

The 6.5" 16/9 RainbowRF monitor has 4 knobs to control all its features. In this manual, knobs are numbered from top (1) to bottom (4 blue color). The knobs can be used by turning them (manual mode) or by pressing them (digital mode). The basics settings are achieved by simply turning the knobs, while more sophisticated functions are controlled by pressing them down.

**ON/OFF:**

Use the power switch located on the top of the monitor to turn ON or OFF.

**Basic Settings (manual mode):**

Brightness  is adjusted by turning KNOB #1.

Contrast  is adjusted by turning KNOB #2.

Saturation  is adjusted by turning KNOB #3.

In NTSC, Hue  or Sharpness SH are adjusted by turning KNOB #4.

In PAL, Sharpness is adjusted by turning knob #4 (no Hue in PAL).

For Brightness, Contrast, Saturation and Hue, a green scale from -30 to +30 will appear in front of each knob indicating the selected setting.

For Sharpness the green scale is from 0 to 9.

The symbol of each parameter is displayed to the right of the green scale.

**Input Selection (digital mode):**

Press KNOB #1 once, Video A is selected. Press KNOB #1 again, Video RF (wireless B) is selected. Press KNOB #1 a 3rd time, Video Accessory is selected. Each selection name will be displayed in the top right corner of the screen for a few seconds.

**Full / Brdcst / U-Scan/ Zoom Options (digital mode):**

Press KNOB #2 to scroll through the various display modes. The words Full or Brdcst or U-Scan or Zoom will be displayed in front of KNOB #2 for a few seconds.

In Full mode there is no cropping of the image. In Broadcast mode a few lines of the active image are cropped all around. In UnderScan the monitor displays the full image plus the vertical interval.

In 4:3 all 4 modes are available. The Broadcast mode is not available in Anamorphic ratio. The Zoom mode is not available in 16/9. In 4:3 + Zoom the left & right sides of the image fill completely the screen while the top and bottom are cropped to preserve the ratio (the black letter boxed are removed). In Anamorphic + Zoom the top & bottom of the image fill completely the screen while the sides are cropped to preserve the ratio (the black letter boxed are removed).

**Switching between 4:3, 16/9 and Anamorphic (digital mode):**

Press KNOB #3 to scroll through all 3 aspect ratios. The words 4:3 or 16/9 or Anamorphic will be displayed in front of KNOB #3 for a few seconds.

## **Main Menu (digital mode):**

Press **KNOB #4** (blue) and the following menu will appear:

Turn **KNOB #4** in order to scroll through the menu.

The function whose name is in red may be modified.

The entire main menu is controlled by the sole **KNOB #4**.

Lock
<b>RX</b> (Video RF only)
<b>HUE</b> (in NTSC only)
SHARPNESS
STANDARD
PICTURE FX
BLUE CHECK
CONFIG
EXIT

### **1/ Lock:**

With the word **Lock** in red, press quickly on **KNOB #4**.

A blue dot appears before the word **Lock** to show it is enabled. The **Lock** function disables all digital functions: pressing on any of the potentiometers will NOT produce any change. The potentiometers only operate by turning them to adjust the basic settings. The *RainbowRF* operates just like the original *Rainbow*.

To unlock the monitor: press several seconds on the blue **KNOB #4** until the menu is displayed, then scroll up by turning **KNOB #4** until the word **Lock** is in red, press once on **KNOB #4** to remove the blue dot before the word **Lock** .

### **2/ RX:**

The **RX** option is only available when the monitor displays the wireless (RF) video (Video B). With the word **RX** in red, press once quickly on **KNOB #4**. A blue dot appears before the word **RX** to show it is enabled.

Press again on **KNOB #4**, the channel letter selected appears after the word **RX** (A, B, C or D). To switch channel, turn **KNOB #4**.

Switching channels without entering the Menu:

From the main menu, with the word **RX** in red, press on **KNOB #4** until a blue dot appears before **RX**. Exit the main menu. Turning **KNOB #4** now switches channels.

### **3/ Hue and Sharpness:**

- In NTSC, while in the main menu, when the word **Hue** is in red, press once quickly on **KNOB #4**, a red scale is displayed in front of **Hue**. **Hue** may then be set from -30 to +30 by turning **KNOB #4**.

- In NTSC or PAL, while in the main menu, when the word **Sharpness** is in red, press once quickly on **KNOB #4**, a red scale is displayed in front of **Sharpness**. **Sharpness** may then be set from 0 to 9 by turning **KNOB #4**.

- In NTSC, you can choose to have **KNOB #4** control **Hue** or **Sharpness** in manual mode. This means that after exiting the Main Menu, by turning **KNOB #4** it will either adjust the **Hue** or the **Sharpness**: with the word **Hue/Sharpness** in red, press several seconds on **KNOB #4**. A blue dot will appear before the word **Hue/Sharpness** indicating that it is now allocated to this adjustment.

### **4/ Standards:**

The *RainbowRF* can be set in two NTSC standards (4.43 and 3.58). US NTSC is 4.43. It can also be set in three PAL standards (M, N or BG), and in SECAM.

When in the main menu, with the word **Standard** in red, press **KNOB #4** once quickly and the various standards will be displayed on the screen. Scroll with **KNOB #4** until

the standard of your choice is in red, and press again on KNOB #4. A blue dot will appear in front of the standard currently displayed.

### **5/ Picture FX:**

- Horizontal or Vertical Flips can be done independently or simultaneously. When in the main menu, with the words Picture FX in red, press KNOB #4 once quickly and various flip options will be displayed on the screen. Scroll with KNOB #4 until the flip of your choice is in red, and press again on KNOB #4. A blue dot will appear in front of the selected flips.
- Monitor Reverse: The angle of view of the monitor is symmetrical left and right. The vertical angle of view is not symmetrical (see specs). If the monitor is installed above eyes-level, so that the user must look up at it, setting the monitor in the “Monitor reverse” mode will allow to hang the monitor upside down and use the best angle of view. This feature is also useful to left-handed users in order to have the controls on the left side of the monitor.
- Monitor Auto-Reverse: when activating this function, the image will be automatically reversed when the monitor is turned upside down. This feature is especially useful to body-mount operators.

### **6/ Blue Check:**

This function is a help to calibrate video cameras. When in the main menu, with the words Blue Check in red, press KNOB #4 once. A blue dot appears before the words Blue Check when this function is active.

### **7/ Config:**

When in the main menu, with the word Config in red, press KNOB #4 once. 3 Options are displayed: “Factory Preset”, “Lock Reset at Start”, “Lock No Reset at Start”. With the words Factory Preset in red, press KNOB #4 once. A red moving scale appears: Brightness, Contrast, Saturation (and Hue in NTSC), are back to the factory settings (0 on the scales, 3 for Sharpness). If Lock Reset at Start is on (blue dot in front), when restarting the monitor, the Lock function will be de-activated. If you wish the lock to remain active after restarting the monitor, choose Lock No Reset at Start.

### **Video Output and Hirose 6:**

The Hirose 6 carries power in/out along with video in or out. The video displayed on the screen is also routed to the video out on the Hirose 6. If a video (C or Accessory) is connected via the Hirose 6, the monitor can be switched between 3 video inputs (A, B and C).

### **Full reset:**

A full reset may also be performed. While turning on the *RainbowRF*, keeping pressed KNOB #1 executes the full reset.

### **Standard / extended mode (wireless):**

In standard mode, *RainbowRF* is configured with the 4 channels A, B, C, D. Extended mode extends the channels from 4 to 10 channels 0, 1, ... , 9.

While turning on the *RainbowRF*, keeping pressed **NOB #3** switches from one mode to the other. The selected mode will be displayed on screen during the start-up. Both transmitter and receiver need to operate in the same mode.

## **TECHNICAL SPECIFICATIONS**

3 Inputs	2 Composite (RF + BNC) 1 Composite (Hirose 6)
2 Outputs	1 Video displayed out (Hirose 6)
Nominal Levels	Composite, 1V / 75Ω
Useful diagonal Number of sub pixels Number of pixels Matrix / Pixel arrangement Contrast ratio Viewing angle Brightness	6.5" 16/9 (14.7 cm) 1200 (H) x 234 (V) 400 (H) x 234 (V) Active TFT / RGB stripe Optimal = 60 +/- 65° (H) +50°/-65° (V) SuperBright: typ 900Nits * Standard: typ 420Nits *
Titan receiver channels	A = 2412.5 MHz    B = 2427.5 MHz C = 2442.5 MHz    D = 2457.5 MHz
Dimensions (l x h x d) Weight	163 x 100 x 58.5 mm - 6.4 x 3.9 x 2.3 inch 800 g, 1.75 lbs
Power input	10 to 36v DC on XLR4 (-1, +4), typ. 15W
Accessory connector Hirose6	1: Video in C Grnd                      2: Video C in, 3: DC in/out 1.5Amp max              4: DC Grnd 5: Video displayed out Grnd        6: Video displayed out Use separate Hirose6 cables for video In or Out
Operating temperature	-25°C ; +65°C

\* These values vary with voltage input

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Warning: Like all equipment including a liquid crystal display, this monitor should not be exposed to extremely low temperatures (see specs above).

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