

USER MANUAL **CyberSync™**



by **Paul C. Buff, Inc.™**

USER MANUAL

CyberSync™

For assistance with your CyberSync™ system components or any other Paul C. Buff, Inc.™ product, please contact our friendly customer service department. We're here, ready to take your calls and answer your emails, Monday through Friday, from 9:00am to 5:00pm, CT. You can email our customer service team or ask questions on our online technical forum, located on our website (www.paulcbuff.com).

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FCC ID: OUECSXCVRI

IC: 6866A-CSXVRI

These devices comply with Part 15 of the FCC rules and Industry Canada requirements. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

v.07/2013

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Absolute Satisfaction Guarantee and Factory Warranty	Back Cover

CSRB



CSXCV



CSR



CST



CC



CSRB+



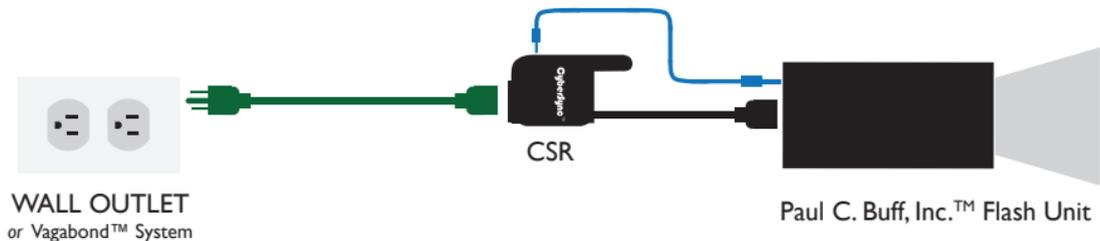
CSR+



QUICKSTART GUIDE

QUICKSTART GUIDE: CSR

(or CSR+ without CYBER COMMANDER™)

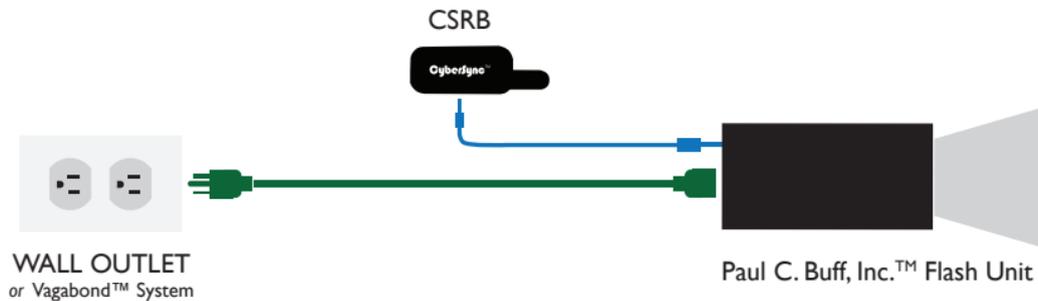


LEGEND

-  AC POWER CABLE (provided with each Paul C. Buff, Inc.™ flash unit)
-  CyberSync™ SYNC CORD (provided with each CSR unit)
 - for AlienBees™ and Einstein™ units: 1/8" male to 1/8" male sync cord
 - for White Lightning™ and Zeus™ units: 1/8" male to 1/4" male sync cord

QUICKSTART GUIDE: CSRB

(or CSRB+ without CYBER COMMANDER™)

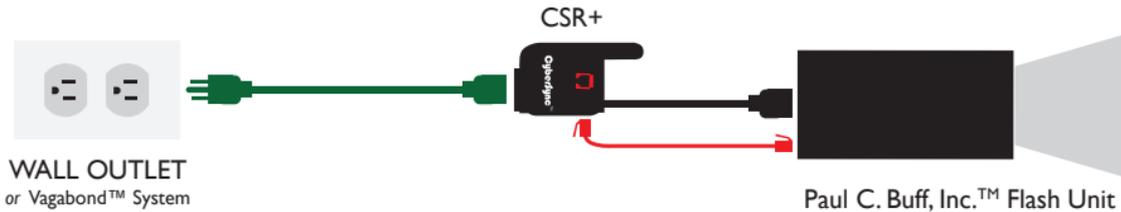


LEGEND

-  AC POWER CABLE (provided with each Paul C. Buff, Inc.™ flash unit)
-  CyberSync™ SYNC CORD (provided with each CSRB unit)
 - for AlienBees™ and Einstein™ units: 1/8" male to 1/8" male sync cord
 - for White Lightning™ and Zeus™ units: 1/8" male to 1/4" male sync cord

QUICKSTART GUIDE: CSR+

(with CYBER COMMANDER™)

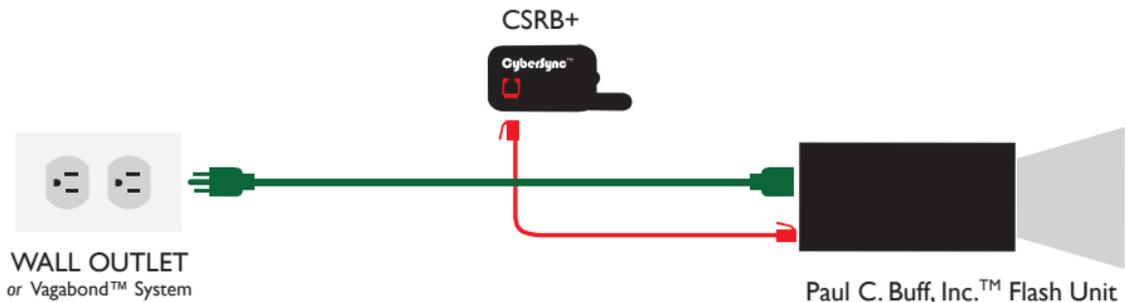


To turn off the slave sensor, simply insert a dummy plug into the sync jack on the flash unit. This will deactivate the slave sensor, eliminating possible misfires. If you do not have a dummy plug, you can use a sync cord as long as it is not plugged into anything else on the other end.

LEGEND

-  AC POWER CABLE (provided with each Paul C. Buff, Inc.™ flash unit)
-  RJ-11 TELEPHONE-STYLE CORD (provided with each CSR+ unit)

QUICKSTART GUIDE: CSRΒ+ (with CYBER COMMANDER™)



To turn off the slave sensor, simply insert a dummy plug into the sync jack on the flash unit. This will deactivate the slave sensor, eliminating possible misfires. If you do not have a dummy plug, you can use a sync cord as long as it is not plugged into anything else on the other end.

LEGEND

-  AC POWER CABLE (provided with each Paul C. Buff, Inc.™ flash unit)
-  RJ-11 TELEPHONE-STYLE CORD (provided with each CSRΒ+ unit)

SAY HELLO TO CYBERSYNC™

CyberSync™ represents the pinnacle of radio remote control systems for photographic lighting. More than a series of devices, CyberSync™ is a fully integrated system of transmitters and receivers that offers a wide range of functions, from simple remote firing of flash units to beyond-state-of-the-art control, metering, and display of complex sixteen-light studio systems. Operating on the global standard 2.4GHz frequency band, the CyberSync™ system includes sixteen operating frequencies to avoid conflicts and potential interference from other remote control users in the area.

A complete system includes **one transmitter** (at camera position) and **one receiver for each light in the setup**. A minimum setup for triggering can be accomplished with one transmitter and one receiver placed on just one light in the setup, leaving any additional lights in the setup to fire from their built-in slave trippers.

Thanks to the system's highly secure 256-bit digital encoding, false triggering and errors from interference are virtually impossible. Typical operating range is up to 400 feet with line-of-sight and up to 150 feet through walls and other major obstructions. A repeater mode is included that allows doubling this range in difficult situations.

The CyberSync™ system includes the **CC** Cyber Commander™ remote control transmitter, the **CST** trigger transmitter, the **CSR** receiver, the **CSRB** battery-operated receiver, the **CSR+** plus-model receiver, the **CSRB+** battery-operated plus-model receiver, and the **CSXCV** transceiver. All CyberSync™ components are sold separately; please see our website or contact our customer service team for more information on ordering individual components.

INTRODUCTION & OVERVIEW

COMPLETE CONTROL FROM THE PALM OF YOUR HAND

The Cyber Commander™ unit controls and displays virtually every parameter of a complex studio flash setup of up to sixteen light units. For each Paul C. Buff, Inc.™ light connected, the Cyber Commander™ remote provides:

- an exact **digital readout** of the flash wattseconds (WS), t.1 flash duration, color temperature (°K), modeling lamp watts, and the EU number (European standard numerical 0 to 10 scale), automatically adjusting as changes are made in output
- the actual camera f-stop (in 1/10 f-stops) of each light (or of all lights or of any particular group of lights, as selected) from a **built-in, high-accuracy flashmeter** that allows setting of ISO and exposure time with exact calibration from your lights to your camera
- **control of all parameters and settings**, including triggering, test firing, setting of recycle status, setting of slave status, setting of modeling lamp status, modeling lamp output, and flashpower adjustment
- manual **bracketing** of individual lights or a group of lights in precise 1/10 of digital steps, while automatically updating the meter reading and power levels
- proportional adjustment capability for setups containing lights with different wattsecond ratings and lamp wattages, allowing you to maintain accurate **what-you-see-is-what-you-get** (WYSIWYG) previews
- a display of the **light name** for each connected light – both the Paul C. Buff, Inc.™ model name and an individual name based on use or placement (*Left Main, Hair Light*, etc.)
- the ability to **store and retrieve** over 50 complex lighting setups on the included memory card

CYBER COMMANDER™ CONNECTIONS

With the CyberSync™ transmitter-and-receiver system, **the Cyber Commander™ remote serves as the transmitter** at the camera position, and **each light in the setup requires its own receiver.**

The Cyber Commander™ remote *can* be used with all CyberSync™ receivers for the purpose of remotely firing units, but for adjustment of flashpower and control of all parameters (possible with Paul C. Buff, Inc.™ flash units only), either a CSR+ and/or CSRB+ receiver is required for each flash unit (or CSXCV transceiver with each Einstein™ unit). The Cyber Commander™ remote and all connected receivers must be set to the same frequency, then all parameters are controlled using the joysticks on the face of the Cyber Commander™ unit.

The Cyber Commander™ unit mounts on the hot shoe of your camera, syncing with your camera so that the cue to fire is sent when your camera shutter is pressed. The base fits standard ISO hot shoes, the common hot shoe found on most cameras except for Minolta and some Sony DSLR cameras (with these cameras, you may need to use an adapter – we recommend the online retailer Flash Zebra for custom cords and adapters). For cameras that cannot establish contact through the use of a hot shoe, the provided SC-CST cord can be used for hard-wired connection between the unit and your camera's PC outlet.

NOTE: Complete details and instructions for use are covered in the separate Cyber Commander™ product manual, provided with each Cyber Commander™ unit.



THE CYBERSYNC™ CST TRIGGER TRANSMITTER

The CST trigger transmitter enables **wireless triggering** for any flash units in your setup fitted with CyberSync™ receivers (and set to the common frequency). The CST transmitter **mounts on your camera's hot shoe** to synchronize your camera's shutter with the cue to fire (if your camera does not have an available hot shoe, the CST can connect to your camera with the supplied sync cord). When your camera shutter is pressed, the CST will simultaneously send the firing signal to all of the associated receivers in your setup.

The CST transmitter is set to one of sixteen selectable frequencies in the 2.4GHz band, sending trigger commands to all receivers in the setup that are set to the same frequency. The use of selectable frequencies provides increased integrity in the presence of interference signals over other systems that use a single frequency and merely vary the encoding to determine operating channels or banks.

The CST uses a lithium coin cell CR2450 battery (3VDC, 540mAH) in a convenient slide out tray for easy replacement. Battery life is approximately one to two years in typical use, without requiring an on/off switch.



THE CYBERSYNC™ PLUS RECEIVERS (CSR+ and CSRB+)

The AC-powered CSR+ and battery-powered CSRB+ receivers connect to the individual flash units in your setup, requiring either the Cyber Commander™ remote control transmitter or the CST trigger transmitter for use. When used with the Cyber Commander™ remote control transmitter, the CSR+ and CSRB+ receivers are designed to trigger, facilitate adjustment of flashpower, and control all parameters of the connected Paul C. Buff, Inc.™ flash unit(s). When used with the CST trigger transmitter, the receivers will only serve to fire the units to which they are attached.

The AC-powered CSR+ (50VAC to 260VAC, 50/60HZ) uses a pass-through power cord to share an AC power source with the connected flash unit. The receiver has a short power cord that attaches to your AC powered flash unit and an AC receptacle into which your flash unit's power cord connects. The receiver hangs from your light unit on its 10-inch cord without added power cords. **The battery-powered CSRB+** uses AA alkaline or rechargeable NiMH batteries. The CSRB+ has approximately a 200 hour battery life with automatic shutoff after one hour of non-use, allowing about 50 shooting sessions per charge. Both the CSR+ and CSRB+ connect to your flash unit with a supplied four-conductor RJ-11 to RJ-11 telephone-style cord or supplied two-foot sync cord (for connections to flashes with 1/8-inch, 1/4-inch or PC jacks).

Both receivers have a 16-position frequency dial and a 16-position channel dial. **The frequency of all receivers must match that set in the Cyber Commander™ remote** for control of firing, flashpower, and other parameters. **Each receiver must then be set to its own unique channel.** The receivers communicate bilaterally with Cyber Commander™ remote to assure reliable receipt of all commands (all CyberSync™ receivers are actually transceivers and employ a selectable repeater mode to allow doubling of the firing range, but not adjustment range).



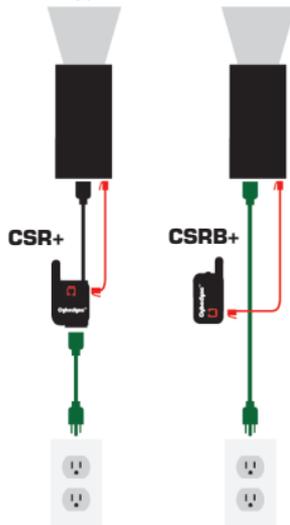
CSR+
AC-powered
(50VAC to 260VAC, 50/60HZ)



CSRB+
battery-powered
(uses two AA batteries)
**RJ-11 jacks highlighted

USING THE CYBERSYNC™ PLUS RECEIVERS with the CYBER COMMANDER™ REMOTE CONTROL

The CSR+ and CSRB+ receivers connect to your Paul C. Buff, Inc.™ flash unit or non-BUFF™ flash using either the provided RJ-11 telephone-style cord, one of the provided sync cords, or a custom cord (purchased separately).



RJ-11 TELEPHONE-STYLE CORD CONNECTION: Each CSR+ and CSRB+ receiver arrives with an RJ-11 to RJ-11 telephone-style cord (part# **CS+PC**) for this connection method. To maximize the capability of the Cyber Commander™ and CyberSync™ setup, a single CSR+ or CSRB+ receiver is connected to each individual Paul C. Buff, Inc.™ light in the setup using the provided telephone-style cord. **Each receiver is then set to its own unique channel and all receivers are set to a common setup frequency (with the Cyber Commander™ unit and all receivers in the setup on one frequency).** This connection allows full functionality of the Cyber Commander™ remote and receiver system, where the triggering and adjustment of all parameters can be controlled by the Cyber Commander™ remote, with firing, metering, and adjustment controlled for each light individually or any group of lights, as set in the Cyber Commander™ remote.

This connection method is for Paul C. Buff, Inc.™ flash units only and only for use with the Cyber Commander™ remote; suitable for use with White Lightning™ (Ultra™, UltraZAP™, and X-Series™ units), AlienBees™, and Zeus™ units.

SYNC CORD CONNECTION: The CSR+ and CSRB+ receivers can be connected to the individual Paul C. Buff, Inc.™ lights or non-BUFF™ lights in your setup via sync cord connection, using one of the provided sync cords. Each CSR+ and CSRB+ receiver arrives with three sync cord options for this connection method:



- the **CSSC** 1/8-inch (3.5mm) male mono to 1/8-inch male mono sync cord for use with Paul C. Buff, Inc™ AlienBees™ flash units, as well as other non-BUFF™ flashes that have a 1/8-inch sync jack; also for use with the SFLA speedlite foot adapter (*sold separately - see our website for details; fits in a standard speedlite foot to provide a 1/8-inch sync cord connection and PC sync connection for units without a suitable sync cord input*)



- the **CSSC-WL** 1/8-inch male mono to 1/4-inch male mono sync cord for use with Paul C. Buff, Inc™ White Lightning™ and Zeus™ flash units, as well as other non-BUFF™ flashes that have a 1/4-inch sync jack



- the **SC-CSRAUX** 1/8-inch male mono to PC-connection sync cord for use with non-BUFF™ flashes that have a PC terminal, such as speedlites

With a sync cord connection, each receiver is set to its own unique channel and all receivers must be set to a common frequency. With this connection method, however, **all connected flash units (either Paul C. Buff, Inc.™ flash units or non-BUFF™ flash units) can only accept commands for triggering, metering, and grouping.** Control of flashpower output and adjustment of parameters is ONLY available with the RJ-11 cord connection method.

THE CYBERSYNC™ RECEIVERS (CSR and CSRB)

The AC-powered CSR and battery-powered CSRB receivers connect to the individual lights in your setup, requiring the CST trigger transmitter for use. When used with the CyberSync™ CST trigger transmitter, the CSR and CSRB receivers are designed to trigger the connected Paul C. Buff, Inc.™ flash unit or other non-BUFF™ flash unit.

The AC-powered CSR (50VAC to 260VAC, 50/60HZ) uses a pass-through power cord to share an AC power source with the connected flash unit. The receiver has a short power cord that attaches to your AC powered flash unit and an AC receptacle into which your flash unit's power cord connects. The receiver hangs from your light unit on its 10-inch cord without added power cords. **The battery-powered CSRB** uses AA alkaline or rechargeable NiMH batteries. The CSRB has a 200-hour battery life with automatic shutoff after one hour of non-use, allowing about 50 shooting sessions per charge. Both the CSR and CSRB connect to your flash unit with a supplied two-foot sync cord (for connections to flashes with 1/8-inch, 1/4-inch or PC jacks).

Both receivers have a 16-position frequency dial. The frequency of all receivers must match that set in the Cyber Sync™ CST trigger transmitter for control of firing.

NOTE: *The CSR and CSRB receivers can be used with the **Cyber Commander™** remote control as well, but they receive only the trigger command with this setup. They have no channel selection and cannot respond to groups or other features of the Cyber Commander™ remote. Any parameter control of Paul C. Buff, Inc.™ flash units by the Cyber Commander™ remote control requires a plus-model receiver (either the CSR+ or CSRB+).*



CSR
AC-powered
(50VAC to 260VAC, 50/60HZ)



CSR-B
battery-powered
(uses two AA batteries)

USING THE CYBERSYNC™ RECEIVERS with the CYBERSYNC™ CST TRIGGER TRANSMITTER

The CSR, CSRB, CSR+, and CSRB+ receivers can be connected to the individual Paul C. Buff, Inc.™ lights or non-BUFF™ lights in your setup via sync cord connection, using one of the provided sync cords:



- the **CSSC** 1/8-inch (3.5mm) male mono to 1/8-inch male mono sync cord for use with Paul C. Buff, Inc™ AlienBees™ flash units, as well as other non-BUFF™ flashes that have a 1/8-inch sync jack; also for use with the SFLA speedlite foot adapter (*sold separately - see our website for details; fits in a standard speedlite foot to provide a 1/8-inch sync cord connection and PC sync connection for units without a suitable sync cord input*)



- the **CSSC-WL** 1/8-inch male mono to 1/4-inch male mono sync cord for use with Paul C. Buff, Inc™ White Lightning™ and Zeus™ flash units, as well as other non-BUFF™ flashes that have a 1/4-inch sync jack



- the **SC-CSRAUX** 1/8-inch male mono to PC-connection sync cord for use with non-BUFF™ flashes that have a PC terminal, such as speedlites

The CST and all receivers must be set to a common frequency. All connected flash units can only accept commands for triggering, regardless of whether a plus-receiver or non-plus-receiver is connected.

The CST may be used in conjunction with the Cyber Commander™ remote, allowing you to hand hold the Cyber Commander™ remote for adjustments and readings while the CST remains in your camera's hot shoe for triggering.

THE CYBERSYNC™ CSXCV TRANSCEIVER for EINSTEIN™

The CSXCV transceiver (transmitting receiver) is designed for second-generation Paul C. Buff, Inc.™ flash units, fitting in the CSXCV transceiver receptacle located on each unit (currently only compatible with Einstein™ E640 flash units). Such units do not contain the RJ-11 telephone-style analog remote jacks (required for use with the CSR+ and CSRB+ receivers) and the CSXCV module forms an all-digital interface from either the CST trigger transmitter or Cyber Commander™ remote control transmitter.

The CSXCV module is powered by the host light unit with frequency and channel selection also performed by the host light unit. This makes the CSXCV module truly plug-and-play, unleashing the full power and accuracy of a sophisticated all-digital remote control system.

The CSXCV receivers facilitate adjustment of flashpower and other parameters when used with the Cyber Commander™ remote control transmitter. When signaled by the CST trigger transmitter, the receivers will only serve to fire the units to which they are attached.



Transmitter	Receiver(s)	Setup / Function with Paul C. Buff, Inc.™ Flash Units
		<p>Cyber Commander™ with CSR+ or CSRB+ <i>for AlienBees™ units, White Lightning™ units (WL5000 / WL10000**, Ultra Series, ZAP1000**, UltraZAP™, and X-Series™), and Zeus™ power packs</i></p> <p>triggering and complete control / adjustment of all parameters when RJ-11 telephone-style cord is used; triggering only when sync cord is used</p>
		<p>Cyber Commander™ with CSR or CSRB <i>for AlienBees™ units, White Lightning™ units (WL5000 / WL10000**, Ultra Series, ZAP1000**, UltraZAP™, and X-Series™), and Zeus™ power packs</i></p> <p>triggering only with sync cord connection</p>
		<p>Cyber Commander™ with CSXCV <i>for Einstein™ units (not compatible with any other Paul C. Buff, Inc.™ flash units)</i></p> <p>triggering and complete control / adjustment of all parameters; frequency and channel selection are made on the Einstein™ unit's control panel using the FUNCTION and ADJUST buttons</p>
		<p>CST transmitter with CSR+ or CSRB+ <i>for AlienBees™ units, White Lightning™ units (WL5000 / WL10000**, Ultra Series, ZAP1000**, UltraZAP™, and X-Series™), and Zeus™ power packs</i></p> <p>triggering only with sync cord connection (do not use the RJ-11 telephone-style cord connection as any function outside of triggering is not possible)</p>

Transmitter	Receiver(s)	Setup / Function with Paul C. Buff, Inc.™ Flash Units
		<p>CST transmitter with CSR or CSRB <i>for AlienBees™ units, White Lightning™ units (WL5000 / WL10000**, Ultra Series, ZAP1000**, UltraZAP™, and X-Series™), and Zeus™ power packs</i> triggering only with sync cord connection</p>
		<p>CST transmitter with CSXCV <i>for Einstein™ units (not compatible with any other Paul C. Buff, Inc.™ flash units)</i> triggering only; frequency selection is made on the Einstein™ unit's control panel using the FUNCTION and ADJUST buttons; channel selection is not necessary when using the CST transmitter</p>

****NOTE:** White Lightning™ WL5000 units, WL10000 units, and ZAP1000 units can only be triggered via sync jack. Additionally, as the WL5000 and WL10000 units have captive cords, these units are NOT intended for use with either the CSR or CSR+ receivers.

CYBERSYNC™ COMPATIBILITY with SPEEDLITES AND OTHER NON-BUFF™ FLASHES

Many speedlites and flash units made by other manufacturers can be used with the CyberSync™ system. With the CST transmitter, a CSR, CSRB, CSR+ or CSRB+ receiver can be used for triggering, though we recommend the CSRB+ as the CSR+ still requires use of a power cord. With the Cyber Commander™ remote, a CSR+ or CSRB+ can be used for triggering, metering and grouping. All functions are retained except for power adjustment. Sync cord options are provided for connection to flashes with PC, 1/8-inch, and 1/4-inch sync outlets. Speedlites without a sync connection may be able to use our SLFA speedlite foot adapter (sold separately) for connection. For “H” style or other connections, it is possible to use a suitable adapter cable. For custom cables, we recommend the online retailer Flash Zebra. **NOTE:** Not all speedlites and flash units can be used with the CyberSync™ system.

CYBERSYNC™ SYSTEM SPECIFICATIONS

Frequency Range: 16 frequencies spaced 2MHz apart, from 2.427GHz to 2.457GHz

Encoding: secure 256-bit binary encoded packet, with validity verification

Latency: 1/4000 second typical delay from closing of camera contact to receiver sync output signal

CST Sync Voltage: 3VDC at camera

CSR/CSR+/CSRB/CSRB+ Sync Voltage: withstands up to 300VDC from connected flash unit

CSR/CSR+ Power Consumption: approximately 2 watts (operates from 50VAC to 260VAC, 50/60Hz; pass-through AC rated for up to 250VAC, 15A)

CSRB/CSRB+ Battery Life: approximately 200 hours on-time with two AA alkaline or NiMH batteries (auto shutoff after one hour of non-use)

CST Battery: one lithium coin cell 2450 battery (3VDC, 540mAH) with a one to two year typical lifespan

CST Connections: syncs from standard hot shoe (auxiliary **SC-CST** adapter cord allows PC connection)

CSR+/CSRB+ Connections (4): **CS+PC** RJ-11 cord, **CSSC** 1/8-inch male mono to 1/8-inch male mono cord, **CSSC-WL** 1/8-inch male to 1/4-inch male mono cord, and **SC-CSRAUX** 1/8-inch male mono to PC cord

CSR/CSRB Connections (3): **CSSC** 1/8-inch male to 1/8-inch male mono cord, **CSSC-WL** 1/8-inch male mono to 1/4-inch male mono cord, and **SC-CSRAUX** 1/8-inch male mono to PC cord

OPERATING INSTRUCTIONS

POWERING THE CST

For power, the CST trigger transmitter uses one 2450 coin cell battery (standard 3V lithium coin cell battery), available at most drug / convenience stores that carry small electronic batteries. The typical battery lifespan is approximately one to two years, regardless of whether or not the transmitter is used. The CST has no power switch; it remains in *sleep mode* except for the very brief time when it is transmitting.

Low Battery Behavior: When the battery is low, the LED on the unit will blink **red** multiple times when activated, or not at all. A CST with a low battery may also cause flash units to rapid-fire.

Replacing the Battery: The battery is located in the battery drawer located on the back / side of the unit. Remove the exhausted battery and insert the new battery with the **positive side (+) facing down** into the tray and the negative side (-) facing up. As soon as power is received from a properly installed battery, the LED in the lower right corner should blink **red** three or more times, and blink **red** once when the TEST button is pressed.



CONNECTING THE CST TO YOUR CAMERA

With the CST trigger transmitter connected to your camera, when your camera shutter is pressed, the CST will simultaneously send the firing signal to all of the flash units in your setup fitted with CyberSync™ receivers (that are set to the common selected frequency).

In typical use, the CST trigger transmitter simply slides onto the standard hot shoe of your camera. The voltage presented to the camera by the CST transmitter is approximately 3 volts DC, safe for use with any camera.

The CST base fits standard ISO hot shoes. This is the common hot shoe found on most cameras except for Minolta and some Sony DSLR cameras. With these cameras, you will need to use an adapter (we recommend the online retailer Flash Zebra for custom adapters).

For cameras that cannot establish contact through the use of a hot shoe, the CST may be connected to your camera's standard PC sync jack using the provided accessory cable (part# **SC-CST**).



POWERING THE CSRB & CSRB+ RECEIVERS

The CSRB and CSRB+ receivers are each powered by two AA batteries. The battery life is approximately 200 hours of on-time.

The CSRB and CSRB+ receivers both ship with alkaline batteries. If you prefer rechargeable batteries, you may use NiMH batteries available at most drug/convenience stores. When the batteries are low, the LED on the unit blinks **red** multiple times when the unit is activated. A receiver with low batteries may also cause flash units to flash intermittently. Batteries are replaced by opening the battery compartment on the back of the unit. Please observe the polarity marked inside the battery compartment for both use and storage purposes - do NOT reverse the polarity.

The CSRB and CSRB+ receivers are turned ON by pressing the TEST button. This places the unit in ON mode for one hour, after which it shuts off automatically to preserve battery life. While in use, the receiver begins a new one-hour ON period each time it receives a flash command. It will stay on continuously during a session, then shut off when not in use.

CONNECTING THE CSR+/CSRB+ (FOR USE WITH THE CST TRIGGER TRANSMITTER)

If the CSR+ or CSRB+ receiver is to be connected as a trigger-only device, used in conjunction with the CST CyberSync™ transmitter, the flash unit to be triggered must be connected to the receiver using the appropriate sync cord between the receiver's 1/8-inch (3.5 mm) sync output jack and the flash unit's external sync input jack.

Do not connect RJ-11 to RJ-11 telephone-style cable to the receiver or the flash unit unless you are using the Cyber Commander™ as the master remote controller. This cable is provided with CSR+ and CSRB+ units exclusively for use with the Cyber Commander™ remote control transmitter.

Connecting the CSR+ or CSRB+ to a Paul C. Buff, Inc.™ light using the RJ-11 telephone-style cable without using the CyberCommander™ remote will not damage your equipment, but it will result in the light's flash power and modeling lamp intensity defaulting to **full power**, and **all back panel power adjustments will be ignored by the light**.

In order to use the CyberSync™ CST transmitter to trigger the CSR+ and CSRB+ receiver (in the absence of a Cyber Commander™ remote), the CSR+ or CSRB+ sync output must be connected to the light's external sync input using the appropriate sync cord. The CSR+ or CSRB+ frequency select switch must be set to the same frequency as the CST transmitter. No grouping or selective channel firing will be available unless the Cyber Commander™ remote is present.

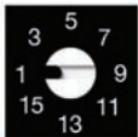
SETTING THE FREQUENCY

The CyberSync™ CST transmitter, CSR/CSR+ receiver and CSRB/CSRB+ battery powered receivers each employ a sixteen channel frequency selection switch on their front panel. The multiple frequencies allow freedom from interference from other nearby photographers using CyberSync™ or other equipment operating on the 2.4GHz band.

The transmitter and all receivers in a setup must be set to the same frequency. If interference is problematic, set all the units to a different common frequency.

***RJ-11 jack highlighted*

CSR+ channel and frequency dials



set to 1



set to 14

as indicated by the dark notch

CSRB+ channel and frequency dials



set to 9



set to 6

as indicated by the arrow



SETTING THE CAMERA

It is necessary to **set your camera to its manual exposure mode** when using external flash units and the CyberSync™ system. The CyberSync™ system is not designed to perform TTL control of flash units, nor are studio flash units capable of TTL operation. Manual exposure mode involves manually setting the aperture, exposure time, ISO, and flash exposure (even with speedlites), requiring use of a flashmeter or histograms to determine optimal exposures.

ISO is preferably set for the lowest number that your camera allows (usually ISO 100 or 200); this will yield the highest possible quality. For most DSLR cameras, the exposure time should be set at the maximum sync speed of the camera. If a slight black bar appears in the pictures, exposure time should be set one click slower than the camera's maximum sync speed. While the latency (time from camera trigger to received flash command) of the CyberSync™ system is typically only 1/4000 second, setting the camera faster than its maximum flash sync speed with any manual flash unit will result in dark, unexposed areas. **NOTE:** *Some cameras have a global electronic shutter. On these cameras, exposure times up to 1/2500 second are possible.*

A common misconception for new users of studio flash equipment is that exposure is determined by both the aperture and the exposure time. While the exposure time *does* affect exposure from ambient light, it does not affect the exposure from flash, nor does a faster exposure time aid in stopping action (unless a very high amount of ambient light is present). Studio flash units typically produce their light in 1/300 to 1/5000 second and the intensity of the flash is thousands of times brighter than the light produced by modeling lamps or normal room lighting. Thus, unless there are high amounts of sunlight present, camera exposure times of 1/60 second or faster have little to no effect on the exposure or action stopping.



REPEATER MODE

If the distance from the transmitter to the receiver is greater than the reliable range of the CyberSync™ system, either a CSR/CSR+ or CSRB/CSRB+ may be used to repeat the trigger signal, thus doubling the effective range.

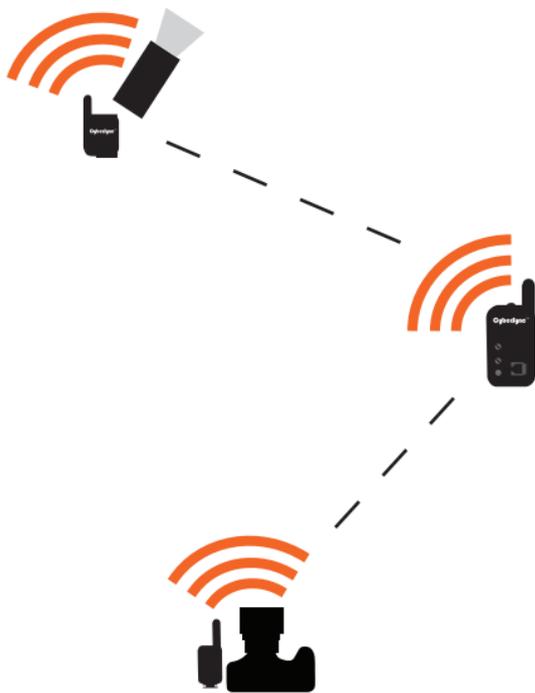
Repeater mode is established by holding down the TEST button for three seconds. When you see the LED rapidly blink green three times periodically, you are in repeater mode. To exit repeater mode, again hold the TEST button in for three seconds until the LED blinks one time to indicate that you have exited repeater mode.

REPEATER MODE EXAMPLE

Assume you are lighting a scene several hundred feet from your camera location. Position a CSR/CSR+ or CSRB/CSRB+ receiver midway between the camera and the scene, then place the receiver in repeater mode. When you fire the camera, this designated “repeater” receiver will receive the camera signal, then regenerate it for transmission to the more distant receivers. If a flash unit is connected to the repeater it will fire normally from the camera signal. The more distant flash units may also fire from the camera signal if they are close enough. If not, they will fire from the regenerated signal of the repeater.

Using a repeater delays the signal by an additional 1/4000 second. The resulting latency of 1/2000 second is still fast enough to allow the camera exposure time to be set one click below the camera’s maximum sync speed in most uses.

It is not generally advisable to use more than one repeater in a setup. If two repeaters are used and both receive the same transmission, both will regenerate at the same instant and interfere with one another.



TROUBLESHOOTING

PROBLEM: Lights are not firing with CST in hot shoe

Possible Cause	Action	Solution
low or dead battery in CST transmitter or CSRB receiver	Press and release the test button on CST and CSRB. LED should blink red one time.	Change batteries, if necessary. See <i>page 39 for battery details.</i>
incorrect installation of battery in CST transmitter or CSRB receiver	Double check installation of batteries. In the CST transmitter; the positive "+" side of the battery should face down inside the battery drawer. In the CSRB receiver; ensure that you've observed the polarity markings inside the battery chamber.	Reinstall batteries following polarity. See <i>page 39 for battery details.</i>
poor connection of batteries in CST transmitter or CSRB receiver	Check that batteries are actually touching the battery contacts.	Gently pry out on battery contacts (CST has a thin metal strip in the back of the battery compartment).
CSRB receiver is not powered on	Look for the LED to blink green .	Press the test button on CSRB.
lack of synchronization - sync cord not connected	Ensure that the appropriate sync cord is connected to both the receiver and the flash unit, fully seated inside both sync jacks.	Ensure correct sync cord connection, noting that this is separate from the power cord connection.
problematic sync cord	Try a different sync cord. Test the cord by jumping contacts on the camera/receiver end.	Replace the cord if necessary.
problem with the receiver output	Press the test button on receiver - the flash should fire.	There may be a problem with the receiver. Contact Customer Service.

Lights are not firing with CST in hot shoe, *continued*

Possible Cause	Action	Solution
frequency mismatch	Ensure the receiver and transmitter frequencies match on all units in the setup. The CST and receiver dials have a deeper cut in the dial slot - this is your selection indicator. CSRB+ remotes have arrows on the dials and E640 frequencies are set via menu.	Match frequencies and test 3 times to ensure proper synchronization.
problem with receiver reception	Check that the receiver LED blinks red in response to triggering of CST. Check other receivers for the same response.	You may need to replace the receiver if one fails while others perform normally. Contact Customer Service.
problem with transmitter output	Check that the receiver LED blinks red in response to triggering of CST. Check other receivers for the same response.	You may need to replace transmitter if no receiver gets a signal. Contact Customer Service.
problem in flash unit sync jack (with Paul C. Buff, Inc.™ units)	Remove and reinsert the sync cord - the flash should fire as you do this.	If the unit does not flash, it may require service or repair. Contact Customer Service.
problem in flash unit	Test fire the flash unit using the TEST button on the flash unit.	Consult the manual for your flash unit and troubleshoot.
problem with CST foot	Press down with CST in hot shoe and take a photo. Jump the side rail and bottom foot contact with a paper clip - trigger should fire.	You may need to replace the CST if this connection is not functional. Contact Customer Service.
camera setting	Some cameras cannot fire the flash in "Live View" or "Continuous Shooting" modes.	Refer to your camera's manual for limitations.

PROBLEM: Lights rapidly fire on their own

Possible Cause	Action	Solution
low CST battery	Test fire the CST transmitter: Multiple blinks or no blinks of the LED indicates low battery. Rapid firing will affect all flashes.	Replace the CST battery. See <i>page 39</i> for battery details.
short in sync cord going to the flash unit	Contact Customer Service for assistance in diagnosis of a faulty sync cord. Rapid firing is usually limited to one flash unit.	If the cord is faulty, replace with different cord.

FAQ

Q: What is the x-sync speed of the CyberSync™ system?

A: The x-sync speed is determined by the camera and radio tripper (in the case of the CyberSync™ system, either the Cyber Commander™ transmitter or CST Transmitter). The delay time of the CyberSync™ system is 1/4000 second. It can sync up to 1/2500 second on capable cameras and flash units. Most modern DSLR cameras max around 1/160 - 1/250 second, either with a sync cord or with a CyberSync™ component.

Q: My CST or Cyber Commander™ has a limited distance, what's wrong?

A: The transmitter's effective range can be affected by the state of the battery in the transmitter. If your range seems to drop under familiar conditions, it may be time to change your battery. Range can also be influenced by objects too near the CST antenna or by solid objects obstructing the line of sight path to the receiver's antenna.

Q: How can I mount my CSRB to my flash unit?

A: You can mount the CSRB using Velcro on the side of the unit housing, a rubber band, a lanyard, or gaffer's tape.

Q: How do I ensure that I have replaced the batteries correctly in my CyberSync™ unit?

A: First, ensure that you have selected the correct battery type for replacement and that you are using new batteries from a reliable manufacturer, sold by a reliable retailer. Refer to the chart below to see the specific battery type used in each product. When replacing batteries, always observe the polarity of the battery and the corresponding polarity markings inside the battery compartment on your product. *For the Cyber Commander™ remote, refer to the Cyber Commander™ manual for details.*

 The image shows a black CyberSync™ CST Transmitter and its battery compartment. The transmitter is a small, rectangular device with a lens on the front. The battery compartment is shown open, revealing a single 2450 coin cell battery. The battery has a '+' sign on one side and a '-' sign on the other.	<p>CyberSync™ CST Transmitter: The CST transmitter uses one 2450 coin cell battery (3V lithium battery). Replacement batteries can be purchased locally from hardware stores, grocery stores, and drug/convenience stores that carry small electronic batteries. The products use standard, commercially popular sizes available from a variety of manufacturers. We recommend using premium, reliable battery brands purchased from reputable retailers. Rechargeable batteries may be used with the CST.</p> <p>Insert the battery with the positive side (+) facing down into the tray and the negative side (-) facing up. As soon as power is received from a properly installed battery, the LED in the lower right corner should blink red three or more times, and blink red once when the TEST button is pressed.</p>
 The image shows two CyberSync™ receivers: the CSRB+ and the CSRB. Both are black, rectangular devices with an antenna on the left side. The CSRB+ is shown above the CSRB. Both receivers have their battery compartments open, revealing two AA batteries. The CSRB+ compartment has a '+' sign on the left and a '-' sign on the right. The CSRB compartment has a '-' sign on the left and a '+' sign on the right.	<p>CyberSync™ CSRB and CSRB+ Receivers: The CSRB and CSRB+ receivers use two AA batteries. Replacement batteries can be purchased locally from hardware stores, grocery stores, and drug/convenience stores that carry small electronic batteries. The products use standard, commercially popular sizes available from a variety of manufacturers. We recommend using premium, reliable battery brands purchased from reputable retailers. NiMH or alkaline rechargeable batteries may be used with either unit. <i>Do NOT use lithium batteries.</i> Do not mix battery types or ages.</p> <p>On the backside of the unit, with the antenna facing left, install the top battery with the positive end (+) on the left and the negative end (-) on the right. Install the bottom battery in the opposite direction with the negative end (-) on the left and the positive end (+) on the right. Ensure that the batteries are actually touching the metal battery contacts inside the compartment. As soon as power is received from properly installed batteries, the LED should blink red once when the TEST button is pressed.</p>

ABSOLUTE SATISFACTION GUARANTEE: Each CyberSync™ product arrives with a 60-Day Absolute Satisfaction Guarantee. If you are not pleased with your product, you can return it within 60 days for a refund, minus the shipping costs. This is an unlimited, no questions asked guarantee. Please contact our Customer Service team for assistance.

TWO-YEAR FACTORY WARRANTY: Paul C. Buff, Inc.™ guarantees to the original purchaser an individual product factory warranty against manufacturer defects in materials and workmanship, beginning with the date that the product is originally shipped to the customer. Please contact our Customer Service team should you experience any problems with your equipment or need to inquire about possible repair service.

TERMS AND CONDITIONS OF WARRANTY:

This warranty is limited to the repair or replacement of a product or component that should become defective under normal use, as outlined in the product description and product manual. If, during the applicable warranty period, the product is found to be defective by Paul C. Buff, Inc.™, we will repair or replace the defective product with an equivalent model without charge for labor or parts.

This warranty will not cover deterioration or malfunction resulting from accident, act of nature, abuse, misuse, neglect, unauthorized product repair, shipping of the product, opening of or modification of the product, or failure to follow instructions supplied with product.

This warranty does not apply to any batteries or memory cards that may arrive with a product as these become exhausted based on normal use. Batteries are considered exhaustible and no warranty can be offered for batteries that have been depleted from heavy and frequent use or misuse.

The product must be returned to Paul C. Buff, Inc.™ for warranty

service. For customers in the U.S., warranty service includes return shipment via UPS ground to the original destination (where the equipment was sent to the original purchaser). Customers outside of the U.S. will be responsible for all shipping fees, duties, taxes and brokerage fees to ship the product to and from our offices.

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