TECHNICAL MANUAL

INTEGRITY 600 SERIES

DVA600
DIGITAL VIDEO
DISTRIBUTION AMPLIFIERS

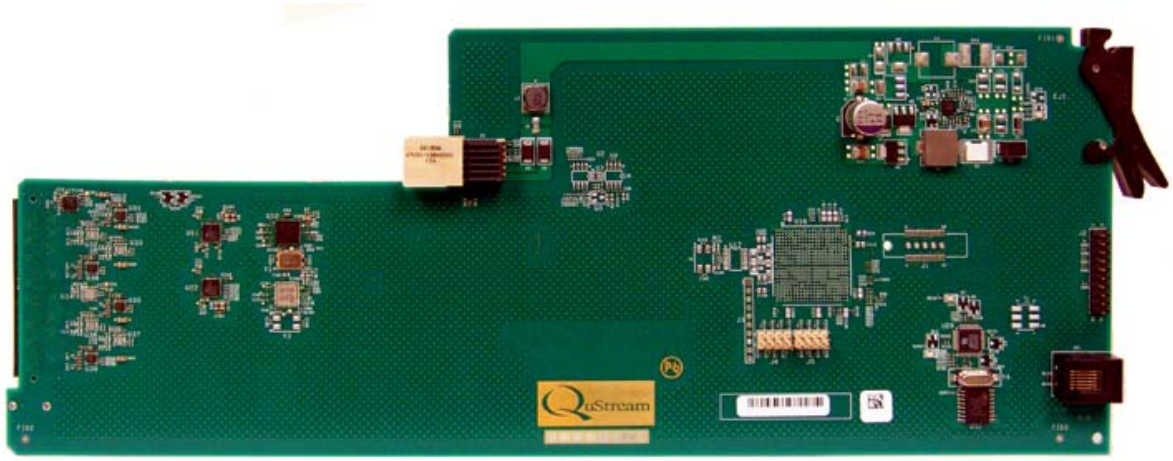

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TABLE OF CONTENTS

CHAPTER 1 ABOUT THIS MANUAL 1-1
1.1 DOCUMENTATION AND SAFETY OVERVIEW 1-1
1.2 WARNINGS, CAUTIONS, AND NOTES 1-1
1.2.1 Warning 1-1
1.2.2 Caution 1-1
1.2.3 Note 1-1
CHAPTER 2 INTRODUCTION 2-1
2.1 DESCRIPTION 2-1
2.2 MID-PLANE ROUTING 2-2
CHAPTER 3 INSTALLATION 3-1
3.1 INTERNAL ROUTING CONSIDERATIONS 3-1
3.2 DVA600 MODULE INTERNAL ROUTING CAPABILITIES 3-2
3.3 INSTALLATION PROCEDURE 3-3
3.3.1 Install Rear Connector Panel 3-4
3.3.2 Install Main Circuit Board 3-5
3.4 REAR PANEL SIGNAL CONNECTIONS 3-6
3.4.1 Single Input DVA Module Connections 3-8
3.4.2 Dual Input DVA Module Connections 3-9
3.5 MENU SELECTIONS 3-9
3.6 INITIAL POWER-UP 3-9
3.7 DVA600 STATUS LEDS 3-10
CHAPTER 4 OPERATION 4-11
4.1 OPERATION 4-11
4.2 CONFIGURATION MENUS 4-11
4.3 MAIN MENU SCREEN 4-11
4.4 ALARM STATUS AND CONFIGURATION 4-14
4.5 CARD INFO MENU SCREEN 4-16
4.6 CHANGE NAME MENU SCREEN 4-17
4.7 FUNCTIONAL BLOCK DIAGRAMS 4-18

LIST OF FIGURES

FIGURE 2-1 TYPICAL DVA-600 DIGITAL DISTRIBUTION AMPLIFIER 2-1
FIGURE 2-2 BLOCK DIAGRAM - FRM-603 CHASSIS FRAME 2-2
FIGURE 3-1 INSTALLING REAR CONNECTOR PANEL 3-5
FIGURE 3-2 INSTALLING MAIN CIRCUIT BOARD 3-6
FIGURE 3-3 SINGLE INPUT DVA MODULE - REAR PANEL CONNECTIONS 3-7
FIGURE 3-4 DUAL INPUT DVA MODULE - REAR PANEL CONNECTIONS 3-8
FIGURE 3-4 DVA600 STATUS LEDS 3-10
FIGURE 4-1 SINGLE INPUT MODULE MAIN MENU 4-11
FIGURE 4-2 DUAL INPUT MODULE MAIN MENU 4-12
FIGURE 4-3 PASSWORD ACCESS PROMPT SCREEN 4-14
FIGURE 4-4 ALARM STATUS AND CONFIGURATION SCREEN 4-15
FIGURE 4-5 CARD INFORMATION DISPLAY SCREEN 4-16
FIGURE 4-6 CHANGE NAME MENU SCREEN 4-17
FIGURE 4-7 BLOCK DIAGRAM - DVA-617 AND 6115 SINGLE INPUT DIGITAL DISTRIBUTION AMPLIFIERS 4-18
FIGURE 4-8 BLOCK DIAGRAM - DVA-626 AND 6214 DUAL INPUT DIGITAL DISTRIBUTION AMPLIFIERS 4-18

LIST OF TABLES

TABLE 3-1 INTERNAL ROUTING CAPABILITIES – DVA600 SERIES MODULES 3-3
TABLE 4-1 SOURCE INPUT SIGNAL OPTIONS 4-12

Chapter 1 About This Manual

1.1 Documentation and Safety Overview

This manual provides instructions for the installation and operation, as well as top-level functional block diagrams of the Integrity 600 Series DVA600 Digital Video Distribution Amplifiers built by QuStream.

It is the responsibility of all personnel involved in the installation, operation, and maintenance of the equipment to know all the applicable safety regulations for the areas they will be working in. ***Under no circumstances should any person perform any procedure or sequence in this manual if the procedural sequence will directly conflict with local Safe Practices. Local Safe Practices shall remain as the sole determining factor for performing any procedure or sequence outlined in this document.***

1.2 Warnings, Cautions, and Notes

Throughout this document, you should notice various Warnings, Cautions, and Notes. These addendum statements supply necessary information pertaining to the text or topic they address. It is imperative that audiences read and understand the statements to avoid possible loss of life, personal injury, and/or destruction/damage to the equipment. These additional statements may also provide added information that could enhance the operating characteristics of the equipment (i.e., Notes). Examples of the graphic symbol used to identify each type of statement and the nature of the statement content are shown in the following paragraphs:

1.2.1 Warning

	**Warning statements identify conditions or practices that can result in loss of life or permanent personal injury if the instructions contained in the statement are not complied with.**

1.2.2 Caution

	**Caution statements identify conditions or practices that can result in personal injury and/or damage to equipment if the instructions contained in the statement are not complied with.**

1.2.3 Note

	**Notes are for information purposes only. However, they may contain invaluable information important to the correct installation, operation, and/or maintenance of the equipment.**

Chapter 2 Introduction

2.1 DESCRIPTION

QuStream's DVA-600 family of Digital Video Distribution Amplifiers is a member of the Integrity 600 Series of video and audio processing products, featuring "Fortel Inside" Technology. There are four versions of the DVA-600, all mount in the Integrity 600 Series FRM603 Chassis Frame. Each is a distribution amplifier for digital video (SD-SDI and HD-SDI) incorporating 3Gbs capable circuitry architecture. They are all are functionally similar and accept HD (or SD) video, provide input equalization and re-clocking for all standard data rates up to 1.5Gbs and provide multiple outputs of the video signal. Modules differ in the number of video input and output signals - each is identified below:

DVA617 - 1 SDI video input and 7 video output signals using a single-width rear panel
DVA6115 - 1 SDI video input and 15 video output signals using a double-width rear panel
DVA626 - 2 SDI video inputs and 6 video output signals using a single-width rear panel
DVA6214 - 2 SDI video inputs and 14 video output signals using a double-width rear panel

Each dual input module is actually composed of two independent DAs – configured as dual 1X3 (DVA626) or dual 1X7 (DVA6214) distribution amplifiers. However, internal circuitry allows the dual module to be configured as a single input DA with all output drivers deriving signal from the same input source. The suite of available DVA Modules, in conjunction with the control and signal routing capabilities of the FRM-603 "Smart Frame", allow multiple DA modules and/or Signal Processing Modules to be combined in any number of signal handling arrangements.

Each DVA Module has an on-board input multiplexer allowing it to derive an input signal from the frame mid-plane, its rear panel BNC connector or another module installed in an adjacent frame slot. On dual-input modules, the input multiplexer can be switched to allow the two DA circuits to share an input, thereby allowing output expansion.

Figure 2-1 shows a typical DVA-600 module with a single-width rear panel attached to the main circuit board.

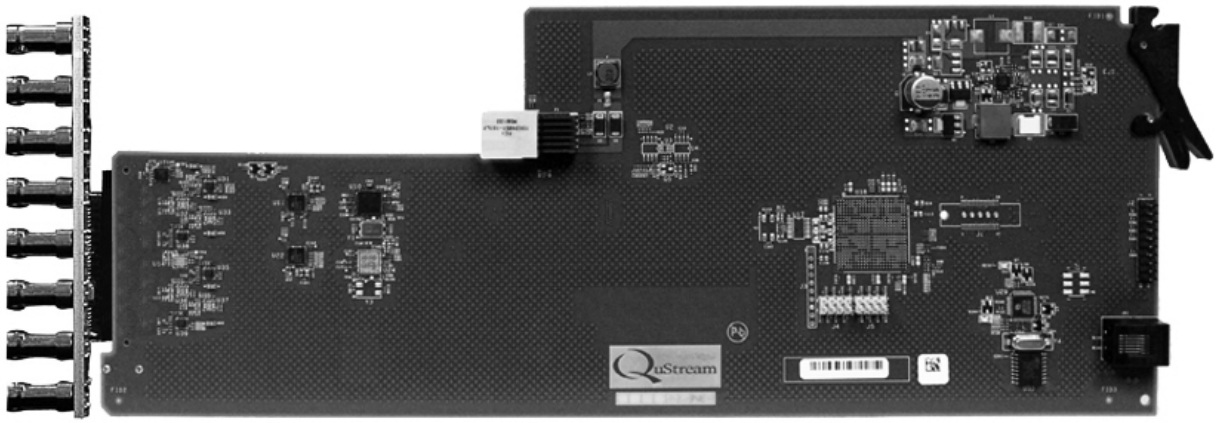


Figure 2-1 Typical DVA-600 Digital Distribution Amplifier

2.2 MID-PLANE ROUTING

One of the unique features of the Integrity 600 Series is the mid-plane routing structure of the FRM603 "Smart Frame." This signal routing scheme allows 600 Series modules with mid-plane routing capability to share signals with modules located in adjacent card slots of the chassis frame, or with special purpose "Star Slot Capable" modules installed in frame slots 5 or 16 – the "Star Slots." All modules with mid-plane signal routing capability are equipped with a connector that interfaces the module circuitry to the mid-plane routing traces for the particular slot in which the module is installed. Star Slot Capable modules are equipped with additional connectors that interface these modules bi-directionally to every other frame slot in the chassis. These Star Slot modules can distribute signals to, and receive signals from, all other mid-plane capable cards. This capability allows a much greater degree of flexibility in planning and implementing a signal processing and distribution system than with other more conventional systems. Redundant power, sync reference and control are optionally available to every processing module through the chassis frame.

Like many of the new Integrity 600 Series processing modules, the DVA600 modules have mid-plane connection capability, in varying configurations; and an input multiplexer to take advantage of the interconnections available through the FRM603 chassis frame. Figure 2-2 is a block diagram of the FRM-603 chassis frame showing the various internal routing buses. This illustration is provided here for reference only. Refer to the FRM-603 Technical Manual, QuStream Publication 81-9059-0622-0, for additional information.

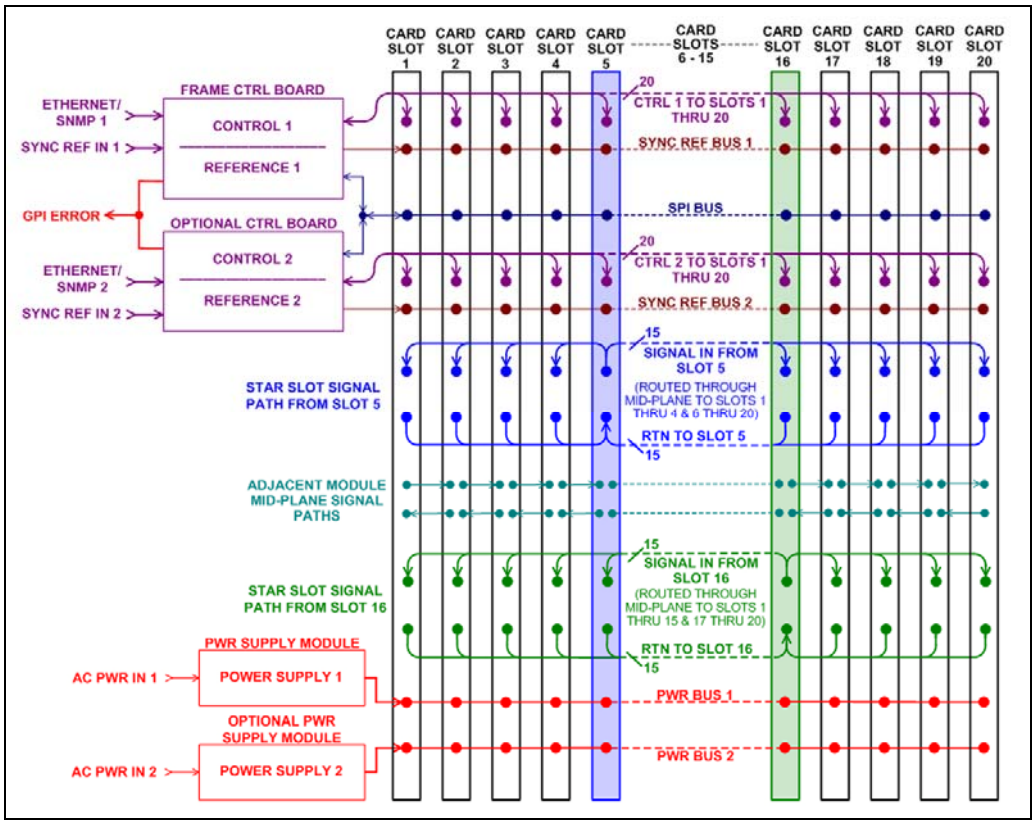


Figure 2-2 Block Diagram - FRM-603 Chassis Frame

Input signal source for a DVA600 module may be derived from the rear panel **IN 1** BNC connector or, by menu selection, from processing modules in adjacent card slots or from Star Slot Capable modules installed in card slots 5 or 16 over the Star Slot routing busses.* All mid-plane routing is configured through an external control device such as the RCP-503 Remote Control Panel, or the SOFT603 PC based software application, via the NET 603 controller. If your frame is not equipped with a NET 603, the input signal source is factory set to order specifications, or if no input choice is specified, to the rear panel BNC connector.

Output signals from the DVA600 modules are available via rear panel BNC connectors, and may also be shared with processing modules in adjacent card slots or routed to Star Slot Capable modules over the Star Slot bus.*

Primary Features

- SDI video input with equalization and re-clocking of all standard data rates up to 1.5Gbs
- Accepts input signal from rear-panel BNC, adjacent module or Star Slot*
- Redundant power, reference and control are optionally available to every board for increased reliability
- Every DA supplies an output signal to the card slots adjacent to it and to Star Slots A and B*
- Input multiplexer allows single or dual width dual-input modules to drive either input to all outputs
- Mid-plane signal routing allows I/O expansion of signal processing modules*
- Field-configurable when installed in a FRM603 Frame equipped with the NET603 Frame Controller

Specifications

Valid Input Signal Formats:	All standard SD and HD formats from 270 Mb to 1.5Gbs will be equalized and re-clocked, other formats will be equalized and passed without re-clocking
Cable length:	300 meters for 270 Mb 100 meters at 1.5Gbs 75 meters at 3Gbs
Jitter:	0.15 UI

*Connectivity capability varies by module type – see Table 3-1

Chapter 3 Installation

3.1 INTERNAL ROUTING CONSIDERATIONS

When determining in which frame slot to install the DVA600 module, you should consider whether or not the internal signal routing capabilities of the frame are to be used for signal input or output sharing with the installed module. For further information on planning an Integrity 600 Series system using internal routing capability, refer to the Technical Manual for the FRM603 frame, QuStream Publication 81-9059-0622-0.

There are no restrictions on placing modules in the FRM603 frame – any module will function stand-alone in any slot. However, if you are intending to incorporate internal frame routing, adjacent module signal sharing or Star Slot routing, you should have the system pre-planned prior to module installation. QuStream recommends that you make a detailed drawing of your system and follow it when loading modules into the frame. The following guidelines will help you in your system planning, but they are not intended to be an all-inclusive, step-by-step guide.

- Make a listing of the modules you will use in your system, and determine the internal routing capability of each module. Not all 600 Series modules share the same capabilities: for example dual input distribution amplifiers are actually two independent amplifiers; one of which can receive input signals from the module *LEFT* adjacent to it, or the Star Slot *A* routing bus, and the other can receive input signals from the module *RIGHT* adjacent to it, or the Star Slot *B* routing bus.

- Not all modules are equipped for internal signal routing. If you are going to use internal routing in your layout, it would not be advisable to install modules without such capability in a Start Slot or in a frame slot you may need for signal sharing.

- Consider placement of modules you intend to share signals first. Include in your sketch which module will receive a signal from an external source, how you want signals distributed to other modules and with which module the internal routing will terminate.

3.2 DVA600 MODULE INTERNAL ROUTING CAPABILITIES

In planning a system incorporating internal routing, you must consider the internal routing capabilities of the Integrity 600 Series DA module(s) you are installing:

All single input models (DVA617 and DVA6115) can derive input signal from either the rear panel BNC, the left adjacent module; or if the frame is equipped with a star slot capable module in Star Slot 5, the input signal may be derived from Star Bus A. Each single input module can provide output signal to all internal routing options.

Dual input modules (DVA626 or DVA6214) contain independent DA circuits with rear panel input connectors A and B. Inputs A and B can derive input signals and provide output signals as shown in Table 3-1.

NOTE

When planning a system using mid-plane routing remember that the RIGHT adjacent module is always the next numerically higher slot and LEFT adjacent is always the next numerically lower slot to the one being configured. Slot numbers increase left to right from the FRONT of the frame. Therefore, when viewed from the **REAR** of the frame – the LEFT adjacent module is physically located to the RIGHT, and the RIGHT adjacent module is physically located to the LEFT of the slot you are configuring!!!!

Signal routing capabilities are listed in Table 3-1, and shown pictorially by Figures 4-7 and 4-8. All mid-plane routing is configured through an external control device via the NET 603 controller. If your system does not incorporate any Star Slot Capable modules, the mid-plane routing capability between modules is limited to adjacent slot signal sharing. If your frame is not equipped with a NET 603 controller, the input signal source is factory set as specified at time of order; or, if not specified, to the rear panel BNC connector.

Table 3-1 Internal Routing Capabilities – DVA600 Series Modules

		Input Connectivity				Output Connectivity			
Module Type	**Slots**	**Left Adjacent Module**	**Right Adjacent Module**	**Star A (Slot 5)**	**Star B (Slot 16)**	**Left Adjacent Module**	**Right Adjacent Module**	**Star A (Slot 5)**	**Star B (Slot 16)**
DVA617	1	Yes*	No	Yes* – With a Star Slot Capable Module in Slot 5	No	Yes*	Yes*	Yes* – With a Star Slot Capable Module in Slot 5	Yes* – With a Star Slot Capable Module in Slot 16
DVA6115	2	Yes*	No	Yes* – With a Star Slot Capable Module in Slot 5	No	Yes*	Yes*	Yes* – With a Star Slot Capable Module in Slot 5	Yes* – With a Star Slot Capable Module in Slot 16
DVA626	1	A Channel*	B Channel*	A Channel* – With a Star Slot Capable Module in Slot 5	B Channel* – With a Star Slot Capable Module in Slot 16	B Channel*	A Channel*	B Channel* – With a Star Slot Capable Module in Slot 5	A Channel* – With a Star Slot Capable Module in Slot 16
DVA6214	2	A Channel*	B Channel*	A Channel* – With a Star Slot Capable Module in Slot 5	B Channel* – With a Star Slot Capable Module in Slot 16	B Channel*	A Channel*	B Channel* – With a Star Slot Capable Module in Slot 5	A Channel* – With a Star Slot Capable Module in Slot 16

*Only one input signal may be active to the module at any time

3.3 INSTALLATION PROCEDURE

Every Integrity 600 Series processing module consists of a rear connector panel and the main circuit card. These two items are shipped as a set, but must be installed individually into the FRM-603 chassis frame. Depending on the model, DVA600 rear connector panels occupy one or two card slots in the FRM603, and may be installed in any available slot (or two side-by-side open slots) in the chassis frame. Proper installation requires that the rear connector panel be installed before the circuit board. Observe the following precautions before proceeding with installation:

CAUTION

Damage may occur to the rear connector panel or the circuit board if the installation instructions are not properly followed.

- Rear connector panel MUST be installed before the front-mounted circuit board.
- If a circuit board should occupy a chassis frame slot where a rear connector panel is to be added or changed, the circuit card MUST be removed or slid out a minimum of two inches from the front side of the chassis frame before installing the rear connector panel.

It is not necessary to remove power to the chassis frame prior to installing a processing module.

3.3.1 INSTALL REAR CONNECTOR PANEL

Install rear connector panel as follows:

1. If your processing module was shipped with the rear connector panel attached to the main circuit board, separate the two units.
2. Figure 3-1 illustrates the connector panel installation process using a single-width panel; however the procedure is identical for installing a double-width rear panel.
3. Orient the rear connector panel with the main board connector toward the lower edge of the chassis.
4. Install the panel by pressing it upward under the top lip of the chassis frame, and move the panel toward the chassis until it is flat against the chassis frame, refer to Figure 3-1.
5. Allow the bottom edge of the connector panel to drop down into its mating slot at the bottom of the lower edge of the chassis.
6. Install retention screw through connector panel to chassis frame, but **DO NOT** fully tighten the retention screw, leaving the rear panel freedom to move, until after the Main Circuit Board is installed per Paragraph 3.3.2.

CAUTION

DO NOT fully tighten the retention screw until **after** the Main Circuit Board is installed. Severe damage could occur to the main board connector if the rear panel is tightly secured prior to installing the main board.

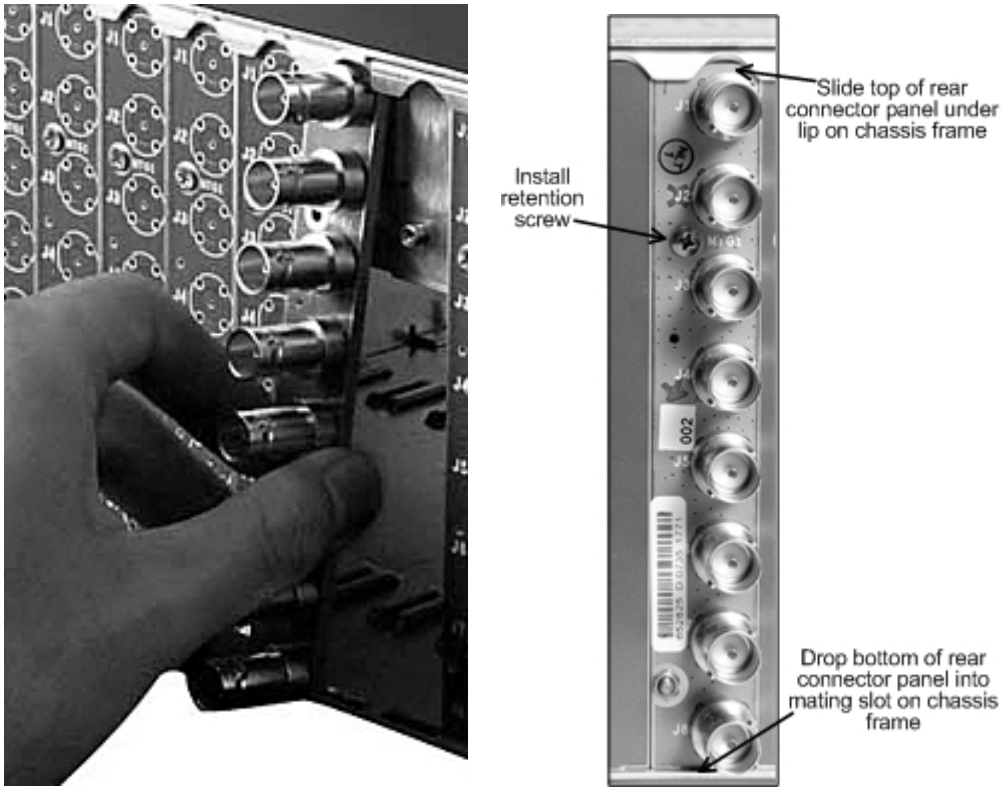


Figure 3-1 Installing Rear Connector Panel

3.3.2 INSTALL MAIN CIRCUIT BOARD

Install main circuit board as follows:

1. Open front access door on the FRM-603 chassis frame.
2. Locate the empty card slot that mates to the rear connector panel installed in the previous step.
3. Align the top and bottom edges of the circuit board with the chassis card guides as shown in Figure 3-2.
4. Hold the card ejector lever out (unlocked position) as shown when inserting the board.
5. Press the board into place to ensure solid connection with the mating connectors on the mid-plane and rear connector panel.

NOTE

Do not force the card into position. If the card does not seat with gentle pressure, back it out, realign with the card guides and reinsert the card.

6. When the card is properly seated, press the card ejector lever toward the board to lock the card in position.
7. Once the main board is seated and locked, and all connectors have properly mated, secure the rear connector panel to the chassis frame by tightening the retention screw.
8. Close the chassis frame front access door.

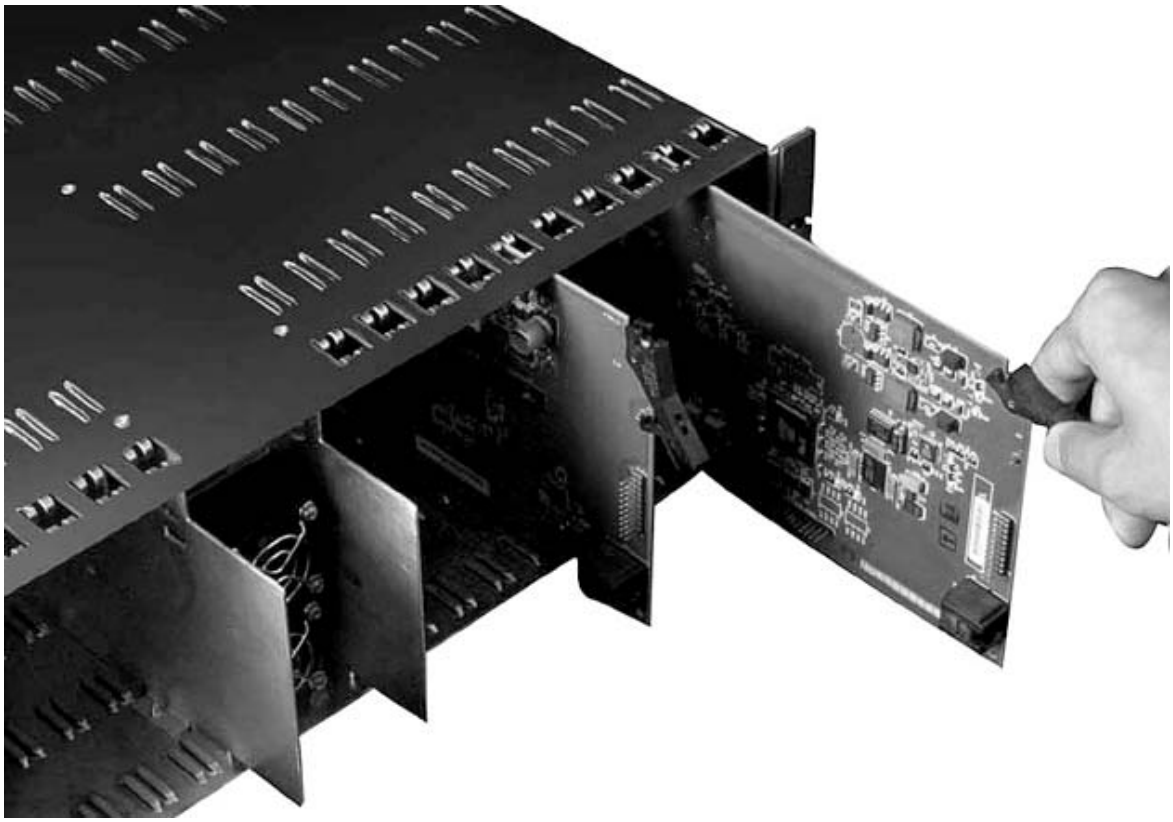


Figure 3-2 Installing Main Circuit Board

3.4 REAR PANEL SIGNAL CONNECTIONS

Input and output connections to the processing module may be made through the rear connector panel, or, in some installations, the internal routing mid-plane of the chassis frame. DVA617 and DVA626 modules use a single-width rear panel with 8 BNC connectors; DVA 6115 and DVA 6214 modules use a double-width rear panel with 16 BNC connectors. Rear connector panel layouts are shown in Figures 3-3 and 3-4, and the function of each connector is briefly discussed in the following paragraphs. When making connections to the rear panel connectors, use a good quality coaxial cable and ensure that the mating BNC connector is properly installed.

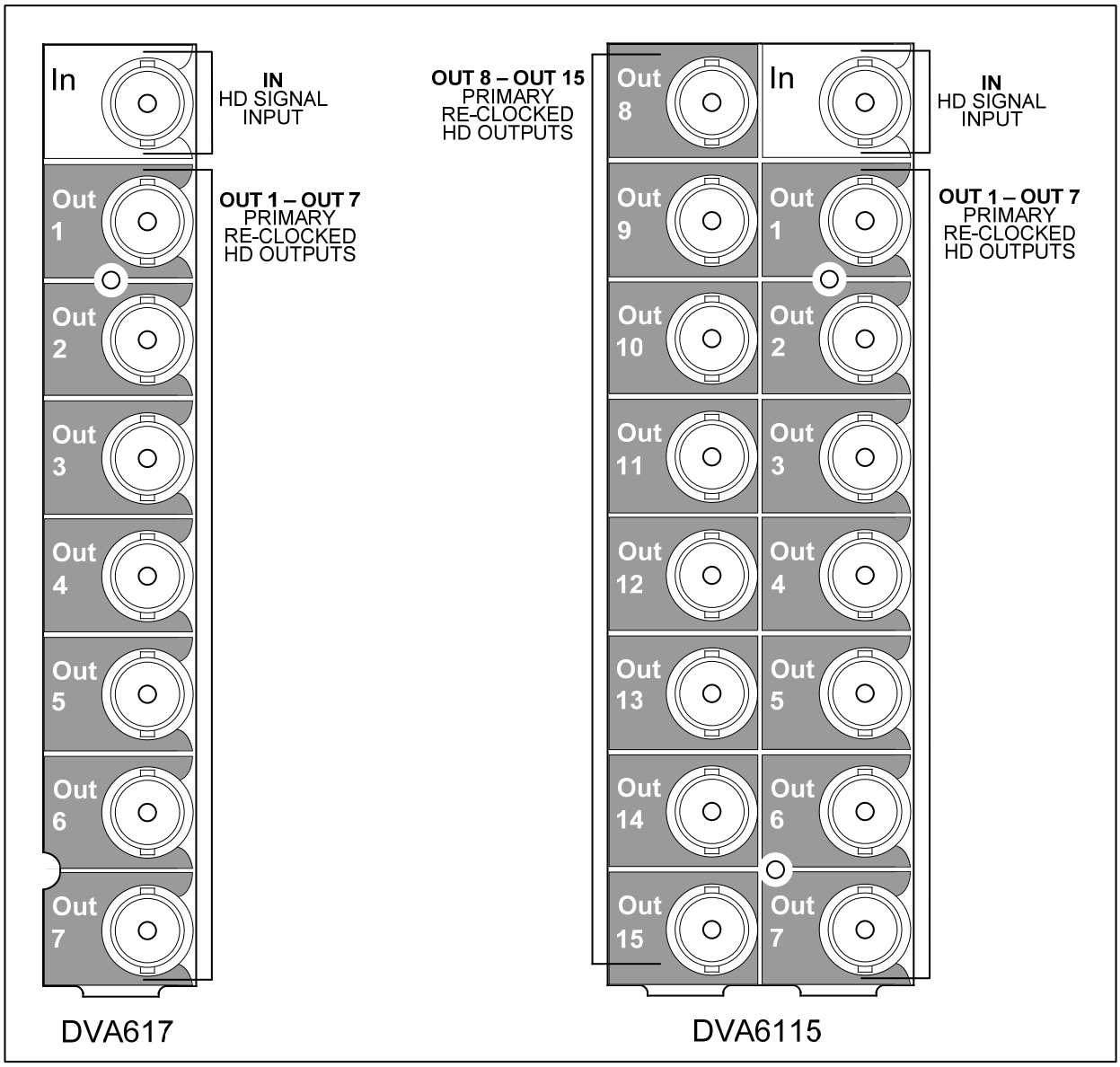


Figure 3-3 Single Input DVA Module - Rear Panel Connections

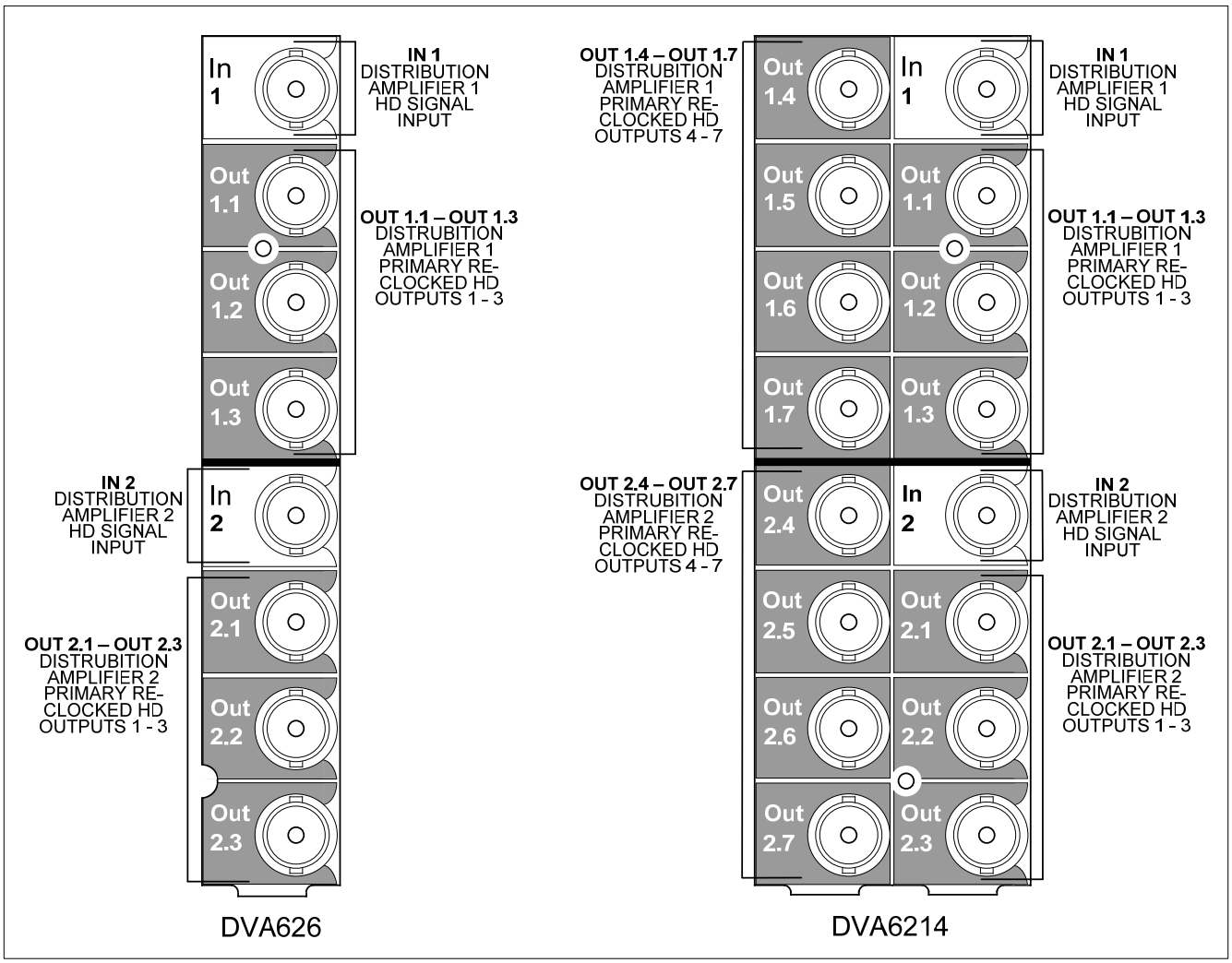


Figure 3-4 Dual Input DVA Module - Rear Panel Connections

3.4.1 SINGLE INPUT DVA MODULE CONNECTIONS

DVA617

Rear panel connector labeled **In** accepts an input of HD (or SD) video with embedded AES audio from an external source.

Rear panel connectors **Out 1** thru **Out 7** provide outputs of re-clocked HD video with embedded AES audio (re-clocked SD if the input signal is SD).

DVA6115

Rear panel connector labeled **In** accepts an input of HD (or SD) video with embedded AES audio from an external source.

Rear panel connectors **Out 1** thru **Out 15** provide outputs of re-clocked HD video with embedded AES audio (re-clocked SD if the input signal is SD).

3.4.2 DUAL INPUT DVA MODULE CONNECTIONS

Each dual input DVA module is actually two independent distribution amplifier circuits on a single board – designated as Channel 1 and Channel 2. Although they are independent, either amplifier may be configured, through the RCP-503 control panel, to share input with the other to allow for output expansion.

DVA626

Rear panel connectors **In 1** and **In 2** accept inputs of HD (or SD) video with embedded AES audio from external sources.

Rear panel connectors **Out 1.1** thru **Out 1.3** provide outputs of re-clocked HD video with embedded AES audio (re-clocked SD if the input signal is SD) from input 1; **Out 2.1** thru **Out 2.3** provide outputs of re-clocked HD video with embedded AES audio (re-clocked SD if the input signal is SD) from input 2.

DVA6214

Rear panel connectors **In 1** and **In 2** accept inputs of HD video with embedded AES audio from external sources.

Rear panel connectors **Out 1.1** thru **Out 1.7** provide outputs of re-clocked HD (or SD) video with embedded AES audio (re-clocked SD if the input signal is SD) from input 1; **Out 2.1** thru **Out 2.7** provide outputs of re-clocked HD video with embedded AES audio (re-clocked SD if the input signal is SD) from input 2.

3.5 MENU SELECTIONS

Menu selectable outputs may be configured through an external control device such as the RCP-503 remote control panel, or the SOFT603 PC based software control application, via the NET 603 frame controller card option for the FRM-603 chassis frame. If your frame is not equipped with a frame controller card, the signal outputs are configured at the factory prior to shipment of the module.

3.6 INITIAL POWER-UP

It is not necessary to remove power when installing the DVA600 module into an active chassis frame. If this is an initial installation, before applying power for the first time, please take time to go back and verify the following:

- Check for electrically sound connections, proper connector placement and possible wiring errors.
- Ensure that the chassis frame has a connection to a source of in-house sync, if required for the application.
- Check that all 600 Series modules, rear panels, power supply and controller modules are securely installed.

There is no power switch on the frame, and it is powered-up simply by connecting the main power cord to a source of primary power. Systems with redundant power supply modules have two main power cords, each of which must be connected to a source of primary power.

When the DVA600 module is initially powered up, look at the status LEDs located on the module circuit board and verify proper operation as discussed in Paragraph 3.7.

3.7 DVA600 STATUS LEDS

There are 3 status LEDs located on the circuit board of each DVA600 module, as shown in Figure 3-5.

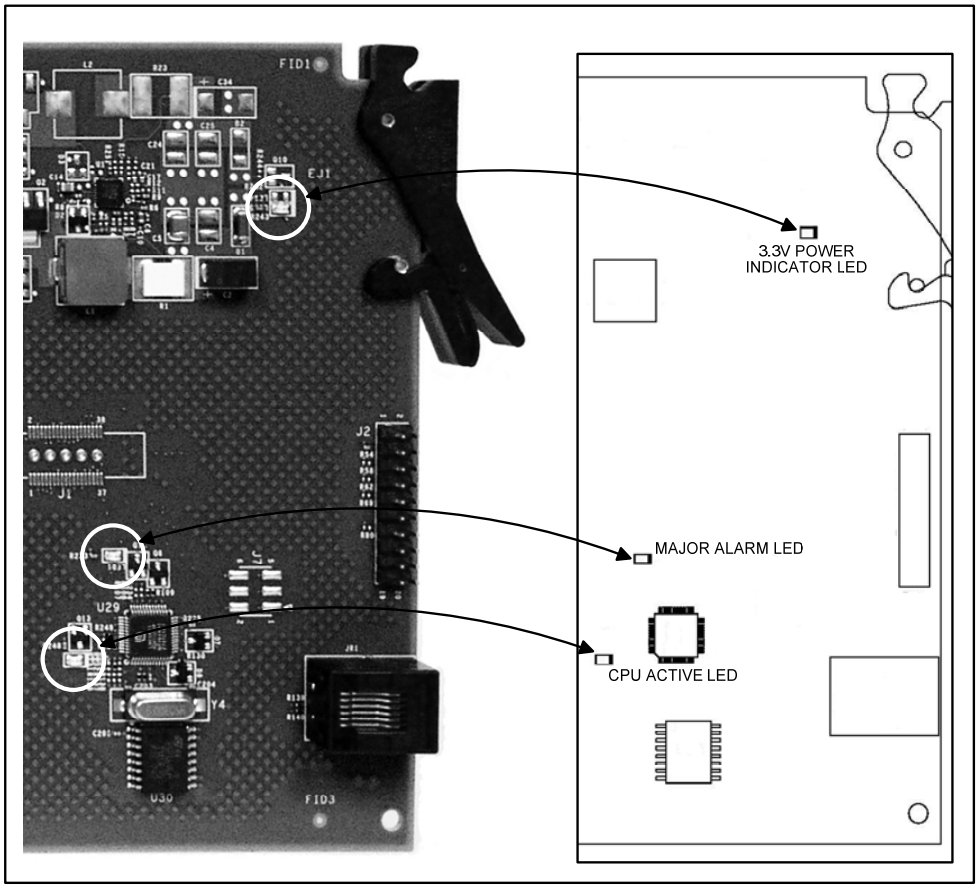


Figure 3-5 DVA600 Status LEDs

Verify that the LED indicators are showing the proper operating status of the module. The function of each LED is discussed is discussed below.

- +3.3V – GREEN – When lit, indicates the 3.3V power supply is operational
- MAJOR ALARM – RED – When lit, indicates a major alarm condition detected
- CPU STATUS – GREEN – When flashing, indicates the CPU is active

Chapter 4 Operation

4.1 OPERATION

There are no operating controls located on the DVA600 modules. Input signal source and certain operating parameters of the module may be selected or modified through an external control device such as the Integrity RCP-503 remote control panel, or the SOFT603 PC based software control application, if the chassis frame is equipped with at least one NET 603 frame controller module. While most installations do contain a frame controller card, any 600 Series module will function without a controller card present in the frame; however, options from the configuration menus discussed in this chapter can not be chosen or changed in the field. The module will be factory programmed prior to shipment. Refer to the RCP-503 Technical Manual, QuStream Publication 81-9059-06360 for control panel operation procedures. The following paragraphs introduce the configuration options and adjustments available through each configuration menu.

4.2 CONFIGURATION MENUS

When a DVA600 module is installed in a FRM-603 frame equipped with a NET-603 Frame Controller card, certain configuration and operational parameters for the module may be selected through menus displayed via the RCP-603 Remote Control Panel. The following paragraphs introduce the menus and options available through each.

4.3 MAIN MENU SCREEN

Figure 4-1 shows the main menu display for the DVA617 and 6115 single input modules, and Figure 4-2 shows the main menu display for the DVA626 and 6214 dual input modules. Both menus are functionally identical, but the dual input menu allows configuration of both independent amplifier circuits A and B. Selectable functions are discussed in the following paragraphs:

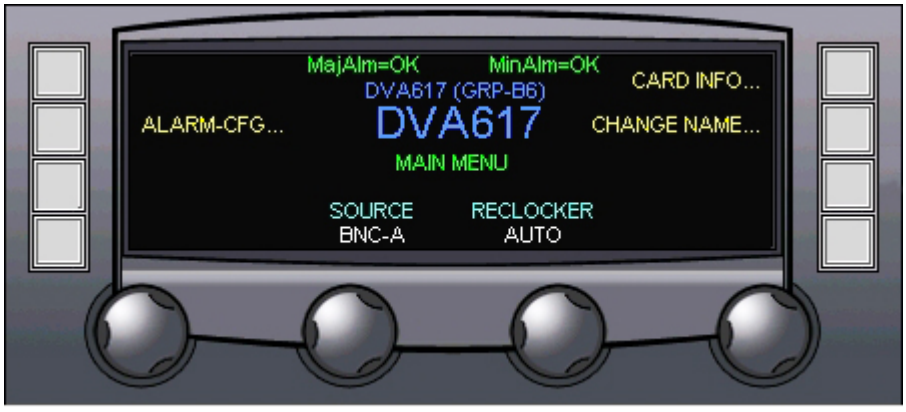


Figure 4-1 Single Input Module Main Menu

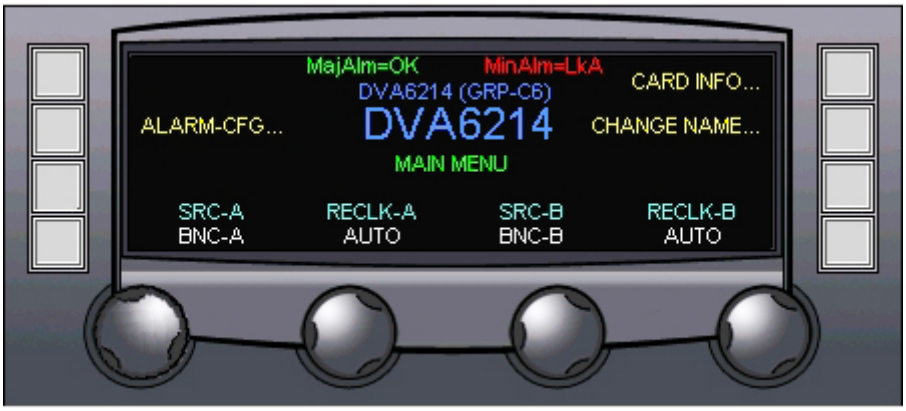


Figure 4-2 Dual Input Module Main Menu

SOURCE

The source display (**SOURCE** on single input module display screens; **SRC-A** and **SRC-B** on dual input module display screens) indicates the current active signal source for the DVA module. The input signal source may be selected by rotating the control knob beneath the display. Table 4-1 indicates the available options for each Source control. Notice from Figure 4-2 the dual input module main menu allows selection of signal source for independent amplifiers A and B.

Table 4-1 Source Input Signal Options

Single Input Module **SOURCE** Options	Dual Input Module **SRC-A** Options	Dual Input Module **SRC-B** Options
BNC-A	BNC-A	BNC-B
Left	Out-B	Out-A
Star-A	Left	Right
	Star-A	Star-B

- **BNC-A** and **BNC-B** allows the user to select the input source for the amplifier as the signal applied to the rear panel BNC connector (labeled In on single input modules; In 1 and In 2 on dual input modules)
- **LEFT** selects the signal source as the signal derived from the module located left-adjacent to the DVA module in the FRM603 frame
- **RIGHT** selects the signal source as the signal derived from the module located right-adjacent to the DVA module in the FRM603 frame
- **Star-A** selects the signal present on STAR BUS A (Card contained in Slot 5) as the input signal

- **Star-B** selects the signal present on STAR BUS B (Card contained in Slot 16) as the input signal
- **Out-A** allows the SRC-B amplifier section to derive its input signal from the output of amplifier section A of the DVA Module. This option allows sharing of the input selected for Amplifier Section A with both A and B outputs
- **Out-B** allows the SRC-A amplifier section to derive its input signal from the output of amplifier section B of the DVA Module. This option allows sharing of the input selected for Amplifier Section B with both A and B outputs

RECLOCKER

The reclocker display (**RECLOCKER** on single input module display screens; **RECLK-A** and **RECLK-B** on dual input module display screens) indicates the current active selection for the reclocker signal format. The signal format may be selected by rotating the control knob beneath the display. Notice from Figure 4-2 the dual input module main menu allows selection of reclocker format for independent amplifiers A and B. The following options are available for each reclocker control.

- **AUTO** – Video format is automatically selected according to the video input signal.
- **HD** – Forces selection of HD for the reclocker format.
- **SD** – Forces selection of SD for the reclocker format.

ALARM STATUS AND CONFIGURATION

Pressing the touch-switch next to the **ALARM-CFG** menu entry opens the Alarm Status and Configuration screen, discussed in Paragraph 4.4.

MAJOR ALARM

The Major Alarm (**MajAlm**) display entry, located at the top of the screen, identifies alarm functions designated as major alarm notifications that are currently in the alarm active state. If a major alarm event is active, the entry is displayed in red and the function that triggered the alarm is displayed. If there is no major alarm condition, the entry is displayed in green with a status of **OK** displayed. This is a display indicator only – no configuration functions are accessible from this entry.

MINOR ALARM

The Minor Alarm (**MinAlm**) display entry, located at the top of the screen, identifies alarm functions designated as minor alarm notifications that are currently in the alarm active state. If a minor alarm event is active, the entry is displayed in red and the function that triggered the alarm is displayed. If there is no minor alarm condition, the entry is displayed in green with a status of **OK** displayed. This is a display indicator only – no configuration functions are accessible from this entry.

CARD INFORMATION

Pressing the touch-switch next to the **CARD INFO** menu item opens the Card Info Menu, Paragraph 4.5.

CHANGE NAME

Pressing the touch-switch next to the **CHANGE NAME** menu item opens the Change Name Menu, Paragraph 4.6.

4.4 ALARM STATUS AND CONFIGURATION

Enter the Alarm Status and Configuration menu screen by pressing the touch-switch next to the **STATUS-ALARMS** entry on the main screen. Before you can gain access to the alarm configuration screen, you will be prompted for the proper access code as shown in Figure 4-3.

Figure 4-3 Password Access Prompt Screen

Enter the access code on the control panel keypad [9][9][9] to access the Alarm Configuration screen. Figure 4-4 shows the Alarm Status and Configuration menu display for all variations of the DVA600 modules. Entries on the menu screen and functions available through each are discussed below.

Figure 4-4 Alarm Status and Configuration Screen

MAJOR ALARM

The Major Alarm (**MajAlm**) display entry, located at the top of the screen, identifies alarm functions designated as major alarm notifications that are currently in the alarm active state. If a major alarm event is active, the entry is displayed in red and the function that triggered the alarm is displayed. If there is no major alarm condition, the entry is displayed in green with a status of **OK** displayed. This is a display indicator only – no configuration functions are accessible from this entry.

MINOR ALARM

The Minor Alarm (**MinAlm**) display entry, located at the top of the screen, identifies alarm functions designated as minor alarm notifications that are currently in the alarm active state. If a minor alarm event is active, the entry is displayed in red and the function that triggered the alarm is displayed. If there is no minor alarm condition, the entry is displayed in green with a status of **OK** displayed. This is a display indicator only – no configuration functions are accessible from this entry.

ALARM SELECT

Alarm Select allows selection of the board function and parameters to associate with an alarm condition. Alarm function may be selected by rotating the control knob beneath the **AlarmSel** display. The following alarm options are available:

- Over Temperature (**OvrTemp**) – Triggers an alarm alert condition if the operating temperature of the DVA module reaches or exceeds the selected threshold temperature
- Hardware Error (**HWErr**) – Triggers an alarm if the DVA module indicates the presence of an error condition in the hardware
- Lock A (**LkA**) – Triggers an alarm if there is no video signal entering Channel A of the DA
- Lock B (**LkB**) – Present on dual input modules only - triggers an alarm if there is no video signal entering Channel B of the DA

VALUE

Value is a display only function to indicate the current status of the selected alarm function. A zero (**0**) in the display indicates that no alarm condition is present for the displayed selection, and a one (**1**) in the display indicates an active alarm condition for the selection.

CONFIGURATION

The setting of the Configuration (**Config**) selector determines which, if any, alarm is associated with the alarm selection. The following configuration options are available:

- **OFF** – The displayed alarm selection is not associated with any of the available alarms.
- Indicator (**IND**) – The displayed alarm selection will be presented as an active indication when the alarm trip condition exists.
- Minor Alarm (**MIN**) - The displayed alarm selection will trigger a minor alarm indication when the alarm trip condition exists.
- Major Alarm (**MAJ**) - The displayed alarm selection will trigger a major alarm indication when the alarm trip condition exists.

OVER TEMPERATURE THRESHOLD

Rotating the control knob beneath the **OvrTempThresh** menu entry determines the temperature (in degrees Celsius) at which the OvrTemp alarm activates. Factory default threshold setting for the DVA600 module is 55° C.

4.5 CARD INFO MENU SCREEN

Enter the Card Information menu screen by pressing the touch-switch next to the **CARD INFO** entry on the main screen. Figure 4-5 shows the Card Info menu display for all variations of the DVA600 modules.

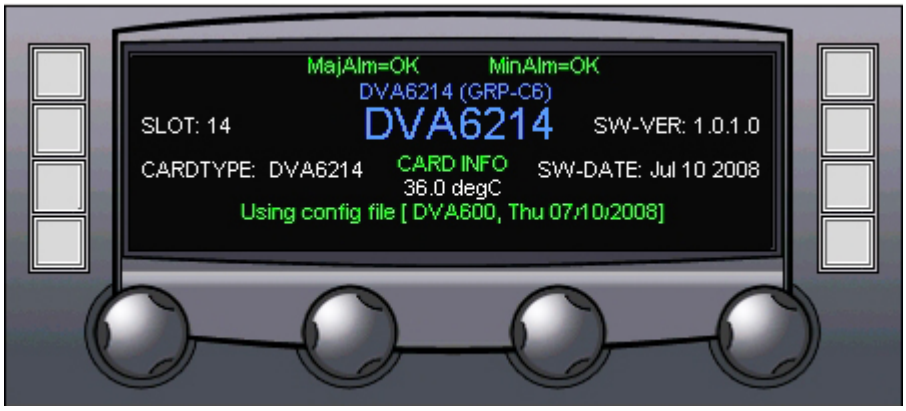


Figure 4-5 Card Information Display Screen

The card information screen displays the following operational data for the DVA module:

- **SLOT** – Identifies the card slot in the FRM603 frame where the DVA module is located
- **CARDTYPE** – Identifies the model number of the DVA module
- Software Version (**SW-VER**) – Displays the revision number of the currently loaded software
- Software Date (**SW-DATE**) – Displays the release date of the currently loaded software

4.6 CHANGE NAME MENU SCREEN

Functions available through the Change Name menu screen allow you to enter a descriptive identification name, or alias – up to 8 characters - for each card in the system. Typical application of this feature would be to name the DVA module in such a way to associate it with its input signal or function, such as CAM 1, KEY VIDEO, etc. Figure 4-6 shows the Change Name menu display for all variations of the DVA600 modules.

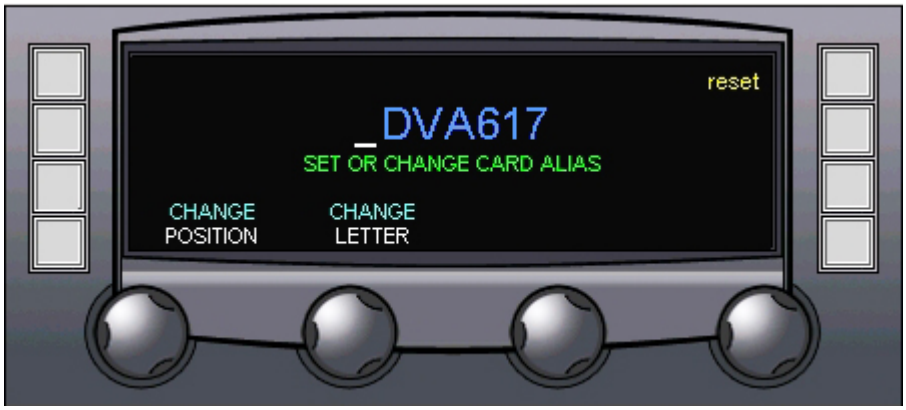


Figure 4-6 Change Name Menu Screen

CHANGE POSITION

Rotating the **CHANGE POSITION** control moves the cursor to the desired character position to enter or change.

CHANGE LETTER

Rotating the **CHANGE LETTER** control scrolls through all alphanumeric display characters - letters, numbers and punctuation marks are available. Once the desired character is displayed in the cursor position, simply move the cursor to the next position.

RESET

Pressing the touch-switch next to the **reset** menu entry sets the name display to the default card alias.

4.7 FUNCTIONAL BLOCK DIAGRAMS

Functional block diagrams of the DVA-600 modules are shown in Figure 4-7 and Figure 4-8.

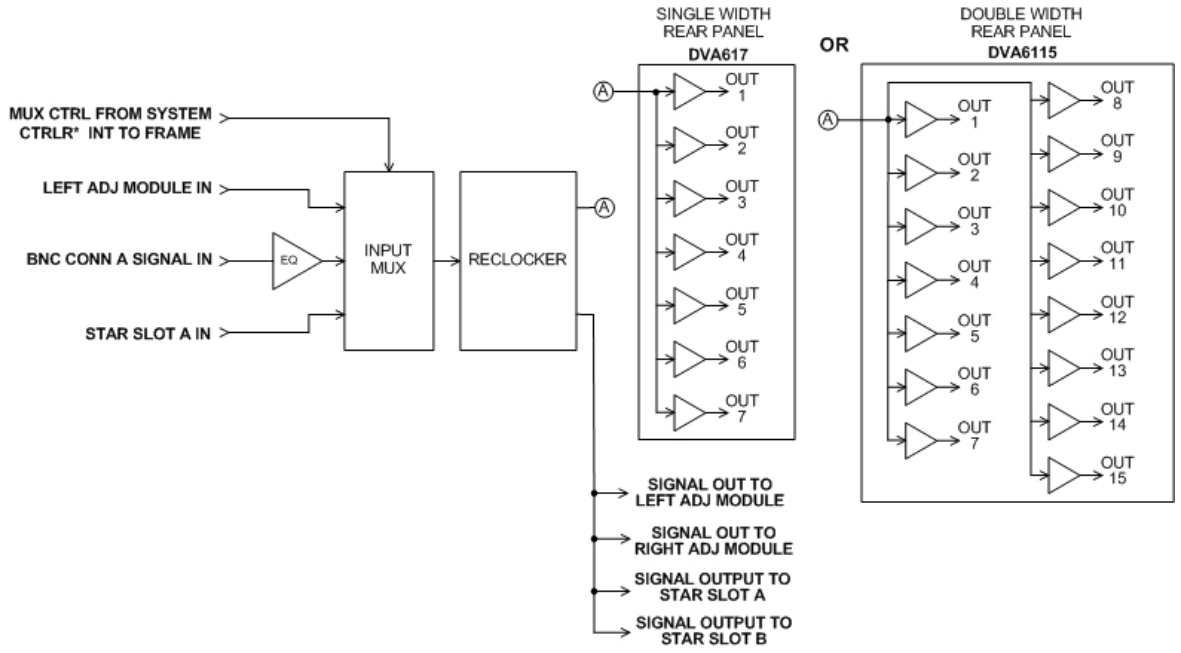


Figure 4-7 Block Diagram - DVA-617 and 6115 Single Input Digital Distribution Amplifiers

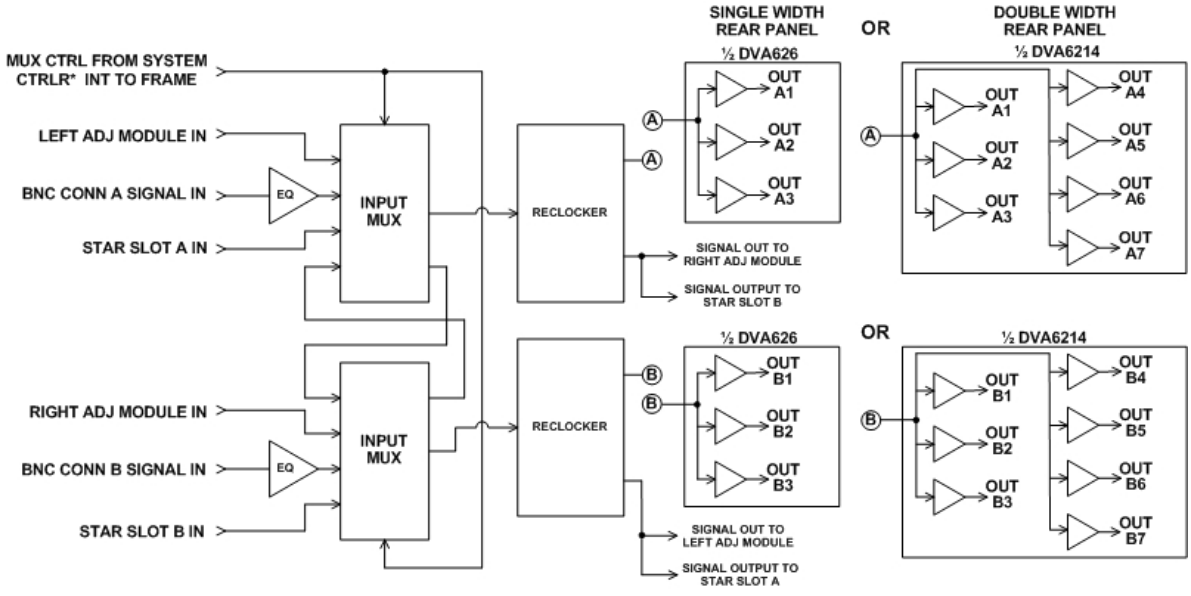
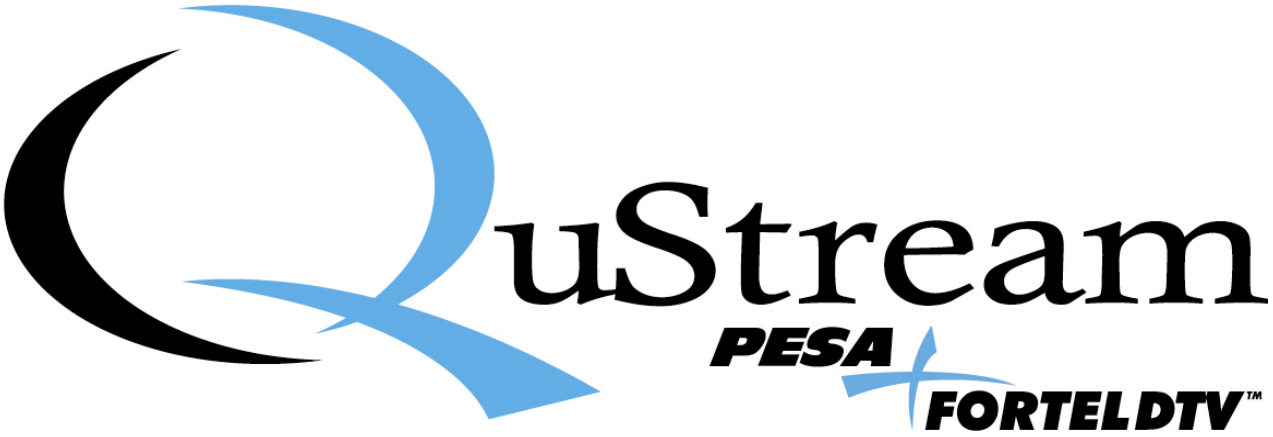


Figure 4-8 Block Diagram - DVA-626 and 6214 Dual Input Digital Distribution Amplifiers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