CRESTRON
HELP FILE DOCUMENT

Manufacturer: d&b audiotechnik
Model: D80, D40, D20, 40D, 30D and 10D
Device Type: Amplifier

CONTACT SUPPORT:

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NOTES:	

GENERAL INFORMATION

SIMPLWINDOWS NAME:	DB Dx/xD amplifier
CATEGORY:	Device Interface
VERSION:	1.6.1
SUMMARY:	This module controls a d&b audiotechnik four channel amplifier D80, D40, D20, 40D, 30D and 10D using the OCA protocol (AES70) over Ethernet.
GENERAL NOTES:	To enable control and monitoring of different functions of the amplifier enable the given parameter of the module. OFF means the functions corresponding are not invoked for control and feedback. The amplifiers must be configured to use the static IP address of the module. During the initialize process of the module the selected functions get registered for monitoring which means the amplifiers must be powered before. The Enable_KeepAlive parameter is a additional check if the TCP/IP connection is still working even if no traffic is between the controller and the amplifier. When changing a parameter (for example "mute channel A") the amplifier confirms this command. To set up and save the AmpPresets in the amplifiers use the d&b software R1 V2.
CRESTRON HARDWARE REQUIRED:	3-Series control engine or 4-Series control engine
SETUP OF CRESTRON HARDWARE:	CP3 or CP4 with XPanel (SMART graphics)

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VENDOR FIRMWARE:	10D, 30D, D20 or D80 with Firmware V2.02.00 or higher 40D, D40 with Firmware V1.00.00 or higher
VENDOR SETUP:	A combination of D80, D40, D20, 40D, 30D and/or 10D amplifiers connected via Ethernet.
CABLE DIAGRAM:	

CONTROL:

Signal/Function Name	D,S,A	Digital, Serial, Analog signal property definition.
connect	D	Set High to establish the TCP/IP connection to the set IP address
Power	D	Pulse to toggle the power state
Mute[x]	D	Pulse to toggle the mute of the channel x (1 = A .. 4 = C)
InputMonAnalog[x]	D	Pulse to toggle the Input monitoring at the analog input x (1 to 4)
InputMonDigital[x]	D	Pulse to toggle the Input monitoring at the digital input x (1 to 4)
LoadMon[x]	D	Pulse to toggle the Load monitoring for channel x (1 = A .. 4 = C)
AmpPresetLoad[y]	D	Pulse to activate AmpPreset y (1 to 15) immediately.
AmpPresetBackupLoad[y]	D	Pulse to activate AmpPreset y (1 to 9) immediately. The current setting is backuped at AmpPreset 13.
AmpPresetLoadSelected[1]	D	Pulse to activate the AmpPreset number which is preselected at AmpPreset_Select[2].
AmpPresetLoadSelected[2]	D	Pulse to activate the AmpPreset number which is preselected at AmpPreset_Select[2] and backup the current setting to the AmpPreset set at AmpPreset_Select[3]. Check demo programm for proper use
AmpPresetSelect[1]	A	Set the number of the AmpPreset to activate immediately.
AmpPresetSelect[2]	A	Preselect the number of the AmpPreset. The preset is loaded with AmpPreset_load_selected[1]

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AmpPresetSelect[3]	A	Preselect the number of the back up AmpPreset. Pulse the "AmpPreset_load_selected[2]" : The preset is backed up in "AmpPreset_Select[3]" , then the selected preset "AmpPreset_Select[2]" is loaded.
Gain[x]	A	Sets the potentiometer level for channel x (1 = A .. 4 = C). Ranges from -575d to 60d (-57.5 to +6). Check demo program for proper use

FEEDBACK:

connect_fb	D	High when connect toggled to high
isConnected_fb	D	High when the TCP/IP connection is established
GeneralError_fb	D	High when a general error occurred (device or channel error)
DeviceError_fb	D	High when a device error occurred (no channel error)
AmpPresetModified_fb	D	High when the amplifier settings does not correspond anymore to the last selected AmpPreset
KeepAlive_fb	D	High for about one second when a KeepAlive feedback is received
Power_fb	D	High when Power is on, Low when Power is off
PowerOk_fb	D	High when power is "OK". Then the amplifier is ready to operate
Mute_fb[x]	D	High when the channel x (1 = A .. 4 = C) is muted (feedback from device)
ChannelError_fb[x]	D	High when the channel x (1 = A .. 4 = C) has an error
InputMonAnalog_fb[x]	D	High when the Input monitoring at the analog input x (1 to 4) is activated
InputMonDigital_fb[x]	D	High when the Input monitoring at the digital input x (1 to 4) is activated
InputMonitoringAnalogErr_fb[x]	D	High when Input monitoring detects an error at the analog input x (1 to 4)
InputMonitoringDigitalErr_fb[x]	D	High when Input monitoring detects an error at the digital input x (1 to 4)
LoadMon_fb[x]	D	High when the Load monitoring at the Channel x (1 to 4) is activated

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PresetValid_fb[y]	D	High when the AmpPreset y (1 to 15) is valid (stored correctly)
DeviceName_fb	S	Name of the devica
DeviceErrorText_fb	S	Text describing the device error.
IP_Text_fb	S	IP address as string
Debug_fb	S	Debug infos for development
ChannelErrorText_fb[x]	S	Text describing the error at Channel x (1 to 4)
AmpPresetSelectedName_fb[1]	S	Name of the AmpPreset loaded
AmpPresetSelectedName_fb[2]	S	Name of the AmpPreset preselected to load when AmpPreset_load_selected[1] get pulsed
AmpPresetSelectedName_fb[3]	S	Name of the AmpPreset preselected to bach up the settings when AmpPreset_load_selected[2] get pulsed
AmpPresetSelected_fb[1]	A	Number of the AmpPreset loaded
AmpPresetSelected_fb[2]	A	Number of the AmpPreset preselected to load when AmpPreset_load_selected[1] get pulsed
AmpPresetSelected_fb[3]	A	Number of the AmpPreset preselected to bach up the settings when AmpPreset_load_selected[2] get pulsed
AmpPresetName_fb[y]	S	Name of the AmpPreset stored at y (1 to 15)
Gain_fb[x]	A	Gain for channel x (1 = A .. 4 = C). Ranges from -575d to 60d (-57.5 to +6). Check demo program for proper use
GainText_fb[x]	S	Gain for channel x (1 = A .. 4 = C) as string.
ChannelTemperatur_fb[x]	A	Temperature for channel x (1 = A .. 4 = C)

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PARAMETERS:

Enable_ChannelControl	B	If "ON" all functions which are channel related and not separate enabled by one of the following parameters.
Enable_Load_Monitoring	B	If "ON" all functions with the Name "LoadMon…" are enabled for remote and get read and monitored.
Enable_Presets	B	If "ON" all functions with the Name "…Preset…" are enabled for remote and get read and monitored.
Enable_Input_Monitoring	B	If "ON" all functions with the Name "InputMon…" are enabled for remote and get read and monitored.
Enable_KeepAlive	B	If "ON" a KeepAlive message is continuous exchanged between the controller and the amplifier. If four messages get lost the TCP/IP connection is disconnected.
IP_Address	S	IP address of the amplifier.
Amplifier_Model	A	Select the amplifier type D80, D40, D20, 40D, 30D or 10D
Enable_Logging	B	If "ON" the module sends logging information to the crestron text console
Logging_Level	A	Select the Level for the log info ERROR = 1, WARNING = 2, INFO = 3, DEBUG = 4

TESTING:

OPS USED FOR TESTING:	CP3 1.8000.4522.24170 / CP4 2.6000.00026
SIMPL WINDOWS USED FOR TESTING:	3.03
DEVICE DB USED FOR TESTING:	200.11000.002.00
CRES DB USED FOR TESTING:	207.0500.005.00
SYMBOL LIBRARY USED FOR TESTING:	1151
SAMPLE PROGRAM:	OcaDxControl.smw
REVISION HISTORY:	V. 1.0 Creation
	V1.2.1 Fixed issue with not freed memory
	V1.4.1 Added amplifier D40 and 40D V1.6.1 Added amplifier 5D to C# Lib

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