WHITE LIGHTNING

UltraZAP

The White Lightning UltraZAP Operation Manual

The UltraZAP Flash Units are made in the USA, manufactured and directly sold by White Lightning, a division of Paul C. Buff, Incorporated.

Thank You for purchasing the UltraZAP Flash Unit!
Please call us if you need any assistance.

WHITE LIGHTNING

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The UltraZAPs are White Lightning products, a division of Paul C. Buff, Inc.

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Safety Precautions
For Your Safety, Please Note These Warnings

WARNING! To avoid potentially lethal conditions, connect this unit only to a **3-wire grounded outlet**. Do not operate with 2-wire extension cords or use adaptors to connect to ungrounded outlets. This unit contains high voltages and internal components which can store dangerous voltages even when the flash unit is unplugged. The unit contains **NO USER SERVICABLE PARTS** and should not be disassembled except by a qualified technician. The only parts you may replace yourself are the flashtube and the modeling lamp, though caution must be taken here as well and the unit must be powered down while these items are replaced.

Before attempting to operate your flash unit, securely mount the unit to a light stand. Do not allow unattended children around studio flash equipment as potentially dangerous conditions may result including burns and electrical shock hazards. **Please be safe with your equipment!**

GUARANTEE AND WARRANTY

Your White Lightning UltraZAP flash units are covered by a **60-Day Absolute Satisfaction Guarantee** and a **5-Year Factory Warranty**. If you are not satisfied with your UltraZAP unit for any reason, you may return the unit to us within 60 days for a complete refund, minus the cost of shipping.

During the period of your 5-Year Factory Warranty, Paul C. Buff, Inc. will repair or replace any UltraZAP unit which becomes defective during normal operation. This warranty does not apply to modeling lamps, flashtubes or flash capacitors which have been exhausted as a result of heavy commercial use or to units which have been physically damaged by the customer. Please contact us if you are having any difficulties with your unit so that we may properly assess your repair needs and provide you with the correct shipping procedures before returning your unit for repair. Do not attempt to fix your unit on your own. To contact **Technical Support**, please call us at **1-800-443-5542**. We're here Monday through Friday, from 9:00 am until 5:00 pm, CST.

POWER REQUIREMENTS

As the units require an AC power source, each unit comes with a 15-foot power cord that must be connected to a 120 Vac, 50-60Hz power outlet.

When shooting in an environment where an AC power source is not available, we recommend the use of the Vagabond Portable Power System *(see specific product for details)*.

PRODUCT DESCRIPTION

The UltraZAP flash units are extremely precise, high power electronic photo flash units. They are designed for professional studio use as well as demanding location work due to their compact, yet highly durable construction and extruded housing. The flashpower and modeling lamp intensity are continuously variable over a 5 f-stop stepless range, independently adjusted on separate rear panel faders.

The unit delivers energy stored in its internal capacitor bank to a critically matched circular hard-glass flashtube designed for 5600ºK daylight spectrum with low UV emission. This yields minimal flash duration while maintaining energy conversion efficacy within 1/4 of an f-stop of the maximum attainable from Xenon light sources of this type. Optional, UV-coated 5200ºK color-corrected tubes may be used as well.

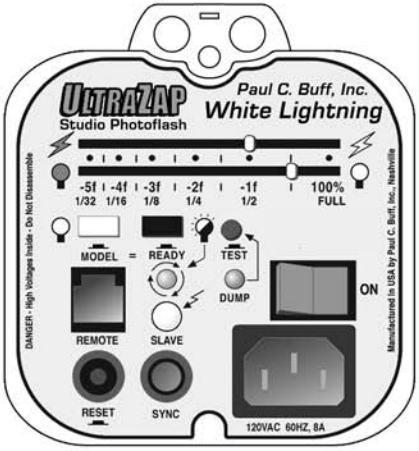
The UltraZAP units come with a 150-watt, long-life quartz bulb encased in a large frosted glass envelope to eliminate hotspots and pattern errors common to small, clear-envelope household bulbs. The unit offers highly accurate, “what-you-see-is-what-you-get” modeling due to careful engineering of the flash and modeling components with respect to polar patterns, specular content and accurate tracking of light ratios from both sources. With respect to tracking accuracy, the units employ full voltage regulation of the flash circuits as well as the modeling lamp circuits to maintain consistent flash /model ratios under real-world power line conditions.

The modeling lamps may be set to FULL power, adjusted via the rear panel fader over the same range as the flashpower, or turned completely OFF. The lamps may be additionally set to indicate recycle, going out when the unit is fired then coming back on to indicate when recycle is complete.

A full range of accessories are compatible with the UltraZAP units, as a quick-release mechanism attaches the entire White Lightning range of reflectors and modifying accessories, while dual holders allow the simultaneous use of umbrellas and counter weight shafts. The UltraZAP units may be used with our Paul C. Buff, Inc. remote controls and our RFT1 Radio Flash Trigger One wireless firing system. For our full line of accessories offered, please refer to the product catalog that came with your light, or to our website at: **www.paulcbuff.com**.

WHAT COMES WITH EACH UNIT

Each UltraZAP Flash Unit arrives with our standard 150-Watt modeling lamp *(150-Watt max.)*, a 5600ºK daylight-balanced flashtube, our standard 7AB/R 7-inch silver field reflector (with umbrella hole), 15-foot power and sync cords (1/4-inch to Pc-sync connection), a black polycarbonate shipping cover, small nylon clips (for attaching gels and filters) and your Owner’s Operation Manual.



The UltraZAP Control Panel

The UltraZAP back control panel offers you clear control of the flash unit's features, conveniently labeled and collectively located, for simple and quick manipulation.

Slider Control of Flashpower
The flashpower is independently adjusted with the top slide fader (marked with lightning bolts on either side). With this slider, you can adjust the flashpower over a full 5 f-stop range, from Full down to 1/32nd of the total power.

Slider Control of Modeling
The modeling lamp output is independently adjusted with the lower slide fader, below the flashpower slider (marked with light bulbs on either side). With this slider, you can adjust the modeling lamp output over the same full 5 f-stop range, from Full down to 1/32nd of the total power.

Modeling Lamp Control (MODEL)
The white "MODEL" button is the ON/OFF switch for the modeling lamp. When depressed, the modeling lamp is turned ON, and when released, the modeling lamp is turned OFF. The modeling lamp must be turned on before its output is adjusted by the modeling lamp slider.

Modeling Lamp Recycle Indicator (MODEL = READY)
The black "READY" button is the ON/OFF switch for using the modeling lamp as a recycle status indicator where lamp will visually indicate the unit's recycle status by dimming after each flash (as the unit recycles). When the lamp comes back on, this indicates that the unit has recycled and is ready to flash again at the indicated settings.

Recycle Indicator Ready Light
The "READY" light also indicates the unit's recycle status. When the light shines green, the unit is recycled and ready to flash at the indicated settings.

Test Flash
The red “TEST” button allows you to fire your unit for testing and meter readings. The test flash button may also be used to dump any excess charge that has been stored when your unit is quickly changed from a higher to a lower power setting.

Remote Control Jack
Plugging a remote control into this jack will cause the unit’s flash-power and modeling lamp to be externally controlled. The RJ-11 Connector accepts four-conductor standard telephone cords (provided with each Paul C. Buff, Inc. Remote Control).

Slave Tripper (SLAVE cell)
The unit contains a highly sensitive built-in slaver tripper, which fires the unit whenever it “sees” the light from another flash unit. Plugging a sync cord or a blank “dummy” jack in will disengage the slave.

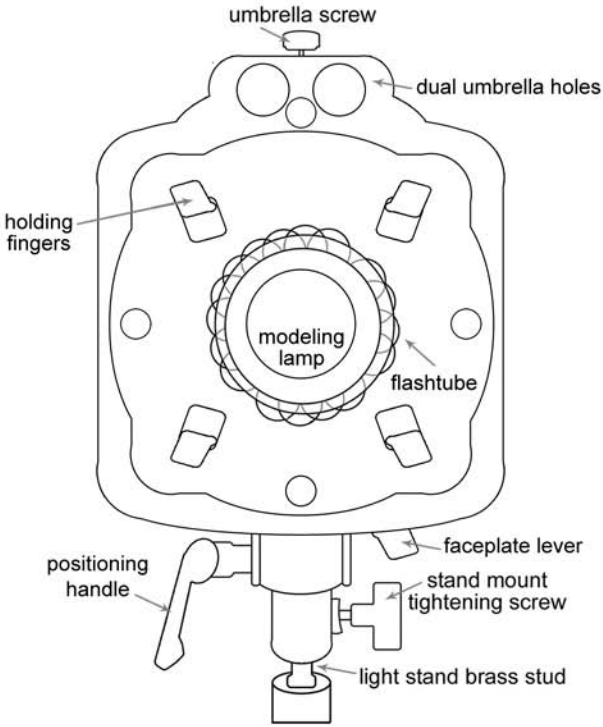
Sync Jack
Each UltraZAP unit arrives with a standard 15-foot sync cord (1/4-inch to PC) for hardwired camera synchronization. When connected, the built-in slave tripper is disengaged, and the unit will only take its cue to fire from the connected camera.

Dump Light
The “DUMP” light indicates the unit’s charge/overcharge status, shining red to indicate that the unit is charged to a higher flashpower than what is selected. This occurs when the flashpower is changed from a higher to a lower setting. To avoid overexposing the next frame, wait for the “DUMP” light to go out (the unit will automatically dump the excess charge). Depending on the change made, the auto dump may take up to one minute, but you can instantly dump this charge by pressing the “TEST” button.

Circuit Breaker Reset
The “RESET” button, located below the Remote Jack, allows you to reset the circuit breaker if it is tripped from excessive, rapid use. Pressing this button in will reset the circuit breaker.

ON/OFF AC Power
This is the main ON/OFF switch for the flash unit.

Power Cord Jack
Each UltraZAP arrives with a 15-foot AC Power Cord, used to connect the unit to a 120 Vac, 50-60 Hz power source. The power cord may only be connected to a 3-prong, grounded power outlet. The flash units will not function properly if the ground is defeated. *For safety, using a surge protector is recommended when multiple flash units are plugged into a single outlet.*



dual umbrella holes:
compatible with standard umbrellas / brolly boxes with poles up to 3/8-inch in diameter

the light stand mount:
the mounting block fits all Paul C. Buff, Inc. light stands and other standard light stands having brass studs up to 5/8-inch

unit dimensions:
both the UltraZAP UZ800 and UZ1600 units measure 4" x 4.5" x 12"

unit weight:
the UZ800 unit weighs 3.7 pounds; the UZ1600 unit weighs 4.6 pounds

SPECIFICATIONS	UZ800	UZ1600
True Wattseconds	330 Ws	660 Ws
Lumenseconds	14,000 Ls	28,000 Ls
Recycle (to full)	1 second	2 seconds
Flash Duration (t.5)	1/3600 second	1/1600 second

EXPECTED OUTPUT	UZ800	UZ1600
Standard 7-inch Reflector	f16 2/10	f22 2/10
11-inch Reflector	f32	f45
48" Silver Umbrella	f11 – f16	f16 – f22
48" Shoot-Thru Umbrella	f8 – f11	f11 – f16
Medium Softbox	f16 – f22	f22 – f32

Expected Output Measurements *were taken with a Gossen Ultra Pro flashmeter (ISO100) at 10' for reflector and umbrella specs and at 4' to 6' for softbox specs (double-diffused); taken in the center of 20' x 27' white room with 20' ceilings. Readings may vary when taken in other environments and with other meters, as different meters can vary in their interpretation of "correct" exposure values.*

MODELING LAMPS AND FLASHTUBES

The UltraZAP units arrives with our 150W **150-Watt Quartz Modeling Lamp**, having a 3000+ hour expected lifespan. Should you need to replace your modeling lamp, first turn your flash unit OFF and unplug it from the AC power source. Wait at least five minutes for your flash unit's internal capacitors to fully discharge and for your unit to completely cool. As your modeling lamp is a standard Edison-type screw-in bulb, you can simply unscrew your existing bulb and replace it with a new one. It is best to use a cloth or gloves so that your finger oils do not touch the bulb, as this may adversely affect its performance.

Each unit additionally arrives with our FT12MM **12mm, Single-Ring Flashtube**. This daylight-balanced tube (5600ºK) has a typical life expectancy between 250,000 and 500,000 flashes. To replace your flashtube, you will also need to turn your unit OFF, unplug it from its power source and wait five minutes before handling the tube. When the unit is completely cool, you will unscrew the modeling lamp to get to the flashtube and pull the tube straight up and out of the unit. The replacement tube is inserted by gently pushing down on all three legs until it is seated snugly. It is best to use a cloth or gloves to replace the flashtube as well so that your finger oils do not touch the lamp as this may adversely affect its performance.

If you have questions or need to purchase replacement modeling lamps and / or flashtubes, please call us at 1-800-443-5542. *All replacement flashtubes and modeling lamps arrive with replacement instructions.*

SET-UP INSTRUCTIONS

Plug your units into suitable, grounded AC power outlets. If more than three units are fired simultaneously, you might need more than one power circuit to avoid tripping building circuit breakers. It is recommended that you set the "Model=Ready" button to the IN position to minimize power usage.

To begin using your units, they must be **mounted to appropriate light stands**. The XMBA mounting block attached to each UltraZAP unit fits all Paul C. Buff, Inc. light stands and any other standard light stands having brass connections studs that measure up to 5/8-inch.

Remove the shipping cover. Your flash unit arrives with the flashtube and modeling lamp in place, protected by the black polycarbonate shipping cover. You must remove this cover prior to operation. The cover is held in place with four fingers on the front faceplate of the unit, which are used to hold accessories as well (such as reflectors and softbox speedrings). To remove the cover, slide the silver lever on the bottom of the faceplate. This will cause the holding fingers on the faceplate to contract, allowing you to pull the shipping cover straight off of the faceplate. Releasing the lever will allow the holding fingers to expand back into the holding position.

SET-UP INSTRUCTIONS *continued*

With the shipping cover removed, you can **attach your desired accessories** and position your flash units. The UltraZAP units are compatible with the full line of Paul C. Buff, Inc. standard reflectors, softboxes / octaboxes, umbrellas, brolly boxes and light modifiers.

Faceplate accessories (such as reflectors and softbox speedrings) are attached and removed with the release lever. Slide the lever to contract the faceplate holding fingers and attach your accessories (ensuring that all four holding fingers are inside), then release the lever to expand the fingers and hold the accessory in place on the unit. **Umbrellas and brolly boxes** may be mounted to the unit using either of the dual umbrella holes located on the top of the unit housing. First, line up the pre-cut hole in your standard 7-inch reflector with either housing hole. The umbrella / brolly pole slides through the pre-cut hole in the reflector then through the housing hole, tightened into place with the umbrella tightening screw. Umbrellas and brolly boxes may be used with or without a reflector.

You can **connect the unit to your camera** using the provided sync cord (allowing other units in your setup to fire via their built-in slaves), or use a remote control or wireless firing system.

METERING

When using flash units and various light modifying techniques, the best way to ensure a proper exposure is to use a **quality dedicated flashmeter**. There are several manufacturers who offer excellent meters, allowing you to enter your chosen settings and read the amount of light present. You can adjustment the flash output and / or light position(s) and set your camera's controls appropriately for the amount of light present, considering the aperture and shutter speed needed for the specific effect desired. When metering for a correct exposure, you cannot rely on your in-camera meter as it cannot detect the light that will be produced by the flash unit(s) when fired. Additionally, many cameras employ a Through-The-Lens Meter (TTL), which takes light readings by sending out a pre-flash or infrared sensor in order to detect the amount of available light. While this reading has no way of detecting the flash, the signal may also inadvertently trip your unit's built-in slave tripper causing a premature flash.

RECOMMENDED LONG TERM USE

For the UltraZAPs, up to 180 full power shots per hour may be used. Care must be taken if operating conditions allow long term excess heat build-up. While more than 180 shots per hour may be permitted with lower power settings, it is best to decrease heavy use when operating at full power. Always power down then unplug your unit when not in use.