

## fSTOP Wireless 900GT Receiver and fSTOP Pedestal Transmitter Manual



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## 1. Introduction

The **fSTOP Wireless 900GT Receiver** and **fSTOP Pedestal Transmitter** base allows users to wirelessly control the camera lens Iris, Zoom from great distances without needing to worry about interference from the 2.4 GHz frequency band.

With a wide operating voltage range of 10 to 30 volts and automatic motor detection, the fSTOP system can be used on virtually any camera system.

The fSTOP is the smallest and lightest digital receiver on the market.

Simply plug in your existing Preston Hardwire Remote Iris Box #4020 into the **fSTOP Pedestal Transmitter** and you now have wireless control.



## 2. Installation

### 2.1. Necessary Hardware

- fSTOP Wireless 900GT Receiver (PLC955-0010)
  - comes with 900MHz ¼ Wave Antenna (PLC477-0001)
- fSTOP Power Cable examples:
  - fSTOP PV Power Cable (PLC940-0025)
  - fSTOP ARRI Power Cable (PLC940-0026)
  - fSTOP P-TAP Power Cable (PLC940-0027)
- Digital Motor examples:
  - Heden M21VE (PLC950-0005)
  - Heden M26VE (PLC950-0006)
- Digital Motor Cable (PLC940-0001)
- fSTOP Pedestal Transmitter (PLC955-0021)
  - fSTOP Remote Transmitter (PLC955-0009)
    - comes with 916MHz ¼ Wave 3 1/8" Long Antenna (PLC477-0008)
  - fSTOP Pedestal (PLC518-0008)
- Preston Hardwire Remote Iris Box #4020 (user supplied)
- M-Type Battery (user supplied)

## 2.2. fSTOP Wireless 900GT Receiver Installation



### 2.2.1. Antenna

Attach the **900MHz ¼ Wave Antenna** (PLC477-0001) Digi-Key# ANT-916-CW-RH-ND to the **fSTOP Wireless 900GT Receiver**.



### 2.2.2. Power

Plug one end of the **fSTOP Power Cable** into the power output connector of a camera and the other end into the 2pin Lemo connector on the **fSTOP Wireless 900GT Receiver**.

### 2.2.3. Motor Connection

Attach the motor to the gearing of the desired focus, iris or zoom ring. Plug one end of the 7pin motor cable into the digital motor and the other end into the 7 pin connector of the **fSTOP Wireless 900GT Receiver**. Do not power up the system at this time.

**\*\*You must ensure that the Camera Power output connector is able to source up to 3.0 Amps if you wish to power the fSTOP Wireless 900GT Receiver Directly from the Camera.\*\***

### 2.3. fSTOP Pedestal Transmitter Assembly



Attach the **916MHz ¼ Wave 3 1/8” Long Antenna (PLC477-0008) Digi-Key# ANT-916-CW-QW-ND** to the **fSTOP Remote Transmitter**.



Install the **fSTOP Remote Transmitter** into the **fSTOP Pedestal**.  
Install the **Preston Hardwire Remote Iris Box** into the **fSTOP Pedestal**.  
Screw on the hold down bracket.





### 3. fSTOP Pedestal Transmitter Calibration

After you have completed you **fSTOP Pedestal Transmitter Assembly** you will need to calibrate your Preston Hardwire Remote Iris Box. This is to allow you to have the full range of travel available from your Preston Hardwire Remote Iris Box.

While holding down both the **Up** and **Down** buttons at the same time plug in the M-Type Battery. When the display shows an '**S**' release the buttons.

- When the display shows an '**H**' turn your Preston Hardwire Iris Breakout all the way **clockwise** and press one of the buttons.
- When the display shows an '**L**' turn your Preston Hardwire Iris Breakout all the way **counter-clockwise** and press one of the buttons.

### 4. fSTOP Wireless 900GT Receiver Setup

#### 4.1. Motor Calibration

After you have completed your installation, power up the camera. The motor will automatically calibrate by moving the lens gear to both end stops. It is now ready to communicate with your **fSTOP Remote Transmitter**.

\*\*You can also calibrate the motor by hand to test the system if no camera lens is available. Once you power the motor it will start to rotate one direction; after some movement apply pressure to the gear to stop the motor moving in that direction. The motor will stop and then move in the other direction, after one revolution in this direction apply pressure to stop it from moving. The motor will now be calibrated.

**Note: Do not let the motor spin for more than 60 seconds, as it will fail calibration as it assumes that no lens is present. If this happens simply unplug the motor cable and then plug it in again to restart the calibration.**

## 4.2. Torque Setup

The **fSTOP Wireless 900GT Receiver** allows for the user to set the desired torque for the motor control. Generally the increased torque will allow for more accurate control on stiffer lens rings, however there is a trade-off with increased noise generated by the motor.

In order to adjust the Torque move the **fSTOP Pedestal Transmitter** knob to the torque percentage you would like to set, i.e. fully clockwise is 100%, fully counter clockwise is 1%

Press and Hold in the **MODE** button on the **fSTOP Wireless 900GT Receiver** and wait for the Green status light to go OFF and then turn back ON after about 1 second. The Torque is set and saved into memory.

## 4.3. fSTOP Switch Settings



### 4.3.1. CHAN Switch Settings

This **CHAN** switch is used to select one of the seven frequencies available in the 900MHz range for operation. The selector switch must be set to the same channel on both the **fSTOP Wireless 900GT Receiver** and the **fSTOP Pedestal Transmitter**.

Note: Switch settings 7 to F are not used at this time.

### 4.3.2. DIRECTION Switch

The **DIRECTION** Switch sets the direction of the motor.

### 4.3.3. SECURITY Switch

The **SECURITY** Switch switches between the two types of motor calibration: current only, or current and velocity. Having the switch in the **ON** position the motor calibrates with current only; the end-stop is determined when the current drawn by the motor exceeds the set limit. If the switch is in the **OFF** position the motor will calibrate with both current and velocity detection. The end-stop is determined by either the motor drawing too much current, or the motor speed dropping below a predetermined speed.

### 4.3.4. MODE Button

The **Mode** Button is used to set the Motor Torque Setting of the **fSTOP Wireless 900GT Receiver**.

- Make sure that the **fSTOP Pedestal Transmitter** and **fSTOP Wireless 900GT Receiver** powered, calibrated and communicating.
- Turn the knob on the **fSTOP Pedestal Transmitter** to a position between 1% Torque (Fully counter-clockwise) and 100% (Fully clockwise) representing the amount of torque you wish the motor to have (Higher Values for Stiff Lenses).
- Press and Hold in the **MODE** button on the **fSTOP Wireless 900GT Receiver** and wait for the Green status light to go OFF and then turn back ON after about 1 second. The Torque is set and saved into memory.
- The new Torque is now set in the **fSTOP Wireless 900GT Receiver** and it will be stored in memory even after power is removed.

### 4.3.5. STATUS LED

When the unit is powered up the **STATUS** LED will indicate this by being lit steadily. When the **fSTOP Pedestal Transmitter** is connected wirelessly to the **fSTOP Wireless 900GT Receiver** the **STATUS** LED will blink quickly to indicate that data is being received.

### 4.3.6. CAL Button

The **CAL** or calibrate button is a soft reset of the unit. When the button is depressed and released it will reset the unit. The motor will then start its calibrate function again after approximately 4 seconds.

## 5. Connector Pin-outs

### 5.1. Camera ON/OFF Connector

#### Lemo# ERD.0S.304.CLL

- 1 Transmit (Tx) – Factory use only
- 3 Receive (Rx) – Factory use only
- 2 Camera (ON/OFF) contact closure
- 4 Camera (ON/OFF) contact closure

Plug for making cables **Lemo# FFA.0S.304.CLA52**

### 5.2. Power (10-30V) Connector

#### Lemo# ECG.0B.302.CLL

- 1 Power (10 – 30V)
- 2 Ground

Plug for making cables **Lemo# FGG.0B.302.CLAD52**

### 5.3. Digital Motor Connector

#### Lemo# EGG.1B.307.CLL

- 1 Motor –
- 2 Motor +
- 3 Chan A Encoder
- 4 VCC +5V
- 5 Ground
- 6 Chan B Encoder
- 7 Motor Detect

Plug for making cables **Lemo# FGG.1B.307.CLAD52**

## 6. Specifications

**Dimensions (antenna removed):** approx 3.5"L x 2 1/8"W x 7/8"H  
(9.1cm L x 5.4cm W x 2.4cm H)

**Weight :** 4 3/4 oz. ( 135 g )

**Input Voltage:** 10 to 30 Volts

**Power Consumption:** 0.075 A @ 12 volts, 0.055 A @ 24 volts  
Standby, not driving motor

**RF Reception:** Frequency hopping spread spectrum

**Resolution:** 16bit (65535 steps)

**fSTOP Wireless 900GT Receiver Antenna:** 900MHZ 1/4 Wave Antenna

Linx Technologies# ANT-916-CW-RH

Digi-Key# ANT-916-CW-RH-ND

**fSTOP Pedestal Transmitter Antenna:** 916MHZ 1/4 Wave 3 1/8" Long Antenna

Linx Technologies# ANT-916-CW-QW

Digi-Key# ANT-916-CW-QW-ND

### Motor Compatibility:

\*Preston: DM1, DM1X, DM2

\*Scorpio: All Digital motors with 7-pin Lemo connector

\*Heden: All Digital motors with 7-pin Lemo connector

Examples: Heden M21VE (PLC950-0005)

Heden M26VE (PLC950-0006)

### FCC ID: MCQ-XBEEEXSC

This equipment complies with FCC Rules, Part 15 and Industry Canada's ICES 003 for a Class A Digital Device. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference that may cause undesired operation.

## 7. Troubleshooting

### 7.1. Calibration

The motor will not calibrate to the full span of the lens.

- If the **Security** switch is in the **OFF** position try moving it to the **ON** position.
- Try increasing the torque settings. See section **4.2 Torque Setup**.

The motor moves to the first stop and continues to try and turn.

- If the **Security** switch is in the **ON** position try moving it to the **OFF** position.
- Try decreasing the torque settings. See section **4.2 Torque Setup**.
- If possible try increasing the supplied voltage to 24V.

### 7.2. Connectivity

I cannot get the **fSTOP Wireless 900GT Receiver** to receive the signal from the **fSTOP Pedestal Transmitter**.

- The motor has not been allowed to calibrate properly.
- Check that the **fSTOP Pedestal Transmitter** and **fSTOP Wireless 900GT Receiver** are set to the same channel.
- Look for the **STATUS** LED blinking on the **fSTOP Wireless 900GT Receiver**

### 7.3. Interference Issues

I am having interference issues.

- If two **fSTOP Wireless 900GT Receivers** are being used at once leave at least one unused channel between the two channels being use, i.e. do not set the units on adjacent channel, such as 5 & 6!

## 8. Limited Warranty

PLC Electronic Solutions Ltd. Warrants this equipment for 1 year from the date of original purchase against defects in materials or workmanship provided it was purchased from an authorized dealer. This warranty does not cover equipment, which has been abused or damaged by careless handling or shipping, nor does it cover products subjected to customer alteration, modification, negligence or misuse. This warranty does not apply to used or demonstrator equipment.

Should any defect develop within the warranted time period, BarTech Engineering will at its sole option, repair or replace the defective instrument without charge. To obtain warranty service, the defective instrument must be returned within 1 year from original purchase date to PLC Electronic Solutions Ltd., along with a brief description of the issue claimed.

## 9. Technical Support

Address any technical question to:



**PLC Electronic Solutions Ltd.**

9-3871 North Fraser Way

Burnaby, BC V5J 5G6

Tel: 1-877-832-3576 (M-F 9:00 am/ 5:00 pm PST)

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