ITX Master Control
(ITX-MC)

User Guide

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1 INTRODUCTION

The iTX Master Control (iTX-MC) option integrates an Imagestore 750 mixer and an iMC master control panel to the target iTX playout channel. This configuration offers the efficiency of fully automated file-based broadcasting (using iTX) along with the capacity for fully-manual operations driven by a traditional master control switcher and user console panel.

In functional terms, iTX-MC allows the automation system to have full control during normal, scheduled playout, but operators can also take direct control when necessary – such as during live events, emergencies, breaking news and other unplanned broadcast events.

By adding master control primary events (live source events) to the schedule, iTX-MC allows the iTX channel to access and switch between multiple live sources (network, studio or live), as well as perform back-to-back live event cuts. iTX-MC also provides full master control transitions using the iMC panel to manually select and insert from the various live sources.

iTX-MC offers the following functionality:

- The ability to create and playout fully automated schedules that contain a mixture of pre-recorded content (long and short form from iTX) and live content from multiple sources.

- The ability to use manual operations on the panel to control the schedule's live and programme events, including triggering programming breaks (e.g. commercials and promos) during live events.

- The ability to have the planned schedule "roll under" during breakaway operations driven by the panel.

- The ability to hold the planned schedule to allow for breakaway operations and then return without programming loss.

Functional overview of an iTX-MC System

The iTX Master Control (iTX-MC) option integrates the Imagestore Master Control processor (Imagestore 750 or Imagestore-Modular) and an iMC panel (iMC100, iMC200, or iMC300) with a traditional iTX channel automation system, station router and router controller (figure 1-1).
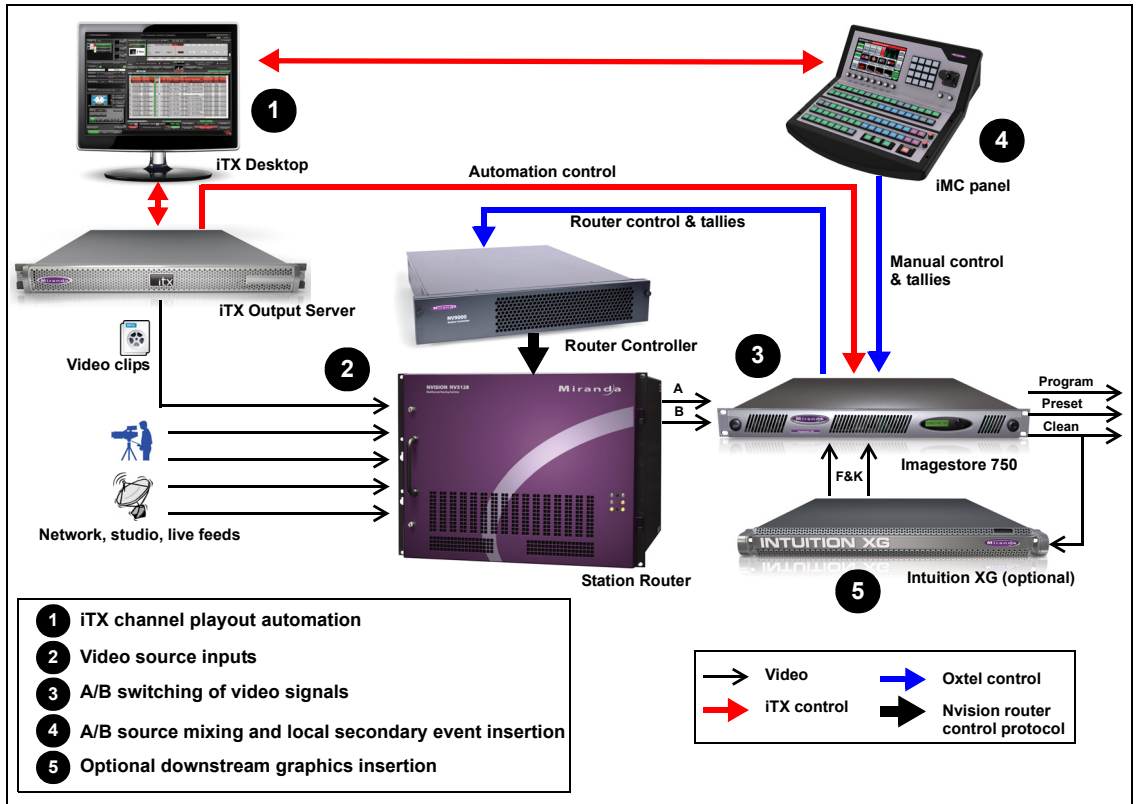
Figure 1-1. iTX-MC system architecture

1 **iTX channel playout automation**: When the iTX-MC option is added to a system, iTX still drives automation control by managing and playing the schedule's events. However, unlike traditional iTX systems, the iTX automation system controls the Imagestore 750 mixer as the playout device as well as an iTX Output Server.

2 **Video source inputs**: With the iTX-MC option, the iTX Output Server acts as a video server source to the station router by providing the pre-recorded programme content, which can also contain the usual secondary events like logos, voice-overs...etc.

The station router also receives SDI video inputs from various sources, including live network feeds, studio feeds and the SDI output of the iTX Output Server.

③ A/B source mixing and local secondary event insertion: The Imagestore 750 provides the A/B switching of signals from the station router based on the scheduled events being run by the iTX automation system, or the manual operations performed on the iMC master control panel.

The Imagestore 750 also provides the ability to perform downstream insertion of logo or voice-over assets which are native to the Imagestore 750.

④ Traditional master control integration: The iMC panel is directly connected to the Imagestore 750 master control and channel branding processor via Ethernet. The Imagestore 750 is fed A/B program sources by an upstream router, with control from playout automation by an Ethernet connection. The router is controlled by the Imagestore 750 via a NVISION 9000 controller.

The iMC master control panel provides operators with the manual control of the Imagestore 750's PGM bus, which permits them to insert or override scheduled programming with live incoming video.

Operators can also manually control the iTX schedule using the iMC panel's Automation Assist buttons (**TAKE NEXT**, **HOLD NEXT**, **CUE NEXT**, **SKIP NEXT**).

⑤ Optional downstream graphics insertion: The Intuition XG co-processor is an optional piece of equipment that can be used to insert rich branding graphics to the Imagestore 750's keyer layers.

Operational modes

iTX-MC has four modes of operation, which offer operators various levels of control over the playout of scheduled and non-schedule content. The following section provide a brief overview of each mode, while further chapters provide usage instructions:

- Fully Automated mode
- Automation Assist mode
- Manual Insert & Manual Override modes

Fully Automated mode

The iTX-MC's **Fully Automated mode** allows the iTX automation system to fully control the playout of iTX schedules, which may contain a combination of pre-recorded video clip events from iTX and live content events from multiple video sources.

Fully Automated mode is ideal for situations where the exact timing of primary video events is known in advance and the live video content is originating from different sources. Since the timing of all of these primary events is known, a schedule containing these events can be created and automation can run the schedule automatically by taking each event at a precise time regardless of where the video content is coming from. When building the schedule, live video source events are added to the schedule as master control primary events.

See "iTX Master Control events" on page 1-6 and "Using Fully Automated mode" on page 3-1 for more information related to Fully Automation mode.

Automation Assist mode

The iTX-MC's **Automation Assist mode** allows operators to have full manual control of scheduled events, even during the playout of a live broadcast. Using the iMC panel's Automation Assist buttons (**Cue Next**, **Take Next**, **Hold Next** and **Skip Next**) or the iTX Desktop's Manual Control panel, operators can manually intervene and control the channel's scheduled primary events, including extending or truncating a scheduled live playout event, which results in the advancement or bumping out of the next schedule primary and secondary events.

Automation Assist mode is ideal for live event broadcasts where the duration of the live events are unknown and the schedule contains primary video clip events that must be taken to air, although not necessarily at a specific time.

See "iTX Master Control events" on page 1-6 and "Using Automation Assist mode to manually control the iTX schedule" on page 4-1 for more information related to Automation Assist mode.

Manual Insert & Manual Override modes

iTX-MC offers two modes that allow operators to manually insert a live video source during an automated broadcast using the iMC panel: **Manual Insert mode** and **Manual Override mode**. Typically this type of intervention is used when unforeseen emergency events occur and a "newsflash" type interruption of the regularly scheduled broadcast is required.

The main difference between the two modes is the way in which the schedule's playout is resumed after the manual live event is finished. When using Manual Insert mode, the automation system pauses the schedule's programming during the live event and then resumes playout from the point of interruption. Manual Override mode allows automation to continue running the schedule (roll under), without displaying the schedule's playout. Once the live event is finished, the programme is resumed "in progress" or from where it would have been had there not been a live event interruption.

See for more information.

iTX Master Control events

iTX-MC introduces two new types of events that can be added to an iTX schedule:

• Master control primary events
• Master control secondary events

Start Time	Type	Global ID	Cache	Transition	Notes	Warnings	Item Name	Item Title	Duration	Status	Source
00:00:00:00	Master Control Event		-	T		-	IN-004	IN-004	00:00:30:00	Ready	IS-750 XPT 3 (IN-004)
00:00:00:00	Master Control Secondary Event		-	T		-	BigShoot.oxt	BigShoot.oxt	00:00:30:00	Ready	

Figure 1-2. Example of a master control primary and secondary event in an iTX schedule

Master control primary events

Master control primary events are main video items added to an iTX schedule to enable the iTX automation system to switch to and playout live content from any of the live video sources available to the Imagestore 750 from the upstream router.

When adding a master control primary event, you must specify the precise live source to be played out, the starting transition type and speed and the duration of the live event.

A master control primary event appears as primary event item in the iTX schedule grid and is displayed as a block on the PGM track of the channel's timeline.

See "Adding a master control primary event to a schedule" on page 3-2 for more information.

Master control secondary events

Master control secondary events represent logos, voice-overs or Macro recalls that are native to the Imagestore 750.

Master control secondary events can be associated with any type primary event in the schedule. However, since live video content from master control primary events is routed directly to the Imagestore 750, it does not pass through the iTX Output Server where traditional iTX logo and voice-over insertion events are normally applied. As such, master control secondary events allow for logo and voice-over insertion using the Imagestore 750.

See "Adding a master control secondary event to a schedule" on page 3-4 for more information.

2 ɪTX-MC SYSTEM CONFIGURATION

iTX-MC is an option that integrates an Imagestore 750 mixer and an iMC panel with a traditional iTX channel automation system, station router and router controller.

For the most part, the iTX automation system must be installed and configured for normal channel control and playout. Similarly, the Imagestore 750 and iMC panel are configured for normal master control usage.

With that in mind, this document does not repeat general iTX, Imagestore or iMC system installation and configuration procedures. Instead the following table summarizes the installation and configuration of iTX-MC specific components that are required to use iTX-MC in normal operating conditions. Further sections in this chapter provide instructions for performing iTX-MC specific installation and configuration tasks.

Component	Setup or configuration description
iTX Framework Server	An iTX Framework Server must be available with iTX Database Server, Locator Server and Media Watcher installed.
	A valid iTX Master Control license and transition license must be added to the iTX system.
	See the iTX System Administrator Guide for more information and instructions.
iTX Output Server	The iTX Output Server software component must be installed and configured for regular channel playout on the iTX Output Server device. See the iTX System Administrator Guide for more information and instructions.
	The iTX-MC related configuration task includes enabling the **CUE TO FIRST FRAME** setting on the Output Server. See page 2-19 for instructions.

Component	Setup or configuration description
iTX Desktop Client	The iTX Desktop Client application must be installed and configured for regular channel playout. See the iTX Desktop Operator's Guide for more information and instructions.
	iTX-MC related configuration tasks include:
	• Installing or updating the **iTX Desktop Client** and **Hard Panel Controller** software components. See page 2-3 for more information and instructions.
	• Configuring the **iTX Hard Panel Controller** component on the iTX Desktop client computer. See page 2-4 for more information and instructions.
	• Installing and configuring the **ITX-MC PLUGIN** within the iTX Desktop application. See page 2-8 for instructions.
	• Enabling the master control setting in the **iTX Channel Config** See page 2-10 for more information and instructions.
	• Adding the **ITX MC LAYOUT** to the iTX Desktop application. See page 2-6 for more information and instructions.
	• Configuring and setting up the iTX MC layout's **Mixer Mapper** component. See page 2-11 for information and instructions.
Imagestore 750 **or** **Imagestore-Modular**	An Imagestore Master Control device must be configured to receive input from a video source router. See the Imagestore 750 User Manual for more information and instructions.
iMC panel	Regardless of which model of iMC panel used (iMC100, iMC200, or iMC300), the panel must be configured to control an Imagestore 750 or Imagestore-Modular device. See the iMC Master Control documentation (Oxtel series>Documentation) for more information and instructions.
	iTX-MC related configuration tasks include:
	• Adding the hardware control panel to the **MCS Panel Configuration Editor** and the IP address of the computer hosting the iTX Desktop client must be specified. See page 2-17 for more information and instructions.
	• Configure the panel's Automation Assist buttons (**HOLD NEXT**, **CUE NEXT, TAKE NEXT**, **SKIP NEXT**) and the **Automation Off** button.
Router & Router Controller	Since the iTX automation system controls the router's crosspoints through the Imagestore 750, please consult the Imagestore 750 User Manual for more information and instructions of configuring the Imagestore 750 and router controller.

Installing or updating the iTX Desktop client software components

Install or update the iTX software to v2.3 SP3 or higher on the computer hosting the iTX Desktop application to ensure that you have the most recent versions of the **iTX Desktop client** and **Hard Panel Controller** components.

To install or update the required iTX Desktop client software components:

1. Open the iTX Suite 2.3 installer folder in Windows Explorer.
2. Run the iTX installer by right-clicking on the `Setup.exe` file and selecting the **Run as administrator** command.
3. Click the **Select Software** button.
4. In the **Select Software to Install** window, enable the **Desktop Client** and **Hard Panel Controller** options and click **OK**.
   Then complete the installation or updates as required.
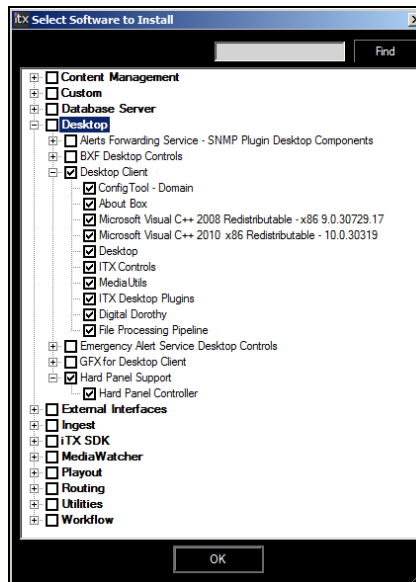
Configuring the iTX Hard Panel Controller

When iTX-MC is used in Automation Assist mode, the iMC panel (v.7.2.9 or later) is used to manually control events scheduled for selected iTX playout channels.

This functionality is made possible by the iTX Hard Panel Controller, which is an iTX service application that interfaces between the iTX Desktop application and the iMC panel. The iTX Hard Panel Controller is run on the same computer as the iTX Desktop client (see page 2-3 for installation instructions).

| iTX Desktop | iTX Hard Panel Controller | iMC panel |
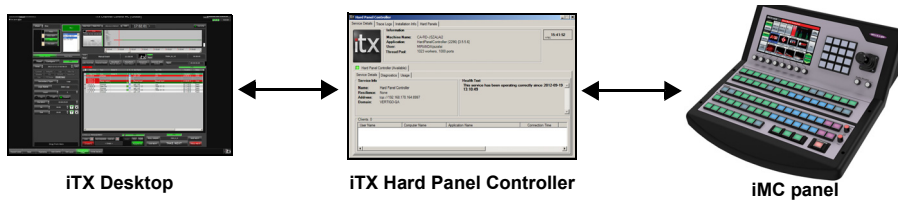
Since the Hard Panel Controller is an iTX service, it has a service window which provides information and status about the service and its clients. To run the iTX Hard Panel Controller service between a specific iMC panel and the iTX Desktop, you must create a hard panel configuration profile (see instructions below).
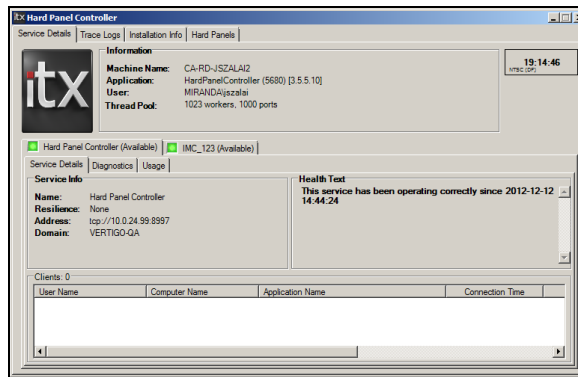
To access the iTX Hard Panel Controller service window:

1. Click the Windows **Start** button and navigate through the programs to **ITX 2.0 > Hard Panel Controller**.
   This activates the **Hard Panel Controller** icon ▨ in the Windows applications tray.

2. Right-click the **Hard Panel Controller** icon ▨ and select the **Show** command. The **Hard Panel Controller** window appears.

To create a new hard panel configuration profile in the iTX Hard Panel Controller:

1. Click the Windows **Start** button and navigate through the programs to **ITX 2.0 > Hard Panel Controller**.
   This activates the **Hard Panel Controller** icon ▨ in the Windows applications tray.

2. Right-click the **Hard Panel Controller** icon ⟨itx⟩ and select the **Configuration** command. The **Hard Panel Configuration** window appears.
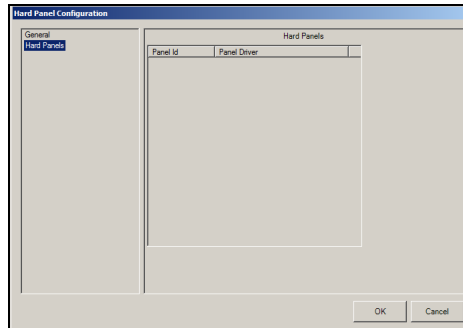
3. Right-click the **Hard Panels** heading and select the **Add new Hard Panel** command. A new panel heading (**New Panel1**) is added as a sub-heading.

4. Select the **New Panel** heading and then type a name for the panel in the **Panel Name** field. This name must be identical to the name given to the panel device when it was configured using the MC Panel Configuration tool.
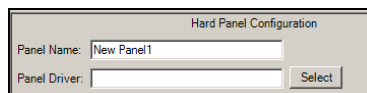
5. Click the **Select** button associated with the **Panel Driver** field, which opens the Select Driver window.

6. Select **IMCPanel** from the Driver Name list and click **OK**.

   The **IMC Panel Driver Configuration** section is added to the Hard Panel Configuration pane and automatically fills in the **Local Address** (which is the IP address of the computer hosting the iTX Desktop) and **TCP Listening Port** setting (5007).
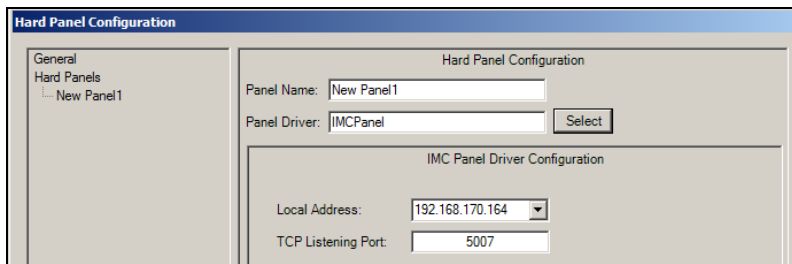
7. Click **OK** to automatically save the hard panel's configuration and close the Hard Panel Configuration window.

Installing and adding the iTX MC layout to the iTX Desktop

A global layout is provided especially for iTX-MC use in the iTX Desktop's Channel Control view. The iTX MC layout contains all of the typical channel control components, plus the **Mixer Mapper** component (see).

To install and add the iTX MC layout to the iTX Desktop's Channel Control view:

1. Open the iTX Suite 2.3 installer folder in Windows Explorer and navigate to:
    `ITX Install\Files\iTX Standard Layouts - v2.0`

2. Run the `INSTALL TEMPLATES MANUALLY.bat` file to install the iTX MC global layout. Open the iTX Desktop application.

3. From the same folder, run the `INSTALL INPUT Mappings.bat` file to install the default input mappings for the iTX Desktop's Mixer Mapper component.

4. Open the Manage Views dialog by right-clicking the Layout Selection Bar (bottom) and select **Manage Views**.

5. Select the **User View** tab at the top of the Manage Views window. Then select the **Global Layout** tab from the **Add Layout from Object Store** section.
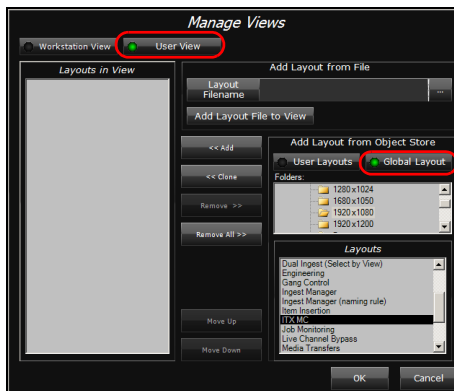
6. In the **Folders** pane, select the **System>Templates>1920x1080** folder.
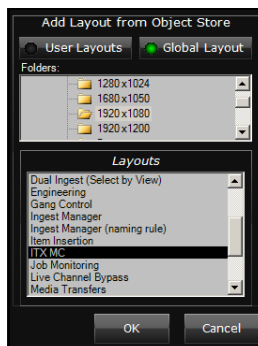
7. In the Layouts pane, select the **iTX MC Layout** Global layouts and click the **<<Add** button. **ITX MC (Global Layout)** is now displayed in the **Layouts in View** pane.

8. Click **OK** and the **iTX MC** tab is added to the iTX Desktop's Layout Selection Bar. When the **iTX MC** tab is selected, the iTX MC layout appears featuring the Mixer Mapper component.
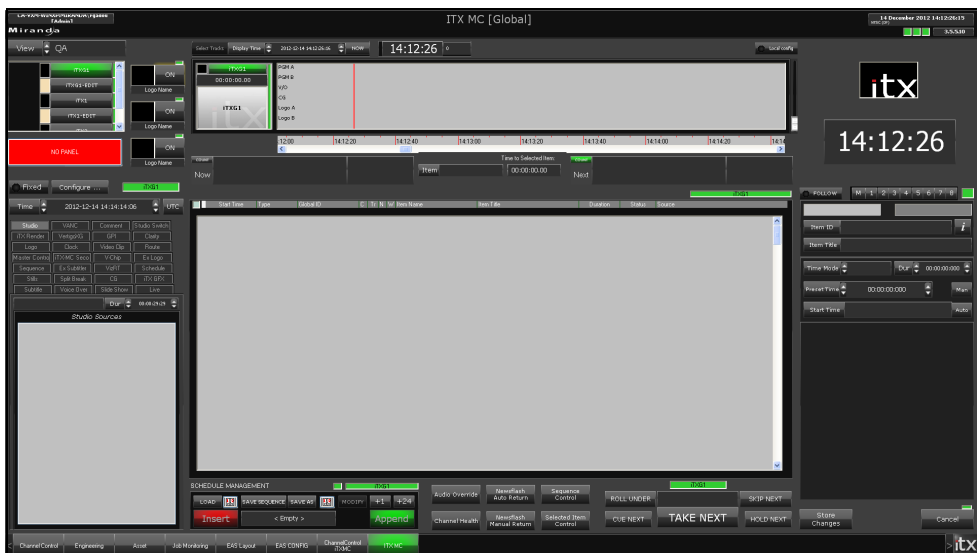
Configuring the Master Control Plugin in the iTX Desktop

The iTX Desktop's **Master Control Plugin** allows you to add master control primary and/or secondary events to a schedule. See "iTX Master Control events" on page 1-6 for a description of master control events.

☑ NOTE

A valid iTX Master Control license must be installed on the iTX system for the Master Control plugin to be visible and operational. Also, the Master Control Plugin must be configured on a per channel basis.

To configure the Master Control plugin:

1. Open the iTX Desktop's **Engineering** View and select the **Channel Config** tab.
2. Select the channel and then the **Plugins** tab.
3. Select the **Master Control** tab and the following **Master Control Setup** settings become available.
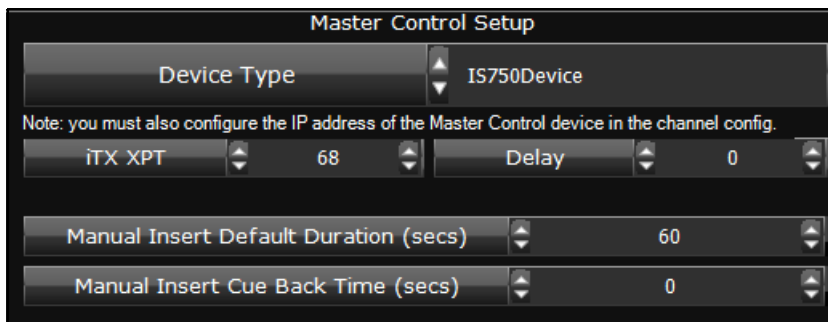
Figure 2-1. The Master Control Plugin's configuration settings

Device Type	Defines the type of hardware that the Master Control plugin will connect to for this channel. Choose **IS750Device.**
iTX XPT	Specifies the crosspoint on the Imagestore device that is selected when the next item in the schedule is not a master control event. Normally, you should specify the crosspoint that has the iTX Pandora video for that channel. It is used only to put Pandora back in circuit when a primary master control event ends. The default is **0**.
Delay	Specify the number of frames (positive or negative) by which to delay commands sent to the IS-750. This compensates for latency in the system and ensures that transitions on the mixer are frame accurate. The default is **0**.

Manual Insert Default Duration (secs)	Specify the number of seconds to use as the default duration of an iTX-MC manual insert. The default is **60**.
Manual Insert Cue Back Time (sec)	Specify the number of seconds by which to cue back an event interrupted by an iTX-MC manual insert. The default is **0**.

4. Click the **Save** button.

Enabling master control on the iTX Channel Config

For each of the iTX channels associated with an Imagestore 750 (master control enabled), you must specify the Imagestore 750's IP address in the **Master Control** property on channel's iTX Channel Config. The Master Control property allows the iTX Desktop's Mixer Mapper component to communicate directly with the Imagestore 750 associated with the iTX channel.

1. Open the iTX Desktop's **Engineering** View and select the **Channel Config** tab.
2. Select the channel that is associated with the Imagestore 750 and then the **Channel** tab.
3. Select the **Channel Config 4** tab and specify the IP address of the Imagestore 750 in the **Master Control** setting's **IP address** field.
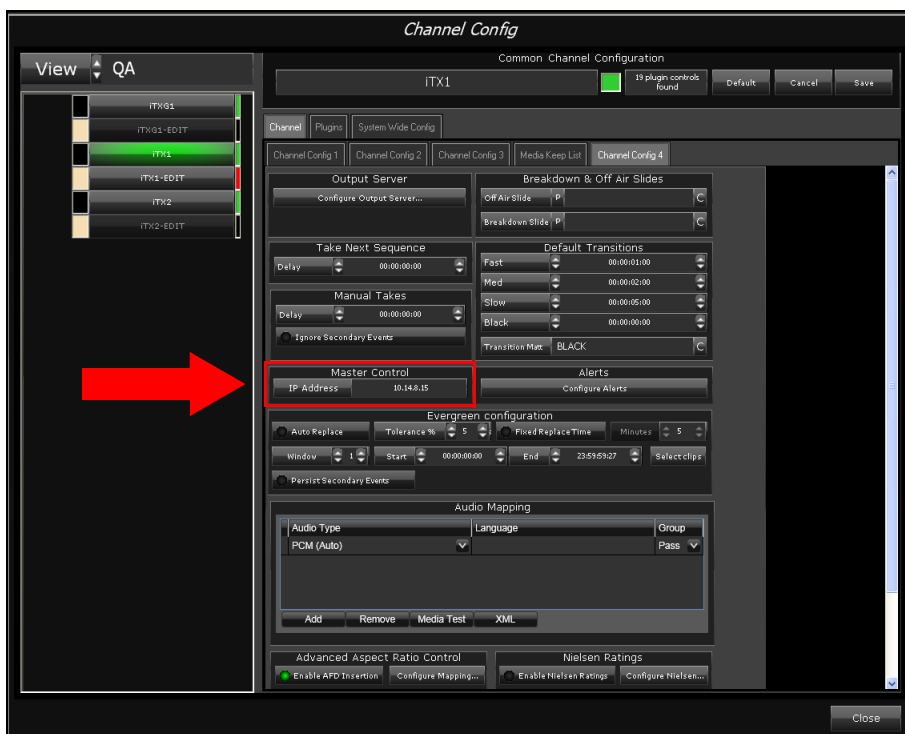
4. Repeat steps 2 and 3 for each of the master control enabled channels and then click **Close**.

Setting up and using the Mixer Mapper

The **Mixer Mapper** is an iTX Desktop component that allows operators in a multi-channel environment to use a single iMC panel station to manually control multiple iTX channels.
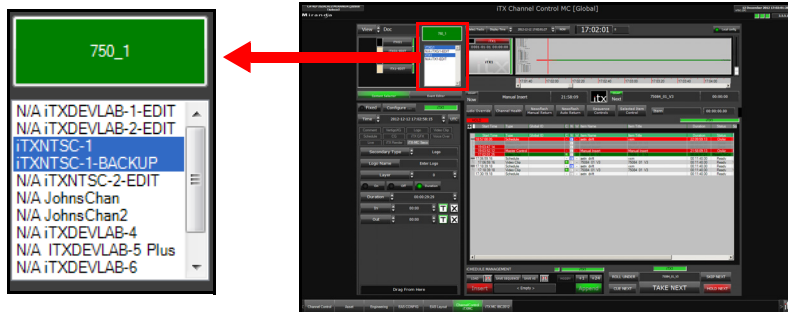
Figure 2-2. Mixer Mapper component of the iTX MC layout

The Mixer Mapper's button identifies the iMC panel and allows operators to enable/disable the Mixer Mapper's functionality. iTX channels are "selected" in the Mixer Mapper, which makes the channel **control panel enabled**. This means that operators are permitted to perform manual control operations on that channel using the iMC panel's Automation Assist buttons.

When the Mixer Mapper is enabled and the iTX system's currently selected channel is control panel enabled, the iMC panel and the iTX Desktop become synchronized. The functional implications of this synchronization are:

- When an operator selects a channel in the iTX Desktop's Channel Selector that is control panel enabled, the same channel is also selected on the iMC panel; and vice versa.

- Regardless of where the channel selection occurs (iTX Desktop or the iMC panel), both interfaces are immediately updated with the sources, labels and functionality available to that particular channel.

- Automation Assist operations performed on the iMC panel are also reflected in the iTX Desktop, and vice versa.

The following sections provide more information about setting up and using the Mixer Mapper component:

- "Configuring the Mixer Mapper" on page 2-12
- "Using the Mixer Mapper" on page 2-15

Configuring the Mixer Mapper

The Mixer Mapper can be configured to appear in the iTX Desktop as a single button, or a button with a view-only or interactive list containing the names of the iTX channels within the current Channel view.

Button only
(NOT DISPLAYED setting)

Button & read-only list
(VIEW ONLY setting)

Button & interactive list
(VIEW AND EDIT setting)

☑ NOTE

If the channel cannot be controlled by the iMC panel, the channel name in the channel list is preceded by "N/A". Also note that Edit channels cannot be controlled by a panel, so they are also precede by "N/A" in the channel list.

Before using the Mixer Mapper, you must "select" which the iTX channels are available to be control panel enabled in the Mixer Mapper. In other words, you must designates which channels the iMC panel is able to perform manual control operations on when the Mixer Mapper button is enabled.

To configure the Mixer Mapper component's desktop appearance and designate specific iTX channels as control panel enabled:

1. With the iTX MC layout open in the iTX Desktop, enter **Edit Mode** by right-clicking in an empty portion of the Layout selection bar and select **Edit**.

2. Type the administrative password in the **Enter Password** window and click **OK**.

   The iTX MC layout now appears in Edit Mode.

3. Right-click the Mixer Mapper handles (small white boxes) and select **Properties**.

   The **Mixer Mapper Properties** window appears.

4.   Set the **CHANNEL LIST DISPLAY** property.

NOT DISPLAYED	When selected, the Mixer Mapper appears only as a button in the iTX Desktop. The button only format requires less desktop space, but operators do not have the ability to select channels for panel control from within the desktop. The selection of channels enabled for panel control must be pre-configured in the **Enabled Channels** section of the **Mixer Mapper Properties** window.
VIEW ONLY	When selected, the Mixer Mapper appears as a button and a list that contains the names of the iTX channels within the current Channel view. Channels that have been pre-configured as "selected" for panel control are highlighted in the list. Although the channel list is displayed in the desktop, operators cannot enable (select) or disable (de-select) channels for panel control because the list is "view only". Any changes to the channel selection must be performed in the **Enabled Channels** section of the **Mixer Mapper Properties** window.
VIEW AND EDIT	When selected, the Mixer Mapper appears as a button and a list that contains the names of the iTX channels within the current Channel view. The channels that have been pre-configured as "selected" for panel control are highlighted in the list. Since the list is "editable", operators can enable or disable panel control on any channel by clicking the channel's name in the Mixer Mapper's channel list. Note that channels whose names are preceded with "N/A" cannot be panel control enabled.

☑ NOTE

Changing the appearance of the Mixer Mapper component in the iTX Desktop (button only vs. button and channel list) may require you to reorganize the placement of other components in the iTX MC layout.

5.   In the **Enabled Channels** section, identify the channel(s) that you want to be available for panel control by dragging the channel from the **Available Channels** list and dropping it onto the **Selected Channels** list.
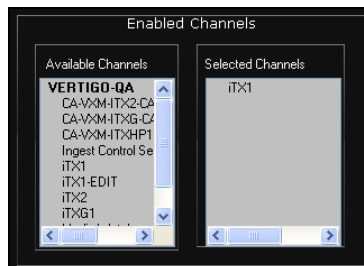
When the **Channel List Display** property is set to **VIEW ONLY** or **VIEW AND EDIT**, the channels listed in **Selected Channels** will be highlighted in the Mixer Mapper's list.

☑ NOTE

Channels can be "selected" even if they do not have an Imagestore 750 configured. However, the Mixer Mapper only highlights channels that have an Imagestore 750 configured and are control panel enabled.

6. Click **OK**.
7. Exit the iTX Desktop's Edit Mode by right-clicking in an empty portion of the Layout selection bar and selecting the **Edit** command.

Using the Mixer Mapper

Once the Mixer Mapper is properly configured with iTX channels that are control panel enabled, operators simply have to click the Mixer Mapper button to activate or de-activate panel control on selected the iTX channel.

Whether it's configured as a single button on its own or associated with a channel list, the functionality and appearance of the Mixer Mapper button is identical.

Figure 2-3 demonstrates that the Mixer Mapper is active (green) so that when the iTXNTSC-1 channel is selected in the iTX Desktop's channel selector on the iMC panel, the iTX Desktop becomes in synch with the iMC panel and the iMC panel's Automation Assist buttons can be used to manually control the channel's active schedule.
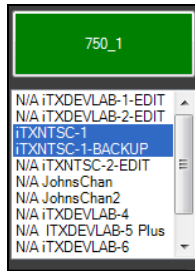
Figure 2-3. The Mixer Mapper is active

The Mixer Mapper interface component provide operators with visual cues (color & text) to indicate the current state of the Mixer Mapper and its associated components.

The background color of the Mixer Mapper button provides operators with a quick reference to the current state of the Mixer Mapper for the selected channel:

Green	**The panel and desktop are connected to the same channel and channel following is enabled.**
	Indicates that the Mixer Mapper component is active and the iTX Desktop and the iMC panel are in synch. Also, the Automation Assist buttons on the iMC panel are active. Operations performed to the selected channel using the iTX Desktop will be reflected on the iMC panel, and vice versa.
Black	**The iMC panel and iTX Desktop are not enabled or the iTX MC layout is in Edit mode.**
	Indicates that the Mixer Mapper is inactive. In this state, both the iTX Desktop and the iMC panel are independent of each other (not in synch) and operations performed on a channel in one will not be reflected on the other.

Red	**No communication with the iMC panel.**
	Indicates that the Mixer Mapper component is active, but the iTX Desktop and the iMC panel are not in synch, or that the selected channel cannot be controlled from iTX Desktop or the iMC panel. Also, the Automation Assist buttons on the iMC panel are not active.

The text or label on the Mixer Mapper button identifies the Imagestore channel that is currently selected on the iMC panel. It can also identify the current state of the connection between the iMC panel's currently selected channel and the Mixer Mapper:

<Channel Name>	The iMC panel's channel name on its own indicates that the iMC panel is reporting that it is connected to the same channel as the channel selected in the iTX Desktop.
	When a different channel is selected on the iMC panel, if the channel is configured for panel control, the Mixer Mapper's button updates to display the new channel's name.
NO PANEL	Indicates that communication with the iMC panel has not been established.
	To remedy, ensure that the Hard Panel Controller is properly configured and that all physical connections are correct and properly fitted.
Panel Disconnected	Indicates that the iMC panel is reporting that it has no channel selected.
<Channel Name> OUT OF SYNCH	Indicates that the iMC panel is reporting that it is connected to a channel that is not the same channel as selected in the iTX Desktop.
<Channel Name> Not Controllable	Indicates that the iMC panel is reporting that it is connected to the same channel as selected in the iTX Desktop, but the Mixer Mapper component is inactive or that the channel is not enabled/selected for panel control.
<Channel Name> Slave	Indicates the iMC panel is reporting that it is connected to the same channel as selected in the iTX Desktop; the Mixer Mapper component is active and that channel is enabled/selected for panel control, but the channel has Slave duty for a Main/Backup iTX channel. Channel control in iTX is available only for the Master duty, hence the Automation Assist buttons in the iTX Desktop and on the iMC panel are not enabled for the selected channel.

Configuring the iMC panel to support iTX Automation

Assuming that the Master Control Panel (iMC panel v.7.2.9 or later) has been installed and configured to control the Imagestore 750, the following procedure describes the additional steps required to configure the master control panel to support iTX Automation.

1. Open the **MCS Panel Configuration Editor** by selecting the Windows **Start** button and navigating the programs menu to **Miranda > Master Control > MCSPanelConfig**.
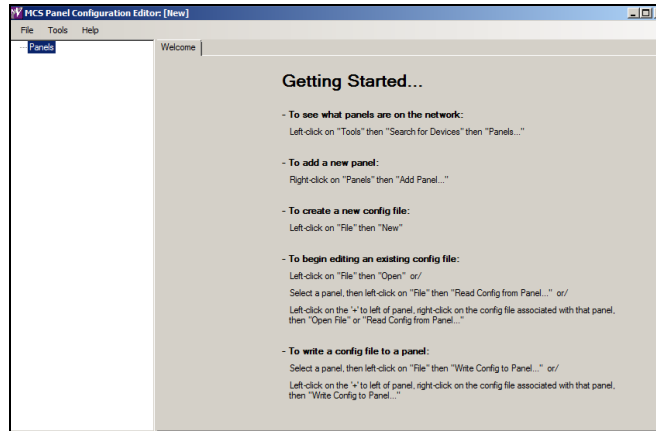
2. Select **File > Open**. Navigate to `C:\Program Files (x86)\Miranda\Master Control\bin\` and open the panel's configuration file.

    The panel's configuration profile appears in the MCS Panel Configuration Editor.
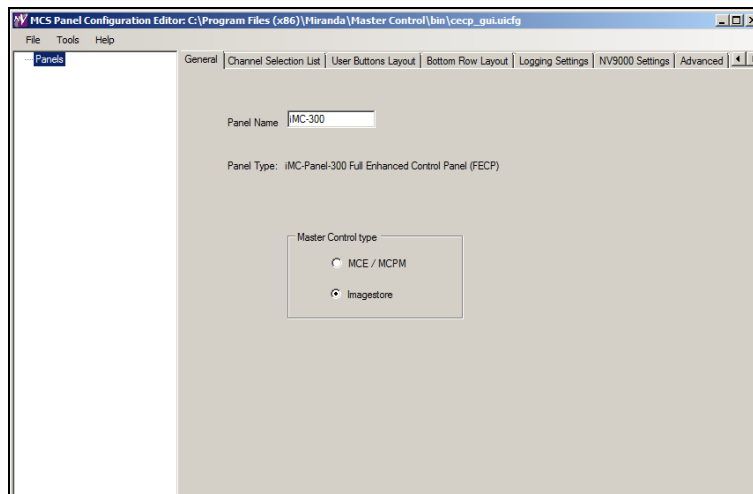
3. In **General** tab, ensure that the **Panel Name** setting is accurate and that **Imagestore** is enable as the **Master Control Type** setting.

4. Select the **Advanced** tab and then select the **Enable iTX Integration** setting in the **Automation** section. This causes the **iTX Integration** section to automatically appear.
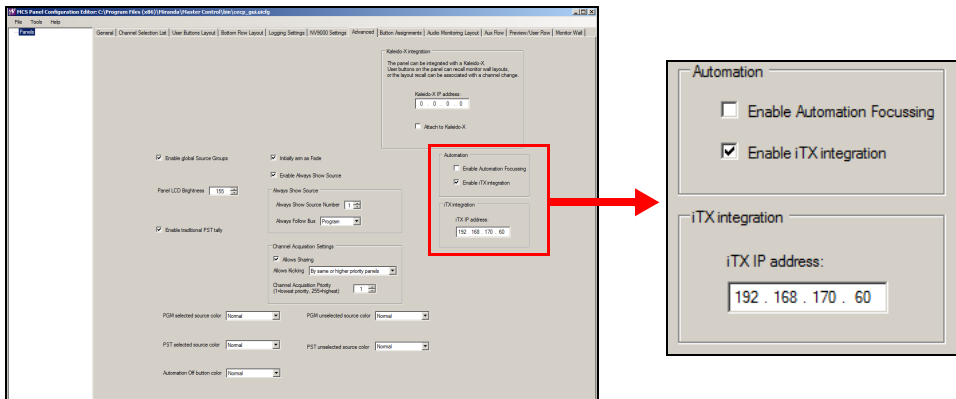
5. In the **iTX IP Address** field, specify the IP address of the computer hosting the iTX Hard Panel Controller and iTX Desktop client.
6. Select **File>Write Config To Panel**.
7. Click **Yes** when asked if you want to save the changes.
8. Click **OK** when the **Config File Save** window appears.
9. A window appears informing you that the device must be reset after a configuration update. Click **Yes** to restart the device.

Activating the Enable Cue-to-First-Frame setting on the iTX Output Server

While the Imagestore 750 is busy playing out a master control primary event (live source event), the iTX Output Server's **ENABLE CUE TO FIRST FRAME** (CTFF) option allows the first frame of next the cued video clip to be displayed on the iTX Output Server's SDI output. Using a a multi-viewer display, operators can then see the first frame of the next video clip and have confidence in what will actually be taken to air.

Video Clip 1	Master Control Primary 1	Video Clip 2

The Master Control primary event (live source) is currently playing out on air.

The video clip is cued and its first frame is displayed on the iTX Output Server's output.
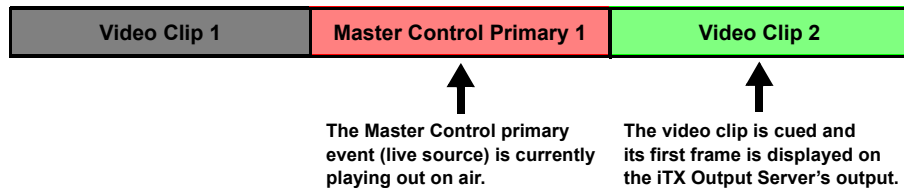
Figure 2-4. Illustration of an iTX timeline that uses the CTFF option to preview the next cued clip

By default, the **ENABLE CUE TO FIRST FRAME** setting is disabled. Instructions are provided below for activating the option. Once activated, CTFF is automatically triggered when:

- A video clip event in the schedule is automatically cued by TxPlay

- The operator manually cues the next video clip event in the schedule using the iTX Desktop's **CUE NEXT** control or the **SELECTED ITEM CONTROL**

- The operator manually cues the next video clip event in the schedule by pressing the iMC panel's **CUE NEXT** button.

Figures 2-4 and 2-5 demonstrate that CTFF will only occur if TxPlay is idle; meaning that the iTX Output Server is not currently processing or playing out a video clip. More precisely, CTFF only occurs when:

- No clips are present on the timeline (e.g. at start-up)

- The last clip on the timeline has finished playing more than two seconds ago

- While displaying bars at startup

Master Control Primary 1	Video Clip 2	Video Clip 3

The video clip is currently playing out on air.

The video clip is cued, but its first frame cannot be displayed on the iTX Output Server's output.
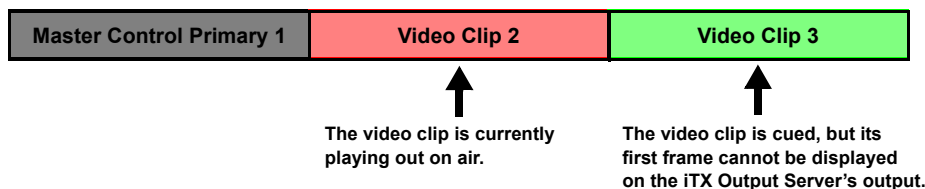
Figure 2-5. CTFF does not occur if the current playout event is also a video clip from the iTX Output Server

☑ NOTE

As per current functionality, the last frame of the previous clip will be repeated if no clip is cued.

To activate the ENABLE CUE TO FIRST FRAME setting:

1. On the iTX Output Server device, open the **iTX Output Server** window.
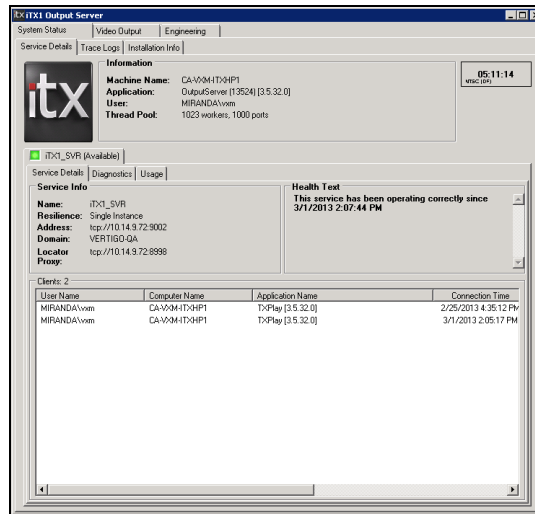
2. Select the **Engineering** tab.
3. Click the **ENABLE CUE TO FIRST FRAME** button to ensure that the LED is green.
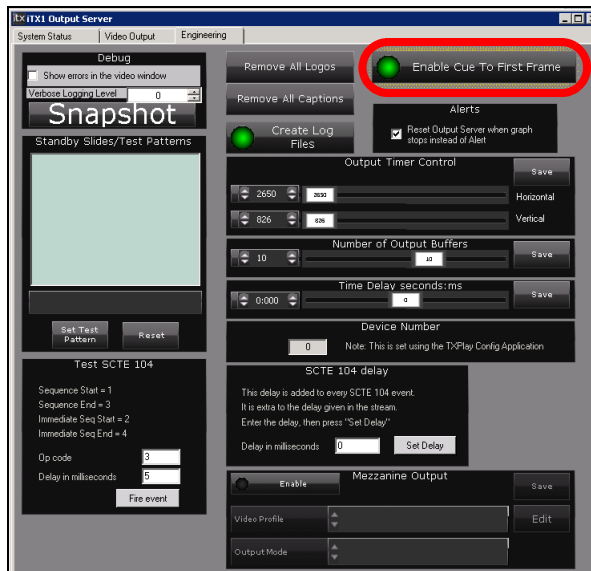
☑ NOTE

See "**Cue to first frame**" in the **iTX System Administrator Guide** for complete information regarding this feature.

3 USING FULLY AUTOMATED MODE

iTX-MC's **Fully Automated mode** allows the iTX Automation system to take full control over the playout of iTX schedules that contain a mixture of traditional iTX events as well as Master Control primary and secondary events.

Fully Automated mode is recommended for situations where the exact timing of primary video events is known in advance and when transitions between back-to-back live video events is required.

Figure 3-1 demonstrates a schedule that contains a mixture of pre-recorded video clip events (e.g. BITC PAL SD), as well as back-to-back live video feeds as Master Control events (e.g. IN-061, IN-068) and Master Control secondary events. Since the timing of all of these primary events is known, automation can run the schedule without the need for any manual intervention. Each event is cued and taken at precise times regardless of the source of the video content.

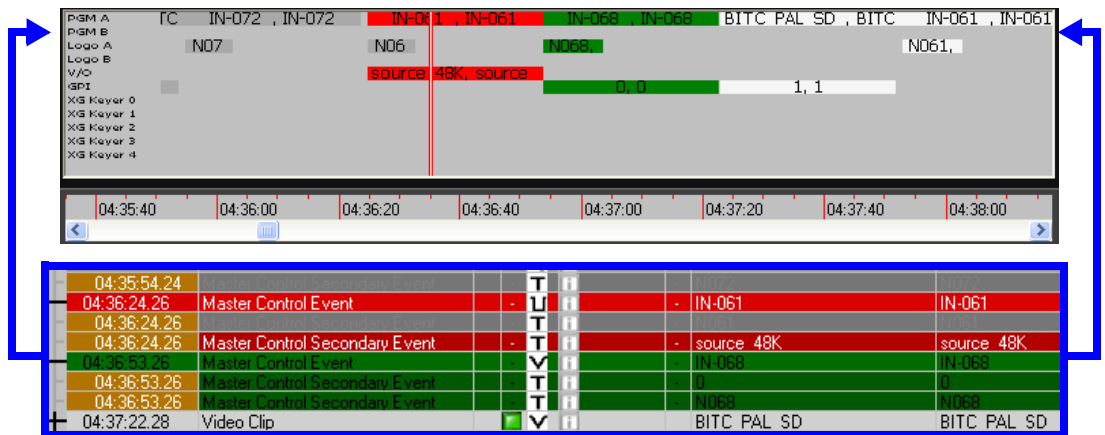Figure 3-1. An iTX schedule that contains a mixture of clips and primary & secondary master control events

Information and instructions for adding and setting master control events in an iTX channel's schedule are provided in the following sections:

*   "Adding a master control primary event to a schedule" on page 3-2
*   "Adding a master control secondary event to a schedule" on page 3-4

Adding a master control primary event to a schedule

Master control primary events are main video items added to an iTX schedule to enable the iTX automation system to switch to and playout from any of the live video sources available to the Imagestore 750 from the upstream router.

To add a master control primary event to an iTX schedule:

1.   Select the **Master Control** tab in the Content Selector to display the Master Control Palette.
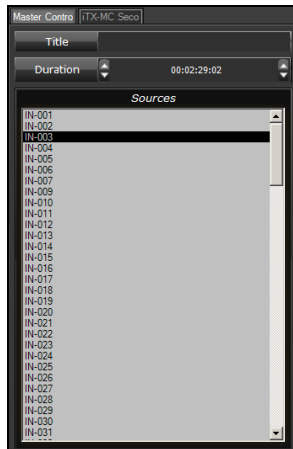
2.   Ensure that the Master Control palette's Selection pane contains the Imagestore 750's video sources.

     If the video sources are not listed, please verify the channel's Master Control configuration setting, the Master Control Plugin's Setup configuration and/or the network connection to the Imagestore 750 device.

3.   Optional: Specify a name for the master control primary event in the **Title** field.

4.   Optional: Set the event's duration in the **Duration** field.

     The Duration field specifies the duration of the next event to be added to a channel. The event's Duration setting can also set/edited after it has been added to the schedule.

5.   Drag and drop a source from the Selection pane onto the iTX schedule grid.

     A master control primary event item is added to the schedule.

When a master control primary event is added from the Master Control palette, it will initially be given the specified duration, a default transition (Cut) and the video source's name will appear in the **Item Name** column. If specified in the Master Control Palette, the event's name also appears in the **Item Title** column. The **Source** column displays the router's crosspoint information.

The event's properties may be edited by selecting the event in the schedule, which displays the event's current property settings in the Event Editor.
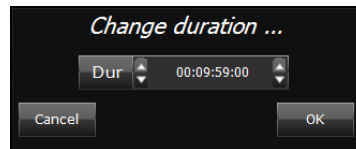
Setting and editing a master control primary event's properties

Once a master control primary event is added to a schedule, you can set/edit the event's **Transition** settings by clicking the event's transition symbol in the Schedule grid. The **Select transition** window appears and allows you to set the transition's duration, rate and style.

☑ NOTE

If you intend on using Automation Assist mode (page 4-1) to control the schedule, ensure that the iTX channel's event transition rate setting (slow, medium, fast) is consistent with the iMC panel's transition rate settings.

Similarly, you can edit the event's duration value by clicking on the **Duration** setting in the Schedule grid. The **Change duration** tool appears and you can change the event's current value.

Just like other iTX video events, selecting a master control primary event in the Schedule Grid or Timeline displays a set of standard event properties in the **Event Editor**. These properties can be edited and applied to the scheduled event.

Displays the name of the source for the master control event.

Set the **title** of the master control event.

Set the master control event's **Time Mode** to:
• Auto   • End -
• Fixed   • End +
• Start -   • Fixed End
• Start +   • Join In Progress

Displays the scheduled **Start Time** of the master control event.

The event's status.

Add a **note** to the master control event.

Change the **duration** of the master control event.

Optional: Set the **Manual** property to enable the manual start for the master control event.

Since there are no properties specific to master control primary events listed on the Event Editor, we ask that you refer to the **iTX Desktop Operator Manual** for full descriptions and instructions on setting these event properties.

☑ NOTE

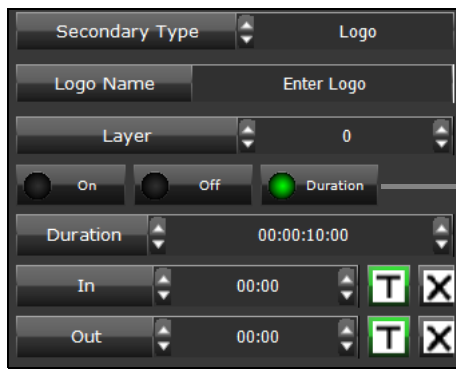Sources cannot be changed within in a scheduled master control primary event.

Adding a master control secondary event to a schedule

Master control secondary events represent logos, voice-overs or Macro recalls that are native to the Imagestore 750.

Master control secondary events can be associated with any type primary event in the schedule, however their main function is to provide logo and voice-over insertion on the live video content coming from master control primary events.
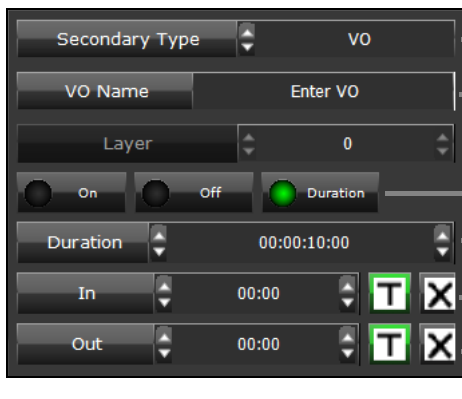
To add a master control secondary event to an iTX schedule:

1. Select the **iTX_MC Secondary** tab in the Content Selector to display the Master Control Secondary Event Palette.

2. In the **Secondary Type** field, use the up/down control to select either **Logo**, **Macro** or **VO**.

3. The following screen captures demonstrate that the palette's fields change depending upon the **Secondary Type** selected. As such, please complete the appropriate fields.

Select **Logo** as the secondary event type.

Enter the name of the **Logo**. See page 3-5 for more information.

Select the **layer** on the device to which the event will be assigned.

Specify if the event is intended to be a **turn on**, **turn off** or **duration** based.

When **Duration** enabled (above), specify the duration of the next event to be added to the schedule. Only specify the **In** and **Out** transition type and duration.

When **On** is enabled (above), specify the **In** transition type and duration.

When **Off** is enabled (above), specify the **Out** transition type and duration.

Select **VO** as the secondary event type.

Enter the name of the **VO**. See page 3-5 for more information.

Disabled.

Specify if the event is intended to be a **turn on**, **turn off** or **duration** based.

When **Duration** enabled (above), specify the duration of the next event to be added to the schedule. Only specify the **In** and **Out** transition type and duration.

When **On** is enabled (above), specify the **In** transition type and duration.

When **Off** is enabled (above), specify the **Out** transition type and duration.

Select **Macro** as the secondary event type.

Enter the name of the **VGPI**.

Disabled.

Disabled.
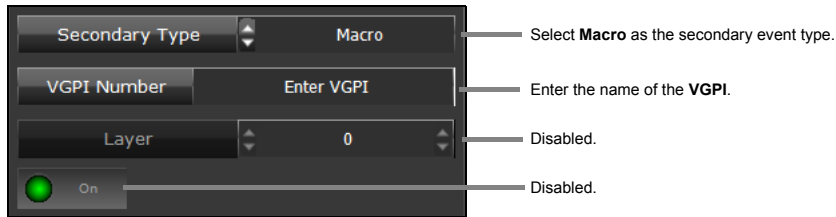
4. Select the **Drag from Here** control at the bottom of the palette. Drag the control from the palette and drop it onto a primary event in the channel's Schedule Grid or the PGM track on the Timeline.

This creates a new Master Control Secondary Event in the schedule, with a Title and Event ID as specified (defaulting to the name of the Logo/VO), as well as a specified duration. Logos appear on the CG track in the Timeline, voice-over events appear on the VO track and Macros appear on the VGPI track.

Browsing the media content of the Imagestore 750

When creating a master control secondary event, you must type the name of the logo or voice-over asset that is stored on the Imagestore 750 in the **Logo Name** or **VO Name** property of the **iTX_MC Secondary** palette (see).

Currently there is no way of browsing or selecting the assets on the Imagestore 750 directly from with the iTX Desktop application. As such, we recommend that you use the procedure below to browse the asset inventory of the Imagestore 750 using its web service. This will ensure that you have the exact name of the desired asset.

To browse the media content of an Imagestore 750 device:

1. Open a web browser and type the IP address of the Imagestore 750 in the address bar (e.g. `http:\\10.14.3.10`) to open the **Imagestore 750 Web Page**.
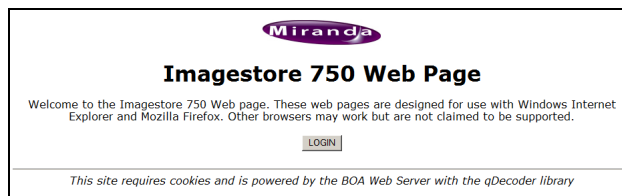
2. Click the **Login** button. Enter the password and click the **Log In** button.

3.   Select **Media Management** from the left-hand menu.

4.   Browse the **Graphics Files** category for logo assets and the **Easyplay Files** category for the Voice-over assets. Note that you cannot open or preview assets from this interface.
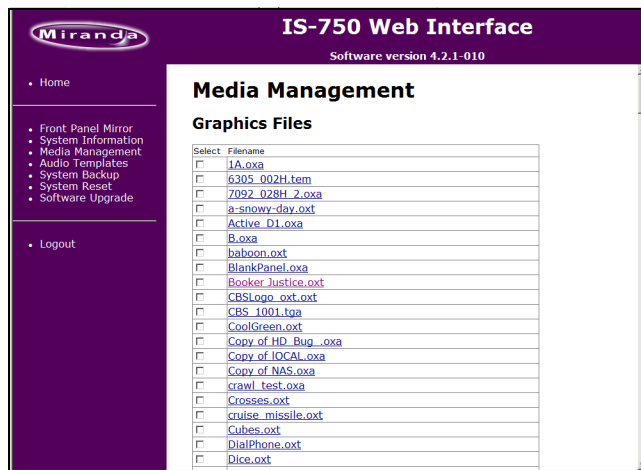
5.   Take note of the exact name of the asset. Once you are finished browsing, click **Logout** and close the web browser to finish the session.

Setting and editing master control secondary event properties

Once a master control secondary event is added to a schedule, you can set/edit the event's **Transition** settings by clicking the event's transition symbol in the Schedule grid. The **Select transition** window appears and allows you to set the transition's duration, rate and style.

Similarly, you can edit the event's duration value by clicking on the **Duration** setting in the Schedule grid. The **Change duration** tool appears and you can change the event's current value.
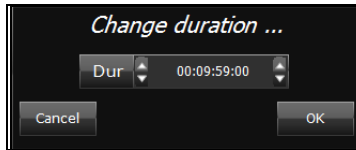
When a master control secondary event is selected in the Schedule Grid or Timeline, the **Event Editor** displays a set of standard and event type specific properties. These properties can be edited and applied to the scheduled event by clicking the **Store Changes** button.

Displays the name of the master control secondary event.

Type the **title** of the master control event.

Set the master control event's **Time Mode** to:
- Auto   • End -
- Fixed   • End +
- Start -   • Fixed End
- Start +   • Join In Progress

Displays the scheduled **Start Time** of the master control secondary event.

The event's status.

Add a **note** to the master control event.

Change the **duration** of the master control event.

Optional: Set the **Manual** property to enable the manual start for the master control event.

The type of master control secondary event determines the properties displayed here. Each property is described on page 3-4

4 USING AUTOMATION ASSIST MODE TO MANUALLY CONTROL THE iTX SCHEDULE

The iTX-MC's **Automation Assist mode** allows operators to use the iMC panel's Automation Assist buttons to manually intervene and control the channel's scheduled primary events.

The iMC panel's Automation Assist buttons consist of:

- **Cue Next**: Cues the item that follows the current on-air item.

- **Take Next**: Takes to air the item that follows the current on-air item.

- **Hold Next**: Holds the item that follows the current on-air items.

- **Skip Next**: Causes the next scheduled item not to take place.

☑ NOTE

The **Take** button on the iMC panel is for a separate purpose and should not be confused with Automation Assist's **Take Next** button.

Automation Assist mode is ideal for live event broadcasts where the duration of the live source events (master control events) are unknown and the schedule contains primary clip events that must be taken to air, although not necessarily at a specific time.

The unpredictably of the live event's start and end times means that operators must manually control the cue and take of the next clip event in the schedule. Using the iMC panel's Automation Assist buttons, the operator is able to put a hold on the next scheduled clip event and then manually take it to air when required. This may require taking the clip or live event earlier or delaying it beyond the events' original scheduled duration settings.

Once the event is taken to air, the iTX automation system resumes control of running the schedule and plays out the subsequent events, including scheduled master control events.

The following section provide information and instructions for using the iTX-MC's Automation Assist mode:

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Preparing to use iTX-MC's Automation Assist mode

Before attempting to use the iTX-MC's Automation Assist mode, operators should ensure that the following pre-requisites are satisfied:

1. Ensure that the iMC panel's Automation Assist buttons (**CUE NEXT**, **TAKE NEXT**, **HOLD NEXT** and **SKIP NEXT**) have been properly configured.

2. Ensure that **Automation** is enabled on the iMC panel.

3. Ensure that the iMC panel's transition rate settings (slow, medium, fast) are consistent with the schedule's event transition rate settings.

4. (Optional) Enable the Output Server's Cue-to-First-Frame option if you want to view the first frame of the next iTX clip event in the schedule on the Imagestore 750's Preset channel (see page 2-19).

Using iTX-MC's Automation Assist mode

The following high-level steps describe how to use the iMC panel's Automation Assist buttons to manually control the iTX schedule's playout:

1. Select the channel in the iTX Desktop.

2. Ensure that the Mixer Mapper button is enabled and that the channel is "selected" in the Mixer Mapper. If both are true, then the iTX Desktop and the iMC panel will be in synch and operations on the iMC panel will be reflected in the iTX Desktop.

3. Load the schedule in the iTX Desktop.

4. As the schedule's events are playing out, you can press the iMC panel's Automation Assist buttons to manually control events in the current schedule (hold, cue, take or skip the next schedule event).

   The following sections provides instructions for performing three of the most common control tasks using the iTX-MC's Automation Assist mode:

Forcing the next scheduled primary event to play immediately

Regardless of what type of event is currently on air, operators can use the iMC panel's Automation Assist buttons to manually force the next scheduled events to be taken to air.

Depending upon the state of the next items in the schedule, operators can use one of the following methods to force the next items to playout immediately:

Next items are already cued (Take Next only)

Regardless of what type of event is currently on air, if the next primary item in the playlist is already cued, pressing the iMC panel's **Take Next** button immediately plays out the next primary item and any associated secondary items that are cued by the same time.

If the Mixer Mapper is enabled for the channel, the changes to the previous and current items' timings and duration are immediately reflected on the iTX Desktop's schedule grid and timeline.

☑ NOTE

Operators should be aware that iTX does not wait for secondary items that cannot be cued in time; nor does it cue the primary items following the item being forced on air. As such, after an operator uses the iMC panel's **Take Next** button, they should use the iMC panel's **CUE NEXT** button to manually cue the next scheduled items and then check that all required items are cued before performing a subsequent **TAKE NEXT** operation.

Next items are not cued (Cue Next & Take Next)

If the next items are not already cued, we recommend that the operator press the iMC panel's **CUE NEXT** button to manually cue the next scheduled items before pressing the **Take Next** button.

When **CUE NEXT** is clicked for a short item (one with a duration of less than 20 seconds), iTX cues any following primary items that are due to start within the next 20 seconds and have a status of **READY**; it also cues secondary items that are due to start within the same period. This is to ensure all items are cued in time to play out. Any item that is unable to be cued (i.e. if it is not ready) is not played out.

Once the items are cued, the operator must press the iMC panel's **Take Next** button, which immediately plays out the next primary item and any associated secondary items that are cued by the same time.

If the Mixer Mapper is enabled for the channel, the changes to the previous and current items' timings and duration are immediately reflected on the iTX Desktop's schedule grid and timeline.

☑ NOTE

Operators should be aware that iTX does not wait for secondary items that cannot be cued in time; nor does it cue the primary items following the item being forced on air. As such, after an operator uses the iMC panel's **Take Next** button, they should use the iMC panel's **CUE NEXT** button to manually cue the next scheduled items and then check that all required items are cued before performing a subsequent **TAKE NEXT** operation.

Next items are not cued (Take Next only)

If the next items are not already cued and they must go to air immediately, there may not be enough time to perform a **Cue Next** operation. In such a case, pressing the iMC panel's **Take Next** button forces iTX to automatically cue the next primary item and any associated secondary items that have the same start time and then plays out the items. This results in a short execution delay before the actual items replace what is currently playing out on air.

☑ NOTE

Operators should be aware that iTX does not wait for secondary items that cannot be cued in time; nor does it cue the primary items following the item being forced on air. As such, after an operator uses the iMC panel's **Take Next** button, they should use the iMC panel's **CUE NEXT** button to manually cue the next scheduled items and then check that all required items are cued before performing a subsequent **TAKE NEXT** operation.

Delaying the next scheduled primary event's playout

Since live source events often have unpredictable start and end times, operators must be ready at any time to take the next scheduled item without delay. A powerful technique for achieving this is to put the next scheduled item on hold using the iMC panel's **Hold Next** button.

The **Hold Next** button temporarily suspends the item that follows the current on-air items and continues to play the current on air items until a **Take Next** operation is executed.

There are two common scenarios for holding the next scheduled events:

Delaying the start of a live source event

When the next scheduled item is a live source event, the live content may not be ready to go on air at the scheduled time. For example, the scheduled coverage of a live press conference is delayed. In such a case, the operator will keep playing the current on air item until the press conference is ready to begin.

To accomplish this, the operator presses the iMC panel's **Cue Next** and then **Hold Next** buttons to ready the next scheduled item (live source event), but prevent it from playing. This puts a hold on the remaining items in the schedule until the live source event is ready. When it is time to join the live source event, the operator simply presses the iMC panel's **Take Next** button and the iTX automation system resumes control of running the schedule by playing out the subsequent events.

Figure 4-1 demonstrates that the primary and secondary master control events (IN-072 and N07) are cued, but placed on hold. The clip that is currently on air (BITC PAL SD) keep playing and the schedule will keep bumping out until the operator executes a Take Next operation.
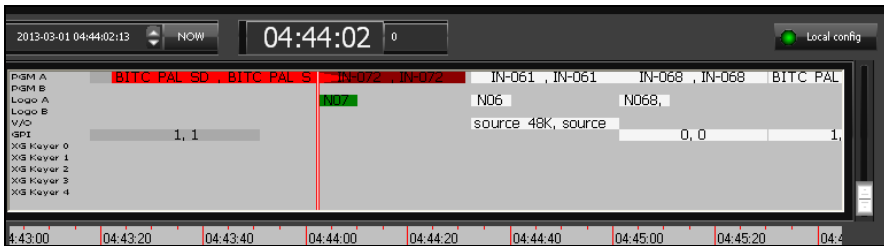

Figure 4-1. Delaying the start of the next live source event using the iMC's Hold Next operation

Delaying the ending of a live source event

When a live source event is currently on air, it might be scheduled but in reality its exact ending time might be unknown. For example, the coverage of a sport event which includes the playout of commercials only when the play allows for a pause or break. In such a case, the operator presses the iMC panel's **Cue Next** and then **Hold Next** buttons to ready and delay the playout of the next scheduled event (commercial clip). The live source event keeps playing and delays the remaining scheduled events until the operator presses the iMC panel's **Take Next** button. The iTX automation system resumes control of running the schedule by playing out the subsequent events.

Figure 4-2 demonstrates that items IN-072 and N072 are master control primary and secondary events that are currently on air and scheduled to playout from 04:40:19:00 to 4:40:43:00, followed immediately by the video clip, BITC PAL SD. Pressing the iMC panel's **Hold Next** button delays the playout of the next item and updates the schedule's progressive timing until a Take Next operation is executed.
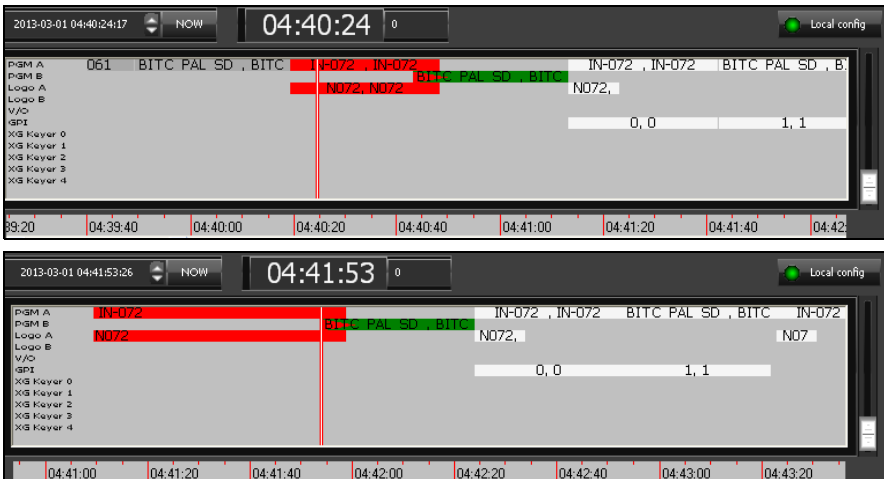

Figure 4-2. Delaying the end of the live source event by holding the next scheduled item

Skipping the next scheduled primary event

Pressing the iMC panel's **Skip Next** button causes the next scheduled event not to take place and the event is immediately removed from the timeline and schedule grid.

5 USING MANUAL INSERT AND MANUAL OVERRIDE MODES

iTX-MC offers two modes for using the iMC panel to manually insert a live video source during the playout of an automated schedule: **Manual Insert mode** and **Manual Override mode**.

These types of manual interventions are typically used when unforeseen emergency events occur and the operator is required to "breakaway" from the regular schedule to broadcast the live coverage of the event.

The main difference between these two modes is the way in which the schedule's playout is resumed after the manual live event is finished.

The following sections provide information and instructions for using the iTX-MC's Manual Insert and Manual Override modes:

Manually inserting a live source into a scheduled broadcast

The iTX-MC's Manual Insert mode instructs the automation system to pause or hold the schedule's programming while the live source event is played out on air. Once the live source event has finished, the scheduled playout resumes from the precise point of interruption.

Figure 5-1 demonstrates that when a manual insert is executed on the iMC panel, the event currently on air (IN-068) gets split in the timeline and the channel's playout transitions to a Master Control Event named "Manual Insert", which is added to both the schedule grid and timeline.

The Manual Insert event has an initial default duration, however as the event continues to playout the manual insert item expands and delays the remaining scheduled events until the manual insert event is ended by the operator. Once the operator manually ends the manual insert event, the on air playout transitions back to the scheduled playout event, which resumes from the exact point of interruption, or from a point as configured in the channel configuration.
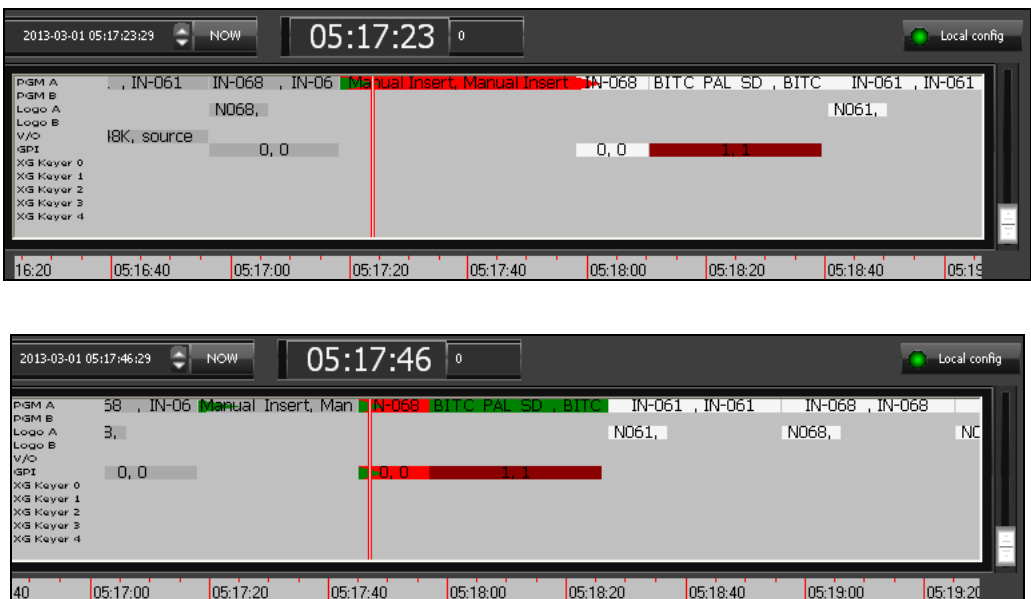

Figure 5-1. A "Manual Insert" breaks into regular programming and resumes from the point of interruption

Preparing to use iTX-MC's Manual Insert mode

Before attempting to use the iTX-MC's Manual Insert mode, operators should ensure that the following pre-requisites are satisfied:

1. Ensure that the iMC panel's Automation Assist buttons (**CUE NEXT**, **TAKE NEXT**, **HOLD NEXT** and **SKIP NEXT**) have been properly configured.
2. Ensure that **Automation** is enabled on the iMC panel (turned on).
3. Ensure that the iMC panel's transition rate settings (slow, medium, fast) are consistent with the typical schedule event's transition rate settings.
4. (Optional) Enable the Output Server's Cue-to-First-Frame option if you want to view the first frame of the next iTX clip event in the schedule on the Imagestore 750's Preset channel (see page 2-19).

Using iTX-MC's Manual Insert mode

To manually insert of a live source into the schedule playout using the iMC panel:

1. Ensure that **Automation Enabled** button on the iMC panel is <u>active</u> (On).
2. Select the channel in the iTX Desktop or on the iMC panel.
3. Ensure that the Mixer Mapper button is enabled and that the channel is "selected" in the Mixer Mapper. If both are true, then the iTX Desktop and the iMC panel will be in synch and operations on the iMC panel will be reflected in the iTX Desktop.
4. Load the schedule in the iTX Desktop and the automation system will playout the scheduled events.
5. When you are required to break into the programming:
   - Press the **Preset** bus button on the iMC panel that represents the desired video source and then press the panel's **Take** button (<u>not</u> the Take Next button).

   or,
   - Press the **PGM** bus button on the iMC panel that represents the desired video source.

   The on air playout immediately begins to transition to the live video source.
6. When you want to exit the "manual insert" event, press the iMC panel's **Take Next** button and the scheduled events resume.

Manually overriding a scheduled broadcast with a live source

The iTX-MC's Manual Override mode instructs the iTX automation system to keep running the schedule's programming while the live source event is played out on air. Once the live source event has finished, the broadcast rejoins the schedule already in progress. In other words, from where it would have been had there not been a live event interruption.

Figure 5-2 demonstrates that when a manual override is executed on the iMC panel, the scheduled events continue running in the schedule grid and timeline, but the channel's actual playout transitions to a Master Control Event named "Roll Under", which is added to added to the schedule grid and timeline.

The Roll Under event has an initial default duration, however as the event continues to playout the Roll Under item expands in the timeline without delaying the other scheduled events. When the operator chooses to end the Roll Under event, the channel's playout transitions back to the scheduled playout event by rejoining the event as if no interruption had occurred.
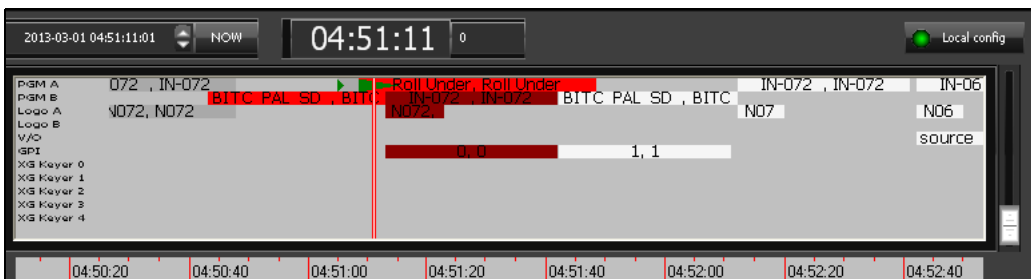

Figure 5-2. A "Manual Override" breaks into regular programming and joins the schedule "in progress"

Preparing to use iTX-MC's Manual Override mode

Before attempting to use the iTX-MC's Manual Override mode, operators should ensure that the following pre-requisites are satisfied:

1. Ensure that **Automation Enabled** button on the iMC panel is de-activated.
2. Ensure that the iMC panel's transition rate settings (slow, medium, fast) are consistent with the typical schedule event's transition rate settings.
3. (Optional) Enable the Output Server's Cue-to-First-Frame option if you want to view the first frame of the next iTX clip event in the schedule on the Imagestore 750's Preset channel (see page 2-19).

Using iTX-MC's Manual Override mode

To manually insert of a live source into the schedule playout using the iMC panel:

1. Ensure that **Automation** is disabled on the iMC panel (turned off).

2. Select the channel in the iTX Desktop or on the iMC panel.

3. Ensure that the Mixer Mapper button is enabled and that the channel is "selected" in the Mixer Mapper. If both are true, then the iTX Desktop and the iMC panel will be in synch and operations on the iMC panel will be reflected in the iTX Desktop.

4. Load the schedule in the iTX Desktop and the automation system will playout the scheduled events.

5. When you are required to break into the programming:
   • Press the **Preset** bus button on the iMC panel that represents the desired video source and then press the panel's **Take** button (<u>not</u> the Take Next button).

   or,

   • Press the **PGM** bus button on the iMC panel that represents the desired video source.

   The on air playout immediately begins to transition to the live video source and the iTX schedule will keep running as usual.

6. When you want to exit the "Roll Under" event, press the **Preset** bus button on the iMC panel that corresponds to the iTX source and then press the panel's **Take** button (<u>not</u> the Take Next button). This cancels the roll under and the channel's playout is transitioned back to regular programming.

☑ NOTE

Be sure to re-enable automation on the iMC panel, otherwise subsequent Master Control Primary events will fail.