INTRODUCTION

GroundControl FS Software / Firmware Upgrade

New software versions are available for the GroundControl™ Followspot Controller Main Board, Switch Board and GC Longthrow.

Summary of Changes

GC Main Board v3.09 change log:

+ Implement Solo Mode to allow only one fixture on a 4-Way switch to be active at a time.
+ When pan/tilt are transitioning from console control to GroundControl, the move is now more graceful.
+ Retain saved reticle position through a camera reset command.
+ Use incoming console DMX values immediately when a followspot is found.
+ Fix handling of persistent data memory sector wrap to avoid main board lockups.
+ Do not light the encoder paging button LED until a valid framing fixture has been identified.
+ If fader mech is disabled, only re-enable fader for Manual Control menu (not for other menus) to avoid inadvertently moving the mechanism.
+ Add throw distance channel to GCLT footprint.
+ In the absence of incoming DMX, set GCLT CTW default position to open.
+ Update GCLT fan names for fixture log messages.
+ If a fixture stops responding, keep attempting to communicate with it and alert the user.
+ Enhance control channel command processing logic to avoid incorrect command interpretation.
+ Fix break & MAB timing to make RDM comm more robust.
+ Add extra camera commands to ensure compatibility with 10X model cameras.
+ Look for the 4-Way Switcher box earlier after power up to ensure that fixtures are found in the correct order, preventing unnecessarily erasing saved presets.
+ Add log messages for start/end of downstream module downloads.
+ Add log messages if truss or switcher pings drop off and when they are re-connected.
+ Increase touchscreen accuracy.

Note: Ensure to note unit configuration settings prior to update. Due to a fix in the handling of persistent data in this version, updating some units may result in altered controller configuration.

GC Switch Board v3.00 change log:

+ Support for all revisions of Switch Board.
GC Longthrow v1.00 change log:
+ Add yoke fan information to user interface.
+ Improve framing rotate repeatability.
+ Enable framing group test in downstream fixtures.
+ Divide designer color wheel into 6 panels instead of 8.
+ Adjust designer color wheel motor parameters.

GC Bad Boy change log:
+ No changes.

GC Best Boy change log:
+ No changes.

GC Truss Box change log:
+ No changes.

GC 4-Way change log:
+ No changes.

**Latest Software and Firmware Versions**

The current firmware/software versions are shown in the Information menu. The latest versions are as follows:

<table>
<thead>
<tr>
<th>Firmware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truss Box: v1.02 3/7/2016 16:13</td>
<td>GroundControl: v3.09 07/07/2017 15:30</td>
</tr>
<tr>
<td>Switch Board: v3.00 07/28/17 12:42</td>
<td>GC Bad Boy: v0.06 3/9/2016 11:42</td>
</tr>
<tr>
<td>4-Way Switch: v0.01 02/25/2016 10:08</td>
<td>GC Best Boy: v0.05 3/9/2016 9:00</td>
</tr>
<tr>
<td></td>
<td>GC Longthrow: v1.00 08/11/2017 10:12</td>
</tr>
</tbody>
</table>

**Note:** You may need to update some of the devices if they do not match the latest versions.
New "Solo Mode" feature with 4-Way switch

When Solo Mode is enabled, only the fixture which is actively selected by the GC Controller will respond to DMX. All other connected fixtures will black out and hold their positions until they become actively selected.

When Solo Mode is disabled (which is the default state), all fixtures that are connected to the 4-Way Switch but are not actively selected by the GC Controller will respond to the connected DMX console, behaving as standard moving lights. If no DMX is present, the non-selected fixtures will hold their position.

Solo Mode state can be toggled in the Options window.
UPDATING SOFTWARE

Updating GroundControl Software

GroundControl software is updated using the two access ports (Figure 1) available on the underside of the Control Arm:

- **Port 1 (DMX)** - used to load firmware into the Control Arm’s Switch Board.
- **Port 2 (Ethernet)** - used to load firmware into the Control Arm’s main board, the GC Truss Box, and the GC luminaire (connected to the arm).

![Figure 1: Access Ports](attachment:image.png)
To update main board, truss box, 4Way switch or luminaire:
Step 1. Connect Truss Box and Luminaire to GC Controller as normal.
Step 2. Connect Ethernet cable between computer and Control Arm Access Port 2 (Figure 1).
Step 3. Open required .jar file.
Step 4. If computer has more than one Ethernet interface available, select appropriate network interface from drop-down menu. Ensure computer IP address is set within 10.66.x.x and subnet mask 255.255.0.0.
Step 5. If updating main board, disconnect fiber from GC controller.
Step 6. Click Start Download button. Touchscreen display will change to bootloader screen and show load progress.
Step 7. Wait for download to complete.
Step 8. After download, the updated version can be verified in the Information menu:

![Information menu](image)

To update switch board:
Step 1. Connect Ethernet cable between computer and PRG Node device or S400 System.
Step 2. Connect XLR cable between Node / S400 and Control Arm Access Port 1 (Figure 1).
Step 3. Open required .jar file.
Step 4. If computer has more than one Ethernet interface available, select appropriate network interface from drop-down menu. Ensure computer IP address is set within 10.66.x.x and subnet mask 255.255.0.0.
Step 5. Click Start Download button. Touchscreen display will change to bootloader screen and show load progress.
Step 6. Wait for download to complete.
Step 7. After download, the updated version can be verified in the Information menu:

![Information menu](image)
**Software Crossload**

The Information menu provides a method for sending the current GC Main Board software to any connected Controllers. Controllers can be daisy-chained using the DMX512 ports located on the Control Arm interface panel.

**Note:** At the last Controller in the chain, install a male termination connector at the DMX OUT connector.

Figure 2: Example Daisy-Chain Configuration

To initiate the software crossload, press Crossload Software at the Information menu. At confirmation menu, press "Yes." If a connected Controller already has that software version, it will do nothing. If it does not have the same version, it will go into the boot screen and start updating.

**Note:** There should be no active control during the update process.