Control Panels for X75 Systems

Installation and Operation Manual

Enabling Your
Integrated Content Environment

Preliminary Edition
175-000248-00

Integrated Content Environment

Experience an Integrated Content Environment

Leitch Technology is uniquely capable of meeting the needs of customers with a full range of products that provide the experience of an Integrated Content Environment — a streamlined workflow for the production, processing, transmission and management of content.

The area of content production has seen increases in source and output formats, effects, layers and volume of material to be edited. As a result, editors need tools that enable increased productivity to offset these additional time demands, while increasing performance and enhancing creativity.

VelocityQ™ running on Quattrus™ hardware, including a new interface style featuring the unique EyeCon View, has received glowing reviews for its "real-time full-quality" playback speed of four video streams, up to six graphic layers and four 3D DVEs.

Leitch's new NEXIO™ server system, a modular, scalable and highly cost-effective storage infrastructure for news and transmission environments, includes gigabit Ethernet for easy integration with IP networks for movement of content. NEXIO features industry-leading productivity — with the introduction of Ingest Control Manager,™ NewsFlash™ server-based NLE, and BrowseCutter™ II low-resolution editing system — to provide the fastest and most effective workflow today.

The advent of fully Integrated Content Environments has led to significant efficiency improvements in workflow, with processing and monitoring now integrated and transparent.

NEO,™ Leitch's advanced processing platform, not only hosts single-function modules, but also consolidates multiple functions on a single "Simplicity" card. New award-winning modules have been added with the NEO VR™ digital video recorder, LogoMotion™ II branding tool and the NEO SuiteView multi-source display processor. More functionality can be achieved by customers' infrastructure environments with the high-density 6800+.™

Leitch's industry-leading routing offerings allow customers to connect high-quality signals of all formats from analog to HD. Panacea™ provides affordable, compact, modular routing in sizes up to 32x32. The new wideband Integrator® Gold provides scalable routing of almost any digital signal up to 128x128 in a single frame. All processing and routing platforms are fully integrated with Leitch's advanced Command Control System (CCS™).

Advancements in digital technologies have enabled more channels, in different content formats, over multiple distribution systems. Customers now seek to achieve their vision of a fully Integrated Content Environment to supply multiple distribution channels with high-quality content and branding.

Leitch's NEXIO transmission server, which supports multiple compression formats in both standard and high-definition resolution, will also support ASI interface and has the ability to record, process and playback MPEG transport streams.

Leitch's Opus™ master control switcher offers an array of effects and has the ability to control up to 16 on-air channels. Opus meets multi-channel digital integration challenges for both high-definition and standard-definition formats.

Integrated Content Environments offer the greatest opportunity for productivity and performance gains when employing content management and control applications that place content, operations or remote locations under common software controls.

A major workflow enhancement is Leitch's Ingest Control Manager,™ which places control of up to 16 server channels with associated proc amps (DPS-575), eight VTRs and eight separate routers under one control station.

Leitch's CCS Navigator,™ winner of NAB 2003's highest awards for control and monitoring of content quality, and the CCS™ soft real-time system provide open access through standard protocols to components of a networked system.

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Installation and Operation Manual

ALL INFORMATION IN THIS MANUAL IS PRELIMINARY AND SUBJECT TO CHANGE WITHOUT NOTICE

Preliminary Edition
December 2004

LEITCH

Preface

Manual Information

Purpose

This manual details the features, installation procedures, operational procedures, and specifications of the local and remote control panels for X75 systems.

Audience

This manual is written for engineers, technicians, and operators responsible for the installation, setup, and/or operation of the local and remote control panels for X75 systems.

Revision History

Table P-1. Revision History

Edition	Date
Preliminary	December 15, 2004

Writing Conventions

To enhance your understanding, the authors of this manual have adhered to the following text conventions.

Table P-2. Writing Conventions

Term or Convention	Description
Bold	Indicates dialog boxes, property sheets, fields, buttons, check boxes, list boxes, combo boxes, menus, submenus, windows, lists, and selection names.
Italics	Indicates email addresses, the names of books or publications, and the first instances of new terms and specialized words that need emphasis.
CAPS	Indicates a specific key on the keyboard, such as ENTER, TAB, CTRL, ALT, or DELETE.
`Code`	Indicates variables or command-line entries, such as a DOS entry or something you type into a field.
>	Indicates the direction of navigation through a hierarchy of menus and windows.
hyperlink	Indicates a jump to another location within the electronic document or elsewhere
Internet address	Indicates a jump to a Web site or URL
Note	Indicates important information that helps to avoid and troubleshoot problems

Obtaining Leitch Documents

Leitch documents can be viewed or downloaded from the Leitch Web site at www.leitch.com (go to **Support>Documentation**). Alternatively, contact your Leitch customer service representative to request a document.

Unpacking/Shipping Information

Leitch has carefully inspected, tested, and calibrated this product before shipment to ensure years of stable and trouble free service.

1. Check equipment for any visible damage that may have occurred during transit.
2. Confirm that you have received all items listed on the packing list.
3. Contact your Leitch dealer if any item on the packing list is missing.
4. Contact the carrier if any item is damaged.
5. Remove all packaging material from the product and its associated components before you install the unit.

Keep at least one set of original Leitch packaging, in the event that you need to return a product for servicing. If the original packaging is not available, you can purchase replacement packaging from Leitch at a modest cost or supply your own packaging as long as it meets the following criteria:

- Withstands the weight of the product
- Holds the product rigid within the packaging
- Leaves at least 2 in. (50.8 mm) of space between the product and the container
- Protects the corners of the product

Ship products back to Leitch for servicing prepaid and, if possible, in the original packaging material. If the product is still within the warranty period, Leitch will return the product prepaid after servicing.

Important Safety Instructions

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it. Read these instructions. Keep these instructions. Heed all warnings. Follow all instructions.

Servicing

Only qualified personnel should perform service procedures. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Safety Terms and Symbols

Terms and Symbols Used in this Manual

WARNING statements identify conditions or practices that can result in personal injury or loss of life. High voltage is present. Uninsulated dangerous voltage within the product's enclosure may be sufficient to constitute a risk of electric shock to persons.

CAUTION statements identify conditions or practices that can result in damage to the equipment or other property. Important operating and maintenance (servicing) instructions are included in the literature accompanying the product.

CAUTION: This icon identifies conditions or practices that can result in damage to the equipment or other property if proper care during use and transport is not taken.

Terms and Symbols Found on the Product

DANGER: Indicates a hazard for high voltage, fire, or personal injury immediately accessible as one reads the marking

WARNING: Indicates a personal injury hazard not immediately accessible as one reads the marking

CAUTION: Indicates a hazard to property, including the product, or the need to take attention and refer to the manual

Protective ground (earth) terminal

Fuse: Replace with same type and rating of fuse

Observe precautions for handling electrostatic-sensitive devices

Important Safety Instructions

Read these instructions. Keep these instructions. Heed all warnings. Follow all instructions.

Do Not Use This Apparatus Near Water

Clean Only With a Dry Cloth

Do Not Block Any Ventilation Openings
Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.

Keep Product Away from Heat Sources
Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Ground the Product
Do not defeat the safety purpose of the polarized and grounding-type plugs. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the Power Cord
Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

Use With Proper Equipment
Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

Do Not Operate With Suspected Failures
Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as if the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, or the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Use Proper Power Source
Do not operate this product from a power source that supplies more than the specified voltage.

Install Near Socket Outlet
The equipment shall be installed near the socket outlet, and a disconnect device shall be easily accessible.

ATTENTION:
Observe precautions for handling electrostatic-sensitive devices.

Fuse Replacement
CAUTION: For continued protection against risk of fire, replace only with the same type of fuse.

ATTENTION: Remplacer uniquement par un fusible de même type et calibre.

Injury Precautions

WARNING!
To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

AVIS! Risque de choc électrique. Ne pas ouvrir.

WARNING!
Potentially lethal voltages are present within this product's frame during normal operation. The AC power cord must be disconnected from the frame before the top panel is removed. (In frames with multiple power supplies, remove ALL power cords.) Power should not be applied to the frame while the top is open, unless properly trained personnel are servicing the unit.

[Poland] Przod zdjeciem pokrywy wyciagnac wtyczke z gniazda sieciowego.

Use Proper Power Cord
To avoid fire hazard, use only the power cord specified for this product.

Connect to an Earthed Mains Socket-Outlet
The apparatus must be connected to an earthed socket-outlet.

United Kingdom:
WARNING: This appliance must be earthed.

Norway:
Apparaten må tilkoples jordat stikkontakt.

Finland:
Laite on liitettää suojamaadoitus-koskettimilla varustettuun pistorasiaan.

Sweden:
Apparaten skall anslutas till jordat uttag.

Do Not Operate Without Covers
To avoid electrical shock or fire hazard, do not operate this product with covers or panels removed.

Do Not Operate in Wet/Damp Conditions
To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture

Do Not Operate in an Explosive Atmosphere
To avoid injury or fire hazard, do not opeate this product in an explosive atmosphere.

Avoid Exposed Circuitry
To avoid injury, remove jewelry such as rings, watches, and other metallic objects. Do not touch exposed connections and components when power is present.

Isolate IT Power System Connection
CAUTION: IT power system shall be isolated from earth, except that one point may be connected to earth through an impedance or a voltage limiter. The parts of the equipment required to be earthed shall be connected to earth electrodes at the user's premises. Protective earthing shall be provided either directly to the equipment or into the mains supply building installation.

Preventing Electrostatic Discharge
CAUTION: Electrostatic discharge (ESD) can damage components in the product. To prevent ESD, observe these precautions when directed:

Use a ground strap. Wear a grounded wrist strap to discharge the static voltage from your body while installing or removing sensitive components.

Use a safe work area. Do not use any devices capable of generating or holding a static charge in the work area where you install or remove sensitive components. Avoid handling sensitive components in areas that have a floor or benchtop surface capable of generating a static charge.

Handle components carefully. Do not slide sensitive components over any surface. Do not touch exposed connector pins. Handle sensitive components as little as possible.

Transport and store carefully. Transport and store sensitive components in a static-protected bag or container.

CAUTION: To completely disconnect this equipment from the AC Mains, disconnect the power supply cord plug from the AC receptacle.

CAUTION: Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.

Certifications and Compliances

This product has been tested and found to comply with the following EN, IEC, FCC, UL, ICES, and CSA standards, per the provision of the Electromagnetic Compatibility Directive 89/336/EEC of 3 May 1989 as amended by 92/31EEC of 28 April 1992 and 93/68/EEC, *Article 5* of 22 July 1993, and the Low Voltage Directive 73/23/EEC of 19 February 1973 as amended by 93/68/EEC.

EMC Standards

EMC Standard	Description
EN55014	Limits and methods of measurement of radio disturbance characteristics of electric motor-operated and thermal appliances for household and similar purposes, electric tools and similar electric apparatus.
EN55022	Limits and methods of measurement of radio disturbance characteristics of information technology equipment, Class A.
EN55103-1	Electromagnetic compatibility—Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use, Part 1: Emission, Environment E4.
EN55103-2	Electromagnetic compatibility—Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use, Part 2: Immunity, Environment E4.
EN61000-3-2	Limits for harmonic current emissions (equipment input current less than or equal to 16 A per phase).
EN61000-3-3	Limitations of voltage fluctuations and flicker in low voltage supply systems for equipment with rated current less than 16 A.

EMC Standard	Description
EN61000-4-2	Electrostatic discharge requirements “ESD” 2 kV CD, 4 kV AD.
EN61000-4-3	Radiated radio-frequency electromagnetic field immunity test 1V/m {1 kHz 80% AM, 80-1000 MHz}.
EN61000-4-4	Electrical Fast transient requirements “Burst”, 0.5 kV Sig. & Ctrl. Lines 0.5 kV a.c. & d.c. Power line, 0.5 kV functional earth.
EN61000-4-5	Surge Immunity test 0.5 kV a.c. Power line.
EN61000-4-6	Immunity to conducted disturbances induced by radio frequency fields 1 V rms 0.15-80 MHz Sig. & Ctrl. Lines, 3 V rms 0.15-80 MHz d.c. Power line, 1V rms 0.15-80 MHz a.c. Power line, 1V rms 0.15-80 MHz functional earth.
EN61000-4-11	Voltage dips, short interruptions and voltage variations-immunity tests.

Per the provision of the Electromagnetic Compatibility Directive 89/336/EEC of 3 May 1989, as amended by 92/31EEC of 28 April 1992 and 93/68/EEC, *Article 5* of 22 July 1993, these devices are for professional use only and comply with Part 15 of FCC rules. Operation is subject to the following two conditions:

1. These devices may cause interference to Radio and TV receivers in residential areas.
2. These devices will accept any interference received, including interference that may cause undesired operations.

Changes or modifications not expressly approved by Leitch Technology, the party responsible for compliance to the FCC Part 15 Rule, could void the user’s authority to operate this equipment legally in the United States.

These devices do not exceed the class A limits for radio noise emissions from digital apparatus as set out in the interference standard entitled “Digital apparatus”, ICES-003 of the Canadian Department of Communications.

Working Environment

This product is intended for professional use in a controlled EMC environment such as a purposely-built broadcast studio.

Additional EMC Information

This device is for professional use in a controlled EMC environment, such as purpose-built broadcast studios.

EMC regulations require that the radiation emitted from this unit does not exceed certain limits. These limits are only met when the front panel is closed and the two thumb screws are secured.

Compliance to the EMC regulations is also dependent on the use of suitably shielded (screened) cables. Coax cables should be of the double-shielded (screened) variety. Unused BNCs should be fitted with 75Ω terminations.

All audio cables should be screened with the shield (screen) making good contact with the metallic parts of the cable connectors.

D-type connectors used with this unit should always have metallic shells with the shield (screen) of the cable mechanically bonded to the metal shell. It is further recommended that the D-type cable connectors be of the “dimple” variety. These connectors make a better contact and consequently improve EMC performance.

Safety Standards

Harmonized Standard	Reference IEC Standard	Description
EN 60950-1:2002	IEC 60950-1:2001 Ed. 1.0	Information Technology Equipment-Safety Part 1: General Requirements
UL 60950-1:2003	IEC 60950-1:2001 Ed.1.0	Information Technology Equipment - Safety Part 1: General requirements
CAN/CSA C22.2 No. 60950-1-03	IEC 60950-1:2001Ed.1.0	Information Technology Equipment-Safety Part 1: General Requirements

Contents

Chapter 2: Operation via Front Panel Controls

Chapter 3: Status and Alarm LEDs

Chapter 4: Specifications (RCP-X75)

Appendix A: Servicing Instructions

Appendix B: Display Screen Setup Parameters

Appendix C: Copyright Notice

Chapter 1

Introduction and Installation

Overview

The local and remote control panels for X75 systems are designed to work with X75HD High-Definition Digital Processing Synchronizer frames. As well, the X75HD control panels can communicate with DPS-575 Digital Processing Synchronizer frames using DCN protocol over Ethernet. DPS-575 Remote Control Panels can similarly control X75HD frames. This chapter covers the following topics:

Product Description

The local and remote X75HD control panels use a four-line 128 x 32 pixel vacuum fluorescent display (VFD) to display parameter names and values. Viewing the VFD, you can navigate through the parameter lists of X75HD frames and DPS-575 frames. Up to 200 devices can be controlled from a single control panel.

Frame Mounted Control Panel

The X75HD local control panel is mounted on the front of a 1RU X75HD frame. The panel communicates with the frame through an interconnect cable located behind the front panel. Power is provided to the front control panel by the frame's X75PS Power Supply, and a fan module draws air through the vents located in the control panel.

RCP-X75

The RCP-X75 Remote Control Panel is a stand-alone rack-mounted control panel. Functionally, the RCP-X75 is similar to the frame mounted control panel, although it does not have the Web browser interface capability of the X75HD frame, and it does not offer a front SD removable media interface. No cooling fans operate in the RCP-X75.

Front Views

Frame Mounted Local Control Panel

Figure 1-1 illustrates the front view of the frame-mounted X75HD local control panel.

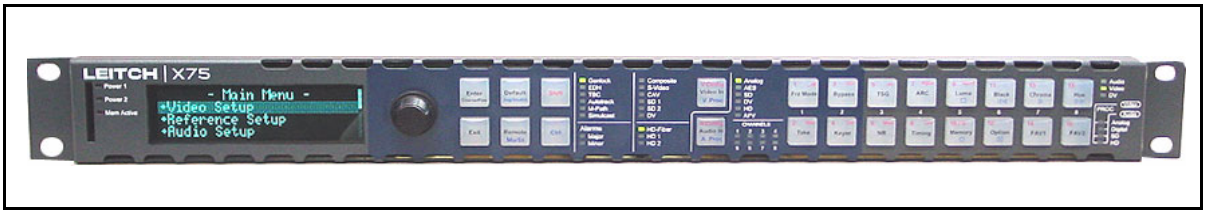

Figure 1-1. Front View of the X75HD Frame-Mounted Control Panel

RCP-X75 Remote Control Panel

Figure 1-2 illustrates the front view of the RCP-X75 Remote Control Panel. The front panel of the RCP-X75 does not include an interface for SD removable media.

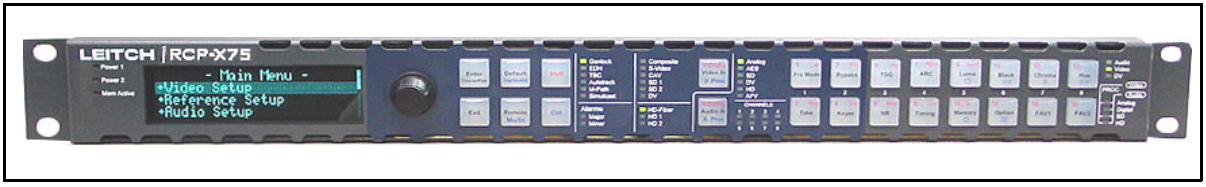

Figure 1-2. Front View of the RCP-X75

Rear View (RCP-X75)

Figure 1-3 shows the rear view of the RCP-X75, which has a shorter depth than an X75HD frame, and one Ethernet connector.

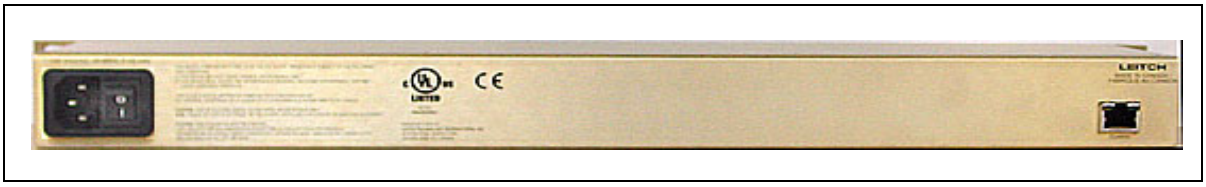

Figure 1-3. Rear View of the RCP-X75

Packing List

The X75HD frame-mounted control panel is shipped as part of the frame. See the *X75HD High-Definition Digital Processing Synchronizer Installation and Operation Manual* for details on the frame's packing list. The RCP-X75 Remote Control Panel package is shipped as a separate unit and includes these items:

- One RCP-X75 Remote Control Panel unit
- One AC power cord
- One *Control Panels for X75 Systems Installation and Operation Manual* per order

See page v for details on unpacking the RCP-X75 Remote Control Panel.

Installing the Control Panels

Frame-Mounted Local Control Panel

The X75HD frame-mounted local control panel is shipped as part of the frame. See the *X75HD High-Definition Digital Processing Synchronizer Installation and Operation Manual* for details on the frame's packing list.

RCP-X75

The RCP-X75 Remote Control Panel requires an ambient temperature of 41° to 113°F (5° to 45°C), with a relative humidity of 10-90% (non-condensing). The panel is designed for a standard 19-inch rack. It occupies a vertical space of 1 RU (1.75 in./4.4 cm) and is secured to the rack with standard front mounting ears located on the frame chassis.

To install an RCP-X75 control panel, follow these steps:

1. Secure the control panel to the rack by inserting four mounting screws (not included).
2. Connect the Ethernet network at the rear of the control panel.
3. Plug in the AC power cord.

Electrical Requirements

The power supply has a universal input of 100-240 VAC~ 50/60 Hz, and maximum power consumption of 6 watts. There is no voltage selector switch.

Chapter 2

Operation via Front Panel Controls

Overview

This chapter describes the main areas of the front panel, along with the various front panel controls and features. For specific descriptions about available menus, submenus, parameters, or options, see the *X75HD Control Options* PDF document available from the Leitch Web site at www.leitch.com (or see the files on the accompanying documentation CD).

To find general information that describes how to use the front panel to navigate, select, and configure various options, see the following topics:

- "Front Panel Description" on page 8
- "About the VFD Screen" on page 9
- "Using the Control Knob and Menu Control Buttons" on page 9
- "Exploring the Main Menu" on page 11
- "Using Front Panel Control Shortcuts" on page 13

Front Panel Description

The front panel (Figure 2-1) is divided into several areas for control and monitoring, including the following:

- VFD screen for viewing menu options and device information
- Control knob and buttons for scrolling, selecting, and setting menu options
- Programmable and device-dedicated control buttons
- Status and alarm LEDs for monitoring the current mode and operating conditions of the unit

Information about each of these areas is available in this chapter.

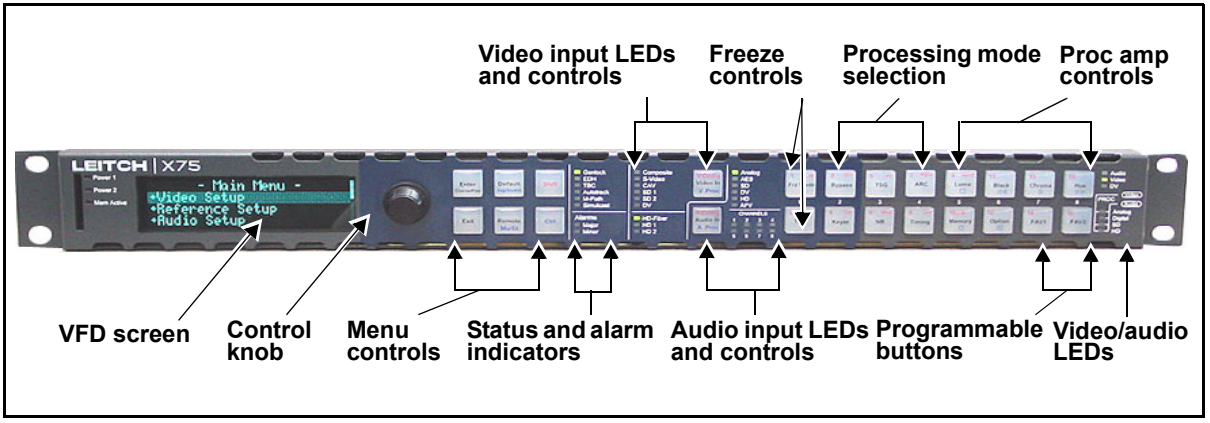

Figure 2-1. Control Panels for X75 Systems Front Panel

About the VFD Screen

Menus, options, settings, device information, and feedback display on the VFD (Vacuum Fluorescent Display) screen. When the frame-mounted local control panel is first turned on, the VFD screen starts at the Main Menu. When the RCP-X75 starts, the Remote Menu appears.

A variable display intensity and a screen saver are available to extend the life of the display device. See pages 47 and 48 for details.

Using the Control Knob and Menu Control Buttons

All menus and device settings for the control panels for X-75 systems can be selected and configured using the control knob and menu control buttons. Figure 2-2 shows the location of the control knob and various menu control buttons on the device. Use these items to open and navigate menus, to scroll through and select options, and to adjust various parameters and settings. In most menus, when you press the control knob, it replicates the action of pressing the **Enter** button. If you press the control knob while working in numerical parameters, you will toggle between fine and coarse adjustment modes.

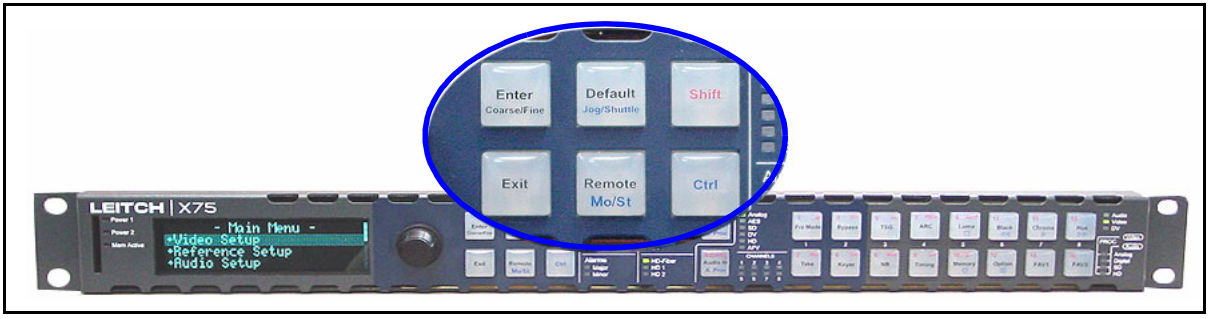

Figure 2-2. Control Knob and Menu Control Area

Using Multi-Function Buttons

Many of the buttons on the control panels have multiple functions assigned to them. To select different tasks from a multi-function button, perform one of the following steps:

- Press the desired multi-function button. The assigned default function is written in *black* text on the button face, either near the top or in the middle of the button.
- Press **Shift** and the desired multi-function button simultaneously. The assigned function is written in *red* text on the button face near the top of the button.
- Press **Ctrl** and the desired multi-function button simultaneously. The assigned function is written in *blue* text on the button face near the bottom of the button.

Note

Function names are color-coded and written in red, black, and blue text on the button face to aid in proper selection.

For more information on front panel buttons, see "Using Front Panel Control Shortcuts" on page 13.

Navigating Through the Menus

To navigate through the menus of different X75 frames, follow these steps:

1. Press the **Remote** button.
2. Select the frame you need from the list of IP addresses, and then press **Enter**.

   The asterisk beside an IP address indicates which frame is currently represented by the control panel.
3. With the **Main Menu** of the selected frame displaying, rotate the control knob to scroll through the menu items.
4. Press the **Enter** button to open the submenu you have selected.
5. Press the **Exit** button to go back a step in the menu structure.
6. When you reach a level in the parameter tree where you can select a value, use the **Exit** button to store the setting.

Exploring the Main Menu

There are eight main menu items available. Each of them open up into several layers of submenus and parameter options that you can scroll through and edit as required. Table 2-1 briefly describes each of the eight main menu items.

Table 2-1. Main Menu Items

Menu Name	Menu Description
Video Setup	Configures and controls the video settings
Reference Setup	Configures and controls the genlock and other reference settings
Audio Setup	Configures and controls the unit's audio settings
System Config	Configures settings of the initial setup parameters
Routing Setup	Controls video signal routing
Global Frame Rate	Sets the unit's frame rate per second
SD Operating Standard	Provides a read-only view of the selected or detected SD-SDI operating standard
HD Operating Standard	Provides a read-only view of the selected or detected HD-SDI operating standard

Setting a Numerical Value

For parameters that have a numerical range of values, the VFD panel shows both a numeric and a visual representation of the range. Figure 2-3 shows this representation.

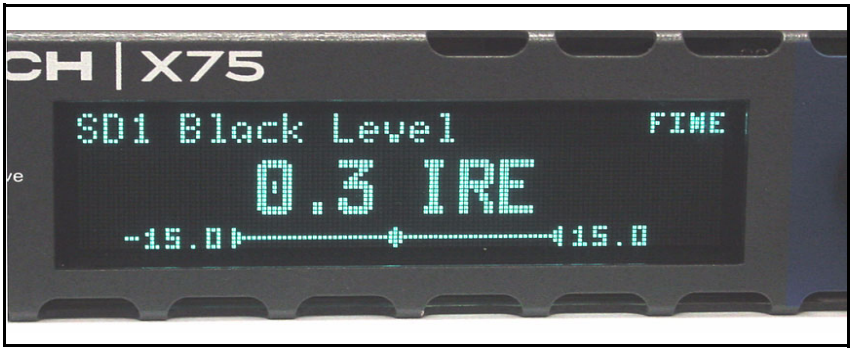

Figure 2-3. VFD Panel Showing Numerical Range of Values

To set a parameter with a numerical value, follow these general steps:

1. Navigate to the required menu or submenu, and then select a parameter.
2. Repeatedly press the **Enter** button to reach the value you need to change or view.
3. In numerical parameter screens, press the **Enter** button or control knob to toggle between coarse and fine adjustment.
4. To reset the parameter to its default value, press **Default** on the front panel.
5. Press **Exit** to set the value.

   Selected settings affect the output immediately, unless you have selected **Delayed** in the **Parameter Adjust Mode**. See page 47 for details.

Note

The **Default** button only affects the parameter currently displaying on the screen. To reset all parameters to factory defaults, select **Main Menu>System Config>Reset Factory Defaults.**

Using Front Panel Control Shortcuts

Instead of scrolling through individual menus to access parameter settings, you can use built-in front panel shortcuts. The **Audio** and **Video** LEDs indicate the current focus of control. Whenever the audio parametric adjustments are made, the **Audio** LED is lit. Whenever the video parametric adjustments are made, the **Video** LED is lit.

The following settings can be made using shortcuts instead of navigating via the control knob and VFD panel:

- "Selecting the Video Input" on page 14
- "Selecting and Adjusting Video Proc Amp Settings" on page 16
- "Selecting the Audio Input" on page 19
- "Selecting and Adjusting Audio Proc Amp Settings" on page 26
- "Using Freeze Controls" on page 28
- "Selecting Processing Mode Functions" on page 29
- "Accessing Optional Features" on page 31
- "Accessing Optional Features" on page 31
- "Assigning Functions to Programmable Buttons" on page 34

Selecting the Video Input

Control Panel Shortcut

With control panel video shortcuts, you can select an input (or multiple inputs) and immediately send it to all video outputs by pressing the **Video In** button. The LEDs on the left side of this button indicate which input is currently selected. The M-Path (multiple inputs) selection allows any output group to be assigned with the video input sources. When two or more video sources are selected and mapped to multiple output groups, the M-Path and corresponding video input source LEDs will be lit. When the selected input signal is absent, the LED flashes. Available inputs include the following:

- Analog Out Sel
- HD Sel
- SDI 1 Out Sel
- SDI 2 Out Sel

If the **Auto Detect** feature is enabled when a selected input option is not installed or detected, the panel accepts the next available input. If **Auto Detect** is not enabled, the selected **Video In** LED flashes.

Procedure

1. In M-Path mode, press the **Video In** button (see Figure 2-4 on page 15).
2. To select multiple video sources (for example, to up-convert a composite input to HD-SDI, and down-convert an HD-SDI input to SD-SDI), you must rotate the control knob to select multiple video inputs to be routed through the internal matrix. Note the following:
    - The **SDI 1 Out Sel** and **SDI 2 Out Sel** parameters each allow selection of one video input from SD-SDI 1 and SD-SDI 2 sources.
    - The **HD Out Sel** parameter allows selection of one video input from HD-SDI 1 and HD-SDI 2 sources.

3. Press **Enter** to confirm your setting(s).

   The associated video input LED will become lit. Where multiple video sources are selected, more than one video input LED will be illuminated (including the M-Path LED and the selected source LEDS). In an example where the **Analog** and **HD** LEDs are lit, the routing is set automatically such that the analog input signal is upconverted and sent to the HD-SDI output. The HD-SDI input is downconverted and sent to all SD-SDI outputs.

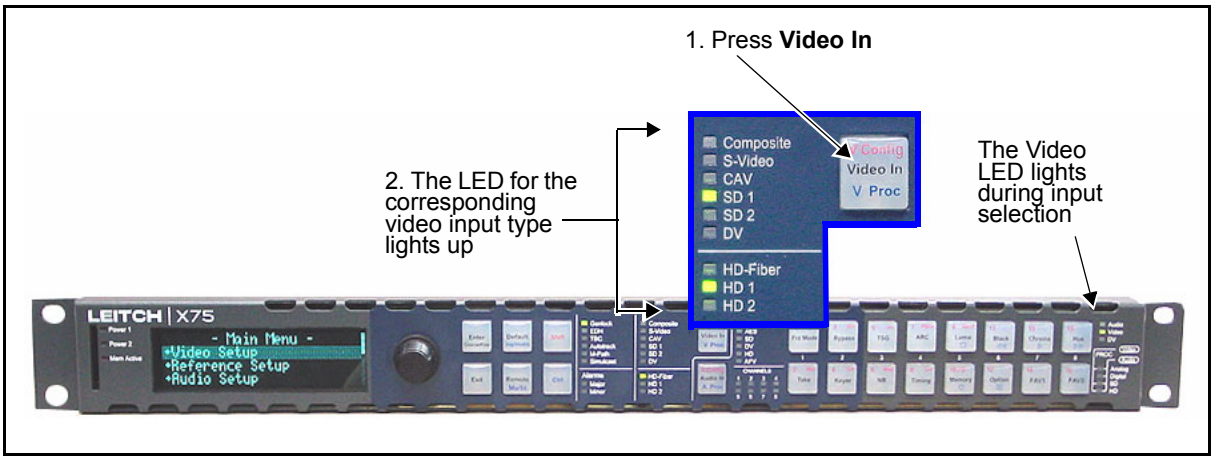

Figure 2-4. Video Input Control Area

Selecting and Adjusting Video Proc Amp Settings

The four most commonly used video processing controls are available from the control panel as shortcuts. With a single video input, you can directly access each proc amp parameter by pressing one button. When you are working with multiple video sources, first press **Ctrl** + **V Proc** to switch between the Video proc amps of the selected video sources. (The VFD briefly displays the selected Video proc amp.) Then press the proc amp parameter buttons.

There are four internal input video proc amps: HD-SDI 1, SD-SDI 1, SD-SDI 2, and Analog, routed in the following ways:

- The HD-SDI 1, HD-SDI 2 and HD-Fiber inputs share the HD-SDI video proc amp.
- The SD-SDI 1 input has its own dedicated SD-SDI 1 video proc amp.
- The SD-SDI 2 input uses the SD-SDI 2 video proc amp.

Video LED Behavior

The three **Video Proc** LEDS (**Analog**, **SD, HD**) on the far right side of the front panel become active when you set the control panel to adjust the video parameters. The LEDs indicate which input video processing block is currently selected for the adjustments under the following conditions:

- The **Analog** LED lights when you select the **Analog** video proc amp.
- The **SD** LED lights when you select the SD-SDI 1 or SD-SDI 2 video proc amp. When a shortcut button is pressed, the parameter prefix on the VFD display indicates which video processing block is currently active.
- The **HD** LED lights when you select the HD-SDI video proc amp.

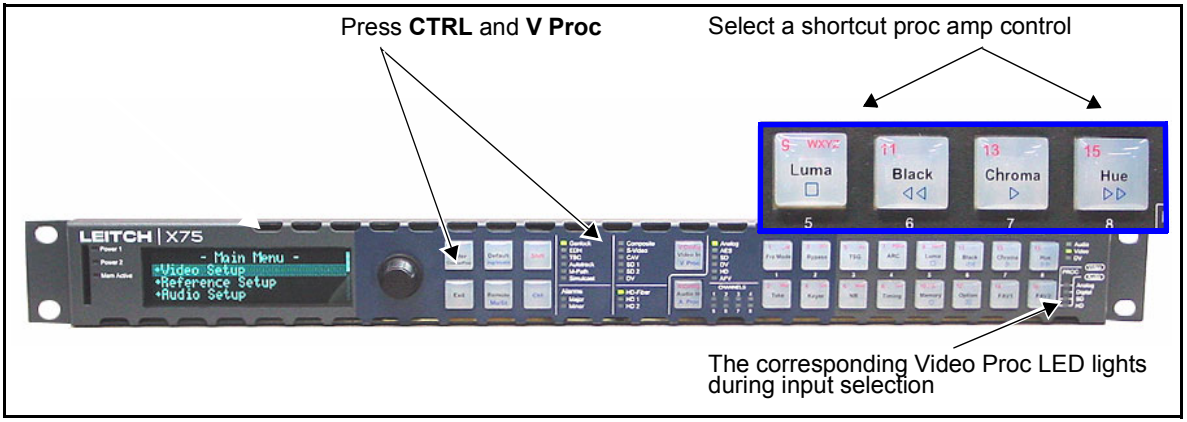

Figure 2-5. Video Proc Amp Control Area

Luma, **Black**, **Chroma**, and **Hue** shortcuts are described below.

Luma (Luma Gain)

To adjust the luminance gain, follow these steps:

1. Press the **Luma** button to display the **Luma Gain** menu on the VFD panel.
2. Set the maximum luminance level (in IRE or mV) of the incoming video signal using the control knob and menu controls. Options include the following:
   - Valid range: -6.00 dB to 6.00 dB (Y/C and SD-SDI)
   - Default settings: 0.00 dB

Black (Black Level)

To adjust the black level, follow these steps:

1. Press the **Black** button to display the **Black Level** menu on the VFD panel.
2. Set the minimum luma level of the incoming video signal using the control knob and menu controls. Options include the following:
   - Valid range:-15.0 to 15.0 IRE (525-line mode)
   - Default settings: 0.0 IRE (525-line mode); 0.0 mV (625-line mode)

Chroma (Chroma Gain)

To adjust the chrominance gain, follow these steps:

1. Press the **Chroma** button to display the **Chroma Gain** menu on the VFD panel.
2. Set the saturation peak (in %) of the incoming video signal using the control knob and menu controls. Options include the following:
   - Valid range: -6.00 dB to 6.00 dB (Y/C and SD-SDI)
   - Default settings: 0.0 dB

Hue (Hue Phase)

To adjust the output phase, follow these steps (hue phase control is not available in HD-SDI):

1. Press the **Hue** button to display the **Hue Phase** menu on the VFD panel.
2. Set the hue in the output signal using the control knob and menu controls. Options include the following:
   - Valid range: -180.00 to 179.94
   - Default settings: 0.00°

Selecting the Audio Input

Control Panel Shortcut

With control panel shortcuts, you can select an input (or multiple inputs) and immediately send it to all audio outputs. Press the **Audio In** button to select any one set of audio inputs to be sent out to all audio multiple output sets. The LEDs to the top, right side of this button indicate which input is currently selected. When the selected input signal is absent, the LED flashes.

Available audio inputs include the following:

- User
- Analog—4 mono channels of analog audio input
- AES—5 channels
- SD—16 channels from the SD-SDI De-Embedder
- HD—16 channels from the HD-SDI De-Embedder

Note

The optional AS-X75HD module is required for synchronizing, delaying and processesing mono audio for SD-SDI and HD-SDI inputs.

Depending upon which input you have selected, the X75 unit automatically and logically maps all output channels. When two or more audio input groups are selected, the **Audio In Src Select** parameter is automatically set to the **User** setting.

The **User** mode includes **Audio Setup** and **Routing** submenus. From these submenus, you can manipulate the input and output audio channels' routing controls for custom configurations to suit most of your applications.

To switch between Mono and Stereo audio processing control, press the **Ctrl** and **Mo/St** buttons simultaneously. When Mono control is active, each button controls an individual gain. When Stereo control is active, the top and bottom front panel buttons work together (are “married”) so that either button will adjust the gain in stereo pairs.

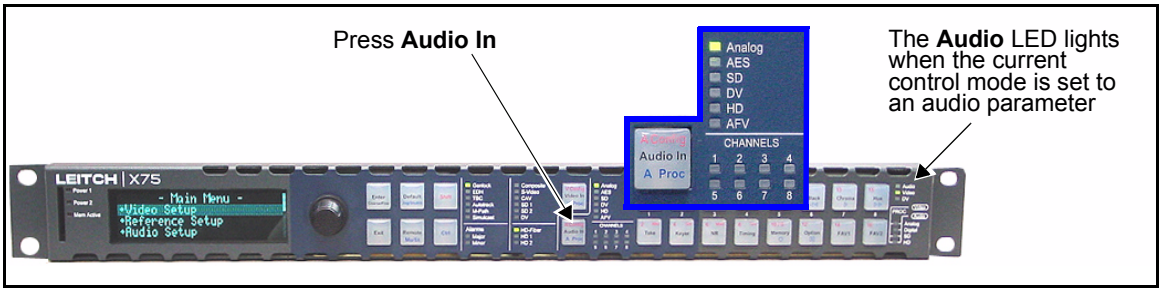

Figure 2-6. Audio Input Control Area

Single Source Configuration

Tables 2-2, 2-3, 2-4, and 2-5 show the mapped buttons on the control panels, and the parameters affected, when you use a single source of analog, AES, SD-SDI demuxed, and HD-SDI demuxed audio.

Table 2-2. Analog Audio Inputs Selected

Selected Inputs	Lit Channel LEDs	Lit Audio Input LEDs	Mapped Parameters	Mapped Buttons on Control Panel	Lit Audio Proc LEDs
AA1/2	1	Analog	Gain1, Gain2	1, 2	Analog
AA3/4	2		Gain3, Gain4	3, 4	

Table 2-3. AES Audio Inputs Selected

Selected Inputs	Lit Channel LEDs	Lit Audio Input LEDs	Mapped Parameters	Mapped Buttons on Control Panel	Lit Audio Proc LEDs
AES1	1	AES	Gain1, Gain2	1, 2	Digital
AES2	2		Gain3, Gain4	3, 4	
AES3	3		Gain5, Gain6	5, 6	
AES4	4		Gain7, Gain8	7, 8	
AES5	5		Gain9, Gain10	9, 10	

Table 2-4. SD-SDI Demuxed Audio Selected (SDX)

Selected Inputs	Lit Channel LEDs	Lit Audio Input LEDs	Mapped Parameters	Mapped Buttons on Control Panel	Lit Audio Proc LEDs
SD 1/2	1	SD	Gain1, Gain2	1, 2	SD
SD 3/4	2		Gain3, Gain4	3, 4	
SD 5/6	3		Gain5, Gain6	5, 6	
SD 7/8	4		Gain7, Gain8	7, 8	
SD 9/10	5		Gain9, Gain10	9, 10	
SD 1/12	6		Gain11, Gain12	11, 12	
SD 13/14	7		Gain13, Gain14	13, 14	
SD 15/16	8		Gain15, Gain16	15, 16	

Table 2-5. HD-SDI Demuxed Audio Selected (HDX)

Selected Inputs	Lit Channel LEDs	Lit Audio Input LEDs	Mapped Parameters	Mapped Buttons on Control Panel	Lit Audio Proc LEDs
HD 1/2	1	HD	Gain1, Gain2	1, 2	HD
HD 1/2	2		Gain3, Gain4	3, 4	
HD 1/2	3		Gain5, Gain6	5, 6	
HD 1/2	4		Gain7, Gain8	7, 8	
HD 1/2	5		Gain9, Gain10	9, 10	
HD 1/2	6		Gain11, Gain12	11, 12	
HD 1/2	7		Gain13, Gain14	13, 14	
HD 1/2	8		Gain15, Gain16	15, 16	

M-Path Configuration

Tables 2-6 and 2-7 show the mapped buttons on the control panels and the parameters affected when you use multiple sources of analog, AES, SD-SDI, and HD-SDI audio. Use the **Ctrl** + **A Proc** buttons to switch between the audio input types.

Table 2-6. Multiple Audio Inputs Selected

Selected Inputs	Lit LED Channels	Lit Audio Input LEDs	Mapped Parameters
AA 1/2	1	Analog	Gain1, Gain2
AA 3/4	2		Gain3, Gain4
AA 5/6	3	AES	Gain5, Gain6
AA 7/8	4		Gain7, Gain8
AA 9/10	5	SD	Gain9, Gain10
AA 11/12	6		Gain11, Gain12
AA 13/14	7	HD	Gain13, Gain14
AA 15/16	8		Gain15, Gain16

Table 2-7. Ctrl + A Proc Buttons Pressed

Lit LED Channels	Mapped Buttons on Control Panel	Lit Audio Proc LEDs
1	1, 2	Analog
2	3, 4	
3	5, 6	AES
4	7, 8	
5	9, 10	SD
6	11, 12	
7	13, 14	HD
8	15, 16	

AFV (Audio Follows Video) Mode

Note

The AFV mode currently functions on the SD-SDI 1 input.

In AFV mode, each of the selectable video inputs has an audio input selection linked to it. With this feature enabled, the audio input selection for the channel automatically changes when the video input is changed.

You can enable or disable AFV mode through the **Audio** menu. The **<channel>-AFV-<input>** parameters specify the audio input channel ("**<channel>**") to be automatically switched when the **SD Out Sel** parameter is switched to a specified input ("**<input>**"). For example, the **Ch1-AFV-SD 1** parameter specifies the audio input for **SRC Channel 1** will be automatically switched when the **SD Out Sel** parameter changes to **SD 1**.

When AFV mode is enabled for any single channel, the AFV LED on the front panel of the unit will be lit.

You can override AFV mode by manually selecting a different audio input. This will not, however, turn AFV mode off—the next time the video input selection is changed, the audio will again follow it. AFV mode can only be disabled through the audio menus.

Figure 2-7 shows the default AFV audio and video assignments. It illustrates the linked audio channels in AFV mode when the video is switched from the composite input to SD-SDI 1 video. When the AFV is enabled for all channels, the composite input video selection also routes the analog input channels 1 and 2 to SRC channel 1, and the analog input channels 3 and 4 to SRC channel 2. When SD-SDI 1 input video is selected, all four groups of de-multiplexed audio channels are routed through eight SRC channels.

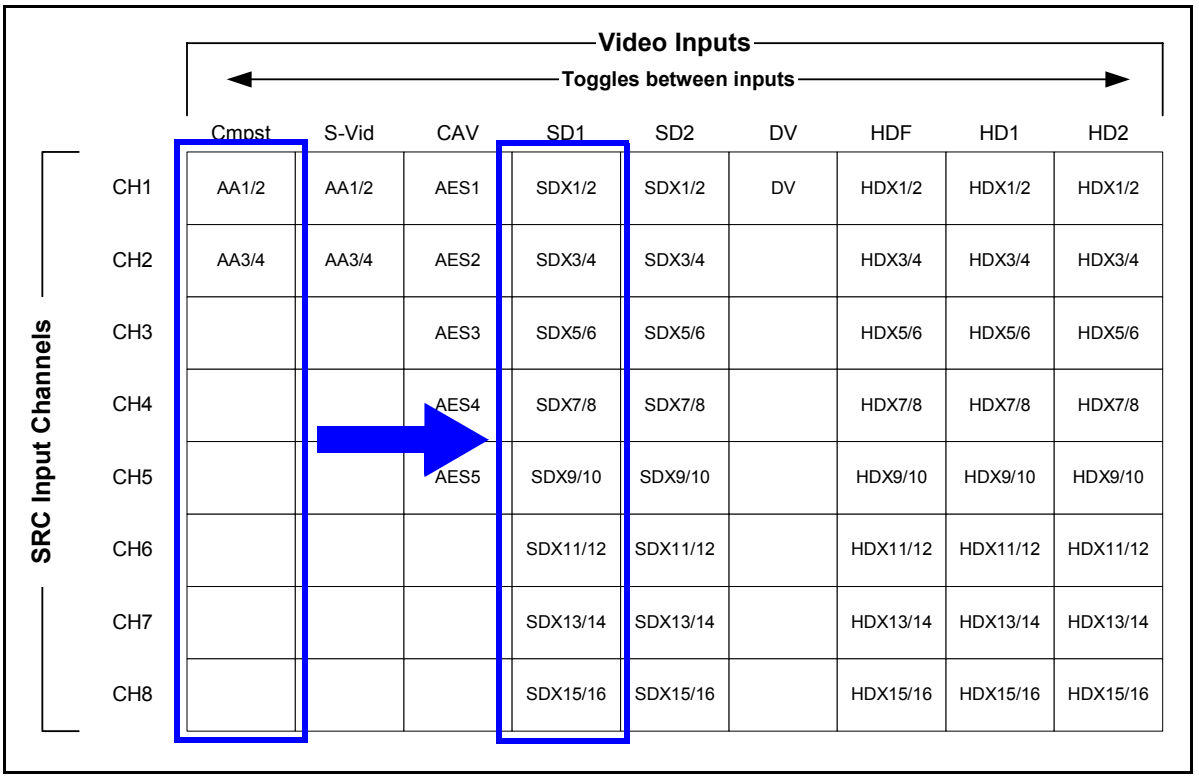

Figure 2-7. Default AFV Channel Assignment

You can assign different audio inputs to each SRC channel, as well as enable and disable the AFV function for each video input to create a complex routing.

Advanced Audio Inputs and Outputs Selection

For custom applications, the X75 unit provides full input and output routing control. You can select multiple audio input sources simultaneously and route them internally to meet your application requirements. This advanced routing can only be done through the **Audio** menu (not using a front panel shortcut button). Each SRC can be assigned to any stereo input source. Mono-based audio outputs can select any SRC outputs, including the summation and tones and mutes.

More than one audio input LED will light when multiple audio input sources are selected (for example, **Analog** and **AES**).

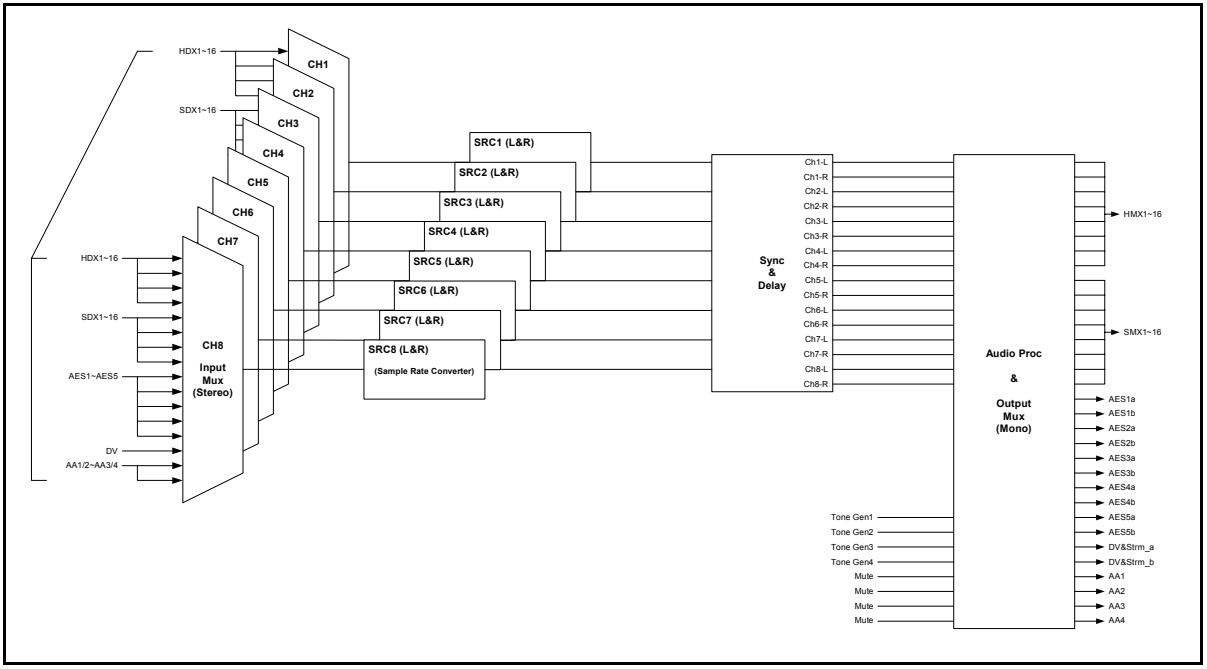

Figure 2-8. Advanced Audio Signal Routing

Selecting and Adjusting Audio Proc Amp Settings

Using control panel shortcuts, you can quickly access the audio level controls. To do this, press the **Ctrl** and **A Proc** buttons simultaneously; the selected audio input channel's gain controls become mapped to the numbered buttons (1 through 16) accordingly. Once mapped, press a numbered button to enable the gain controls assigned to it.

If you are in M-Path mode and have multiple audio inputs, press **CTRL** and **A Proc** repeatedly to select the audio proc amp for adjustment (either SD-SDI 1, HD-SDI 2, Analog, or Digital); the **Audio Proc** LEDs at the right side of the front panel will indicate which audio channel is currently selected. The selected audio input channel's gain controls become mapped to the numbered buttons (1 through 16) accordingly.

Audio LED Behavior

The four **Audio Proc** LEDs (**Analog**, **Digital**, **SD**, **HD**) on the far right side of the front panel indicate the selected audio input group that is being adjusted for the audio gain. The LEDs indicate which input audio processing block is currently selected for the adjustments under the following conditions:

- The **Analog** LED lights for the Analog audio channels gain adjustments.
- The **Digital LED** lights for the AES and DV channels audio gain adjustments.
- The **SD** LED lights for the SDX (SD demuxed) channels audio gain adjustments.
- The **HD LED** lights for the HDX (HD demuxed) channels audio gain adjustments.

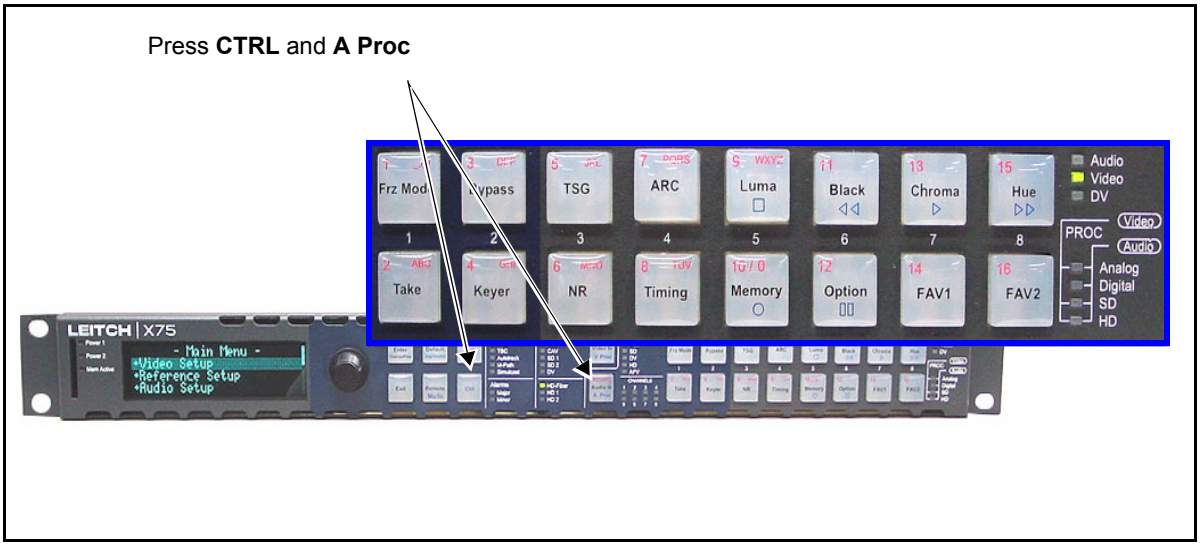

Figure 2-9. Audio Proc Amp Control Area

Tables 2-2 to 2-7 provide more information on the button mappings of the different audio inputs (for both mono and stereo control), including the following:

- Analog audio input
- AES audio input
- SD-SDI audio input
- HD-SDI audio input

Using Freeze Controls

The control panel provides a shortcut to freezing individual frames or fields of the incoming video source. The Freeze mode only affects the currently active video proc amp block. To use the freeze shortcut, follow these steps:

1. Press **Frz Mode** to open a menu in the VFD panel where you can select a mode to apply to the incoming video.
2. Press **Frz Mode** multiple times to cycle through the different modes, or use the control knob.

   Available modes include the following:

   - Field 1
   - Field 2
   - Frame
3. Press **Take** to activate the selected Freeze mode and apply it to the incoming video.

   The **Take** button flashes while the Freeze mode is active.

   If you activate one of the **Field** modes, the display panel indicates which field of the video is frozen (1, 2, 3, or 4). This will initially be the same as the value of the **Field Select** menu option. The control knob changes the currently selected field (and the **Field Select** menu option is updated accordingly).
4. Press **Frz Mode** while **Frame** or **Field** mode are already active to toggle between them.
5. Press **Take** again to return to the live video feed.

Note

The **Mute In Freeze** option (**Audio** menu) specifies whether or not audio output will be muted while the video is frozen in Frame or Field mode.

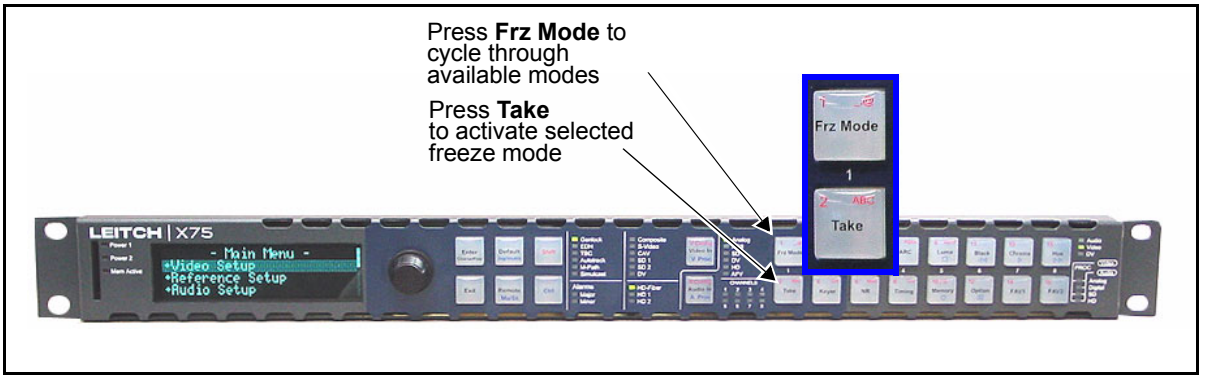

Figure 2-10. Freeze Control Area

Selecting Processing Mode Functions

The processing mode selection controls provide direct access to Bypass, ARC (aspect ratio conversion), and Timing functions.

Figure 2-11. Processing Mode Selection Area

Bypass Mode

In Bypass mode, no processing is applied to the **SDI 1 In** video signal; the signal is instead passed directly to the **SDI 1 Out** connector that is closest to the **SDI 1 In** connector. (Only one of the two **SDI 1 Out** connectors provides a bypass output.)

To activate Bypass mode, press the **Bypass** button. From the resulting **Bypass Menu**, select **On** or **Off**, and then press **Enter**. When the unit is powered off, or forced by the user, this relay is not energized to pass the signal straight through the output without any processing. The **Bypass** button flashes when the Bypass mode is active.

ARC Mode

Note

The ARC mode requires an HD-SDI module to operate in both HD-SDI and SD-SDI formats.

The ARC mode provides quick access to the **ARC (SD Out)** and **ARC (HD Out)** controls. When the HD-SDI video proc amp block is currently selected, pressing the **ARC** button takes you straight to the **ARC (HD Out)** controls. When the **SD 1**, **SD 2** or **Analog** video proc amp block is currently selected, pressing the **ARC** button takes you straight to the **ARC (SD Out)** controls.

Pending on the video configuration, you must manually select the appropriate ARC controls to apply the settings to outputs. The following options are available when the **ARC** button is pressed:

- Aspect Ratio Lock
- H. Size

- H Position
- V Size
- V Position

Timing Mode

The **Timing** button affects the timing of the video input that is currently in use. When you press **Timing**, the vertical phase menu appears. Press **Exit** to reach horizontal phase.

Accessing Optional Features

The **Option** control panel shortcut allows quick access to parameters that become enabled with the purchase and installation of various optional modules and upgrades.

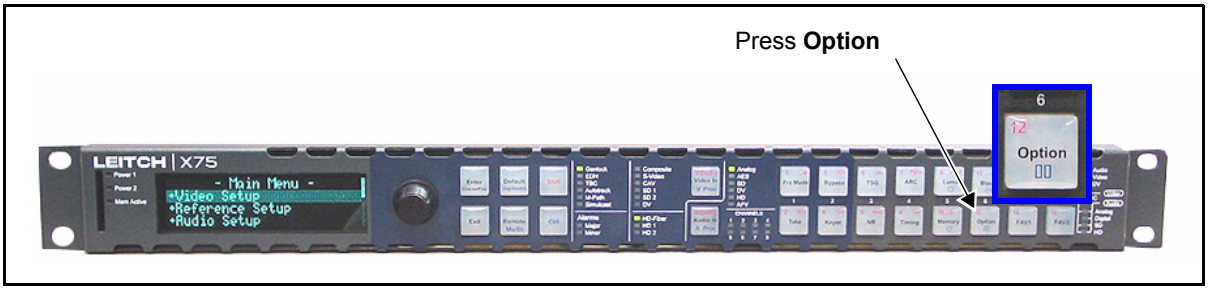

Figure 2-12. Option Access Control

To access the Options List parameters, press the **Option** button, and then select one of the following items:

- Home
- Path
- Favorite 1
- Favorite 2
- History
- Alarms
- Alarms Log
- Lock Panel
- Setup

Descriptions of these parameters begin on page 32. See page 46 for information on display screen **Setup** parameters.

Options List Descriptions

Home

This option returns you to the Main Menu.

Path

Using this feature, you can establish the path of the parameter that you are currently viewing or adjusting. To obtain the path, select **Path** from the **Options List**, and then press **Enter**. Rotate the control knob to view the entire path.

Favorite 1 and Favorite 2

Use these two lists to retain the ten most-needed parameters. With each parameter listing that you wish to save, press **Favorite 1** or **Favorite 2** from the **Options List**, and then select **Add**. The message “Item added” appears. See page 34 for more details on other functions of the **Favorites** list.

History

The last ten parameters that you have viewed or modified appear chronologically in the **History** list. The most recent event appears at the bottom of the list. This list is deleted if the control panel loses its power.

Alarms

Using this parameter, you can set the parameters for alarms on your network of RCP-X75-enabled devices. For each alarm, you can make the following settings:

- Trigger Time
- Clear Time
- Priority
- Alarm Mute
- Acknowledged

Alarms Log

The last 20 alarms (minor and major) are listed in the Alarms Log. This is a read-only list; it can only be cleared by disconnecting power to the control panel.

Lock Panel

By selecting and entering this parameter, all card-edge controls are locked out, preventing accidental changes. To remove the Lock Panel function, press **Ctrl** + **Exit**.

Setup

The **Setup** menu contains a number of parameters that affect how your display screen operates. See page 46 for details on the use of this function.

Assigning Functions to Programmable Buttons

Programming Fav 1 and Fav 2 Buttons

You can program the **Fav 1** and **Fav 2** buttons on the front panel for specific functions. These buttons have no default function until they are programmed.

Figure 2-13. User-Programmable Controls

To assign a function to a user-programmable button, follow these steps:

1. Select the menu or option on the display that you wish to assign to a button.
2. Press the **Fav 1** or **Fav 2** button.

   The **Favourite 1** or **Favorite 2 Menu** appears.
3. Select **Add Favorite**, and then press **Enter**.

   The message **Item Added** appears.

Note

If the programming fails, any function previously assigned to that button will have been erased, so the button will have to be reprogrammed.

To test the newly created Favorite item, follow these steps:

1. Press **Fav 1** or **Fav 2**.
2. Select **List Favorites**, and then press **Enter**.
3. Select the item from the list, and then press **Enter**.

To delete or re-order the items in the **Favorites** list, follow these steps:

a. Select the parameter you wish to re-order.

b. Press the **Fav 1** or **Fav 2** button.

c. Select **Delete**, **Move Up**, or **Move Down**.

d. Press **Enter**.

Chapter 3

Status and Alarm LEDs

Overview

The status and alarm LEDs on the local and remote control panels provide visual feedback on the current mode and operating conditions of the unit.

This chapter contains the following information:

Location

The Status and Alarm LEDs are located together in the center of the panels, as shown in Figure 3-1.

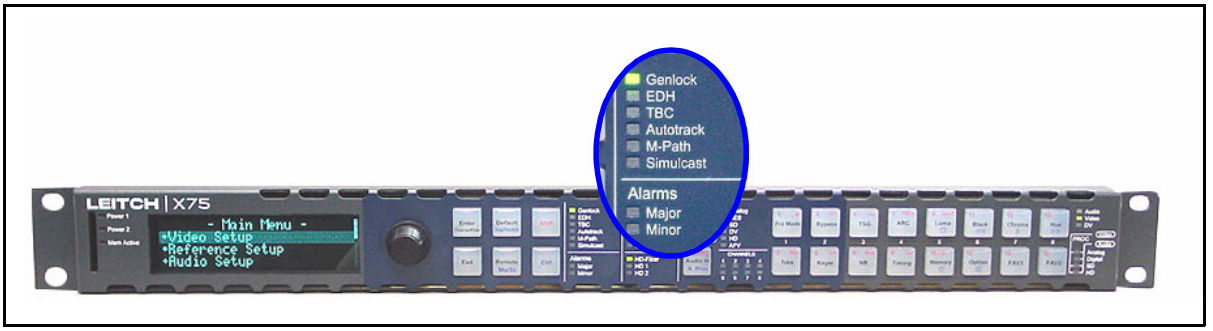

Figure 3-1. Status LED Area

Genlock Status LED

The Genlock LED indicates the current status of the external genlock source.

Table 3-1. Genlock LED Status Definitions

LED Status	Operating Condition
On	The control panel is configured to Auto Genlock and a stable genlock source is detected.
Off	Genlock is not selected.
Flashing	The genlock source is not stable or is missing.

EDH Status LED

The EDH LED indicates the current configuration and status of Error Detection Handling (EDH) in the input standard serial digital video stream. The EDH LED receives SD-SDI 1 and SD-SDI 2 inputs for status reporting.

Table 3-2. EDH LED Status Definitions

LED Status	Operating Condition
On	The EDH feature is monitoring incoming video from both SD-SDI inputs.
Off	The EDH feature is turned off or EDH is not present on the input signal.
Flashing	EDH detection is enabled and EDH errors have been detected and not yet cleared by the operator, or the incoming SDI feed does not include EDH. For an EDH error count and other related information, follow this thread: **Main Menu>Video Setup>SD1 or SD2 Input>EDH**.

TBC Status LED

The TBC LED indicates whether or not the composite input signal is timebase-corrected by the unit's TBC circuitry.

Table 3-3. TBC LED Definitions

LED Status	Operating Condition
On	The internal time base corrector is operating and correcting the input signal, usually for heterodyned signals from sources such as a VTR.
Off	The internal time base corrector is not active (the unit may be in Sync mode).

Autotrack Status LED

The Autotrack LED indicates whether or not the audio Auto Track mode is enabled.

Table 3-4. Autotrack LED Definitions

LED Status	Operating Condition
On	The audio delay feature is selected to match the delay of video data through the synchronizer (up to four fields).
Off	The audio delay feature is turned off.

M-Path Status LED

The M-Path LED indicates whether or not the unit is in M-Path mode. If the M-Path LED is not lit, the Simulcast mode is in effect.

Table 3-5. Digi-Triplex LED Definitions

LED Status	Operating Condition
On	The M-path mode is enabled (more than two input signals are selected and routed to the outputs).
Off	The M-Path mode is not enabled.

Simulcast Status LED

The Simulcast LED indicates when the unit is in Simulcast mode. If the Simulcast LED is not lit, the M-Path mode is in effect.

Table 3-6. Simulcast LED Definitions

LED Status	Operating Condition
On	The Simulcast mode is enabled.
Off	The Simulcast mode is not enabled.

Major and Minor Alarm LEDs

The **Major** and **Minor Alarm** LEDs are activated from the enabled list of alarms found in the selected frame's parameters. Major alarms appear as red LEDs; minor alarms are amber. Local and remote control panels only detect alarms that are activated on X75 and DPS-575 frames that are currently being accessed.

Table 3-7. Major and Minor Alarm LEDs

LED Status	Operating Condition
Flashing	Alarms are detected.
Off	No alarms are detected.

Mem Active LED

This LED is reserved for future use.

Chapter 4

Specifications (RCP-X75)

Overview

The following specifications are listed for the RCP-X75 Remote Control Panel on page 62:

- "Dimensions and Weight"
- "Network Control"
- "Power Consumption"

Specifications for the controls on the frame-mounted local control panel are not described here, as the unit functions within the X75HD frame.

These specifications may change without notice.

Dimensions and Weight

Table P-1. Dimension Specifications

Item	Dimension
Height	1.75 in. (4.4 cm)
Width	19 in. (48.3 cm)
Mounting depth	Approximately 5 in. (13 cm)
Weight	2.5 lbs (1.1 kg)

Network Control

Table P-2. Network Control Specifications

Item	Specification
Connector	RJ-45
Protocol	EP, DCN over Ethernet
Ethernet	10/100 base-T

Power Consumption

Table P-3. Power Consumption Specifications

Item	Specification
Power consumption	• Input power: 6 W max. at 100 to 240 VAC, 50/60 Hz

Appendix A

Servicing Instructions

Overview

This appendix contains information about replacing the fuse in the RCP-X75 Remote Control Panel.

RCP-X75 Fuse Rating and Replacement

Caution

To avoid the risk of fire, you must always replace the fuse with the same type of fuse and specified rating. Failure to comply may result in equipment damage and/or personal injury.

The RCP-X75 input is protected by a 2A slow blow fuse, located in the AC power supply.

In rare cases, it may be necessary to change the power supply fuse. However, a blown fuse indicates the presence of a serious electrical fault.

To access the power supply fuse, follow these steps:

1. Remove the AC power cord and Ethernet connection from the back of the control panel.
2. Remove the control panel's mounting screws.
3. Remove the four screws on the top of the unit, and then remove the flat panel cover.
4. Locate the fuse in the power supply and then remove it.
5. Replace the fuse with another 2 A 250 V 20 mm cartridge fuse.

Fuse Replacement:

CAUTION: For continued protection against risk of fire, replace only with the same type 2 A 250 V 20 mm fuse.

6. Re-install the flat panel cover.
7. Re-connect the AC power supply and Ethernet connection.

Appendix B

Display Screen Setup Parameters

Overview

The display screen **Setup** menu contains a number of parameters that affect how the display screen operates.The following main items are included in this appendix:

Configuring the Display Screen Setup Menu

The display screen Setup parameters affect the way in which the display screen functions.

To access the display screen Setup Menu, follow this steps:

1. Press the **Option** button.
2. Rotate the control knob and select **Setup**.
3. Press the **Enter** button.

Other Setup parameters that are related to the configuration of audio and video back connectors are found using the following thread: **Main Menu**>**System Configuration**>**Setup.**

The display screen Setup parameters are described in the following pages.

Display Screen Setup Parameter Descriptions

Parameter Adjust Mode

Parameters with preset values can have either immediate or delayed settings. *Immediate* adjustments take effect as soon as you select the parameter option. *Delayed* adjustments only take effect when you press the **Enter** button.

These two options are only available to non-numeric range parameters. Numeric changes are always immediate.

Scroll Mode

In *Wrap* mode, when you scroll through a parameter list, the module considers the list as a circular set of data. When the last parameter in the list is reached, the first parameter in the list immediately follows it. In *Don't Wrap* mode, the module stops when the last parameter in the list is displayed. To return to the first parameter, you must scroll through the entire list in the opposite direction.

Display Intensity

To accommodate different equipment room lighting conditions, you can set the panel to five levels of display intensity: 100%, 75%, 50%, and 25%.

Panel IP Address

The system administrator can set a new IP address to a control panel. The default IP address of a remote control panel is **192.168.100.251**. The default IP address of a local control panel is **192.168.100.250**.

To prevent IP address conflicts, this default IP address must be changed when the control panel is used in a network. You can assign an IP address to the panel using a local control panel. Also, you can use the Web server software control for this purpose. See the *X75 Quick Start Guide* for more details on the Web server control application.

Subnet Mask

A subnet is a part of a network. It may include, for example, the devices in one geographic location, studio, or local area network. Using this parameter, the system administrator can assign a new subnet mask to the remote control panel. The default subnet mask is **255.255.255.0**.

Gateway

This parameter sets the value for the gateway IP address. The default value is **192.168.100.251**.

Screen Saver Timeout

To extend the life of the display device, the screen saver automatically shuts off the display after a preset period of inactivity. Using the screen saver timeout parameter, you can set the duration of inactivity after which the control panel display turns off, or you can disable the screen saver. The available time options are 5, 10, 20, and 30 minutes.

To exit the screen saver mode, press the control knob or any button. No parameters will be changed when you exit the screen saver mode.

Screen Saver Select

The screen saver can be set to either **Blank** or **Default**. The **Default** screen saver consists of a line of scrolling text.

Shaft Direction

Using this parameter, you can determine whether the clockwise rotation of the control knob moves a parameter list up or down. The setting of this parameter only applies to navigation, and does not effect the adjustment of numeric values. To make numeric values increase, the control knob must always be turned the knob clockwise. To make values decrease, you must always turn the knob counter-clockwise.

About...

This feature provides descriptive information about the control panel, such as hardware and software version numbers, the panel's serial number, and customer service information. You may need this information when contacting customer support for assistance, or for purchasing add-on options.

Reboot...

When you reboot the control panel, no other devices on the network are affected, and each X75 unit must be rebooted independently. To reboot a blank X75 frame, you must disconnect and then reconnect the AC power source. In a reboot, all settings, including setup parameters, return to a factory default position. After the reboot is started, there is a delay of several seconds before the control panel screen turns blank.

Appendix C

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