SIMPLWINDOWS NAME:	Lectrosonics AM8 Controls
CATEGORY:	Mixer
VERSION:	1.1
SUMMARY:	Controls all standard functions on Lectrosonics AM8 Mixer
GENERAL NOTES:	

This module will control a Lectrosonics AM8 MIC Mixer, using RS232. This device operates on the Lectrosonics LecNet bus. Multiple Lectrosonics devices can be placed on this bus, including the AV62, MM8. AM8, AM16. And TH2. Each device on the LecNet bus must have a unique address. This address must be entered into the module at the ADDRESS input, using an external INIT symbol. Valid address values are 128-254 decimal, or 80-FE Hex. Using this addressing scheme, multiple Lectrosonics devices can be controlled by using only one Crestron Com port.

This module will allow the current mic-on status to be polled using the POLL-CHANNEL input. This will report which mics are currently on. It also has an input allowing the auto/direct status of all mics to be polled. This is done using the POLL-AUTO-DIRECT input. Polling functions do not exist for mic levels and the main level. However these parameters can be adjusted from the module, and the module will keep track of the last level sent to each parameter.

Before using any other functions on this module, you should pulse the RS232-ON input. This will allow certain parameters to be adjusted from the Crestron system, including the Auto/Direct setup.

This module has a chaining capability included. This means that it can be chained to other modules connected to a single LecNet bus, and using an additional module, LECLOOP, the commands sent to the LecNet will be sequenced such that only one command will be sent at a time, regardless of how many functions are activated at a time. All functions that were activated will be sent to the LecNet, but the Crestron system will take care of sequencing the commands to meet the timing requirements of the LecNet bus. This capability is implemented using the CYCLE-START input, and the WAITING, and CYCLE-DONE output. The CYCLE-DONE output should be connected to the CYCLE-START input on the next Lectrosonics module in the program. If there are no additional Lectrosionics modules, then it should be connected to the DONE input on the LECLOOP module. The STAT-CYCLE output of the LECLOOP module should be connected to the START-CYCLE input of the first Lectrosonics module in the chain.

The WAITING outputs of all Lectrosonics modules in the programs should be connected to an OR gate and a NOR gate. The output of the OR gate should go to the WAITING input, and the output of the NOR gate should go to the NOT-WAITING input of the LECLOOP module.

It works as follows:

When the WAITING input of the LECLOOP module goes high (which occurs when any module has a command to send) it will activate it's CYCLE-START output. This will activate the first Lectrosonics module in the chain, and it will send out any commands it has pending. When it has finished, it will activate it's CYCLE-DONE output, which will activate the CYCLE-START input on the next

module. This will sequence through all modules in the chain. When the last module is done, it's CYCLE-DONE output will activate the DONE input on the LECLOOP module. The LECLOOP module will then check to see if any modules are waiting for processing. If there a re modules waiting, it will repeat the cycle until no modules are waiting, at which point the cycle will stop.

Note that even if you are only using one module, you must still use the LECLOOP module to activate your single module.

CRESTRON HARDWARE REQUIRED:	ST-COM, CNXCOM
SETUP OF CRESTRON HARDWARE:	Baud Rate - 9600 Parity - None Data Bits - 8 Stop Bits - 1
VENDOR FIRMWARE:	None
VENDOR SETUP:	The address of the Lectrosonics device must be set to match the address programmed in the Crestron system. This can be done using the Lectrosonics LecNet PC software.
CABLE NUMBER:	Use the cable included with the Lectrosonics device to connect the Crestron system to the LecNet bus

CONTROL:

ADDRESS	D	Address of the AM8. This should come from an INIT symbol.
RS232-ON	D	This must be pulsed to allow the Crestron system to change certain parameters on the AM8, including the auto/direct parameters
RS232-OFF	D	This can be pulsed to disable the Crestron system from changing certain parameters. This function should not normally be needed.
VOL-UP-INPUT-1-8	D	Raise the level of the appropriate mic input
VOL-UP-MAIN	D	Raise the level of the Main level
VOL-DN-INPUT-1-8	D	Lower the level of the appropriate mic input
VOL-DN-MAIN	D	Lower the level of the Main level
MUTE-INPUT-1-8-ON	D	Discretely mute the appropriate mic
MUTE-INPUT-1-8-OFF	D	Discretely unmute the appropriate mic
MUTE-INPUT-1-8-TOG	D	Toggle the mute state of the appropriate mic
MUTE-MAIN-ON	D	Discretely mute the Main level
MUTE-MAIN-OFF	D	Discretely unmute the Main level
MUTE-MAIN-TOG	D	Toggle the state of mute of the Main level
CH-1-8-AUTO	D	Place the appropriate channel into auto mode
CH-1-8-DIRECT	D	Place the appropriate channel into direct mode
POLL-CHANNEL	D	Poll the AM8 to find out which mics are currently active. This status will be reflected at the CH-1-8-ON-FB outputs
POLL-AUTO-DIRECT	D	Poll the AM8 to find out the status of the auto/direct parameter for all inputs.
CYCLE-START	D	Start the processing of this module. After CYCLE-START has been pulsed, any commands which it has pending will be sent

out

LECNET-RX$	S	Serial data string to be routed from a 2-way RS232 port.

FEEDBACK:

LEVEL-INPUT-1-8	A	Indicates the current level of each mic
LEVEL-MAIN	D	Indicates the current level of the Main level
MUTE-INPUT-1-8-FB	D	Indicates if mute is active for each mic
MUTE-MAIN-FB	D	Indicates if mute is active for the main level
CH-1-8-AUTO-FB	D	Indicates if the appropriate mic is in auto mode
CH-1-8-DIRECT-FB	D	Indicates if the appropriate mic is in direct mode
CH-1-8-ON-FB	D	Indicates which mics are currently active
WAITING	D	High when this module is waiting for servicing (a command is waiting to be sent) Should be routed through an OR gate and a NOR gate, to a LECNET SEQUENCER module
CYCLE-DONE	D	Pulses when the module is finished sending out commands. Should be connected to the CYCLE-START input on the next module, or to the DONE input on the LECNET SEQUENCER module
LECNET-TX$	S	Serial data signal to be routed to a 2-way RS232 port

OPS USED FOR TESTING:	3.18.06, 5.01.29x
COMPILER USED FOR TESTING:	SimplWindows Version 1.21.04
SAMPLE PROGRAM:	LECTTSTE
REVISION HISTORY:	LECT-AMB - Original