

# FW-10 Instructions and Housing Label

Revised: 06 June 2000

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## 1.0 Introduction

We would like to introduce you to Delta's unique ability to control your photo gear, wirelessly.

Delta makes a *two-way* link between your camera, flash, and you. Let's say you're using the Delta system for wireless flash sync. The remote Delta unit will send back confirmation that it received the trigger signal!

Delta provides wireless sync and/or wireless shutter control. And, Delta provides wireless TTL control of remote Qflash's.

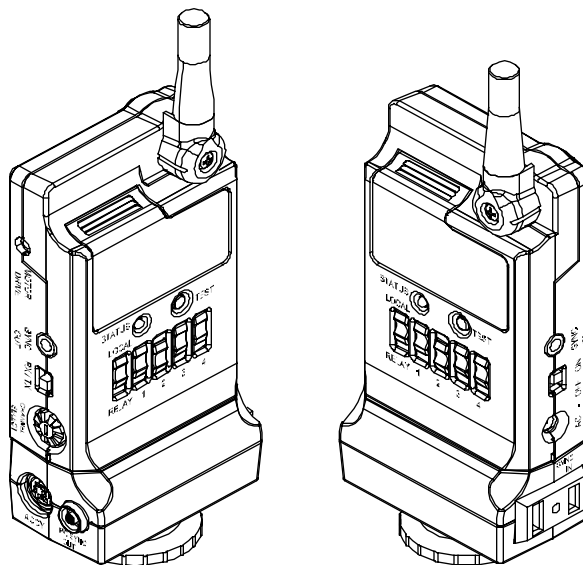
Delta controls four independent *Zones* for wireless flash or motor drive. You can activate any one *Zone*, or any combination of *Zones* 1,2,3 and 4. There are 15 possible *Zone* combinations, plus one that shuts off all *Zones*. Switch your lighting instantly, remotely. Shoot cameras, or combinations of them, from your remote position.

Delta also has eight unique *System* codes. Delta units set to one *System* cannot activate Deltas set to different *Systems*. You control the *System* code to make Delta units work together or independently, as required.

Each Delta can be selected to send, receive, or relay commands to your equipment.. For example, four Deltas can become two remote send/receive *Systems*, or they can become one *System* with one sender and three receivers. If you need extremely long-range wireless control, Deltas can *relay* commands to farther Delta units. You need only one type of Delta and fewer of them than with conventional wireless triggers.

Delta is very small and light and mounts easily to cameras, brackets, poles, and tripod legs. Adapter cords are available for all popular cameras and flashes. A Universal Module (Uni-Mod), though not required, allows you to hot sync Delta directly from camera hot shoes .

There are many more useful features of Delta and we encourage you to read on!



## **IMPORTANT - CAUTION**

**Changes or modifications to this equipment could void your authority to use this product under the equipment authorization granted by the regulating agency or agencies.**

[This copy to appear in the instructions]

**This device complies with RSS-210 of Industry & Science Canada. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference including that which may cause undesired operation.**

[---LABEL FOR HOUSING---]

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**FCC ID: CEXFW10**

**QUANTUM INSTRUMENTS INC. model FW-10**

This device complies with Part 15 of the FCC Rules.  
Operation is subject to these conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received including that which may cause undesired operation

## **2.0 System code and Zone set up**

2.1 Locate the system code switch on the left side of Delta. Set it by rotating with your small finger. Set all Delta units that will operate together to the same system code, 0 through 7.

Put AAA batteries in all units.

Set one Delta to "TX" and any number of other Delta units to "RX". TX means transmit, or send; RX means receive.

Select one or more Zones on the TX. Set one (or more) of those Zones ON on each RX unit.

2.2 Turn on the units. TX Status blinks *red* once every two seconds. RX units blink *green* once every two seconds. Low batteries are indicated by **3 quick blinks** every 3 seconds.

Open the antennas so that they are approximately vertical to the ground. See Section 6.0, Mounting Delta.

Press “TEST” on the TX Delta to confirm that all units are working. All RX Deltas’ Status should light green for as long as you hold TEST.

If you will use the Uni-Mod, connect it now.

### **3.0 Remote Flash Set-up**

3.1 TX Delta: Connect a sync-in cord from your camera PC nipple to Delta Sync-In. Set the Local/Relay switch to Local.

You may also use the Uni-Mod to hot sync to the camera hot shoe.

If you want to sync a “local” flash as well as a remote one, connect the flash manufacturer’s PC sync cord to the Sync-Out PC nipple on the TX Delta, and set the Local/Relay switch to Local.

3.2 RX Delta: Connect the PC sync cord supplied by your flash’s manufacturer to the Sync-Out PC nipple on the RX Delta.

### **4.0 Remote Shutter Set-up**

4.1 RX Delta: Connect a Motor Drive Cord (see Appendix C) from Delta MD-out to your camera motor drive.

4.2 TX: Delta: Press TEST and hold to activate the camera motor drive. Some cameras will require time to “wake-up” and auto focus before they release the shutter. Test before you shoot with film.

### **5.0 Confirmation Signals**

When an RX unit receives a valid signal, it sends a confirmation signal back to the TX unit. A valid signal is one that matches the same Zone and System codes on both RX and TX units.

When the TX unit receives confirmation, Status lights *steadily* for about 1 second. If the TX receives no confirmation signal, Status will only blink.

When controlling two or more RX units, simultaneous confirmation is not possible. Instead, set the RX units on different Zones (same System code). Turn on one TX Zone at a time to test the radio links. When you take your pictures, turn on all the TX Zones you desire to activate.

When using Special Applications, Section 9, the confirmation signal operates a little differently. See the instructions with those set-ups.

The Status confirmation is very useful for testing your radio links or for troubleshooting. See the Troubleshooting section for more details.

## **6.0 Mounting Delta**

### **6.1 Physical Mounting**

Pole Mount Clamp – Item 513: this is included with your Delta. Attach it to the back of Delta and clamp it around any pole, leg, or structure where the antenna can be opened away from metal objects.

Mounting directly to a bracket

Mounting with the Uni-Mod  
    To camera hot shoe  
    To a “dead” shoe

Mounting with velcro-type tape.

### **6.2 Notes on Antenna orientation.**

At close range (about 50’ or 16m) antenna orientation is not critical. Antenna orientation matters more as distance between TX and RX Delta increases. Since local conditions affect all radio signals, we recommend a quick test using the Confirmation Signal, Section 5. Also see Section 12 – Tips for Maximizing Distance and Reliability.

The best mounting position keeps Delta’s antenna away from metal objects. Each antenna should be perpendicular to a line between TX and RX Deltas.

Vertical Deltas with vertical antennas provide the greatest range. Other orientations work almost as well.

When the TX unit is rotated from vertical to horizontal (for portrait or landscape film orientations) try this:

## **7.0 Special Applications**

### **7.1 Wireless TTL with Qflash**

A Delta system can provide wireless TTL control by your camera to any number of remote Qflash ‘s. (All models: T/T2/X/X2).

Delta TX set-up: Connect the correct type of Qflash TTL Adapter to your camera, or check the latest Qflash product information for new adapters). Attach a Uni-Mod to Delta and connect the TTL Adapter to the Accessory connector *on the Uni-Mod*.

If a local Qflash is used, connect it and Delta TX through a Y-Connector QF52.

Delta RX: Connect from Sync-Out to your Qflash by any means of Section 8.0. Turn Delta OFF- Delta is powered by Qflash.

You can set up multiple Delta RX with Qflashes. Set all Deltas to the same System Code. Set Delta RX’s to different Zones to turn them on and off by the Delta TX zone switches. Otherwise, you can use the same Zone on all units.

## 7.2 Remote Camera & Remote Flash Together

Careful settings are required for this set-up using 3 Delta's. See the diagram.

When Delta #1 Set is pressed, Delta#2 will activate the camera shutter function. The camera will delay the flash sync until wake up, auto focusing, metering, etc., is achieved. This takes up to a second or so.

Then, the shutter opens and the camera sync activates Delta#2. Delta#3 receives the signal and synchronizes the flash.

Here's how to set it up:

Delta#1: Set to TX and any System code 0-7. Select any Zone on.

Delta#2: Set to RX and Relay mode. Set the System and Zone the same as Delta#1.

Delta#3: Set to RX mode. Turn on the same Zone as above. Set the System code *one* higher. For example, if Delta #1 and #2 are code 5, set Delta #3 to code 6. If the first code is 7, the next higher code is 0.

The Confirmation signal in this set-up will be delayed until after the camera shutter releases. You will see first a fast blinking on Delta #1 until Delta#2 gets the shutter sync signal from the camera. Then Delta #1 Status will change from fast blinking to steady.

If you use multiple Delta #3's, you can control them from Delta#1 like this: Select different Zones for the multiple Delta#3's. Turn on all those same Zones on Delta#2. Now, you can select any or all such Zones on Delta#1 to control Delta#3's as desired.

## 7.3 Relay for Long Distance Remote

This set-up extends range by relaying signals to a chain of Deltas. This is recommended mainly for remote motor drive. If used for remote flash, decrease the camera's shutter speed by half for each "relay" unit used. For example, if you have one TX, one RX, and one Relay Delta, decrease shutter speed by half of the maximum allowed. (Also see Speed Sync, Section 11.0.)

You will need at least 3 Delta Units.

Set up Delta #1 as a TX. Select any System Code 0-7.

Set up a Delta Relay units like this:

Set the TX/RX switch to RX. Set the System Code one number higher than Delta #1, for example if Delta #1 is Code 5, set Delta Relay to 6. (after 7, the next higher Code is 0).

If you use another Relay unit, set its System Code one number higher again.

Set up a Delta #3 like this:

Choose a System code one number higher than the last Delta Relay unit.

Set all Deltas to the same Zone, 1,2,3 or 4.

Connect Delta #1 and Delta #3 to your equipment as described previously.

Note: Relay mode is not suitable for short ranges. Use it only when the range of a simple TX-RX set-up is inadequate.

## **8.0 Power for Delta**

Without the Power Saver mode, the batteries last about 120 hours.

The Power Saver provides up to 500 hours of use with the two AAA batteries. In this mode, Delta goes to “sleep” after 40 minutes of no use. The Status light on “sleeping” Deltas will blink once every 15 seconds.

To wake up a Delta, press Test up to 5 seconds or until Status blinks once. To wake up a remote Delta RX, hold the TX Test up to 10 seconds. The TX Status will blink once, then turn on steadily when the Delta RX wakes up.

Note: The RX will wake up only if the TX sends the correct Zone and System code. When using more than one RX unit, hold the TX Test at least 10 seconds regardless of the Status light.

You can also wake up any Delta by turning it off and on again.

To defeat the Power Saver, turn off Delta. Then hold Test while you turn Delta on. Delta will not go to “sleep” as long as it is left on.

If you use the AC/DC adapter, Delta will not go to “sleep.” If you connect a cord from the Delta Accessory connection to Qflash Accessory connection, then Qflash will power Delta and it will not go to sleep.

For additional power you may connect a Quantum Battery 1, 1+, Bantam, or QB Compact to Delta’s DC input using cables listed in Appendix D.

## **9.0 Speed Sync**

To increase the maximum shutter speeds allowed using Delta remote flash do this: Turn on all zones on the Delta TX unit. All remote Zones will fire quickly, allowing settings up to 1/500 for focal plane and 1/1000 for leaf shutters.

Normal maximum shutter speeds are 1/250 for focal plane and 1/500 for leaf shutters.

When you use Relay mode, cut the maximum speed in half for each Delta Relay added.

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