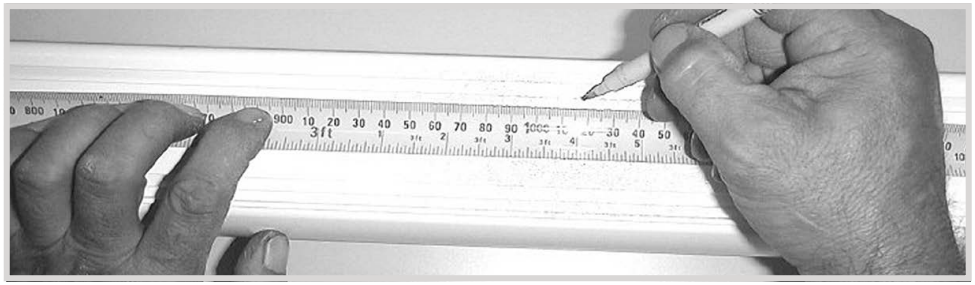
Thank you for purchasing a Screen Technics Projection Screen, please ensure that you read the following instructions fully before attempting to install this product.

WALL MOUNTING INSTRUCTIONS

STEP 1. Measure the wall where the screen is to be installed and mark with a pencil the desired height to top of screen case and also the centre of the screen.

STEP 2. Measure the length of screen canister along the top surface and mark the centre of the canister with a pencil, to assist in lining up the screen when mounting.



STEP 3. Determine the best positions for the wall brackets, allowing that in Gyprock or in low strength walls the brackets will be screwed into a timber stud. In more solid walls, such as masonry, position the brackets approx 150mm in from the canister end. The brackets should be no more than 450mm in from each end. You must use a minimum of 3 off wood screws per bracket or 2 off Dyna-bolts, for masonry walls and you must be satisfied that the attachment is strong enough for the a safe installation.

Brackets supplied as follows, all brackets must be used in installation:

Up to and including 100" = 2 brackets

Over 100" and up to 150" = 3 brackets

150" and up to 200" = 4 brackets

200" = 5 brackets

NB: Top of bracket equals top of screen canister.

STEP 4. You may need to remove the bottom clip in order to screw brackets to wall, please ensure to replace them afterwards.

Continued Over.../

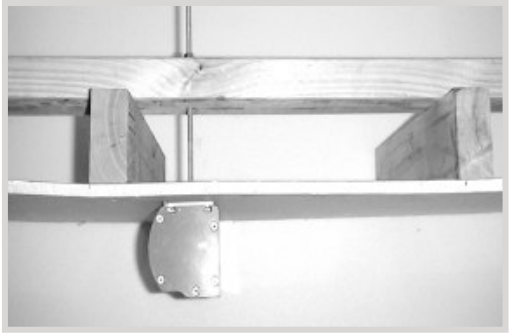
STEP 5. Using two people install the screen by placing the screen canister into the bottom of the bracket clips and pivoting back the canister to slot the top pins into the T channels running along the top of the canister (you may have to remove any tape that is in the way).

STEP 6. Holding screen in position tighten up Allen screw at each end and check that the top pins have hooked into the T section of the screen canister.

IMPORTANT. Always ensure that you can remove the screen for maintenance or repair if required. Do not sheet it in place.

CEILING MOUNT INSTRUCTIONS

Below is a photo showing a side view using the brackets for ceiling fixing, you would follow the instructions for the wall mounting system, with the only difference being the screen is mounted hard against the ceiling. It is important that adequate support is supplied by the ceiling structure to support the screen and to ensure a safe installation. Never rely just on the Gyprock for attachment.



Please follow these instructions to ensure trouble free operation;

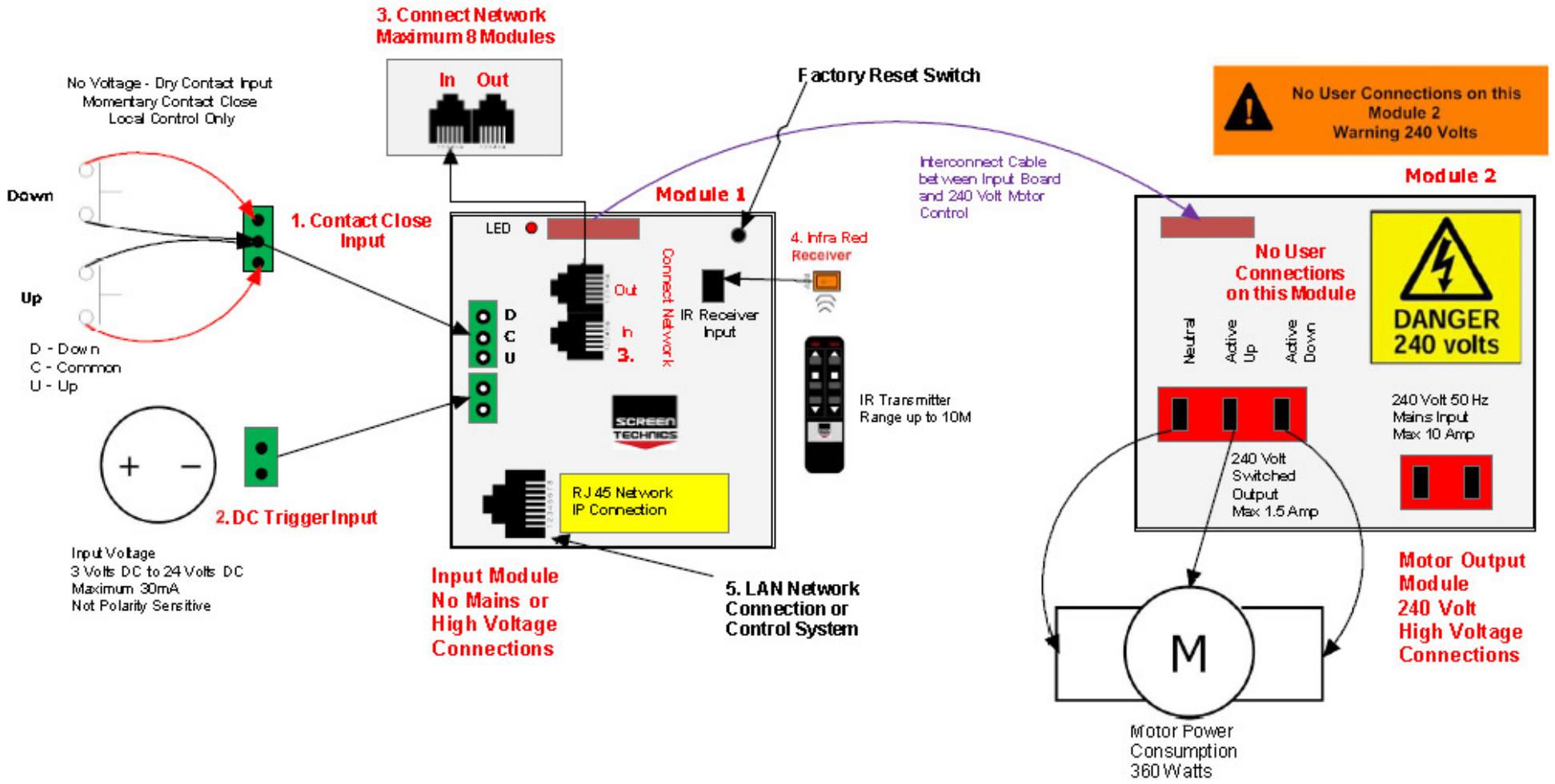
- Ensure that the screen is free to descend and that any adhesive tape that has been placed bottom of the screen (to stop movement during transport) has been fully removed.
- When installed, the opening in the canister should be down and at the back of the canister. This will put the chain drive on the left-hand side of the screen, as viewed by the audience. (Unless ordered otherwise).
- Cleaning of the screen is best achieved by first dusting the surface with a feather duster, then to remove any stubborn marks, use a small amount of mild detergent and warm water on a clean white lint free cloth. Do not use a saturated cloth, as this may leave a watermark, only a damp one. It is most important that you only treat the actual mark by this process and not the entire surface.

The Motor is 240 V 50Hz and draws 1.2 A.

The screen drop is set and tested at the factory. Therefore, any damage caused to the screen from limit re-adjustment is not covered by warranty.

Should you have any questions regarding the installation of our projection screens please call our technical sales desk on +61 2 4869 2100 for assistance.

CONNECT IP MODULES 1 & 2



All inputs on module 1 are accessed by removing right hand end cap of screen canister

1. CONTACT CLOSE INPUT

- Contact Close Input for local control
- Requires 2 x Momentary contacts duration minimum 50 milliseconds
- Dedicated contact for Up & Down
- Stop command is close opposite travel contact or both Up & Down together

2. DC TRIGGER INPUT

- Down command is sent when a DC Voltage of 3 Volts @ 1mA minimum is applied to input, a Up command is sent
- Up command is sent when a DC Voltage of less than 1.0 Volts DC @ 1mA is applied to input, a Down command is sent
- Maximum cable length 75 meters approximately based 24 AWG gauge cable

Continued Over.../

3. CONNECT NETWORK

- Connect Network uses a RJ11 6P6C Plug 6 core wired straight through
- 50 Meter maximum cable length between modules
- Connect network carries commands when connected to other Connect Modules
- Maximum of 8 Modules Total, including Connect IP module

4. INFRA-RED INPUT

- Supplied with 2 channel IR transmitter
- Supplied with IR receiver with 300mm and 1.2M input lead
- IR operates on Group 1 & 2 as standard

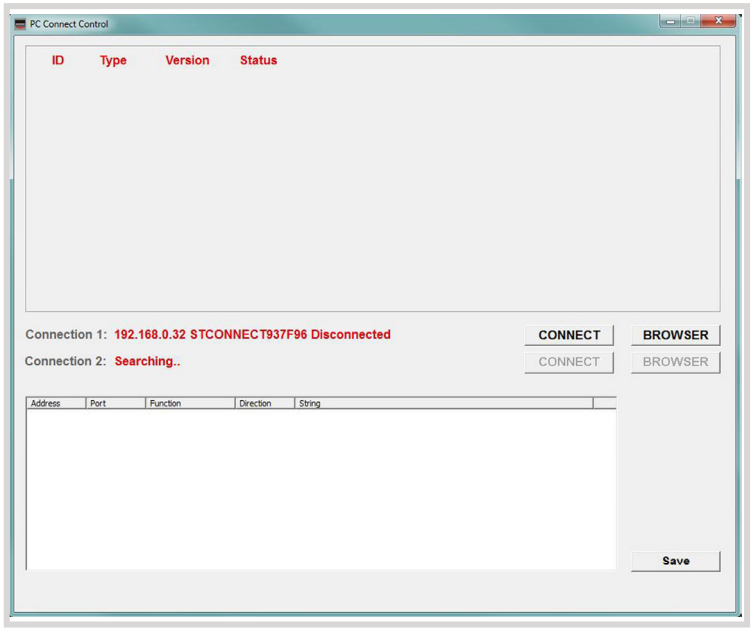
5. RJ45 LAN INPUT

- DHCP or Static IP addressable
- Internal Web Browser
- TCP/IP controllable

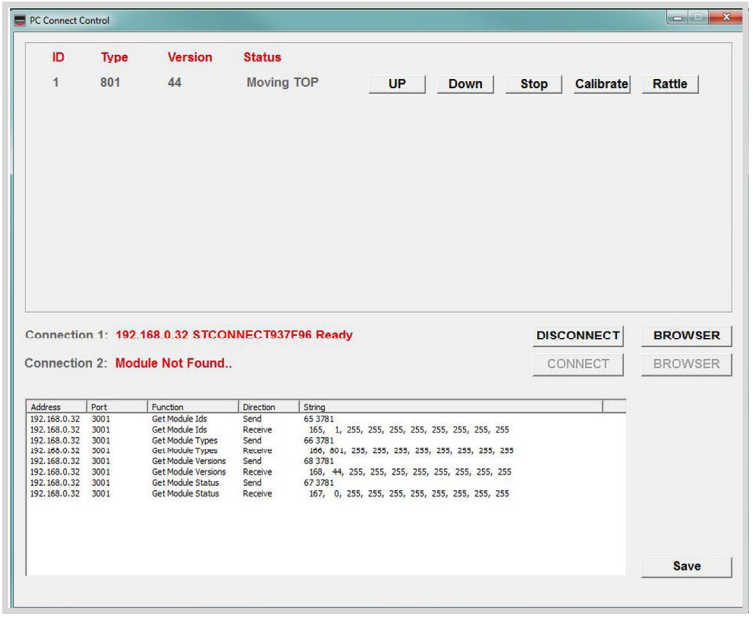
6. PC OR MAC CONNECT SOFTWARE

- As the module is DHCP default, this software will allow simple operation and identification of IP address and port number of IP connect modules on network
- PC Connect software will search for Connect IP Modules on the network
- Screen shot below showing module, IP address using PC Connect
- Connect to module

The PC Connect / Mac Connect software is found on our web site: screentechnics.com.au and can be accessed through the DOWNLOAD menu.



- Screen shot below of module connected
- Allows operation of module via simple control
- When command is sent – string showing command, IP address, Port number and feedback response is shown in the box below



- Click on Browser button and simple control screen appears

- Click on login to view advanced settings page

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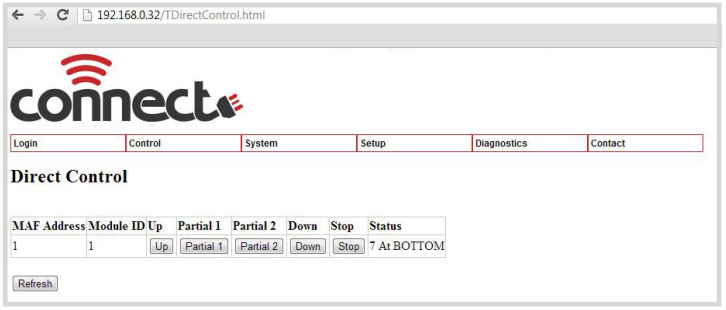
7. CONNECT INTERNAL WEB BROWSER

- Using web browser
- Type IP address as shown in PC Connect Software
- Connect Login screen will be shown
- Input User Name : Admin
- Password : Connect

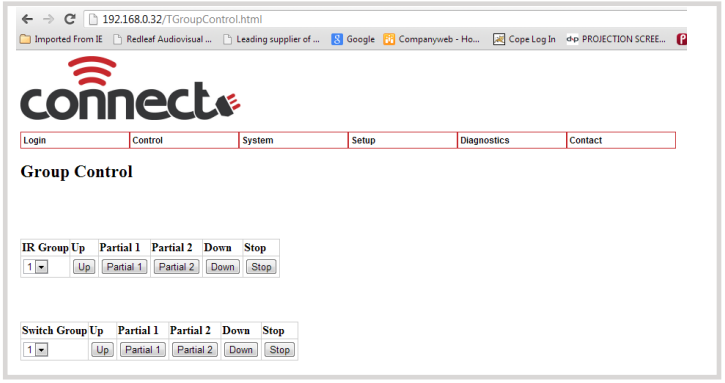
8. CONNECT DIRECT CONTROL

- Select Direct Control from Control Menu
- Direct Control Screen shown below
- Partial 1 & 2 act as stop command unless partial has been programmed
- MAF address and Module ID shown
- Simple control feature
- Status indication of screen – use refresh to obtain latest status update



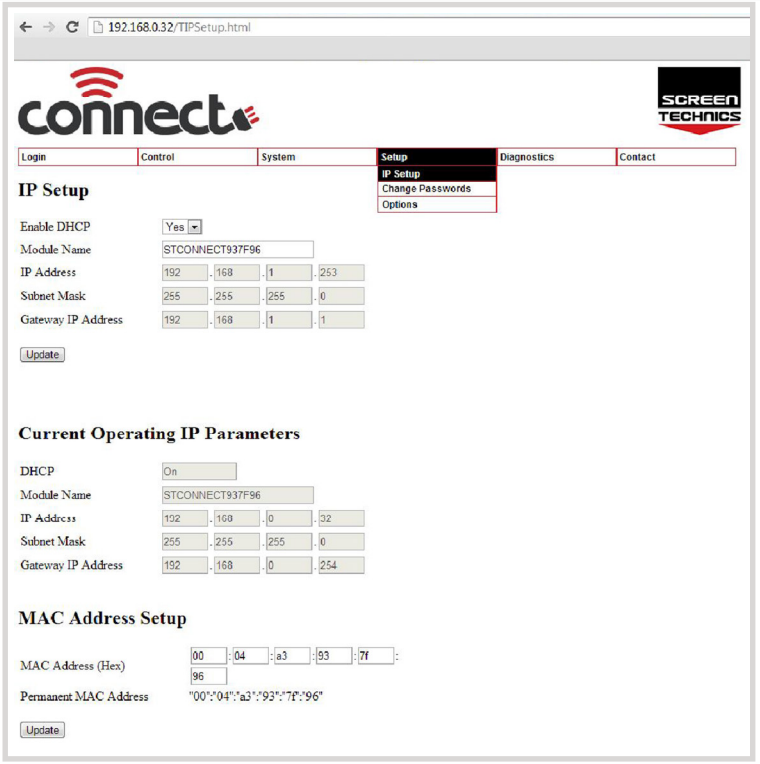
9. GROUP CONTROL

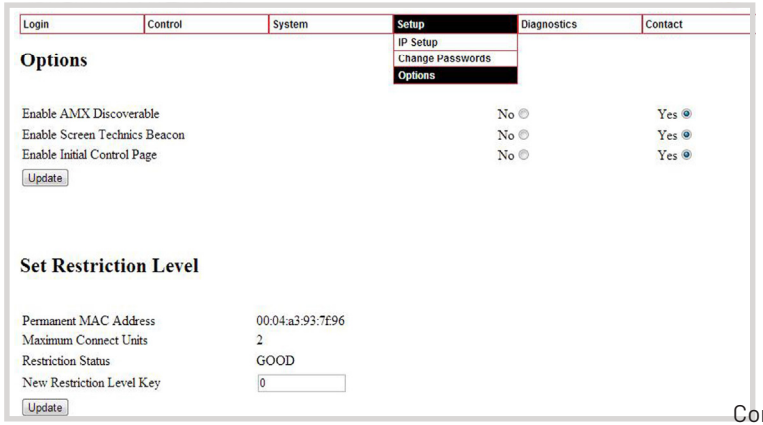
- Direct Control Screens that have been programmed with the same IR group or switch group (contact Close input)
- Partial 1 & 2 act as stop command unless partial has been programmed
- Simple control feature



10. IP CONTROL SETTINGS

- Access settings via set up tab
- Setting of static IP address
- Mac address set up (If replacing on network)
- Current IP operating parameters
- AMX Discoverable enable
- Screen Technics Beacon
- Simple control page





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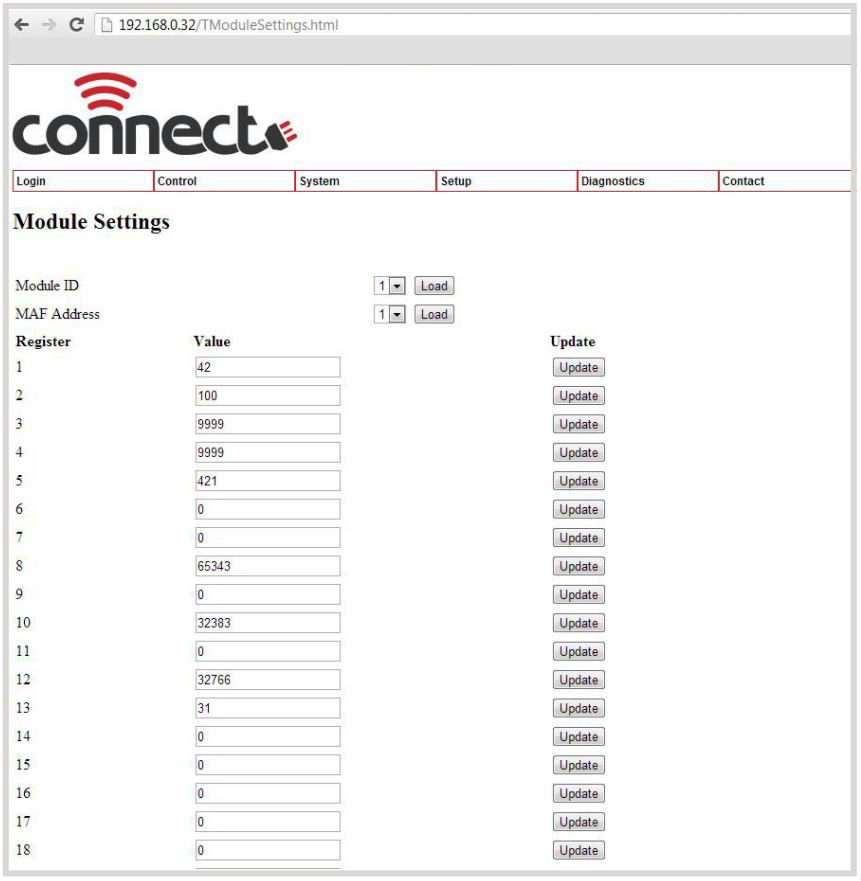
11. REGISTER SETTINGS

- Access this menu by selecting System then Module Settings
- Select MAF address or Module ID and select load
- Change value and select update
- This menu will enable changes of features within the module
- 127 registers in total
- Screen shot below showing register page



COMMONLY USED REGISTERS

Register Number	
65	Operation PIN
66	Programming PIN
67	Partial Pos 1 – Lo
68	Partial Pos 1 – Hi
69	Partial Pos 2 – Lo
70	Partial Pos 2 – Hi
71	SWITCH MODE
72	Partial 1 Open Mode
73	Partial 2 Open Mode
74	SWITCH GROUP Bitmapped Register below
75	IR GROUP Bitmap Register Below
76	Timer Up
77	Timer Down
78	MODULE_ID
82	Time_delay_up (100mS)
83	Time_delay_down (100mS)

Continued Over.../

12. INFRA-RED GROUP BITMAP CALCULATOR

- Add the value of IR groups
- If you wish the module to operate on Group 1 only – change register 75 to a value of 2
- If you wish the module to operate on Group 1 & 2 only – change register 75 to a value of 6

Group	Value
1	2
2	4
3	8
4	16
5	32
6	64
7	128
8	256
9	512
	TOTAL

13. CONTACT CLOSE SWITCH GROUPS

- Add the value of switch groups
- If you wish the module to operate on Switch Group 1 only – change register 74 to a value of 2
- If you wish the module to operate on Group 1 & 2 only – change register 74 to a value of 6

Group	Value
1	2
2	4
3	8
4	16
5	32
6	64
7	128
8	256
9	512
	TOTAL

SWITCH GROUP BITMAP REGISTER

Calculate the register number by using following table:-

1. Transfer the Value for each required group to the right column.
2. The Total of the values in the right column then becomes the Register Value

Eg: to set groups 1, 2 & 4 then the Total value is 22

Group	Value
1	2
2	4
3	8
4	16
5	32
6	64
7	128
8	256
9	512
	TOTAL

14. IP CONNECT SERIAL PROTOCOL

- This serial command protocol is essentially the same for all console channels
  - TELNET via TCP/IP (2 ports 3001)
  - HTTP via port 80

FORMAT

The stream is made up of messages. A message consists of 1 to 80 printable ascii characters followed by and end of message. An end of message is one or more of CR and LF optionally combined with any number of delimiters.

A message is made up of unsigned numerical value fields in decimal format separated by one or more delimeters. A delimiter is any single or combination of space, comma or tab.

Examples of valid messages to the IP Connect module are given below. All these messages have the same meaning.

1,3,45<CR>
1,3,45<LF>
1,3,45<CR><LF>
,1,3,45<CR><LF>
1,3,45,<CR><LF>
1,3,,45,<CR><LF>
1,3, 45,<CR><LF>
1,3,45,<CR>, ,<LF>
01,3,45<CR><LF>
000000001,3,45<CR><LF>
1 3 45<CR><LF>
1, 3, 45<CR><LF>

A message is not a valid message if:

- It contains more than 80 characters before an end of message character is received.
- It contains a character that is not <CR>,<LF>,<TAB>,<SPACE>,0,1,2,3,4,5,6,7,8,9,",".
- A numerical field exceeds 65535
- It contains more than 10 fields

If a packet is determined to be not a valid message it is ignored. If a message is determined to be invalid before the end of message is ignored then all characters received are ignored until an end of message character is received.

Messages from the IP Connect module comply with the requirements of the incoming messages but in addition are fixed width formatted. Each numerical field is made of 5 characters (leading spaces and digits). A comma delimiter is included.

An Example is shown below:

1, 3, 45<CR><LF>

Continued Over.../

15. CONTROL COMMANDS

- These commands are used to control the operation of screens.
- The Switch groups and IR groups must be programmed according to section 5
- Unified address is MAF address plus 16 e.g. Module 1 is Unified address 17

OPERATE MODULE DIRECT

COMMAND	VALUE	DESCRIPTION
30	Module ID	Operate Module UP
31	Module ID	Operate Module PARTIAL 1
32	Module ID	Operate Module PARTIAL 2
33	Module ID	Operate Module DOWN
36	Module ID	Operate Module STOP

- Command followed by value 0 operates all modules connected via Connect Network including the Connect IP module
  (e.g.: 30 0 will operate all devices connected via the Connect network)
- Example of direct command
  Connected to 192.168.0.32:3002 – command 30 1 using module ID would see the screen move to up position

IR GROUP COMMANDS

- IR group control can be used to control screens directly if connected via Connect Network including the Connect IP module
- Each module will require programming via register 75, as per point 11 in document
- Example of direct command Connected to 192.168.0.32:3002 – command 20 1 ,would see all screens programmed to operate on IR group 1 move to up position
- Command followed by value 0 operates all modules connected via Connect Network including the Connect IP module

OPERATE IR GROUP

COMMAND	IR GROUP	DESCRIPTION
20	IR Group 1 to 9, 0	Operate IR Group UP
21	IR Group 1 to 9, 0	Operate IR Group PARTIAL 1
22	IR Group 1 to 9, 0	Operate IR Group PARTIAL 2
23	IR Group 1 to 9, 0	Operate IR Group DOWN
26	IR Group 1 to 9, 0	Operate IR Group STOP

SWITCH GROUP COMMANDS

- Switch group control can be used to control screens directly if connected via Connect Network including the Connect IP module
- Each module will require programming via register 74, as per point 11 in document
- Example of direct command
  Connected to 192.168.0.32:3002 – command 20 1 - would see all screens programmed to operate on Switch group 1 move to up position
- Command followed by value 0 operates all modules connected via Connect Network including the Connect IP module

OPERATE SWITCH GROUP

COMMAND	IR GROUP	DESCRIPTION
10	SWITCH Group 1 to 9, 0	Operate IR Group UP
11	SWITCH Group 1 to 9, 0	Operate IR Group PARTIAL 1
12	SWITCH Group 1 to 9, 0	Operate IR Group PARTIAL 2
13	SWITCH Group 1 to 9, 0	Operate IR Group DOWN

16. PROGRAMMING PARTIAL POSITIONS 1 & 2

- Before partial positions can be programmed, the screen must be calibrated – Calibration is done by sending the below command. eg. to calibrate screen 1 a code of 192.168.0.32:3002 – **command 042 17** using Unified address would see the screen calibrate
- Calibration command can also be sent from the PC Connect software

COMMAND	MAF ADDRESS + 16	VALUE 1
42	Unified Address	3781

- Please start calibration by returning screen to top limit and then sending calibration command
- Due to motor run time this feature is not available on some large projection screens or Screen Lowering devices
- Partial 1 must be set first and must be above partial 2
- Note that if partial positions have been programmed Stop 1 and Stop 2 on infra red transmitter will send screen to partial 1 & 2, and will not stop the screen

Continued Over.../

SETTING THE PARTIAL POSITIONS

Note: Partial positions are set using internal timers, position can vary due to mains voltage fluctuations, motor load changes and temperature.

COMMAND	MAF ADDRESS + 16	VALUE 1	DESCRIPTION
44	Unified Address	3781	Sets Partial Position 1
45	Unified Address	3781	Sets Partial Position 2

To set Partial 1 – stop screen at required location and send command - if screen 1 is being used

- IP address 192.168.0.32:3002 – command 044 17 using unified address would see the screen set partial position 1
- To set Partial 2 – stop screen at required location and send command - if screen 1 is being used a IP address 192.168.0.32:3002 – command 045 17 using unified address would see the screen set partial position 1

17. MODULE STATUS FEEDBACK

- A module status buffer (20 record FIFO) is updated as a automatically generated Send Register Commands with register number = 0x20 are sent from each module.
  The module status buffer contains the Module ID (1 byte), and Module Status (2 bytes)

COMMAND
050

Response from module e.g. 150, 1, 1, 6 – value 6 indicates screen at top

COMMAND	VALUE 1	VALUE 2	VALUE 3
150	Status	Module ID	Module Status Register (0x20)

Note – Status=1 is returned if valid data and no further records in the status buffer
Status=2 is returned if valid data and there are still records in status buffer
Status=3 is returned if valid data but the buffer is full (eg may have lost data)
Status=6 is returned if there are no new records

This buffer is updated when screens are moved. It is also updated automatically every 60 seconds. It needs to be polled regularly to clear the stored data otherwise it will get full and records will be lost. Even though screens may not be moving the data is being updated even though the status is the same.

RESPONSE TYPE NO	CONNECT IP MODULE
0	Moving top
1	Moving bot
2	Moving PP1
3	Moving PP2
4	Moving PPT
5	Moving PPB
6	At TOP
7	At BOTTOM
8	At PP1
9	At PP2
10	Stopped manual
11	Error
12	Spare
13	Fail-timeout
14	Fail – current
15	Rattle
16	At PPT
17	At PPB

Example of string from module:

192.168.0.32 3001 Up Send 30 1
192.168.0.32 3001 Up Receive 130, 1, 1
192.168.0.32 3001 Status Change Receive 9999
192.168.0.32 3001 Get Module Status Send 67 3781
192.168.0.32 3001 Get Module Status Receive 167, 0, 255, 255, 255, 255, 255, 255, 255, 255
192.168.0.32 3001 Status Change Receive 9999
192.168.0.32 3001 Get Module Status Send 67 3781
192.168.0.32 3001 Get Module Status Receive 167, 6, 255, 255, 255, 255, 255, 255, 255, 255

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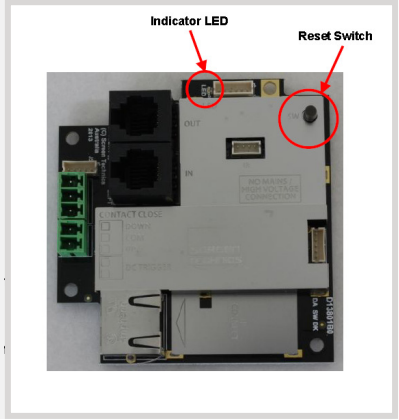
18. AMX Device Discovery

- This feature allows the IP CONNECT module to be identified by AMX AV Control Systems. When polled the IP CONNECT module responds with a Beacon message which contains device specific information. (Eg Make, Model, Version) With this information the AMX system is able to then configure itself with the correct protocol to be able to control the IP Connect Module.
- The protocol works for any of the Serial ports, and over TCP/IP.
- The AMX "Device Discovery White Paper.Doc" defines, The Dynamic Device Discovery
- Protocol - the connection methods and data interactions required to dynamically connect a third party device to a NetLinx Master via either serial or IP connectivity.
- AMX Discovery is enabled using Register 80 or via internal web browser

19. FACTORY RESET SWITCH

- Single long press for 5 seconds approximately
  - Factory Default Mode selected.
  - LED double flashes.
  - Pressing button again exits mode.
  - Receiving an IR command exits this mode.



- Single short press for 3 seconds approximately
  - Screen Rattle command.
  - 3 seconds down 1 second up.
  - LED single flashes while in this function.
  - Pressing button again stops screen.
  - Function is exited when screen operation finished or another screen operate command is acted on.

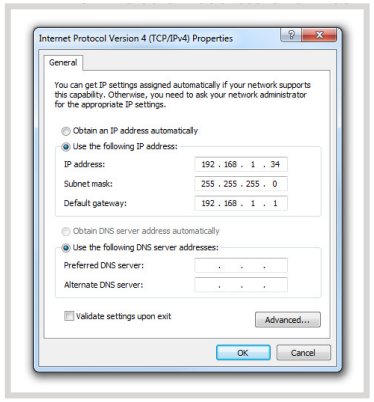
- Double short press for 2 seconds approximately per button press
  - Screen Up command. Screen travels to up limit.
  - LED single flashes while in this function. Pressing button again stops screen.
  - Function is exited when screen travels to up position or another screen operate command is sent.

- Triple short press for 2 seconds approximately per button press
  - Screen Down command. Screen travels to down limit.
  - LED single flashes while in this function.
  - Pressing button again stops screen.
  - Function also exited when screen operation finished or another screen operate command is acted on.

20. Default IP Address when in Factory Default Mode

- Hold reset button on module until LED flashes twice to put the IP module into static IP mode
- You will need to set your network adaptor to look for IP range – example shown:

http://192.168.1.253
Into browser address bar
Input User
Name : Admin - Password : Connect
You should now see the direct control screen
You can now access the settings for the Connect IP module



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21. LIMIT SETTING FOR CONNECT ELECTRICINEMA IP SCREENS

The following instructions are for the adjustment of the limit switches that alter the upper and lower stop positions on "Connect" ElectriCinema IP Screens only

WHERE ARE THE LIMIT SWITCHES?

(On the Left Hand Side).
One switch is accessible through the slat rod opening and the other is behind a rubber grommet towards the front of the canister.

WHICH SWITCH IS FOR UP AND DOWN?

Down switch - Accessible through the rubber grommet
Up switch - Accessible through the slat rod opening

WHAT TOOLS DO I NEED?

Either the limit setting tool (supplied), a narrow tip screw driver (less than 4mm) or a 4mm Allen Key

WHICH WAY DO I TURN THE SWITCH?

Clockwise always increases the amount of rotation (travel) of the motor.
Anti-clockwise always reduces the amount of rotation (travel) of the motor.
So pick the switch responsible for the limit position, up or down. Clockwise turning of the switch will always let the motor travel further in that direction. Anti-clockwise turning of the switch will lessen the amount of travel in that direction.

CAN I ADJUST THE SWITCH WHILE THE SCREEN IS SITTING ON THE LIMIT - IE FULLY UP OR DOWN?

Clockwise adjustment? – YES. But it is better to back the screen away from the limit and then adjust
Anti-clockwise adjustment? - NO you will damage the micro switch if you turn it anti-clockwise while the screen is sitting on the limit. Never attempt this. You must back the screen away from the limit before adjustment. After adjustment you will need to run the screen up and down to pick up the new limit

WILL I VOID THE PRODUCT WARRANTY IF I DAMAGE THE SCREEN WHILST MAKING THESE ADJUSTMENTS? YES.!!!

Should you have any questions regarding the installation of our products please call our sales desk on +61 2 4869 2100 for assistance