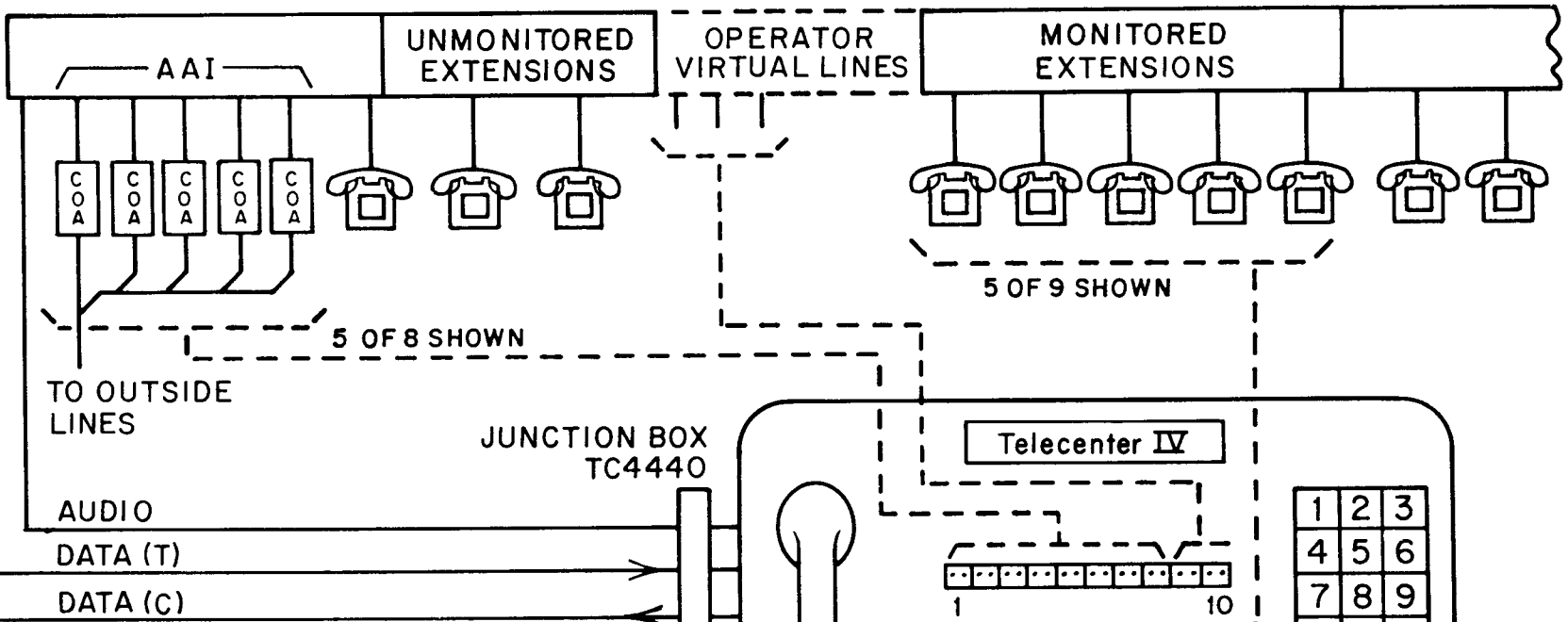


CPU
TC4410

EXPANSION MODULES (LLM)

INTERFACE
TC4420



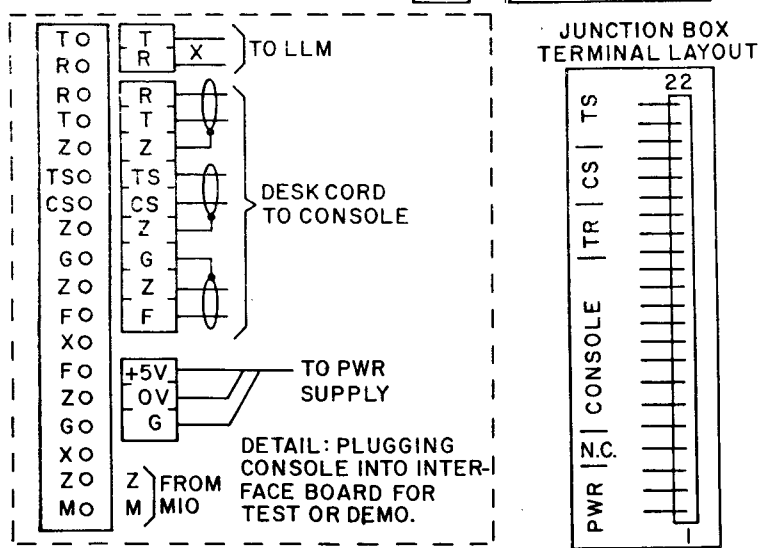
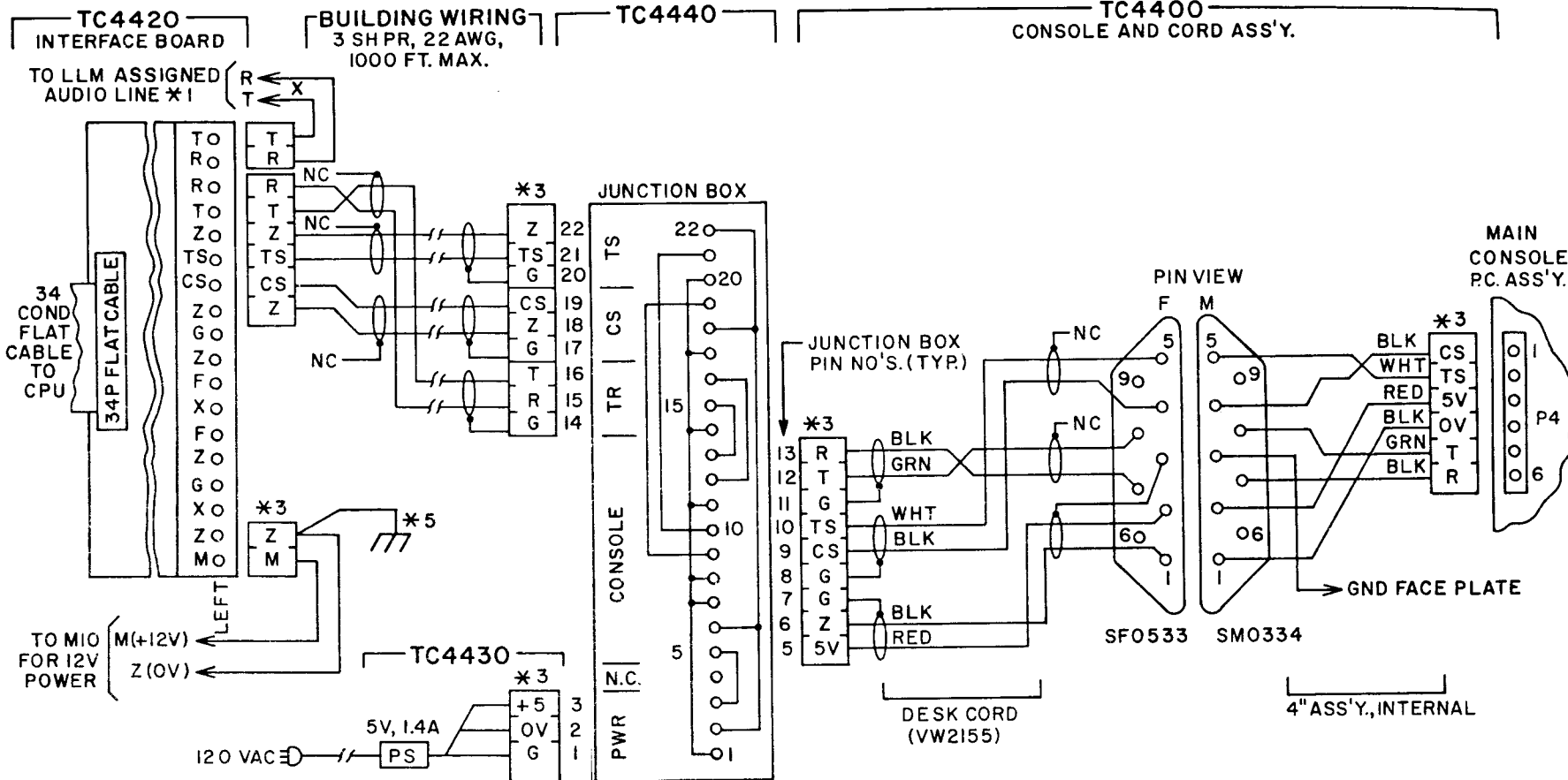
DATA (T): 1200 BAUD, ASCII,
LED & DISPLAY CONTROL
MESSAGES.

DATA (C): 1200 BAUD, ASCII,
KEYSTROKE MESSAGES.

AUDIO: 600 Ω BALANCED, NO D.C. OR RING.

NOTE: DOTTED LINES SHOW LOGICAL CONNECTIONS, NOT WIRING.
THE QUANTITY OF OUTSIDE, OPERATOR, AND MONITORED EXT.
LINES MAY INDIVIDUALLY VARY. LIMIT = 20 TOTAL.

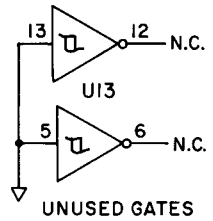
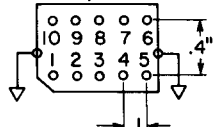
TCIV CONSOLE
KM0838



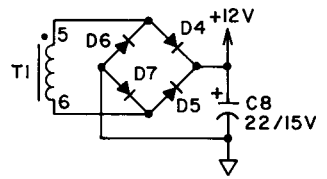
- NOTES:
1. CONNECT AUDIO PAIR TO ASSIGNED LLM (TC4150) LINE. REMOVE LINE HYBRID (UI) FROM THAT LLM CIRCUIT.
 2. 64K CPU REQUIRED, TC4410.
 3. ALL CONNECTORS SHOWN ARE .045 SQ. X .156 SPACING, EXCEPT AS NOTED. DO NOT EXTEND LENGTH OF PS. CORD.
 4. CONSOLE MAY BE PLACED IN STAND ALONE DIAGNOSTIC MODE BY POWERING UP WHILE TEMPORARILY HOLDING UPPER LEFT DIRECT SELECT P.B. IN. PRESSING P.B.'S WILL THEN AFFECT LED'S AND ALPHA DISPLAY. GRAY P.B.'S ARE USED TO TURN ALL LED'S OFF.
 5. GROUND LUG ON TC4001 CHASSIS DIRECTLY BENEATH TC4420 CONNECTOR.

TC4
CONSOLE
KM0812C

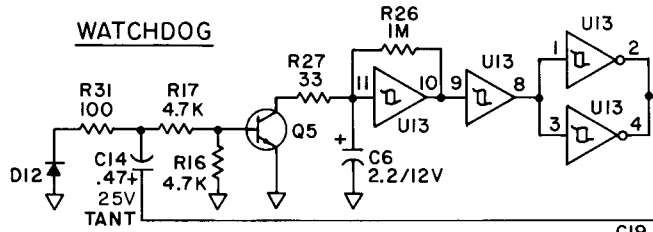
.6 INCHES BETWEEN MOUNTING HOLES OF SHIELD



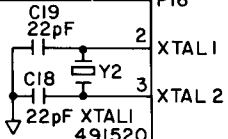
UNUSED GATES



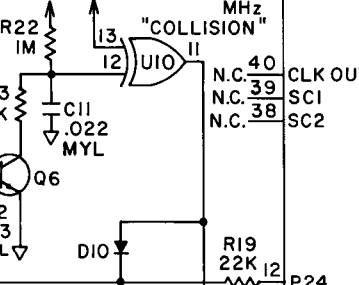
WATCHDOG



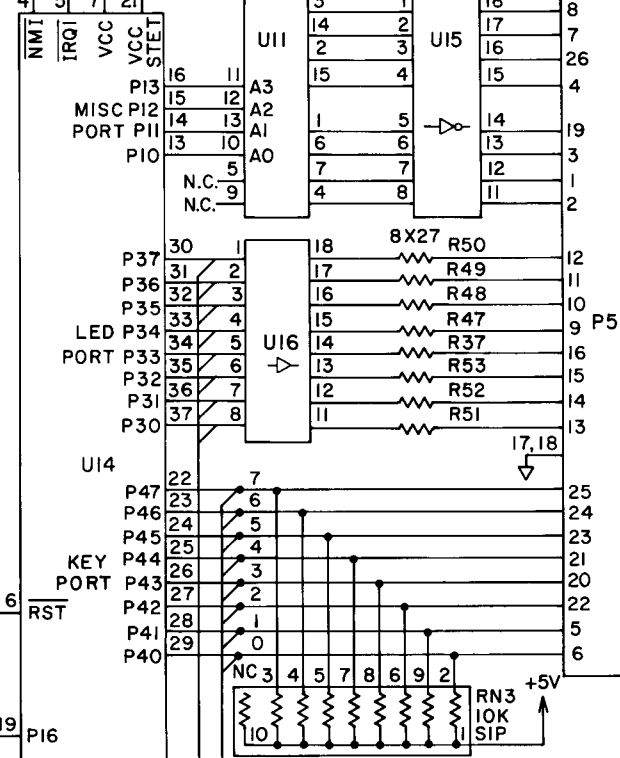
CRYSTAL



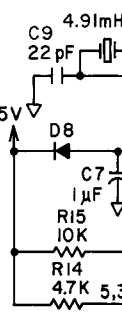
"COLLISION"



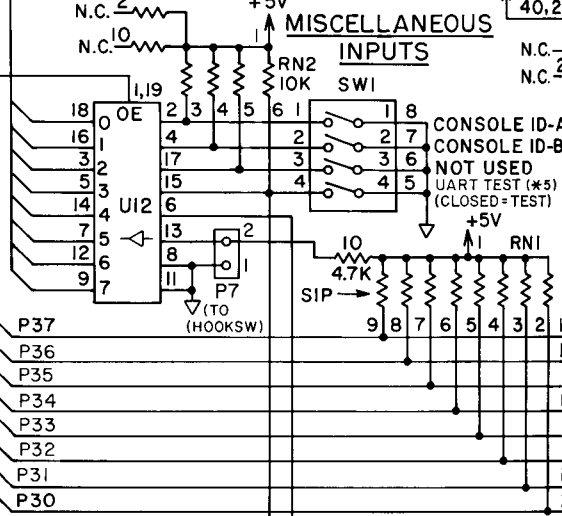
KEYBOARD INTERFACE



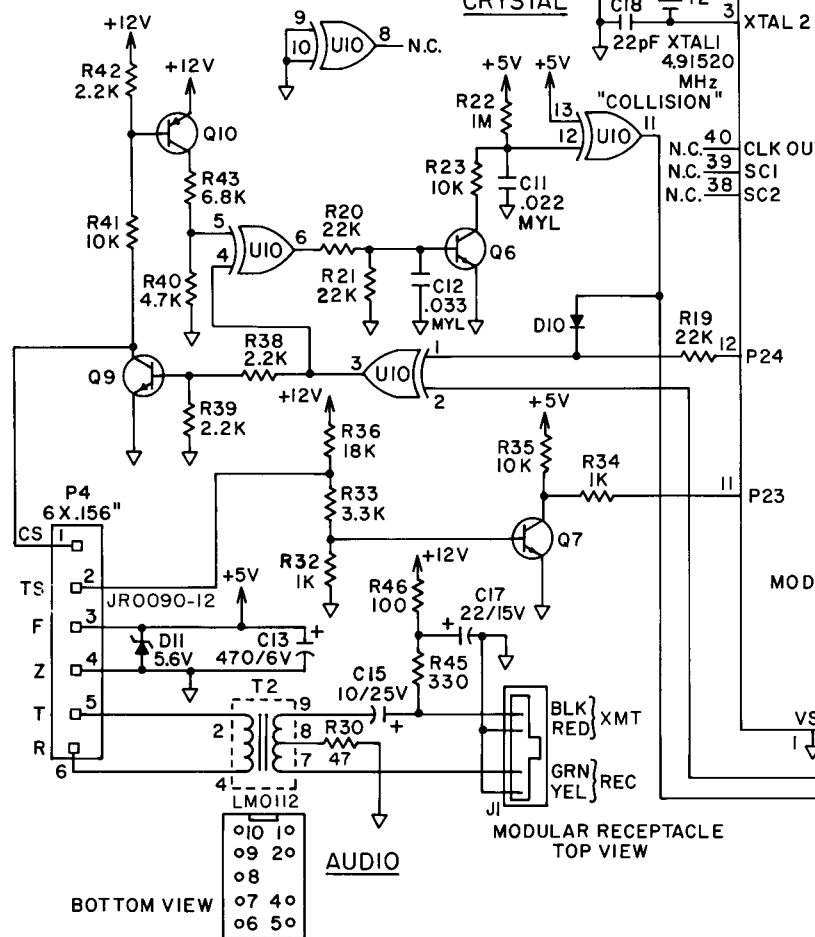
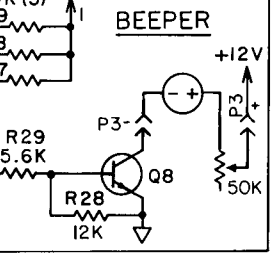
KEYBOARD CONNECTOR 26 PIN



MISCELLANEOUS INPUTS



BEEPER

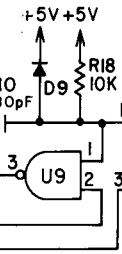


BOTTOM VIEW

MODULAR RECEPTACLE TOP VIEW

AUDIO

CONSOLE ID-A
CONSOLE ID-B
NOT USED
UART TEST (*5)
(CLOSED=TEST)



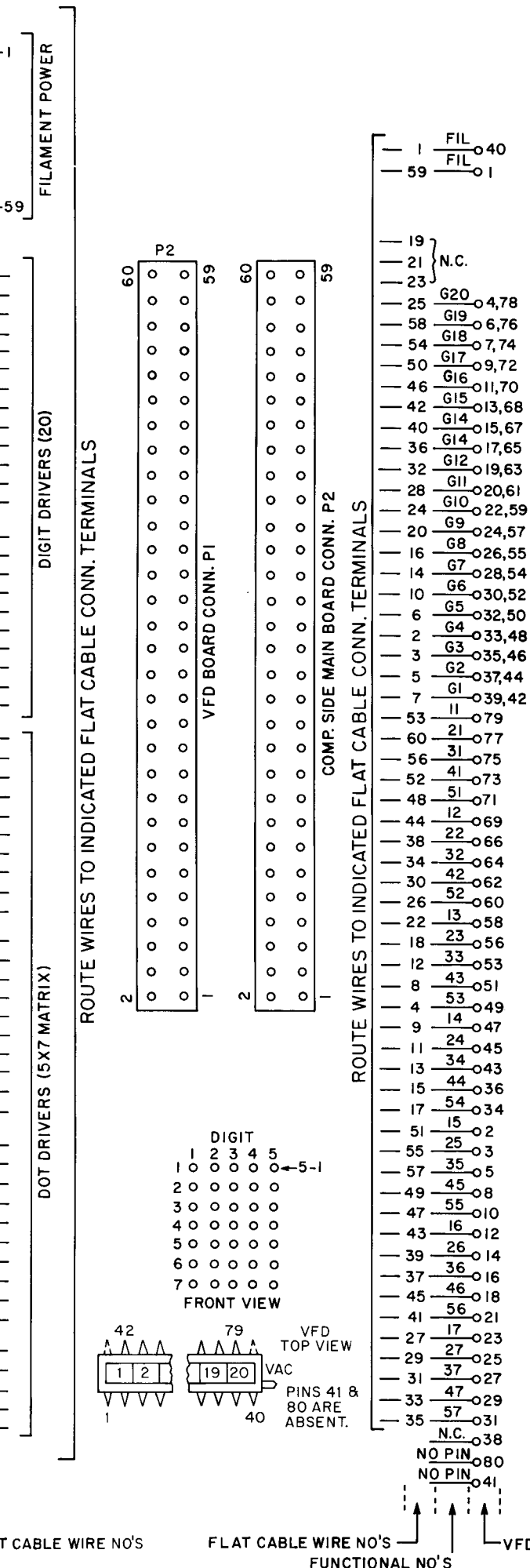
DRG. NO.		KC1541		G	
DATE		7-30-87			
ISS.		CHANGE			
A	IN COLUMN "TYPE" ADDED 74 TO HCOO, HC86, HC244 10-28-87				
B	ADDED CHECKSUM VER. 4. C1 & 9 WERE 20pF. C6 WAS 125V. C13 WAS 47μF. R9 WAS 5.7K. 2-18-88				
C	CHECKSUM WAS VER4: E874 3-2-88				
D	U14 WAS EDO14I. R30 WAS 270. LMO112 WAS LMO10I. 3-21-89				
E	Q8 WAS MPS6515. R28 WAS 470. R29 WAS 1.2K. ADDED P7. 8-3-89				
F	ADDED 50K POT. TO BEEPER. ADDED CHECKSUM VER 10. 10-31-89				
G	DELETED VER. 6 & 10 CHECKSUMS. 1-26-90				

COMPONENT IDENTIFICATION	
COMPONENT	TYPE
Q1	2N6728
Q2	2N6115
Q3,Q4	2N6715
Q5,6,7,9	MPS6515
Q8	MPSA14
Q10	MPS6519
DI,D4-D7	IN4002
D2,D3,D8,D9,D10,D12	IN914
D11	JR0090-12
T1	LPO446
T2	LM0112

IC NO.	TYPE	EC NO.	DESCRIPTION	OV	+5V
U1,U2 U4-U7	4810	0256	DISPLAY DRIVER	5	6
U3	LSI65	0257	8 BIT SER TO PAR	8,10 15	16
U8	8741	EDO140	MICROCONTROLLER	20	40
U9	74HCOO	0170	4 X NAND	7	14
U10	74HC86	0258	4 X EXOR	7	14
U11	4028	0051	BCD TO DEC DECODER	8	16
U12	74HC244	0192	BUFFER	10	20
U13	74HC14	0264	SCHMITT INVERTER	7	14
U14	68701	ED0258	MICROCONTROLLER	1	4,5, 7,21
U15	2813	0259	SINK DRIVER	9	10
U16	2982	0076	DRIVER	10	9

NOTES:

- UNLESS OTHERWISE SPECIFIED, RESISTANCE IS RATED IN OHMS ±5%. RESISTORS ARE 1/4 WATT.
- CAPACITANCE IS RATED IN MICROFARADS.
pF = PICO FARAD
- ∇ DENOTES CONNECTION TO CIRCUIT COMMON.
- PINS OF LPO446 ARE NUMBERED OPPOSITE DIRECTION AS FOR IC'S. PIN 1 IS INDICATED BY WHITE DOT ON XFMR. SHIELD IS CONNECTED TO GROUND.
- DIAGNOSTIC FUNCTIONS:
 - POWER UP WITH TOP LEFT P.B. ON FOR STANDALONE DIAGNOSTICS. P.B.'S CYCLE LED'S & DISPLAY. POWER DOWN TO RESET.
 - CLOSE SW1, CONTACT 4 TO SET DATA I/O POLARITY TO SAME AS RS232 INSTEAD OF TC4.



TCIV
 CONSOLE
 RAULAND-BORG CORP.
 SKOKIE, ILL.
 MADE IN U.S.A.
 KC1541 G