

# What's a CPC?

## APPLICATION NOTE:

CPC (Calling Party Control) is a signal sent from most modern electronic COs to indicate that the "Calling Party" has hung up. It's usually called "Open Loop Disconnect" when you're programming equipment.

CPC is normally sent as an open ranging from 250 to 500 milliseconds. Phone equipment at the far end of the call sees this open on the line, and hangs up. Most voice mail and phone systems have a timer setting for CPC. If you set it at 500ms, it usually works fine.

If you accidentally set it for 50ms you'll probably get cut-offs, especially during a lightning storm. Setting this timer for 50ms means that if the phone equipment sees an open for 1/20th of a second, it will hang up. Setting it for 500ms means it will hang up if it sees an open of 1/2 a second. That's much more reliable.

It's pretty hard to measure CPC timing, but you can at least verify there is some kind of CPC. Put a volt meter across the line and answer a call. When the calling party hangs up, you should see a blip on your meter. That's the CPC, but most meters can't respond fast enough to show you much of anything. Our CPC Tester (below) tells you how long the CPC signal is, so you can program your system to recognize it.

On older mechanical COs, you may see a reversal of the battery instead of an open. There aren't too many of those types of older COs left. Your phone equipment probably won't be able to detect that kind of signal properly. If you don't see any kind of CPC signal from the CO, call repair and ask them why. The line may be programmed wrong. No CPC causes voice mail systems to tie up phone lines for a long time after the caller hangs up, leaving long messages and wasting valuable ports and disk storage.

We have a new **CPC Generator** that will detect a dial, busy or reorder tone, and hang up the phone line. It works well behind PBXs and key systems that don't provide CPC to devices connected to their analog ports. **See the CPC Generator on Page 104!**

We've recently received reports of very short CPC signals, like 60 ms, in the Nynex area. A lot of phone equipment can't be set low enough to detect that short open. You can use a combination of Wizard's Tool Box relays to make a little CPC Stretcher. **Take a look at our App Note for the details...**

• **STRETCH OUT A SHORT CPC TIME OUT TO 500ms, SO PHONE EQUIPMENT CAN SEE IT**

Parts Needed (See Previous Page):

1. Std. Sens. Loop Sensing Relay WTB-860617-10
2. 500ms Hook Flash Relay WTB-AFU-48

• Place the coil of the **Loop Sensing Relay** IN SERIES with the phone line.

• Remove the switch (not needed) from the **Hook Flash Relay**, and connect the blue trigger wires to the normally open contacts on the **Loop Sensing Relay**.

• Place the remaining leads from the **Hook Flash Relay** IN SERIES with the phone line *after* the **Loop Sensing Relay**. These leads are polarity sensitive!

• When the **Loop Sensing Relay** sees a 60ms open, it will trigger the **Hook Flash Relay**, which will in turn open the line for a timed 500ms.

See lots more info on our Wizard's Tool Box page:  
[www.sandman.com](http://www.sandman.com)

## World's ONLY CPC Tester is NOW AVAILABLE!

Only \$45.95



Keep one in your case! It'll cost you a lot more to go back on a second service call!

Do you have Voice Mail, or other types of systems that *won't hang up?*

Set "Open Loop Disconnect Time" without guessing!

The CPC Tester will tell you whether you're getting the CPC signal, telling your system to hang up.

The CPC signal tells your phone system to hang up if a call on hold is abandoned, it tells your answering machine or voice mail system to hang up when the outside caller hangs up. Without CPC? You end up with a lot of expensive lines used up by reorder and busy tones!

This is incredibly easy to use! Plug it into the line you want to test (there's an extra jack on the Tester so you don't need a Y Adapter). Make a call and have the other end hang up. You'll see the top red LED flash for the duration of the CPC signal, and one of the LEDs will light up indicating the length of the CPC signal. That's it!

Also shows you opens (false CPCs) that cause CUT OFFS!

### Some Fine Print:

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**Please don't mail or fax us!** Even though we are a mail order company, we *don't* take orders by mail. We **ONLY** take orders by **phone** (except for orders from non-English speaking countries). Since we sell such weird stuff, there's better than a 50-50 chance that something would be wrong on your order if it was mailed in to us, and that would get costly in terms of shipping - for both of us. **Thanks!**

#### Minimum Order:

We don't have a minimum order (except for 20 TIE Hookswitches), even though we should. We realize that you don't necessarily need more than one of something to fix a phone, and you may never see another one like that. We **break even** when the order is around \$27.

#### Shipping:

We charge shipping on all orders. **We don't accept CODs on returns**, and we don't pay for return shipping. If we screwed something up, then we'll pay for the return shipping.

#### Damaged Merchandise:

If you receive merchandise that was damaged during shipping, please save the packaging and everything and let us know right away. We can then file a claim with the freight company.

#### 30 Day Moneyback Guarantee:

We realize that we sell weird stuff, and there's no way to know if some of it is right for you until you try it. You can return any stock item within 30 days, but it **MUST** be in new condition in the original packaging with all books (not written on) and accessories. **Please check out one of an item before you buy a lot of them, as large quantities are considered special orders and are not refundable. Shipping is not refundable.**

#### Sales Tax:

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#### Bad Checks:

As a subscriber to the Telecom Bad Check List, we share information on bad checks and credit cards with others in our industry.

#### Warranty:

Items may or may not contain a manufacturer's warranty. If the item goes bad right away, will usually be able to exchange it for you. If it goes bad after a month or more, depending upon the vendor, you may have to return the item to the manufacturer for repair.

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#### Errors & Price Increases:

We occasionally screw up on prices in our catalog, or a manufacturer increases their prices to us so much that we have to increase our prices before the next catalog. We usually find out when we go to reorder. It's hard to believe that we buy stuff from our vendors all of the time, and they can't let us know about price increases in advance so we can correct our catalog. Sorry, but we'll let you know when you place your order.



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