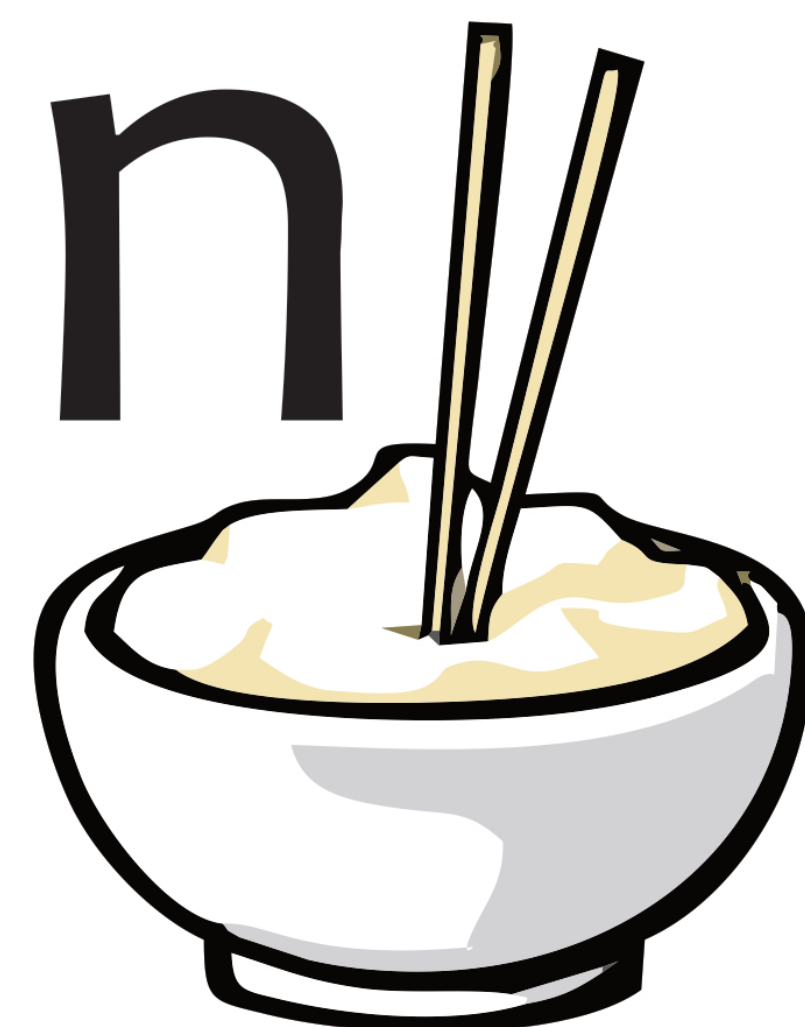


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Klipsch KDA Crestron Module

Installation and Usage Guide

Klipsch®

KEEPERS OF THE SOUND™

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Overview

The Klipsch KDA amplifier module allows for complete control of the Klipsch KDA line of multichannel amplifiers.

The module provides source selection, volume and mute control over each of the 4 channels. It also provides the ability to flash the LED's on the front of the unit to help locate the device.

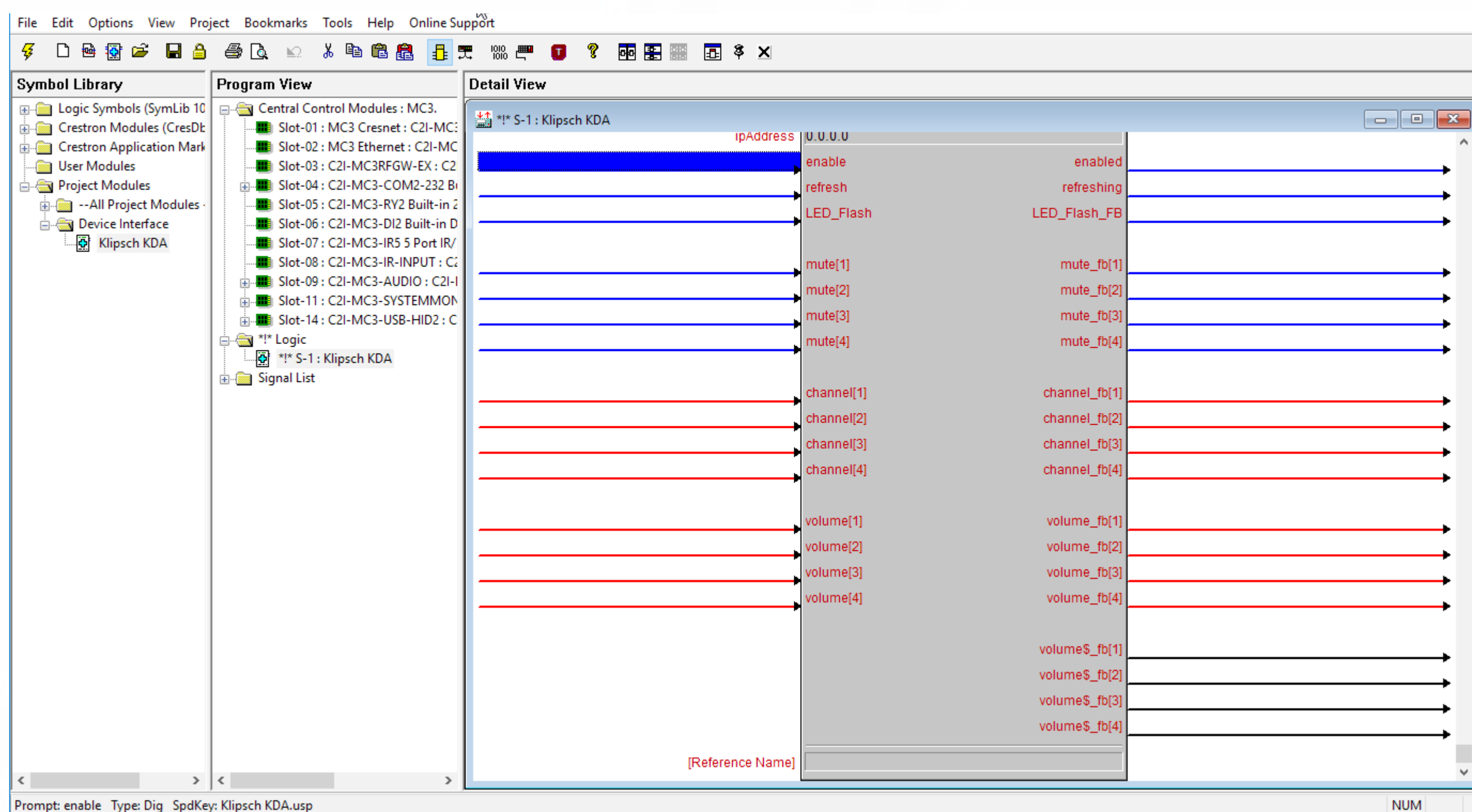
The module provides analog feedback for the source, analog and a string join for the volume and digital feedback for the mute status. The frequency to refresh the status can be set by the integrator to suit the project.

The module includes a sample SIMPL project and 2 Xpanel layouts (one with and one without smart graphics).

Installation

Copy the files to your project

Copy the Klipsch KDA.usp and Klipsch KDA.ush files to your project folder. Once the files are in place re-sync your project and the module should appear under the Project Modules section in the Symbol Library.



Module Configuration

The Klipsch KDA module requires three parameters to be set for it to be able to communicate. The parameters are the IP Address of the Klipsch unit, the port number (which can be left at the default 49152) and the volume range supported by the firmware on this unit. The range is typically either 40 or 80.

port

49152d

range

40d

ipAddress

0.0.0.0

KEY	PARAMETER
ipAddress	The ip address of the Klipsch KDA
Port	The port number of the Klipsch KDA (default 449152)
Range	The volume range of the amplifier. This is typically wither 40 or 80.

Module Joins

Initialisation and state

KEY	TYPE	IN/OUT	DESCRIPTION
enable	Digital	Input	This will enable the module and open the connection to the KDA
refresh	Digital	Input	This join will cause an refresh of the all state for the KDA
LED_Flash	Digital	Input	This will cause the LED's on the front panel of the KDA to flash
enabled	Digital	Output	This signal will stay high while the KDA has an active connection
refreshing	Digital	Output	This signal will stay high while the state refresh is taking place
LED_Flash_FB	Digital	Output	The signal will stay high when the LED flash discovery is active



Module Joins

enable and enabled feedback

To communicate to the Klipsch KDA the enable signal must be held high. This is typically done with a toggle symbol. Lowering the signal will cause the communication channel to close and for the module to ignore incoming commands.

The enabled digital output will remain high while the communication channel is open.

refresh and refreshing feedback

The Klipsch KDA does not provide feedback when the state changes outside of the module. For this reason it is good practice to poll the unit periodically to get the correct state. The polling interval can be set externally to the module using an oscillator. Depending on your requirements a typical poll cycle would be 60 seconds. If you are only communicating with the unit via this module you could ignore the polling. The correct state is recovered each time you make a change to the mute, volume or source inputs.

LED_Flash and LED_Flash_FB feedback

The Klipsch KDA uses the front panel LED's as a way of discovering the units once they have been installed. Raising the LED_Flash input will start the LED's on the front panel flashing. Lowering this signal will stop the flashing.

While the LED's are flashing the LED_Flash_FB signal will remain high.

Module Joins

Mute Joins

KEY	TYPE	IN/OUT	DESCRIPTION
mute[1 - 4]	Digital	Input	When the signal is high the chosen channel will be muted
mute_fb[1-4]	Digital	Output	When the chosen channel is muted, this signal will be high



mute and mute_fb

There are four mute joins labeled mute[1] to mute[4] representing each available channel. When you raise the join going to the channel you want to affect that channel will be muted. When you lower the signal it will be un-muted. Typically this will be done with a toggle in SIMPL.

If a channel is currently mute the matching mute_fb signal will remain high.

There is no dedicated power off command so mute is used to turn the channel off.

Module Joins

Channel Input Joins

KEY	TYPE	IN/OUT	DESCRIPTION
channel[1 - 4]	Analog	Input	Change the selected channel to the input represented by the analog join
channel_fb[1-4]	Analog	Output	Analog value of current source for the selected channel



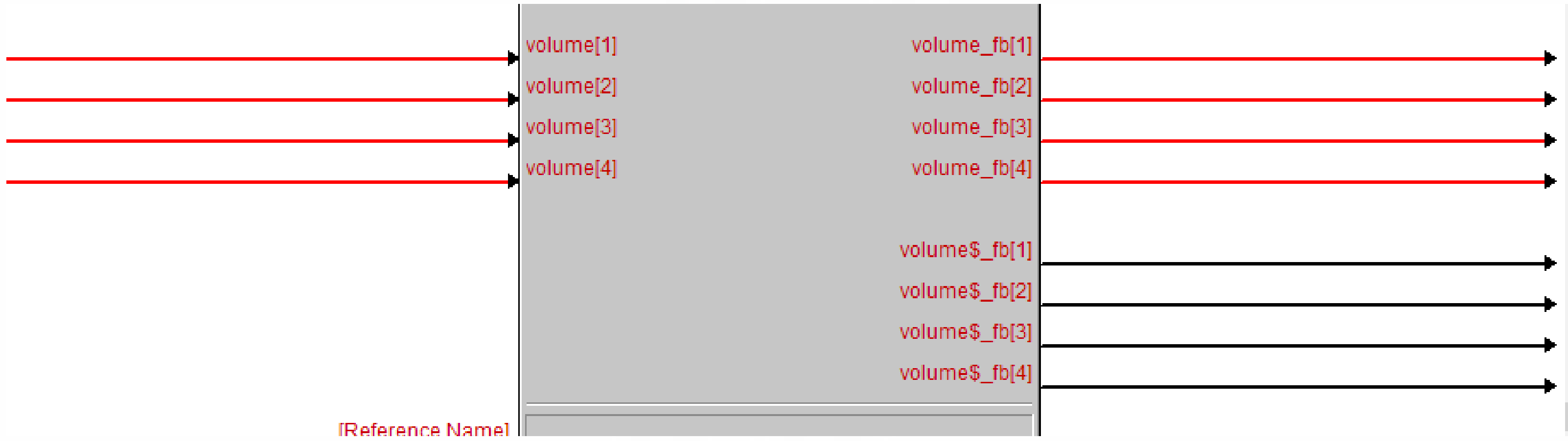
channel and channel_fb

The channel input requires an analog value between 1 and 12 (see table below for input mapping). When you select a new input the amp will change the input and then ask the KDA for the current input. Once it gets the current input state from the KDA it will change the channel_fb to represent the correct input.

Module Joins

Volume Joins

KEY	TYPE	IN/OUT	DESCRIPTION
channel[1 - 4]	Analog	Input	Change the selected channel to the input represented by the analog join
channel_fb[1-4]	Analog	Output	Analog value of current source for the selected channel
volume_fb[1-4]	String	Output	



volume and volume_fb

The volume can be adjusted by attaching an analog join to the desired channel. The volume will only be sent to the amp when it needs to change so it will work with ramping without causing an overload in traffic.

The current volume is output as both an analog signal and a text string that shows the current volume in dB as per the amp’s built in web interface.

Module History

Version 20180104

- Inital release