

REVISED



NEW READERS!

If you're a new reader, you might be wondering just what the hell this is all about. YIPL is an anti-profit organization dedicated to people's technology, and we publish information that shows you how to fight back at the computers that run our lives. Every YIPL reader is urged to be a contributing editor, and to send us ideas for stories, information from the inside, and criticism of what we do or don't publish. We're taking a big risk so help us make it worthwhile. Get as many people to join as possible, and help spread the ideas you learn from YIPL.

If you got this as a sample issue, a subscription is \$4/year. If you're poor and can't afford it, it's free. So if you can afford it, perhaps you can afford to help pay for some less fortunate person's share. Send stamps or checks but no cash please. We're getting ripped up mail all the time.

There's been a lot of talk about the Red Box, and we promised to reveal just what it is. The Red Box is only an oscillator of 2.2KC, switched on and off electronically, just like a single slot pay phone. Circuits will soon be available.

5- 60 ms. pulse.

10-60 ms. on, 60 ms.off, 60 ms. on

25-5 pulses, 35ms. on, 35 ms. off

THE YOUTH INTERNATIONAL PARTY LINE NO.12 AUGUST, 1972

The Phone Phreak Convention on July 29 in New York was interesting indeed. Many news-men, phreaks, and even a few undercover agents from the Phone Kompany attended, and watched a film about ripping off the phone kompany, ate Bell cookies, discussed in our workshops about circuits, legal questions & general strategies of Ma Bell. We'll be looking forward to the next convention soon. See ya there!

By the way, the film is available for rent, so write to us.

John Thomas Draper, the alleged Captain Crunch of Esquire fame, is about to go on trial in California. The charge is fraud by wire, but the motive behind the indictment is to intimidate every phone phreak in the country and to silence John, who they suspect knows enough to turn Ma Bell into a pile of rubble. John and his lawyer, Jim McMillan are beautiful dudes but they need money to fight this bullshit. If you can, please send some bread to the Captain Crunch Defense Fund, Box 755, Campbell, Ca. 95008, or to the same c/o YIPL, Rm. 504, 152 W. 42.St., NY, NY 10036.

RAMPARTS INFO:

Last month we published a simpler version of the suppressed Ramparts article, "Regulating the Phone Company in your home" and we have heard that a new, experimental system will detect the device being used over 4 minutes in certain locations in New York. This is not confirmed but it really isn't bad news because one can use the device 10 times in a row safely, though we don't think you have to go overboard. Until the rumor is checked out, though, keep all calls under 4 minutes to or from the New York area. All Telco employees should write what they know about this to us soon.

CONSTRUCTION

The Blue Box uses two tones per digit. We show one oscillator and a common amplifier, both being turned on when the pushbutton sends +9V thru the diodes, one for each of the two oscillators (for that button's digit) and one for the amplifier. 30 diodes are used, or an on-off switch on the amp lets you use only 24 (matched silicon). The best speaker is a telephone earpiece. Each tone mixes thru a 47K resistor. 39K sets gain. Entire current drain under 10 milliamps.

Oscillator frequency $f = 1/2\pi \sqrt{LC}$, when the R/2 pot is adjusted to the point of oscillation. This point has no distortion, and the frequency can be raised, but distortion sets in. For 1500 cycles, and C .0022, R = about 45kohms. Raising R to 1/K (the next highest standard value) lowers the frequency, and you can now tune up to 1500 Hz. Distortion will be very low. 2C will be .0017, and R/2 will be 22K, so use a 50K pot. With Sprague 192P capacitors, this Twin-T oscillator is really good. Try it!

To simplify the diode jungle, use a matrix by sandwiching the diodes between two pieces of perforated circuit board, one with 13 "buss" lines to the switches and the other with 8 output lines, 7 for oscillators and one for the amplifier. Actually, since 2600 is a single tone, you don't need a diode for it, so matrix can be 12 X 7. The diodes are upright inside the two boards. Watch polarity.

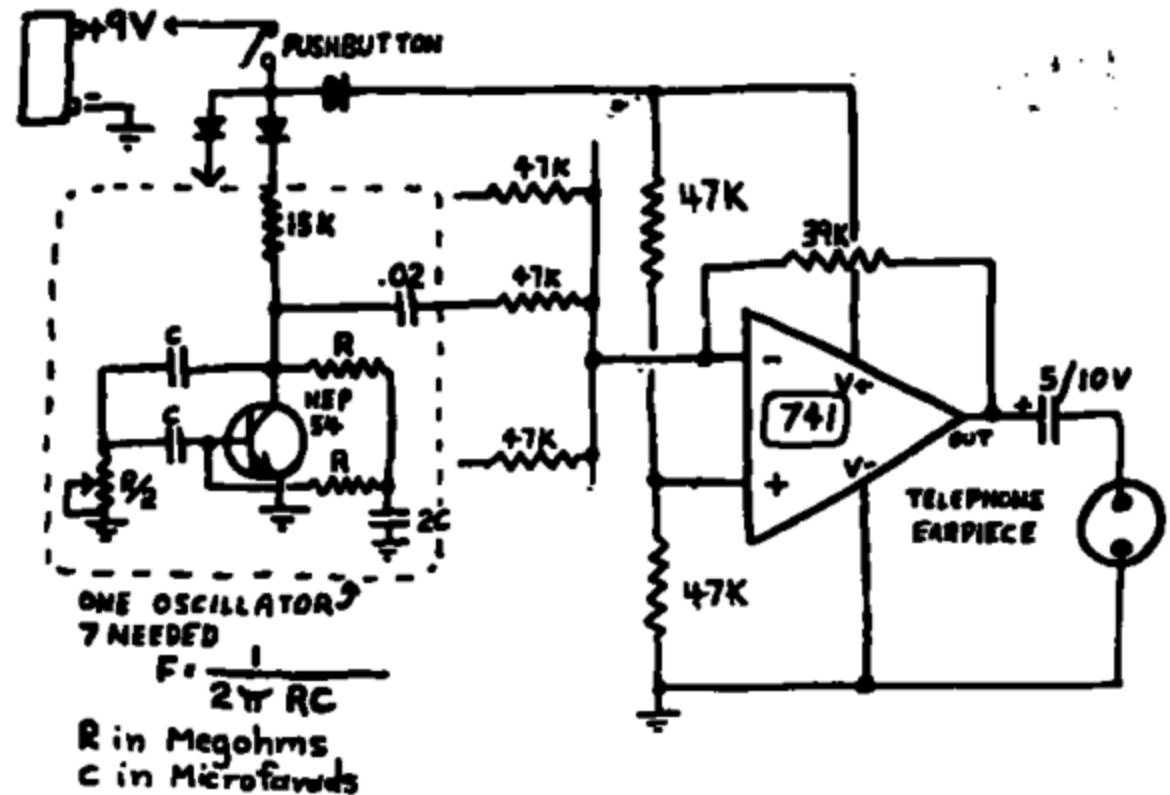
Readers have reported that an integrated circuit exists that used a resistor for each tone, two variable oscillators being required for a box. The Signetics 566 is also reported to be unstable with temperature variations. For plans on building with it, write to Signetics, 811 E. Arques Ave., Sunnyvale, Ca. 94086 and ask for information on the 566 VCO and applications notes. Sign your name Joe Smith, Enq.

TUNING

Notes on an organ will actually work if you use them, but they're best used for tuning. Or, use a touch tone phone for tuning your box, or your signal generator. Play your oscillator and your source of pitch and adjust till "beats" just stop. Remember there are two tones per digit. If you tune with an organ, you must be able to interpolate; that is to set the pitch in between two different organ notes. To set the 900 oscillator, it should be between the A and the A#.

OPERATION

From a pay phone, dial long distance information, or an 800 number, whichever you can get from your city. As call goes thru, press 2600 for one second, and when you hear a click dial desired number, preceded by KP and followed by ST. Example-KP4156869945ST. Each pulse is the same, as if you were using a pushbutton phone. All pulses must be sent within 10 seconds of disconnect, if not, disconnect and try again. Do not stay on longer than necessary.



741 OP AMP available at PolyPaks, Box 942E, Lynfield, Mass. 01940. Order 741C, TO-5 case, 2 for 90¢, add 25¢ postage and wait. Write for catalog first as they may require minimum order. All resistors 1/4 watt, 5%. Capacitors recommended-Sprague 192P, silvered mica, or mica(dipped).

The values of R should be between 30K & 150K.

Hep 54, 2N2222, or RCA SK3020 transistors.
Diodes-Matched small signal silicon(1N914)

Blue Box Tones

Digit	Frequencies
1	700+900
2	700+1100
3	900+1100
4	700+1300
5	900+1300
6	1100+1300
7	700+1500
8	900+1500
9	1100+1500
0	1300+1500
KP	1100+1700
ST	1500+1700
Disconnect	2600

741 OP AMP - TOP VIEW

14 PIN
DIP



TO-5



8 PIN
DIP



Organ Notes

Note Frequency

F#	698
A	880
C#	1109
D	1319
E	1480
F#	1661
G	2637

Touch-Tone

209	1336	1477
697	1	2
770	4	5
852	7	8
941	*	0

A 16 button keyboard with no moving parts, measuring 3X3X 1/2, is available from Environmental Products, Box 406, Lafayette, In. 47902. The price is \$7.95 but write for their catalog before you order it. Also, if any readers know where to obtain thinner keyboards, please write us with details. By the way, 16 buttons is perfect for a combination blue box/red box.

Line earpiece with foam, and press it to mouthpiece tightly.

The smartest phone phreaks we know seldom carry their unit with them, but rather a cassette recorder, which they erase after making their call.

All numbers directly dialable are callable with the box. Overseas instructions will be forthcoming.

HOW IT WORKS

There are two basic types of telephone offices thru which all calls are switched. The first is the CO, or Central Office. The wires from your telephone go to your local CO. From there your call is switched to another telephone in the same CO, meaning a local call, or it is switched to a toll office. A toll office, for our purposes, is an "inter-office" office. The toll office connects different CO's to each other.

When you dial a call from your phone, and suppose it happens to be long distance, the digits you dial, whether they are touchtone or dial type pulses, are sent directly to your central office. Most CO's have CAMA, Centralized automatic message accounting. The CAMA machine in the CO records your number, the date and time, and the number you dialed. The record is a punched paper tape. The CO then relays the area code and number to the toll office. The toll office contains a sender, which sends by whatever route is easiest a series of MF, or multifrequency pulses to another toll office in the area you called. These are picked up by an incoming sender, which translates and connects you to the CO dialed. The CO then itself translates the remaining digits and connects you to the line you dialed. When that line answers, a signal is returned all the way down the line to your CO to say that the call is completed. The punched paper tape records this. When you or your friend hang up, a signal is returned to end billing, and this goes on tape too, along with the date and time and both numbers, yours and theirs. At this point the CAMA machine sends the billing details of the call to the real heart of the CAMA, in the Toll office.

Now the way the phone company sends signals on their lines is with frequencies. When an inter-toll line, or trunk, is idle, it has present on it a tone of 2600 cycles. This tone tells senders who are searching for idle trunks that this one is OK to use. When the line is seized and used, the tone is not present.

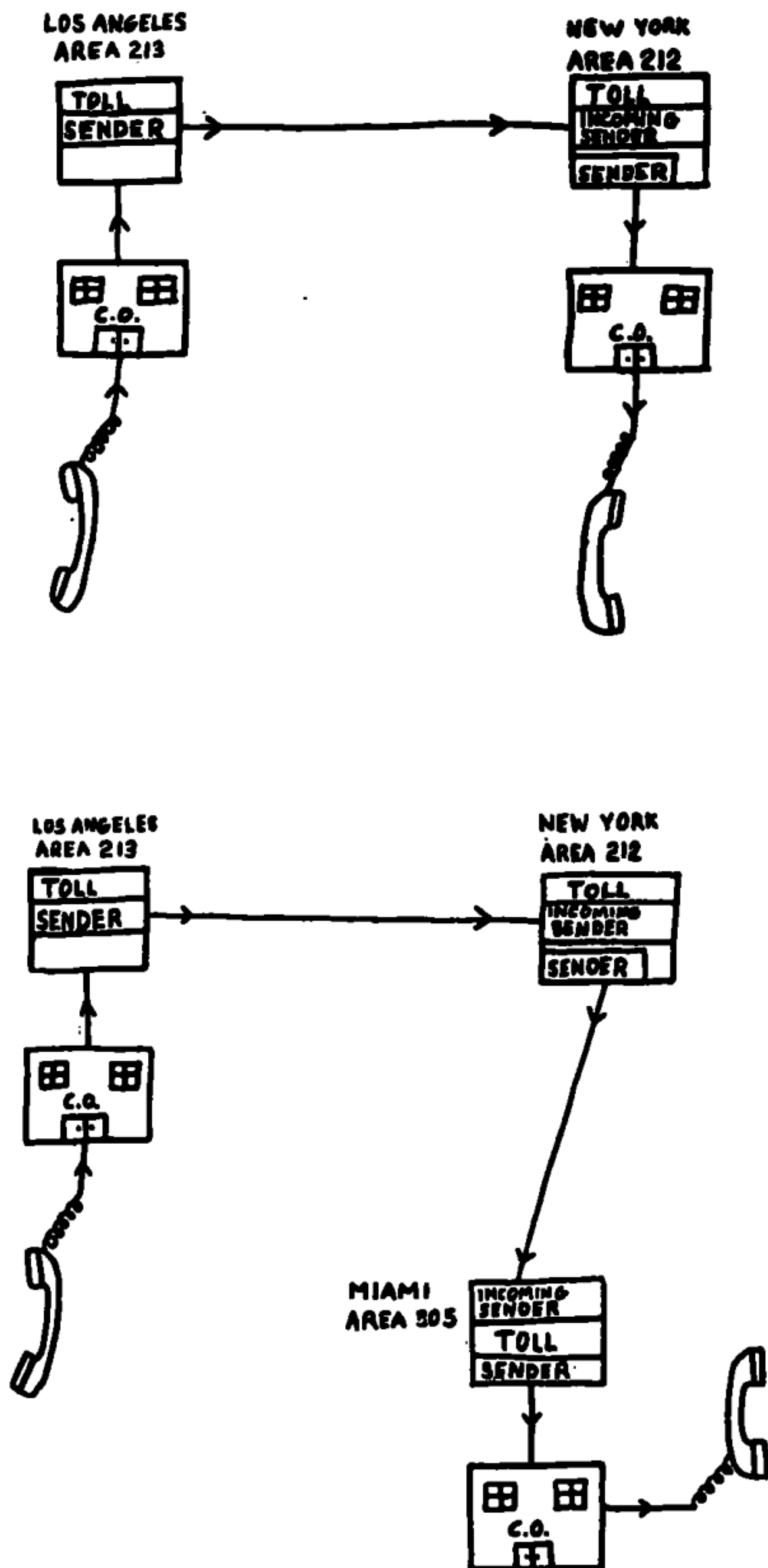
Control of your telephone line is done by you. When you hang up, the CO relays that to the senders and incoming senders on the trunk and then they disconnect.

If, however, you were to send a 2600 cycle tone down your line, your CO would not do a thing because it isn't designed to react to a 2600 cycle tone. But the intertoll trunks would think you hung up, because 2600 cycles means the line is 'dle. So they would disconnect you from the CO at the end of the chain. When you release the 2600 tone, the incoming sender would now believe the line has been seized, and will wait for the MF digits.

Meanwhile, back at the CO(yours) the CAMA is billing you for the initial call you made. If it was for information, the rate is zero ¢/minute. However, information calls don't take too long so the people who go over the paper tape at the end of the month may spot something fishy. 800 numbers are a different story, but they'd better be valid. The MF digits and 2600 cycles are passing thru the CO unnoticed all this time.

When you send MF digits, the incoming sender at the far end translates them and routes you to the correct CO, if its in that area code. If it is, and you send the area code along with the other digits, the machine will overload and the call won't go thru. If you had dialed information or a wats line based in a different area from the desired number, the sender will reroute you to that area and then to that number. Most boxers call information in a different city from where they want to call and then send area code with digits to reroute.

Since all calls are shown on the paper tape, a pay phone is the only safe way to go. And be sure to change phones too.



An item of interest for readers: For \$1.50 businesses and schools are equipping themselves with "dial-lock", which fits into the "1" position on a dial phone, which eliminates calls except from dial-lock key holders. (For pushbutton phones, a steel plate covers the buttons-Ed.) For every piggy action, there is an equal and opposite people reaction. Simply lift the receiver and rapidly push the buttons on the cradle equal to the numbers you would dial. For example, to dial 936-2323 you would push the buttons down (or just one of them) 9 times, 3 times, 6 times, etc., about as fast as a watch ticks, with a second or so between each digit. Keep count, cause its easy to lose count. Or, push the button 10 times, and you can give the operator the number you want, whether its around the corner or across the country. She is well-trained to assist you most ably. The "dial-lock ads are right, the phone bill is effectively reduced, but it doesn't say whose. L.W., Houston, Texas.

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STRENGTH IN NUMBERS!

Sign up all your friends for YIPL. \$2 to TAF Room 504, 152 W. 42 St., NY, NY 10036. When our subscription breaks 1000, we'll have a super article!

BUTTON OFFER

We have these cute little Anti-Bell Buttons to raise some bread, and at 50¢ each they probably will. We'd like to see every person in the country wearing these pretty soon. 10 for \$3.

Dear YIPL,

If any YIPL reader has access to info on a pig device called a curdler please publish the description of the resonator tubes. This device is developed in France for use on rioters. Basically it is a tone generator, amplifier, and a hi-fi type exponential horn tweeter fitted with resonator tubes. Supposedly even a hand-held model can cause ear damage and brain hemorrhaging through a sort of "sound laser" effect. Come the revolution sympathetic stereos can be turned against the pig. CCS. Yippie!

The Credit Card Computer we reported to you about is not yet available to all operators. So in some areas, the old system of simply matching the 4th digit to the letter still works. We've also heard that on the West Coast, the computer is off from 2-4 a.m. for checking, and credit card calls during that time are assumed to be valid. The same thing is true in other areas, but we don't know the times. They may be the same.

BACK ISSUES

- Credit card calls-How to safely.
- Receive long distance calls free.
- The Blue Box (this issue)
- Pay phone issue

Back issue are back up to 50¢ each, until we raise some more bread.

FROM TAP, ROOM 504, 152 W.
42 ST., N.Y., N.Y. 10036
(MAIL ONLY)

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TO: