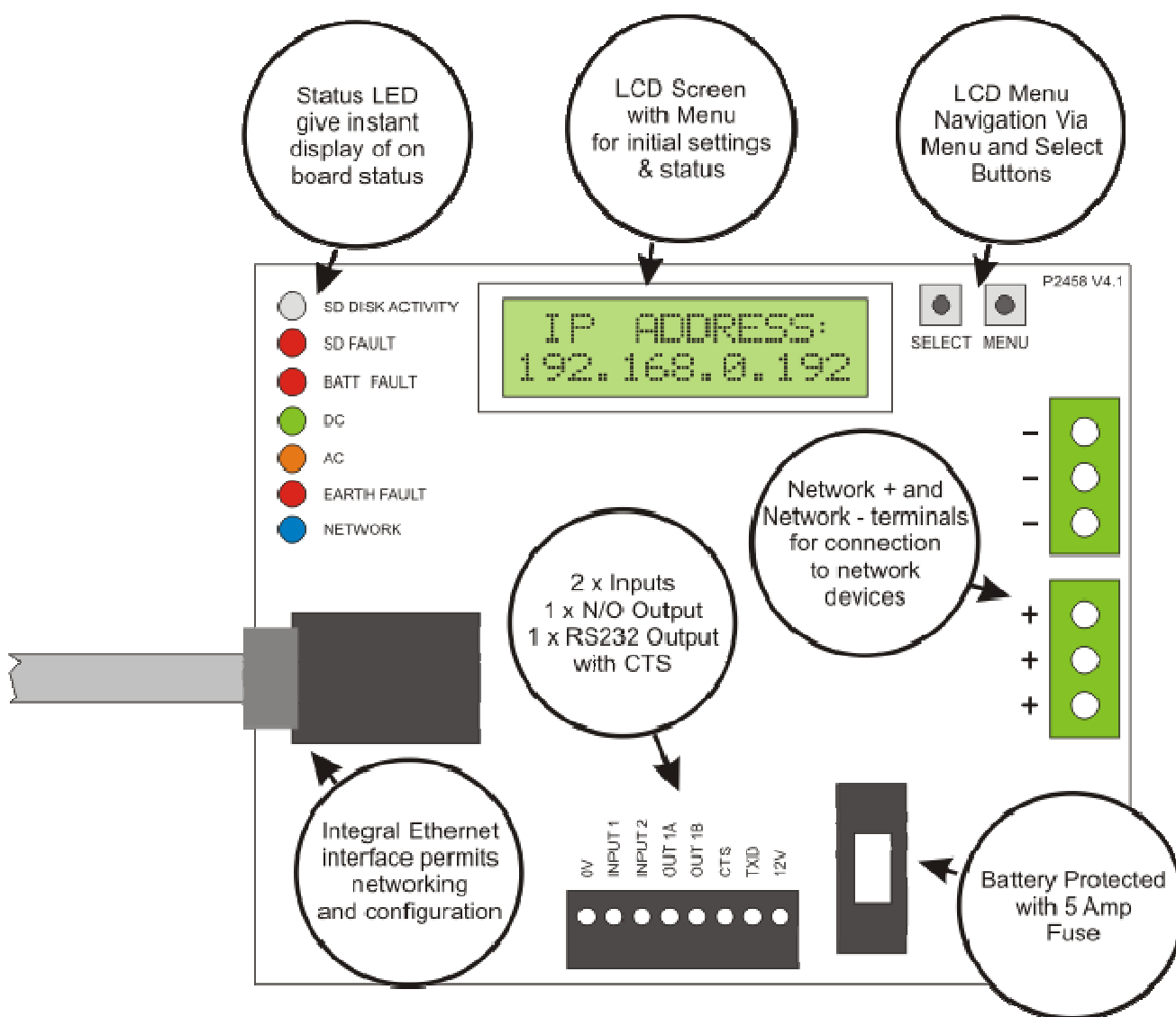




L7700 IP16 CONTROLLER
DOCUMENTATION

L7700 IP Power Supply Unit.

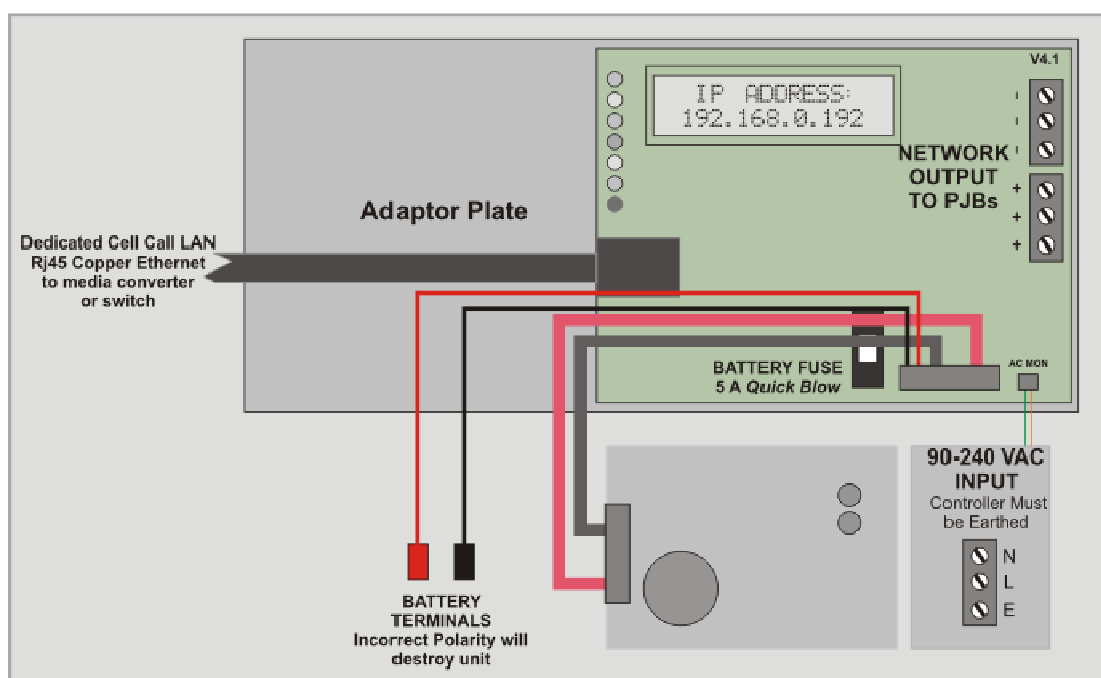
The L7700 features integrated **IEEE 802.3** Ethernet controller with **embedded web server** permitting system configuration, datalog access and remote monitoring using a standard web browser. Security is maintained as web access to the setup and configuration screens are password protected. In addition, the Ethernet port may be used to connect IP controllers together, provide an interface to other Intercall IP devices and for connection to third party products such as IP DECT phones and message paging. In addition, the unit features; onboard calendar clock and Secure Data flash disk drive which records all system activity and configuration settings. Day/Night alarm settings may be automatically switched by the on-board clock without the need for a manual switch. The unit features programmable volt free contact inputs and a volt free contact output together with an RS232 interface which can be configured for many baud rate and data formats. The unit supports a VOIP expansion card which allows the audio voice channel conversations to be recorded and/or integrated with other IP devices. The integral float charger supports a single 12Volt 12AH battery and the AC, DC, Battery and Earth continuity are monitored continuously.



L7700 IP16 PSU/Controller

Above drawing showing PCB Detail

MAIN SUPPLY INPUT:	90 – 240VAC Remove protective cover to gain access to these terminals.
REQUIRED BATTERY:	12Volt 6/12AH Sealed Lead Acid. OBSERVE POLARITY!
OUTPUT TERMINALS:	Two parallel terminals provided for convenience, connect to network devices.
ETHERNET:	IEEE 802.3 Compatible 10Base-T interface using copper RJ45 connector.
LCD:	Two line LCD with menu for essential status & configuration.
MENU & SELECT/OK:	Buttons for navigating the LCD Menus.
INPUT TERMINALS:	
INPUT 1:	Programmable Input No 1 active when connected to 0V.
INPUT 2:	Programmable Input No 2 active when connected to 0V.
OUTPUT TERMINALS:	
OUT 1A & 1B:	Programmable Volt Free Normally Open Output Max 24V DC 500mA
TXD:	RS232 Output Data which can be many baud rates & data streams.
CTS:	RS232 Flow Control Input which can be disabled and/or inverted.
STATUS LEDs:	
NET:	Blue pulsing indicating the Intercall network processor is running.
EARTH*	Indicates too low resistance between the network & protective earth.
AC:	Yellow to indicate Mains Supply detected.
DC:	Green to indicate DC supply is operating within limits.
BATT*	Battery backup fault, battery is not charging.
SD*	Fault reported by on-board disk.
DISK:	Indicates activity read/write to the on-board SD Disk.
<i>*Red LEDs indicate Fault Conditions.</i>	
Onboard Fuse:	5Amp 20mm Quick Blow protection for Battery, Charger is current limited.
Installation:	Self Contained Surface Mounted Case. <i>(See Below)</i>
Size & Weights:	370mm x 260mm x 110 mm 4.5Kg



L7700 LCD Display Menu Settings.

The on-board LCD screen, together with the Menu and OK buttons provides access to essential Local Area Network and Power Supply status, together with control over the basic settings of the IP controller. In quiescent condition, the LCD Displays INTERCALL IP and the date and time, to scroll through the menu screens, press the Menu button to activate one of the settings press the Select/OK button.

<u>Menu</u>	<u>Settings</u>	<u>Description</u>
INTERCALL IP16 17/3 10:32:12		In quiescent condition, the LCD Displays INTERCALL IP and the date and time. Press the Menu button to move onto the next setting.
IP ADDRESS: 192.168.0.192		Displays the current IP address for the IP Controller. <i>(The default IP Address when no DHCP Server present is 192.168.0.192)</i>
SERIAL NUMBER: 1A7A0000083		Displays the unique Serial Number / MAC Address
FREE DISK SPACE: 100%		Displays the percentage of available Space on the Data Log,
DC RAIL: 13.8V		Displays the voltage of incoming DC Supply Rail to the IP16 Printed Circuit Board
BATTERY CHARGE: DETECTED		Displays the status of the sealed lead acid battery charger. A non-charging or not connected battery will show as NOT DETECTED and a fault will be raised.
UNIT TEMPERATURE: 25.6 Deg		Displays the ambient temperature of the IP16 controller circuit board.
FIRMWARE VERSION: 1.0.0.2		Displays the current installed software version of the IP16 controller.
DEVICE RESET: "OK" TO CONFIRM		Press OK button to reset all network devices connected to this controller.
FULL RESET: "OK" TO CONFIRM		Press OK button to reset IP16 controller and all network devices connected to this controller.

L7700 Revert to Factory Defaults.

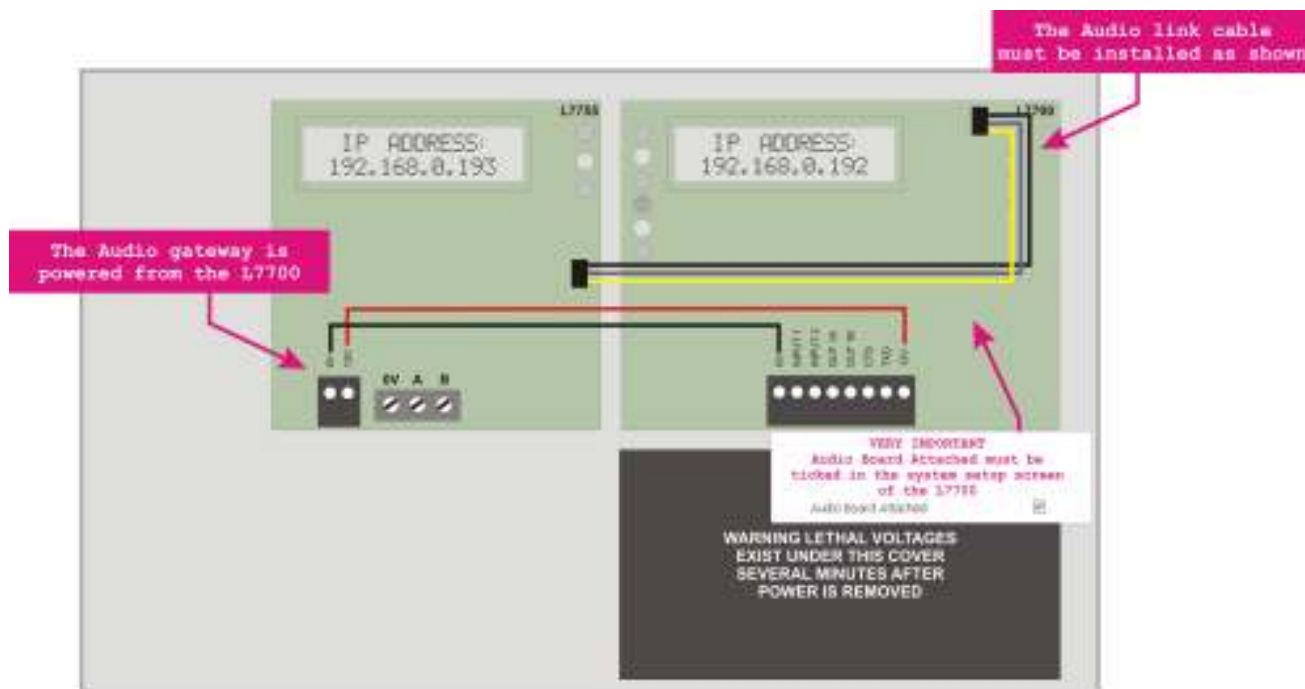
The IP16 can be reverted to factory defaults switching the unit on while holding down the **Menu** button, the following screens will appear on the LCD screen. If a new disk is inserted, the IP16 will automatically go through this process, in which case you must press OK to the first two screens but you may retain the current LAN settings.

<u>Menu</u>	<u>Settings</u>	<u>Description</u>
DISK FORMAT OK = Continue		Press OK to format the SD card and clear <i>all</i> user defined data. This screen will automatically appear if a new SD card is fitted.
CLEAR DATALOG OK=continue MENU=skip		Clears all entries from the datalog, press MENU button to Skip or OK button to continue. If this is a new SD card you must press OK to continue.
LAN DEFAULTS OK=continue MENU=skip		The LAN settings are held within the IP16 circuit board and not in the SD card, so if the card is changed, the network settings can be retained. Press OK to load default settings.

L7755 Audio Gateway Circuit Board.

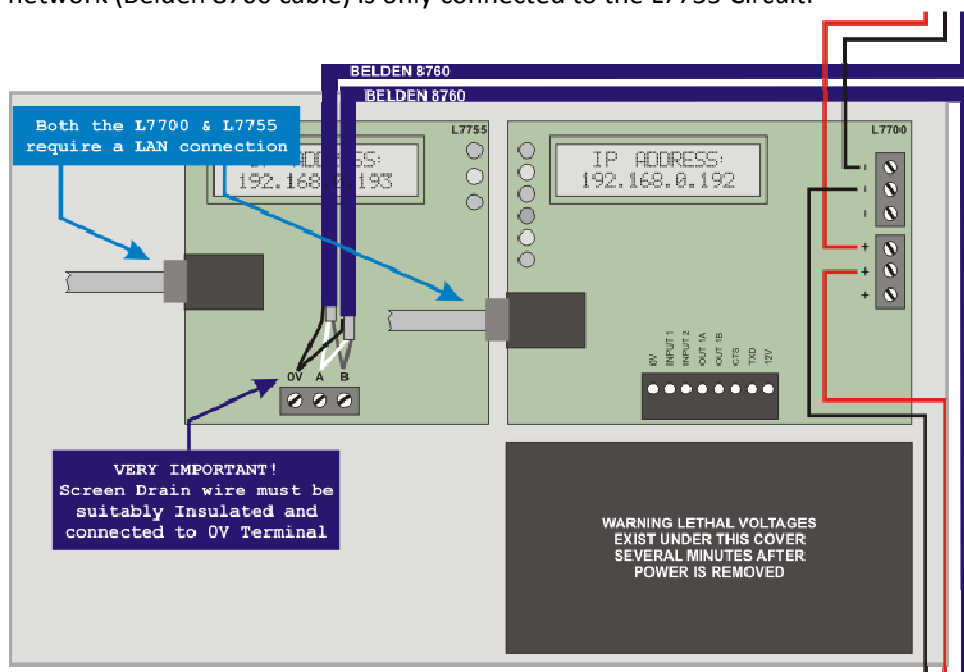
The L7755 Audio Gateway Circuit Board provides a link between the analogue speech network and the digital IP speech network. This allows the speech to be integrated from the legacy network devices to IP devices such as IP Phones, GUI Front ends, IP DECT Phones and many other modern telephony systems. The L7755 card is located alongside the L7700 circuit board and power and signalling is derived from the L7700 circuit board. The L7755 Audio Gateway requires an additional IEEE 802.3 Compatible 10Base-T interface using copper RJ45 connector in addition to the L7700 circuit board.

The L7700 and L7755 must have a **unique IP Address** on the Local Area Network. Set the L7700 and the L7755 to the same **Channel Number** so they operate together. On the L7700 system setup screen you must tick **Audio Board Fitted**. If you wish to synchronise the time, you can pick a single L7700 and set it to **Time Master** this will automatically update the L7755 internal clock as it a **Time Slave** by default.



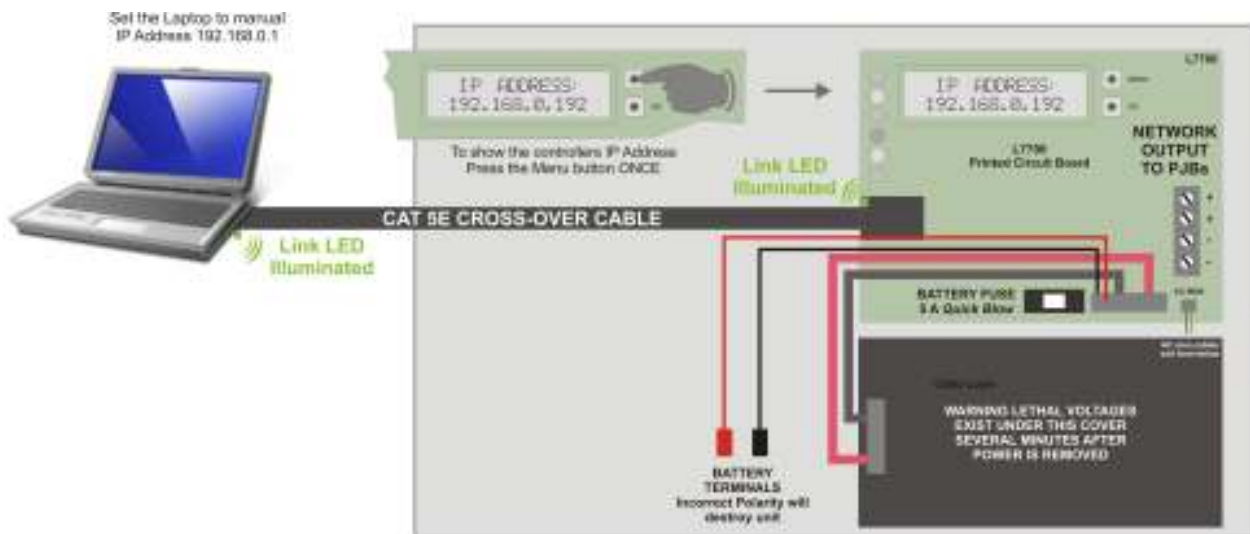
L7700 Power Supply Controller with L7755 Audio Gateway Board fitted on the left

The speech network (Belden 8760 cable) is only connected to the L7755 Circuit.



Direct Ethernet Connection between the L7700 and your laptop.

The simplest way to communicate with the L7700 is to use a **RJ45 Cat5E Cross-Over cable** and manually set the **IP Address** of your laptop. Ensure the **Link LEDs** are illuminated both the Laptop and the IP16 RJ45 connectors before you begin.



Manually Setting your laptop IP Address

Windows XP: Control Panel – Network Connection and double click the *Network Connections* icon to open the Network Connections Dialog. Now Select the Wired Local Area Connection. For **Windows Vista / Windows 7:** Control Panel – Network and Sharing Centre – Change Adaptor Settings to open the - *Network Connections* dialog shown below right, then follow XP instructions 1 to 4.



1.



2.



3.



4.



1. The **Network Connections** dialog shows all connections on your laptop including wireless connections and VPN connections, Identify and double click the correct **Local Area Connection** icon. If your laptop has more than one Network Adaptor then ensure you have selected the correct one.
2. The **Local Area Connection Status** dialog will appear – press the **Properties** button at the bottom.
3. The **Local Area Connection Properties** dialog will appear, highlight *Internet Protocol (TCP/IP)* item and select the **Properties** button.
4. The Internet Protocol (TCP/IP) Properties dialog will appear, move the button down to **Use the Following IP address:** and enter **192.168.0.253** and **255.255.255.0** as the subnet mask as shown in diagram 4 above.
5. Now Select OK and windows will reassign the computers IP address.
6. Select *Start, All Programs, Accessories, Command Prompt* and type **Ping 192.168.0.192** into the command prompt & you should see **Reply from 192.168.0.192: bytes 32.** as below to confirm communication.

```

C:\>ping 192.168.0.192

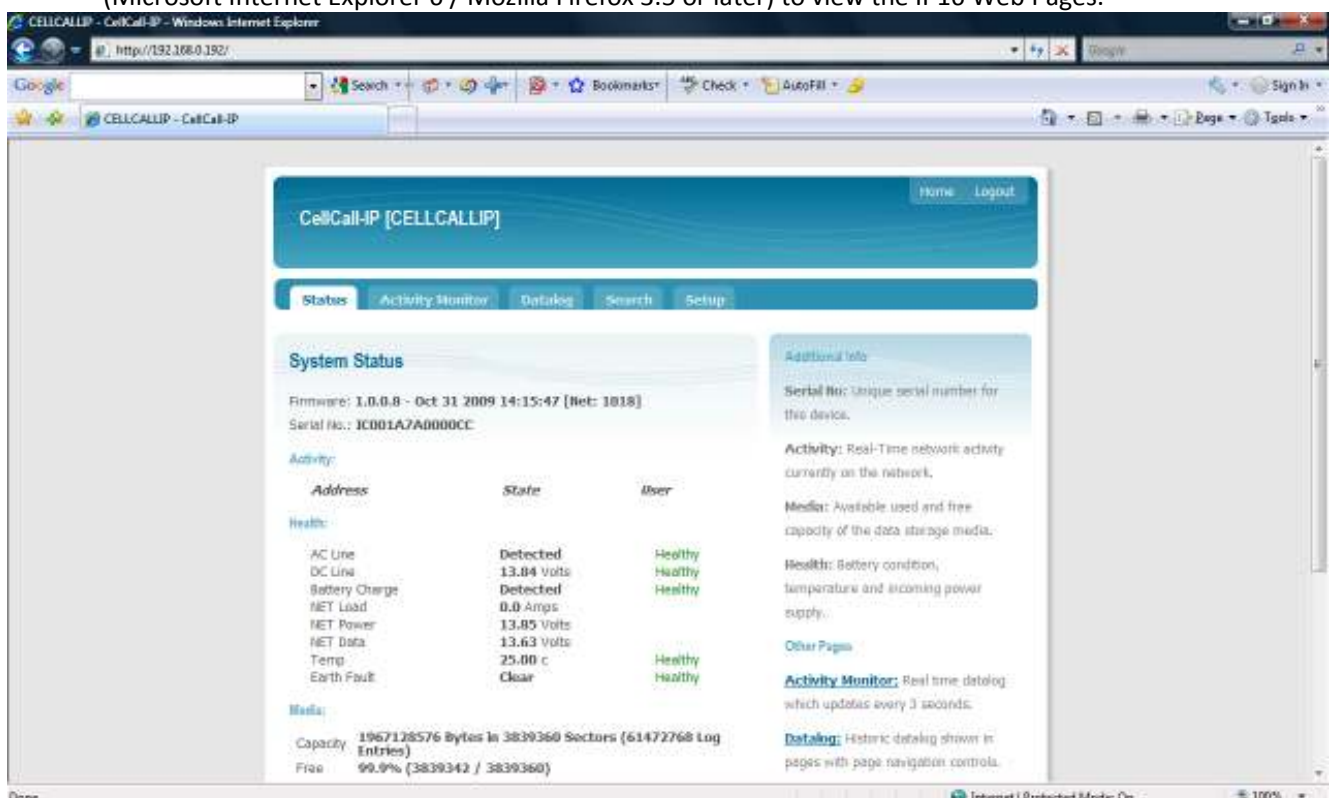
Pinging 192.168.0.192 with 32 bytes of data:
Reply from 192.168.0.192: bytes=32 time=1ms TTL=100
Reply from 192.168.0.192: bytes=32 time<1ms TTL=100
Reply from 192.168.0.192: bytes=32 time<1ms TTL=100
Reply from 192.168.0.192: bytes=32 time<1ms TTL=100

Ping statistics for 192.168.0.192:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>

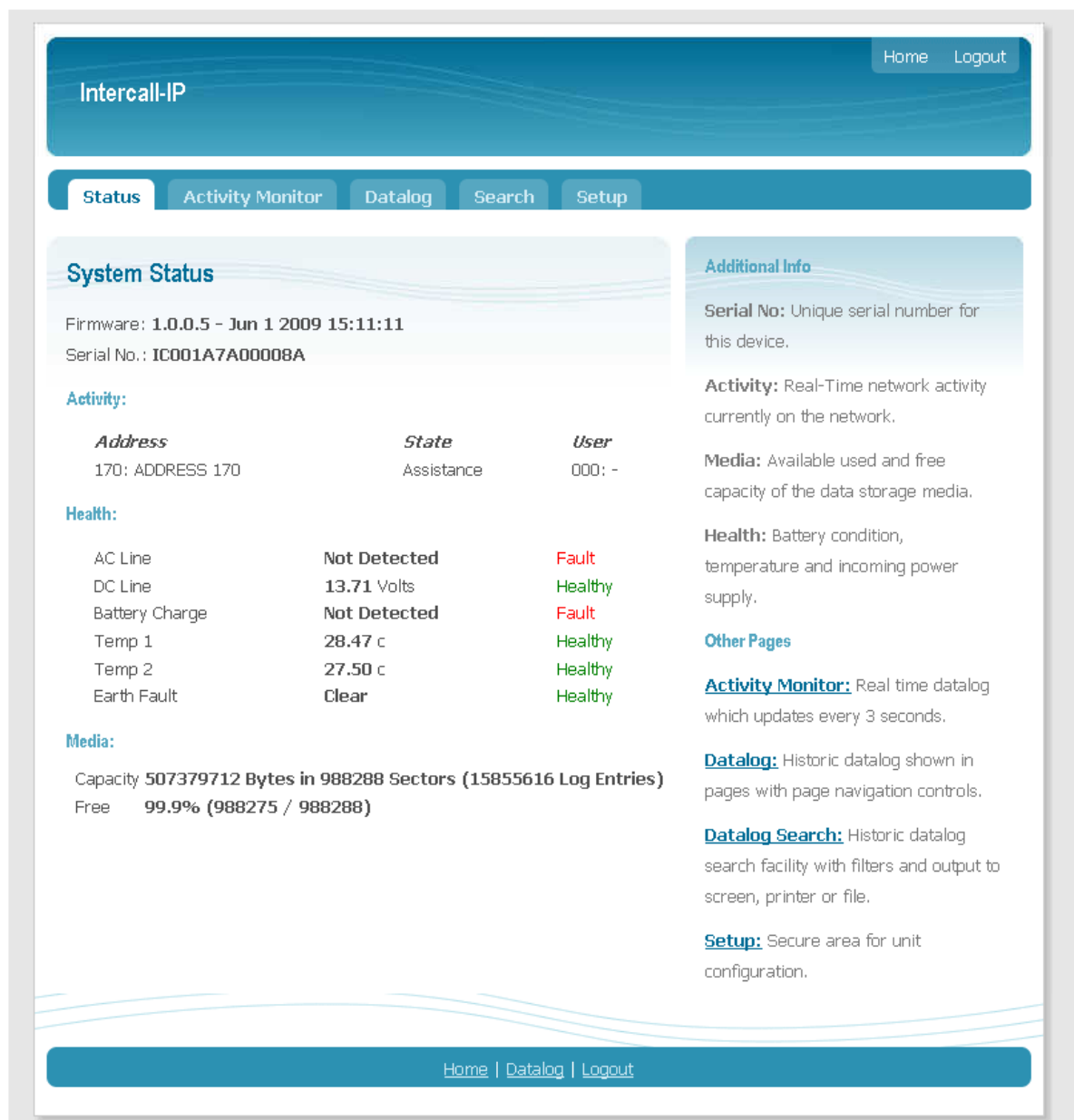
```

7. If the ping fails with **Destination Host Unreachable**, check the cross over cable is plugged in and the **Link LED** is lit on the IP16 ethernet socket. If the Link LED is lit then try and ping your laptop (ie **Ping 192.168.0.1**) If this also says **Destination Host Unreachable** then there is an incorrect network setting on your laptop, firewall or other software on your laptop preventing communication. Ensure you are configuring the correct network adaptor (see 1 above) and switch off any wireless adaptors.
8. Once the ping command has worked and communication is established, use an Internet browser (Microsoft Internet Explorer 6 / Mozilla Firefox 3.5 or later) to view the IP16 Web Pages.



Intercall IP Embedded Web Server.

The Intercall IP16 Power Supply Controller contains an embedded web server for system configuration and status monitoring. It is used gain access to the on-board data-logger recording all system activity with the date and time and to allow password protected access to the system configuration and networking pages.



As you can see, the main index screen shows the status of the power supply together with any network device which is active. The HTML pages also contain help text to assist unfamiliar users navigate around the users screens. This controller is used with many different types of network devices and system configurations and not all of the features included in this manual may be applicable to your system.

Intercall IP Embedded Datalog and Search Facility.

All network activity is recorded internally within the Intercall IP Controller and may be accessed via the web server. The system automatically records a health check every hour together with the status of the power rails, internal temperature etc. The embedded search facility allows a filter to be applied to this data log for retrieval purposes, data can be filtered by date, time, location and event type. The data may be shown on-screen or downloaded and imported directly into Microsoft excel.

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Activity Monitor

Time	Channel	Address	Event	User
2010-09-16 10:48:08	099: ALPHA BLOCK	156: ADDRESS 156	Call	000: -
2010-09-16 10:48:08	099: ALPHA BLOCK	155: ADDRESS 155	Reset	000: -
2010-09-16 10:48:01	099: ALPHA BLOCK	155: ADDRESS 155	Call	000: -
2010-09-16 10:48:01	099: ALPHA BLOCK	154: ADDRESS 154	Reset	000: -
2010-09-16 10:47:54	099: ALPHA BLOCK	154: ADDRESS 154	Call	000: -
2010-09-16 10:47:54	099: ALPHA BLOCK	153: ADDRESS 153	Reset	000: -
2010-09-16 10:47:46	099: BUILDING 4	153: ADDRESS 153	Call	000: -
2010-09-16 10:47:46	099: BUILDING 4	152: ADDRESS 152	Reset	000: -
2010-09-16 10:47:39	099: BUILDING 4	152: ADDRESS 152	Call	000: -
2010-09-16 10:47:39	099: BUILDING 4	151: ADDRESS 151	Reset	000: -
2010-09-16 10:47:32	099: BUILDING 4	151: ADDRESS 151	Call	000: -
2010-09-16 10:47:32	099: BUILDING 4	150: ADDRESS 150	Reset	000: -
2010-09-16 10:47:24	099: BUILDING 4	150: ADDRESS 150	Call	000: -
2010-09-16 10:47:24	099: BUILDING 4	149: ADDRESS 149	Reset	000: -
2010-09-16 10:47:17	099: BUILDING 4	149: ADDRESS 149	Call	000: -
2010-09-16 10:47:17	099: BUILDING 4	148: ADDRESS 148	Reset	000: -

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Datalog

Time	Channel	Address	Event	User
2010-09-16 10:51:18	099: ALPHA BLOCK	182: ADDRESS 182	Call	000: -
2010-09-16 10:51:18	099: ALPHA BLOCK	181: ADDRESS 181	Reset	000: -
2010-09-16 10:51:11	099: ALPHA BLOCK	181: ADDRESS 181	Call	000: -
2010-09-16 10:51:11	099: ALPHA BLOCK	180: ADDRESS 180	Reset	000: -
2010-09-16 10:51:04	099: ALPHA BLOCK	180: ADDRESS 180	Call	000: -
2010-09-16 10:51:04	099: ALPHA BLOCK	179: ADDRESS 179	Reset	000: -
2010-09-16 10:50:57	099: ALPHA BLOCK	179: ADDRESS 179	Call	000: -
2010-09-16 10:50:56	099: ALPHA BLOCK	178: ADDRESS 178	Reset	000: -
2010-09-16 10:50:49	099: ALPHA BLOCK	178: ADDRESS 178	Call	000: -
2010-09-16 10:50:49	099: ALPHA BLOCK	177: ADDRESS 177	Reset	000: -
2010-09-16 10:50:42	099: TRUMAN BLOCK	177: ADDRESS 177	Call	000: -
2010-09-16 10:50:42	099: TRUMAN BLOCK	176: ADDRESS 176	Reset	000: -
2010-09-16 10:50:35	099: TRUMAN BLOCK	176: ADDRESS 176	Call	000: -
2010-09-16 10:50:35	099: TRUMAN BLOCK	175: ADDRESS 175	Reset	000: -
2010-09-16 10:50:27	099: TRUMAN BLOCK	175: ADDRESS 175	Call	000: -
2010-09-16 10:50:27	099: TRUMAN BLOCK	174: ADDRESS 174	Reset	000: -

Page : [Jump](#) | [<<<<](#) | [>>>>](#)

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Example of Datalog Search Facility.

The embedded search facility allows a filter to be applied to this data log for retrieval purposes, data can be filtered by date, time, location and event type. The data may be shown on-screen or downloaded as a CSV file and imported directly into Microsoft excel or similar. CSV stands for Comma Separated Values http://en.wikipedia.org/wiki/Comma-separated_values which is a universal file not specific to Excel. CMS-IP Management software can be used to interrogate the embedded data log and produce in depth trending and analysis reports.

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Intercall-IP [INTERCALLIP]

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INTERCALLIP - Datalog Search

Download Result To File: ☐

From: 06 12 2009 To: 06 12 2009
Time: 01 00 05 59
Unlock Time From Dates ☐
Address: MAIN RECEPTION
User: 0

All Events ☐

System	☐ Calls	☒ Visits	☐ Accepts	☐ Priority's	☐
Emergencies	☐ Attacks	☐ Assistance	☐ Tamper's	☐ Faults	☐
Isolate	☐ Resets	☒ Intercom	☐		

Use your Browsers 'Stop' button to cancel and partially show your results.

Time	Address	Event	User
2009-12-06 05:36:24	001: MAIN RECEPTION	Reset	000: -
2009-12-06 05:36:17	001: MAIN RECEPTION	Call	000: -
2009-12-06 05:05:27	001: MAIN RECEPTION	Reset	000: -
2009-12-06 05:05:20	001: MAIN RECEPTION	Call	000: -
2009-12-06 04:34:30	001: MAIN RECEPTION	Reset	000: -
2009-12-06 04:34:23	001: MAIN RECEPTION	Call	000: -
2009-12-06 04:03:33	001: MAIN RECEPTION	Reset	000: -
2009-12-06 04:03:26	001: MAIN RECEPTION	Call	000: -
2009-12-06 03:32:36	001: MAIN RECEPTION	Reset	000: -
2009-12-06 03:32:28	001: MAIN RECEPTION	Call	000: -
2009-12-06 03:01:39	001: MAIN RECEPTION	Reset	000: -
2009-12-06 03:01:32	001: MAIN RECEPTION	Call	000: -
2009-12-06 02:30:42	001: MAIN RECEPTION	Reset	000: -
2009-12-06 02:30:35	001: MAIN RECEPTION	Call	000: -
2009-12-06 01:59:45	001: MAIN RECEPTION	Reset	000: -
2009-12-06 01:59:38	001: MAIN RECEPTION	Call	000: -
2009-12-06 01:28:48	001: MAIN RECEPTION	Reset	000: -
2009-12-06 01:28:41	001: MAIN RECEPTION	Call	000: -

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Setup Page.

The Setup tab gives access to the engineering configuration screens and is password protected to prevent unauthorised access. User Name is *admin* and the Password is *lismore* all lower case.



System Configuration Screen – Intercall.

The first screen is the system configuration screen which allows configuration of the global system settings, which previously were configured using the configuration DIP switches in the L7717/L717 Power Supply. The **Day/Night Alarm Schedule** is also accessed from this screen and the setup access password can be changed.

System Settings

- Data Mode
- Alarm - Night Mode
- Allow Staff Present
- Enable Call Follower Sounder
- Staff Present Expiry
- Show Lost Units
- Show User ID
- Legacy 215 Address Mode
- Legacy Visit Mode
- Legacy User Mode
- Timer Setting
- Audio Board Attached
- Setup Password
- Enable Debug Trace

Normal systems must be set to 1 Event 1 User. All other settings are reserved for future developments.

When this is ticked its the same as linking the D/N Terminals on a L717. You can switch to Night mode automatically using the on-board clock or using an input switch

1 Event, 1 User

☐ Tick to enable staff present same as L717 SW1 ON

☐ Tick to enable call follower sounder same as L717 SW2 OFF

☐ Tick to enable automatic np expiry same as L717 SW8 OFF

☐ Tick to show lost units on LCDs same as L717 SW6 OFF

☐ Tick to show user IDs on LCDs same as L717 SW7 ON

☐ Tick if using pre 2011 LCD Displays up to 215 Devices

☐ Dont Tick - Reserved for Cell Call Systems

☐ Dont Tick - Reserved for Cell Call Systems

Acc: 1:30 Pri: 2:30 Same as L717 SW3-SW4-SW5 Timer Settings

☐ Tick if there is an Audio Board attached to the L7700

lismore Password to gain access to HTML Setup

☐ Dont Tick - Reserved for Factory Testing

System Configuration Screen – CellCall.

The Cell Call screen is somewhat different from the Intercall screen and only shows dialogs which are relevant to the cell call system. The system configuration screen controls global system settings, which previously were configured using the configuration DIP switches in the L7100 Power Supply Controller. The **Day/Night Alarm Schedule** is also accessed from this screen and the setup access password can be changed.

System Settings

Data Mode: 1 Event, 1 User

Normal systems must be set to 1 Event 1 User. All other settings are reserved for future developments.

Show Lost Units: ☐ Tick to show lost units on LCDs same as L717 SW6 OFF

Legacy 215 Address Mode: ☐ Tick if using pre 2011 LCD Displays up to 215 Devices

Legacy Visit Mode: ☐ Tick to record visits from 7000/7500 series devices

Timer Setting: 1 Minute(s) Elapsed time before call becomes priority

Audio Board Attached: ☐ Tick if there is an Audio Board attached to the L7700

Setup Password: lismore Password to gain access to HTML Setup

Enable Debug Trace: ☐ Dont Tick - Reserved for Factory Testing

Save

Automatic Day/Night Scheduling.

From the system screen there is a link to the Day/Night Scheduling screen which can be setup to automatically change the system between the Day and Night alarm modes. Enter the Day Mode Start Time and the Night Mode Start Time in 24 hour clock format and select the Enable Auto Change dialogue. The Day/Night mode will now automatically change as the on board clock passes the times entered in this screen.

Intercall-IP [L7700 DEMO] Home Logout

Status Activity Monitor Datalog Search **Setup**

System LAN Time Device Settings Communications Despatch I/O Command

Day/Night Scheduling

Current Mode: Day Mode

Enable Auto Change: ☐

Day Mode Start Time: 8 : 30

Night Mode Start Time: 17 : 30

Save

Other Settings

- System Settings
- Day/Night Alarm Schedule

Additional Info

Use these settings to change the night mode schedule.

Home | Datalog | Logout

LAN - Local Area Network Screen.

The LAN settings screen controls the essential LAN settings for the IP controller. On a simple one-to-one connection the factory default IP address will be in use (192.168.0.192). You may need to use a cross-over type network cable (depending on the age of your laptop) and you will need to manually assign your laptop with an IP address. On a network where a DHCP server is operating, the IP controller will automatically be assigned an IP address and this will be shown on the LCD screen. Do Not Enable DHCP when you are using a cross over cable directly into a laptop or PC. Do Not Enable DHCP when you are using a stand-alone network without DHCP Server.

HomeLogout

Intercall-IP [INTERCALLIP]

Status

Activity Monitor

Datalog

Search

Setup

System

LAN

Time

Device Settings

Bridging

Despatch

I/O

Command

LAN Settings

Enable DHCP☐

IP Address

192.168.0.192

Subnet Mask

255.255.255.0

Gateway Address

192.168.0.1

Primary DNS

192.168.0.1

Secondary DNS

0.0.0.0

Netbios Name

MAC_0_0_224

Save

Additional Info

WARNING

Incorrect settings entered here may prevent communication with this unit.

Enable DHCP: Automatic allocation of IP settings when a DHCP server is available on the LAN.

IP Address, Subnet Mask and DNS: Manually entered IP settings.

Netbios Name: Unique name for unit discovery on the LAN.

Warning:

Only enable DHCP when there is a DHCP Server available on the LAN. Do Not Enable DHCP when you are using a cross-over cable directly into a laptop or PC.

Intersniff and CMSN

Intersniff and CMSN will not operate if you have DHCP Enabled without a DHCP server available on the network.

Home | Datalog | Logout

Time - System Clock.

The IP Controller contains an on-board Real Time Clock which can be set manually using this web page. The time will automatically be updated if a NTP (Network Time Protocol) server is available over the Local Area Network. Alternatively one controller can be set to be a *time master* and all other controllers to *time slave* thus synchronising the clocks between controllers.

[Home](#) [Logout](#)

Intercall-IP [INTERCALLIP]

[Status](#) [Activity Monitor](#) [Datalog](#) [Search](#) **Setup**

[System](#) [LAN](#) **Time** [Device Settings](#) [Bridging](#) [Despatch](#) [I/O](#) [Command](#)

System Clock

Current Time:

2009-11-17 13:17:11

NTP Information

Last NTP Time:

2009-11-17 13:16:58 {UTC}

Network Time Protocol (NTP):

Allow NTP: ☒

NTP Server:

NTP Query Interval: Minutes

[Save NTP Settings](#)

Master/Slave Syncing:

Sync Mode:

[Save Sync Settings](#)

Enter New Time:

Year	Month	Day	Hour	Mins	Secs
2009	11	17	13	17	00

Entry must be in 24hr mode

[Save New Time](#)

Additional Info

System Clock: All datalog events are time stamped using the internal clock which is automatically updated by a NTP server.

NTP: Connected via the LAN, NTP servers can be local or off-site if external access is available on the LAN.

Time Setting: The internal clock can be manually altered in 24 hour clock mode (ie 1pm = 13:00).

[Home](#) | [Datalog](#) | [Logout](#)

Using the Master/Slave Sync function, several IP16 Controllers can share a single clock source. Simply set one power supply to *I am a Master* and all other displays to *I am a Time Slave*. Only choose one IP16 to be the time master.

Master/Slave Syncing:

Sync Mode

[Save Sync Settings](#)

Addresses - Address Descriptions.

The Address and User Descriptions may be manually entered into the web page by page with the **Save button** pressed before exiting each page. Alternatively may be uploaded from a Excel spreadsheet. Please note the Excel Import/Export must be a CSV file formatted correctly and we recommend editing a previously exported spreadsheet rather than creating a new one, to ensure the format is correct. The Screen shows eight addresses descriptions at one time and the pages can be navigated using the Forward and Back arrows or entering a specific address and selecting the Jump button.

Intercall-IP [INTERCALLIP] Home Logout

Status Activity Monitor Datalog Search Setup

System LAN Time Device Settings Communications Despatch I/O Command

Address Descriptions

Show Address: 1 Jump <<<< >>>>

ID	Text
001	BEDROOM 1
002	BATHROOM
003	TV LOUNGE
004	QUIET ROOM
005	GREEN ROOM
006	BEDROOM 12
007	DSAB WC 2
008	RECEPTION

Save

Address Commands

Export Addresses

Import Addresses Browse...

Warning: Data Imports *MUST* be in the correct file format

Other Settings

- Addresses
- Users
- Display Texts
- Events

Tools

- Device Check

Additional Info

Show Address: This screen allows you to navigate to and change an individual address text description on a controller.

Import/Export: Address texts may be imported and exported in a fixed format suitable for Microsoft Excel format.

Note: You must save, download and broadcast for any changes to take effect.

Home | Datalog | Logout

Addresses – CMS IP Monitor Software.

When you are using CMS IP Monitor software, the Address Descriptions and User Descriptions are automatically passed to the computer, there is no need to program or upload the descriptions into the PC database.

Users - User Descriptions.

The User Descriptions (User ID's) may be manually entered into the web pages shown below or alternatively may be uploaded from a Excel spreadsheet. Please note the Excel Import/Export must be a CSV file formatted in the correct manor and we recommend editing a previously exported spreadsheet rather than creating a new one, to ensure the format is correct. The Screen shows eight addresses descriptions at one time and the pages can be navigated using the Forward and Back arrows or entering a specific address and selecting the Jump button.

Intercall-IP [INTERCALLIP]

Home Logout

Status Activity Monitor Datalog Search Setup

System LAN Time Device Settings Communications Despatch I/O Command

User Details

Show User: 1 Jump <<<< >>>>

ID	Text
001	USER.001
002	USER.002
003	USER.003
004	USER.004
005	USER.005
006	USER.006
007	USER.007
008	USER.008

Save

User Commands

Export Users

Import Users Browse...

Warning: Data Imports *MUST* be in the correct file format

Other Settings

- Addresses
- Users
- Display Texts
- Events

Tools

- Device Check

Additional Info

Show User: This screen allows you to navigate to and change an individual user description on a controller.

Import/Export: User texts may be imported and exported in a fixed format suitable for Microsoft Excel format.

Note: You must save, download and broadcast for any changes to take effect.

Home | Datalog | Logout

Users – CMS IP Monitor Software.

When you are using CMS IP Monitor software, the User Descriptions are automatically passed to the computer, there is no need to program or upload the descriptions into the PC database.

Display – Display Text Descriptions.

The Display Text Descriptions are the four text strings reserved for the *System Text* descriptions which are linked to the X1,X2,X3,X4 external inputs on the call points. These are shown on the lower line of the LCD when the call point is activated using one of these terminals. In addition, the *display text* lines 1 and 2 may be edited which is shown on the LCD displays when there is no calling activity being shown.

HomeLogout

Intercall-IP [INTERCALLIP]

StatusActivity MonitorDatalogSearchSetup

SystemLANTimeDevice SettingsCommunicationsDespatchI/OCommand

Display Text Descriptions

System Text 1	SYSTEM TEXT 001
System Text 2	SYSTEM TEXT 002
System Text 3	SYSTEM TEXT 003
System Text 4	SYSTEM TEXT 004
Display Text 1	INTERCALL-IP
Display Text 2	NURSE CALL

Save

Other Settings

[Addresses](#)
[Users](#)
[Display Texts](#)
[Events](#)

Additional Info

System Text 1-4: Common second address text shown on the lower line of the LCD to specifically identify which X1-X4 Input has been triggered.

Display Text 1: The top line of the LCD displays when the system is quiescent.

Display Text 2: The lower line of the LCD displays when the system is quiescent.

Note: You must save, download and broadcast for any changes to take effect.

Home | Datalog | Logout

Display – Event Descriptions.

The Event Descriptions are the text strings that are associated with the call types such as *Call* and *Emergency* etc. Changing the descriptions in this page will alter the wording stored in the data log and shown on the activity dialog. It will not change the wording on the LCD Display units.

[Home](#) [Logout](#)

Intercall-IP [INTERCALLIP]

[Status](#) [Activity Monitor](#) [Datalog](#) [Search](#) [Setup](#)

[System](#) [LAN](#) [Time](#) [Device Settings](#) [Communications](#) [Despatch](#) [I/O](#) [Command](#)

Event Descriptions

Show Event: 136 [Jump](#) | [<<<<](#) | [>>>>](#)

136	Call
137	Assistance
138	Emergency
139	Priority
140	Attack
141	Tamper
142	Intercom
143	Intercom Reset

[Save](#)

Event Commands

[Export Events](#)

[Import Events](#) [Browse...](#)

Warning: Data Imports ***MUST*** be in the correct file format

Other Settings

- [Addresses](#)
- [Users](#)
- [Display Texts](#)
- [Events](#)

Tools

- [Device Check](#)

Additional Info

Event Descriptions: This allows the name given for each system event in the datalog to be edited if required.

WARNING

Incorrect settings may invalidate the datalog integrity.

[Home](#) | [Datalog](#) | [Logout](#)

Network Device Check.

Under the Diagnostics tab, the network device check produces a list of the network devices connected to the controller, together with their current state and user information. The total number of network devices is shown at the top of this screen.

InterCall-IP [INTERCALLIP]

Home

Logout

Status

Activity Monitor

Datalog

Search

Setup

System

LAN

Time

Device Settings

Communications

Despatch

I/O

Command

Device Check

Additional Info

Device Count: 239

Address	State	User
001: BEDROOM 1	Reset	000: -
002: BATHROOM	Reset	000: -
003: TV LOUNGE	Reset	000: -
004: QUIET ROOM	Reset	000: -
005: GREEN ROOM	Reset	000: -
006: BEDROOM 12	Reset	000: -
007: DSAB WC 2	Reset	000: -
008: RECEPTION	Reset	000: -
009: BEDROOM 009	Reset	000: -
010: BEDROOM 010	Reset	000: -
011: BEDROOM 011	Reset	000: -
012: BEDROOM 012	Reset	000: -
013: BATHROOM 2A	Reset	000: -
014: BEDROOM 014	Reset	000: -
015: BEDROOM 015	Reset	000: -
016: LOUNGE AREA	Reset	000: -
017: BEDROOM 017	Reset	000: -
018: REST ROOM 1	Reset	000: -
019: BEDROOM 019	Reset	000: -
020: TREATMENT	Call	000: -
021: BEDROOM 21A	Reset	000: -
022: HAIRDRESSER	Reset	000: -
023: BEDROOM 023	Reset	000: -
024: UPPER LIFT	Reset	000: -
025: SUN LOUNGE 2	Reset	000: -
026: SUN LOUNGE 3	Reset	000: -
027: BACK DOOR	Reset	000: -
028: BEDROOM 028	Reset	000: -
029: UPSTAIRS WC	Reset	000: -
030: BEDROOM 030	Reset	000: -
031: DSAB TOILET	Reset	000: -
032: CONSERVATORY	Reset	000: -
033: BEDROOM 033	Reset	000: -
034: BEDROOM 034	Reset	000: -
035: OUTSIDE FRONT	Reset	000: -
036: MAIN RECEPTION	Reset	000: -
037: OUTSIDE REAR	Reset	000: -
038: COURTYARD EAST	Reset	000: -
039: COURTYARD WEST	Reset	000: -
040: ATTIC AREA	Reset	000: -
041: BEDROOM 41	Reset	000: -
042: BEDROOM 41A	Reset	000: -
043: BEDROOM 42	Reset	000: -

Device check.

Communications.

This screen controls the way that the IP Controllers communicate using the LAN (Local Area Network) The Transmit and Receive Broadcast must be selected and the Broadcast Port set to 6345 to ensure compatibility with other IP devices. Port 6345 must therefore be open on any network security software (ie firewall) and/or equipment such as routers, hubs, gateways & switches etc. The text entered into the **Channel Name** dialog is also shown on the top of all web pages to enable the engineer to identify the power supply.

Intercall-IP (INTERCALLIP) Home Logout

Status Activity Monitor Datalog Search Setup

System LAN Time Device Settings Communications Despatch I/O Command

Communications

Transmit Broadcasts ☒

Receive Broadcasts ☒

Broadcast Port: 6345

Channel ID: 0

Channel Name: INTERCALLIP

Local Accept Timeout (Secs): 120

Save

Remote System Options:

Accept Mode: Accept Remote

Current Entries: [Click here to add a new Entry](#)

Index	Channel	Address	User	Event
-------	---------	---------	------	-------

Additional Info

Transmit & Receive Broadcasts:
Enable Network events to be sent and received over the LAN.

Broadcast Port: Used for broadcast traffic, 6345 is the factory default.

Channel ID: Channel Number for this controller.

Channel Name: Used to identify events originating from this system.

Local Accept Timeout: When a distributed call is configured to Accept Locally, this is the time period before the device returns to a calling state after being accepted.

Remote System Options

Accept Mode: For Distributed systems, this dialog configures what happens when an incoming event (from another system) is accepted on a local display.

Cannot Accept – The incoming event cannot be accepted on the local displays and any attempt to accept is ignored.

Accept Locally – The incoming event can be accepted on the local displays and will remain accepted for the period specified in the Local Accept Timeout.

Accept Remote – The incoming event can be accepted on the local

The text entered into the **Channel Name** dialog is also shown on the top of all web pages to enable the engineer to identify the power supply.

Channel Name – CMS IP Monitor Software.

What is typed into the Channel Name dialog is automatically passed to the computer, if you have many L7700's this is the way to identify each system. It can be used as the establishment name on single systems.

Despatch Engine.

The Despatch Engine controls how events on the Intercall Network are used to drive the outputs from the IP16, including:

- **Relay Output**
- **RS232 Pager Output [Scope MSP Protocol]**
- **Other RS232 ASCII Output**

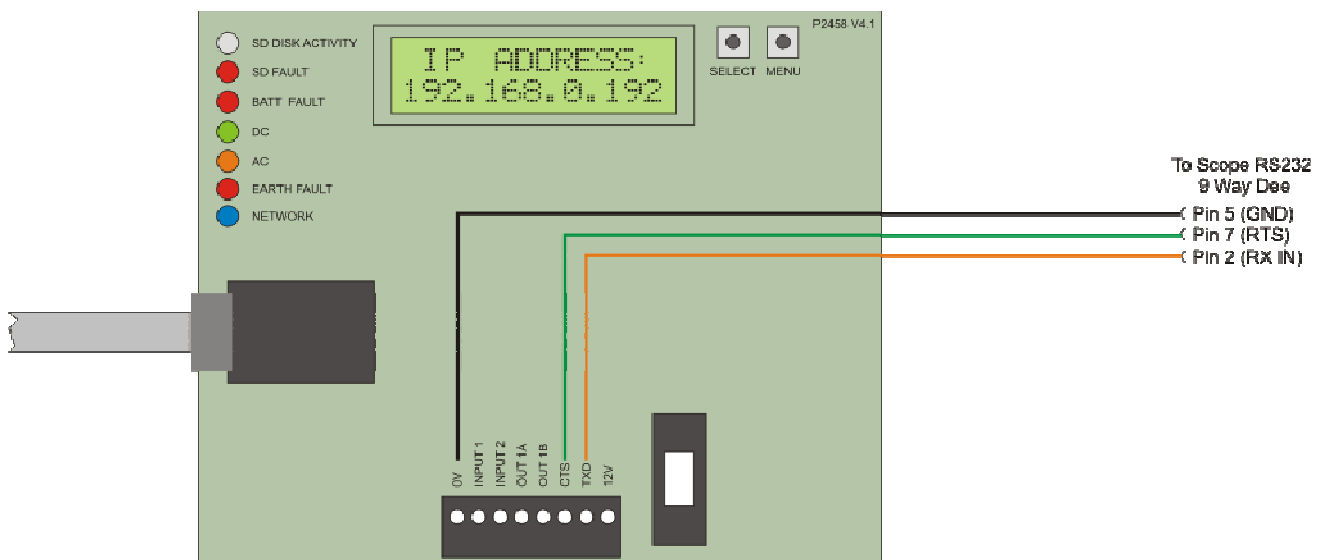
Every individual entry may contain a different cause and effect process.



Every individual output is controlled with a separate despatch entry, select **Click here to add a new Entry** on the despatch screen to open the Despatch Entry dialog.

Connecting the Scope Transmitter to the L7700 RS232 Port.

The Pager transmitter is connected directly to the L7700 PCB using the on-board RS232 port. The diagram below shows the connections required. Note the CTS line is optional and may not be required – refer to Scope/Paging equipment manual for more information



Add a Despatch Entry – RELAY CONTACT OUTPUT

Every output is controlled with a despatch entry, select **Click here to add a new Entry** on the despatch screen to open the Despatch Entry dialog which is shown below. In this example, we are creating a **Relay Output** for **Attack** only for any device between **1** and **215** for **any user ID** and is operational in both **Day** and **Night** mode. Tick **Auto Cancel Output** to clear once an **Attack** is no longer active. Press the **Save** button and the Output Despatch Entry screen will appear shown on the right, Tick output state to set the output when this condition is true.

Intercall-IP [INTERCALLIP] Home Logout

Status Activity Monitor Datalog Search Setup

System LAN Time Device Settings Communications Despatch I/O Command

Despatch Entry

STEP 1: Event Matching

From: Address 1 To: 215

User 0 0

Event 140: Attack 140: Attack Except ☐

Day/Night Mode Any

STEP 2: Event Despatching

Despatch Type Output

Repeat every (Secs) 0

Auto Cancel Repeats ☐

Auto Cancel Outputs ☒

Save

Additional Info

This screen deals with how an incoming event is manipulated before being despatched to one of the output types. To simplify the process, we have divided the process into four steps; Incoming Event, Change Event, Process Event and Accept Event. A zero in any field indicates all or any.

Step 1 Incoming Event.

Address: Limit reception of events to the following device address(es) on the specified system(s) Enter 0 for any Address.

User: Limit reception of events to the following User ID's from the specified

Press the **Save** button and the Output Despatch Entry screen will appear shown below, The IP16 Output is one **Normally Open** Relay Contact. If you wish the contact to close for the attack condition, tick **Output State**. If you wish the relay to Open for the attack leave the Output State un-ticked. You must Enable the entry in order for it to operate. The activation of the relay can be recorded in the datalog by ticking the relevant box.

Intercall-IP [INTERCALLIP] Home Logout

Status Activity Monitor Datalog Search Setup

System LAN Time Device Settings Communications Despatch I/O Command

Output Despatch Entry

Entry Enabled ☒

Output State ☒

Log Activations ☐

Save

Additional Info

Entry Enabled: This box must be ticked to activate this dispatch entry.

Output State: A normally open relay contact set is provided. If you want the relay to close for this dispatch entry, tick this box. If you want the relay to open for this entry do not tick this box.

Log Activations: Tick to record the Relay operation within the on-board datalog.

Home | Datalog | Logout

Add a Despatch Entry – SCOPE PAGER OUTPUT RS232

Every type of output is controlled with a despatch entry, select **Click here to add a new Entry** on the despatch screen to open the Despatch Entry dialog which is shown below. In this example, we are creating a **Serial** output for **Emergency** only for any device between **34** and **76** for **any user ID** and is operational in both **Day** and **Night** mode. Press the Save button and the Output Despatch Entry screen will appear shown at the bottom of this page.

Intercall-IP [INTERCALLIP]

Home Logout

Status Activity Monitor Datalog Search Setup

System LAN Time Device Settings Communications Despatch I/O Command

Despatch Entry

STEP 1: Event Matching

From: Address: 34 To: Address: 76

User: 0

Event: 138: Emergency Except ☐

Day/Night Mode: Any

STEP 2: Event Despatching

Despatch Type: Serial

Repeat every (Secs): 0

Auto Cancel Repeats: ☐

Auto Cancel Outputs: ☐

Save

Additional Info

This screen deals with how an incoming event is manipulated before being despatched to one of the output types. To simplify the process, we have divided the process into four steps: Incoming Event, Change Event, Process Event and Accept Event. A zero in any field indicates all or any.

Step 1 Incoming Event.

Address: Limit reception of events to the following device address(es) on the specified system(s). Enter 0 for any Address.

User: Limit reception of events to the following User ID's from the specified system(s). Enter 0 for any User ID.

Press the **Save** button and the **Serial Pager Despatch Entry** screen will appear shown below. Press the **Setup For Scope** button and the fields will automatically be filled. Enter the **capcode** you wish to use with this specific entry, tick the **Entry Enabled** box and press the **Save** button. You can manipulate the specific message sent to the pager using the edit functions on the lower part of this screen. See the following pager and refer to the HTML for more information. You must ensure the **Serial Settings** are correct and the **Serial Port** is enabled using the **Serial Settings** dialog.

Serial Despatch Entry

Setup For Scope

Entry Enabled: ☐

Driver Field 0: A0014000D

Driver Field 1:

Driver Field 2:

Driver Field 3:

Driver Field 4:

Save

Serial Data To Send

Field Type: Channel ID

Field Data:

Add Field

Idx	Field	Data	Cmd
01	Driver Specific	0	x ^
02	Address Name		x ^
03	Custom Char	'' [32]	x ^
04	Event Name		x ^
05	Custom Char	'' [32]	x ^
06	User Name		x ^
07	Custom Char	13	x ^

Clear All Fields

Tools

Test Message

Additional Info

Setup for Scope: Automatically enters a Driver Field 0 as the Capcode and a message string suitable for Scope Paging protocol. You must use the **Serial Settings** to configure the RS232 port settings.

Entry Enabled: This box must be ticked to activate this dispatch entry.

Driver Fields: The Driver Fields contain specific information to be sent to the serial port. In the case of the Scope Paging Protocol, it contains the Capcode of the specific pager entry. Driver Field 1-4 are additional free format strings which can be sent to the serial port. These can be included in the complete message by selecting Field Type: Driver Field and Field Data: 00, 01, 02, 03 or 04.

Serial Data to Send

The message sent to the

SERIAL PAGER DESPATCH ENTRY AND MESSAGE MANIPULATION

Below, we show the Serial Pager Despatch Entry in greater detail.

Serial Despatch Entry

Press this button to automatically enter a setup suitable for the Scope

Setup For Scope

Entry Enabled ☐

Tick to switch on this entry

Enter the CAP CODE you want to use with this entry

Driver Field 0: A0014000D

Driver Field 1:

Driver Field 2:

Driver Field 3:

Driver Field 4:

Save

Use this dropdown list to select new components to add to the message

Field Type: Channel ID

Field Data:

Add any specific codes before pressing ADD FIELD to add the entry to the end of the message

Add Field

Idx	Field	Data	Cmd
01	Driver Specific	0	X ^
02	Address Name		X ^
03	Custom Char	" [32]	X ^
04	Event Name		X ^
05	Custom Char	" [32]	X ^
06	User Name		X ^
07	Custom Char	13	X ^

This moves the item up to towards the beginning of the message

This deletes this item from the message

Clear All Fields

Clear all entries

The Choice of **Field types** which can be sent to pager:

Channel Name – The Channel name of this PSU as entered into the communications page Eg “BLOCK 5”

Address Name – The Address description of the calling device – Eg “BEDROOM 34”

User Name – The User ID description of the calling device – Eg “USER ID 001”

Event Name – The Event name of the calling device “Eg CALL”

Hour ASCII – The on board clock Hour count as a printable number.

Minute ASCII – The on board clock Minute count as a printable number.

Second ASCII – The on board clock Hour count as a printable number..

Day ASCII – The on board clock Day as a printable number.

Month ASCII – The on board clock Month as a printable number.

Year YY ASCII – The on board clock Year as a two digit printable number.

Year YYYY ASCII – The on board clock Year as a four digit printable number.

Driver Field – Enter the **Field Data** as 1,2,3 or 4 which picks the string entered into the **Driver Field** 1,2,3,4.

Custom Char – Enter the **Field Data** as the **ASCII** representation of the character

Commonly Used **ASCII** Characters: 32 is a space, 13 is carriage return, 10 is line feed, 11 is form feed refer to <http://en.wikipedia.org/wiki/Ascii> for more information.

Please note, the use of **Field Types** not listed above in a message may result in spurious pager behaviour and/or spurious characters on the pagers. Custom Characters below 32 or above 127 should not be used.

ON BOARD RS232 SERIAL PORT

The IP16 Power Supply contains a dedicated RS232 Serial Port which is used to send messages to Scope Pagers and other serial devices. The global settings for the serial port are accessed from the Despatch screen and Serial Settings. Here the Baud Rate, Data Bits, Flow Control (CTS) etc are configured. You must tick Enable Serial Port before any data can be sent.

The screenshot shows the 'Serial Settings' page of the Intercall-IP [L7700 DEMO] interface. The page has a blue header with 'Home' and 'Logout' links. Below the header is a navigation bar with tabs: Status, Activity Monitor, Datalog, Search, and Setup. The 'Setup' tab is active, and a sub-menu shows 'System', 'LAN', 'Time', 'Device Settings', 'Communications', 'Despatch', 'I/O', and 'Command'. The 'Serial Settings' section contains the following fields:

Enable Serial Port	☒
Honour CTS	☐
Invert CTS	☐
BAUD	1200
Data Bits/Parity	8 Data Bits, No Parity
2 Stop Bits	☐
CTS Timeout (Secs)	0

A 'Save' button is located below the settings. To the right, the 'Other Settings' section includes links for 'Despatch Settings' and 'Serial Settings'. Below that, the 'Tools' section has a 'Test Message' link. The 'Additional Info' section is empty. The footer contains 'Home | Datalog | Logout' links.

TEST MESSAGE

Using the Test Message function, you can simply sent an RS232 ASCII string to prove the configuration settings and connections. It is not possible to send extended ASCII characters or control characters using the test message function.

The screenshot shows the 'L7700 DEMO - User Message' page of the Intercall-IP [L7700 DEMO] interface. The page has a blue header with 'Home' and 'Logout' links. Below the header is a navigation bar with tabs: Status, Activity Monitor, Datalog, Search, and Setup. The 'Setup' tab is active, and a sub-menu shows 'System', 'LAN', 'Time', 'Device Settings', 'Communications', 'Despatch', 'I/O', and 'Command'. The 'L7700 DEMO - User Message' section contains the following fields:

Number/Capcode	
Message	Hello World

A 'Send' button is located below the message field. The footer contains 'Home | Datalog | Logout' links.

CONTACT INPUTS.

The L7700 features two on-board independent closing contact inputs which may be configured for the following operations:

Input Mode:

Input 1

- Disabled
- Apply Event
- Reset Unit
- Reset Slots
- Reset OP 1
- Reset NET

APPLY EVENT – Create a call on the system, Call type, address and user may be specified using the fields on screen.

RESET UNIT - Perform a hard reset to the L7700.

RESET SLOTS - Reset all incoming events on a bridged or distributed system

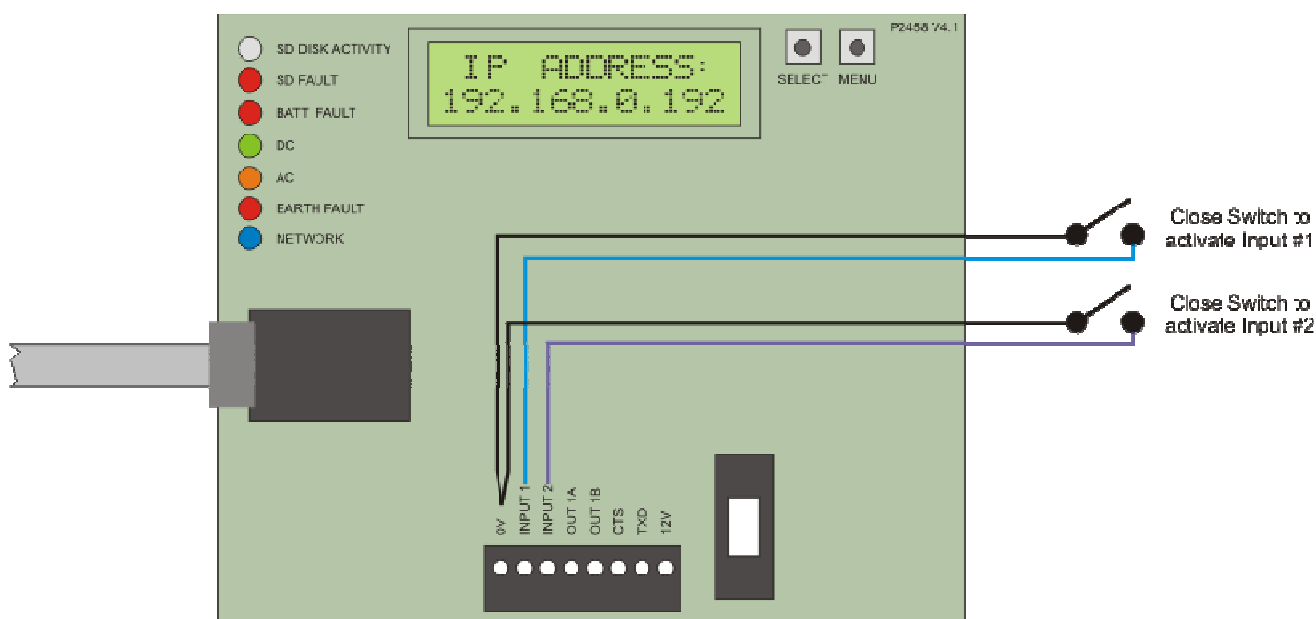
RESET OP1 For example an output can be used to activate a strobe or sounder, the input can be configured to reset that output to act as a mute or reset button/key.

RESET NET. Reset all devices (Call Points, Displays etc) on the L7700 Output Network.

The screenshot shows the Intercall-IP (INTERCALLIP) web interface. The top navigation bar includes links for Home and Logout. Below this is a menu with Status, Activity Monitor, Datalog, Search, and Setup (which is currently selected). A secondary menu shows System, LAN, Time, Device Settings, Communications, Dispatch, I/O, and Command. The main content area is titled 'Inputs' and displays 'Current Input States: (Use your browser 'Refresh' button to update)'. It shows two inputs, both currently 'OFF'. Below this is a configuration table for Input 1 and Input 2. Each input has a dropdown for 'Input Mode' (currently 'Disabled'), a dropdown for 'Event' (currently '128: Reset'), and fields for 'Addr' and 'User' (both set to '0'). There is also an 'Invert?' checkbox. A 'Save' button is at the bottom left. On the right, there is an 'Other Settings' section with links for 'Inputs' and 'Output', and an 'Additional info' section with text explaining the two programmable contact inputs and their configuration options.

CONNECTING THE INPUTS

The inputs are simply closing contacts taken to 0V, there is a 10K pull up resistor to 3.3V on each contact input. Do not apply voltage to these inputs, if connected to other systems they **must be isolated** using a relay or similar.



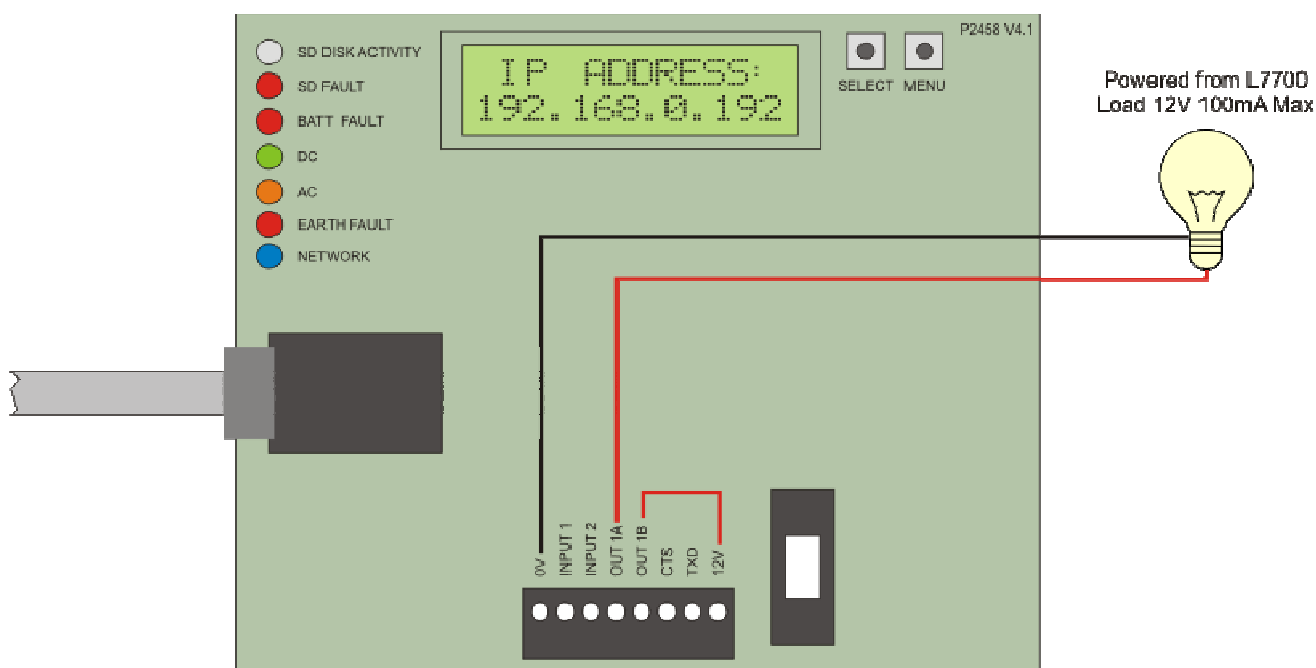
RELAY OUTPUT.

The L7700 features a single normally open volt free relay. This may be used in conjunction with the on-board 12V supply to power up to 100mA, Alternatively, an external power supply may be used to power an external device such as a strobe or sounder etc. As the on-board relay provides isolation, this may be directly connected to third party equipment up to 24V DC 500mA.



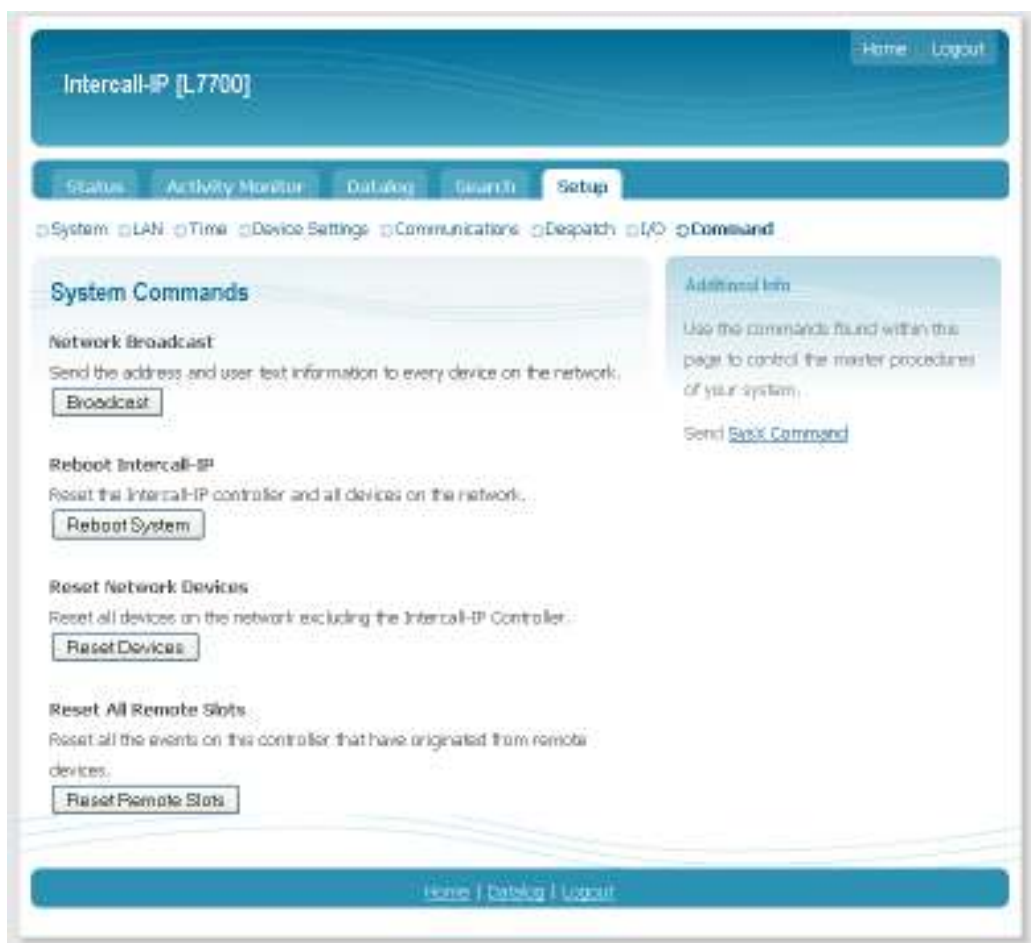
CONNECTING THE RELAY OUTPUT.

The L7700 features a single normally open volt free relay, this may be used in conjunction with the on-board 12V supply to operate a 12V up to 100mA load. Larger loads up to 500mA may be switched using an external supply or switched via a power relay.



Command – Network Commands.

The commands page contains four basic commands; Broadcast – Send the current Address, User, System, and display text to the displays. Reboot System – Restart the IP Controller and all Network Devices. Reset Devices - Reset the Network Devices only and Reset Remote Slots – Reset device addresses set by other IP devices and controllers.



Send SysX Command.

The SysX commands are used to configure network devices and alter their default settings. The link opens the following dialog where the message is prepared and sent. This page should only be used after consultation with the factory as illegal settings may render devices inoperable.



Changing the configuration parameters on Lismore Legacy Device.

Fourth generation Lismore legacy network devices have the ability to receive configuration data from the Lismore Network, this is used for example to change the function of an X input or a button etc. We call this data **SysX** or **System Exclusive** messages. The only device capable of sending configuration data is the **L7700 IP16 Power Supply**.

1. Ensure the L7700 IP16 Power Supply and system is running normally and you have the devices you wish to program connected to the output circuit of the L7700 IP16 Power Supply.
2. Ensure you can communicate with the L7700 and view the embedded website.
3. Navigate to the **Setup – Commands** page and select the **Send SysX** link on the right hand side of the page.
4. This will bring up the following page:

The screenshot shows the 'SysX Command' page of the Intercall-IP [INTERCALLIP] interface. The page has a blue header with 'Home' and 'Logout' links. Below the header is a navigation bar with tabs: 'Status', 'Activity Monitor', 'Datalog', 'Search', and 'Setup'. Under the 'Setup' tab, there is a sub-navigation bar with links: 'System', 'LAN', 'Time', 'Device Settings', 'Communications', 'Despatch', 'I/O', and 'Command'. The main content area is titled 'SysX Command' and contains four dropdown menus: 'Message ID' (0), 'Device Type' (0), 'Address' (0, 0, 0), and 'Command' (0). A 'Send' button is located below these fields. To the right, there is an 'Additional Info' box that says 'Sends a SysX Command.' At the bottom of the page, there is a blue bar with links: 'Home | Datalog | Logout'.

5. Ensure the equipment you wish to program is connected to the output of the power supply. Enter the numbers you have been given by the factory and select the **Send** button at the bottom of the page:

The screenshot shows the 'SysX Command' page of the Intercall-IP [INTERCALLIP] interface, similar to the previous one but with specific values entered. The 'Message ID' dropdown is set to 0, 'Device Type' is set to 4, 'Address' is set to 0, 0, 28, and 'Command' is set to 12. The 'Send' button is still present. The 'Additional Info' box and the bottom navigation bar are the same as in the previous screenshot.

WARNING: ILLEGAL ENTRIES MAY RENDER THE DEVICE INOPERABLE