Bose® ControlSpace® Designer™ Software
ControlSpace 1.1 Release Notes

Introduction

We are pleased to provide a new release of ControlSpace®, version 1.1. This release adds new functionality to ControlSpace® Designer™, the CC-16, the CC-64, and the ESP-88. There are also some new hardware components such as add-in cards which have been added into this release. Many issues with previous versions of the software have been resolved.

Installation Instructions:

Version 1.1 is backward compatible with existing designs but it may be necessary to use 1.00x to retrieve an existing design from a running ESP-88 if you do not have a copy of the .csp file. For this reason, it is recommended that you install 1.1 without uninstalling or replacing 1.000. See **Installing 1.1 without Removing 1.000**.

Backward compatibility:

ControlSpace® 1.1 adds new features which make it incompatible with v1.00x firmware – you won't be able to use the new software to upload or download designs to ESP's that are running 1.001 firmware. However, the software will import any previous design file. Thus if you have .csp file of an existing design, 1.1 will be able to read in that file and after upgrading the firmware (you can upgrade firmware from within 1.1), you will be able to upload the design to the hardware without any design changes.

If you have an existing installation you wish to upgrade and you *do not* have the .csp file, you will need to do the following:

1. Using ControlSpace® Designer™ 1.00x download the "saved" or running design from the ESP-88.
2. Save the file.
3. Start ControlSpace® Designer™ 1.1 and open the design file from step 2. The file will be converted as it is opened.
4. Check for any Speaker EQ changes (see **Known Issues**). Save the file.
5. Upgrade the firmware in the ESP to v1.1
6. Upload the design file to the ESP.

Until production hardware has the latest firmware, you will have to upgrade the firmware in the CC-64 and ESP-88. The "kernel" in the CC-64 must also be upgraded. The Designer™ software will give you an incompatibility error if you try to connect to hardware with unsupported firmware. Refer to the section on **Upgrading Firmware** below:

Files needed:

- ControlSpace® Designer™ v1.1
- CC-64 Firmware Programmer.exe
- ESP Firmware: esp_ v1.100.frm
- CC-64 Firmware: CC64_v1.100.mot (firmware),
- CC-64 Kernel: CC64_kernel_1.100.mot (Kernel)

Known Issues:

1. Some designs that use Timers and were created in a European Language will generate a warning. Check all timer events for correct settings.

2. Renaming an input module after it is dragged to a CC-64 does not update the CC-64.

3. Some PCs that have incorrect serial port idle state levels can cause the ESP to hang if connected while the ESP is powering up. Either disconnect the PC during power up or ensure an application that opens the serial port, e.g. Hyperterm, is active.

4. Distortion can occur if the summed curve in the Parametric EQ exceeds the graph area, giving more than a +15 dB of gain overall. Keeping the summed response within the +/- 15 dB graph will prevent this problem.

5. Distortion can occur if the summed curve in the Graphic EQ is greater than 15dB. When adjacent frequencies are boosted / cut, they overlap due to the bandwidth of each band. The summed curve can be > 15dB and may not be visible on the graph. Keeping adjacent bands below +/- 11dB will prevent this problem.

6. Due to more conservative DSP processing calculations, some designs which fit in a single DSP will no longer upload. A DSP expansion card may be needed or some processing blocks removed.

7. A second scan is occasionally necessary for all ESP-88's to appear in a design.

8. When opening some 1.00x files, control characters in a module name can cause an error when uploading or using DSP Resources. Remove any control characters from module's name on converted files.

9. When downloading the "running" configuration with the standard configuration of an ESP-88, Output 3 of the 4x4 card breakout adapter (output) located in slot 4, will take the label given to output 3 on the breakout adapter located in slot 2. Likewise, this occurs with any additional 4x4 card, as it will take the label for the previous slot's output card's Output 3. This does not occur when downloading the saved settings.

10. When the CC-64 custom mode contains signal processing blocks (EQ, etc), using the CC-64 Smart Simulator while on-line, may cause the CC-64 to enter custom mode.

11. Upon opening a 1.00x file, if you receive an error message such as "342.6 is not a valid value for Int32", the 1.00x file contains an incompatible crossover frequency value. Return to version 1.00x and retype in a valid frequency (contains no decimal point).

12. Opening a .CSP file that includes an icon that is not in the devicelist.xml file will generate an "Object not referenced to an instance of an object" error. To open the .csp file, you must have the customized devicelist.xml created for that design file.

New Features and Bug Fixes since 1.001:

- **Properties Window**: Users can now review and change many properties of a device in the properties window instead of double-clicking on the device.

- **European Language support**: ControlSpace® Designer™ supports European language settings without the need to change regional settings. Designer™ will import existing files with the exception of those with timers. See **Upgrading Notes** for information on this process.

- **CC-64 Save Settings**: Current design settings (those running in RAM) can now be save to the ESP flash using the CC-64 in custom mode without the need for a PC.

- **Support for new cards**: The 4-Channel SDR (standard dynamic range) output-only card, a 4-channel mic/line input-only card and a series II 4-in/4-out mic/line I/O card are now supported.

- **CC-64 Smart Simulator preview**: The simulator now includes the "*" to activate similar to the hardware. This allows selections to be previewed in the simulator before they are activated.

- **Undo/Redo command**: Has been added for wiring, moving, adding and deleting blocks.

- **Address autoincrement:** IP addresses are auto-incremented when adding ESPs and CC-64s in project view. CC-16 addresses are also incremented when they are wired to an ESP. The IP addresses are now shown in the ESP-88s and CC-64s devices in Project View.

- **Project view rename**: Devices in Project View can now be renamed.

- **Change list order**: Can now change the order of elements in lists after they are dropped into a CC-16 or CC-64.

- **Redesign of the AGC algorithm**: New ballistics have been added to prevent loud bursts at the beginning of song following a period of silence.

- **New serial commands**: Added support for the RS232 Serial Port protocol version 1.4. Can now control group levels. See *ESP-88 Serial Protocol 1.4* document for more information.

- **Serial Input and Output blocks**: Have been expanded to allow up to 32 input and 32 output strings.

- **Change ESP-88 baud rate:** Can use System/Network Setup to change the ESP-88 baud rate.

- **Groups:** Can now be added to parameter sets to facilitate room combining.

- **Scan results**: New window now provides more information about differences between the hardware found and the design in Designer™.

- **Speaker updates**: New speakers (EQs and icons) can now be added without a new release of the application. DS16 and DS 100 speakers have been added.

- **Multiple versions**: CSD v1.1 can be installed or uninstalled independently of 1.001.   A version number in Add/remove programs has been added for uninstalling a specific version.

- **RS232 Serial Port control of AES and EDR cards**: has been fixed.

- **Prompt on change only:** When going on or off-line, Designer™ only prompts for an upload or download if something has changed.

- **Serial port format conversion:** Has been fixed. Some existing designs may require a special procedure to fix the situation. Please see *1.1_Upgrading_Notes.doc* for more information.

- **GPO and Serial Output in a Timer**: Has been fixed.

- **Active GPI prevents booting**: Fixed the issue where the ESP-88 will not boot if a GPI is changing during boot or uploading a design, or disconnecting.

Installing 1.1 without Removing 1.000:

It is possible to have multiple versions of ControlSpace® Designer™ installed on your computer. This may ease the process of upgrading existing installations. By default, the 1.1 installer will suggest ControlSpace 1.1 as the directory for the new install which will not conflict with your current installation of 1.00x.

Upgrading Designs with Serial Commands:

The new ESP 1.1 firmware may cause some incorrect serial strings. This is a result of the old design file being resident in the ESP-88 flash memory. If your design used Serial output strings, and does not appear to be working in the new versions, we recommend the following procedure:

1. Upgrade the firmware in the ESP-88.
2. Upload a blank design (that contains no serial programming) to the ESP.
3. Copy by hand the old settings / strings, and CC-64/CC16 mappings.
4. Import your old design and remove the serial port settings, and any links to the CC-64/CC-16.
5. Re-populate the Serial port output settings, and CC-64 Bindings.

Updating the ESP-88 and CC-64 Firmware:

You *must* update the ESP-88, CC-64 Kernel and CC-64 firmware to be compatible with the latest version of the ControlSpace® Designer™, version 1.1.

Multi-Esp 88 and CC-64 Mac Address Cloning

Never upload firmware to more than one ESP-88 or CC-64 that have the same IP address. This can cause the Mac address to be transferred to another unit and prevent future communication. Change each device to a unique IP address before beginning the firmware update.

ESP-88 and CC-64 Firmware Upgrade:

Follow the instructions below or refer to the section **Updating Firmware** in chapter 1 of the *Designer™ User Guide.* You can upgrade all the devices on your network at the same time.

1. The latest firmware should already be in the bin directory. If not, copy the latest CC-64 firmware (CC-64_v1.100.mot) and ESP firmware (ESP_v1.101.frm) to the c:\Program Files\Bose\ControlSpace1.1\bin directory (you may have installed the software in a different directory).

2. Connect one CC-64 and one ESP to your PC's local area network PC is connected to. Ensure the CC-64's link LED is on, and the ESP-88's Ethernet LED is on.

3. Open ControlSpace® Designer™. Select System - Update Firmware under the System menu. A window similar to the one below will appear. If the window does not appear go to the Troubleshooting section.

    Note that the application automatically:
    *   scans for the hardware,
    *   determines the firmware currently loaded,
    *   determines the latest firmware in the bin directory,
    *   selects (check marks) the devices for which a firmware update is recommended.
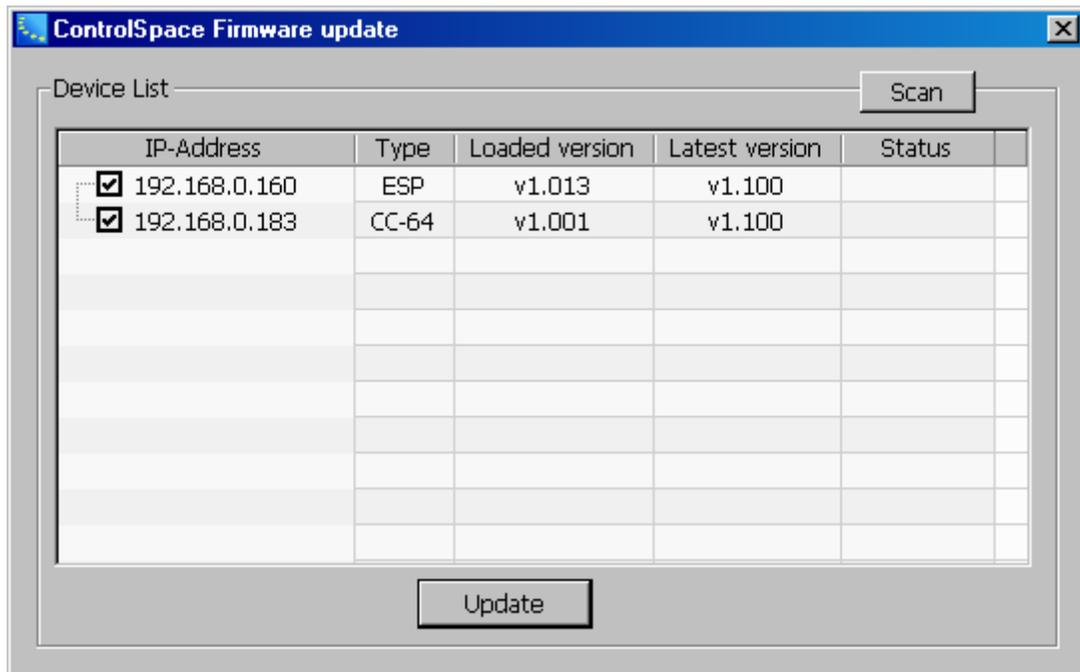
4. Click update to start the firmware update process.

5. If successful, the following dialog should appear.

6. After clicking OK, the status will be updated to successful; you should have a dialog similar to the one below:
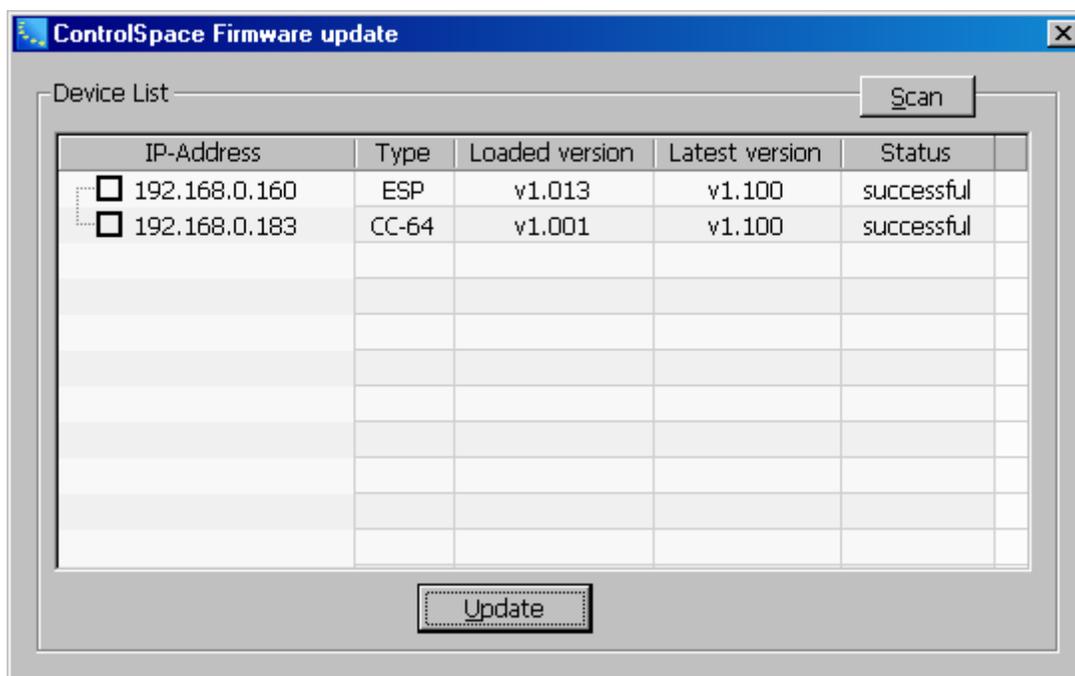
CC-64 Kernel Upgrade:

For the CC-64, you may have to update the kernel firmware as well. The current kernel version is 1.1. To check the version, power on the CC-64 and watch the top line, it will be hard to read as the backlight may be off (you may need a flashlight). If the backlight is on and "Duplo Kernel 1.1" is displayed, then it is current release. If the backlight is off or a different message is displayed, it is an earlier version, and needs to be upgraded. Follow the steps below for upgrading:

1. Copy the CC-64 Progammer.exe to your drive. Copy CC-64_kernel_1.100.mot and CC-64_v1.100.mot (firmware) to the same location. See the figure below:
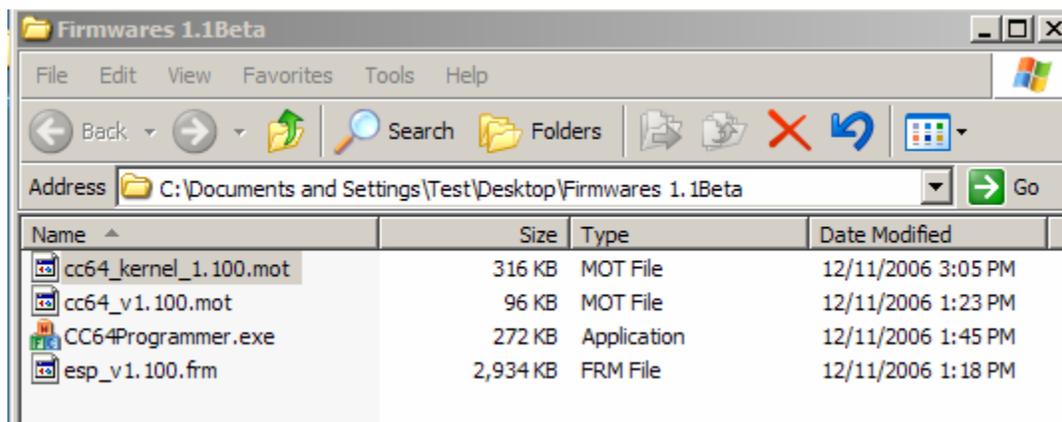
2. Start CC-64 Programmer. Drag and drop the file CC-64_kernel_1.100.mot onto the CC-64 programmer screen.
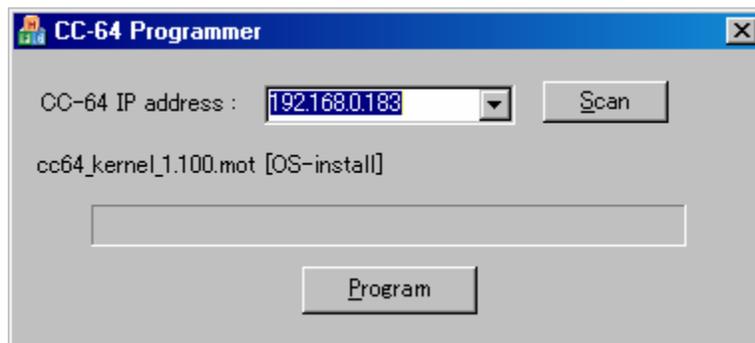
3. If the CC-64 IP address is blank, go to the troubleshooting section below; otherwise click the program button to begin updating the CC-64.

4. After about 45 seconds, a dialog will appear, reminding you not to power off the CC-64 while the device is being flashed. Press OK.
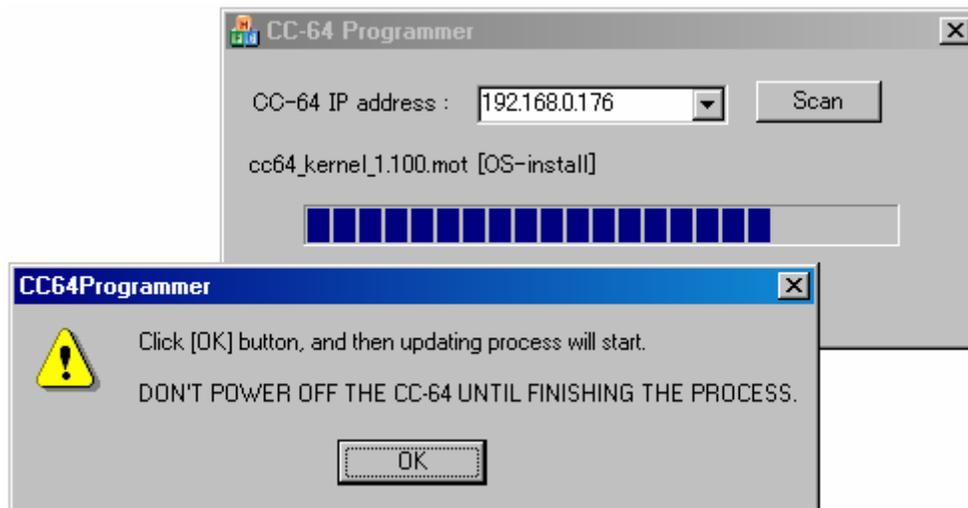
5. When the blue status meter reaches the end, as shown below, check the LCD of the CC-64. There will be a series of changing numbers on the top line.
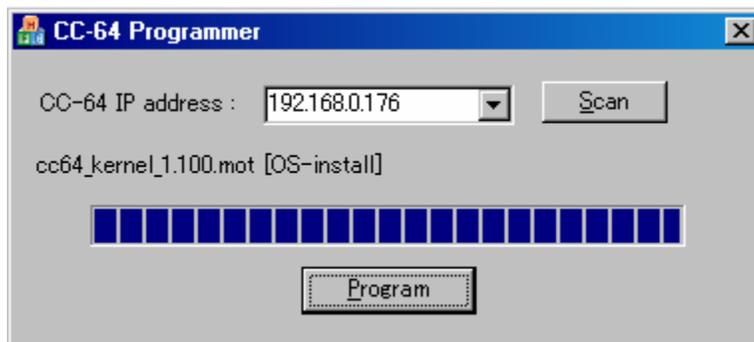
6. After a few seconds, if you look closely, the bottom line will read: "Completed!! Power off this DUPLO". Power cycle the CC-64.

7. When power is reapplied, CC-64's LCD will briefly display "Duplo Kernel 1.100 Booting".

If you receive a dialog box similar to the one below after pressing Scan, it is an indication you need to upgrade your firmware.   Follow the instructions above to upgrade the firmware.

Scan results

⊞ ESP-88 (RTC) "ESP-88 1"
⊞ CC-64 "CC-64 1"

[Error 1] ESP-88 (RTC) "ESP-88 1" (192.168.0.160) v1.013 <— Incompatible firmware.
Communication with ESP cannot be established because your ESP's firmware is not up to date.
Please upgrade the firmare to version 1.100 or newer.
You can check the firmware version currently in use by selecting [System – Update Firmware] from the menu.
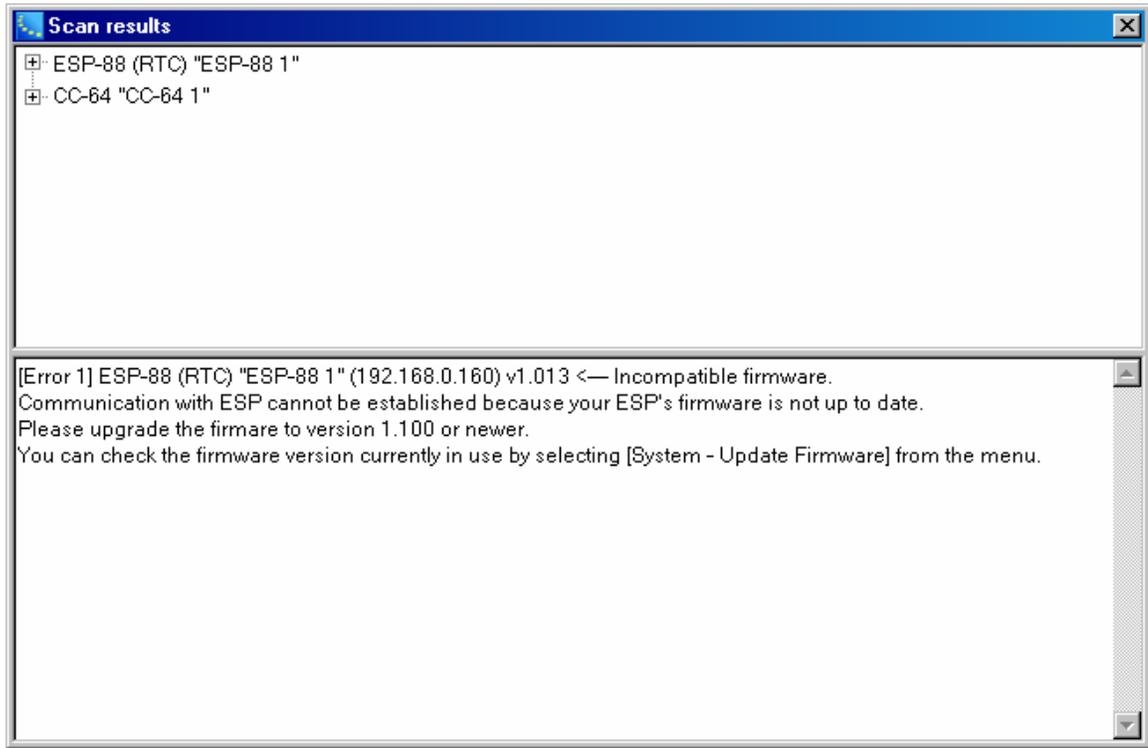
If the Firmware Update window is blank, you may have a hardware or firewall problem. Follow the directions and troubleshooting information in the *ControlSpace® ESP-88 System Quick Start Guide*.

Note that after your PC has been re-imaged or if there has been major changes, your firewall settings may not be correct.