(DENSITÉ) SERIES

DDA-1132

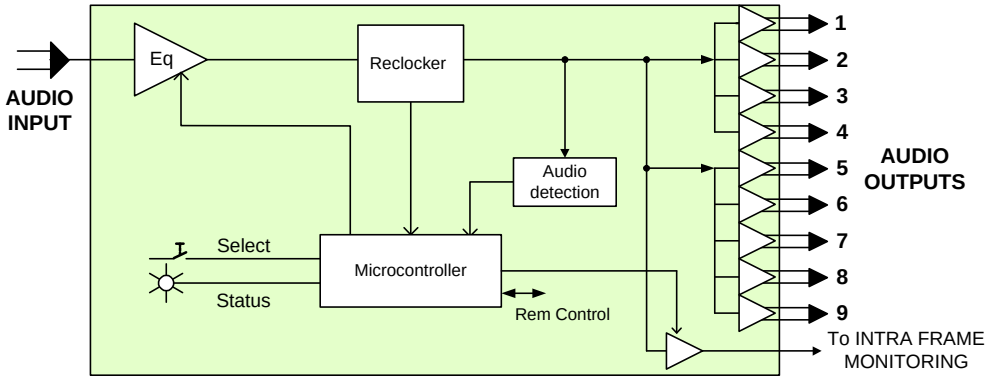
Description

The Digital Audio Distribution Amplifier DDA-1132 supports AES3-110 Ω and provides 9 outputs. The input features clock regeneration for reduced jitter and signal restoration. A signal detection stage permits control of the content of the audio signal. A multi-coloured LED, visible with the door closed, reports the card status. The DDA-1132 requires a "single" or a "double" rear connector panel.

Features

- Digital distribution amplifier 1 input to 4 or 9 outputs
- AES3 audio balanced input
- Remote control of carrier quality
- Silence detect with user-adjustable delay and threshold
- Intra frame output for monitoring
- Status LED and remote reporting
- Signal regeneration
- V, U, C, P bits transparency

FUNCTIONAL BLOCK DIAGRAM



DDA-1132 Functional Block Diagram

SPECIFICATIONS

Input

Signal: .....AES3 (ANSI S4.40)
Level: .....0.1 to 7.0 Vpp
Impedance: .....110 Ω balanced
Equalization:.....up to 1000 m (Draka PGB110)

Outputs

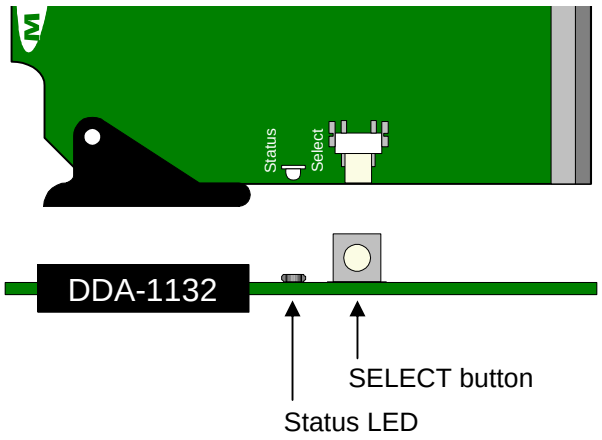
Signal: .....AES3 (ANSI S4.40)
Level: .....4 Vpp
Impedance: .....110 Ω balanced
Jitter reduction: .....>15 dB (@ 100 kHz)
Specific jitter:.....<0.005 UI pp (700 Hz to 100 kHz)

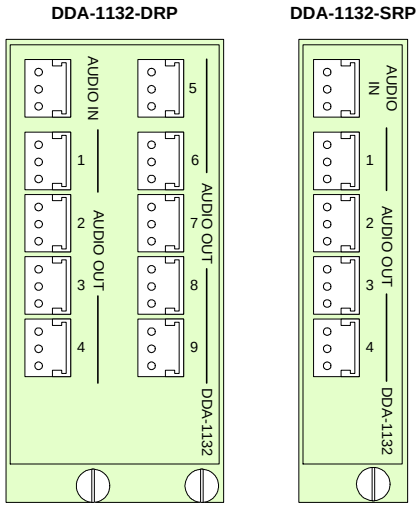
Signal Processing

Sampling:.....28 to 100 kHz
Processing delay:.....<12 µs @ 48kHz
Signal absence
- threshold:.....-48 / -72 dBFS (6 dB steps)
- delay:.....from 0 to 255 s
V, U, C, P bits transparency

Miscellaneous

Power:.....single: 1.8 W
.....double: 2.7 W





DDA-1132 Rear Connector Panels

INSTALLATION

Make sure the following items have been shipped with your DDA-1132. If any of the following items are missing, contact your distributor or Miranda Technologies Inc.

* DDA-1132 Digital Audio Distribution Amplifier
* DDA-1132 rear connector panel (see figure for options)

The DDA-1132 and its associated rear connector panel must be mounted in a DENSITÉ frame. It is not necessary to switch off the frame's power when installing or removing the DDA-1132. Detailed instructions for installing cards and their associated rear panels are given in the Densité Frame manual.

When used with a DDA-1132-DRP, the module must be installed in the right-most of the two slots covered by the rear panel in order to mate with the panel's connectors. If it is placed in the wrong slot, the card's STATUS LED will flash red. Move the card to other slot for correct operation. No damage will result to the card should this occur.

OPERATION

Overview

The DENSITÉ frame incorporates a central controller card, located in the center of the frame, which is equipped with an LCD display and a control panel. The controller handles error reporting and local and remote control for all cards installed in the frame. The display and control panel are assigned to the card in the frame whose SELECT button has been pushed.

Status Monitor LED

The status monitor LED is located on the front card-edge of the DDA-1132 module, and is visible through the front access door of the DENSITÉ frame. This multi-color LED indicates module status by color, and by flashing/steady illumination, according to the following chart (which also indicates fault reporting for this card on the DENSITÉ frame's serial and GPI interfaces).

A "Flashing Yellow" Status LED indicates that the SELECT button on the front panel has been pushed, and the controller display and control panel are now assigned to this card.

The LED color assignments for some error conditions can be reconfigured by the user (see the chart and menu for details).

	REPORT		COLOR (F=flashing)			
	SERIAL	GPI	G	Y	R	FR
No input lock	✪				✪	
Biphase Coding Error	✪				✪	
Parity Error	✪				✪	
CRCC Error	✪			✪		
Slipped sample	✪			✪		
Confidence	✪			✪		
Invalid	✪			✪		
Non audio	✪			✪		
No signal input 1	✪			✪		
No signal input 2	✪			✪		
No rear panel						✪

✪ : Factory default. User configurable

User Interface

Pushing the SELECT button will cause the on-card STATUS LED to flash yellow, and the card identification and the current status will be shown on the controller card's display. The STATUS LED will revert to its normal state upon a second push of the button, or after a short delay. The messages which may appear are shown in the top line of the menu chart on page 3

Example:

SELECT button pushed twice when there is no signal connected to Input 2 on the rear panel and the LED is steady red:

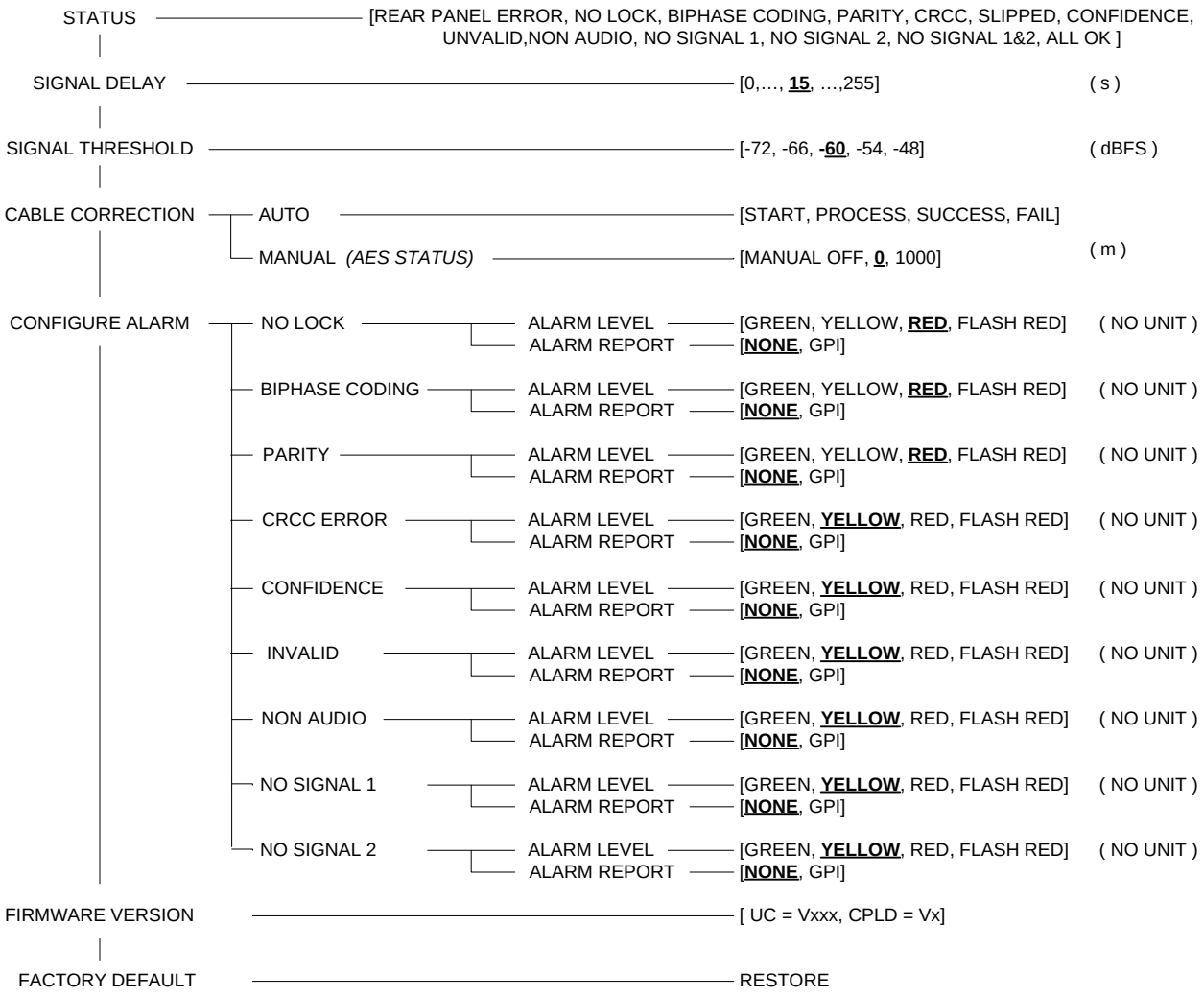
D	D	A	-	1	1	1	2							
N	O		S	I	G	N	A	L		2				

Use the local control panel to access the detailed status report shown in the STATUS menu below.

Operating Parameter Adjustment

The DDA-1132 has operating parameters which may be adjusted at the controller card interface. After pressing the SELECT button on the DDA-1132 card, use the keys on the local control panel (described in the Controller card manual) to step through the displayed menu and adjust the parameters. The menus are shown below.

DDA-1132



OPERATION (continued)

STATUS menu

Displays status of the different board alarms. The higher-level alarm is displayed, even if not configured to activate the STATUS LED. **ALL OK** indicates an absence of alarms.

REAR PANEL ERROR Indicates an absence of the rear panel or an incompatibility between the module and the rear panel. The STATUS LED turns on flashing red

NO LOCK Indicates that the input stage is not locked on the incoming AES.

BIPHASE CODING Indicates a biphase coding error .

PARITY Indicates a parity error.

CRCC Indicates a CRCC error.

SLIPPED Indicates a sample slipping.

CONFIDENCE Indicates that the input signal is becoming weaker.

INVALID Indicates an invalid sample.

NON AUDIO Indicates the audio content is not linear PCM samples.

NO SIGNAL Indicates an internal signal level lower than the selected threshold during a user-defined period.

NO SIGNAL DELAY menu

Signal absence is declared when the level signal is lower than the signal threshold during the selected period, which can be adjusted from 0 to 255 s. The default value is set to 15 s.

SIGNAL THRESHOLD menu

The signal absence threshold can be adjusted from –72 to –48 dBFS in 6 dB steps. The default value is –60 dBFS.

CABLE CORRECTION menu

AUTO: *START* will initiate an automatic sequence, indicated by *PROCESS*. When the input status becomes correct it will stop and *SUCCESS* will be displayed. *FAIL* will be displayed to indicate that no correction has been found that will yield a correct input status.

MANUAL This command allows a manual adjustment of the correction applied to the input signal. The input status is displayed at the same time to facilitate the setting.

CONFIGURE ALARM

It is possible to associate a *STATUS LED* colour and/or a GPI relay activation with each detected error.

Alarm relay activation occurs when the controller board menu item GPI REPORT is set to ENABLE.

ALARM LEVEL: Associates a *STATUS LED* colour (GREEN, YELLOW, RED or FLASH RED) with each error. This selection has no influence on the {STATUS} menu display.

ALARM REPORT: The default value NONE is assigned to errors. Alarm relay activation will be associated with an error when GPI is set.

FIRMWARE VERSION menu

UC = Vxxx Microcontroller firmware version

CPLD = Vx Programmable logic element firmware version.

FACTORY DEFAULT menu

RESTORE: Select *RESTORE* to reset all of the menu-adjustable parameters to a factory-preset state (indicated in the menu chart by an underline in the list of available choices)

COMPLIANCE

Radio Frequency Interference and Immunity

This unit generates, uses, and can radiate radio frequency energy. If the unit is not properly installed and used in accordance with this guide, it may cause interference with radio communications. Operation with non-certified peripheral devices is likely to result in interference with radio and television reception. This equipment has been tested and complies with the limits in accordance with the specifications in:

FCC Part 15, Subpart B; EN55022; EN50204; EN61000-3-2, -3; EN61000-4-2, -3, -4, -5, -6, -11

CONTACT MIRANDA

For technical assistance, please contact the Miranda Technical Support Centre nearest you:

Americas
Telephone:
+1-800-224-7882
e-mail:
techsupp@miranda.com

Asia
Telephone:
+81-3-5730-2987
e-mail:
asiatech@miranda.com

Europe, Middle East, Africa, UK
Telephone:
+44 (0) 1491 820222
e-mail:
eurotech@miranda.com

France (only)
Telephone:
+33 (0) 1 55 86 87 88
e-mail:
francetech@miranda.com

Visit our web site at www.miranda.com