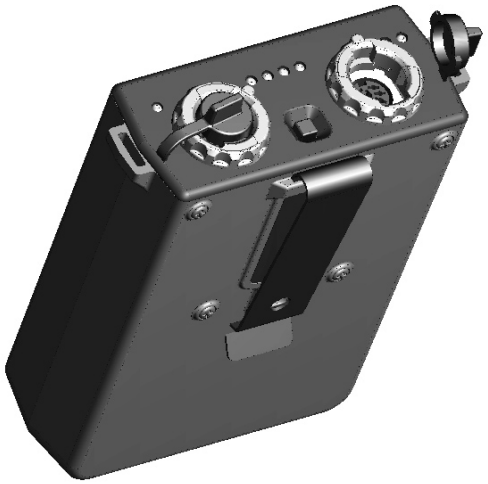
QUANTUM

# TURBO3

## Operating Instructions



CE

Quantum Instruments Inc.
Designed and manufactured in the USA

## 1. Introduction

Turbo 3 can power a digital camera and flash together, or two flashes. With *three times* the capacity of the original Turbo battery. Turbo 3 is the most capable flash/camera portable power pack Quantum has developed to date.

Turbo 3 uses the latest technology Nickel Metal Hydride (NiMH) battery. The battery provides bursts of high power for quick flash recycling, great capacity, no memory, and long life. (NiMH batteries are not subject to the air travel restrictions of some Lithium batteries.)

## 2. Warnings and Cautions:

**Do not disassemble the Turbo 3. High voltage!**

**Return equipment requiring service only to Quantum, or its authorized dealers or distributors.**

**Never put metal objects near either socket. Keep away from children.**

**Turn Turbo 3 off before attaching or removing cables.**

**Turbo 3 is powerful! Do not exceed flash's maximum consecutive full-power flashes (see flash instructions, or else 20 flashes). Then rest flash until it cools. Note: no limit for Qflash.**

## 3. Quick Guide

For best results charge your Turbo 3 *the night before* each use. The nature of Nickel Metal Hydride batteries is that they loose a portion of charge every day. Charging the night before or right before use ensures maximum capacity for your job.

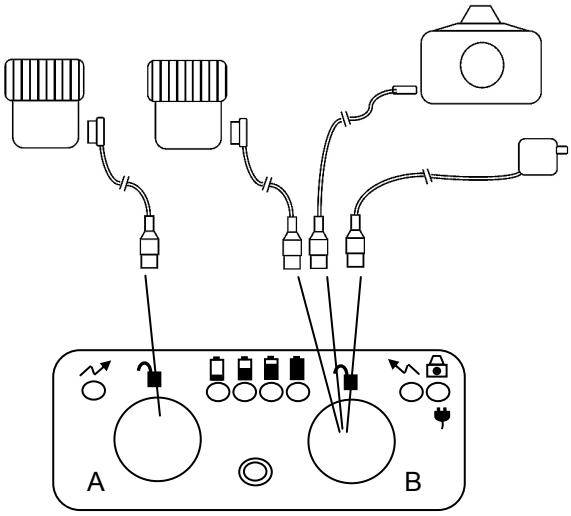
The "fuel gauge" is a computer calculated monitor of remaining battery capacity. The "fuel gauge" also displays the state of charge during recharging. When powering cameras and flashes, each green indicator goes out as battery capacity is used up. With only one green indicator lit less than 25% capacity remains.

**To check Turbo 3 capacity without a flash or camera attached, press the ON/OFF button. The LED fuel gauge will come on for a few seconds displaying remaining capacity. Turbo 3 will not stay on unless connected to a flash or camera.**

When the green 25% indicator *blinks*, Turbo 3 has shut down power and must be recharged.

During charging, each green indicator blinks on as charge is returned to the battery. When all four green indicators are steadily lit, charging is complete. See Section 5 for more charging details.

Turbo 3 powers two pieces of photo gear at the same time. Socket covers keep rain and dirt out of one (or both) sockets when not being used. Socket "A" can be used only for **Flash Cables**. Socket "B" can be used for **Camera** or **Flash Cables**, and for **charging**.




Turbo 3 has a cable locking feature that works with newer Flash Cable models CKE2, CZ2, and CQ2. Older cables may also be used without the locking feature. Please see the tables in Section 8 for all cable models.

Turbo **Camera Cables** and **Flash Cables** come in several styles, defined by their initial prefixes.

C" series **Flash Cables** power flashes from any Turbo model. Examples are CK, CKE, CKE2, CM4, CV, CZ, CZ2, CQ2, CQ8, etc. They power flashes with high voltage, rapid recycling power. Plug them into either "A" or "B" Turbo 3 socket and into your flash. The white LED panel indicator marked flash symbol will light.

"CD" **Camera Cables** power digital cameras from any Quantum Turbo model that has a low voltage output. Examples are CD1, CD3, CD30.
"SD" **Camera Cables** power digital cameras from Turbo 3 or T2X2 only. Examples are SD2, SD4.

Plug CD or SD cables only into socket B of Turbo 3, and plug the other end into the camera it is designed for. Turbo 3 automatically adjusts the DC low voltage correctly for the compatible camera. The yellow LED indicator will light for SD cables. The white LED indicator will light also when CD cables are connected.

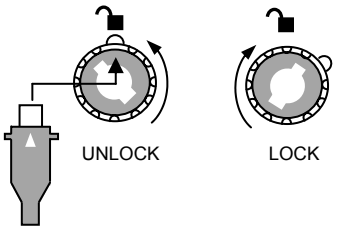
Quantum Qflash "T" models come with their own power cord which plugs into the A or B socket of Turbo 3.

Qflash Pilot can use an accessory power cord CCQ8, CQ8, or CQ2 for power. Plug into A or B socket of the Turbo 3.

**4. Operation**

***Turn Turbo 3 OFF before attaching or removing cables.***

To attach a locking cable, turn the lock ring counter clockwise. Line up the key indicator ▲ on the cable plug with the "unlock" symbol and press fully in. Lock the cable by turning the lock ring clockwise.




To insert a non-locking cable line up the key indicator with the "unlock" symbol on the panel and press fully in.

To turn Turbo 3 **on** press *and hold* the **ON / OFF** button until the "fuel gauge" lights, then release before the lights go out. To turn **off**, press *and hold* the button until the lights go out.

The fuel gauge displays the remaining capacity in the pack.

Each socket A and B lights steadily when in use. The A socket has a white LED indicator and flash symbol . The B socket has a white LED indicator and flash symbol , a yellow LED indicator with camera and charger symbols. Please see Sections 6 and 7 for LED indications of the status of your Turbo 3 and/or any problems that it may have detected.

You may connect flashes to either A or B sockets, but digicams may connect only to the B socket. Keep unused sockets clean and dry with the attached covers.

**5. Charging**

Charge at room temperature. Charge the night before, or charge just before use to be assured of starting your assignment with 100% charge.

Turbo 3 is supplied with a universal charger that works with an AC mains power from 100 to 240 VAC.
An accessory universal charger kit TRU may be used to allow charging from Euro, UK, US, or Australia/NZ 100-240 VAC power outlet. *A voltage converter is not necessary*.

***Be sure the AC mains socket is an uninterruptible line (not switched)***. Plug the charger into the **B socket only.** (Please note that the A socket will not accepted a charger). The charge indicator will light when the charger is properly connected. It is important not to interrupt the charging so that the computer fuel gauge remains accurate. If the power is interrupted, the fuel gauge may read incorrectly for one charge cycle, but will correct itself on the next cycle.

A full charge takes about 3.5 hours. ***Do not use any other type of charger and risk damage to the Turbo 3 and the charger!***

The fuel gauge indicates charging progress as shown in the diagram.

| 25% charged | 50% charged | 75% charged | 100% charged |
|---|---|---|---|
| ● ☼ ○ ○ | ● ● ☼ ○ | ● ● ● ☼ | ● ● ● ● |

● = steady light ☼ = blinking ○ = off

**6. "Flash" and "Camera" Output Indicators**

The Flash indicators show status of the corresponding outputs.

● A **steady** light means the output is supplying either flash (using a C Flash Cable) or camera power (using a CD or SD Camera Cable).

☼ A **Blinking** low voltage indicator shows when high voltage has shut down (but still supplying low voltage power).

○ **Off** indicates no power for that output.

Typical examples are shown below:

| A Socket | B Socket | | |
|---|---|---|---|
| Flash | Flash | Camera | |
| ● | ● | ○ | A and B outputs supplying flash power. |
| ● | ○ | ● | A: supplying flash power<br>B: supplying "SD" camera power |
| ○ | ● | ○ | A: No cord connected<br>B: supplying "CD" camera power |
| ● | ○ | ○ | A: supplying flash power<br>B: No cord connected |
| ☼ | ☼ | ● | A: high voltage shut down<br>B: supplying camera |
| ☼ | ☼ | ○ | A and B high voltage shut down. |

**7.0 Error Conditions and troubleshooting**

| *Symptom* | *Solution* |
|---|---|
| A flash cable is connected but the output indicator is not lit or blinking. | The cable could be broken, shorted, or it may be the wrong cable. Connect the cable to the other output; if the output indicator does not light, the cable has one of the above problems. |
| C type Flash Cable is connected to a flash and the output light blinks for 30 seconds | Turbo 3 has detected that no flash is connected. This could be caused by a bad cable or loose cable. Check that the cable is securely connected to flash and battery, then restart Turbo 3. |
| SD Camera Cable connected to B socket, C Flash Cable to the A socket. The A white flash LED blinks and high voltage is shut off. | Probably the "C" Flash Cable is broken (the cable is faulty). Replace the Flash Cable. |
| The green 25% fuel gauge LED light blinks for a few minutes, and then all lights go out and there is no power to the equipment connected. | This is the low battery indication. Recharge. Check that the charger is connected to a live mains outlet that cannot be. switched off. |

**8. Accessories for Turbo 3**

All Flash Cables power flashes with Turbo 3, Turbo, Turbo 2x2, Turbo SC, Turbo C, Turbo AC, Turbo Z,

**Replacement Chargers:**

Universal Charger TRU 100-240VAC, interchangeable mains plugs for Euro, UK, US, Aust/NZ

**Locking "C" type Flash Cables for flash power:**

CKE2 Nikon*
CZ2 Canon*
CQ2 Qflash TRIO / PILOT

**"C" type Flash Cables for flash power:**

| | |
|---|---|
| CO5 | Olypmus FL50 |
| CH | Honeywell* |
| CK | Nikon SB11, 24, 25, 26, 28-US |
| CKE | Nikon* |
| CL3 | Minolta 360PX |
| CL4 | Minolta 4000AF |
| CL5 | Minolta* |
| CM1 | Metz 45CT-1, 5 |
| CM4 | Metz 45CL1,3,4, 45CT3,4; Hasselblad 4504 |
| CM5 | Metz* |
| CM58 | Metz 58AF series |
| CM54 | Metz 54MZ series |
| CN3 | Vivitar 3900 |
| CO3 | Olympus T32, T45 |
| CS4 | Sunpak* |
| CS5 | Sunpak* |
| CS6 | Sunpak 622 |
| CV | Vivitar* |
| CZ | Canon* |

**Camera Cables for digital cameras:**

| | |
|---|---|
| CD1- | Nikon D1, D1x, D1h |
| SD2- | Kodak DC 200 series, 3400, 5000<br>Olympus "C", "D", and "E" models<br>Nikon Coolpix 800 thru 995, 5000, 5700<br>Epson PC850Z, 3000Z |
| CD3- | Kodak DCS 520 thru 760, Pro Back<br>Canon EOS D2000 |
| SD4- | Fuji S1, S2, S3Pro, S20Pro, S700D |
| CD5- | Kodak DCS Pro Back 645M/ 645C<br>Kodak DCS 300 series, 50, 120 |
| CD30- | Canon |
| CD100- | Nikon |
| SD10- | Nikon |

Cables and accessories are updated continuously. Please consult our website, your dealer, or Quantum directly for the latest availability.

* See the complete selection chart for specific model in Quantum brochures, on the product package at your dealer, or on the Quantum website, www.qtm.com.

**9. Customer Service**

Having any trouble in using your Quantum product? We are here to help. Mail, call, fax, or email our Service Department:

Service Department
Quantum Instruments Inc.
10 Commerce Drive
Hauppauge, NY 11788

Tel: 631 656 7400 Fax: 631 656 7410
email: QuantumHelp@qtm.com

Troubleshooting tips are available at www.qtm.com, Support, Customer Support, FAQ. If you suspect a malfunction or require adjustment, return the unit to us with an accurate description of the problem. Please be sure your problem is not caused by improper operating procedure or malfunctions in your other equipment. Send all equipment carefully packaged and insured to our address above.

An estimate of repair cost on out-of-warranty merchandise may be forwarded if you desire. This will require that we contact you for approval before proceeding and will delay return of your equipment. For fastest repair time, you may pre-approve repairs up to a limit of $100 with your credit card. We will bill you only for actual costs up to that limit. If repair costs exceed your pre-approval, we will contact you.

Paying by check will delay the repair until the check clears (up to 15 days). Payment by money order is acceptable.

Normal repair time is 10-15 days. For expedited service, contact our Service Department.

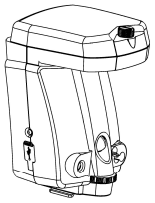
**Summary:**

Ship via UPS, Parcel Post, or other carrier, insured.
Give a clear, detailed description of the problem.
Give your mailing address and daytime phone number, fax #, and/or email.
For warranty repairs include a copy of the receipt.

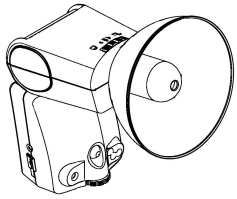
In addition, for out-of-warranty repairs with pre-approval:
Provide your Visa, MasterCharge, American Express, or Discover card# and expiration date.
Give us authority to charge repair costs up to $100.00.
Provide your billing address.

**Note:** Please do not email your credit card information

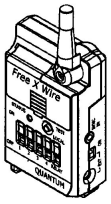
**Other Quantum Products**



PILOT



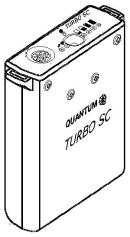
TRIO



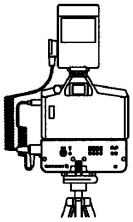

FREE X WIRE


FW7Q


QNEXUS




TURBO SC



TURBO
COMPACT

**WARNING**
**DO NOT SUBJECT THIS PRODUCT TO DRIPPING OR SPLASHING LIQUID, EXCESSIVE HEAT OR FIRE.**

**Quantum Instruments Inc.**
**10 Commerce Drive, Hauppauge NY 11788-3968 USA**
**Tel: 1-631-656-7400 Fax: 1-631-656-7410**
**www.qtm.com**

P670

# OPERATING INSTRUCTIONS

# FREEXWIRE®

## model FW7Q, FW8R

Digital Receivers

## model FW9T

Digital Transmitter

Digital Wireless TTL Flash and Camera Trigger

QUANTUM

★ DESIGNED AND MANUFACTURED IN THE USA ★

Patent Pending

# Contents



**Included with *FREEXWIRE* FW7Q:**
Instructions, Hook and Loop mounting pads (cables and batteries not required))

**Included with *FREEXWIRE* FW8R:**
Pole mounting kit, 2x AAA batteries, Instructions, Hook and Loop mounting pads

**Included with *FREEXWIRE* FW9T:**
2x AAA batteries, Sync-in cord, Hook & Loop mounting pads, Instructions

**Included with *FREEXWIRE* FW89 (set of Receiver and Transmitter):**
FW8R, FW9T, and all accessories included with those models above

All specifications and features are subject to change, updating, and improvements.

**Glossary**

| | |
|---|---|
| **Qflash 2 series** | refers to models QFT2, QFT2d, QFX2, QFX2d |
| **Qflash 4 series** | refers to models QFT4d, QFX4d |
| **Qflash 5 series** | refers to models QFT5d, QFX5d |
| **Receiver FW7Q** | ***FREEXWIRE*** Receiver dedicated for Qflash eries 4 and 5. |
| **Receiver FW8R** | ***FREEXWIRE*** Receiver for any flash or remote shutter release. |
| **Transmitter FW9T** | ***FREEXWIRE*** Transmitter |
| **Transceiver FW10** | ***FREEXWIRE*** Transceiver (can be set as transmitter or receiver). |
| **Transceiver FW10w** | Upgraded FW10 incorporating the features of Section 7.0. |
| **Unimod FW11** | Hot shoe adapter with additional sync inputs- used with QF series TTL adapters |
| **Hot Shoe Adapter FW12** | ***FREEXWIRE*** hot shoe adapter to mount FW9T or FW10 on camera shoe |
| **Zones 1, 2, 3, and 4** | wireless links that can be turned on or off to change lighting and camera activation |
| **Channels 0 thru 7** | independent channels for separate ***FREEXWIRE*** setups operating in the same area |
| **Local, or on-camera flash** | a flash close to the camera and connected with a sync cord |
| **Remote flash** | a flash at a distance from the camera and wirelessly synchronized |

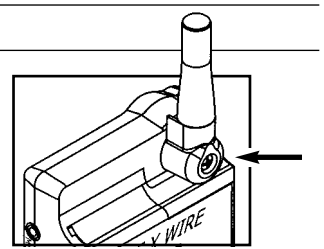
## FW Series Antenna Screw

Quantum Instruments, Inc. has made it easier to identify different FW series products by changing the color of the antenna screw.

**Green** - indicates FW8R Receiver

**Red** - indicates FW9T Transmitter

**Black** - indicates FW10w Transceiver



# 1.0 Introduction

We introduce the newest additions to the ***FREEXWIRE*** system: Receivers **FW8R**, **FW7Q** and Transmitter **FW9T**. Transmitter **FW9T** emits higher power for extended range. Receiver **FW8R** has extra sensitivity and simplified operation. **FW7Q** is dedicated to, and designed for any Qflash 4 or 5 series flash. **FW7Q**, **FW8R** and **FW9T** are fully compatible with all other ***FREEXWIRE*** system components. Transceiver **FW10** may be upgraded for additional features of Section 7.0.

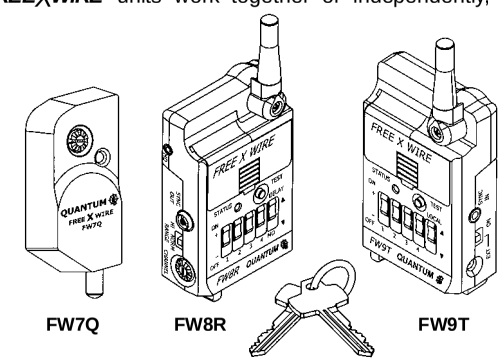
**Wireless Sync, Wireless Shutter** - Working with all popular flashes and cameras, ***FREEXWIRE***s provide wireless sync for remote flash and/or wireless shutter control for remote camera operation.

**Wireless TTL flash control: FW8R, FW7Q** and **FW9T**, in conjunction with Dw series Adapters and Qflash 5d flashes, provide wireless "QTTL" flash control from digital and film cameras. This wireless QTTL feature also transmits the "pre-flash" signal utilized by many digital and film cameras to determine exposure values. Qflash 4 series (QFT4d, QFX4d) can be upgraded to Qflash 5 series via software update.

***FREEXWIRE*** controls four independent *Zones* for wireless flash or wireless shutter release. You can activate any one Zone, or any combination of Zones 1,2,3 and 4. Switch your lighting instantly, remotely. Select and trigger flash, cameras, or combinations of them, from your remote position.

***FREEXWIRE*** also has eight unique *Channel Codes*. ***FREEXWIRE*** units set to one Channel cannot activate ***FREEXWIRE***'s set to different Channels. You control the Channel Code to make ***FREEXWIRE*** units work together or independently, as required.

***FREEXWIRE*** is very small and light and mounts easily to cameras, brackets, poles, and tripod legs. Sync and Shutter Release (motor drive) Cords are available for popular cameras and flashes. You can mount Transmitter **FW9T** directly on a camera's hot shoe using optional UniMod **FW11** or Hot Shoe Adapter **FW12**.





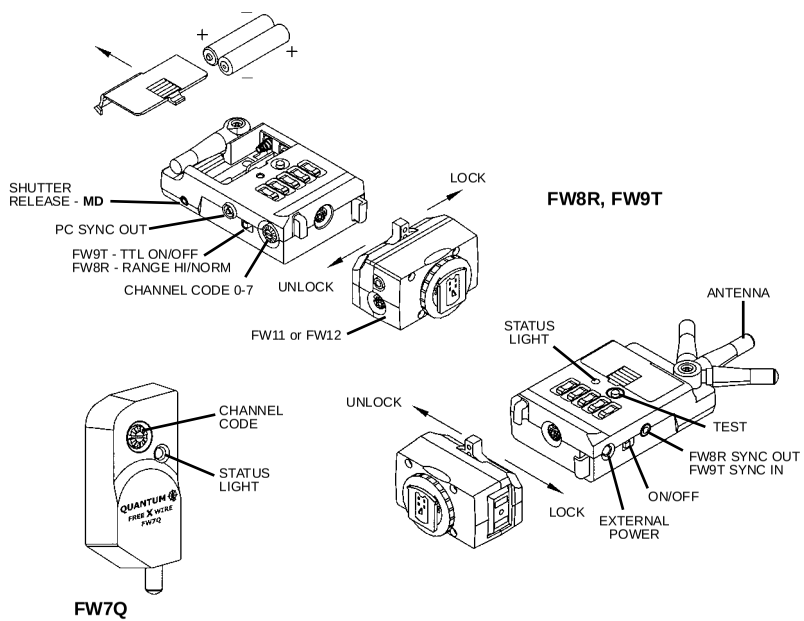

# 2.0 Channel Code and Zone set-up

### 2.1 Setting the Channel Code and Zones

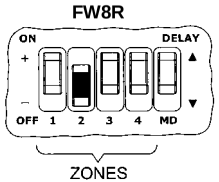
The Channel Codes allow ***FREEXWIRE***s to work together. Set all units that you want to work together to the same Channel Code. If you desire independent groups of ***FREEXWIRE***s (to work in the same area but not interfere), assign each group of ***FREEXWIRE***s its own Channel.

The Channel dial is located on the left side of FW8R and FW9T, and on the front of FW7Q. Rotate the dial to the desired Code, 0 through 7. To rotate, press the pad of your thumb on the dial and turn. Or, use a small screwdriver. Channels can be matched by number or by the position of the cutout in the Channel dial.

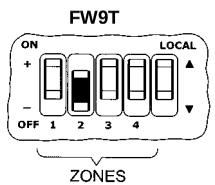
Install AAA batteries (not required for FW7Q).



**Activate at least one Zone** on both FW8R and FW9T by sliding Zone switches 1, 2, 3, and/or 4 up, towards the "+" symbol. Any FW8R and FW9T Zones that match will activate FW8R units each time the FW9T unit transmits. There are many possible combinations and you can change them as you work. To deactivate a Zone slide its switch down towards the "-" symbol.




The ***FREEXWIRE*** FW7Q has no Zone Switch. When used with a Qflash 4 series, FW7Q will activate for any Zone 1, 2, 3, or 4, on the matching Channel. However, Qflash 5 series can set the Zone of FW7Q through its control panel. (Note: Qflash 4 series can be upgraded to Qflash 5 series. Please contact the Service Department at www.qtm.com).




To set the Zone on a Qflash 5 series, press the Option button three times. The Zone Code settings should display on Qflash screen. Use the Set button select a Zone, then press the Up ▲ and Down ▼ buttons to turn the selected Zone on or off.

### 2.2 Turn on the units

Slide the power switch to ON. The status light of FW9T blinks *red, slowly.* FW8R units *blink green, slowly*. Low batteries are indicated by 3 *quick blinks* every few seconds. Qflash 4 and 5 series power Receiver FW7Q which requires no batteries. The green LED indicator on the FW7Q blinks once per second when Qflash is powered.

Open the antennas so that they are approximately vertical. See Section 5.0, Mounting ***FREEXWIRE***.

Press TEST on the Transmitter FW9T to confirm that all units are working. STATUS should light *steadily* on all ***FREEXWIRE*** Receivers for as long as you hold TEST (assuming correct Channel and Zone settings.)

### 2.3 Using FW9T test button to trigger a flash or shutter release:

For single shot operation, set the TTL switch of the FW9T "ON" when triggering a remote flash, this is a one shot mode to prevent the flash from firing multiple times.

For continuos operation, set the TTL switch of the FW9T "OFF" when releasing the shutter of a camera remotely.



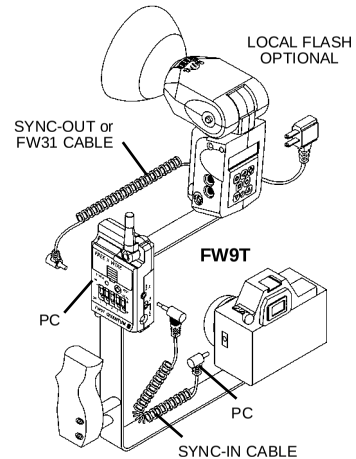
# 3.0 Wireless Flash set-up - with or without On Camera Flash

### 3.1 Transmitter FW9T

Connect the included (or other) sync-in cord from your camera PC nipple to FW9T Sync-In. Or use the optional FW11 or FW12 to connect ***FREEXWIRE*** to your camera's hot shoe. (See Appendix A for other sync-in options.)

If you want to sync an on-camera flash (in addition to a wireless one) connect the flash manufacturer's PC sync cord to the Sync-Out PC nipple on Transmitter FW9T, and set the Local switch to (**+**). To turn off the local flash, switch to (**-**).

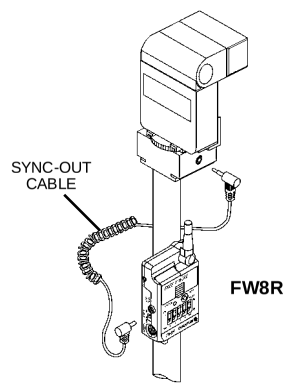
If Qflash is the on-camera flash, connect FW31 from Qflash to the FW9T bottom socket (or FW11 DIN socket if used). Then, Qflash can power the FW9T by setting the power switch to EXT, and batteries are not needed.




### 3.2 Receiver FW8R

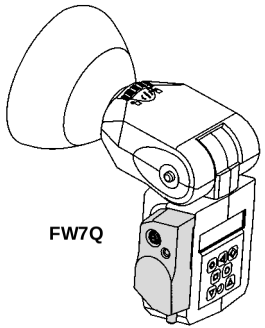
Connect the PC sync cord supplied by your flash's manufacturer to the Sync-Out PC nipple or mini phone socket on the FW8R. (See Appendix B for other sync-out options.)

Generally set the RANGE switch to NORM. Only if you require greater range, set RANGE to HI. (See Section 11.0 for range distances). **However, whenever using any *FREEXWIRE* for wireless TTL, always use NORM range.**

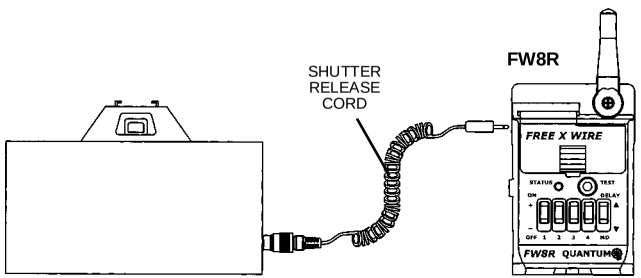


### 3.3 Wireless Qflash with Receiver FW7Q

This receiver is dedicated to Qflash series 4 and 5 and mounts directly onto the flash. Please see Section 5.0 for proper mounting. FW7Q will be set to NORM range when connected to a Qflash 4d. When connected to Qflash 5d, range can be set to HI or NORM, however, only NORM can be used for wireless TTL (Sections 7 and 8). See Section 11 for range specifications.




## 4.0 Wireless Shutter Release (motor drive)




**4.1 Receiver FW8R:**
Connect a Shutter Release Cord (see Appendix C) from the Receiver FW8R MD connection to the camera shutter release connection.

**4.2 Transmitter FW9T:**
Press TEST and hold (up to 1 second ) to release the shutter. Test the camera -- some require time to wake-up and to auto focus before they release the shutter.

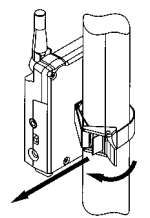
**4.3 Shutter MD Delay on FW8R:**
Many cameras have two step shutter buttons: Pressing part way turns on the meter and auto focusing, and pressing all the way releases the shutter. Some of these cameras require a delay between the meter/focus function and shutter release (for example, Contax 645). Select Shutter MD Delay for those cameras by sliding MD DELAY switch to (+). Without Shutter MD Delay, the camera focus, meter, and shutter will be activated together (and the camera will shoot as soon as it can). The Shutter MD Delay requires a two step Shutter Release Cord listed in Appendix C. Shutter Release Cords will be added periodically; please consult your dealer or the Quantum Web Site (qtm.com) for the latest models available.

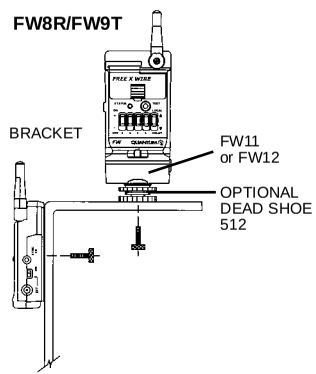
**4.4** Remote shutter operation is not possible with FW7Q.

## 5.0 Mounting *FREEXWIRE*

***FREEXWIRE*** units mount by several means:

**5.1 Pole Mount Adapter 513:** This item is included with your Receiver FW8R. Attach it to the back of ***FREEXWIRE*** and clamp it around any pole, leg, or structure where the antenna can be opened away from metal objects.



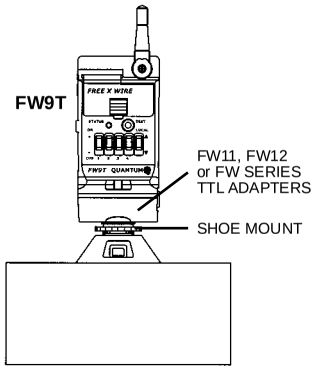




**5.2 Mounting directly to a bracket:** Use the #8/32 screw included with ***FREEXWIRE*** to secure it through a hole in a bracket. *Any other screw used must protrude not more than 3/4" (2 cm) into the* ***FREEXWIRE*** *case, or you will damage* ***FREEXWIRE****!*

When mounting the FW12 or FW11 to a Dead Shoe (model 512) it will be necessary to connect a sync-in cable for FW9T units, or sync-out cable for FW8R units. See Appendices A and B.

### 5.3: Direct Hot Shoe Mounting with FW12 or FW11

Connect the Hot Shoe Adapter FW12 or (Uni-Mod FW11) to a Transmitter FW9T and slip it into a camera hot shoe. The purpose of the Hot Shoe Adapter is only to provide hot shoe mounting and sync from a camera to a Transmitter FW9T. FW11 or FW12 will not provide TTL control -- see Appendix D for selection of QTTL and other TTL adapters.

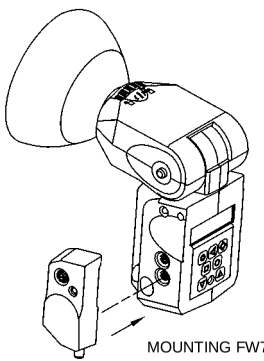



A Receiver FW8R mounted to FW11 or FW12 on a camera shoe will have no connection to the shutter release. If you desire wireless shutter release, connect a separate Shutter Release Cord (see appendix C) between the FW8R **MD** socket and the shutter release connection on the camera.

### 5.4 Mounting FW7Q

**Turn off Qflash power before mounting the FW7Q.**

FW7Q plugs into the lower Accessory socket of Qflash, as shown in the diagram. For added stability a hook-and- loop pad is mounted on the back of Receiver FW7Q. One part of this pad will be attached to the Qflash housing as follows:




Note where the hook and loop pad will come into contact with the Qflash housing when FW7Q is plugged into the lower Accessory socket. Clean the area of any dirt or grease. Remove the adhesive liner from the pad (without touching the adhesive), and align and mount FW7Q. Then press the FW7Q housing firmly against Qflash so that the hook and loop pad adheres to the Qflash housing. **Do not remove FW7Q for 24 hours to allow adhesive to cure.**

You can now remove and re-mount FW7Q when you need to use it. Additional hook and loop pads are included with FW7Q. They can be used to place additional pads on other Qflash units, or as a replacement.



### 5.5: Mounting FW8R and FW9T with hook & loop tape:

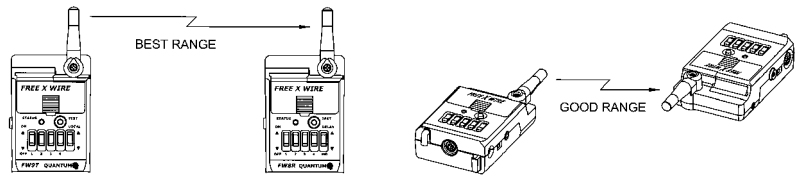
Two sets of hook & loop fasteners and one mounting pad are included in the FW8R and FW9T packages.

### 5.6: Important notes on antenna orientation:

**During operation the antennas should not be left in the stored position!**

At close range (about 50' or 16m) antenna orientation is not critical. Antenna orientation matters more as distance between Transmitter FW9T and Receivers FW8R and/or FW7Q increases.

The best mounting positions keep ***FREEXWIRE*** antennas away from metal objects. Each antenna should be parallel to all others. Vertical ***FREEXWIRE***s with vertical antennas provide the greatest range. Other orientations work almost as well. See Section 11, ***FREEXWIRE*** Performance Guide, for more tips for ideal operation.




## 6.0 Changing Qflash Settings via Wireless Remote

This feature allows you to change the settings on a remote Qflash from the panel of another Qflash, using Receivers FW7Q, FW8R or FW10 with Transmitters FW9T or FW10. The settings on Qflash 4 and 5 series can be changed in this way. For example, you can change the ISO, mode, F#, manual power, and most all other Qflash settings.

FW8R, FW10 and FW9T will need FW31 cables to connect each of them to the local and remote Qflashes. (FW7Q connects directly and does not require the FW31 cable). The Qflash 4 and 5 series operating manuals give detailed instructions for adjusting the settings on the remote Qflashes via wireless mode.

# 7.0 Wireless QTTL control for *Digital Cameras and pre-flash Film Cameras*

Many newer camera systems utilize a “pre-flash” as a means to set exposure. After the pre-flash the main flash fires and synchronizes with the shutter. FW7Q, FW8R and FW9T provide wireless QTTL flash capability for these types of camera systems, whether digital or film camera systems.

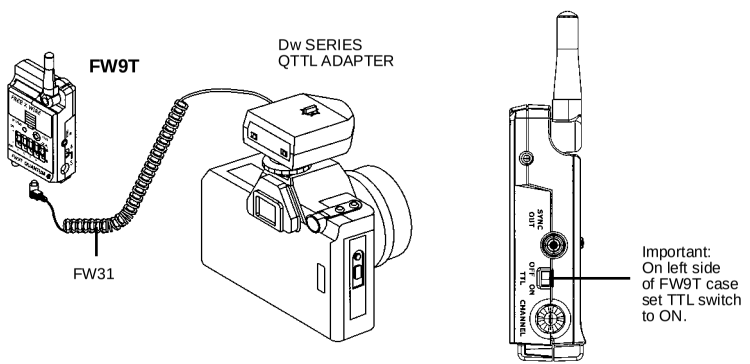
**“Dw” series QTTL adapters (e.g. D12w, D13w, etc.) and Qflash series 5d flashes are required for the functions of this Section 7.0.** Note: All Qflash 4d series flashes can be converted to Qflash 5d series, and all D series adapters can be converted to Dw series via software upgrades. Please contact Quantum Customer Service for the upgrade procedure.

If you wish to utilize ***FREEXWIRE*** FW10 transceivers together with FW7,8, or 9 units, they require an upgrade to **FW10w** for the functions Sections 7.0 and 8.0. Please contact Quantum Customer Service for the upgrade procedure.

FW10w can not be directly connected to Dw series QTTL Adapters (sections 7.1, 8.1). A local Qflash is required as illustrated in sections 7.3 and 8.3.

### 7.1 Transmitter FW9T set-up

Select the Dw series QTTL Adapter compatible with your camera (Appendix D, or www.qtm.com for latest additions). Mount the Dw series adapter to the camera and connect its cable to the FW9T Accessory socket. Mount FW9T on a bracket or other convenient location.



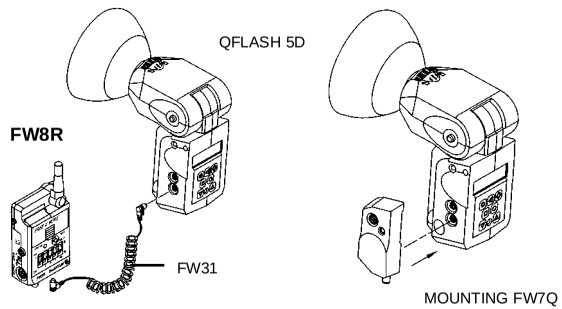



### 7.2 Receiver FW8R or FW7Q set-up

**Important: Set receivers FW7Q or FW8R to NORM range only for wireless TTL. Set Qflash to TTL mode.**

Connect FW31 Accessory Cable between the Receiver FW8R and either Qflash 5 series Accessory socket. Qflash powers ***FREEXWIRE***, and batteries are not needed, when it is connected with the QF31 cable. Set the power switch of FW8R to EXT.

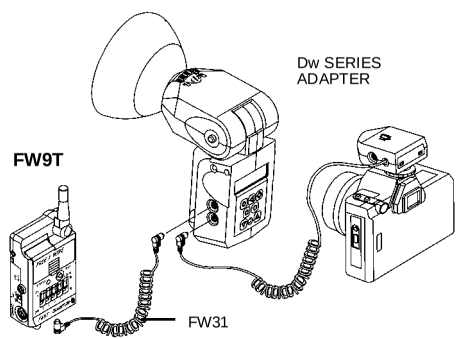
FW7Q plugs directly into a Qflash 5d series as described in Section 5.4.




### 7.3 Connecting a local Qflash to the Transmitter FW9T

If you wish to sync an on-camera Qflash 5 series with all remote Qflashes, connect the “Dw” series TTL Adapter to either Qflash Accessory socket. Connect the FW9T to the other Accessory socket with an FW31 accessory cable.

**Set Qflash 5 series to QTTL mode.** Qflash cannot be deactivated with the Local switch on FW9T. However, Qflash 5 series can be turned off by pressing MODE twice. To restart, press any button on Qflash.



# 8.0 Wireless TTL control for *Film Cameras (non pre-flash)*

This mode allows a (non pre-flash) TTL camera to control all local and remote Qflash exposures. **All series of Qflash and all series of TTL adapters can be used**, including QFT, X, T2, X2, T2d, X2d, 4 and 5 series, and TTL adapter series QF, FW, D, and Dw.

**Set all Qflashes, on-camera or remote, to TTL mode.**

### 8.1 Transmitter FW9T set-up:

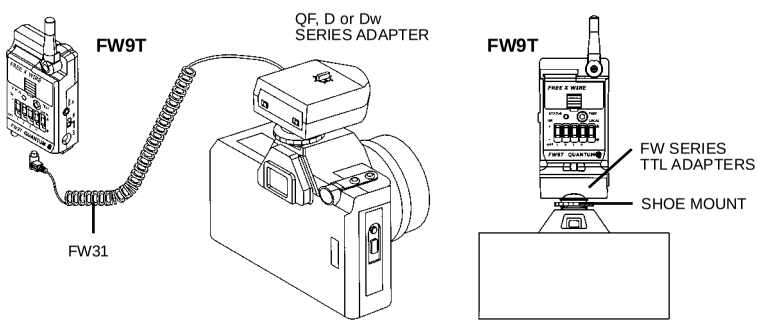
Select the correct type of Qflash TTL Adapter for your camera, from the list in Appendix D or our website.

FW series of TTL adapters attach to Transmitter FW9T and to the camera hot shoe without cables.

QF series TTL Adapters connect to Transmitter FW9T accessory socket and require an FW11 Uni-Module.

D or Dw series QTTL adapters connect to Transmitter FW9T and DO NOT require other accessories.

**Set Transmitter FW9T TTL switch to ON**. Mount FW9T on a bracket or other location, or use an FW series Adapter which mounts directly to the camera hot shoe.



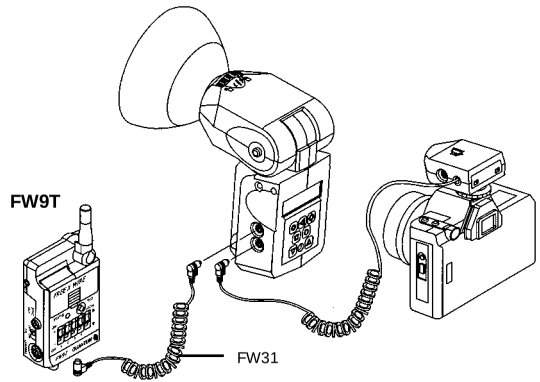



### 8.2 Receiver FW8R or FW7Q:

Mount and connect one or more of these receivers as in Section 7.2

### 8.3 Optional: connect a local Qflash to the Transmitter FW9T:

A local Qflash connected to FW9T will sync with the remote flash and will also power the FW9T. Set the power switch of the FW9T to EXT. **Set Qflash to TTL mode.**




# 9.0 Wireless Auto Mode – for any Qflash – without TTL Adapters

With today's complicated camera systems, it is sometimes easier, more reliable and straightforward to shoot in auto mode rather than TTL. Auto also gives the photographer the ability to tailor her/his exposures to personal taste or experience.

This mode will give **any** model of Qflash wireless Auto mode control of remote Qflashes. **This set up does not require a camera with TTL capability nor a TTL Adapter, only local and remote Qflashes.**

### 9.1 Transmitter FW9T set-up:

Connect an FW31 cable from Transmitter FW9T to Qflash. Connect a Sync-in cord from camera PC nipple to Transmitter FW9T Sync -in. **Set the local Qflash to Auto mode.**

### 9.2 Receiver FW8R or FW7Q:

Mount and connect one or more of these receivers as in Section 7.2. Connect as many remote Qflashes as required. **Set the remote Qflashes to TTL mode.** The remote TTL Qflashes will expose to the setting of the local “Auto” Qflash.

### 9.3 Additional features with Qflash 4 and 5 series & QTTL Adapters:

Many other Wireless Auto features are available when a Qflash 4 or 5 series is connected to the camera with a D or Dw series Adapter.

The available features include: Wireless ratio control between Qflashes; Wireless auto-fill; Flash f/# tracking the camera’s f/# setting as it changes; Sensor limit with any of the preceding modes. Full details of these features are found in the operating manuals for Qflash 4 or 5 and D series QTTL adapters. Operating manuals can be found at qtm.com if needed.

## 10.0 Remote Camera and Remote Off-Camera Flash Operation

**Remote Camera and Remote off-camera Flash operation using Quantum *FREEXWIRE*™ FW8R (or FW7Q with Qflash T4d, T5d), FW9T and FW10(w).**

The new FW7Q, FW8R and FW9T are fully compatible with the FW10(w). These units can be used together to setup remote camera and remote off-camera flash operation. This setup releases a shutter wirelessly and the camera triggers a remote flash timed to the shutter release. Careful settings are required for this setup to work.

When the TEST button of the ***FREEXWIRE***™ FW9T Transmitter is pressed, the ***FREEXWIRE***™ FW10(w) [set as a receiver (RX)] Relay unit will activate the camera shutter function. The camera will delay the flash sync until wake up, auto focusing, metering, etc. is achieved (this may take up to a second or so), then the shutter opens and the cameras’ flash sync activates the ***FREEXWIRE***™ FW10 RX Relay unit which sends a signal to the (FW8R or FW7Q) Receiver and synchronizes (fires) the flash.

**Basic setup:**

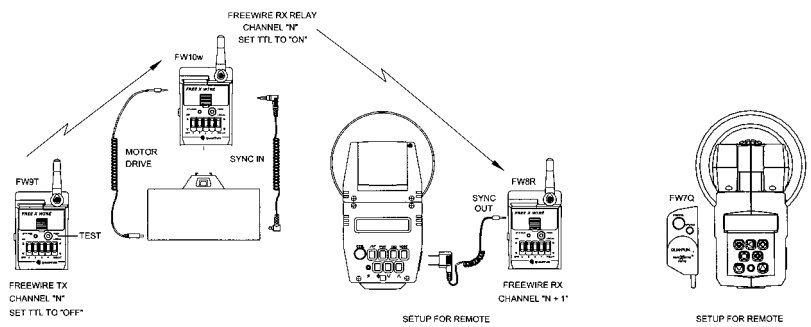
***FREEXWIRE***™ FW9T Tansmitter, set the TTL switch “OFF”, set it to any channel Code 0 – 7, set the Zones “+” (on) that correspond to the ***FREEXWIRE***™ Receivers that you want to fire.



***FREEXWIRE***™ FW10(w) [set as a receiver (RX)] Relay unit set it to Relay mode ▼, select Special Option for “TTL ON”, set the channel number the same as the ***FREEXWIRE***™ TX unit, connect a sync-in cord from the cameras’ sync, or mount it on the cameras’ hot shoe using a FW11 or FW12 shoe adapter. Connect a shutter release cord (motor drive cord) from the FW10 to the cameras’ shutter release connection.

***FREEXWIRE***™ (FW8R or FW7Q) Receiver, set to NORM range, connect a sync-out cord from the unit to the off-camera flash (not needed when using an FW7Q and Qflash 4d/5d), set the channel Code one higher. For example if ***FREEXWIRE***™ TX and ***FREEXWIRE***™ RX Relay are Code 5, set ***FREEXWIRE***™ RX to Code 6. If the first Code TX unit is 7, the next higher Code is 0. Set a Zone “+” (on) which is also selected on the TX unit.

- The confirmation signal is not possible for this setup.
- Wireless QTTL is not possible for Remote Camera and Remote off-camera Flash operation.
- Multiple ***FREEXWIRE***™ Receivers can be used. Only the FW10(w) can be a RX Relay unit. See FW10(w) section 8.3.
- Advance Setup with “local” flash and remote TTL or Auto control. See FW10(w) section 8.4.



## 11.0 Miscellaneous

**11.1 High Speed Sync for remote flash:**

For highest sync speeds: Turn on all zones of Receiver FW8R units. High speed sync allows shutter speeds up to 1/500 for focal plane and 1/1000 for leaf shutters. **TTL mode does not work with high speed sync.**

> "Normal sync" speeds are 1/250 for focal plane and 1/500 for leaf shutters (or slower) when selecting one, two or three of the Zones on any ***FREEXWIRE*** RX unit.

**11.2 External Power:**

You can power ***FREEXWIRE*** externally with AC adapters, Quantum Batteries, or with a Qflash connected by an FW31 Accessory cable. Appendix E lists AC adapters that connect to the EXT power jack. To utilize external power, switch ***FREEXWIRE*** OFF (EXT). When external power is removed, switch ***FREEXWIRE*** ON to power it from its internal batteries.

**Warning:** Use only Quantum specified external power to avoid possibly damaging ***FREEXWIRE***.



## 12.0 *FREEXWIRE* Performance Guide

**How to maximize performance, troubleshoot, and answer questions about Quantum's *FREEXWIRE* Wireless Photo Control System.**

If for some reason we don't have an answer in this guide, please email, fax, write or call Customer Service for further assistance.

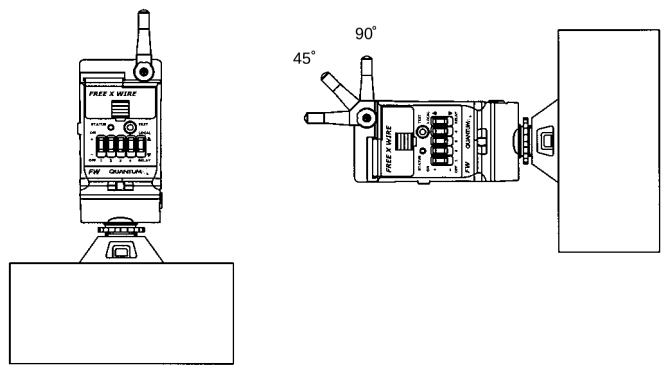
Good radio performance depends on several factors: The orientation of a radio and antenna, the presence of other radio signals which may interfere, and the presence of objects which may interfere. As the range increases, these issues become more important. At close range, performance is less critical.

**The following suggestions will maximize range and reliability of your *FREEXWIRE* link:**

**Orientation**

The maximum range may be possible when all ***FREEXWIRE*** antennas are aligned vertically. If ***FREEXWIRE*** is attached to a camera and you change from vertical to horizontal framing, you can easily swing the ***FREEXWIRE*** antenna back to vertical.

When shooting quickly and changing from horizontal to vertical framing, you may get good results the TX antenna at 45° as shown. That will provide reasonable range without adjusting the antenna with every shot. The receiver antenna remain fixed horizontally or vertically.



**Mounting and placement**

The enemies of radio signals are metal objects, concrete, and water. Mount ***FREEXWIRE***s away from metal objects when possible. Of course, you may be mounting ***FREEXWIRE*** on light stands and brackets, and they generally have a slight affect on range.

At longer distances it is possible to find dead spots. Moving the ***FREEXWIRE*** Remote unit a few inches in any direction can cure the problem.

Do not use gaffers or duct tape which have metal threads imbedded, on any ***FREEXWIRE***. Do not mount metallic labels on the units.

When wearing ***FREEXWIRE***s, mount them outside your clothing and away from your body. And, of course, watch out for metal objects on or near you.

Transmitter FW9T units may be mounted close together. FW9T units will trigger FW8R units at a distance greater than 3 ft (1m) up to the maximum range.

These are the maximum ranges which may be possible under optimum conditions (vertical antennas, no metal nearby, no nearby radio stations or interference, about 5' above open field):

| Transmitter | Receiver | HI Range* | NORM Range (TTL) |
|---|---|---|---|
| FW9T | FW8R | 1000' (300m) | 500' (150m) |
| FW9T | FW7Q | 600' (175m) | 300' (90m) |

FW10, as a transmitter or receiver, operates at approximately 1/2 of the distances above.

Notes:
*** HI range is not recommended for pre-flash systems (digital TTL).** HI range can be used for flash sync, wireless shutter release, or for non pre-flash TTL control (mostly film cameras). HI range for FW7Q is set via the QF5d panel.

**Interference**

Do lot locate ***FREEXWIRE*** receivers directly on studio flash power packs or other equipment that generate radio frequency interference, such as most heavy machinery, motors, and of course other transmitters. Arenas, factories, and offices have other sources of radio "noise" which can include TV camera uplinks, walkie-talkies, radio and TV broadcast antennas, and cell phone repeaters.

If you cannot remove ***FREEXWIRE*** receivers from the area of interference: Close or partly close the **receiver (only!)** antennas which will decrease interference. Set FW8R RANGE switch to NORM. Be aware that these measures will necessarily decrease range as well as cut interference.



# Appendices

**Accessories may be changed or added periodically. Please consult you dealer or the Quantum Web page (www.qtm.com) for the latest models available.**

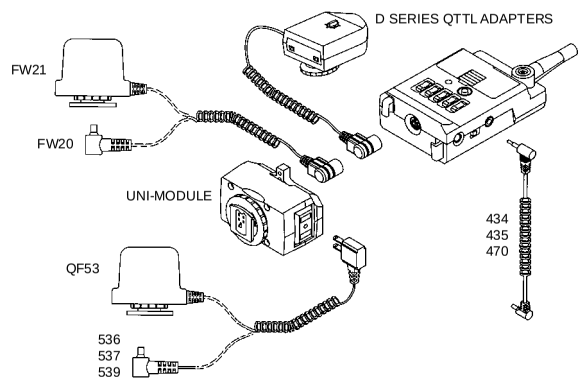
**Appendix A – Sync-in connections from camera to Transmitter FW9T**

| Model | Description | From | To | Notes |
|---|---|---|---|---|
| 434 | Sync-in cord- 18" (.5m) | Camera PC nipple | ***FREEXWIRE*** Sync-In | Included with FW9T |
| 435 | Sync-in cord- 4' (1.2m) | Camera PC nipple | ***FREEXWIRE*** Sync-In | Coiled cord |
| 470 | Hasselblad sync cord | Hasselblad "C" lens | ***FREEXWIRE*** Sync-In | |
| FW11 | Uni-Mod | Camera hot shoe | FW9T Accy conn | |
| FW12 | Hot Shoe Mount | Camera hot shoe | FW9T Accy conn | |
| FW20 | Sync-in cord- 18"(.5m) | Camera PC nipple | FW9T Accy conn | |
| FW21 | Hot Shoe sync- 18" (.5m) | Camera hot shoe | FW9T Accy conn | |
| FW22 | Hot Shoe sync- 18" (.5m) | Camera hot shoe | FW9T Sync-In | |

**The following require an FW11 Uni-Mod connected to your Transmitter FW9T unit. These Sync-in connections provide no TTL functions. See Appendix D for D series adapters which provide additional TTL functions explained in Sections 7 and 8.**

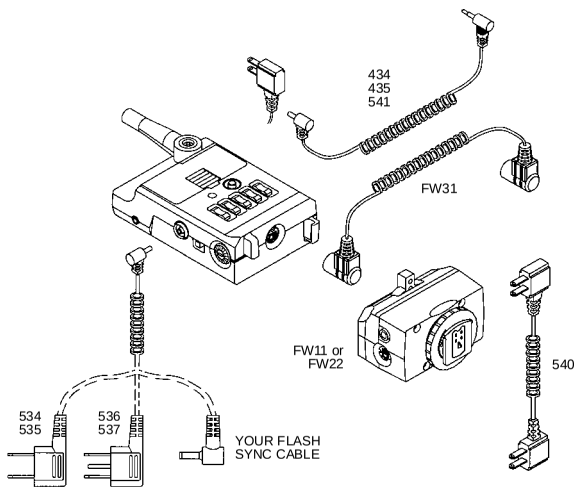
| | | | | |
|---|---|---|---|---|
| 536 | Sync-in cord, 18" (.5m) | Camera PC nipple | Uni-Mod two prong | Coiled cord |
| 537 | Sync-in cord, 5' (1.5m) | Hasselblad "C" lens | Uni-Mod two prong | Coiled cord |
| 539 | Sync-in cord, 12" (.3m) | Camera PC nipple | Uni-Mod two prong | Straight cord |

[Note: #536 and 537 serve as Sync-out cords as wel l- see Appendix B]



## Appendix B - Sync-out connections from *FREEXWIRE* FW8R to flash

| Model | Description | From | To | Notes |
|---|---|---|---|---|
| ---- | flash mfg's sync cord | ***FREEXWIRE*** PC conn. | Your flash | Supplied by flash mfg. |
| FW31 | Accy cable 18" (.5m) | ***FREEXWIRE*** Accy conn. | Qflash Accy | For Qflash sync or wireless TTL. |
| 434 | Sync-out cord 18" (.5m) | ***FREEXWIRE*** Sync-out | Flash PC nipple | For Qflash and some studio flash |
| 435 | Sync-out cord 4' (1.2m) | ***FREEXWIRE*** Sync-out | Flash PC nipple | For Qflash and some studio flash |
| 534 | Sync-out cord 18" (.5m) | ***FREEXWIRE*** PC conn. | 2 prong | For Studio flash -2 prong socket |
| 535 | Sync-out cord 5' (1.5m) | ***FREEXWIRE*** PC conn. | 2 prong | For Studio flash -2 prong socket |
| 536 | Sync-out cord 18" (.5m) | ***FREEXWIRE*** PC conn. | 2 prong + pin | For Qflash and some studio flash |
| 537 | Sync-out cord 5' (1.5m) | ***FREEXWIRE*** PC conn. | 2 prong + pin | For Qflash and some studio flash |
| 541 | Sync-out cord | ***FREEXWIRE*** mini-phone | 2 prong + pin | For Qflash and some studio flash |






## Appendix C - Motor Drive cords from *FREEXWIRE* to camera

| Model | Camera | Notes |
|---|---|---|
| 451 | Nikon MD2/4/12/15, 8008s, F4S | N90s, F5 need Nikon adapter MC25 |
| 452 | Hasselblad ELM, ELX | |
| 453 | Canon, Olympus, Hasselblad H-1 | See other Canon selections |
| 454 | Mamiya RZ67, RZ67 II, 645 Super, 645 Pro | |
| 456 | Leica R3, R5, R6, R6-2, R7, RE | |
| 458 | Minolta 5000, 7000, 9000, 5000i, 7000i, 8000i, 5Xi, 7Xi, 9Xi, 700si, Maxxum - 7,9 | |
| 459 | Canon EOS A5, A2E, A2, 1, 1N, 620, T90, Rebel 300D | |
| 463 | Bronica SQAI | |
| 464 | Rollei, 6002, 6003, 6006, 6008, SLX | |
| 465 | Hasselblad 503CW/CXi | |
| 466 | Canon EOS 3, 1V, D30, D60, 10D, 1D, 1Ds, 1D Mark II | |
| 467 | Mamiya 645AF | |
| FW41 | Contax 645, Canon Elan 2, 2E, 7, 7E, Rebel 2000, XI Lite, Rebel 300D, Hasselblad H-1 | Two step MD cord |
| FW42 | Maxxum 7, 9 | Two step MD cord |
| FW43 | Canon 1v, 3, D2000, D30, D60, 10D, 20D, 1D, 1Ds, 1D Mark II | Two step MD cord |
| FW44 | Nikon D1, D1H, D1X, D2H, D2X, F5, N90/s, F90x, F100 / Kodak DCS 760, Fuji S3 | Two step MD cord |
| FW45 | Mamiya 645AF | Two step MD cord |
| FW46 | Canon EOS 1, A2, A2E, AS, 1N, 620, T90 | Two step MD cord |
| FW47 | Pentax 645N and all Autofocus SLR Cameras except Z-1p | Two step MD cord |

## Appendix D -- QTTL and TTL Wireless Adapters for Transmitter FW9T

These Adapters connect to a ***FREEXWIRE*** TX and provide wireless QTTL/TTL exposure control.

| D Series *** QTTL Adapters | QF Series** TTL Adapters | FW Series* TTL Adapters | Cameras |
|---|---|---|---|
| D10w | QF10 | | Olympus, Practica |
| | QF11 | | Minolta X series |
| D12w | QF12 | FW52 | Nikon, Fuji S2, S3 |
| D13w | QF13N | FW53N | Canon |
| | QF14 | | Minolta Xi series |
| | QF15 | | Contax |
| | QF16 | | Leica |
| | QF17 | FW57 | Pentax |
| | QF18 | | Rollei |
| D19w | QF19 | FW59 | Hasselblad |
| | QF20 | FW60 | Bronica |
| | QF22 | | Mamiya 645 ProTL |
| | QF23 | | Leica R8 |
| | QF24 | FW64 | Contax 645 |
| D25w | QF25 | FW65 | Mamiya 645AF, 645AFD |

* FW series TTL Adapters connect directly to the ***FREEXWIRE*** TX

** QF series TTL Adapters require an FW11 Uni-Mod connected to ***FREEXWIRE*** TX, unless a Qflash is also connected to the Accessory connector of ***FREEXWIRE***.

*** D series QTTL Adapters provide the most features, including auto-focus, fill flash offset, etc.

Adapters models may be changed or updated periodically. Please check the latest Quantum Price List at your dealer, or www.qtm.com. Look under Qflash and ***FREEXWIRE***.

## Appendix E - Miscellaneous Accessories

| Model | Description |
|---|---|
| MDC2 | External power connection from QB1, 1+, or QB1c to ***FREEXWIRE***. |
| XDC2 | External power connection from Bantam or QB1c to ***FREEXWIRE***. |
| FW26 | Multi clip for ***FREEXWIRE*** to clip to a belt or bracket |
| FW29 | AC external adapter, US & Can, 115 VAC. |



## Appendix F - Specifications

**Size:** ***FREEXWIRE*** FW8R/FW9T: 3.6 x 2.3 x 1.1 in. (9 x 6 x 2.8 cm)
***FREEXWIRE*** FW7Q: 3.3 x 1.5 x 1.0 in. (8.3 x 3.8 x 2.5 cm)

**Weight (w/ batteries):** FW8R/FW9T: 4.3 oz. (122g)
FW7Q: 1.8 oz. (51g)

**Batteries:** 2x AAA cell alkaline, nicad, nickel-metal hydride, or lithium

**Battery life:(alkaline):** FW8R: receiving four synchronizations per minute: 24000 shots, 100 hours;
FW9T: sending synchronizations shots per minute: 36000 shots, 150 hours
Remaining battery life- after low battery signal (triple blink every 2 seconds): approx. 1-3 hours

FW7Q requires no batteries. Any ***FREEXWIRE*** connected to Qflash with FW31 cable requires no batteries.

**Maximum Range:** See Section 11.

**Maximum flash rate:** 25 fps

**Maximum sync delay from camera trigger to remote flash:** 1/2000-sec (normal sync); 1/3000 sec. (all RX Zones ON – fast sync mode).

**Minimum camera shutter speeds:** Leaf shutters 1/500, 1/250 focal plane shutters. In fast sync mode (All RX Zones ON) sync speeds may be 1/1000 for leaf shutters, 1/500 for focal plane shutters.

All equipment, specifications and descriptions are subject to changes, improvements and availability.

## Customer Service

If you have any trouble whatsoever in using your Quantum product, we wish to assist you in any way we can. Contact the Service Department via:

Telephone: (631) 656-7400 Fax: (631) 656-7410

Website: www.qtm.com

If you suspect a malfunction, return the unit with a detailed, accurate description of the problem and the type and models of other equipment used with it. Please be sure your problem is not caused by improper operating procedure or malfunctions in your other equipment.

Carefully package and insure units sent for repair. For most reliable service send via UPS, FedEx, or other common carrier to:

Service Department
Quantum Instruments Inc.
10 Commerce Drive
Hauppauge, NY 11788-3968

In case we have to contact you please provide your phone number and best time to call, plus email address if desired.

An estimate of repair cost for out-of-warranty merchandise will be sent if desired. This will require that we contact you for approval before proceeding and will delay the return of your equipment. For fastest turn around, you may pre-approve repairs up to a limit of $85 with your credit card. We will bill only the actual repair cost, and you will be contacted if repairs exceed the pre-approved limit.

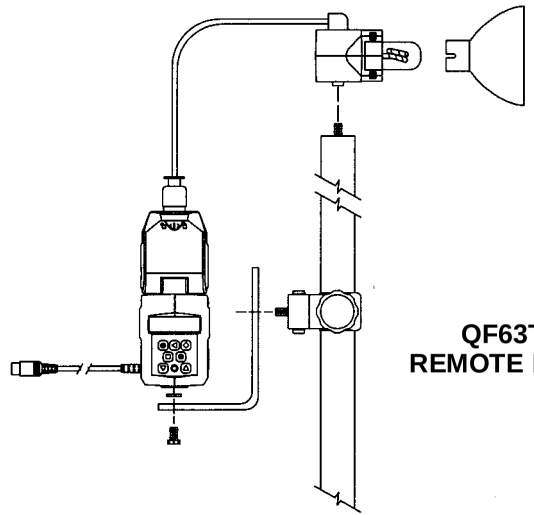
For pre-approved repair charges provide your Visa, MasterCharge, or American Express card, expiration date, and billing address. Send this information via postal mail or phone. DO NOT EMAIL THIS INFORMATION.

## Limited Warranty

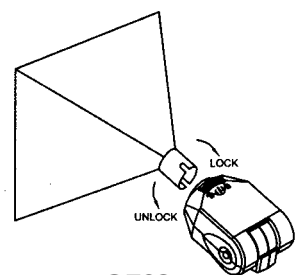
Quantum products have a one year limited warranty. Please refer to the Limited Warranty card enclosed with your product for further details, conditions, and terms.



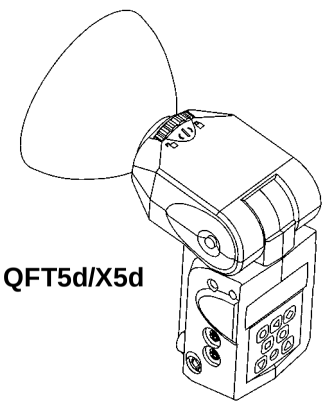
# QFlash T2/X2, T4d/X4d ACCESSORIES



**QF63T / QF36X**
**REMOTE FLASH HEAD**

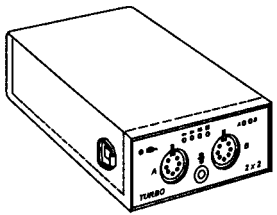



**QF68**
**SOFTBOX**

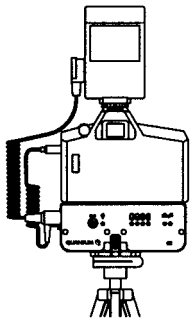


**QFT5d/X5d**

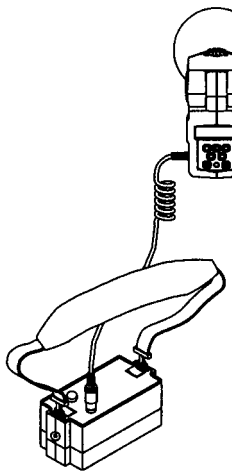
# OTHER QUANTUM PRODUCTS



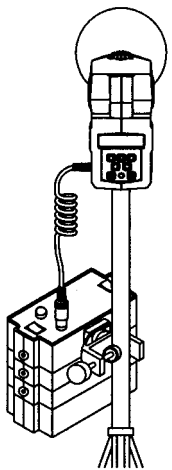

**TURBO 2X2**



**TURBO COMPACT**

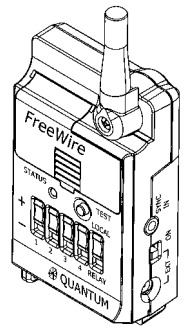


**QPAQ-X**



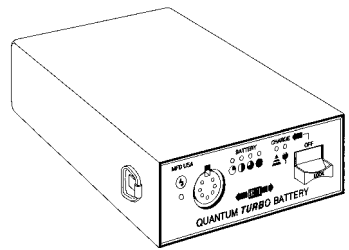


# OTHER QUANTUM PRODUCTS

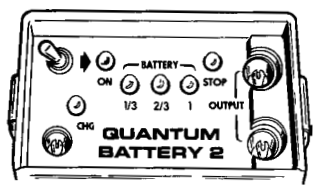



***FREEXWIRE*™**

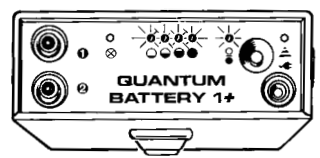

**RADIO SLAVE**




**TURBO**




**QB2**




**QB1+**

FC Tested to comply with FCC standards

CANADA: 3707A-IC2811A
FCC ID: CEXFW7Q CEXFW8R CEXFW9T

***FREEXWIRE*** model FW7Q, FW8R, FW9T

This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry & Science Canada. Operation is subject to the following 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 of the device.

**IMPORTANT - CAUTION**

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

CE 0678 !

**Declaration of Conformity:** Quantum Instruments, Inc. declares that ***FREEXWIRE*** FW10 satisfies all the technical regulations applicable to the product within the scope of Council Directive 1999/5/EC.

**For Customer Service, technical help, or information:**

**Quantum Instruments, Inc**
**10 Commerce Drive, Hauppauge NY 11788-3968 USA**
**Tel: 1-631-656-7400 Fax: 1-631-656-7410**
**www.qtm.com**

# Qflash® *CoPilot*
## QF91C (Canon)
## QF91N (Nikon)

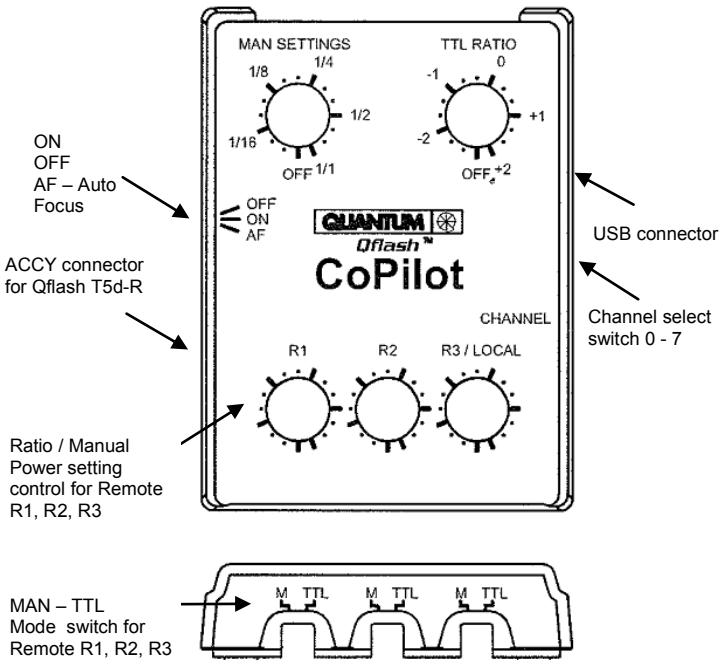
# Shoe Mount Wireless Radio Commander for Qflash 5d-R and TRIO

## Operating Instructions

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

Quantum Instruments Inc.
10 Commerce Drive, Hauppauge NY 11788-3968 USA
Tel: 1-631-656-7400 Fax: 1-631-656-7410
www.qtm.com

P701




## 1 Introduction

Mount CoPilot to your camera hot shoe for simple, reliable wireless control of remote flash units: CoPilot QF91N for Nikon, QF91C for Canon.

CoPIlot sends camera TTL signals to remote flashes to set and adjust multi-flash lighting right from your camera position. CoPilot's radio wireless system works up to 300' (100m) using the reliable FreeXwire system.

CoPilot controls the exposure of up to three independent Remote Groups of flash units.

A Remote Group can consist of :

Quantum Trio
and / or
Qflash T5d-R with an FW8R or FW7Q receiver
and / or
Any non Quantum flash that can be triggered by a sync signal, with
A FreeXwire receiver.

A Remote Group may consist of any number of remote flash units. Each Remoter Group receives its individual exposure setting according to the setting on CoPilot mounted to your camera's hot shoe.

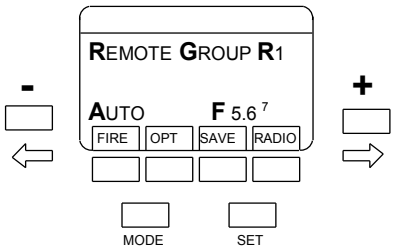
## 2 Setting up the Remote Groups

Remote Group are designated **R1**, **R2**, and **R3.** Remote Groups can consist of any of the following:

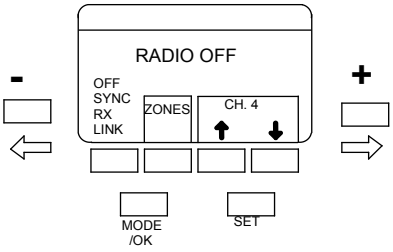
- Quantum Trio set to **Remote Group R1, R2, R3**
- Qflash T5d-R set to **Wireless Group R1, R2**. When used with A FreeXwire FW8R or FW7Q receiver.
- Any non Quantum flash connected to a FreeXwire FW8R or FW10w.

### 2.1 Set up a Quantum Trio as a remote flash

On Trio, press the Mode button, on the Trio, then use the Left or Right arrow buttons to select **Wireless Remote Group**. Press one of the soft keys (under the display) to choose **R1, R2,** or **R3.**




Press the **RADIO** softkey to set the channel. There are eight channels available, 0 through 7. All remote flash units must be set to the same channel number.




NOTE: There is no need to set the **ZONES** when using **Wireless Remote Groups** with the **Trio**.

### 2.2 Set up a Qflash T5d-R as a remote flash

Qflash T5s do not have internal radios. Connect a FreeXwire FW8R or FW7Q for remote control via CoPilot.

On Qflash T5, press the Mode button, then use the Up or Down buttons to select **Wireless Remote Group 1** or **Wireless Remote Group 2**.

| **WIRELESS GROUP R1**<br>TO ACTIVATE CONTROL FROM<br>LOCAL QFLASH TURN LOCAL<br>QFLASH OFF THEN ON |
|---|

The Qflash T5d-R may display a message that it needs a signal from the Local flash to activate this mode. The message will disappear when you set up the CoPilot

Set the channel on the FW8R or FW7Q. There are eight channels available, 0 through 7. Set the same channel for all remote flash units.

NOTE: On the FreeXwire receiver, set all zones to **ON.**

### 2.3 Using a Non Quantum flash as a remote

Connect a flash unit to a FW8 or FW10w receiver. Set the channel on the receiver to the same channel set on CoPilot (Section 3).

Use the **ZONE** switches to select the remote group. Zone 1 **ON =** Remote Group R1, Zone 2 **ON =** Remote Group R2, Zone 3 **ON =** Remote Group R3.

NOTE**:** When using a non Quantum flash the CoPilot will provide a sync signal to fire the flash, but will not control the exposure. The MAN-TTL mode switch on CoPilot for this Group must be set to **M**.

## 3 CoPilot setup

The CoPilot can control the exposure of three Remote Groups (**R1, R2,** and **R3**) or two Remote Groups (**R1, R2**) and a local Qflash T5d-R.

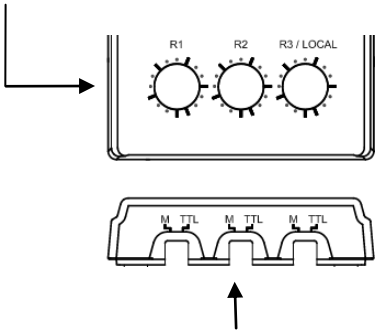
A Remote Group can consist of any flash set up as described in Sections 2.1, 2.2 or 2.3.

### 3 .1 No Local Qflash T5d-R connected

When no local flash is connected to the CoPilot ACCY connector, up to three remote groups may be set up, each with its own exposure setting.

Each Remote Group has two controls.

**RATIO / MANUAL POWER SETTINGS** – this sets the exposure mode of the Remote Group. Ratio settings can be set from $-2^7$ to +2. Manual power settings can be set from 1/16- to 1/1. This control also has an **OFF** position. When set in the **OFF** position the flash in the Remote Group will not fire.




**MODE** switch – this control sets the mode of the Remote Group to **M** (manual) or **TTL**

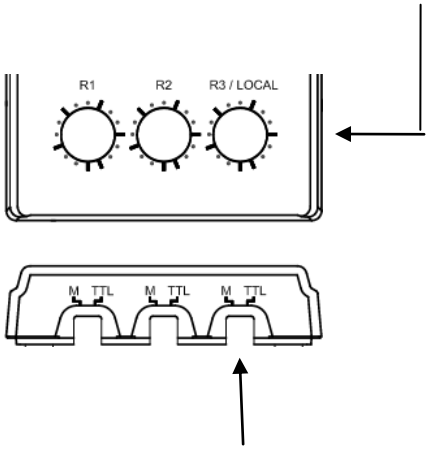
Note : When using a non Quantum flash as a Remote Group set the **MODE** switch to **M.** Only a sync signal will be sent to the flash.

### 3 .2 Local Qflash connected

When a Qflash is connected to the CoPilot ACCY connector, Group R3 becomes the Local ratio control. A Local Qflash may be models QFT5-dR, QF4Td, QF3d, or QF2d.

Remotes will operate in Groups **R1, R2** only**.**

**RATIO / MANUAL POWER SETTINGS** – this control adjusts the ratio of the local Qflash when the Qflash is in **QTTL** mode. Ratio settings can be set from $-2^7$ to +2.




**MODE** switch – this control is disabled when a Qflash T5d-R is connected to the CoPilot. The **MODE** button on the local Qflash T5d-R overrides the mode setting.

# Qflash® *CoPilot*
## QF91

## FCC and Industry Canada compliance statements

Operation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

Conformite aux normes FCC Cet equipement a ete teste et trouve conforme aux limites pour un dispositif numerique de classe B, conformement a la Partie 15 des reglements de la FCC. Ces limites sont con cues pour fournir une protection raisonnable contre les interferences nuisibles dans une installation residentielle.

Cet equipement genere, utilise et peut emettre des frequences radio et, s'il n'est pas installe et utilize conformement ment aux instructions du fabricant, peut causer des interferences nuisibles aux communications radio.

Rien ne garantit cependant que l'interference ne se produira pas dans une
installation particuliere. Si cet equipement provoque des interferences nuisibles a la reception radio ou de television, qui peut etre determine en comparant et en l'eteignant, l'utilisateur est encourage a essayer de corriger les interference par une ou plusieurs des mesures suivantes:

• Reorienter ou deplacer l'antenne de reception.
• Augmenter la distance entre l'equipement et Ie recepteur.
• Branchez l'appareil dans une prise sur un circuit different de celui auquel Ie recepteur est connecte.
• Consultez votre revendeur ou un technicien radio / TV pour assistance.Avertissement

Les changements ou modififfications a cet appareil sans expressement approuvee par la partie responsable de conformite pourraient annuler l'autorite de l'utilisateur de faire fonctionner cet equipement.

**Industry Canada Statement**

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numerique de la classe B est conforme a la norme NMB-003 du Canada.

This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme avec Industrie Canada exempt de licence Rss standard(s).

Son fonctionnement est soumis aux deux conditions suivantes :
(1) cet appareil ne peut causer d'interferences, et
(2) cet appareil doit accepter toute interference, y compris des interferences qui peuvent provoquer un fonctionnement indesirable du peripherique.

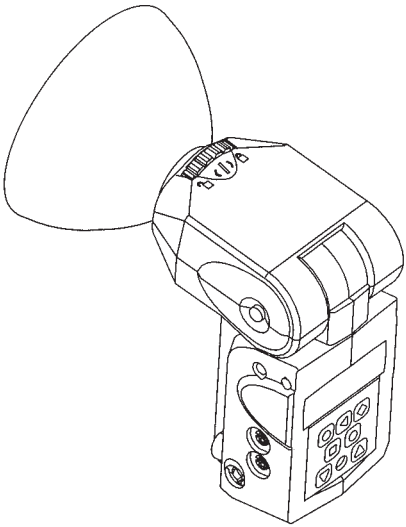
The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population: consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca/rpb.

QUANTUM

# *Qflash®*
# *"5d-R" series*
# *Digital Flash*

## *Models QFT5d-R, QFX5d-R*

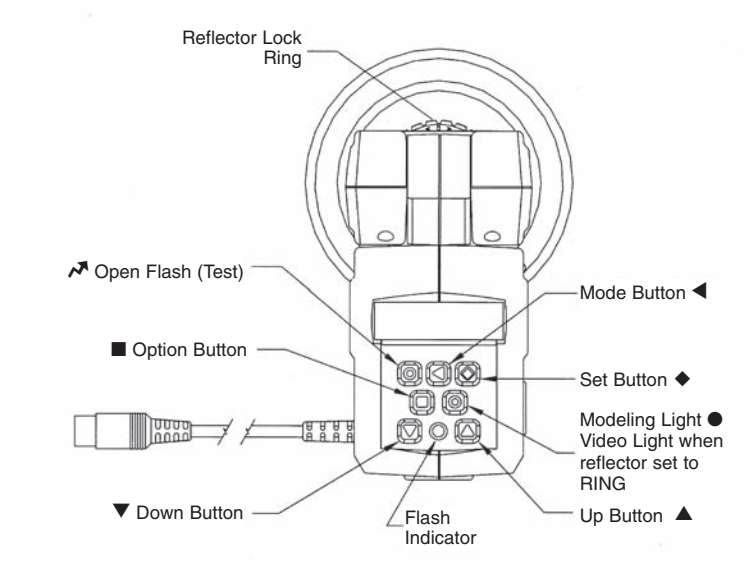
## Operating Instructions

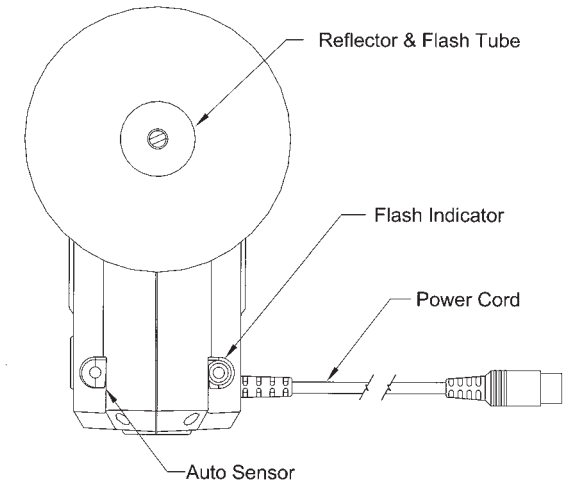


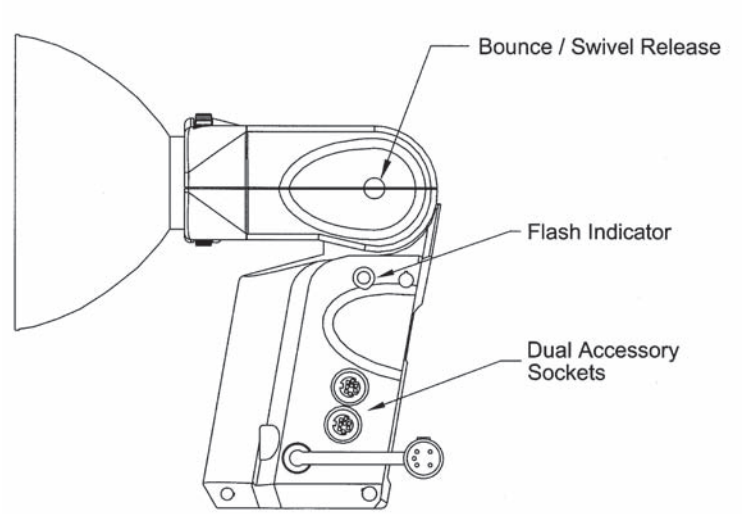
***QFT5d-R-- powered by Quantum Turbo® batteries***
***QFX5d-R-- powered by Quantum Qpaq System***

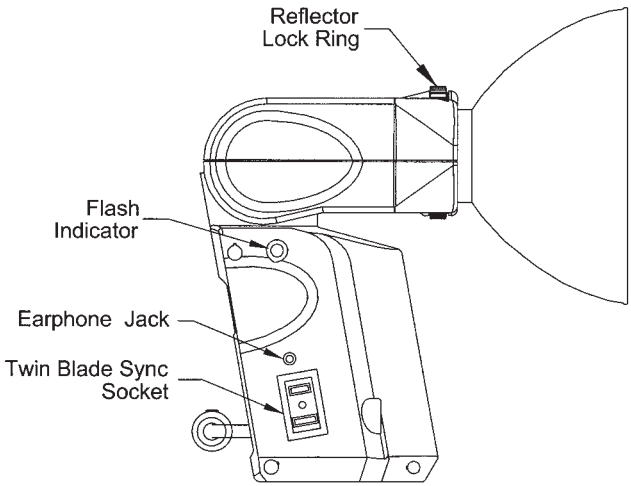
## Quantum Instruments

Designed and manufactured in the USA


Reflector Lock Ring
Open Flash (Test)
Option Button
Down Button
Flash Indicator
Mode Button ◀
Set Button ◆
Modeling Light ●
Video Light when reflector set to RING
Up Button ▲


Reflector & Flash Tube
Flash Indicator
Power Cord
Auto Sensor


Bounce / Swivel Release
Flash Indicator
Dual Accessory Sockets


Reflector Lock Ring
Flash Indicator
Earphone Jack
Twin Blade Sync Socket

## Flash Display Symbols

| | |
|---|---|
|  | Speaker |
|  | Flash indicator LEDs |
|  | On solid - Flash ready<br>Blinking - Flash recycling |
|  | Front curtain sync |
|  | Rear curtain syns |
|  | Reflector no diffusers |
|  | Bare bulb reflector |
|  | Reflector with diffusing disks,<br>wide angle dome, or soft box |
|  | Telephoto reflector |
|  | Auto sensor limit turned off |
|  | Ring Light |

# TABLE OF CONTENTS



# 1. INTRODUCTION

Qflash “5d-R” series flashes provide professional quality lighting for both digital and film cameras. Quantum’s proprietary QTTL® Adapters dedicate Qflash seamlessly to your camera. Many features of Qflash5d-R will enhance your lighting control when used with non-dedicated/manual cameras.

While powerful and extremely versatile, Qflash operation is intuitive and straightforward. Advanced features for most lighting needs are accessible as required.

**We highly recommend reading this entire instruction manual. Whether or not you require all of Qflash’s capability now, you will want to know it exists when the need arises.**

Series Qflash 5d-R adds wireless preflash TTL and wireless remote auto to the Qflash features. These features apply when Qflash 5d-R is used in combination with Dw-R series QTTL Adapters, FreeXWire receivers FW7Q and FW8R, and transmitter FW9T or transceiver FW10w. If you own FW10 transceivers, they can be upgraded to become FW10w.

Qflash 5d-R models used with Quantum’s proprietary Dw-R Adapters allow you to create ratios with multiple remote Qflashes in the wireless TTL mode. Older D and Dw series Adapters can be upgraded to become Dw-R adapters.

See www.qtm.com for costs for these upgrades. D, Dw, or Dw-R series QTTL adapters are optional for specific makes and camera models. Please consult your dealer or www.qtm.com for the latest availability.

.

## 2. WARNINGS AND CAUTIONS

- ***Disconnect external power before changing the flash tube, or connecting or disconnecting to/from cameras, power packs, or any other equipment.***
- ***OPERATE ONLY WITH A FLASH TUBE IN THE SOCKET!!***
- ***DO NOT TOUCH THE FLASH TUBE SOCKET WITH METAL OBJECTS!!***
- ***THIS IS A PROFESSIONAL INSTRUMENT. KEEP AWAY FROM CHILDREN!!***
- ***DO NOT ATTEMPT TO OPEN THE FLASH UNIT! DANGEROUS HIGH VOLTAGE INSIDE!!***
- ***Repairs can be made only by a qualified Quantum service representative.***

## 3. ADVANCED FEATURES SUMMARY

The chart below summarizes the advanced features for various Qflash series. A "U" means the Qflash model will have this feature when upgraded to series 5d-R. An "F" means this feature is available in the model shown.

| **Feature** | **Qflash Models (T and X types)** | | |
|---|---|---|---|
| | QF4d | QF5d | QF5d-R |
| Wireless Control in Nikon/Canon systems with Qnexus | U | U | F |
| Wireless multiple ratio TTL- with Dw-R Adapters & FreeXWire | U | U | F |
| Wireless preflash TTL with digital cameras -using Dw/ Dw-R Adapters and FreeXWire | U | F | F |
| Wireless remote Auto / Auto Fill mode | U | F | F |
| Zone control of FW7Q from panel of Qflash | U | F | F |
| Flash ready indication in camera viewfinder | F | F | F |
| Shutter speed control (camera detects flash and sets shutter) | F | F | F |
| Rear Curtain Sync | F | F | F |
| Auto focus assist | F | F | F |
| Auto Fill ratio | F | F | F |

# 4. FEATURES AVAILABLE WITH QTTL (D, Dw, Dw-R SERIES) ADAPTERS

Quantum's QTTL® adapters provide a dedicated link between Qflash 5d-R series and popular digital and film cameras.

**Wireless multiple *ratio* TTL** - with Dw-R series Adapters & FreeXWires, remote Qflashes can be set to ratios of the camera's TTL metering system. For example, an on-camera flash could be set 1.6 stops down, a main flash on the left to +1 stop, and a hairlight to –2 stops from the camera TTL exposure.

**Wireless preflash TTL with digital cameras** - when using Dw or Dw-R series QTTL Adapters, you can control Qflash exposure wirelessly with your camera's TTL exposure control system.

**Rear curtain sync** - If supported by your camera, the QTTL adapter can fire Qflash in sync with the rear curtain. Rear curtain sync is selected by a switch located on the back of the adapter.

**Auto focus assist** - If your camera requires an infrared focus assist, the QTTL adapter will project a beam when the camera focuses.

**Flash Sync speed control** - If flash readiness is achieved, the camera's automatic system switches the shutter speed to the correct flash sync speed.

**Ready light** - Flash readiness is established when the "Ready" indicator appears in the Qflash display. If "flash ready" is supported by the camera, then a flash symbol will appear in the viewfinder when Qflash is recycled and ready.

**Pre-flash TTL** - Cameras that have advanced TTL metering systems require a pre-flash to determine proper exposure. This pre-flash is supported by the QTTL adapters.

QTTL adapters support the features mentioned above **only when the camera connected also supports those features.** Please see the list of adapters available for cameras in the latest Quantum Price List or at www.qtm.com.

# 5. GETTING STARTED

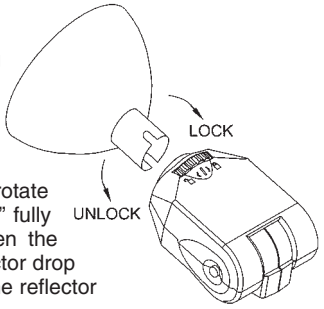
### 5.1 Inserting the Flash Tube

Match the red dot on the base of the flash tube with the red dot in the socket of Qflash. Push the flash tube in until it is seated snugly into the socket. **Excessive force is not required.**

Replace the flash tube only with Quantum type QF30 or QF30uv for Qflash model T5d / T5d-R. Qflash model X5d / X5d-R requires QF32 or QF32uv flash tubes. Other flash tubes will not provide proper exposure, may not work at all, or they may damage the Qflash.

### 5.2 Reflectors and Bare Bulb

Reflectors are secured by the locking ring near the base of the reflector. Rotate the ring in the directions shown in the diagram to loosen or tighten the reflectors.



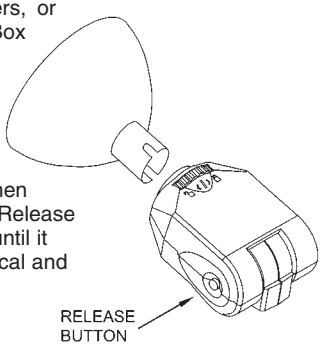

When inserting a reflector, first slowly rotate it until the notch in the reflector "drops" fully into head of the Qflash. Then tighten the locking ring. If you do not let the reflector drop fully into the Qflash before locking it, the reflector may become loose during use.

| Reflector | Approx. Angle | Guide No. for ISO 200* | | |
|---|---|---|---|---|
| | | QFT5d-R | QFX5d-R | |
| | | | 200Ws | 400Ws |
| Normal QF60 | 55˚ | 226ft / 72m | 226ft / 72m | 320ft / 100m |
| QF60 w/flat diffuser | 90˚ | 128ft / 40m | 128ft / 40m | 180ft / 56m |
| QF67A Dome Diffuser<br>QF68 Soft Box<br>QF69 Mini Soft Box | 120˚ | 90ft / 28m | 90ft / 28m | 128ft / 40m |
| QF62Bs/g Bare Bulb Reflector | 180˚ | 60ft / 19m | 60ft / 19m | 90ft / 28m |

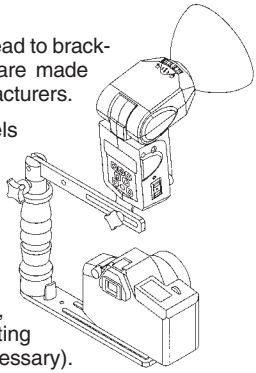
Note to previous Qflash T, T2 ,X or X2 owners: There is no longer a "Wide" position for the reflectors. The only position is "Normal". For wide angle coverage, use the included flat diffusers, or optional QF67A wide angle or Soft Box QF68 diffusers.

### 5.3 Bounce and Swivel Head

The head position is locked and can be changed with a single button (see diagram). Press and hold this button, then adjust the head to the desired position. Release the button, and slightly move the head until it "clicks" and locks the head into the vertical and horizontal planes.



### 5.4 Bracket Mounting



Qflash mounts with a 1/4-20 standard tripod thread to brackets, light stands, and tripods. Many brackets are made especially for Qflash by popular bracket manufacturers.

Quantum has two optional brackets, models QF70US and QF70E. The instructions below describe mounting to both of these brackets and to other manufacturers brackets, light stands, and tripods.

Two types of 1/4-20 fasteners screw/knob and a friction pad are supplied with Qflash. Place the friction pad between Qflash and the bracket, insert the knob/screw and tighten. (If the mounting surface has a pad, the friction pad is not necessary). Note: Brackets vary in thickness - always make sure that the mounting knob/screw screws into Qflash at least two complete turns.

### 5.5 Connecting Qflash to a Camera

There are two ways to connect a Qflash to a camera- wired and wireless. For wired connection use either of these methods:

- Connect a household two-prong sync cord (supplied) to the sync connector of Qflash.
- Connect a QF series TTL adapter to the camera hot shoe.
- Connect a D, Dw, or Dw-R series QTTL adapter to the camera hot shoe.
- Connect a QF53 Hot Shoe sync to the camera.

For wireless connection

- Use the FreeXWire system. See Section 14 - Wireless Qflash Operation

Consult your dealer or www.qtm.com for the latest TTL and QTTL adapter models.

Note: When using a household type (two-prong) sync cord, if you have difficulty getting the flash to fire, Remove the two-prong plug from the Qflash and reinsert it in the opposite direction. This changes the polarity of the Qflash to match the polarity of the camera.

### 5.6 Powering Qflash

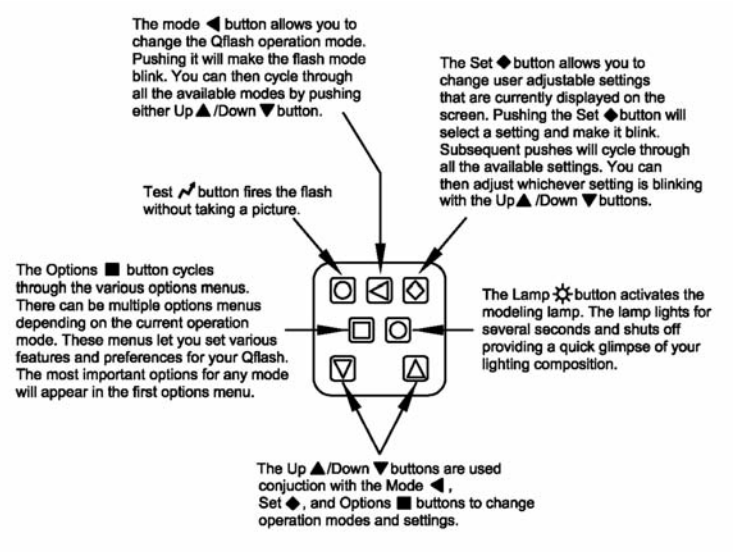
**Before turning on any power to Qflash always make all electrical connections first, both to the camera and to the power pack.** Qflash "T" models are powered by any Quantum Turbo Battery including Turbo 2x2, Turbo Compact, Turbo Z, and Turbo SC. Quantum "X" models are powered by the Quantum Qpaq system.

Plug the Qflash power cable into the output connection of the appropriate power pack. Turn on Turbo or Qpaq power. Normally Qflash will be powered up and ready to run.

If a "Check Turbo" or "Check Power" message appears on the Qflash display, turn off the Turbo or Qpaq, wait one second, and turn it on again. If the message appears again, the power pack needs recharging. If a "Reset Flash?" message appears in the Qflash display press any button, except the **Mode** ◀ button, to resume operation.

## 6. BASIC NAVIGATION

**This Section explains how to maneuver your way around the Qflash 5d-R**



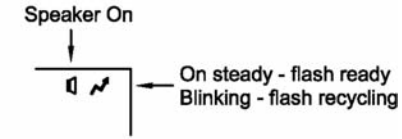

**Very Important Tips**
**For consistent exposures with your digital camera and Qflash.**

- **Always do a custom white balance before shooting**
- **When shooting TTL use Aperture or Shutter priority or Manual camera modes**
- **Set your metering area to center weight, partial metering instead of matrix or multi-spot metering.**
- **Your Qflash provides 150 watt-seconds of power compared to 50 watt-seconds of a typical shoe mount flash. When shooting 6 ft. (2m) or closer, at ISO 200 or greater, with a wide open F/#, you must always diffuse the light. Otherwise your subject will be over-exposed.**

# 7. COMMON FEATURES

### 7.1 Flash Ready

The Flash Ready indicator will blink while Qflash is recycling. It will stop blinking once the flash is ready to fire again, and the speaker will beep.




If flash readiness is supported by the camera, then an LED or flash symbol will appear in the viewfinder when the flash is ready. Many cameras will automatically switch the shutter to the camera pre-defined flash sync speed.

### 7.2 Display, Speaker, and Indicator Lights

Qflash indicates the result of a flash exposure in Automatic and TTL/QTTL modes via the Display, Speaker and Flash Indicator Lights. The signals are shown in the table below:

| Flash exposure condition | Display | Speaker/ Earphone | Flash Indicator Lights |
|---|---|---|---|
| Good exposure | OK | one beep | rapid blink |
| Under/Over | Undr or Over | 3"beeps | 3 blinks, pause, 3 blinks, pause… |
| No flash | No Flash | long steady beep | long steady on |

### 7.3 Sync Turn Off

If you are using Qflash as an on camera flash and want to disable the flash for a few shots, you can use the 'sync turn off' feature. To prevent Qflash from firing, press **Mode** ◀ twice. The word 'OFF' will appear in the display. To return to normal operation press any button (except **Test** ↗ ). Other Qflashes connected to this on-camera flash, whether by cable or wirelessly, will fire (unless they also are turned off).

This feature will only prevent the flash from firing, it will not turn off the Qflash or the Turbo. To completely turn off the Qflash the Turbo must be turned off.

### 7.4 Rear Curtain Sync

When using a QTTL Adapter, Qflash can fire the flash with the rear curtain (if supported by your camera). Rear curtain sync is selected with the switch located on the back of the QTTL Adapter. Set it to **"R"** for rear curtain, or **"F"** for front curtain. For some cameras rear curtain is controlled through a menu on the camera itself. For these cameras leave the switch in the **"F"** position. Consult your camera's manual.

### 7.5 Auto Focus Assist

The D/Dw/Dw-R series QTTL Adapters will project a beam whenever the camera is having difficulty focusing due to low light conditions. A local Qflash must be connected for this feature. Turn the auto focus assist switch of the QTTL Adapter to on (☼).

Always turn the auto focus assist switch off (●) under any of the following conditions:

When no Qflash is connected;

When using Qflash models, T, T2, X or X2. These models do not support auto focus assist;

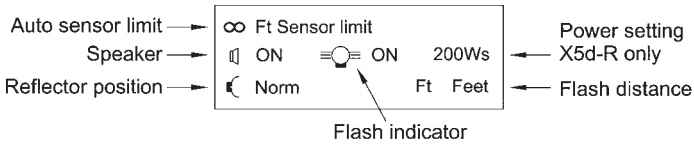
When using a QF50 or QF51 extension cables.

If the auto focus switch is not turned off for the above conditions, proper operation cannot be assured.

## 8. BASIC OPTIONS

You can cycle through the option menus in this section by pushing the **Option** ■ button. Then select an option to change by pressing the **Set** ◆ button until the option you want to change blinks. Then use the **Up** ▲/**Down** ▼ buttons to make the change.

**Option Menu 1:**




### 8.1 Flash Sensor Limit for Auto Mode

Flash sensor limit is an option that limits the distance that the sensor "sees" when the Qflash is in **Auto** mode. This option is described in detail in section 10.

#### Speaker

You may want the speaker off for sensitive shooting, or turn it on for audible confirmation of flash exposure. The earphone signals always sound whether the speaker function is set on or off.

#### Flash Indicator Lights

The red Flash Indicators on four sides of Qflash give visual indication that a flash fired, weather the exposure was good, over, under, or no flash, indicating that the flash did not fire. You can enable or disable the lights.

#### Reflector settings

Setting the reflector type is important so that the displayed distance, guide number and f/# correspond to the reflector in use. The choices are **NORM** (for the reflector supplied with Qflash), **DIFF** (for diffusers supplied with Qflash, and optional QF67A wide-angle diffuser or softbox QF68), **BBE**

(optional Bare Bulb Enhancers QF62Bs and QF62Bg), **TELE** (for optional QF63B Tele photo reflector) and **RING** (for optional QF26 ring light).

**Notes:**

When using QF62B s/g the manual parameters are accurate only for an open area. In medium and small rooms the very widely dispersed light will bounce off nearby walls and increase exposure. A practical solution when using QF62B in small rooms is to meter the light, or use Auto, TTL, or QTTL modes which will provide better exposures and attractive, soft lighting.

When using a Telephoto Reflector QF63B the Auto mode cannot be used because the flash sensor is blocked. Use Manual, TTL, QTTL, Strobo or Linked modes.

Use "B" series reflectors (QF61B, QF62B g/s, QF63B) with Qflash 5d-R. The standard QF60B reflector mounts to Qflash 5d-R as well.

**Distance Units**

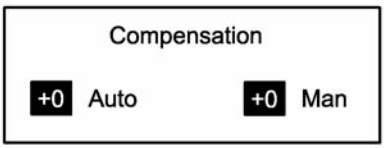
Set your preference for the display of metric (M) or US distance (Ft) units. Guide numbers also change accordingly.

### 8.2 Option Menu 2:

**Exposure Compensation**

Quantum calibrates Qflashes to American National Standards Institute (ANSI) standards with laboratory equipment traceable to the National Institute of Standards and Technology (NIST). From time to time, photographers may wish to fine tune Qflash exposures to match their exposure meters, to compensate for variations in cameras or films, to match particular styles, for effects, or for individual taste.

**There are two compensations available- one for Manual and one for Auto mode. In QTTL modes Qflash does not control exposure and compensation will not apply. The compensation also does not apply whenever Wireless or Wired appears in the display.**



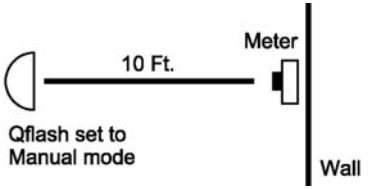

#### 8.2.1 Setting Compensation

Press **Set** ◆ until the compensation you wish to change blinks. Adjust compensation **Up** ▲/**Down** ▼ in 1/3 steps up to +2 or -2 stops. All exposures for that mode will be compensated by the amount selected. You cannot limit compensation settings to individual programs in program mode.

**For calibration to a particular light meter you may use the procedures below. It is very important to note the meter measurement type (incident, reflected) used for each procedure!**

### 8.2.2 Manual mode Qflash Compensation

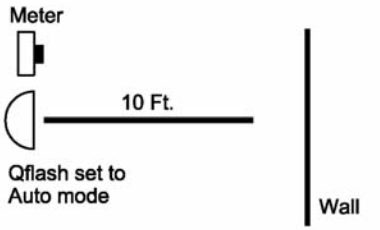
This procedure will calibrate Qflash to an **incident light** flash meter you use and trust. Note that only incident light measurements are reliable for manual exposure settings.




1. Place the Qflash 10 feet from the incident light flash meter **facing** Qflash.
2. The area surrounding the meter and flash should be similar to the shooting environment you usually work in. For example, in a large hall, there will be little light bouncing from walls and ceilings. In a small room, the light meter reading will be increased by whatever bounce occurs from nearby surfaces. These factors will affect calibration and should be considered.
3 Turn Qflash on and change the manual power setting to 1/8.
4. Set the film speed on the flash and the flash meter to the same value.
5. Change the F number on the flash until the distance shown in the display is 10 feet.
6. Fire Qflash. Push the the **Option** ■ button, until the compensation display appears.
7. Use the **Set** ◆ and **Up** ▲/**Down** ▼ buttons to adjust compensation until the f/number in the display matches the f the f/number on the meter. The light output can be increased or decreased by as much as 2 stops in 1/3 steps.

### 8.2.3 Auto mode Qflash Compensation

This procedure will calibrate Qflash to a **reflected light** flash meter you use and trust. Note that only reflected light measurements are reliable for auto exposure settings.




This is because auto mode flashes read reflected light from the scene and subject. In order to compare those readings to a meter, the meter must also be reading the same reflected light. The reflected light is affected by the subject and background, and an incident light reading will not typically provide the same reading (unless the subject is an 18% gray card).

1. Place the Qflash 10 feet from a blank wall. The wall should be larger than the metering area of the meter, and preferably a wall of continuous tone (blank wall).
2. Place flash meter next to Qflash, also facing the blank wall. Be sure to set the flash meter for a **reflected** reading.
3. Turn Qflash on and change the f/ number to F8.0
4. Set the film speed on the flash and the flash meter to the same value.

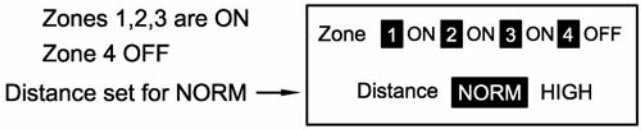
5. Fire Qflash. Push the the **Option** ■ button, until the compensation dis play appears.
6. Use the **Set** ◆ and **Up** ▲ button to increase light output (if flash meter reads less than F 8.0), or the **Down** ▼ button to decrease light output (if flash meter reads more than F 8.0). The light output can be increased or decreased by as much as 2 stops in 1/3 steps.

### 8.3 Option Menu 3

**FW7Q Zone Control**

This option menu is only available when a FW7Q is attached to the Qflash. With this option menu you can access the zone and the range settings of the FW7Q.

You can enter this menu by pushing the **Option** ■ button until it shows up




on the Qflash's display. The **Set** ◆ button will cycle through the available settings. Use the **Up** ▲/**Down** ▼ buttons to make a change.

### 8.4 Restoring Factory settings

Qflash options and settings are preset at the factory. You can restore the factory settings by the following method:

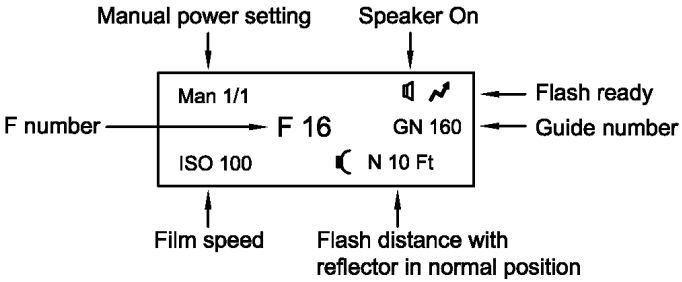
1. Turn Turbo or Qpaq OFF. Connect Qflash to Turbo or Qpaq.
2. Press and hold any button (except **Test** ↗ ).
3. Turn Turbo or Qpaq ON.
4. The Qflash will display a reset message.
5. Press **Mode** ◀ to reset the Qflash and restore the factory settings.

If you push any other button or fail to push the **Mode** ◀ button within 4 seconds, the Factory settings will not be restored.

# 9. MANUAL MODE OPERATION

**The camera exposure may be set to any mode, and Qflash will emit the fixed amount of light shown on its display.**

### 9.1 Manual Mode with sync only connection




Power, F/number, ISO are all user adjustable. The **Set** ◆ button will cycle through them in that order.

Power settings are adjustable in 1/3 steps from full power to 1/64th power like this: 1/1, 1/1-, 1/2+, 1/2 ,1/2- …… 1/32, 1/32-, 1/64+, 1/64. Using ISO and Aperture settings, Qflash calculates the optimal flash distance. Match these settings to your camera's film speed and aperture.

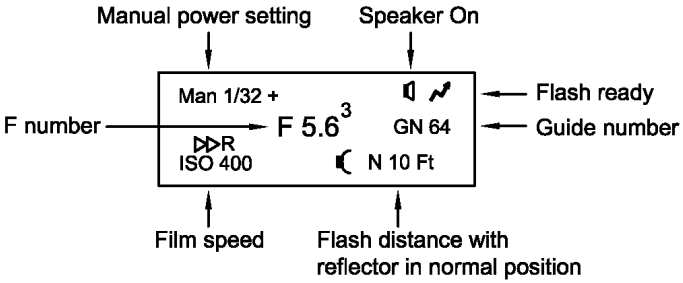
Flash Compensation setting allows you to fine tune your Qflash in manual mode from +2 to –2 stops in 1/3 step increments.

For model X5d-R only there is an additional Manual setting for 200/400 watt seconds, which can be set in the option menu.

### 9.2 Manual mode with QTTL adapter connection

With a QTTL adapter the camera controls the f/# and ISO shown on the display - you cannot change it on Qflash. The camera also selects its shutter speed consistent with flash exposure. The camera exposure may be set to manual, aperture or shutter priority.

The power level is set on the Qflash. Qflash will emit the fixed amount of light shown on its display, and the distance shown corresponds to the subject distance for good exposure for the f/# set on the camera.




The following QTTL features are available: Front or Rear curtain sync, Auto focus assist, and Ready light.

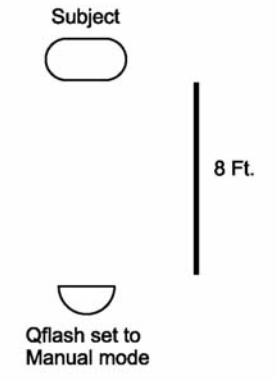
### 9.3 Manual shooting made easy

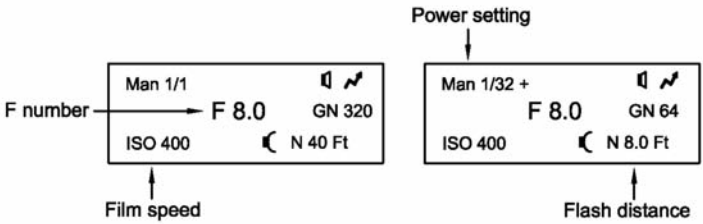
Nothing can beat the combination of a flash meter and a flash set manually. Automatic and TTL are a compromise based on the need for speed. Setting the flash for a manual power setting and taking an incident meter reading takes time and resources the average photographer may not have. So we use automatic flash exposure and know that in some situations the sensor may be fooled.

The Qflash 5d-R allows for easy manual shooting without metering. Below is an example of how this is accomplished.

In this example Qflash will produce an F8.0 at the subject (8 ft), and it will be quickly accomplished without metering.

Start by selecting the F number and Film speed you are using on your camera. If you have connected a QTTL adapter these are already chosen for you. Now adjust the power setting until the Qflash distance shown matches the subject distance as closely as possible.






**Reminder:** If the distance to the subject changes (you move in for a head shot, or move out for a full length) you must change the flash distance readout by changing the power setting.

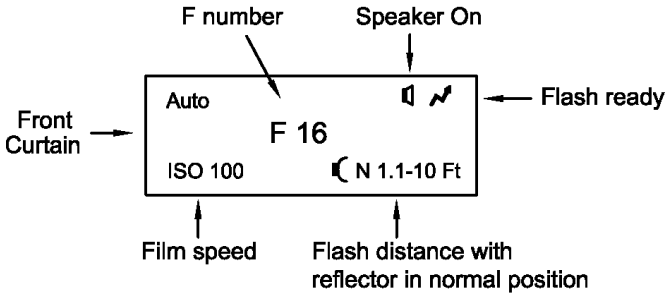
## 10. AUTOMATIC MODE OPERATION

**The preferred setup for Auto Mode is to connect Qflash to a camera with a QTTL (D, Dw, or Dw-R series) Adapter. Then, the ISO and f/# settings of the camera are set and displayed on the Qflash panel. Qflash will display "Auto Fill" indicating that fill/flash ratio may be set on the QTTL Adapter. The camera may be set to manual, shutter or aperture priority, however light output is controlled by Qflash.**

### 10.1 Automatic Mode with Sync only Connection

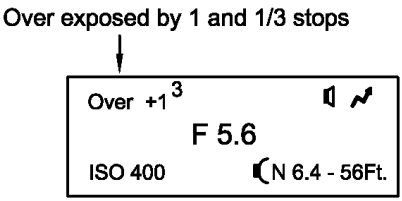
Using only a plain sync cord, Qflash displays "Auto" Mode. F/# and ISO are set on the Qflash display manually. Press **Set** ◆ to select f/#, then press the **Up** ▲/**Down** ▼ keys to change the setting. Similarly, press **Set** ◆ twice to select ISO and change it.

Flash distance displays the working distance between your Qflash and Subject based on the current settings. Moving outside this range may result in an Under or Overexposed picture.



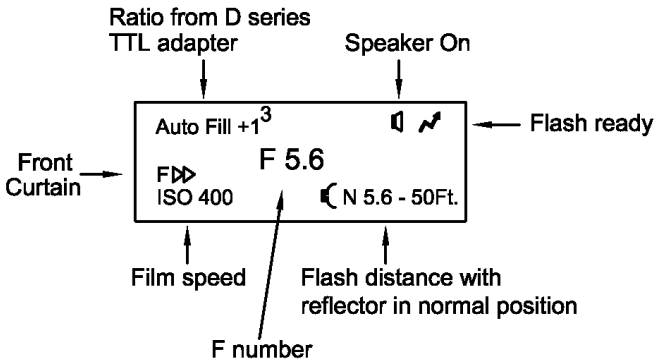
### 10.2 Auto mode exposure indications

There are three types of exposure indications. The display will blink either OK, Over, or Undr. The display will also indicate how much over or under the last exposure was, from +3 stops to -3 stops. If an arrow appears then the exposure error is more than 3 stops (for example -3 ➔).




If activated in Options (Section 8.2) the Speaker will sound after a flash. The audible signal is one “beep” for “OK and ready”, and three “beeps” for “Undr” or “Over”.

### 10.3 Auto Fill (Auto mode with QTTL adapter)




Auto Fill is useful when you prefer to control exposure with the Qflash sensor, instead of a camera’s own TTL or pre-flash metering. Many photographers find that Auto Fill mode provides more consistent exposures for digital cameras.

Fill flash ratio may be set using the “Fill” dial on the QTTL adapter. Choose any setting from –3 stops below to +2 stops above the camera’s aperture, in 1/3 stop increments. As the aperture of the camera changes Qflash will adjust it’s output to keep the ratio that has been selected.

When using the “Fill” dial on the QTTL adapter, set **flash** compensation on your camera to zero.

Error messages will appear if you choose a fill ratio which is out of range of the flash. The error indications are:

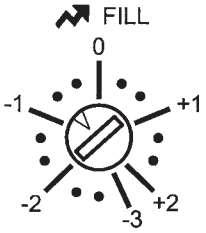
**"OUT OF RANGE - DECREASE FILL OR F#"**

For example, the camera is set to F16 and QTTL fill flash is set to +2 stops. Either decrease the f/# on the camera or decrease the fill flash ratio on the QTTL adapter.

**"OUT OF RANGE - INCREASE FILL OR F#"**

For example, the camera is set to F2.8 and QTTL fill flash is set to –3 stops. Increase the f/# on the camera or increase the fill flash ratio on the QTTL adapter.

Once the adjustment is made and Qflash returns to an acceptable range, the display will revert to the usual Auto Fill information.

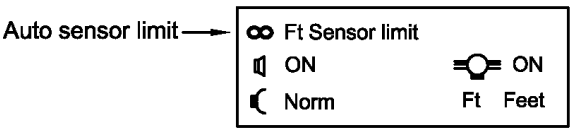



QTTL Fill Dial

### 10.4 Auto Sensor Limit

Setting Qflash to Auto exposure makes picture taking fast and easy. However, an automatic flash has a flaw: the sensor on the flash expects the subject to be wide, flat, and fill the view of the sensor. A person standing against a wall fits this description; people in a catering hall or in a park at night do not. When the background is located far behind the subject, the automatic flash struggles to produce even lighting. The result is often an over exposed subject, sometimes by as much as two stops. When a photo lab develops film with a greatly over exposed subject, it will 'print down' to bring the flesh tones back into range. Or, time will be spent adjusting a digital image, with the resultant loss of detail and image quality.

To solve this problem use the Flash sensor limit.



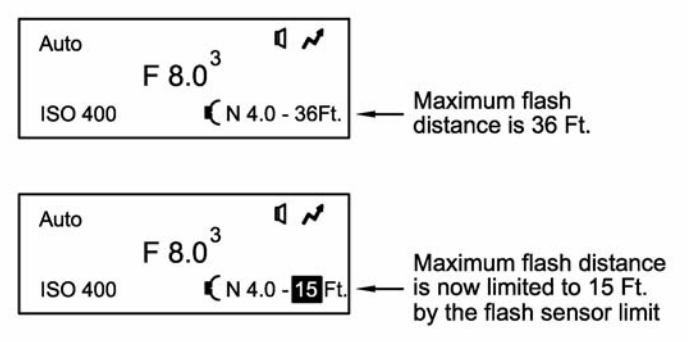
### 10.5 Setting the Sensor Limit:

Press **Option** ■ button to bring up this menu. Push **Set** ◆ once. The sensor limit will blink. Use **Up** ▲/**Down** ▼ buttons to change the sensor limit. The available limits are:

∞ - No limit placed on sensor distance

20ft / 6m, 15ft / 4m, 10ft / 3m, 5ft / 2m,

When the Flash Sensor Limit is set to ∞ the flash will produce the desired f/# for a subject within the flash's minimum and maximum flash distance.




With Auto Sensor Limit turned on, a 'Limit' indicator is activated. After a flash, if the subject's distance exceeds the sensor limit currently set (5, 10, 15 or 20ft. / 2, 3, 4, 6m) the word 'Limit' will appear in the display. Three beeps and/or 3 blink warning may also occur (if those features are set in Options). If the subject is within the current sensor limit normal exposure indicators (OK, Undr, Over) will apply.

### 10.6 Quick turn ON / OFF of Sensor Limit

There are times you may want to quickly change from a Sensor Limit distance, to no sensor limit [∞]. For example, at a wedding reception you may shoot close up from 5' with no background, and next shoot a group shot from 25'.

To set or cancel a sensor limit quickly: Press the **Option** ■ button until you bring up the menu with the Sensor limit setting. Then, without pressing the **Set** ◆ button, use the **Up** ▲/**Down** ▼ buttons to toggle between maximum sensor limit [∞] and the last sensor limit set (in the procedure above).

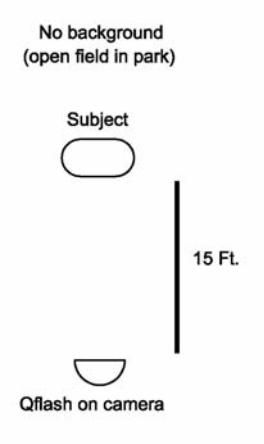
You can also use Program (Section 13) to preset the sensor limits you want. Then, just toggle between them using the **Up** ▲/**Down** ▼ buttons.

### 10.7 Using the Sensor Limit

The flash Sensor Limit function essentially cuts down on the distance that Qflash attempts to illuminate. See the examples shown below.

**Open field**

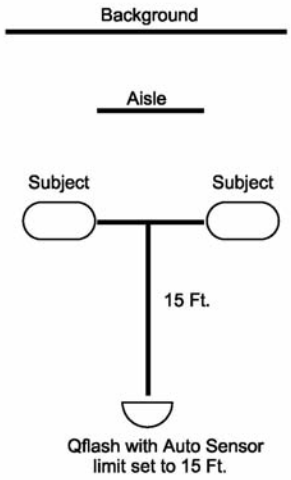
The subject is located 15 feet from the camera. The background is an open field in a park. By setting the Sensor Limit to 15 feet, the flash will read only the light from subjects within 15 feet, ignoring anything further.




**Two subjects separated by a gap**

Sometimes two subjects are separated by a gap. When this occurs the sensor is 'looking' between the two subjects and may miss them. The Sensor Limit will correct for this by reading only the light from objects within the limit set, in this case, 15 feet. The light from objects further away will be ignored.

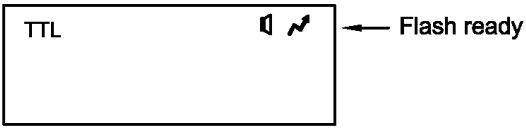
With the Sensor Limit it is no longer necessary for the subject to be centered in the frame. As long as the subject is within the Sensor Limit it will be lit properly.



## 11. TTL and QTTL MODE OPERATION

**TTL Mode**

TTL mode may be used when the camera exposure is set to manual, aperture or shutter priority, or program mode, and Qflash is connected to the camera with a compatible QF series Adapter. The camera will determine flash exposure. The listing for compatible QF series TTL adapters is available from your dealer, or at www.qtm.com. QF series TTL adapters are generally not compatible with digital cameras.



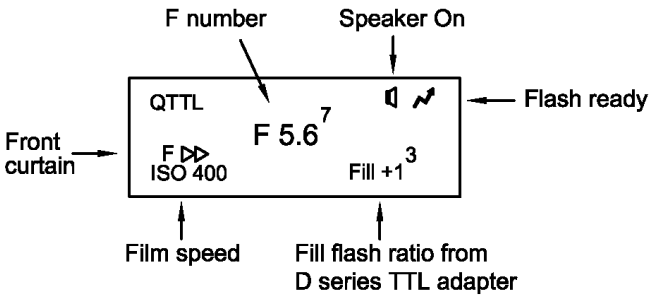

The exposure indications for TTL mode are similar to those of Auto mode with one exception. The amount of under or over exposure will not be shown in the display.

**QTTL mode**

When using a D, Dw, or Dw-R series QTTL adapter, “TTL” is replaced by ”QTTL” on the Qflash display. QTTL mode has all the features of the Auto Fill mode including adjustment of fill ratio. The difference is that QTTL mode lets the camera, not Qflash, control exposure.

Set your camera to manual, aperture or shutter priority, or program mode for QTTL dedication to Qflash 5d-R.

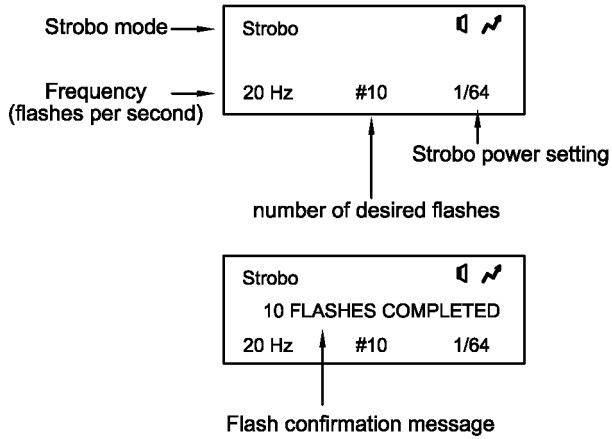
Some cameras allow compensation (+/-) for flash/fill ratio. Qflash 5d-R flash/fill can also be set on the QTTL adapter using the “Fill” dial. Choose any setting from –3 stops below to +2 stops above the camera’s aperture, in 1/3 stop increments. When using the “Fill” dial on the QTTL adapter, set **flash** compensation on your camera to zero.



## 12. STROBOSCOPIC MODE OPERATION

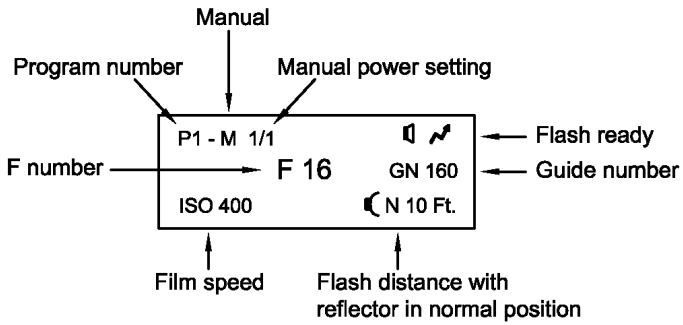
Press the **Set** ◆ to cycle through Frequency, Number of Flashes, and Strobo Power, in that order.

Connect a sync cord or any Quantum QF, D, Dw, or Dw-R series Adapter to the camera. After the flash has finished firing a confirmation message will be displayed. The flash will display the actual number of flashes fired. Strobo is a manual exposure mode. Over and Under exposures are not indicated.




## 13. PROGRAM MODE OPERATION

The Program mode allows you to store your favorite settings and set-ups and then quickly recall them just by pressing the **Up** ▲/**Down** ▼ buttons. Program up to 8 Qflash set-ups of Manual, Auto, or TTL operation, including settings for all parameters.



Your Qflash is factory preset with several Programs (which you are free to change). To view them, press **Mode ◀**, then **Up ▲/Down ▼** until you see the Program mode displayed, like above. After the "P" stops blinking, press the **Up ▲/Down ▼** buttons to switch to the next higher, or lower program number. (Programs which have not been preset are considered "clear" and will be skipped).

**How to set up or change a Program**

While in the Program mode, press the **Set ◆** button. The program number will blink, and the **Up ▲/Down ▼** buttons will select the program number you wish to set or change. All program numbers will be displayed this way, even those that are "clear".

Press **Set ◆** again (or press it twice if the Program number stopped blinking). The mode (Manual, Auto, TTL, etc.) will be blinking. **Up ▲/Down ▼** to select your flash mode for this program.

Once your flash mode is selected keep pressing **Set ◆** to choose parameters to program. To change any settings use the same procedures used for Manual, Auto, TTL, or Wireless/Wired modes.

There are times when you will want to "clear" a Program from memory. Clearing unwanted programs allows for quicker switching between stored programs during actual shoots. For example, if you need just 3 Programs for a job, and you clear out the other 5 Program numbers, you will cycle through just the 3 Programs you want for a shoot, using the **Up ▲/Down ▼** buttons.

**To clear out a Program**

Start in the Program number you wish to clear. Press **Set ◆** until the 'mode' blinks in the display. Press **Up ▲/Down ▼** until the word CLEAR appears. After several seconds the display will stop blinking and the program will be cleared from memory. Note: You can never clear out Program 1.

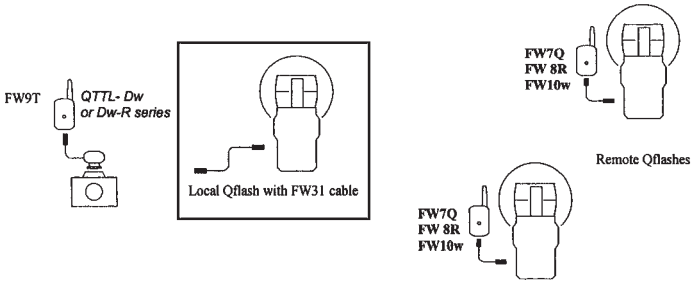
## 14. WIRELESS QFLASH OPERATION WITH FreeXWire

Qflash 5d-R are capable of wireless operation using one or more units connected to FreeXWire radios. Depending upon your needs, select one of the operating modes below. There are also additional combinations of modes that are possible for Local and Remote wireless Qflash operation which are detailed in the chart of Section 14.5

**Important: Note the series of FreeXWires and QTTL Adapters indicated in each setup to be assured of proper operation.**

### 14.1 QTTLw - Wireless TTL mode

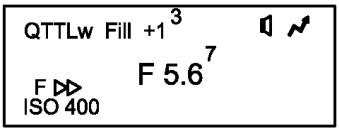
QTTLw mode gives exposure control of all Qflashes to your camera's pre-flash evaluative TTL metering system. Both Local (on-camera) and Remote Qflashes will produce the same exposure. The Fill ratio can be adjusted on the QTTL adapter (or on the camera, if available). However, use only one Fill compensation at a time.




**Set the camera modes:** Choose manual, aperture priority, or shutter priority on your camera. Program mode may be selected, although the camera will make decisions that reduce your control of lighting.

#### 14.1.1 A Local Qflash is optional.

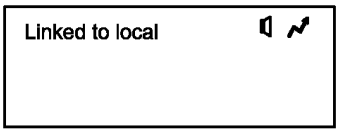
If a local Qflash is attached to the camera, Press **Mode ◄**, the **Up ▲/Down ▼** until "QTTL" or "QTTLw" appears on the display.




Note: "QTTLw" will appear after the QTTL adapter has established communication with the camera. This occurs when the camera shutter is pressed 1/2 way.

#### 14.1.2 Set up the Remote Qflash(s)

Connect a FreeXWire receiver to the remote Qflash(s). FreeXWire model FW7Q connects directly to Qflash; models FW8R or FW10w require an FW31 cable for connection.




Press **Mode ◄ on the Remote Qflash, then** press the **Up ▲/Down ▼** buttons until the display shows **"Linked to Local".**

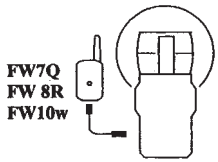
### 14.2 QTTLwR - Wireless Multiple Flash Ratio TTL mode

QTTLwR mode provides the photographer with the ability to set three zones of flash exposure, each with different amounts of exposure offset from the camera's TTL system. The three available flash zones are : Local, Group R1, Group R2. Any number of Qflashes can be employed in each of the 3 groups. For example, an on-camera flash could be set 1.3 stops down (Local), two main flashes on the left to +1 stop (Group R1), and a hairlight to –2 stops from the camera TTL exposure (Group R2). The actual settings could be whatever you wish within +/- 3 stops.

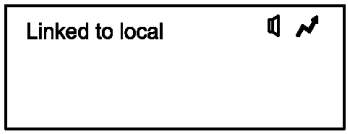
**Set the camera modes:** Choose manual, aperture priority, or shutter priority on your camera. Program mode may be selected, although the camera will make decisions that reduce your control.

### 14.2.1 Always set up the Remote Qflash(s) *first*

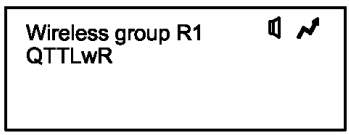
Connect a FreeXWire receiver to the remote Qflash(s). FreeXWire model FW7Q connects directly to Qflash; models FW8R or FW10w require an FW31 cable for connection.




To set a Remote flash to the Local group: Press **Mode** ◀, then **Up** ▲/**Down** ▼ until the display shows **"Linked to Local".** This Remote Qflash exposure will be the same as the Local, on-camera Qflash.




To set a Remote flash to the Group R1 or Group R2: Press **Mode** ◀, then **Up** ▲/**Down** ▼ until the display shows **"Wireless Group R1"** or **"Wireless Group R2"**.



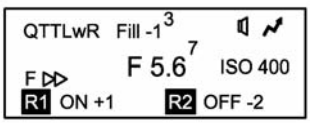

"QTTLwR" will appear on the Remote display only when the Local Qflash is set up. If QTTLwR does not appear press **Mode** ◀ on the Local Qflash 3 times to re-sync the Local Qflash with the Remotes. Also check that the FreeXWire units are connected properly and turned on.

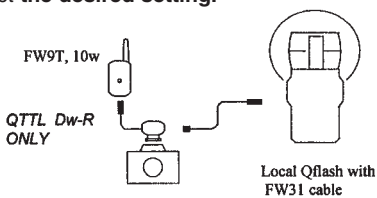
Continue setting all the Remote Qflashes to one of the three Groups. There is no limit to the number of Qflashes in each Group.

### 14.2.2 A Local, on-camera flash is required

Press **Mode** ◀, then **Up** ▲/**Down** ▼ until **"QTTLwR"** appears in the display. You have the ability to turn Remote flash Group R1 or R2, ON / OFF, and the ability to set offset ratios for these groups. **Note: "QTTLwR"** will appear after the QTTL adapter has established communication with the camera. This occurs when the camera shutter is pressed 1/2 way.

Press the **Set** ◆ button until ON/OFF next to flash Group R1, or R2, blinks. Use the **Up** ▲/**Down** ▼ buttons to turn the flash Groups ON or OFF. Next, press the **Set** ◆ button until the offset amount blinks (0, -1, -13, etc.). Use the **Up** ▲/**Down** ▼ buttons to select **the desired setting.**



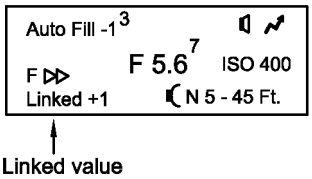

The Local Group flash ratio can be set with the Fill dial on the QTTL Adapter. Use only series DwR QTTL Adapters. The amount of Fill offset shows on the Local Qflash display.

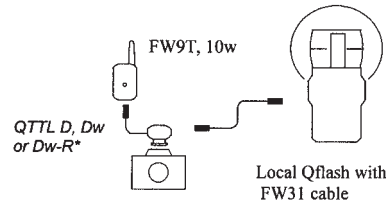
### 14.3 Wireless Auto Fill

Wireless Auto Fill mode has several useful features. It can add light ratio capability to non-TTL cameras. With digital cameras Auto Fill mode can decrease the delay between shutter release and image capture, compared to the camera system's TTL control. And, Auto Fill with Qflash sensor control lets the photographer fine tune flash exposure for her/his particular needs without being locked into camera TTL exposure.

Set the camera modes: Manual, aperture priority, or shutter priority. Program mode may be selected, although the camera will make decisions that reduce your control of the shots.

#### 14.3.1 A local, on-camera flash is optional.

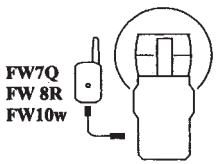


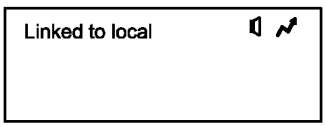

To change the linked value Press the **Set** ◆ button once. Use the **Up** ▲**/Down** ▼ buttons to select the desired option. To change the Fill value use the Fill dial located on top of the QTTL adapter.

#### 14.3.2 Set up the Mode of the Remote Qflash(s)

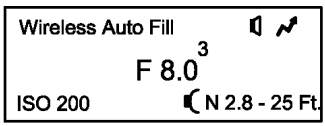
Connect a FreeXWire receiver to the remote Qflash(s). FreeXWire model FW7Q connects directly to Qflash; models FW8R or FW10w require an FW31 cable for connection.




**To set a Remote flash to the Local group:** Press **Mode** ◀, then **"Linked to Local".** This Remote Qflash exposure will be the same as the Local, on-camera Qflash.




**If you are not using a Local on-camera Qflash:** Press **Mode** ◀, then **Up** ▲**/Down** ▼ until the display shows **"Wireless Auto Fill".**



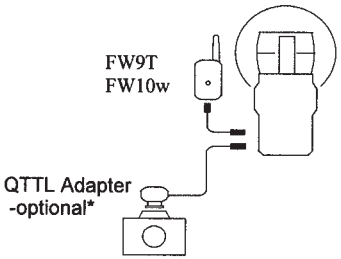
### 14.4 Wireless Control Mode

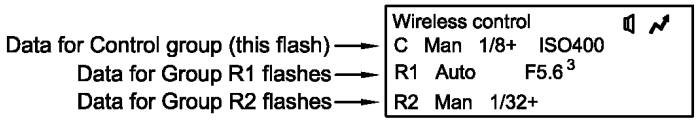
Wireless Control mode can achieve the most control over wireless Remote Qflashes. From the camera position you can change the modes, settings, as well as the fill ratios, of Wireless Groups R1 and R2. Wireless Control mode has the disadvantage, however, of being slower to react than QTTLwR mode. This is because much more information has to be transmitted to the Remote Qlfashes.

Use Wireless Control mode for maximum control over Remote Qflashes. Select QTTLwR for faster reactions to changes in lighting ratios only.

#### 14.4.1 A Local Qflash is required.

Press the **Mode** ◄ button on the Local Qflash and use the **Up** ▲/**Down** ▼ button to select "Wireless Control." The display will show the data for Control (C) and Group R1 and Group R2.



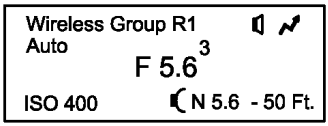

Next, from the Local Qflash panel, select the settings for the Remote Qflashes.

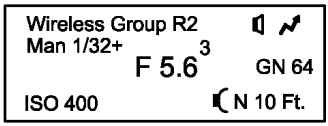
- Press **Set** ◆ until either "C", "R1" or "R2" blinks in the display. If necessary, press Up _or Down _ until "R1" blinks to set the parameters for Group R1, or until "R2" blinks for Group R2.
- Press **Set** ◆ again and the Mode of R1 or R2 will blink. Use the **Up** ▲/**Down** ▼ buttons to select the Mode of the Remote Qflash.
- Press **Set** ◆ again to set the parameters of the Mode selected.
- Press **Set** ◆ again and the word SEND will appear next to the data for R1 or R2. The Control Qflash is now sending the data to the Remote Qflash.

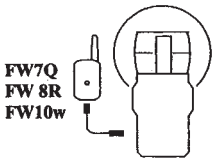
* A QTTL Adapter is not required. If one is used it provides all Qflashes with ISO and F# setings from the camera. Set a fill/flash ratio (for the Control Group only) with the "Fill" dial on the Adapter. Fill ratio applies only in TTL and Auto modes.

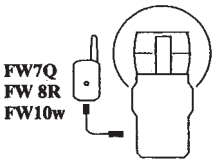
### 14.4.2 Set up the Remote Qflash Groups

Any number of Remote Qflashes may be used. Set each the Mode of each Remote to either Wireless Group R1 or R2, or Linked to Local, using the **Mode** ◀ and **Up** ▲/**Down** ▼ controls on each Remote Qflash.

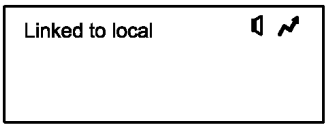


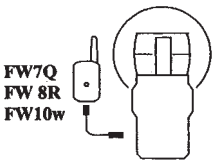




The displays on the Remote Qflashes will update when the word SEND appears on the Local Qflash.




### 14.4.3 Wireless Control Mode – Important Notes

- Qflash cannot fire while sending data to wireless Remotes, or when the display is blinking. To speed up data transmission, press **Set** ◆ on the Control Qflash until SEND appears in the display to make Qflashes ready.
- When using a QTTL adapter, the camera settings for f/# and ISO will appear on the Control Qflash display. Generally, to update the camera settings, press the camera shutter 1/2 way (to wake up the camera or metering function). The Qflash display will then update to the current camera settings. (On some cameras updating takes place automatically).

## 14.5 Available Modes and Features of Qflash Wireless Operation

In addition to the setups described in Section 14.1, 14.2 and 14.3, other combination of modes are possible for Local and Remote Qlfashes. In the table below, pay particular attention to the models of FreeXWires and QTTL adapters required to achieve the results in the chart. We recommend some testing when using one of the combinations of operating modes before shooting an assignment.

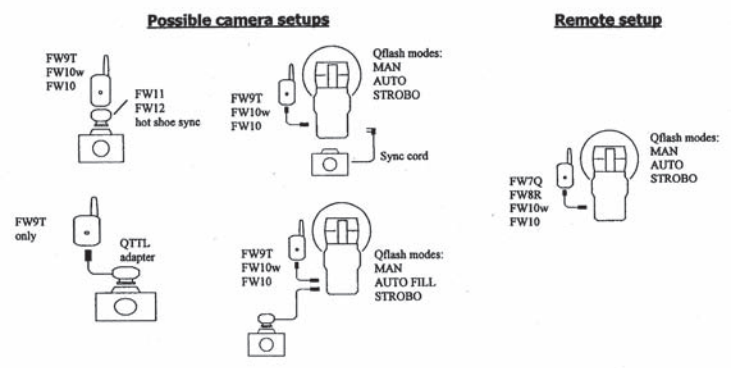
**Available Modes and Features of Qflash Wireless Operation**

| | | Modes set on Remote Qflashes | | | | | |
|---|---|---|---|---|---|---|---|
| **Modes set on Local Qflash** | **FreeXWires & TTL adapters** ▼ ▶ | **Man** | **Auto** | **Linked to Local** | **Auto Fill** | **Wireless Group R1** | **Wireless Group R2** |
| | | FW 7Q, 8R, 10, 10w | FW 7Q, 8R, 10, 10w | FW 7Q, 8R, 10, 10w | FW 7Q, 8R, 10w | FW 7Q, 8R, 10w | FW 7Q, 8R, 10w |
| **Man** | FW 9T, 10, or 10w<br>D, Dw or DwR QTTL adapter | Remote Qflash exposure controlled by its own Manual settings<br><br>TTL adapter not required for local Qflash | Remote Qflash exposure controlled by its own Auto settings and sensor<br><br>TTL adapter not required for local Qflash | Exposure linked to Local Qflash | Flash receives F# / ISO / QTTL fill switch info. However, output controlled by its own sensor | Qflash mode switches to "Linked to Local" [Note 2] | |
| **Auto** | FW 9T, 10, or 10w<br>No adapter required | | | | **Not recommended** | | |
| **Auto Fill** | FW 9T, 10, or 10w<br>D, Dw or DwR QTTL adapter | | | | Flash receives F# / ISO / QTTL fill switch info. However, output controlled by its own sensor | | |
| **TTL** | FW 9T, 10, or 10w<br>QF series adapter | | | | **Not recommended** | | |
| **QTTL** | FW 9T, 10, or 10w<br>D series QTTL adapter | | | **Not recommended** | | **Not recommended** | |
| **QTTLw** | FW 9T or 10w<br>Dw or DwR QTTL adapter | | | Exposure linked to Local Qflash | Flash receives F# / ISO / QTTL fill switch info. However, output controlled by its own sensor | Qflash mode switches to "Linked to Local" [Note 2] | |
| **QTTLwR** | FW 9T or 10w<br>DwR series QTTL adapter | | | | | Qflash modes switches to "QTTLwR". TTL ratios can be set separately for Group R1, R2. For local Group, use "linked to Local" mode | |
| **Wireless Control** | FW 9T, 10, or 10w<br>Dw or DwR QTTL adapter | | | | | Local Qflash controls the modes and settings for Group R1 and R2 Remote Qflashes. | |
| **No Local Qflash** | FW 9T<br>D, Dw or DwR QTTL adapter | | | Exposure linked to camera setting | | **Not recommended** | |

Notes: 1. Some Local Qflash modes [inside the heavy borders] may not appear on the display depending upon the accessories attached
2. Wireless Group R1/R2 is intended to work with the Local Qflash in Wireless Control mode.
However, for other Local Qflash mode settings, the Remote Qflashes will automatically switch to "Linked to Local" or "QTTLwR", as indicated.

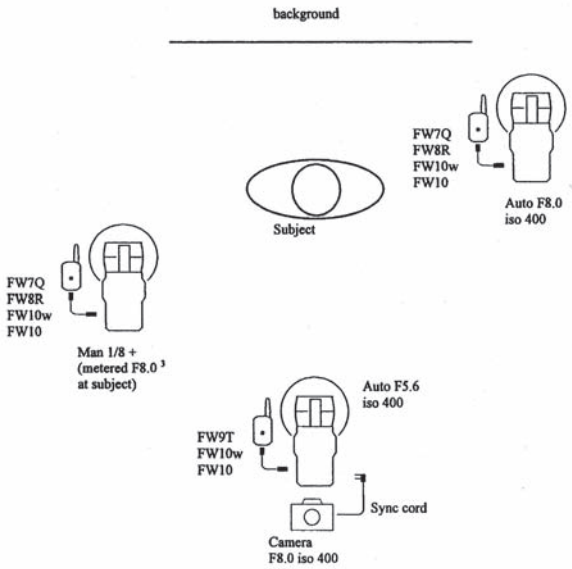
### 14.6 SYNC only setup

By employing this type of setup each Qflash operates independently of the others. This is the simplest and most straightforward way of using multiple, wireless Qflashes.




For independent Qflash operation the Qflashes must be in Manual, Auto (Auto Fill), or Strobo. If any one of the Qflashes is in TTL, QTTL, or Wireless, the Qflashes will no longer behave independently.

### Example of independent Qflash operation

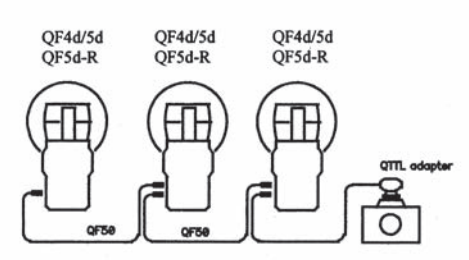


# 15. WIRED CONTROL MODE

Qflash's Wired Control Mode is a versatile tool for precise lighting control. One Qflash is designated as the "Control", and from its panel the photographer can change the modes or settings on one or two "Remote" Qflashes.

The physical setup for Control Mode is shown below. The camera adapter must be a QTTL series D, Dw, or Dw-R series:

Wired Control



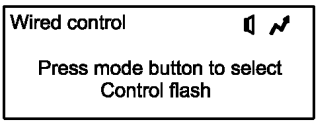

The basic steps for Wired Control Mode setup are:

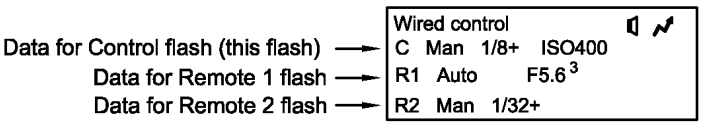
- Set the on-camera flash to Wired Control. Usually this is the one at the camera. Connect a QTTL Adapter (D, Dw, or Dw-R series).
- Using the Control Qflash panel, select the operating Mode and settings for Control, Remote 1 and/or 2.

### 15.1 Set up the Control Unit

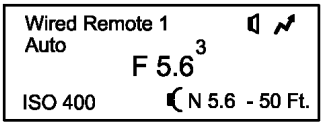
The number of Qflashes can be 2 or 3. Turn on all Qflashes. The Qflash displays will prompt you to select the Control flash for the "Wired Control" setup. Press the **Mode** ◄ button on the Qflash that you want to be the Control Qflash (usually the one at the camera).

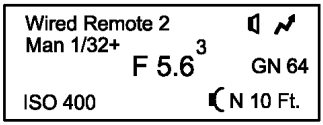
The display will change to "Wired Control", and show the data for Remote 1 ( R1 ) and Remote 2 ( R2 ).



The displays of the two Remote Qflashes will automatically change to R1 and R2.




### 15.2 Select the Mode and settings for all flashes

Always select the settings you desire for the Control Qflash first. Those settings determine the choices you have for the Remotes.

- Press **Set** ◆ until "C" is blinking. (If "R1" or "R2" is blinking instead, press the **Up** ▲/**Down** ▼ buttons until "C" blinks).
- Press **Set** ◆ again. The mode of the Control flash will blink. Use the **Up** ▲/**Down** ▼ buttons to select the mode. The choices are Man, Auto, QTTL and OFF* (see 15.3 – Wireless Setup - Important Notes)
- Press **Set** ◆ again to set the parameters for the mode selected. For example, power (1/64 to 1/1) for Man, F# for Auto, etc. There are no settings for TTL or OFF modes.
- Set the fill/flash ratio. To change the ratio, turn the "Fill" dial on the QTTL adapter.

Next, from the Control Qflash panel, select the settings for the Remote Qflash(s):

- Press **Set** ◆ until either "C", "R1" or "R2" blinks in the display. If necessary, press **Up** ▲/**Down** ▼ until "R1" blinks to set the parameters for Remote 1, or until "R2" blinks for Remote 2.
- Press **Set** ◆ again and the Mode of R1 or R2 will blink. Use the **Up** ▲/**Down** ▼ buttons to select the Mode of the Remote Qflash.
- Press **Set** ◆ again to set the parameters of the Mode selected.

### 15.3 Selecting a different flash as the control flash

To select a different flash as the control, press the **Mode** ◀ button on the Control Qflash and use the **Up** ▲/**Down** ▼ button. The Qflash displays will prompt you to select the Control flash for the "Wired Control" setup. Press the **Mode** ◀ button on the Qflash that you want to be the Control Qflash.

### 15.4 Changing Remote 1 to Remote 2 or Remote 2 to Remote 1

Press the **Mode** ◀ button on the Remote Qflash and use the **Up** ▲/**Down** ▼ button to change from Remote 1 to Remote2.

Note : If there is already a Remote 2 Qflash connected, it will automatically change to Remote 1

# 16. TYPICAL LIGHTING SITUATIONS

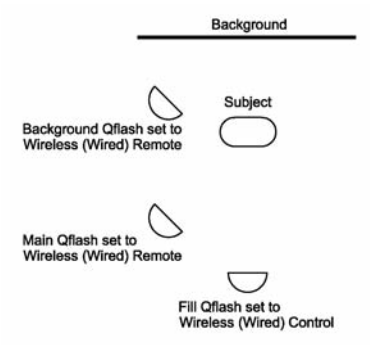
This section covers some typical lighting situations that photographers find themselves in. Here is how Qflash can help.

### 16.1 Portrait

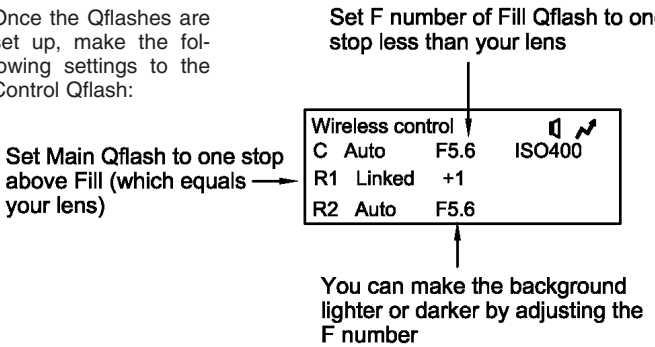
Setting up a 3:1 portrait ratio (or any other ratio) has always been time consuming. It is usually accomplished with three flashes: Main, Fill, Background set to manual. Each flash needs to be adjusted and metered separately. If the Main is in an umbrella or soft box this becomes even more time consuming.

The Qflash 'Wireless Control' mode (with a FreeXWire) or 'Wired Control' mode (with a QF50 cable) provides a method for setting up portrait lighting which takes only a few moments. See Section 15 for details of the Control Modes.

Set the Qflashes as shown in the diagram to the right. Place the camera at the Fill Qflash position. The Main Qflash can be placed in an umbrella or soft box.




Once the Qflashes are set up, make the following settings to the Control Qflash:




Now the system is set up for perfect portrait lighting, with no metering needed. The on-camera Qflash (Control) which is producing a flat light will shut off one stop below the lens setting (Fill). Remote 1 Qflash will produce a light from the left (loop lighting) that is equal to the lens setting (Main). This will achieve the portrait 3:1 ratio. The ratio can be adjusted by changing the F number of the Control Qflash and the linked ratio.

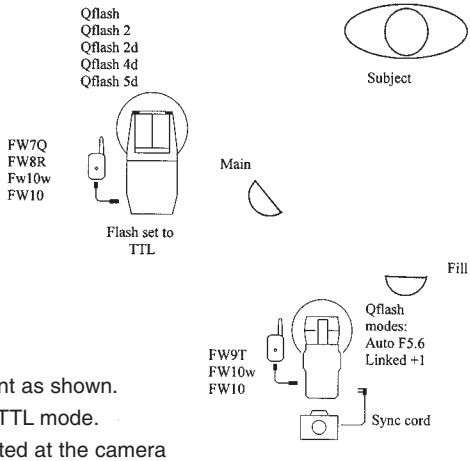
For a ratio of 5:1 set the F number of the Control Qflash to 2 stops below the lens setting, and set the Linked ratio to +2.

### 16.2 Wireless lighting ratios made easy

When using multiple lights to light a subject it's very easy to set up a lighting ratio between the Main and Fill lights. The ratio can be set from –3 stops to +3 stops.

Equipment needed:

- One Qflash 5d-R
- One Qflash (any version) located to the right of the subject
- Two FreeXWires
- Two QF30 cables
- Two Quantum Turbo batteries




Set up:

- Connect the equipment as shown.
- Set the Main flash to TTL mode.
- Set the Fill flash, located at the camera position to Auto mode. Select an F number that is <u>less</u> than the F number set on the camera. Typically it is set to one stop under the camera's aperture, but can be as low as 2-1/2 stops under.
- Next Adjust the Linked ratio for the difference between Fill flash and the camera's aperture.

Example. If the camera is set for F8.0, and the Fill is set for F5.6, the Linked ratio needs to be set to +1 ( the camera is one stop higher than the Fill)

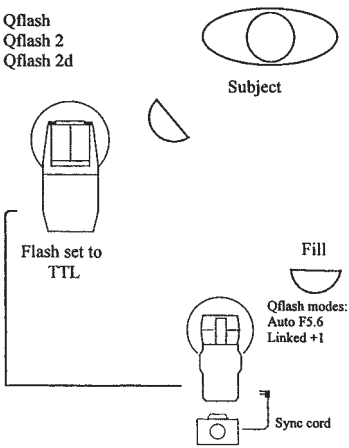
### 16.3 Lighting ratios using a control cable

This set up is similar to the wireless one above, only Qflashes are connected with QF50 cables instead of FreeXWires.

Equipment needed:

- One Qflash 5d-R located at camera position
- One Qflash / 2/ 2d/4d/5d located to the right of the subject
- One QF50 control cable
- Two Quantum Turbo batteries

Set up: Same set up as above.



## 11. CUSTOMER SERVICE

Having any trouble in using your Quantum product? We are here to help. Mail, call, fax, or email our Service Department:

Service Department
Quantum Instruments
10 Commerce Drive
Hauppauge, NY 11788

Tel: (631) 656-7400 Fax: (631) 656-7410
Website: www.qtm.com

Troubleshooting tips are available at www.qtm.com, Support, Customer Support, FAQ. If you suspect a malfunction or require adjustment, return the unit to us with an accurate description of the problem. Please be sure your problem is not caused by improper operating procedure or malfunctions in your other equipment. Send all equipment carefully packaged and insured to our address above.

An estimate of repair cost on out-of-warranty merchandise may be forwarded if you desire. This will require that we contact you for approval before proceeding and will delay return of your equipment. For fastest repair time, you may pre-approve repairs up to a limit of $85 with your credit card. We will bill you only for actual costs up to that limit. If repair costs exceed your pre-approval, we will contact you.

Paying by check will delay the repair until the check clears (up to 15 days). Payment by money order is acceptable.

Normal repair time is 10-15 days. For expedited service, contact our Service Department.

**Summary:**

- Ship via UPS, Parcel Post, or other carrier, insured.
- Give a clear, detailed description of the problem.
- Give your mailing address and daytime phone number, fax #, and/or email.
- For warranty repairs include a copy of the receipt.

In addition, for out-of-warranty repairs with pre-approval:

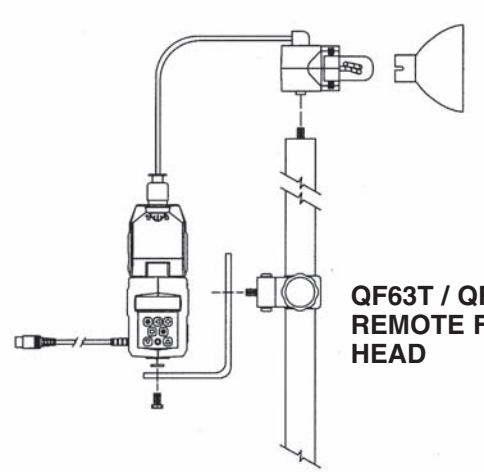
- Provide your Visa, MasterCharge, or American Express card # and expiration date.
- Give us authority to charge repair costs up to $85.00.
- Provide your billing address.

**Note:** Please do not e-mail your credit card information

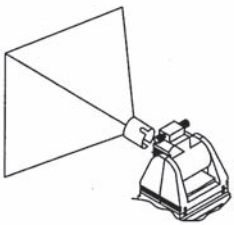
## LIMITED WARRANTY

Quantum products have a 1 year limited warranty. Please refer to the Limited Warranty card for complete details, conditions, and terms.

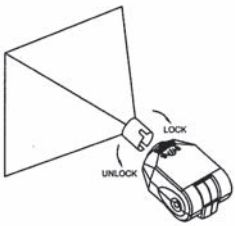
# Qflash ACCESSORIES



**QF63T / QF36X REMOTE FLASH HEAD**

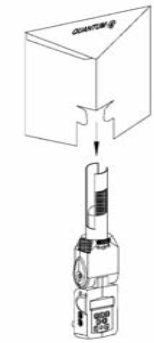


**QFT2/X2**
**QFT2d/X2d**

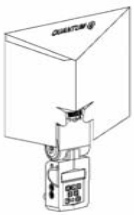



**QFT4d/X4d**
**QFT5d/X5d**

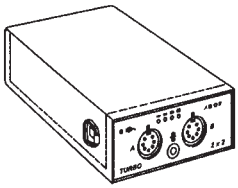
**QF68 SOFTBOX**



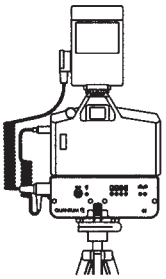
**QF69 FOLDING SOFT BOX & HOT SPOT REDUCER**



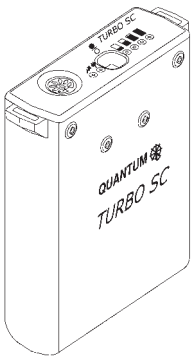
# OTHER QUANTUM PRODUCTS



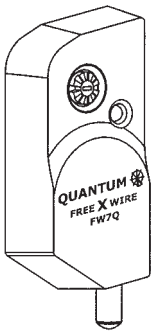
**TURBO 2X2**



**TURBO COMPACT**

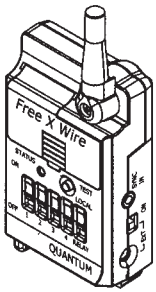



**TURBO SC**




**FW7Q**


**QNEXUS**

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