

ADA-1023

Description

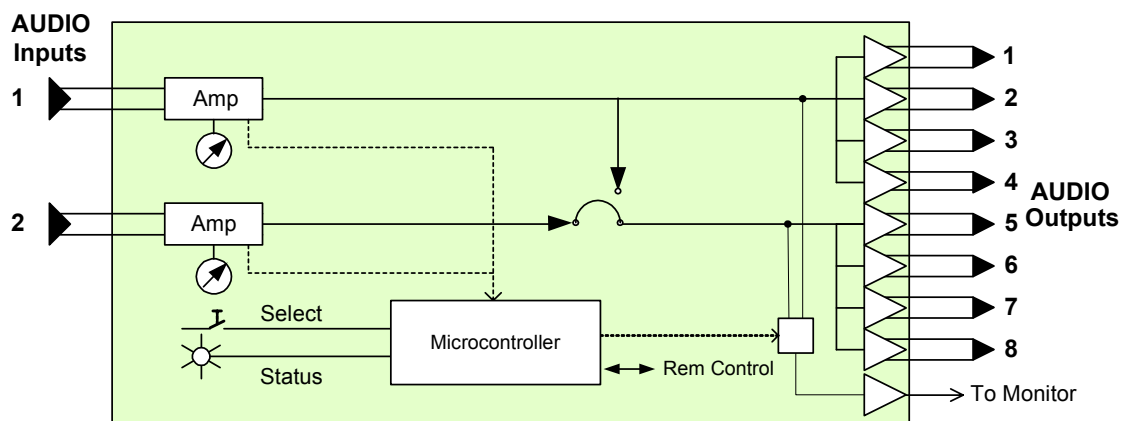
The ADA-1023 is an analog audio DA that can be configured for single or dual channel (stereo) operation. In single channel mode, 8 outputs can be driven while in dual channel mode, each channel has four outputs. A wide range of level gain control is possible and controlled from the card edge. A signal status is also available indicating the presence of the input signal(s).

The ADA-1023 requires a 'double' rear connector panel.

Features

- Single or dual analog audio input(s)
- Single channel 8-output or dual channel (stereo) 4-output
- Balanced inputs and outputs
- Wide control of gain (-8 to +32 dB)
- Status LED and remote reporting of presence and overload.
- Provides output to Monitoring Switching Bridge option (MSB-1121)

FUNCTIONAL BLOCK DIAGRAM



ADA-1023 Block Diagramm

SPECIFICATIONS

Input

Balanced
Signal: analog audio
Impedance: > 20 k Ω
Common mode
rejection: > 50 dB

Output

Balanced
Signal: balanced analog audio
Impedance: < 50 Ω

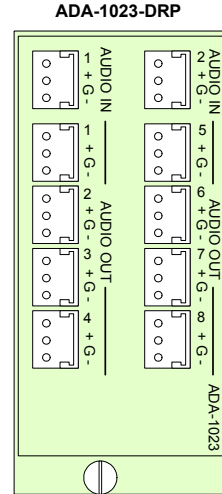
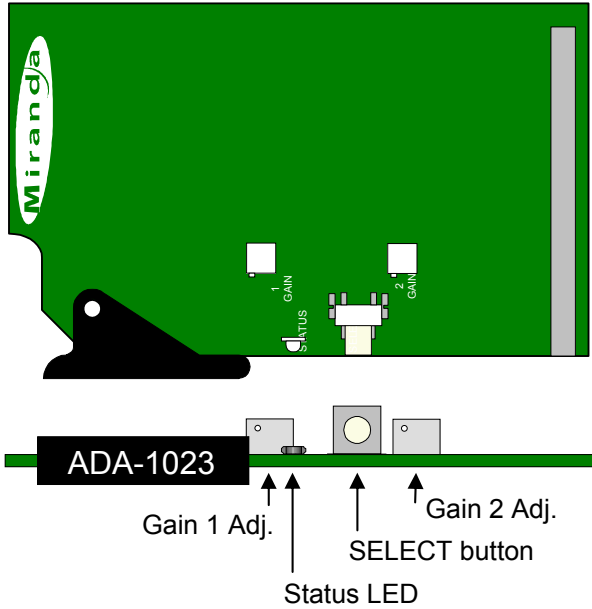
Processing performance

Gain: -8 to +32 dB
Max. Level: +25 dBu
SNR: < -95 dBu
20 Hz to 20 kHz unweighted
Distortion: < -85 dB (20 Hz to 20 kHz) @ +23 dBu
Freq. response: ±0.2 dB (20 Hz to 20 kHz)
Crosstalk: 100 dB

Miscellaneous

Overload threshold: . +9 to +24 dBu (1 dB steps)
Signal absence:
-Fixed threshold: -48 to -24 dBu (6 dB steps)
-Adjust. Delay: from 0 to 255 s
Power: 7 W

ADA-1023 Single/Dual Analog Audio Distribution Amplifier Guide to Installation and Operation



ADA-1023 Rear Connector Panel

INSTALLATION

Make sure the following items have been shipped with your ADA-1023. If any of the following items are missing, contact your distributor or Miranda Technologies Inc.

- * ADA-1023 Analog Audio Distribution Amplifier
- * ADA-1023-DRP rear connector panel

The ADA-1023 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 ADA-1023. Detailed instructions for installing cards and their associated rear panels are given in the Densité Frame manual.

When used with a ADA-1023-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 ADA-1023 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).

	REPORT		COLOR (F=flashing)			
	SERIAL	GPI	G	Y	R	FR
Overload input 1	☉				☉	
Overload input 2	☉				☉	
No signal input 1	☉			☉		
No signal input 2	☉			☉		
No rear panel						☉

☉ : Factory default. User configurable

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).

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:

A	D	A	-	1	0	2	3				
N	O	S	I	G	N	A	L	2			

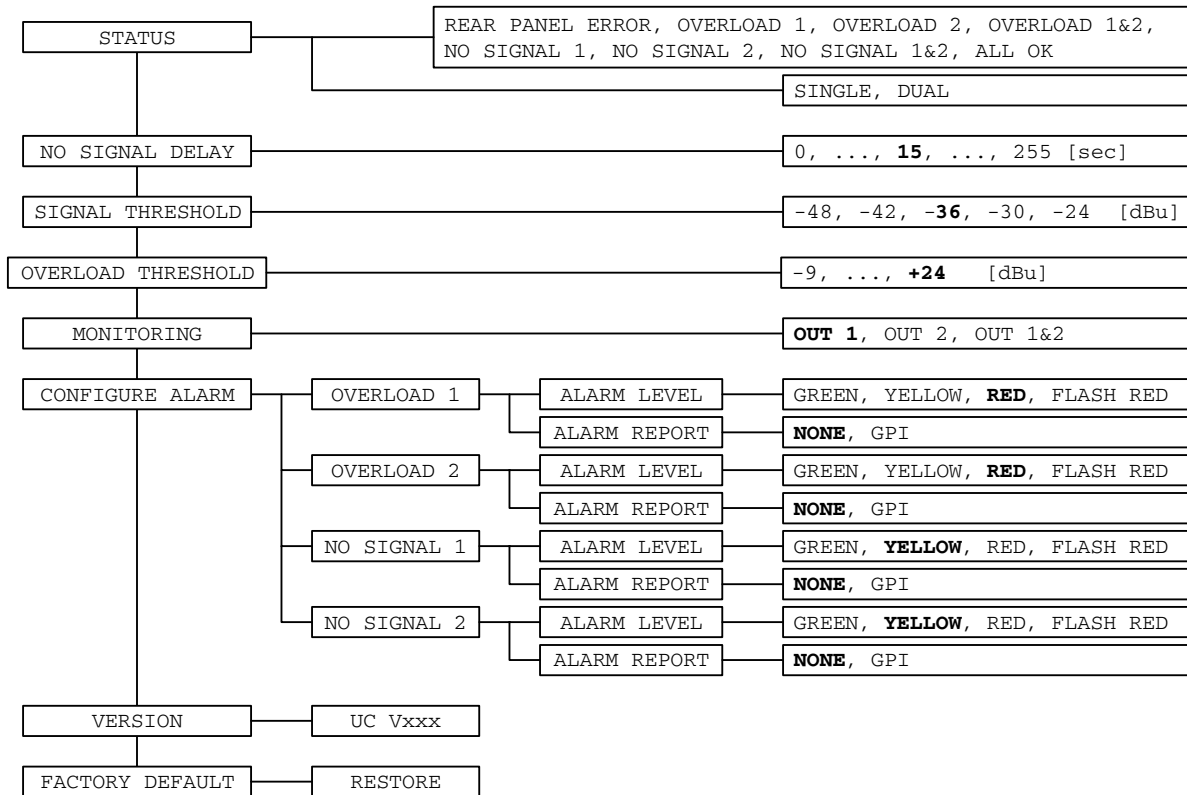
Use the local control panel to access the detailed status report shown in the STATUS menu below.

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Operating Parameter Adjustment

The ADA-1023 has operating parameters which may be adjusted at the controller card interface. After pressing the SELECT button on the ADA-1023 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.



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 Absence of the rear panel or an incompatibility between the module and the rear panel. The STATUS led turns on flashing red

OVERLOAD Indicates an internal signal level higher than the overload threshold (channel indicated 1, 2, 1&2).

NO SIGNAL Indicates an internal signal level lower than the signal threshold during a user defined period (channel indicated 1, 2, 1&2).

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 presence signal threshold can be adjusted from -48 to -24 dBu by 6 dBu steps. The default value is -36 dBu S.

OVERLOAD THRESHOLD menu

The overload signal threshold can be set from -9 to +24 dBu. The default value is +24 dBu.

MONITORING menu

Allows the pre-selection of the monitored signal. The ON/OFF command will come from a monitor module like the MSB-1121 in slot 20 of the Densité frame.

ADA-1023 Single/Dual Analog Audio Distribution Amplifier

Guide to Installation and Operation

CONFIGURE ALARM menu

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.

VERSION menu

UC = Vxxx Microcontroller firmware version

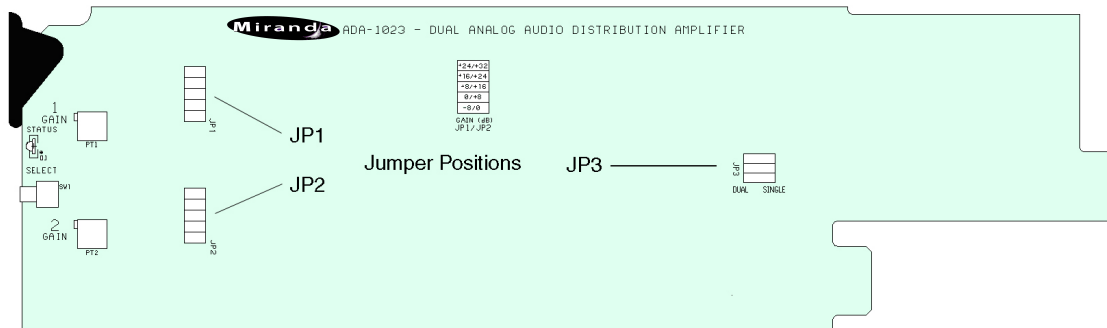
FACTORY DEFAULT menu

RESTORE: Select *RESTORE* to reset all of the menu-adjustable parameters to a factory-preset state (indicated in **BOLD** the menu chart above).

Mode selection and Gain Adjustment

The ADA-1023 can operate as a single-input, 8-output DA, or as a dual-input, 4-output DA. Select the operating mode using jumper J3, located on the card (see figure below for jumper location)

The gain of the two audio input channels can be set using a two-step process. First, select the gain range using on-board jumpers J1 and J2. The gain range can be selected from the following choices: -8 to 0db, 0 to 8 db, 8 to 16 dB, 16 to 24 dB, 24 to 32 dB. Once the range is selected, use the trim pots accessible from the front card edge to adjust the gain within the selected range.



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

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