```
*-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-*
!                                                                   !
!                  The Dark Side Research Group                   !
!                                                                   !
!                     Proudly Presents:                           !
!        The DARK BOX: Multi-Purpose Network Manipulation Unit      !
!                                                                   !
!                    By: Cablecast 0perator                       !
!                                                                   !
!      (]<)0PYWR0NGDE 1987, 1990 DSR/ATR   All Rights Fucked        !
!                                                                   !
*-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-+-=-*
```

-=> Introduction <=-

The Dark Box is the newest device to enter the "colored box"   market
and is guaranteed to rerevoloutionize the art of   telecommunications
fraud. The device's inventor, Cablecast 0perator, became quite bored
with the old forms of phreaking, having to worry about codes   dying,
or being traced. The unit you are about to build was spawned by   the
need   for a more versitle, safe and interesting way to   phreak.   You
don't   need any special tones or attack dialers, just your good   old
every-day DTMF pushbutton phone.

The   box's   basic design allows you to call anywhere   on   earth   (or
elsewhere   for all we care) without fear of being billed or   traced.
But it's uses do not stop there! When hooked up properly, it can   be
used to emulate multi-line bridges, loop lines and direct in-dials.

It's   really   quite   simple. The device is plugged   into   two   phone
lines,   other   than your own, or one end into a phone line   and   the
other   into another box. When there is an incoming call, the   device
senses this and picks up the phone. Your call is then transferred to
the other line or onto the loop. When you hang up, the device senses
this, too, and it hangs up also, waiting for the next caller.

To   illustrate this, whip out your good old analog   multimeter   and
hook   it   up   to your phone line. See that nice,   juicy   voltage   on
there? Now call it on your other line. The voltage will jump and the
polarity   will   go all to hell. This version of the   Dark   Box   uses
an alternating current detector to tell if the phone is   ringing
because sensing voltage is unreliable and not entirely universal. Now

pick   up your second line. There is a momentary blackout on   it   and
then the voltage becomes constant. Now hang up the phone you   called
in   on. There will be another blackout on your other line   ans   then
the   voltage will pop back up again. On the box, hangup is   detected
by the line current passing through an optoisolator that is   holding
the relay open. When it is cut off for the split second the blackout
occurs, the relay is cut off and the phone hangs up.

NOTE: With the rapid expansion of digital ESS's, the little phone
company quirks that are essential for the device's operation might
not be available in your area. Check your line with the meter as
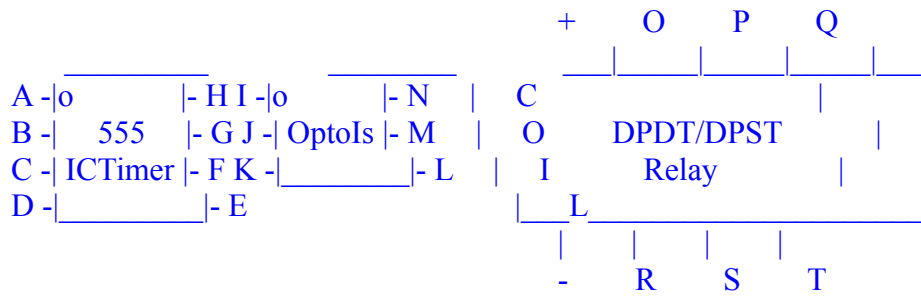directed to be sure!

                        -=> Trip To Radio Snack <=-

On your next trip out to your friendly neighborhood Radio Shack, get
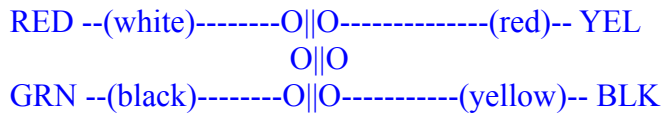yourself these:

1:1 Audio Isolation Transformer
555 IC Timer
Optoisolator (Transistor Output)
(2) NPN Transistors (2N3904 or 6 Will Do Nicely)
(2) 100k 1/4w Resistors
(2) Normal Diodes
1k 1/4w Resistor
10mF Electrolytic Capacitor
Disc Capacitor (.01mF)
DPST Relay
9v Battery or Likewise AC Adapter and Timer

It'll   run you about five or six bucks, unless of course you   get   a
five finger discount...It can be mounted on a small IC perfboard, or
whatever you like depending on how small you want it.

If you can't display the schematic that goes along with this,   we'll
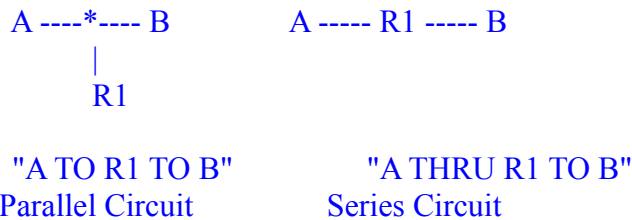do it like connect the dots, it'll be fun!!

```
                                     +      O     P     Q
                                     __|_____|_____|_____|_
      _____       _____    __|     |     |     |    |
A -|o           |- H I -|o        |- N  |   C                      |
B -|    555     |- G J -| OptoIs |- M   |   O       DPDT/DPST       |
C -| ICTimer |- F K -|_____|- L   |   I           Relay         |
D -|_____|- E                     |___L_____|
                                     |      |     |     |
                                     -      R     S     T
```

This is the wiring diagram for X1, the 1:1 Audio Transformer:

```
    RED --(white)--------O||O--------------(red)-- YEL
                         O||O
    GRN --(black)--------O||O-----------(yellow)-- BLK
```

They   don't have to be paired exactly like that, just remember   that
white goes with black, and red goes with yellow.

Text   coding   of   the schematic is very simple.   If   you   have   ever
assembled one of those 1,000,000,000,000-in-1 electronics kits   from
Shack,   you can do this... I will guide you with TO and THRU.   There
is a difference:

```
   A ----*---- B          A ----- R1 ----- B
        |
        R1
```

    "A TO R1 TO B"   "A THRU R1 TO B"
   Parallel Circuit   Series Circuit

These are the abbreviations for the components:

RED, GRN, YEL, BLK   =   Phone line red and green respectively
Dx(Anode/Cathode)   =   The Diodes Where x=1,2
Qx(Emitter/Base/Collector)   =   Transistors   x=1,2
C1(+/-)   =   Electrolytic Capacitor   (observe polarity!)
C2   =   Disc Capacitor
R1   =   1k Resistor
Rx   =   100k Resistor   x=2,3

Ya   dig it, mon? If this is too complex for you, try and view the
schematic through Generic Software's CADD, or try to draw your
own out from the directions below. Sometimes it helps to do this
in visual terms!

Ok, let's go to it...

```
<-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=->
```
 1: GRN thru R3 to Q1(Emitter) to GND
 2: RED thru D1(Anaode) to Q1(Base)
 3: Q1(Collector) to B
 4: +V thru R1 to B
 5: +V to M to D to H to Q2(Collector)
 6: H thru R2 to G to F thru C1(+) to GND
 7: E thru C2 to A to GND

8: C thru D2(Anode) to Q2(Base) to L
 9: Q2(Emitter) thru COIL to GND
10: RED to I
11: J thru X1 to T
12: GRN to R
13: BLK thru X1 to Q
14: YEL to O
<-=->

There.   That wasn't too hard now, was it? Now let's test it. A   word
to the wise: Do not substitute batteries or other power supplies   in
place   of the telephone line. If you do, then you risk   blowing   the
transformer and the optoisolator.

-=> Testing The Puppy <=-

Now that you have it built, double check and make sure everything is
OK   before you apply power to it. If everything you have   is   right,
there   might be some wierd, uncaught error in the file, or you   have
bad parts. Contact us or try again.

A voltmeter and a logic probe can come in handy here...

Connect   the battery, but not the phone line yet. Your relay   should
not   throw. If it does, check the 555 and the transistor   triggering
it.

If that's ok, short out the emitter and collector on Q1 momentarily.
The relay should throw for about two or three seconds then shut off.
If not, check that trigger circuit again.

Now plug in RED and GRN. If your relay trips, you might have the RED
and GRN reversed, or Q1 is not wired properly.

If   you're ok, call it on your other line. It should ring   once   and
then   pick up. If it's busy, perhaps D1 is not right. If it   doesn't
answer the phone, check Q1 to make sure all contacts are right.

Ok,   FINAL TEST! Connect YEL and BLK and call the line that RED   and
GRN are on. It should pick up and you should hear a steady dial tone
and   be   able   to dial DTMF on it, etc etc etc.   There   are   several
problems   that could arise here. 1) No dial tone means   it's   either
not   hooked up right, or the transformer is bad. 2) If you only   get
it   for about three seconds before it hangs up on you, you   are   not
getting   complete   isolation   from   the   other   line.   Check   the
transformer. 3) If the dial tone you hear is "bobbled" then you have

a major voltage spillover, isolate the second line from the rest   of
the circuit.

If everything checks out, you have just built a DARK BOX!! Now let's
have fun with it...

-=> Applications And Operations <=-

You   already   have   the basic unit constructed. This is   sort   of   a
Pseudo-Extender or Pseudo-Diverter. Place it on any two phone   lines
(other   than your own) and be sure you know the number for the   RED-
GRN   pair.   Now when you call the line that's hooked up to   RED   and
GRN, you get the dial tone from the YEL/BLK pair, and it's just like
you   were at that person's house using THEIR phone! But you're   not,
you   could   be in Tahiti if you want! This is,   basically,   how   you
avoid billing of calls.

If you want to use this box from long distance without having to pay
for   it   yourself,   you could wire a black   box   resistor   onto   the
RED/GRN pair. It's not your phone line, what do you care?

For loop lines and cheese boxes, wire two Dark Boxes back to back on
any two phone lines.

For a multiple line bridge, you need as many boxes as you want dial-
ins. Loop all the YEL's and BLK's together respectively and plug the
RED/GRN's   into   a hunt group (You know, call 555-0000   and   if
it's   busy, you'll be transferred to 555-0001, etc etc),   this   way,
hackers   can   drop   in   and out at   will.   Didn't   Cap'n   Crunch   do
something like this?

If you want to make credit card calls instead of dialing direct,
attach the box to two payphones that are next to each other.
That way, you don't have to freeze your ass off to avoid having
your phone number put on the guy's card bill. Make sure the
payphones will accept incoming calls!

Patch YEL/BLK into an audio amplifier and into the paging system
at someplace like K-Mart. Imagine the riot you can start by
paging "INS! Stay where you are!" The xfrmer should push out
a line level audio, so interfacing to most sound applications
should be a snap.

A word about Caller ID. CI has been introduced scince the invention
of the box. The box can bypass CI to an extent, being that if the box
calls someone who caller ID's you, they'll get the second phone line

of the box, and not you. However, if the indialing line for the box
has CI and you call directly into it and someone happens to be there
to get it, you could be in serious trouble. A soloution to this would
be to use the box on a payphone that will accept incoming calls.
Scince noone gives a fuck who calls a pay phone, chances are it won't
CI'd. You could also place the box in an area that doesn't have CI,
whereas in order for CI to work, both the caller and the callee must
be in service areas.

Don't   be limited by only these suggestions! Be creative and let   us
know how you use it! Make a DID for your school's PABX, or get   your
VICModem   to   autoanswer!   There   HUNDREDS   of   uses   for   this
revoloutionary device waiting to be discovered!

-=> One Final Word <=-

The   staff   of Dark Side Research would like to   thank   our   friend,
Rebecca, who has encouraged us to press on in the Box's   development
even during times when it seemed hopeless.

Enjoy you new toy....

Cablecast 0perator