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# 1 Introduction

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## 1.1 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.

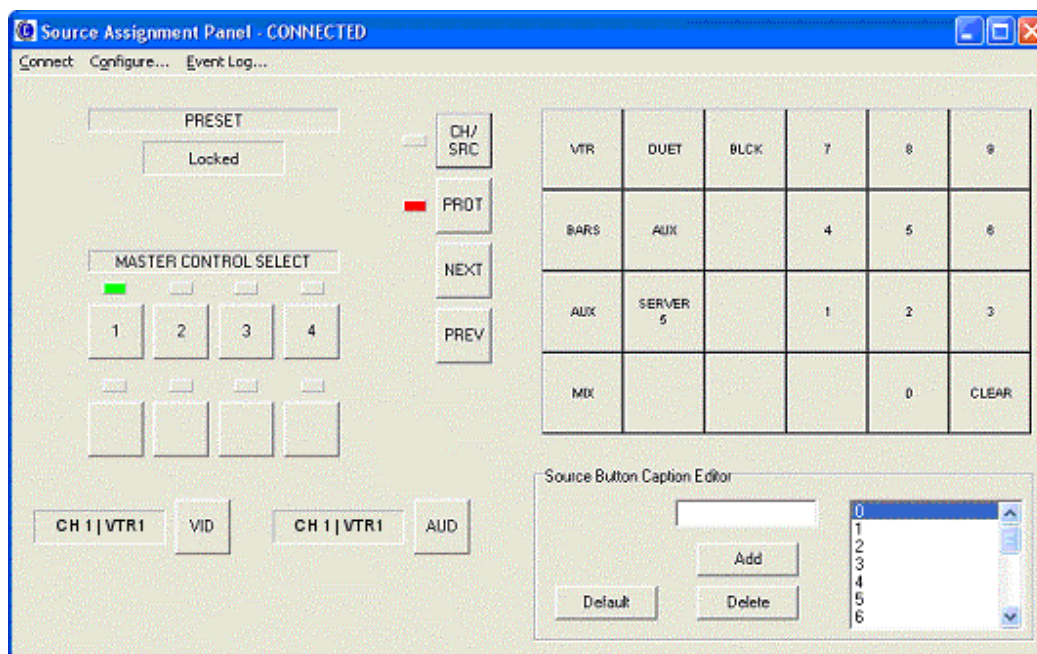
The TX220, TX320, TX420 and TX520 mixers all have 20 channels on their Preset (PST) and Programme (PGM) busses, and 24 channels on the two Auxiliary (AUX1 and AUX2) busses. Channels 1 to 20 have the same video and audio assignments available across all 4 busses, and channels 21 to 24 are available only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

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 has become desirable and convenient to provide a 'soft' version of the same panel.

## 1.2 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.



Full operating instructions are given in Section 3 of this manual.

## 1.3 The Aurora database

A Source Assignment Panel, of either type, will not function if it does not exist in the Aurora database. Not only must it exist as a panel type, it must have all required Sources entered as key-sequences on the appropriate keypad. As a security measure, the Source Assignment Panel keypad cannot be programmed with 'Next' and 'Previous' buttons like a standard dial-up keypad, which means that only sources that have a specified key-sequence may be pre-selected and consequently assigned.

If the user is required to assign sources that have no current key-sequence, then they must edit both the Aurora database and the Soft SAP keypad. This function is only available to users who can access the on-line Aurora Editor, and is explained in Section 4 of this manual.

### 1.4 The 'Babel Fish'



Babel Fish (with apologies to 'Hitchhikers Guide to the Galaxy') is the name given to Pro-Bels new protocol translator product. The unit houses a PC-on-a-chip, is fitted with two serial ports and one Ethernet port. An external power supply unit is used, or two may be connected for redundant operation. Its flash memory may be loaded with one of a variety of translator programmes by Pro-Bel, which is then indicated with a label on the unit. The Babel Fish required for use with the Soft SAP must be loaded with 'SAPSERVER'.

### 1.5 System requirements

The TX Soft SAP requires a Pentium PC 233Mhz, or better, running the Microsoft Windows 9X, NT, 2000 or XP operating system. The PC must be fitted with a 10/100 Base T Ethernet network adaptor card, configured with TCP/IP. A Pro-Bel 'Babel Fish' is also required, running the 'SAP Server' software. Ideally, both the PC and Babel Fish will be connected to the same Local Area Network, although the two may be directly connected together using their Ethernet ports and a crossover patch lead. COM port 1 of the Babel Fish must connect to the Aurora multi-drop device port for which the Source Assign Panel is configured. **The Babel Fish is the only device which may be connected to this port.**

In summary, the following is required:

- PC running Windows 9X/NT/2000/XP connected to a LAN using TCP/IP
- Babel Fish running SAP Server, connected to the same LAN
- Exclusive use of an Aurora device port, connected to Babel Fish COM 1



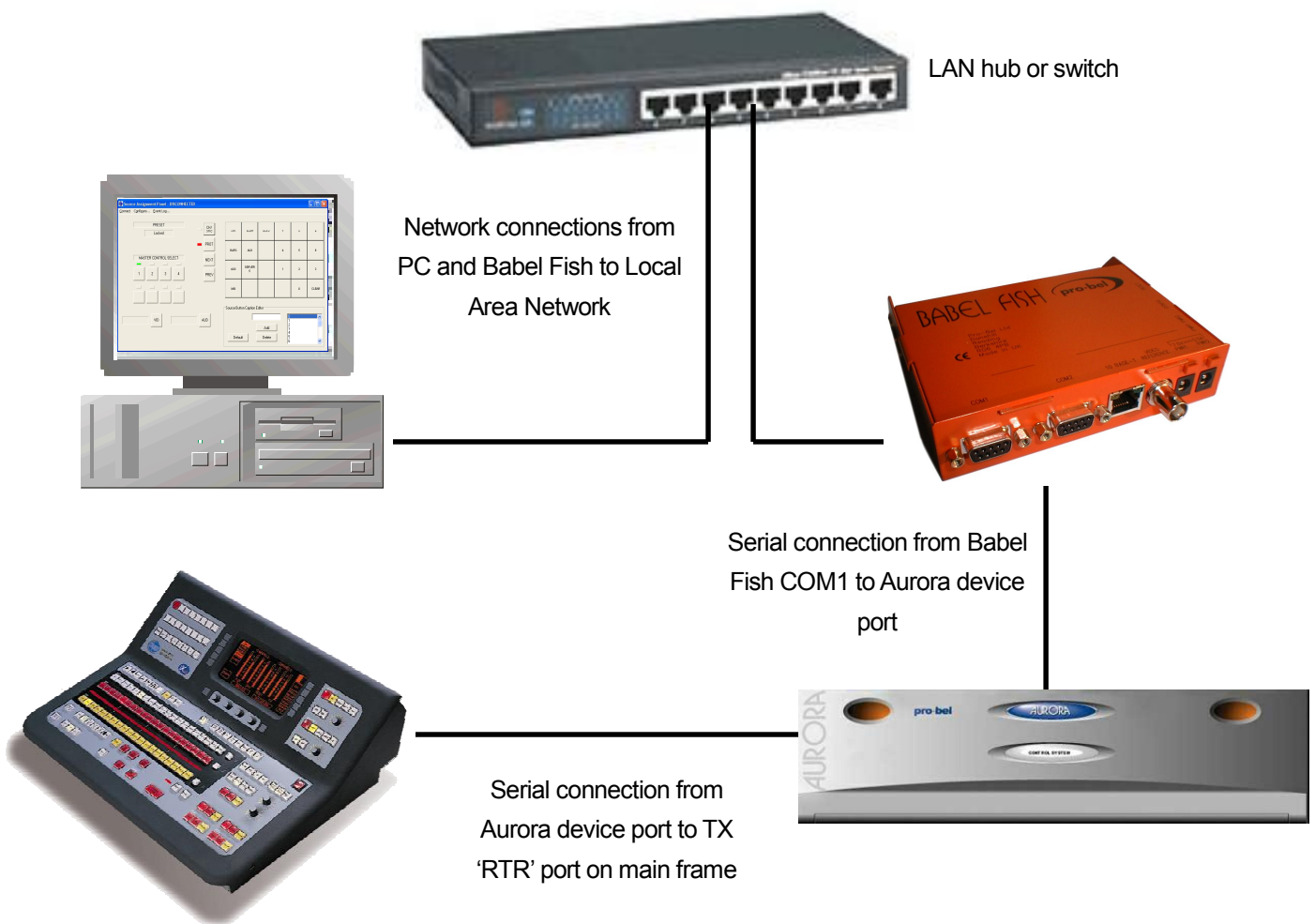
### 1.6 Automation and 'auto-assignment'

If the users installation includes a Pro-Bel Automation system, or any third party automation that interfaces with the Pro-Bel TX Master Control mixer, a feature known as 'auto-assignment' will be active. This feature ensures that any source requested by the automation system will be automatically assigned to a master control channel, giving the operator full access to the source. Sources are auto-assigned to a spare channel, that is, one that is not being used by any of the mixer busses, starting at channel 20. If channel 20 is in use, the source is assigned to channel 19, and so on. At its limit, video and audio sources may have to be auto-assigned to channels 13 and 14, but only if both Auxiliary busses and the PGM bus have separate video and audio sources already assigned. Auto-assigned sources will override manually assigned sources, which may then require the user to re-assign sources using the Source Assign Panel, if operation requirements change.

## 2 Installation and configuration

There are both hardware and software components to be installed and configured for this product. It is also essential that the host Aurora controller has a Source Assign Panel and Master Control panel configured in its database. If the Soft SAP is replacing an existing hardware SAP, this configuration will already exist. If, on the other hand, this is a new installation, Section 4 of this guide describes the process of configuring a SAP in the Aurora database.

### 2.1 Connecting the system



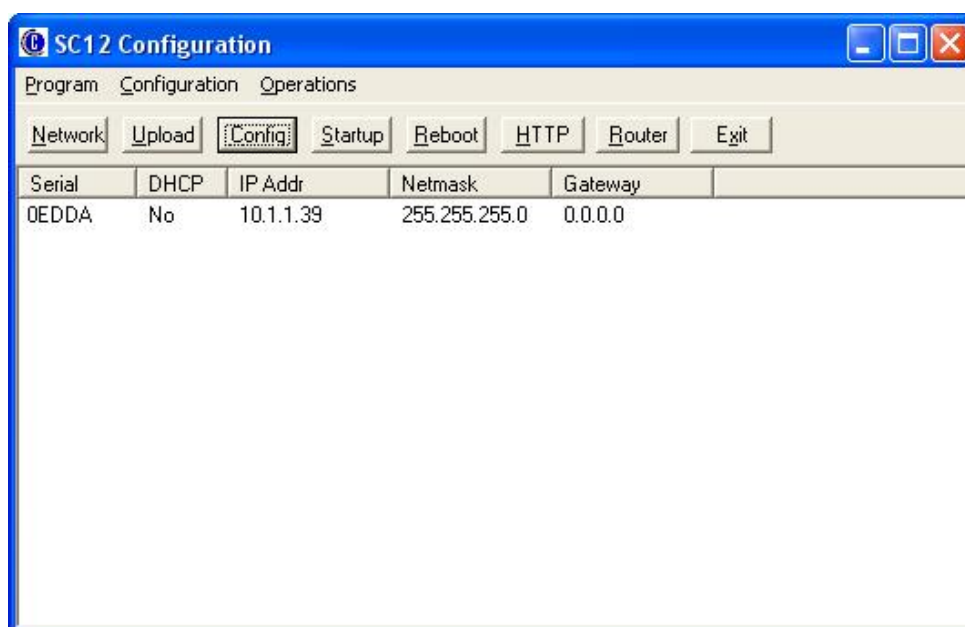
Both serial cables are connected pin-to-pin and terminated with a 9 pin D type plug on each end.

## 2.2 Installing the software

The TX Soft SAP software will be supplied on a CD ROM. The user must locate the 'Setup.exe' file in the root directory of the CD ROM using Windows Explorer, and double click on the file to execute it. When the software has finished installing, a shortcut will be available on the PC Desktop and also in the Pro-Bel Program group from the Start menu. Before the SAP software can be used, the SAP Server must be configured, as follows:

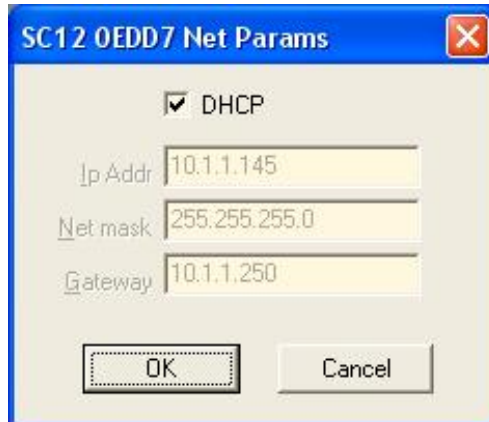
### 2.2.1 Configuring SAP Server

Make sure the Babel Fish is powered up and connected to the same Local Area Network as the PC. Using Windows Explorer, locate the Server Configuration software, which is a file called 'SC12.exe' in 'Program Files\Pro-Bel\Soft Source Assign Panel', and double click on it to execute the program. The Babel Fish should be broadcasting UDP messages on the LAN, and will be found by the Configuration program, as in the screen shot shown here:



By default, the Babel Fish is configured to look for a DHCP Server on the network and request an IP address, if no DHCP Server is found the IP address will appear as 1.1.1.1. If this happens, the user must configure a valid fixed IP address by highlighting the required device (if there are more than one), and clicking on the 'Network' button, the following window will appear:

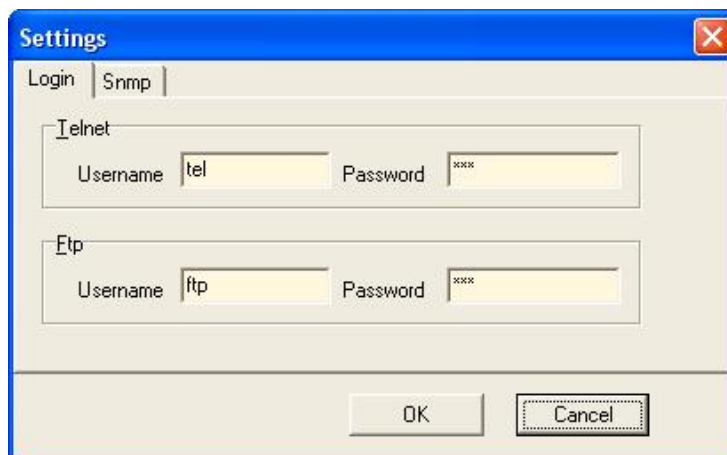




The user must now uncheck the DHCP box and type in a valid IP address and Net mask, a Gateway address is not required. If in any doubt about what address to use, the user must consult their Network Administrator. Click OK, and that the new address appears in the main SC12 application window.

The user can force the Babel Fish to reboot at any time by clicking on the 'Reboot' button.

If any problems are encountered up to this stage, the user should check the application settings by selecting Program\Options from the toolbar. The Windows should appear like this:



The passwords for 'tel' and 'ftp' are identical to the usernames

The user can also check the Babel Fish startup menu by clicking on 'Startup' from the toolbar. This shows the list of programs automatically started when the Babel Fish is powered up, and must contain a line 'SAPSERVE xxx', where xxx is the Port number which must match that configured in the Soft SAP application, and defaults to 3005.

This completes configuration of the SAP Server.

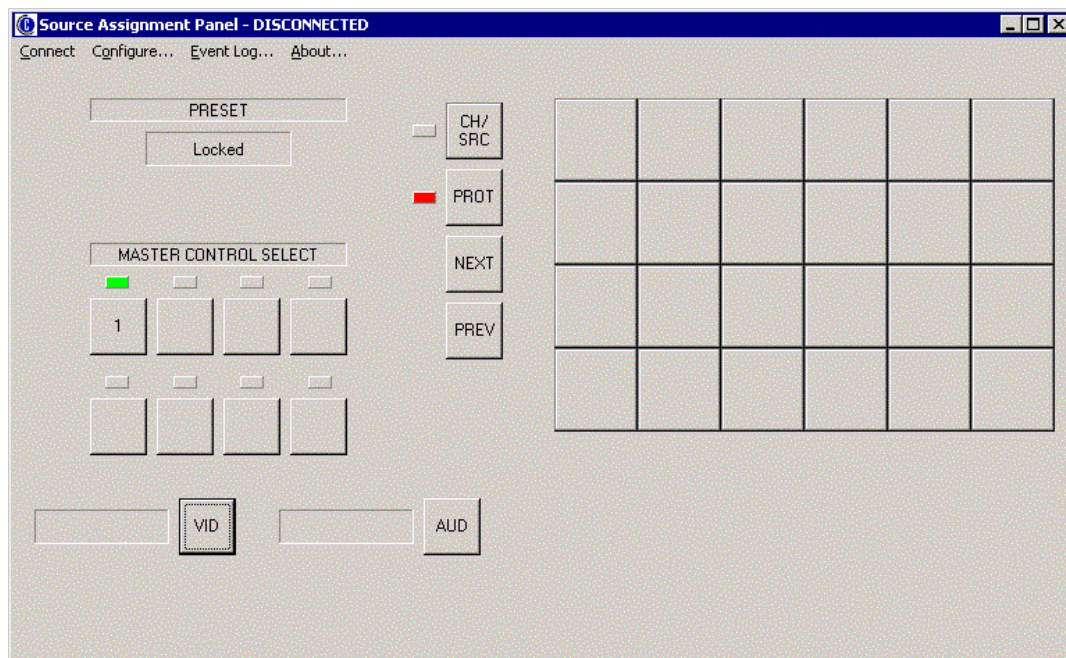


## TX soft source assign panel

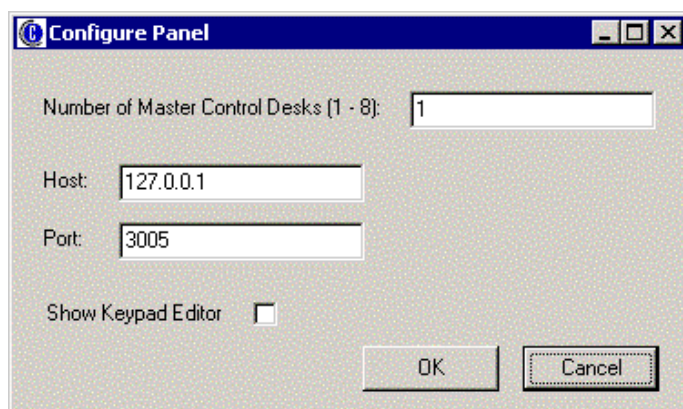


### 2.2.2 Configuring the Soft SAP

When the Babel Fish SAP Server is running, the user can launch the Soft SAP application on the PC. This can be done from the desktop shortcut, or from the Pro-Bel program group from the Start menu. The following window will appear:

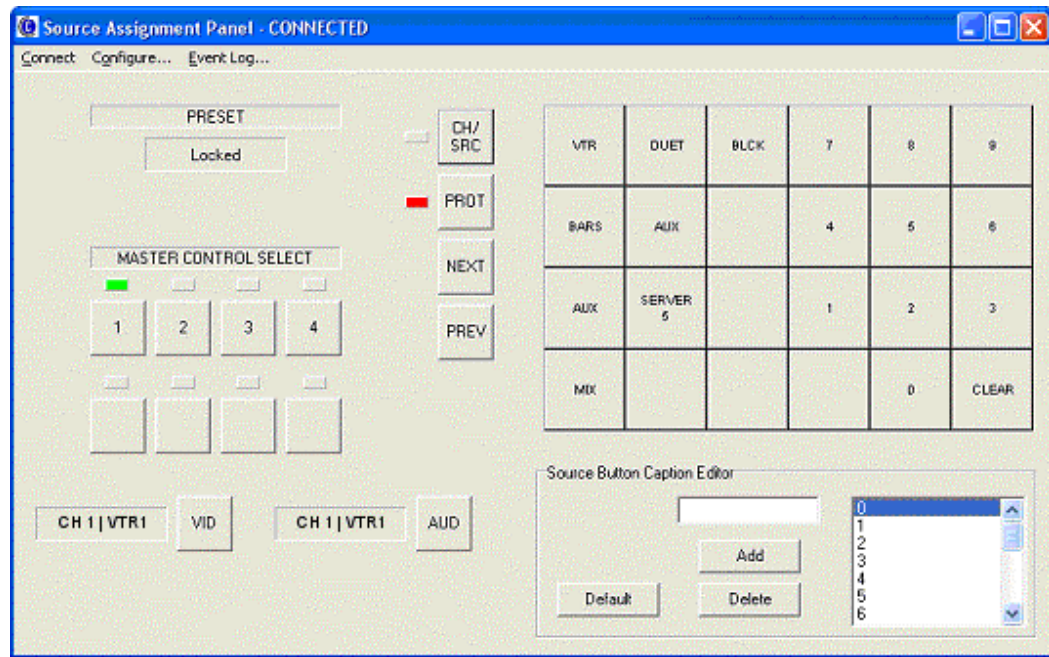


The user must now configure the application by clicking on 'Configure' from the tool bar. The following will appear:



The user must type in the IP address of the Babel Fish SAP Server in the 'Host' window. The 'Number of Master Control Desks' relates to the number of Pro-Bel TX series Master Control mixers that are connected to the host Aurora system. If this is the first time the application has been used, check the 'Show Keypad Editor' box. Do not change the 'Port' number. Click OK.

From the main application window, click on 'Connect' from the toolbar. The application will attempt to connect to the Aurora controller via the Babel Fish. If this is successful, the window will appear as follows:



Although if this is the first time the application has been run, no keypad labels will exist.

## 2.2.3 Editing the keypad

The Soft SAP keypad will require editing when the application is first installed, or if new sources are added to the Aurora database and consequently need assigning to the TX System. The Soft SAP keypad must match the SAP keypad configured in the Aurora database, and therefore the user must have access to that database. Section 4 of this manual describes how the SAP is configured in the Aurora database.

Keypad button captions are created by 'dragging and dropping' the required names from the list displayed in the caption editor, shown here:

## TX soft source assign panel

A screenshot of the TX soft source assign panel. It features a 4x6 grid of buttons. The first row contains 'VTR', 'DUET', 'BLCK', '7', '8', and '9'. The second row contains 'BARS', 'AUX', an empty space, '4', '5', and '6'. The third row contains 'AUX', 'SERVER 5', an empty space, '1', '2', and '3'. The fourth row contains 'MX', an empty space, an empty space, an empty space, '0', and 'CLEAR'. Below the grid is a 'Source Button Caption Editor' window. This window has a text input field, an 'Add' button, a 'Delete' button, and a 'Default' button. To the right of these buttons is a list box containing the numbers 0 through 6, with '0' currently selected.

If the caption editor is not visible it is because the appropriate box has not been checked in the configuration setting, see Section 2.2.2 of this manual.

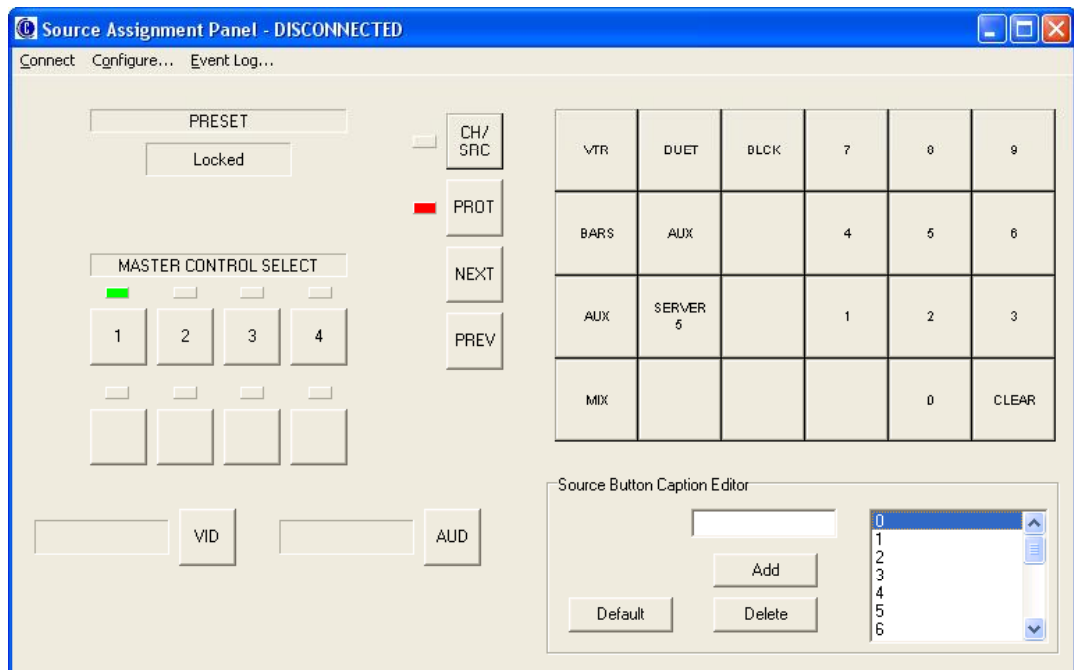
If the required caption does not exist in the list, it can be typed in the box, and the 'Add' button clicked, it will then appear in the list. Similarly, captions can be deleted from the list by highlighting them and clicking on 'Delete'.

If a caption is dropped onto a button where a caption already exists, the original caption will move to the bottom half of the button, and the new caption will occupy the top half.

Clicking on 'Default' will clear all captions and assign a standard keypad and 'Clear' button only, to which new captions may be added.

## 3 Operating the Soft SAP

### 3.1 Assigning sources



To assign sources to the channels of a Master Control mixer, proceed as follows:

- Click on the PROT button to unlock the panel (red indicator off)
- If more than one Master Control mixer exists in the system, select the appropriate MASTER CONTROL SELECT button
- Check that the CH/SRC is in Channel mode (red indicator off)
- Click on the number keypad to call up a channel number
- the NEXT or PREVIOUS buttons may be used to select any other channel number
- The video and audio sources, if any, assigned to that channel will appear as follows:



## TX soft source assign panel



- Click on the CH/SRC button to put it into Source mode (red indicator on)
- 'dial-in' the sequence for the required source on the keypad (e.g. VTR then 1)
- check that the required source appears in the PRESET display
- click on the VID and AUD take buttons to assign the sources
- the NEXT or PREVIOUS buttons may be used to select the next channel number to be assigned

## 4 Editing the Aurora database

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### 4.1 Adding a TX system to Aurora

If the users Aurora system does not include a TX Master Control mixer, it must be added using the Aurora Editor, as follows:

Each Master Control system requires the following components adding to the database:

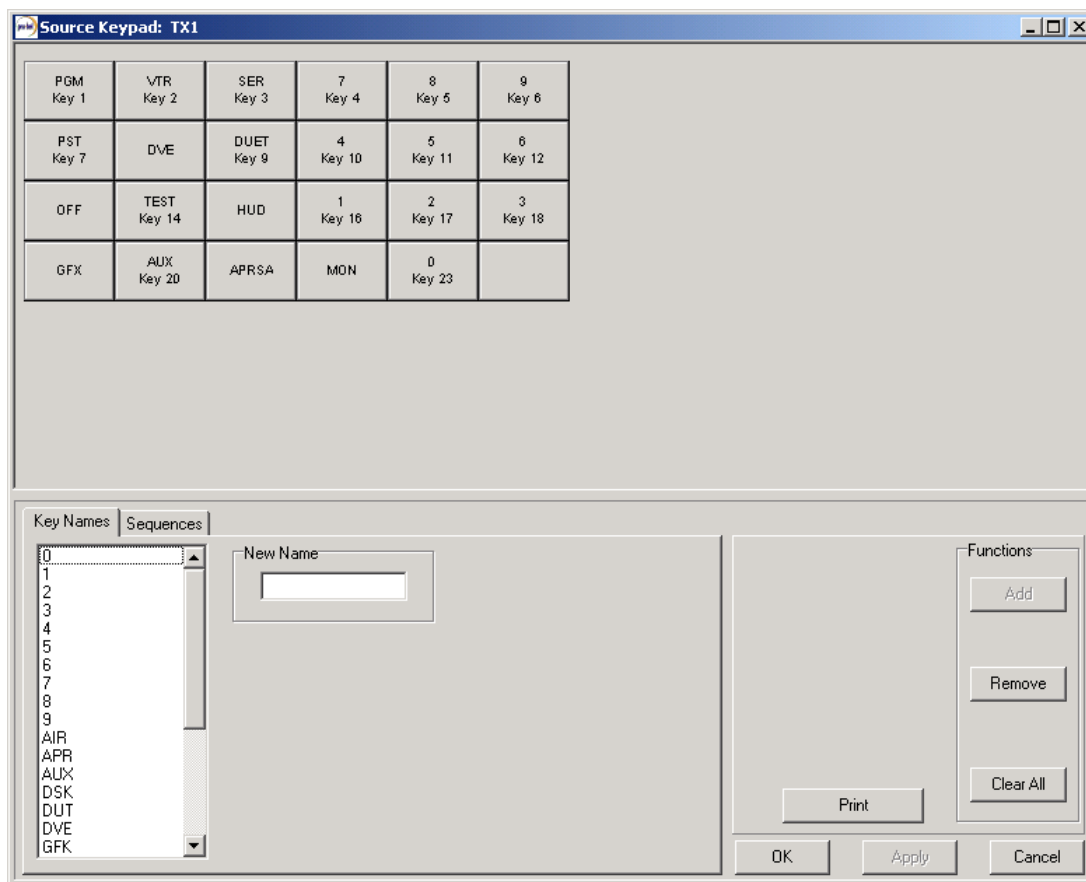
- Destination Associations for the master control video and audio inputs:
  - 'PGM video' (video only association)
  - 'PST video' (video only association)
  - 'AUX1 video' (video only association)
  - 'AUX2 video' (video only association) not required for TX310, 410, 510
  - 'PGM audio' (audio only association)
  - 'PST audio' (audio only association)
  - 'AUX1 audio' (audio only association)
  - 'AUX2 audio' (audio only association) not required for TX310, 410, 510
- A keypad for a 'master control' type panel
- Key names and sequences on that keypad for all required sources
- Four control panels of type 'master control' configured as follows:
  - 'Assign video', configured for suite number 1
  - 'Assign audio', configured for suite number 2
  - 'TX video', configured for suite number 1, controlling the video only destination associations
  - 'TX audio', configured for suite number 2, controlling the audio only destination associations
- The 'Assign' panels are connected to an unused device port on positions 1 (video) and 2 (audio)
- The 'TX' panels are connected to an unused device port on positions 1 (video) and 2 (audio)
- **Note:** The 'Assign' device port is the port connected to the Babel Fish and the 'TX' device port is the port connected to the TX control frame. **Neither of these ports can be used for any other purpose.**

## 4.2 Adding new sources

Sources can only be assigned to a TX series Master Control mixer if they can be 'dialled up' on the Source Assign Panel. If a 'key-sequence' does not exist for the required source, then it must be added to the source assign keypad in the Aurora database, and subsequently to the Soft SAP keypad.

The procedure for adding sources to the Source Assign Keypad in the Aurora database editor is as follows:

Open up the keypad editor window:



PGM Key 1	VTR Key 2	SER Key 3	7 Key 4	8 Key 5	9 Key 6
PST Key 7	DVE	DUET Key 9	4 Key 10	5 Key 11	6 Key 12
OFF	TEST Key 14	HUD	1 Key 16	2 Key 17	3 Key 18
GFX	AUX Key 20	APRSA	MON	0 Key 23	

Key Names | Sequences

0  
1  
2  
3  
4  
5  
6  
7  
8  
9  
AIR  
APR  
AUX  
DSK  
DUT  
DVE  
GFK

New Name

Functions

Add

Remove

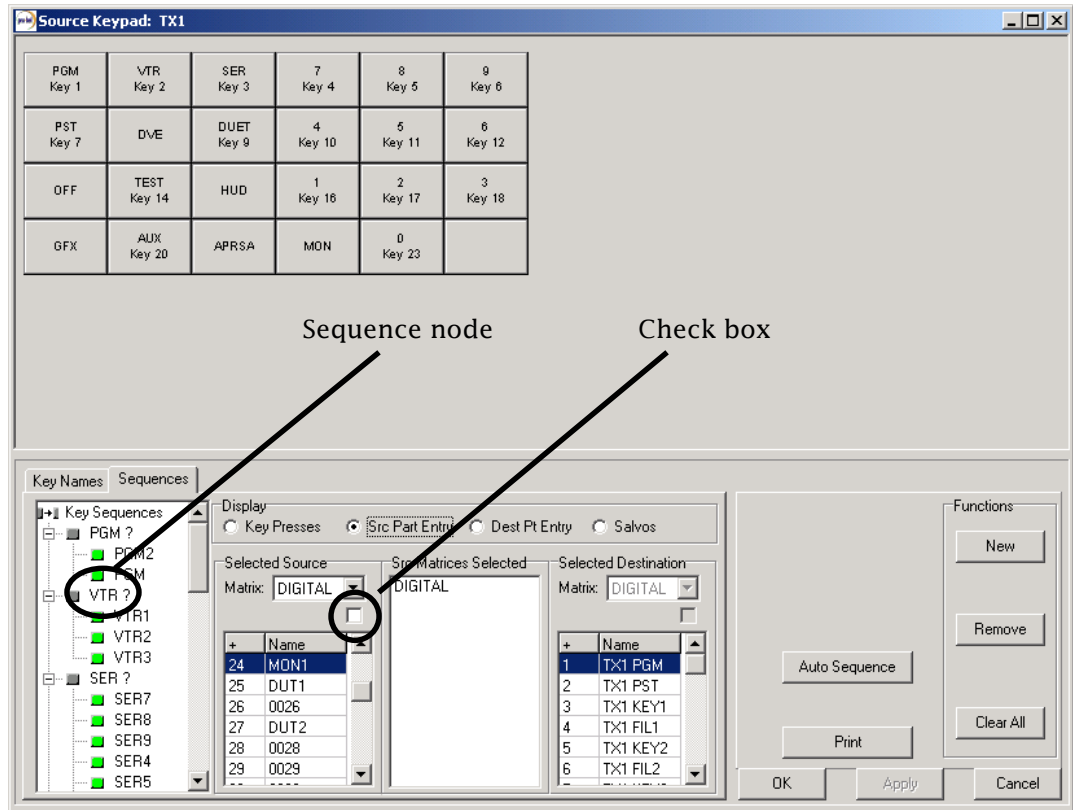
Clear All

Print

OK Apply Cancel

If a key label does not exist for the new source, 'drag and drop' it from the list, or if it is not in the list, type it in the 'New Name' box, click 'Add', and then drag it from the list. Select the 'Sequences' tab:





Click on 'New' and then click on the keypad buttons in the exact sequence required. Select the appropriate source, on the appropriate matrix, from the source list, and finally click on the check box to complete the new sequence. If necessary, the 'Src Part Entry' name may be edited (by right-clicking on the sequence node).

If the key labels exactly match the source names, 'Auto Sequence' may be used, by first highlighting the required source(s), and clicking on 'Auto Sequence'.

The same key captions must now be added to the Soft SAP, see Section 2.2.3 of this guide.