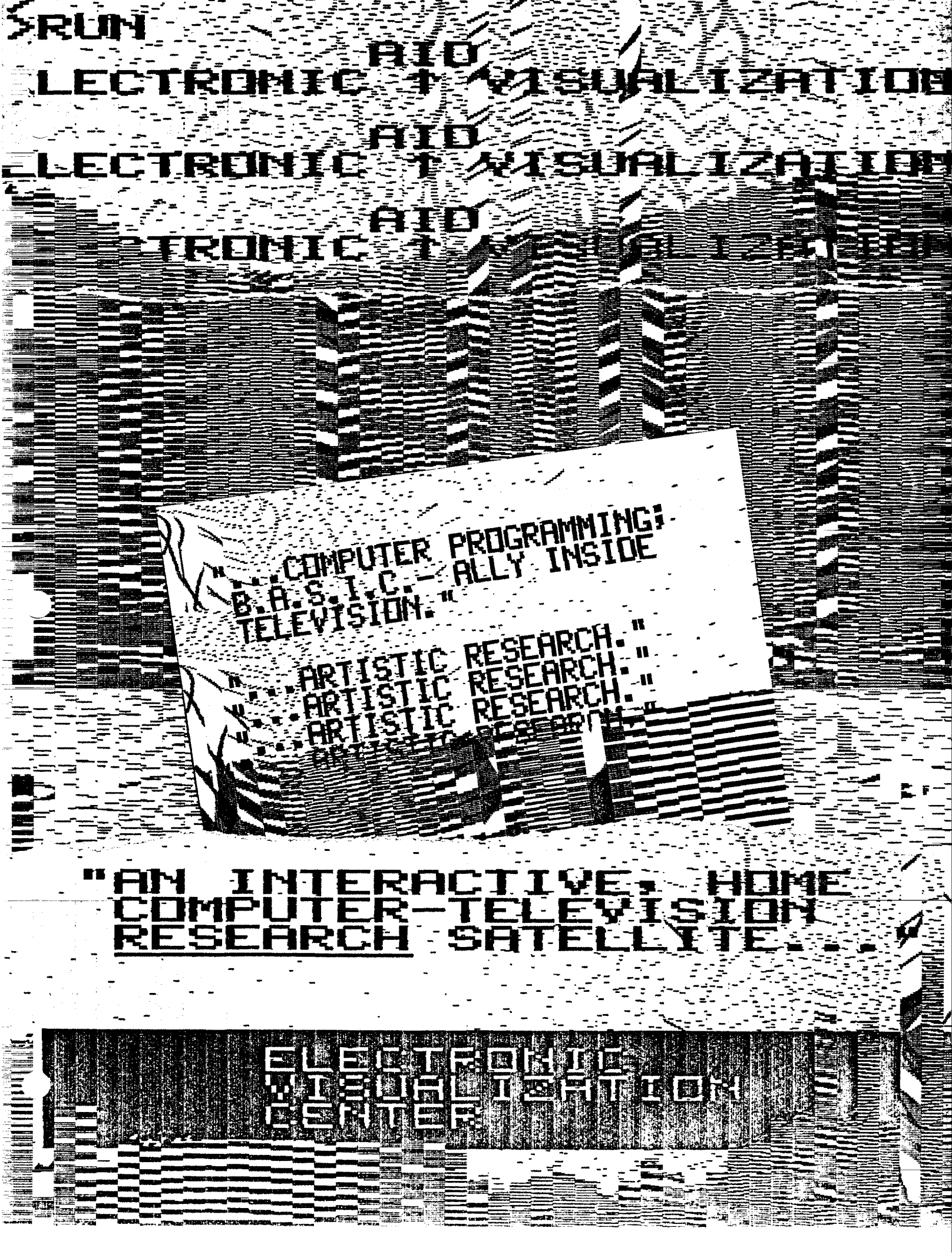
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COMPUTER-TELEVISION
RESEARCH SATELLITE..."
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CENTER

JANUARY 1980

TO: Bally Arcade computer users.

An add-on circuit which improves the audio and video signals, optimizing for recording and/or transmission.

This add-on circuit gives the computer user a line level audio signal output and a composite video signal output. It is a lowest-possible-cost solution to a highest-possible-quality goal.

This add-on circuit was designed and prototyped by Dan Sandin; copied and documented by Phil Morton. For assistance contact Phil at (312) 666-5628, Chicago, Illinois.

For Bally Arcade computer users who are not connected into the ongoing Sandin IMAGE PROCESSOR cybernet, you probably should simply collect the parts (see PARTS LIST) and wire-wrap this circuit.

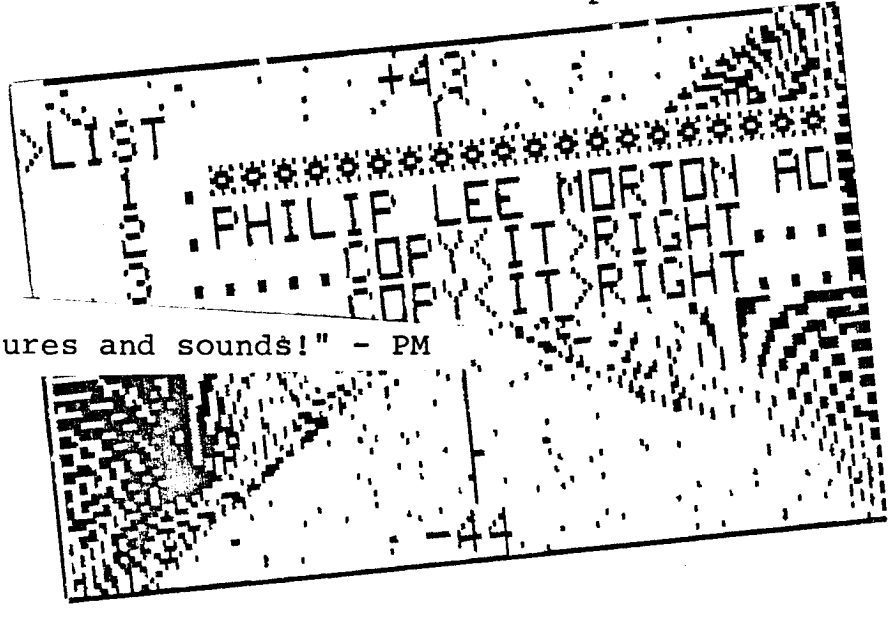
The following circuit diagram and 2X printed circuit board pictorial can be directly copied by Sandin IMAGE PROCESSOR builders using parts already on hand. The circuit is a slight variation on the "standard driver" used so frequently through-out the IP. We used 1/4 of a #217 board to build the circuit on.

You can do a "neat" job by using either chassis-mount connectors, mounting them in the top plastic "fin", or cable-mount connectors by enlarging the RF Cable hole to run the audio and video cables out. We got away with using RG 174/U (coax) for both audio and video.

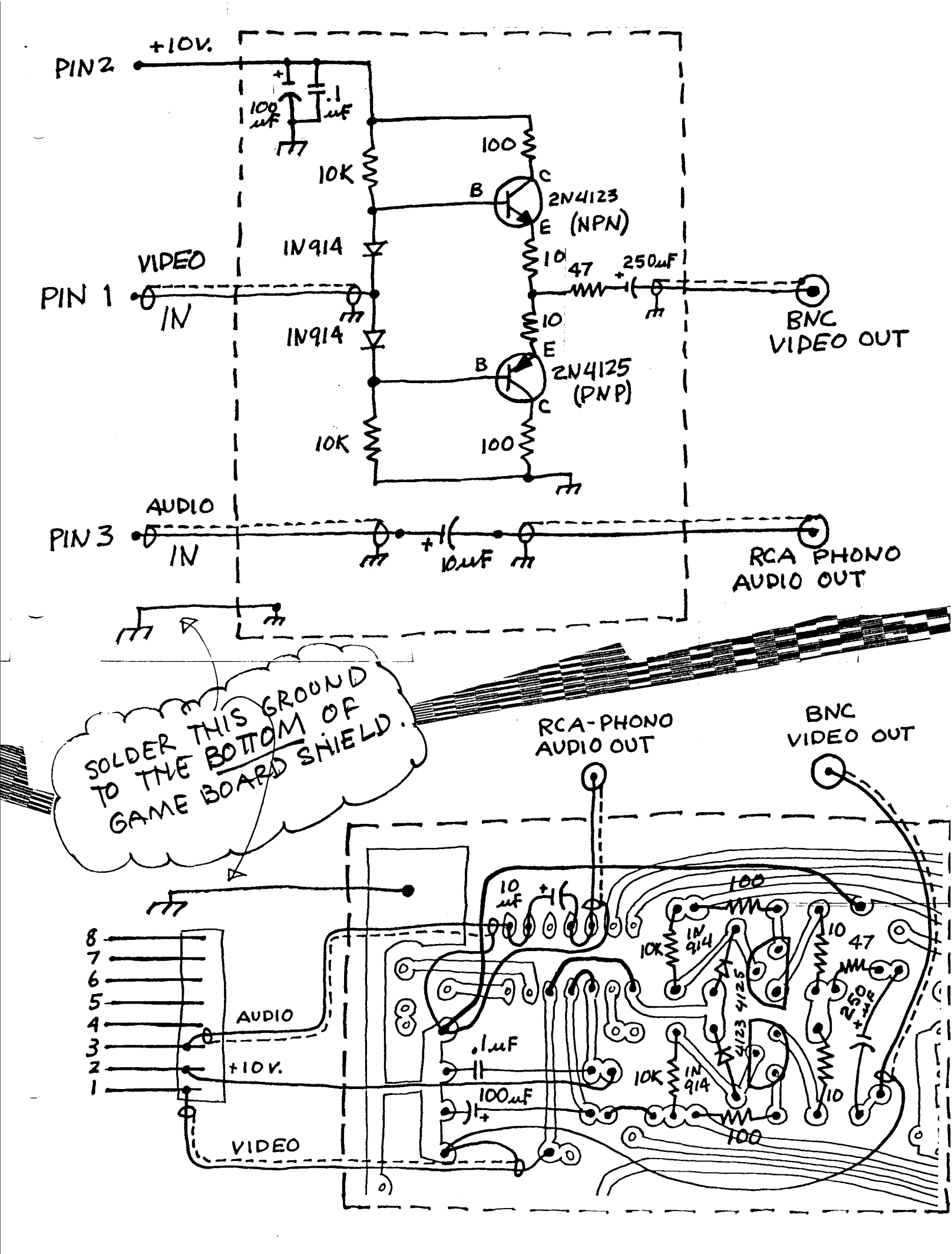
If you remove the RF Modulator from your computer then the BNC video out will deliver black-and-white composite video only; no color. This may be desirable for special applications which assume colorizing "down stream" in time.

Remove the five phillips-head screws on the bottom of the computer; the top plastic will now come off. Pull the RF Modulator off the 8 pin connector; solder to pins #1(video), #2(+10 volts), #3(audio). Pin #1 is closest to the heat sink and the front of computer.

Pin #8 = -5 volts
Pin #7 = B-Y
Pin #6 = R-Y
Pin #5 = +2.5 volts
Pin #4 = Chroma
Pin #3 = Audio
Pin #2 = +10 volts
Pin #1 = Video




"...enjoy your clean pictures and sounds!" - PM


+10V.
PIN 2
100 µF
.1 µF
10K
100
C
B
2N4123
E (NPN)
IN914
VIDEO
PIN 1
IN
IN914
10
47
250µF
BNC
VIDEO OUT
10
E
B
2N4125
(PNP)
C
10K
100
AUDIO
PIN 3
IN
10µF
RCA PHONO
AUDIO OUT
SOLDER THIS GROUND
TO THE BOTTOM OF
GAME BOARD SHIELD.
RCA-PHONO
AUDIO OUT
BNC
VIDEO OUT
10 µF
100
10K
IN 914
10
47
4125
4123
250µF
.1µF
10K
IN 914
100µF
10
100
8
7
6
5
4
3
2
1
AUDIO
+10V.
VIDEO

PARTS LIST

Resistors:

| | | |
|---|---|---|
| 1 | 47Ω | 1/4 watt |
| 2 | 10Ω | 1/4 watt |
| 2 | 100Ω | 1/4 watt |
| 2 | 10kΩ | 1/4 watt |

Capacitors:

| | |
|---|---|
| 1 | .1uF 50wvdc cer. disc. |
| 1 | 10uF 25wvdc electrolytic |
| 1 | 100uF 25wvdc electrolytic |
| 1 | 250uF 12wvdc electrolytic |

Transistors:

| | |
|---|---|
| 1 | 2N4125 (PNP) |
| 1 | 2N4123 (NPN) |

Diodes:

| | |
|---|---|
| 2 | 1N914 |

Wire/cable:

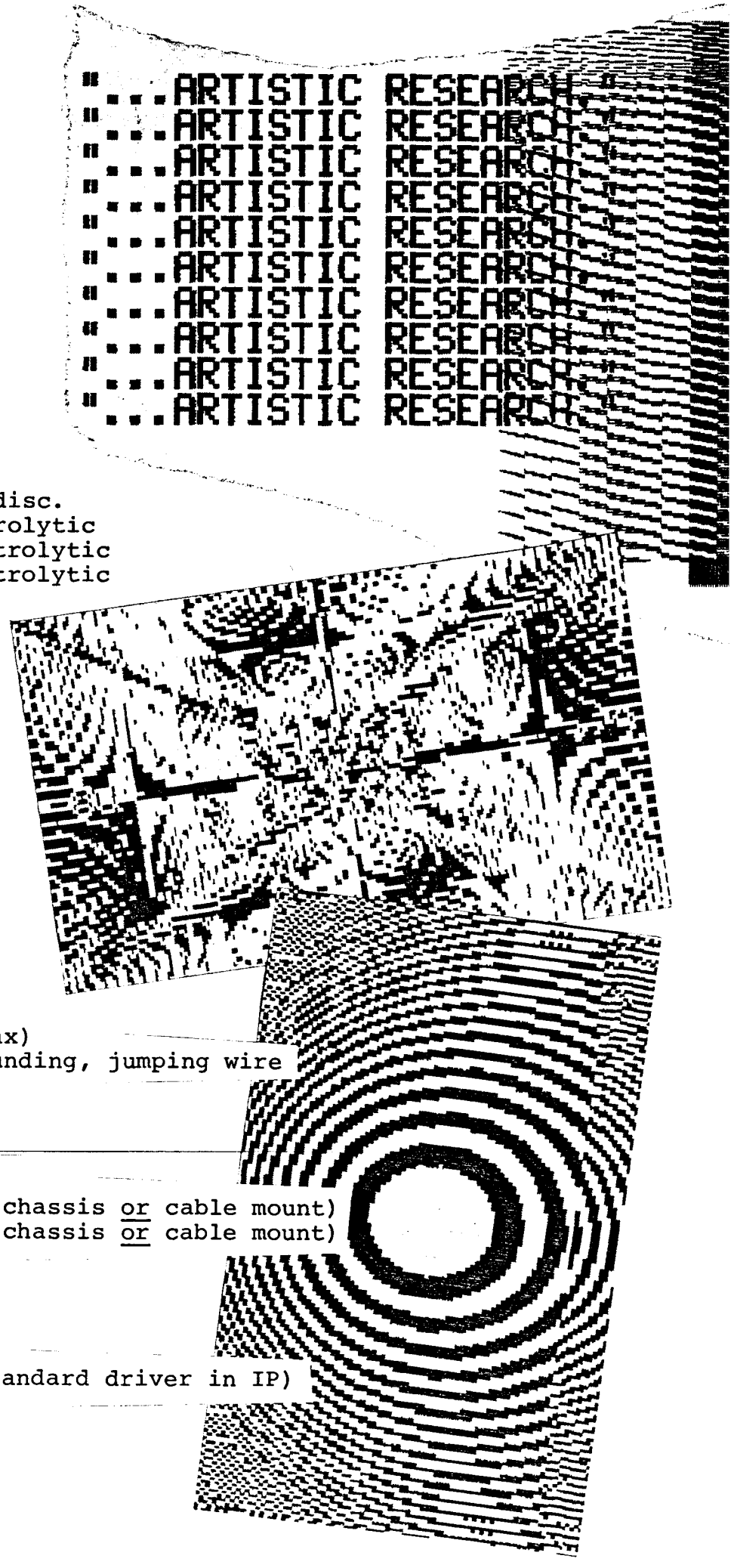
| | |
|---|---|
| 4 feet | RG 174/U (coax) |
| 2 feet | hook-up, grounding, jumping wire |

Connectors:

| | |
|---|---|
| 1 | RCA phono-female (chassis or cable mount) |
| 1 | BNC video-female (chassis or cable mount) |

PC Board:

1/4 of a #217 board (standard driver in IP)

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Ice Hockey