



April 12, 1978

Ken Greenberg
GENERAL INSTRUMENTS
600 West John Street
Hicksville, N.Y. 11802

Dear Ken:

SUBJECT: PRINTED CIRCUIT BOARD OUTLINE

Enclosed are sketches showing the outline for the cassette circuit board and the power supply circuit board. A revision to the logic board will be sent later.

Note that the two outer connector traces for the cassette board are shorter than the rest of the traces. These are the lines that will connect the 5V power back to the logic board. The amount of recess is yet to be determined and will be relayed to you later.

Figure 1 shows approximate preferential locations for the connections to the power supply board. The transformer connection is made by a 5 pin connector, Magnavox part #181013-5. The connector to the on-off switch and to the logic board are by means of cables which are soldered into the power supply board. These cables consist of 28 gauge stranded wires which have been top coated. They are to be inserted into holes in the power supply board and wave soldered.

In order to enhance the U.L. requirements for low voltage in the system, it is desirable to design the power supply board in such a way that neither end of the center tapped winding of the transformer comes in close proximity to the 14V winding. This will reduce the probability of these 2 windings being shorted together in such a fashion that the voltages on any pair of leads can add up to a maximum possible voltage from the transformer. Figure 1 indicates a connection configuration for the transformer connector and the switch cable which would supply such a separation. In this configuration, pins A & B of the transformer connector are connected to the ends of the center tapped winding. Pin C is the center tap and the ground circuit for the power supply. Pins D & E are connected to the 14V transformer winding. With a little care the entire power supply can be developed in two sections (the 12V and 16V in one section, and 5V and 3V in the other) separated by the ground lead so that any shorting between the two sections would be extremely difficult.

Drawings of the connector involved on the power supply and logic boards are being sent to you by Cliff Perry.

Cordially,

Dr. David P. Chandler
Preliminary Design

DPC:1b
Enclosures

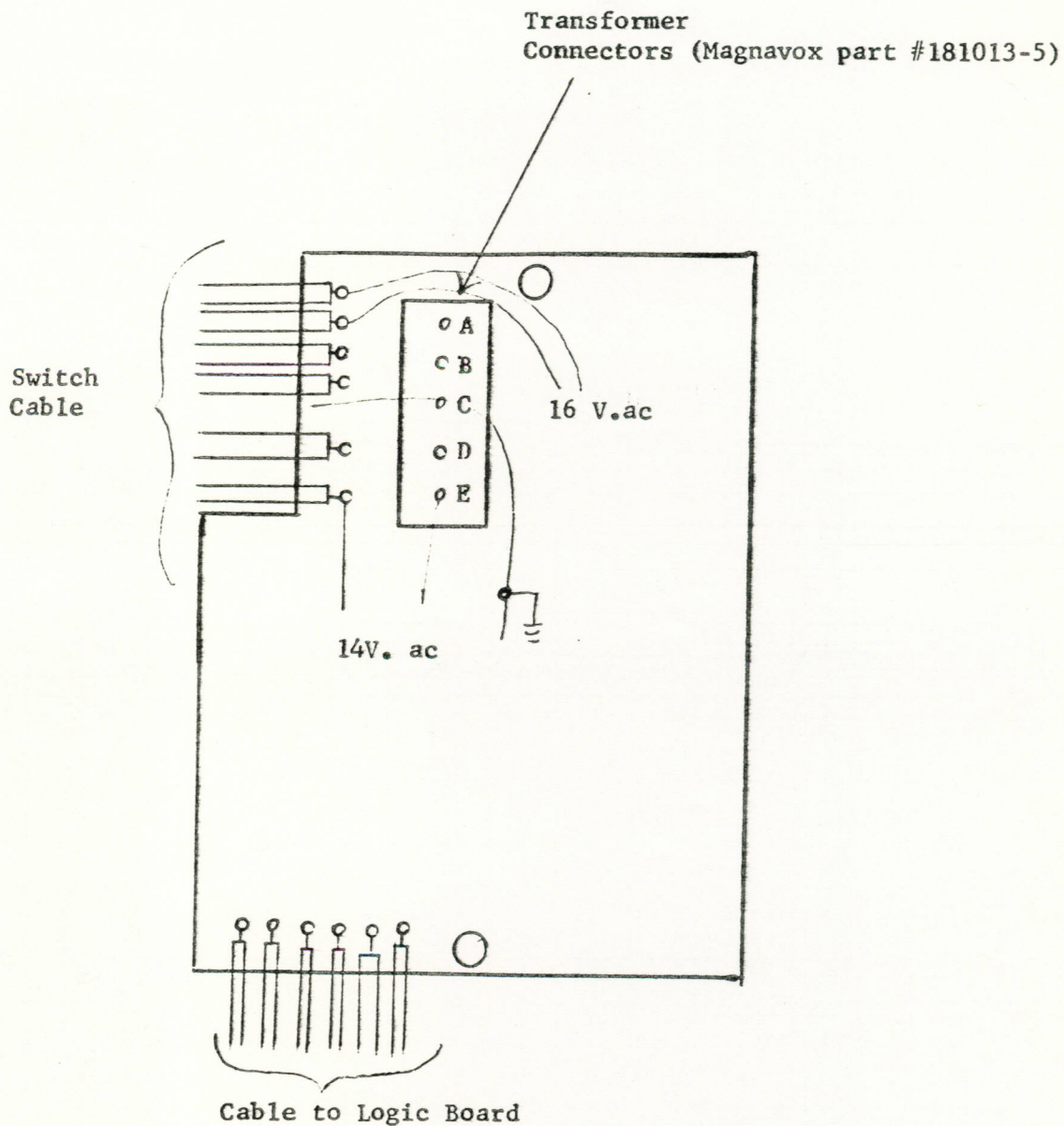
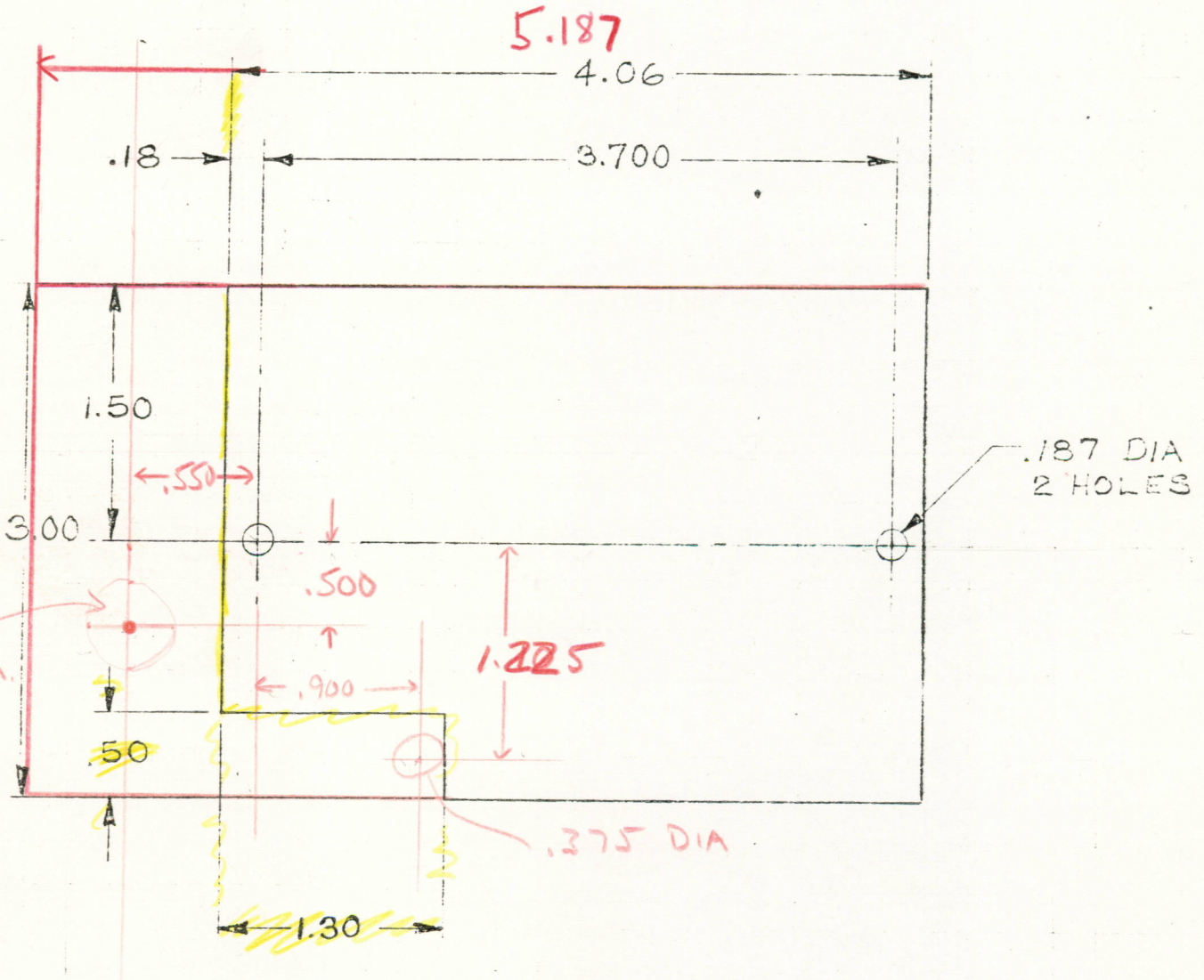


FIGURE 1. Preferred connection location for Power Supply Board.

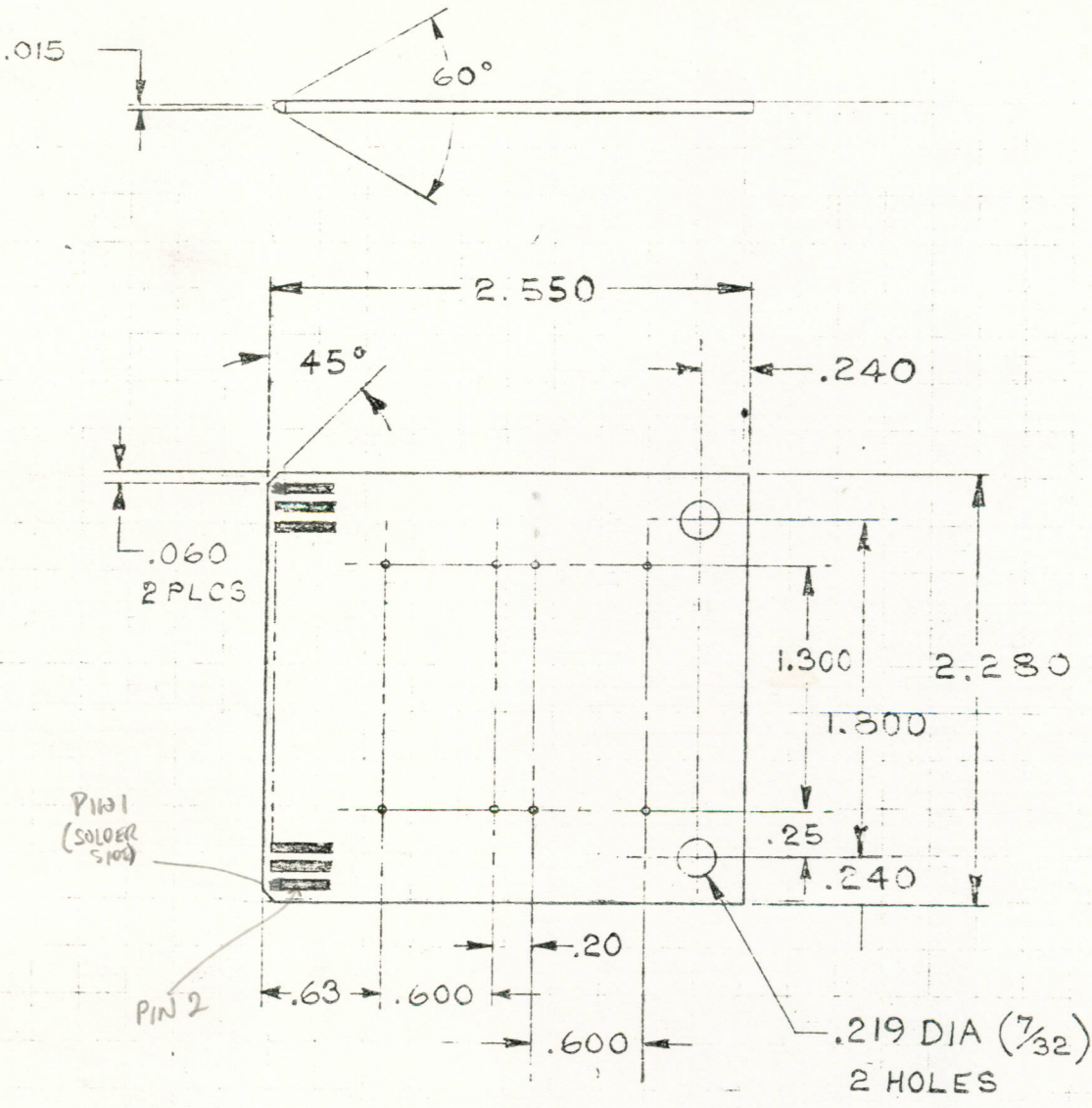
2.875
 1.375
 1.500

6.2
 5.3
 .9



MATTEL P.S. BOARD
 PC LAYOUT
CIRCUIT BOARD BLANK

J. J. Ford
 1-12-78



COMPONENT SIDE

(MATERIAL: .060 CIRCUIT BOARD, ~~SINGLE SIDED~~)

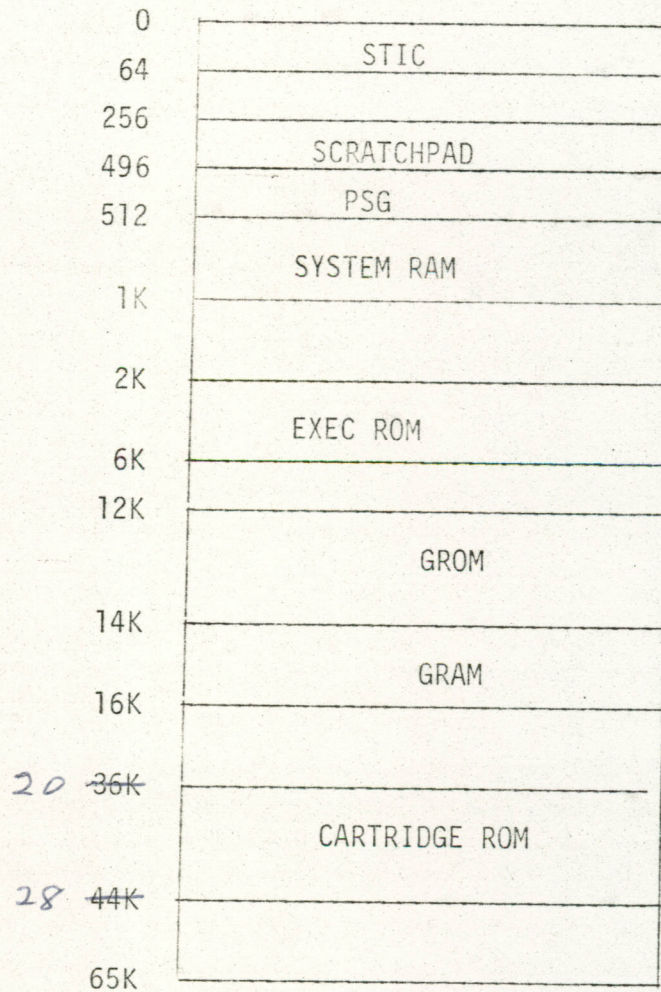
MATTEL CARTRIDGE BOARD
PCB LAYOUT

~~CASSETTE CIRCUIT BOARD~~

~~J. Ford~~
~~4-12-78~~

MATTEL VIDEO GAME SYSTEM

MEMORY MAP



NOTE: All memory references are in decimal and represent the first address in the following block.



100% Pre-Test Conditioning For General Instrument

Plastic Encapsulated LSI Products

- Post Mold Cure - 170° for 4 hours.
- Thermal Shock - 10 cycles, 0° to 100°C.
- Marking Cure - 150°C for 2 hours.

GENERAL INSTRUMENT CORPORATION
INTER-OFFICE CORRESPONDENCE

November 17, 1978


FROM: K. Greenberg

TO: D. Bogart (Mattel)
J. Robertson (Sylvania)
T. O'Brien (Jerrold)
G. Dash (Dash-Straus)

CC: J. Rochlis (Mattel)
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(memo only) H. Cohen (Mattel)
D. McGuire (Sylvania)
C. Dages (Jerrold)
R. Norwood (G.I.)
E. Sack (G.I.)

<u>TITLE</u>	<u>DRAWING NO.</u>	<u>DATE</u>	<u>REV.</u>
Mattel Logic Board	39-133	11/14/78	N
Logic Board P.C. Layout	39-157	10/26/78	A
Mattel Cartridge Board	39-121	11/17/78	C
Cartridge Board P.C. Layout	39-158	10/29/78	A
Mattel Power Supply Board	39-125	10/24/78	F
P.S. Board P.C. Layout	39-159	10/29/78	A
Parts List	39-147	11/14/78	C
Memory Map	39-148	11/1/78	C
Cartridge Connector	39-149	11/14/78	C

Regards,


Ken Greenberg

KG/lr
Encl.