

NWAre Release Notes

What Is New in Release 1.2.6 (9 July 2007)

1. Faster Booting. The Nion now takes about 10 seconds less time to boot and start passing audio.
2. XDAB reliability bugs introduced in 1.2.5 have been removed.
3. XDAB failure retries are now limited. Previously, a bad cable could cause the units to continuously retry to connect, resulting in bursts of audio output. Now, after a couple of tries, it slows down the retry interval to up to 30 seconds. This also may help units that have problems achieving XDAB sync.
4. The CobraNet low latency (1.3ms and 2.6ms) modes are now supported.
5. The new installer by default installs the software in a unique directory and gives unique shortcuts. This allows for the independent installation and removal of NWAre versions.
6. When the new version (1.2.6) of NWAre is run for the first time and finds a previous version of NWAre, it offers to copy configuration files, user-preference files, Custom Devices, firmware zip files and Project files from the previously active version of NWAre (ie the one located in Program-Files\MediaMatrix\NWAre) into the new installation (ie at c:\Program-Files\MediaMatrix\NWAre1.2.6). Note that if your previous installation was someplace other than c:\Program-Files\MediaMatrix\NWAre you will need to copy your files and reset your preferences manually.
7. Fixed a bug that was causing the grid to be drawn incorrectly at certain zoom settings.
8. ControlMatrix devices have been removed from the standard device menu. If you need these, use the NWAre++ personality switch.
9. Added a System Status page to the front panel. This gives you a display of the CPU load. This reflects the amount of control activity. If the 5 or 15 minute load readings are greater than 2, you should consider reducing the control activity. Heavy load can be due to python script problems, or too many Kiosk clients.
10. Mono recorders have been broken in the last couple of releases. We have removed them from the device menu until we have fixed it.
11. If too many recorders or players are included in a design (<12 for an N6) the NION will compile properly but not run. Previously, this failure was difficult to diagnose. A more descriptive error message is now written to the log.

Known bug;

1. The NIO-8i card +3dBu sensitivity is actually +15dBu. So when you go from 6dBu to 3dBu, the level will actually go 9dB lower instead of 3 dB higher. The work-around is to set sensitivity to +6dBu and adjust Digital Gain to +3dB, if you are working with this low of a signal.

What was New in Release 1.2.5 (25 September 2006)

Feature:

1. Now supports NION NX32 via the new NioNodeNX device. Only two card slots are available. XDAB usage is disallowed and will be shown by a compiler error if XDAB is connected to the NX role. NX16 will be supported in a future version.
2. All CAB devices now offer an Advanced SubChannel Mapping feature (in the Advanced Properties dialog). This allows Advanced CM-1-style bundle assignment of audio channels. 4 bundle transmitters and 8 bundle receivers are available in this mode.
3. Many improvements have been made to all ControlMatrix devices. All ControlMatrix devices now provide no input and output wiring nodes. Instead, NWare automatically creates input, output and XDAB Flyoffs that begin with "CM...", which can easily be connected directly to I/O or to additional processing. This saves time and complication in setting up medium to large ControlMatrix projects. **NOTE:** Special care must be taken to update existing ControlMatrix NWare projects. Click [here](#) for more information about upgrading or converting projects made with older ControlMatrix devices.
4. The NWare installer now offers to back up the existing installation if a prior version is detected. This allows you to go back to previous versions in case it is needed or if you have to work with files from multiple versions. If you don't want to create this backup, click "No."

What Was New in Release 1.2.4 (24 July 2006)

Feature:

1. Support added for NIO-8i 8-channel line input card.
2. New components for making very large, distributed ControlMatrix systems. These devices require strict DSP assignment and XDAB usage and thus are NOT self explanatory! Use these devices for ControlMatrix designs that either exceed 30 inputs x 30 zones or are distributed across multiple projects using the forthcoming CMPProxy software.
3. Control Delay: delay and pulse maximum times can now be adjusted via the Device Properties. The default values are 120 seconds, but this value can be extended up to 10800 (3 hours).

4. Relaxed the range of properties in the snapshot device. Maximum input count is now 256. Maximum bank count is now 64. You would be foolish to max out both at the same time.

Bug Fixes:

1. Optimized the extract part of the compile process that takes an extremely long time when a large number of devices are wired to the same connection.
 2. Fixed a bug that prevented Kiosk from connecting to a project that was emulated if it was not already fully compiled.
 3. Fixed a problem with the ExpressionLabel command where a decreasing sequence was displayed as "--N" which was interpreted as incrementing and thus did not preserve the original sequence.
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What Was New in Release 1.2.3 (18 April 2006)

Feature:

1. Added new keyboard accelerators for Align and Pack. Previously, only Pack Left and Pack Top had accelerators. The accelerators for the Align commands are exactly the same, but with the Shift key included:
Pack Left: Ctrl-L (same as before)
Pack Top: Ctrl-T (same as before)
Pack Right: Ctrl-R
Pack Bottom: Ctrl-B
Align Left: Ctrl-Shift-L
Align Top: Ctrl-Shift-T
Align Right: Ctrl-Shift-R
Align Bottom: Ctrl-Shift-B

Bug Fixes:

1. Fixed a problem with DSP timeouts that caused a project to fail to run because too few DSPs were detected.
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Release 1.2.2 (Unreleased) (13 April 2006)

What Was New in Release 1.2.1 (8 April 2006)

Bug Fixes:

1. Fixed a problem that caused the compile to fail with "unmapped segment" error related to serial ports.
2. Fixed a long standing problem with project linking where "write" controls (from the perspective of the client) are not always sent to the server when the client first connects or if it reconnects to the server.

What Was New in Release 1.2 (9 March 2006)

Features:

1. Added support for ControlMatrix integration via a new ControlMatrix device in the Control menu. This device is intended for centralized ControlMatrix designs. Some customization is required for more complex NION arrangements (i.e. multiple projects) or interoperability with ControlManager. Contact Peavey should you need more assistance.
2. Support for the custom NioNode SNMP extensions has been moved to the new Peavey registered namespace:
iso(1).org(3).dod(6).internet(1).private(4).enterprises(1).peavey(24603).nion(1).nionode(1). SNMP subagent functionality is unchanged. A new MIB definition reflecting these changes can be found at: NWare\plugins\pion\doc\PEAVEY-NION-NIONODE-MIB-V2.my
3. Added the ability to add SNMP control and monitoring for up to 512 controls per physical NioNode unit. To add SNMP Flyoffs to the NioNode in the Flyoffs tab, put the total quantity needed into the 'Number of SNMP exported controls' field of the NioNode properties dialog. If the quantity is greater than 0, an 'SNMP Exports' tab will be added to the NioNode device. In the row for each control, there is a 'R/O' button and a Label field. When 'R/O' is off, the control can be read and set via SNMP. When on, the control is read-only. Read-only is the default setting. Since the SNMP flyoffs and the 'exportedControlTable' in the MIB keep track of the controls via their "index" number, you should enter a short description in the label field that will also be viewable in the exportedControlTable as 'controlLabel'. SNMP flyoffs should only be wired to master nodes on controls

that you want to monitor or control. To provide SNMP control of a Python script, you should wire a generic control to both the Python script and to the SNMP flyoff.

4. Added support for the NIO-AES digital audio IO card.
5. Added control to enable RS-485 unicast addressing in the CAB's RS-485 tab.
6. Added filibuster mode to PageMatrix logic device. This enables 'first-come-first-serve' logic on stations of equal priority. In order for this to work, you must also set priorities equal on intended station/zone combinations.
7. 'Copy control attributes' now copies polygon shapes as well as general control settings.
8. The following control operator functions are now multichannel aware - invert, negate, absolute value, threshold, hysteresis, toggle on rising edge, toggle on falling edge, value link, position link, and string link.
9. Changed default low/high pass filter type to Linkwitz-Riley so default crossovers have a flat frequency response.
10. Added dropdown list of pages in Launcher dialog box.
11. Added control ruid and device id to 'Find control' dialog box if a control was selected.
12. Added string multiplexer/demultiplexer devices, created for sending a lot of control values through one wire of the Project Linker devices.
13. Added the % operator to the expression evaluator. This restarts the sequence after n iterations. For example "Input {1+=1%4}" would give "Input 1", "Input 2", "Input 3", "Input 4", "Input 1", "Input 2", "Input 3", "Input 4", etc.
14. Added new keyboard commands - The ENTER key now opens the selected block(s) and the ESC key closes the window with focus.
15. Added option for Kiosk mode to hide root level tabs (see #19).
16. Added option for Kiosk mode to hide cursors (see #19).
17. Kiosk page changes are now always deployed - before if no DSP or control wiring changes were made the user was required to force a recompile by holding the shift key while hitting the deploy button.
18. Default User logon is now case-insensitive.
19. Added optional XML based configuration for running NWare in Kiosk mode. The old command line options have been removed. The new command line looks like:
"NWare.exe /personality=nware_kiosk kiosk_config.xml".

The xml file should be in the form :

```
<kiosk>
<name value="kiosk_test" />
<compile_id value="" /> <!-- only necessary if there are multiple compiles of the
same project on the network -->
<deploy_id value="" /> <!-- only necessary if there are multiple deployments of
the same project on the network -->
<username value="3" />
<hash value="" /> <!-- can use prehashed password if you don't want to store
```

the password in plain text in this file -->
<password value="3" />
<hide_root_tab value="true" /> <!-- defaults to false -->
<hide_cursors value="true" /> <!-- defaults to false -->
</kiosk>

Note: The 'hash' referred to above can be generated within NWare by pressing Ctrl-Shift-H. A Generate Hash dialog will be displayed. You should enter the same username used in this xml and a password. The resulting hash code should be entered within the <hash value="" /> quotation marks. Use only the hash or password element, not both. Obviously, the username and password (explicit or the hash) used here, must match the username and password stored in the deployed project.

ConMan Feature:

1. Added support for direct CAB control. Here is how to set it up:
 - From a command prompt, type "conman -adapters" and press Enter.
 - A list of discovered adapters will be shown with a "Device ID:..." line which shows how Windows refers to the adapter. You need to pick the appropriate NIC (on the CobraNet network) and copy this line from the "\Device..." to the end of the line
 - Open the conman.cfg.xml file in a text editor
 - Add a line after line 3 that incorporates the bit you copied from the printout of adapters like this:

```
<cab_adapter value='\Device\{3bcabbb8-8809-41e2-8e0f-d4c98fdfe6e3}' />
```

Notes: This line is the example from the file, but the part within the {}'s needs to be the one you got from the printout of adapters. This functionality will be included as an automatic part of future ConMan installers.

Bug Fixes:

1. Fixed bug which made it impossible to switch from XControl PASHA back to regular PASHA without a reboot.
2. Fixed bug which caused the project file to not be properly saved to the NioNode in some cases due to the location of the saved project file (on a different drive than the install, on the root of the drive, etc.).

3. Fixed bug which caused increment or decrement strings (++1, --2, etc) not work if the increment or decrement value was larger than the maximum value of the control.
4. Fixed issues with arrow key selection which caused the selection to not be as expected.
5. Fixed bug which caused PageMatrix priorities to be limited to the number of zones and not the number of stations.
6. A problem with the ambient level sensing router getting stuck with the wrong input selected while the ambient level is fluctuating rapidly has been corrected. The router now also aborts a cross-fade if the input selection is changed while the cross-fade is in progress.
7. Fixed bug which caused 'Bring to Front' command to not work properly if there were wires in the container window.
8. Fixed bug where there was a 1.5 second delay when initially connecting via RATC which caused problems with ControlMatrix.
9. Fixed bug which made GPIO analog input calibration not work properly across a redeploy.
10. Fixed bug where .npa files with long filenames opened from outside NWare had 8.3 truncated names in NWare (and saved back to those incorrect names).

What Was New in Release 1.1.3 (24 October 2005)

Changes:

1. Bug: Inadvertently included some files from 1.1.1 which should have been replaced with 1.1.2 versions. In some cases, this prevented files to be emulated.
2. Fixed a bug that caused some graphics (e.g. kosmos) to not be displayed when viewed from NWare:Kiosk sessions.
3. Fixed a bug that prevented the 2D Control device from working properly.
4. Added Chapters 1 through 7 of the highly recommended book, [Dive Into Python](#) to the help file. In future releases, we will be adding sidebars and topics to better relate this material to Python use with NWare.

What Was New in Release 1.1.2 (17 October 2005)

Changes:

1. Fixed a bug related to master->slave control wiring that spanned across boxes. If the box that the slave control was on rebooted, the control would not be synched up with the value of the master control. This only affected master->slave links where the master was on one box and the slave was on another.
 2. Fixed a bug where multiple GUIs and Kiosks would have timeouts when connecting to a NioNode with a very large number of controls.
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What Was New in Release 1.1.1 (5 October 2005) (unreleased)

Changes:

1. Fixed bug that caused analog input boards at boot to fail to load all the settings of the last default preset.
 2. Added check boxes to the User Accounts dialog's exported page list to make it more obvious that you have to do something to export a particular page for a user.
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What Was New in Release 1.1 (12 September 2005) (unreleased)

NWare/NION Additions and Changes

New Features

1. Added support for XControl trigger-style controls. There are now two options for PASHA serial control protocol - PASHA/PageMatrix and PASHA/XControl. Use the latter so that the "T" command acts as an XControl trigger command. PASHA/PageMatrix is the same as the old PASHA protocol.
2. There is a new version of the RATC control protocol - RATC2 RAW. This variant supports control access to all controls without the use of Control Aliases. Instead of using a Control Alias to reference a control, a string based on the device_id of the parent Device and the ruid of the control is used (in the form "//devices/device_id/controls/control_ruid", where device_id and control_ruid must be determined using the Inspector window). In addition, the external controller must know which NioNode or ControlNode each control resides on when using RATC2 RAW. This protocol is intended for advanced external control and should not be used as a replacement for standard RATC2.
3. CAB serial bridging raw MAC mode: added raw MAC-based RS-485 CAB addressing for ControlMatrix compatibility. This checkbox is hidden within the advanced section of the CAB properties dialog box.

4. Added block property to only require a single click to open a block while in gesture mode.
5. Added a preference (tentatively called "Deep Locate") that allows the GUI to open blocks when locating objects by clicking on the compile results or the find results. This preference defaults to checked which allows the existing behavior. If the preference is unchecked, the GUI will highlight the block containing the locate target, but will not open that block. This means it will take more clicks to actually get to the located object, but some may find this less confusing than having blocks pop open automatically.
6. Added NioNode Diagnostics to NWare. It is currently in a somewhat unfinished state. Before running diagnostics, the role running on the NioNode must be erased or the diagnostics will fail and bad audio may come out of the system.
7. Added new 'ExpressionLabel' auto label generator syntax. This replaces the older AutoNumber Flyoffs and AutoNumber Labels dialogs. This function is much more powerful than the AutoNumber function.
8. Added new 'Gesture Wipe' mode. In this mode, if a click-drag operation is started on either a button control or empty space, any button that is passed over while the mouse button is down is automatically pressed/released. This mode is useful for running on touchscreen computers. To enable this mode, add the following to the \plugins\nware\preferences.xml or \plugins\nware\kiosk_preferences.xml:

```
<item name="enable_wipe_gesture" value="true" />
```

9. Added full-screen option. Available from right click context menu or command line option (/fullscreen=true)
10. Added an enable control to the blinker device.
11. Added new "Duplicate Special..." command (Ctrl+Shift+D) which allows a user to specify the orientation (horizontal/vertical) and number of copies to create.

New Devices

1. Added the Signal Probe device. The Signal Probe works across a set of NioNodes connected by XDAB, and allows the end-user to dynamically monitor any wire or device wiring node.
2. A Wave File Recorder device has been added. That's right - you can now record wave files as well as play them. The number of channels that can be recorded simultaneously on a NioNode has not been fully determined (I think somebody got 16, but that seems too high). We also probably need a scheme to protect against the NioNode running out of disk space while recording - proceed with appropriate caution.

3. Added a [Huge Mixer Controller](#) device. This virtual device provides a single set of send controls that are mapped, by pressing a select button, to the array of send controls in a (potentially) big mixer made up of multiple mixers, each producing some of the outputs.
4. Added an [Auto Group](#) control device. Place this inside a hierarchical block and all of the read-write controls from the other devices inside that hierarchical block with the same ruid will be automatically grouped together. Use this to make stereo or multi-channel devices where all channels share the same settings. Note that this doesn't work very well for graphic equalizers.
5. Added a [Register](#) control device. This multi-channel device latches the values of the input controls on the rising edge of the clock input and sets the latched values to the outputs on the falling edge of the clock input. This is useful from creating certain kinds of logic (like state machines) that are otherwise difficult due to race conditions.
6. Added the [Control Router](#) device.

Improvements

1. Modified X-Control Device to work with the automatic control wiring assignment.
2. Modified PageMatrix device to be able to generate versions with more than 16 paging stations. The PageMatrix hardware only supports 16 stations, but many people use the PageMatrix device without the hardware and might need very big devices. The maximum is now 99 stations and 99 zones. **WARNING:** Large PageMatrix devices can take several minutes to generate, so be prepared to wait while NWare builds your mammoth device. Even if it looks like NWare has crashed, if you will just be patient, the device will be created. Just go to lunch.
3. Improved error reporting of sample rate mismatches in compile results.
4. Improved error reporting of wiring between NioNodes without XDAB.
5. Endpoint hover text is now shown when wiring to make it easier to tell what you are wiring to.
6. Project compile settings now validate property values so that dangerous values are disallowed.
7. Increased the default attack time of the Limiter from 100us to 10ms in order to avoid signal distortion.
8. Previously, if only one NioNode was wired to an XDAB, the compile would succeed, but during runtime XDAB failures would cause the NioNode to mute. Now the compile will fail with a message "...only one NioNode wired to this XDAB...".
9. Fixed warning messages when NWare is launched after ConMan has been run as a service on the same PC.
10. The Wave Recorder and Player do not require the .wav extension to be entered in the File Name control. If the file name does not end in .wav (or

.WAV), the .wav extension will be assumed. This fixes the situation where a wave file can be recorded with a name that overwrites one of the units configuration files, rendering it unable to run the role.

11. Improved performance on CAB control. Previously, the poll time would increase linearly with the number of CABs at $200\text{ms} \times \text{num_cabs}$. Now the poll time should be a constant 200ms for all CABs regardless of how many CABs the NioNode is controlling. It is suggested that a NioNode should not control more than 8 CABs.
12. Hover text can now be changed from the control properties.
13. Hovering or selecting a control with a control alias displays the alias in the status bar. The text associated with the control will also be displayed in the status bar.
14. Added graphic object property to lock the size so it cannot be resized by click-dragging on the object.

Bug Fixes

1. Fixed the bug which caused the text_box control style dialog to display the Font Size as an empty value, which would in turn cause the text to display infinitely small.
2. Fixed a bug which caused the find results to not be clearable.
3. Fixed a bug which occasionally made the last line in the Log window unreachable.
4. Fixed a compile bug which generated unrunnable DSP code for some designs that used very large SDRAM delay buffers.
5. Fixed bug which caused scroll bars to not be visible in certain situations.
6. Fixed bugs in 'Save As' code which incorrectly disallowed using 'Save As' to save over the current file as well as saving the same file name to a different directory on the disk.
7. Fixed a bug that caused the compile to fail if the output and input of the same channel of an XDAB were wired together. These wiring mistakes should still be avoided.
8. Fixed glitch during looped wave file playback.
9. Fixed bug where sometimes the tail end of the previous wave file was played when a new file is started.
10. Fixed bug which caused the hover 'tooltip' popup to be incorrectly positioned on machines with more than one display.
11. Fixed bug which disallowed empty passwords for project users.
12. Fixed a bug where the valuels RATIC2 response has an extra % at the end when running on the Nion but not under the emulator.
13. The sub-preset controller device is now placed on the NION or ControlNode which contains the greatest number of controls in that Sub-preset domain. This fixes an apparent error in the situation when the NION containing the sub-preset controller contained none of the controls in the sub-preset. In those

cases, the sub-preset file did not exist on the NION containing the controller; pressing the load button would result in an error indication, even though the command was successfully sent to the other units that contained portions of the preset and they loaded it successfully.

14. Fixed potential instability problem of parametric equalizer in shelf mode.
15. Fixed a bug in XDAB'ed systems where some of the NioNodes sent only a small number of channels to the XDAB and others sent many, possibly causing distortion on one of two XDAB channels in the design.

Python

1. In scripts, calling `changes_get()` on an input now works with threaded scripts. Once called, the changed state is cleared on both threaded and regular scripts.
2. The Python script editor now supports find (`CTRL+F`) and find/replace (`CTRL+H`). Replace All and regular expressions are also supported.
3. The Python script editor now gets user confirmation when closing the editor if the script has been changed.
4. Added support for data bit, stop bit, parity and full/half-duplex configuration of the Python based serial port. The serial port constructor has 4 optional arguments - `serial_port.create(name, baud_rate, data_bits, stop_bits, parity, half_duplex)`. See `PythonSerial` for more information.

NWAre : Kiosk

1. Removed the unnecessary `pace::file` warning about missing `media.zip` when uploading for Kiosk.

What Was New in Release 1.0.2

NWAre Changes:

1. Changed the limit on the number of walls in the room combiner from 32 to 128.
2. Changed the limit on the input and output count properties of the python script function from 64 to 256.

NWAre Bugs:

1. Fixed bug in pink noise generator which caused a roll-off in the high-frequency.

2. Fixed bug which could cause the parametric EQ in shelf mode to go unstable and/or oscillate when using XDAB.
 3. Fixed bug which caused delay lines to stop passing audio following an XDAB re arbitration.
 4. Fixed bug which caused the Wave Player output to be 20dB quieter than it should be. Corrected distortion problem (8-bit mono and stereo, 16-bit mono), as well as channel-swapping problem (8-bit and 16-bit stereo).
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What Was New in Release 1.0.1 (unreleased)

NWAre Bugs:

1. Fixed bug in python script engine which caused negative integers passed into value_set() to be interpreted as very large positive integers.
 2. Fixed router bug which caused ramping to and from the 'off' state to output incorrect audio.
 3. Fixed bug which caused the device and flyoff icons to not draw if the Windows system icon size what changed from the default.
 4. Undo menu command is now correct after inserting a device, flyoff, or image.
 5. Fixed bug which caused deploying to large number of NioNodes to fail with a 'TRANSIENT' error.
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What Was New in Release 1.0

NWAre Additions/Changes:

1. **New Devices:**
 - Auto-Created **PageMatrix** Device (**Warning:** large station or zone counts can take several minutes to create)
 - Reverb** (same as in MWare and XWare)
 - LCR Matrix** (same as in MWare and XWare)
 - X-Control Device** (makes it simpler to implement X-Control devices in NWare)
2. **Find Improvements:**
 1. If the lower frame is closed, it now opens to display the Find Results page when using Find feature.
 2. Only clickable lines in the Find Results report underline and highlight when moused over.
 3. The lines corresponding to items found are indented.
 4. Some instructions are included in the footer.
3. The stored compile report is now displayed when a project is loaded.
4. Simplified some devices (Feedback Ferret, Ambient Sensing devices, kosmos, Vocal Eliminator) to make them occupy less hard drive space and appear more

quickly when dragged from the device menu. Old versions of these should be replaced for proper functionality. This change doesn't remove any functionality from the devices.

5. Added node labels to several devices to make it easier to use. Some devices don't show node labels when the input or output counts are very small. Click [here](#) for a list of modified devices.
6. Previously, when deploying or emulating, the GUI would attempt to establish the control connection to the roles using the defaultuser account. As long as this account had Control Settings Access of at least Read-Only, the user was not prompted to enter a username and password. Now, the control connection is established using the Preferred User account that is selected from the File -> Preferred User... menu item.
7. Added right-click help on devices from the device treeview. This function will be much more useful once the help file is complete. At the moment, only Scheduler and Schedule Generator have help available with this method. We will post a patch in the near future with a more complete help file, so this function will actually be helpful.
8. Added advanced preference to enable/disable Auto-Deploy dialog box in the Deploy dialog.
9. When hiding a locked page, the page is automatically relocked.
10. Removed the Default Group Type project property (Value/String/Position). NWare now uses an intelligent "auto" control group type. If NWare chooses the wrong type of linking, you can override it by using the Value/Position/String Link devices in the Control section of the Device menu.
11. The GPIO configuration dialog now matches the actual pin-outs of the DB-25 on the NION. The real pins have not changed, only the order and labelling in the GPIO dialog.

NION:

1. Removed concept of 'Locking Enabled' of the front panel. The front panel is either locked or unlocked. Changing the state either way requires the correct front panel combination
2. Added web-based configuration of SNMP community strings.
3. Fixed bug that could cause DSP(s) to crash following XDAB arbitration.
4. Fixed bug that could cause DSP(s) to crash the first time an audio player is started
5. Fixed a bug that caused the setting of a static IP address via the web interface to appear as though it didn't work.
6. Fixed a bug that prevented time from being set via the web interface
7. Fixed a bug that caused a noise blast when the LAN cable was pulled on an XDAB'ed unit with the "Do not mute on node or XDAB failures" fault policy.

NWare : Kiosk:

1. Kiosk now automatically re-downloads and connects when a project is redeployed.

Installer

1. When upgrading, the /temp folder is cleared. In prior versions, upgrades with residual /temp folder contents produced undesired effects.
2. The default install mode is now set for all-users rather than just the local account. Although you still have to have administrator privileges to install NWare, you can now run it as a normal user. If you do not want NWare exposed to other machine users, you should restrict NWare folder access to specific accounts. You should also change the security settings of the shortcut icons, so they aren't visible to those users.
3. A Start Menu shortcut has been added providing access to NWare : Kiosk. Before, you had to create this shortcut yourself.
4. The User Devices folder is now set to be permanent. It will now never be removed by uninstalling. This folder is located here:
...\NWare\plugins\nware\user_devices

NWare Bugs:

1. Fixed a bug which made it impossible to scroll the list of targets in the 'Update Target Firmware' dialog box.
2. Fixed a bug where Cycle Breakers in a signal across XDAB caused the compile to fail.
3. Fixed a bug which caused application to lockup if the project user list was edited after doing a Save As.
4. Fixed a bug which allowed NWare to remain connected to the NION(s) in the project after a Save As or a first-time save (also a Save As). This can cause several functions to cease functioning including Presets. The problem is that NWare has created new names and copies of everything, but the NION(s) are still expecting all the old names. Now when you perform a Save As, NWare disconnects from the project before saving to the new filename. To connect the new file to the NION(s), you must now re-deploy the project.
5. Corrected IDAB cycle accounting to reflect 100MHz DSP-to-memory transfer rate. This will result in a reported decrease in IDAB busyness for some designs.
6. Fixed a bug in the NION compiler that underestimated the amount of IDAB resources needed by the multi-tap delay line device. In some projects, this could have resulted in one or more muted output channels.
7. Fixed a bug in both Basic and Deluxe Routers. Previous behavior: with the OFF state enabled and switching from OFF back to a router input, the router device used to momentarily output audio from the wrong input.
8. Fixed a bug which caused the firmware update dropdown list to not have a scroll bar when a large number of updates were available. You probably wouldn't notice this, since old versions are normally removed by the installer upon upgrade.

9. Fixed a bug which prevented the Launcher control from launching anything.
 10. Changed a graphic panel in CAB 4n output cards to say "Outputs" instead of "Inputs"
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NWAre 1.0 Patch 1:

1. Some files were inadvertently omitted from the 1.0 release to fix the RC1 router problem ([here](#)). This would result in the wrong audio input to be routed to a router's output. This patch corrects the problem.
 2. Updated [Known Issues](#). Some items were removed (fixed).
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What Was New in 1.0 Release Candidate 1

NWAre:

1. There was a bug, now fixed, that caused the PC-based software to not work correctly if at least one network adapter didn't have link, or if all the network adapters were disabled (or not detected) on the computer.
2. Kosmos and Vocal Eliminator devices have been added.
3. New File menu commands have been added. Save Default Settings saves the current settings as the ones that are recalled on a restart, and Load Default Settings restores the current settings to the stored values.
4. An "alert text" control style has been added.
5. There are some new User Preferences to always save the current settings as the default when disconnection from a running system or the Emulator.
6. There is a new User Preference that determines if there is warning dialog box when closing the application while connected to a running system.
7. Hitting an initial backspace when editing block text now doesn't delete the last character (works like MWare did)
8. The Emulator now allows Kiosk to connect to it. This is helpful in testing exported Page Groups.
9. The Emulator now uses the Project User Account privilege settings to authenticate Network Control access.
10. If a role assignment partially succeeds and partially fails, the control connection is started to allow control of the units that succeeded.
11. The Project Link Client device now has a property that specifies the rate at which the server is polled.
12. ControlNodes now pay attention to the Project User Account privileges for Network Control Access, Control Settings Access and Exported Page Groups.
13. The Serial Control COM port selection control has been fixed.
14. The "find parent of selected control" option in the Find dialog has been improved to automatically use a single selected control.

15. The Advanced CM-1 option's "Unicast Mode" is now set to 1, by default. The old default, "Never" was getting people into trouble. Typing "Never" into this field will prevent the CM-1 from ever using unicast bundles, which is not usually a good thing.

Python:

1. Some bugs in exporting and importing Python scripts have been fixed.

NION:

1. A NioNode SNMP extension agent has been added. This allows SNMP monitoring of NioNode-specific information such as audio, project, and hardware status. This is an extension to the standard Linux (UCD) SNMP agent that is already supported. In the future, SNMP traps will be added, and a section will be added to support access to Project-based control values. The SNMP agent can be enabled in the Network page of the NioNode web interface. The SNMP agent community strings (passwords) are not currently accessible through the web interface, so if those need to be altered from the defaults, you must do so by editing the `/etc/snmp/snmpd.conf` file through Telnet. The default values for the community strings are 'public' for read access and 'private' for read/write access.
2. It is now possible to edit the CobraNet CM-1 netmask value through the front-panel interface. This value can also be edited through the NioNode web interface.
3. Remote Log access can now be controlled via NioNode User Privileges. Access is either read-only or read/clear.
4. A bug that caused the NioNode to automatically unlock its front panel after one hour has been fixed.
5. There were some false alarm messages being logged about the fans stopping and recovering - this has been fixed.

NWare : Kiosk:

1. The Kiosk GUI has some new command line options: `/open=`, `/user=` and `/pass=`

Installer

1. The MediaMatrix NION Daemon service that was introduced in Beta 11 is no longer necessary, since NWare automatically loads the Discovery agent in the background when necessary (see Beta 12 NWare note 15). The Beta 12 installer was still trying to install the service even though it wasn't necessary, which was causing problems.
 2. The Upgrade functionality of the installer wasn't properly updating old NWare installations. Hopefully it is now fixed.
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What Was New in Beta 12

NWAre:

1. Project-based security added to allow the Designer to control user access to RATC, Kiosk, and 'Upload and Connect'. This works at the Project level, rather than the NioNode level.
2. Added an advanced User Preference to show/hide the Inspector page in the Utility frame. The Inspector page is now hidden by default.
3. Added a compile-time check to verify that no non-system sample rate signals are sent across XDAB.
4. Fixed the COM port selection control.
5. Fixed a bug which broke selecting wires from the compile report.
6. Added conductor priority and clock source to the advanced Properties of the NioNode device.
7. Added controls to configure CAB buddy link. Also added CAB control of conductor priority and synchronization to external word clock on the link input.
8. The Preset devices' Load and Save buttons are now trigger style rather than momentary.
9. The Latching Light devices' control input is now trigger style rather than momentary.
10. Upon deployment, NWAre shows a warning if the NioNode firmware does not match the NWAre version.
11. NWAre now shows a Communications Preferences dialog box if more than one IP address is present on the host PC. This box allows the user to pick which IP address to use for NION communications. The setting is remembered, so the box only comes up again if IP addresses have changed.
12. Added a menu item to allow the user to manually invoke the new Communications Preferences dialog box.
13. The default preset is no longer automatically saved every few seconds.
14. Fixed a bug where distributed control connected to logic function will sometimes not deliver value to the function.
15. The NWAre Discovery Application (the one with the panda head), which runs in the background, is now hidden from view.
16. Added kosmos" device to the Dynamics menu.

Python:

1. Added console module to Python control scripting, in the Emulator only, which prints out to the NWAre log window. Usage looks like
`import console`
`console.out("your string here").`
2. Python output/message `string_set` method now calls `str()` on the passed in object if the object is not a string, making it easier to use.
3. Improved error reporting on missing or invalid control scripts.

4. The embedded Python scripting language has been upgraded to version 2.4, both for the NioNode, ControlNode and the Emulator. In addition, a more complete Python library is included so that Telnet clients can be implemented.

NION:

1. The RATC privilege was removed from NioNode-based security (it was moved to Project-based security). This allows you to manage RATC access from one interface instead of on each NioNode.

NWAre : Kiosk:

1. Added a network browser.
2. Added an '/open' option. This specifies a Project for NWAre : Kiosk to automatically connect to. Syntax is /open="<project name>".
3. Now auto-launches the Nion Discovery service when launched.

Installer

1. The installer will now recognize a Beta 11 installation and present a dialog box alerting you about the upgrade. Uninstalling of Beta 11 is not necessary. Any older Beta versions should be uninstalled prior to installing Beta 12.
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What Was New in Beta 11

NWAre:

1. You can now use the Windows clipboard to copy and paste control values - multiple control values are separated by tabs.
2. Added Feedback Ferret and Pitch Shifter
3. Fixed a bug where compile would fail with an unwired cycle breaker device
4. "pandad.exe", which formerly executed automatically when NWAre was started, is now installed upon installation as a Windows Service. This means that you no longer have to make sure that it is running (with the title "Target Discovery" and a panda head) in order to use NWAre:Design or NWAre:Kiosk. If you need to use the interactive features of pandad, you must first stop the service from the Services Control Manager (Control Panel -> Administrative Tools -> Services) before running pandad in its Interactive Mode. Basically, you should leave it running, unless you are instructed otherwise.

Python:

1. Updated to version 2.4
2. Fixed a bug that caused the input.value_set to not take floating point values

3. Added a serial port object which allows scripts to read and write to the serial ports (documentation to come)
4. Added a telnet object which allows scripts to manage a TCP session using the Control Ethernet port (documentation to come)
5. Improve Python error string generation
6. Display syntax errors in message field

NION:

1. Improved BIOS frontpanel menu by adding better descriptions about what buttons do what action
2. Added 'Nion Admin Privilege'
3. Password protect 'dangerous' web pages (accessed via the Nion Admin Privilege)
4. Improved speed of project loading on NION
5. Added support for CM-2-based CAB 4n's (early CAB 4n's used CM-1)
6. Fixed bug which caused frontpanel to report "IDE OK" when IDE boot actually failed

NWare++:

1. Added TCP/IP Server (RATC/RATC2) to ControlNode properties and controls. Must use ConMan Beta 11 or higher to utilize this feature.

Installer

1. Installer is now digitally signed with a code signing certificate. This will prevent the "Publisher could not be verified" messages when installing software from our website and will produce friendlier warning messages from Windows XP Service Pack 2. Publisher will be listed as "Peavey Electronics Corporation". Also the digital signature is time-stamped by VeriSign, so that it may be verified after the certificate expires.

What Was New in Beta 10

1. New Installer.
2. KLS file (Kiosk Configuration File) is now properly registered. Right-clicking on KLS files will allow editing in Notepad or opening with NWare:Kiosk. Right-clicking in Windows Explorer or the Desktop, going to "New" -> "NWare Kiosk Configuration File" will produce a sample KLS file for you to edit, complete with comments on how to configure the file.
3. When muting output cards relays are used in conjunction with the DAC mutes to remove possible audio pops during deployment.
4. Deploy, log, and status window now have moveable splitters

5. When displayed in the GUI, Nions include their IP address.
 6. Fixed a bug that caused a crash when shutting down with RATC client(s) connected.
 7. Added a pop-up menu with zoom items to NWare Kiosk
 8. Fixed bug which caused limiters to go into full limit mode and never return.
 9. Fixed flaw that prevented output boards from muting if piond was restarted without a reboot.
 10. Fixed bug where CAB 4n phantom buttons were not operational.
 11. Fixed bug where room combiners with odd number of rooms would cause the role to not start (due to the fact the composite was placing an odd input mixer, which isn't supported)
 12. Allow the front panel serial port to be used.
 13. Enabled per channel mutes on CAB 16o by setting channel gain to -95.5 (16o does not have per channel mute capability built in)
 14. Add event object to threaded python scripts with the following methods (the sleep object has been removed)
 - `wait(timeout_ms)` - waits timeout_ms
 - `wait_input_change()` - waits for input change
 - `wait_input_change(timeout_ms)` - waits for input change. returns true if an input changes within timeout_ms, otherwise returns false.
 15. Fixed a bug in the PageMatrix 16x32 Device and Script sample project file. The outputs were reversed (1 was 32 - 32 was 1).
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What Was New in Beta 9

1. Fixed a build problem with Beta 8 that caused the DSP primitives to be out of date with the DSP kernel. This would cause the DSPs to crash and DMA errors.
 2. In the GPIO tab of the NioNode device, enlarged the label text, so that the text is always readable. Also made the labels have a background color so it's easier to differentiate the sections.
 3. Removed "Serial Control" device, which is instead auto-instantiated through a NioNode.
 4. Added "Find parent of selected control" find command. Only available if a single control is selected.
 5. Fixed bug which caused the incorrect context sensitive help to be displayed in certain dialog boxes.
 6. Added 'Find controls of selected device' find command.
 7. Implemented default find value for flyoff name if flyoff is selected when find is called.
 8. Added logical control operator "exactly one" that satisfies an "alternate" definition of XOR.
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What Was New in Beta 8

1. Added labels to crossover block output nodes.
 2. Added flip-flop device.
 3. Added control delay device.
 4. Added Tone Control.
 5. Added check for obsolete (removed) devices when loading a project file.
 6. Added 'find obsolete devices' find command to help in rooting out obsolete devices.
 7. Added tx channel count control to advanced CM-1 control panel.
 8. Added security for RATC/RATC2. You can now use the Web Interface to add Telnet users.
 9. Integrated Peak and RMS into one "uber-meter."
 10. Show warning dialog box when software loads if multiple NICs are detected.
 11. Fixed problem with flyoffs and flyoff icons not being colored correctly when dragged in from the flyoff window.
 12. Fixed bug which caused the last transmitter and receiver in the simple cm-1 configurations (4x8 or 8x4) to not be useable.
 13. Fixed bug which caused "missing unit_z" message when switching from XDAB project to stand-alone project.
 14. Fixed bug which caused flyoff editor menu to go off the bottom of the screen making it impossible to select the bottom few items without moving the flyoff.
 15. Fixed bug which caused front panel lock state to not persist across boots.
 16. Fixed bug that caused meter text box to be drawn with an extremely small font.
 17. Changed labels of NioNode types to be N6 and N3 (instead of 3N and 6N).
 18. GIO Pin assignment in NioNode device properties now defaults to unused.
 19. Fixed bug in Python script of "PageMatrix 16x32 Device and Script" sample file which inhibited priority '0' from preventing a page to a zone.
 20. Fixed bug where using Installer created NWare shortcuts cause the "Target Discovery" icon to appear as "C:\\" icon instead of a panda head. Merely cosmetic.
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What Was New in Beta 7

1. Fixed single band parametric frequency response.
2. NION network services (Web server, telnet, SNMP) can now be turned on/off from the front panel.
3. Added low/high shelf filter types to single band parametric.
4. Fixed a bug where multiple flyoffs would be created in seemingly random orders.
5. New CM-1 device. There are now 2 presets (four 8-channel bundles like MM and eight 4-channel bundles for 4n) as well as Advanced which exposes all CM-1 controls to the user
6. Fixed bug which muted CABs.

7. Added per user privileges. Current privileges are role_deploy, user_admin, and pandebug_access (update privilege is listed but is currently not implemented). There are 3 built in accounts - defaultuser, superuser, and frontpanel user. Users can be managed from either pandebug or the web interface.
 - **Superuser** has all privileges and only the password can be changed.
 - **Defaultuser** has an empty password and only the privileges can be changed.
 - **Frontpanel** is only used for frontpanel locking at this point. Privileges are ignored and password needs to be in the form '0:0:0:0:' (four numbers 0 - 40 with colons (":") after each number) .
 8. Fixed bug which caused kiosk mode to fail if no images were used in the design.
 9. Added Ambient Sensing Leveler.
 10. Added DTMF encoder / decoder.
 11. Fixed bug where if a design was saved with a locked page visible it was permanently hidden when the file was reloaded.
 12. Added 'button - custom' style which allows the user to specify an on and off image as well as whether or not it draws the background color as well.
 13. Created new Cascading Style Sheet (CSS) for NWare's help system and reorganized topics and bookmarks.
 14. Fixed a bug that resized hierarchical block internal flyoffs if the properties were modified after block creation.
 15. Added a menu item in the Help menu, "Check for updates...", which will connect to the MediaMatrix web site (if you are connected to the Internet) to check for any available updates. If the version of NWare is not current, the resulting web page will provide links to download the latest update and view its release notes. If your version is current, you will be reassured that you are running the latest and greatest NWare.
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What Was New in Beta 6a

1. Added new control style - 'Button - Custom'.
 2. Fixed Beta 6 bug: Couldn't change color from Control Properties dialog box.
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What Was New in Beta 6

1. Added 'Copy Style...' for controls and graphics.
2. Added 'led - rectangle' style.
3. Added page based security. Pages can be locked and hidden with a password. To show the page, the password needs to be entered. Locked pages are hidden when the file is loaded regardless of their state when the file was saved.

4. Allow for multiple selections when importing media
 5. Added 'allow off state' property to Router. Adds an off button to each output selector.
 6. Added 'image control' control style, which draws an image based on it's control string value. The image must be imported into the media library before it's available to the control.
 7. Added support for txPriority, txUnicastMode, txMaxUnicast, and rxPriority in the CM-1 device.
 8. Change dialog font to 'MS Shell Dlg' which will hopefully make the dialogs work in international versions of XP.
 9. Added 'replace text' menu item.
 10. Added 'autonumber' option to flyoff and label finds.
 11. Now sorts find results alphabetically.
 12. Check python syntax and for missing scripts during compile.
 13. Make system flyoffs read-only and drawn in italics. When a NioNode is renamed, rename all of the associated flyoffs
 14. AutoNumber Flyoffs defaults to at least 4 fields so the dialog box is useful to name empty flyoffs
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What Was New in Beta 5

1. If you ping a NioNode, it will respond by flashing its LCD backlight a number of times.
2. There is a new, easier to use, Auto number dialog that replaces the old command.
3. The script editor dialog box is resizable, so it's easier to edit large scripts.
4. Removed the low quality graphics options for the GUI.
5. Added support for vector based EMF/WMF files so they scale nicely.
6. Added support for configuring RS-485 serial bridging in CABs.
7. When a unit is not yet connected to the GUI, its controls now have a transparent yellow overlay.
8. Added full scale gain selection control for line input/output cards in CABs
9. Added capability to invoke a web page from the menus (via the display_url function in default_menu.xml).
10. Added /deploy="file" command line argument
11. The System Mute Device now mutes attached CABs.
12. Fixed a bug where clearing the remote log of a NioNode that you weren't polling crashed with an unhandled exception. Also disabled 'sync' if not polling, since it doesn't make any sense in that case.
13. Added graphical lock and unlock menu items.
14. Fixed the polygon tool to reach polygons that are behind locked objects.
15. Added a CobraNet error counter to the CM-1 device.
16. CABs now mute when the NioNode that is controlling them is shutdown.

17. Removed some error logging that was printing out if you had CABs but didn't have a cable plugged into the CM-1.
 18. When resizing objects. holding the shift key down now locks width/height proportions.
 19. Reduced GUI memory usage. For instance, a large Project that used to take 220MB of PC memory now uses 150MB.
 20. NioNodes now run a web server (the NioNode Web Interface), through which you can accomplish various status monitoring and unit configuration tasks.. Type something like <http://198.90.143.30/> (substitute your NioNodes IP address) into your web-browser. An extra-special dangerous page lets you reboot or power down and restart, halt and erase the current role. This page, which has no security, currently, can be found at this address (substitute the proper IP): <http://198.90.143.30/god.html>
 21. NioNode front panel screen capture is available through the NioNode Web Interface.
 22. RATC, versions 1 and 2, are supported via TCP/IP and on the NioNode rear serial port see User Guide for more information.
 23. PASHA and XControl are supported on the NioNode rear serial port see the User Guide for more information.
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What Was New in Beta 4

1. **Duplicate Command:** Added Edit | Duplicate command (hot key Ctrl+D).
2. **Editing Grouped Items:** Fixed a bug where items in a graphical Group (Tools | Group) could not be edited.
3. **Full Bundle Range:** Fully support CobraNet bundle range (excluding the private bundle range above 65279).
4. **Fader knobs now track under mouse.**
5. **Phase 0 Security:** Features have been implemented that can give hardware protection and allow designer-designated control panels to be exported. See User Guide Security Phase 0 for details.
6. **Phase 0 Fault Policy:** Features have been added. This allows you to specify dependencies between Target Nodes. This means that a node will mute if any of the nodes it is dependent upon suffer a fault. By default, the NioNodes in an XDAB cluster are dependent on one another. See User Guide System Fault Policy for details.
7. **The 16 kHz system sample rate is longer available.** Since there are no I/O cards that support a sample rate this low, it is felt that 16 kHz is not important enough to support.
8. **Update All Out of Date Devices:** The "Tools | Update All Out of Date Devices" now works properly.
9. **ControlNode Auto Assignment:** Those devices which can only be placed on a ControlNode are now automatically assigned to the ControlNode in the Project, if there is only one ControlNode in the Project.

- 10. Power-Down Shortcut:** On the NioNode front panel, if the power button is held for three seconds, the LCD backlight will darken, and a power-down will occur when the button is released.
 - 11. Find Command:** A 'Find' menu command has been added. The results of a Find can be displayed in the design by clicking on the find results. The results can be edited by right clicking on the find results.
 - 12. Improved Locate:** Locate now opens child windows if item to be located is inside of a block. Locates are invoked by clicking on items in the compile report or by performing a Find (Edit | Find).
 - 13. Loading large Project files is much faster.**
 - 14. A System Mute device has been added.**
 - 15. Support for CAB-4n AEC cards has been added.**
 - 16. User-Defined Devices:** An install bug In Beta 3 prevented the display of User-Defined devices. This has been fixed
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What Was New in Beta 3

- 1. Devices with 'Debug' Feature:** Modulated allpass filter and modulated low/highpass filters
- 2. Browse for Image from Properties:** Added browse for image button to graphic object properties
- 3. Buttons Removed:** Buttons eliminated from Media and Python windows in order to standardize on right-click/ top level menus for all actions
- 4. Drag-and-drop from script window creates Control Scripter device**
- 5. Automatically imports math module so it's available to all python scripts**
- 6. Added user devices window. Allow for deletion of user devices**
- 7. Added GPIO for CAB 8i/8o device**
- 8. Added single-channel gain to Level category**
- 9. Added bypass parameter to gain**
- 10. Added CAB 16d device**
- 11. Control wiring nodes are now repositioned if the size of the control changes**
- 12. Removed broken printing menu item. Will be restored in later release.**
- 13. Added threaded concept to Python scripts. They run in their own thread and have a sleep.wait(ms) function that can be called. If they loop, it is a requirement that the sleep.wait function is called so the thread has a chance to exit.**
- 14. Waypoints are now sized so that wires are straight when stacked**
- 15. Added optional period knob to blinker device**
- 16. Changed maximum output gain from 0dB to +18dB in NxM mixers**
- 17. Add schedule device**
- 18. Add scheduler generator device**
- 19. Middle mouse button activates pan**

What Was New in Beta 2

1. **NioNodes now mute audio during firmware updates**
2. **Graphical group/ungroup implemented:** Items can be grouped together so they maintain their relative positions. Hierarchical groups are supported, so if a set of groups is grouped and then upgrouped, their original grouping is preserved.
3. **Python script undo: Editing python scripts now supports undo in the following operations:**
 - " undo/redo script edit
 - " undo/redo script create
 - " undo/redo script delete
 - " undo/redo script rename (via export script name conflict)
4. **Copy/Paste of control values is now supported**
5. **New control styles available:** Polygon LED' and Transparent Polygon Button styles have been added. Also, a Color option has been added to the LED/polygon LED. The LED gets its color from its string value. Currently it supports the standard SVG color names (see <http://www.w3.org/TR/SVG/types.html#ColorKeywords>), as well as HTML style RGB triplets (#RRGGBB)
6. **Improved CAB Support:** Preliminary support for CAB 8i, 8o, 16i, 16o. Supports tx/rx config and level controls, but does not support CAB GPIO as of yet.

What Was New in Beta 1

1. **Numerous GUI enhancements:** Too many to list&
2. **Project Deploy methods have changes:** The method by which you compile a Project, and deploy and connect to target hardware has changed. The new commands are Deploy, Connect, Disconnect, Emulate and Disemulate. See the User Guide for details!
3. **Project can be stored on the NioNodes:** During deploy there is an option to Save Project to Target. The Project can later be uploaded, using "File | Upload and Connect&", for editing and/or control.
4. **Odd mixer input counts no longer allowed:** Due to an optimization of the Mixer device processing efficiency, the number of inputs can only be an even number now i.e. a 3x1 is not allowed, you have to use a 4x1.
5. **Script Library:** You can import and export script functions to and from the Script Library, so that the functions are available to other Projects.

Known Issues in This Release

1. **WSE Exception:** One user has reported the connection status window popping up with all roles in error while connected to the emulator after editing the design. The log window contains a long error message for each role that says "WSE exception ... during poll_change_group" and every 5 seconds thereafter an error message for each roll that says "WSE exception ... during discover_and_connect". If this happens, disconnect, cancel the error box, save the project canceling any preset errors that pop up, and restart the application. This is still under investigation.
2. **Error upon closing NWare:** Occasionally NWare will have an error upon exit with regards to an illegal instruction or access violation of address 0x00000010. This is believed to be harmless and is still under investigation.
3. **A NioNode hardware problem has been identified:** An intermittent hardware failure can occur on some of the N6s that have been shipped (the N3s are okay). It manifests itself as either a failure of the Role to start, or a failure while running. After the failure, the NioNode's front panel status display reads: **AUDIO: OFF** and **MESSAGE: STOPPED : ROLE STOPPED**. The Remote Log for that unit will contain the lines **note piond/role_manager role is stopped** and **fault piond/role_manager role fault: role restart failed: DSP SDRAM test failed**. These units require a minor factory hardware modification to return them to working order.
4. **NioNodes connected with XDAB require LAN communications:** Currently, the XDAB interconnection between NioNodes is dependent on LAN communications - it's used to determine the physical XDAB wiring pattern between nodes, whether any nodes that are supposed to be in the ring are missing, which node is to be the XDAB clock master, and so on. This communication is ongoing, and if LAN communications fails to any node in an XDAB ring, all NioNodes assume that they cannot know that everything is still okay (that every other node is still powered up and that no cables have failed), so all go into mute (fault).
5. **Multiple XDAB clusters connected with CobraNet:** Deploying a Project with more than one XDAB clusters (ring of NioNodes connected by XDAB), which are inter-connected by CobraNet, requires an understanding of the clocking issues that arise in such a system. Proper network topology choices and CobraNet conductor settings can deal with these issues, but the topic is not yet properly documented. Multiple XDAB clusters that are clock-independent (not connected by CobraNet) work just fine.
6. **Compiler does not auto-place across XDAB:** Currently, the Project compiler does not auto-place devices across the NioNodes that are interconnected with XDAB. (It does, however, auto-place devices across the DSP chips within a NioNode.) What this means is that you must place an XDAB Device in your Project, manually wire signals to it, and ensure that the signals wired to it can be traced to a particular NioNode. If the input to an XDAB is traceable to more than

one NioNode, the compile will fail. It's not always obvious where the wiring mistake was made in your design that causes this compile failure.

7. **DHCP danger:** It is important, that if you use DHCP to dispense IP addresses for the NioNodes, that the IP address leases not be revoked once the NioNodes are running. Communications will fail and the units have to be restarted. This is not normally a problem during Project development, but not so good in an installed system.
8. **96KHz CobraNet not Supported:** Currently, if you use a NioNodes CM-1 (CobraNet interface), your Project sample rate must be 48KHz. You might think that you could get around this problem by using Sample Rate Conversion Devices (to convert to and from the 48KHz CobraNet rate), but you'd be wrong.
9. **Windows XP Service Pack 2 issues:** Be careful when using the Windows Firewall that comes with XP Service Pack 2. Be sure to allow NWare to have unblocked access to the ports that the Firewall reports. Otherwise some Deploy features will not correctly function. If in doubt about correct functionality, you should disable the firewall, restart NWare and try again.
10. **Design selections seem to fail:** Clicking on some items in the Compile Report will open a Device, but will not select anything inside the Device. This is because the item is on a Schematic Page which is hidden.
11. **Delay Report is incomplete:** The Delay Report section of the Compile Report does not give the total latency through the system - it does not include the analog-to-digital and digital-to-analog converter delays. In addition, the Delay Report is a little difficult to understand.
12. **Network broadcast storms cause NioNodes to restart:** Network broadcast storms can cause a NioNode to become so busy dealing with network traffic that the hardware watchdog, whose job it is to detect software stalls, may restart the NioNode.
13. **Networking problems reported:** A few people report trouble getting the NWare host code to discover (see) the NioNodes on a network, even though they can ping the NioNodes. This may be related to Novell networking, but we're just not sure.
14. **Green wire node coloring can be confusing:** The NWare GUI colors wires and wiring nodes green when they are part of an incomplete connection. An incomplete connection is one that contains a source but no sink, or a sink but no source. This commonly happens when using Flyoffs that have no matched partners. It also happens when you wire a circuit inside a hierarchical block, but have not wired anything to the outside of the block. Some devices placed from the menu are actually composite devices, built up from hierarchical blocks and primitives. For instance, the Graphic Equalizer and the Compressor Limiter are composites, so their nodes appear green when they are not wired. Also, the NioNode device is a composite that internally creates Flyoffs for its input and output signals. These Flyoffs are considered part of incomplete connections until they are wired to, and are reported as such in the Compile Results.
15. **Undo/Redo:** After performing a Deploy or Emulate command, the Edit / Undo X menu item says simply Undo. Invoking this item does not undo the Deploy or Emulate, but it does undo the importation of the compile results (such as device

placement information) into the design. Also, dragging some Devices into the design results in Edit / Undo text in the menu item, though performing the undo will actually remove the dragged in Device.

- 16. Large Projects are slow:** Creating and compiling complex multi-node Projects currently requires a lot of PC memory and CPU cycles, perhaps more than you have.
- 17. Device window positions and open states not stored:** NWare does not store and restore the position and open/closed state of Device windows. It also does not store which Design page is selected instead, the first Design page will be the one displayed on a re-open. So if you want the Project to present a control panel on open, copy the desired controls to the first Design page.
- 18. Front panel knob can be pulled off:** With enough force, you can pull the front panel data wheel knob off, possibly resulting in a nasty fall to the ground.