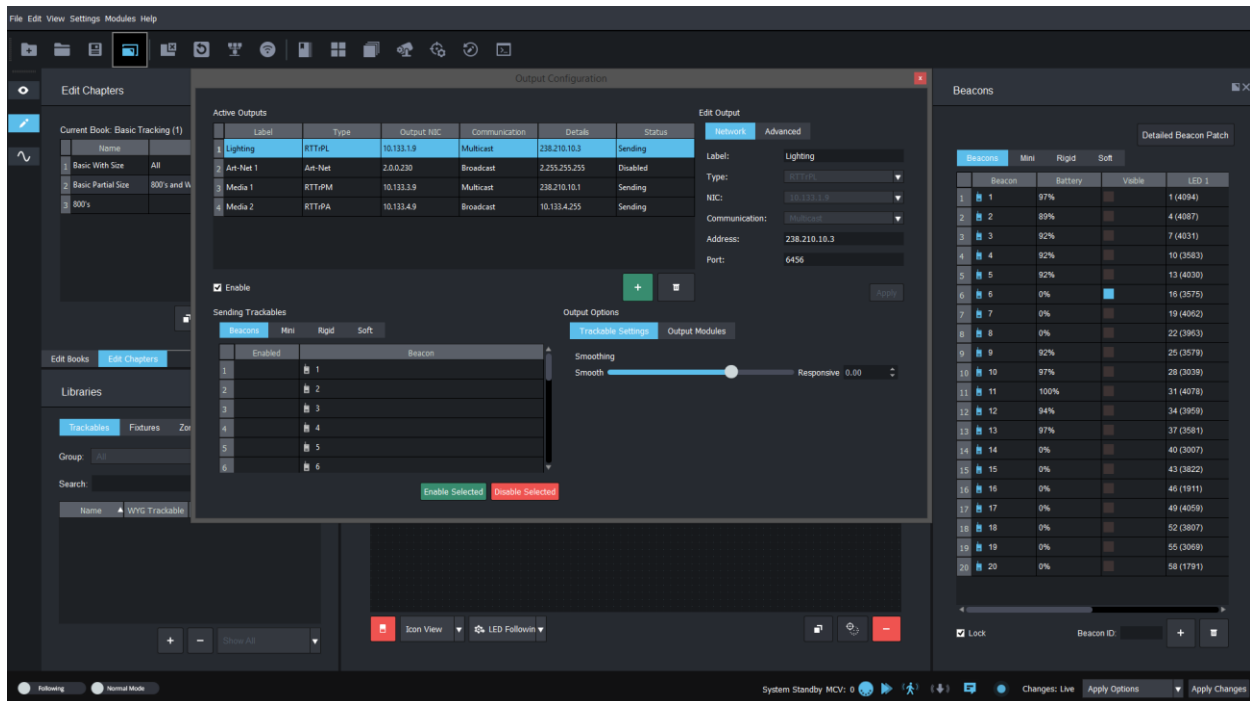# Release note for 2.1.0 BETA

Notes

As this is BETA, please be mindful of any bugs or issues you may come across and email support@blacktrax.ca with any findings.

The Beacon List is defaulted to locked as of this release and every time the GUI is opened and apply changes is pressed. Be sure to unlock the list when adding or removing beacons from the Beacon List.

When creating new RTTrPM and RTTrPA outputs, beacons must be added to each output as opposed to automatically added when motion is seen. This should eliminate extra traffic on the network, and reduce confusion between rigid/soft bodies and classic beacons when received by third parties.

Tracking Adapter is no longer able to be opened directly from the .exe without an instance present. Please refer to the new Output Configuration widget in the Main GUI to configure your RTTrPM outputs.

It is recommended to 'Reset BTEngine Settings' when upgrading to this release to ensure that any previous configurations from previous versions are re-synced to the Main GUI.

Projects saved with BlackTrax 2.0.5.9853 (Weeknd Build) will not be compatible with this release currently.

It is advised to revert all projects back to Point Cloud v2 for the time being as there have been some stability issues reported using Point Cloud v4.

Motive Dongle Date Requirement:

July 26th 2016

Major changes:

- Output Configuration widget has been added to add, remove, and edit all outputs from BlackTrax including RTTrPL, RTTrPM, RTTrPA, and Art-Net
- Tracker, Follower, and Tracking Adapter's GUIs have been hidden and functionally moved to the Main GUI to simply the entire BlackTrax experience
- Auto Douse and Smooth Pickups are two new lighting intensity features to help automate when fixtures turn on and off based on visible position
- Undo and Redo have been added for editing operations in Edit View
- New BlackTrax System Update installer that displays currently installed versions with recommendations on which applications to update, as well as a new overview of the complete package installation progress

Known issues:

- Status in Output Configuration can get out of sync and report incorrect status
- Art-Net output NIC cannot be edited after creation
- Monitor is not uninstalled when uninstalling BlackTrax
- Monitor may not restart before changes are applied (if you manually launch Monitor, it will still launch)
- Undo stack doesn't undo all the way to the defaults
- Unable to delete multiple outputs from Output Configurations at once

Firmware Package:
v2.7.0.41

Build Numbers:
BlackTrax: 2.1.0.9914
BTWYG: 2.37.60.206
Motive: 1.10.1.3.28991

Server Version Requirement:
July 2016

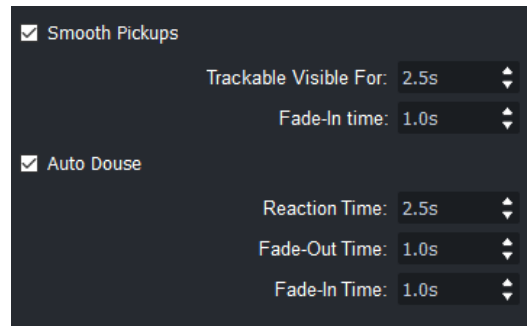**Compatible with RTTrP Versions:**
6
1.8.3
1.8.7

Features and Fixes:

New Feature

- *Auto Douse and Smooth Pickups add two additional features that give even greater control of when lights turn on and off*
    - *Auto Douse will ensure the fixture is only on when the Beacon is visible*
        - *If all LEDs of the patched beacon become hidden, Auto Douse will start to fade the fixture to 0 (from console control) after the reaction time is complete*
        - *Once at least one LED is visible again, the fixture will fade in from 0 (back to console control), after the reaction time is complete*
        - *Reaction time is the continuous time required for motion to be visible, or to be hidden before the fade time starts*
        - *Reaction time is user controllable, but applies to both fade in and fade out operations*
        - *Fade in and fade out times have individual user-definable times*
    - *Smooth Pickups are like Auto Douse, but are a onetime event per chapter*
        - *Auto Douse works throughout the course of the chapter, whereas Smooth Pickups only check for motion at the beginning of the chapter*
        - *If motion is not seen at the time of chapter entry, BlackTrax will automatically douse the fixture to 0*
        - *Once motion is seen, and after the reaction time is complete, the fixture will douse up (to console control) over the fade time specified*
        - *Once the Smooth Pickup is complete, the Smooth Pickup feature will turn back off for the remainder of the chapter and will be enabled again once the chapter is changed to a chapter with a new fixture (relative to the previous chapter, and only if Smooth Pickups are enabled for that fixture)*
    - *Both features are disabled by default and found in Fixture Settings*

- *New widget to manage all outputs from BlackTrax called Output Configuration*
  - o *Ability to create and modify RTTrPM, RTTrPA, and Art-Net outputs*
    - ▪ *Only one Art-Net output can be created*
    - ▪ *Art-Net is defaulted to broadcast and can only be sent on 2.x networks*
  - o *Monitor output statuses via the Active Output table to see what is sending, disabled, and disconnected*
  - o *RTTrPL is also present in the table, but not editable or removable although it can be disabled (it always is at the top of the list)*
  - o *Configure RTTrPM and RTTrPA outputs' perimeters*
    - ▪ *Ability to set a unique name per output*
    - ▪ *A drop down of all IPs present on the system will appear when a new output is created for easy selection (to refresh this list, reboot the GUI)*
    - ▪ *A new drop down to select the sending type (multicast, broadcast, or unicast) and automatically configures the address field with the corresponding IP information*
      - ▪ *Broadcast will be based off the selected NIC for the output, Multicast will populate with the default for the type of output, and Unicast will be blank ready for user input*
      - ▪ *Address and Port fields are editable per output, where applicable, if the user desires to use setting outside of the defaults*
    - ▪ *Which beacons (classic, mini, rigid, and soft) are sending for RTTrPM and RTTrPA outputs*
      - ▪ *Ability to select several beacons at once and select Enable/Disable selected to send to third parties (by default no beacons are sending to third parties)*
      - ▪ *Rigid and Soft Bodies display their name instead of Beacon ID now*

- Beacons will send to Tracking Adapter at Apply Changes now, regardless of active motion
  - What RTTrPM/A modules are sending per output
    - If Acceleration and Velocity is disabled Smoothing is disabled (likewise if Output Raw Position is enabled, Smoothing is also disabled)
  - Configure advanced functions of RTTrPM/A such as coordinate system and orientation module format
  - Based on feedback, a warning will appear to alert the user when two outputs are created with the same port number
  - When a new RTTrPM/A output is created, and Apply Changes is pressed, a Tracking Adapter or OSC Adapter will be started in the background
    - If a running Tracking Adapter or OSC Adapter is found running that is not part of the project, it will be closed
    - If a project is opened and the saved outputs' respective modules are not running, they will be opened at Apply Changes
  - Apply Changes (Configuration Changes) must be pressed to apply output changes
    - Apply (under Edit Output) must be pressed before Apply Changes is pressed to apply network changes
  - When Tracking Adapter or OSC Adapter is running in the task tray, and Windows is attempting to shut down, it will no longer attempt to prevent shut down with a confirmation message
  - Can be found under the Settings Menu
- New widget called Undo Stack has been added to Edit View
  - You can now undo and redo changes done in Edit View, such as chapter editing, Trackable renaming, and fixture settings
  - Using the widget, you can also see a history of editing operations and jump back to any editing operation at any point
  - CTRL+Z and CTRL+Y Undo and Redo respectively
  - Using the terminal will clear the undo history
- New BTEngine module called Monitor
  - Responsible for communicating and commanding multiple Tracking Adapters via the Main GUI's Output Configuration widget's settings
  - Runs in the task tray and is opened with BTEngine and every time Apply Changes is pressed with Configuration Options enabled or the project is saved
    - If new configurations are needed to be sent to Monitor/Tracking Adapters, the first Apply Changes will start Monitor and a second Apply Changes will push the necessary configuration once the connection is established

Improvement

- Major features and functions of Tracker, Follower, and Tracking Adapter have been migrated to the Main GUI
  - GUIs for Tracker, Follower, and Tracking Adapters have been removed

- *You can monitor the status of each module in the Task Tray or in the Module Status widget in the Main GUI*
  - *Restart and exit all modules now from Module Status by right clicking, or double clicking to start them*
  - *Tracking Adapter and OSC Adapter now appear in Module Status with the their instance name in brackets*
  - *Tracking Adapter and OSC Adapter now appears in the Task Tray as well, with the instance name in the tooltip*
  - *Tracking Adapter is no longer able to be opened with no instance specified, meaning launching directly from the .exe is no longer possible*
- *Modules continue to run in the background and the Main GUI will send the required commands to control them*
- *A new Apply Changes Option has been added called 'Configuration Options' that enables all BTEngine and Output Configuration sending*
- *When the Main GUI saves the project, it will also send a command to have all modules save their individual configurations as well*
- *Backgrounds modules are now referred to as the 'BTEngine' collectively*

	Beacon	Battery	Visible	LED 1	LED 2	LED 3
1	1	67%	☐	1 (4094)	2 (4093)	3 (4091)
2	2	93%	☐	4 (4087)	5 (4079)	6 (4063)
3	3	93%	☐	7 (4031)	8 (3967)	9 (3839)
4	4	93%	☐	10 (3583)	11 (3071)	12 (2047)
5	5	96%	☐	13 (4030)	14 (3965)	15 (3835)
6	6	85%	☐	16 (3575)	17 (3055)	18 (2015)
7	7	72%	☐	19 (4062)	20 (4029)	21 (3966)
8	8	96%	☐	22 (3963)	23 (3837)	24 (3831)
9	9	82%	☐	25 (3579)	26 (3567)	27 (3063)
10	10	61%	☐	28 (3039)	29 (2031)	30 (1983)
11	11	69%	☐	31 (4078)	32 (4061)	33 (4027)
12	12	75%	☐	34 (3959)	35 (3838)	36 (3823)
13	13	57%	☐	37 (3581)	38 (3551)	39 (3067)
14	14	89%	☐	40 (3007)	41 (2039)	42 (1919)

- *Tracker's Beacon List is now controlled via the Beacons Widget in the Main GUI*
  - *You can lock and unlock the Beacon List from the checkbox that says 'Lock'*
    - *By default, the list is locked when a new project is loaded and when apply changes is pressed*
  - *You can add and remove classic beacons from the new add and remove buttons*
    - *All beacons will follow the preset rule (Beacon 1 = LED 1, 2, 3, Beacon 2 = LED 4, 5, 6 etc)*
    - *When adding beacons, you can enter either a single beacon ID or a range (like 10-45)*
- *Follower's Art-Net/sACN toggle is now controlled from Project Properties (ie when you change the setting for the Main GUI, you are also changing it for Follower)*
- *Recording lighting and tracking data is now possible from the Main GUI via the keyboard shortcut CTRL+R*
  - *Pressing it once will start the recording in both Tracker and Follower*
  - *Pressing it again will stop the recording*
  - *All files are saved in c:\bt_run_time*
- *Tracker's Noise Filter is now controlled via the System Configuration widget*
- *Reset Tracker and Follower settings via the Settings Menu option called 'Reset BTEngine Settings'*
  - *This will reboot Tracker and Follower*
- *Local Dampening has new smaller defaults that are more realistic based on feedback*
- *RTTrPM and RTTrPA outputs default to stage coordinate system now*
- *BlackTrax and Follower will auto create a dump file in C:\bt_run_time if they crash (only the latest dump file will be kept, and only for BETA releases) – useful for tech support and troubleshooting when contacting CAST*

- *Motive Template defaults to Point Cloud v2*
  - ***NOTE:*** *It is advised to revert all projects back to Point Cloud v2 for the time being as there have been some stability issues reported using Point Cloud v4*
- *New start screen for BlackTrax System Update to compare version numbers of currently installed versions vs update versions and select which applications to be installed*
  - *Required updates will be highlighted in green and automatically checked for installation*
  - *Matching versions will be yellow and unchecked by default*
  - *If the server is running a version newer than what is included in the update, it will be red and unchecked by default*
- *A new installation screen during install now displays progress of Motive, BlackTrax, and BTWYG installation*
- *BlackTrax System Update will now check for server compatibility before running and alert the user if the server OS is not compatible*

Design Review

- *Tracker, Follower, and Tracking Adapter have been removed from the Modules menu and replaced with 'BTEngine'*
  - *Clicking BTEngine will start Tracker, Follower, and Monitor if they are not already running*
  - *Increased the size of the Modules Widget by default*
- *View LED patterns within the Beacons Widget*
- *Changed the Visible and Radio column colours in Live View to Green instead of Blue*
- *Unified 'Auto Spot' spelling across GUI*
- *BlackTrax System Update no longer shows in system tray*
- *BlackTrax System Update will always stay on top when running*