

PARALINX TOMAHAWK

USER MANUAL



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SAFETY INSTRUCTIONS

When operating this equipment, read and follow all the instructions in this manual.

Do not block the air ventilation openings.

Keep these instructions in a safe and accessible place for future reference.

Do not expose this equipment to water.

Clean only with a dry cloth.

Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

Use only accessories specified or recommended.

Do not defeat the grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of your obsolete outlet. Caution! To reduce the risk of electrical shock, grounding of the center pin of this plug must be maintained.

Protect the power cord from being walked on or pinched particularly at the plugs, and the point where they exit from the device.

Unplug this apparatus during lightning storms or when unused for long periods of time.

Caution! Shock Hazard. Do not open the enclosure.

Refer to Paralinx for repair assistance.

Servicing is required when the device has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled, or dirt/objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

OVERVIEW

The Paralinx Tomahawk is the world's first light-weight uncompressed ultra-long-range HD wireless system, capable of sending ultra-low-latency full HD video with a range of up to 600m / 2000 feet

POWER INPUT WARNING!

The Tomahawk system accepts 7-17 volts DC maximum input current! Subjecting the system to higher voltage will result in damage or destruction and is not covered by warranty!

QUICK START GUIDE

IMPORTANT NOTES

DISCONNECT VIDEO SOURCE WHEN POWER CYCLING SYSTEM

RECEIVER MUST BE POWER- CYCLED IF TRANSMITTER IS POWERED DOWN

TRANSMITTER

- 1 Disconnect video source from the transmitter.
- 2 Connect your Paralinx Tomahawk to a 12 V power source via the Lemo input.
- 3 Connect the Tomahawk transmitter to the video source using an HDMI cable.
- 4 It is recommended to set the dual antennas in the form of a "V" and maintain unobstructed line of sight between transmitter and receiver.

RECEIVER

- 5 Connect your Tomahawk Receiver to a monitor using an HD-SDI cable.
- 6 Connect your Tomahawk Receiver to a 12 V power source using the Lemo input, or integrated battery plate.
- 7 Antennas should be arranged in the form of an open hand.

NOTES

For maximum range

*Note that high-output wireless systems (F.P.V., radio control systems etc.) can interfere with the Tomahawk and reduce the overall range.

- Keep line of sight between the transmitter and the receiver.
- Avoid placing any obstacles between transmitter or the receiver.
- Position both transmitter and receiver in an upright position, for enhanced antenna performance.

- Maintain proper air ventilation for transmitter and receiver.
- If signal is lost bring the transmitter and receiver closer together.
- If using multiple receivers, keep a minimum of 6 feet between receivers.

PACKAGE CONTENTS

1x HD wireless video transmitter



1x 12 V Power supply



2x 5dBi Omni directional antennas for Transmitter



1x HD-SDI wireless video receiver



1x Remote Control



1x IR remote sensor



1x USB to miniUSB cable














5x 2dBi Omniv directional antennas for Receiver



REMOTE CONTROL



-  1 Enter main menu
-  2 Return to previous menu
-  3 Select video source
-  4 Operate for up, down left and right directions on the menu screen
-  5 Press OK to confirm the operation
-  6 Remove video source
-  7 Add new video source
-  8 Powers receiver down
-  9 Connect to 1st video source
-  10 Connect to 2nd video source
-  11 Connect to 3rd video source

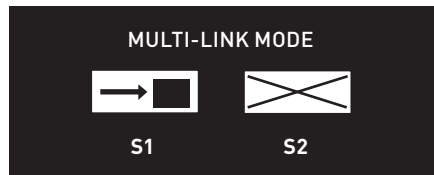
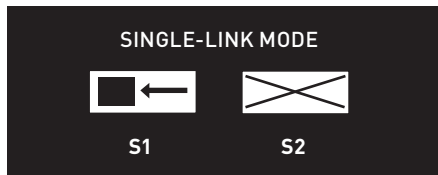
REMOTE CONTROL HOTKEYS

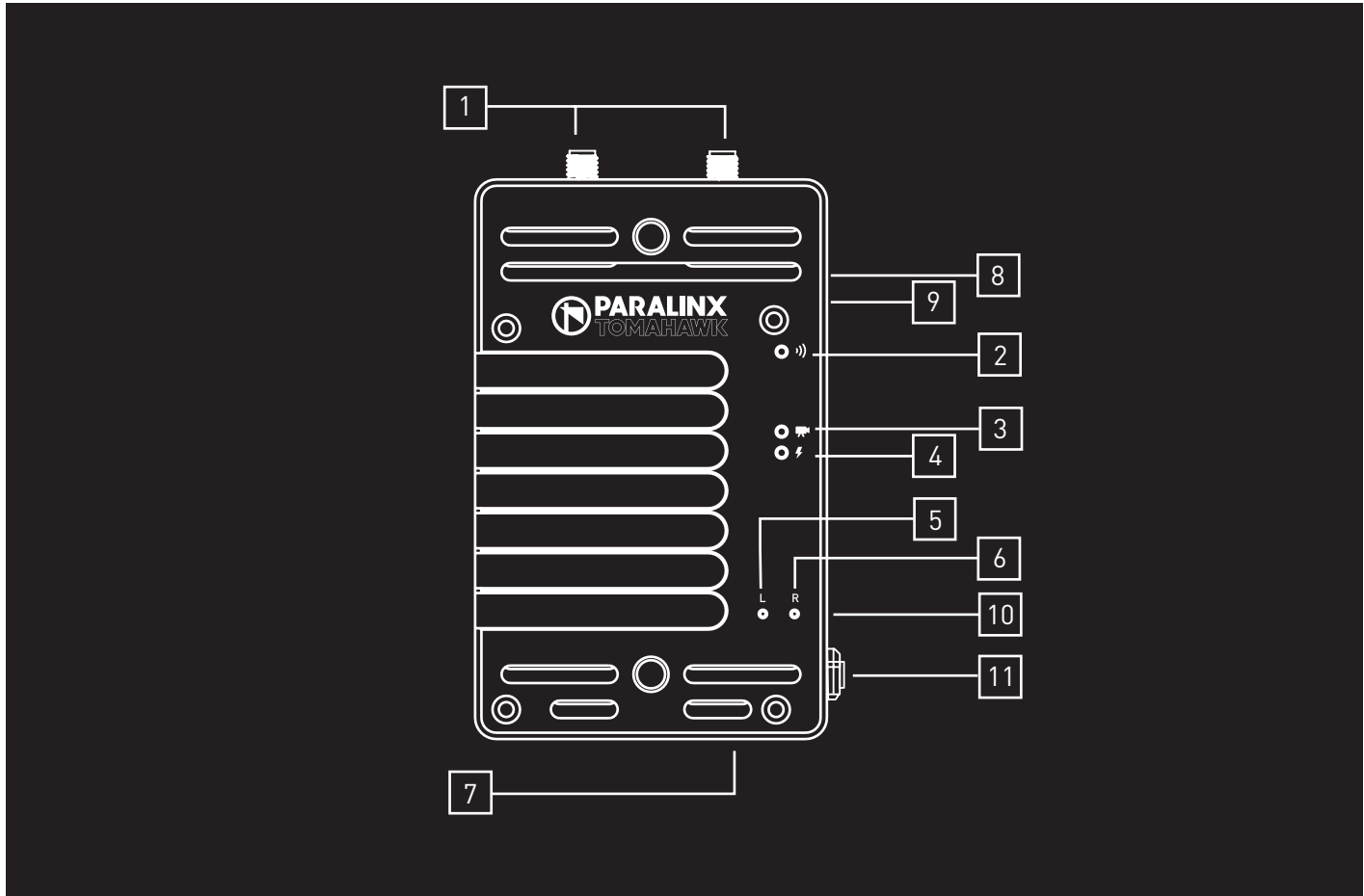
- “ADD” hotkey** Direct access for starting the linking process on the receiver.
- “Delete” hotkey** This hotkey button will open the “Remove Video Source” in the OSD menu which allows the user to choose which device to remove.
- Input Devices Key** Hotkey, “1, 2 or 3” will switch the receiver to link with the first, second or third source registered to the receiver.

TRANSMITTER

- | | |
|---|--|
| <p><u>1</u> Antenna Connectors
Dual RP-SMA</p> <p><u>2</u> Connection status LED
Indicates the wireless network status</p> <p><u>3</u> Video status LED
Indicates the video connection status</p> <p><u>4</u> Low battery warning LED
Indicates input voltage is less than 7 V</p> <p><u>5</u> Link button
For linking the transmitter to additional receivers</p> <p><u>6</u> Reset button</p> | <p><u>7</u> Mini-USB Port
The USB port can be used for firmware updates. *NOT A POWER INPUT</p> <p><u>8</u> S1 Slide Switch
Left position: Single-link mode
Right position: Multi-link mode</p> <p><u>9</u> S2
Not used</p> <p><u>10</u> HDMI Input port</p> <p><u>11</u> 7-17 V LEMO power input connector</p> |
|---|--|

TRANSMITTER SLIDE SWITCH SETTINGS

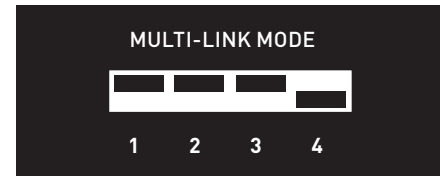
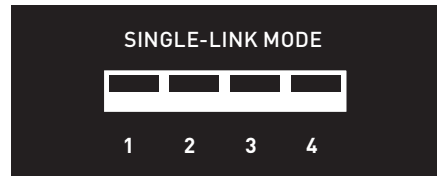


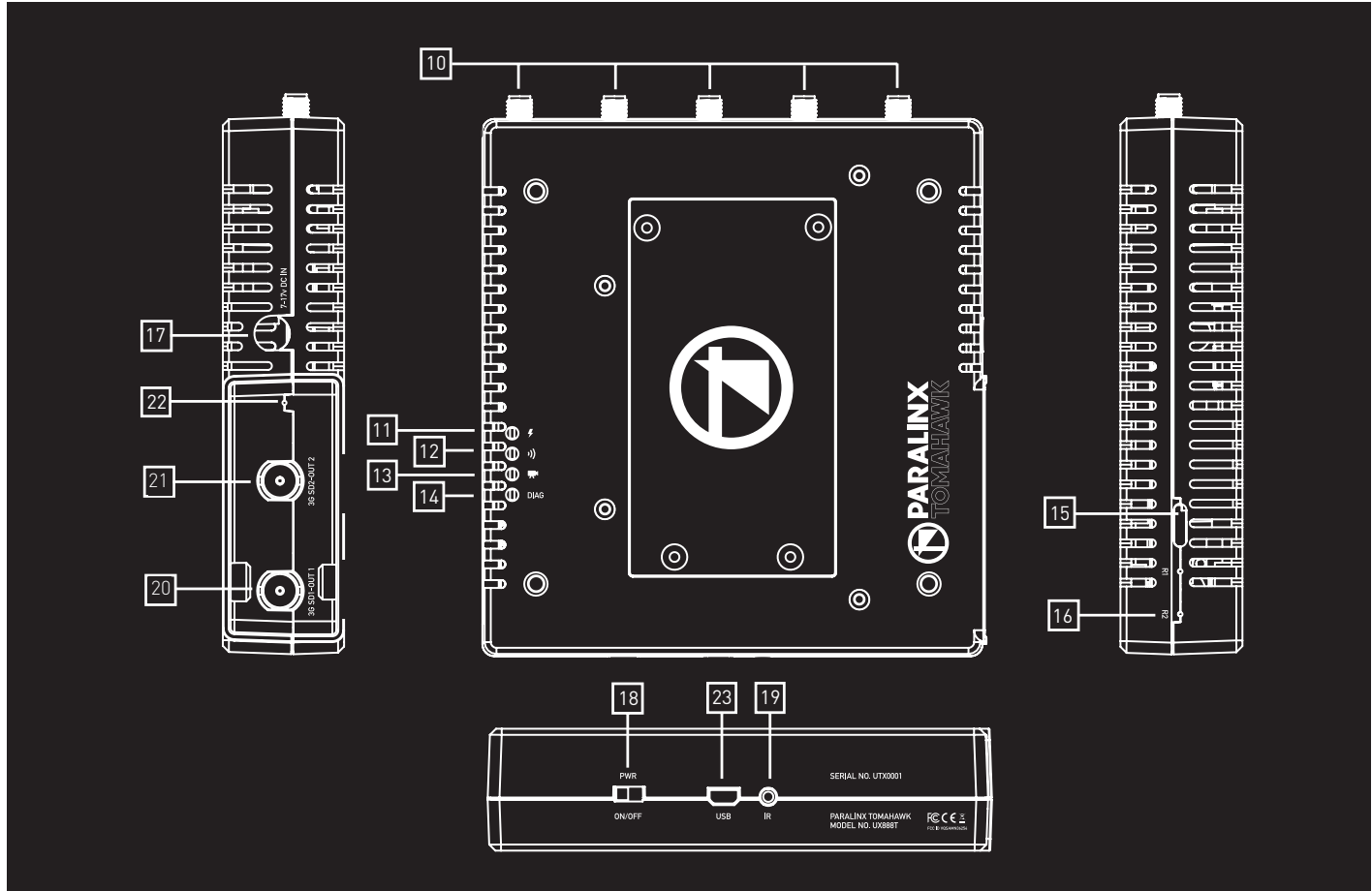


RECEIVER

- | | |
|--|---|
| <p><u>10</u> Antenna Connectors
5x RP-SMA - Type</p> <p><u>11</u> Low battery warning LED
When input voltage is less than 7 V</p> <p><u>12</u> Connection status LED
Indicates the wireless network state</p> <p><u>13</u> Video status LED
indicates the video connection status</p> <p><u>14</u> Diagnostic LED</p> <p><u>15</u> Receiver DIP Switches
DIP switch # 1, 2, & 3 should be UP
DIP switch # 4 UP = Single-link mode
DOWN = Multi-link mode</p> | <p><u>16</u> Link Button</p> <p><u>17</u> Input Voltage connector 7-17 V</p> <p><u>18</u> ON/OFF Switch</p> <p><u>19</u> IR input connector</p> <p><u>20</u> HD-SDI output 1</p> <p><u>21</u> HD-SDI output 2</p> <p><u>22</u> Reset Button</p> <p><u>23</u> Mini-USB for firmware updates
*NOT A POWER INPUT</p> |
|--|---|

RECEIVER DIP SWITCH SETTINGS





TRANSMITTER LED STATUS

* YOUR PARALINX TOMAHAWK

TRANSMITTER FEATURES LEDS

WHICH WILL LIGHT UP TO INDICATE SYSTEM STATUS.

NETWORK LED CONNECTION



Solid

Connection to Rx is established

Slow blinking

Transmitter is in listen mode

Normal blinking

During linking process

**Fast blinking
(With Video LED)**

System error; Cycle power

VIDEO CONNECTION LED



Solid

Video link established and locked in

Normal blinking

Video source is not supported

**Fast blinking
(With Network LED)**

System error

LOW BATTERY WARNING LED



Solid

Low Battery; when input voltage is less than 7 V

RECEIVER LED STATUS

* YOUR PARALINX TOMAHAWK RECEIVER FEATURES LEDS WHICH WILL LIGHT UP TO INDICATE SYSTEM STATUS.

NETWORK LED CONNECTION



Solid	Connection to Tx is established
Slow blinking	Device is in listen mode
Normal blinking	During link setup mode
Fast blinking (With Video LED)	System error, cycle power

VIDEO LED CONNECTION



Solid	Video link established and locked in
Fast blinking (With Network LED)	Video source error

POWER LED



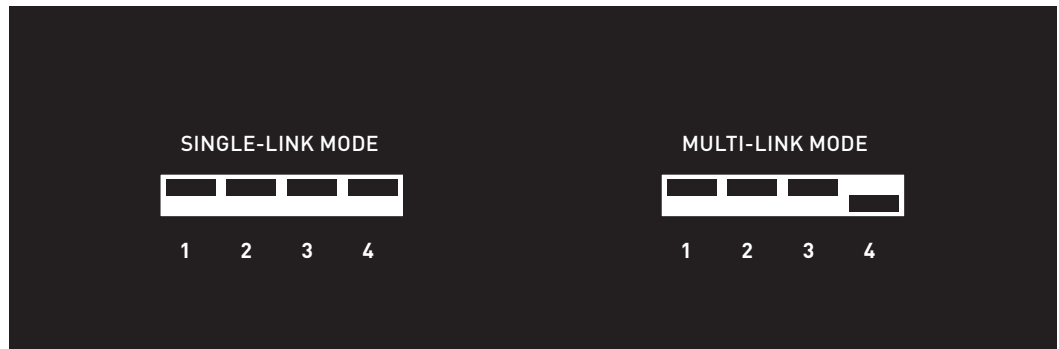
Solid	Receiver is powered up
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TRANSMITTER
SLIDE SWITCH

TOMAHAWK SWITCH POSITIONS



RECEIVER
DIP SWITCH



TOMAHAWK LINK MODES

Linking Tip:

Single-link mode enables DFS (Dynamic Frequency Selection).

DFS allows the Tomahawk to utilize more channels and to automatically find the channel with the least amount of interference.

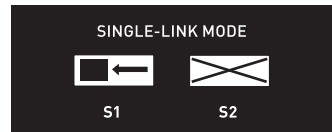
The transmitter should be kept no less than 3 feet and no greater than 150 feet from the receiver until DFS is activated (60 seconds).

This will help the Tomahawk to better coexist with other wireless systems in the area.

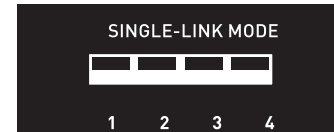
NOTE: There will be a delay of over 10 seconds when switching between Transmitters in multi-link mode.

The Paralinx Tomahawk supports the linking of multiple receivers to a single transmitter as well as the linking of multiple transmitters to a single receiver. The following guide illustrates different modes and options for linking transmitters and receivers:

SINGLE-LINK MODE: Offers the best practice for operating a maximum number of Tomahawk systems within the same environment, also allows for re-linking at longer distances.

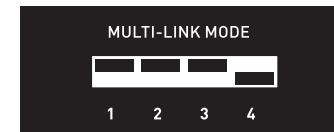
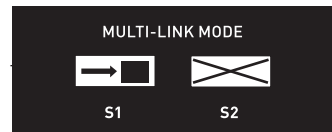


Transmitter slide switch



Receiver DIP switch

MULTI-LINK MODE: Allows the linking of up to four Tomahawk receivers to a single transmitter. Linking can only be established within close proximity and DFS will be disabled.



LINKING A TRANSMITTER TO A SINGLE RECEIVER

NOTE: Before linking, both Transmitter and Receiver must be set to **Single-Link Mode.**
(see page 15)

If there is no transmitter registered to the receiver, you

- 1 Connect a HD-SDI cable from the ParalinX Tomahawk receiver to the HD display
- 2 Connect transmitter and receiver to power source, power on the and receiver
- 3 Connect IR sensor to receiver
- 4 Using the remote control, press the "Add" hotkey button
- 5 The message, "Please Activate the Registration on Transmitter Unit", will appear on the monitor
- 6 Using a paperclip GENTLY press and hold the "L" Button on the transmitter for 5 seconds until the "Network" LED starts blinking
- 7 Wait for the message of "Adding [Tx name] Press OK to continue or Exit to cancel"
- 8 Press the "OK" button on the Remote control to confirm the new ParalinX Tomahawk transmitter
- 9 Wait until the registration process is completed; an OSD message of "Adding [Tx name]..." and a progress bar will be shown during the process
- 10 Connect an HD video Source to the ParalinX Tomahawk transmitter
- 11 Video should be displayed on your monitors

NOTE

Once the registration process has been initiated on the receiver, you have 30 Seconds to start registration on the transmitter side. If the registration process on the transmitter is not started in time, re-start the registration process by going back to step 4.

LINKING A TRANSMITTER TO MULTIPLE RECEIVERS

The Paralinx Tomahawk transmitter has the ability to transmit to 4 receivers at a time.

- NOTE:** Before linking, both Transmitter and Receiver must be set to **Single-Link Mode**. (see page 15)
- 1 All other linked receivers should be powered down while registering an additional receiver
 - 2 Connect each Tomahawk receiver using HD-SDI cables to a HD display
 - 3 Power on the transmitter and receiver
 - 4 Power on only one receiver at a time
 - 5 Press the "Add" hotkey button on the remote control
 - 6 The message "Please Activate the Registration on Transmitter Unit" will appear on the monitor
 - 7 Press and hold the link button on the transmitter for 5 seconds until the "Network" LED starts blinking
 - 8 Wait for the message of "Adding [Tx name]"
Press OK to continue or Exit to cancel"
 - 9 Press the "OK" button on the IR Remote to confirm the addition of the Paralinx Tomahawk transmitter
 - 10 Wait until the linking process is complete; an OSD message of "Adding [Tx name]..." and progress bar will be shown during the process
 - 11 In order to add additional receivers to the transmitter, power down all other Paralinx Tomahawk receivers, except the receiver that will be linked
 - 12 Repeat steps 5 through 12 for each receiver
 - 13 When all the receivers have been registered to the transmitter, power-cycle the system, then power on all the receivers one by one
 - 14 Set to multi-link mode and power-cycle system
 - 15 Connect an HD Video Source to the Paralinx Tomahawk transmitter