

PASQUALLY HOT LINE

VISUAL PAGING SYSTEM BY:  
Pizza Time Theatre Inc.

OPERATION AND INSTALLATION

LIMITED WARRANTY

PIZZA TIME THEATRE INCORPORATED WARRANTS ITS PASQUALLY HOT LINE TO THE ORIGINAL PURCHASER TO BE FREE FROM DEFECTIVE MATERIALS AND WORKMANSHIP. UNDER THIS WARRANTY, THE PRODUCT WILL BE REPAIRED OR REPLACED, AT OUR OPTION, WITHOUT CHARGE FOR PARTS, WHEN RETURNED TO PIZZA TIME THEATRE INCORPORATED.

THIS WARRANTY DOES NOT APPLY TO ANY APPEARANCE ITEMS NOR TO ANY PRODUCT WHOSE EXTERIOR HAS BEEN DAMAGED OR DEFACED, NOR TO ANY PRODUCT SUBJECTED TO MISUSE, ABNORMAL SERVICE OR HANDLING, NOR TO ANY ALTERED OR REPAIRED BY OTHER THAN PIZZA TIME THEATRE INCORPORATED.

THE PERIOD OF THIS WARRANTY COVERS NINETY (90) DAYS IN PARTS.

THIS WARRANTY ENTITLES THE ORIGINAL PURCHASER TO HAVE THE WARRANTED PARTS, RENDERED AT NO COST, FOR THE PERIOD OF THE WARRANTY DESCRIBED ABOVE WHEN THE PASQUALLY HOT LINE IS CARRIED OR SHIPPED, PREPAID, TO PIZZA TIME THEATRE INCORPORATED TOGETHER WITH PROOF OF PURCHASE.

THIS SHALL BE THE EXCLUSIVE WRITTEN WARRANTY OF THE ORIGINAL PURCHASER AND NEITHER THIS WARRANTY NOR ANY OTHER WARRANTY EXPRESSED OR IMPLIED, SHALL EXTEND BEYOND THE PERIOD OF TIME LISTED ABOVE. IN NO EVENT SHALL PIZZA TIME THEATRE INCORPORATED BE LIABLE FOR CONSEQUENTIAL ECONOMIC DAMAGE OR CONSEQUENTIAL DAMAGE TO PROPERTY. SOME STATES DO NOT ALLOW A LIMITATION ON HOW LONG AN IMPLIED WARRANTY LASTS OR AN EXCLUSION OF CONSEQUENTIAL DAMAGE. SO THE ABOVE LIMITATION AND EXCLUSION MAY NOT APPLY TO YOU. IN ADDITION, THIS WARRANTY GIVES SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

FOR YOUR RECORDS

FOR YOUR ASSISTANCE IN REPORTING THIS PASQUALLY HOT LINE IN CASE OF LOSS OR THEFT, PLEASE RECORD BELOW THE MODEL NUMBER AND SERIAL NUMBER WHICH ARE LOCATED ON YOUR PASQUALLY HOT LINE. PLEASE RETAIN THIS INFORMATION.

MODEL NUMBER \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

DATE OF PURCHASE \_\_\_\_\_

## PASQUALLY HOT LINE

### SUMMARY

#### DESCRIPTION

The Pasqually Hot Line acquires the data from the keyboard and displays it on a video monitor. When a key is hit, the corresponding number is displayed on the LEDs. To clear the LEDs if an unwanted number is displayed, hit CLEAR. When the two (2) LEDs are on, push ENTER and the number flashes on the video terminal for five (5) seconds. Decimal points only will flash on the LEDs then the number entered is added to the numbers already on the screen. To erase any number in this file just enter that number again.

#### FUNCTION

When a key is hit, the corresponding four-bit code is latched by (A2). The comparator (A3), driven by the microprocessor (A5), identifies the key. The microprocessor sends the data to the LEDs via an I/O port. The LEDs are controlled by two (2) open collector drivers (A3, and B3). The ROM (C6) contains the control program. The RAM (C3) is used to store the numbers displayed on the screen. These 2 memories are controlled by memory controller (B5). The multiplexers (D4, D5, D6, and D7) select CPU, video, or memory control data and address the RAM as controlled by the CPU and send the data to the character generator. This data is converted by the character generator (D1) to a serial output. The counters (F3 and F6) address the PROM (F4 and F5) which control the flip-flops (E4, E5, and E6). The flip-flops (E4 and E5) drive the multiplexers (D4, and D7) to control the clock of the character generator and the RAM addressing. Flip-flop (E6) provides the horizontal sync-pulses. Counter (E1) provides the vertical sync-pulses. The vertical and horizontal sync-pulses are summed with the video through (E7, P. 11).

NUMBER OF LOCATIONS	20 (4 ROWS, 5 COLUMNS)
NUMBER OF CHARACTERS PER LOCATION	2
TYPE OF CHARACTERS	NUMERIC
CHARACTER FORMAT	7 x 9 DOT
DISPLAY GROUP	

EACH DISPLAY LOCATION CAN HOLD A TWO DIGIT NUMBER.  
LOCATIONS ARE NUMBERED FROM LEFT TO RIGHT, TOP TO  
BOTTOM.

DIGIT PAIRS GROUP TO THE LOWEST NUMBERED LOCATIONS  
WITH BLANKS IN THE HIGHER ACTIVE DISPLAY LOCATIONS.  
DIGIT PAIRS REMAIN IN THE ORDER OF ENTRY.

#### CONTROLS

12 KEY KEYPAD

"0" THRU "9"                      SELECTS TWO DIGIT NUMBER TO BE ENTERED  
OR DELETED

"ENTER"                              ENTERS THE SELECTED TWO DIGIT NUMBER  
INTO THE NEXT EMPTY DISPLAY LOCATION  
OR DELETES THAT NUMBER FROM THE  
DISPLAY

"CLEAR"                              CLEARS THE SELECTED TWO DIGIT NUMBER  
PRIOR TO "ENTER"

THE SELECTED DIGITS ARE DISPLAYED ON TWO 7-SEGMENT, L.E.D.  
READOUTS UNTIL CLEARED, ENTERED INTO MEMORY OR DELETED FROM  
THE DISPLAY.

SPECIFICATIONS (Continued)

SPECIAL FEATURE (01)

A NEW TWO DIGIT NUMBER IS FLASHED, 10x LARGER THAN NORMAL,  
FOR 5 SECONDS AS IT IS ENTERED. NO OTHER NUMBERS ARE  
DISPLAYED.

VIDEO OUTPUT

1.5 V pk-pk\* COMPOSITE VIDEO  
75 OHM SOURCE TERMINATED  
\*3.0 V pk-pk UNTERMINATED

CRYSTAL OSCILLATOR

4.52736 MHz

HORIZONTAL RATE

15.720 KHz

VERTICAL RATE

60.000 Hz

Pasqually's Hot Line Number Call Out and Display System uses the latest in microprocessor based digital electronics. It has been designed to be easy to install and use.

Pasqually's system uses T.V. monitors (up to 18) to display the called out numbers so that full coverage of even the most complex layout is possible.

Two (2) display modes are automatically selected during use:

ATTRACT MODE:

A new number is displayed full screen and flashing for 5-6 seconds to attract the attention of customers waiting for their number to be called.

LIST MODE:

Steadily shows all of the numbers that have been called in the order that they were called so that customers will never have to worry about missing their call.

INSTALLATION

I. CONTROL UNIT

The control unit should be located on a counter top or shelf that is handy to the operator and within six (6) feet of an A.C. outlet. (Minimum shelf size is 8½" x 8½").

[CAUTION]

Heat is the natural enemy of any electronics system so do not locate the unit where the average temperature exceeds 95° F (35° C).

Although the unit will perform perfectly with any reasonable length of extension cord, local ordinances may prohibit the use of them.

## II. DISPLAY MONITOR

Each monitor should be located for maximum customer coverage and completely out of unauthorized reach.

A wall mounted shelf or cabinet top is recommended. The minimum shelf size is 16" x 21".

## III. ELECTRICAL CONNECTIONS

The monitor installation must be custom fit to comply with the location requirements for maximum customer coverage.

## IV. A.C. POWER

Once each monitor has been located and secured, A.C. power must be supplied to each one through pins 9 and 10 of the rear Molex plug. Pin 7 should be connected to a good earth ground (water pipe or third wire ground on A.C. outlet) for maximum safety or to conform to local codes.

## V. VIDEO

As many as six (6) monitors may be connected to each of three (3) video outputs but must be connected using a loop-through. Each coax run may be in excess of 100 feet. The video output from the control unit should go directly to the closest monitor on each string and connect into pins 1 and 2 of the rear Molex plug.

( $\frac{1}{2}$  W or  $\frac{1}{4}$  W, CARBON OR ALUMINUM FILM) ...  
1 and 2 to terminate the signal. This will prevent reflections back down the line that can cause ghosts.

## VI. MONITOR ADJUSTMENT

The only adjustments are to set the contrast and brightness on each monitor. Best results are obtained after the system installation is complete and monitor cabinet shelves are in place.

- Enter a few two-digit numbers into the control unit (see Operation Section) and observe each monitor to verify operation.
- Press the reset button to clear out all entries.
- Turn the brightness up on each monitor just to the point where NO BACKGROUND RASTER IS VISABLE.
- Enter several numbers into the control unit.
- Adjust the contrast of each monitor for a bright clear display with no blooming.

The results of the monitor adjustments should produce a clear, crisp and uniform display on all monitors and should have no visible background raster when no numbers are being displayed.

## VII. OPERATION

The keyboard has a touch-activated control. It is unnecessary to "push" the key to enter a number. Simply "touch" the desired digits (ten's digit first, unit's digit second) which will show through the control panel when activated.



A digit is detected as the finger is removed from the keypad. This helps to prevent erroneous entries.

[CAUTION]

The keypad must be touched using a finger only. Pencils, pens and other objects will not activate the keypad and may cause expensive damage.

The digits must be keyed-in before the "enter" button is active. Therefore, a single digit entry must be preceded by a zero.

ATTRACT MODE:

Once two digits have been keyed in and are displayed on the L.E.D. display, the "enter" key will enter the number into the control unit if this is a new number (not already entered). The L.E.D. digits will go out and their decimal points will start flashing. The two digit number will appear on all the monitors as a large flashing display. The decimal points on the L.E.D. unit and the large numbers on the monitor screen will flash for five to six seconds. The keypad is locked out during this period.

LIST MODE:

When the ATTRACT MODE is complete, the new number will enter the display field in the next available location without regard for numerical values. This is the LIST MODE and can hold up to twenty-two (22) digit numbers in a five by four array.

REMOVING A NUMBER:

A two (2) digit number is removed from the display field (list) simply by re-entering it. The numbers in the display field will shift to fill in the vacated location without changing their order of entry.

The "clear" key is used for correcting entries before they are entered.  
It clears the L.E.D. unit only.

RESET:

There is an unmarked switch button on the back of the control unit which resets the microprocessor and erases the memory.

There is a ON-OFF switch located on the back of the control unit.

There is no ON-OFF switch on the monitors. It is not necessary to turn these units off except for servicing at which time they should be unplugged.

It is a good idea to press the reset button on the control unit at the end of the day to prevent numbers from selectively aging the monitor phosphor.

PASQUALLY'S HOT LINE  
TEST PROCEDURE

- 1.0 Verify that connectors are hooked securely to the boards. Power ON, RESET.
  
- 2.0 Check the power supply; ripple free, solid +5V, +12V, Gnd. If not ...
  - 2.1 C2(+) should have 1.5V of ripple above +7.3V (scope).
  - 2.2 Q2 (base at 12.4V, collector at 18V).
  
- 3.0 Hit one key (0 to 9) on the keyboard; the number has to appear on the first LED. A second hit is displayed on the second LED. Check that CLEAR erases the second LEDs. If not ...
  - 3.1 Check communication from keyboard to comparator (A3).
    - a. Connector J1 pin 3 (strobe) stays high when any key remains hit.
    - b. Keyed data is inverted binary, and may be verified. For example: A3 pins 10, 12, 13, and 15 (LSB -- MSB) are low when 0 remains hit, high when no key is hit.
  
  - 3.2 Check clock signals.  
A6 pin 11: 2.25 MHz  
pin 4: 1.5 MHz
  
  - 3.3 Check communication from microprocessor A5 to comparator A3.  
\*A3 pins 1, 9, 11, and 14: [is active in expecting a key hit]  
[go low or high when a key is hit]

3.4 Check communication between microprocessor A5, memory control (B5), RAM (C3) and ROM (C6).

- a. A5 pin 1: Clock 1.5 MHz  
A5 pin 2: Clock 375 KHz  
A5 pins 22 and 23: High  
A5 pins 17,18,19,20, and 21: Are active in any case except 18 which goes low when a key is hit.
- b. C6 pin 18: CE 80 KHz, 3 pulse signal groups (active high)
- c. C3 pin 13: [WE goes low for a very short time (hardly seen with scope  $\approx$  1 NS) when ENTER is hit.]
- d. B5 pin 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, and 24: [Are active in expecting a key hit.]  
  
B5 pin 8 and 9: Active
- e. Check connections between these four (4) chips.

3.5 Check communication between microprocessor A5 and LEDs.

- \*A3 pin 4: Goes high when the screen is not flashing.
- A3 pins 1, 2, 6, 7: Are low when two 0's are hit.
- B3 pins 1, 2, 6, 7: Are high after clear.

\*A segment is ON with a 3.0 V input and OFF with a 3.7 V input  
\*When the 2 LEDs are displaying, D2 pin 13 is low to enable an ENTER.

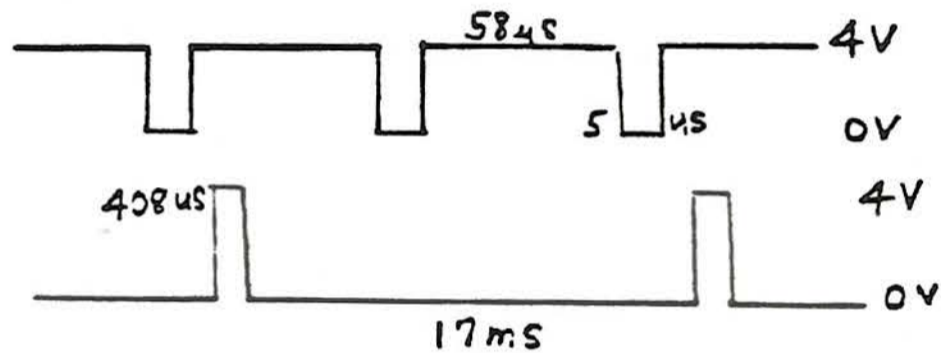
4.0 At this point, the LEDs have to display a good number and be erased correctly.

Now display two (2) numbers on the LEDs and push ENTER. The two (2) numbers have to flash on the screen for five (5) seconds. Then they are added to the numbers already on the screen. If not ...

4.1 D2 pin 13: Has to be low to enable an ENTER

4.2 Check the vertical/horizontal sync generator.

a. E6 pin 15: Delivers the horizontal sync pulses 16 KHz



b. E1 pin 13: Delivers the vertical sync pulses 60 Hz.

4.3 Check the multiplexers D4, D5, D6, and D7

a. D7 pin 1: (select) is high when the screen doesn't flash.

b. D4 pin 1: (select) is active at 60 Hz. Goes low when the screen doesn't flash.

c. The 2 IN to 1 OUT configuration are pins 2, 3/4; 5, 6/7; 10, 11/9; 13, 14/12.

4.4 Check the character generator signals.

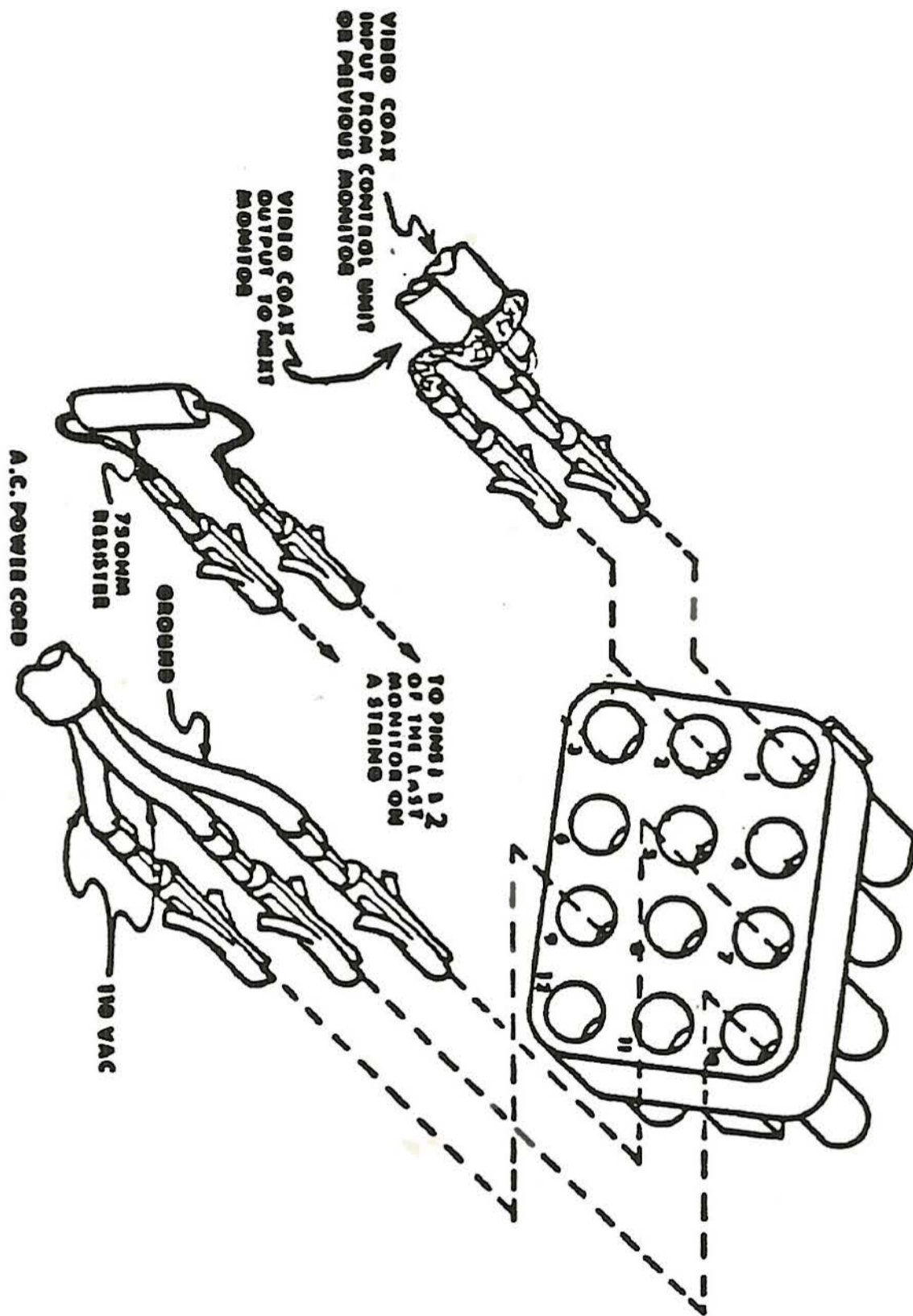
a. D1 pin 6: 4 KHz active signal (2 KHz) when screen flashes.

D1 pin 9: 2.25 KHz active signal (562 KHz) when screen flashes.

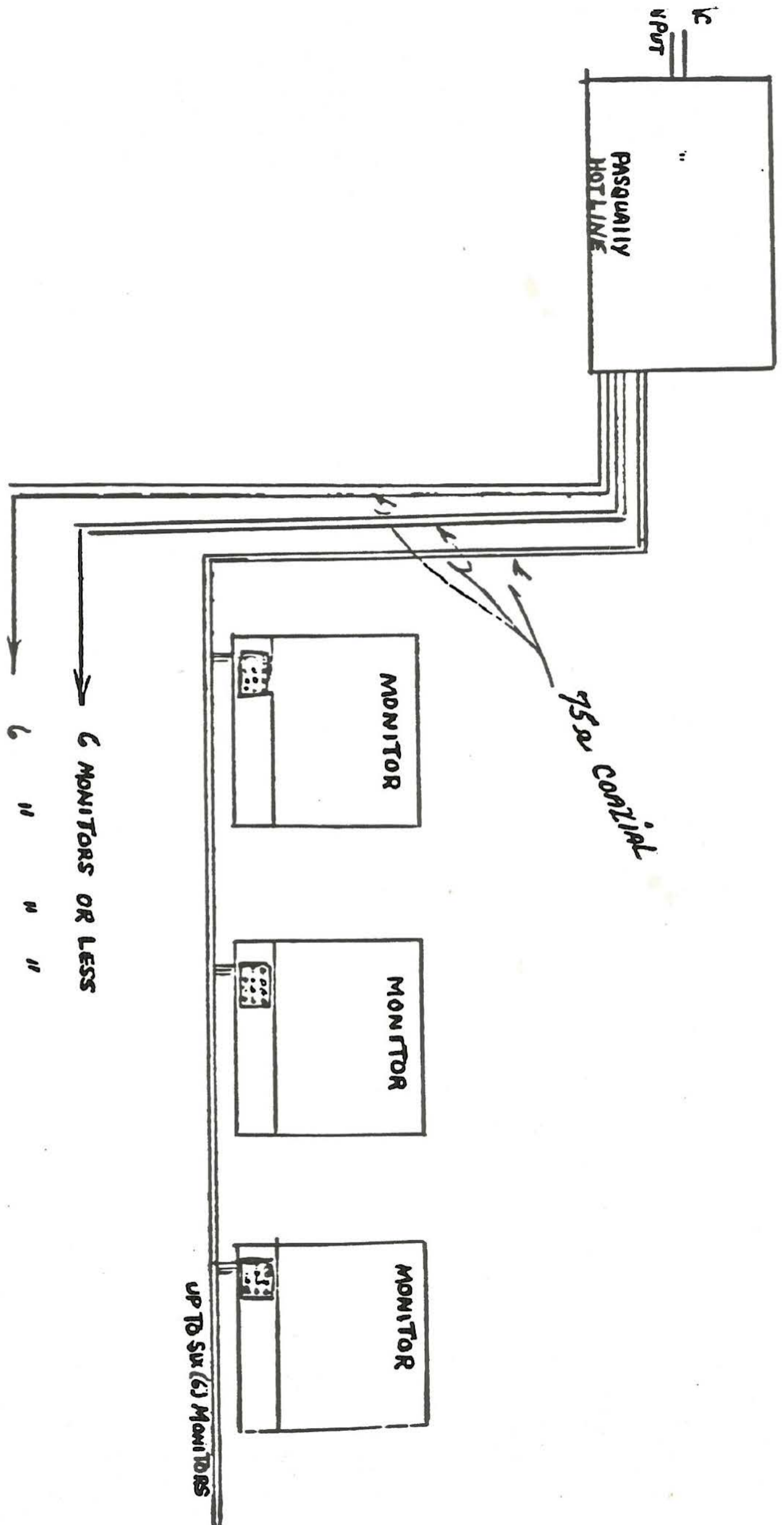
D1 pin 5: (clear)  4 negative pulses 60 Hz signal (1 pulse)

D1 pin 10: (load) negative pulses  16 KHz.

- b. E3 pin 3: 16 KHz pulse train signal when screen flashes.  
E3 pin 4: 60 Hz active signal high when screen flashes.  
E3 pin 5: 60 Hz active signal high when screen flashes.
  
- c. C3 pins 19, 20, 21, 22, 23, 24: 16 KHz active signal (go high or low when a key is hit or the screen flashes).

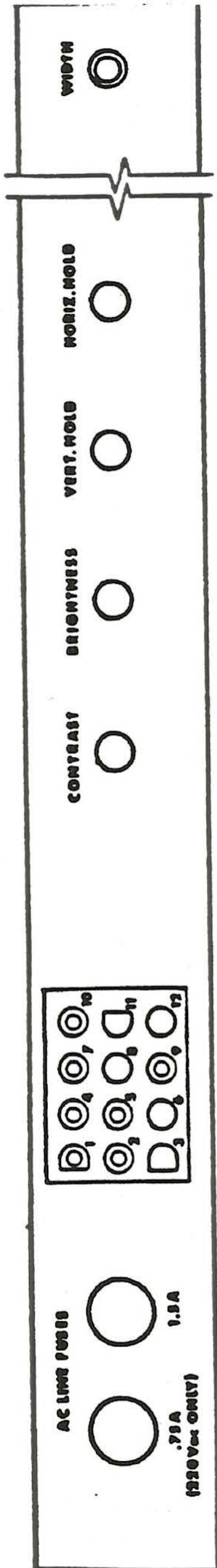


**MONITOR CONNECTOR**



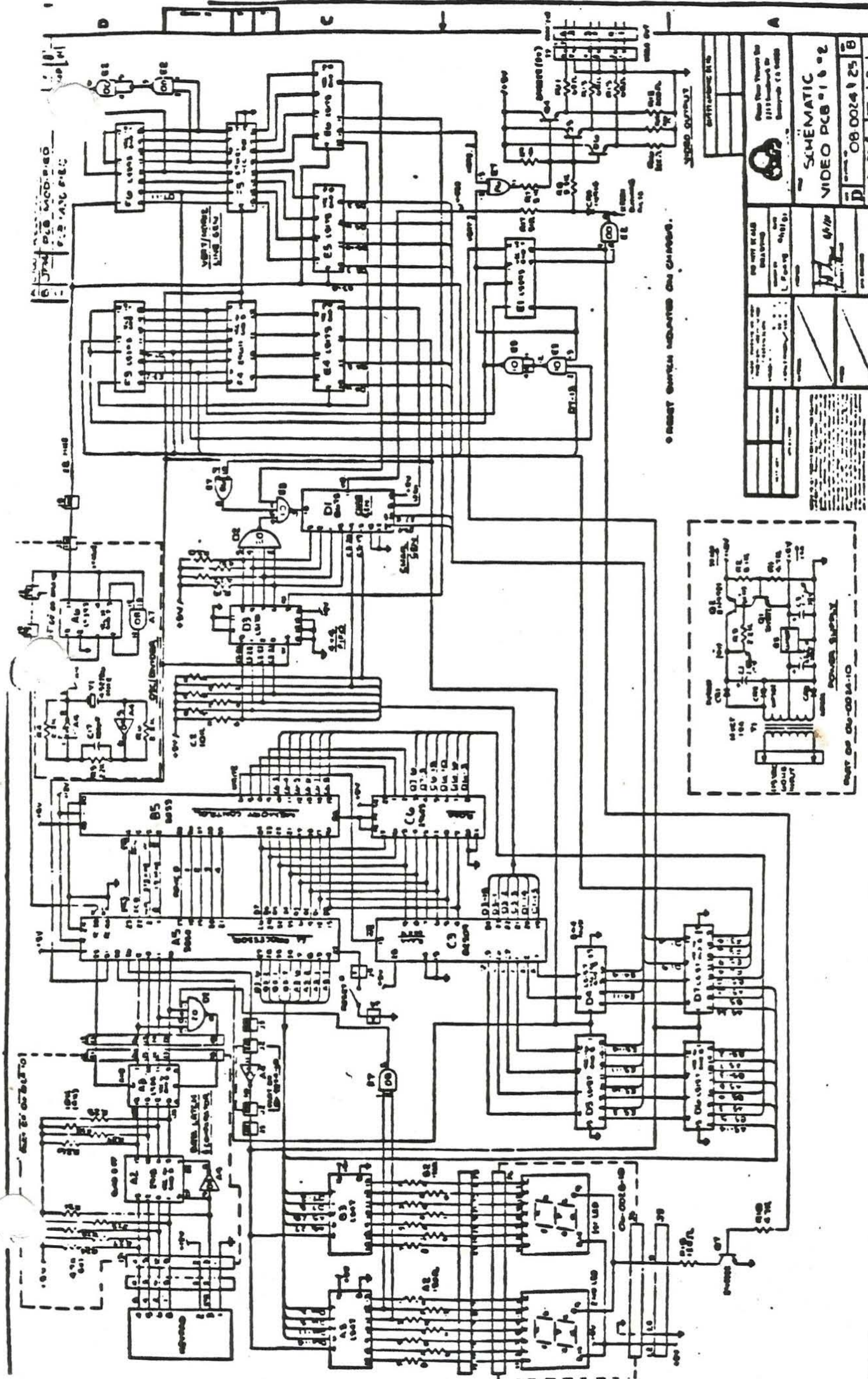
CENTER CONDUCTOR PIN#1  
 SHIELD PIN#2 ON MONITOR  
 AS PER DWG NO.#1



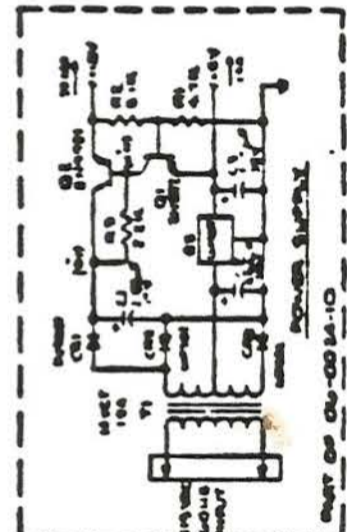


POWER & SIGNAL PLUG  
 Pin 1 VIDEO INPUT  
 2 VIDEO INPUT COMMON  
 3 VIDEO OUTPUT  
 4 VIDEO OUTPUT COMMON } LOOP-THROUGH  
 5 CHASSIS GROUND  
 6 }  
 7 } AC LINE INPUT  
 8 }  
 9 }  
 10 }

**DISPLAY MONITOR CONTROL**



RESISTOR VALUES INDICATED ON CHANGES.



**A**  
 VIDEO PCB 16-2  
 SCHEMATIC  
 52  
 08 0024 25 B



# Memo

Date: AUGUST 23, 1982

CC: JOHN IMPSON  
PHIL STEWART  
CHARLES CORDONNIER

To: DALE BENJAMIN

From: CARL JORGENSEN

A handwritten signature in cursive script, appearing to read "CJ", written over the name "CARL JORGENSEN".

Subject: VIDEO CALLOUT-REVISED SOFTWARE

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The Video Callout System (A.K.A. Pasqually's Hot Line) has been plagued with problems since day one!

A majority of these problems were solved with the release of the REV B level PCB February of this year. However, a couple of software bugs are still present in the system.

These bugs are:

1. An incorrect number occasionally being displayed on the screen. Sometimes only the large number is incorrect, and other times both a small and large number are incorrect.
2. When the screen is completely filled, and an operator attempts to enter the 21st two digit number onto the screen, the screen goes completely blank, losing all numbers from memory (as if reset was depressed).

I am pleased to announce that these software bugs have been solved. Thanks to the patient efforts of our Exchange Student from France, Charles E. Cordonnier (C.E.C.), new software is now available for the Video Callout System.

All that is required to update an existing system, is to replace one PROM. Remove PROM PN 015-0008-01 REV A from "C6" location on the 006-0025 PCB, and replace it with PROM PN 015-0008-01 REV B.

I trust that Field Service will make this update available to all stores that currently have the system. If any assistance is required in obtaining copies of the "B" level PROM, please feel free to contact me.

As of August 20, 1982, all Video Callout Systems currently in production will include "B" level PROMS, as well as all future production.

Thank You.

CJ/TS

# PASQUALLY HOT LINE GUIDE

(WITH ADDITIONAL HOT LINE MEMO)

Date of Origin: 1982  
Archived: 12-16-23  
Submission by Pikalove  
Version 1.0

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