EVS CDV08 Analog Video Distribution Amplifier Installation Guide

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EVS CDV08 Analog Video Distribution Amplifier

Introduction to Synapse

An Introduction to Synapse

Synapse is a modular system designed for the broadcast industry. High density, intuitive operation, and high-quality processing are key features of this system. Synapse offers a full range of converters and processing modules. Please visit the EVS Broadcast Equipment SA Website at **http://www.evs.com** to obtain the latest information on our new products and updates.

Local Control Panel

The local control panel gives access to all adjustable parameters and provides status information for any of the cards in the Synapse frame, including the Synapse rack controller. The local control panel is also used to back up and restore card settings. Please refer to the RRC18, RRC10, and RRC04 manuals for a detailed description of the local control panel, the way to set up remote control over IP, and frame-related settings and status information.

Remote Control Capabilities

- The remote control options are explained in the rack controller (RRC18/RRC10/RRC04) manual. The method of connection to a computer using Ethernet is described in the RRC manual.
- Although not required to set up a Synapse frame, you are strongly advised to use a remote personal computer or laptop PC with the Synapse setup software as this increases the ease of use and understanding of the modules.
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Unpacking and Placement

Unpacking

The EVS Synapse card must be unpacked in an anti-static environment. Care must be taken to NOT touch components on the card – always handle the card carefully by the edges. The card must be stored and shipped in anti-static packaging. Ensuring that these precautions are followed will prevent premature failure from components mounted on the board.

Locating the card

The Synapse card can be placed vertically in an SFR18 frame or horizontally in an SFR04 frame. Locate the two guide slots to be used, slide in the mounted circuit board, and push it firmly to locate the connectors.

Correct insertion of a card is essential as a card that is not located properly may show valid indicators, but does not function correctly.

REMARK: On power-up, all LEDs will light for a few seconds, this is the time it takes to initialize the card.

A Quick Start

When Powering-up

On powering up the Synapse frame, the card set will receive basic data and default initialization settings. All LEDs will light during this process. After initialization, several LEDs will remain lit – the exact number and configuration are dependent upon the number of inputs connected and the status of the inputs.

Default settings

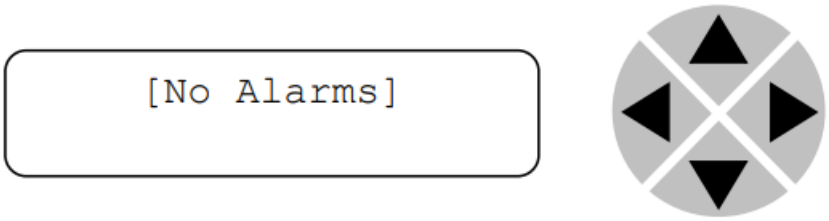
In its default condition, the CDV08/09 will act as an AC-coupled distribution amplifier.

Changing parameters and settings

The front panel controls or the Synapse Set-Up Software can be used to change settings. An overview of the settings can be found in chapters 5, 6, and 7 of this manual.

Front Panel Control

Front Panel Display and Cursor



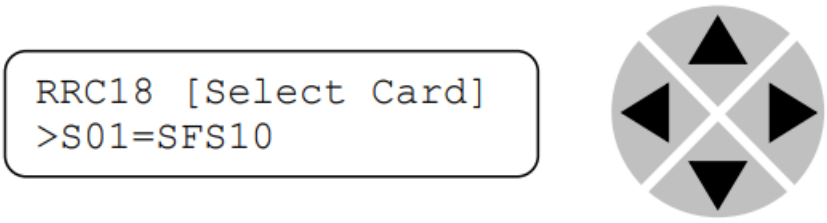
Settings are displayed and changed as follows

Use the cursor ‘arrows’ on the front panel to select the menu and parameter to be displayed and/or changed.

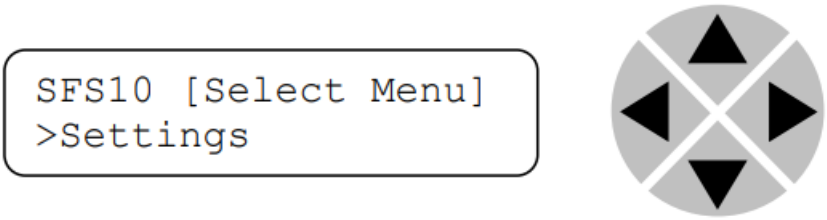
- Press ► To go forward through the menu structure.
- Press ◄ To go back through the menu structure.
- Press ▲ To move up within a menu or increase the value of a parameter.
- Press ▼ To move down through a menu or decrease the value of a parameter.
- REMARK: Whilst editing a setting, pressing ► twice will reset the value to its default.

Example of changing parameters using front panel control

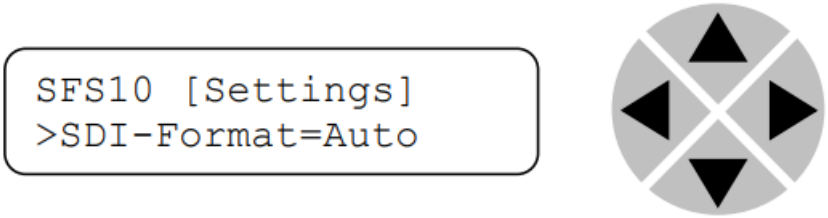
The display as shown below



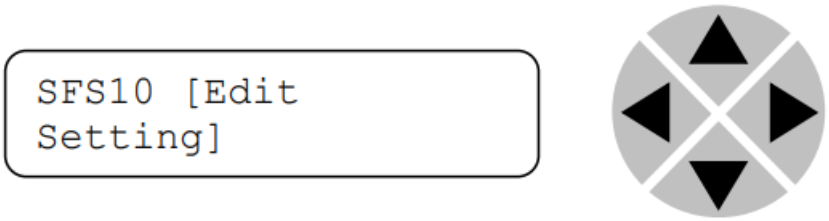
- Pressing the ► selects the SFS10 in frame slot 01.
- The display changes to indicate that the SFS10 has been selected. In this example, the Settings menu item is indicated.



- Pressing the ► selects the menu item shown, in this example Settings.
- (Pressing ▲ or ▼ will change to a different menu eg Status, Events).
- The display changes to indicate that the SFS10 Settings menu item SDI-Format has been selected and shows that its current setting is Auto.



- Pressing the ► selects the settings item shown, in this example SDI-Format.
- (Pressing ▲ or ▼ will change to a different setting, eg Mode, H-Delay).
- The display changes to indicate that the SFS10 Edit Setting menu item SDI-Format has been selected.



- To edit the setting of the menu item press ▲ or ▼.
- All menu items can be monitored and/or changed in this way.
- Changing a setting has an immediate effect.

Synapse SetUp Software

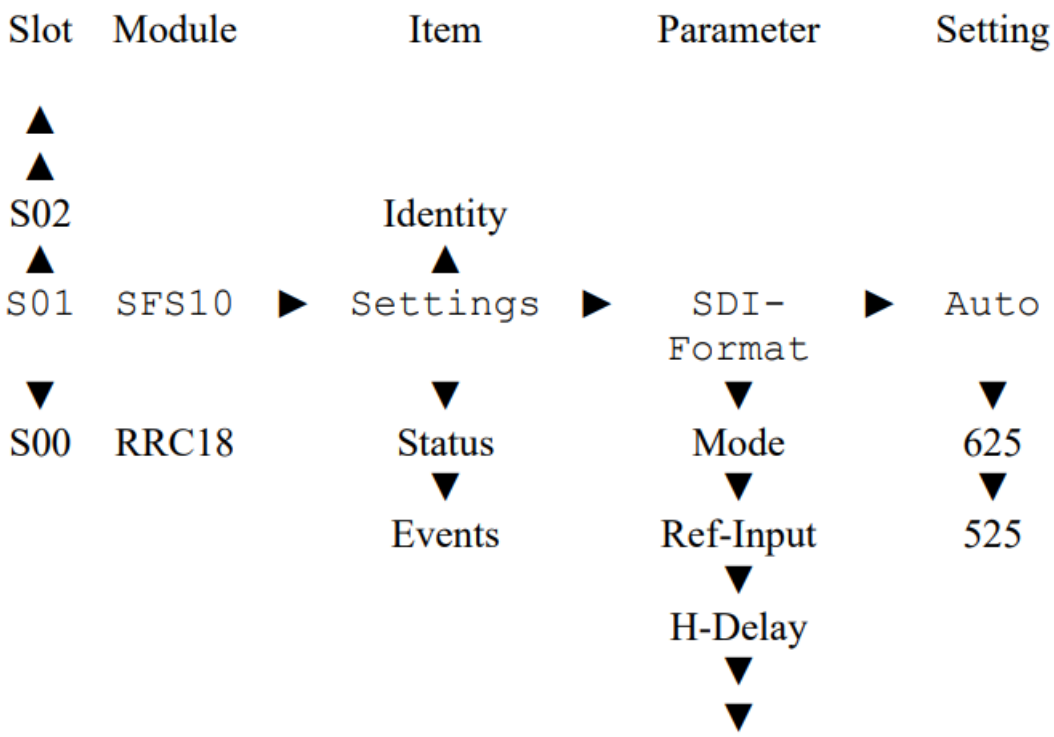
Synapse SetUp Software can be used to change the settings of Synapse modules from a PC, either locally or remotely. The software enables communication based on TCP/IP between the setup PC and Synapse frames/modules.

Each Synapse frame is addressed through its rack controller's unique IP address, giving access to each module, its menus, and adjustment items. The Synapse SetUp software has access to data contained within the Synapse module and displays it on a GUI. The software has an intuitive structure following that of the module that it is controlling.

Having selected the desired Frame and Module from the GUI Synapse Network View, select the menu item that you wish to open. Opening the menu item gives a complete list of available properties with their associated Value.

For example, to change a setting e.g. SDI-Format, select SDIFormat from the list of settings by 'double-clicking to open a dialogue box. The dialogue box allows parameters to be changed or set to the default value. On completion close the dialogue box.

Menu Structure Example



REMARK: Further information about Front Panel Control and Synapse Set Up Software can be obtained from the RRC18 and RRC04 operational manuals.

The CDV08/09 Cards

Introduction

The EVS CDV08/09 are analog distribution amplifiers providing a low loss electronically balanced input with a loop-through or terminate connector. If necessary the input can be used truly floating.

Back planes

The CDV08/09 can be used with a BPL01 or BPL07 backplane. If the BPL01 is used then both the CDV08 and CDV09 have eight outputs. If the BPL07 is used then both the CDV08 and CDV09 have seven outputs and one loop. By means of this BPL07, the input can be used floating. The outputs, representing the input signal, provide DC restoration, Black level correction, Video level correction, and AC or DC coupling, in addition, the CDV08 has scalable Cable EQ, and all items are user selectable.

Miscellaneous

- The CDV08/09 cards fit into the EVS SFR18 rack. LEDs at the front of the board indicate the presence of power and input signals.
- The CDV08/09 can be controlled by EVS Synapse set-up software. Refer to menu structure for control.

Settings Menu

Introduction

The settings menu displays the current state of each set within the CDV08/09 and enables the item to be changed or adjusted. Settings can be changed using the front panel of the Synapse
frame (SFR18 or SFR04) or Synapse SetUp software.

Please refer to chapter 3 for information on the Synapse front panel control and Synapse SetUp software.

Input

The Input item selects the coupling of the input. The item can be set to AC-Coupled or DC-Coupled. The default setting for the input is AC-Coupled.

Equalize

Equalize controls the status of the built-in programmable equalizer. Equalize can be set to On or Off. The default setting for this item is Off. CDV08 only.

EQ-Level

With Equalize set to On, EQ-level allows the equalization to be varied between 0 to 230%. The default setting of EQ-level is 0%. CDV08 only.

Clamping

Clamping allows the DC level of the input signal to restored, it can be set to On or Off. The default setting is On. CDV08 only.

DC-Level

DC-Level allows the DC offset of the output signal to be set within the CDV08 range –4.20V to 4.20V. only. The default setting is 0.00V.The notation of the 0500 software versions has been changed. – 1V (ind) .. +1V (ind), ind is an indicative value. Default setting is 0V (ind).

GainCtrl

This menu enables the input gain control to be switched to Auto or Manual. The default setting is Auto.

InputGain

With GainCtrl set to manual InputGain allows the video signal present at the input to be amplified or attenuated within the range –6dB to 6dB. The default setting is 0.00dB.

AGC-Calibr

With this setting you can calibrate the automatic gain control (when GainCtrl is set to Auto) between -50mV and 50mV.

Status Menu

Introduction

The status menu indicates the current status of each item listed below

Input

This status item indicates whether an analogue video signal is present at the input. The status can be Present if a video signal is detected or NA if a video signal is not detected.

Events Menu

Introduction

An event is a special message that is generated on the card asynchronously. This means that it is not the response to a request to the card, but a spontaneous message

What is the Goal?

The goal of the events is to inform the environment about a changing condition on the card. A message may be broadcast to mark the change in status. The message is volatile and cannot be retrieved from the system after it has been broadcast. There are several means by which the message can be filtered

CDV08/09 Events

The events reported by the CDV0809 are as follows

Announcements

Announcements is not an event. This item is only used for switching the announcement of status changes on/off. 0=off, other =on

Input

1. A message string to show what has happened in text, for example: “INP_LOSS”, “REF_LOSS”, “INP_RETURN”.
2. A tag that also shows what happens, but with a predefined number: e.g. 1 (= loss of input), 2 (= loss of reference), 129(= 1+128 = return of input). For a list of these predefined tags see the table on the next page.
3. A priority that marks the importance of an event. This value is defined by the user and can have any value between 1 and 255, or 0 when disabled.
4. A slot number of the source of this event.

The Message String

The message string is defined in the card and is therefore fixed. It may be used in controlling software like Synapse Set-up to show the event.

The Tag

The tag is also defined in the card. The tag has a fixed meaning. When controlling or monitoring software should make decisions based on events, it is easier to use the tag instead of interpreting a string. The first implementation is the tag-controlled switch in the GPI16.
In cases where the event marks a change to fault status (e.g. 1 for Loss of Input), the complement is marked by the tag increased by 128 (80hex) (e.g. 129 (81hex) for Return of Input).

Defining Tags

The tags defined are

- Event Menu Item Tag Description
- Announcements 0 or NA 0 or NA Announcing of report and control values
- Input 01hex=INP_LOSS 81hex=INP_RETURN primary input lost or returned

The Priority

The priority is a user-defined value. The higher the priority of the alarm, the higher this value. Setting the priority to Zero disables the announcement of this alarm. Alarms with priorities equal or higher than the Error Threshold setting of the RRC will cause the error LED on the Synapse rack front panel to light.

The Address

Together with the message string or the tag, the slot number or address of the card is relevant to be able to assign the event to a certain card.

LED Indication

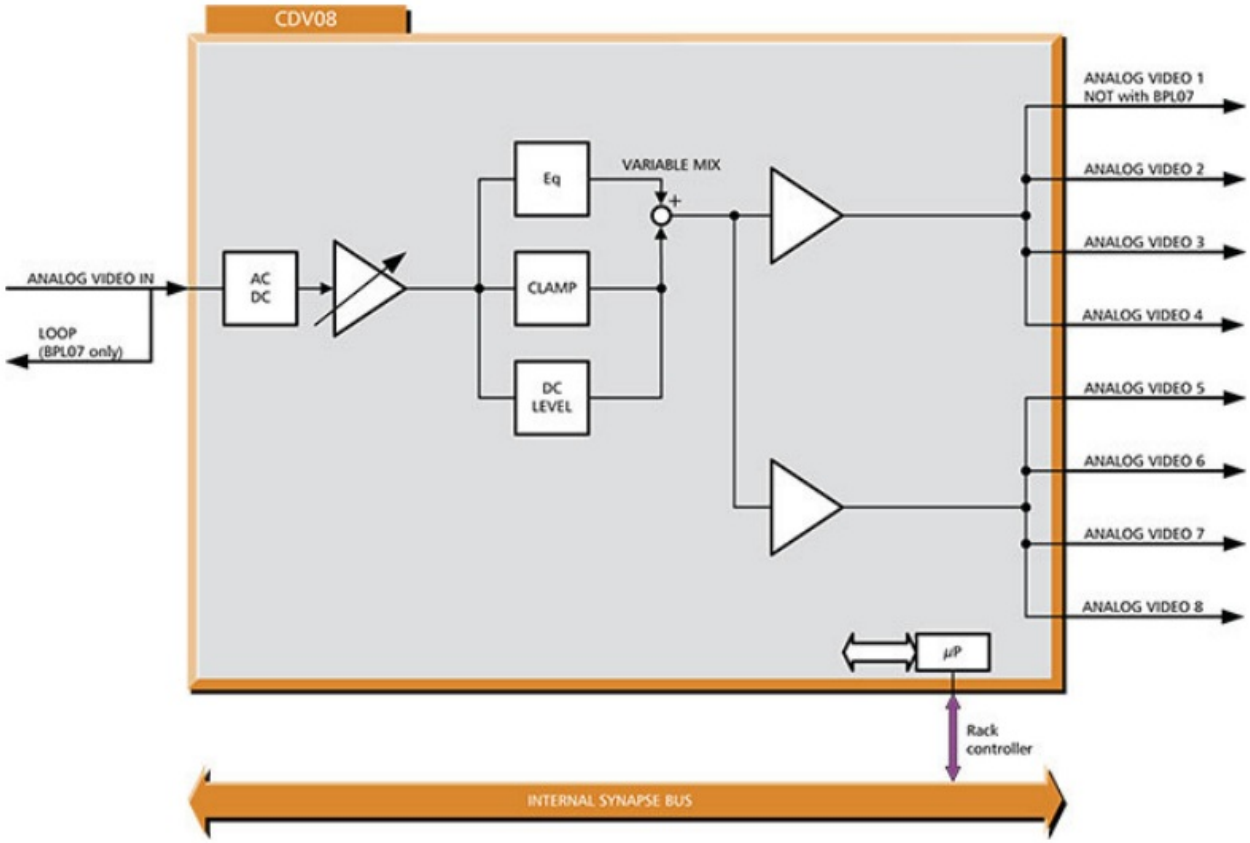
POWER LED

The power LED indicates the presence of power on the CDV08/09.

INPUT LED

This LED indicated the presence of a valid analog video signal on the input.

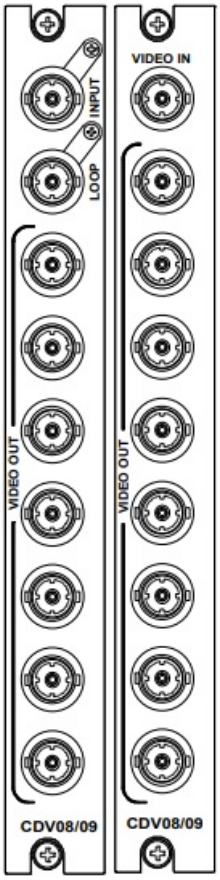
Block Schematic



Connector Panel

The CDV08/09 can be used with the following backplanes: BPL01, and BPL07.

Unused inputs and outputs must be terminated with the correct impedance!



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The address and phone number of the EVS headquarters are usually mentioned in the Help > About menu in the user interface.
You will find the full list of addresses and phone numbers of local offices either at the end of this user manual (for manuals on hardware products) or on the EVS website on the following page: **http://www.evs.com/contacts.**

User Manuals on EVS Website

The latest version of the Media Infrastructure manuals is available at: https://mi-sftp.evs.com/ The user manuals for other EVS products can be found at the EVS download center, on the following webpage: **https://www.evs.com/en/download-area.**

WARNING

To Reduce The Risk Of Fire Or Electrical Shock, Do Not Expose This Appliance To Rain Or Moisture

- ALWAYS disconnect your entire system from the AC mains before cleaning any component. The product frame (SFR18 or SFR04) must be terminated with a three-conductor AC mains power cord that includes an earth-ground connection. To prevent shock hazards, all three connections must always be used.
- NEVER use flammable or combustible chemicals for cleaning components.
- NEVER operate this product if any cover is removed.
- NEVER wet the inside of this product with any liquid.
- NEVER pour or spill liquids directly onto this unit.
- NEVER block airflow through ventilation slots.
- NEVER bypass any fuse.
- NEVER replace any fuse with a value or type other than those specified.
- NEVER attempt to repair this product. If a problem occurs, contact your local EVS distributor.
- NEVER expose this product to extremely high or low temperatures.
- NEVER operate this product in an explosive atmosphere.
- EVS warrants their products according to the warranty policy as described in the general terms. That means that EVS Broadcast Equipment SA can only warrant the products as long as the serial numbers are not removed.

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This product complies with the requirements of the product family standards for audio, video, and audio-visual entertainment lighting control apparatus for professional use as mentioned below.

Documents / Resources

	EVS CDV08 Analog Video Distribution Amplifier [pdf] Installation Guide CDV08, CDV09, CDV08 Analog Video Distribution Amplifier, CDV08, Analog Video Distribution Amplifier

References

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