TC100 CPC Signal Generator

USER & PROGRAMMING MANUAL

MODEL	CATEGORY	OPEN LOOP
TC100	Call Controllers	~800 ms

Overview

When a call ends, the far end doesn't always signal a clean disconnect. The TC100 monitors the line for howler, dial, busy, and reorder tones, and when it detects one, it opens the loop for roughly 800 ms. That brief open-loop interval is recognized by phone systems and PBXs as a CPC (Calling Party Control) signal, letting the equipment reset immediately instead of holding a dead call open.

Applications

Voice Mail Attendants

Reliably release the line after a caller hangs up so the system is ready for the next call.

Emergency Call Systems

Confirm the far end has cleared before resetting an emergency or courtesy phone.

Alarm Systems

Generate a clean CPC signal so alarm panels release the line without lingering ghost calls.

Specifications

Model	TC100
Function	CPC (Calling Party Control) Signal Generator
Detected Tones	Howler, Dial, Busy, Reorder
Open Loop Duration	~800 ms

Programming

Program Password: #0*

When you lift the receiver you have 3 seconds to enter the program password before the unit goes into tone-control mode. After the 3 seconds, the unit will ignore the program password.

Register 01 – Cadence On Time (ms)

Default = 4000 · Valid entries 1–20000

```
Example   01 beep 500 ##
```

Register 02 – Cadence Off Time (ms)

Default = 0 · Valid entries 0–20000

```
Example   02 beep 500 ##
```

Register 03 – Cadence Tolerance (ms)

Default = 0 · Valid entries 0–500

```
Example   03 beep 500 ##
```

Register 04 – Cadence Matches

Default = 1 · Valid entries 1–20

```
Example   01 beep 2 ##
```

Register 05 – Frequency Watch

Default = 10100000 · Enter the 8 frequency settings followed by ##. 1 = look for frequency, 0 = ignore frequency.

Frequency (Hz)	350	400	440	480	620	1400	2060	2600
Entry	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1

```
Example   05 beep 10100000 ##  (Unit will look for 350 Hz or 440 Hz)
```

Programming Examples

1. Detect a 400 Hz tone, minimum duration 1000 ms

```
#0* beep                 ; enter program mode
01 beep 1000 ## beep     ; set duration to detect
02 beep 0 ##             ; set cadence off time to 0, only care about when tone is on
03 beep 0 ##             ; no need for cadence tolerance
04 beep 1 ##             ; match one time
05 beep 01000000 ##      ; match 400 Hz only
```

2. Detect a busy tone (480 Hz + 620 Hz, 500/500 ms cadence)

```
#0* beep                  ; enter program mode
01 beep 500 ## beep       ; set cadence on to detect
02 beep 500 ##            ; set cadence off time to detect
03 beep 50 ##             ; set tolerance for cadence 50 ms (±10%)
04 beep 4 ##              ; match 4 cadence on/off cycles
05 beep 00011000 ##       ; match 480 Hz and 620 Hz components
```

3. Detect 4000 ms of silence

```
#0* beep                  ; enter program mode
01 –                      ; register ignored in this example, value does not matter
02 beep 4000 ##           ; set cadence off time to detect 4000 ms of silence
03 beep 0 ##              ; set tolerance to 0
04 beep 1 ##              ; match 1
05 beep 00000000 ##       ; disable all frequency components
```