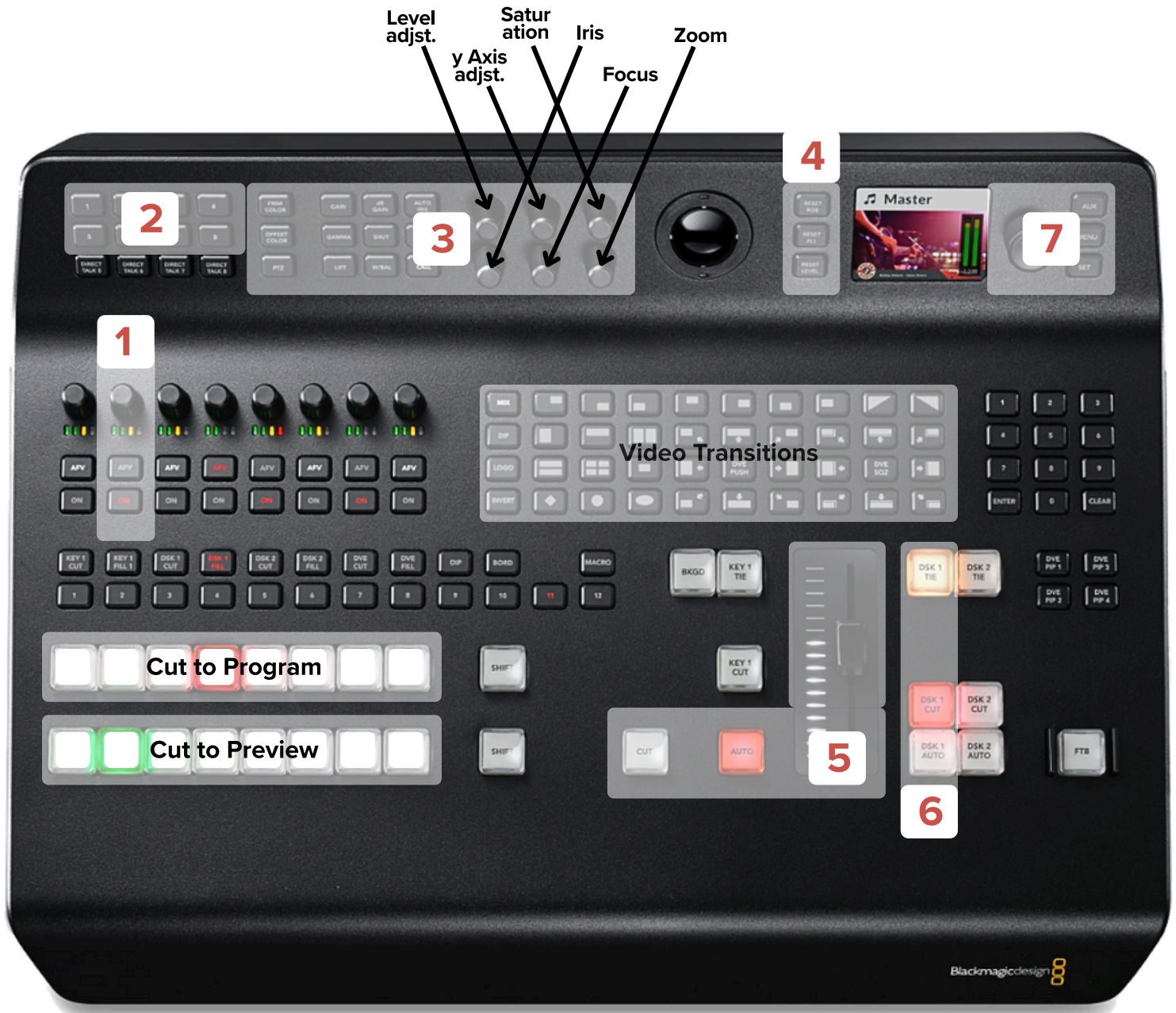


# ATEM Television Studio Pro HD

Guide for use at NRC



- 1 Mac 2 Volume Control** --- Red means audio is '**ON**', twist knob to adjust volume
- 2 Camera Selection** --- '**6**' takes control of Camera 2
- 3 Camera Adjustments & Control** --- see attached
- 4 Reset Buttons** --- use if you want undo recent color correction adjustments you have made to the lift, gamma or gain tonal ranges --- see attached
- 5 Transitions** --- use the Transition Slider to time transition between program/preview manually, use "AUTO" to auto fade transition, use "CUT" to immediately transition
- 6 Lower Thirds** --- use 'DSK1 AUTO' to fade lower thirds lyrics in/out, or CUT to immediately do so
- 7 Settings** --- press 'MENU' to toggle between program view and settings menu on LCD display, when on *program* view the knob will adjust the overall output volume, when in *settings* the knob will cycle through setting options, press 'SET' to enter into a setting and 'SET' again to select, press 'MENU' to back up/out

## Camera Control

The camera control knobs, buttons and trackball give you the ability to control Blackmagic URSA Mini and Blackmagic Studio model cameras via the SDI program return signal. When using compatible lenses, you can adjust settings such as iris, focus, zoom and camera features such as the camera color correctors using the respective controls on your switcher's panel.

Having the ability to make fast adjustments to your cameras directly from ATEM Television Studio Pro HD's control panel is like having a built in CCU.

VISCA PTZ cameras and remote heads can also be controlled using the camera control trackball.

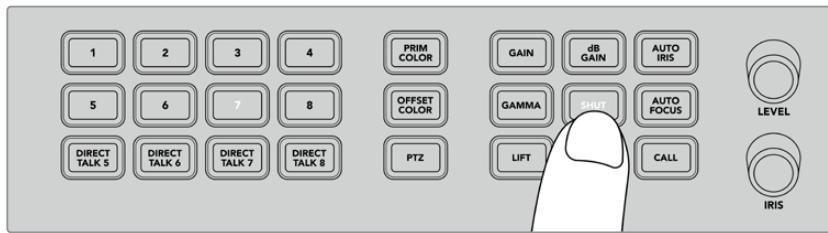
**TIP** Camera control is possible via camera control packets of information embedded in the SDI outputs from the ATEM switcher to your Blackmagic Design cameras. For more details, refer to the 'using camera control' information located in the 'using ATEM Software Control' section of this manual.

## Controlling Cameras

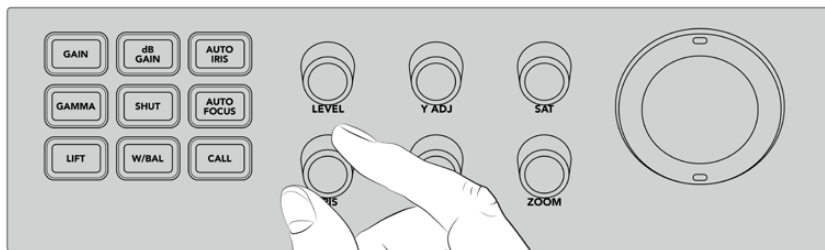
The first step when changing a camera setting is to select the specific camera you want to control.

- 1** Press one of the camera buttons on the top left corner of your switcher. The button will illuminate so you can easily see which camera you are adjusting.
- 2** With the camera selected, you can immediately make adjustments. For example, to open or close the lens aperture on a compatible servo lens, rotate the iris knob clockwise or counterclockwise. If you want to increase or decrease the shutter speed or shutter angle, press the shutter button marked SHUT on the control panel to cycle through the available shutter settings.

**NOTE** It's worth mentioning that if you want to control focus, iris and zoom settings, a compatible lens with servo controlled focus, iris and zoom control must be attached to the camera.



Press a camera button to select the camera you want to control, then use the camera control buttons and knobs to make adjustments, such as changing the shutter angle on Blackmagic URSA Mini



After selecting the camera you want to adjust, rotate the iris knob to open or close the lens aperture on compatible lenses

## Camera Settings

Below is a description of the different camera settings you can adjust including dB gain, shutter, white balance, iris, focus, and zoom.

### dB Gain

Press the dB Gain button to adjust a selected camera's overall gain, or light sensitivity. On Blackmagic URSA Mini, this setting is called ISO. Pressing the dB Gain button cycles through the camera's gain or ISO settings.

### Auto Iris

Pressing the 'auto iris' button will automatically set the aperture of the camera's lens to optimize the exposure on cameras with compatible auto iris lenses.

**TIP** Your camera may have a variety of modes for evaluating the exposure of an image, such as spot exposure and center weighted averaging. These can affect what your camera interprets as correct exposure. Check your camera settings to make sure you are happy with the exposure of your image when pressing the auto iris button.

### Shutter

The shutter button is labelled SHUT and is used to select the desired shutter speed or shutter angle. Press the shutter button to cycle through the available shutter settings.

### Auto Focus

By pressing the auto focus button, you can set the selected camera to automatically focus the image and maintain sharpness. To use this function, the selected camera must have a compatible lens with built in electronic auto focus control, and the auto focus feature enabled on the lens.

**TIP** The area of the image used when determining focus can often be set independently in the camera settings. If you find your camera focussing on the wrong part of the image when using ‘auto focus,’ check the camera’s auto focus settings.

### White Balance

The white balance button is labeled ‘w/bal’, and this feature lets you adjust the white balance on a selected camera. Press the white balance button to cycle through the available white balance settings and set the correct color temperature.

### Iris

Rotate the iris knob clockwise or counterclockwise to open or close the lens aperture on compatible lenses.

### Focus

Rotate the focus knob clockwise or counterclockwise to adjust the focus when using compatible lenses.

### Zoom

Rotate the zoom knob clockwise or counterclockwise to zoom in and out when using compatible zoom lenses.

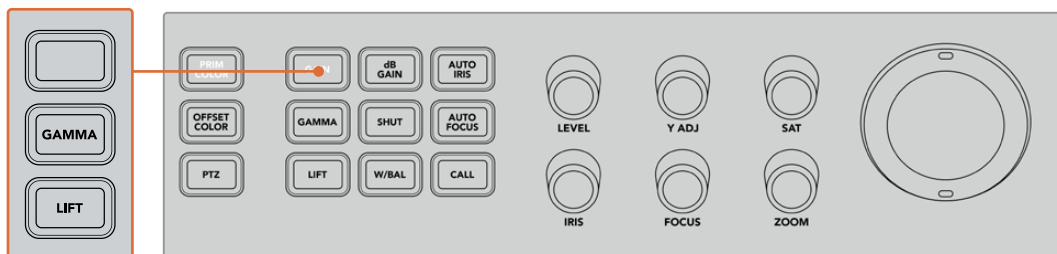
## Controlling Color

The primary color button lets you select primary color correction feature so you can make color adjustments to the lift, gamma, and gain tonal ranges using the trackball.

Before we look at the different ways you can control color, it’s important to look at the three tonal ranges that form a video image.

|              |                                                                                                                                                                                          |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Lift</b>  | Lift controls the shadows, or the darkest ranges of the image. For example, the color and brightness, or luminance, of the black level.                                                  |
| <b>Gamma</b> | The midtones of your image are controlled via the gamma value. Midtones are regions of your image that are approximately half way between the darkest and brightest levels of the image. |
| <b>Gain</b>  | The gain represents the highlights, or the brightest areas of the image.                                                                                                                 |

By making specific color and luminance adjustments to each of these tonal regions, you have incredible control over the image. When making adjustments, you can select each tonal range by pressing the respective lift, gamma, and gain buttons.



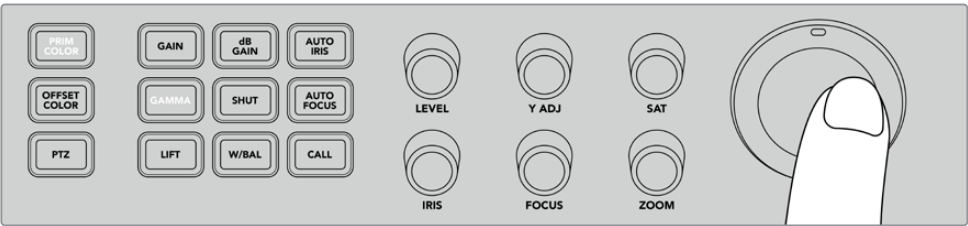
Primary color control lets you adjust the color and luminance for specific lift, gamma and gain tonal ranges in the image

Primary Color

This feature enables precise color control over each of the RGB color channels for lift, gamma and gain.

To adjust primary color:

- 1 Press the camera button for the camera you want to control.
- 2 If not already selected, press the primary color button to enable primary color control.
- 3 Press the lift, gamma or gain button to select the tonal range you want to adjust.
- 4 Rotate the camera trackball in any direction to apply color changes to your chosen tonal range.



In primary color mode, press the lift, gamma, or gain tonal range you want adjust, then rotate the trackball towards the desired color

In addition to using the trackball, you can make changes to the brightness and saturation of the image using the following color adjustment knobs.

|       |                                                                                                                                        |
|-------|----------------------------------------------------------------------------------------------------------------------------------------|
| Level | Rotate the level knob to increase the luminance and color channels simultaneously. This increases the overall brightness of the image. |
| Y ADJ | To increase or decrease the brightness, or luminance, for a specific tonal range, rotate the Y ADJ knob clockwise or counterclockwise. |
| SAT   | The saturation knob lets you increase or decrease the amount of overall color in the image.                                            |

Reset Buttons

The three reset buttons are used if you want undo recent color correction adjustments you have made to the lift, gamma or gain tonal ranges.

These controls only affect the specific tonal range you have selected. For example, pressing the reset buttons when gain is selected will only affect the gain tonal range.

|             |                                                                                                                                                                                         |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reset RGB   | Press this button to reset the RGB color channels for lift, gamma or gain to their default neutral position without affecting luminance adjustments.                                    |
| Reset All   | This button lets you reset luminance and RGB color channels to their default neutral position for the selected camera, as well as all other color adjustments such as hue and contrast. |
| Reset Level | Press this button to reset the YRGB luminance and color channels to their default neutral position.                                                                                     |