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AMX Plug-in for
d&b 10D, 30D, D20 and D80 amplifiers

Quick start guide

**d&b
audiotechnik** ®

1. Introduction

The d&b AMX Plug-in allows the control and monitoring of a number of functions of the d&b four channel amplifiers (10D, 30D, D20 and D80) from within the AMX framework using the OCA protocol (AES70).

Requirements

- Ethernet-compatible d&b amplifiers (10D, 30D, D20 or D80) with Firmware V2.02.00 or higher.
- **Hardware Controller:** AMX NetLinx NX-1200 or higher
- **Development Tool:** AMX NetLinx Studio 4
- **Touch Panel Designer:** AMX TPDesign4

Plug-in capabilities

- **Device**
  - Power the amplifier on and off
  - Track the amplifier's Power and Error status
  - Read the amplifier name
- **Outputs**
  - Channel output gain and mute control
  - Supervise each channel's error status individually
  - Monitor the amplifier channel temperature
- **Amplifier Presets**
  - Backup and load presets
  - Track the modified status of currently active preset and display its name
- **Monitoring**
  - Enable/disable Input monitoring for each individual analog and digital input
  - Enable/disable Load monitoring for each individual output
- **Log** events such as device disconnects and communication errors to the AMX log.
  - Four log levels *ERROR, INFO, WARNING* and *DEBUG* to filter log messages by significance

2. Getting Started

1. Open an existing NetLinx project (*.axs) or create a new one in NetLinx Studio.

2. Integrate the d&b AMX module *DbAudiotechnik_OCA_Comm_dr_0_0.jar* into the NetLinx project.
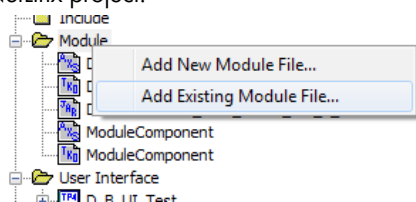
3. Design a user interface in TPDesign4 and import it into the NetLinx project.

4. Adjust the NetLinx script.

   a) Define physical and virtual devices that represent the amplifiers and their output channels.

   b) Connect those devices to the d&b AMX module that communicates with the amplifier via OCA.

   c) Set the property IP_Address for each amplifier.

   d) Connect the virtual devices with the user interface controls (buttons, labels, etc.).

5. Refer to the interface specification mentioned below to map user interface controls to functionality supported by the d&b AMX module.

6. Build the NetLinx project within NetLinx Studio and upload it on the NetLinx controller.

   Note: The d&b AMX demo project on our website contains more information and an example NetLinx project with an user interface for two d&b amplifiers. The IP addresses in the demo script have to be adjusted to your setup. For a detailed explanation please consider the "AMX Duet Module Interface Specification for d&b audiotechnik D20/D80/10D/30D Amplifiers" that is included in the demo project.

3. Plug-in details overview

The AMX framework enables system integrators to define their own custom user interface. By means of the d&b AMX module the user interface can be connected to d&b audiotechnik amplifiers over Ethernet. The following screenshots of the d&b AMX demo project give an insight into the supported functionality.

Main screen

The main screen enables users to change the power and mute states of individual amplifiers and channels. The colors of the buttons provide a visual feedback of the device's power and mute states. Updates from the amplifiers are being processed immediately without time- and resources-consuming polling mechanism for changes in regular time intervals.

[Amplifier 1/2] Navigate to the **«Amplifier screen»** for more detailed information and functionality. The label contains the amplifier's name.

[All Amplifiers] The **«All Amplifiers»** section addresses all amplifier devices/channels simultaneously.

[Error] A red **«Error»** LED indicates amplifier errors.

[Module Info] The **«Module Info»** button leads to another screen with debug information.

Amplifier screen

The amplifier screen contains detailed information and controls for one individual amplifier. Power and mute functionality is available as well as further controls for gain control of each amplifier channel. The current gain gets displayed and can be adjusted by means of the **+** and **–** buttons.

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[Channel A/B/C/D]	Navigate to the **«Channel screen»**.
[General Error]	Additionally to the red **«General Error»** LED there's a text field which contains the device error text in case the amplifier is in an error state.
[AmpPresets]	Nine predefined amplifier settings 1-9 can be loaded. Below the name of the current amplifier preset gets displayed. The red LED next to the amplifier preset name indicates that the most recently loaded preset has been modified since loading it.
	Amplifier presets have to be defined within the amplifiers.
[Preset/Backup]	The preset and backup functionality 10-12 stores the current amplifier settings into the slots 13-15 and loads the predefined amplifier settings 10-12 right afterwards. This feature is useful to switch to an emergency setting immediately without losing the possibility to restore the previous setting later.
[Preset/Recall]	Resources the settings stored into the slots 13-15 via **«Preset/Backup»**.
[Input Monitoring]	Navigate to input monitoring settings for analog and digital input channels.

Input monitoring screen
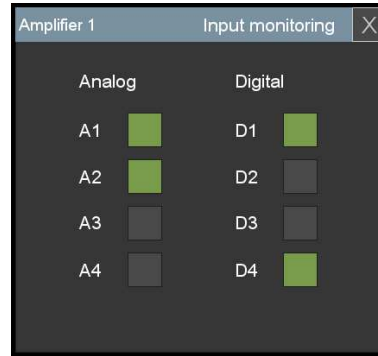
The Input Monitoring screen visualizes the current state of input monitoring for all four analog and digital input channels. The input monitoring states can be changed there as well.

Channel screen
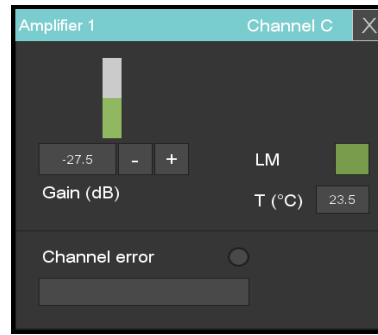
The channel screen contains channel specific controls. In addition to the **+** and **–** buttons and display of the current gain in decibel, there's also a slider control to visualize the current gain setting. It can also be used to fade in/out.

[LM]	Control for Load monitoring.
[T (°C)]	Displays the current amplifier channel temperature.
[Channel Error]	Similar to the **«General Error»** control within the **«Amplifier screen»** this control displays possible amplifier channel errors.
	If there's an channel error the LED illuminates red.