Dw-R series QTTL® ADAPTER INSTRUCTIONS

For use with Quantum Qflashes and popular digital and film cameras

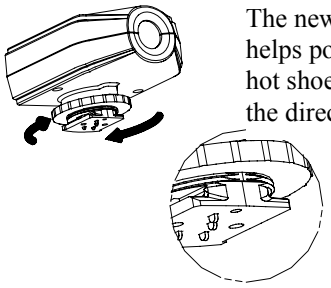
Quantum's Dw-R series QTTL Adapters provide new dedicated features for popular professional digital and film cameras used with Quantum's Qflash series 2d, 3d-R, 4d, 5d and 5d-R. In particular, when used with Qflash 5d-R's and FreeXWire radios, these QTTL adapters allow setting of TTL ratio exposures of remote Qflashes, wirelessly.

For a list of available QTTL Adapters and the cameras compatible with them, see Section 5.0 QTTL-Camera Compatibility Chart. Also check the Quantum website www.qtm.com, for the latest additions and updates to the list.

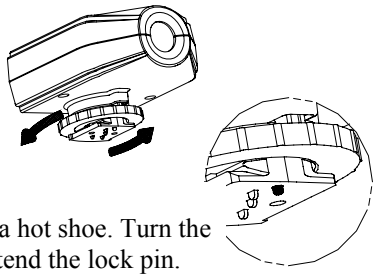
Certain Quantum equipment may be upgraded to the capabilities described in these instructions: Qflash 4d and 5d series upgrades to 5d-R series; D and Dw QTTL adapters upgrade to Dw-R series (for some models); and , FreeXWire FW10 upgrade to FW10w. Qflash 2 / 2d upgrades to 3d-R. Note : If you have a Qflash that has been upgraded to a Qflash 2, it can not be upgraded to Qflash 3d-R. Please contact Customer Service at Quantum for details and costs.

1.0 Connecting a Dw-R series QTTL Adapter

Always turn the Qflash and camera power **off** when connecting or disconnecting a QTTL adapter. **Do not use a sync cord. Qflash will get a sync from the QTTL Adapter.**



Releasing the QTTL Adapter
The new locking feature for QTTL Adapters helps position and lock these adapters in camera hot shoes. To retract the lock pin, turn the ring in the direction of the arrows.



Mounting the QTTL Adapter
Slide the QTTL Adapter into the camera hot shoe. Turn the ring in the direction of the arrows to extend the lock pin. Before tightening the ring, move the Adapter slightly to assure that the lock pin falls into the locating hole of the hot shoe. It is no longer necessary to tighten down the ring to secure the QTTL Adapter -- as soon as you feel resistance, stop -- the lock pin will keep the Adapter in place.

2.0 General Operation

Flash Ready and Flash Sync Speed
Flash readiness is established when the **"Ready"** indicator appears in the Qflash display. 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. Check your camera's manual to see if it supports flash sync speed control. If it does not, then set the shutter speed at or below the maximum flash sync speed recommended in the camera manual.

Exposure Indicators
In the TTL, Auto, and A.Fill modes, Qflash provides **OVER**, **UNDR**, or **OK** exposure information. An audible signal can also be programmed on Qflash.

Rear Curtain Sync
If supported by your camera, the QTTL Adapter can fire the flash with the rear curtain. 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.

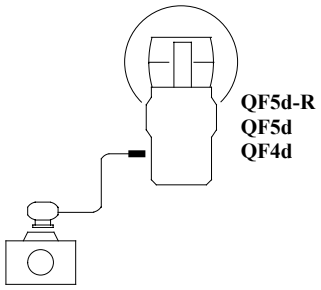
Auto Focus Assist
The D/Dw series QTTL Adapters will project a beam whenever the camera is having difficulty focusing due to low light conditions. A local Qflash must be connected for this feature. Turn the auto focus assist switch of the QTTL Adapter to **on** (☼).
Always turn the auto focus assist switch **off** (●) under any of the following conditions:

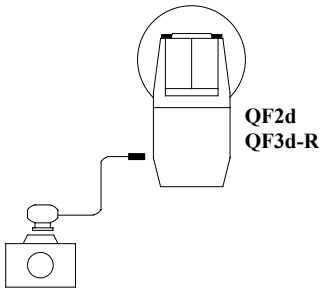
When no Qflash is connected;
When using a QF50 or QF51 extension cables.

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

3.0 Qflash operating modes - *for direct* camera connection

These instructions apply to Qflashes connected by Dw-R series QTTL Adapter to a camera. Multiple Qflashes may be linked via the Accessory sockets. Additional operating details are available in the Qflash manual.





Qflash Mode	Qflash series 2d, 3d-R, 4d, 5d, 5d-R
3.1 Man	Aperture and the film speed are set on Qflash by the camera. Set the desired power setting on the Qflash corresponding to the distance to your subject.
3.2. Auto	If camera is capable of two way communication **Auto** will change to **A.Fill / Auto Fill**, when shutter is pressed ½ way.
3.3 A.Fill /Auto Fill	The **A.Fill** mode adds fill capability for cameras that do not support TTL ratio control. Also, some photographers prefer A.Fill for more control over exposures than is possible with camera-controlled TTL mode. Aperture and the film speed are set by the camera and cannot be changed on Qflash. Set the desired fill flash ratio using the **"↗ Fill"** control on the adapter. You may choose a setting from –3 stops below the cameras aperture to +2 stops above the cameras aperture in 1/3 stop increments. Light output is controlled by the **Qflash sensor** which will display an indication if the setting is out of range of the flash. The error indicators are: **ERROR – Decrease fill flash or F# --** For example the camera is set to F16 and the fill switch is set to +2. Either decrease the F# on the camera or decrease the fill flash ratio on the QTTL Adapter. **ERROR – Increase fill flash or F# --** For example the camera is set to F4.0 and the fill switch is set to –3. Either increase the F# on the camera or increase the fill flash ratio on the QTTL Adapter.
3.4 TTL	If the camera is capable of two way communication **TTL** will change to **QTTL**, when shutter is pressed ½ way (See QTTL mode below). Camera controls exposure.
3.5 QTTL	**QTTL** mode works with camera TTL or pre-flash evaluative metering. Set fill flash amount using the **"↗ Fill"** switch located on the top of the adapter. You may choose a setting from –3 stops below the cameras aperture to +2 stops above the cameras aperture in 1/3 stop increments. Light output is controlled by the sensor in the **camera**. The Qflash will monitor exposure. See **A.Fill** mode for the error indications.

4.0 Wireless Qflash operation with FreeXWire

This sections describes how to link Qflashes wirelessly to QTTL Adapters via FreeXWires. Please note carefully which series of Qflash and FreeXWires may be used in each position of each setup.

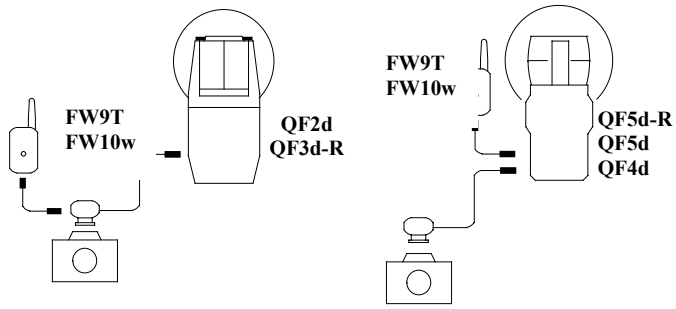
Set the TTL option ON for Transmitter FW9T or FW10w. Set Range to NORM for Receivers FW8R or FW7Q. Additional setup details are available in the FreeXWire and Qflash manuals.

Note : When using another manufacturer's flash as your remote flash (i.e. Studio strobes), then set the on camera Qflash to A.Fill (Auto Fill) / Auto mode.

4.1 Using the A.Fill (Auto Fill) / Auto mode

This mode requires an on-camera Quantum Qflash. Light output is controlled by the sensor of the on-camera Qflash.

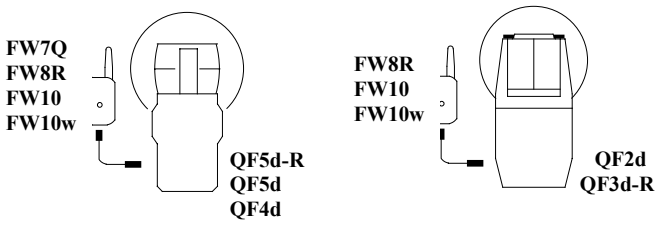
On-camera flash set up



Install the QTTL Adapter onto the hot shoe of the camera. Connect the cord from the QTTL Adapter to the bottom of the FreeXWire. Use an FW31 accessory cord to connect a local on-camera Qflash to the QTTL Adapter.

Set Qflash mode to **Auto** or **A.Fill**. If **A.Fill** appears on the Qflash display, you can use the **"↗ Fill"** switch on the QTTL Adapter to set the fill-flash ratio. If **Auto** appears on Qflash you must set the f/# and film speed manually.

Remote flash set up



Remote Qflashes:

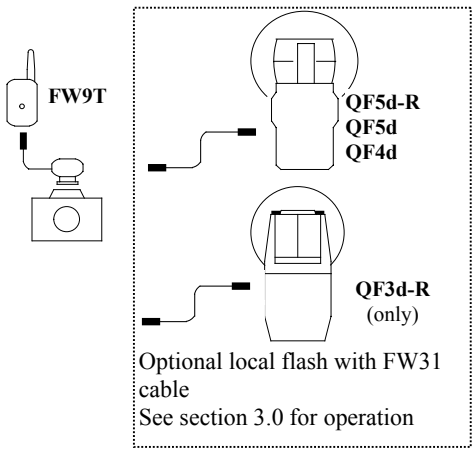
QF2d / QF4d / QF5d
Set flash to **TTL** mode. Light output is controlled by the on-camera Qflash

QF3d-R / QF5d-R
Set flash to **"Linked to Local"**

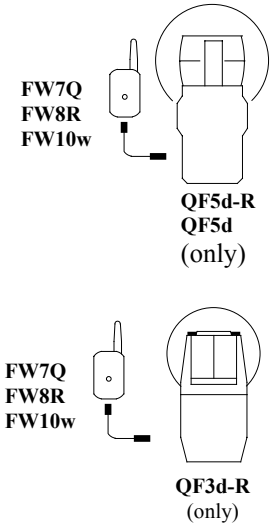
4.2 Using the Wireless Remote Auto mode - *with or without* an on-camera Qflash.

With this mode the sensors of a remote Qflashes control their own exposure. However, the F number and film settings of the camera are sent wirelessly to the remote Qflashes. As these settings change on the camera, they change on the remote Qflashes. Some cameras do not support Wireless Remote Auto. Please refer to the QTTL-Camera Compatibility Chart.

An on-camera Qflash is optional and may operate in any mode in Section 3.0. It's exposure can be set independently of the remote Qflashes.



Optional local flash with FW31 cable
See section 3.0 for operation



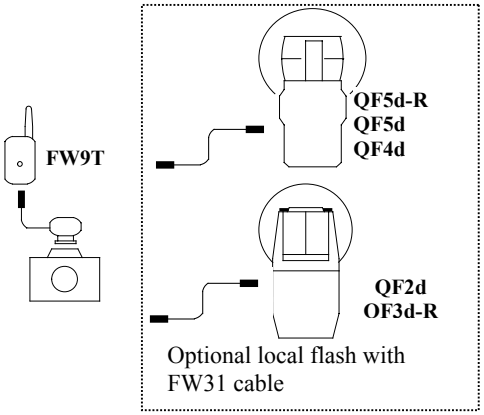
Set the remote Qflash to "**Wireless Remote 1** or **2**" mode. When the flash receives the wireless signal from the camera the flash will enter the **Wireless Remote (1** or **2**) **Auto** mode. As the F number or ISO on the camera is changed the information will be sent to the Remote Qflashes.

Note: When using the Fill switch located on the Dw adapter the f/# displayed on the remote Qflash will be the result of the camera's setting and the Fill switch. Example: Camera set to f/11, Fill switch set to –1, remote Qflash will display f/8.0

4.3 Wireless QTTL and TTL modes - *for non pre-flash cameras*

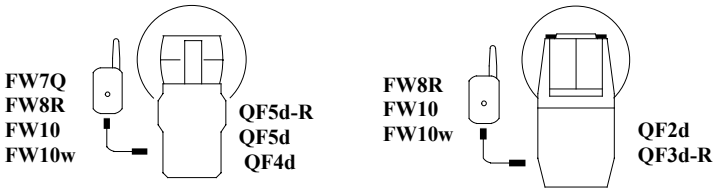
This mode is used for film (and a few digital) cameras that do not use pre-flash evaluative metering. An on-camera flash is optional. The camera controls exposure, and the Fill control of the QTTL Adapter function as in Section 3.4 and 3.5.

Camera set up



All models: Set flash to **QTTL** mode as described in Section 3.5

Remote Qflash set up



Remote Qflashes:

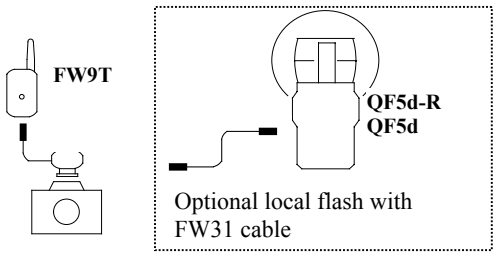
QF2d / QF4d / QF5d
Set flash to **TTL** mode. Light output is controlled by the on-camera Qflash

QF3d-R / QF5d-R
Set flash to **"Linked to Local"**

4.4 Wireless QTTLw mode -- *for digital cameras with pre flash evaluative metering*

Qflash 5d/5d-R series are required, and a local on-camera Qflash is optional. The camera controls exposure, and the Fill control of the QTTL Adapter function as in Section 3.5. * FW10 may be upgraded to FW10w. Qflash 4d can be upgraded to Qflash 5d-R. Please contact Quantum Customer Service.

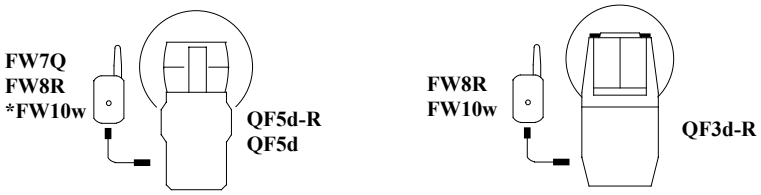
Camera set up



QF5d-R / QF5d:
Set flash to **TTL** mode. Press shutter ½ way. When flash establishes communication with camera and FreeXWire **QTTLw** will appear on the display.

See Section 3.5 for setting fill-flash ratio.

Off camera flash set up



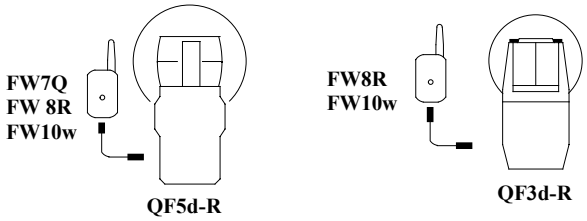
QF5d:
Set flash to **TTL** mode.
When flash establishes communication with camera and FreeXWire, **QTTLw** will appear on the display. This may not occur until after the shutter is fully depressed. Light is controlled by camera and QTTL Adapter setting.

QF3d-R / QF5d-R :
Set flash to **"Linked to Local"**

4.5 Wireless Multiple Flash Ratio QTTL mode -- *for Qflash 3d-R / 5d-R and Dw-R series QTTL Adapters*

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.

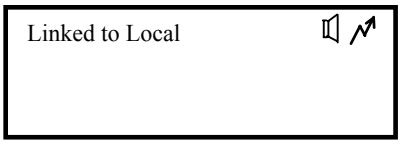
Set the camera modes: Choose manual, aperture priority, or shutter priority on your camera. Program mode may be selected, although the camera will make decisions that reduce your control.



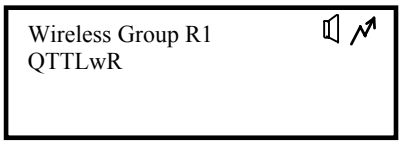
4.5.1 Always set up the Remote Qflash(s) *first*

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.

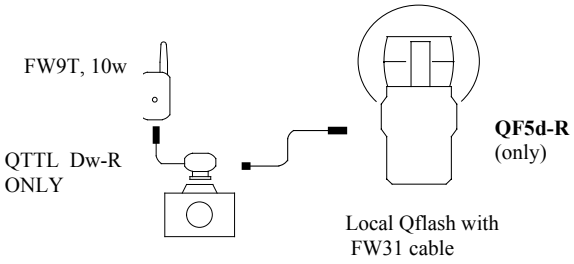
Continue setting all the Remote Qflashes to one of the three Groups. There is no limit to the number of Qflashes in each Group.

4.5.2 A Local, T5d-R Qflash 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 ½ 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, -1**^{3}, 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.



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Section 5.0 QTTL-Camera Compatibility Chart

camera model	QTTL Adapter	Qflash series	Supported features: Direct link to Qflash: Full dedication	Pre-flash metering	Auto focus assist(2)	TTL Ratio / Fill flash	Auto Fill	Rear curtain sync	Shutter speed control	Viewfinder ready	Supported features: Wireless link toQflash (Requires FW7Q / 8R / 9T/ 10w): Wireless Non Pre flash QTT	Wireless Pre flash QTTLw	Wireless Remote Auto	Wireless multiple QTTL ratio
Canon - non pre-flash 1, 1n, 1n RS, 1v, 7, 7E, 10, 10S, 600, 620, 630 , 650, 700, 750, 850, 1000, 1000F, E0S-3, A2E, A2, A5, Elan, Elan2, Elan2e, Rebel S, RT, T90	D13w-R	QF5d-R QF3d-R									1			
		QF5d									1			
		QF2d / QF4d									1			
		QF / QF2	Not compatible											
Canon - pre-flash E0S1, EOS3, 10D, D30, D60, 20D, EOS1D, EOS1Ds, EOS1D M2, EOS1Ds M2, REBEL 300D Mark II, III, 40D KODAK Pro SLR/c	D23w-R	QF5d-R QF3d-R		aTTL										
		QF5d		eTTL eTTL2										
		QF2d / QF4d												
		QF / QF2	Not compatible											
Nikon - non pre-flash FA, FG, FE2, F100, F301, F4, F4S, F401 F401S, F501, F601, F601M, F801, N60, N70, N2000, N2020, N4004, N6000 N6006, N8008, N8008S, N90, N90S Fuji S2	D12w-R	QF5d-R QF3d-R									1			
		QF5d									1			
		QF2d / QF4d									1			
		QF / QF2	Not compatible											
Nikon - dTTL pre-flash D1H, D1X, D100, F100, F5, D1 Kodak Pro 14n, Pro SLR/n Fuji S3	D12w-R	QF5d-R QF3d-R		dTTL										
		QF5d												
		QF2d / QF4d												
		QF / QF2	Not compatible											
Nikon - iTTL pre-flash D2H, D2X, D70, D70S, D200, D2Xs	D22w-R	QF5d-R QF3d-R		iTTL										
		QF5d												
		QF2d / QF4d												
		QF / QF2	Not compatible											

Legend

Feature supported by Dw Adapter / Qflash model indicated. Camera TTL mode indicated if applicable.

1 If your camera is capable of both TTL or pre-flash metering, elect TTL mode only. See your camera's operating manual for selecting the metering mode.

2 Camera must be set to **one shot** or **single shot**, and **center** square only. Check you camera's custom / personal settings for any other options that need to be set to activate AF assist.

3 Not all cameras support multiple QTTL ratio. Consult your camera's operating manual for more information.