SIMPLWINDOWS NAME:	None
CATEGORY:	Mixer
VERSION:	1.0
SUMMARY:	Provides volume control, mute and store/recall of presets
GENERAL NOTES:	This module will provide volume control, muting and preset store/recall on the vram. Real feedback is provided whenever a preset is recalled, mute is pressed or volume level is changed. All digital inputs to this module are intended to be momentary unless otherwise noted - latching inputs may result in improper operation of the module! The device number must match the mixer being controlled. The software from biamp("biamp win") must be used to set up the device number. See the signal information below for more details on the device number.
CRESTRON HARDWARE REQUIRED:	ST-COM, CNXCOM, CEN-COM
SETUP OF CRESTRON HARDWARE:	Baud Rate - 2400, 9600, 19200, 38400 (9600 is device default) Parity - None Data Bits - 8 Stop Bits - 1
VENDOR FIRMWARE:	None
VENDOR SETUP:	The device number must be set using the BiampWin software.
CABLE NUMBER:	CNSP-121

CONTROL:

VRAM_RX$	S	Serial data string from Vram - routed from RX$ of RS-232 port
PRESET1-15	D	Pulse to recall a preset
LEVEL1-8_UP_MAIN	D	Raise selected channel main volume output
LEVEL1-8_DWN_MAIN	D	Lower selected channel main volume output
LEVEL1-8_UP_AUX	D	Raise selected channel aux volume output
LEVEL1-8_DWN_AUX	D	Lower selected channel aux volume output
LEVEL1-8_MAIN_MUTE	D	Mute selected channel main volume output
LEVEL1-8_AUX_MUTE	D	Mute selected channel aux volume output
AUX1_UP_MAIN	D	Raise aux input 1 main volume output
AUX1_DWN_MAIN	D	Lower aux input 1 main volume output
AUX1_UP_AUX	D	Raise aux input 1 aux volume output
AUX1_DWN_AUX	D	Lower aux input 1 aux volume output
AUX1_LEVEL_TO_MAIN_MUTE	D	Mute aux input 1 to main

		volume output
AUX1_LEVEL_TO_AUX_MUTE	D	Mute aux input 1 to aux volume output
AUX2_UP_MAIN	D	Raise aux input 2 main volume output
AUX2_DWN_MAIN	D	Lower aux input 2 main volume output
AUX2_UP_AUX	D	Raise aux input 2 aux volume output
AUX2_DWN_AUX	D	Lower aux input 2 aux volume output
AUX2_LEVEL_TO_MAIN_MUTE	D	Mute aux input 2 to main volume output
AUX2_LEVEL_TO_AUX_MUTE	D	Mute aux input 2 to aux volume output
LEVEL_MAIN_UP	D	Raise the main output volume
LEVEL_MAIN_DWN	D	Lower the main output volume
LEVEL_AUX_UP	D	Raise the auxiliary output volume
LEVEL_AUX_DWN	D	Lower the auxiliary output volume
LEVEL_MAIN_MUTE	D	Mute main output
LEVEL_AUX_MUTE	D	Mute aux output
STORE	D	Store currently selected preset

FEEDBACK:

VRAM_TX$	S	Serial data string to vram - routed to tx$ of RS232 port
INPUT1-8_MAIN_OUT	A	Real analog feedback of corresponding input level(0 to 31d)
INPUT1-8_AUX_OUT	A	Real analog feedback of corresponding input level(0 to 31d)
LEVEL1-8_MAIN_MUTE_FB	D	Real feedback for mute state of volume _mute_fb output
LEVEL1-8_AUX_MUTE_FB	D	Real feedback for mute state of volume _mute_fb output
AUXINPUT1_MAIN_OUT	A	Real analog feedback of corresponding input level(0 to 31d)
AUXINPUT1_AUX_OUT	A	Real analog feedback of corresponding input level(0 to 31d)
AUXINPUT2_MAIN_OUT	A	Real analog feedback of corresponding input level(0 to 31d)
AUXINPUT2_AUX_OUT	A	Real analog feedback of corresponding input level(0 to 31d)
AUX1_LEVEL_TO_MAIN_MUTE_FB	D	Real feedback for mute state of volume output
AUX2_LEVEL_TO_MAIN_MUTE_FB	D	Real feedback for mute state of volume output
AUX1_LEVEL_TO_AUX_MUTE_FB	D	Real feedback for mute state of volume output
AUX2_LEVEL_TO_AUX_MUTE_FB	D	Real feedback for mute state of volume output

MAIN_OUTPUT	A	Real analog feedback of corresponding input level(0 to 31d)
AUXILIARY_OUTPUT	A	Real analog feedback of corresponding input level(0 to 31d)
MAIN_OUTPUT_MUTE_FB	D	Real feedback for mute state of volume output
AUXILIARY_OUTPUT_MUTE_FB	D	Real feedback for mute state of volume output

PARAMETERS:

DEV_NUM_HIGH	P	Hex equivalent of high byte for device number(see below)
DEV_NUM_LOW	P	Hex equivalent of low byte for device number(see below)

The Biamp Vram uses a device number which is setup through the BiampWin software. The range of values is from 00-63 decimal in the BiampWin software. To process this number for purposes of this module, the following steps must be taken:

1. Convert the decimal number to Hex 2. Convert the Hex digits to the Biamp pseudo-hex equivalent which follows the convention listed here:

0=30	4=34	8=38	C=3C
1=31	5=35	9=39	D=3D
2=32	6=36	A=3A	E=3E
3=33	7=37	B=3B	F=3F

For Example:

A device number of 1 would use:

1 DECIMAL = 01 HEX
DEV_NUM_HIGH = 30
DEV_NUM_LOW = 31

A device number of 42 would be use:

45 DECIMAL = 2D HEX
DEV_NUM_HIGH = 32
DEV_NUM_LOW = 3D

Please see the sample/test program for an example of this implementation.

OPS USED FOR TESTING:	5.10.11x
COMPILER USED FOR TESTING:	SimplWindows Version 1.40.07
SAMPLE PROGRAM:	VRAMTEST REVA.SMW
REVISION HISTORY:	None