

# MAILBAG

## Commercial killer triggered by station logo

Regarding Max Maughan's query about some sort of device that can detect the station logo and hit pause on the VCR, etc (page 5, April 2006), it did sound like a great idea. So good in fact that Elektor published a circuit for it in 2004. See this website:

<http://www.elektor-electronics.co.uk/Default.aspx?tabid=27&year=2004&month=-1&art=51778&PN=On>

**Matt Crump,**  
via email.

*Comment: thanks to those other readers who sent in the same reference.*

## Concern about passive DI box

I have a concern regarding the passive DI box published in SILICON CHIP, May 2006. In the text on page 64 you state: "The resistor for the ring output also prevents the possibility of the signal from a stereo source being shorted to ground . . ."

This is clearly not the case with the way that the circuit is drawn. The two ring connections are directly connected together and the resistors and transformer primary are in parallel with this link.

There is no isolation between the ring connections of the input and through sockets; therefore a mono connector plugged into the through socket will still short the ring to ground. Additional isolation resistors would need to be provided between the two sockets to prevent shorting of stereo signals. This will reduce the signal level available from the through jack which may or may not be desirable depending on the application.

**Rodney Baker,**  
Walkley Heights, SA.

*Comment: the resistors are included to provide mixing of the signal from stereo to mono. If a mono plug is inserted into the second socket then it will short the ring of a stereo plug that is in the other socket. This would also be the case in any DI box that has mono sockets.*

*Typically, when a stereo plug is used, you would not be using the*

*second socket or if you needed to you would use a stereo connection. If such a stereo socket was plugged into a standard DI box, the ring signal would be shorted to ground. This would not be the case in our DI box.*

*In virtually all situations, the second socket is used when the signal goes both to the public address system via the DI box's XLR output and to an amplifier via the 6.35mm jack connection. These signals would be mono and so cause no problem.*

## Experiences with a Battery Zapper

I have been following with interest your development of the Battery Zapper and would like to share my experiences with a commercial unit.

I live on a farm that has 18 vehicles that need a battery for operation. Many of these vehicles are only used intermittently and battery maintenance has been a problem.

After premature failures and a costly replacement program, all of the vehicles were modified to take standard-sized batteries so that only several batteries are needed between all of the vehicles. The modifications even extended to the ride-on mower. When not in use, the batteries are shelved and connected to a float charger. However, premature failure was still a problem and a Megapulse brand unit was successfully used to extend the battery life by rotating the unit between the batteries while on the shelf.

A visit to a scrapyard revealed a large quantity of batteries that appeared to be in good condition. Several batteries were purchased to determine if the Battery Zapper could rejuvenate them to a usable condition. From my experiences, the answer is yes and I have since been able to provide good batteries for all of the vehicles at a negligible cost.

An interesting fact I have learnt is that high-quality batteries respond the best. Cheap batteries generally are a waste of time. As there is no price difference at the scrapyard, I make a point of carefully selecting prospective batteries by brand and by using



a heavy-duty "battery load tester" to check for open cells. Back in the shed, following a week on the Battery Zapper, I have a very usable battery.

I had read with interest of the original SILICON CHIP Battery Zapper (July 2005), however as I was satisfied with my methodology, I had no pressing desire to build one. However, after reading about the improved design of Battery Zapper (May 2006) and the ability to monitor what is happening, I have decided that I need to build at least one unit. Every farm should have one!

**Chris Ryan,**  
via email.

## Easter egg helps remote repair

They say that necessity is the mother of invention. A co-worker presented me with a problem: his remote which controls his entire hifi/TV system was working apart from the volume button. His dilemma was that a replacement was going to take almost two months to ship and his hifi had no external volume control, so he couldn't use it until he got a new remote control.

I tried cleaning the remote's board and keys but the multimeter still showed very high resistance on the offending key's rubber pad. The working keys had resistance of about 15k $\Omega$ -30k $\Omega$ , whereas this one had 1M $\Omega$ . I knew which keys were working by viewing the infrared LED via my mobile phone's inbuilt camera.

Being just after Easter, I had an Easter egg lying on my desk, so I peeled the foil off and glued it to the offending key and hey presto, a working remote! It's not exactly hi-tech but sufficient to last two months.

**Trevor Nuridin,**  
via email.