



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

**CONTACT SUPPORT:**

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<b>NOTES:</b>	

**GENERAL INFORMATION**

<b>SIMPLWINDOWS NAME:</b>	DB Dx/xD amplifier
<b>CATEGORY:</b>	Device Interface
<b>VERSION:</b>	1.4.1
<b>SUMMARY:</b>	This module controls a d&b audiotechnik four channel amplifier D80, D40, D20, 40D, 30D and 10D using the OCA protocol (AES70) over Ethernet.
<b>GENERAL NOTES:</b>	<p>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.</p> <p>When changing a parameter (for example "mute channel A") the amplifier confirms this command.</p> <p>To set up and save the AmpPresets in the amplifiers use the d&amp;b software R1 V2.</p>
<b>CRESTRON HARDWARE REQUIRED:</b>	3-Series control engine or 4-Series control engine
<b>SETUP OF CRESTRON HARDWARE:</b>	CP3 or CP4 with XPanel (SMART graphics)

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

**CONTROL:**

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



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<b>AmpPresetSelect[3]</b>	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.
<b>Gain[x]</b>	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:**

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



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



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**PARAMETERS:**

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

**TESTING:**

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