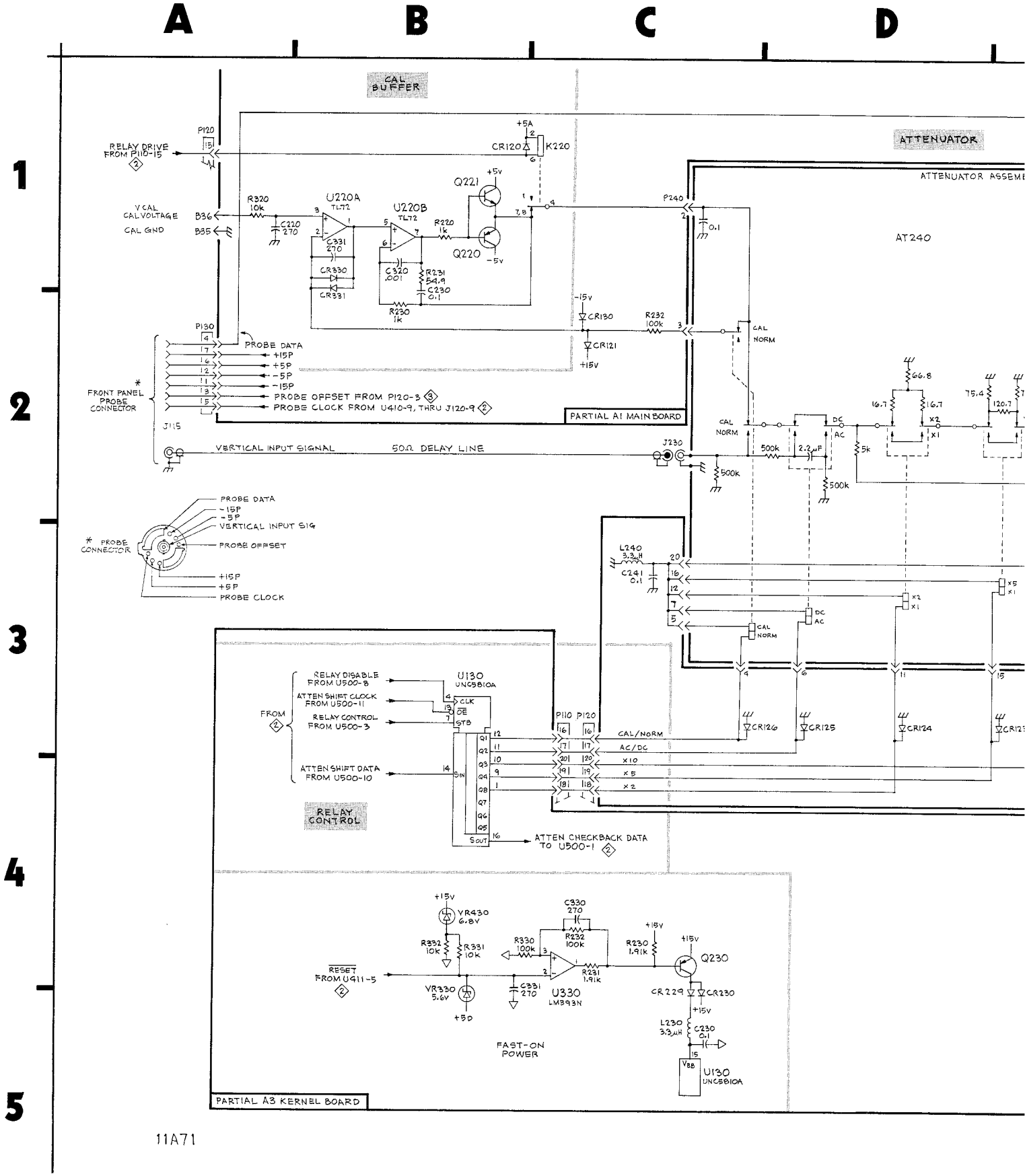
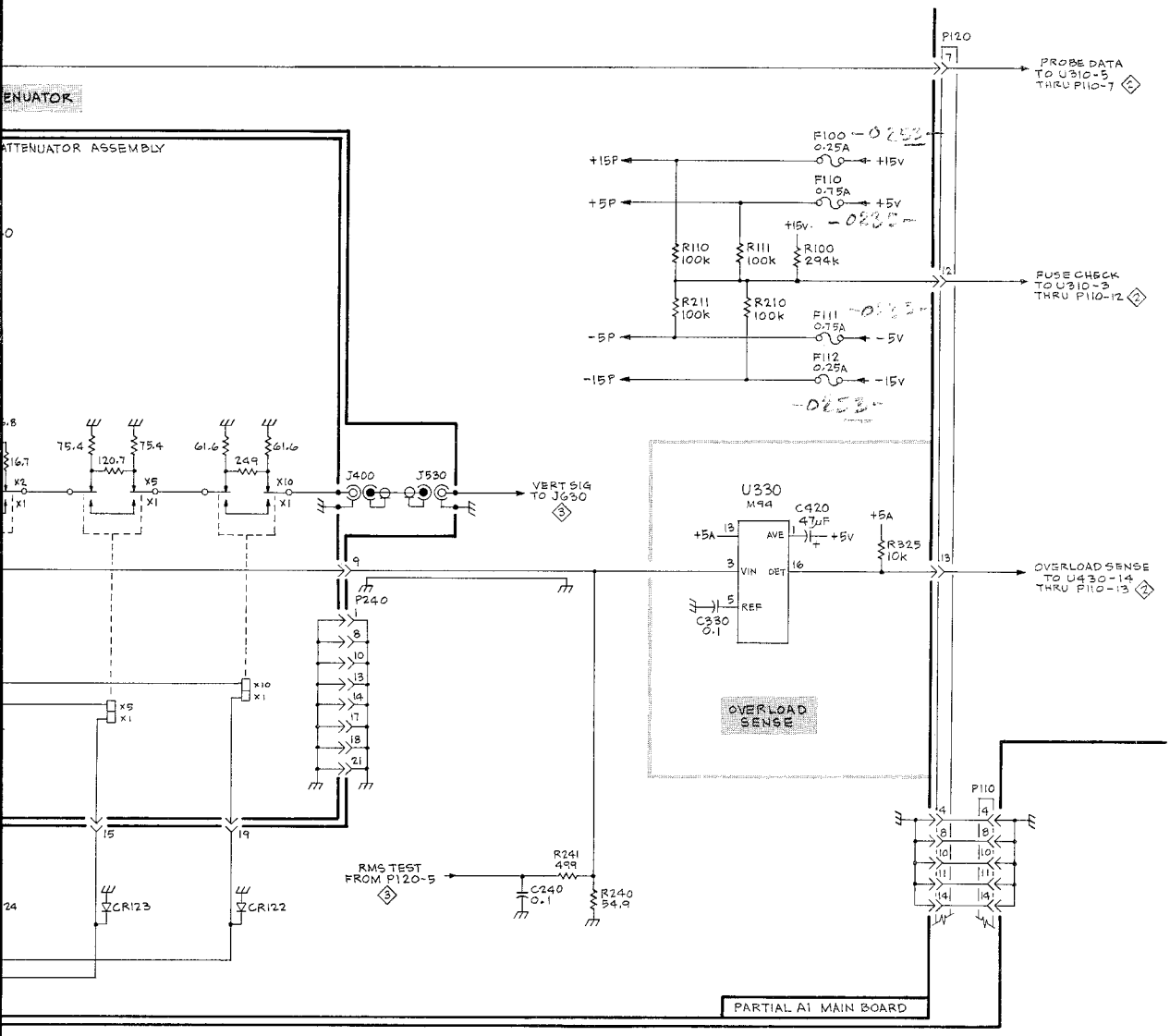
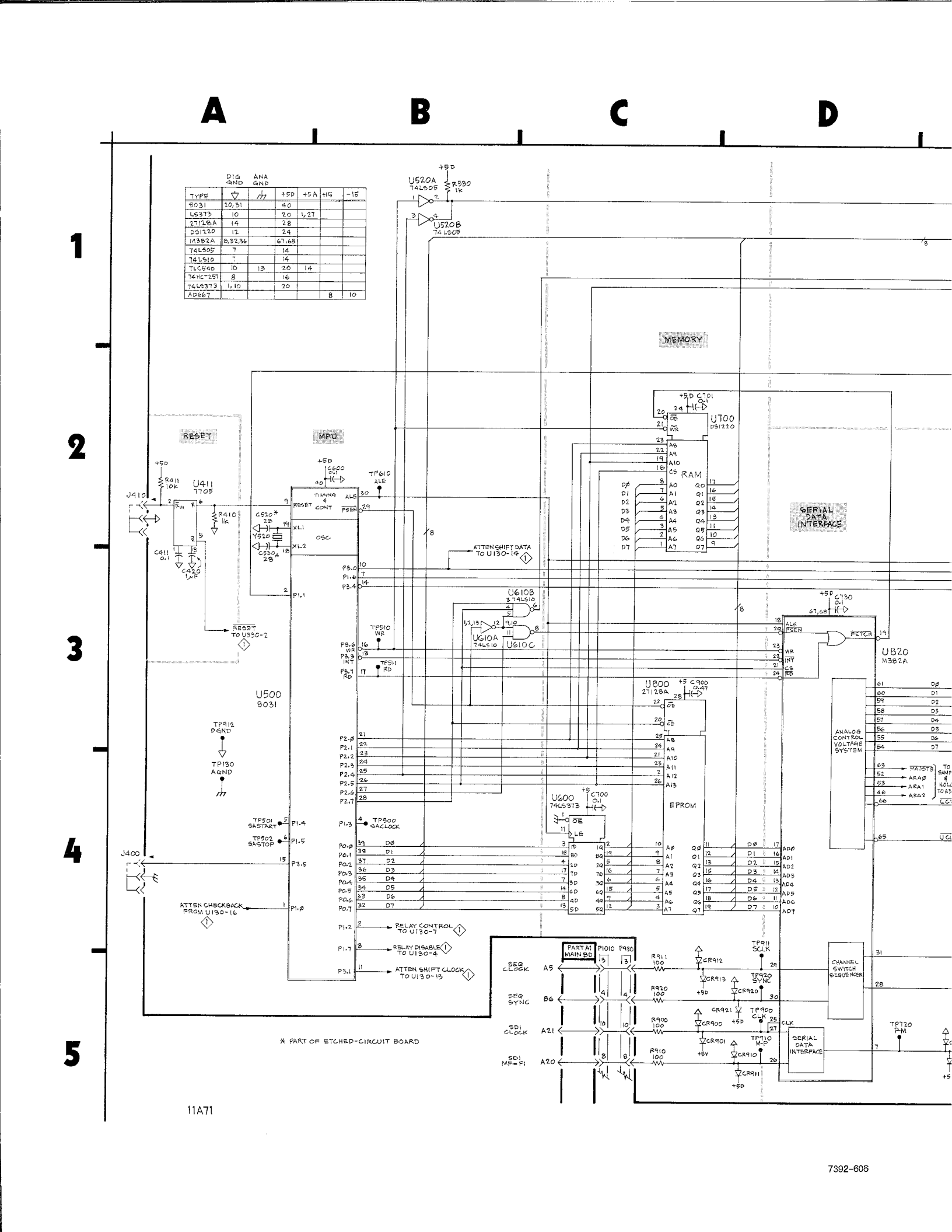

A
B
C
D
1
2
3
4
5
CAL BUFFER
ATTENUATOR
ATTENUATOR ASSEME
AT240
PARTIAL A1 MAIN BOARD
PARTIAL A3 KERNEL BOARD
RELAY DRIVE FROM P110-15
V CAL CAL VOLTAGE
CAL GND
PROBE DATA
+15P
+5P
-5P
-15P
PROBE OFFSET FROM P120-3
PROBE CLOCK FROM U410-9, THRU J120-9
FRONT PANEL PROBE CONNECTOR
VERTICAL INPUT SIGNAL
50Ω DELAY LINE
PROBE CONNECTOR
VERTICAL INPUT SIG
PROBE OFFSET
RELAY DISABLE FROM U500-8
ATTEN SHIFT CLOCK FROM U500-11
RELAY CONTROL FROM U500-3
ATTEN SHIFT DATA FROM U500-10
RELAY CONTROL
ATTEN CHECKBACK DATA TO U500-1
CAL/NORM
AC/DC
x10
x5
x2
RESET FROM U411-5
FAST-ON POWER
U130 UNC5810A
U330 LM393N
Q230
Q220
Q221
CR230
CR229
CR126
CR125
CR124
CR123

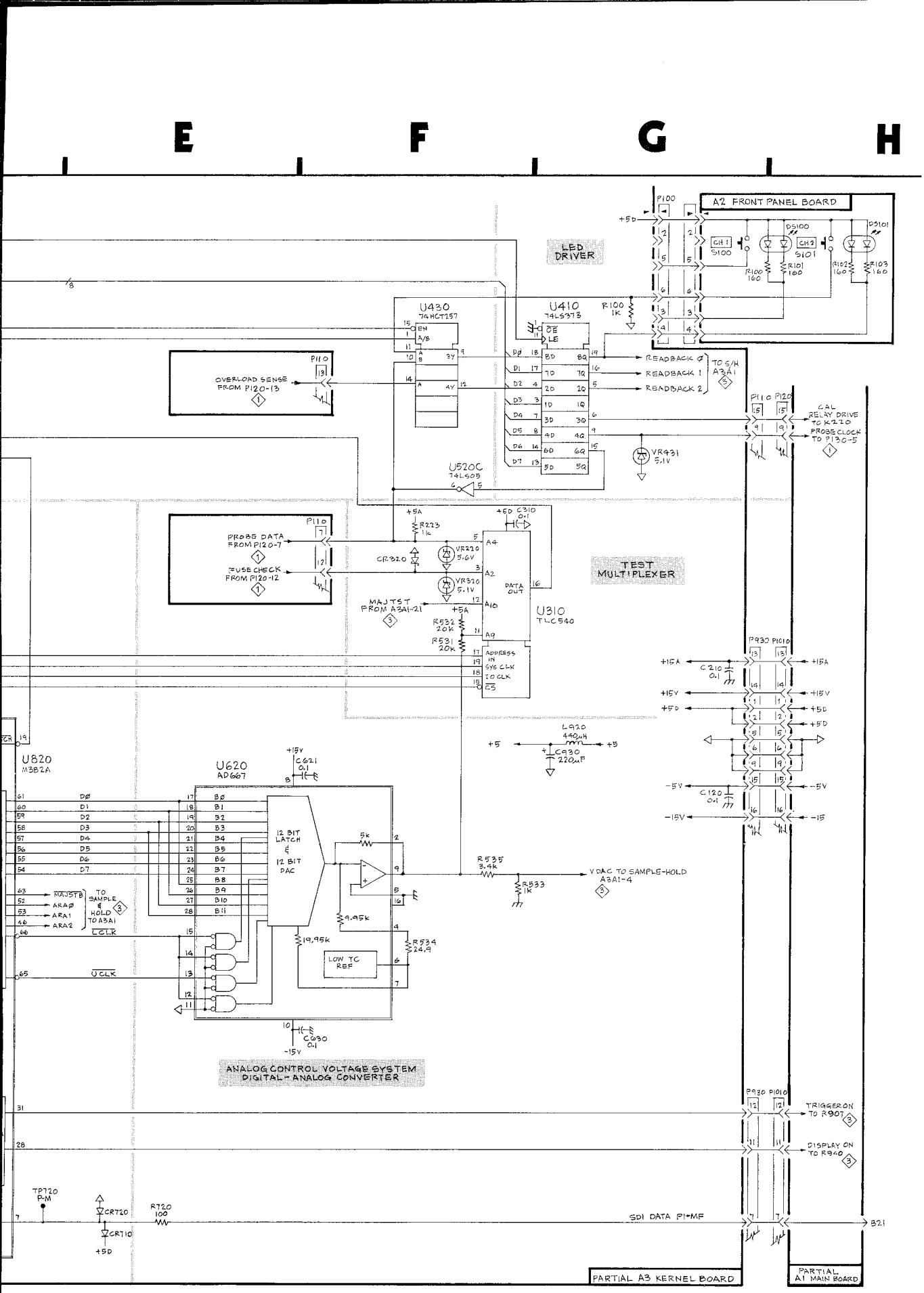
11A71

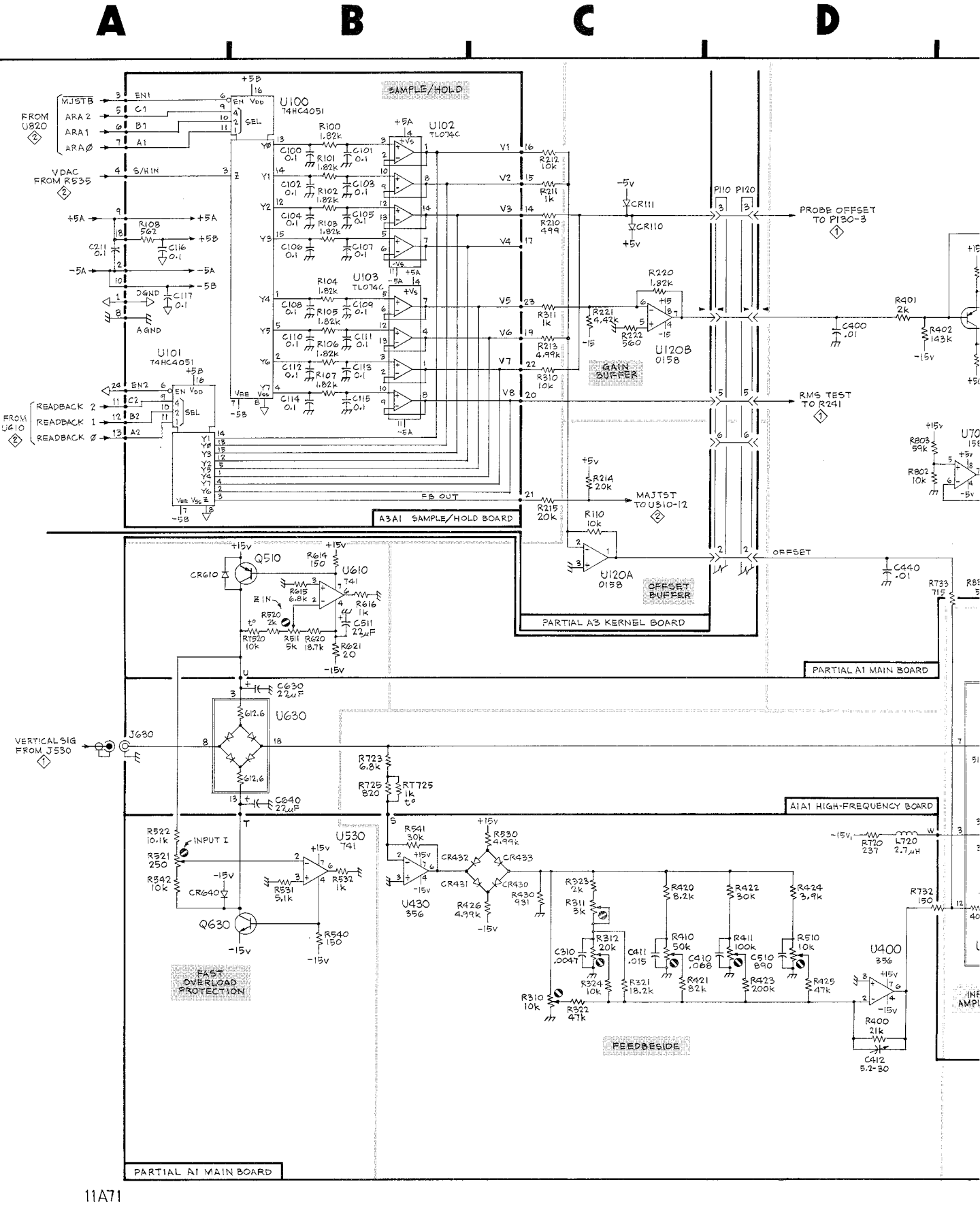


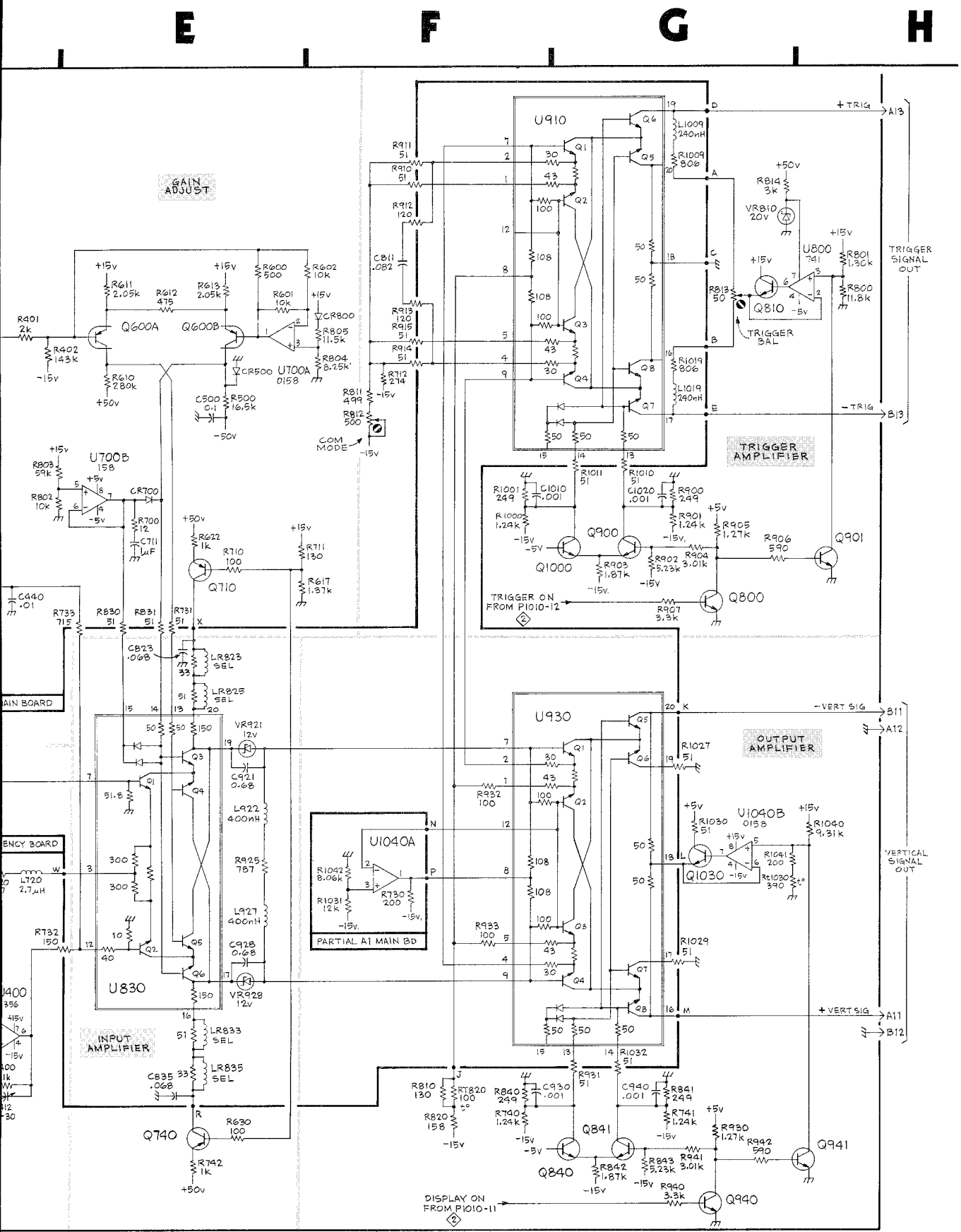
IC TYPE	+5A	-5A	+5D	+15V	-15V	▽D	⫽A
5810A			6				5
393N				8		4,5,6	
TL72				8	4		
M94	2	4					6,7,8,9, 10,11,12, 13,15

ATTENUATOR ①


A
B
C
D
1
2
3
4
5
DIG GND
ANA GND
TYPE
+5D
+5A
+15
-15
8031
LS373
27128A
DS1220
M382A
74LS05
74LS08
74LS10
74LS373
AD667
U520A
U520B
R930 1K
MEMORY
U700
DS1220
RAM
SERIAL DATA INTERFACE
RESET
MPU
U411
T705
R411 10K
R410 1K
C411 0.1
C420 1μF
Y520
C530 28
C520 28
C600 0.1
TP610 ALE
TIMING & CONT
OSC
RESET TO U330-2
ATTEN SHIFT DATA TO U130-14
U610B
U610A
U610C
TP510 WR
TP511 RD
U500
8031
U820
M382A
FETCH
U800
27128A
EPROM
C900 0.47
C730 0.1
C701 0.1
C700 0.1
U600
74LS373
ANALOG CONTROL VOLTAGE SYSTEM
MAJSTB
ARAØ
ARA1
ARA2
TO SAMP & HOLD
TP912 PGND
TP130 AGND
TP501 SASTART
TP502 SASTOP
TP500 SACLOCK
J400
J410
ATTEN CHECKBACK FROM U130-16
RELAY CONTROL TO U130-7
RELAY DISABLE TO U130-4
ATTEN SHIFT CLOCK TO U130-13
PART A1 MAIN BD
P1010
P930
SEQ CLOCK
SEQ SYNC
SDI CLOCK
SDI MP→PI
A5
B6
A21
A20
R911 100
R920 100
R900 100
R910 100
CR912
CR913
CR920
CR921
CR900
CR901
CR910
CR911
TP911 SCLK
TP920 SYNC
TP900 CLK
TP910 MP
CHANNEL SWITCH SEQUENCER
SERIAL DATA INTERFACE
TP720 PM
* PART OF ETCHED-CIRCUIT BOARD
11A71
7392-606


E
F
G
H
A2 FRONT PANEL BOARD
P100
+5D
DS100
DS101
CH 1 S100
CH 2 S101
R100 160
R101 160
R102 160
R103 160
LED DRIVER
R100 1K
U430 74HCT257
U410 74LS373
READBACK 0
READBACK 1
READBACK 2
TO S/H A3A1
P110
OVERLOAD SENSE FROM P120-13
P110 P120
CAL RELAY DRIVE TO K220
PROBE CLOCK TO P130-5
VR431 5.1V
U520C 74LS03
PROBE DATA FROM P120-7
FUSE CHECK FROM P120-12
+5A
R223 1K
C310 0.1
CR320
VR220 5.6V
VR310 5.1V
DATA OUT
TEST MULTIPLEXER
MAJ TST FROM A3A1-21
R532 20K
R531 20K
U310 TLC540
ADDRESS IN
SYS CLK
I/O CLK
CS
P930 P1010
+15A
+15V
+5D
-5V
-15V
C210 0.1
C120 0.1
L920 440uH
C930 220uF
U820 M382A
U620 AD667
C621 0.1
12 BIT LATCH & 12 BIT DAC
5k
9.95k
19.95k
R534 24.9
LOW TC REF
C630 0.1
R535 3.4k
R533 1K
VDAC TO SAMPLE-HOLD A3A1-4
MAJSTB
ARA0
ARA1
ARA2
TO SAMPLE & HOLD TO A3A1
LCLK
UCLK
ANALOG CONTROL VOLTAGE SYSTEM
DIGITAL-ANALOG CONVERTER
TRIGGER ON TO R907
DISPLAY ON TO R940
TP720 P-M
CR720
CR710
RT20 100
SDI DATA PI+MF
A21
PARTIAL A3 KERNEL BOARD
PARTIAL A1 MAIN BOARD
KERNEL 2


A
B
C
D
1
2
3
4
5
SAMPLE/HOLD
U100
74HC4051
U101
74HC4051
U102
TL074C
U103
TL074C
FROM U820
MJSTB
ARA 2
ARA 1
ARAØ
VDAC FROM R535
S/HIN
FROM U610
READBACK 2
READBACK 1
READBACK Ø
AGND
DGND
R100 1.82k
R101 1.82k
R102 1.82k
R103 1.82k
R104 1.82k
R105 1.82k
R106 1.82k
R107 1.82k
R108 562
R210 499
R211 1k
R212 10k
R213 4.99k
R214 20k
R215 20k
R220 1.82k
R221 4.42k
R222 560
R310 10k
R311 1k
R110 10k
CR110
CR111
PROBE OFFSET TO P130-3
RMS TEST TO R241
MAJTST TO U310-12
FB OUT
GAIN BUFFER
U120B 0158
U120A 0158
OFFSET BUFFER
A3A1 SAMPLE/HOLD BOARD
PARTIAL A3 KERNEL BOARD
R401 2k
R402 143k
C400 .01
C440 .01
OFFSET
PARTIAL A1 MAIN BOARD
Q510
CR610
U610
741
R614 150
R615 6.8k
R616 1k
R520 2k
RT520 10k
R511 5k
R620 18.7k
C511 22µF
R621 20
C630 22µF
C640 22µF
U630
612.6
VERTICAL SIG FROM J530
J630
R723 6.8k
R725 820
RT725 1k
A1A1 HIGH-FREQUENCY BOARD
R522 10.1k
INPUT I
R521 250
R542 10k
U530
741
R531 5.1k
R532 1k
CR640
Q630
R540 150
FAST OVERLOAD PROTECTION
R541 30k
R530 4.99k
CR432
CR433
CR431
CR430
R430 931
R426 4.99k
U430
356
R323 2k
R311 3k
R312 20k
R324 10k
C310 .0047
R310 10k
R322 47k
R420 8.2k
R410 50k
C411 .015
R321 18.2k
R421 82k
R422 30K
R411 100k
C410 .068
R423 200k
R424 3.9k
C510 890
R510 10k
R425 47k
U400
356
R400 21k
C412 5.2-30
R720 237
L720 2.7µH
R732 150
FEEDBESIDE
PARTIAL A1 MAIN BOARD
11A71


E
F
G
H
GAIN ADJUST
U910
U700A 0158
U700B 158
U800 741
U1040A
U1040B 0158
Q600A
Q600B
Q810
Q1000
Q900
Q901
Q800
Q710
Q740
Q840
Q841
Q940
Q941
U830
U930
Q1030
TRIGGER AMPLIFIER
OUTPUT AMPLIFIER
INPUT AMPLIFIER
PARTIAL A1 MAIN BD
TRIGGER BAL
COM MODE
+TRIG
-TRIG
TRIGGER SIGNAL OUT
VERTICAL SIGNAL OUT
-VERT SIG
+VERT SIG
TRIGGER ON FROM P1010-12
DISPLAY ON FROM P1010-11
AIN BOARD
ENCY BOARD
AMPLIFIER 3

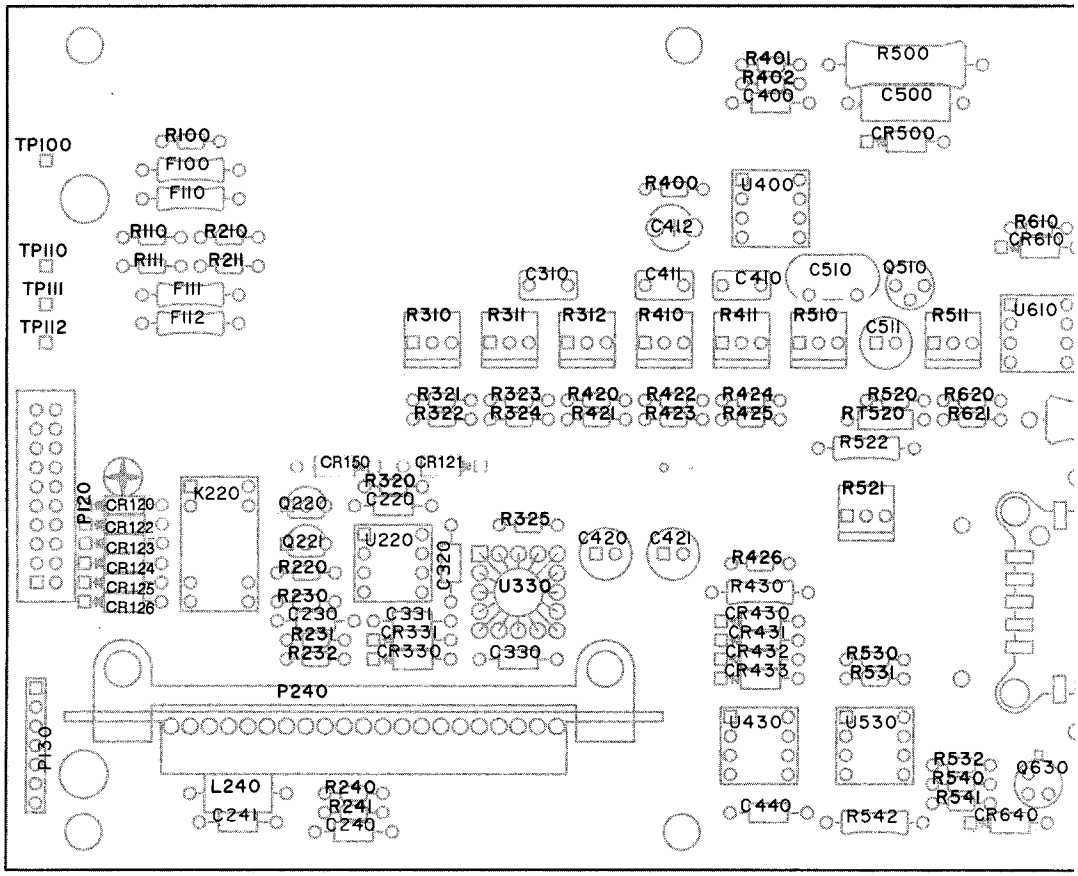
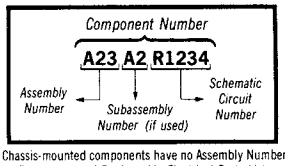


Figure 6-3. *A1–Main Circ*

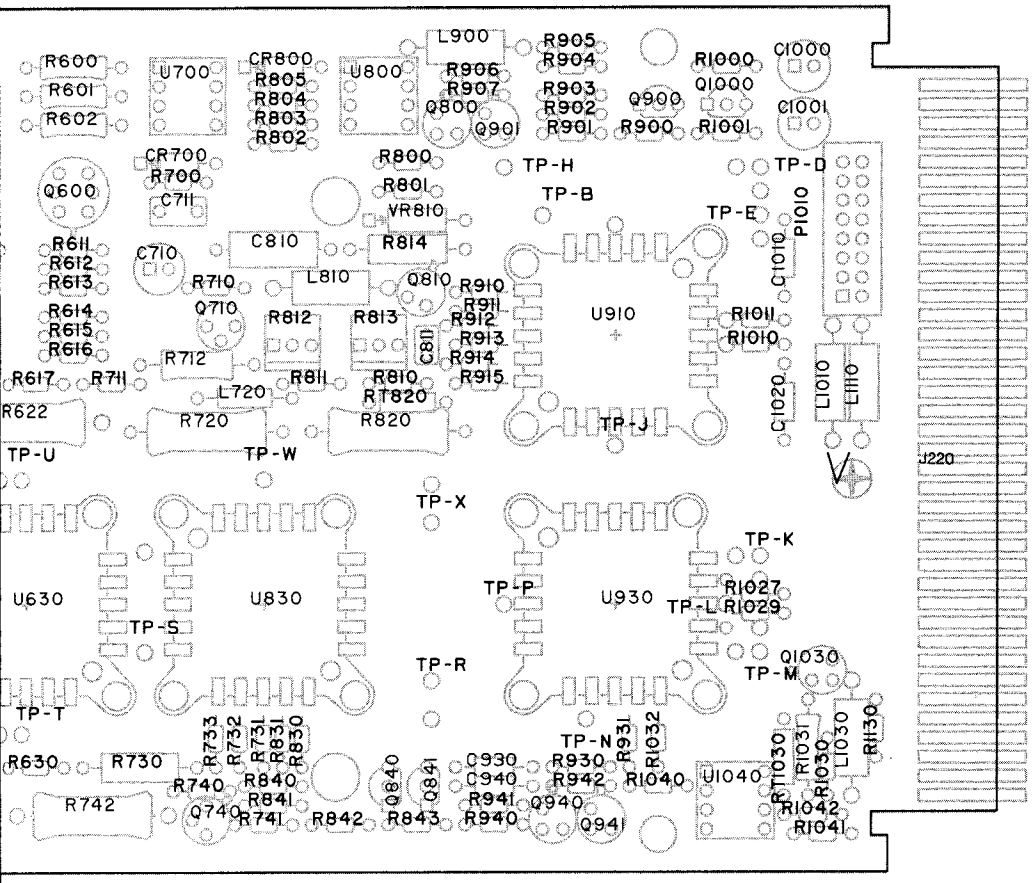
A1–Main circuit board illustration to be used with

Static Sensitive Devices
See Maintenance Section

COMPONENT NUMBER EXAMPLE



Chassis-mounted components have no Assembly Number prefix—see end of Replaceable Electrical Parts List.



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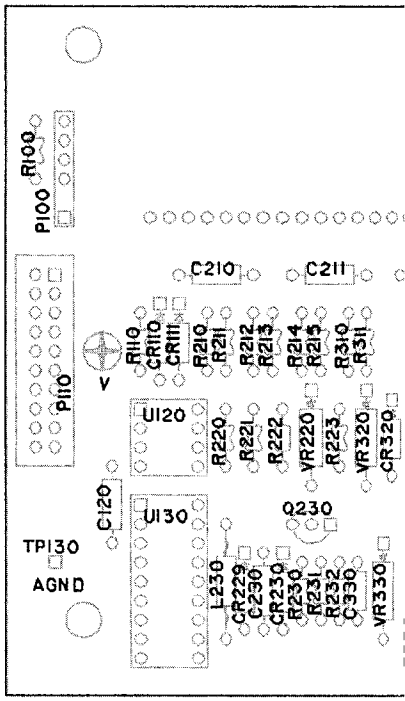
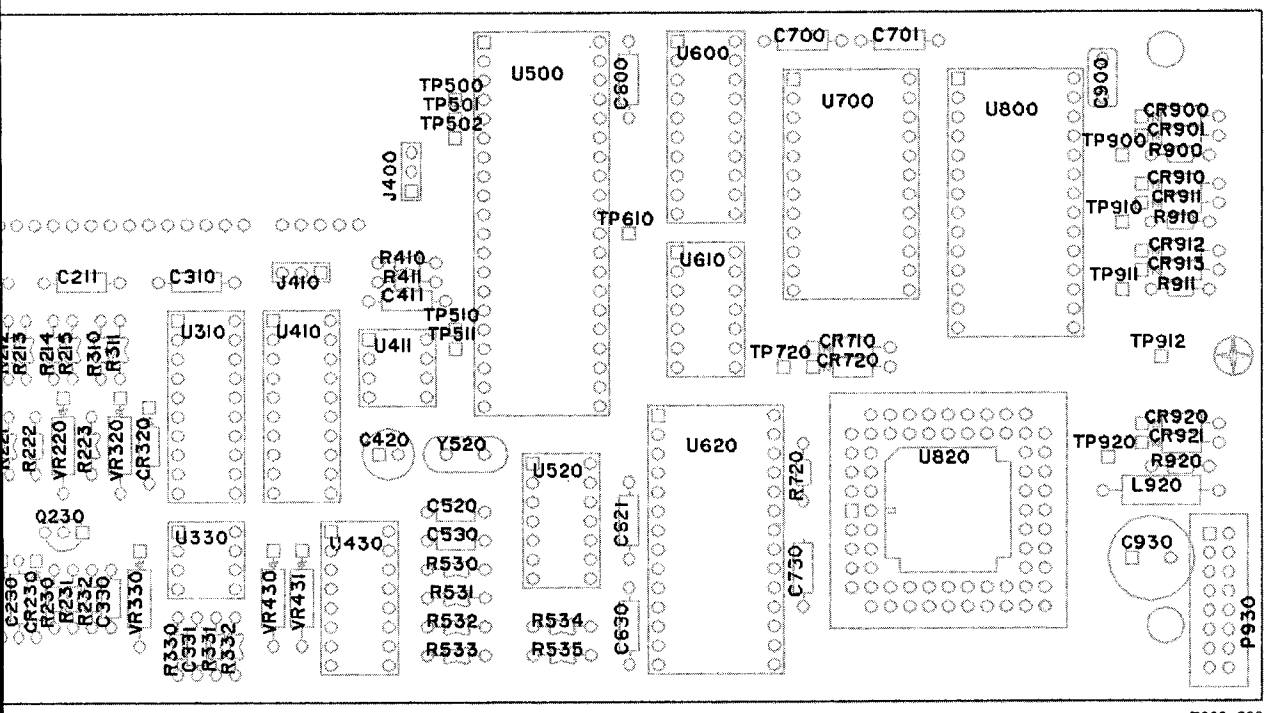
uit Board Assembly



diagrams 1 3 *and* 4

A3–Kernel circ



7392-603

Figure 6-4. *A3-Kernel Circuit Board Assembly*

3-Kernel circuit board illustration to be used with diagrams ◇1◇ *through* ◇4◇