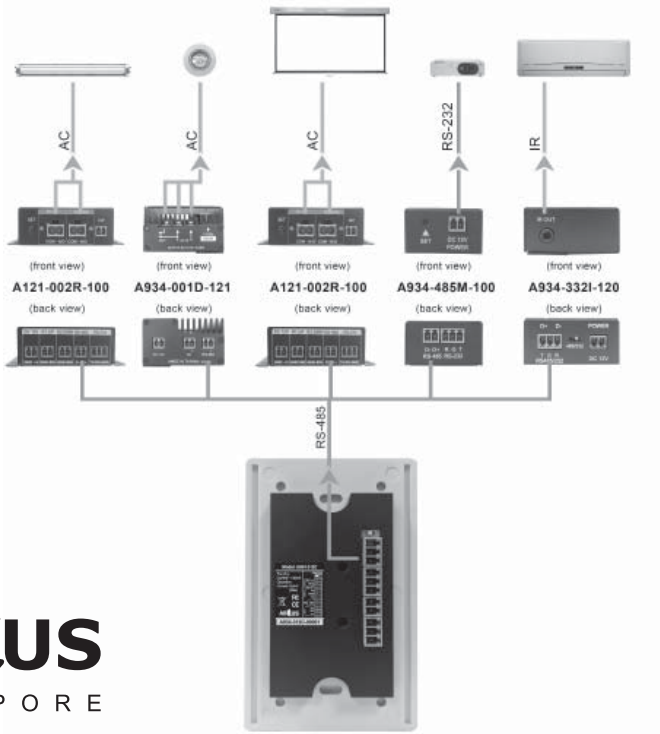



1 Select the button location (Location #1) The button will be highlighted as shown.
2 Key 0A in "TX Bytes"
3 Key in **80 00 57 02 00 00 01 00 FE** (Set Dimmer to dim-up)
4 Checked RX/UP as shown
5 Key in the "Dimming Stop" command **80 00 57 02 00 00 00 00 FE** accordingly with Bytes length **0A**
6 Click on "Save" to apply settings and "OK" will appear in high lighted box
7 Do remember to set the baud rate and button function name accordingly after the above settings have been programmed

## SPECIFICATION

| | | |
|---|---|---|
| **Input Voltage** | : | 12V-DC, 500mA |
| **Back light** | : | With white LED light guide plate |
| **Communication Standard** | : | 1 × RS-232 or RS485 (*Selectable) and<br>1 × RS-232 (Tx Only) |
| **Configurable Com Port** | : | 7 or 8 Data Bit and 1 or 2 Stop Bit<br>Baud Rate (1200 to 38400)<br>Parity Bit (Non, Even or Odd) |
| **Total number of button** | : | 12 |
| **Total number command set allow** | : | 32 |
| **Standby current** | : | 35mA |
| **Operation current** | : | 65mA |
| **Housing** | : | ABS |
| **Gross Dimensions** | : | 190 × 195 × 78 mm |
| **Gross Weight** | : | 323 g |
| **Accessirues** | : | AC-DC Power Adaptor 12V-DC, 500mA<br>1 × 2 Pin, 2 × 3 Pin Terminal Block |

## DIAGRAM




** For details and updated Command and Program Software, please visit and download from **www.abtussingapore.com**

**Specifications are subject to changes without notice.*