



The

Broadcasters' Desktop Resource

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... edited by Barry Mishkind – the Eclectic Engineer

Broadcast Operations The Henry Engineering BackUPS



By Hank Landsberg

[May 2020] We know that software and file backups are important, especially these days when a ransomware attack can wipe everything out in minutes. But what about your power source for mission critical gear? And what if the UPS fails?

Have you ever had a rack full of critical equipment go down because of a failed UPS power supply?

Did it happen at a remote site, where there was no way to bypass the UPS? Or have you had to shut down equipment just so you could remove a UPS for battery replacement or other maintenance?

These important issues are solved with Henry Engineering's new **BackUPS** Failsafe Power Switcher.

A POWER CONTROLLER

The **BackUPS** is a power controller for ensuring reliable AC power to critical equipment that is powered with an Uninterruptible Power Supply (UPS).

It can supply up to 15 Amps of AC current to a load.

The unit is housed in a heavy duty plastic enclosure and can be mounted using the integral mounting flanges. Standard AC input cords with IEC connectors are supplied with the unit, as is the mating Remote connector.



Installed after the UPS, and before the “load” (your rack full of gear), **BackUPS** constantly monitors the output of the UPS, automatically bypassing the UPS if its output fails or becomes unstable.

CONTROLLING THE OUTPUT

BackUPS has two AC inputs: Direct Line and UPS. Direct Line is plugged directly into a local AC socket; the UPS line is connected to the output of the UPS.

Once on line, the *BackUPS* normally senses output interruptions of about 100 ms. However, if there is reason to suspect that the UPS output is “glitchy” with shorter interruptions, the Fast Response Mode will detect UPS power interruptions as short as 10 ms – even shorter than one full cycle of 60 Hz power (16 ms).

If *BackUPS* senses that there is any interruption in the UPS output, it immediately switches to the Direct Line, bypassing the UPS entirely. It takes less than one-tenth of a second for the switchover to happen. This keeps the load powered-up while the operator takes care of the UPS problem(s).

A Manual Bypass switch is available in order to bypass and disconnect the UPS at any time, without powering-down the load.

MONITORING STABILITY

A problem often encountered with a UPS is its output instability, usually caused by a battery that is nearing the end of its life.

The UPS may work fine for a while, but will occasionally shut down, then come back on.

Such on-off-on-off cycling can even wreak havoc with the equipment that it is powering. Because it is difficult to constantly monitor the UPS output, it is not always obvious what is causing the problem.

BackUPS solves this problem, too, by ensuring that the UPS output is stable for a preset period of time *before* the UPS is switched back online.

SETTING RE-TRANSFER DELAY

BackUPS is fully automatic once installed.

Whenever the UPS output comes on, the system begins monitoring the UPS output for a preset time delay period.

The UPS will then be switched online *only* if the UPS output is stable during this delay interval. The delay time can be set from 10 seconds to 16 minutes – or defeated if not needed.

The Mode switch can select Manual UPS Bypass mode, or Automatic operation with or without the Delay feature.

REMOTE MONITORING

The *BackUPS* can be remotely monitored and controlled.

A DC output signal is provided to indicate when the UPS is online and the Remote Bypass Input allows the unit to bypass the UPS via a GPI control input.

This is especially useful when *BackUPS* unit is installed at a remote site and one needs to “force-bypass” a UPS unit that is causing problems. It is also possible to do a “remote reboot” of any attached devices – resetting and restarting equipment via Off/On power cycling.

The “list” price for the *BackUPS* “list” is \$260. The unit will be available later this month (May 2020).

For more complete information, you can visit www.henryeng.com.

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