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1 Introduction

1.1 What is MCM?

Morpheus, **C**ontrol, and **M**onitoring (MCM) is the successor to Pro-Bel's original 'Procion' product range. Legacy documents, directories, and file paths may still refer to Procion and P2 and in context are still valid. Procion was a family of PC based applications designed to control and monitor a range of broadcast hardware, which included router control, video and audio monitoring, GPI triggering and event scheduling. Procion's success was due to its intuitive graphical interface, ideal for touch-screens, its networking capability and the scalability and range of the product. Unfortunately, Procion was restricted to the Microsoft Windows for Workgroups 3.11 operating system, and has therefore become effectively obsolete. MCM aims to surpass the capabilities of Procion by using the advanced development tools and working environment offered by the Windows XP operating system.

Features of the MCM system include:

- Full integration with Pro-Bel's Aurora, Nebula, or Freeway router controller
- VTR control
- Sophisticated designer using Microsoft editing conventions
- User definable buttons and graphics
- Local Area Network support
- Video and Audio monitoring
- TX Master Control plasma screen emulation
- Wide Area Network support
- Event scheduling
- GPI Support
- Media Browsing
- Web based router control

1.2 MCM router control

The MCM router control product will be shipped with a 'General Remote' driver, which will allow it to communicate directly with an Aurora or Nebula router controller, and therefore control any routers included in the Aurora or Nebula database.



1.2.1 General Remote Protocol (SW-P-08)

'General Remote' refers to the protocol that Pro-Bel use to provide control and status of a system of routing matrices. Physically, the protocol uses a serial interface running at 38400 BAUD (38400,8,N, 1) on a 9 pin 'D type' connector, this provides real-time control over long cable runs with a high tolerance to external interference. The PC running the MCM General Remote driver must have such a port available, usually by means of an external RS232 to RS422 converter, or an internal PC I/O card, Section 2.1 details these requirements.

The Pro-Bel Aurora controller has a minimum of two General Remote ports available, any of which may connect to the MCM computer running the General Remote driver. The Pro-Bel Nebula controller is the integrated control system currently shipped with Sirius, Freeway, Halo or Axis routers. Routers that use the earlier Freeway or Routers Windows Editor can also be integrated for MCM control. All of these have 2 configurable serial ports, either of which may be configured for General Remote protocol. MCM uses this protocol both to set routes and receive 'connected' messages for routes set by other controllers.

1.2.2 The router control database

Any router control system needs a 'database' of information detailing the names and grouping of all sources and destinations, and also the configuration of all hardware control panels and under-monitor-displays. This database is critical to the operation of the system, and so it resides in 'non-volatile', i.e. battery-backed-up memory, in the Aurora or Nebula controller, older Freeway/Axis controller and is given the name 'CURR_SYS'. All systems have database editor software available for editing the database, and if the editor PC has ever been used 'on-line' with the controller, it will also have a copy of the CURR_SYS database on it's hard drive.

This database is also critical to the MCM user, since information from this database will be used to design the router control panels and to control the system.

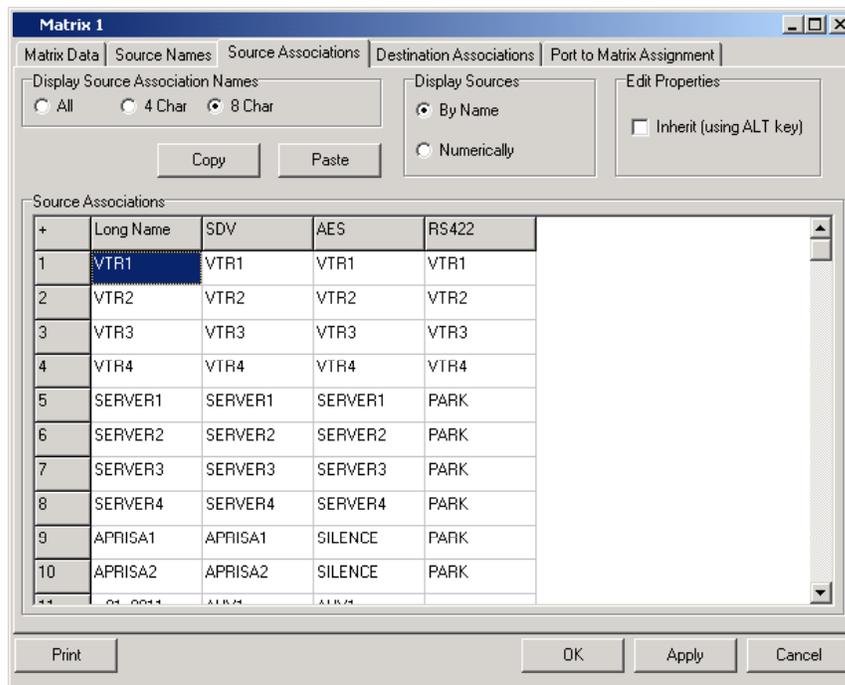
A system of routers will be logically grouped into matrices and levels, Aurora has an upper limit of 20 matrices each of 16 levels, and Nebula or Freeway/Axis has 1 matrix of 8 levels. However the MCM user does not need knowledge of these numbers since they will have direct access to the database, and can therefore use the source and destination names assigned in the database.

The MCM user must understand the meaning of source and destination associations, as used in the database editor, and these are described in the following sections.

1.2.3 Source Associations

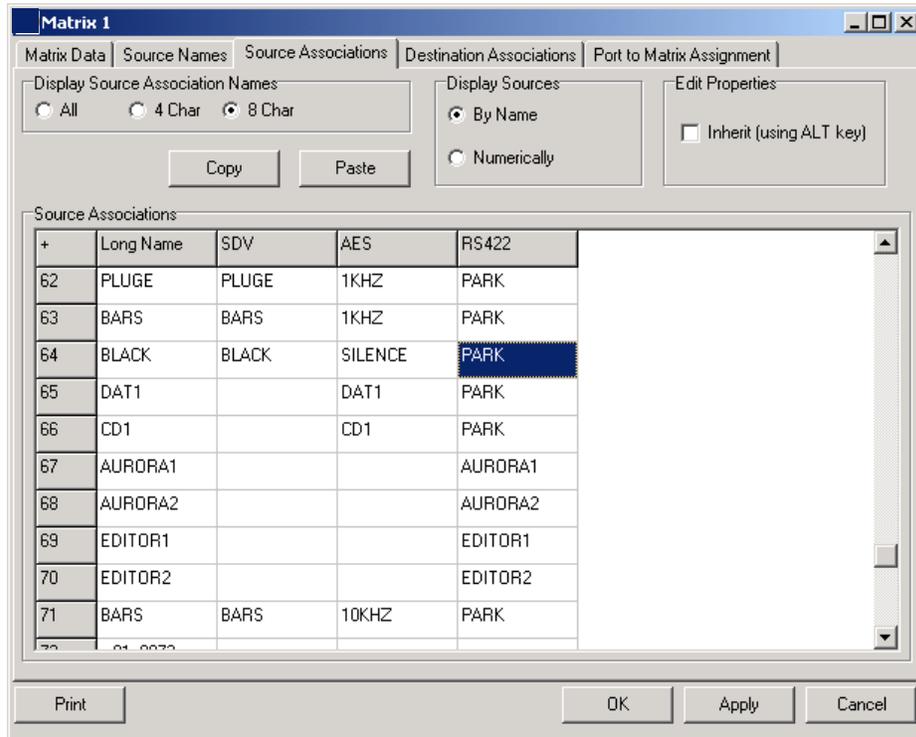
A source association is a combination of input signals, across multiple levels that are required to be routed together. A typical example would be that the video, audio and control

signals for a VTR usually need to be routed at the same time in order to simplify the system operation for a user. In a multi-level system, the user must define the source associations, at least for all the primary level inputs. The primary level is level 1, typically the video level. So, for a multi-level system with a 32 source primary level, there must be at least 32 source associations, and these are referred to as the 'standard associations'. The source names and associations are defined in the Aurora or Nebula database, as follows:



A source association is usually identified by the name of the source on the primary level, however, in the above example, the Aurora editor has been configured to display source 'association names' as well. This makes the system more flexible to the user, since any 8 character name may be applied to any combination of sources, including 'special associations', as described in the next paragraph. The MCM user may also make the choice of using source names or source association names, providing the Aurora database being accessed is also configured to do so, as described in Chapter 3. Note that source association names are not an option in the Nebula database editor.

As well as standard associations, some 'special associations' may have been assigned. These can consist of any sources on any levels to be associated together, including those that have no primary level source. A typical example of this would be an audio-only source, such as a DAT machine, as follows:



If source association names are not being used, special associations are identified by their 'index number'.

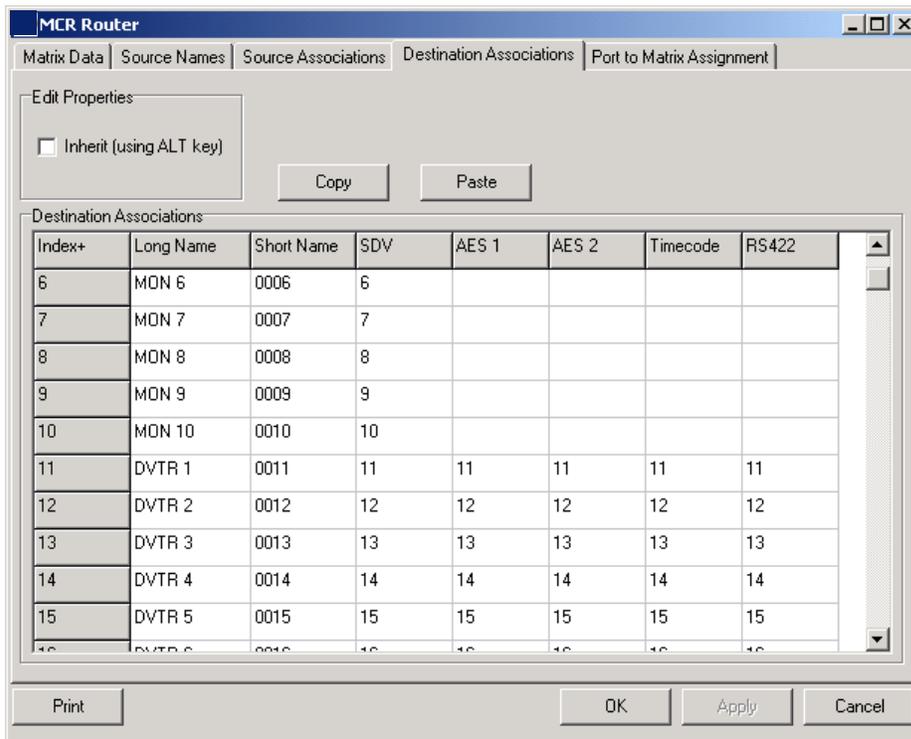
1.2.4 Destination Associations

A destination association describes how equipment is connected to the outputs of a routing system. This is particularly important in a multi-level system where a piece of equipment may take feeds from more than one level.

Destinations associations have the following properties:

- Feeds from other levels to that equipment are defined in the association
- If equipment has no connection on the primary level, it must use a 'special association'
- Special associations are those beyond the maximum primary output number

These are examples of standard destination associations in an Aurora or Nebula database:



1.2.5 Routing using Associations

The object of programming source and destination associations into the database is to make routing a simple activity on a multi-level system. Whenever a source is routed to a destination using any type of control panel, it is in fact the associations that are being routed, meaning that if the system has 8 levels of routing, up to 8 routes will be made simultaneously by a single 'take' operation.

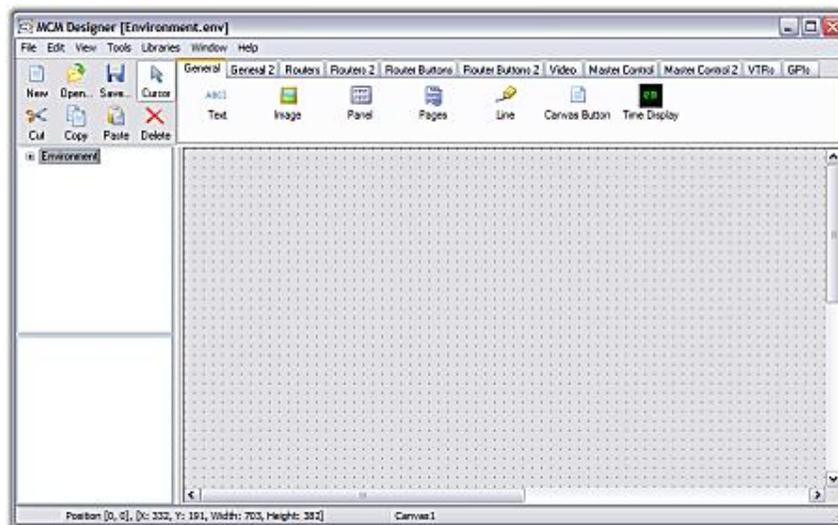
1.2.6 Married and unmarried routes

When a standard source association is routed to a standard destination association, the resulting route is known as being 'married', assuming all routes are made successfully. If a special association is involved in any routing, the result will be 'unmarried'. Some hardware control panels will indicate an unmarried route by illuminating a yellow LED, in MCM unmarried routes may be indicated by a special graphical 'tally'. Unmarried routes may be created or displayed using 'level' buttons on a MCM panel.

1.3 The router control components

There are several essential software components required to design and run an MCM router control system, as follows:

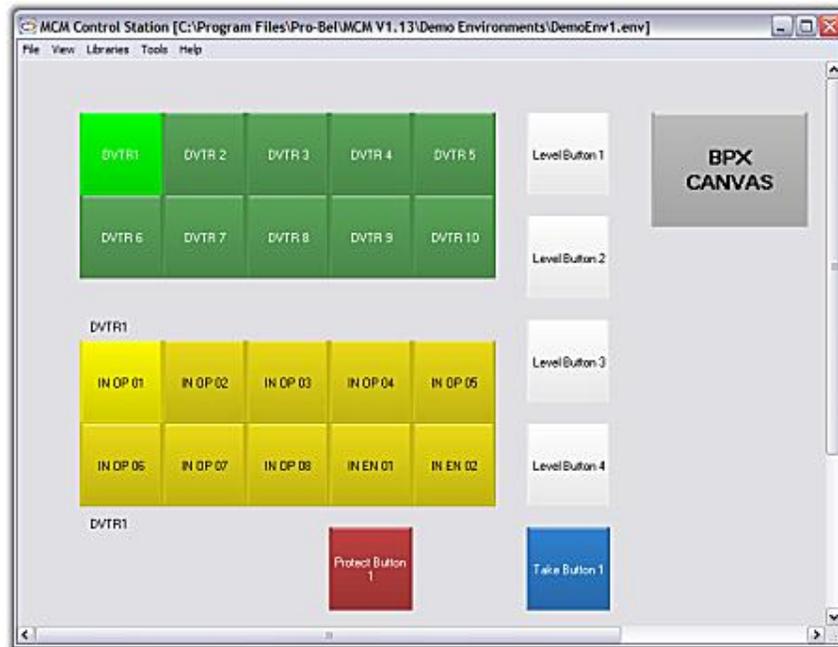
1.3.1 MCM Designer



This is the software tool for designing and testing control panels. Router control panels cannot be designed unless an Aurora or Nebula database is available and open, either using the Router Database Driver (see Section 1.3.4), or locally through the Libraries tool bar. The same database may be used by any MCM Designer running on the same Local Area Network by connecting to the Router Database Driver at a known IP address.

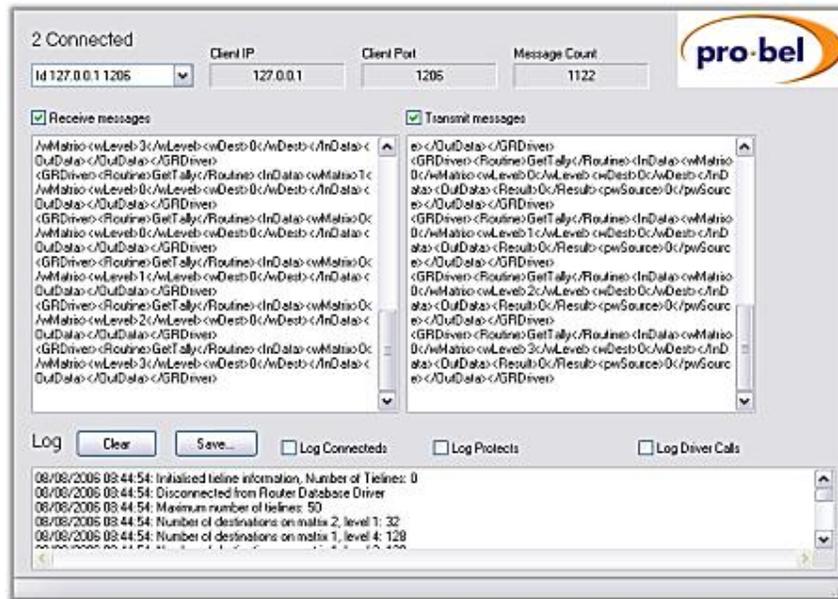
The configuration and use of this application is described in later sections of this manual.

1.3.2 MCM Control Station



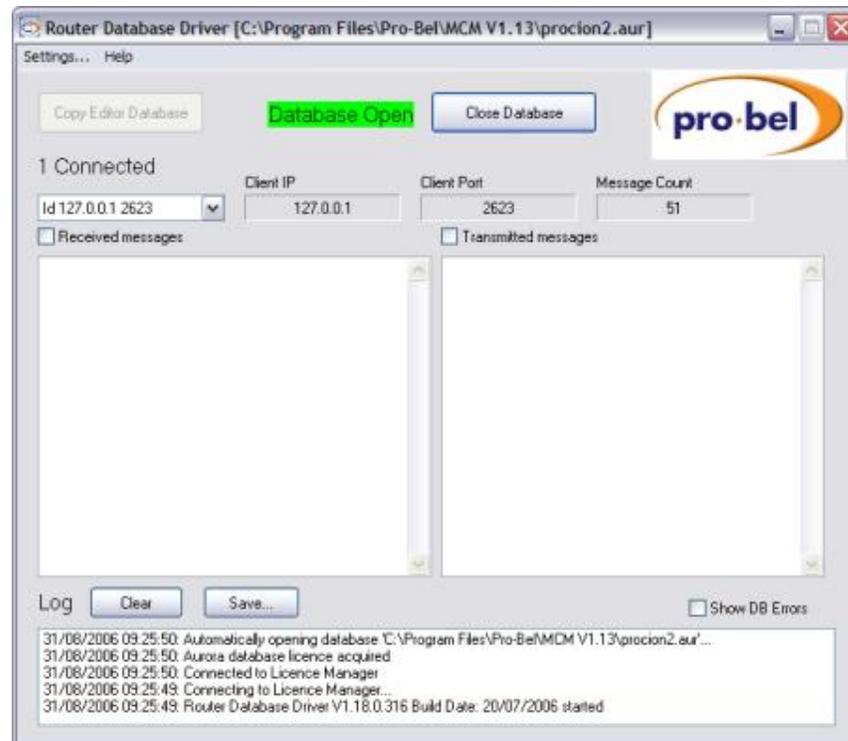
This is the application on which the MCM router control panels run. Therefore, this must be installed on every PC, or 'client', in the MCM control system. This software relies on the presence of a Licence Manager running on the same network, which itself limits the number of MCM Control Stations allowed at any time.

1.3.3 General Remote Driver



This is the channel of communication between the MCM Control Station(s) and the Aurora or Nebula controller. The application must run on the PC that connects to the Aurora or Nebula controller via its serial port.

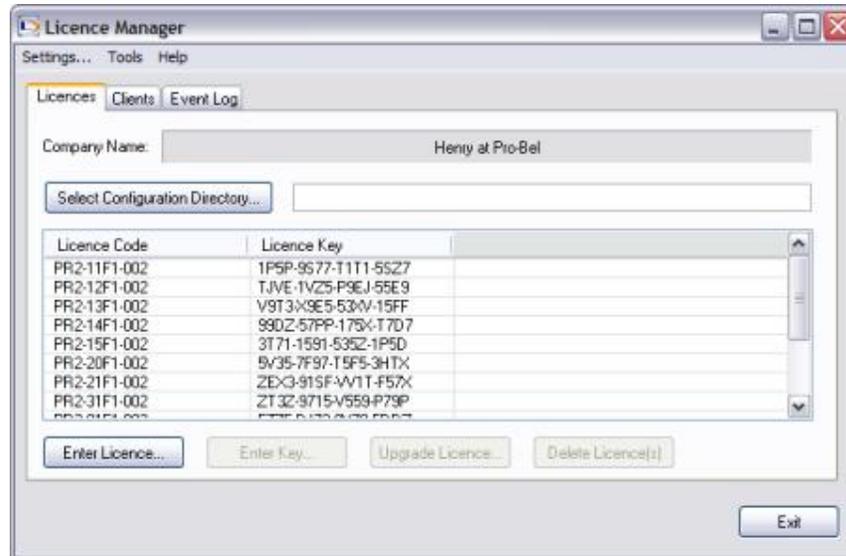
1.3.4 Router Database Driver



This application is used to make an Aurora or Nebula database file available to all users of the MCM Designer and MCM Control Stations wherever they are on the network. Every user has the option of using a local database or the database opened in the Router Database Driver, the advantage of using the driver database is that all users will be synchronised with the same data.

In principle, this application can run on any PC in the network, but in practice it is easier to locate it where the database files are stored. If an Aurora or Nebula editor exists on the system, this will be an ideal location for the Router Database Driver.

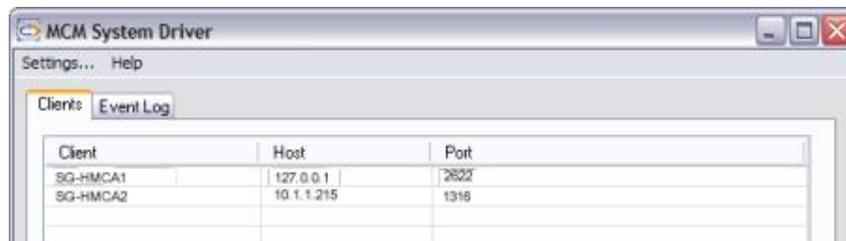
1.3.5 Licence Manager



The Licence Manager can be regarded as the 'server' to which all MCM Control Station and General Remote driver 'clients' connect. This application requires a minimum of two Licence Codes and Keys, one for the Control Stations, and one for the General Remote Driver. Additional licences may exist for additional features such as 'advanced' router control clients and for VTR control. The number of allowed connections is also embedded in the licence code, according to the licence purchased with the product.

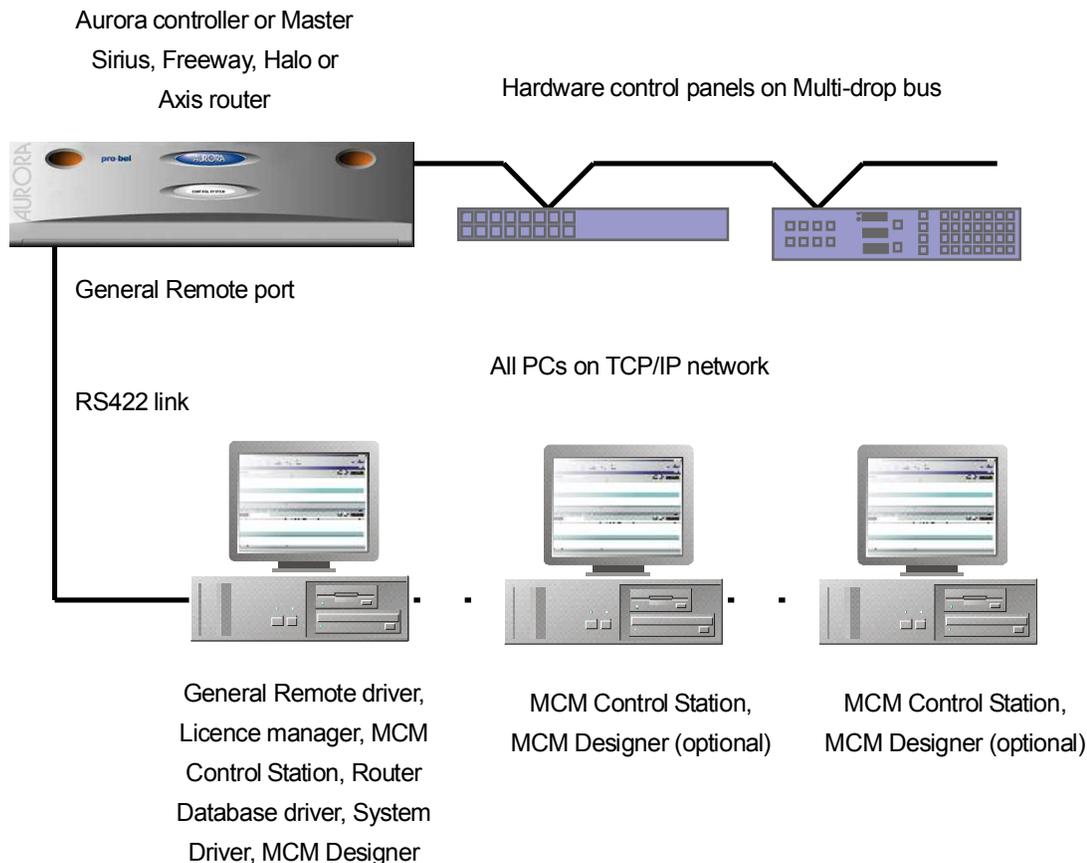
The user does not have to buy a full licence in order to use any of the MCM components since 'trial' licences are also available. The user may enter trial licence codes into the Licence Manager and operate the system for a period of 30 days. Trial licences may not be re-used, and warnings will be issued every time a Control Station is started up.

1.3.6 System Driver



This application allows Control Stations to communicate with each other over a TCP/IP network in order to support panel locking. Panel Locking is a feature, which gives MCM administrators the ability to remotely enable other users locked control panels.

1.3.7 An example MCM router control system



1.4 MCM and the Aurora database editor

Users of the MCM router control software are likely to be already familiar with the Aurora database editor, and will be interested in how these two can co-exist on the same PC. Both MCM and the Aurora editor are required to connect to the Aurora controller, although the editor may only occasionally need to be 'on-line'. If this is the case, then the user must consider the following:

- The Aurora 'REMOTE 1' port also supports the on-line editor
- The REMOTE ports can only be RS422
- The REMOTE port always connects to the Active processor
- Using the Aurora editor on REMOTE 1 will only edit the Active database



- Loading a database into the Active controller will disable the control system for the duration of the download
- The Aurora CONFIG A and CONFIG B ports are hard wired to the A and B processors respectively
- The CONFIG ports can be jumper configured as RS232 or RS422
- The CONFIG ports support the editor AND General Remote protocol
- Only one CONFIG port will ever be connected to the active processor

In summary, the user could use the RS232 port on their PC for running the Editor or MCM, but with no auto-changeover mechanism. Or, the user could use an RS422 port on their PC for running the Editor or MCM, but must be aware that any editing will always effect the Active database.

Ideally, different PCs or different PC serial ports should be used in such an environment.

1.5 MCM and the Nebula database editor

If the user requires a Nebula database editor and a MCM General Remote driver to run on the same PC, this can only be achieved by using 2 PC COM ports. This is because any router system using the Nebula controller has independent editor and control ports. The Nebula editor port is always RS232, and does not support General Remote protocol, and the ports labelled 'RS485' on the router must be configured for General Remote protocol, which forces the port into RS422 mode. The RS485 port configuration is either performed through the Nebula editor if a 'configured' database is selected, or via a control card switch setting if a 'fixed' database is selected. The user must refer to the Nebula user guide for full configuration details.

1.6 MCM and the earlier Freeway/Router editor

As with the Nebula editor above, the Freeway and Router editors should be configured for General Remote Protocol on either of the RS485 ports. The user must refer to the relevant Freeway or Router editor manuals for full configuration details

2 Installation and configuration

2.1 System requirements

The primary requirement for running MCM router control software is that a General Remote port is available on the system Aurora or Nebula Controller. See Section 1.4 and 1.5 of this manual. The pin out for these ports is as follows:

pin	function
1	Chassis
2	TX-
3	RX+
4	Ground
5	Not connected
6	Ground
7	TX+
8	RX-
9	chassis

The specification for this RS422 port is as follows:

- 38400 BAUD
- 8 data bits
- 1 stop bit
- no parity

The PC running the General Remote driver software must therefore have a corresponding RS422 port available. This might be achieved in one of two ways:

- using an external RS232/RS422 converter connected to the PC's COM port
- using an internal RS422 PC I/O card

For either method, a connecting cable will be required, if necessary with appropriate pin swapping.

PCs running very simple control panels must comply with the following minimum specification:

- Pentium 2, 450 MHz, 128Mb RAM
- CD ROM drive
- 30Mb HDD space
- Windows 2000 or XP operating system
- 100 Base T Ethernet adapter supporting fixed IP addresses (if using multiple workstations)

However, complex panels configurations comprising hundreds of buttons and tallies within multiple canvases require the following recommended specification:

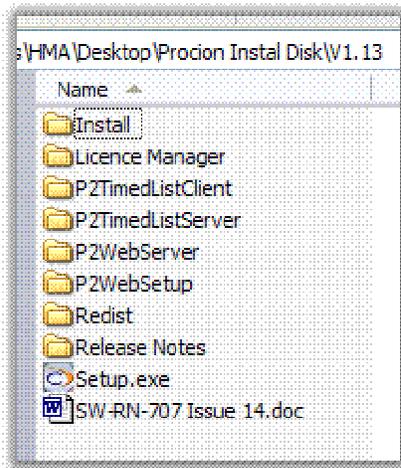
- Pentium 4, 2 GHz, 512Mb RAM
- CD ROM drive
- AGP 4X graphics card with 32Mb RAM
- 30Mb HDD space
- Windows 2000 or XP operating system
- 100 Base T Ethernet adapter supporting fixed IP addresses (if using multiple workstations)

2.2 Installation from a CD ROM

The MCM software is supplied with an 'install wizard', so that all the user must do is locate the 'setup.exe' file in the root of the CDs directory, using Windows Explorer, and execute (double click) it.

2.2.1 The MCM Install Wizard

MCM is the successor to Pro-Bel's original 'Procion' product range. Legacy documents, directories, and file paths may still refer to Procion and P2 and in context are still valid. MCM is normally installed from an Installation CD. To view the files click on My Computer and select the CD Drive. A screen grab of the files is shown below: -



The CD contains the following folders, documents and programs: -

Install

Licence Manager

P2TimedListClient

P2TimedListServer

P2WebSetup

Redist

Release Notes

Setup.exe

SW-RN-707 Issue xx.doc

Versions may vary with publication date.

Installation

Before installing you should read documents “Release Notes” and “SW-RN-707”. These contain the latest information.

We strongly recommend that the Setup.exe install wizard be used to install the program(s).

The following information is correct at the time of printing, always check for updates.

2.2.2 A Step-by-Step View of the Installation Wizard

Close all existing programs.

Insert Installation CD.

Go to My Computer and select the installation CD.

View the files.

Double click Setup.exe

The Setup Wizard should start-up.

This is the main wizard start-up screen

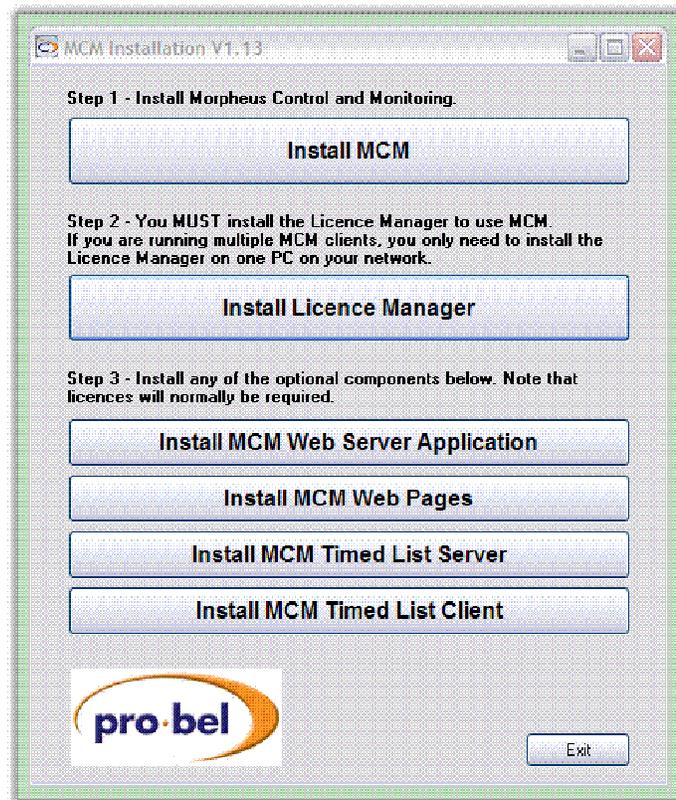


Figure 1: Main Installation Menu

All the programs are installed from this menu. You **must** follow the 3-Step installation sequence to ensure correct installation.

2.2.3 MCM Installation Step 1 – Install MCM

Click on Install MCM button from the main installation menu.

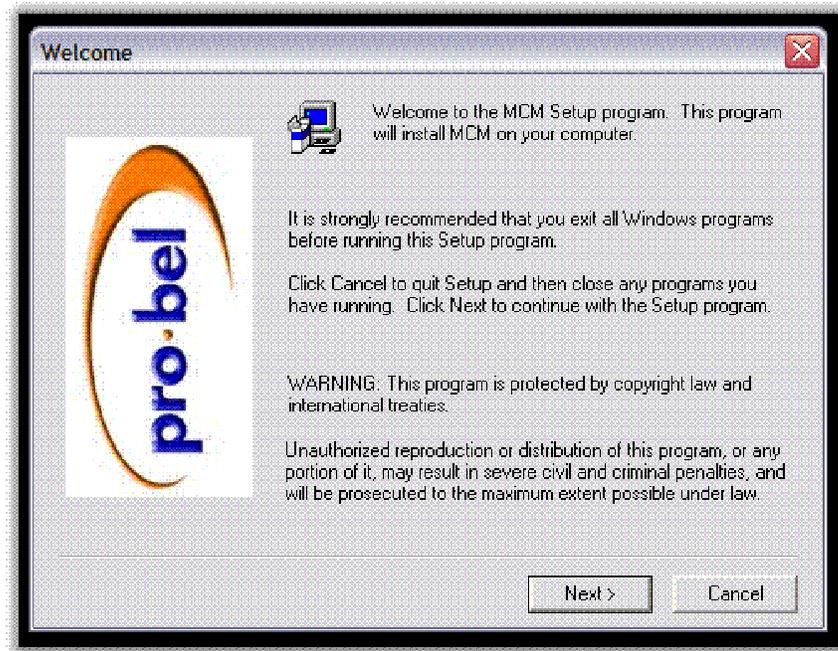


Figure 2: MCM Setup Welcome Screen

This is the MCM Setup Welcome Screen. It is strongly recommended that you exit all Windows programs before running this Setup program. Click Next to continue.



Figure 3: MCM Software Licence Agreement

The Software License Agreement will now be displayed. You must accept this Software Licence Agreement if you wish to install the software. Click “Yes” to accept and commence installation. Click “No” if you do not accept the Licence Agreement and wish to terminate the installation. Click “Back” if you need to review the previous screen.

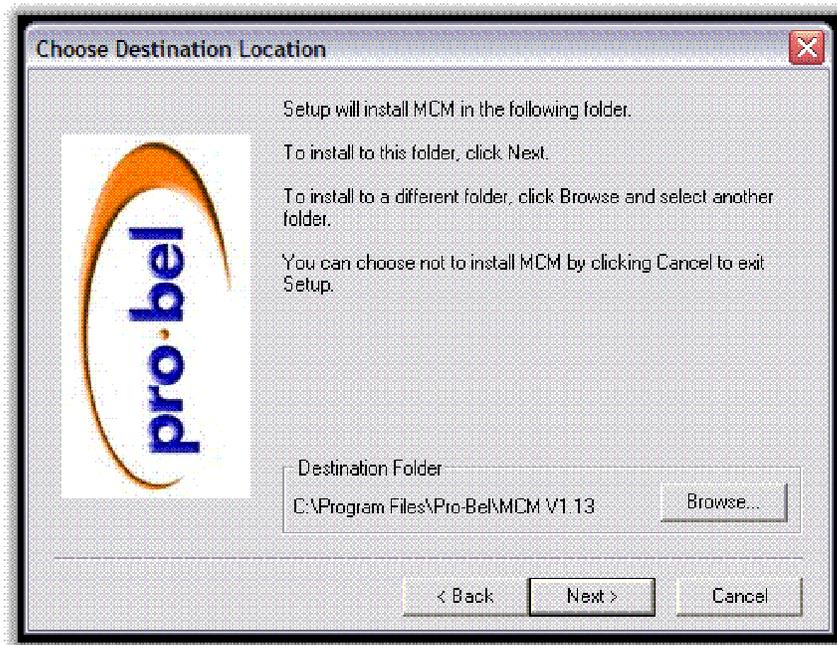


Figure 4: Destination Folder

Set-up will install MCM in the default folder. To install to a different folder, click “Browse” and select another folder. If you wish to abort the installation click “Cancel” to exit set-up

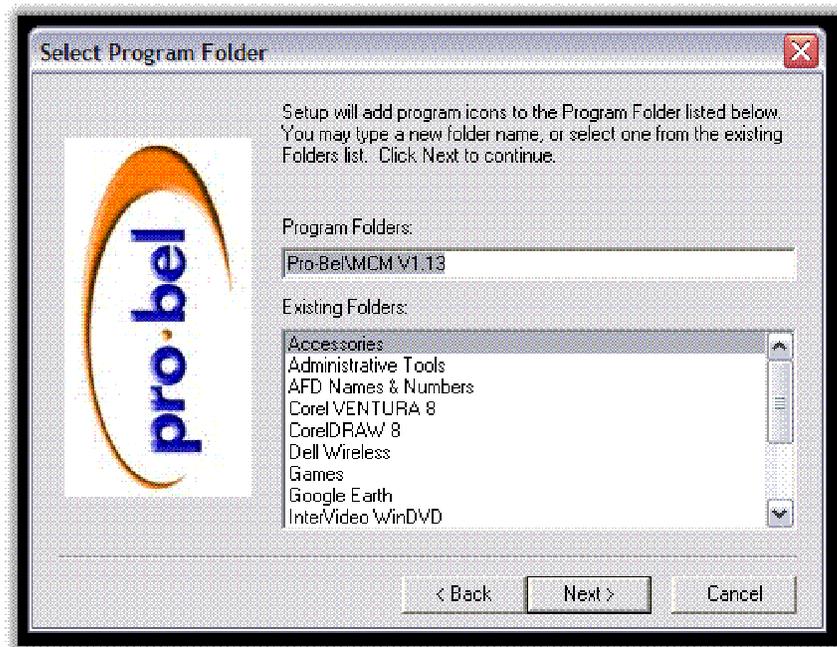


Figure 5: Selecting Program Folder

Set-up will add program icons to the Program Folder. You can either select the default, type a new folder name, or select from the existing folder list. Click “Next” to continue.

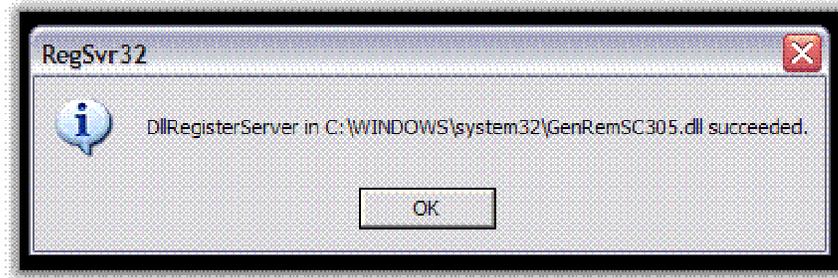


Figure 6:Installation Succeeded Confirmation Screen

When the program has installed correctly, the following confirmation screen will appear.

Click OK to return to the main installation menu. See Figure 1.

2.2.4 MCM Installation Step 2 – Installing Licence Manager.

You must install the Licence Manager to use MCM. If you are running multiple MCM (Procion) Clients, you only need to install Licence Manager on one PC on your network.

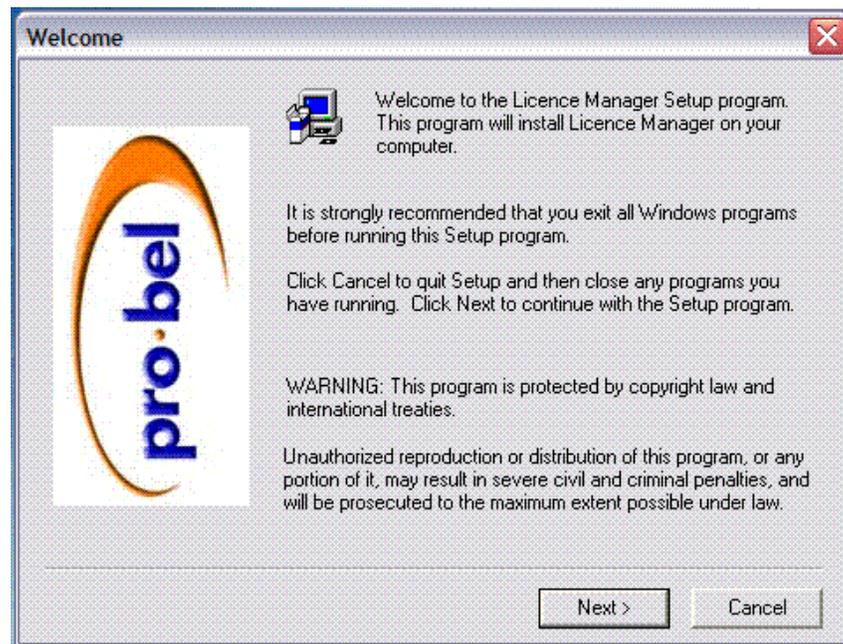


Figure 7: Licence Manager Set-up Welcome Screen

Again it is strongly recommended that you exit all Window programs before running this set-up program.

Click "Next" to commence the start-up.

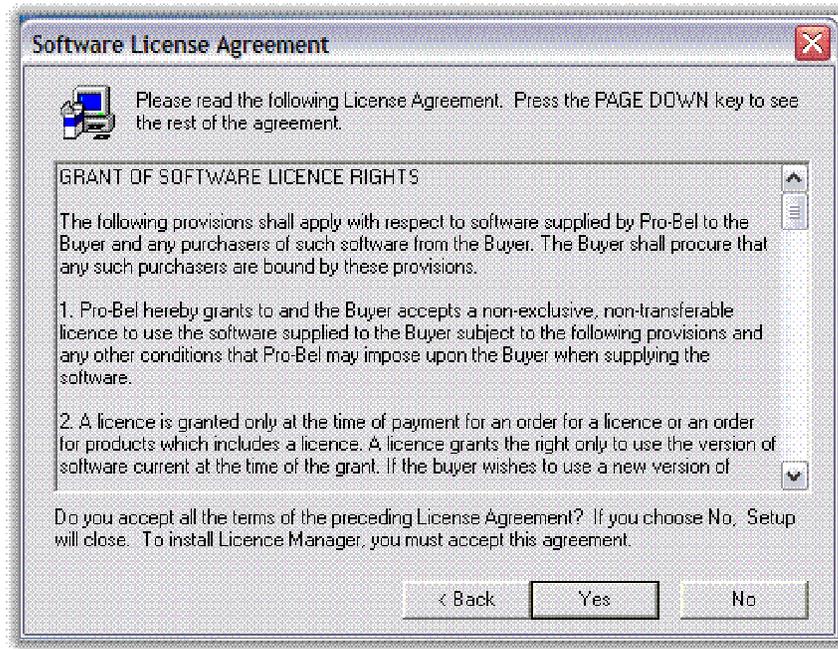


Figure 8: Software License Agreement

The Software License Agreement will now be displayed. You must accept this agreement to install the Licence Manager. If you agree click “Yes”.

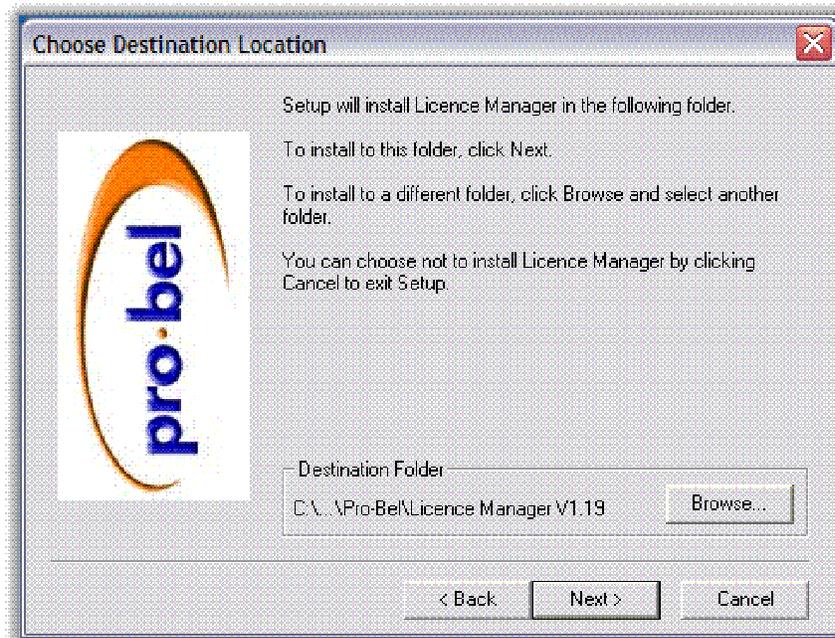


Figure 9: Choosing Destination Folder

Set-up will install the Licence Manager in the default folder. To install to a different folder, click “Browse” and select another folder. If you wish to abort the installation click “Cancel” to exit set-up.

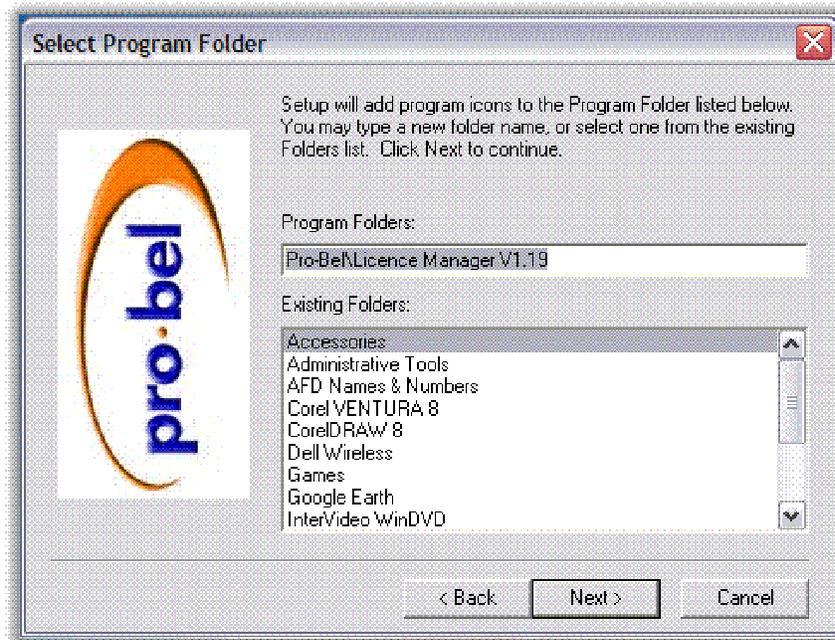


Figure 10: Select Program Folder



Set-up will add program icons to the Program Folder. You can either select the default, type a new folder name, or select from the existing folder list. Click "Next" to continue.

2.2.5 MCM Installation Step 3

After completing steps 1 and 2, you will be returned to the main installation menu for step 3 options.

Step 3 allows the installation of the following options: -

- MCM Web Server Application
- MCM Web Pages
- MCM Timed List Server
- MCM Timed List Client

Note Licences will normally be required.

WARNING

BEFORE COMMENCING STEP 3 YOU MUST READ THIS SECTION

The web-based applications require the installation of IIS (Internet Information Services) and .NET Framework to be actively installed. This section will guide you through the process.

Checking for IIS

Step1: Check IIS (Internet Information Services) is installed on the PC used to host the web pages

The PC that will be hosting the web pages must have a web server installed and running. If this is a Windows XP or Windows Server PC the web server software is called IIS (Internet Information Services). This is not installed by default on a Windows XP PC. To check whether it is installed on your PC open "Control Panel", select "Add or Remove Programs" and then select "Add/Remove Windows Components" on the left hand side. The check box for "Internet Information Services (IIS)" should be checked. If not check it and continue with the installation of IIS. This is a step-by-step view of the process.

Start > Control Panel > Add or Remove Programs

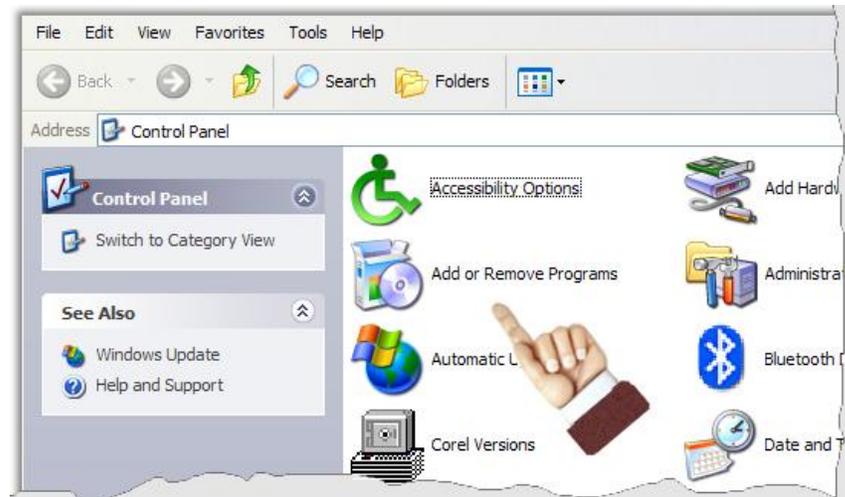


Figure 11 : Windows Control Panel Menu

Click on “Add or Remove Programs”.

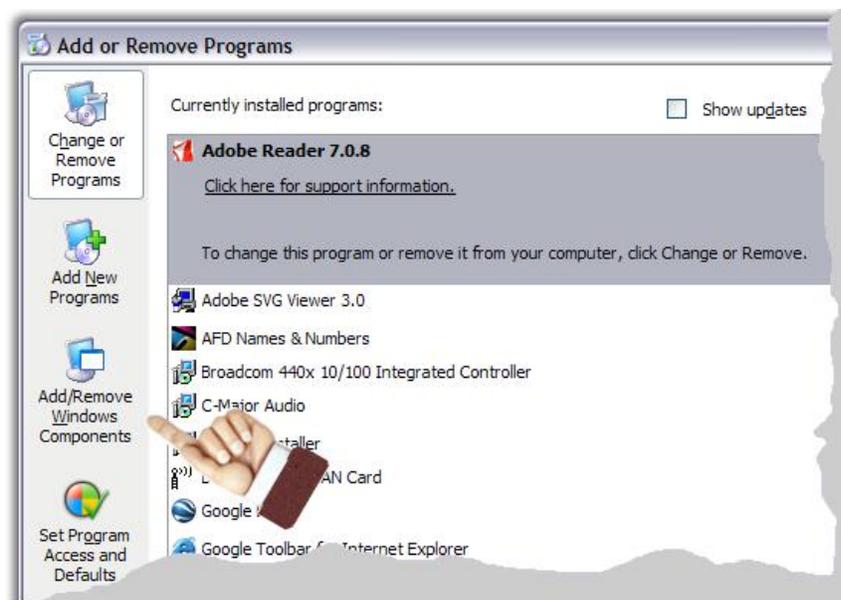


Figure 12: Add or Remove Programs

After the screen has populated, select “Add/remove Windows Components” from the left-hand column.



Figure 13: Windows Components

The Windows Components Screen will open. The check box for “Internet Information Services (IIS)” should be checked. If not, check it, and continue with the installation of IIS.

Checking for .NET Framework.

Step 2: Check the Microsoft .NET framework is installed and up to date.

This can be checked by looking for “Microsoft .NET Framework 1.1” in the list of installed programs, accessible through “Control Panel” and “Add or Remove Programs”. It is important that version 1.1 is installed.

This is a step-by-step view of the process

Start > Control Panel > Add or Remove Programs.



Figure 14: Add or Remove Programs

From the Control Panel, select “Add or Remove Programs”.

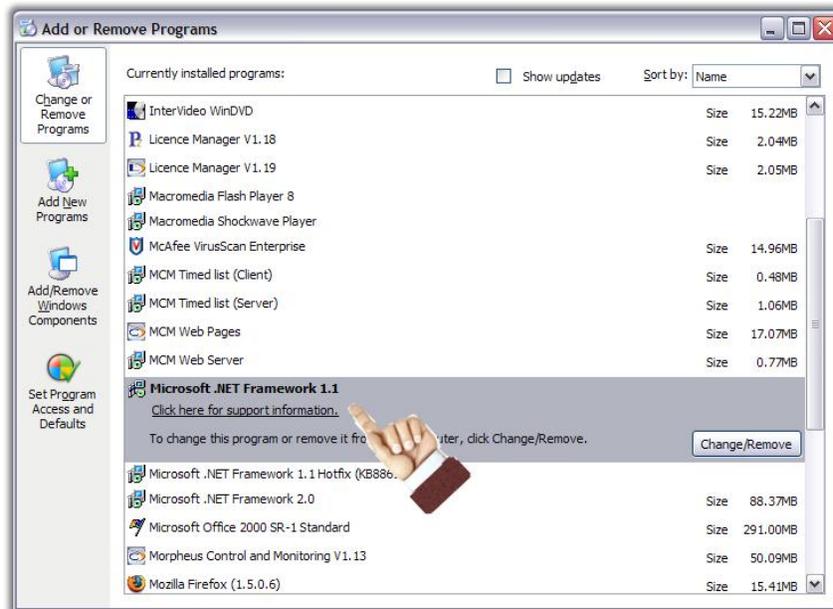


Figure 15: Checking if .NET is installed

If it is not installed it can be installed from the MCM installation CD. To do this run the program “dotnetfx.exe” located in the “Redist” directory on the MCM installation CD.



Figure 16: Installing .NET from the MCM installation disk

After installing, or if already installed, “Windows Update” should be used to ensure the latest updates have been applied.

Check asp.net extensions are registered with IIS

Step 3

When the .NET framework is installed asp.net extensions are registered with IIS. If however IIS was not installed when the .net framework is installed or IIS is uninstalled and reinstalled, asp.net extension will not be recognised. To check whether asp.net extensions are registered, go to “Control Panel”, select “Administrator Tools” and “Internet Information Services”. Expand the local computer entry, right click on “Web Sites” and select properties. On the “Home Directory” tab select “Configuration” in the “Application Settings” part. If

asp.net extension are recognised there should be an entry in the list for “.aspX”, if not it will be necessary to register them. The easiest way to do this is to uninstall the .NET framework and reinstall it. To do this go back to step 2 find the .NET framework in the list of installed programs and select “Change/Remove” and remove it. Then follow the instructions in Step 2 to install the .NET framework from the CD. Note – The .NET framework must be uninstalled before reinstalling it. Installing it without first doing an uninstall will have no effect. It is possible to register asp.net extensions without reinstalling the .NET framework. An article on how to do this can be found on the Microsoft web site (<http://support.microsoft.com/kb/841558>).

This is a visual step-by-step view of the process.

From Windows[®] Start menu, select Control Panel, then Administrative Services.

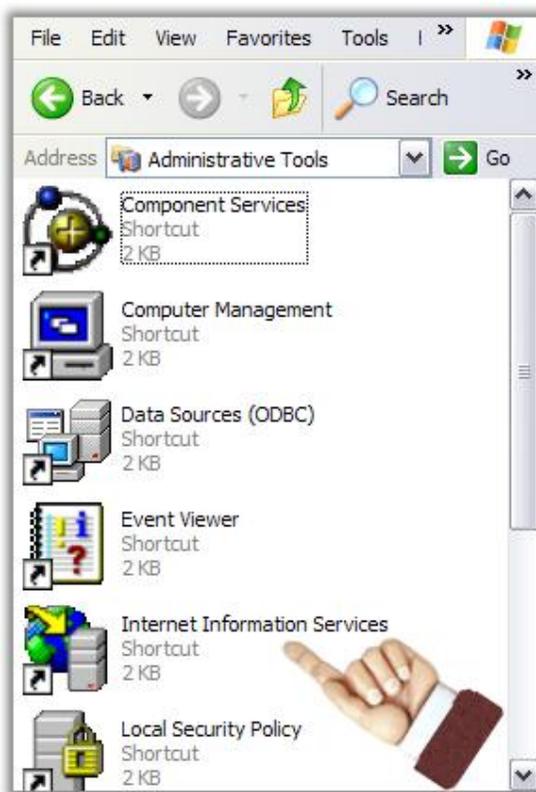


Figure 17: Windows Administrative Tools menu

From the Administrative Tools menu, select Internet Information Services (IIS).

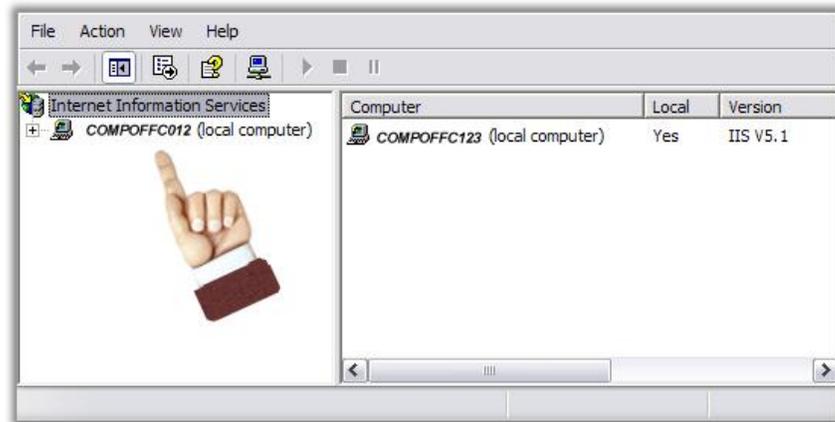


Figure 18: Internet Information Services (IIS) Menu

From the Internet Information Services (IIS) menu, expand the local computer entry.

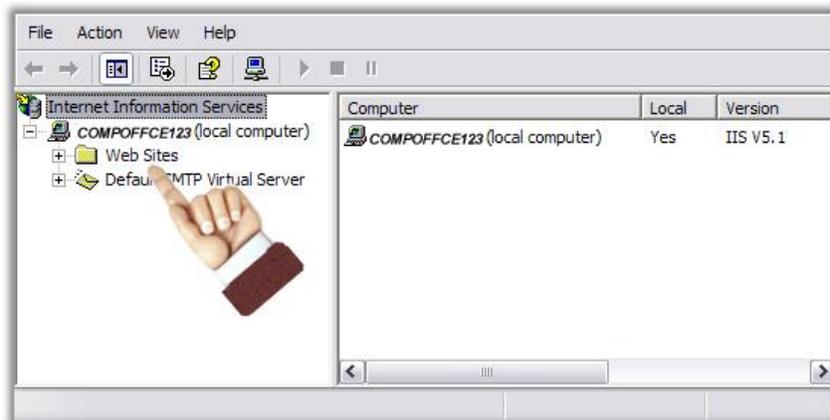


Figure 19: Local Computer entry expanded

When the Local Computer entry is expanded, right click on Web Sites.



Figure 20: Local Computer Properties

From the drop down menu, select Properties.

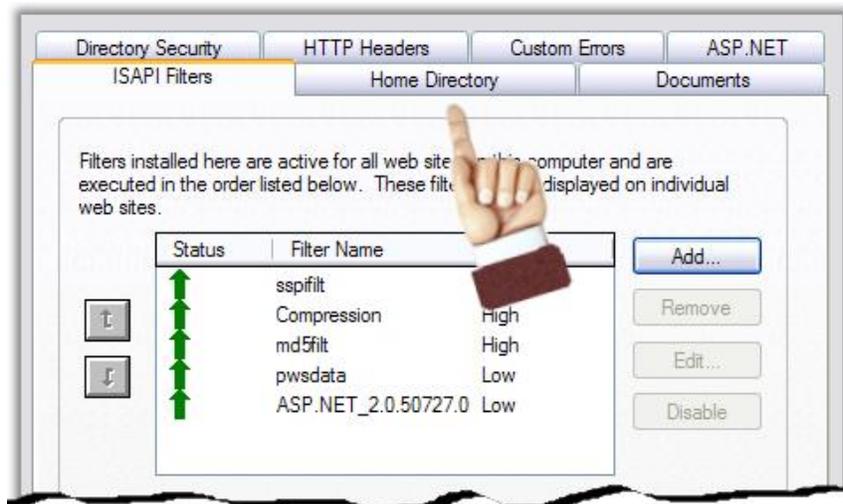


Figure 21: Home Directory

Select the Home Directory Tab.

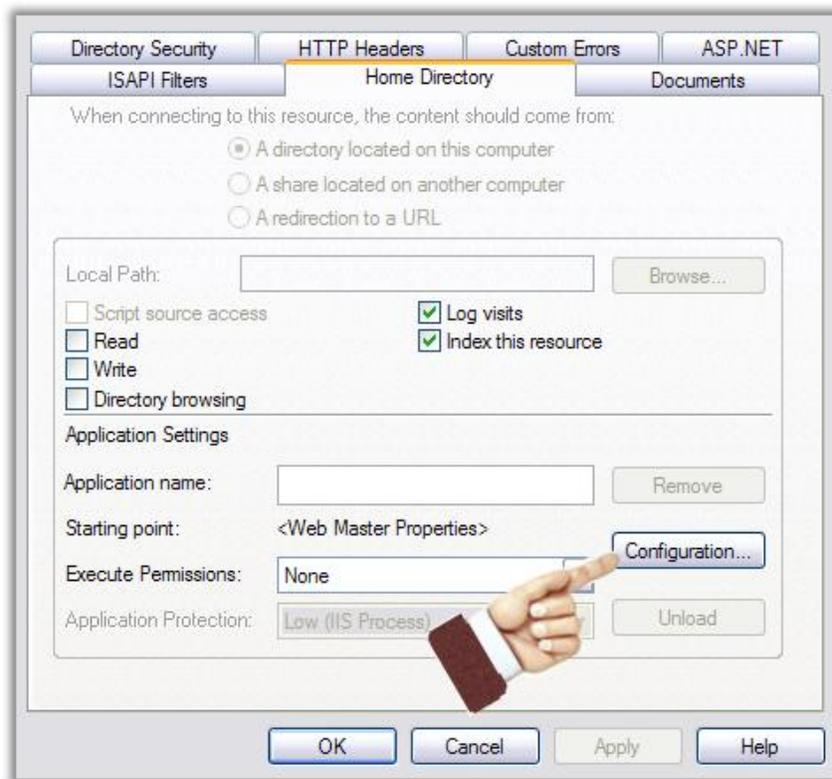


Figure 22: Configuration

From the Home Directory tab, select Configuration.

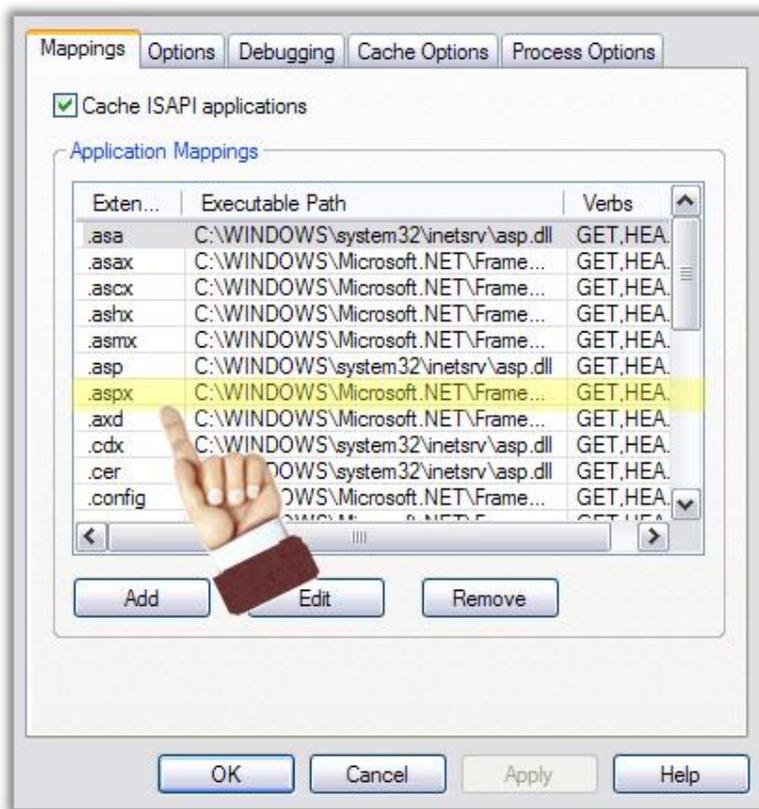


Figure 23: Mappings

If “.aspx.net” extensions are recognised there should be an entry in the list for “.aspx”, if not it will be necessary to register them. The easiest way to do this is to uninstall the .NET framework and reinstall it. To do this go back to step 2 find the .NET framework in the list of installed programs and select “Change/Remove” and remove it. Then follow the instructions in Step 2 to install the .NET framework from the CD. Note – The .NET framework must be uninstalled before reinstalling it. Installing it without first doing an uninstall will have no effect. It is possible to register asp.net extensions without reinstalling the .NET framework. An article on how to do this can be found on the Microsoft web site (<http://support.microsoft.com/kb/841558>).

Step 4 (Windows server 2003) – Check ASP.NET service extensions are allowed

If Windows server 2003 is the operating system on web server PC, asp.net service extension must be allowed. To check they are allowed open the IIS manager by selecting “Control Panel”, “Administrative Tools” then “Internet Information Services”. Expand the local computer entry and select “Web Service Extensions”. Check the entry for ASP.NET is set to allowed.

2.2.6 Install MCM Web Server Application

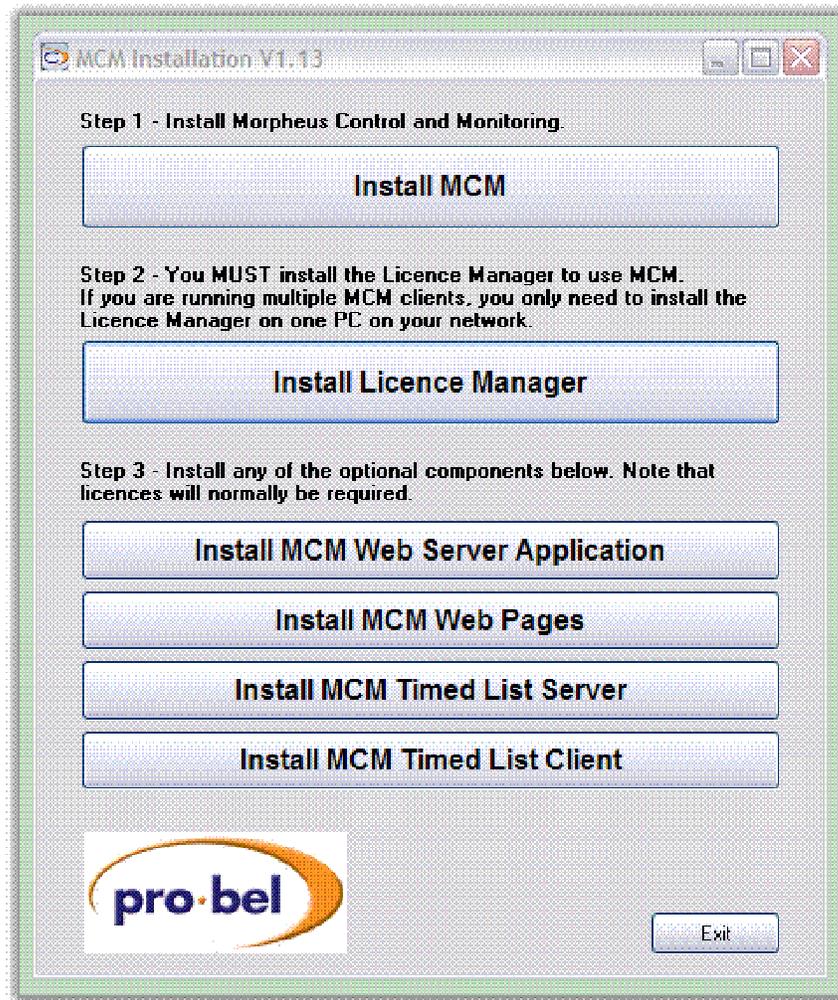


Figure 24: MCM Installation Screen



Figure 25: Install MCM Web Server Application

If you have read the previous section and are ready to install The Web Server Application, then click on the Install MCM Web Server Application button on the main menu.



Figure 26: MCM Web Server Setup Wizard

The installer will guide you through the steps required to install MCM Web Server on your computer. Click "Next" to continue.



Figure 27: Installation Folder Selection

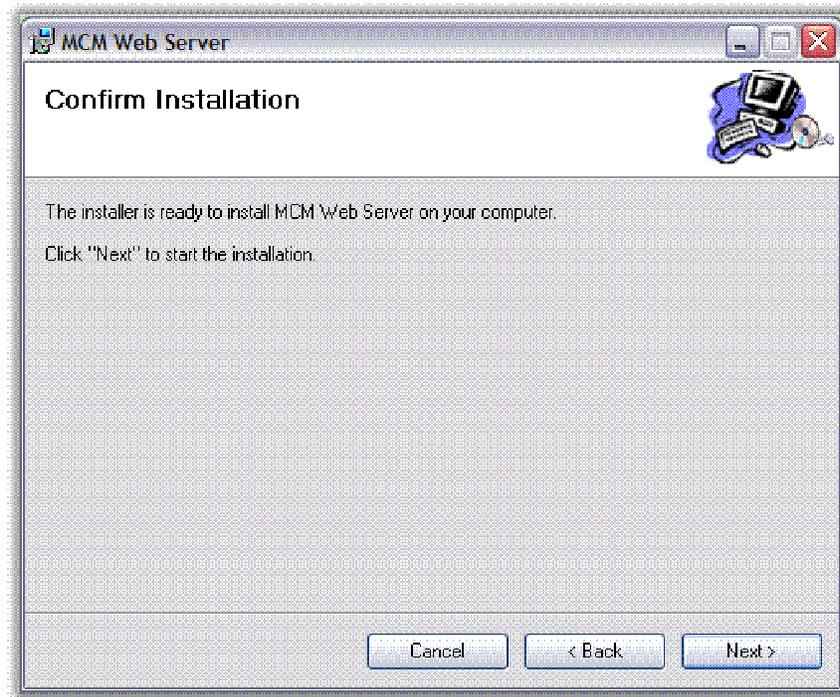


Figure 28: Confirming MCM Web Server Installation

If you have completed the previous screens, the installer will now install MCM Web Server on your computer. Click "Next" to start installation.

When the installation has finished you will receive an installation complete message. Click "Close" and you will be returned to the main installation menu.

2.2.7 Install MCM Web Pages

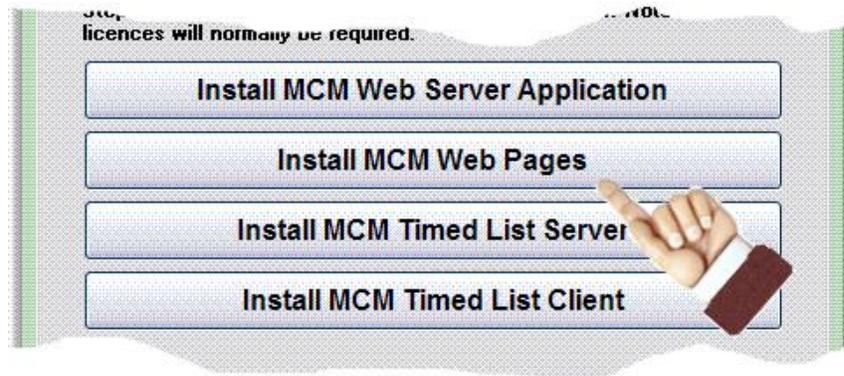


Figure 29: Selecting Install MCM Web Pages

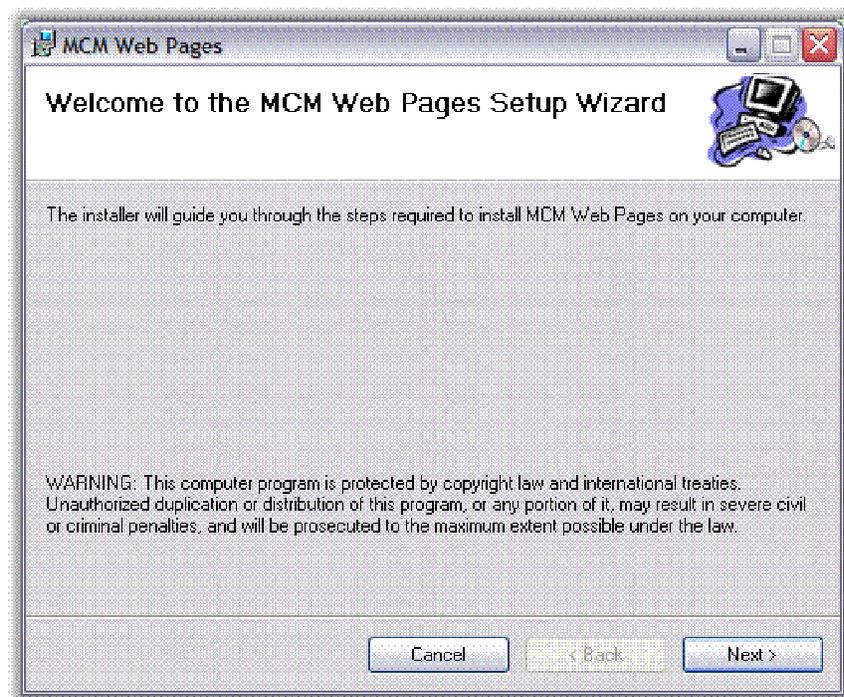


Figure 30: MCM Web Pages Setup Wizard

The MCM Web Pages Setup Wizard will guide you through the required steps to install MCM Web Pages on your computer. Click “Next” to commence the installation.

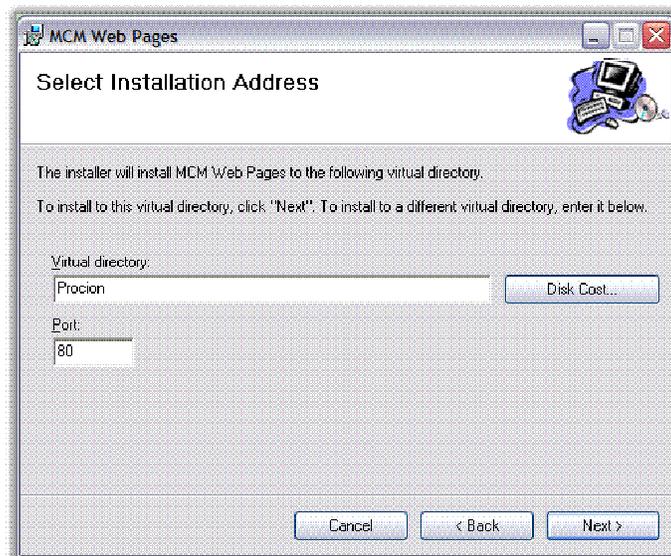


Figure 31: Select Installation Address

The installer will install MCM Web Pages to the virtual directory, Procion. If you wish to install to a different directory overwrite Procion with the new name. The port can also be changed. Click “Next” to continue.

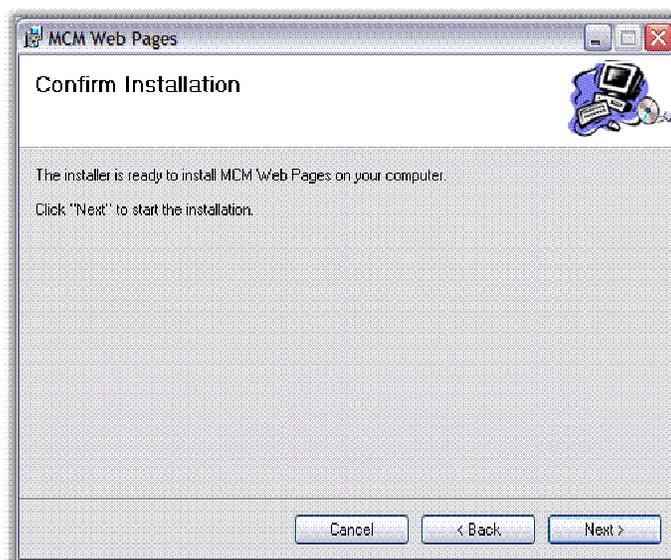


Figure 32: Confirm Installation

The installer is ready to install MCM Web Pages on your computer. Click “Next” to start the installation.

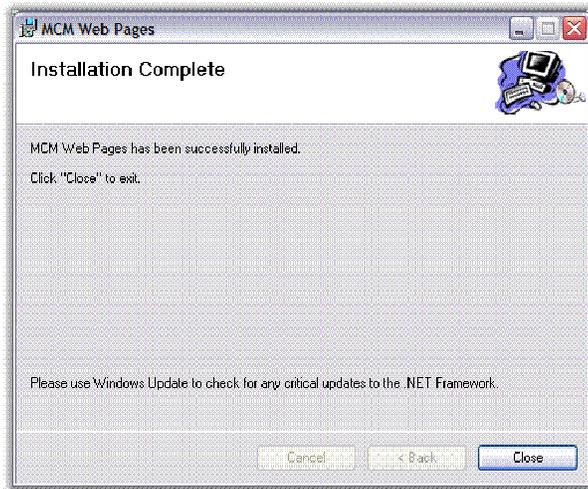


Figure 33: Installation Complete

This page confirms that MCM Web Pages has been successfully installed. It is highly recommended that you now use Windows Update to check for any critical updates to the .NET Framework. Click “Close” to exit. You will now be returned to the main installation menu.

2.2.8 Install MCM Timed List Server

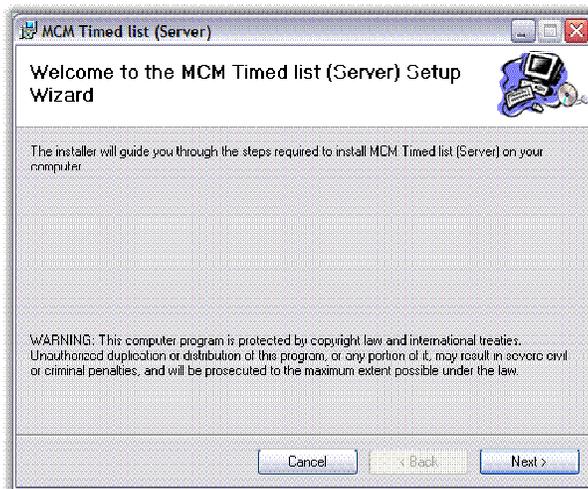


Figure 34: MCM Timed List (Server) Set-up Wizard

The installer will guide you through the steps required to install MCM Timed List (Server) on your computer. Click “Next” to continue.

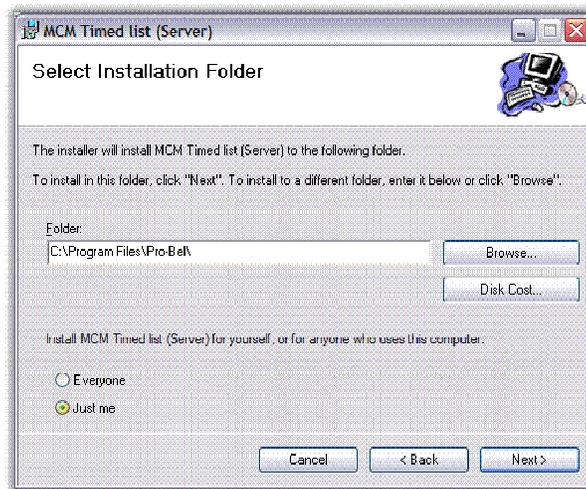


Figure 35: Selecting an Installation Folder

The installer will install MCM Timed List (Server) to the default folder. To install in this folder, click “Next”. To install to a different folder, type in the path, or search for the folder in “Browse”. Select who will be using this computer, “Everyone” or “Just me”. Select “Next” to install.

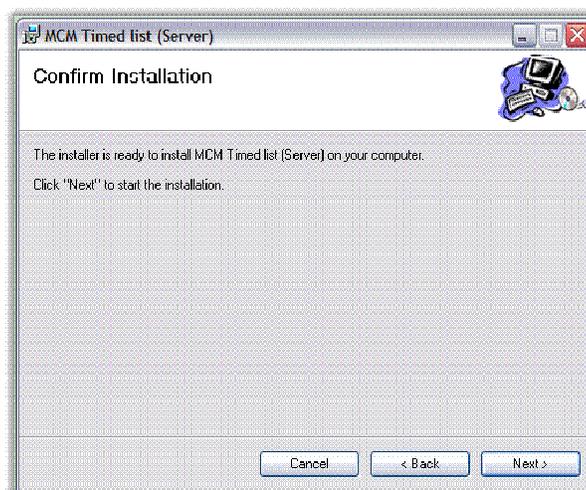


Figure 36: MCM Timed List (Server) Installation Confirm

The installer is ready to install MCM Timed List (Server) on your computer. If you wish to review or change the settings click “Back”. “Cancel” will abort the installation. Click “Next” to start the installation.

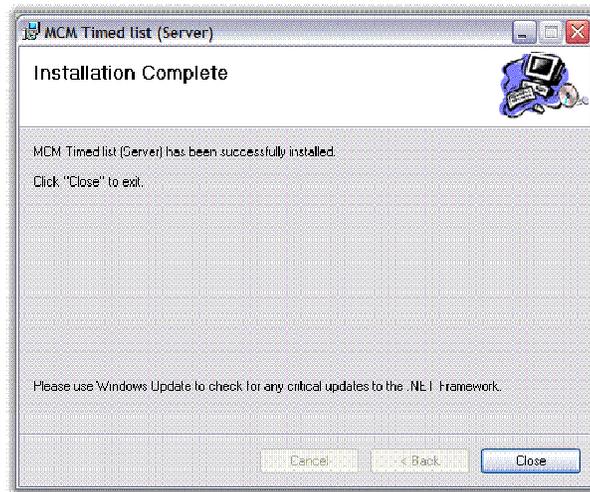


Figure 37: MCM Timed List (Server) Installation Complete

The MCM Timed List (Server) has been successfully installed. Click "Close" to exit the installation program and return to the main installation menu.

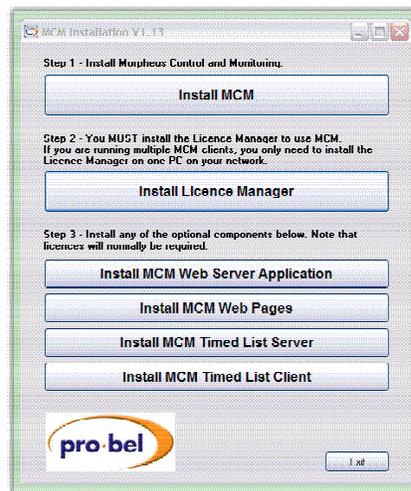


Figure 38: Main Installation Menu

2.2.9 Install MCM Timed List Client

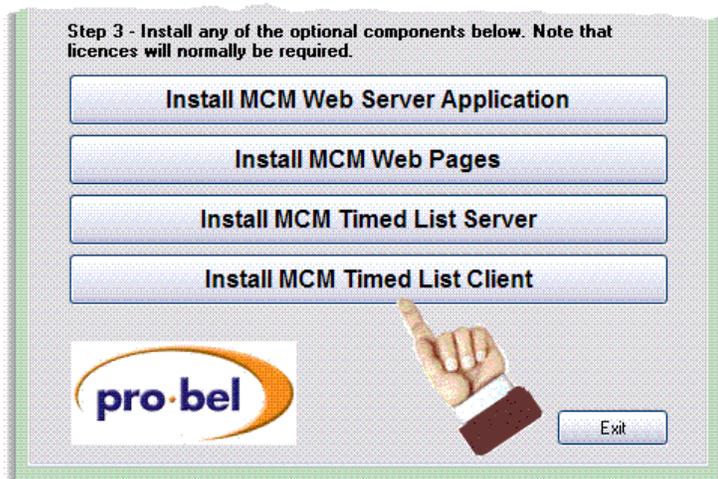


Figure 39: Install MCM Timed List Client

To install MCM Timed List Client go to the main installation menu and click on “Install MCM Timed List Client”.

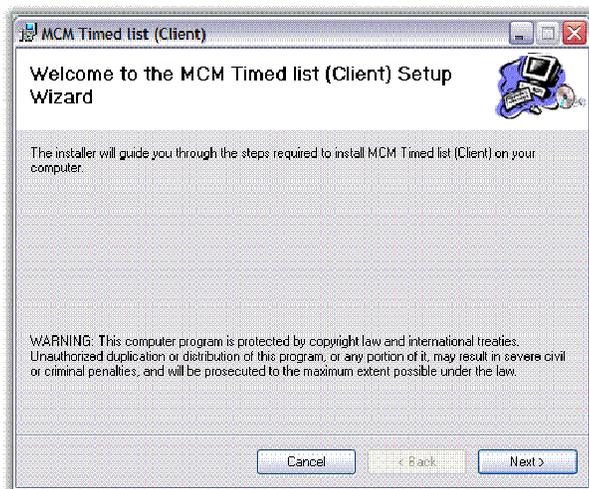


Figure 40: Timed List Client Setup Wizard

The installer will guide you through the steps required to install MCM Timed List (Client) on your computer. If you wish to abort the installation or install later click “Cancel”. Click “Next” to continue.

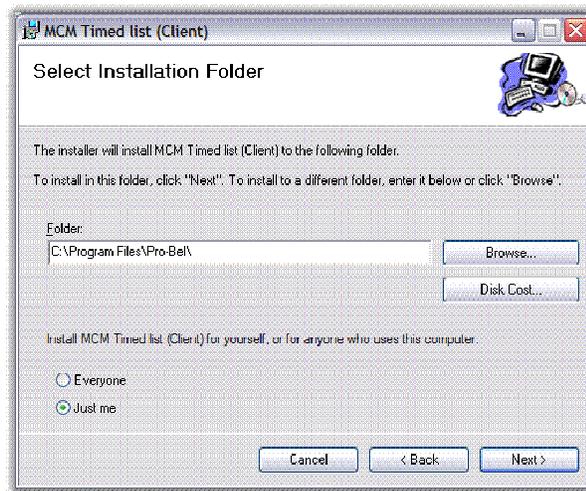


Figure 41: Select an Installation Folder

The installer will install MCM Timed List (Client) to the default folder. To install in this folder click “Next”. If you wish to install to a different folder, enter the path or click “Browse”.

Disk Cost advises on memory usage.

Select who will be using the computer, everyone or yourself.

If you wish to abort the installation click “Cancel”.

Click “<Back” to review previous screens.

Click “Next >” to continue with the installation.

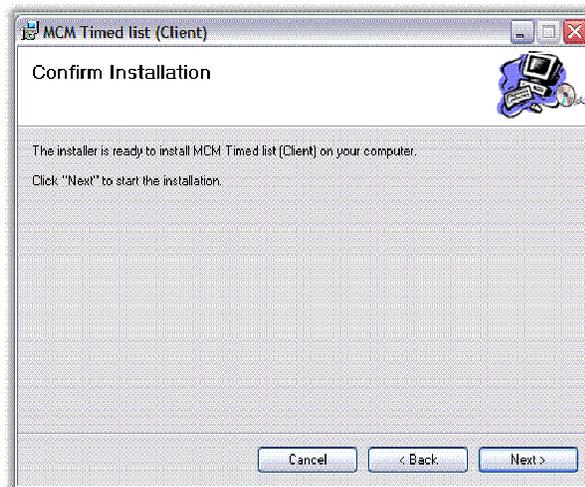


Figure 42: Confirm Installation

The installer now has all the information it requires to install MCM Timed List (Client) on your computer. Click "Next >" to start the installation. If you wish to abort the installation click "Cancel". If you wish to review previous screens click "< Back".

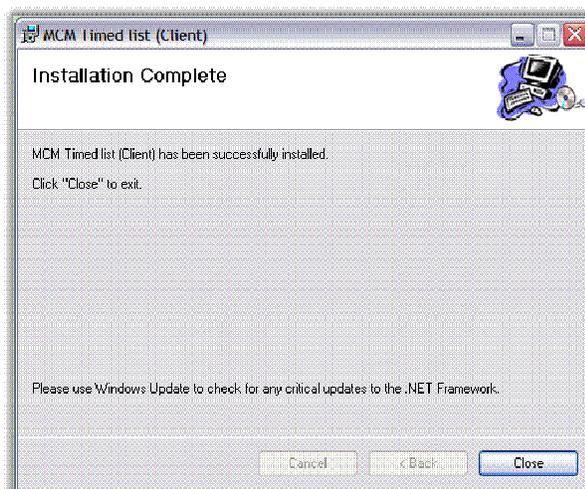


Figure 43: Installation Complete

MCM Timed List (Client) has been successfully installed. Click "Close" to exit.

MCM Timed List (Client) uses the .NET Framework, always use Windows Update to check for any critical updates to the .NET Framework.

2.3 The Application Wizard

We recommend using the wizard to start-up the applications.



Figure 44: MCM Wizard

The wizard is divided into three sections: -

- MCM Demo
- MCM Live
- Shortcut Wizard

2.3.1 MCM Demo

The MCM demo is a good place to familiarise yourself with the MCM program. It provides an easy and safe introduction to using MCM.



Figure 45: Start MCM Demo Wizard

Click on “Start MCM Demo”. The wizard will open the Licence Manager Database, and General Remote Driver in the correct sequence. Finally the MCM Control Station will open a demo environment.

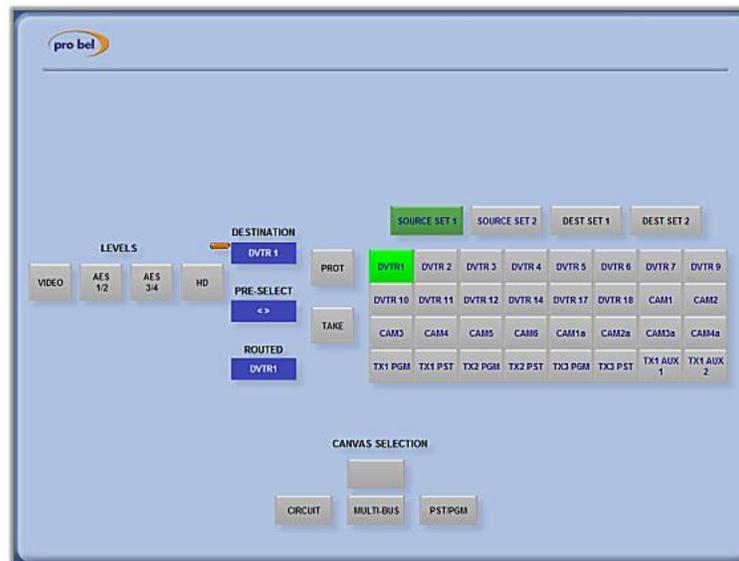


Figure 46: Demo Environment

The demo will normally open in full screen mode (default). Pressing F12 or ESC will reveal the normal editing options at the top of the screen.



Figure 47: Tab Menus

Clicking on the Tabs at the top-left reveals the following options and set-up screens: -

Tabs	Options
File	Log In Log Out Open Environment Recent Files Exit
View	Full Screen F12 Event Log F1
Libraries	Register Unregister Information Router Library Master Control Library VTR Library GPI Library
Tools	Options (<i>see figure below for details</i>)
Help	Help

Table 1: MCM Control Station Tabs

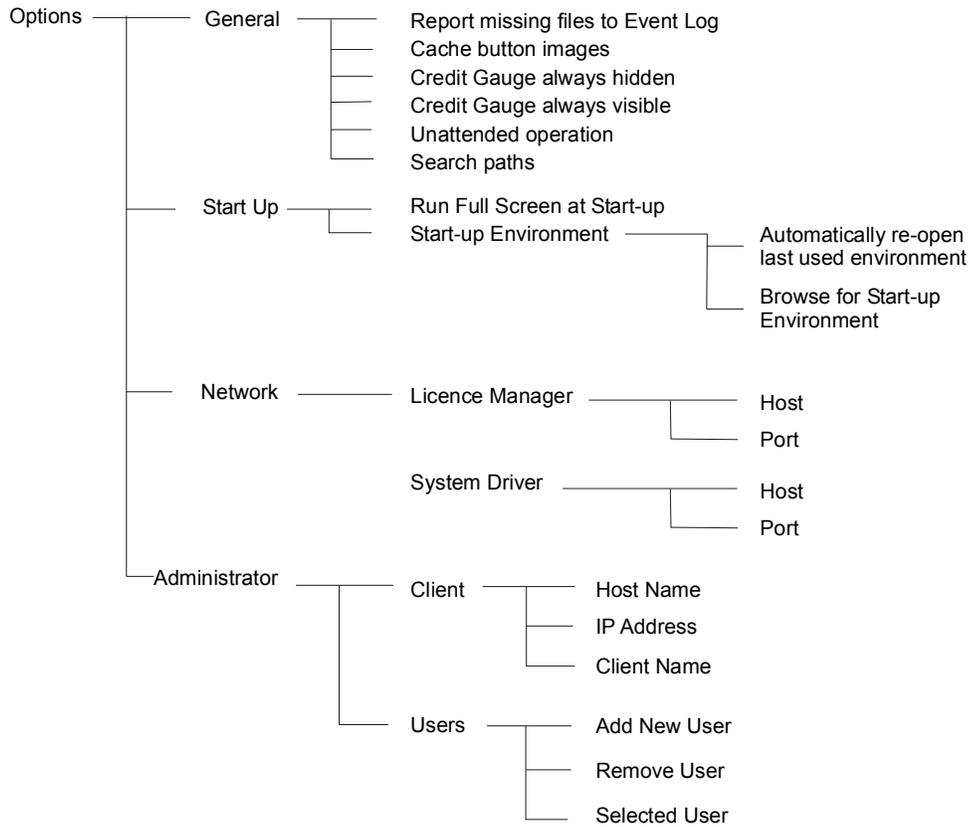


Figure 48: Tools > Options Menu Tree

2.3.2 MCM Live

If you own MCM licences or you would like to try MCM on a real system, use the MCM Live buttons to configure and start the servers and/ or client applications. You can use the wizards to guide you through the main server and client settings.

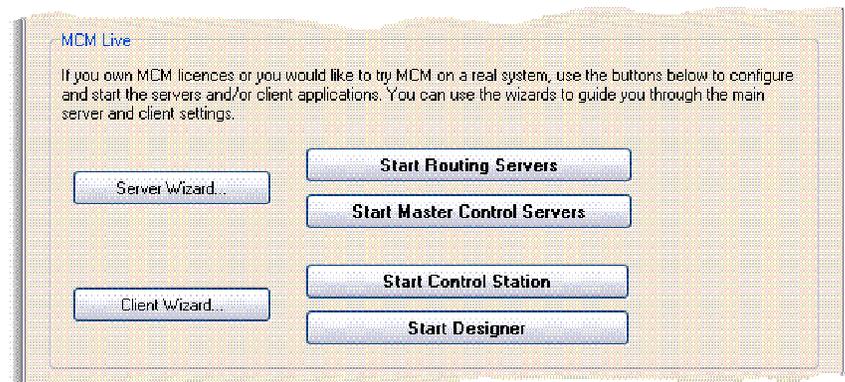


Figure 49: MCM Live Wizards

2.3.2.1 The Server Wizard

Clicking on the server wizard will take you through a four-step process.

Step 1 – Server Ports

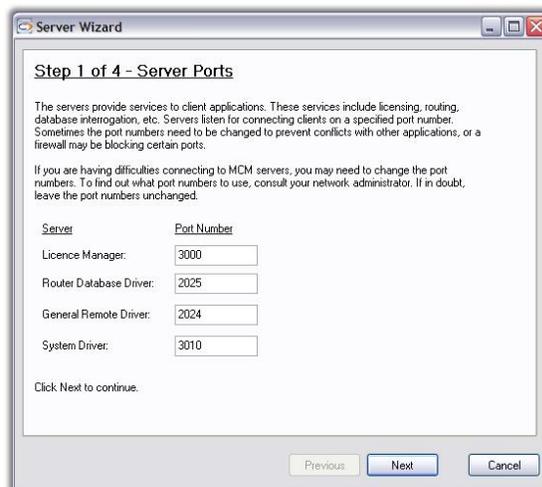


Figure 50: MCM Server Wizard Step 1 - The Server Ports

The servers provide services to client applications. These services include licensing, routing, database interrogation, etc. Servers listen for connecting clients on a specified port number. Sometimes the port numbers need to be changed to prevent conflicts with other applications, or a firewall may be blocking certain ports.

If you are having difficulties connecting to MCM servers, you may need to change the port

numbers. To find out which port numbers to use, consult your network administrator. If in doubt leave the port numbers unchanged.

Click “Next” to continue to step 2.

Step 2 – Router Database

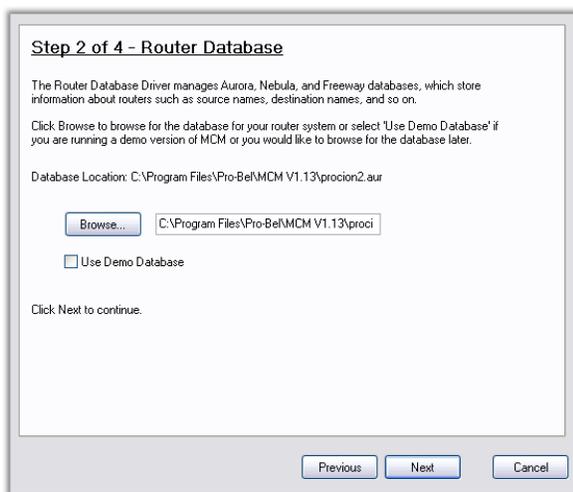


Figure 51: MCM Server Wizard Step 2 - Router Database

The Router Database Driver manages Aurora, Nebula, and Freeway databases, which store information about routers such as source names, destination names, and so on.

Click “Browse” to browse for the database for your router system or select “Use Demo Database” if you are running a demo version of MCM or you would like to browse for the database later.

Click “Next” to continue to step 3.

Step 3 - Serial Port Settings

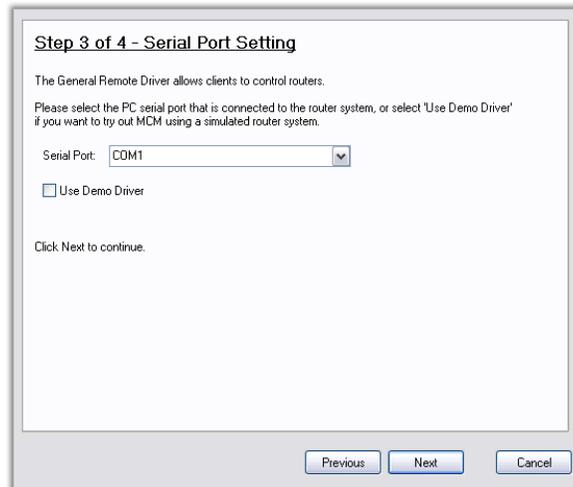


Figure 52: MCM Server Wizard Step 3 – Serial Port Settings

The General Remote Driver allows clients to control routers. Select the PC serial port that is connected to the router system, or select “Use Demo Driver” if you want to try out MCM using a simulated router system.

Click “Next” to continue to step 4.

Step 4 – Licence Codes

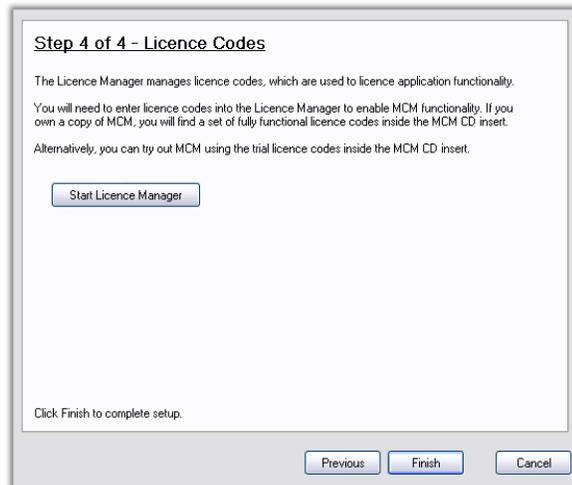


Figure 53: MCM Server Wizard Step 4 - Licence Codes

The Licence Manager manages licence codes, which are used to licence application functionality.

You will need to enter licence codes into the Licence Manager to enable MCM functionality. If you own a copy of MCM, you will find a set of fully functional licence codes inside the MCM CD insert. Alternatively, you can try out MCM using the trial codes inside the MCM insert. This completes the set-up information required for the servers. Start the Licence Manager if you intend to start-up the servers. Click “Finish” to complete the set-up.

Master Control Servers

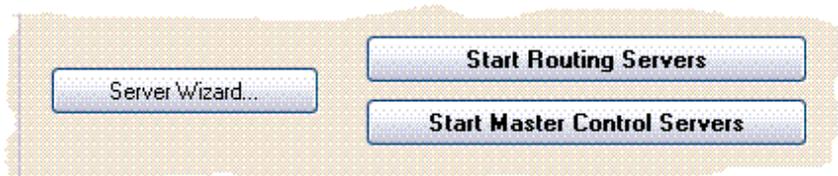


Figure 54: Starting The Master Control Servers

To run the master control servers, click on “Start Master Control Servers” button.



Figure 55: MCM Master Control Driver Screen

The MCM master Control Driver Screen allows user setup of mixer logging, mixer/client logging, simulator, and port functions. The “Settings Tab at the top left of the screen allows more configuration and user setups, the menu structure is shown below.

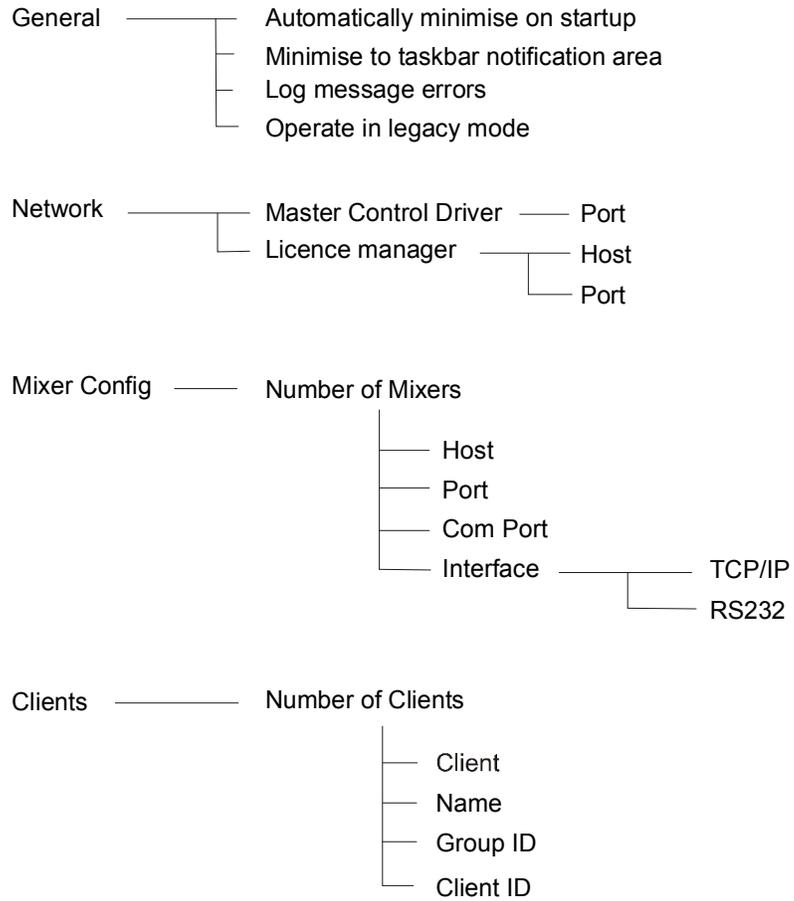


Figure 56: MCM Master Control Server Settings Menu

2.3.2.2 Routing Servers

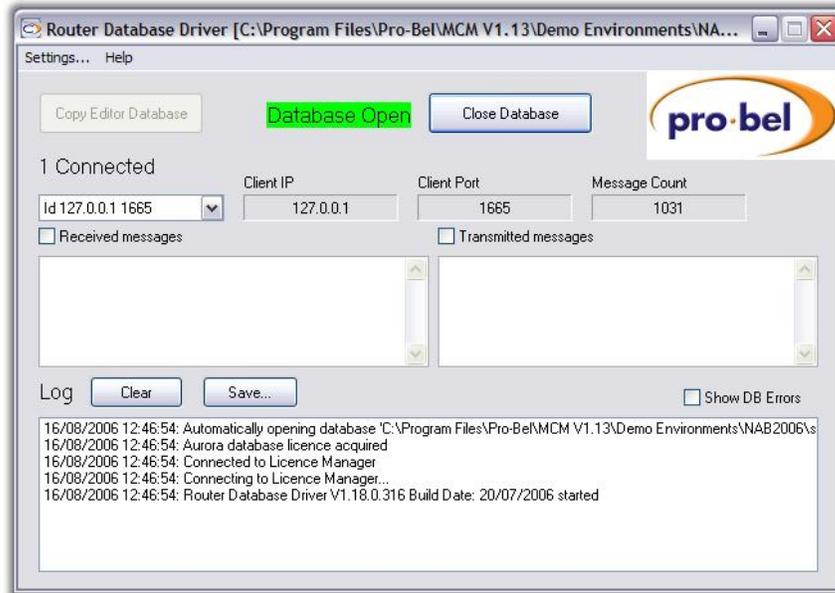


Figure 57: Router Database Driver

The “Settings Tab at the top left of the screen allows more configuration and user setups, the menu structure is shown below.

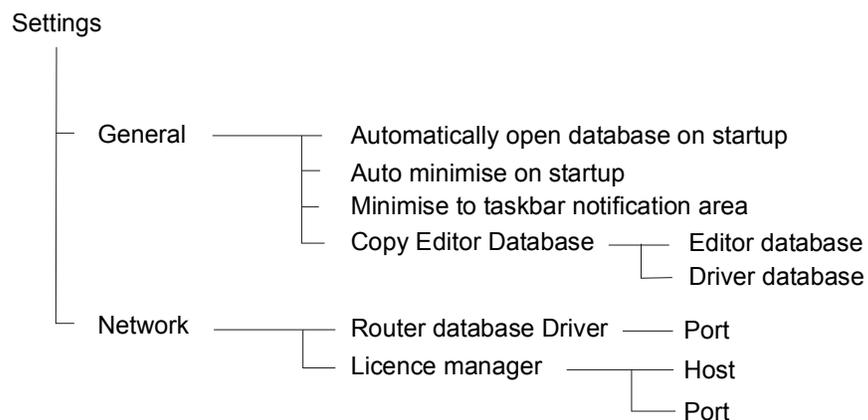


Figure 58: Settings Menu

2.3.2.3 The Client Wizard

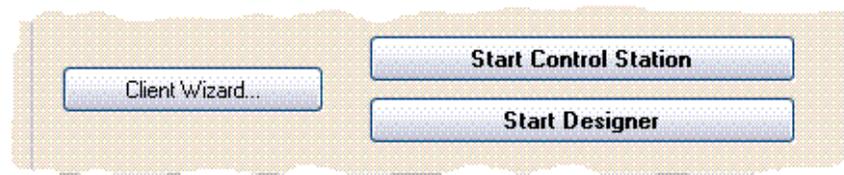


Figure 59: Client Wizard

To open the Client Wizard, go to the MCM Wizard and click on “Client Wizard”.

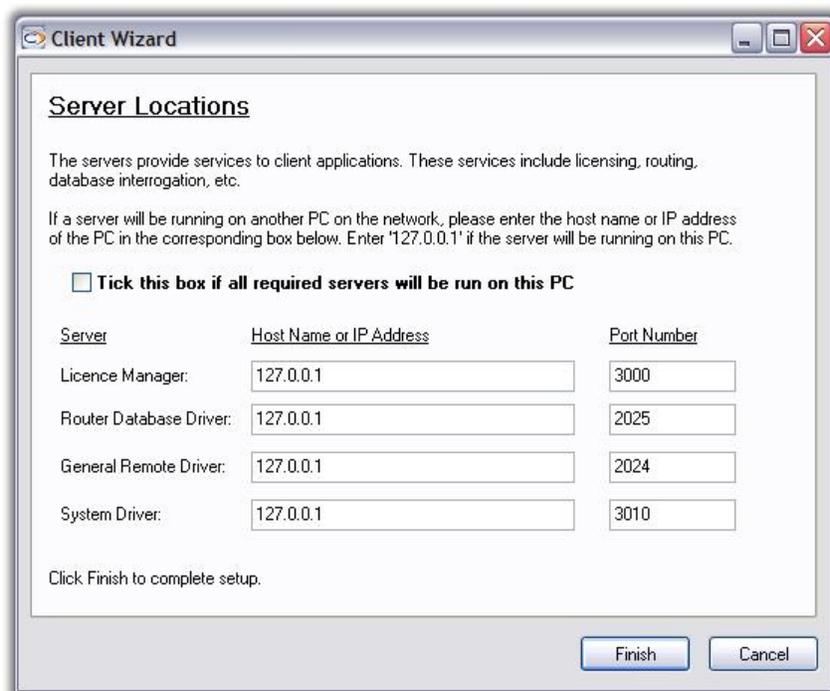


Figure 60: Client Wizard

The servers provide services to client applications. These services include licensing, routing, database interrogation, etc. If a server will be running on another PC on the network, enter the host name or IP address of the PC in the corresponding box. Enter “127.0.0.1” if the server is running on the same PC. Click “Finish” to complete set-up.

Start Control Station

To start the Control Station go to the MCM Wizard and click on “Start Control Station”. The Control Station controls and set-up screens are discussed in the MCM Demo section previously.

Start Designer

To start MCM Designer go to the MCM Wizard and click “Start Designer”.

2.3.3 Shortcut Wizard

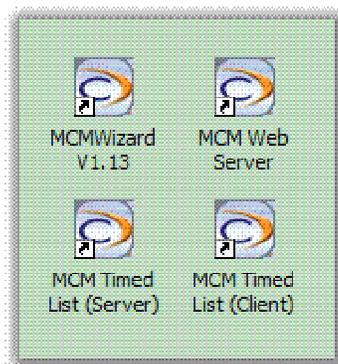


Figure 61: Desktop Shortcuts

To start MCM without displaying the MCM Wizard, shortcuts can be added to the desktop or to the Windows Start-up folder. To do this, use the Shortcut Wizard.

2.4 Starting The Web Server

Before starting the Web Server Application the MCM Database and General Remote Driver

should have been started. To start the web server run the “MCM Web Server” either from the shortcut on the desktop or the start menu, then click the start server button on the application. The web server should connect to the MCM drivers and retrieve information about the system from them. At this point the application can be minimised where it will continue to run providing an interface between the web application and the MCM drivers.

Loading the login page

Once the web server application has been started the MCM canvases can be accessed through a web browser.

Before MCM canvases can be displayed on the browser the client must log in using a MCM user name and password. The initial page that must be accessed through the browser is therefore the login page. To access this on a web browser, on the local machine the URL is <http://localhost/procion/login.aspx>. On another PC localhost should be replaced with the name or IP of the web server PC.

Here is a visual step-by-step view of the process.



Figure 62: MCM Web Server Shortcut

MCM Web Server may be started either from the MCM Web Server desktop shortcut or from Windows “Start” menu.

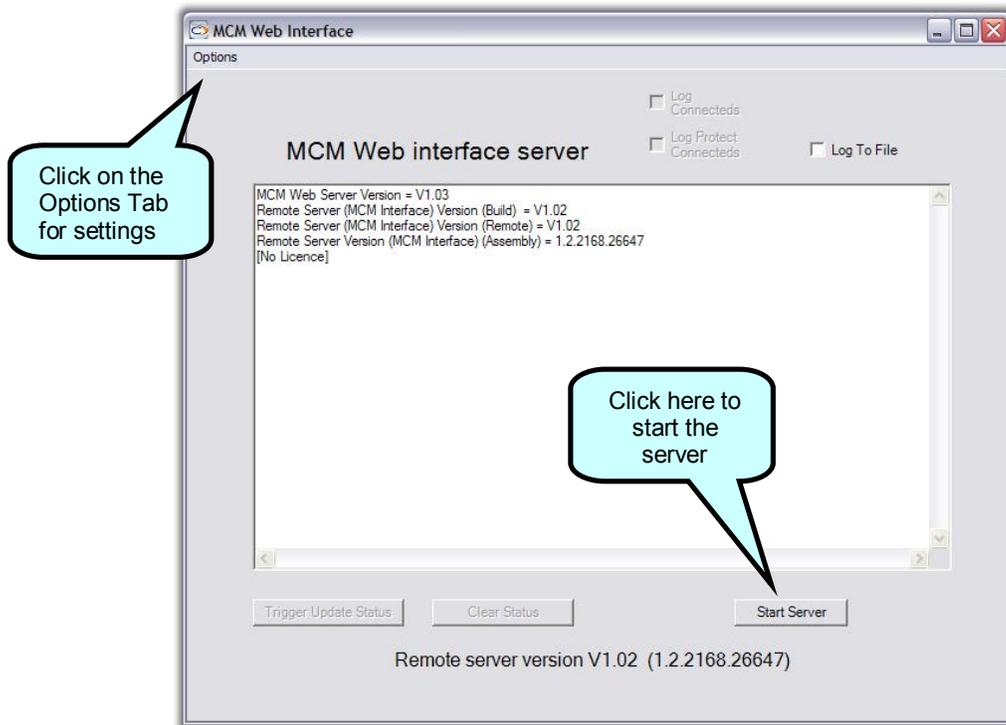


Figure 63: MCM Web Interface Server

The "Options" Tab sets up the network locations of The Licence Manager, The Router database Drive, and the General Remote Driver.

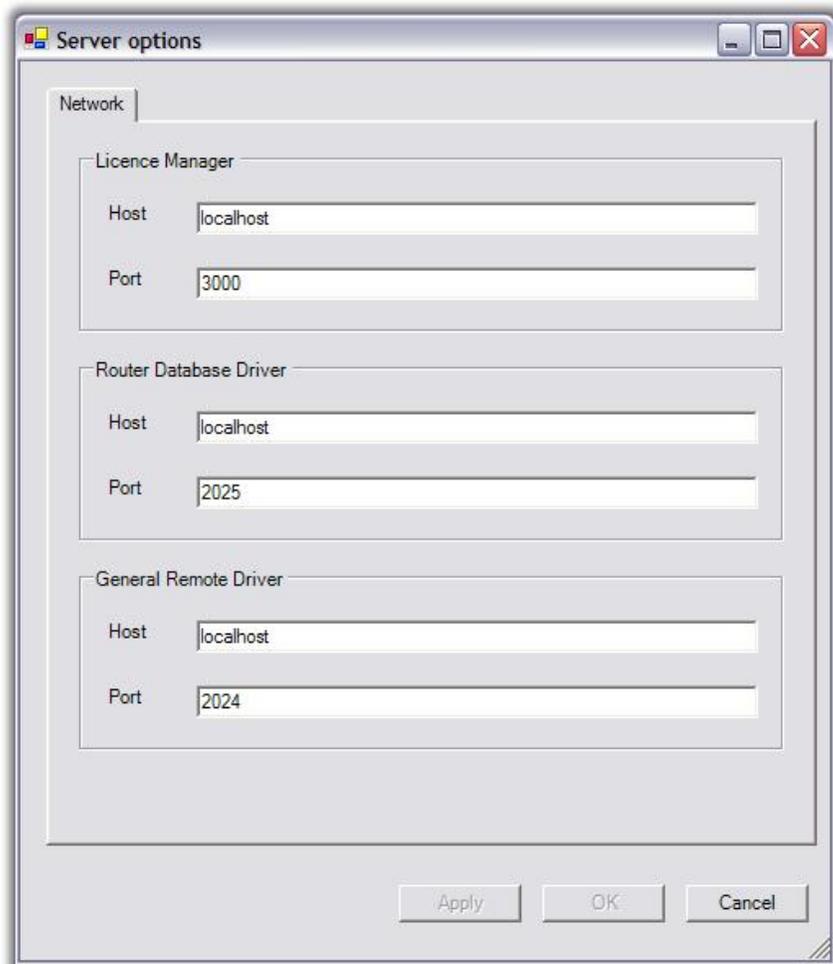


Figure 64: MCM Web Server Options

2.4.1.1.1 Web Pages

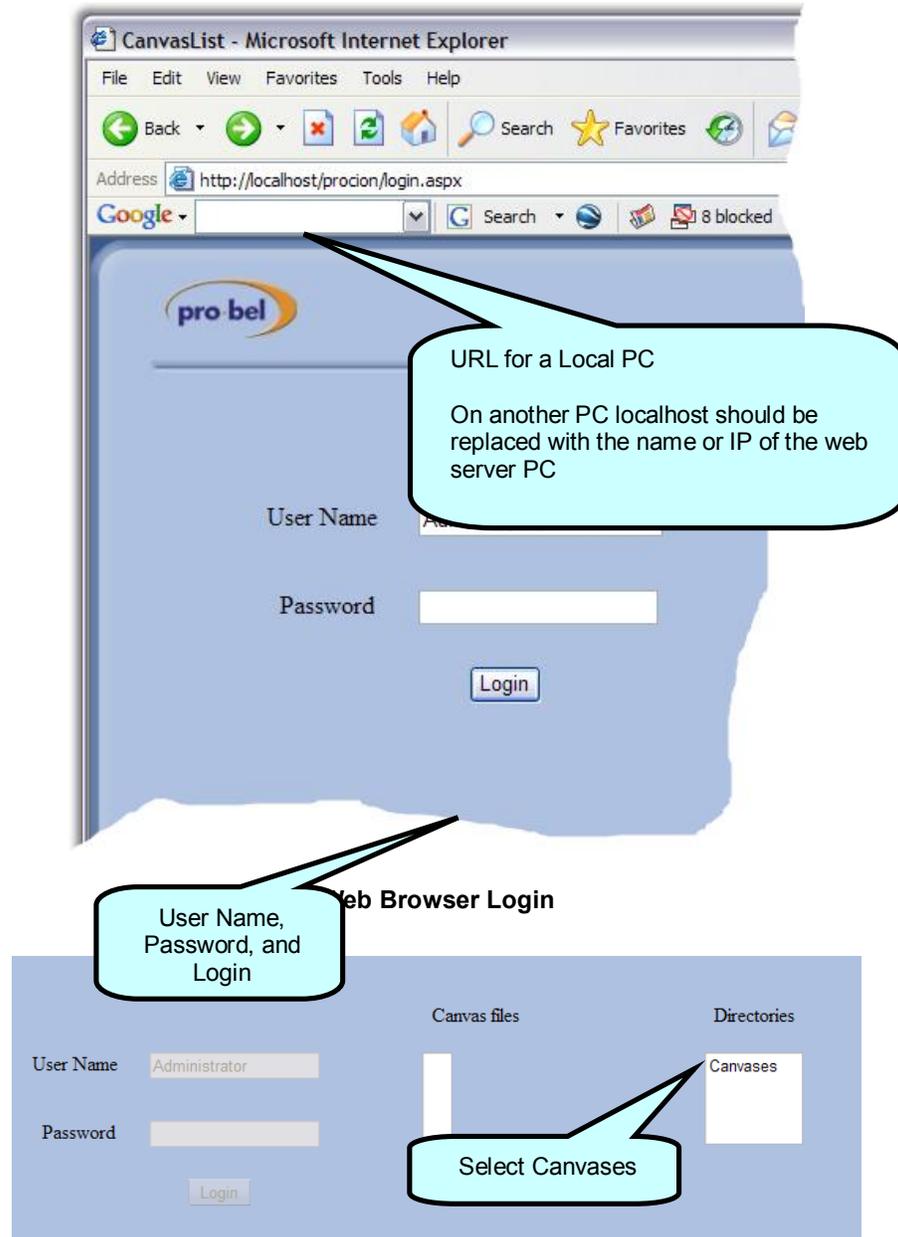


Figure 66: Select Directory

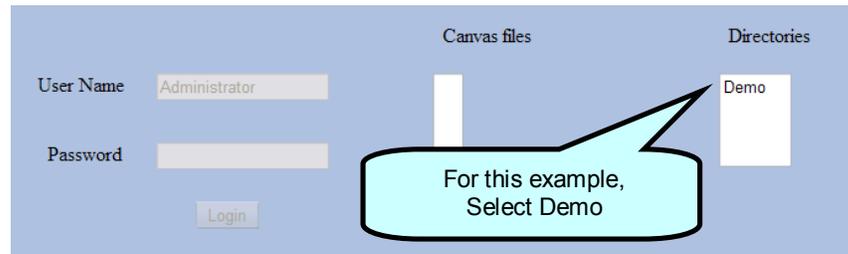


Figure 67: Select Directory

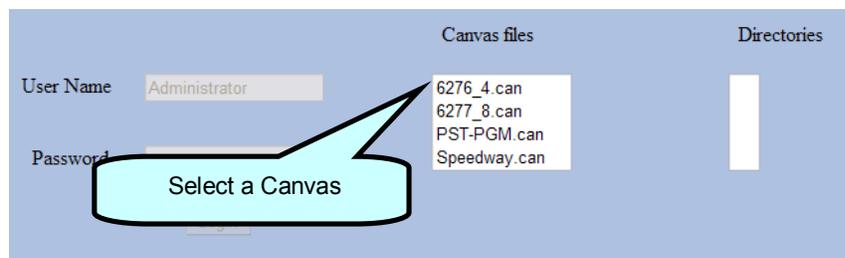


Figure 68: Select Canvas Files

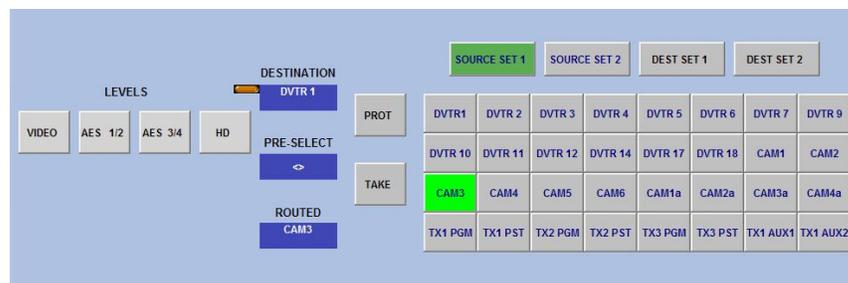


Figure 69: Canvas Example

Note for users of MS Internet Explorer ©.

The MCM Web Server Application needs to continuously update, depending on your settings this can cause a clicking sound. The way to stop it is to switch off the sound for "Start Navigation" for "Windows Explorer".

To do this

Open "Sounds and Audio Devices" from Control panel.

Select the "Sounds" tab.

Scroll down the list in the "Program events" window to "Windows Explorer" and "Start Navigation".

Set the sounds to "None".

Here is a visual step-by-step view: -

From the "Start" menu select "Control Panel"

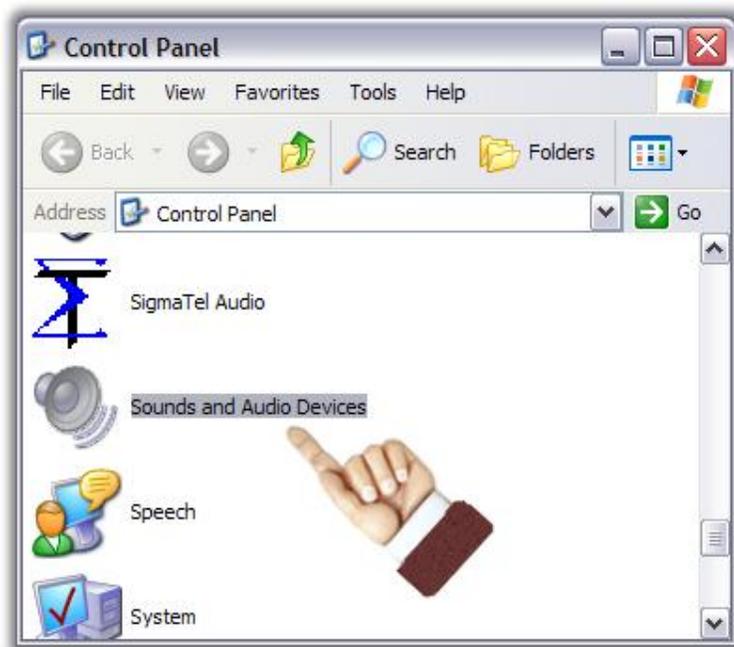


Figure 70: Control Panel

From the "Control Panel", select "Sounds and Audio Devices"

From the Sounds and Audio Devices Properties;

Scroll through Program Devices to Internet Explorer, then to "Start Navigation". From the Sounds menu select "None". Click OK to confirm the changes.

2.5 Workstation Configuration

Single workstation

If the user has a licence for only one user, it is likely that all components will be installed on the same PC. All the default IP addresses in the various components are configured for such a set-up, and the user will notice that the address '127.0.0.1' is used throughout, which is the standard 'loop-back' address used for communication between networked applications on the same physical platform.

Multi-Client Network

If the user has a Multi-Client licence, the Licence Manager, System Driver, Router Database Driver and General Remote Driver will be installed on the 'Server' PC. The Control Station will be installed onto the 'Client' PC's. In Multi-Client use the Licence Manager and Control Station will require the relevant Host name to be modified. Once this is completed, opening the Environment file on the Control Station of the Client PC links this PC to the Server PC, where the relevant file is opened.

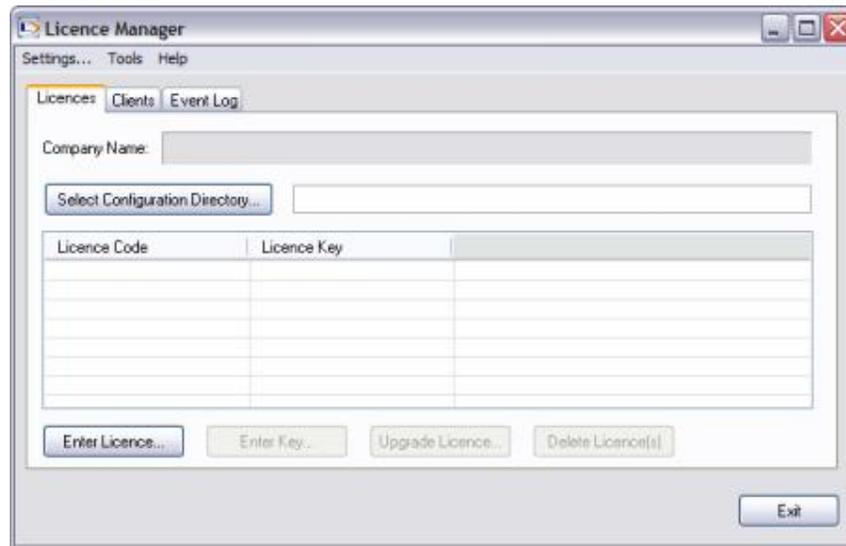
The Designer can be installed on the client or server PC, usually the installation is on the server PC.

General Workstation Notes:

1. Even if a Multi-Client licence has been supplied it is usual to check the installation with the Control Station located on the Server PC. Once this has been achieved the changes to the Licence Manager and Control Station can be carried out to suit the Clients.
2. The General Remote Driver Demo can be used to 'test' an environment before 'going live'.

2.6 Configuring the Licence Manager

When first launched the Licence Manager will appear as follows:



2.6.1 Licence requirements

A minimum of 2 licences are required to run a MCM router control system, one for the General Remote Driver, and one for the Control Station. A 'trial' licence may be used, which will only allow the applications to run for a limited period of 30 days, or a full licence can be supplied by Pro-Bel.

The trial licences available are as follows:

- PR2-01T1-001 For General Remote connection to Aurora
- PR2-02T1-001 For General Remote connection to Nebula (Sirius/Freeway)
- PR2-11T1-002 For 2 basic router control clients
- PR2-12T1-002 Additional for 2 advanced router control clients
- PR2-21T1-002 Additional for 2 Monitoring clients
- PR2-20T1-001 Additional for 1 VTR control client

The last digits in each licence indicate the number of servers or clients and may be changed as required when using trial licences.

2.6.2 Installation of the MCM licence codes

Licences will operate in a fully functional trial mode for 30 days from the date that they are installed on a specific PC. The licence will cease to function after 30 days and a licence key



will be required.

The following TRIAL licence codes need to be entered into the Licence Manager as detailed below, however it is not necessary to request a licence key, and licence keys should ONLY be requested for full licence codes.

For the Aurora Interface

PR2-01T1-001 - This licence code can be used to operate one Aurora Interface Network server.

PR2-11T1-002 - This licence code can be used to operate two Basic Router Control clients.

For the Nebula/Freeway Interface

PR2-02T1-001 - This licence code can be used to operate one Nebula/Freeway Interface Network Server.

PR2-11T1-002 - This licence code can be used to operate two Basic Router Control clients.

You may wish to use the additional features;

PR2-12T1-002 - This licence code can be used to operate two Advanced Router Control clients.

PR2-20T1-001 - This licence code can be used to operate one VCR Interface.

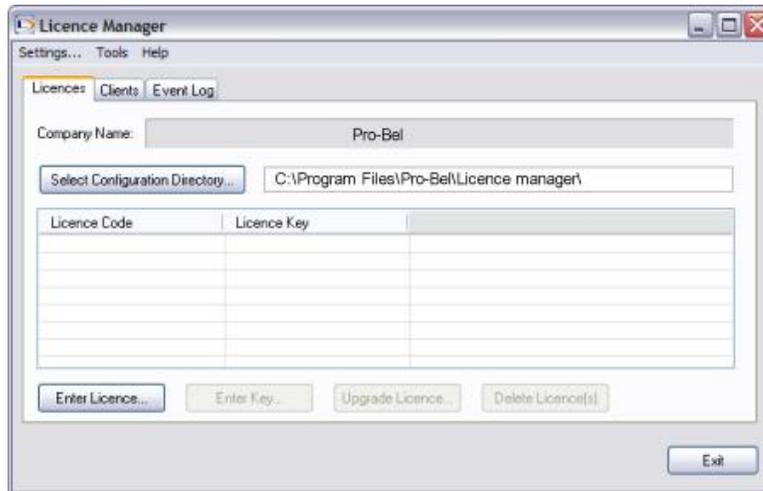
In each case, the last three digits specify the number of servers or clients, and can be changed when running as evaluation licences.

Once installed, components of MCM should be run in the following order:

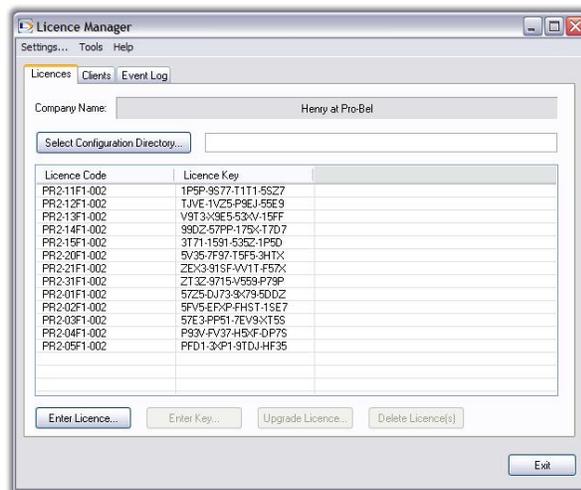
1. Licence Manager
2. P2RouterDBDriver
3. P2GenRemDriver
4. P2SystemDriver
5. P2Designer or P2Control.

2.6.3 Installing the Trial Licence Code

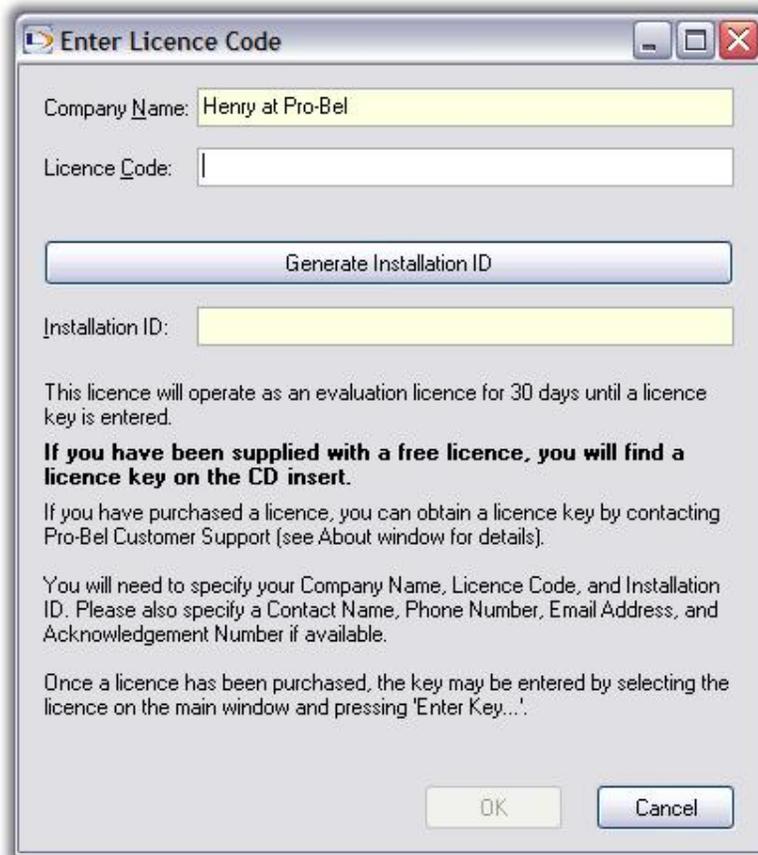
Open the Licence Manager. The following window will be displayed:



A final Licence Manager screen may appear like this, but without the Configuration Directory entry, which is described in the next section:



Pressing the 'Enter Licence' button in the Licence manager will open the following window



Enter Licence Code

Company Name: Henry at Pro-Bel

Licence Code: |

Generate Installation ID

Installation ID: |

This licence will operate as an evaluation licence for 30 days until a licence key is entered.

If you have been supplied with a free licence, you will find a licence key on the CD insert.

If you have purchased a licence, you can obtain a licence key by contacting Pro-Bel Customer Support (see About window for details).

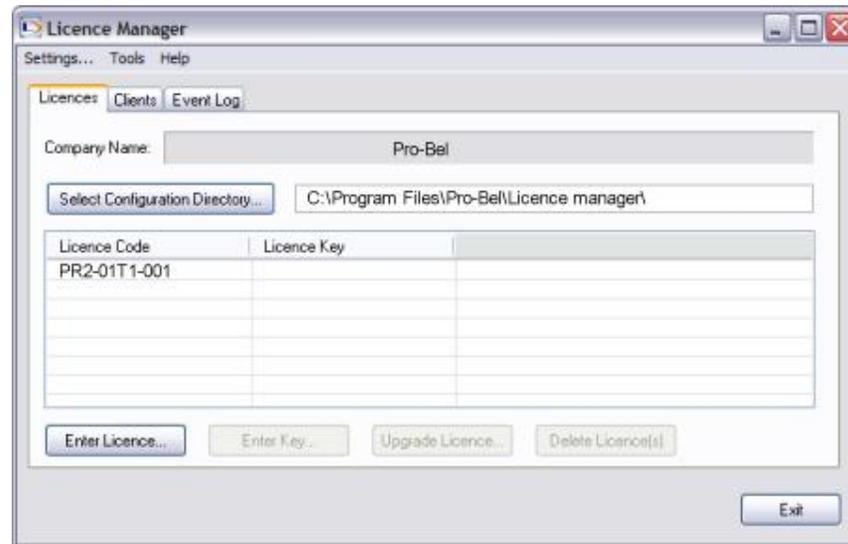
You will need to specify your Company Name, Licence Code, and Installation ID. Please also specify a Contact Name, Phone Number, Email Address, and Acknowledgement Number if available.

Once a licence has been purchased, the key may be entered by selecting the licence on the main window and pressing 'Enter Key...'

OK Cancel

When entering the first licence code, the 'Company Name' text box will be enabled. Enter the company name that you wish MCM to be registered to use the licences. Subsequent licences (Trial or Full) will use the same name.

Note that leading or trailing spaces cannot appear around the company name, licence code, or licence key.



Enter a licence code and press the 'Generate Installation ID' button.
For the Trial Licences this Installation ID is not required by Pro-Bel.
Selecting OK shows the Trial Code installed in the Licence Manager.

This procedure is repeated for all the Trial codes required.

Trial Licence codes will operate in a fully functional mode for 30 days from the date that they are installed on a specific PC.

The Trial licence codes will cease to function after 30 days.

If the MCM Control Station is using a trial licence, and the 30 days trial period expires for that licence, the MCM Control Station will inform the user and then close the environment. The environment can only be restarted by entering a FULL Licence into the Licence Manager.

A full licence must be purchased from Pro-Bel to continue to use a licence code.

Please contact your local Pro-Bel Sales representative or contact sales@pro-bel.com who can generate the necessary full licence codes for the options you require.

For each full licence code the user must generate an 'Installation ID', this and other required information needs to be forwarded to support@pro-bel.com who will generate the necessary licence keys. These keys will then be entered into the Licence Manager so that the licences do not time-out.

2.6.4 Installing the Full Licence Code

The purchased MCM Full Licence Codes are installed into the Licence Manager. The generated Installation ID information is required by Pro-Bel so that a corresponding Licence

Key can be generated. The key is entered using the Enter Key button.

Once the Licence Key is entered the software will not time-out.

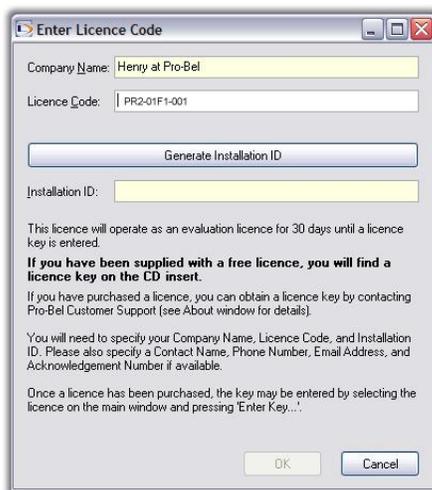
2.6.5 Obtaining the Installation ID from the PC

Open the Licence Manager and press the 'Enter Licence' button, the following window will be shown.

When entering the first licence code, the 'Company Name' text box will be enabled. Enter the company name that you wish MCM to be registered to use the licences. Subsequent licences (Trial or Full) will use the same name.

Note that leading or trailing spaces cannot appear around the company name, licence code, or licence key.

Enter a licence code and press the 'Generate Installation ID' button.



The Licence Code entered in the window should be a Full Licence signified by an 'F' contained within it e.g. PR2-01F1-001

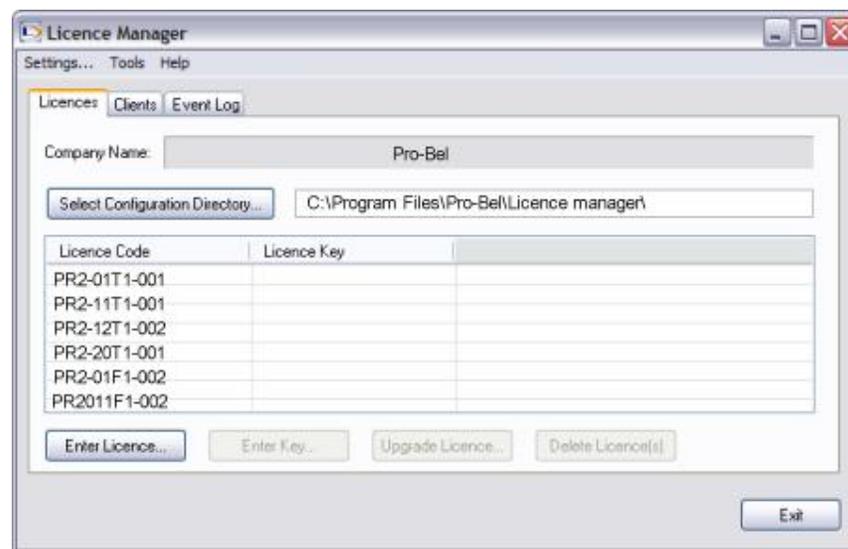
A number will appear in the Installation ID text box. The Licence Code and the associated Installation ID must be provided along with the **exact** company name as entered (including capitalization and spaces) in order to receive a valid licence key.

Email this information as detailed in the Forwarding Licensing Information section of this document

2.6.6 MCM Licence Information

- On start-up the MCM software checks for a Full Licence installed in the Licence Manager. If there is not a Full Licence present, it will use the Trial Licence.
- The Trial Licence and Full Licences can be installed together but the Trial Licences will automatically be deleted after the 30 days trial period.
- When a Full licence is installed, the MCM software will run for 30 days allowing time for the Licence key to be entered. If at the end of this period a Licence Key is not present the MCM Control Station will inform the user and close the environment.
When a Full licence code expires, environments can only be restarted by entering a Full licence code AND licence key into the Licence Manager.
- It is not necessary to enter trial codes if you have purchased the full licence codes.

The Licence Manager screen below shows that the customer has entered the purchased 'F' codes but has not entered a Licence Key for any.



A Licence Key must be entered to stop the software from timing out

2.6.7 Receiving the MCM Non-Timeout Licence Keys

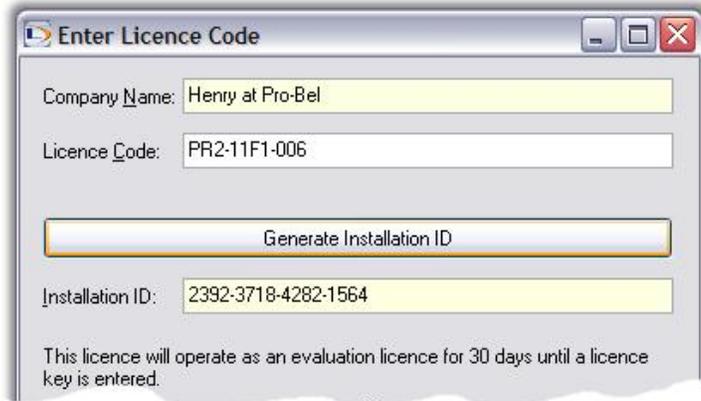
Once the permanent licence code is purchased from Pro-Bel and the Installation ID's have been generated, the required information should be emailed to support@pro-bel.com.

An E-mail will be returned to the user that will contain the required Licence Keys.

Contact information is provided below and can also be obtained in the Licence Manager by selecting Help - About from the menu.

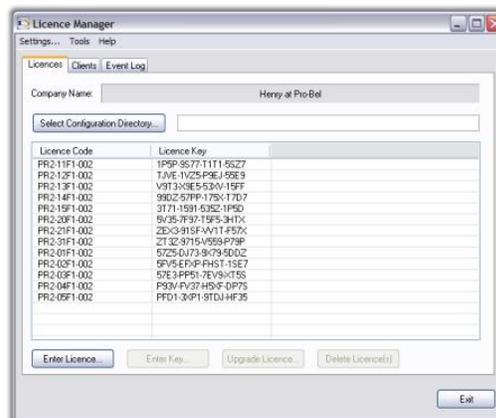


2.6.7.1 Entering the Licence Key



The Licence Key is entered into the Licence Manager by selecting the relevant code in the list and using the Enter Key Button, once this has been completed the MCM functionality for the respective Licence Code will not timeout.

The Licence Manager screen below shows that the customer has successfully entered the required Licence Keys allowing the software to continue to function.



2.6.8 Forwarding the Licensing Information

Information detailed below must be forwarded to the email address support@pro-bel.com. All Licence Codes with the associated Installation ID must be included. Licence codes cannot be processed without a Pro-Bel sales order acknowledgement number. An email will be returned to the provided email address, which will contain the licence keys required.

Sales order ACK:

Company name:

Contact:

Phone:

Email address:

Licence Code:

Installation ID:

Licence Code:

Installation ID:

Licence Code:

Installation ID:

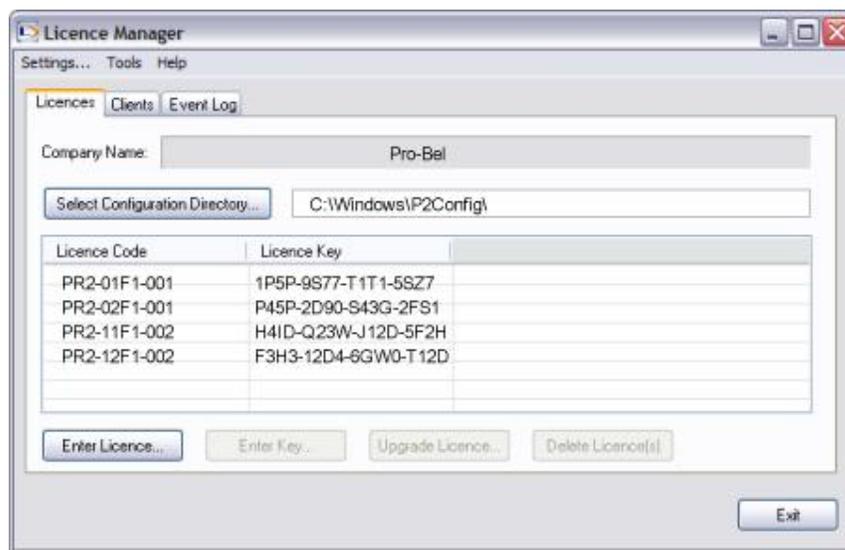
2.6.9 Selecting the configuration directory

The Configuration Directory is a directory that contains configuration files. Server and Client PCs require read/write access to this directory. Any folder may be used for this purpose but a better approach is for the user to add a folder named 'P2Config' into the Windows directory, e.g. 'C:\Windows\P2Config' or 'C:\WINNT\P2Config'.

2.6.10 Licence Manager Configuration Directory

Single Workstation

For a single Workstation the Configuration should be set as \\P2Config\ as shown below

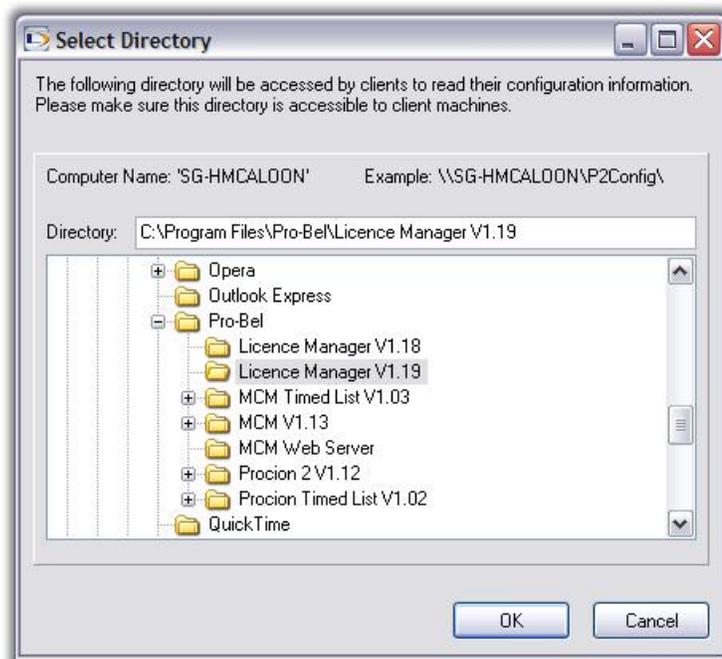


Multi-Client Networks

For a Multi-Client network environment the Configuration should be set as

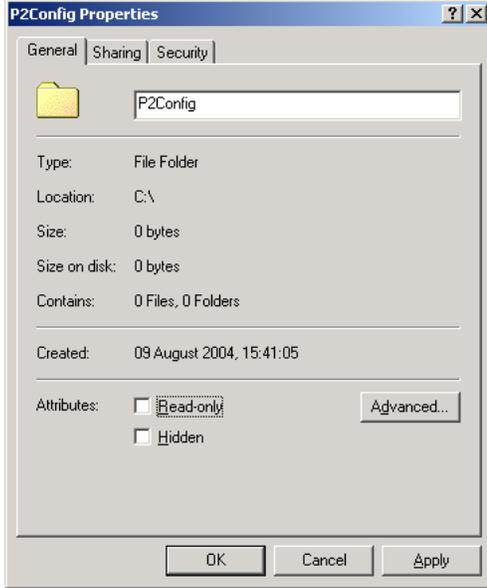
`\\yourPCname\P2Config\`

as shown below:-

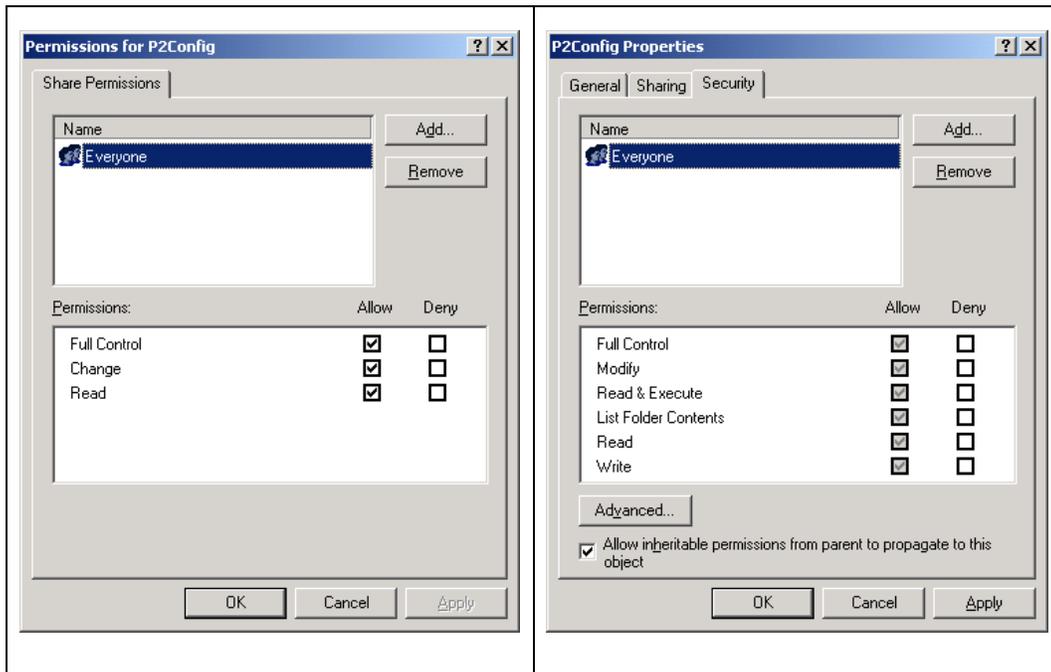


2.6.11 Enabling Read/Write Access for Multi-Client Networks

Select the folder named 'P2Config' (or your specifically selected folder). Select the Properties tab and ensure that the following elements are set so that the folder can be shared over the network with read/write permissions.

<p>P2Config General Tab</p>	<p>P2Config Sharing Tab Select Share this folder radial button</p>
	

<p>Permissions Window Ensure Full Control Selected</p>	<p>P2Config Security Tab Ensure the Read Write are set to Allow</p>
---	--



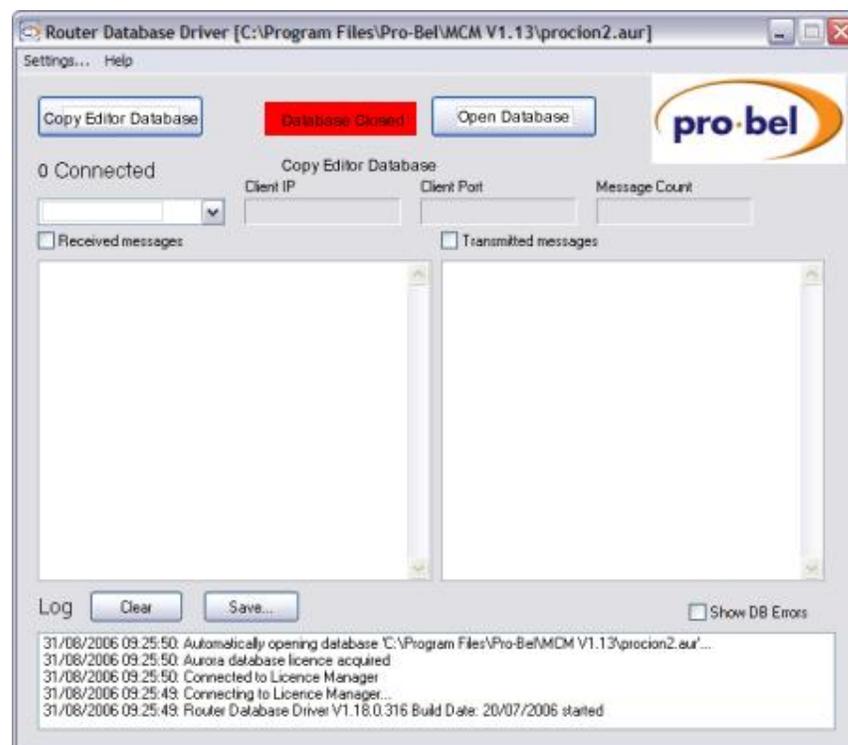
IMPORTANT NOTE:

In many network environments it is not possible to allow Full Control to EVERYONE. Therefore your IT department must be involved in setting the various permissions between the Server and Client PCs.

The application is now ready to accept connections from MCM Control Station Clients.

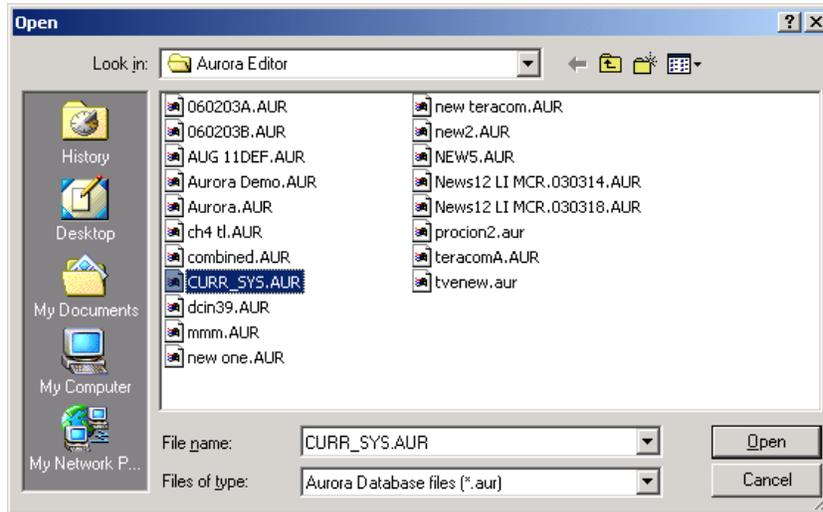
2.7 Configuring the Router Database Driver

On launching the MCM Router Database Driver for the first time, the following will appear:

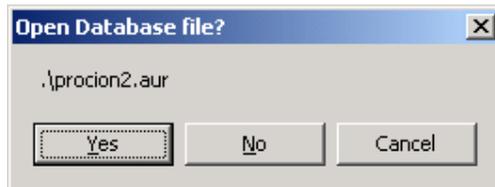


The user must open an Aurora or Nebula database in order that MCM Designers and MCM Control Stations may connect to it, if they are configured to do so. These clients may also use their own 'local' database, although this will not guarantee synchronized data sharing.

If the database editor has been used on the same PC, the user may copy the most recently used on-line database, which will be called 'CURR_SYS.AUR' (or CURR_SYS.NE1 for a Nebula system), in the Program Files\Pro-Bel\Aurora Editor (or \Nebula Editor) directory, as a file called Procion2.aur, as follows:

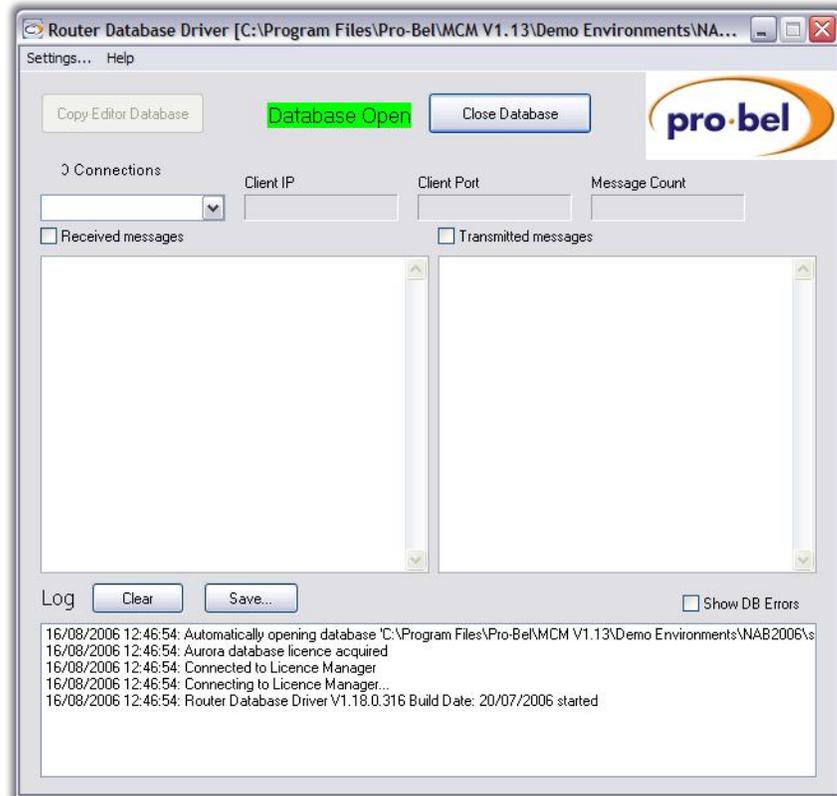


The user can then open this database for use by clicking on 'OPEN DATABASE', as follows:

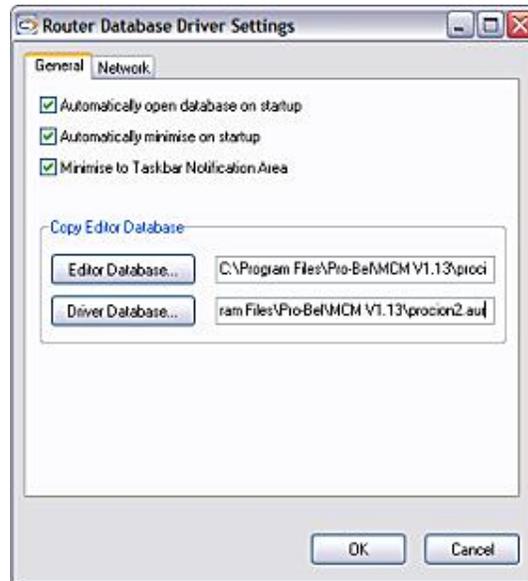


Or alternatively, answer NO, and choose another database.

The Screen will now appear like this, and is available for clients to connect to:



The user must configure the default paths and database names in 'Settings', from the toolbar, as follows:



Select the Editor Database button. Via the window, select the file that is the current database file. Usually this is named CURR-SYS

Select the Driver Database button. Via the window select the file that is going to be used as the Procion Driver database.

Usually, this is : -

for Aurora - Procion2.AUR

for Nebula - Procion2.NE1 or NE2

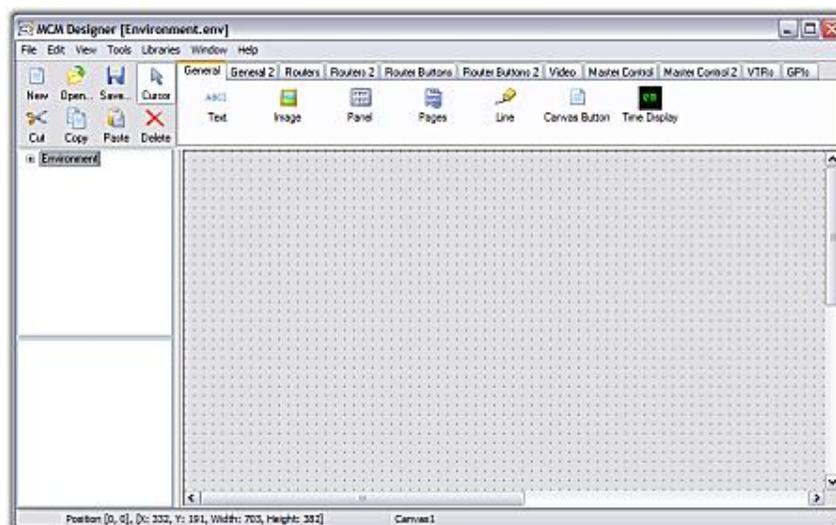
for Freeway or Router Editor -

Procion2.FR1

NOTE: If the relevant Procion2 file is not contained in the folder a copy of the CURR-SYS file can be renamed as Procion2 (extension as above).

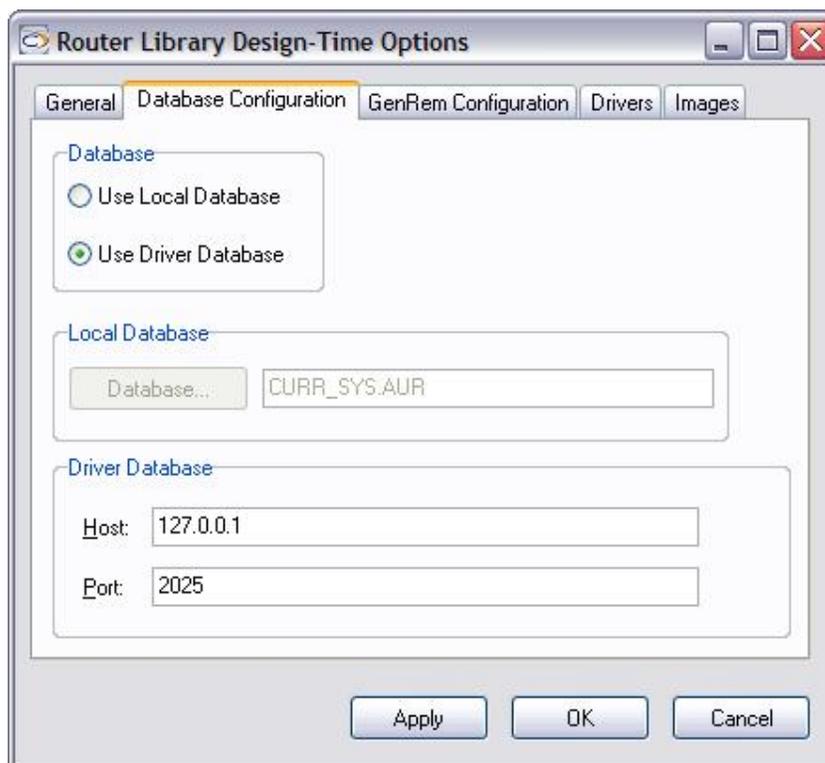
2.8 Configuring MCM Designer

When MCM Designer is first launched, the screen will appear as follows:



2.8.1 Database configuration

The user must now decide which Aurora database to use. The choice is made by selecting 'Libraries\Router Library' from the tool bar. The following will appear:



In normal use the default driver database will be selected.

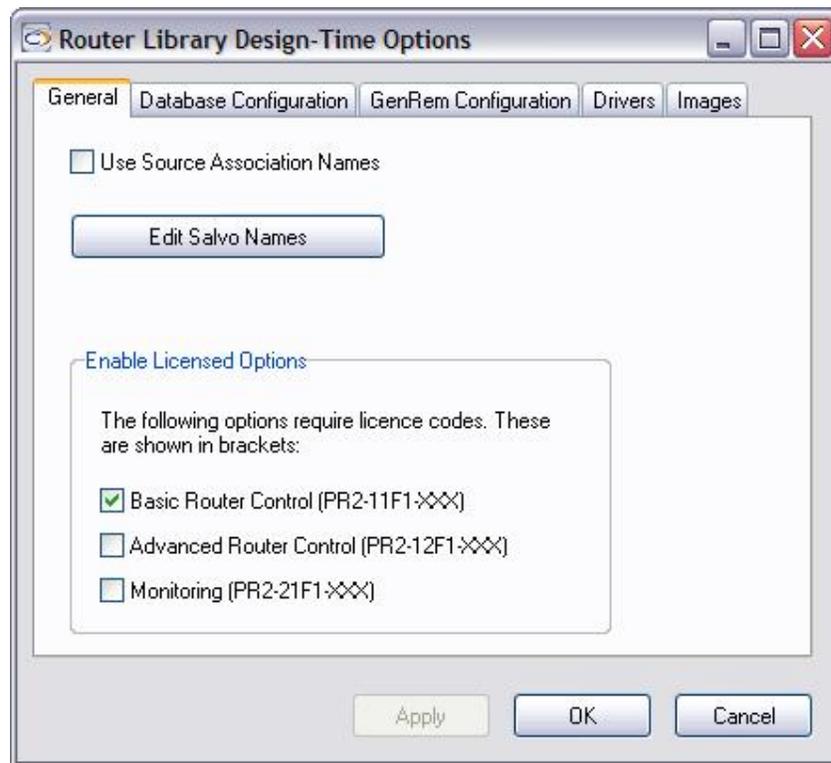
If the Aurora Database Driver is already running, the user may select 'Use Driver Database'. Do not edit the Port address unless there is a conflict. Note that the IP address 127.0.0.1 is the 'loop-back' address for a driver on the same PC.

If the Driver database is located on a different PC the host name will have to be entered (without //) or its IP address, instead of the default 127.0.0.1

If the user chooses Local Database, they must specify a location and file name for such a database.

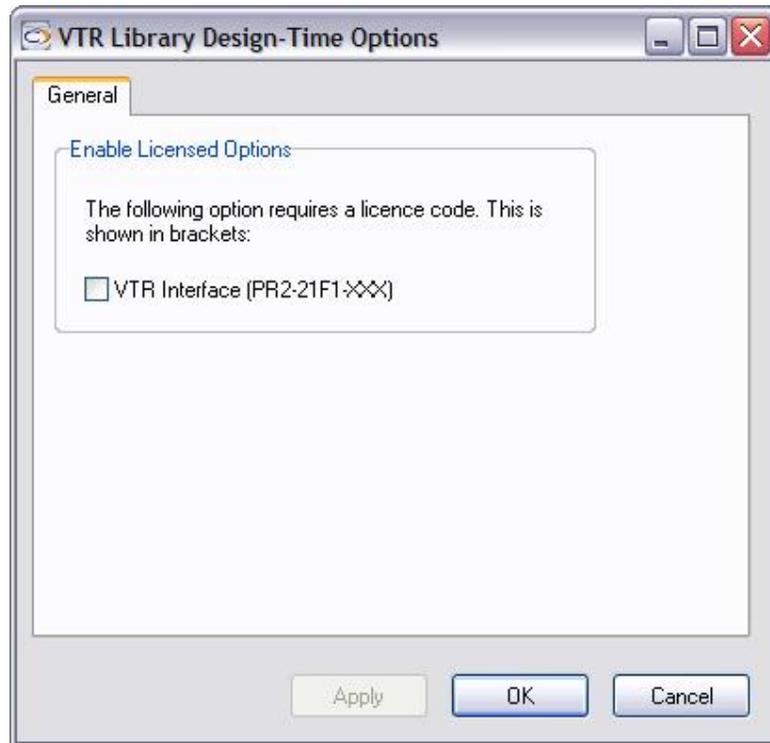
2.8.2 Configuring advanced options

If the user has configured Licences to use the Advanced Router Control functions, they must enable this function in Designer in order to make the features available. This is done in Libraries\Router Library\General, as follows:



Note that the Monitoring feature is not yet available. It is also noted that even if advanced features are designed into a panel, they will not function without the appropriate licence.

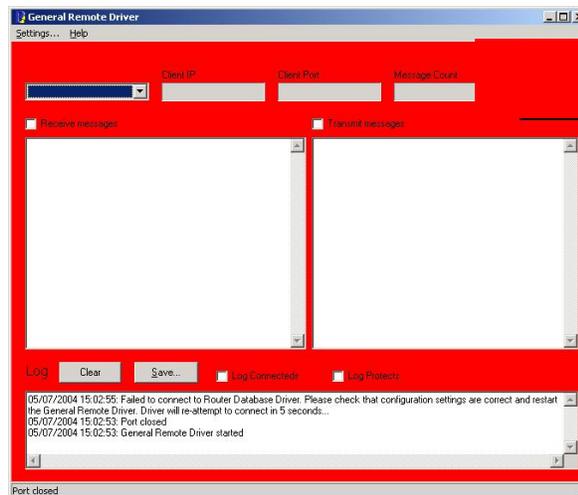
Additionally, if the user requires the VTR Interface design tools activating, this must be enabled in Libraries\VTR Library, as follows:



MCM Designer is now ready to use, refer to Chapter 3 for further instruction.

2.9 Configuring the General Remote Driver

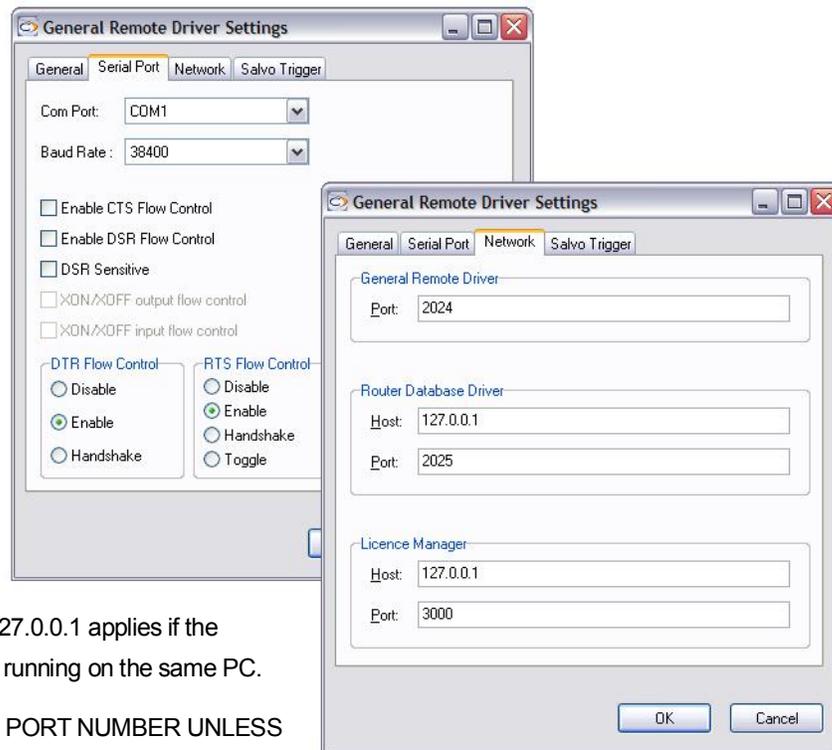
In order to run the General Remote Driver, the Licence Manager and the Router Database Driver must also be running, usually on the same PC. In addition, a connection must exist to the General Remote port on the Aurora controller. If the first two of these conditions are not satisfied, the screen will appear as follows:



The red screen colouring indicates that no Licence Manager has been located, and the log message 'failed to connect to router database driver', indicates that no Router Database driver was found. If both these conditions were satisfied, but no Aurora controller was found, the message 'No response from controller' would appear in the log.

It can be noted that it is not essential for the Aurora Database driver to be running for the General Remote driver to function, although the user will find that the system will be slower to read router tallies.

If the Licence Manager or Router Database Driver are not on the same PC, or if the PC COM port 1 is not being used to communicate with the Aurora controller, then the General Remote configuration will require changing. This configuration is configured in the Settings dialogue from the toolbar:



Note that address 127.0.0.1 applies if the Licence Manager is running on the same PC.

DO NOT EDIT THE PORT NUMBER UNLESS THERE IS A CONFLICT. SEE YOUR IT MANAGER FOR ASSISTANCE

If the General Remote Driver is located on a different PC, the host name will have to be entered (without //) or its IP address, instead of the default 127.0.0.1

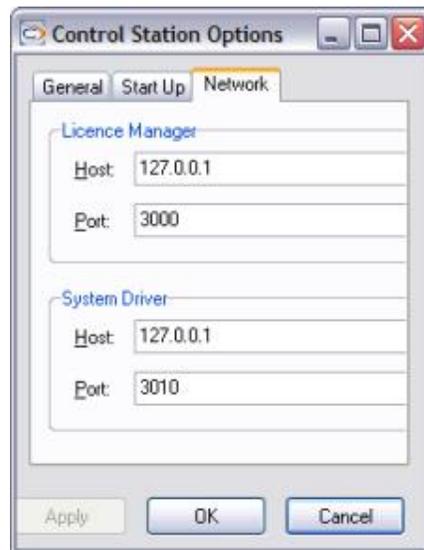
The General Remote Driver settings shown here are the default for the Licence Manager and Database Driver on the same PC, and COM port 1 connected to Aurora or Nebula.

2.10 Configuring the MCM Control Station (Single Workstation)

After the user has designed some control panels and saved them into an 'environment' file, they can be run on the MCM Control Station, either using a real system, or in test mode. The user should refer to Chapter 3 for instructions on designing control panels in MCM Designer.

2.10.1 Licence Manager and System Driver connection

With the Control Station and Licence Manager running on the same PC the default Host address should not be changed from 127.0.0.1. If there is a conflict see your IT manager for assistance. The Host address can be observed by selecting Tools, Options and the Network tab.

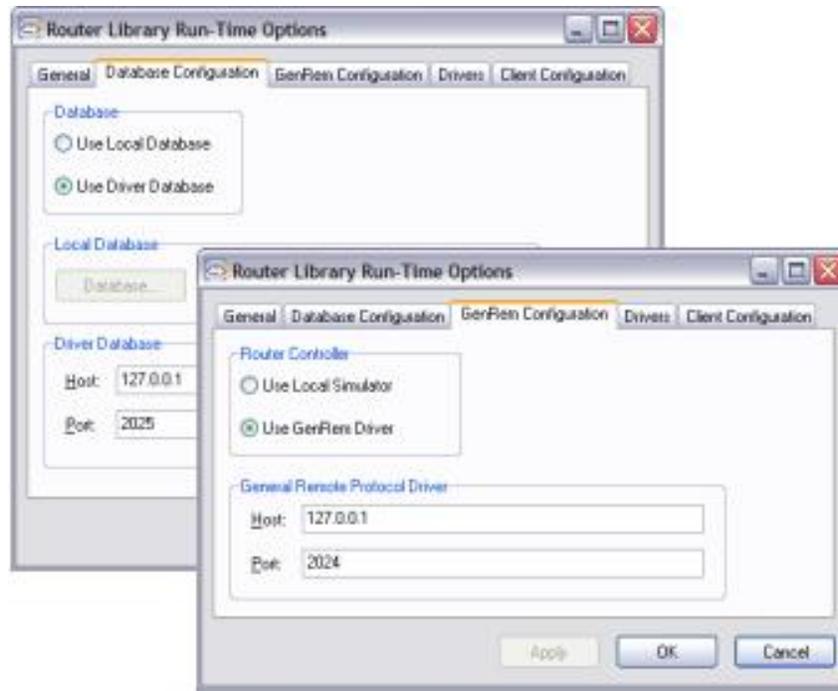


Note that address 127.0.0.1 applies if the Licence Manager is running on the same PC.

DO NOT EDIT THE PORT NUMBER UNLESS THERE IS A CONFLICT. SEE YOUR IT MANAGER FOR ASSISTANCE

2.10.2 Database and General Remote connections

On start up the Driver Database and Gen-Rem Driver are selected by default. These settings are shown by selecting Libraries\Router library\Database Configuration tab or Gen Rem Configuration tab.



Note that address 127.0.0.1 applies as the Licence Manager is running on the same PC.

DO NOT EDIT THE PORT NUMBER UNLESS THERE IS A CONFLICT. SEE YOUR IT MANAGER FOR ASSISTANCE

ROUTER CONTROLLER

Note that address 127.0.0.1 applies as the Licence Manager is running on the same PC.

DO NOT EDIT THE PORT NUMBER UNLESS THERE IS A CONFLICT. SEE YOUR IT MANAGER FOR ASSISTANCE

Note that 'Host' refers to the IP address of the PC running the drivers, and the address 127.0.0.1 applies if the drivers are running on the same PC as the MCM Control Station. Do not edit the Port number unless there is a conflict. The local database should be selected if this differs from the Driver Database i.e. if the user requires different source/destination names to be used.

2.10.3 Configuring the Client PC to run MCM Control Station Multi-client Networks

After the successful installation of the MCM software onto the Server PC the Control Station software can be installed onto the PCs being used as Clients. When the Control Station is opened it links to the Licence Manager, System Driver, Router Database Driver, and General Remote Driver. These programs reside on the Server PC so the Host names within the Control Station must be changed to reflect this.

NOTE: Before changing the Host Names it is important to check that:

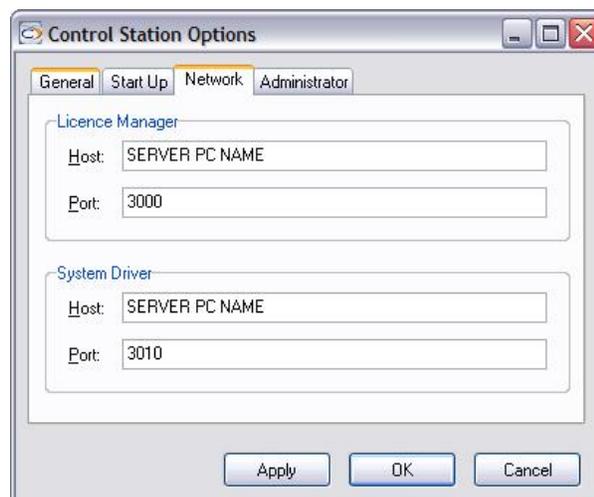
- The Licence Manager shows the correct Networking Configuration Directory e.g. \\yourPCname\P2Config\ --- See the Multi-Clients Networks information within the Licence Manager Section.
- The P2Config folder is shared and has the correct read AND write permissions.
- The directory containing Procion2 environment and canvas files is shared and has the correct read AND write permissions.

2.10.4 Configuring the Control Station

Run the Control Station software at the Client PC, and Login as Administrator.

Select Tools, Options and the Network Tab.

Replace the Host name for both the Licence Manager and System Driver with the name of the SERVER PC or its IP address.

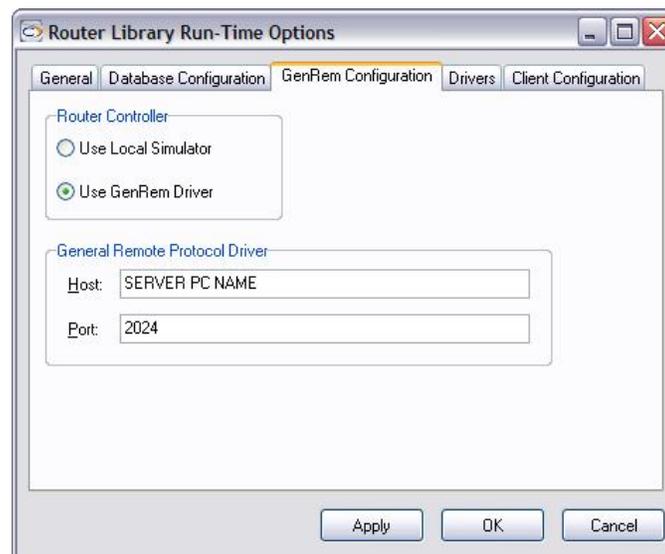
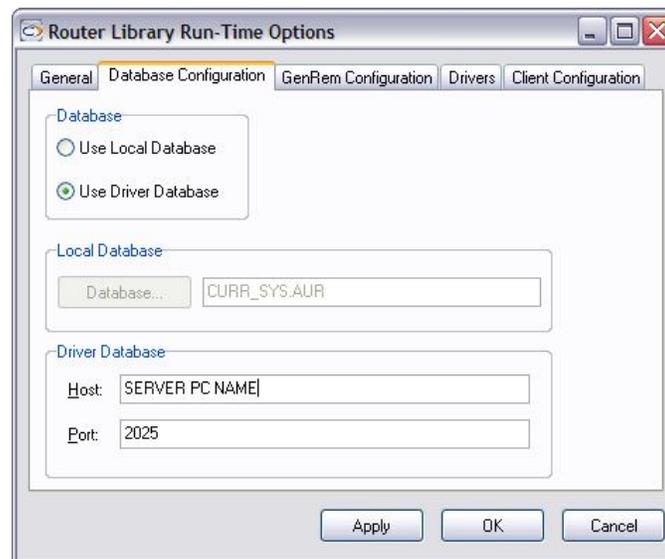


NOTE: The \\ MUST NOT BE USED when entering the Host name.

The same Host name should be applied to both the Database AND GenRem Configuration using the relevant tabs.

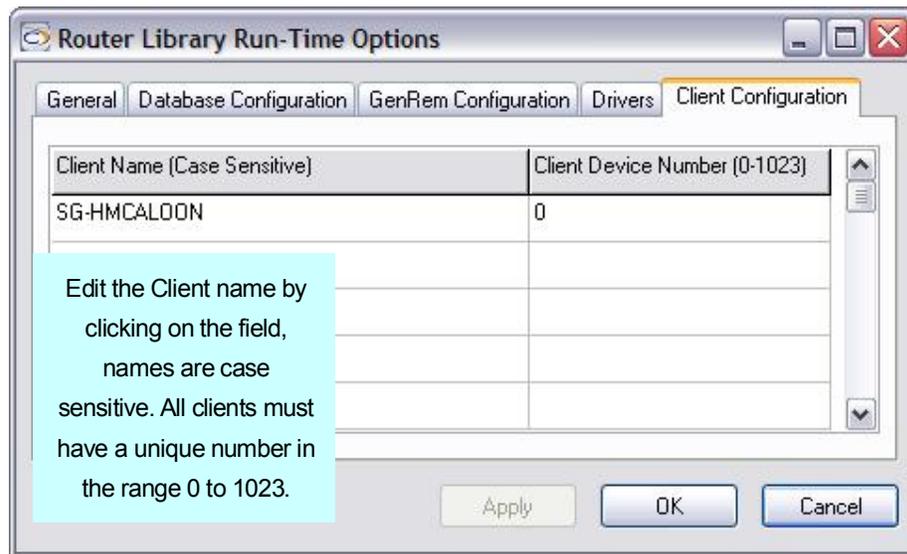
To do this, select Libraries, Router Library.

NOTE: The \\ MUST NOT BE USED when entering the Host name.



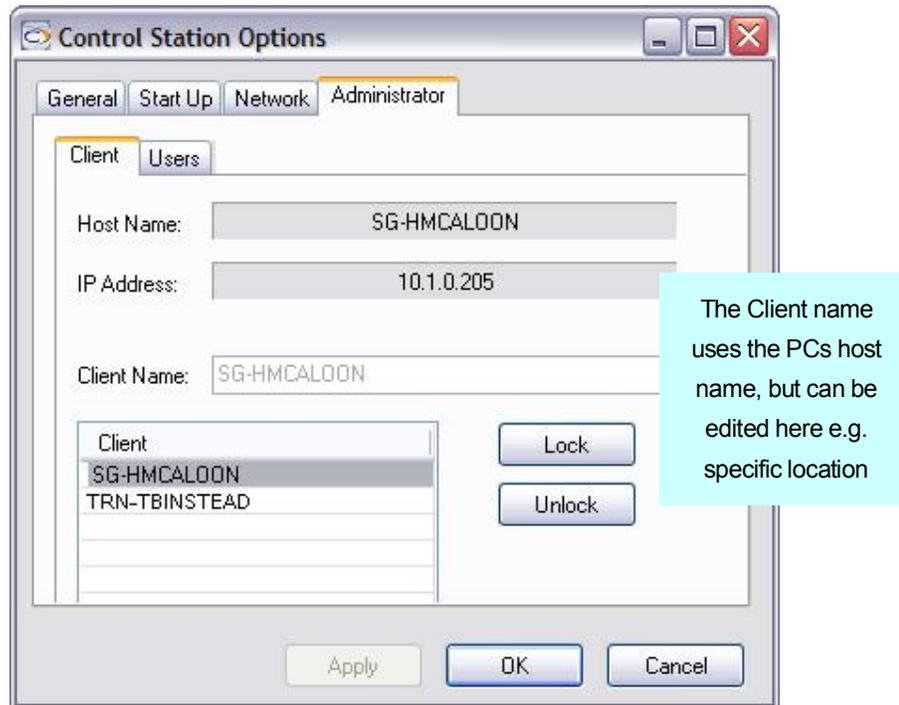
2.10.5 Naming Clients (Single Workstation)

After the user has successfully logged-on as Administrator, the 'Clients' must be configured. Select 'Libraries\Router Library' from the toolbar, and configure all required Clients as follows:



By default, the Client Name is the host name of the PC running each Control Station application. This can be found in the Control Station under Tools\Options\Administrator, where the client name can also be edited. It is this name that will be used to identify the owner of a protected route in a fully functioning system.

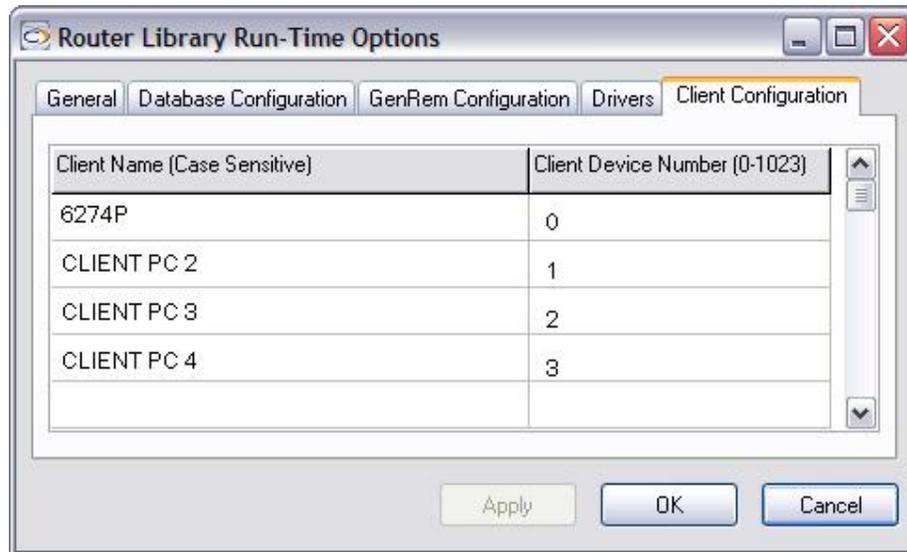
The Client Device Number identifies a client and is used to display its unique name when required e.g. to display which client is protecting a destination.



2.10.6 Configuring Clients – Multi-Client Networks

After the user has successfully configured the MCM Control Station for Multi-clients, the new Client Name must be configured.

Within MCM Control, Select 'Libraries\Router Library' from the toolbar and configure all the required Clients.

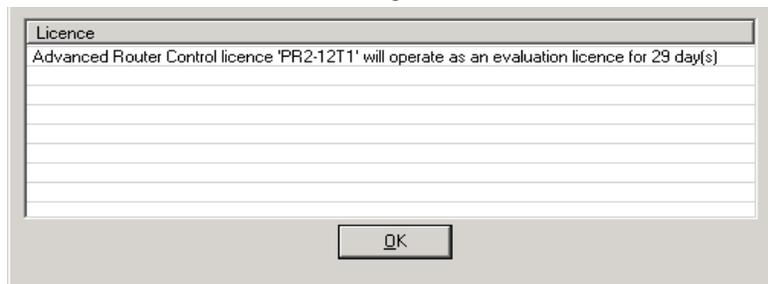


Each Client should be added to the list and given a unique Client Device Number.

2.10.7 Opening an environment

Finally, the user may open an environment in the configured directory by selecting 'File\Open Environment' from the toolbar. If everything is configured correctly, no error messages will be given.

2.10.8 Trial licence warnings



When an environment is launched that contains features not supported by a full licence the screen shown above will appear.

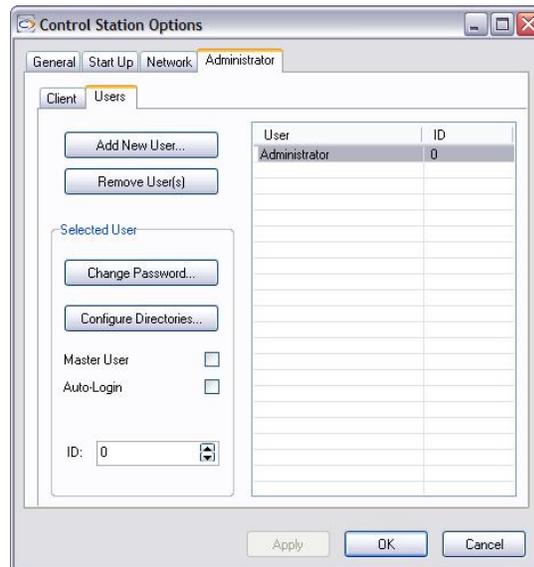
2.11 Logging in to Add and Configure each User

For the Control Station the default login name is 'Administrator' with no password, either from the server PC or client PC.



If required multiple users can be set up to use differing Procion2 environments that access the same database. New users can only be configured by the Administrator.

The Administrator password can be changed by selecting Tools, Options and Administrator tab. The Change Password button is enabled by selecting Administrator



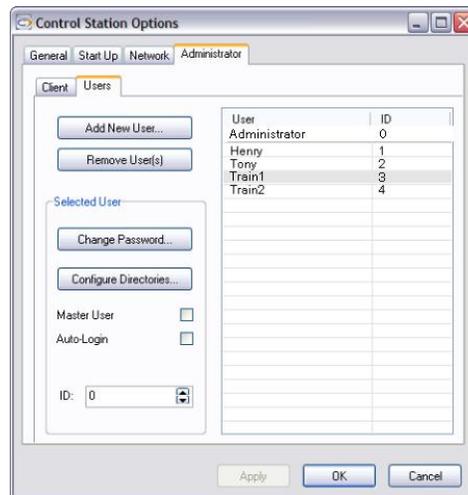
2.11.1 Adding a New User

Select Add New User to display the screen below.

Add User and Password for each user



2.11.2 User Access to the Environments



Select the required user from the list as shown:

Note: When adding a User it is advisable to add a Unique ID by using the ID: up/down arrows.

The ID identifies a user and is used to display their unique name when required.

e.g when displaying users who have set Source Protections

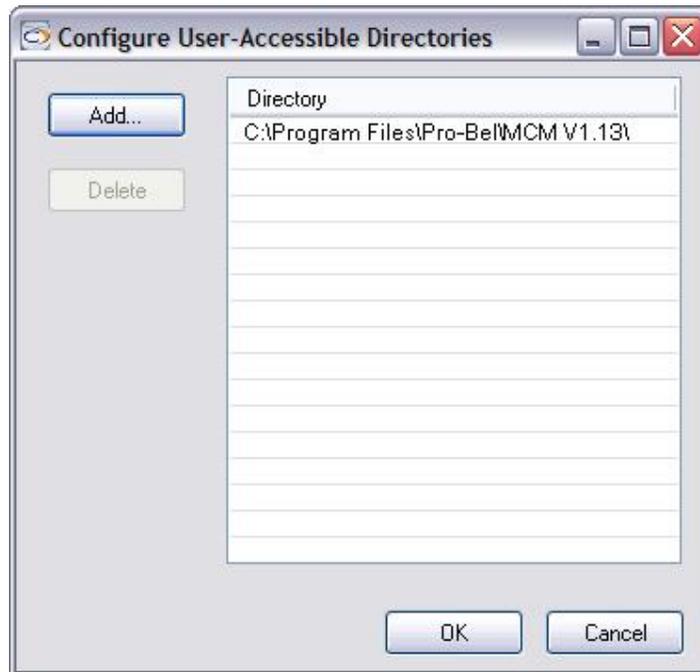
2.11.3 Setting Environment Paths

Click on the Configure Directories... and browse for the location of the environment file created in MCM Designer, these have the extension of .env and are usually located in

C:\Program Files\Pro-Bel\MCM Vn.n

Note: For a multi-Client network the Environment path should be set as

[\\yourSERVERName\sharedfolder](#)



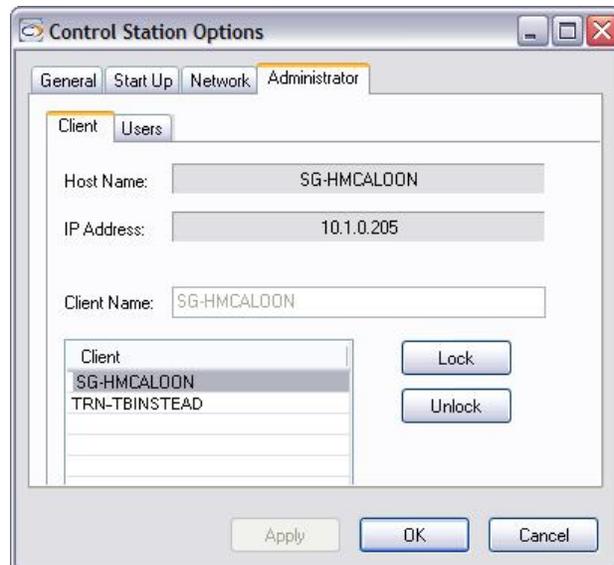
Select OK to see Directory Path listed. If the user requires access to other environments located within other directories select ADD and repeat the operation.

Select OK to return to the Administrator tab.

2.11.4 Locking Clients

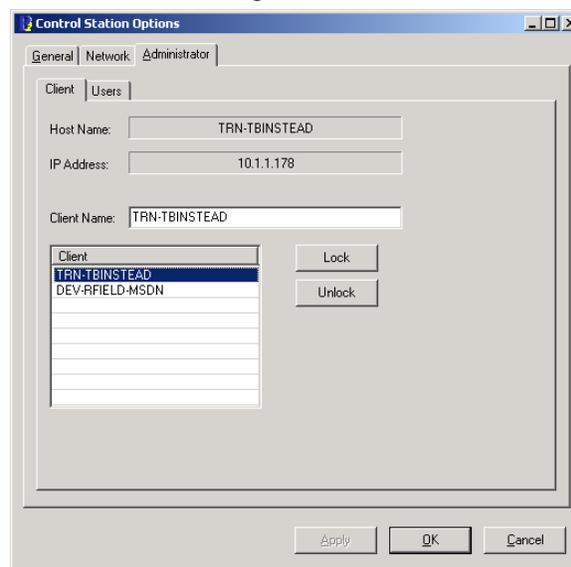
Both users and administrators have the ability to 'lock Procion2 canvas' from other users by placing a lock button onto the canvas.

When logged on as Administrator, another way to achieve this without changing the canvas is to use the lock feature by selecting the Client tab.



To lock a Clients environment, select them from the list and click on Lock

2.11.5 Unlocking Clients



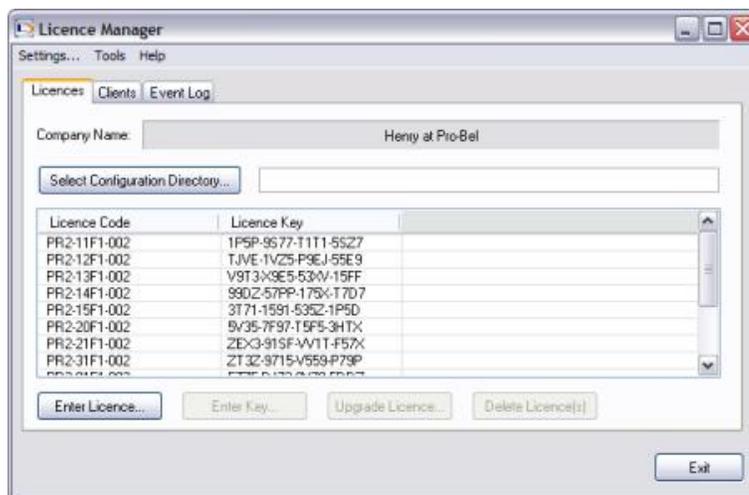
To unlock a Clients environment, select them from the list and click on Unlock

Only the administrator has the ability to unlock clients from the Control Station Options window. If the logged on user is an administrator they are able to unlock an environment used by any other client, including other administrators.

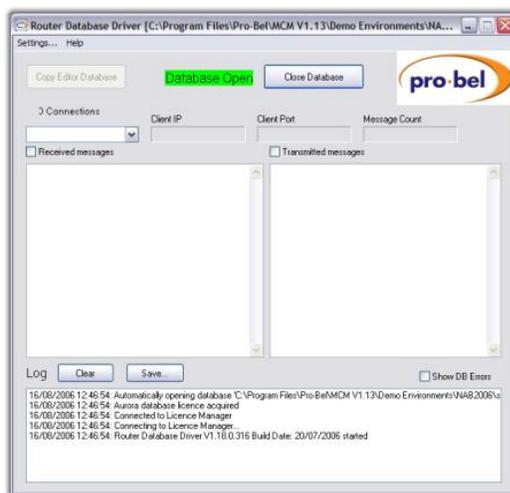
2.12 Testing the configuration

When all components have been configured, the user can test the installation by launching the applications in a specific order, and observing their interaction, as follows:

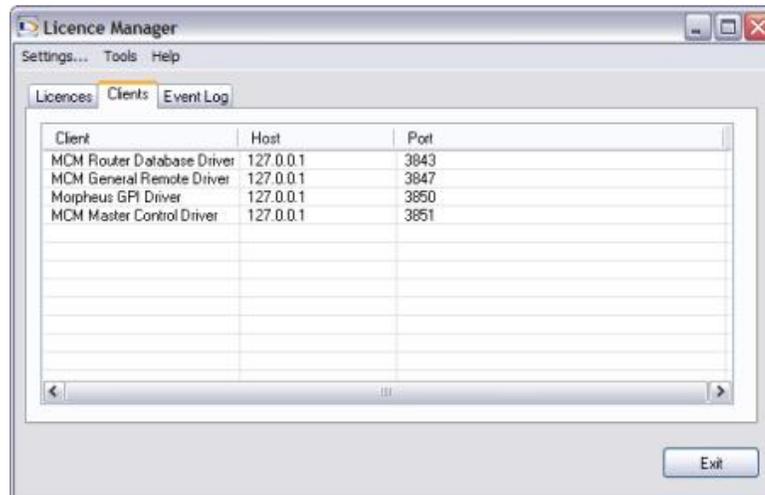
- Launch the Licence Manager, the screen will appear as follows:
-



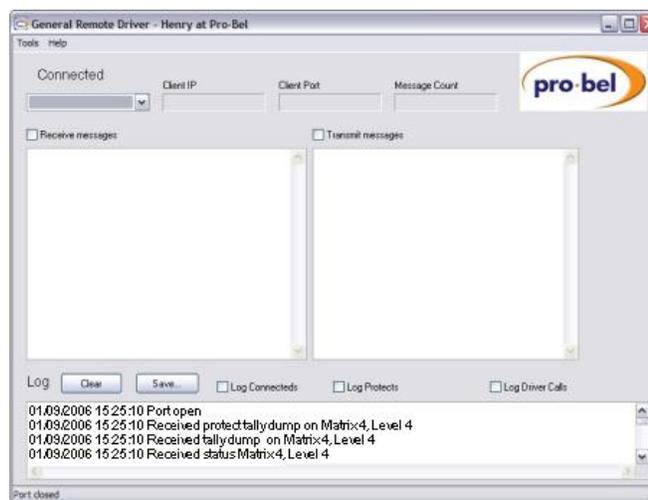
- Launch the Router Database Driver and open the required database (if not configured to open automatically), the screen will appear as follows:
-



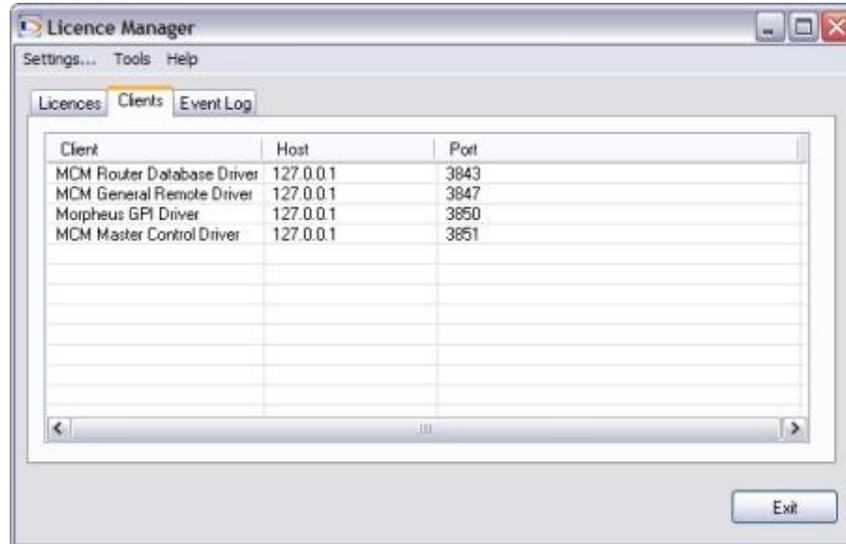
- Launch the General Remote Driver, which will register with the Router Database Driver and the Licence Manager, whose client screen will appear as follows:



- If the General Remote Driver also successfully connects to the Aurora controller it's screen will appear similar to this:



- Finally, launch a MCM Control Station, each one will register with the Licence Manager, whose client page will appear as follows:



2.13 MCM Source Assignment Panel



2.13.1 What is a Source Assign Panel?

A Source Assign Panel (SAP) is used to program an Aurora router controller with the source allocations required by a Pro-Bel TX Master Control mixer. It is an essential piece of equipment in any Aurora router control system that includes a TX220, TX300, TX400 or TX500 series mixer. A Master Control mixer cannot preview, or put a source on air unless that source is assigned to one of its channels. A mixer may have any of its channels assigned to any video and audio source located on any router under control of the host Aurora system. On some mixers these may be assigned at the installation stage and never changed, however, on many systems operators may wish to change the channel allocations on a regular basis in order to suit operational requirements.

The TX220, TX320, TX420 and TX520 mixers all have 20 channels on their Preset (PST) and Programme (PGM) busses, and 24 channels on the two Auxiliary (AUX1 and AUX2) busses. Channels 1 to 20 have the same video and audio assignments available across all 4 busses, and channels 21 to 24 are available only to the Auxiliary busses. The TX310, TX410 and TX510 mixers have only 12 channels on the PST and PGM busses, and 16 on

the single Auxiliary buss. If any of these mixers are connected to an Aurora controller, all the sources must be assigned using a Source Assign Panel.

Once assigned, the data is held in non-volatile (battery-backed memory) in the Aurora controller, and in a dual-controller system both controllers hold it. Consequently, this essential data is retained during system resets, controller changeover and the downloading of databases.

Although this manual is written to cover the MCM product range, it would be useful to review previous SAP solutions: The SAP hardware panel and the Soft SAP.

A hardware version of the Source Assign Panel has always been available, which is actually a 6277-2 type routing panel, with a special version of firmware installed. However, with the proliferation of PC hardware, it became desirable and convenient to provide a 'soft' version of the same panel.

The Soft SAP uses the Babelfish as a protocol translator to interface the LAN on which the PC is connected, to the Multi-drop device port on an Aurora router controller.

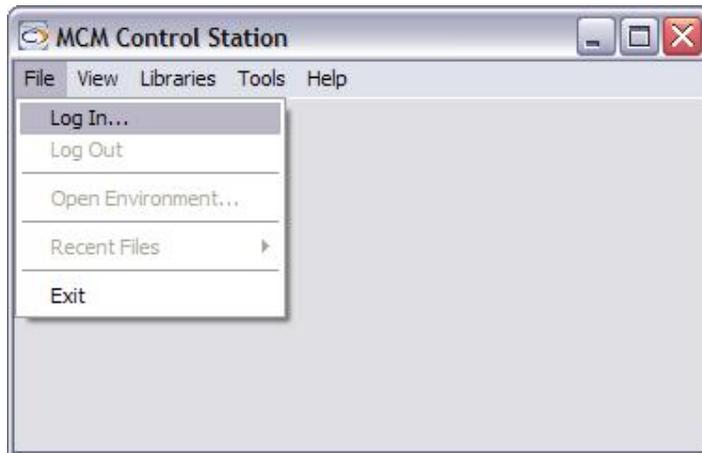
2.13.2 The Soft SAP

The TX Soft Source Assign Panel is a piece of PC software designed to perform the same task as its existing hardware equivalent. Either panel is essential in any Pro-Bel Aurora router control system that includes a TX series Master Control mixer. The Soft SAP runs on a Windows 9X, NT, 2000 or XP operating system, and the user interface (GUI) is a direct representation of the hardware panel it replaces. A user can therefore easily adapt to the soft SAP if they have previously used the hardware panel.

2.13.3 MCM Source Assignment Panel

The MCM Source Assignment panel is MCM's elegant solution to source assignment. The panel is accessed through the MCM Control Station.

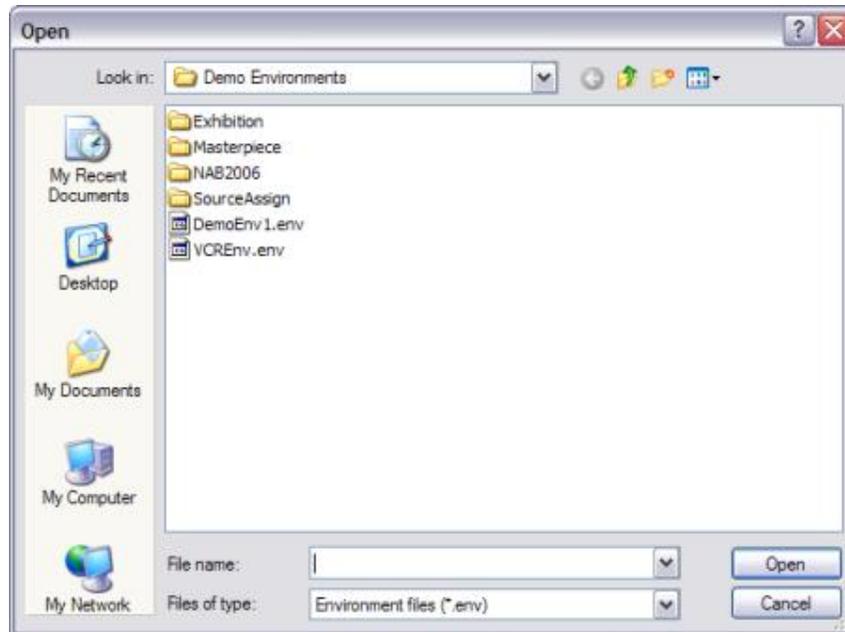
Click on "File", and from the pull-down, select Log In.



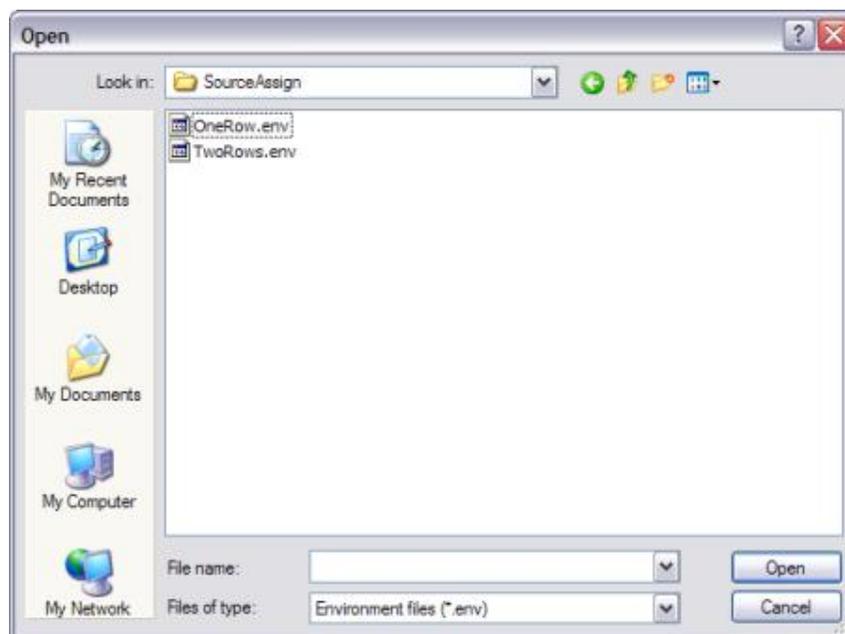
The "Log In" screen will appear. If the system is password protected, enter your password, if not click "OK" to continue.



From the File menu select "Open Environment".



Open the SourceAssign directory.



Select OneRow.env environment.

File

- Log In
- Log Out
- Open Environment
- Recent Filter
- Exit

View

- Full Screen
- Event Log

Libraries

- Register
- Unregister
- Information — Library Information
- Router Library
 - General
 - Edit Source Protect
 - Configure safe Source
 - Edit Salvos
 - Video Capture
 - Use Source Association Names
 - Auto Route Source protect Safe Sources
 - Source Protect Owner Take Only
 - Log Driver Functions
 - Database Configuration
 - Database
 - Use Local Simulator
 - Use Gen Rem Driver
 - Local Database
 - Driver Database
 - Host Port
 - Port
 - GenRem Config
 - Driver
 - Client Config
- Master Control Library
 - Driver Config
 - TX502
- VTR Library
 - General
 - Com Port
 - Timecode Source
 - Ctl
 - LTC
 - VITC
- GPI Library
 - Use Driver
 - GPI Driver
 - Host Post

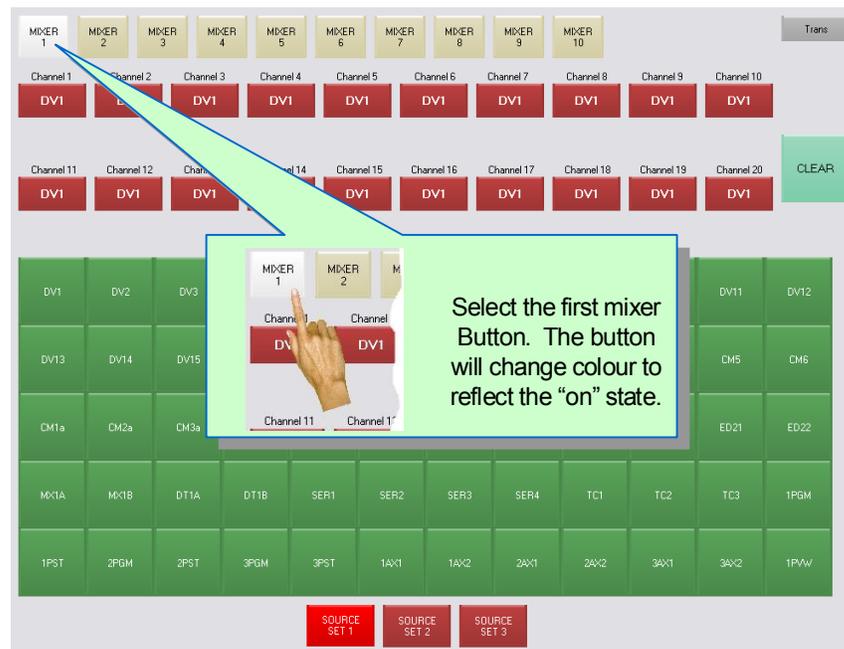
Tools

- Options
 - General
 - Report missing files to Event Log
 - Cache button images
 - Credit Gauge Always Hidden
 - Credit Gauge Always Visible
 - Unattended Operation
 - Search Path(s)
 - Edit path
 - Add path
 - Start Up
 - Run full screen at start up
 - Start up environment
 - Auto re-open last opened on start up
 - Use start up environment specified below
 - Browse for start up environment
 - Network
 - Licence manager
 - Host Port
 - System Driver
 - Host Port
 - Admin
 - Client
 - Lock
 - Unlock
 - Users
 - Add new user
 - Remove user
 - Change password
 - Configure directories
 - Master user
 - Auto log in

The full menu structure is shown above.



When the screen opens initially the channel buttons (ch1 to ch20) will show a row of 4 dots.

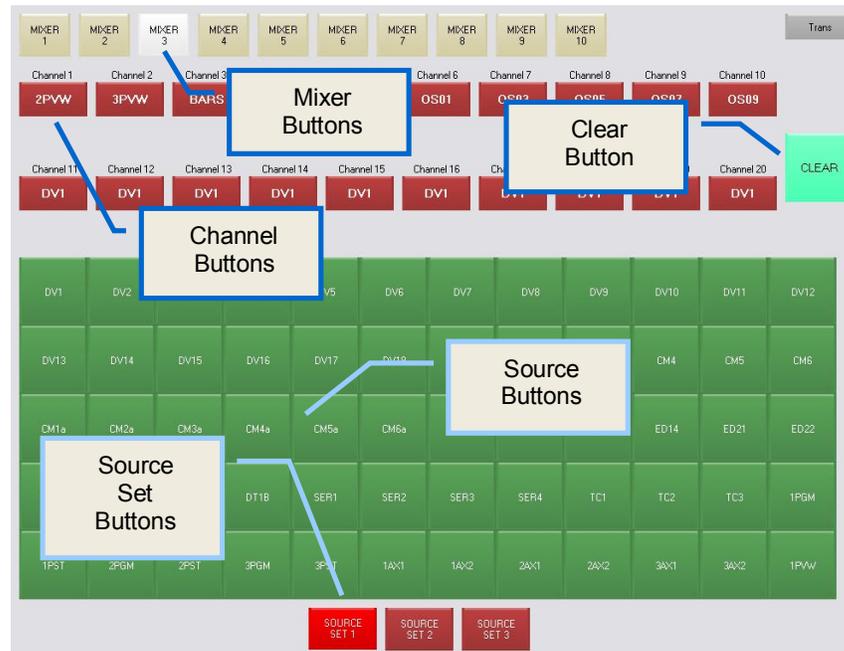




In this example the sources are divided into three source sets, which may be selected using the three Source Set buttons at the bottom of the screen. To assign a source to one of the twenty channels: -

- Select a source from one of the source sets
- Click on the source button it should “light-up” in its on state.
- Click on the Channel button to assign the selected source to that channel.
- Repeat this procedure until the assignment is complete.

Pressing the “Clear” button, followed by the channel button, will clear a channel. The channel may then be assigned to another source or left clear. It is not necessary to clear a channel before assigning a new source. The process of assigning a channel will overwrite any previous allocation.



2.14 Security

The system Administrator has the important role of creating Control Station users and passwords, as well as selecting the location of environment files they are allowed to access. Therefore the Administrator is responsible for system security, and must protect their authority accordingly. However, this does not provide total security against 'browsing' access to files for the normal Windows user, and therefore the Administrator should consider using the built-in Windows security to limit user access to valuable environment and canvas files.

3 Using the Designer

MCM Designer is used to create the router control panel environment that will then be run on the MCM Control Station. This Chapter describes the functions and features of the Designer application both for the basic and advanced router control functions. The user will only be able to use the advanced features if the appropriate licence has been purchased.

3.1 Definition of basic terms

3.1.1 Environment

This is the name given to the file that contains a collection of router control panels, arranged on one or more 'canvases'. A MCM Control Station can run only one Environment file, which will be named by the user, in the form 'user.env', and stored by default in the location C:\Program Files\Pro-Bel-Procion2 Vn.nn on the host PC. The MCM Designer user must create an environment file with a unique client name before any panels can be designed.

3.1.2 Client

Every PC that runs a Control Station must have a unique client name, which by default is the same as the PC's host name, although this can be edited in the Control Station. Each Client must also have a unique number, in the range 0 to 1023, also configured in the Control Station by the administrator. The Licence Manager will only allow a pre-defined maximum number of clients to run at any time, determined by the licence number purchased with the product. Client names are used by the Administrator to identify and lock, if required, any client environment, they are also used to identify the owners of protected routes.

3.1.3 Administrators, Users and Master Users

The administrator exists to configure the system and other users. Once created, a user can login on any Client (a PC running a Control Station), but their passwords and file accessibility is controlled by the administrator through the Control Station. The administrator can also define a user as a Master, which allows that user to access the Source Protect utility. Only the administrator can remotely lock and unlock client environments via the Control Station.

3.1.4 Canvas

A 'canvas' is a single screen that will be displayed in the Control Station and will be a logical collection of router control functions. A canvas can contain many control panels, tallies, images and graphics and must be saved independently of the environment in a user named 'user.can' file. An environment can contain several canvases, and a canvas can exist in more than one environment. Multiple canvases in the same environment are switched between using 'canvas buttons'.

3.1.5 Panel

A surface, with a user specified colour, onto which keypads, buttons, tallies and graphics may be layered. A canvas may contain multiple panels, and panels may be pasted into more than one canvas.

3.1.6 Source and Destination keypads

A group of buttons with assigned captions or images, allocated to specific Source or Destination associations by the designer. Source and Destination keypads must be members of an 'XY Group' or 'BPX Group', which then determines which keypads are operationally linked. See Sections 3.1.9 and 3.1.10 for the difference between these groups.

3.1.7 Source and Destination buttons

As above but allocated to only one source or destination each. Must also be a member of a group.

3.1.8 Canvas buttons

This is the button that allows the operator to switch between different pages in the same environment.

3.1.9 XY Group

A collection of Source and Destination, keypads and buttons, which are operationally linked. This means that sources can be routed to destinations only if they are in the same group. Further, when a source button is clicked on, it is only 'pre-selected' to the currently active destination, and the route will not be made until a 'take' button is pressed. If the user wishes a route to be made immediately a source is selected, they must use a 'BPX Group'.

3.1.10 BPX Group

A collection of Source keypads and buttons all operationally linked to a single Destination allocated to the group, or a group of destinations allocated to a destination keypad in the same group. The difference between a BPX Group and an XY Group is that no take button

is required in a BPX group.

3.1.11 Text and Image Tallies

A tally is 'feedback' from the router under control, and therefore indicates it's current status. Text tallies are associated with a destination, and will indicate, using a name from the database, which source is currently routed on a specified level. An image file may be allocated to specific sources, which will then indicate destination status using a graphic instead of a name. Tallies must be part of the group containing the associated destinations in order to function.

3.1.12 Married tally

Indicates if a specified route, or the currently active route, is married or not. See Section 1.2.6 for a definition of married and unmarried routes. Married tallies must be part of the group containing the associated destinations in order to function.

3.1.13 Protect Tallies and Buttons

A protect tally indicates the protect status of a specified (or the currently selected) destination, that is, if the route is locked, and by whom. A protect button allows the user to lock and unlock specified routes; only routes locked by that user may be unlocked. Protect Tallies and Buttons must be part of the group containing the associated destinations in order to function.

3.1.14 Take button

A take button must be assigned to an XY Group, since routes will only be 'pre-selected' until the take button is pressed.

3.1.15 Level buttons

Level buttons may be assigned to one or more levels on a specified matrix. This then allows routes to be 'broken away' from their normal married associations, by de-activating levels prior to using the take button. They also allow the status of routes to be interrogated by viewing the destination tally response as different levels are activated. Level Buttons must be part of the group containing the associated destinations in order to function.

3.1.16 Preselect tally

A Preselect Tally display is assigned to a specific level for which it will then display the name of the source currently preselected to that level. This is used with XY panels, with a Take button, to show what will be routed to respective levels if the take button were to be pressed. May be used in combination with "Use Levels" buttons to allow preselections to be made by clicking directly on the Preselect Tally display.

3.1.17 Use levels

This button is used in conjunction with Level Preselect displays in order to allow operators to quickly preselect sources to different levels before using the Take button. When the Use Levels button is active the operator uses the level buttons in the normal way, de-selecting the levels which will remain unaffected by a Take. When the Use Levels button is inactive, the user may preselect sources by clicking on the Preselect Tally displays after clicking on the desired source button, in this way an unmarried source preselection may be easily configured prior to a Take operation.

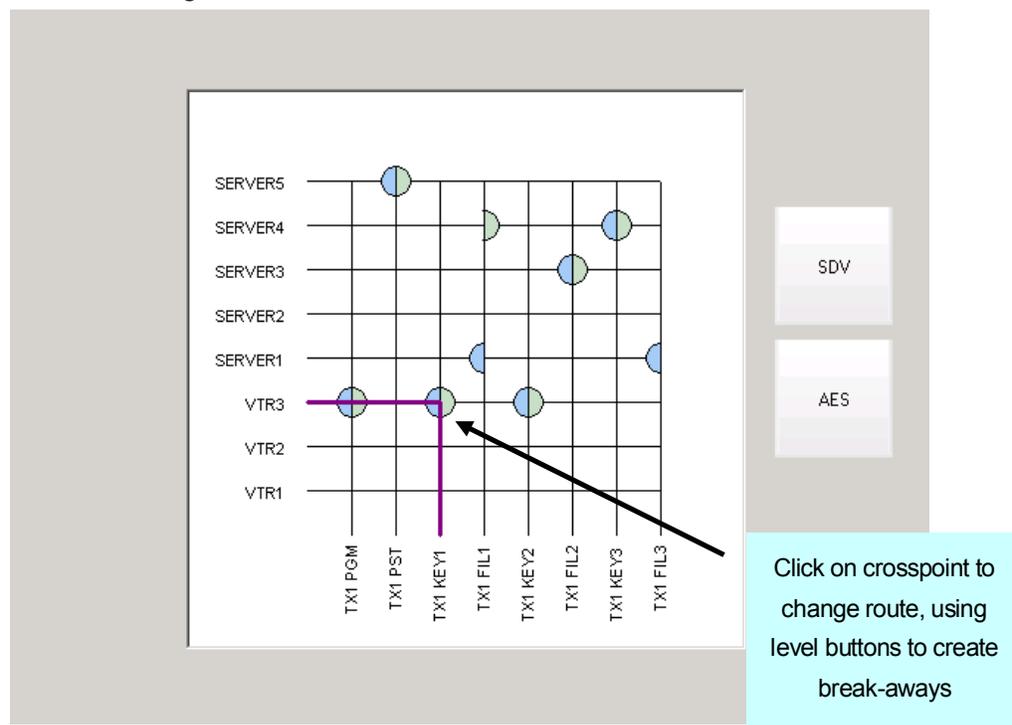
3.1.18 Status

This display may be added to a BPX or XY panel group in order to indicate any user mis-operation, such as attempting to make routes within a locked environment, or trying to change a protected crosspoint

3.1.19 Lock

When added to a canvas this button allows the user to Lock the entire active environment, and preventing any routes to be changed. The button may be configured in Designer to require a password in order to de-activate it. If the System Driver application is running, any administrator may remotely lock and unlock a user environment.

3.1.20 XP grid



The Crosspoint Grid is a feature that allows the status of a pre-configured number of sources and destinations to be displayed for a single matrix. It also allows routes to be changed by simply clicking on the appropriate crosspoint, it must be noted that the crosspoint will be immediately taken on a mouse-click and therefore the XP Grid must be used with care. The matrix may be multi-level, in which case crosspoints are shown as 'cake slices' of different colours, and level buttons are used to create level break-aways. The XP Grid and level buttons must be in a BPX or XY group in order to function,

3.2 Definition of advanced terms

3.2.1 Config Button



Clicking on a Config Button in the Control Panel opens the menu shown here

By adding this button to a BPX or XY panel group, three features may be configured, as follows:

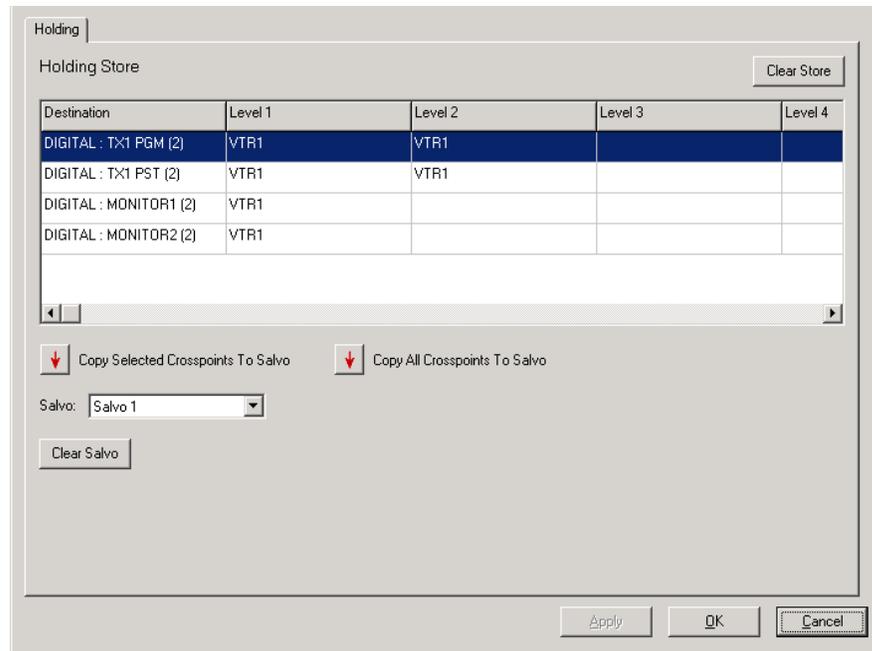
- Edit Source Protects. See Section 3.2.6
- Configure Safe Sources. 3.2.7
- Edit Salvos. See Section 3.2.2

3.2.2 Salvo

A Salvo button is configured in Designer to use either a Database or Procion salvo. If a Database salvo is selected then the exact crosspoints stored in the Nebula or Aurora database file for that salvo will be fired. If a Procion salvo is selected, then that salvo must be configured through the Control Panel application using Build Salvo and Config buttons,

as follows:

Set up the crosspoint configuration required using source and destination keypads in the normal manner. Activate the Build Salvo button and select all destination buttons that are required in the salvo, then de-activate the Build Salvo button. Select the Config button, and Edit Salvos.



Destination	Level 1	Level 2	Level 3	Level 4
DIGITAL : TX1 PGM (2)	VTR1	VTR1		
DIGITAL : TX1 PST (2)	VTR1	VTR1		
DIGITAL : MONITOR1 (2)	VTR1			
DIGITAL : MONITOR2 (2)	VTR1			

If the holding store contains the exact required crosspoints, call up the salvo number from the drop-down menu and click on Copy All Crosspoints To Salvo, if not, copy the selected ones. Click OK.

To fire the Salvo click on the appropriate salvo button followed by Take. A Take operation is not required if the control panel is part of a BPX group.

3.2.3 Build Salvo

Required in order to configure a salvo in a Control Station. See Section 3.2.2.

3.2.4 Gang

If this button is added to an XY panel group it allows the operator to preselect multiple routes which can then be taken in a single operation. This functions by first activating the Gang button, then selecting a Source followed by a Destination, the selection will be displayed in the Destination button display, followed by any other number of selections. The entire selection is routed with a Take operation. The Gang take may be 'undone' using a

Gang Undo button, which routes all Destinations back to their original sources. If Take is not pressed, and Gang is pressed to leave gang mode, all selected routes are entered into the holding store, see Section 3.2.2.

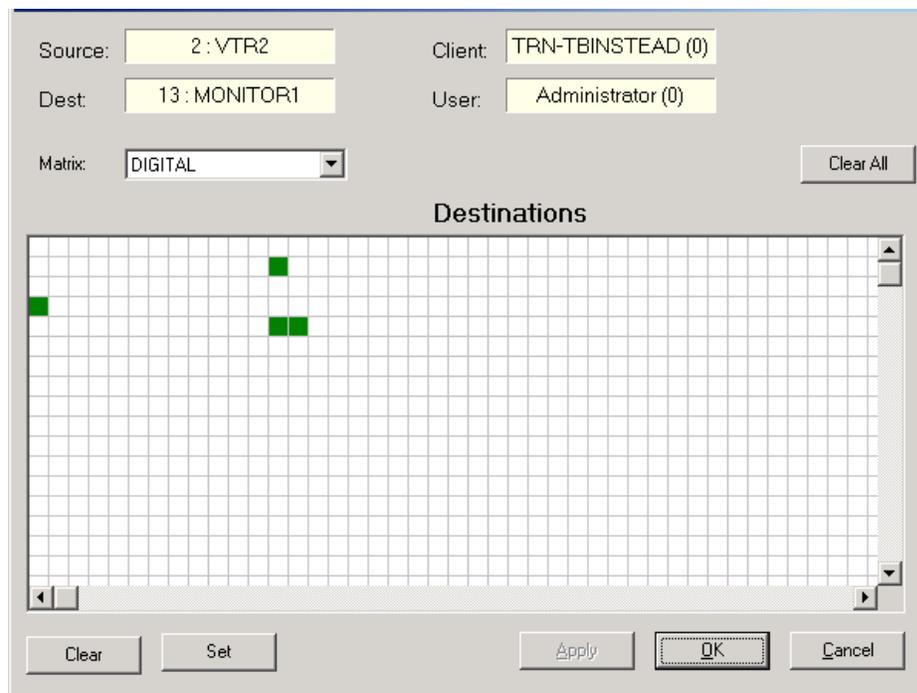
3.2.5 Gang undo

See previous Section. A Gang Undo button must belong to an XY panel group to function.

3.2.6 Source protect

Source protection allows specific sources to be routed only to certain destinations. If an attempt is made to route those sources to other destinations an error message will appear in the Status Display, see Section 3.1.18. This feature can be made to be specific to certain users only, and there are two ways of implementing it:

- Source Protect button: If this button is included in an XY or BPX panel group it may be used directly to configure source protects. It functions by first activating the button then selecting a source followed by the required destination(s), when all routes have been selected, the Source Protect button is de-activated and the feature is immediately implemented.
- Config Button: See Section 3.2.1. One of the operations accessed through this button is the Source Protect feature. When selected, a grid is displayed which allows the user to select source protects as follows:



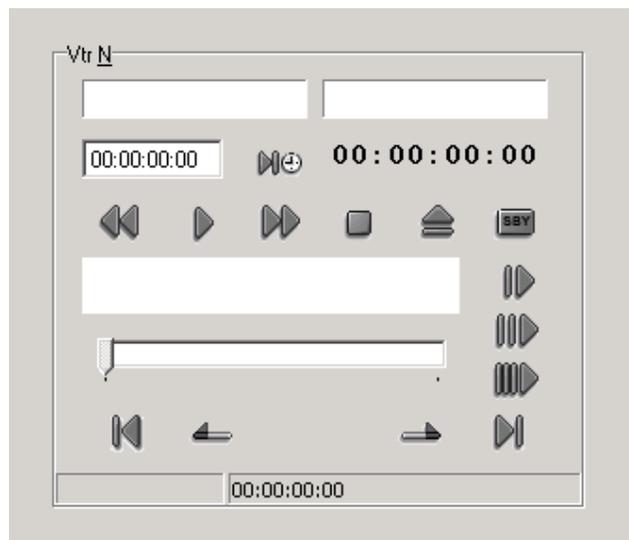
The routes Set indicate the only routes allowed for those specific sources. The exact source

and destination names are shown by hovering the mouse cursor over the grid. It is noted that these limitations only apply to the indicated user. It is useful to note that when the mouse cursor is moved across the grid the appropriate Client and User name will appear in the windows if any source protects have been configured for that source, this is particularly useful when not all routes are visible on the grid.

3.2.7 Safe Source

A safe source is one that will be routed to a destination in the event that it is no longer permitted to be routed to its current source. This would happen when a Source Protect is applied to a system in which certain routes become invalid as a consequence.

3.3 VTR Panels



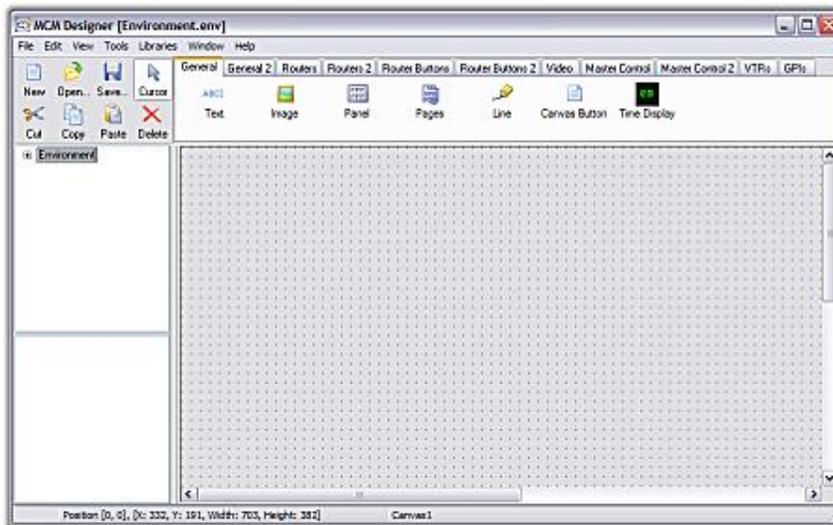
With the appropriate Licence, VTR Control panels can be configured as part of any canvas, see Section 3.4.6. These allow the user to control a Sony 9 pin VTR protocol enabled device over a PC COM port. The panel provides all the standard control types as follows:

- Play, Wind, Stop, Standby, Eject
- Jog, Shuttle, Varispeed, using mouse or keyboard cursor
- Timecode display using a Ctl, LTC or VITC signal within the serial connection
- Cue to timecode entered in display

3.4 Creating router control panels

After MCM Designer has been successfully configured and tested according to the instructions in Chapter 2, the user can start to design a control panel environment.

3.4.1 Creating and saving Environments and Canvases

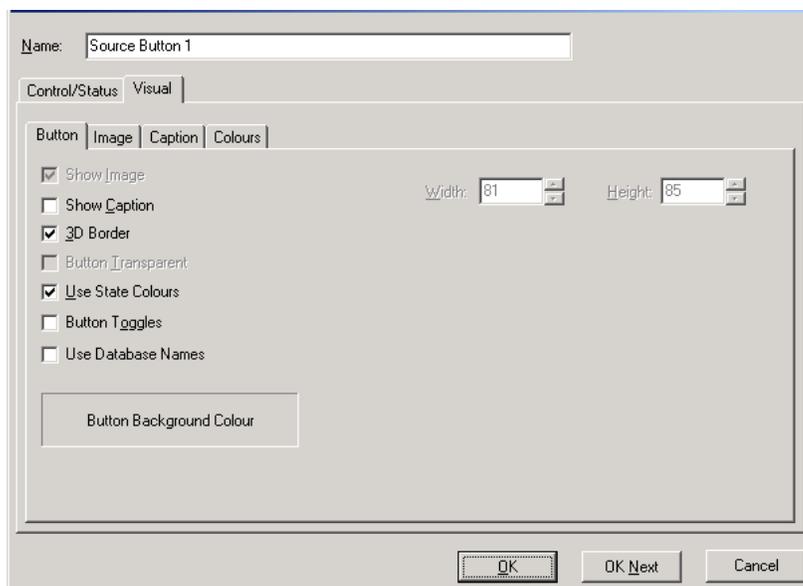


Launch MCM Designer. If this is for the first time, a blank canvas will appear and the user is free to add graphics, keypads, tallies etc. to the blank page. When appropriate, both the canvas and the environment must be saved. Note that both these functions are available through the 'File' menu on the toolbar, but the Save icon only saves the current canvas.

If required, the user can now create new canvases in the same environment, using the 'New' icon, or the File menu. 'Canvas buttons' will now be required on every canvas to allow the operator to switch between screens.

It is noted here that the user has the choice of using Source or Source Association names, as explained in Section 1.2.3. See Section 3.5.1 for instructions on selecting the Source Association name mode.

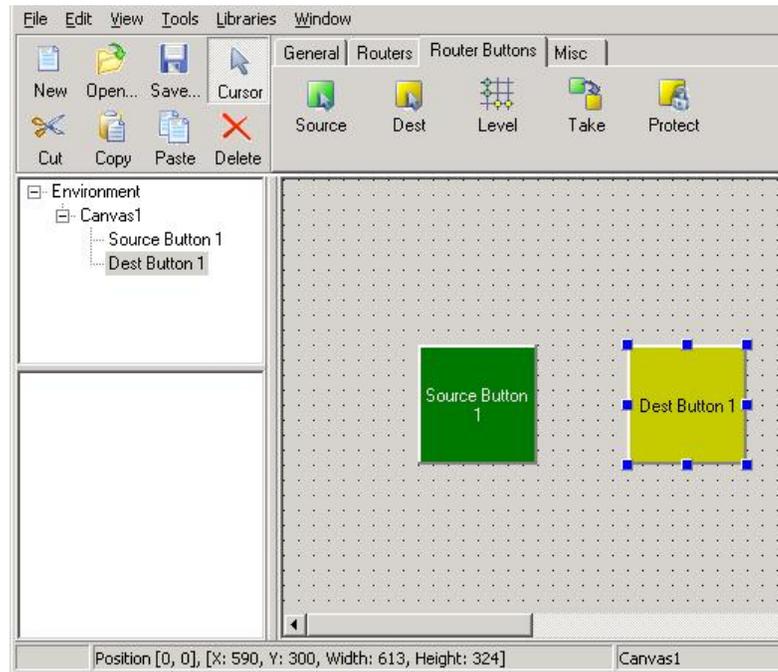
If the 'Visual' tab is now selected, several more button options are available. These are as follows:



- Show Image/Show Caption: allows text and/or a graphic to be allocated to the button from the 'image' and 'caption' tabs
- 3D border: gives the button a dropped border
- Use Colour States: Uses the colours defined in the 'Colours' tab for different states of the button, such as active, hover, pressed; the user may change these colours
- Button Toggles: not currently used, although the button visually changes.
- Use Database Names: used in conjunction with 'Show Caption', where the caption will be the same as the name from the database used for this button

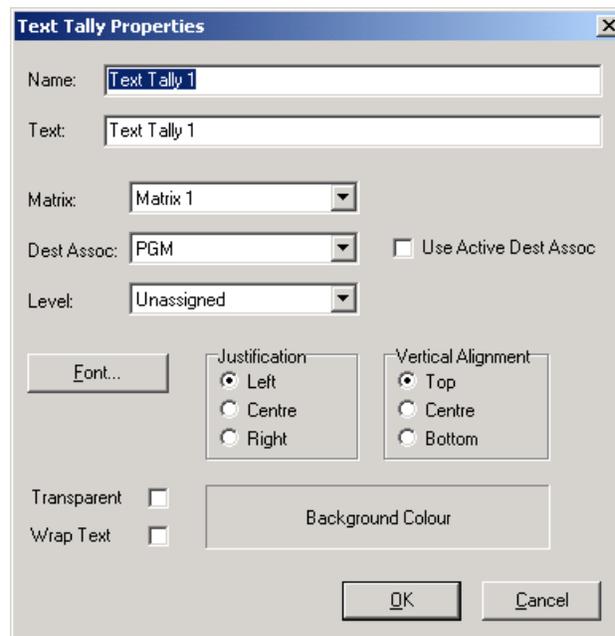
Common properties can be applied to all buttons on a keypad by right clicking on any button and selecting 'keypad properties', where all the above may be applied globally to the keypad.

All the above properties may be applied to single Source or Destination buttons, which are selected from the 'router buttons' tab:



3.4.3 Text and Image Tallies

Just like keypads and buttons, text and image tallies may be 'picked and placed' onto the canvas. The properties of these objects are accessed by double clicking, or by right clicking and selecting 'properties'. A tally must have a destination and level assigned.



Text tally properties, 'Use Active Dest Assoc' means that the tally will reflect the status of the currently selected destination rather than a single destination assigned in the properties

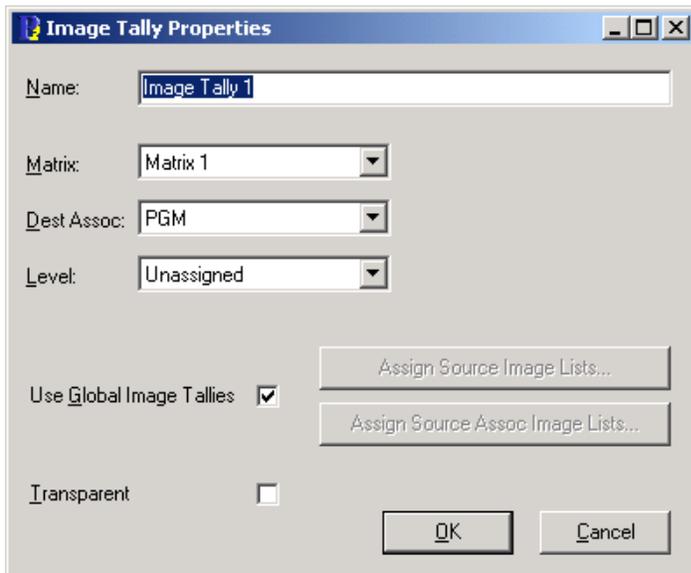


Image tally properties. Images may be assigned to each tally individually, or using a 'global' assignment table, see Section

3.5.1

3.4.4 Other Objects

The remaining router control objects have specific features summarized here:

- Canvas button: must be assigned to one other canvas in the same environment, does not need to be a member of a group
- Married tally: must have an image assigned to the 'married' and 'unmarried' states
- Level button: must be allocated to one or more levels
- Protect button: can be part of an XY or BPX group, when in an XY group it must be used in conjunction with a Take button
- Protect tally: must have images assigned to the three different states; can be allocated to the 'active' or any specific destination

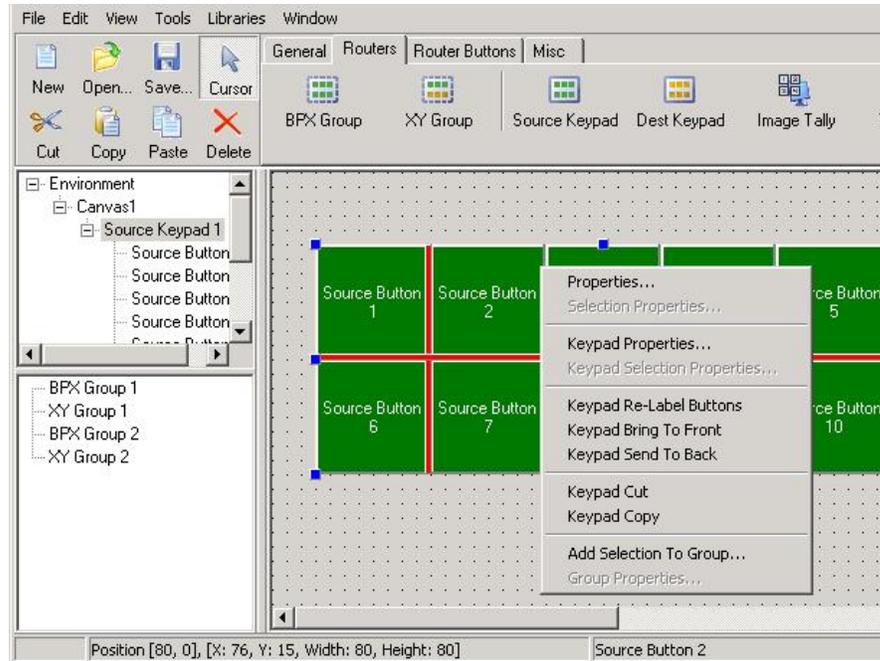
3.4.5 Assigning objects to groups

All the following objects must be assigned to a BPX or XY group in order to function:

- Source and Destination keypads
- Text and Image tallies
- Protect buttons and tallies
- Level buttons
- Married tallies
- Take buttons

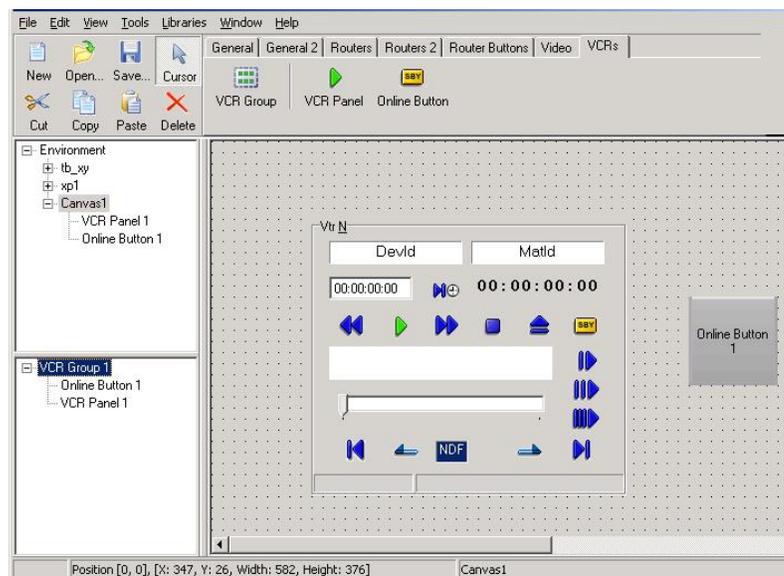
They are assigned to a group by selecting them, either individually or globally, then right mouse clicking and selecting 'add selection to group'. See Sections 3.1.9 and 3.1.10 for an

explanation of how groups function.



3.4.6 Adding VTR panels

Providing an appropriate Licence has been configured and the feature enabled in Designer, the user may add VTR Panels, Online Buttons and VTR Groups to a canvas, as follows:

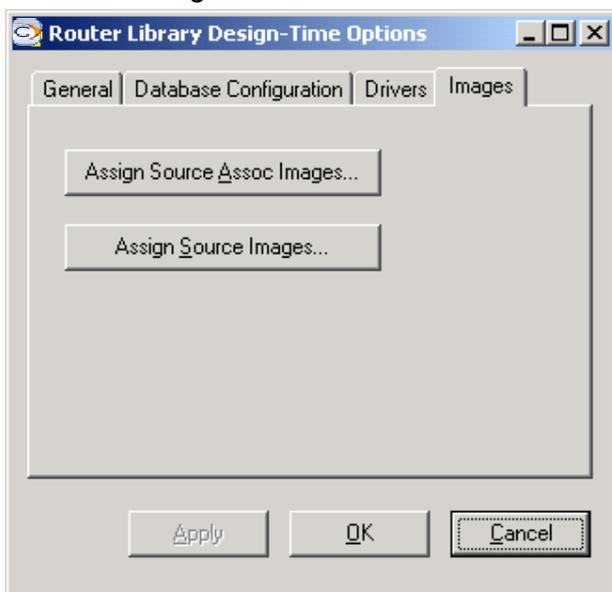


An Online button is required for each VTR panel, and both must be in the same VTR Group

in order to function, therefore a single VTR button will activate all VTR Panels in the same group. When the panel appears in a Control Panel, it will not function until it has been assigned to a PC COM port with an RS422 connection to a device communicating with Sony 9 pin VTR protocol. This is configured in the Control Panel from Libraries\VTR Library.

3.5 Tips and features

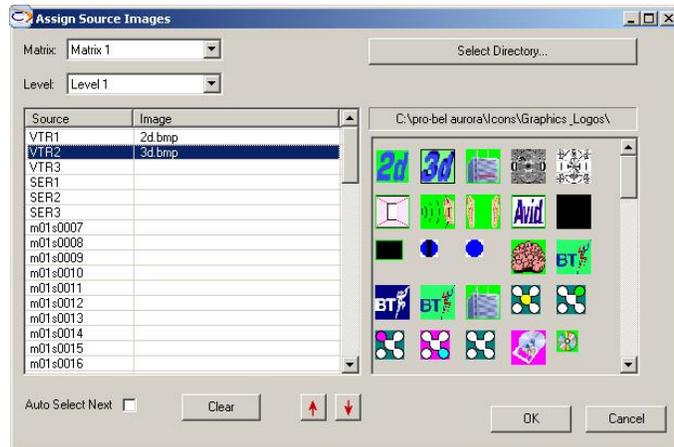
3.5.1 Using Source or Association names



The PC port and Timecode source must be configured in the Control Panel

This Window is available from 'Libraries\Router Library' on the toolbar, and determines what images are displayed for Image Tallies when in Global Image mode, see Section 3.4.3. It is also used to determine whether Source Association names or Source names are to be globally used when assigning names and captions to Source keypads, see Section 3.4.2.

Using the 'Assign...' Buttons, the user can now allocate images, from a chosen directory, to all sources and associations, as follows:



3.5.2 Grouping objects

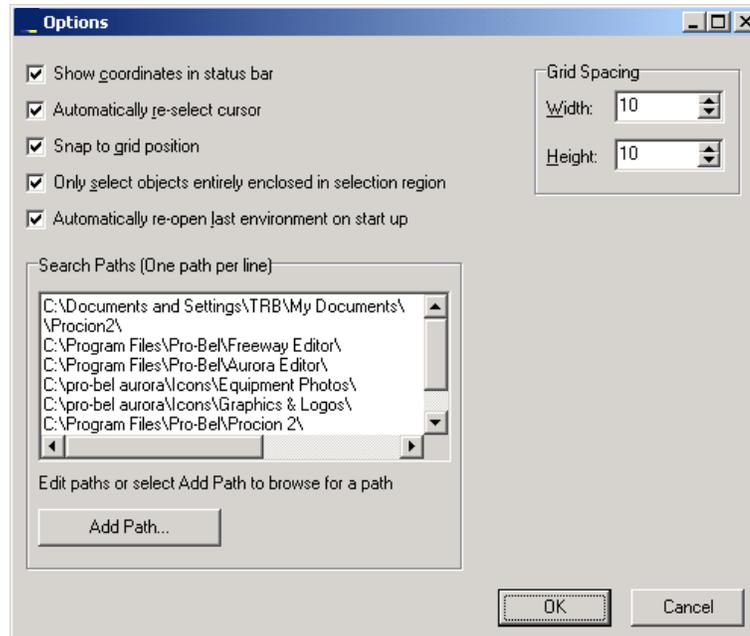
The mouse cursor can be used in Designer to 'click and drag' around a group of objects, which is usual to assigning global properties, such as group member ship or button colours. Note that the same can be achieved by holding the keyboard 'Ctrl' key and clicking on objects.

When clicking-and-dragging on objects inside panels, the keyboard Shift key must be held in order to define a selection rather than a panel move.

3.5.3 Transparency

If the 'Transparent' property of an object is selected, the background of that object will be transparent to the object behind. The 'background' of an object is defined by whatever colour is present in the top left hand corner.

3.5.4 Options

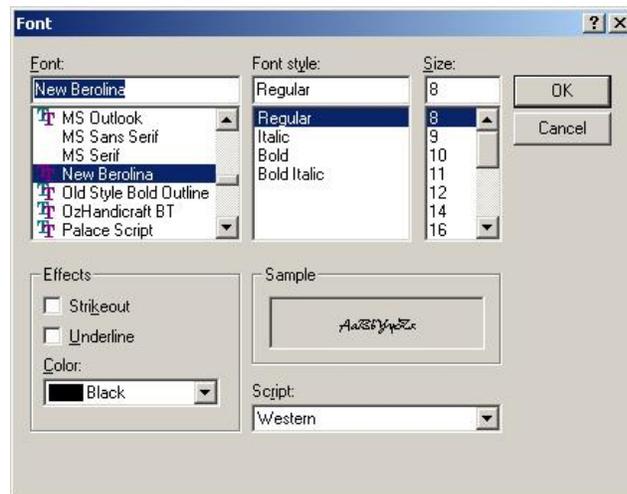


This window is available from the 'Tools' menu, and has the following options:

- Show coordinates in status bar: the exact cursor XY position and object dimensions are shown at the bottom of the screen
- Automatically re-select cursor: After an object has been placed on the canvas, this ensures that the mouse cursor becomes a selector once more, otherwise it will remain in object placing mode
- Snap to grid position: ensures that objects align with the grid structure as defined by the 'Grid Spacing' dimensions; with the box un-ticked, objects may be freely placed
- Only select objects entirely enclosed in selection region: Used when grouping objects, see Section 3.5.2, allowing the user to partially click-and-drag around objects in order to select them
- Automatically re-open last environment on start up: Designer will always open the last used environment file when launched

3.5.5 True Type Fonts

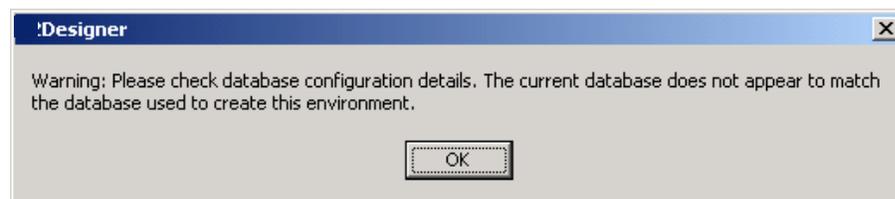
MCM supports True Type Fonts, as indicated by the 'TT' or 'O' symbol in the fonts menu for captions and text. These fonts give improved resolution and choice of size over normal fonts.



3.5.6 Run Environment

This available from the 'Tools' menu in Designer, and is simply another shortcut to the MCM Control Station. Therefore MCM Control Station must be installed and configured on the same PC in order for this to work. The user is still required to log in unless Auto-Login is selected within the MCM Control Station.

3.5.7 Database error

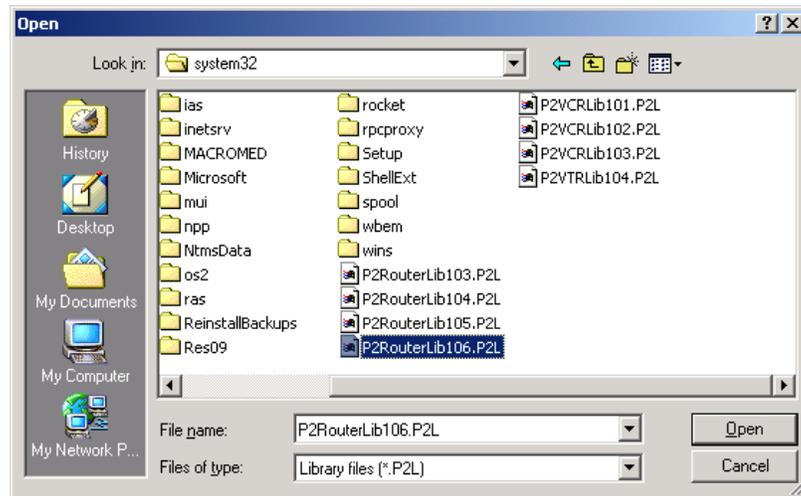


If the following error is indicated when the Designer opens an environment, it usually means that Designer is currently registered to a different Aurora database to that originally used to design the control panels. The user should check which database is currently selected from 'Libraries\Router Library' on the toolbar. This may be due to the Aurora Database driver having been re-configured.

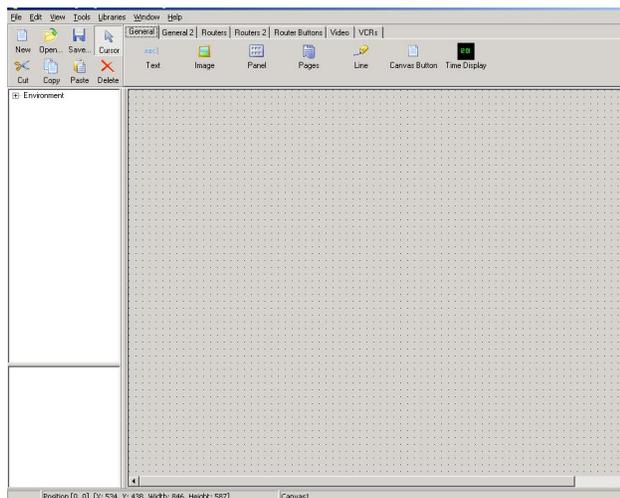
3.5.8 Registering a library file in Designer

The Designer application cannot be used until it has registered with a library file. Although

this is usually done automatically when the application is first launched, it may be necessary for the user to check or update the library registration. The Library file gives the application a range of features and resources, which will be periodically updated by Pro-Bel. To register with the current library file, click on 'Libraries' on the toolbar, followed by 'Register Library'. Libraries reside in the C:\Winnt\System32 directory, as follows:



Select the latest 'P2RouterLibxxx.' file and click 'Open'. The main screen will appear as follows with a complete range of function tabs:

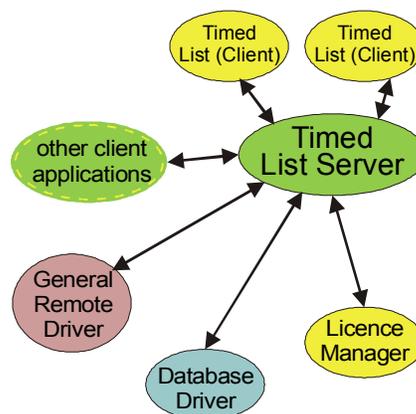


4 MCM Timed List Server

MCM (Morpheus Control and Monitoring) is the new name for Procion. Legacy documents and existing file paths may still refer to Procion 2 or P2. For the purposes of this document Procion and MCM are interchangeable. The MCM Timed List Server is a fully featured scheduling application. Its intuitive and user-friendly design integrates seamlessly with the MCM Suite. It allows the user to set up routes using simple drop-down menus, then using the timed event list, switch on a once-off basis, a daily, weekly, or monthly recurring mode. A summary of its key features is: -

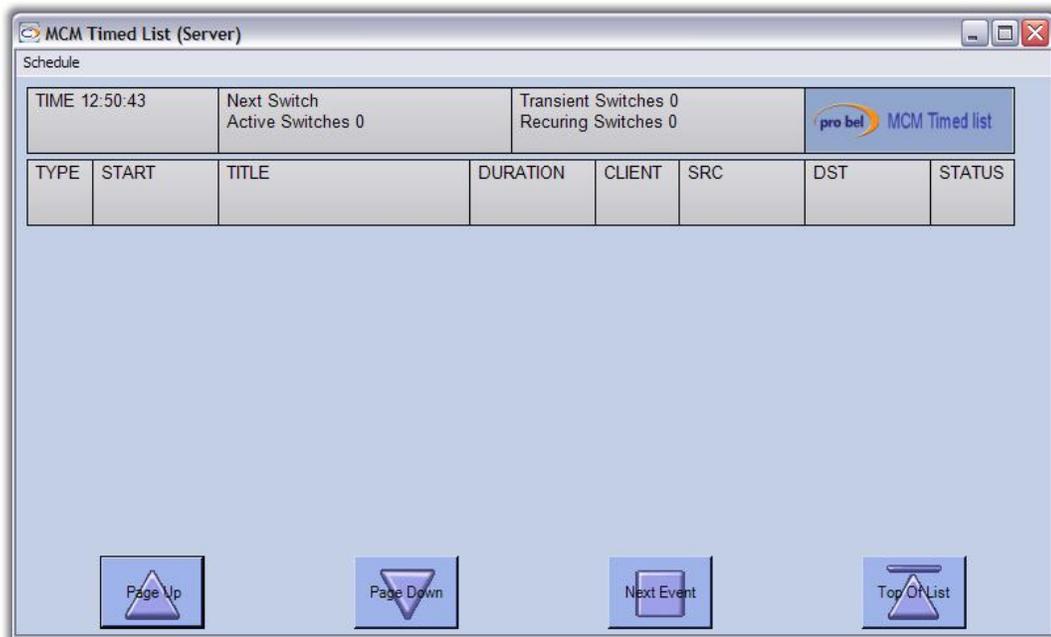
- Seamless integration with MCM
- Route switching
- Transient Event Switching
- Daily, Weekly, and Monthly Event Switching
- Error Logging

4.1 Starting the MCM Timed List Server

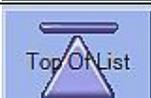


Starting the MCM Timed List Server establishes communications with the Licence Manager, Database Driver and General Remote Driver. It also registers itself to allow timed list client applications to connect to it.

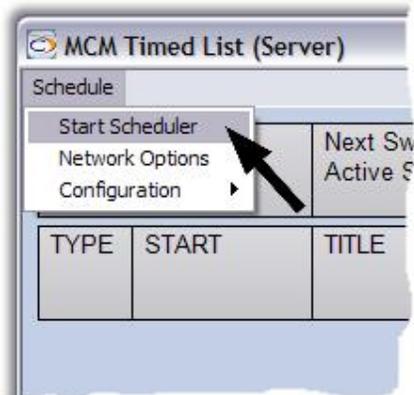
The Start-Up Screen



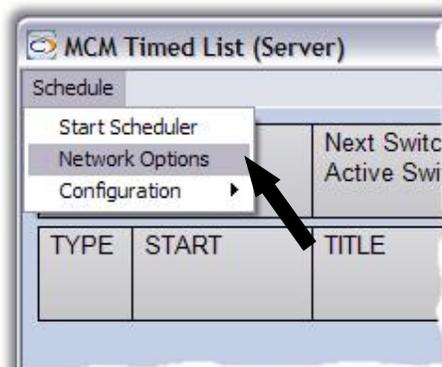
Once the Timed List is started and events are loaded, the display is scrolled using the four buttons on the bottom. The Page Up and Page Down buttons, scroll up and down the display. The Next Event button aligns the display such that the next event to be started is at the top of the display. A standard windows scroll bar is not used because the display range is likely to be infinite if recurring events are loaded without an end date.

	Page Up Scrolls the page up
	Page Down Scroll the page down
	Next Event Re-arranges the event list so that the Next Event to activate is shown at the top of the list.
	Top Of List Scrolls pages to the top of the list – useful when there is several pages of data.

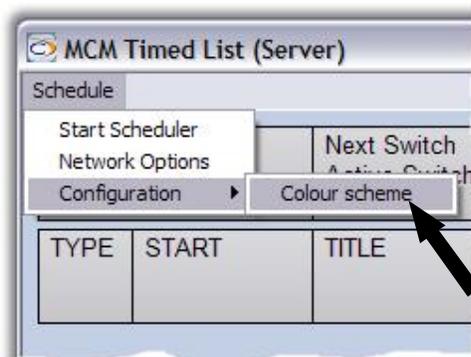
Clicking on Schedule offers three options; Start Scheduler, Network Options, and Configuration.



To start up the scheduler click on the Schedule tab and select Start Scheduler from the drop down menu



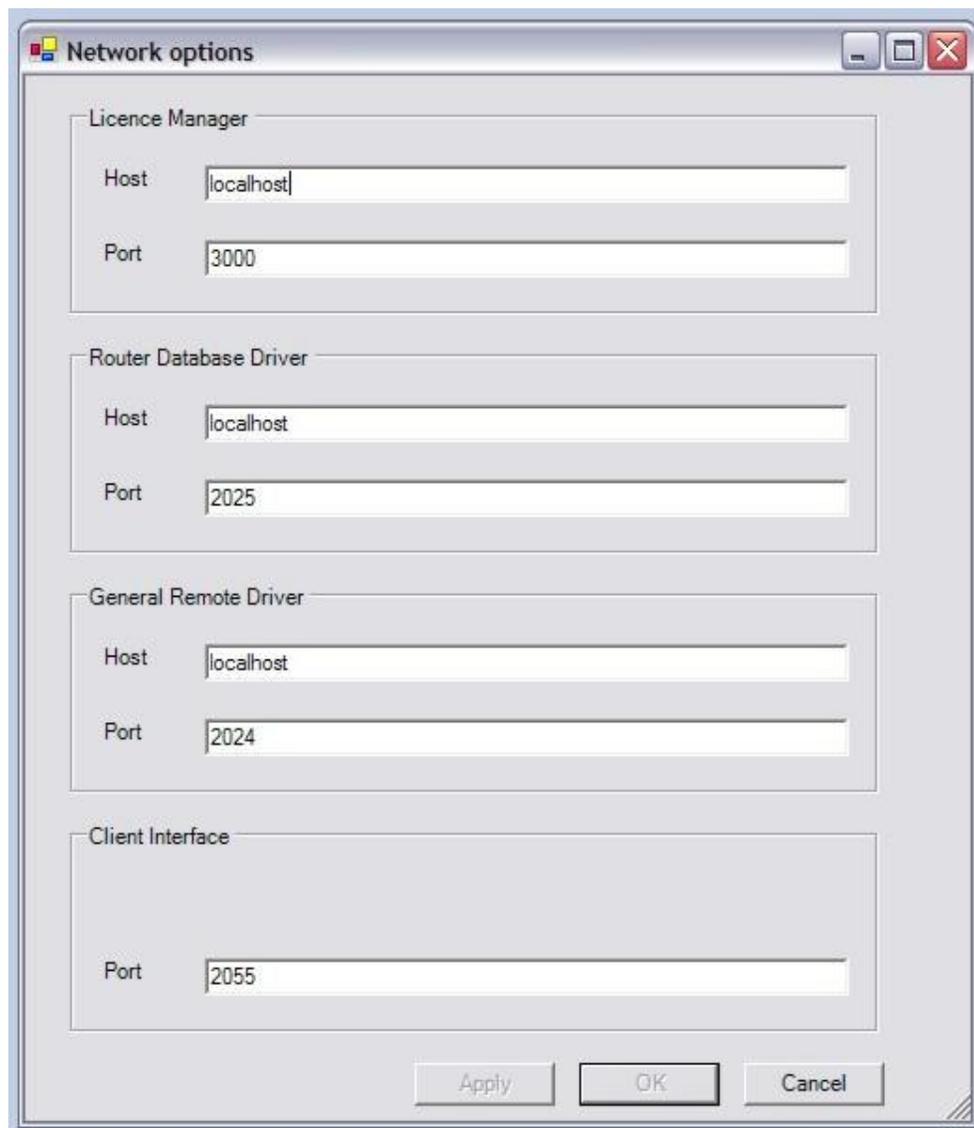
To access the Network option, Select Network Options and proceed.



To access the Configuration menu Select Configuration and Colour scheme and proceed

4.1.1 Network Options

Clicking on the Schedule tab and selecting Network Options from the drop down menu will access the Network Options. These options are used to connect to the Licence Manager, the Router Database Driver, and the General Remote Driver. The port number in the client interface shows the TCP/IP port number that client applications will use to connect to the timed list server.



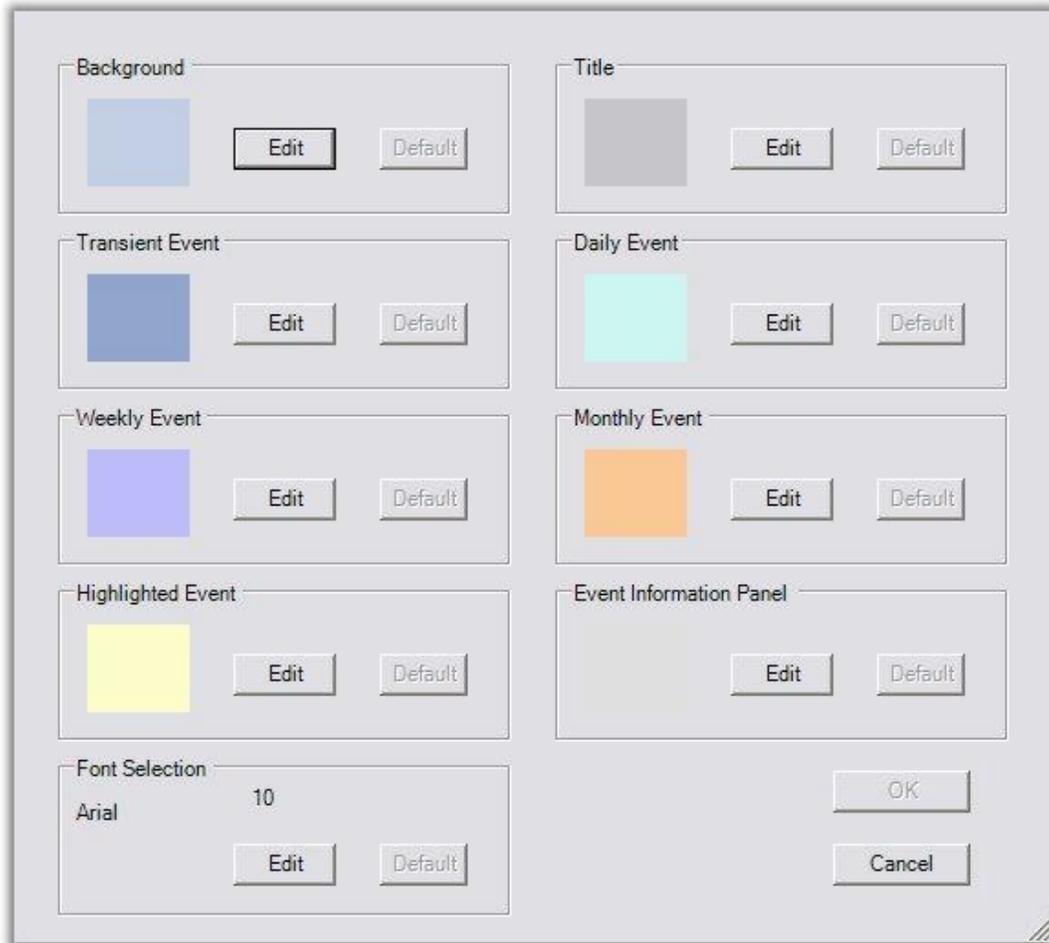
The screenshot shows a dialog box titled "Network options" with four sections for configuring network connections:

- Licence Manager:** Host: localhost, Port: 3000
- Router Database Driver:** Host: localhost, Port: 2025
- General Remote Driver:** Host: localhost, Port: 2024
- Client Interface:** Port: 2055

At the bottom of the dialog box are three buttons: "Apply", "OK", and "Cancel".

4.1.2 Configuration and Accessibility

The configuration menu can be accessed by clicking on the Schedule tab, Configuration, and selecting Colour Scheme. Schedule > Configuration > Colour Scheme.



4.1.2.1 Colour Scheme

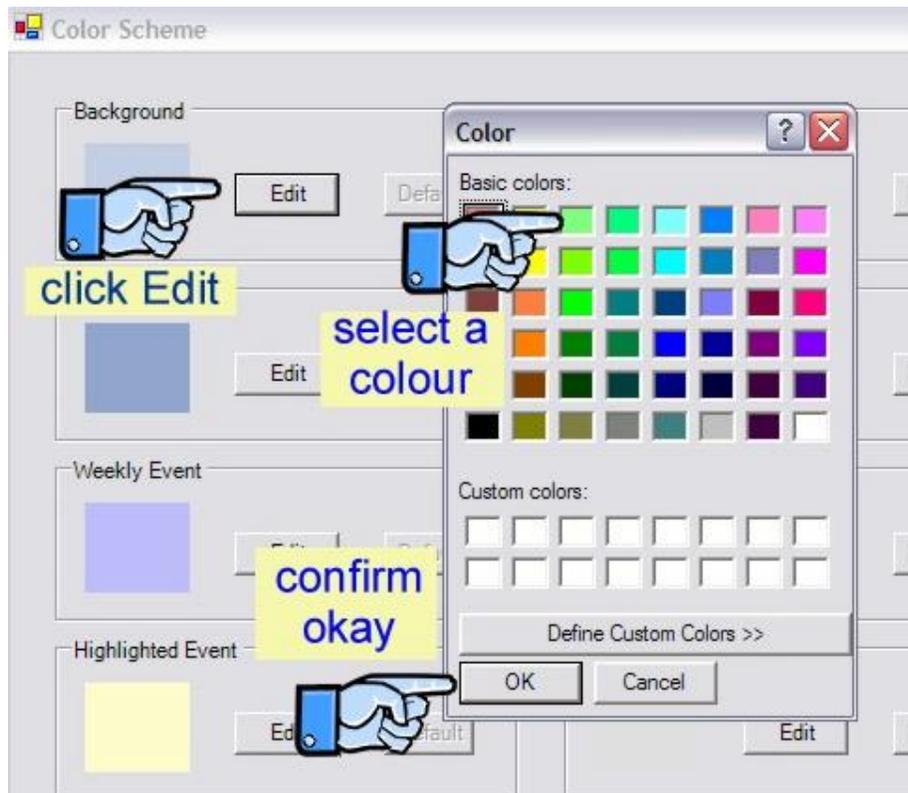
The colour option allows the screens to be customised perhaps to a corporate livery or personal preference.

4.1.2.2 Accessibility

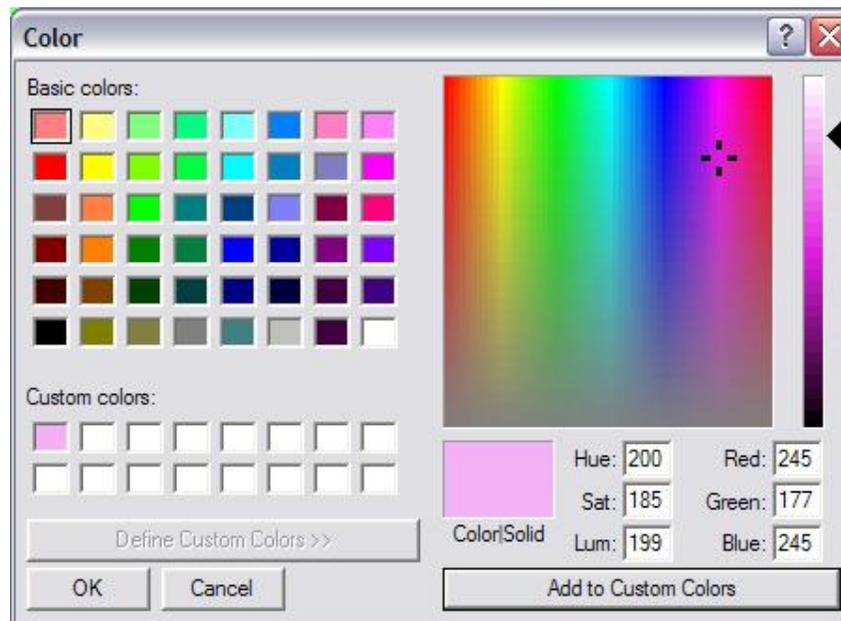
Ensure that foreground and background colour combinations provide sufficient contrast when viewed by someone having colour deficits.

The combination should use good, contrasting colours and/or the user should be able to select the colours to be used.

To change the Background colour to Green for example, click the background colour EDIT button. This opens a colour palette that allows you to choose a new colour scheme.



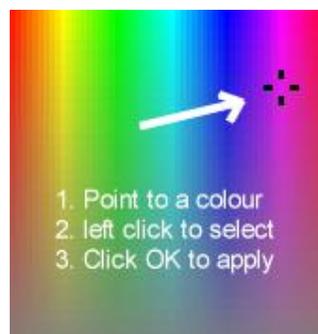
It is also possible to create a customised colour. Open the colour palette and click Define Custom Colours this will expand the colour palette.



Colours can be defined by using one of the following colour construction methods: -

- Colour Picker
- HSL
- RGB

4.1.2.3 Colour Picker

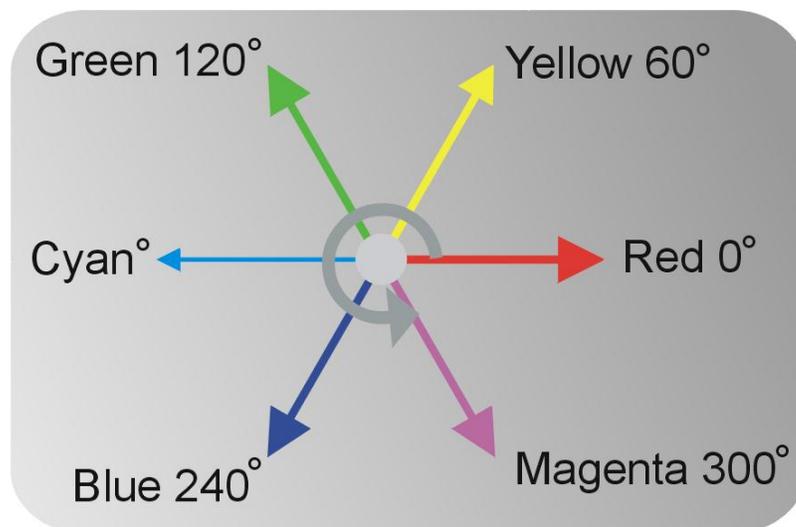


The colour picker is a user-friendly method that allows the user to simply point to a colour on the rainbow palette and click to select.

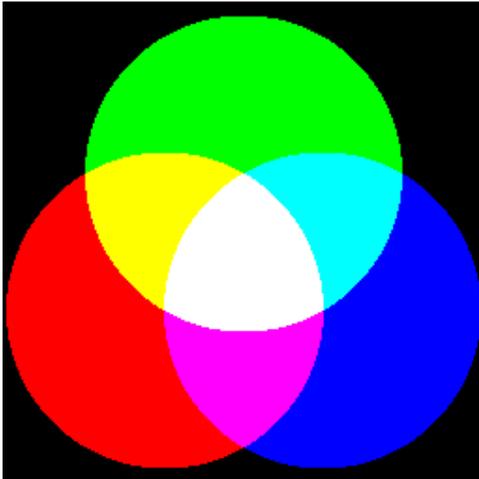
4.1.2.4 HSL

Hue, Saturation, and Lightness (HSL) is a classic method of defining a colour. It is based on how an artist would mix colours. Hue (H) is the colour or pigment and is measured in a circle from 0 to 360 degrees (see table). Saturation ranges from 0 to 100% and defines the grey in the colour. 0% indicates grey and 100% is the pure primary colour. Lightness is intuitively what its name indicates; varying the lightness reduces the values of the primary colours while keeping them in the same ratio.

Colour or Hue	Degrees
Red	0 °
Yellow	60 °
Green	120
Cyan	180 °
Blue	240 °
Magenta	300 °



4.1.2.5 Red, Green, and Blue (RGB)



RGB is the preferred engineering colour space model. It constructs colours from the three primary colours; Red, Green, and Blue. Each primary can be adjusted from 0 to 255. Typical values are shown in the table.

COLOUR	RED (R)	GREEN (G)	BLUE (B)
Red	255	0	0
Green	0	255	0
Blue	0	0	255
Yellow	255	255	0
Cyan	0	255	255
Magenta	255	0	255

4.1.2.6 Custom Colours

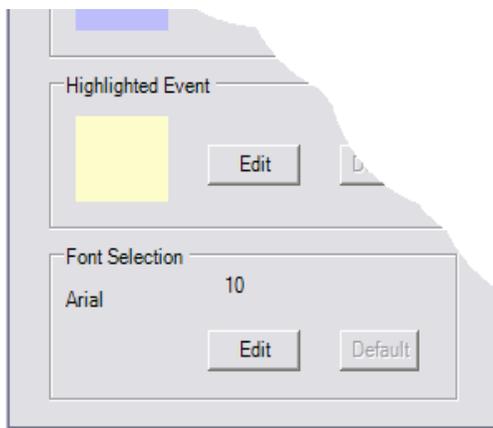
Having mixed your colour you can save it to the Custom Colour area of the palette by clicking the Add to Custom Colours button. Up to 16 colours can be chosen.

4.1.2.7 Default Colours

Clicking the Default button beside each selection will reset that particular item to the default colour or property.

4.1.2.8 Font Selection

The Font and Font size can be varied depending on the pc installed font set. This can also be restored to the default font of 10pt Arial.



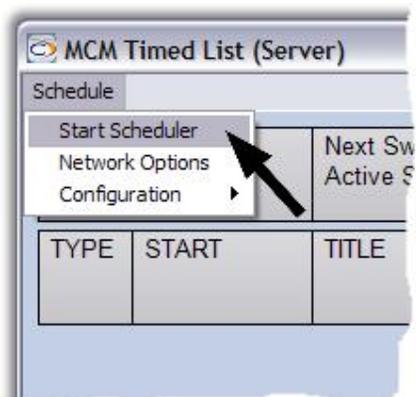
Click on the Font Selection Edit button to access the font selection menu

Select Font from the menu

Click OK to apply

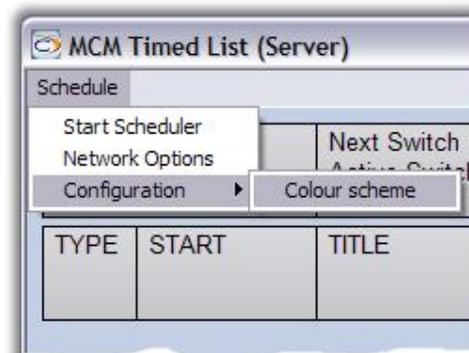
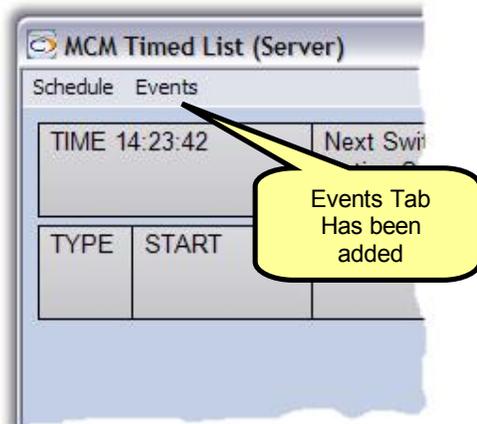
To undo and reset click Default.

4.2 The Scheduler



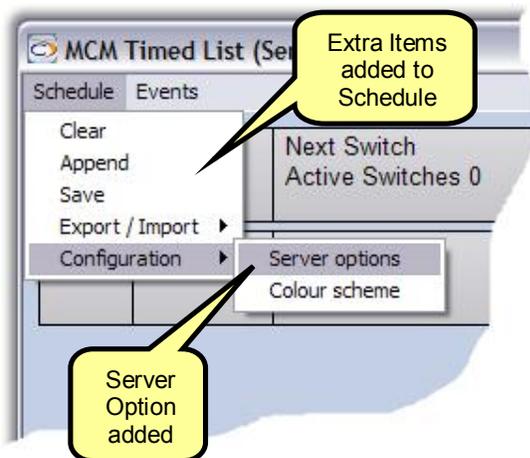
Click on the Schedule tab at the top left of the screen. From the drop down menu select Start Scheduler. Schedule > Start Schedule.

When the Scheduler has connected, extra menu items will be available.



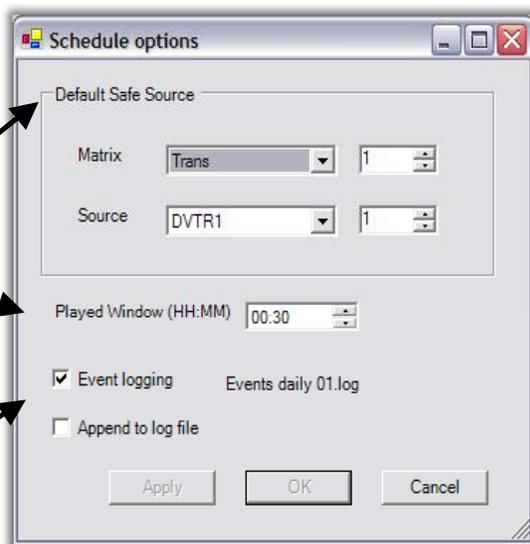
Clicking on the Schedule tab will now add the following options.

1. Clear: Clears future timed events. Does not clear past timed events
2. Append: Adds a stored schedule to the current schedule.
3. Save: Stores the current schedule to disk
4. Export / Import: Exports or Imports CSV type files.



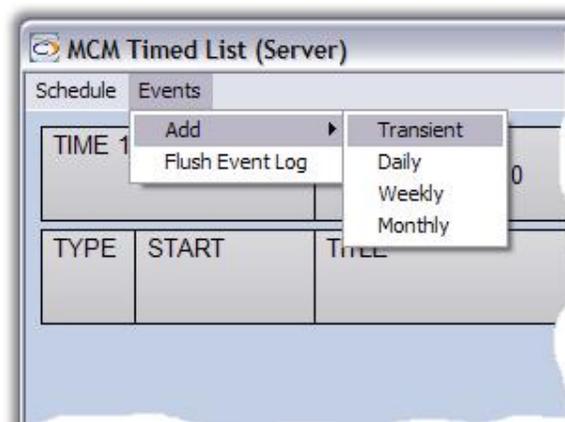
The Configuration also has additional menu option "Server Options" added. This allows configuration of: -

1. Default safe Source: Source a destination will revert to at the end of an event, if it is not overridden to another source, or set to none.
2. Played Window: Length of time events in the past remains viewable.
3. Event Logging: Allows a text file to be specified that will contain a log of events processed.



4.3 Events Menu

To view the Events menu click on the Events tab.



The Events Menu allows a Transient, Daily recurring, Weekly recurring, or Monthly recurring event to be added.

Transient Event: is a one off event.

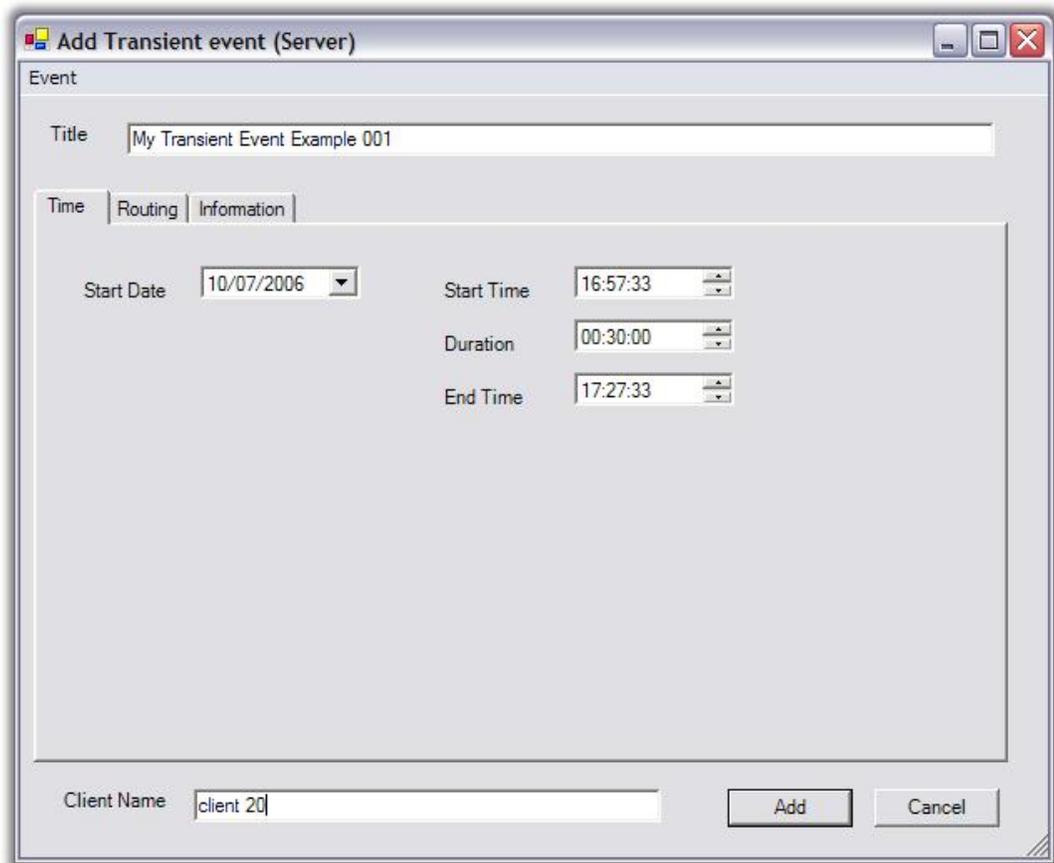
Daily Recurring Event: is an event that occurs on a daily basis.

Weekly Event: is an event that occurs on a weekly basis.

Monthly Event: is a monthly recurring event.

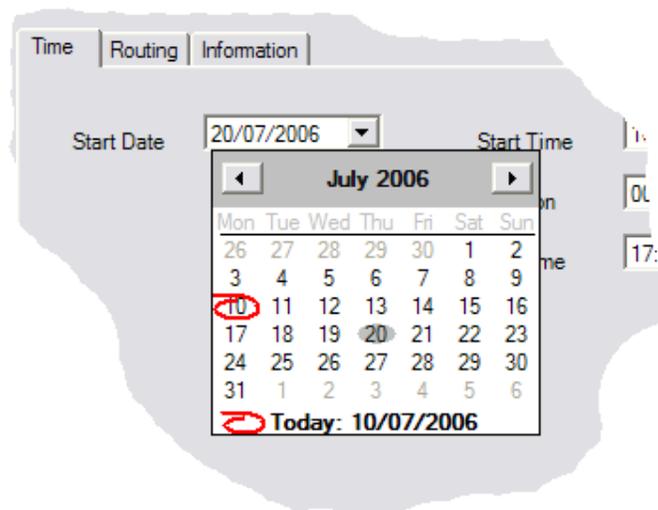
4.3.1 Adding a Transient Event

Select Events > Add > Transient. The Add Transient input screen will appear.



Title: Enter the Title of the event. This will appear in the schedule list column under Title.

Start date: This is the starting date for the event. The time can be directly entered or via the drop down calendar.



The calendar highlights today's date in red and the start date in grey.

Start Time: This is the starting time for the event and is entered in 24-hour clock notation.

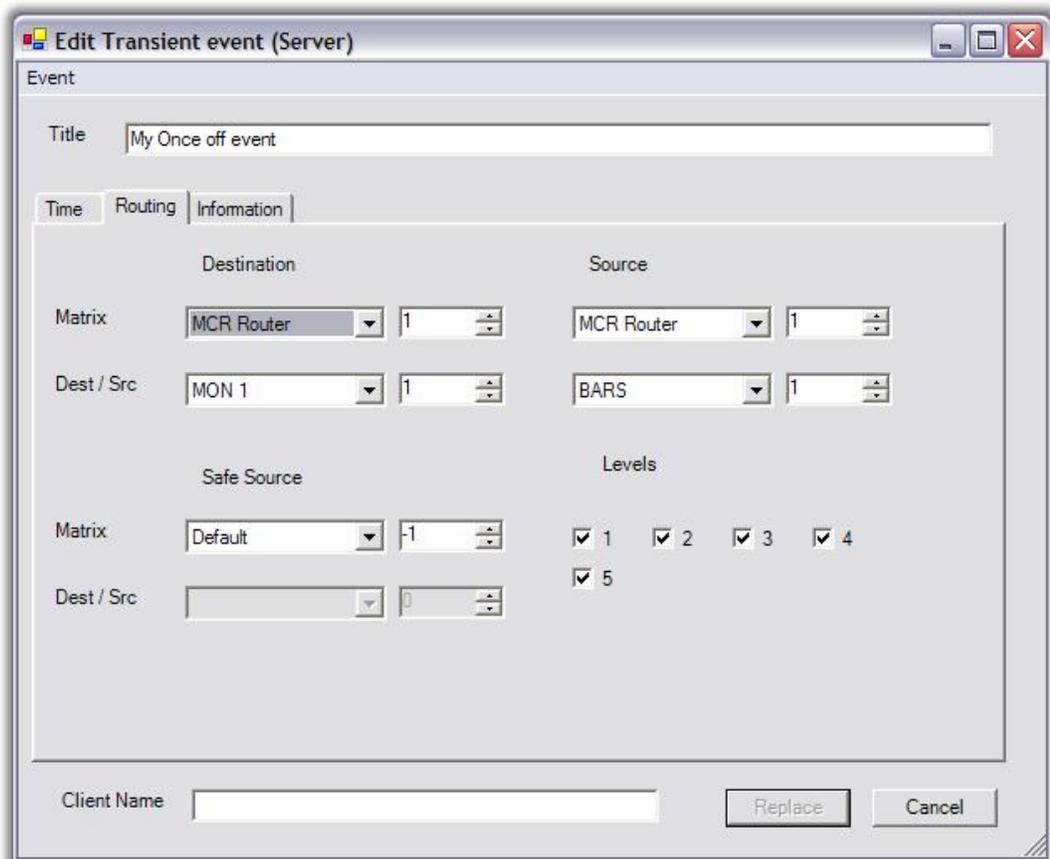
Duration: This is the duration of the event and can range from 00:00:01 to 23:59:59.

End Time: This is the end time for the event and is entered in 24 Hour clock notation.

Client Name: If an event is added from the server application, it is possible to specify the client name for the event. Since client applications only show events relating to their list, the client name must match the name configured in the client application in order for it to appear on a client applications list. When an event is entered from a client application the client name is automatically added and is not configurable for an event.

Routing

Click on the Routing tab to enter routing details.



This screen allows you to enter the Destination, Source, Safe Source and Levels details. Selections are made from the drop-down menus, which are derived from the Aurora database.

Safe Source Options:

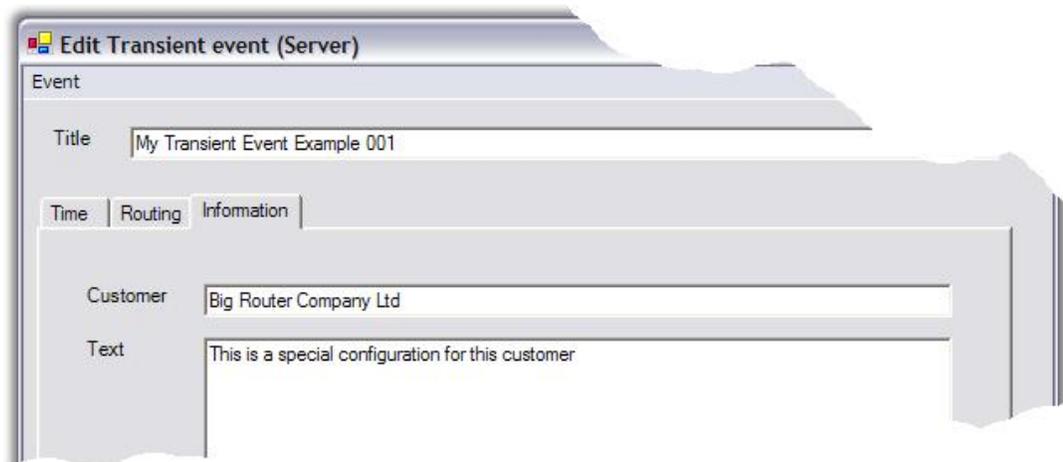
Default: Default safe source configured for the server is set at the end of the duration.

None: No safe source, the destination is not changed at the end of events duration.

Matrix and Source: Source to set at the end of the duration.

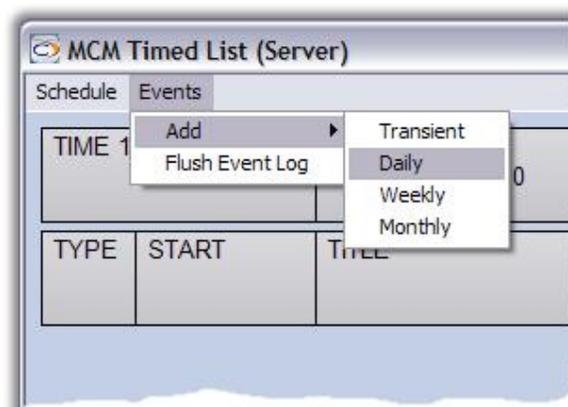
Information.

Click on the Information Tab.

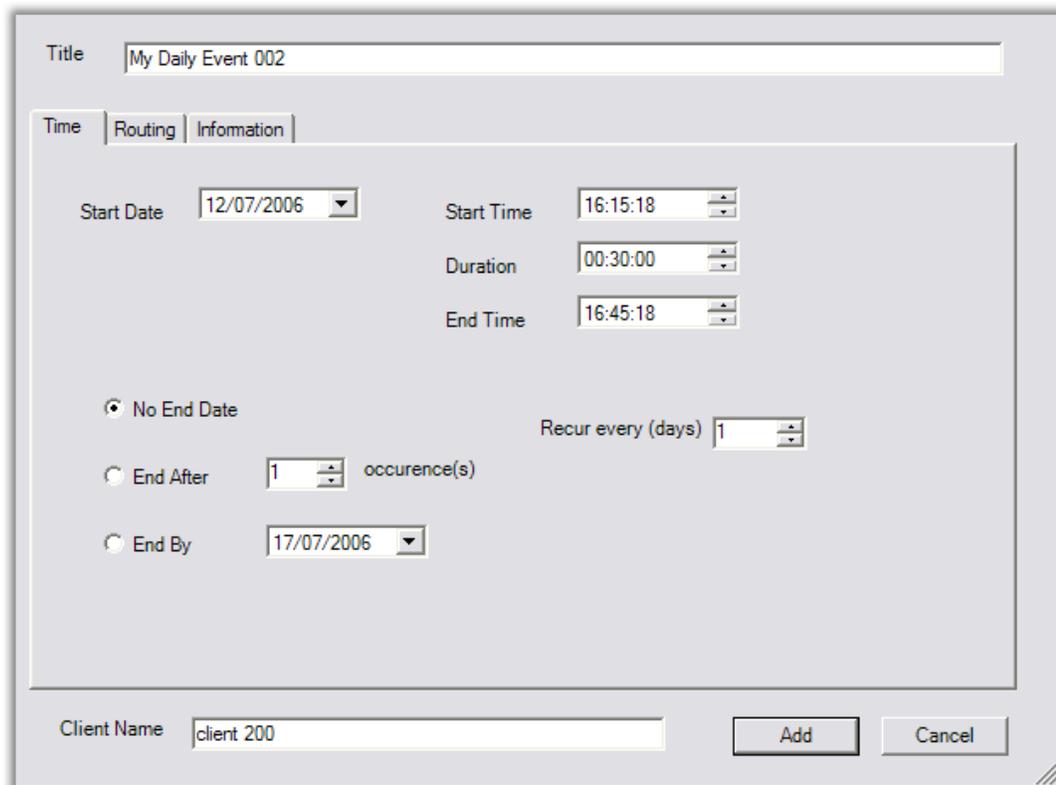


This screen allows you to enter customer details and other useful text. It accepts normal cut and paste editing.

4.3.2 Adding a Daily Event



To add a Daily Event, click Events > Add > Daily. This will open the Daily Events Screen.



This example is a daily Event. It is titled “My Daily Event 002”. The starting date for the event is 12 July 2006 and no end day is selected, so this event will occur every day. Its start time is 16:15:18 with duration of 30 minutes finishing at 16:45:18. The timing inputs are dynamically refreshed to reflect changes. For example setting the start time to say 13:00:00 and the duration to 00:30:00 will automatically show 13:30:00 in the End time. Setting the Start Time to say, 15:00:00 and the End Time to 15:17:00 will automatically be shown as Duration 00:17:00. If the End Time were now set to 16:00:00, the Duration would be increased to 1 hour but the Starting Time would remain unchanged. The Start Time is a fixed reference and will not dynamically refresh with changes to the other inputs. It can only be changed manually; this is a safety feature.

Start Date: The start date for the event. May be entered directly or via the drop down calendar.

Start Time: The start time for the event. May be entered directly or by the scroll controls.

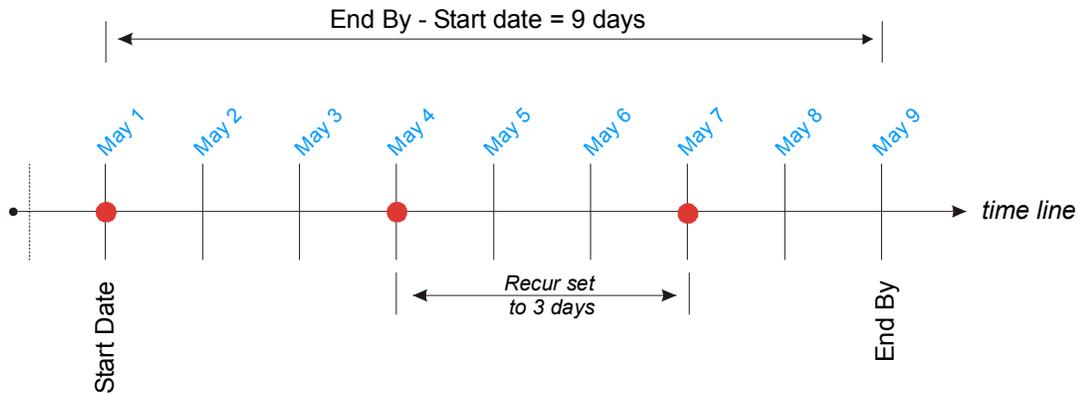
Recur every (days): Sets the interval between recurring events from 1 to 100 days.

No End date: No end date the event will recur indefinitely.

End After: Sets the number of occurrences of the event.

End By: Sets the last possible date for an event. This is not always the last date of the occurrence see the graphic.

Client Name: The client’s name (Server only).

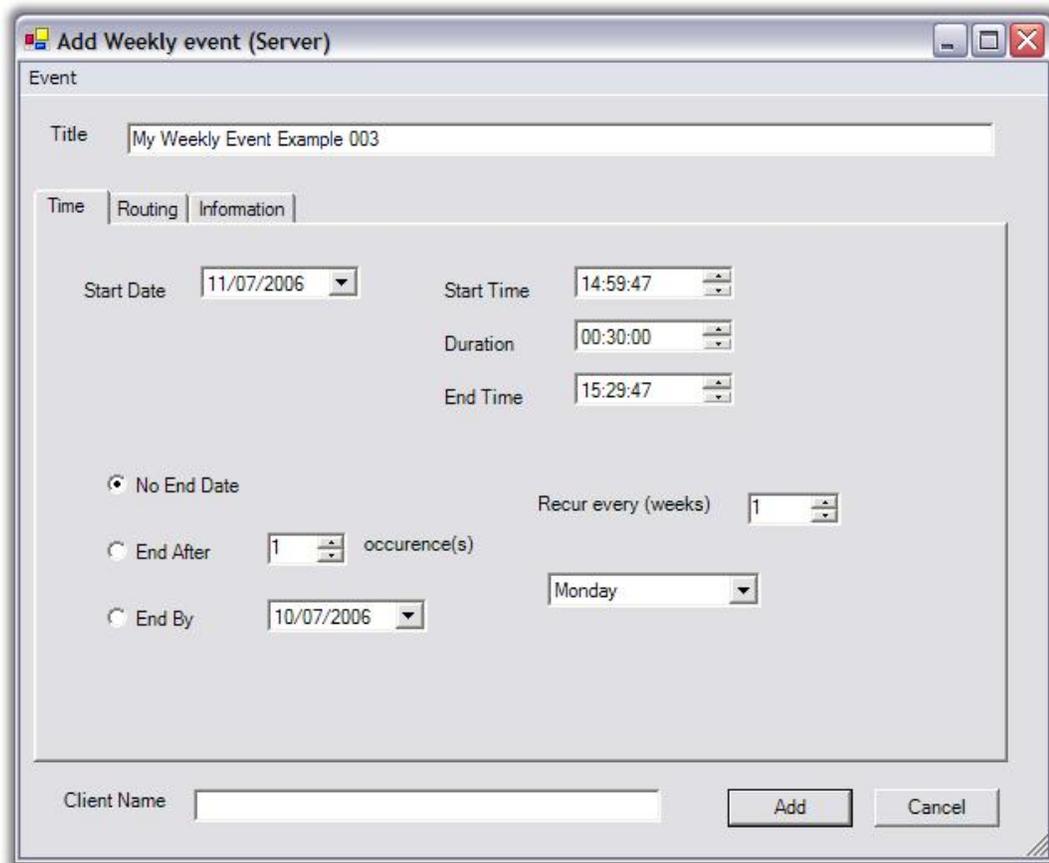


In the graphic the Start Date is May 1 and the End By date is May 9, which is 9 days. The Recur every (days) has been set to 3. So the first event will be May 1, then 3 days later May 4, and the final event will be 3 days later on the May 7. There will be no event on the End By date May 9 as it is not a multiple of 3 days.

4.3.3 Adding a Weekly Event



To add a Weekly Event click Events > Add > Weekly. This will open the Weekly Events Screen.



This is a Weekly Event example. The starting date is the 11th July 2006 and the No End Date and Monday has been selected, so this event will occur every Monday indefinitely. The time is 14:59:47 and the duration is 30 minutes with an end time of 15:29:47.

Start Date: The start date for the event. May be entered directly or via the drop down calendar.

Start Time: The starting time for the event in 24-hour format. May be entered directly or by the scroll controls

Duration: This is the duration of the event and can range from 00:00:01 to 23:59:59.

End Time: This is the end time for the event and is entered in 24 Hour clock notation. The minimum setting is 00:00:01 to maximum 23:59:59.

Recur every (weeks): Sets the interval between recurring events from 1 to 100 weeks. An event can also be set to trigger on the same day of the week e.g. Tuesdays.

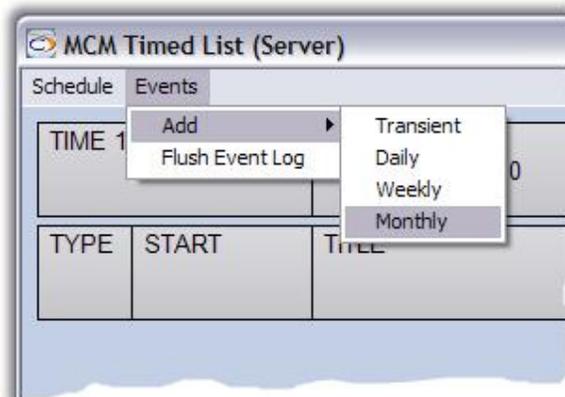
No End Date: No end date the event will occur indefinitely.

End After: Sets the number of occurrences of the event.

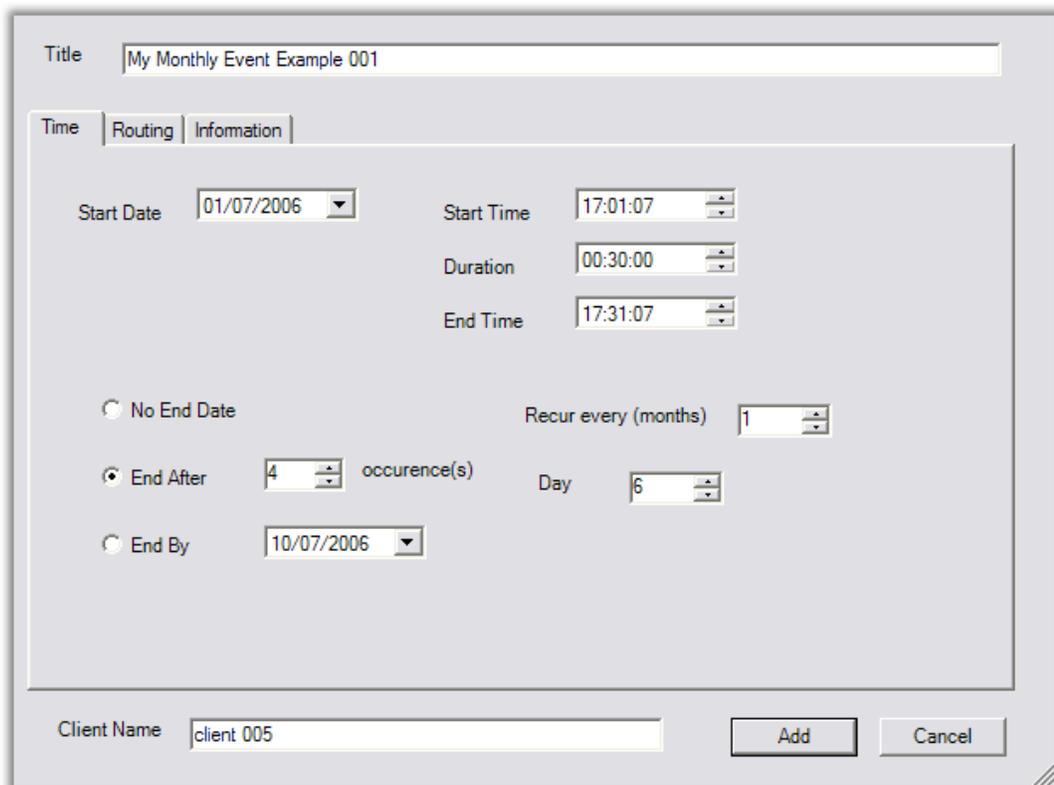
End By: Sets the last possible date for an event. This is not always the last date of the occurrence. For a further explanation refer to Transient Event End By explanation.

Client Name: The client name (Server only).

4.3.4 Adding a Monthly Event



To add a Monthly Event click Events > Add Monthly. This will open the Monthly Events Screen.



The screenshot shows the 'Monthly Events' configuration screen. The 'Title' field contains 'My Monthly Event Example 001'. The 'Time' tab is selected, showing the following fields:

- Start Date: 01/07/2006
- Start Time: 17:01:07
- Duration: 00:30:00
- End Time: 17:31:07
- Recur every (months): 1
- End After: 4 occurrence(s)
- Day: 6
- End By: 10/07/2006

The 'Client Name' field at the bottom contains 'client 005'. There are 'Add' and 'Cancel' buttons at the bottom right.

The example is a monthly event. The Starting date is the 1 July 2006. The starting time is 17:01:07 with duration of 30 minutes giving an end time of 17:31:07. In this case the End After check box has been selected and has been set to occur 4 times on the 6th of each month. So for this example the event will occur at the specified time on 7th July, 7th August, 7th September, and finally on 7th October.

Start Date: The start date for the event. May be entered directly or via the drop down calendar.

Start Time: The starting time for the event in 24-hour format. May be entered directly or by the scroll controls

Duration: This is the duration of the event and can range from 00:00:01 to 23:59:59.

End Time: This is the end time for the event and is entered in 24-Hour clock notation. The minimum setting is 00:00:01 to maximum 23:59:59.

Recur every (months): Sets the interval between recurring events from 1 to 100 months.

Day: An event can also be set to trigger on the same date of the month e.g. 6th of the month

No End Date: No end date the event will occur indefinitely.

End After: Sets the number of occurrences of the event.

End By: Sets the last possible date for an event.

Client Name: The client' name (Server only).

4.3.5 Recognizing the Type of Event Icons

The Timed Events screen uses special symbols to identify the different types of Event. The symbols are shown in the table below.

Transient Event	
Daily Event	
Weekly Event	
Monthly Event	

4.3.6 Timed List Screen Examples.

TIME 16:23:52		Next Switch 21/07/06 16:25:03		Transient Switches 4 Recurring Switches 3			
TYPE	START	CLIENT	SRC	DST	STATUS		
	20/07/06 16:25:03	Requires tieline 3	00:10:00	Matrix 2 M02s0003	Matrix 1 M01d0005		
	20/07/06 16:25:11	Re tieline		Matrix 2 M02s0005	Matrix 1 M01d0005		✓
	20/07/06 16:25:14	Daily Event 1	00:10:00	Matrix 2 M02d0004 123	Matrix 2 M02d0004		✓
	20/07/06 16:25:2	Event 1	00:10:00	Matrix 1 M01s0003 123	Matrix 2 M02d0004		
	20/07/06 16:25:2	Monthly event 1	00:10:00	Matrix 3 M03s0003 123	Matrix 2 M02d0004		✓
	20/07/06 16:25:2	Event 1	00:10:00	Matrix 1 M01s0003 123	Matrix 2 M02d0004		
	20/07/06 16:25:2	Event 1	00:10:00	Matrix 1 M01s0003 123	Matrix 2 M02d0004		
	20/07/06 16:25:2	Event 1	00:10:00	Matrix 1 M01s0003 123	Matrix 2 M02d0004		

Transient event

Brings up diagnostics display (ESC to close)

Daily recurring event

Monthly recurring event

Holding the left mouse button down on an event displays additional information on the event

Safe source: Default

Customer name

Free format text

The additional information displayed when the left mouse is held down on an event is

- Safe source (Default, None or a Specific value for the event)
- Customer information
- Free form text

TIME 16:26:04		Next Switch 21/07/06 16:25:14 Active Switches 5		Transient Switches 0 Recurring Switches 3			
TYPE	START	TITLE	DURATION	CLIENT	SRC	DST	STATUS
	20/07/06 16:25:03	Requires	00:10:00		Matrix 2	Matrix 1	 
		<p>This event had "NONE" set for the safe source; consequently this event is complete and not active</p>					
	20/07/06 16:25:11	tieline 2			M02s0005	Matrix 1 M01d0005	 
	20/07/06 16:25:14	Daily Event 1	00:10:00		Matrix 2 M02d0004 123	Matrix 2 M02d0004 123	 
		<p>The levels to be controlled are displayed below the source and destination</p>					
					Matrix 1 M01s0005 123	Matrix 1 M01d0001 123	 
	20/07/06 16:25:30	Monthly event 1	00:10:00		Matrix 3 M03s0004 1	Matrix 3 M03d0001 1	 
	20/07/06 16:25:45	Requires tieline	00:10:00		Matrix 2 M02s0003 123	Matrix 1 M01d0002 123	 
	20/07/06 16:25:59					Matrix 1 M01s0007 123	 
		<p>This event failed to trigger. The reason is that there are only two tielines from matrix 2 to matrix 1, so this event failed because there was not a tieline available.</p>					
	20/07/06 16:25:14				Matrix 2 M02d0004 123	Matrix 2 M02d0004 123	

TIME 16:26:38		Next Switch 21/07/06 16:25:14 Active Switches 4		Transient Switches 0 Recurring Switches 3			
TYPE	START	TITLE	DURATION	CLIENT	SRC	DST	STATUS
	20/07/06 16:25:03	Requires tieline 3	00:10:00		Matrix 2 M02s0008	Matrix 1 M01d0006	 
	20/07/06 16:25:11	Requires tieline 2	00:10:00		Matrix 2 M02s0005	Matrix 1 M01d0005	 
	20/07/06 16:25:14	Daily Event 1	00:10:00		Matrix 2 M02d0004 123	Matrix 2 M02d0004 123	 
	20/07/06 16:25:24	Transient event 1	00:01:00		Matrix 1 M01s0005 123	Matrix 1 M01d0001 123	 
	20/07/06 16:25:33	Monthly Event 1	00:10:00		Matrix 2 M03s0004 1	Matrix 3 M03d0001 1	 
	20/07/06 16:25:45	Requires tieline			Matrix 2 M02s0003 123	Matrix 1 M01d0002 123	 
	20/07/06 16:25:59	Weekly event 1	00:10:00		Matrix 1 M01s0003 123	Matrix 1 M01d0007 123	 
	20/07/06 16:25:14	Daily event 1	00:10:00		Matrix 2 M02s0004 123	Matrix 2 M02d0004 123	

4 switches are now active.

Successfully started and stopped.

7 events have reached their start time, 1 failed to start, 1 had "none" set for it's safe source, so the status has changed to complete, 1 event has reached it's stop time and successfully set the safe source, 4 events are currently active awaiting for the stop time.

All events have now reached there stop time (none are active). 1 event failed to set its safe source.

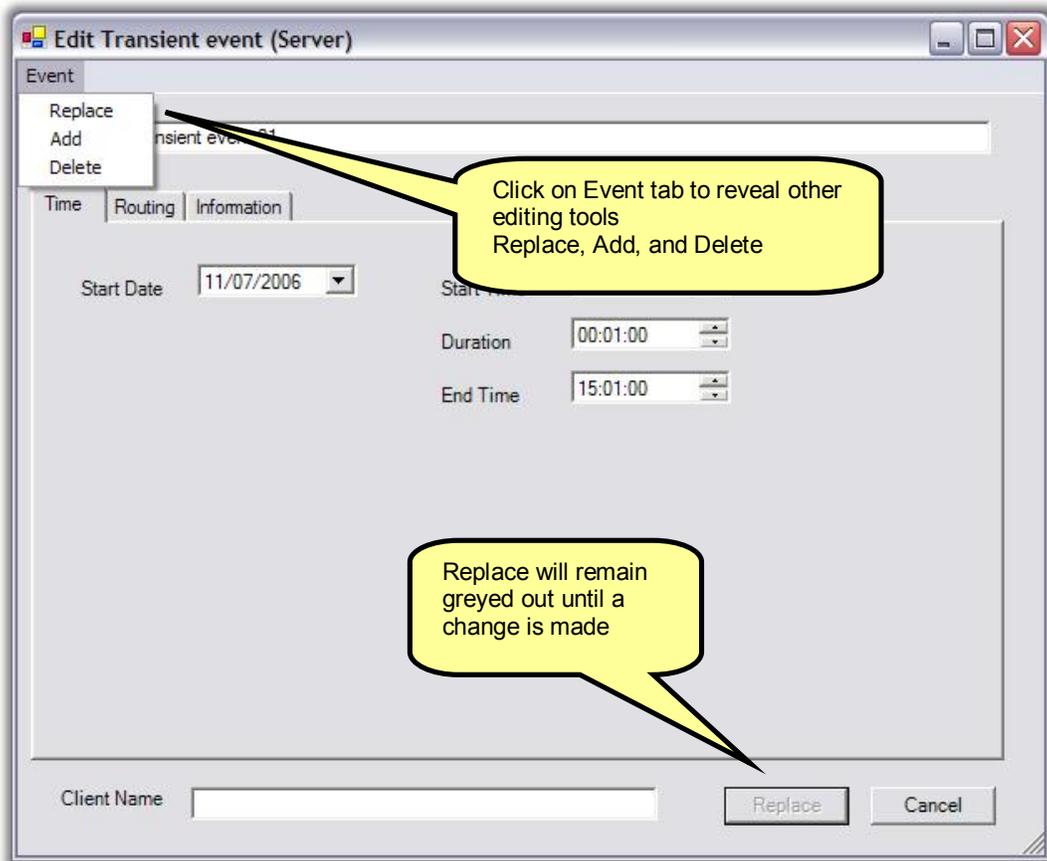
TIME 16:50:40		Next Switch 21/07/06 16:25:14 Active Switches 0		Transient Switches 0 Recurring Switches 3			
TYPE	START	TITLE	DURATION	CLIENT	SRC	DST	STATUS
	20/07/06 16:25:03	Requires tieline 3	00:10:00		Matrix 2 M02s0008 123	Matrix 1 M01d0006 123	 
	20/07/06 16:25:11	Requires tieline 2	00:10:00		Matrix 2 M02s0005	Matrix 1 M01d0005	 
	20/07/06 16:25:14	Daily Event 1	00:10:00		Matrix 2 M02d0004 123	Matrix 2 M02d0004 123	 
	20/07/06 16:25:24	Transient event 1	00:01:00		Matrix 1 M01s0005 123	Matrix 1 M01d0001 123	 
	20/07/06 16:25:30	Monthly event 1	00:10:00		Matrix 3 M03s0004 1	Matrix 3 M03d0001 1	 
	20/07/06 16:25:45	Requires tieline	00:10:00		Matrix 2 M02s0003 123	Matrix 1 M01d0002 123	 
	20/07/06 16:25:59	Weekly event 1	00:10:00		Matrix 1 M01s0007 123	Matrix 1 M01d0007 123	 
	20/07/06 16:25:14	Daily event 1			M02s0004 123	Matrix 2 M02d0004 123	

Failed to set its safe source

The monthly event failed to set the safe source. The reason is it is configured to use the default safe source, which is matrix 1 source 1. However the destination is on matrix 3 and there was no available tielines from matrix 1 to matrix 3.

4.3.7 Editing events

Events can be edited by right clicking on the event you require to edit



Replace: Will update the event details with your changes.

Add: Creates a new copy of the event with any changes made.

Delete: Deletes the event.



4.3.8 CSV Files

Comma Separated Values (CSV) type files may be imported and exported.

The comma-separated values (or CSV) file format is a data format that has fields separated by a comma and records separated by new lines. Fields, that contains a comma, new line, or a double quote character, must be enclosed in double quotes.

CSV files may be imported into most word processing and spreadsheet programs. For example, opening the file in MS Word will show the text nature of the file, and while it can be edited, it's not particularly intuitive (see the screenshot).

```
Event Type, Start Date, Start Time, Duration, Title, Client,
Destination Matrix, Destination, Source Matrix, Source, Safe Source
Matrix, Safe Source Source, Levels, Customer, Text, Range Type, No of
occurances, End Date, Every No (days/weeks/months), Day
(weekly/monthly)

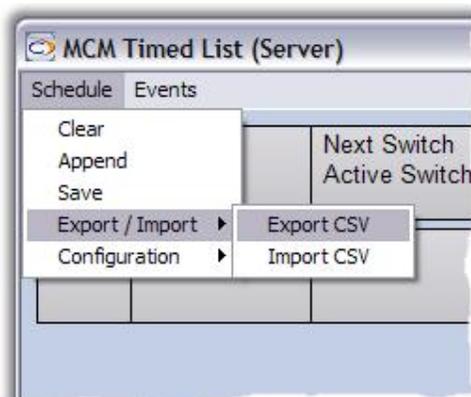
Transient, 12/07/2006, 16:00:00, 00:01:00, Transient event 01, , 1, 1,
1, 1, Default, , 12345
Daily, 12/07/2006, 16:01:00, 00:10:00, daily event 02, , 1, 2, 1, 1,
1, 1, 12345
Monthly, 01/07/2006, 16:02:09, 00:30:00, monthly event, , 1, 4, 1, 1,
Default, , 12345
Weekly, 09/07/2007, 16:01:00, 02:30:00, weekly event, , 1, 3, 1, 1,
Default, , 12345
```

Opening the file in MS Excel arranges the data fields and records into a more simple and user-friendly spreadsheet view as shown in the cropped screenshot below. The advantage of using external packages is that it allows for lots of data to be typed in very quickly, although error checking needs to be extra careful. Also when saving the file, double-check that the file has a standard .csv extension.

	A	B	C	D	E	F	G	H
1	Event Type	Start Date	Start Time	Duration	Title	Client	Destinatio	Destinatio
2								
3	Transient	12/07/200	16:00:00	00:01:00	Transient		1	1
4	Daily	12/07/200	16:01:00	00:10:00	daily ever		1	2
5	Monthly	01/07/200	16:02:09	00:30:00	monthly e		1	4
6	Weekly	09/07/200	16:01:00	02:30:00	weekly ev		1	
7								

Exporting a CSV file

To export a CSV file click the Schedule tab at the top left of the screen. From the drop-down menu select Export CSV then follow the usual save window.



4.3.8.1 Importing a CSV file

To import a CSV file follow the path: -

Schedule > Export/Import > Import CSV

Importing a CSV file does not replace current data but adds or appends to it. To replace current data first clear the schedule before importing the CSV file.

Notepad, most word processors and spreadsheet programs e.g. Excel will edit CSV files. When using an external editing program be sure to save as a CSV file and not the native file format of the application you are using.

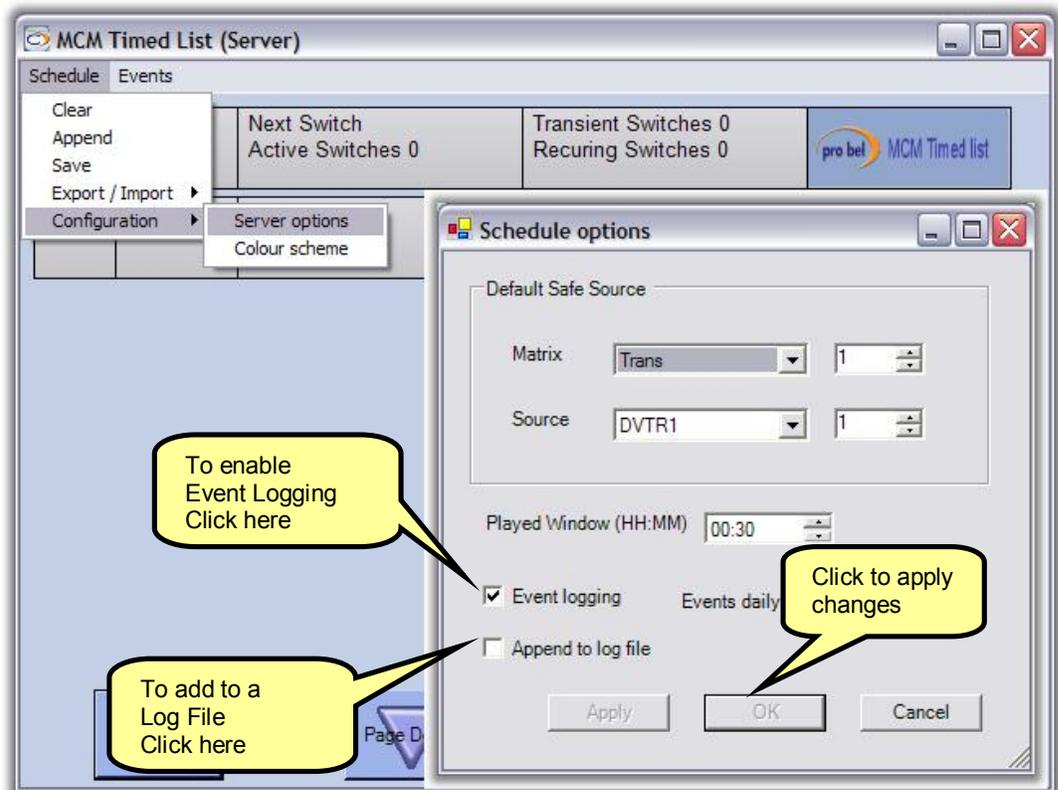
4.3.9 Events Logging

An Event's status and progress can be continuously monitored and logged. The data can then be accessed and stored as a file by accessing the server options menu.

Schedule Options Menu.

Click on Schedule Tab at the top left of the screen, select Configuration, then Server Options. This will open the Schedule Option screen.

Schedule > Configuration > Server Options > Schedule options



The first time the Event Logging option is checked, you will be asked to set up a log file. Thereafter when you check the Append to log file, logging info will be added to the log file. The name of the log file will then appear on the screen.



The following is an example of the log file for 5 daily events. The table shows a summary of the events to assist with the log file.

Event Title	Start Time	End Time	Duration HH:MM
D1	16:45	16:55	00:10
D2	16:46	16:55	00:09
D3	16:47	16:56	00:09
D5	16:48	16:51	00:03
D4	16:48:30	16:50:30	00:02



The Contents of Events Daily 01.log. The log file stores date, time, and routing information.

```

24/07/2006 16:45:00 Starting Daily Event "D1", Client ""
    Created 24/07/2006 16:35:50
    Source MCR Router (0) BARS (0), Destination MCR Router (0) MON 1
    (0), Levels 12345
    Routed successfully

24/07/2006 16:46:00 Starting Daily Event "D2", Client ""
    Created 24/07/2006 16:36:53
    Source MCR Router (0) BARS (0), Destination MCR Router (0) MON 2
    (1), Levels 12345
    Routed successfully

24/07/2006 16:47:00 Starting Daily Event "D3", Client ""
    Created 24/07/2006 16:38:12
    Source MCR Router (0) BARS (0), Destination MCR Router (0) MON 3
    (2), Levels 12345
    Routed successfully

24/07/2006 16:48:00 Starting Daily Event "D5", Client ""
    Created 24/07/2006 16:40:14
    Source MCR Router (0) BARS (0), Destination MCR Router (0) MON 6
    (5), Levels 12345
  
```



Routed successfully

24/07/2006 16:48:30 Starting Daily Event "D4", Client ""

Created 24/07/2006 16:39:15

Source MCR Router (0) BARS (0), Destination MCR Router (0) MON 5 (4), Levels 12345

Routed successfully

24/07/2006 16:50:30 Stopping Daily Event "D4", Client ""

Safe Source Default, Destination MCR Router (0) MON 5 (4)

Routed successfully

24/07/2006 16:51:00 Stopping Daily Event "D5", Client ""

Safe Source Default, Destination MCR Router (0) MON 6 (5)

Routed successfully

24/07/2006 16:55:00 Stopping Daily Event "D1", Client ""

Safe Source Default, Destination MCR Router (0) MON 1 (0)

Routed successfully

24/07/2006 16:55:00 Stopping Daily Event "D2", Client ""

Safe Source Default, Destination MCR Router (0) MON 2 (1)

Routed successfully

24/07/2006 16:56:00 Stopping Daily Event "D3", Client ""

Safe Source Default, Destination MCR Router (0) MON 3 (2)

Routed successfully

5 MCM Timed List Client

5.1 Introduction

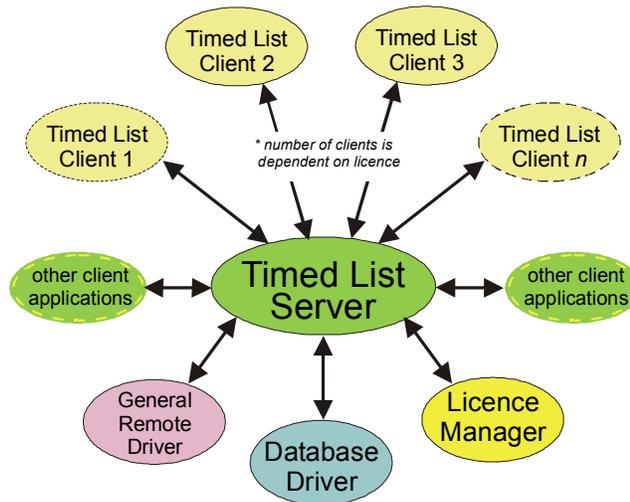
The Timed List Client application works in association with the Timed List Server, which of course being a server must be started first. As the screens, menus, and terminology are common for the server and client applications please refer to the timed list server description for detail. Users may purchase multi-client licences according to their project needs.

MCM Timed List Client Licences

PR2-15T1-002 a 30-day evaluation or trial licence for 2 clients

PR2-15F1-002 a full licence for 2 clients

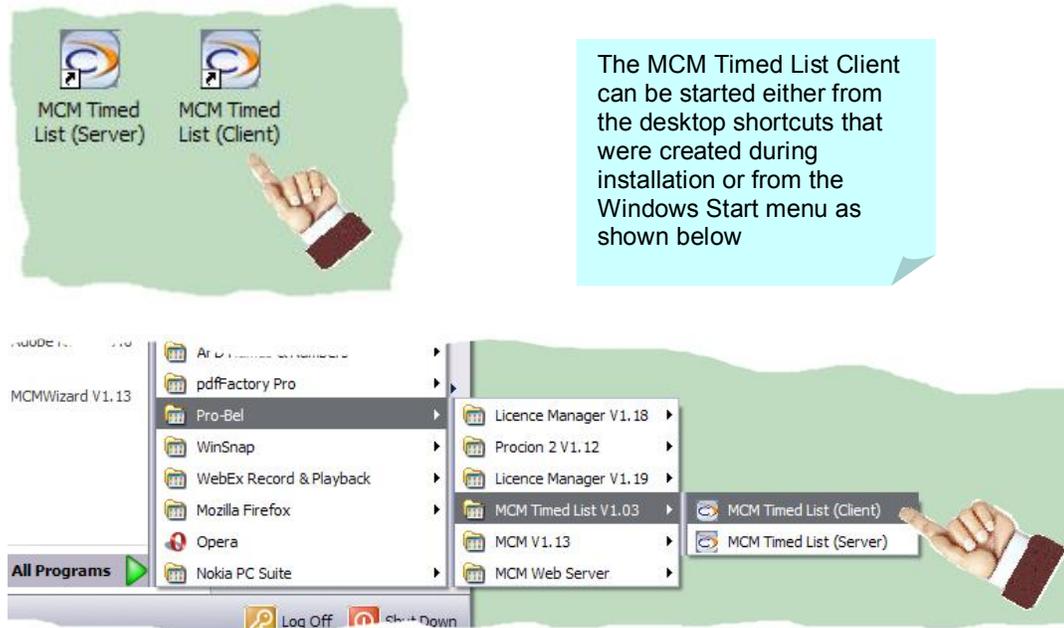
**Note that the last 3-digits indicates the number of clients*



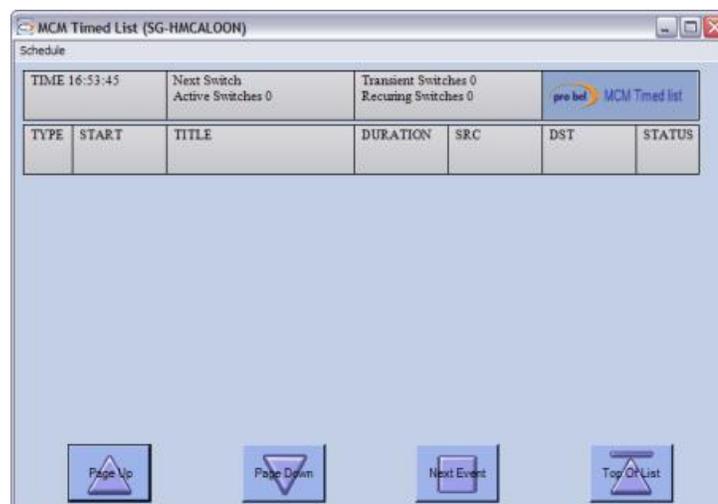
Starting the MCM Timed List Client establishes communications with the licence Manager, Database Driver, General Remote Driver, and the Timed List Server.

5.2 Starting the MCM Timed List Client

The MCM Timed List Client can be started either from the desktop shortcuts that were created during installation or from the Start menu

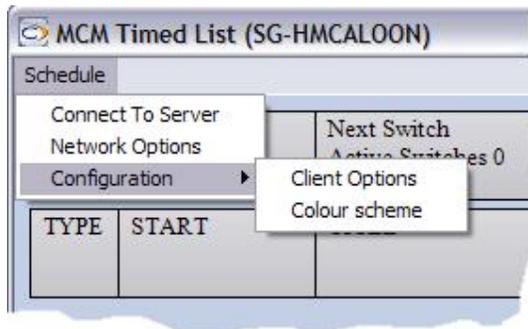


5.2.1 The Start-Up screen



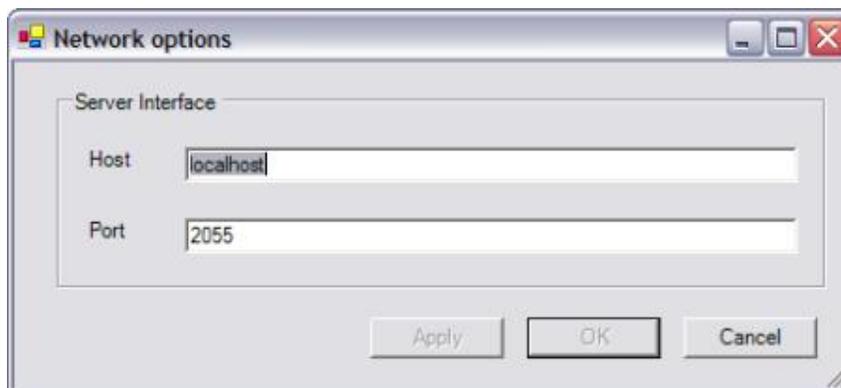
This is the Start-Up Screen. Clicking on the Schedule tab will offer several menu items. The menu structure is shown below.

5.3 Schedule Menu



5.3.1 Network Options

The Network Options screen is shown below, and identifies the Server Interface Host and Port.



5.3.2 Configuration Menu

The Configuration Menu has two sub menus: the Client Options and Colour Scheme.

5.3.2.1 The Clients Option Menu

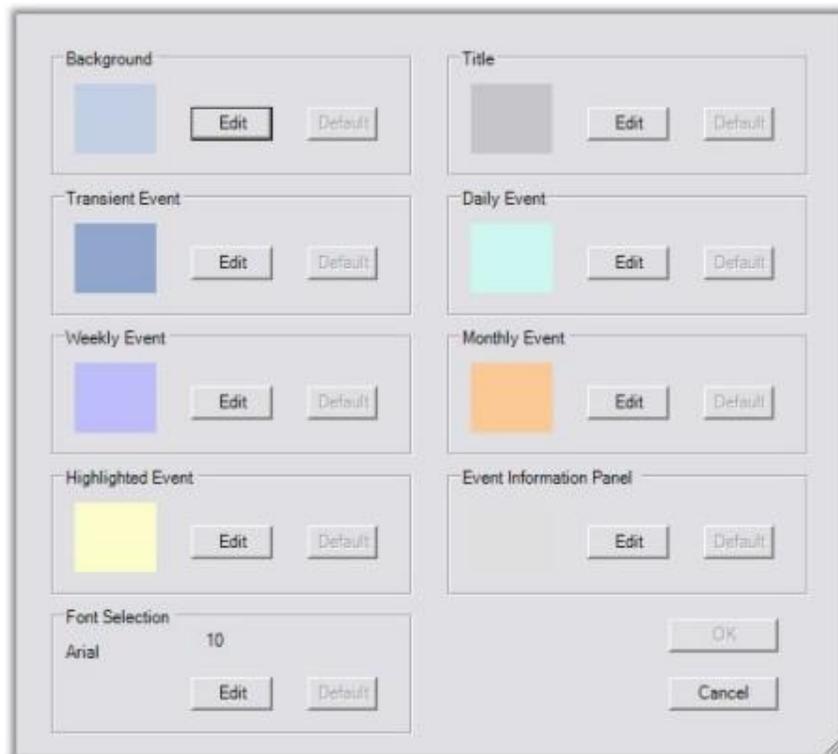
The Client Options Screen is shown below. It allows the client name to be entered.



5.3.2.2 The Colour Scheme Menu

The Colour Scheme menu allows the user to customise the colour of the screens and the font and font size used. This may be useful from a company livery or Accessibility viewpoint.

The Colour Scheme menu is shown below. The screen is the same as the server menu. Please refer to section 4.1.2 for further details.

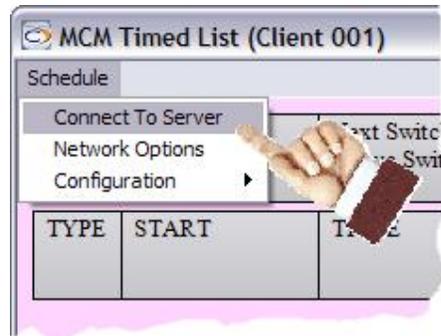


As well as changing the colour scheme this menu allows the Font and Font Size to be changed. Clicking the "Default" button can reverse all the changes.

5.4 Linking to the Server

Assuming that the Network Options: Host and Port have been defined, we can now connect to the server.

5.4.1 Connecting to the Server



Click to
Connect to Server

From the Schedule Menu, click "Connect to Server". If this is successful, you will then need to log-in.

5.4.2 Log In

The Schedule Menu will have updated allowing two possible selections: Log In and Configuration. Select "Log In".



After the connection
is established to the
server, click on
"Log In"

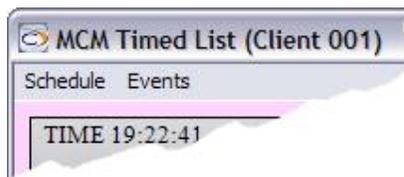
After the connection is established, a Login Screen will appear. Companies operate different IT rules; logging onto a network usually requires some level of permission. If in doubt consult your network administrator.



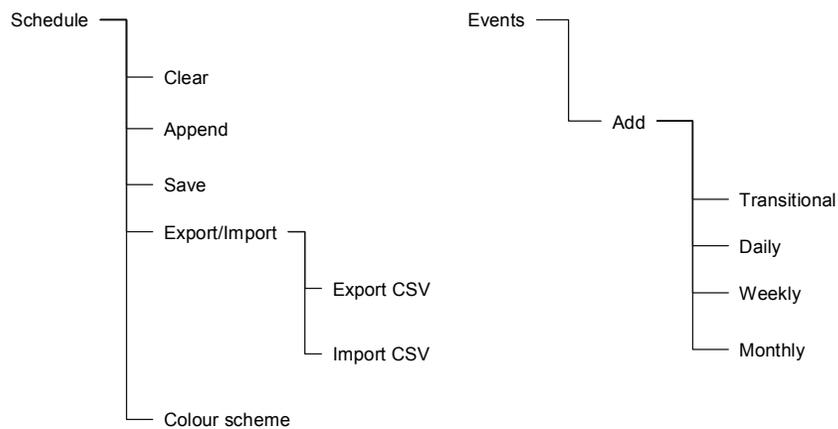
The Login Box, requires a User name and a Password

The MCM Timed List Client uses contextual menus. After log-on is completed the menu tabs and their content will change.

5.4.3 Events Menu



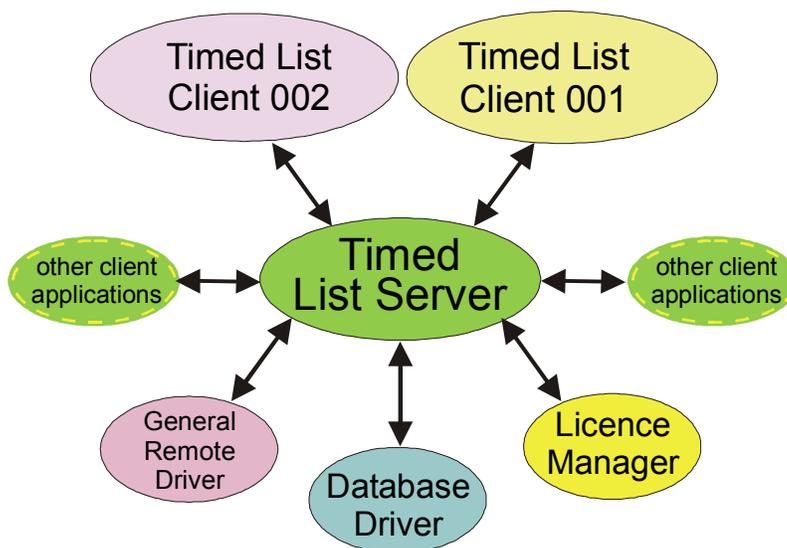
After Log-on has been completed, the Events Menu tab will be added. The Schedule menu items will also change. A tree diagram of the Schedule and Events tabs is shown below



The menus contain all the necessary editing, file management, and importing/exporting tools. A detailed discussion of these tools can be found in the server section.

5.4.4 Example

In this example, there are two MCM Timed List Clients connected to the MCM Timed List Server. The clients have been named Client 001 and 002. There are three events in total: one entered directly into the server screen and one entered into each client 001 and 002.



Server/Client	Event Title
Server	Network 001
Client 001	Scotland 002
Client 002	Wales 003

The screenshot below shows the server and two clients: Client 001 and Client 002. The server shows the combined entries for the system.



The screenshot displays three overlapping windows of the MCM Timed List application. The top window is the 'Server' view, the middle is 'Client 001', and the bottom is 'Client 002'. Each window shows a summary bar at the top with statistics and a table of events below.

TIME	START	TITLE	DURATION	CLIENT	SRC	DST	STATUS
12:58:15							
		Next Switch 07/09/2006 20:00:00		Transient Switches 3		Active Switches 0	
				Recurring Switches 0			
	07/09/2006 20:00:00	Netweok 001	00:30:00		HALO OMN1 1	HALO PGM 1	✓
	07/09/2006 20:30:00	Scotland 002	00:30:00	Client 001	HALO OMN1 1	HALO PGM 1	✓
	07/09/2006 21:00:00	Wales 003	00:30:00	Client 002	Trans DVTR1 1234	Trans IN OP 01 1234	✓

The Server screen has an additional client column showing the name of the client originating the entry. The entries can be edited on the server screen or the originating client screen. Client screens can only view their own entries.

Events are entered via the Events tab menu. The process is identical to the server application. Please refer to the server section for further details.