

# ControlSpace® Designer™ software 5.0.1

February 3, 2018

Revision: 1.0

## General

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**This release of ControlSpace Designer software adds the following new functionality:**

1. Support for EX-1280C conferencing processor including new DSP blocks: Acoustic Echo Canceller, VoIP, PSTN/POTS, USB, Conference Room Router, Room Combine Group, Enhanced AGC, linkable gated and gain-sharing AMMs, Logic and AmpLink
2. Support for Panaray® MSA12X Modular Steerable Array loudspeaker including new MSA12X device block, MSA12X control panel, and basic steer/spread beam steering directly from within ControlSpace Designer.
3. Support for EX-UH, EX-4ML, and EX-8ML 'under table' Dante endpoints.
4. Support for various Dante microphones including Shure MXA910, MXA310 and multiple Audio Technica Dante microphones
5. User experience improvements including multi-wiring, port spacing, and audio routes
6. Additions to the Bose® Loudspeaker Database: Speaker EQs added for EdgeMax EM90, EdgeMax EM180 and MB210 Subwoofer.

## Firmware

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Firmware included in this release:

	FW	Dante FW	Notes
EX-1280C	1.090	1.0.11	
EX-UH	1.001	1.0.6	
EX-4ML/8ML	1.000	1.0.3	
Fixed IO ESP	2.080	1.5.0	With DNC-R32
ESP-00	4.610	1.5.0	With DNC-E
PowerMatch	2.140	1.5.0	With DNC-P
CC-64	1.120		
EP22D/40D, WP22B/BU		3.0.0	
MSA12X	1.038	1.0.0	

New (this release)

No change from previous release

## System Requirements

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The following are the minimum system requirements for ControlSpace® Designer™ 5.0.1

### Microsoft

- Windows® 7 or greater, x86 and x86-64bit versions (may require Microsoft .NET 3.5)
- 1GHz processor (or better)
- 512MB of available RAM (1GB recommended)
- 512MB of available disk space (1GB recommended)
- Minimum resolution of 1366x768 WXGA

## New Features

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### Hardware support

1. EX-1280C  
The EX-1280C conferencing processor includes 12 mic/line analog inputs, 8 analog outputs, 8 AmpLink<sup>1</sup> digital outputs, 12 routable Acoustic Echo Cancellers, 64x64 Dante (redundancy supported)<sup>2</sup>, USB audio<sup>3</sup> (stereo in/out), VoIP (2-line), Analog telephone (POTS/PSTN), 5 GPI, 5 GPO and a front panel that allows you to view any audio channel level, view/change IP addresses, etc.  
Static, DHCP and Auto-IP addressing is supported.
2. Panaray® MSA12X Modular Steerable Array loudspeaker  
The MSA12X is a self-powered, digital beam-steering loudspeaker with a Dante® digital audio network interface. It includes multiple algorithms for steering including basic steer/spread, flat floor optimized and raked floor optimized, allows independent level and EQ control per beam and has a 10-preset memory.
3. EX-UH  
The EX-UH USB/Handset Dante endpoint converts USB audio to/from Dante and analog audio to/from Dante where the analog audio is from a desk telephone's headset jack, or, from a 3.5mm TRRS connection.
4. EX-4ML/8ML  
The EX-4ML and -8ML Mic/Line Dante endpoints convert mic/line audio to Dante. They also include 2 GPO and 1 GPI per channel for mute button/LED functionality.
5. Dante Microphones  
Discovery, control and metering of Shure MXA910/310 Dante microphones and Audio Technica ATND971/8677/8734 Dante Microphones  
Includes direct control of microphone logic (LEDs, mute button) to simplify programming.
7. Additions to the Bose® Loudspeaker Database: speaker EQs added for EdgeMax EM90, EdgeMax EM180 and MB210 Subwoofer.

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<sup>1</sup> AmpLink is a CAT-5 version of ESPLink. **Note: YOU MUST USE SHIELDED CAT-5 (STP) for AmpLink.**

<sup>2</sup> Note: The EX-1280C ships in Switched mode (ControlSpace and Dante ports connected internally to a switch) enabling Dante and ControlSpace on both jacks. **Connecting both ports to the same switch will cause network issues.**

<sup>3</sup> Appears as standard USB device (no driver needed) for compatibility with Skype for Business, etc.

## Software

The following new software features are included in ControlSpace Designer 5.0. For more information about the features refer to the help file.

1. Available in EX-1280C
  - 12 Channels of Acoustic Echo Cancelling
  - Conference Room Router (CRR):
    - Reduces conference room design and troubleshooting time by configuring all routing automatically.
    - The CRR wizard simplifies defining IO including voice-lift mics, program audio, multiple far end connections, Aux outputs, overhead zones, front speakers and multiple AEC references as well as stereo/mono sources/destinations
  - Room Combine groups:
    - Reduces combinable conference room design and troubleshooting time by automatically configuring all room combine routing and wiring.
  - Logic
  - Enhanced AGC, optimized for conferencing applications
  - Linkable Gain-sharing automatic mix mixer
  - Linkable Gated automatic mix mixer
  - Browser-based VoIP configuration tool
  - Drag and drop Dante I/O between EX-1280C processors; all Dante programming stored in the .CSP file.
2. Available in EX-1280C and fixed IO ESPs
  - Automatic Dante routing to endpoints: adding EX Dante endpoints or Dante microphones to a DSP will create, and store in the .CSP, the Dante routing to that endpoint.
  - Port spacing: spacing between any block port can be changed to clean up wiring. Ports can be moved by highlighting and using arrow keys or by selecting the Set Port Spacing context menu option
  - Audio routes: multi-channel “virtual wires” to connect one input port to one or more output ports without wires.
3. Available in EX-1280C, fixed I/O ESPs and ESP-00
  - Multi-wiring
  - Wire vertices
  - 2-click wiring: click on a block port then on another port to wire without having to hold down the left mouse button.
4. Available in MSA12X
  - Beam-Steering, Device Controls, Preset Management, and System status
  - Basic steer/spread beam-steering directly from within ControlSpace Designer.
  - Advanced beam-steering data can be received from the MSA Array Design Tool within Modeler® sound system software

## ControlSpace Remote (CSR)

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ControlSpace Remote (CSR) v2.2 supports new features in ControlSpace v5.0 including VoIP and PSTN/Tel dialers, Conference Room Router, and logic. Refer to [CSR 2.2](#) on pro.Bose.com for all associated CSR files.

## Known Issues, Defects and Limitations

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The following are the known issues and defects with this release. Information included here can be useful when troubleshooting issues with software or hardware operation.

### General Issues

1. After a design upload, the GPO on the EX-4ML/8ML may be unresponsive. Power cycling the device will fix this condition.
2. When creating multiple AmpLink Modules, the channel name display is repeated for all Modules. Renaming the channel names will fix this issue
3. When using multiple Linked Auto Mic Mixers, there is no indication of which Slave is Linked to its Master (no index number)
4. When closing a Timer window that is docked on the right-hand side, a "ghost" of that window will be seen. Restarting CSD will remove this effect
5. When dragging single Dante Input or Output modules to CSD Design View, the channel indices will be off by a factor of +1. This does not affect performance.
6. CSD does not allow grouping of more than 32 single-channel Dante Output channels. Attempting to upload with this programming will result in an error.
7. The USB Input Module will not show metering unless wired to another module
8. Using Parameter Sets to Program Dante Subscriptions does not function with the EX-1280C
9. If an Automatic Echo Cancelling Module is deleted from CSD, adding a new AEC Module will retain the settings of the deleted Module, rather than setting to default values.
10. It has been observed that when using multiple Gated Auto Mic Mixers, and not Linking those Mixers, Mute Groups will be controlled for unlinked AMM Mutes.
11. If performing Firmware Updates on multiple EX-1280Cs, the Front Panel display may go to "sleep", and the "Updating Firmware" message may not be seen
12. There may be some slight attenuation seen when setting AEC Comfort Noise to "On".
13. Some Serial commands may accept values that are out of range. This does not affect performance, as those ranges will not be implemented, but the actual limit will be set
14. Grouped Dante Outputs control from CSD do not function while online.
15. Muting grouped Dante modules while online with CSD (ControlSpace Designer) does not work correctly
16. When uploading a design file to an EX-1280C, if audio is applied to a Meter above its threshold before the upload, the Logic for that channel will not trigger. The audio must be dropped below the threshold and then back to its original level.

### MSA12X

1. Firmware updates to MSA12X arrays may take multiple tries; CSD will alert user to try multiple times if initially unsuccessful.
2. When using computer with ControlSpace Designer, and toggling beam presets with the ControlSpace Designer MSA12X Control Panel, users may experience additional mutes of the audio. This does not occur when presets are recalled via parameter sets.
3. User may experience audio beeps upon power on. 3 1-khz tone audible beeps indicate driver fault. Units experiencing driver fault may need service. 2 1-khz tone audible beeps indicate preset mismatch and/or module count mismatch. Units experiencing preset or module count mismatch, should use the reset to defaults feature in the advanced window of the MSA12X control panel. Users must then re-create new beam presets for that array.
4. It is recommended to uncheck all driver check boxes and turn off audio check before closing the advanced window, otherwise audio-check may create 1-khz tone during subsequent external audio checks.
5. Do not disconnect Ethernet during audio-check. Doing this may result in 1-khz tone not turning off until power-cycling unit.
6. MSA12X control panel window can become stuck in minimized state. To resolve, close and re-open control panel window.

7. (Best Practice) Users must save beam presets and .CSP files that are in progress before updating MSA12X firmware. Also, users must re-push beam presets after firmware update.
8. (Best Practice) When commissioning system, it is recommended not to set MSA12X in DHCP. Installations should be configured with Static IPs.
9. After going online and returning to offline mode, CSD will display 'disable endpoint control' in the system window, however a connected ESP processor may still have endpoint control. To correct, disable and re-enable endpoint control. This only effects designers making beam-preset changes from the MSA12X control panel window in software.

## **Network**

1. The Call Timer starts while dialing rather than when the call is Active.
2. Hardware Manager does not show DHCP state when that state is "Static"
3. The EX-1280C Network Gateway cannot be changed from default "192.168.0.1"
4. The EX-1280C does not show decimals for Subnet Displays
5. EX-UH, EXP4ML/8ML Dante endpoints may not automatically show up in CSD running Win7 if they are in DHCP mode and there is no DHCP server on the network (i.e. LinkLocal scenario). To work-around, launch Dante Controller after starting CSD.

## **Logic Blocks**

1. Logic blocks looped back to itself through another block can cause CSD to crash.
2. For some Logic Wiring, vertices cannot be added
3. CSD does not save control points for Logic Wiring
4. CSD does not save wire label colors or backgrounds for logic wiring
5. Settings for "Pulse" Pulse Logic Modules cannot be set while online
6. Assigning a Logic Action from an ESP-00 to a Trigger on an EX-1280 will result in an error
7. The states of Logic Connectors within the Logic Wiring View may sometimes show the incorrect state. This does not affect the functionality
8. "Pulse" Logic may be out of sync on upload and require multiple GPI presses to synchronize the state

## **Conference Room Router/Room Combine Groups**

1. Deleting a room from a Room Combining Group will remove that room from the "Room Number" dropdown list.
2. "Undoing" some Conference Room combining actions do not undo the changes correctly
3. Changing the Label of Port in a Conference Room Router will not change the Label in the CRR Matrix view.
4. Changing CRR Output names does not update those changes in the CRR Matrix View
5. If Running the Conference Room Router Wizard while RC connections are currently made, those connections to Audio Routes will be disconnected.
6. Adding a Conference Room Router to an existing Room Combine Group with different audio routes may require completing the Audio Routes manually.

## **PSTN/Telephone**

1. It has been observed that incoming calls to PSTN will not display full caller ID when calling from some countries
2. The Call Timer starts while dialing rather than when the call is Active.
3. PSTN dialer "Incoming" message can be out of sync after multiple incoming calls.
4. PSTN and VoIP Ring and Voice Levels are not being properly set. There is no difference in audible level between 0 dB and +10 dB

## **USB**

1. Both EX-1280C and EX-UH USB ports work as expected with PCs running soft codecs. However, when using the Logitech Smart Dock via USB, the mute functionality in Skype for Business does not mute the near end as expected. When using the EX-1280C, room level controls from the Skype do not control the room level as expected.

## **Backward Compatibility**

1. Fixed I/O ESPs Analog Inputs and Outputs are not set correctly via Timers
2. When assigning PowerMatch Outputs to a GPI Trigger, they are not executing properly when they are triggered by the CC-4
3. Serial commands for PowerMatch Array EQ Module Advanced Parameters are not functional
4. For the ESP-00 II, the indicators for the Gated AMM Control Panel do not display correctly. These Modules function accurately on all other devices.
5. For the ESP-00 II, the Crosspoints of a Standard Mixer cannot be set via Serial Command

## **ControlSpace Remote (CSR)**

1. ControlSpace Remote will show 8 Far End Sources regardless of how many exist in the CSD Design File
2. The "Flash" functionality in CSR works differently than it does in CSD when making Conference Calls. In CSR, the call is immediately dialed, rather than hitting the "Dial" button in CSD.
3. When entering digits via CSR while in an active VoIP call, there will be no audible DTMF tones