Release note for 2.0.0 BETA

Notes

IMPORTANT: When updating to BlackTrax v2.0.0 from 1.x, you must first uninstall BlackTrax v1.x before installing v2.0.0. This can be done with the v1.x installer; once run it will prompt you to remove BlackTrax. Follow the steps to remove BlackTrax, then copy the new installer into the Installation Management folder and upgrade as per normal. As BlackTrax will be installing new, please ensure the installer installs for all users on the machine.

As this is a BETA, please be mindful of possible bugs and unexpected behavior. Please report all bugs to support@blacktrax.ca.

When upgrading from v1.x, all application settings will be re-set to defaults – if you changed any default settings please verify each application to ensure your system is still configured correctly. Please see releases notes below for more information.

There is a new licensing security system used to authorize hardware devices with the BTServer. Please be sure to download the required license files and follow the instructions found here. Note that for this release, your system will only warn you if your license is invalid, but will not prevent access to any features or functionally.

Dongle Date Requirement:

August 4th 2015

Major changes:

- All new GUI design across BlackTrax, Tracker, and Follower with a fullscreen mode for BlackTrax and new simpler basic mode for Tracker and Follower
- Brand new Fixture Calibration mode
    - Multi-person calibration
    - Zoom, iris, colour, and gobo control (zoom and iris are controllable, colour is changed to white, and gobo is cleared automatically)
    - Modify fixture positions in BT directly without needing to change the BTWYG file
    - Improved calibration solver with more accurate results
    - Better reporting of calibration progress
    - Ability to jump to a specific fixture from the GUI without needing the beacon buttons to cycle through
    - Auto-calibration automatically calibrates when deleting points
- Rigid and soft frames for more flexible tracking operations and objects
- Apply changes no longer resets fixture positions
- Unified multi-fixture settings and the ability to quickly view, select and apply settings to several fixtures from across multiple chapters
- Copy and paste trackables and fixtures between chapters and within chapters (if applicable)
- Ability to create a new BlackTrax Project without first requiring BTWYG information
- Send BTWYG changes directly to BT without needed to export a .btx file

Known issues:

- When a recording is stopped in Motive with the Edit Tools window open, Motive will crash
- Motive reconstruction bounds are inverted on the X axis (minimum X actually affects the maximum X)
- Only 12-bit operation is supported (8-bit systems currently do not work)
- The messages widget can sometimes conflict with other pop ups, resulting in the GUI appearing to be locked and unresponsive – Please hit escape a couple of times to back out of the conflicting pop up and resume GUI operation
- Selecting to and from BTWYG from BT is currently not working
- Displayed calibrated fixture position in BTWYG is not currently working
- If you apply changes while a fixture pan-flip is happening, then the intensity of that fixture is 'locked' until you change chapters
- Creating a fixture train from the terminal currently does not work (previously programed fixture trains will continue to work)
- Beacon widget position reporting sometimes stops updating until you apply changes
- Inactive LEDs on the LED tab in beacons do not clear unless the centroid stops reporting position
- Project Properties file path only updates when a project is opened (if you save as, the path is not updated)
- Fixture selection can sometimes unselect your selection with repeated left clicking of selected fixtures
- Fixture settings with drop down menus that have inconsistencies between several fixtures are not currently shown
- You can make a frame with the same number as a real beacon causing the position to jump between the beacon and the frame
- Frames will still report removed beacons in Trackable Details even if they are not contributing to the final solution
- Manual frame orientation offsets scale incorrectly, causing large rotation operations; please use the set home function to align the rigid body with your model
- Old frames will not clear from the project when creating a new project, they must be manually deleted if you no longer wish to use them
- Motion indicator in the status bar can become disabled if the GUI is restarted while motion data is present
- Fixtures without iris may display they have iris enabled in table view, if set through multi-fixture settings
- Tracker and Follower's summary page may not always update connection status until basic/advanced mode is toggled
- Imperial units are not readable in the new beacon design
- Running chapters widget currently doesn't close
- Show reporting doesn't display the correct zoom/iris size
- Show reporting displays the zone patch ID instead of the zone name

Firmware:
2.7.0.41

Secondary Applications:
BTWYG: 2.35.50.202
Motive: 1.8.23633

Compatible with RTTrP Versions:
6
1.8.3
1.8.7

Features and Fixes:

Bug

- *Fixed: Apply Changes will no longer return fixtures to console control momentarily, meaning it is now safe to apply during a show*
- *Fixed: BlackTrax will no longer hold DMX channels for fixtures when it enters a chapter until it sees motion data*
- *Fixed: Follower will no longer re-send the console's passive channel values (values that can be controlled by BlackTrax, but currently aren't)*
- *Fixed: BlackTrax will no longer douse out all fixtures if no DMX input is present*
- *Fixed: GUI would crash while updating BTX information during fixture calibration*
- *Fixed: Opening a .btprj file from Windows Explorer itself will actually launch the project (and not just the GUI with a blank project)*
- *Fixed: Hitting cancel on the GUI save project prompt would close the GUI anyway without saving*
- *Fixed: Zones may not fade in/out correctly during chapter changes in certain situations*
- *Fixed: Pan slider in fixture calibration mode showed incorrect pan values on the slider/value*
- *Fixed: Saving the beacon list in Tracker with nothing in the list doesn't create a blank file*
- *Fixed: Raw LED position fed into either a classic beacon or a rigid/soft body, but not both*
- *Fixed: Library selection is no longer cleared when removing a fixture from a chapter or other editing operations*
- *Fixed: Re-sorting a table with a selection will retain the current selection*
- *Fixed: Swapping from a chapter with an active fixture delay to the Standby chapter and back will no longer resume tracking from the last known pan/tilt of the delayed fixture*
- *Fixed: Pan-Flip scroll bar could be hidden by dragging a hidden drag bar*
- *Fixed: BTWYG displayed the wrong log item when enabling/disabling the 'Motion from Third Party Stream' option*
- *Fixed: BTWYG was not displaying offsets or delay correctly*
- *Fixed: RTTrPL sent multiple output modules per universe instead of just one containing all universes*
- *Fixed: RTTrPL needed to hear Art-Net or sACN to output, this is no longer the case*

New Feature

- *All new GUI design*
    - *All new view and widget design that is fully customizable*
        - *Re-arrange the GUI anyway you prefer, and create the layout that works for you*
        - *An option to reset the views back to factory default at any point or close all open docking widgets*

        - *Three core views for Live, Edit, and Calibration*
            - *Live view is for running and monitoring your project*
            - *Edit view is for chapter programming and modifications*
            - *Calibration view is a parent for multiple sub-views for each type of Calibration*
                - *Fixture Calibration is for calibrating your moving light fixtures*
                - *Frame Calibration is for creating and managing rigid and soft body frames*
        - *New colour scheme, colours, and icons for a more modern look*
        - *Larger icons, widget headings, and buttons for touchscreen users*
        - *BlackTrax splash screen*
        - *Be able to detach any widget and move to an additional monitor*
        - *Traditional menu structure (file, edit, view, etc.)*
        - *All new chapter editor design for trackables and fixtures*
            - *Trackables and fixtures are now 'bubbles' with either the trackable name or the spot ID front and centre*
        - *All new beacon and trackable design*
            - *Introduced beacon/frame types, indicated by colour on the header of the beacon: Blue = Classic Beacon, Orange = Rigid Frame, and Purple = Soft Frame*
            - *Visible indicator is shown via status light next to the name*
            - *Dropped frame is now indicated by the centroid icon turning yellow*
    - *Live view offers a more in depth review of the Trackables and Beacons actively running in the system with more options*
        - *Docking widgets available exclusively in Live view:*
            - *Running Chapters (for monitoring and selecting the active chapters)*
            - *Modules (connected modules such as Tracker, Follower, and BTWYG)*
            - *Trackable Details (displays the selected Trackable's classic beacons if the Trackable is patched to a rigid or soft frame)*
    - *Edit view has been updated and re-designed to allow more functionally and more flexibility while programming your show*
        - *Docking widgets available exclusively in Edit view*
            - *Edit Chapters (create, copy, and move chapters)*
            - *Libraries (a collection of all trackables, fixtures, and zones available for use in the project)*
            - *Fixture Settings (all settings that can be applied to a fixture; shows current fixture or collection of fixtures' settings)*
            - *Trackable Settings (modifies selected trackable's settings)*
            - *Terminal (command line level for entering editing level commands)*
    - *Fixture Calibration view is now a sub-view of Calibration and provides access to all fixture calibration features and functions*
        - *Docking widgets available exclusively in Fixture Calibration*
            - *Calibration Control (change the way that the fixtures operate in calibration mode including their parameters)*

            - *Calibration Points (the list of calibrated fixture points for the select fixture; allows you to manage points)*
            - *Calibration Fixture Properties (a report of the XYZ and rotation position of the fixture, as well as intrinsic perimeters)*
    - *Frame Calibration view is a sub-view to manage and create rigid and soft frames*
        - *Docking widgets available exclusively in Frame Calibration*
            - *Frame LEDs (the order and list of all LEDs that make up the selected frame)*
            - *Frame Construction (the current position and orientation of a rigid or soft frame, if applicable, as well as apply centroid and orientation offsets and the ability to set a home position for orientation)*
    - *Docking widgets available globally across all views*
        - *Beacon Patch (the new Beacon Assignment page, where you patch beacons to Trackables)*
        - *BTWYG Patch (the old WYSIWYG BTX tab in v1's System)*
        - *Beacons (a table view of all beacons in the system, as well as their battery status and visible indicator)*
        - *Messages (errors and status updates about the state of the system)*
        - *System Log (in-depth reporting of system messages and actions to other modules)*
        - *System Configuration (settings for the way BlackTrax operates)*
        - *Project Properties (settings specific to the current project)*
    - *New status bar design*
        - *New icons and status*
        - *Clearer design for changes, the red arrow to indicate a new change has been replaced with a glowing light that is blue when 'changes are live' and flashing red when 'changes are blind' – both colours have text to accompany the status*
        - *Merging Channel Value has moved to the status bar*
        - *Indicator for incoming motion is now a glowing blue man*
        - *Indicator for incoming DMX is now two flashing arrows*
        - *New indicator for incoming BTWYG updates*
        - *New button to access the new Messages window*
- *All new Fixture Calibration mode*
    - *Multi-person calibration – assign different beacons to different fixtures so several people may calibrate lights at once*
        - *Assign beacons by selecting the fixtures you wish to assign, then click on the assign beacon button and select your desired beacon*
        - *All fixtures currently assigned to the same beacon will be queued while one fixture becomes the actively calibration fixture; as points are collected, the fixtures will cycle though*
        - *Each beacon will receive a unique colour to easily tell multiple beacons apart in a list*
    - *Zoom and iris control over calibration fixtures, allowing BlackTrax to make the beam narrow*
        - *By default, the zoom and iris will affect all fixtures, but you may affect only a single fixture by unchecking 'apply globally'*
            - ***Note:** Must have at least one fixture selected to modify zoom and iris*

- *Colour and gobo from the console is automatically cleared when fixtures are actively calibrating (fixture turns white)*
- *Improved calibration solver, resulting in more accurate results for tougher fixtures like the Alpha Profile 800ST*
- *Reporting of calibration status has more information now including how many points each fixture has, their assigned beacon, and that fixture's current status (calibrating, queued, or not assigned)*
- *Jump to a specific fixture by double clicking the desired fixture's queued status, making it the actively calibrated fixture– useful for highlighting one fixture in a queue without needing to alter the queue itself*
- *New calibration status: Yellow – indicates the fixture is currently using original position instead of calibrated fixture position, but it does have enough points to calibrate*
- *You can now modify fixture properties directly in BlackTrax without needing to update the WYG file, this is done by typing in the Calibration Fixture Properties widget's fields and hitting enter*
  - *Useful for when fixtures are hung backwards in WYG, or for when fixtures are significantly off in the real world, you can modify the required fields (RZ in the hung backwards case, or the X, Y, or Z in the latter case) to align the fixture the correct way*
  - ***Note:** Calibration operations always resets these fields, meaning calibration, reset or clear operations will revert to either original WYG position, or calibrated position*
- *Clear selection option was added so you don't need to delete either all fixture's data or just one at a time*
- *Remove a fixture from a group by right clicking the fixture while in that group and selecting 'Remove from Group'*
- *Auto-calibration automatically activates now for point deletion*
  - ***Note:** You must still have 5+ points for auto calibration*

- *Rigid body and soft body frame creation*
  - *Create new rigid bodies – a collection of LEDs and beacons that make up a 'rigid' object (i.e., a table, box, etc)*
    - *Use several LEDs to construct a single object, so long as you have a minimum of three visible at any one time*
    - *Be able to view the beacon an LED belongs to*
    - *Define and track a single centroid that can be offset and moved around*
    - *Give a rigid body a name to easily identify it later*
    - *You can set the home orientation via the 'Set Home' button, and the current orientation of the object will become the 'home' orientation (meaning Roll, Pitch, and Yaw = 0,0,0)*
    - *Orientation is rotatable to fit your object*
    - *So long as three LEDs are always visible, the centroid will not change*
    - *Add LED positions to the solution as it is constructing – no need to see all LEDs at once*
    - *Ability to reset and reconstruct a rigid body without re-loading it*
    - *The initialization of the rigid body is saved within the project and loaded next time you open it*
      - ***Note:** If the original solution of the rigid body changes (LEDs move drastically), then the solver will try and*

adjust accordingly. Keep this in mind for projection mapping applications as the centroid may change.

- *Create new soft bodies – a collection of LEDs and beacons that make up a 'soft' or 'flexible' body (i.e., a person, inflatable object, etc)*
  - *Use several LEDs to construct a single object that can be flexible (minimum one LED is required)*
  - *Be able to view the beacon an LED belongs to*
  - *A centroid of all visible LEDs will be calculated and applied; this centroid cannot be manually adjusted and it will change depending on how many LEDs are visible at any given time*
  - *Give a soft body a name to easily identify it later*
  - *So long as one LED is always visible, a position will always be calculated*
  - ***Note:** Useful for lighting, audio, and effect based projections where the absolute center of an object with several beacons is not required so long as the general position is tracked as the centroid will jump around, depending on how many active LEDs is visible*
- ***Note:** To apply Frames once constructed or reset, you must click 'Accept Frames'*

- *You can now copy and paste trackables from chapter to chapter, and they will retain all their assigned fixtures and fixture settings*
  - ***Note:** Trackables already assigned in the chapter will not be copied, and fixtures already present in the new chapter will not be copied either*
- *You can also copy and paste fixtures between chapters or between trackables in the same chapter*
  - ***Note:** Fixtures already assigned in the chapter will be overwritten with the new fixtures and their new settings*
- *Send BTWYG updates directly between BT and BTWYG without the need of a .btx file*
  - *In BTWYG, go to Live Mode and ensure you are connected to BlackTrax via the BTX Panel. Once connected, click on BTX Apply. In the BlackTrax GUI, you can apply the new changes by going to File -> Apply BTWYG Updates*
- *All new Trackable and Fixture editor, with Trackables at the top and Fixtures on the bottom*
- *Selection of multiple fixtures in the editor itself, allowing for multi-fixture settings to be applied directly from the Fixture Settings widget, without the need to go to a separate window*
  - *Shift, CTRL, or drag select to select multiple fixtures or Trackables and right click to select the active fixture or Trackable*
  - *There is always one active fixture, which will display it's settings in fixture settings; to change the active fixture, right click on the fixture (this is true with trackables as well)*
  - *Fixture setting widget now displays inconsistency with the selected fixtures (for example, if Spot 1 has zoom set to 1m and Spot 2 has zoom set to 2m, the zoom field would highlight grey indicating a difference)*
  - *Multi-fixture settings apply instantly, without needing to apply them separately (apply changes is still required to send changes live)*
- *You can now view which fixtures are used across multiple chapters via the Several Chapters tab in Edit view*

    - *Select multiple chapters in Edit Chapters, go to the Several Chapters tab and select 'Scan Chapters' – you will get a list of all fixtures found in those chapters*
    - *Selecting multi-fixtures works the same way as in single-chapter view*
    - *You can turn on and off auto-select via the check box (for large selections such as 4000+ fixtures, it may be advised to uncheck auto-select and use manual selection via the 'Make Selection' button once all fixtures are selected)*
- *Fixtures can now be displayed in either an icon view or a table view; table view shows several fixture settings by default making it easy to find which fixtures have specific parameters enabled*
    - *Toggle different fixture settings by the following option drop down menu*
- *Search for fixtures by spot ID once assigned to a trackable in the fixture editor*
- *A new button to deselect all selections in Edit view*
- *The currently selected chapter ID and name that you are editing will be shown at the top of the centre area in Edit view*
- *Full screen mode for the BlackTrax GUI*
- *Under the file menu, there is now a list of recently opened projects*
- *You now have access all modules from the GUI from the Modules menu – this includes Tracker, Follower, and Tracking Adapter*
- *New small size for the beacons and trackables in Beacon Patch so you can fit more icons in the same space*
- *Create Trackable groups in the library widget to be used in the Live view*
- *Show report is now exportable, containing all fixture and trackable programming – exporting options are either .html (for viewing) or .xml (for data input)*
- *The GUI can now re-load its show state if it crashes*
    - *If the GUI crashes and Follower is running, next time the GUI launches, it will request show data from Follower – this puts the GUI in a ready to use state when the same project is re-opened as the GUI will be placed in the same chapter and mode as it was previously, resulting in no noticeable change to the lighting fixtures*
- *The ability to turn logging on and off in Tracker and Follower*
    - ***Note:** By default, logging is disabled in all Tracker, Follower, and the GUI*
- *Unicode support*

Improvement

- *More detailed reporting of the system while running via Live view*
    - *Centre area now displays either all trackables, per chapter trackables, or Trackable Groups (new feature)*
    - *Visible trackables can be displayed either in icon view (large icons with lots of information) or table view (more trackables visible with simple on/off indicator)*
    - *Trackable Details widget will show the classic beacons assigned to the selected Trackable, showing you individual battery status and centroid visible indication*
- *Create a new file without the need of a .btx file*
- *Tracker, Follower, and Tracking Adapter all now have save configuration buttons, so you do not need to reboot the application in order to save settings*
- *BlackTrax GUI now saves configuration during a project save so you do not need to reboot the application in order to save settings*

- *New configuration file saving structure – All BlackTrax applications have discarded the start in folder approach and are now saving all configuration files to c:\bt_run_time. This means that you can now open the applications from any location without having settings reset to defaults*
    - ***Note:** This means that when upgrading from v1.x, all application settings will be re-set to defaults – if you changed any default settings please verify each application to ensure your system is still configured correctly*
    - ***Note:** If you have multiple Tracking Adapters set up for different outputs via different start in folders, you will need to create new shortcuts for each output, and change the target folder by this command: --instance="Output name here". An example would look like: "C:\Program Files (x86)\CAST Software\BlackTrax\tracking_adapter.exe" --instance=Output 1". You may also change the icon for the adapter via the change shortcut icon in Windows*
    - ***Note:** When upgrading from a BETA product to a Release product, application settings will be re-set to defaults*
- *View the currently opened project from project properties*
- *When the GUI launches, it will open an empty file by default*
- *BlackTrax will now ask you to save your project when closing the software*
- *Entering fixture calibration mode while in another view will take you to Fixture Calibration view*
- *BlackTrax now references fixtures by spot ID instead of by patch information (this will allow you to update your patch information for fixtures without needing to reprogram chapters)*
- *Toggles have been added to show LED Index and LED Pattern in Tracker's Beacon list*
- *Tracker can now show more than three LEDs per beacon (to support frames)*
- *Fixtures in the Library widget no longer affect the Fixture Settings widget*
- *Renamed prediction to sensitivity and labeled the various prediction and delay options clearer*
- *Selection in fixture calibration mode no longer affects the queue of the calibrating fixtures*
- *When assigning multiple fixtures a beacon, a progress bar appears indicating status if you assign several fixtures at once*
- *Trackable renaming is now done directly from the library widget*
- *Enabling and disabling trackable orientation has been moved to the trackable settings widget*
- *Add a column to see the original WYG Trackable in the library widget*
- *Per chapter beacons are now reflected in Live view*
- *Beacon widget has been updated to show battery status and a visible indicator in the widget itself*
    - *Also a 'Detailed Beacon Patch' button was added to open the Beacon Patch window*
- *The fixture calibration group 'all' will now always appear at the top of the list (instead of alphabetically)*
- *GUI now saves widget locations in a configuration file*
- *All tables sort by spot ID by default (instead of fixture name)*
- *Removed the ability to disable negative or positive tilt in fixture settings*
- *Beacon drag and drop now works in more places (dragging from the beacon patch or beacon widget to the calibration fixture view for example)*
- *Follower can now change between Art-Net and sACN from summary page*

- *Sorting improvements to fixtures with sorting by Spot ID*
- *When you enable 'For Tracking Adapter' in Tracker, the network settings automatically update to enable output to Tracking Adapter (or direct output from Tracker, depending on the state of the checkbox)*
- *Cue and OSC Adapter are included in the start menu*
- *New command line syntax*
- *Beacon Cursor mode has been removed*

Design Review

- *Pop up messages now appear in a new Messages widget that will fade out after five seconds*
    - *See a log of system messages as well as system errors*
    - *Accessible via the status bar's Messages icon*
- *Tracker and Follower have been updated with a 'basic' and 'advanced' mode*
    - *Basic mode shows a summary page with the different connections and an indicator to show packet activity*
    - *Advanced mode unlocks new tabs that organize the rest of the application's settings more efficiently*
- *New keyboard shortcuts to accommodate new docking widgets – most notably Apply Changes is now CTRL+ENTER*
- *Renamed Calibration Mode to Fixture Calibration as there are now multiple types of calibration*
- *Added a note in the Assign Beacon page to remind the user to use LED1 on the calibration beacon(s)*
- *Condensed the System Configuration tabs into one single widget*
- *Beacon Patch can now be viewed horizontally or vertically*
- *Changed the fixture setting's number inputs from 3 decimal places to 1 decimal place in most cases and changed stepping of most settings to a more intuitive value*
- *In the libraries widget, renamed "assigned to" to "assignment"*
- *Fixtures are now displayed by spot ID instead of by fixture name and spot ID in most places*
- *Removed the spot ID from the fixture name section and replaced the patch info column with a spot ID column in the libraries widget*
- *Renamed Visualizer to BTWYG in the modules widget*
- *Removed '(N.P.)' from the 'Screen Coordinate Format' option in BTWYG*
- *In Tracker and Follower, improved titles for recording tracking data*
- *Tracker and Follower's inputs and outputs are now labeled more intuitively, following a Listen/Output Address and a Subscription Address labeling system*
- *In Tracker and Simulator, Natural Point is now Motive*
- *In Tracker and Simulator, Renamed TK Listener to Router*
- *In Tracking Adapter, filtering is renamed to Acceleration and Velocity with an enable check box*
- *In Tracking Adapter, renamed beacon position to centroid position*
- *In Tracking Adapter, remove the '(Motive)' from the screen coordinate system option*
- *Tracking Adapter now displays working folder*