Partner: BiAmp
Model: AudiaFlex & Nexia
Device Type: DSP

GENERAL INFORMATION

SIMPLWINDOWS NAME:	Biamp AudiaFlex + Nexia Dialer v7.5.1
CATEGORY:	Mixer
VERSION:	7.5.1
SUMMARY:	This module controls the TI-2 Telephone interface within the Biamp AudiaFlex and Nexia.
GENERAL NOTES:	This module will control the TI-2 Telephone interface within the Biamp AudiaFlex and Nexia.

This module MUST be used in conjunction with the Biamp AudiaFlex + Nexia Command Processor Serial v7.5.1 module or the Biamp AudiaFlex + Nexia Command Processor IP v7.5.1. These modules process all transmitted and received serial strings and reformats device feedback so that this data can be sent to the proper module for final processing.

When polling the BiAmp for current status, you should poll for only the information you really need at the time. The more data points you poll for at one time, the longer it will take to get an update for any one data point. It should not normally be necessary to poll for all data points all the time.

This module will have some latency when dialing in an off hook state. This is due to the time that it takes the AudiaFlex's processor to process a dial command then send it to the dialer.

This module has (4) four parameter fields, all of which must be set for proper module operation. All parameters are entered as ASCII characters. ADDRESS is the device's ID and is automatically assigned when the .dap or .nex file is compiled. INSTANCE is the "Logic Block's" ID that is automatically assigned when the .dap or .nex file is compiled. LENGTH is the total number of characters allowed for dialing within a dialing string or preset. Entries Per Page is the number of dialer presets to be displayed per page.

This information is all contained in the Block properties field when developing the .dap file within the BiAmp AudiaFlex Windows software or the .nex file within the BiAmp Nexia software. A .dap file (Crestron Test w-VOIP v7.4.dap) was created for Crestron testing purposes and MUST be used for proper operation of the BiAmp AudiaFlex + Nexia Serial v7.5.1 Demo PRO2 program. A .nex file (2 tc Room Combining v7.4.nex) was created for Crestron testing purposes and MUST be used for proper operation of the BiAmp AudiaFlex + Nexia IP v7.5.1 Demo PRO2 program.

Presets are stored internally in the Crestron processor. Speed Dial Entries are stored in the BiAmp.

When the Initialize input on the BiAmp AudiaFlex + Nexia Command Processor Serial v7.5.1 or on the Biamp AudiaFlex + Nexia Command Processor IP v7.5.1 is pulsed, the BiAmp AudiaFlex + Nexia Command Processor Serial v7.5.1 or the Biamp AudiaFlex + Nexia Command Processor IP v7.5.1 module will send out initialization strings to each of the To_Modules[*] outputs, asking for the connected module's command type, instance ID or Tag and indexes. The control module will transmit that information out its To_Processor output.

There is a new output on the module called errorReceived. It will be set high when the BiAmp sends an error to the module. If this output is set high it is an indication of one of a couple of things. The instanceID, device type, or indexes entered in the parameter fields are incorrect. The other possible cause is that the wrong or no configuration file has been loaded into the BiAmp. Once this output is set high, you

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15 Volvo Drive • Rockleigh, NJ 07647
800.237.2041 / 201.767.3400

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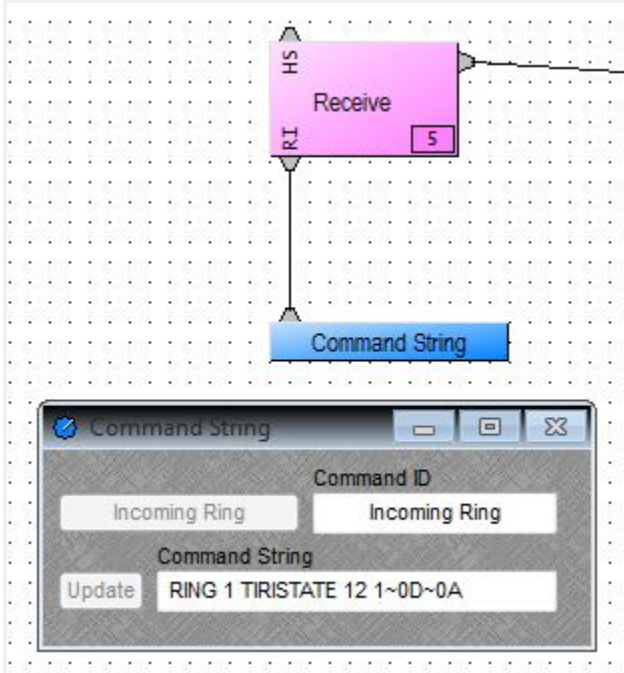**Partner: BiAmp**
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Certified Module
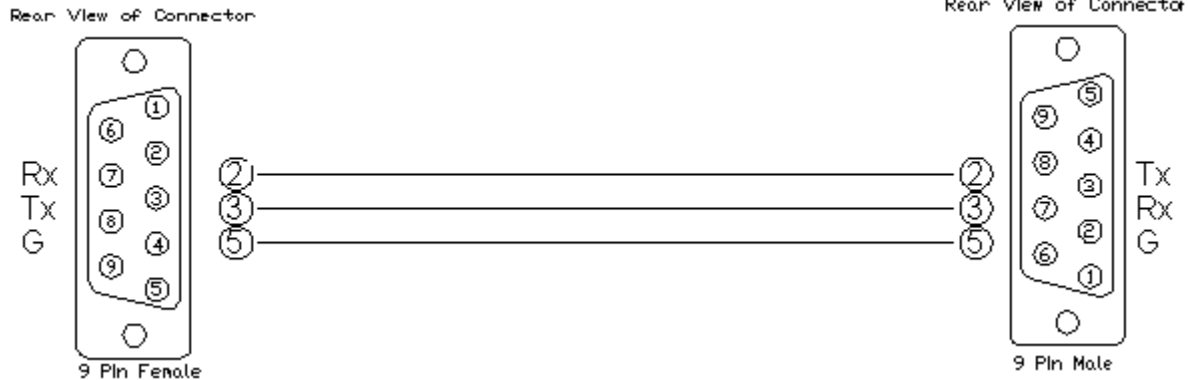
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	will still be able to poll for status but no controls will function.
CRESTRON HARDWARE REQUIRED:	C2-COM, C2I-*-COM*, C2ENET-1/2, C2I-*ENET-*
SETUP OF CRESTRON HARDWARE:	RS232 Baud: 38400 Parity: N Data Bits: 8 Stop Bits: 1 TCP/IP Port 23 (Telnet)
VENDOR FIRMWARE:	4.560
VENDOR SETUP:	In order to get the incoming call notification you need to add some programming to the BiAmp program. "For incoming call notification from the Telephone Interface console, please connect a command string block to the RI node of the Telephone Interface Receive Console block. This command string block needs to be configured similar to this example. The command needs to look like this: "RING 1 TIRISTATE 12 1~0D~0A". The first digit between the RING and TIRISTATE is the unit number. The "12" is the instance ID. The final "1" is the state and should always be 1. Please be sure to use the unit number and instance ID that you enter into the parameter fields on the Crestron module. When an incoming call is detected, this string will be sent to the Crestron." NOTE: INCOMING CALL NOTIFICATION WILL ONLY WORK VIA SERIAL. IT WILL NOT WORK VIA TCP/IP.

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CABLE:	CNSP-121

CONTROL:

On/Off_Hook	D	Pulse to put TI-2 interface on and off hook.
Dial	D	Pulse to dial current string displayed on the Dialer Text field
Redial	D	Pulse to re-dial previously dialed phone number
KEYPAD-*	D	Pulse to enter the number to dial.
Get_Speed_Dial_Names	D	Pulse to get the speed dial names from the BiAmp. Will then display the first page of entries.
First	D	Pulse to display the first page of speed dial entries.
Scroll_Up/Down	D	Pulse to scroll up or down in the list. This is a true scroll and will advance only one entry at a time in each direction.
Dial_Speed_Dial_Entry_*	D	Pulse to dial the desired speed dial entry.
Preset_<0-16>	D	Pulse to select the preset. These are stored internally in the Crestron processor. Press and hold for 3 seconds to store the currently displayed phone number in the speed dialer memory. Stored feedback will go high for 3 seconds
Poll_Enable	D	Pulse to poll TI-2 interface for its current hook status. This MUST be done.
From_Processor	S	Serial data signal to be routed from one of the To_Modules[*] outputs on the BiAmp AudiaFlex + Nexia Command Processor Serial v7.5.1 module or the BiAmp AudiaFlex + Nexia Command Processor IP v7.5.1 module.

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FEEDBACK:

Phone_is_On/Off_Hook	D	True feedback indicating current hook status.
There_Is_An_Incoming_Call	D	High to indicate that there is an incoming call. Will go low 10 seconds after going high or when the call is answered or rejected using the Crestron.
Incoming_Call_Caller_ID_ <Name/Number>_Text	S	Serial signals to indicate the incoming call caller id name and number text.
Speed_Dial_Name_*_Text	S	Serial signal indicating the speed dial names from the BiAmp.
Preset_Stored	D	True feedback indicating a speed dial has been stored.
Phone_Number_Text	S	Serial text string displaying the current phone number to be dial or stored.
errorReceived	D	Digital output that will be set high when the BiAmp sends an error to the module. If this output is set high it is an indication of one of a couple of things. The instanceID, device type, or indexes entered in the parameter fields are incorrect. The other possible cause is that the wrong or no configuration file has been loaded into the BiAmp. Once this output is set high, you will still be able to poll for status but no controls will function.
To_Processor	S	Serial data signal to be connected to the From_Modules on the BiAmp AudiaFlex + Nexia Command Processor Serial v7.5.1 module or the BiAmp AudiaFlex + Nexia Command Processor IP v7.5.1 module.

PARAMETERS:

ADDRESS	ASCII	Device address automatically assigned after the Biamp .dap file is compiled
INSTANCE	ASCII	Logic Block ID assigned after the Biamp .dap file is compiled
LENGTH	ASCII	Total length of phone number string to be dialed or stored
Entries Per Page	ASCII	Number of Speed Dial Entries to be displayed per page. Maximum is 16.

TESTING:

OPS USED FOR TESTING:	PRO3: 1.501.0013
SIMPL WINDOWS USED FOR TESTING:	4.03.20
DEVICE DB USED FOR TESTING:	72.00.001.00
CRESTRON DB USED FOR TESTING:	54.05.005.00
SAMPLE PROGRAM:	BiAmp AudiaFlex + Nexia Serial v7.5.1 Demo, BiAmp Nexia IP v7.5.1 Demo

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REVISION HISTORY:

V3 – 2-Series Only, corrected dialer timing, text display, speed of dialing and over all operation (firmware)

V4 – Changed timing of dialer strings sent when off hook

V5 – Made changes for the new responses from the BiAmp. These new responses have the command details and status in them. This eliminates the need to poll for status when making changes. Added new commands. Added buffering for the responses to improve system response.

V5.1-Changed the Command Processor module to handle the response for presets. Also eliminated the Command Processor sending any response if the unit ID is determined to be 0. Changed all of the modules to allow instance IDs up to 65534d. Changed all modules to look for the proper channel ID. Added MBMUTE command to the On-Off module.

V7.0 – Changed all modules to allow the use on Instance ID Tags. Changed the volume control module to allow for the selection of the size of the volume change step. Changed the command processor module to handle all filtering of the feedback. Eliminated the unit buffer module. Also eliminated the need for using serial buffers.

V7.1 – Fixed an issue in the Processor module that allowed feedback from the BiAmp to be sent to the wrong module. Also fixed an issue in the level control module with controlling the AEC Inputs.

V7.2 – Created separate processor module for IP and Serial control. The IP processor module sets the telnet echo to off. Fixed an issue in the BiAmp AudiaFlex + Nexia Dialer module where a wait statement in Simpl+ was not programmed correctly. Fixed an issue with the processor module that allowed the processor to "lockup" if the queue pointers in the wrapped around. Changed the method that the processor module uses to collect the InstanceID information. The new method should be less confusing to program. Added a Simpl Windows gather to the processor modules to reduce the number of entries into the Simpl+. Added code to the control modules to prevent buttons presses more frequently than every 1 second.

V7.4 – Adjusted a timing issue with the way that the modules initialize. Changed the Initialize input to allow a larger time window for pulsing the Initialize input after the 60 second lock out. Fixed an issue with the VoIP module when sending the DTMF tones. Tested the modules with the 3-Series processor. Added new compiler directives #IF-SERIES2 and #IF_SERIES3 in Simpl+ to clean up warnings when compiling Simpl+.

V7.5 – Made several changes to the processor module:

1) Incorporated 3-series best practices for processing the responses from the BiAmp and from the control modules.

2) Changed the way that the module handles the initialization of communications between the processor module and the control modules.

Made several changes to the control modules:

1) Incorporated 3-series best practices for processing data from the BiAmp AudiaFlex + Nexia Command Processor Serial v7.5 or the BiAmp AudiaFlex + Nexia Command Processor IP v7.5 module.

2) Added code to handle the new initialization process.

3) Added an output to indicate that there was an error when trying to control a point on the BiAmp.

V7.5.1 – Fixed a timing issue in BiAmp AudiaFlex + Nexia Command Processor Serial v7.5 and the BiAmp AudiaFlex + Nexia Command Processor IP v7.5 module the with some 2-series processors.