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Nicolet

Digital Oscilloscope

442A

TEST DISK

for performance chec

SERVICE MANUAL

FOR SERIES 2090 DIGITAL OSCILLOSCOPES

NOVEMBER 1981

NICOLET
INSTRUMENT
CORPORATION
OSCILLOSCOPE DIVISION

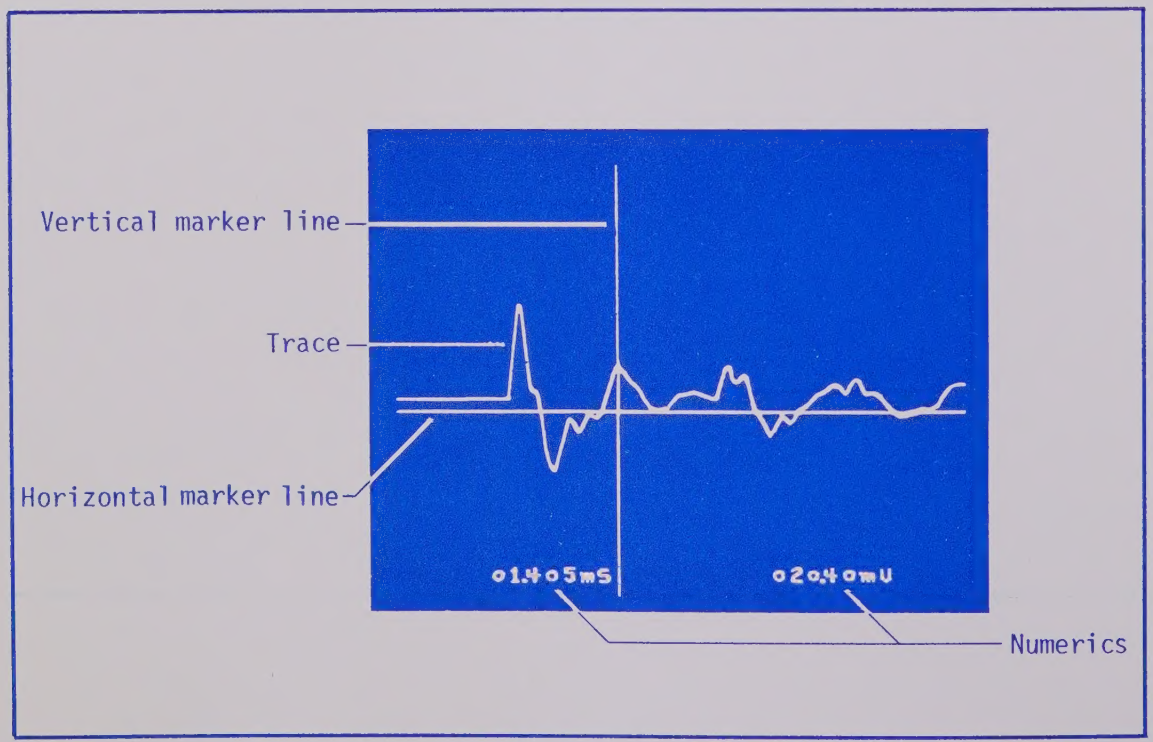
SPECIFICATIONS

2090-2		2090-3	
Memory:	4,096 words by 12 bits. Data may be stored in all of the memory, in either half or in any quarter.	Memory:	4,096 words by 12 bits. Data may be stored in all of the memory, in either half or in any quarter.
Power Requirements:	101, 115, 202, 230 volts ac (±10%) 50-60 Hz (±5%), 225 volt-amperes.	Power Requirements:	101, 115, 202, 230 volts ac (±10%) 50-60 Hz (±5%), 225 volt-amperes.
Display Expansion:	Digital expansions of X2, X4, X8, X16, X32 or X64, horizontal and/or vertical. Display may be automatically centered around intersection of the horizontal and vertical cursors.	Display Expansion:	Digital expansions of X2, X4, X8, X16, X32 or X64, horizontal and/or vertical. Display may be automatically centered around intersection of the horizontal and vertical cursors.
Display Mode:	Choice of X/Y or Y/T.	Display Mode:	Choice of X/Y or Y/T.
Data Functions:	Data may be inverted, moved, added, subtracted, outputted to a pen recorder or manually erased.	Data Functions:	Data may be inverted, moved, added, subtracted, outputted to a pen recorder or manually erased.
Pen Recording:	Control signals to operate an external XY pen recorder are provided. Information is read out at a variable rate, many data points per second in featureless regions of the plot, and more slowly in regions where the pen movement is substantial. The linear velocity of the pen is maintained essentially constant, adjustable to match the speed capabilities of the recorder. Output voltages are nominally 0-5 volts.	Pen Recording:	Control signals to operate an external XY pen recorder are provided. Information is read out at a variable rate, many data points per second in featureless regions of the plot, and more slowly in regions where the pen movement is substantial. The linear velocity of the pen is maintained essentially constant, adjustable to match the speed capabilities of the recorder. Output voltages are nominally 0-5 volts.
Plug-ins:	Accepts Models 201-2, 204-A, 206-1, 206-2.	Plug-ins:	Accepts Models 201-2, 204-A, 206-1, 206-2.
Length:	18-5/8" (47.3 cm)	Length:	19" (48.3 cm)
Width:	11-1/4" (28.6 cm)	Width:	17" (43.2 cm)
Height:	9-5/8" (24.5 cm)	Height:	9-5/8" (24.5 cm)
Weight:	30 lbs. (13.5 kg)	Weight:	46 lbs. (20.7 kg)

SPECIFICATIONS

PARAMETER	MODEL 201	MODEL 204-A	MODEL 206
Maximum digitizing rate, MHz	0.2	20	2
Resolution, percent	0.025	0.4	0.025
Accuracy, percent of full scale	0.1	0.5	0.2
Linearity, percent of full scale	0.1	0.5	0.1
Maximum sensitivity, full scale range, mv	±10	±100	±100
Maximum voltage range, volts	±40	±40	±40
Safe overload at maximum sensitivity, volts	100	100	100
Safe overload at minimum sensitivity, volts	200	100	200
Amplifier bandwidth at maximum sensitivity, MHz	0.003	7	0.350 (Note 4)
Amplifier bandwidth at minimum sensitivity, MHz	0.035	7	1 (Note 5)
Sample time uncertainty, nsec	25	3	10
Noise, >100 Hz, percent of full scale, rms	0.02	0.4	0.02
Noise, 0.01 Hz to 100 Hz, μv rms	2	100	25
Drift/°C, percent of full scale	0.02	0.2	0.02
Input impedance, most sensitive amplifier settings, megohms	10,000	1	1
Input impedance, least sensitive amplifier settings, megohms	1	1	1
Input bias current, 25°C ambient, pa	10	-	50
Common mode rejection ratio at maximum amplifier setting	10^5	(Note 1)	10^4
Common mode voltage range, percent of full scale range setting	(Note 3)	(Note 1)	(Note 3)
DC offset range, percent of full scale range setting	100	120	100
Sweep speed ranges for all plug-in units are in steps of 1, 2, 5, 10, ... times maximum speed setting in usec per point			
Maximum speed, time per point, μsec	5	0.05	0.5
Minimum speed, time per point, seconds	200	20	200
Trigger sensitivity, % of full scale range, internal triggering	10	3	10
Trigger sensitivity, volts, external triggering	0.5	0.25	0.5
Trigger range, volts, external triggering	±5	±5	±5
Trigger range, percent of full scale, internal triggering	100	100	100
Mid-signal trigger point, percent of one sweep	25	0-100	0-100
Number of data points per waveform, single channel used (Note 2)	2K, 4K	1K, 2K, 4K	1K, 2K, 4K
Number of data points per waveform, two channels used (Note 2)	1K, 2K	512, 1K, 2K	512, 1K, 2K

1. The Model 204-A plug-in utilizes single-ended amplifiers; common-mode rejection data do not apply.
2. The number of data points are selectable via the MEMORY selector switch.
3. Common mode voltage range, percent of full scale range setting is equal to 50% for the X4 settings and 150% for all other settings.
4. ±100mV, ±200mV, ±400mV, ±4V, ±40V ranges only.
5. ±1V, ±2V, ±10V, ±20V ranges only.


Vertical marker line
Trace
Horizontal marker line
o1.4o5mS
o2o.4omU
Numerics

1.0 REQUIREMENTS

1.1 FUNCTION GENERATOR

1.	Output:	Square wave and Triangle wave with sync output.
2.	Adjustable amplitudes:	100 mV_{pp} - 20 V_{pp}
3.	Adjustable frequencies:	0.2 - 10 KHz

1.2 DIGITAL MULTIMETER

1.	Resolution:	4½ or 5" digits
2.	Accuracy:	.005% of input, DC voltage

1.3 TOOLS

1.	Allen wrench:	5/64
2.	Screwdrivers:	Adjustment and Common types

1.4 NETWORKS

1. Attenuator:

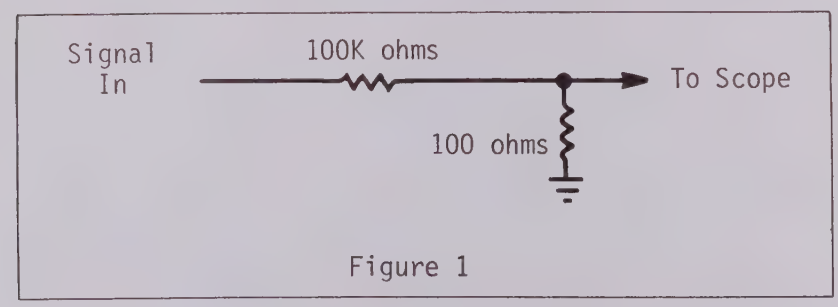


Figure 1

2.0 EXPLORER DISASSEMBLY

The bottom and left side covers must be removed to perform the alignment procedures.

> WARNING: All power must be removed from the oscilloscope before continuing.

1. Remove the four bottom cover securing screws with a 5/64 Allen wrench and place the cover aside.
2. Remove the two left side cover securing screws with a 5/64 Allen wrench. Do not remove the cover except to make measurements and adjustments.

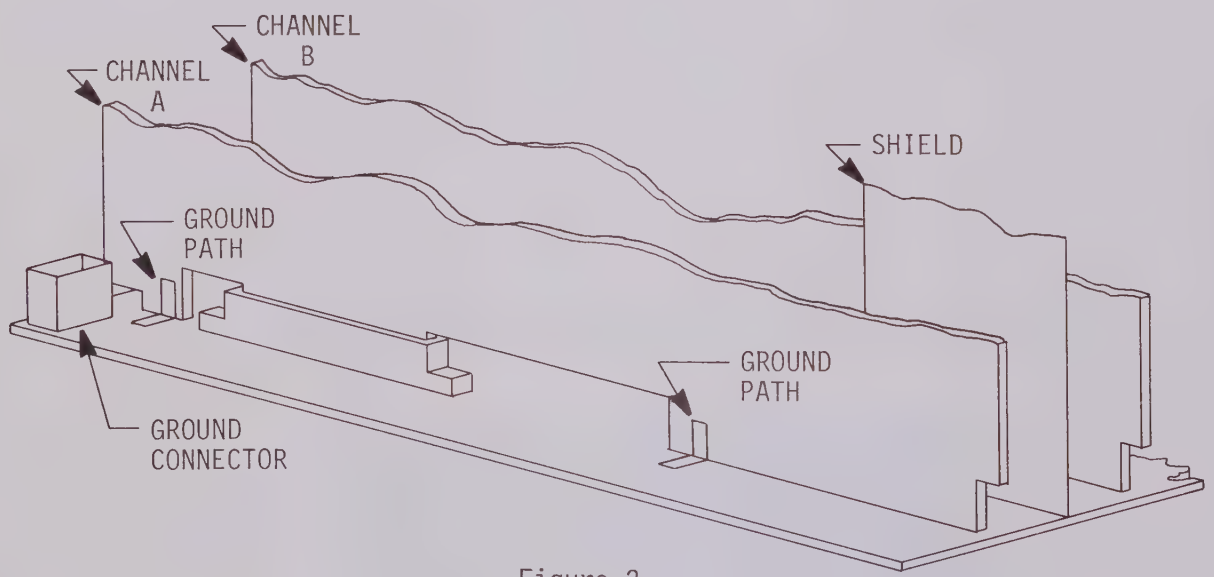


Figure 2

3.0 EXPLORER SET-UP PROCEDURE

The procedures have been outlined sequentially. Do not change any switch settings unless otherwise directed.

3.1 MAIN FRAME CONTROLS

NOTE: Allow the oscilloscope to warm up for at least 15 minutes before proceeding with any alignment procedures.

Power On/Off:	ON
Vertical Expansion switch:	X32
Horizontal Expansion switch:	OFF
Autocenter switch:	ON
XY/YT switch:	YT
Memory switch:	ALL
Function switch:	RESET NUMBERS

3.2 DISK DRIVE (Explorer III Models)

Track Protect switches:	Don't Care
Track Segment switch:	MAIN FRAME CONTROL (Full CCW)
Semi-Auto/Manual switch:	MANUAL

3.3 201 PLUG-IN

Storage Control:	LIVE
Time Per Point:	5 uS
100 Hz Filter:	OFF
Protect 2H switch:	OFF
Channel A switch:	ON (Only if calibrating Channel A)
Channel B switch:	ON (Only if calibrating Channel B)
Trigger Mode:	NORM
Trigger Slope:	-DC
Trigger Source:	EXT
Trigger Threshold:	Adjust as required.
Range:	1V
Range Multiplier:	X1
(-) Input BNC switches:	GND

4.0 GAIN & OFFSET ADJUSTMENTS

An analog-to-digital converter (ADC) normally generates a series of incrementally increasing output voltages (digital outputs) when a gradually increasing voltage (analog signal) is applied to its input.

Discontinuities in the digital output signal will occur when misalignments of the Gain (Figure 3) and/or Offset (Figure 4) are present.

4.1 INITIAL SET-UP PROCEDURE

1. Connect the signal generator to the (+) input BNC of the channel to be aligned.
2. Signal Generator output: Triangle waveform
   a. Adjust the waveform frequency for a one period display.
   b. Adjust the waveform amplitude for a full screen display.

   NOTE: It may be necessary to reposition the display by operating the paddle switch located adjacent to the Vertical Expansion switch.

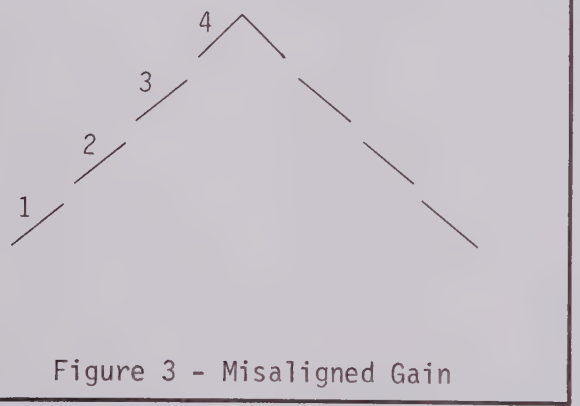


Figure 3 - Misaligned Gain

Figure 4 - Misaligned Offset

4.2 GAIN & OFFSET TESTS

1. DC Level adjust: Full CCW
2. Slowly adjust the DC Level control toward the full CW position.
   a. Observe the waveform for separations similar to those illustrated in Figure 3 (Misaligned Gain) and/or Figure 4 (Misaligned Offset).
      - If a linear waveform is observed, repeat Procedures 4.1 and 4.2 for Channel B and advance to Procedure 5.0 (Balance Adjust) if the waveform is linear.
      - If separations are observed, note which variation(s) (Gain and/or Offset) and then repeat Procedures 4.1 and 4.2 for Channel B before proceeding to Procedure 4.3.

4.3 EXPLORER DISASSEMBLY

> WARNING: All power must be removed from the oscilloscope before continuing with this procedure.

1. Unplug the Ground Connector. See Figure 2.

NOTE: It is not necessary to reconnect the ground after the module has been removed from the oscilloscope.

2. With a 5/64 Allen wrench, remove the four corner screws (located on the front panel) securing the input module and then slide the module halfway out of the oscilloscope.
3. Disconnect the ribbon cable from the rear of the input module.
4. Remove the input module and set it to the left side of the oscilloscope.

> WARNING: Place the input module on a non-conductive workbench free of metal such as solder splashes.

5. Reconnect the ribbon cable to the input module.
6. Reapply power to the oscilloscope.

4.4 GAIN ADJUSTMENTS

1. DC Level control: Adjust fully CCW
   a. Slowly adjust the DC Level control in the CW direction until a full screen triangle waveform appears.
2. Slowly adjust trimpot R133 (Figure 5) until a separation appears on the waveform.
   a. Readjust the trimpot for the best linear waveform.
3. Repeat Step 2. Use trimpot R111.
4. Repeat Step 2. Use trimpot R91.
5. Repeat Step 2. Use trimpot R78.
6. Repeat Step 2. Use trimpot R52.

NOTE: The DC Level control may require additional adjustment to isolate each separation as the trimpots are adjusted.

4.5 OFFSET ADJUSTMENTS

NOTE: The input module slide rail may require removal if the OFFSET trimpot(s) on the channel "B" ADC board require adjustment.

WARNING: Remove all power from the oscilloscope before removing the rail.

1. DC Level control: Adjust fully CCW
   a. Slowly adjust the DC Level control in the CW direction until a full screen triangle waveform appears.
2. Slowly adjust trimpot R125 (Figure 5) until a separation appears on the waveform.
   a. Readjust the trimpot for the best linear waveform.
3. Repeat Step 2. Use trimpot R107.
4. Repeat Step 2. Use trimpot R85.
5. Repeat Step 2. Use trimpot R83.
6. Repeat Step 2. Use trimpot R51.

NOTE: The DC Level control may require additional adjustment to isolate each separation as the trimpots are adjusted.

4.6 EXPLORER REASSEMBLY

WARNING: Remove all power from the oscilloscope before continuing.

1. Replace the input module slide rail if it was removed during Procedure 4.5.
2. Disconnect the ribbon cable from the rear of the input module.
3. Slide the input module halfway into the oscilloscope and reconnect the ribbon cable to the rear of the input module.
4. Slide the input module the rest of the way into the oscilloscope and reconnect the ground to the Ground Connector.

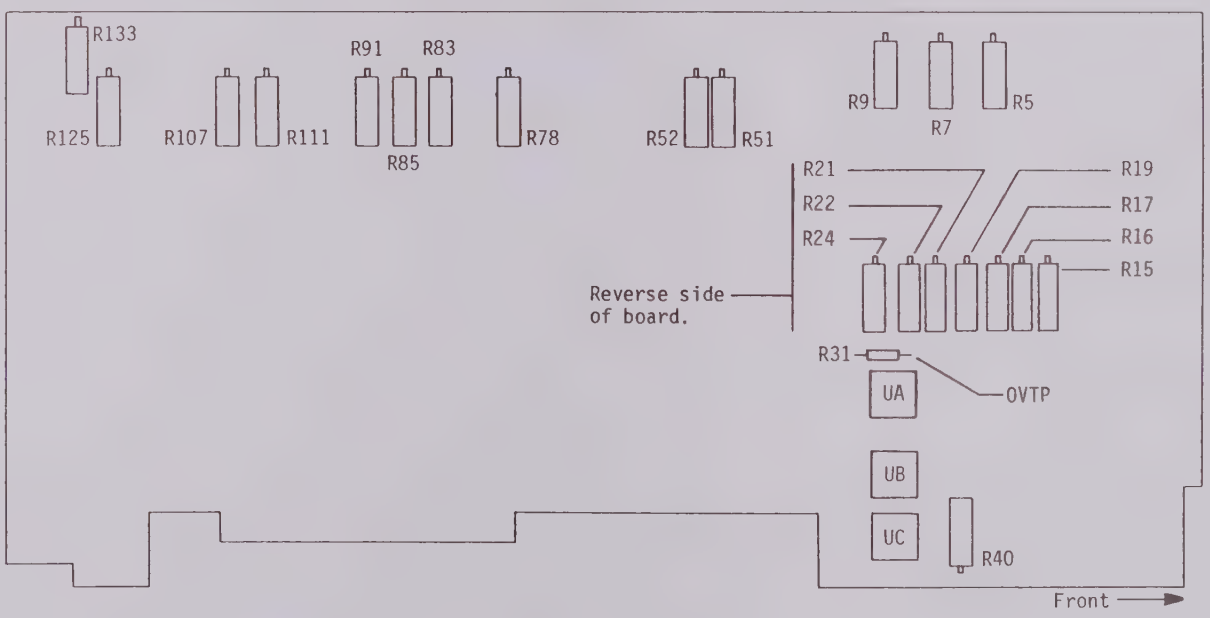


Figure 5

4.7 GAIN & OFFSET ALIGNMENT CONFIRMATION

1. Replace the left side cover on the oscilloscope.
2. Apply power to the oscilloscope and allow it to warm up for 15 minutes.
3. With the triangle waveform still applied to the oscilloscope, slowly adjust the DC Level control from fully CCW to fully CW and observe the waveform for separations. Repeat for the other channel.
   a. Repeat Procedure 4.0 thru 4.7 if necessary.
4. Remove the signal generator from the input BNC.

4.8 SUMMARY OF GAIN & OFFSET TRIMPOTS

STAGE	GAIN TRIMPOTS	OFFSET TRIMPOTS
5	R133	R125
4	R111	R107
3	R91	R85
2	R78	R83
1	R52	R51

5.0 BALANCE ADJUSTMENTS

5.1 10 mV & 100 mV RANGE BALANCE

1. Range: 10 mV
2. Range Multiplier: X1
3. Vertical Expansion switch: OFF
4. Trigger Source: EXT
5. SIG/GND switches: GND
6. DC Level control: Adjust trace to center of screen.
7. Multimeter range: 0-10 mVDC
8. Connect multimeter to OVTP. (See Figure 5)
   a. Adjust R22 for a 0 volt reading.
9. Vertical Expansion switch: X64
10. Autocenter switch: ON then OFF

11. Range switch: 100 mV
    a. Observe trace for vertical shift.
    b. Adjust trimpot R21 (Figure 5) until the trace is aligned with the horizontal marker line.

    NOTE: Make the first adjustment without vertical expansion if the shift is excessive.

12. Repeat Steps 10 thru 12 until minimum shifting is achieved.

5.2 X1 & X4 MULTIPLIER BALANCE

1. Range Multiplier switch: X4
2. Autocenter switch: ON then OFF
3. Range Multiplier switch: X1
    a. Observe trace for vertical shift.
    b. Adjust trimpot R40 (Figure 5) until the trace is aligned with the horizontal marker line.
4. Repeat Steps 1 thru 4 until minimum shifting is achieved.

6.0 COMMON MODE ADJUSTMENT

1. Range Multiplier switch: X1
2. Range switch: 1V
3. Vertical Expansion switch: OFF
4. Signal Generator output: 100 Hz Square wave
5. (+) Input BNC switch: SIG
6. Apply square wave to the (+) input BNC.
   a. Adjust for a 3/4 full screen display.
   NOTE: The Offset and Trigger Level controls may require adjustment.
7. (-) Input BNC switch: SIG
8. Apply same square wave signal to the (-) input BNC.
   NOTE: The signal must be applied to both the (+) and (-) input BNCs.
9. Autocenter switch: ON
10. Vertical Expansion switch: X64
11. Adjust trimpot R24 (Figure 5) for the best straight line.

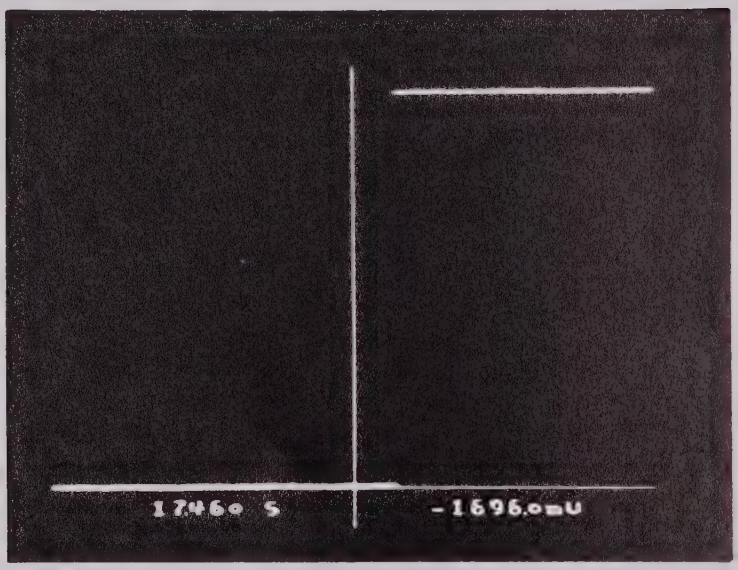
> WARNING: Use an insulated adjustment screwdriver to avoid shorting across components.

12. Vertical Expansion switch: OFF

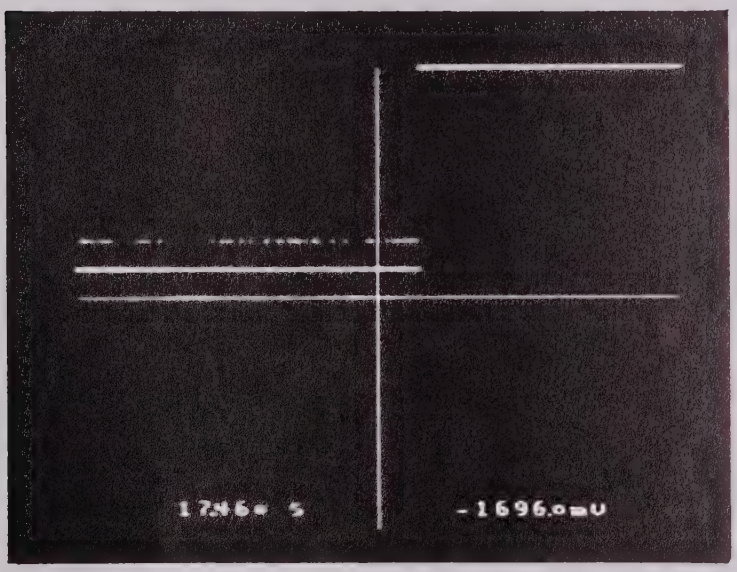
7.0 GAIN CALIBRATION

7.1 1V RANGE

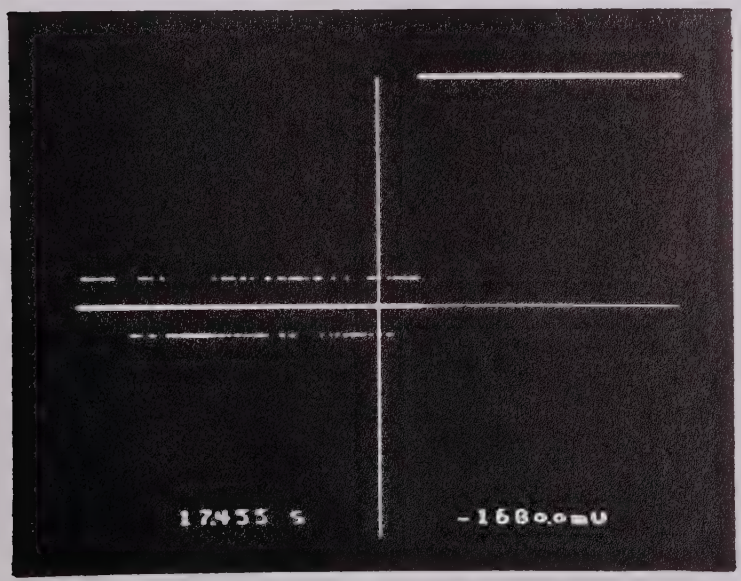
1. Memory switch: ALL
2. Filter switch: ON
3. Time Per Point: 2 mS
4. Autocenter switch: OFF
5. Range Multiplier: X1
6. Range: 1V
7. Signal Generator output: 0.2 Hz Square wave
   a. Adjust for a 3/4 full screen display.
      NOTE: The Offset and Trigger Level controls may require adjustment.
8. Multimeter range: 0-2 VDC
9. Apply same square wave signal to the multimeter.
10. Record both (+) and (-) multimeter readings and ADD absolute values to obtain the peak-to-peak voltage.



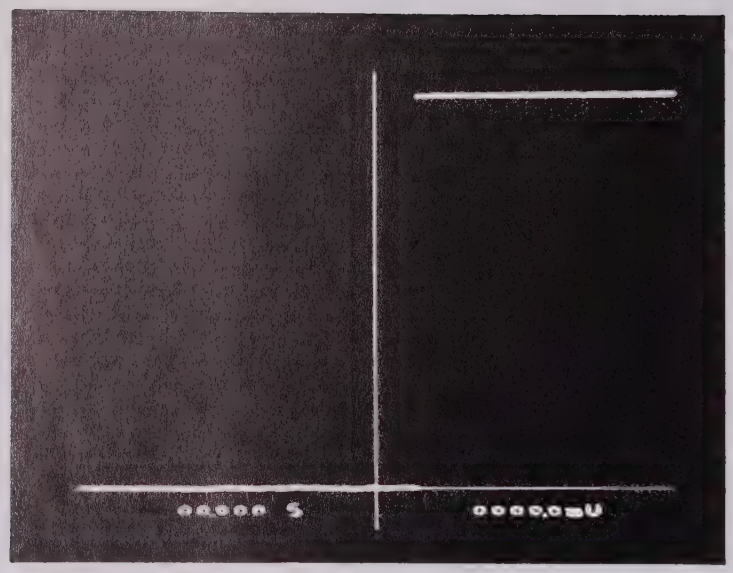
11. Depress the HOLD NEXT pushbutton.
    a. Wait until the waveform has been stored. (Hold Last led lit only.)



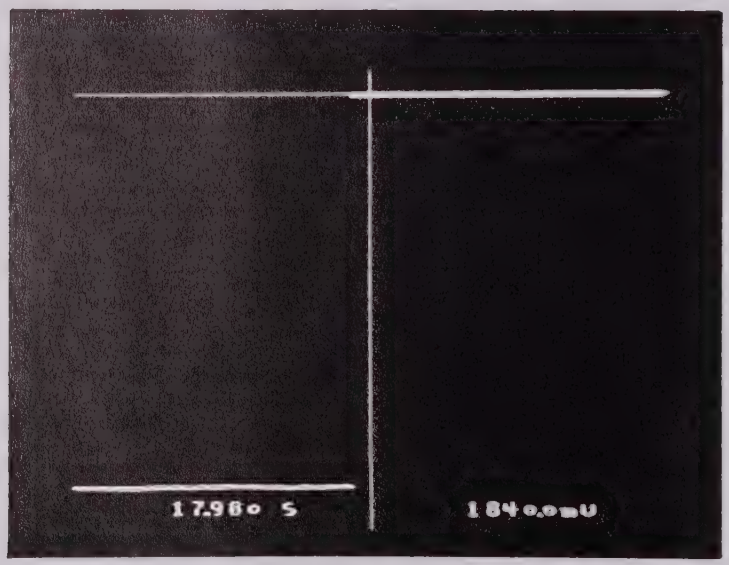
12. Autocenter switch: Autocenter
13. Vertical Expansion switch: X64



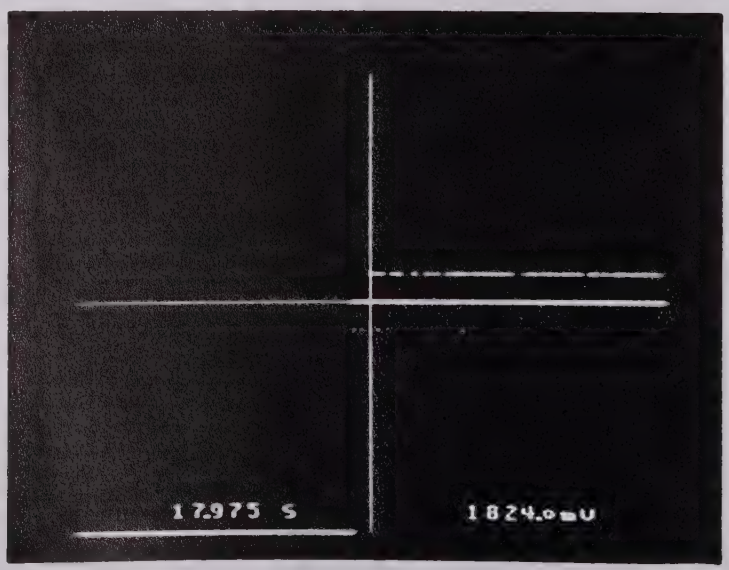
14. Several levels of data points will be displayed due to a certain amount of "noise." Select the level with the majority of data points by moving the horizontal marker line.



15. Vertical Expansion switch: OFF
16. Function switch: RESET
17. Depress the Execute button.
    a. Time and voltage numerics indicate zero.



18. Position the vertical marker line to the opposite peak of the waveform.



19. Vertical Expansion switch: X64
20. Select the level with the majority of data points.
    a. Record the peak-to-peak voltage displayed on the oscilloscope.

21. Compute the Percent Error.

a. The percent error should be less than 0.05%.

$$\text{Percent Error} = \left| \frac{\text{Multimeter } (V_{pp}) - \text{Scope } (V_{pp})}{\text{Multimeter } (V_{pp})} \right| \text{X100}$$

22. Adjust R9 (Figure 5).

a. CW to decrease. CCW to increase.

23. Depress the LIVE pushbutton.

24. Vertical Expansion switch: OFF

25. Autocenter switch: OFF

26. Repeat Procedure 7.1, Steps 11 thru 26 until percent error is less than 0.05%.

7.2 2V, 4V, +10V & 100 mV RANGES

Repeat Procedure 7.1 (1V Range) for each of the Range Calibrations and substitute the steps listed in the table below.

RANGE TO BE CALIBRATED	STEP 5	STEP 6	STEP 8	STEP 22
	Range Multiplier	Range	Multimeter Range	Trimpot
2V	X2	1V	0-4V	R7
4V	X4	1V	0-10V	R5
+10V	X1	10V	0-20V	* R15
100 mV	X1	100 mV	0-200 mV	R19

* NOTE: Adjust R15 (Step 22) CW to increase gain and CCW to decrease gain.

7.3 10 mV RANGE

Repeat Procedure 7.1 using the following substitutions:

1. Range: 10 mV (Step 6)
2. Apply the square wave signal to the (+) input BNC using the Attenuator network illustrated in Figure 1.
   a. Adjust for a 3/4 full screen display.
3. Multimeter Range: 0-20 mV (Step 8)
4. Trimpot: R17 (Step 22)

7.4 -10V RANGE

1. Remove the Attenuator network.
2. Range: 10V
3. Apply square wave signal to the (+) input BNC.
   a. Adjust for a 3/4 full screen display.
4. Apply same square wave signal to the (-) input BNC.
   NOTE: The signal must be applied to both the (+) and (-) input BNCs.
5. Autocenter switch: ON
6. Vertical Expansion switch: X64
7. Adjust trimpot R15 (Figure 5) for the best straight line.
8. Vertical Expansion switch: OFF

DISPLAY ALIGNMENT

TRIM POTS ACCESS

The display trimpots are accessible from the bottom of the oscilloscope. Refer to Figure A-1.

> WARNING: High voltages exist in the oscilloscope. Use care during the following procedures.

ALIGNMENT PROCEDURE

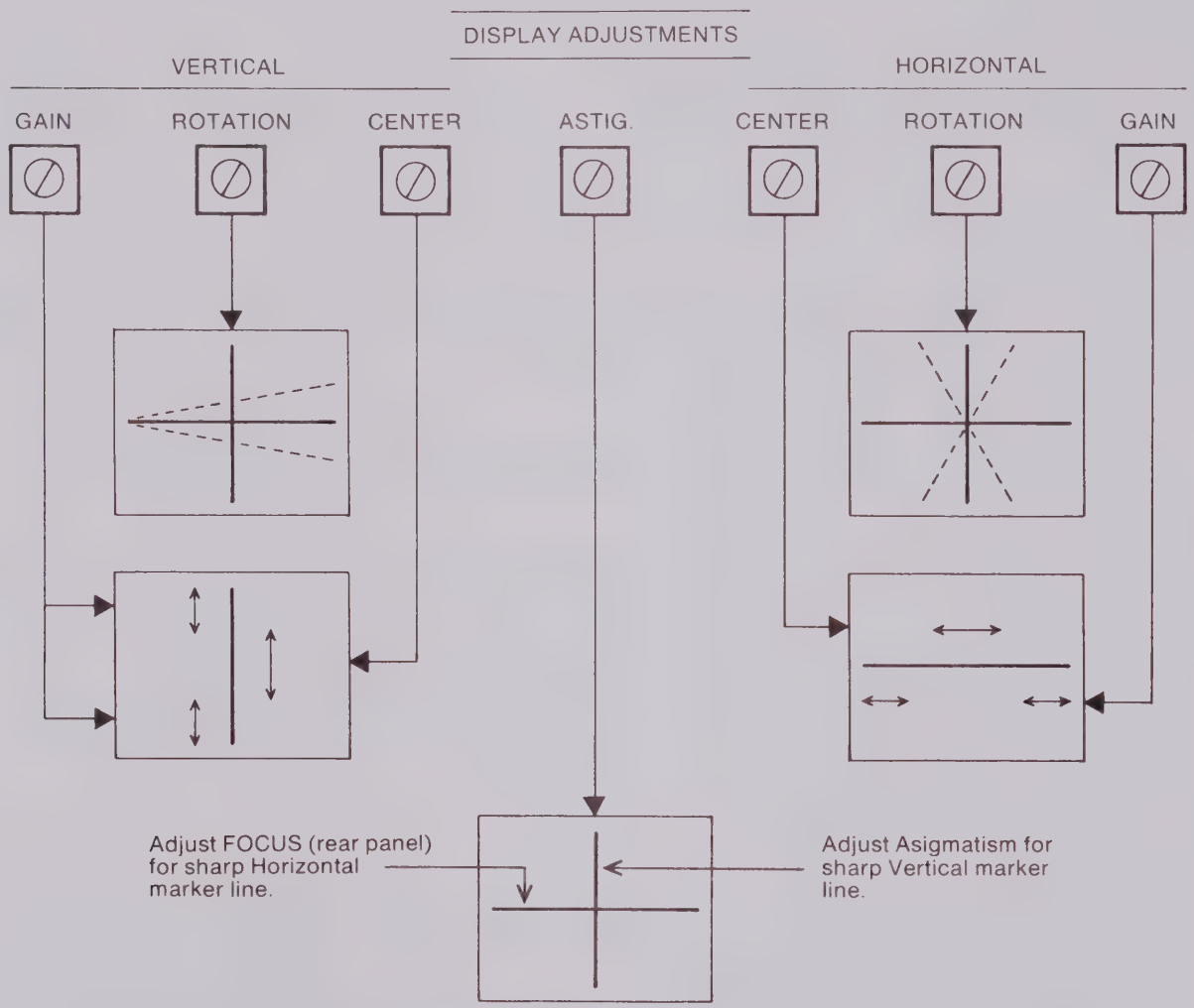
It is recommended that the following alignment procedure be followed in the sequence as listed. Perform the alignment(s) if required.

1. Ground all (+) and (-) input BNC's.
2. Switch the FUNCTION selector to the ERASE position (spring loaded) and depress the EXECUTE pushbutton.
3. HORIZONTAL ROTATE: Rotates the entire display with the screen center acting as the pivot point.
   a. Adjust until the vertical marker line is straight up and down.
4. VERTICAL ROTATE: Rotates the entire display with the left side of the screen acting as the pivot point.
   a. Adjust until the horizontal marker line is level.
5. HORIZONTAL CENTER: Positions the display either left or right.
   a. Adjust until the horizontal marker line is evenly centered on the screen.
6. HORIZONTAL GAIN: Expands or contracts the display in the horizontal plane.
   a. Adjust until both ends of the horizontal marker line are approximately 3/16" from the sides of the screen.
7. VERTICAL CENTER: Positions the display either up or down.
   a. Adjust until the vertical marker line is approximately 1/4" from the top of the screen.
8. VERTICAL GAIN: Expands or contracts the display in the vertical plane.
   a. Adjust until the vertical marker line is approximately 1/8" from the bottom of the screen.
   b. Repeat Step 7 and 8 until the vertical marker line is approximately 1/4" from the bottom of the screen.

9. ASTIGMATISM: Adjust the sharpness of the display and is used in conjunction with the FOCUS adjustment located on the rear panel.

a. Adjust the Astigmatism trimpot for a sharp vertical marker line.

b. Adjust the FOCUS control for a sharp horizontal marker line.



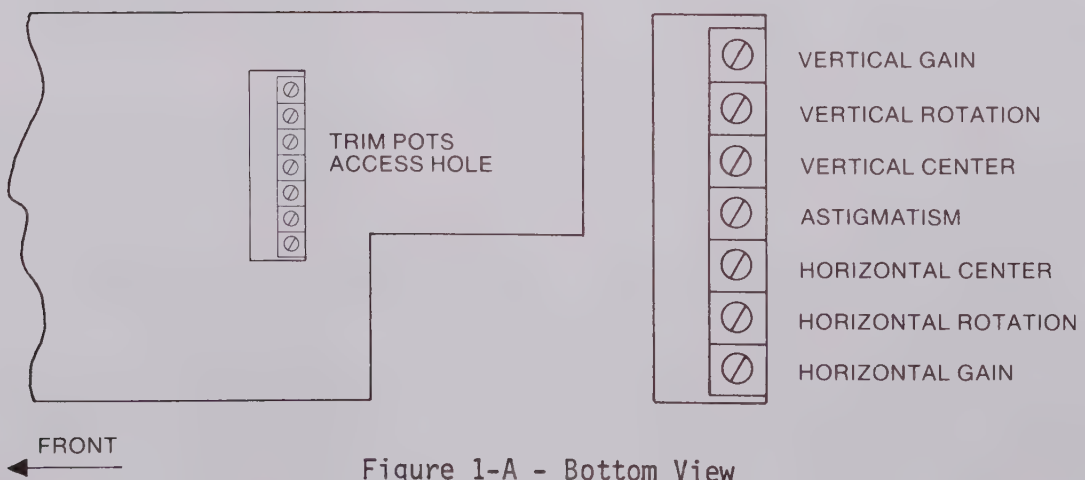


Figure 1-A - Bottom View

FOCUS AND INTENSITY CONTROLS

The Focus and Intensity controls are located on the rear panel.

- FOCUS: The Focus control is used in conjunction with the Astigmatism trimpot described above in Step 9.

- INTENSITY: The Intensity control brightens or darkens the display. This control may be adjusted, when using the scope camera, to permit optimum results while capturing displays on film.

MAINTENANCE

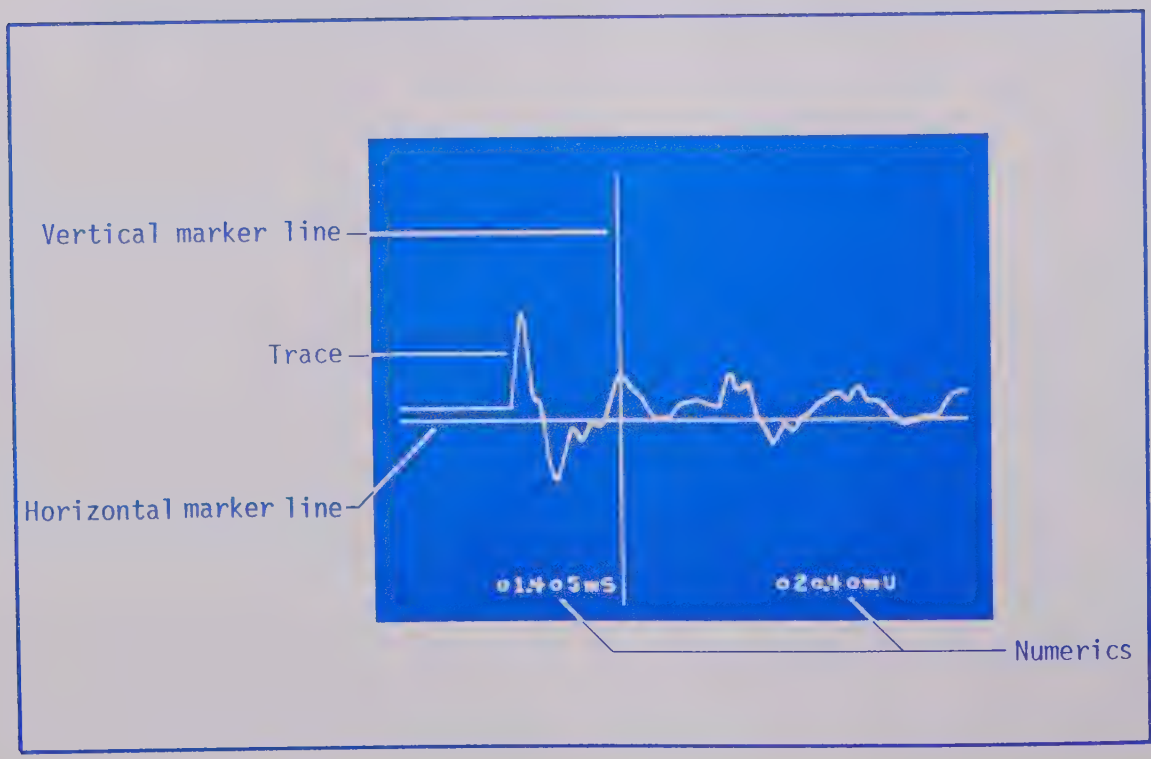
The following guidelines should be observed when cleaning the Explorer.

- SCOPE FACE: Clean the display face with a slightly damp, soft cloth.

- CABINET: Clean the external surfaces with a slightly damp, soft cloth using a mild detergent.

- AIR FILTER: The dust filter on the rear panel should be inspected at regular intervals and cleaned whenever an accumulation of dust appears.

To clean the filter: Remove the four retaining screws, remove the surface dust with either compressed air or a soft-bristle brush. Reinstall the filter.


Vertical marker line
Trace
Horizontal marker line
01.405mS
02.40mV
Numerics

1.0 REQUIREMENTS

1.1 FUNCTION GENERATOR

1.	Output:	Square wave
2.	Adjustable amplitudes:	100 mV_{pp} - 20 V_{pp}
3.	Adjustable frequencies:	0.2 Hz - 20 MHz

1.2 DIGITAL MULTIMETER

1.	Resolution:	4½ or 5½ digits
2.	Accuracy:	.05% of input, DC Voltage

1.3 ANALOG OSCILLOSCOPE

1.	Bandwidth:	100 MHz

1.4 TOOLS

1.	Allen wrench:	5/64
2.	Screwdriver:	Adjustment type

1.5 NETWORKS

1. Input capacitance:

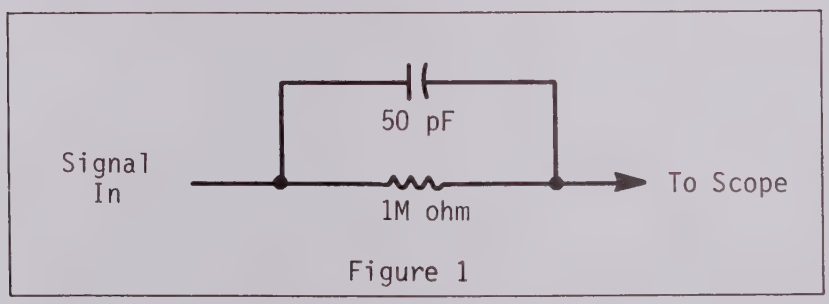


Figure 1

2. Frequency compensation:

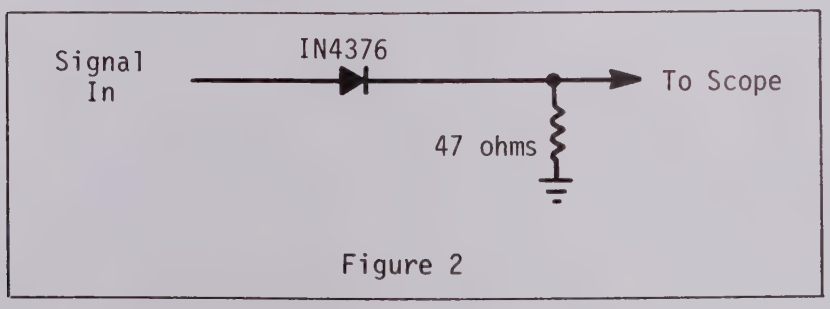


Figure 2

2.0 EXPLORER DISASSEMBLY

The left side cover must be removed to perform the alignment procedures.

> WARNING: All power must be removed from the oscilloscope before continuing.

1. Remove the two left side cover securing screws with a 5/64 Allen wrench. Do not remove the cover except to make measurements and adjustments.

3.0 EXPLORER SET-UP PROCEDURE

The procedures have been outlined sequentially. Do not change any switch settings unless otherwise directed.

NOTE: The procedures should be completed with the digitizer shields in place and the plug-in front panel fastened to the frame. Some of the adjustments will be affected if the shields are removed and then reinstalled after the alignments.

3.1 MAIN FRAME CONTROLS

NOTE: Allow the oscilloscope to warm up for at least 15 minutes before proceeding with any alignment procedures.

Power On/Off:	ON
Vertical Expansion:	OFF
Horizontal Expansion:	OFF
Autocenter switch:	OFF
XY / YT switch:	YT
Function switch:	RESET NUMBERS
Memory switch:	ALL

3.2 DISK DRIVE (Explorer III Models)

Track Protect switches:	Don't Care
Track Segment switch:	Main Frame Control (Full CCW)
Semi-Auto/Manual switch:	MANUAL

3.3 204-A PLUG-IN

Storage Control:	LIVE
Retain Reference:	ALL OFF (Down)
Time Per Point:	500 nS
Volts Full Scale:	100mV
Filter:	FULL
On/Off:	ON (For channel to be calibrated only)
DC/AC:	DC
Offset:	Center of Screen

Trigger Mode

a. Auto/Norm:	AUTO
b. Cursor:	Out
c. Lock:	Out

Trigger Coupling

a. AC/DC:	DC
b. HF REJ/NORM:	NORM

Trigger Source (See Note 1)

a. CH A / CH B:	Don't Care
b. Int/Ext:	EXT
Trigger Level:	Adjust as required to stabilize trace.
Trigger Slope:	(-)

NOTE 1: Connect the function generator sync output to the external trigger input BNC.

4.0 VOLTAGE CHECK

1. Multimeter range: 0-20 VDC

2. Connect multimeter to -2VTP. (See Figure 3)
   a. Adjust R9 for -1.98 VDC to -2.02 VDC.

3. Connect multimeter to +6VTP. (See Figure 3)
   a. Adjust R40 for +5.94 VDC to +6.06 VDC.

> CAUTION: Use insulated probe on +6VTP to avoid shorting to heatsink.

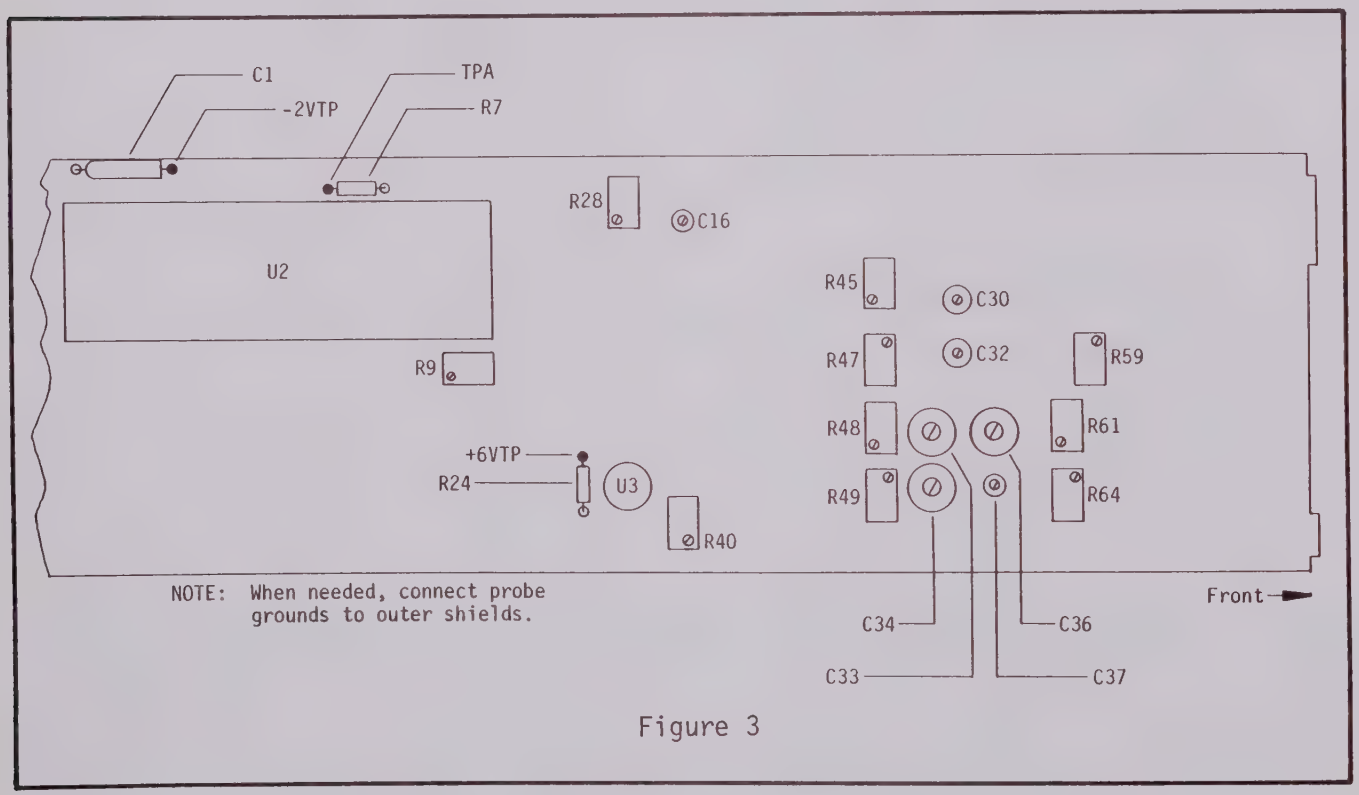


Figure 3

5.0 INPUT RESISTANCE CHECK

1. Multimeter range: 2 Megohms
2. Connect multimeter to input BNC.
   a. Record the resistance. (1 Megohm ± 1%)
3. Volts Full Scale switch: 1V
   a. Adjust R48 for same reading as recorded in Step 2, ± 1%.
4. Volts Full Scale switch: 10V
   a. Adjust R49 for same reading as recorded in Step 2, ± 1%.
5. Disconnect multimeter from oscilloscope.

6.0 BALANCE ADJUSTMENT

1. Ground input BNC.
2. Volts Full Scale switch: 100 mV
3. Filter switch: 1 MHz
4. Vertical Expansion switch: X16
5. Autocenter switch: ON, then OFF
6. Volts Full Scale switch: Switch between 100, 200 and 400 mV ranges.
   a. Observe trace for vertical shift.
   b. Adjust R59 until trace is aligned with the horizontal marker line.
      NOTE: Make the first adjustment without vertical expansion if the shift is excessive.
7. Repeat Steps 5 thru 6 until minimum shifting is achieved.
8. Volts Full Scale switch: Switch between all ranges.
   a. Observe trace for vertical shift.
   b. Adjust R59 if necessary for minimum shifting.
9. Vertical Expansion switch: OFF
10. Disconnect the ground from the input BNC.

7.0 AMPLIFIER RESPONSE

1. Volts Full Scale: 100 mV
2. Filter switch: FULL
3. Signal Generator output: 100 kHz Square wave (20 MHz or better bandwidth)
4. Apply square wave to input BNC.
   a. Adjust for a 3/4 full screen display.
      NOTE: The Offset and Trigger Level controls may require adjustment.
5. Analog oscilloscope: CHANNEL 1 - 0.5 V/Div.
   CHANNEL 2 - 50 mv/Div. Inverted
   DC Coupling
   0.05 uSec/Div.
   Internal Trigger, (-) slope
6. Connect analog oscilloscope to output of signal generator and to test point TPA on the digitizer board. (See Figure 3).
7. Adjust C16 (Figure 3) until the slopes of the signal generator output and test point TPA are identical. (See Figures 4 and 5.)

> CAUTION: Turning C16 too far in the counter-clockwise direction may cause the adjustment screw to fall out of the variable capacitor.

8. Disconnect the analog oscilloscope.

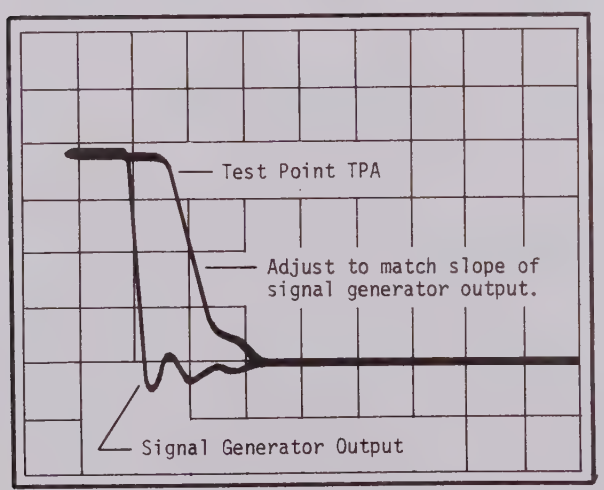


Figure 4 - Unacceptable Response

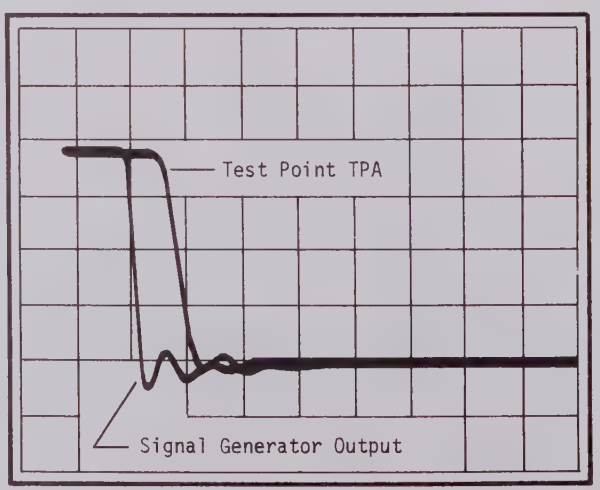
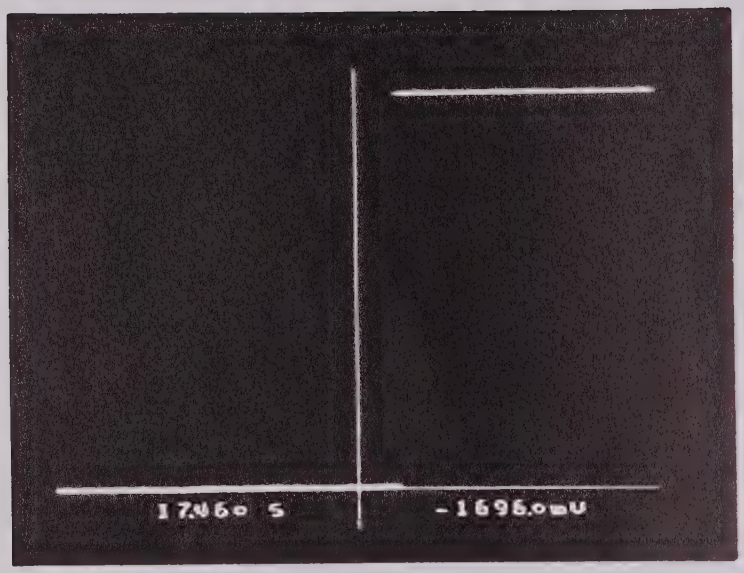


Figure 5 - Acceptable Response

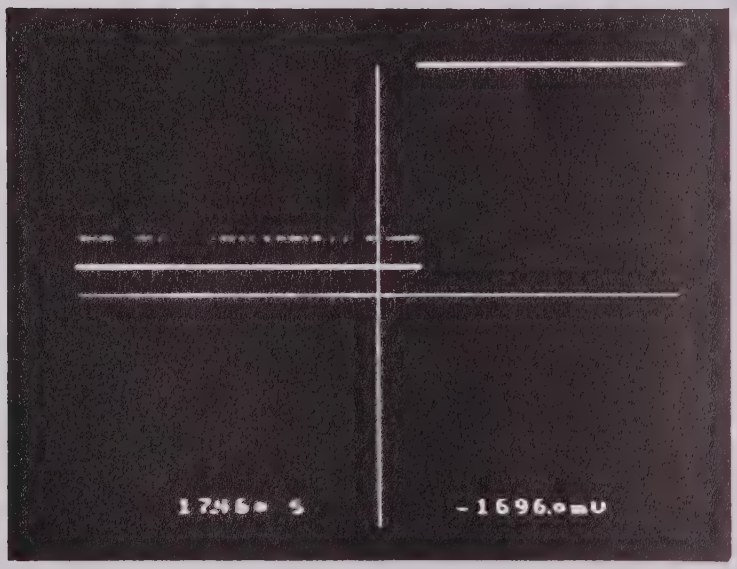
8.0 GAIN CALIBRATION

8.1 100 mV RANGE

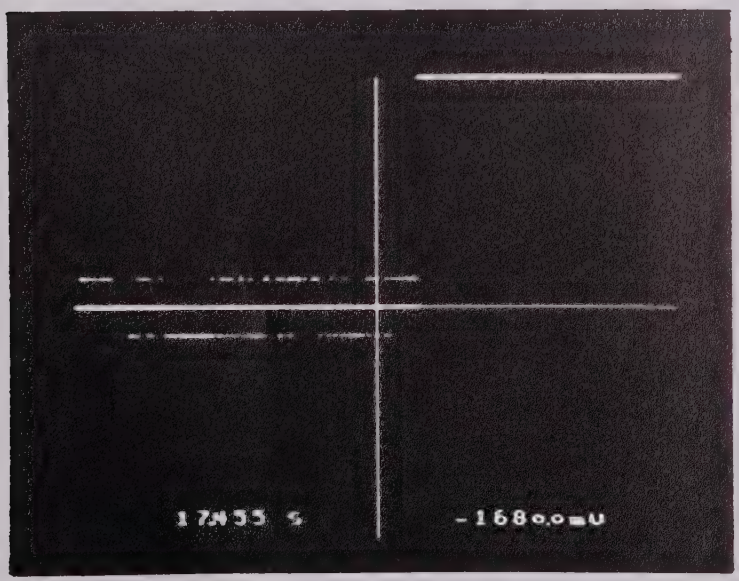
1. Volts Full Scale switch: 100 mV
2. Memory switch: Q1
3. Autocenter switch: OFF
4. Filter switch: 1 MHz
5. Time Per Point: 5 mS
6. Signal Generator output: 0.2 Hz Square wave
   a. Adjust for a 3/4 full screen display.
      NOTE: The Offset and Trigger Level controls may require adjustment.
7. Multimeter range: 0-200 mVDC
8. Apply the same square wave signal to the multimeter.
9. Record both (+) and (-) multimeter readings and ADD absolute values to obtain the peak-to-peak voltage.



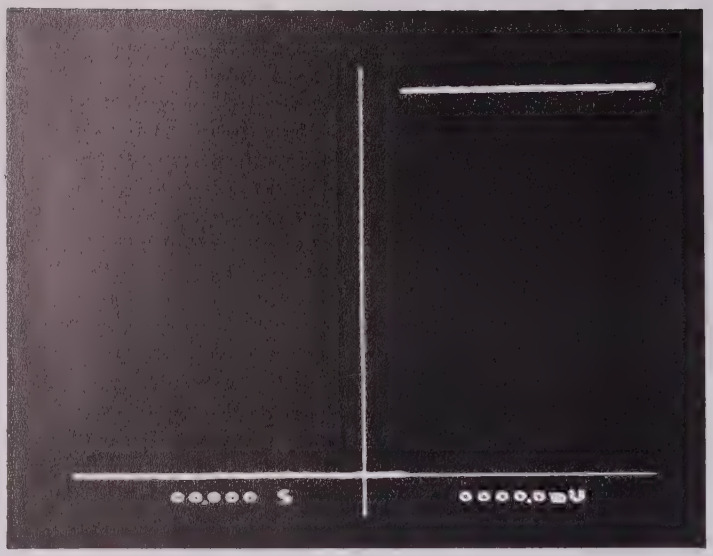
10. Depress the HOLD NEXT pushbutton.
    a. Wait until the waveform has been stored. (Hold Last led lit only)



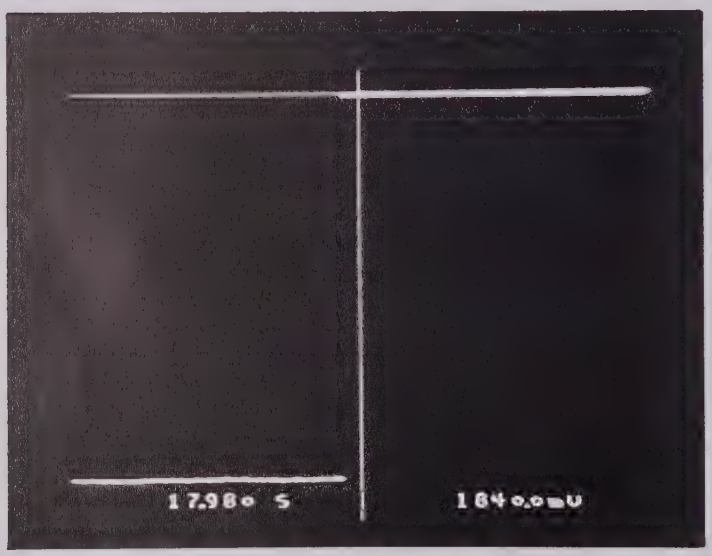
11. Autocenter switch: ON
12. Vertical Expansion switch: X16



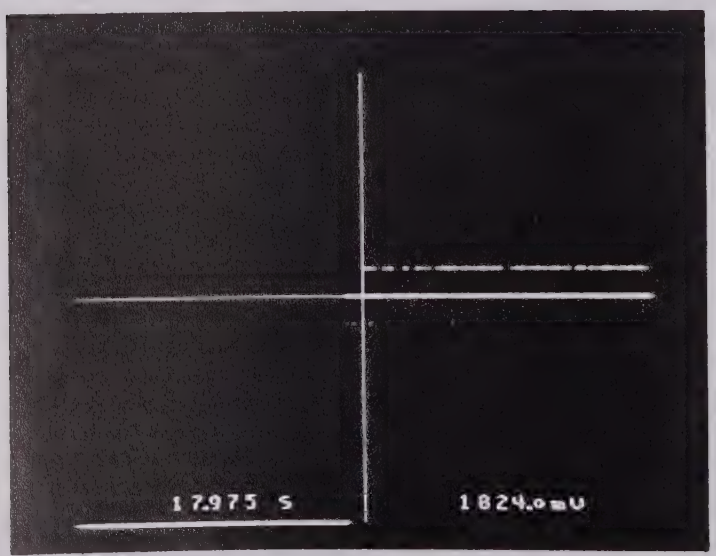
13. Several levels of data points will be displayed due to a certain amount of "noise." Select the level with the majority of data points by moving the horizontal marker line.



14. Vertical Expansion switch: OFF
15. Function switch: RESET
16. Depress the Execute button.
    a. Time and voltage numerics indicate zero.



17. Position the vertical marker line to the opposite peak of the waveform.



18. Vertical Expansion switch: X16
19. Select the level with the majority of data points.
    a. Record the peak-to-peak voltage displayed on the oscilloscope.

21. Compute the Error.

    Error = Multimeter (V_{pp}) - Scope (V_{pp}) < 1 mV

22. Adjust R28 (Figure 3).
    a. CW to increase, CCW to decrease.

23. Depress the LIVE pushbutton.

24. Repeat 8.1, Steps 10 thru 23 until Error value computed in Step 21 is met.

25. Vertical Expansion switch: OFF

26. Autocenter switch: OFF

8.2 200 mV, 400 mV, 1V & 10V RANGE CALIBRATIONS

Repeat Procedure 8.1 (100 mV Range Calibration) for each of the Range Calibrations and substitute the steps and values listed in the table below.

RANGE TO BE CALIBRATED	SUBSTITUTIONS			
	Step 1 Volts Full Scale	Step 6 Multimeter Range	Step 21 Error Value	Step 22 Trimpot
200 mV	200 mV	0-400 mVDC	2 mV	R47
400 mV	400 mV	0-800 mVDC	4 mV	R45
1V	1V	0-2 VDC	10 mV	R61
10V	10V	0-20 VDC	0.1 V	R64

NOTE: Disconnect the multimeter when the Range Calibrations have been completed.

9.0 200 mV RANGE FREQUENCY COMPENSATION

1. Vertical Expansion switch: OFF
2. Filter switch: FULL
3. Memory switch: ALL
4. Time Per Point: 50 nS
5. Volts Full Scale switch: 200 mV
6. Signal Generator output: 100 kHz Square wave
7. Apply square wave to the input BNC using the frequency compensation network illustrated in Figure 2.
   a. Adjust for a 3/4 full screen display.
8. Vertical Expansion switch: X4
9. Horizontal Expansion switch: X16
10. Autocenter switch: ON
    a. Adjust the Offset for minimum noise.
11. Adjust C32 for the best negative cycle response. (See Figures 3 & 6 thru 8).

9.1 400 mV, 1V, 2V, 4V & 10V RANGE FREQUENCY COMPENSATION

Repeat Procedure 9.0 (200 mV Range Frequency Compensation) for each of the ranges and substitute the steps listed in the table below.

NOTE: The 200 mV, 400 mV, 2V and 4V compensation procedures must be repeated after the entire procedure has been completed. Repeat these procedures until an optimum response for all four ranges has been achieved.

RANGE TO BE CALIBRATED	STEP 4	STEP 5	STEP 6	STEP 11
	Time Per Point	Volts Full Scale	Signal Generator	Capacitor
400 mV	50 nS	400 mV	100 KHz	C30
1V	500 nS	1V	10 KHz	C36
2V	500 nS	2V	10 KHz	C32
4V	500 nS	4V	10 KHz	C30
10V	500 nS	10V	10 KHz	C37

NOTE: Place the Horizontal and Vertical Expansion switches to "OFF" when the Range Frequency Compensations have been completed.

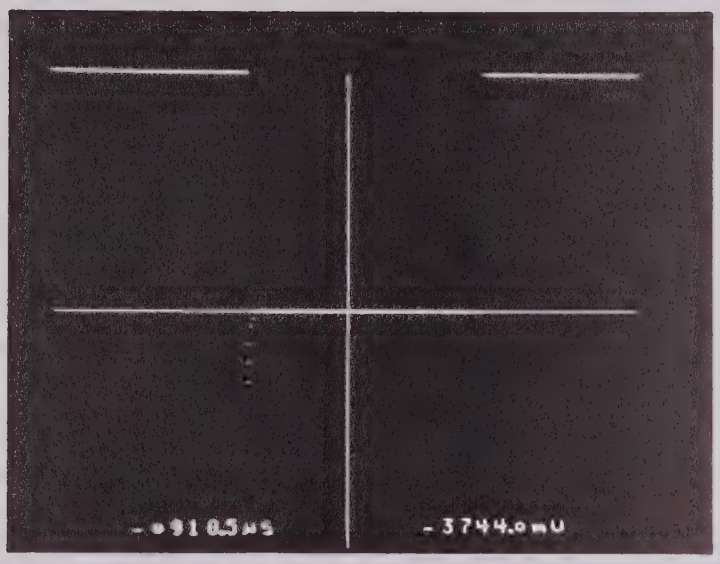


Figure 6 - Negative square wave cycle with undershoot.

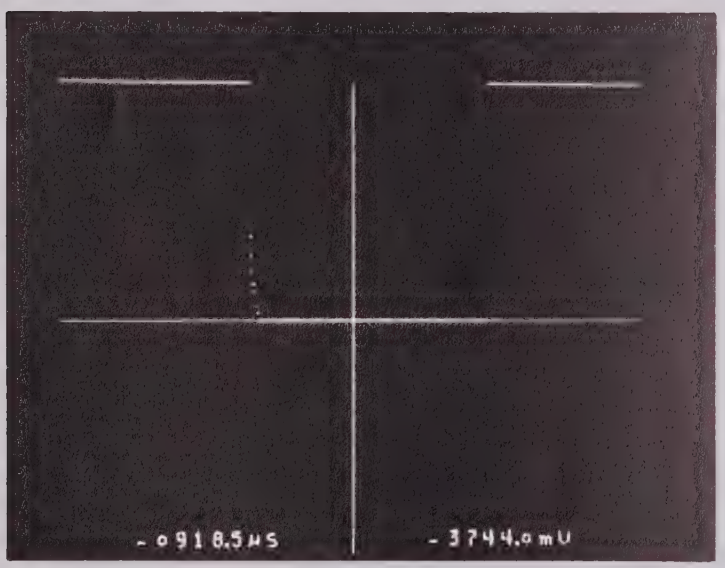


Figure 7 - Negative square wave cycle with overshoot.

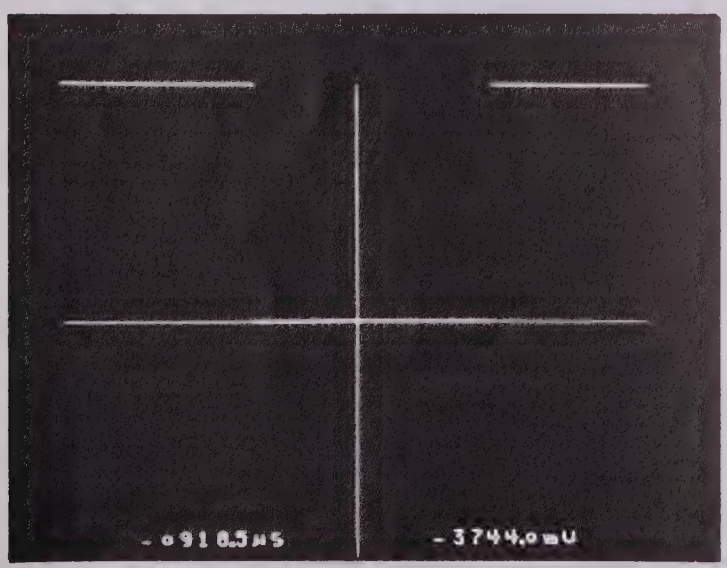


Figure 8 - Best possible negative square wave cycle. One or two data points may be present.

10.0 INPUT CAPACITANCE

The series number of the Model 204-A Digitizer Board must be determined in order that the appropriate procedure will be selected.

1. Locate the Digitizer board part number as illustrated in Figure 9
   - If the last two digits of the part number is -02 (or less), perform Procedure 10.1
   - If the last two digits of the part number is -03 (or greater), perform Procedure 10.2

10.1 SERIES -02 OR LOWER

1. Volts Full Scale: 1V
2. Time Per Point: 50 nS
3. Signal Generator output: 10 kHz Square wave
4. Apply the square wave to the input BNC using the capacitance network illustrated in Figure 1.
   a. Adjust for a 3/4 full screen display.
5. Vertical Expansion switch: X4
6. Horizontal Expansion switch: X2
7. Adjust C33 for the best square wave response.
8. Vertical Expansion switch: OFF
9. Volts Full Scale: 10V
10. Repeat Procedure 10.1, Steps 2 thru 7.
    a. Substitute capacitor C34 in Step 7.

Note: Repeat Procedure 9.0 & 9.1 (Frequency Compensation) after completing this procedure to verify proper alignment.

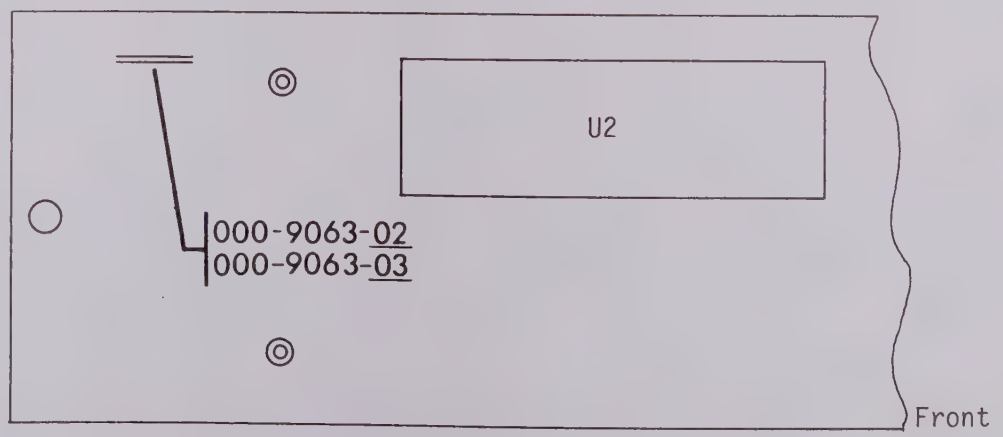


Figure 9 - Digitizer Board

10.2 SERIES -03 OR GREATER

1. Volts Full Scale: 100 mV
2. Time Per Point: 50 nS
3. Signal Generator output: 10 kHz Square wave
4. Apply the square wave to the input BNC using the capacitance network illustrated in Figure 1.
   a. Adjust for a 3/4 full screen display.
5. Horizontal Expansion switch: X2
6. Retain Reference switches: 1 & 3 (UP), 2 & 4 (DOWN)
7. Volts Full Scale: 1V
   a. Adjust output of the signal generator for a 3/4 full screen display.
8. Vertical Expansion switch: X4
9. Offset control: Adjust until retained waveform and "live" waveform are superimposed.
10. Adjust C33 until the slopes of the "live" waveform matches the slopes of the retained waveform.
11. Vertical Expansion switch: OFF
12. Volts Full Scale: 10V
    a. Adjust output of the signal generator for a 3/4 full screen display, or as large a signal amplitude obtainable from the signal generator.
13. Vertical Expansion switch: X8
14. Adjust C34 until the slopes of the "live" waveform matches the slopes of the retained waveform.
15. Horizontal Expansion switch: OFF
16. Retain Reference switch: All Down

NOTE: Repeat Procedure 9.0 & 9.1 (Frequency Compensation) after completing this procedure to verify proper alignment.

DISPLAY ALIGNMENT

TRIM POTS ACCESS

The display trimpots are accessible from the bottom of the oscilloscope. Refer to Figure A-1.

> WARNING: High voltages exist in the oscilloscope. Use care during the following procedures.

ALIGNMENT PROCEDURE

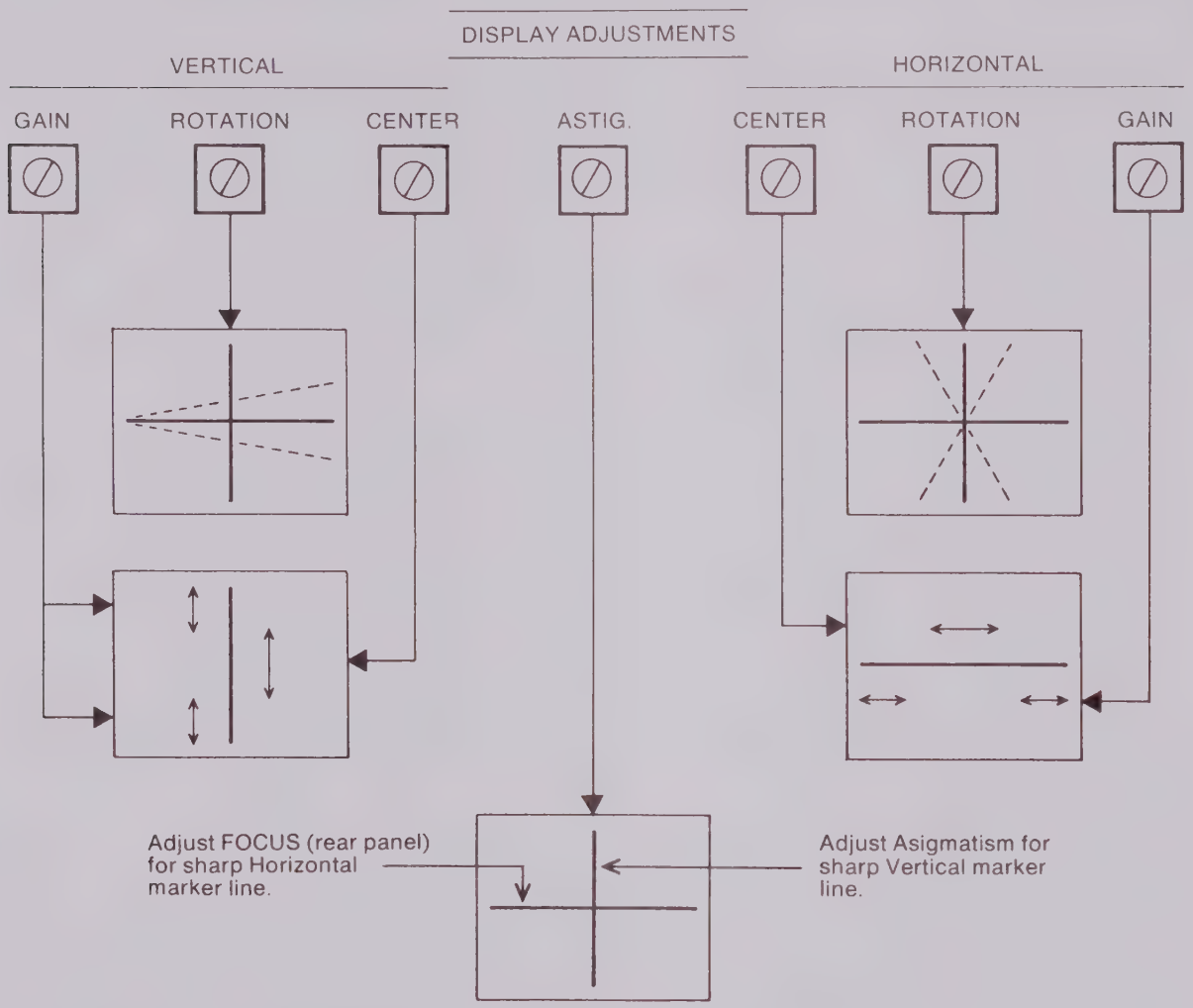
It is recommended that the following alignment procedure be followed in the sequence as listed. Perform the alignment(s) if required.

1. Ground all (+) and (-) input BNC's.
2. Switch the FUNCTION selector to the ERASE position (spring loaded) and depress the EXECUTE pushbutton.
3. HORIZONTAL ROTATE: Rotates the entire display with the screen center acting as the pivot point.
   a. Adjust until the vertical marker line is straight up and down.
4. VERTICAL ROTATE: Rotates the entire display with the left side of the screen acting as the pivot point.
   a. Adjust until the horizontal marker line is level.
5. HORIZONTAL CENTER: Positions the display either left or right.
   a. Adjust until the horizontal marker line is evenly centered on the screen.
6. HORIZONTAL GAIN: Expands or contracts the display in the horizontal plane.
   a. Adjust until both ends of the horizontal marker line are approximately 3/16" from the sides of the screen.
7. VERTICAL CENTER: Positions the display either up or down.
   a. Adjust until the vertical marker line is approximately 1/4" from the top of the screen.
8. VERTICAL GAIN: Expands or contracts the display in the vertical plane.
   a. Adjust until the vertical marker line is approximately 1/8" from the bottom of the screen.
   b. Repeat Step 7 and 8 until the vertical marker line is approximately 1/4" from the bottom of the screen.

9. ASTIGMATISM: Adjust the sharpness of the display and is used in conjunction with the FOCUS adjustment located on the rear panel.

   a. Adjust the Astigmatism trimpot for a sharp vertical marker line.

   b. Adjust the FOCUS control for a sharp horizontal marker line.



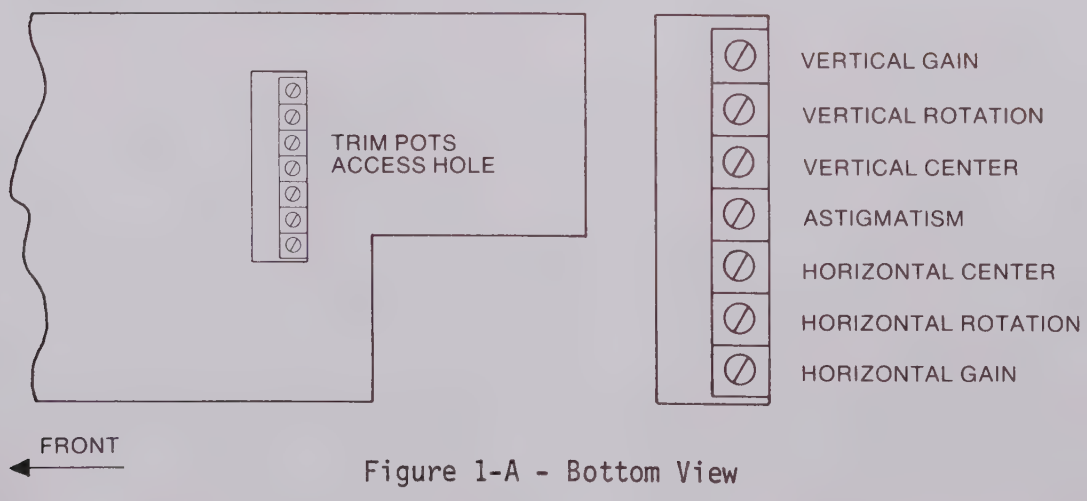


Figure 1-A - Bottom View

FOCUS AND INTENSITY CONTROLS

The Focus and Intensity controls are located on the rear panel.

- FOCUS: The Focus control is used in conjunction with the Astigmatism trimpot described above in Step 9.

- INTENSITY: The Intensity control brightens or darkens the display. This control may be adjusted, when using the scope camera, to permit optimum results while capturing displays on film.

MAINTENANCE

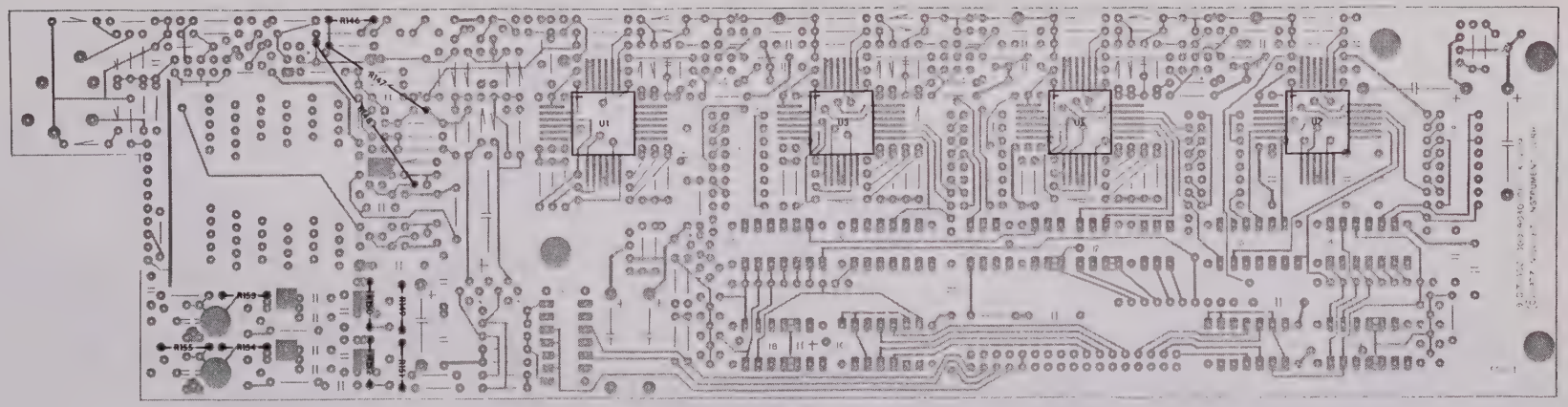
The following guidelines should be observed when cleaning the Explorer.

- SCOPE FACE: Clean the display face with a slightly damp, soft cloth.

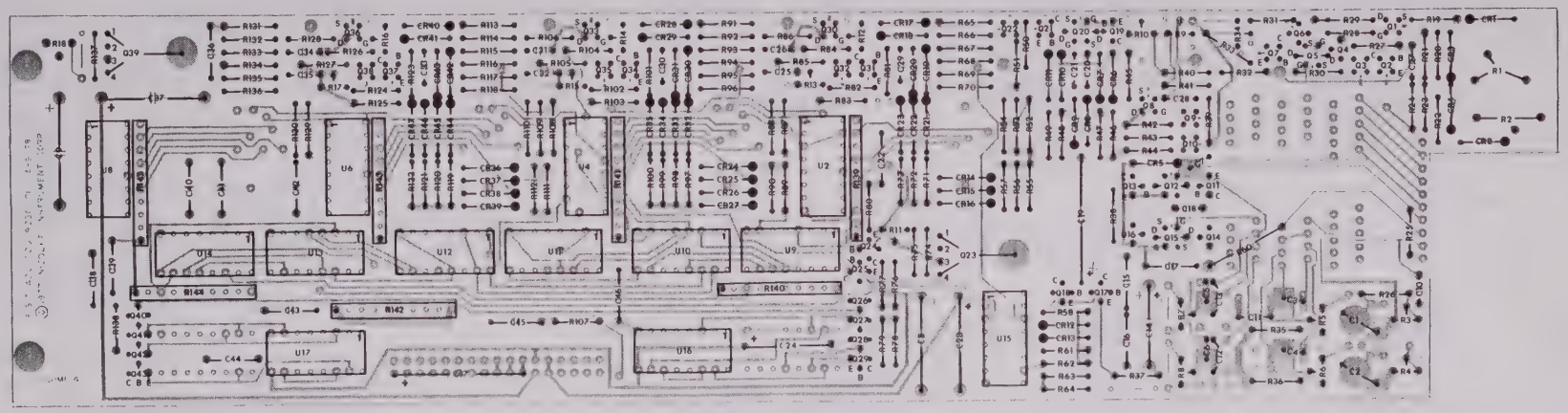
- CABINET: Clean the external surfaces with a slightly damp, soft cloth using a mild detergent.

- AIR FILTER: The dust filter on the rear panel should be inspected at regular intervals and cleaned whenever an accumulation of dust appears.

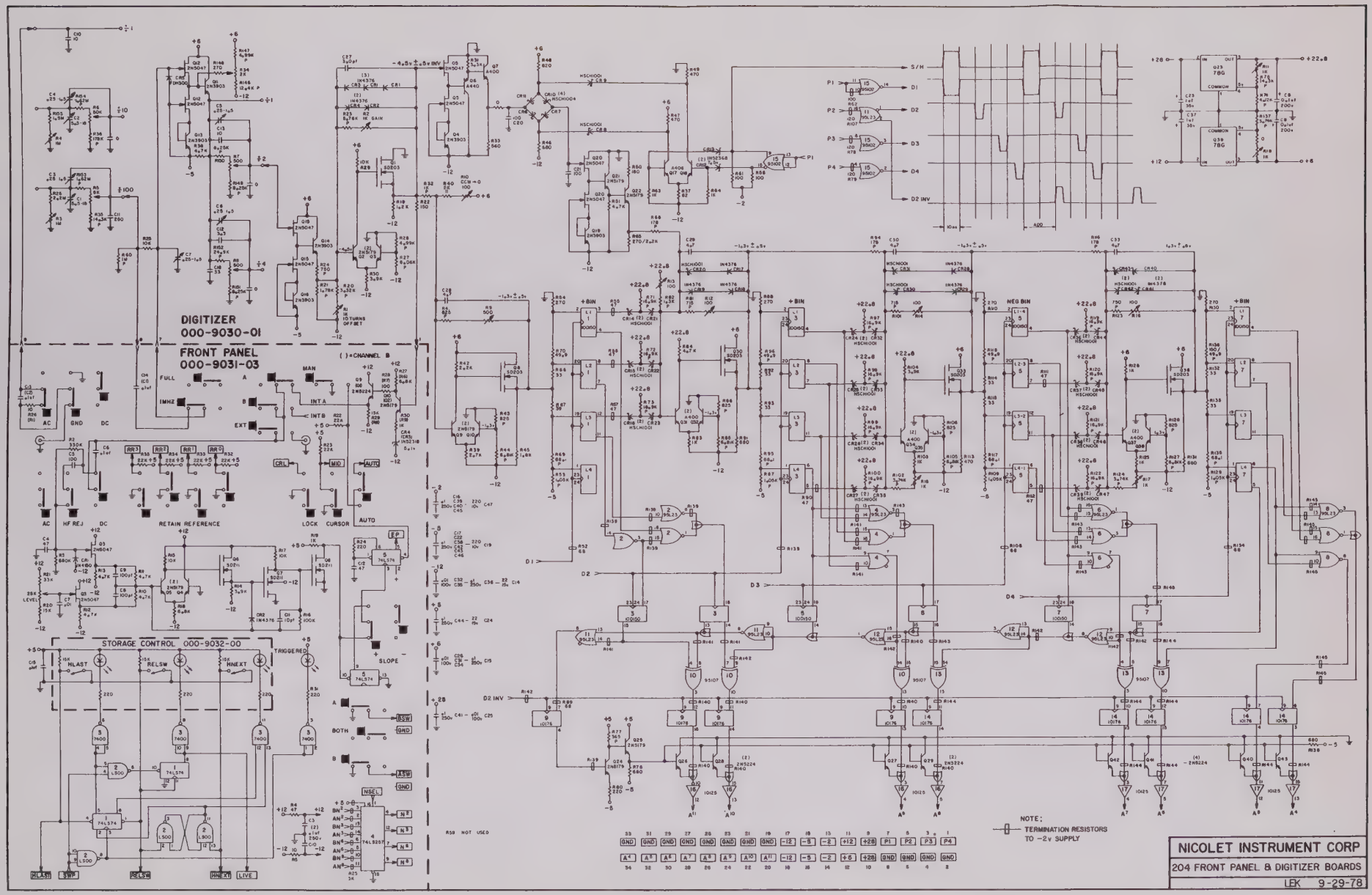
To clean the filter: Remove the four retaining screws, remove the surface dust with either compressed air or a soft-bristle brush. Reinstall the filter.

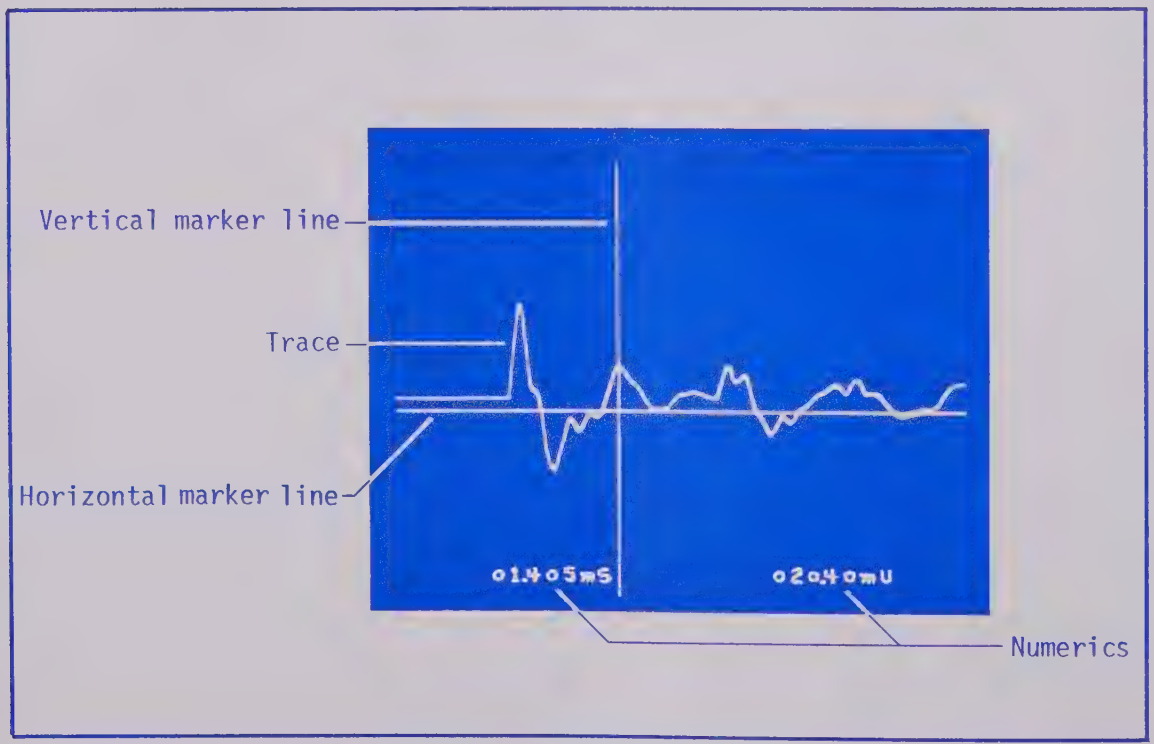


204 PLUG-IN DIGITIZER BOARD
– CONDUCTOR SIDE –



204 PLUG-IN DIGITIZER BOARD
– COMPONENT SIDE –


DIGITIZER
000-9030-01
FRONT PANEL
000-9031-03
STORAGE CONTROL 000-9032-00
NOTE;
TERMINATION RESISTORS
TO -2v SUPPLY
NICOLET INSTRUMENT CORP
204 FRONT PANEL & DIGITIZER BOARDS
LEK 9-29-78


Vertical marker line
Trace
Horizontal marker line
01.405mS
02.40mU
Numerics

1.0 REQUIREMENTS

1.1 FUNCTION GENERATOR

1.	Output:	Square wave and Triangle wave
2.	Adjustable amplitudes:	100 mV_{pp} - 20 V_{pp}
3.	Adjustable frequencies:	0.2 - 10 kHz

1.2 DIGITAL MULTIMETER

1.	Resolution:	4½ or 5½ digits
2.	Accuracy:	.02% of input, DC Voltage

1.3 EXTENDER BOARD

1.	For D2 Amplifier:	Furnished with Explorer

1.4 TOOLS

1.	Allen wrench:	5/64
2.	Screwdrivers:	Adjustment and Common types
3.	Open end wrench:	1/4"
4.	Soldering Iron:	40W pencil type

1.5 NETWORKS

1. Input capacitance:

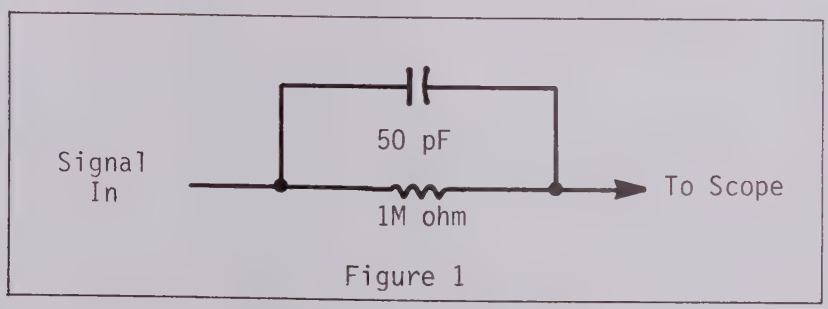


Figure 1

2. Frequency compensation:

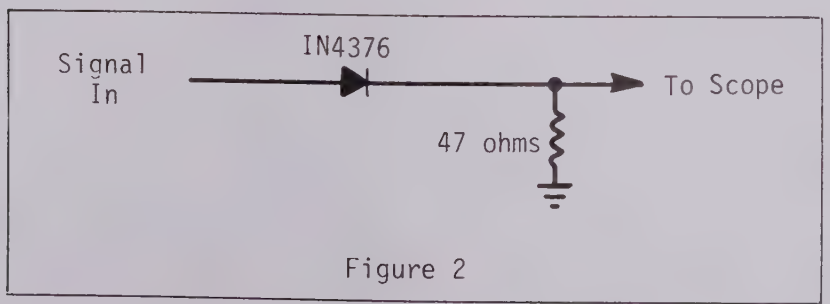


Figure 2

2.0 EXPLORER DISASSEMBLY

The left side cover must be removed and the D2 Amplifier board extended to perform the alignment procedures.

WARNING: All power must be removed from the oscilloscope before continuing.

1. Remove the two left side cover securing screws with a 5/64 Allen wrench and set aside.
2. Unsolder the two ground straps from the D2 Amplifier shields. (See Figure 3)
3. Remove the two screws securing the D2 Amplifier to the plug-in front panel and pull the D2 Amplifier out.
4. Insert the extender board between the ADC board and the D2 Amplifier board.
5. Ground the D2 Amplifier shield to the plug-in.
6. Replace the left side cover and cover the extended D2 Amplifier board.
7. Turn the oscilloscope on and allow it to warm up for at least 15 minutes before proceeding

NOTE: The Channel "A" D2 Amplifier and ADC boards must be removed to align the Channel "B" boards.

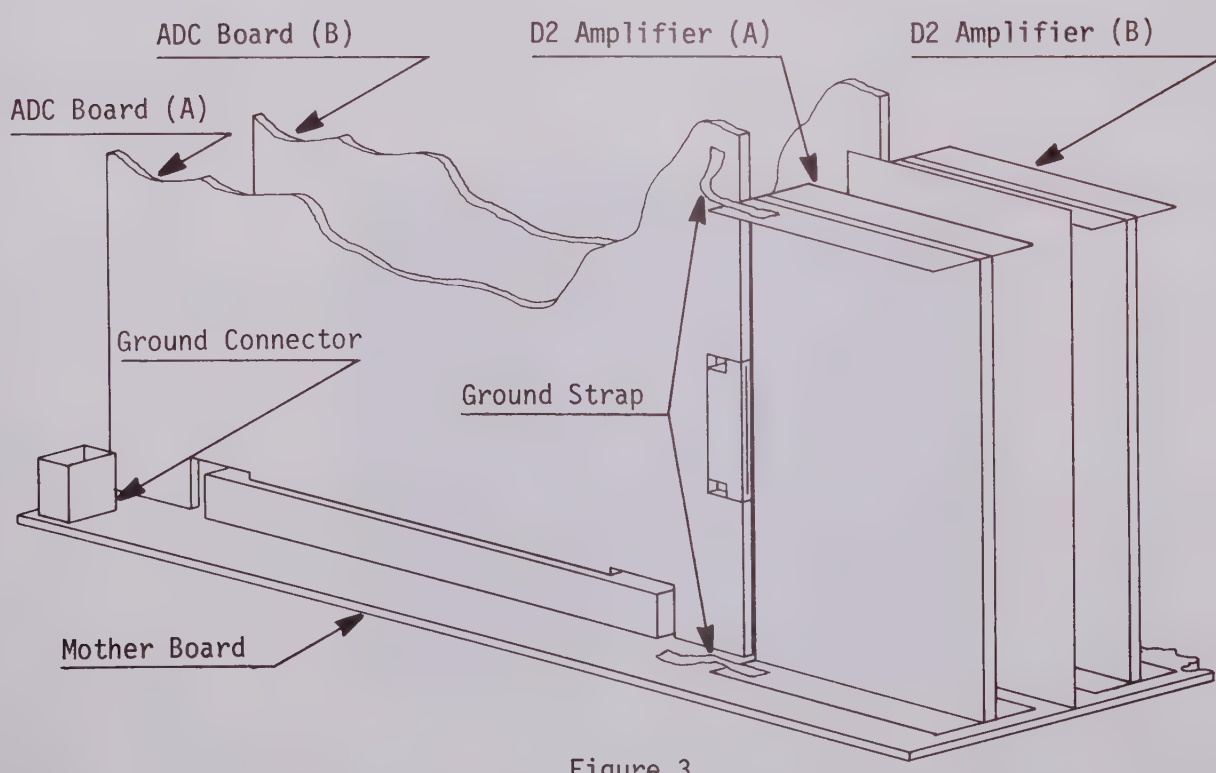


Figure 3

3.0 EXPLORER SET-UP PROCEDURE

The procedures have been outlined sequentially. Do not change any switch settings unless otherwise directed.

3.1 MAIN FRAME CONTROLS

NOTE: Allow the oscilloscope to warm up for at least 15 minutes before proceeding with any alignment procedures.

Power On/Off:	ON
Vertical Expansion:	OFF
Horizontal Expansion:	OFF
Autocenter switch:	OFF
XY / YT switch:	YT
Function switch:	RESET NUMBERS
Memory switch:	ALL

3.2 DISK DRIVE (Explorer III Models)

Track Protect switches:	Don't Care
Track Segment switch:	MAIN FRAME CONTROL (Full CCW)
Semi-Auto/Manual switch:	MANUAL

3.3 206 PLUG-IN

Storage Control:	LIVE
Retain Reference:	OFF
Time Per Point:	500 nS
100 kHz Filter:	OFF
Channel A switch:	ON (Only if calibrating Channel A)
Channel B switch:	ON (Only if calibrating Channel B)
Trigger Mode:	AUTO
Trigger Slope:	-DC
Trigger Source:	Channel being calibrated. (See Note 1)
Trigger Threshold:	Adjust as required.
Range:	10V
Multiplier:	X2

NOTE 1: If the function generator has a sync output, connect it to the external trigger input BNC and then select EXT as the Trigger Source.

4.0 VOLTAGE CHECK

1. Multimeter range: 0-20 VDC
2. Connect the multimeter to the +5VTP. (See Figure 5)
   a. Adjust R7 for +5 VDC ± 1%. (See Figure 4)

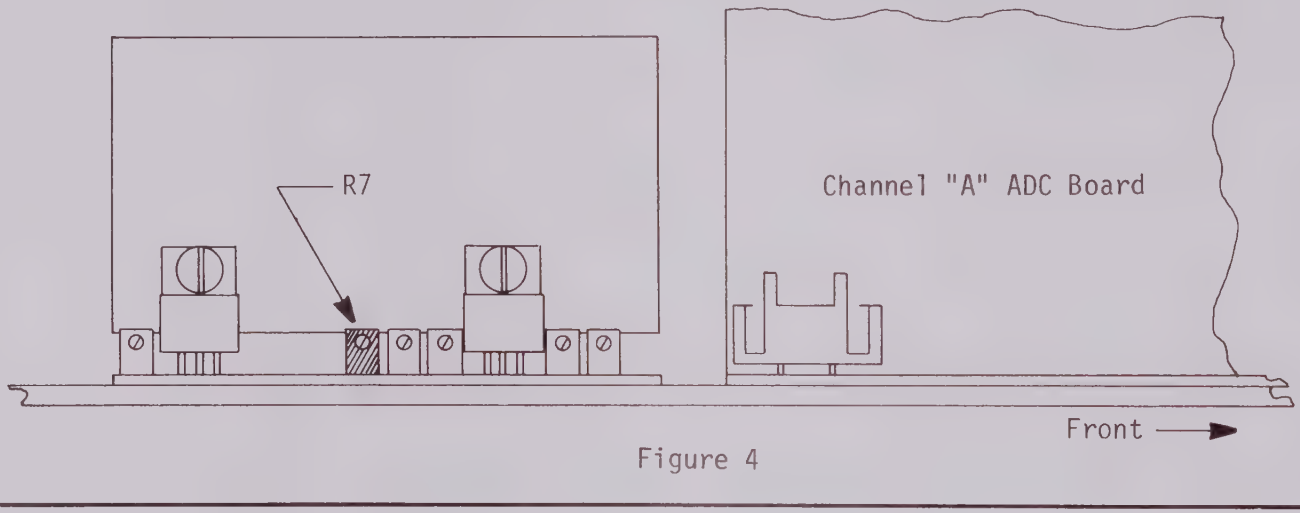


Figure 4

5.2 GAIN & OFFSET TESTS

1. DC Level adjust: Full CCW
2. Slowly adjust the DC Level control toward the full CW position.
   a. Observe the waveform for separations similiar to those illustrated in Figure 6 (Misaligned Gain) and/or Figure 7 (Misaligned Offset).

      - If a linear waveform is observed, repeat Procedures 5.1 and 5.2 for Channel B and then advance to Procedure 6.0 (Balance Adjust) if the waveform is linear.
      - If separations are observed, note which variation(s) (Gain and/or Offset) and then repeat Procedures 5.1 and 5.2 for Channel B before proceeding to Procedure 5.3.

5.3 EXPLORER DISASSEMBLY

> WARNING: All power must be removed from the oscilloscope before continuing with this procedure.

1. Unplug the Ground Connector. See Figure 3.

   NOTE: It is not necessary to reconnect the ground after the module has been removed from the oscilloscope.

2. With a 5/64 Allen wrench, remove the four corner screws (located on the front panel) securing the input module and slide the module halfway out of the oscilloscope.
3. Disconnect the ribbon cable from the rear of the input module.
4. Slide the input module the rest of the way out and set it to the left side of the oscilloscope.

> WARNING: Place the input module on a non-conductive workbench free of metal such as solder splashes.

5. Reconnect the ribbon cable to the input module.
6. Reapply power to the oscilloscope.

5.4 GAIN ADJUSTMENTS

NOTE: The channel "A" ADC board must be removed if the GAIN trimpot(s) on the channel "B" ADC board require adjustment.

> WARNING: Remove all power from the oscilloscope before removing the channel "A" ADC board.

1. DC Level control: Adjust fully CCW
   a. Slowly adjust the DC Level control in the CW direction until a full screen triangle waveform appears.
2. Slowly adjust the Stage 4 - R66 trimpot (Figure 5) until a separation appears on the waveform.
   a. Readjust the trimpot for the best linear waveform.
3. Repeat Step 2. Use trimpot (Stage 3 - R1)
4. Repeat Step 2. Use trimpot (Stage 2 - R1)
5. Repeat Step 2. Use trimpot (Stage 1 - R32)

   NOTE: The DC Level control may require additional adjustment to isolate each separation as the trimpots are adjusted.

5.5 OFFSET ADJUSTMENTS

NOTE: The input module slide rail may require removal if the GAIN trimpot(s) on the channel "B" ADC board require adjustment.

> WARNING: Remove all power from the oscilloscope before removing the rail.

1. DC Level control: Adjust fully CCW
   a. Slowly adjust the DC Level control in the CW direction until a full screen triangle waveform appears.
2. Slowly adjust the Stage 5 - R49 trimpot (Figure 5) until a separation appears on the waveform.
   a. Readjust the trimpot for the best linear waveform.
3. Repeat Step 2. Use trimpot (Stage 4 - R49)
4. Repeat Step 2. Use trimpot (Stage 3 - R49)
5. Repeat Step 2. Use trimpot (Stage 2 - R49)

3. Multimeter range: 0-40 VDC

4. Connect the multimeter to +25VTP. (See Figure 5)
   a. Adjust R72 for +25 VDC ± 1%.

5. Connect the multimeter to -25VTP. (See Figure 5)
   a. Adjust R74 for -25 VDC ± 1%.

6. Multimeter range: 0-20 VDC

7. Connect the multimeter to +8VTP. (See Figure 5)
   a. Record reading.

8. Connect the multimeter to -8VTP. (See Figure 5)
   a. Adjust R100 for a reading equal to the magnitude of the +8 VDC recorded in Step 7, ± 1%. (See Figure 5)

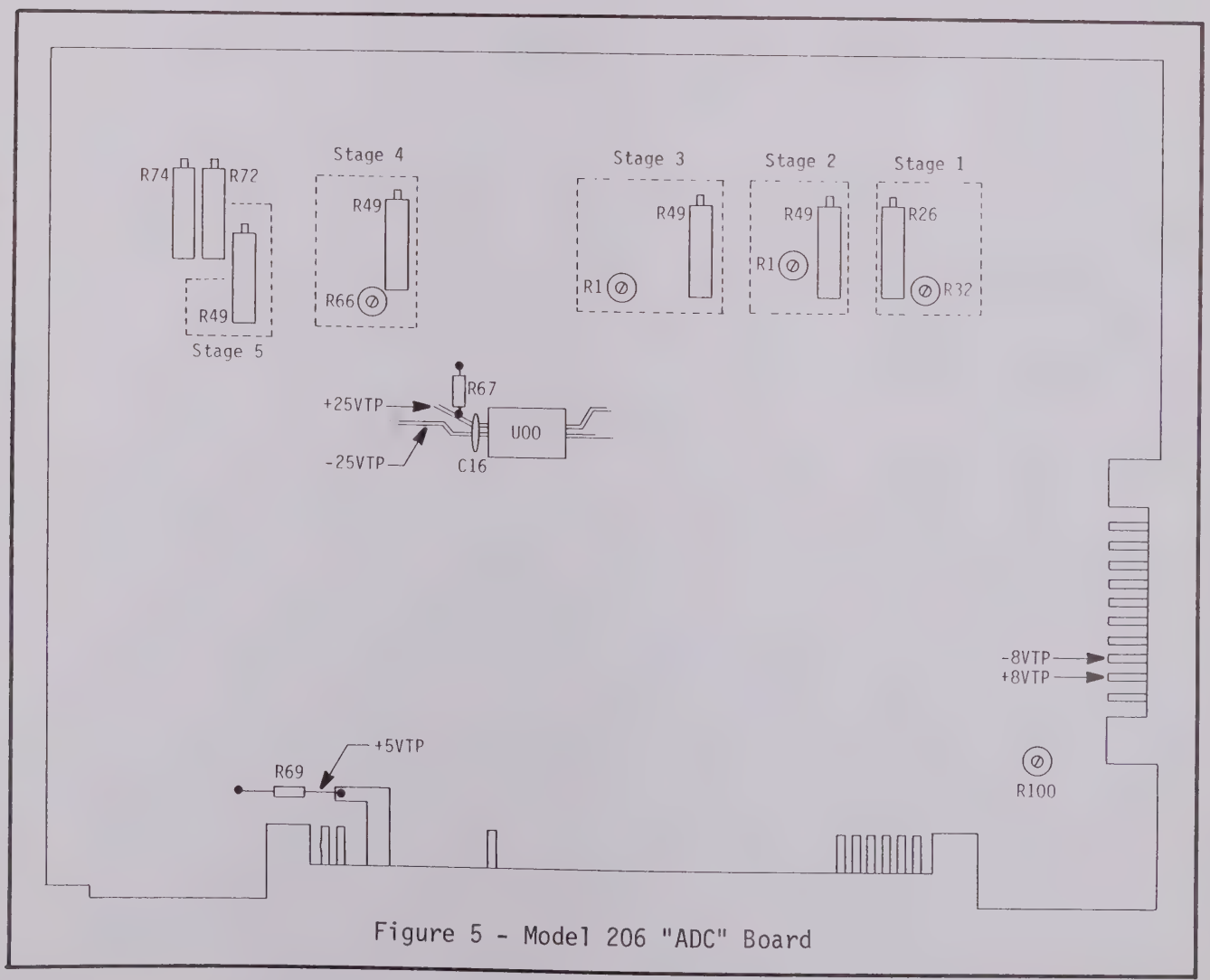


Figure 5 - Model 206 "ADC" Board

5.0 GAIN & OFFSET ADJUSTMENTS

An analog-to-digital converter (ADC) normally generates a series of incrementally increasing output voltages (digital outputs) when a gradually increasing voltage (analog signal) is applied to its input.

Discontinuities in the digital output signal will occur when misalignments of the Gain (Figure 6) and/or Offset (Figure 7) are present.

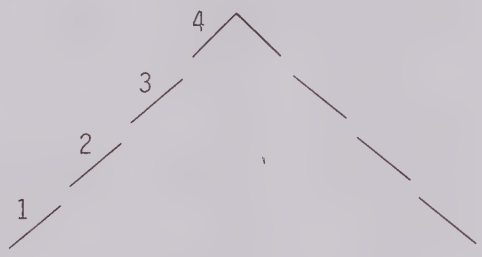


Figure 6 - Misaligned Gain

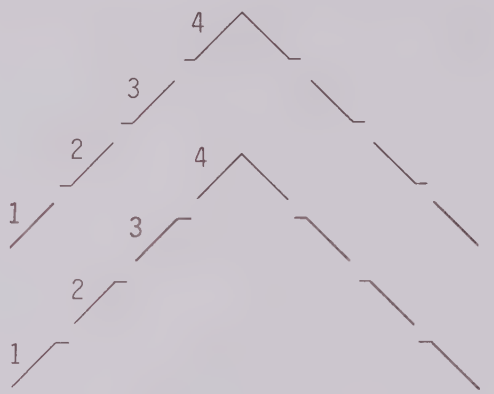


Figure 7 - Misaligned Offset

5.1 INITIAL SET-UP PROCEDURE

1. Multiplier Range: X2
2. Range: 1V
3. 100 kHz Filter switch: ON
4. Connect the signal generator to the input BNC of the channel to be aligned.
5. Signal Generator output: Triangle waveform
   a. Adjust the waveform frequency for a one period display.
   b. Adjust the waveform amplitude for a full screen display.
6. Vertical Expansion switch: X32

   NOTE: It may be necessary to reposition the display by operating the paddle switch adjacent to the Vertical Expansion switch.

6. Repeat Step 2. Use trimpot (Stage 1 - R26)

NOTE: The DC Level control may require additional adjustment to isolate each separation as the trimpots are adjusted.

5.6 EXPLORER REASSEMBLY

WARNING: Remove all power from the oscilloscope before continuing.

1. Replace the input module slide rail if it was removed during Procedure 5.5.
2. Replace the channel "A" ADC board if it was removed during Procedure 5.4.
3. Disconnect the ribbon cable from the rear of the input module.
4. Slide the input module halfway into the oscilloscope and reconnect the ribbon cable to the rear of the input module.
5. Slide the input module the rest of the way into the oscilloscope and reconnect the ground to the Ground Connector.

5.7 GAIN & OFFSET ALIGNMENT CONFIRMATION

1. Replace the left side cover on the oscilloscope.
2. Apply power to the oscilloscope and allow it to warm up for 15 minutes.
3. With the triangle waveform still applied to the oscilloscope, slowly adjust the DC Level control from fully CCW to fully CW and observe the waveform for separations. Repeat for the other channel.
   a. Repeat Procedure 5.0 thru 5.7 if necessary.
4. Remove signal generator from input BNC.

5.8 SUMMARY OF GAIN & OFFSET TRIMPOTS

STAGE	GAIN TRIMPOTS	OFFSET TRIMPOTS
5	None	Stage 5 - R49
4	Stage 4 - R66	Stage 4 - R49
3	Stage 3 - R1	Stage 3 - R49
2	Stage 2 - R1	Stage 2 - R49
1	Stage 1 - R32	Stage 1 - R26

6.0 BALANCE ADJUSTMENTS

6.1 X1 & X2 MULTIPLIER BALANCE

1. Vertical Expansion switch: OFF
2. Range Multiplier: X2
3. Range: 100 mV
4. Ground the (+) and (-) input BNCs.
5. DC Level control: Adjust trace to center of screen.
6. Multimeter range: 0-10 mVDC
7. Connect multimeter to G1TP. (See Figure 8)
   a. Adjust R44 for 0 VDC ± 1 mVDC
8. Vertical Expansion switch: X64
9. Autocenter switch: ON, then OFF
10. Range Multiplier switch: X1
    a. Observe trace for vertical shift.
    b. Adjust R47 (Figure 8) until the trace is aligned with the horizontal marker line.

    NOTE: Make the first adjustment without vertical expansion if the shift is excessive.
11. Range Multiplier switch: X2
12. Repeat Steps 9 thru 11 until minimum shifting is achieved.

6.2 X2 & X4 MULTIPLIER BALANCE

1. Range Multiplier: X4
2. Autocenter switch: ON, then OFF
3. Range Multiplier: X2

   a. Observe trace for vertical shift.
   b. Adjust R20 (Figure 9) until the trace is aligned with the horizontal marker line.

   NOTE: Make the first adjustment without vertical expansion if the shift is excessive.

4. Repeat Steps 1 thru 3 until minimum shifting is achieved.

5. Range Multiplier: Switch between X1, X2 and X4
   a. Repeat Procedures 6.1 and 6.2 if necessary.

6. Remove the grounds from the (+) and (-) input BNCs.

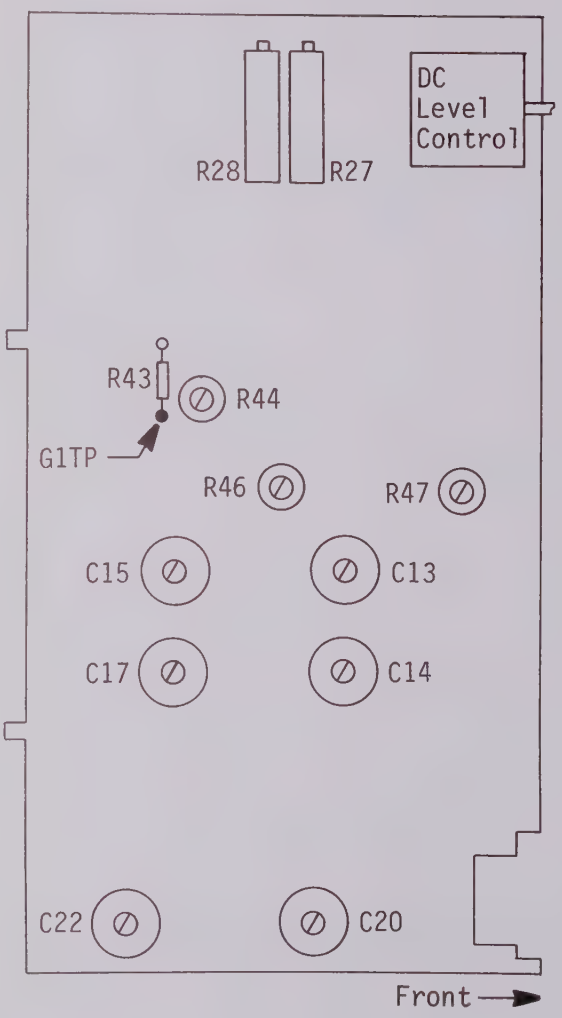


Figure 8 - Left side view

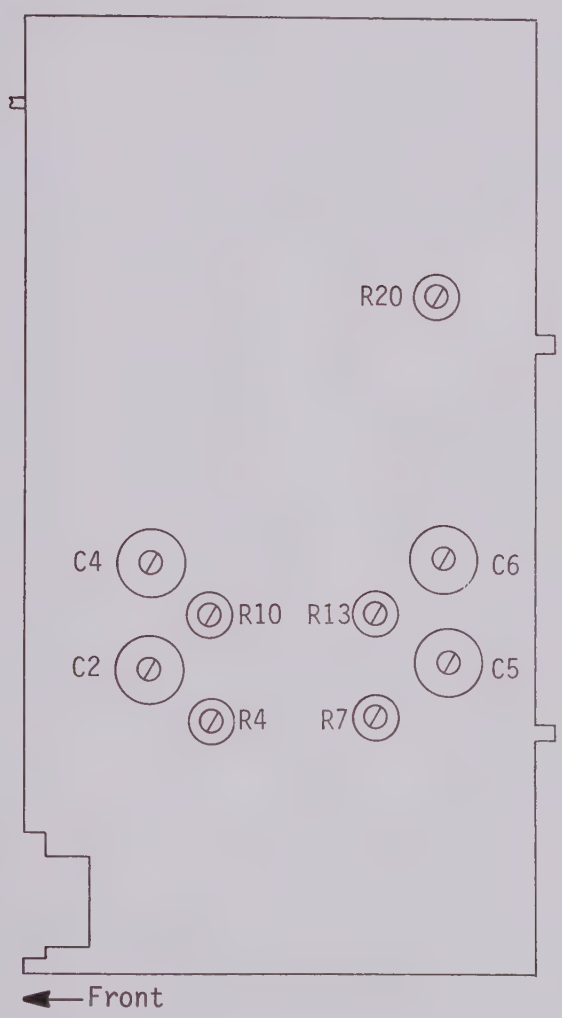


Figure 9 - Right side view

7.0 COMMON MODE ADJUSTMENT

1. 100 kHz Filter switch: OFF
2. Range Multiplier: X2
3. Vertical Expansion switch: OFF
4. Signal Generator output: 10 kHz Square wave
5. Apply square wave to the (+) input BNC.
   A. Adjust for a 3/4 full screen display.
      NOTE: The Offset and Trigger Level controls may require adjustment.
6. Apply the same signal to the (-) input BNC.
   NOTE: The signal must be applied to both the (+) and (-) input BNCs.
7. Autocenter switch: ON
8. Vertical Expansion switch: X64
9. Adjust R27 (Figure 8) for the best straight line.
10. Vertical Expansion switch: OFF
11. Disconnect the signals from the (+) and (-) input BNCs.

8.0 200 mV RANGE INPUT CAPACITANCE

8.1 (+) INPUT BNC

1. Signal Generator output: 10 kHz Square wave
2. Apply square wave to the (+) input BNC using the Input Capacitance network illustrated in Figure 1.
   a. Adjust for a 3/4 full screen display.
3. Vertical Expansion switch: X32
4. Horizontal Expansion switch: X16
5. Adjust C20 (Figure 8) for minimum overshoot or undershoot.
6. Vertical Expansion switch: OFF

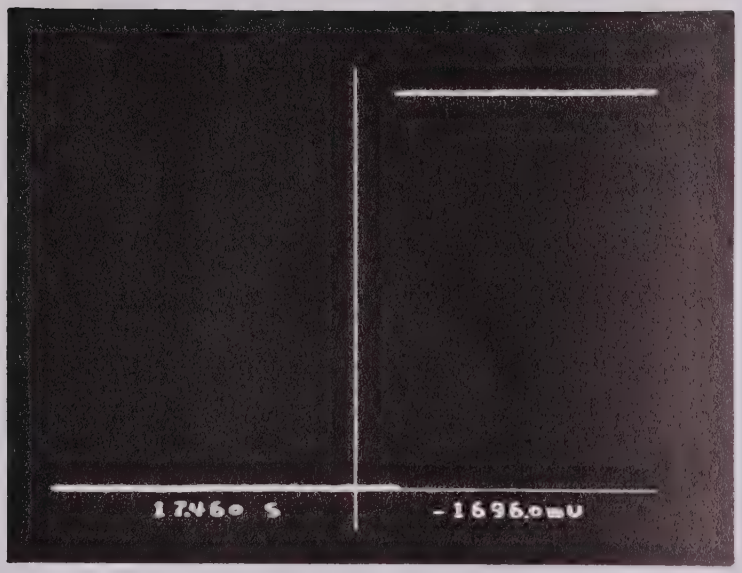
8.2 (-) INPUT BNC

1. Remove the square wave signal from the (+) input BNC and apply it to the (-) input BNC using the Input Capacitance network.
   a. Adjust for a 3/4 full screen display.
2. Vertical Expansion switch: X32
3. Adjust C22 (Figure 8) for minimum overshoot or undershoot.
4. Vertical Expansion switch: OFF
5. Horizontal Expansion switch: OFF
6. Remove the Input Capacitance network from the (-) input BNC.

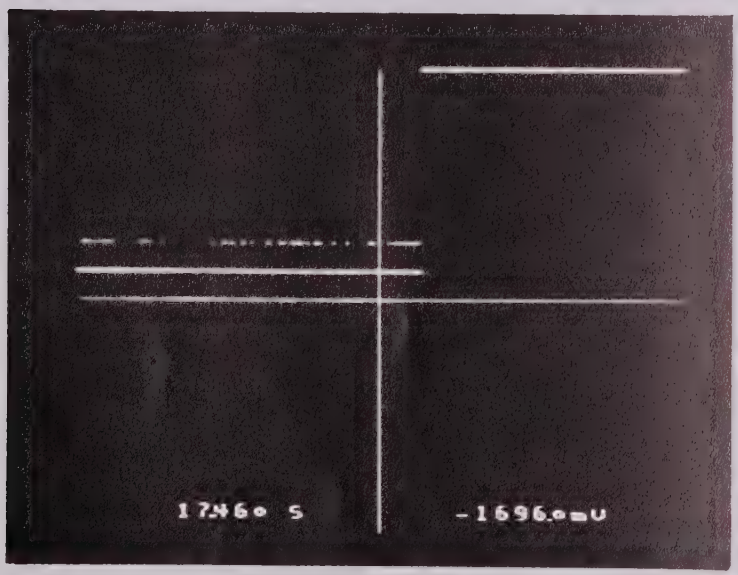
9.0 GAIN CALIBRATION

9.1 200 mV RANGE

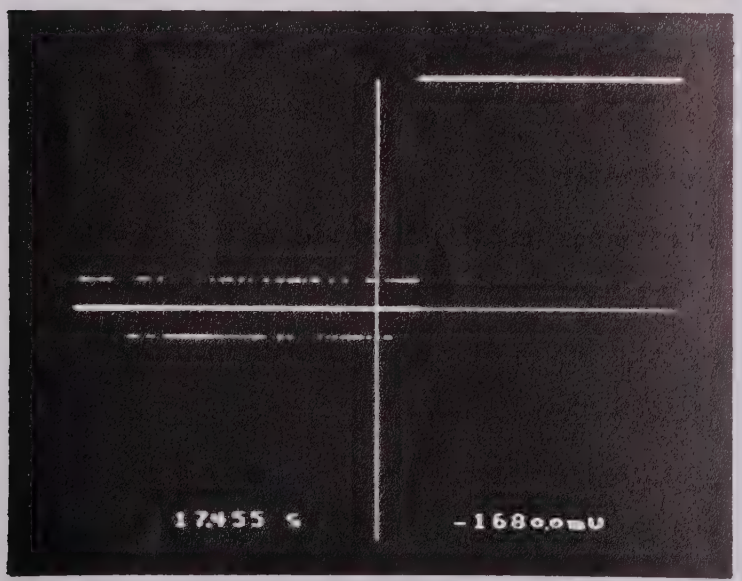
1. Memory switch: Q1
2. Filter switch: ON
3. Time Per Point: 5 mS
4. Autocenter switch: OFF
5. Range Multiplier: X2
6. Range: 100 mV
7. Signal Generator output: 0.2 Hz Square wave
   a. Adjust for a 3/4 full screen display.
      NOTE: The Offset and Trigger Level controls may require adjustment.
8. Multimeter range: 0-400 mVDC
9. Apply same square wave signal to multimeter.
10. Record both (+) and (-) multimeter readings and ADD absolute values to obtain the peak-to-peak voltage.



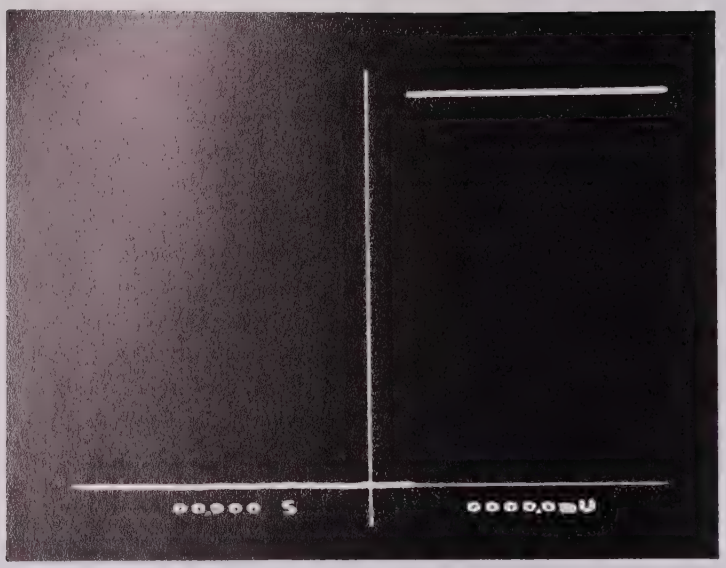
11. Depress the HOLD NEXT pushbutton.
    a. Wait until the waveform has been stored. (Hold Last led lit only.)



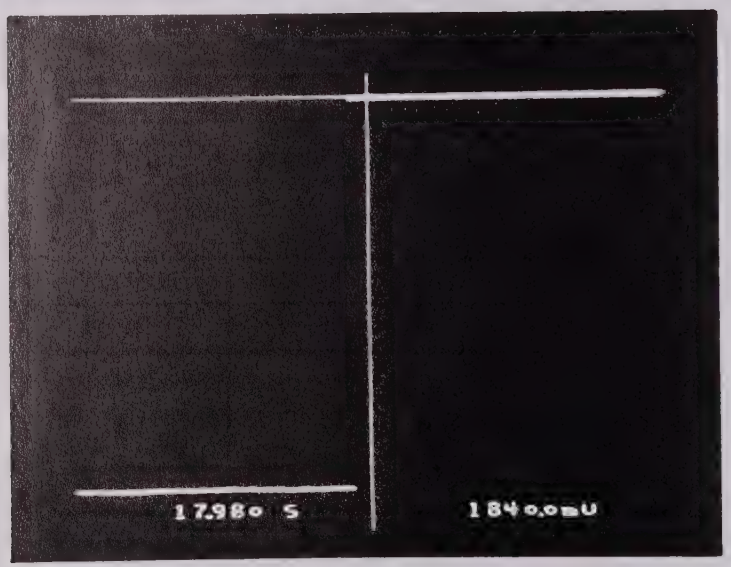
12. Autocenter switch: ON
13. Vertical Expansion switch: X64



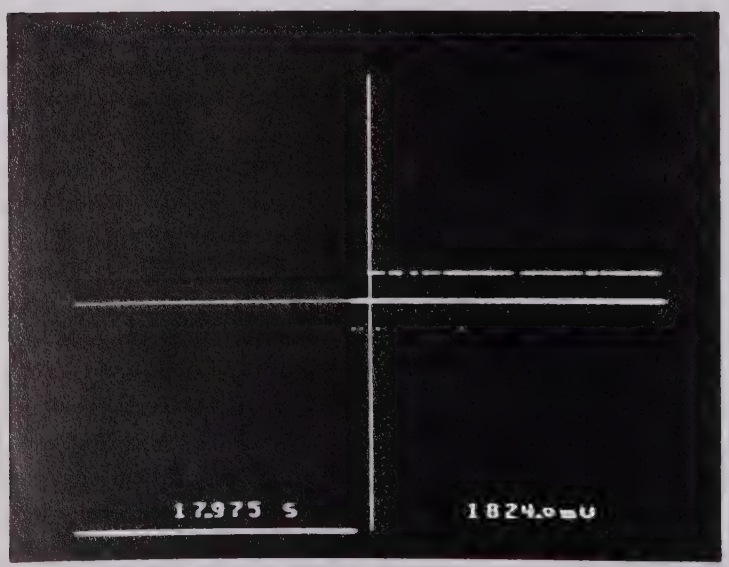
14. Several levels of data points will be displayed due to a certain amount of "noise." Select the level with the majority of data points by moving the horizontal marker line.



15. Vertical Expansion switch: OFF
16. Function switch: RESET
17. Depress the Execute button.
    a. Time and voltage numerics indicate zero.



18. Position the vertical marker line to the opposite peak of the waveform.



19. Vertical Expansion switch: X64
20. Select the level with the majority of data points.
    a. Record the peak-to-peak voltage displayed on the oscilloscope.

21. Compute the Percent Error.

    a. The percent error should be less than 0.2%.

$$\text{Percent Error} = \left| \frac{\text{Multimeter } (V_{pp}) - \text{Scope } (V_{pp})}{\text{Multimeter } (V_{pp})} \right| \text{X100}$$

22. Adjust R28 (Figure 8).

    a. CW to increase. CCW to decrease.

23. Depress the LIVE pushbutton.

24. Vertical Expansion switch: OFF

25. Autocenter switch: OFF

26. Repeat Procedure 9.1, Steps 11 thru 25 until percent error is less than 0.2%.

9.2 100 mV, 2V & 20V RANGES

Repeat Procedure 9.1 (100 mV Range) for each of the Range Calibrations and substitute the steps listed in the table below.

RANGE TO BE CALIBRATED	STEP 5	STEP 6	STEP 8	STEP 22
	Range Multiplier	Range	Multimeter Range	Trimpot
100 mV	X1	100 mV	0-200 mV	R46
2V	X2	1V	0-4V	R4
20V	X2	10V	0-40V	R10

NOTE: Disconnect the multimeter when the Range Calibrations have been completed.

10.0 FREQUENCY COMPENSATION

use PG 506 Generator, you will not n... the comp. Network, ...

10.1 20V RANGE

1. Filter switch: OFF
2. Memory switch: ALL
3. Time Per Point switch: 500 nS
4. Depress the LIVE pushbutton
5. Vertical Expansion switch: OFF
6. Horizontal Expansion switch: OFF
7. Signal Generator output: 10 kHz Square wave
8. Apply square wave to the (+) input BNC using the Frequency Compensation network illustrated in Figure 2.
   a. Adjust for a 3/4 full screen display or as large of a signal as the generator will supply without exceeding a 3/4 full screen display.
9. Autocenter switch: ON
10. Vertical Expansion switch: X32
11. Horizontal Expansion switch: X16
12. Adjust C13 (Figure 8) for minimum negative cycle overshoot or undershoot.
    C14/2V Range
13. Vertical Expansion switch: OFF
14. Horizontal Expansion switch: OFF
15. Autocenter switch: OFF
16. Remove the Frequency Compensation network.
17. Apply square wave to the (+) input BNC.
    a. Adjust for a 3/4 full screen display or as large of a signal as the generator will supply without exceeding a 3/4 full screen display.
18. Apply the same signal to the (-) input BNC.
    NOTE: The signal must be applied to both the (+) and (-) input BNCs.
19. Autocenter switch: ON
20. Vertical Expansion switch: X32
21. Horizontal Expansion switch: X8

22. Adjust both C15 (Figure 8) and R13 (Figure 9) for the best straight line.
    NOTE: It may be necessary to repeat adjusting C15 and R13 to obtain the best straight line.

23. Autocenter switch: OFF

24. Vertical Expansion switch: OFF

25. Horizontal Expansion switch: OFF

10.2 2V RANGE

1. Range: 1V

2. Repeat Procedure 10.1, Steps 7 thru 25, and make the substitutions listed
   a. Step 12: C14
   b. Step 22: C17 & R7

11.0 INPUT CAPACITANCE ADJUSTMENT

11.1 2V RANGE

1. Signal Generator output: 10 kHz Square wave

2. Apply square wave to the (+) input BNC using the Input Capacitance network illustrated in Figure 1.
   a. Adjust for a 3/4 full screen display.

3. Vertical Expansion switch: X32

4. Horizontal Expansion switch: X16

5. Adjust C2 (Figure 9) for minimum overshoot or undershoot.

6. Vertical Expansion switch: OFF

7. Remove the square wave signal from the (+) input BNC and apply it to the (-) input BNC.
   a. Adjust for a 3/4 full screen display.

8. Adjust C5 (Figure 9) for minimum overshoot or undershoot.

9. Vertical Expansion switch: OFF

10. Horizontal Expansion switch: OFF

11.2 20V RANGE

1. Signal Generator output: 10 kHz Square wave
2. Apply square wave to the (-) input BNC using the Input Capacitance network illustrated in Figure 1.
   a. Adjust for a 3/4 full screen display or as large of a signal as the generator will supply without exceeding a 3/4 full screen display.
3. Vertical Expansion switch: X32
4. Horizontal Expansion switch: X16
5. Adjust C6 (Figure 9) for minimum negative cycle overshoot or undershoot.
6. Vertical Expansion switch: OFF
7. Remove the square wave signal from the (-) input BNC and apply it to the (+) input BNC.
   a. Adjust for a 3/4 full screen display.
8. Adjust C4 (Figure 9) for minimum negative cycle overshoot or undershoot.

DISPLAY ALIGNMENT

TRIM POTS ACCESS

The display trimpots are accessible from the bottom of the oscilloscope. Refer to Figure A-1.

> WARNING: High voltages exist in the oscilloscope. Use care during the following procedures.

ALIGNMENT PROCEDURE

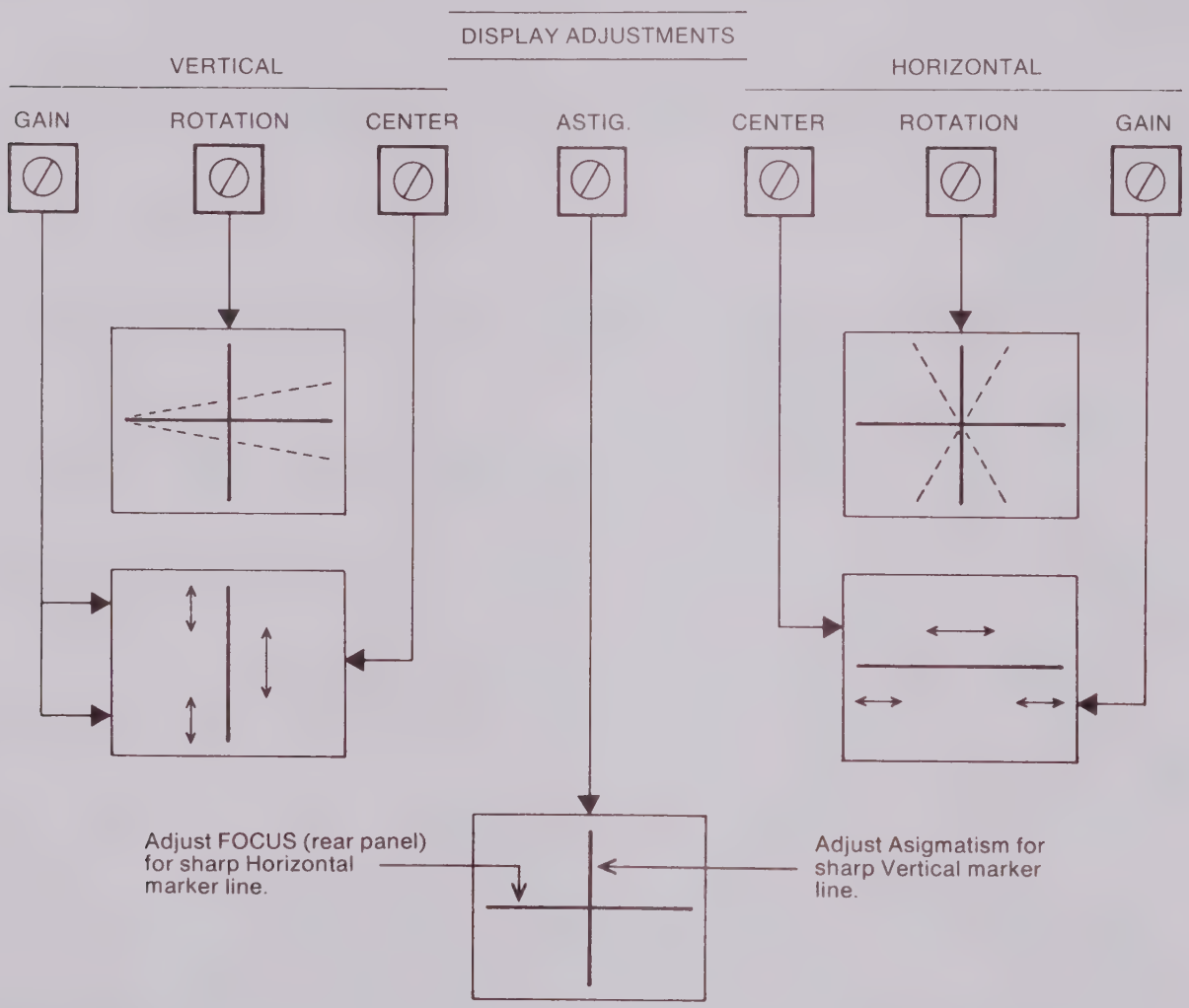
It is recommended that the following alignment procedure be followed in the sequence as listed. Perform the alignment(s) if required.

1. Ground all (+) and (-) input BNC's.
2. Switch the FUNCTION selector to the ERASE position (spring loaded) and depress the EXECUTE pushbutton.
3. HORIZONTAL ROTATE: Rotates the entire display with the screen center acting as the pivot point.
   a. Adjust until the vertical marker line is straight up and down.
4. VERTICAL ROTATE: Rotates the entire display with the left side of the screen acting as the pivot point.
   a. Adjust until the horizontal marker line is level.
5. HORIZONTAL CENTER: Positions the display either left or right.
   a. Adjust until the horizontal marker line is evenly centered on the screen.
6. HORIZONTAL GAIN: Expands or contracts the display in the horizontal plane.
   a. Adjust until both ends of the horizontal marker line are approximately 3/16" from the sides of the screen.
7. VERTICAL CENTER: Positions the display either up or down.
   a. Adjust until the vertical marker line is approximately 1/4" from the top of the screen.
8. VERTICAL GAIN: Expands or contracts the display in the vertical plane.
   a. Adjust until the vertical marker line is approximately 1/8" from the bottom of the screen.
   b. Repeat Step 7 and 8 until the vertical marker line is approximately 1/4" from the bottom of the screen.

9. ASTIGMATISM: Adjust the sharpness of the display and is used in conjunction with the FOCUS adjustment located on the rear panel.

a. Adjust the Astigmatism trimpot for a sharp vertical marker line.

b. Adjust the FOCUS control for a sharp horizontal marker line.



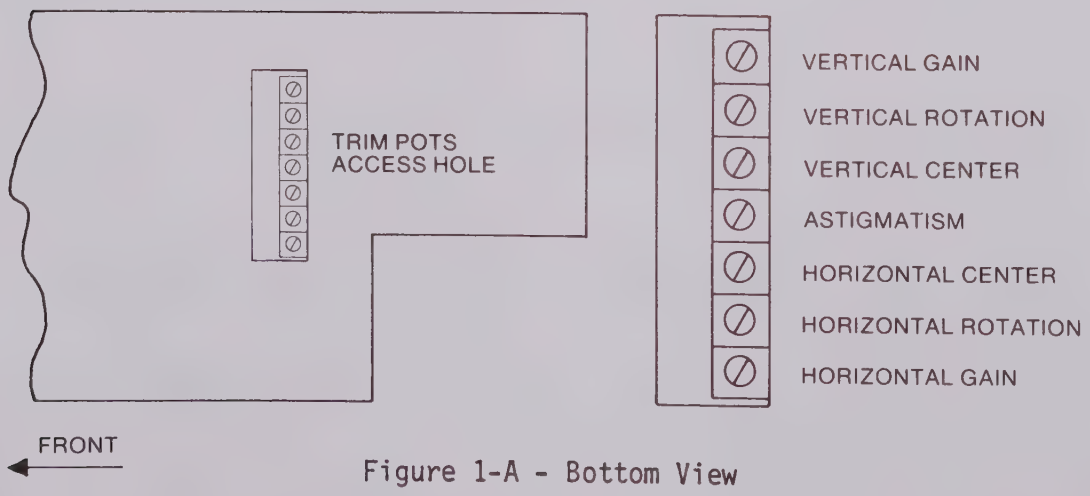


Figure 1-A - Bottom View

FOCUS AND INTENSITY CONTROLS

The Focus and Intensity controls are located on the rear panel.

- FOCUS: The Focus control is used in conjunction with the Astigmatism trimpot described above in Step 9.

- INTENSITY: The Intensity control brightens or darkens the display. This control may be adjusted, when using the scope camera, to permit optimum results while capturing displays on film.

MAINTENANCE

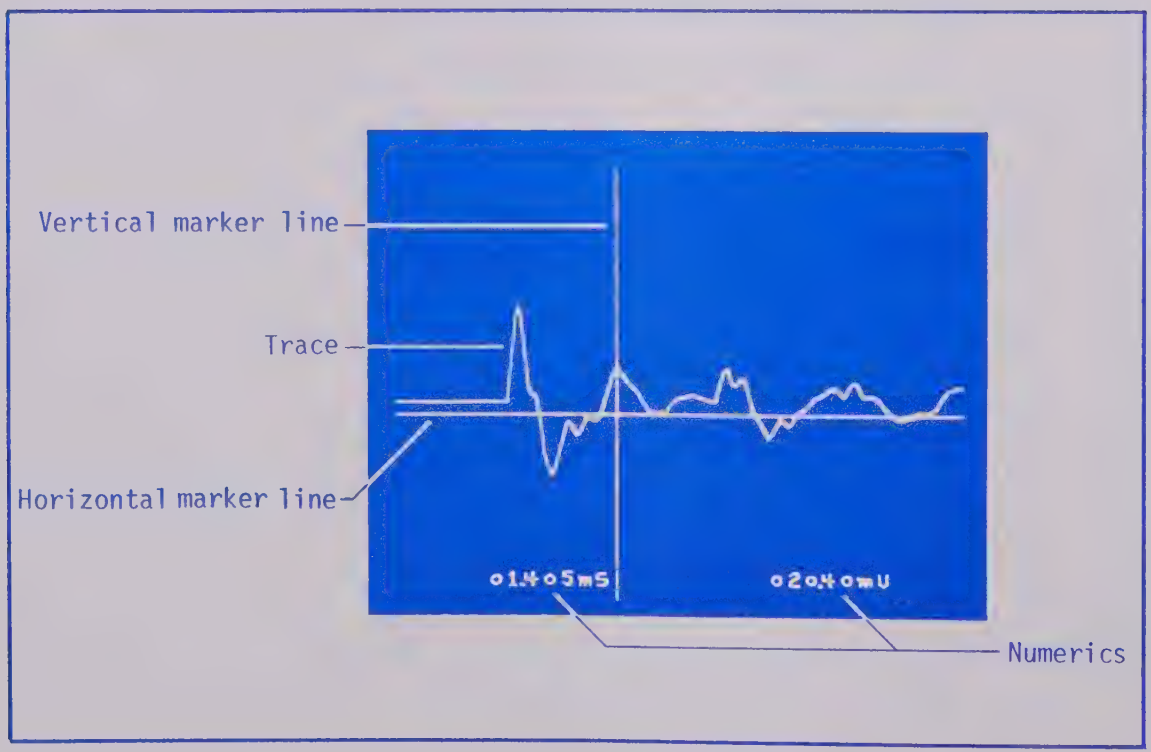
The following guidelines should be observed when cleaning the Explorer.

- SCOPE FACE: Clean the display face with a slightly damp, soft cloth.

- CABINET: Clean the external surfaces with a slightly damp, soft cloth using a mild detergent.

- AIR FILTER: The dust filter on the rear panel should be inspected at regular intervals and cleaned whenever an accumulation of dust appears.

To clean the filter: Remove the four retaining screws, remove the surface dust with either compressed air or a soft-bristle brush. Reinstall the filter.


Vertical marker line
Trace
Horizontal marker line
01405mS
02040mU
Numerics

MAINFRAME

Memory Size:	4K words, 12 bits.
Addressable Subgroups:	Halves (2K), Quarters (1K).
Storage Capacity:	Normally 8 waveforms, (16 waveforms max).
Display:	5-inch, high definition.
Expansion:	Up to X64, both axes, cursor-interactive.
Numerics:	
(a) YT Display Mode:	Time and voltage.
(b) XY Display Mode:	X-voltage and Y-voltage.
Numeric Displays (XY/YT):	
(a) Normal:	Absolute numerics.
(b) Reset Numerics:	Relative numerics.
Arithmetic Functions:	Subtract, Invert, Data Move.
Autocenter:	
(a) Unexpanded Display:	Automatic lock of cursor to waveform.
(b) Expanded Display:	Automatic waveform centering.
Pen:	Analog output to XY pen recorder.

DISK RECORDER

Disk Recorder Type:	5-1/4" Floppy, single sided, single density, soft-sectored, 48 TPI.
Storage Capacity/Diskette:	Eight 4K, sixteen 2K or thirty-two 1K records.
Write Protection:	Switchable, track-specific.
Autocycle:	Automatic consecutive capture-and-store of up to 32 records.
Long Sweep:	Continuous recording of up to 32K of data at sweep speeds of 500 microseconds per point or slower, (2090-3C/206 or 201 only).

DIGITAL I/O

Interfaces Available:	13-bit parallel binary, IEEE-488 (GPIB), RS-232C.
Minimum Transfer Times (4K):	Parallel Binary, 8 milliseconds. GPIB Binary, 2.5 seconds. RS-232C Binary, 8.5 seconds.

OVERALL DIMENSIONS

2090-2: 28.6cm (W) x 25cm (H) x 47.3cm (D)

2090-3: 43.2cm (W) x 25cm (H) x 47.3cm (D)

APPROXIMATE WEIGHTS

2090-2: 30 lbs, (14 kg)

2090-3: 46 lbs, (21 kg)

POWER REQUIREMENTS

2090-2: 101, 115, 202, 230 VAC (±10%); 50-60Hz (±5%); 225 volt-amperes.

2090-3: 101, 115, 202, 230 VAC (±10%); 50-60Hz (±5%); 300 volt-amperes.

Specifications are subject to change without notice.

PARAMETER	PLUG-INS			
	201	204-A	206	207
Inputs:	2 Differential	2 Single-Ended	2 Differential	2 Differential or 4 Single-Ended
Vertical Resolution	12-bits (0.025%)	8-bits (0.4%)	12-bits (0.025%)	12-bits (0.025%)
Maximum Sweep Length:	4096 pts. (Note 1)	4096 pts.	4096 pts. (Note 1)	4096 pts. (Note 1)
Maximum Digitizing Rate:				
a. 2 inputs:	5 µS/pt.	50 nS/pt.	500 nS/pt.	500 nS/pt.
b. 4 inputs:	N/A	N/A	N/A	10 µS/pt.
Minimum Digitizing Rate:	200S/pt.	20S/pt.	200S/pt.	200S/pt.
Time Base Accuracy (%):	0.01	0.01	0.01	0.01
External Clock Input:	No	Yes	Yes	Yes
Overall Accuracy (%F.S.):	0.2	0.5	0.2	0.2 (Note 2)
Linearity (%F.S.):	0.1	0.5	0.1	0.1
Noise, (RMS, open inputs):	0.025% F.S. +7µV	0.25% F.S.	0.025% F.S. +10µV	0.03% F.S. +10µV
Drift, (%F.S./°C):	0.03	0.35	0.06	0.15
Inputs				
a. Coupling:	DC	AC/DC	DC	AC/DC/GND
b. Ranges (Full Scale):	±10mV to ±40V	±100mV to ±40V	±100mV to ±40V	±10mV to ±40V
c. Impedance (ohms)	10,000M (Note 3)	1M (47 pF)	1M (47 pF)	1M (47 pF)
d. Filter (Switchable, RC):	100Hz	1MHz	100KHz	10K,100KHz
Safe Overload:				
a. At max. sensitivity:	100V	100V	100V	10V
b. At min. sensitivity:	200V	200V	200V	200V
Analog Bandwidth:				
a. At max. sensitivity:	5 KHz	7 MHz	400 KHz	400 KHz
b. At min. sensitivity:	60 KHz	7 MHz	650 KHz	1 MHz
D.C. Offset Range (% F.S.):	100	100	100	200
Common Mode				
a. Voltage Range, (%F.S.):	150	N/A	200	1000
b. Rejection Ratio (db):	72	N/A	72	72
Trigger Range				
a. External (Volts):	±5	±5	±3	±3
b. Internal (%F.S.):	100	100	100	100
Trigger Sensitivity				
a. External (Volts):	0.25	0.1	0.25	0.25
b. Internal (%F.S.):	10	1	10	10
Max. Pre-Trigger Delay (% of Sweep Time):	25	100	100	100

NOTE 1: Longer sweeps are possible with the optional disk recorder.

NOTE 2: Overall accuracy on 10mV, 20mV, and 40mV ranges is 1.5% of full scale.

NOTE 3: The input impedance of the 201 is 1 Megohm on 10V, 20V, and 40V ranges.

Specifications are subject to change without notice.

1.0 REQUIREMENTS

1.1 FUNCTION GENERATOR

1.	Output:	Square wave and Triangle wave
2.	Adjustable amplitudes:	100 mV_{pp} - 20 V_{pp}
3.	Adjustable frequencies:	0.2 - 10 KHz

1.2 DIGITAL MULTIMETER

1.	Resolution:	4½ or 5½ digits
2.	Accuracy:	.02% of input, DC Voltage

1.3 TOOLS

1.	Allen wrench:	5/64
2.	Screwdrivers:	Adjustment and Common types
3.	Open end wrench:	1/4"
4.	Soldering Iron:	40W pencil type

1.4 NETWORKS

1. Frequency compensation

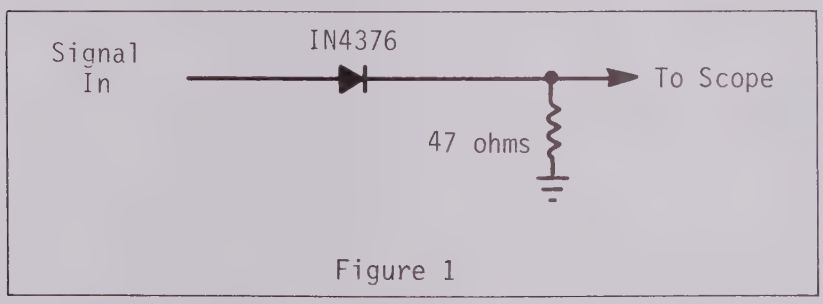


Figure 1

2.0 EXPLORER DISASSEMBLY

The left side cover must be removed when performing alignments. In addition, the Channel "A" ADC and D3 Amplifier boards must be removed when performing adjustments on the Channel "B" boards.

WARNING: All power must be removed from the oscilloscope before continuing.

1. Remove the two left side cover securing screws with a 5/64 Allen wrench and set aside.
2. Unsolder the two ground straps from the Channel "A" D3 Amplifier shields. (See Figure 2.)
3. Remove the two screws securing the D3 Amplifier to the plug-in front panel and pull the D3 Amplifier out.
4. Replace the left side cover.
5. Turn the oscilloscope on and allow it to warm up for at least 15 minutes before continuing.

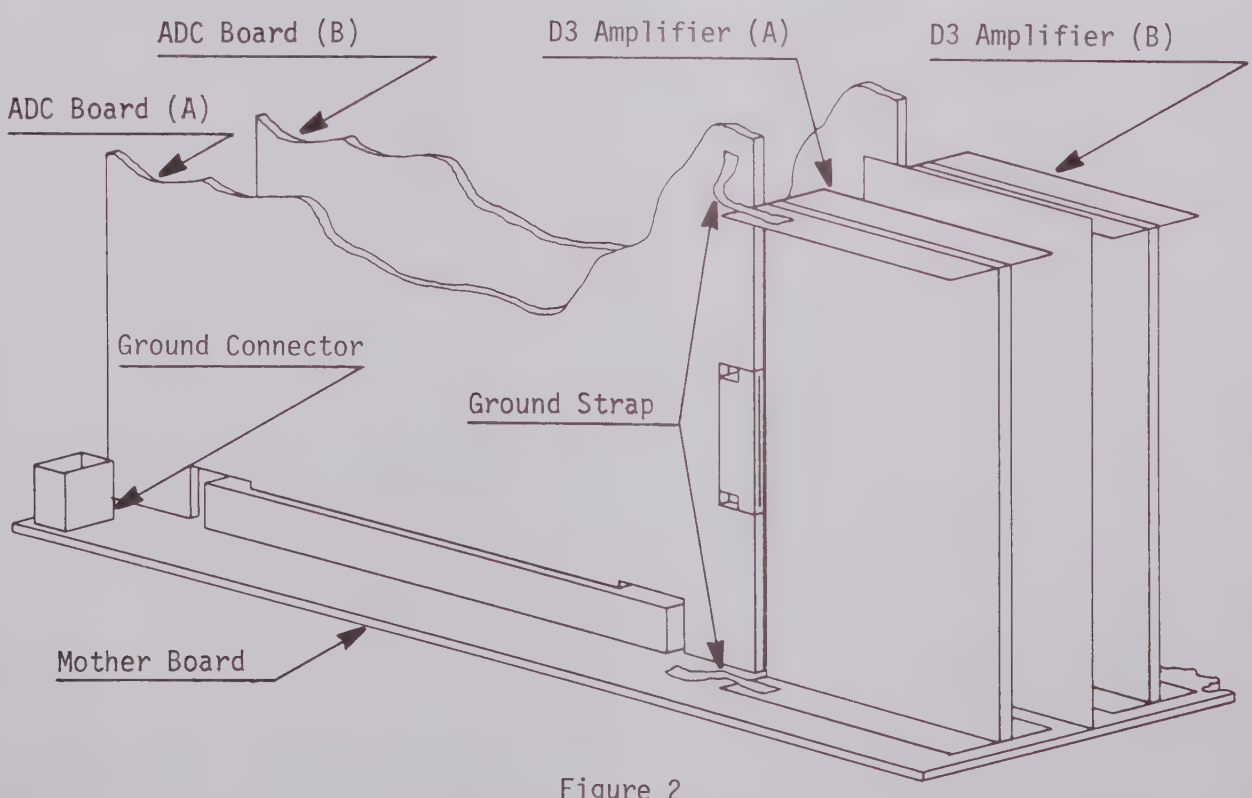


Figure 2

3.0 EXPLORER SET-UP PROCEDURE

The procedures have been outlined sequentially. Do not change any switch settings unless otherwise directed.

3.1 MAIN FRAME CONTROLS

NOTE: Allow the oscilloscope to warm up for at least 15 minutes before proceeding with any alignment procedures.

Power On/Off:	ON
Vertical Expansion:	OFF
Horizontal Expansion:	OFF
Autocenter switch:	OFF
XY / YT switch:	YT
Function switch:	RESET NUMBERS
Memory switch:	ALL

3.2 DISK DRIVE (Explorer III Models)

Track Protect switches:	Don't Care
Track Segment switch:	MAIN FRAME CONTROL (Full CCW)
Semi-Auto/Manual switch:	MANUAL

3.3 206 PLUG-IN

Storage Control:	LIVE
Retain Reference:	OFF
Time Per Point:	500 nS
100 kHz Filter:	OFF
Channel A switch:	ON (Only if calibrating Channel A)
Channel B switch:	ON (Only if calibrating Channel B)
Trigger Mode:	AUTO
Trigger Slope:	-DC
Trigger Source:	Channel being calibrated. (See Note 1)
Trigger Threshold:	Adjust as required.
Range:	10V
Multiplier:	X2
(-) Input BNC	GND

NOTE 1: If the function generator has a sync output, connect it to the external trigger input BNC and then select EXT as the trigger source.

4.0 VOLTAGE CHECK

1. Multimeter range: 0-20 VDC
2. Connect the multimeter to the +5VTP. (See Figure 4)
   a. Adjust R7 for +5 VDC ± 1%. (See Figure 3)

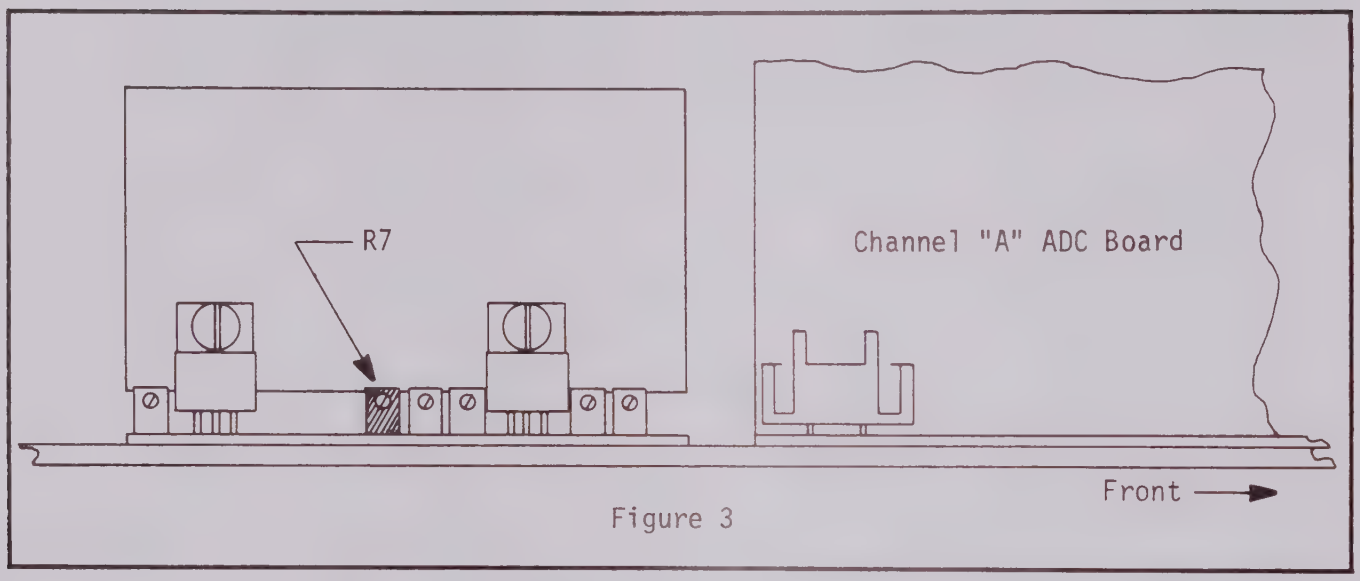


Figure 3

3. Multimeter range: 0-40 VDC

4. Connect the multimeter to +25VTP. (See Figure 4)
   a. Adjust R72 for +25 VDC ± 1%.

5. Connect the multimeter to -25VTP. (See Figure 4)
   a. Adjust R74 for -25 VDC ± 1%.

6. Multimeter range: 0-20 VDC

7. Connect the multimeter to +8VTP. (See Figure 4)
   a. Record reading.

8. Connect the multimeter to -8VTP. (See Figure 4)
   a. Adjust R100 for a reading equal to the magnitude of the +8 VDC recorded in Step 7, ± 1%. (See Figure 4)

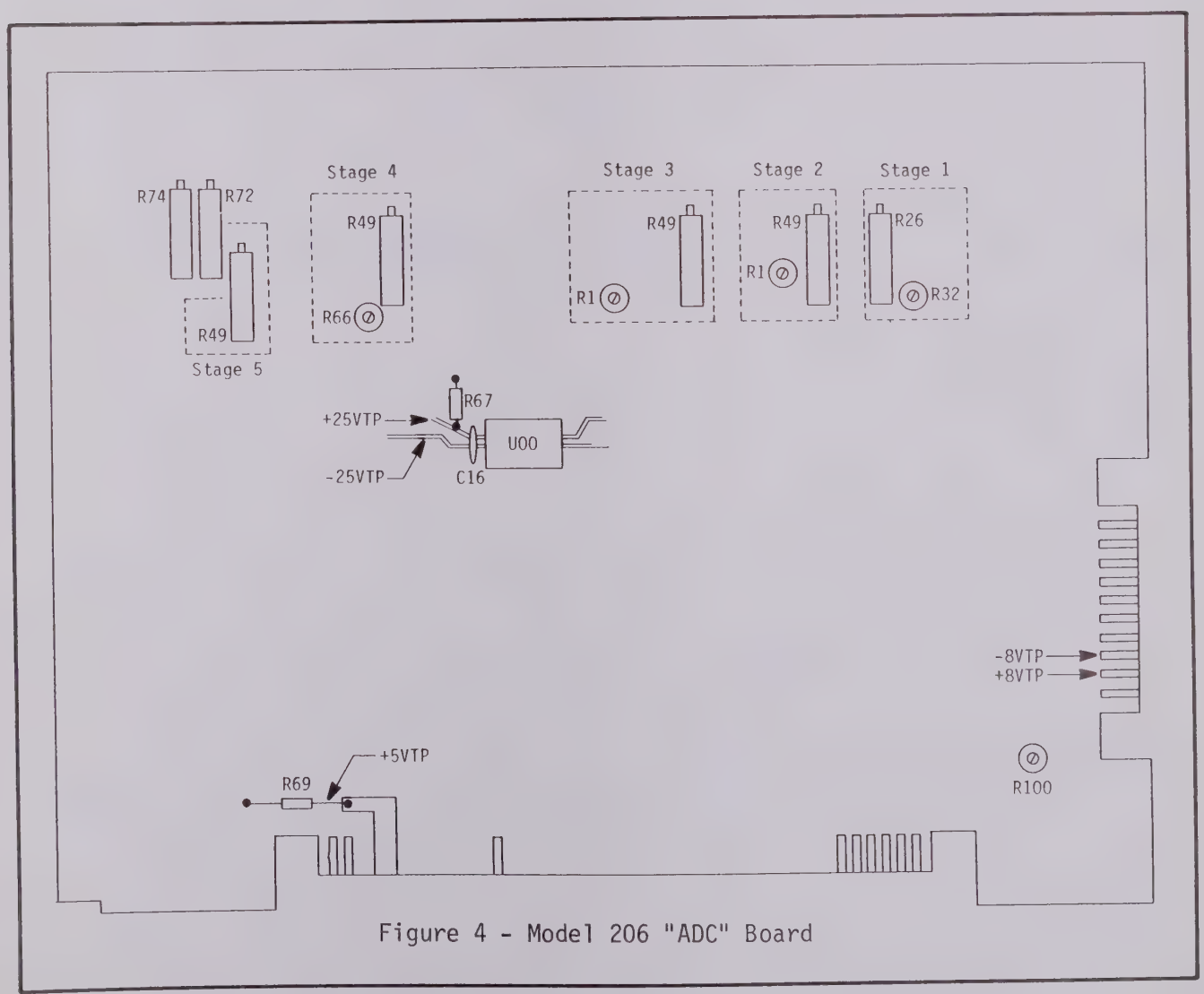


Figure 4 - Model 206 "ADC" Board

5.0 GAIN & OFFSET ADJUSTMENTS

An analog-to-digital converter (ADC) normally generates a series of incrementally increasing output voltages (digital outputs) when a gradually increasing voltage (analog signal) is applied to its input.

Discontinuities in the digital output signal will occur when misalignments of the Gain (Figure 5) and/or Offset (Figure 6) are present.

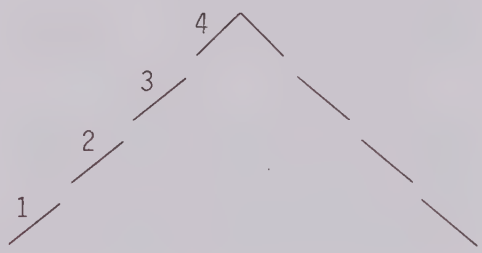


Figure 5 - Misaligned Gain

Figure 6 - Misaligned Offset

5.1 INITIAL SET-UP PROCEDURE

1. Multiplier Range: 1V
2. Range: X2
3. 100 kHz Filter switch: ON
4. Vertical Expansion switch: X32
5. Connect the signal generator to the input BNC of the channel to be aligned.
6. Signal Generator output: Triangle waveform
   a. Adjust the waveform frequency for a one period display.
   b. Adjust the waveform amplitude for a full screen display.

   NOTE: It may be necessary to reposition the display by operating the paddle switch adjacent to the Vertical Expansion switch.

5.2 GAIN & OFFSET TESTS

1. DC Level adjust: Full CCW
2. Slowly adjust the DC Level control toward the full CW position.
   a. Observe the waveform for separations similiar to those illustrated in Figure 5 (Misaligned Gain) and/or Figure 6 (Misaligned Offset).
      - If a linear waveform is observed, repeat Procedures 5.1 and 5.2 for Channel B and then advance to Procedure 6.0 (Balance Adjust) if the waveform is linear.
      - If separations are observed, note which variation(s) (Gain and/or Offset) and repeat Procedures 5.1 and 5.2 for Channel B before proceeding to Procedure 5.3.

5.3 EXPLORER DISASSEMBLY

> WARNING: All power must be removed from the oscilloscope before continuing with this procedure.

1. Unplug the Ground Connector. See Figure 2.

   NOTE: It is not necessary to reconnect the ground after the module has been removed from the oscilloscope.

2. With a 5/64 Allen wrench, remove the four corner screws (located on the front panel) securing the input module and slide the module halfway out of the oscilloscope.
3. Disconnect the ribbon cable from the rear of the input module.
4. Slide the input module the rest of the way out and set it to the left side of the oscilloscope.

> WARNING: Place the input module on a non-conductive workbench free of metal such as solder splashes.

5. Reconnect the ribbon cable to the input module.
6. Reapply power to the oscilloscope.

5.4 GAIN ADJUSTMENTS

NOTE: The channel "A" ADC board must be removed if the GAIN trimpot(s) on the channel "B" ADC board require adjustment.

> WARNING: Remove all power from the oscilloscope before removing the channel "A" ADC board.

1. DC Level control: Adjust fully CCW
   a. Slowly adjust the DC Level control in the CW direction until a full screen triangle waveform appears.
2. Slowly adjust the Stage 4 - R66 trimpot (Figure 4) until a separation appears on the waveform.
   a. Readjust the trimpot for the best linear waveform.
3. Repeat Step 2. Use trimpot (Stage 3 - R1)
4. Repeat Step 2. Use trimpot (Stage 2 - R1)
5. Repeat Step 2. Use trimpot (Stage 1 - R32)

NOTE: The DC Level control may require additional adjustment to isolate each separation as the trimpots are adjusted.

5.5 OFFSET ADJUSTMENTS

NOTE: The input module slide rail may require removal if the GAIN trimpot(s) on the channel "B" ADC board require adjustment.

> WARNING: Remove all power from the oscilloscope before removing the rail.

1. DC Level control: Adjust fully CCW
   a. Slowly adjust the DC Level control in the CW direction until a full screen triangle waveform appears.
2. Slowly adjust the Stage 5 - R49 trimpot (Figure 4) until a separation appears on the waveform.
   a. Readjust the trimpot for the best linear waveform.
3. Repeat Step 2. Use trimpot (Stage 4 - R49)
4. Repeat Step 2. Use trimpot (Stage 3 - R49)
5. Repeat Step 2. Use trimpot (Stage 2 - R49)

c. Repeat Step 2. Use trimpot (Stage 1 - R26)

NOTE: The DC Level control may require additional adjustment to isolate each separation as the trimpots are adjusted.

5.4 [illegible]

WARNING: Remove all power from the oscilloscope before continuing.

1. Replace the input module slide rail if it was removed during Procedure 5.5.
2. Replace the channel "A" ADC board if it was removed during Procedure 5.4.
3. Disconnect the ribbon cable from the rear of the input module.
4. Slide the input module halfway into the oscilloscope and reconnect the ribbon cable to the rear of the input module.
5. Slide the input module the rest of the way into the oscilloscope and then reconnect the ground to the Ground Connector.

5.7 GAIN & OFFSET ALIGNMENT CONFIRMATION

1. Replace the left side cover on the oscilloscope.
2. Apply power to the oscilloscope and allow it to warm up for 15 minutes.
3. With the triangle waveform still applied to the oscilloscope, slowly adjust the DC Level control from fully CCW to fully CW and observe the waveform for separations. Repeat for the other channel.
   a. Repeat Procedure 5.0 thru 5.7 if necessary.
4. Remove signal generator from input BNC.

5.8 SUMMARY OF GAIN & OFFSET TRIMPOTS

STAGE	GAIN TRIMPOTS	OFFSET TRIMPOTS
5	None	Stage 5 - R49
4	Stage 4 - R66	Stage 4 - R49
3	Stage 3 - R1	Stage 3 - R49
2	Stage 2 - R1	Stage 2 - R49
1	Stage 1 - R32	Stage 1 - R26

6.0 BALANCE ADJUSTMENTS

6.1 1V & 100 mV RANGE BALANCE

1. Adjust R6 (Figure 8) for zero volts at TPA (Figure 7).
2. Vertical Expansion switch: OFF
3. Range Multiplier: X1
4. Ground the (+) input BNC.
5. DC Level control: Adjust trace to center of screen.
6. Vertical Expansion switch: X32
7. Autocenter switch: ON, then OFF

   Range: 100 mV

   a. Observe trace for vertical shift.
   b. Adjust R5 (Figure 8) until the trace is aligned with the horizontal marker line.

   NOTE: Make the first adjustment without vertical expansion if the shift is excessive.
8.
9. Range: 1V
10. Repeat Steps 6 thru 8 until minimum shifting is achieved.

6.2 X1 & X2 MULTIPLIER BALANCE

1. Range Multiplier: X2
2. Autocenter switch: ON, then OFF
3. Range Multiplier: X1

   a. Observe trace for vertical shift.
   b. Adjust R4 (Figure 7) until the trace is aligned with the horizontal marker line.

   NOTE: Make the first adjustment without vertical expansion if the shift is excessive.
4. Repeat Steps 1 thru 3 until minimum shifting is achieved.
5. Range Multiplier: Switch between X1, X2 and X4.

   a. Repeat Procedure 6.2 if necessary.

   Remove ground from the (+) input BNC.

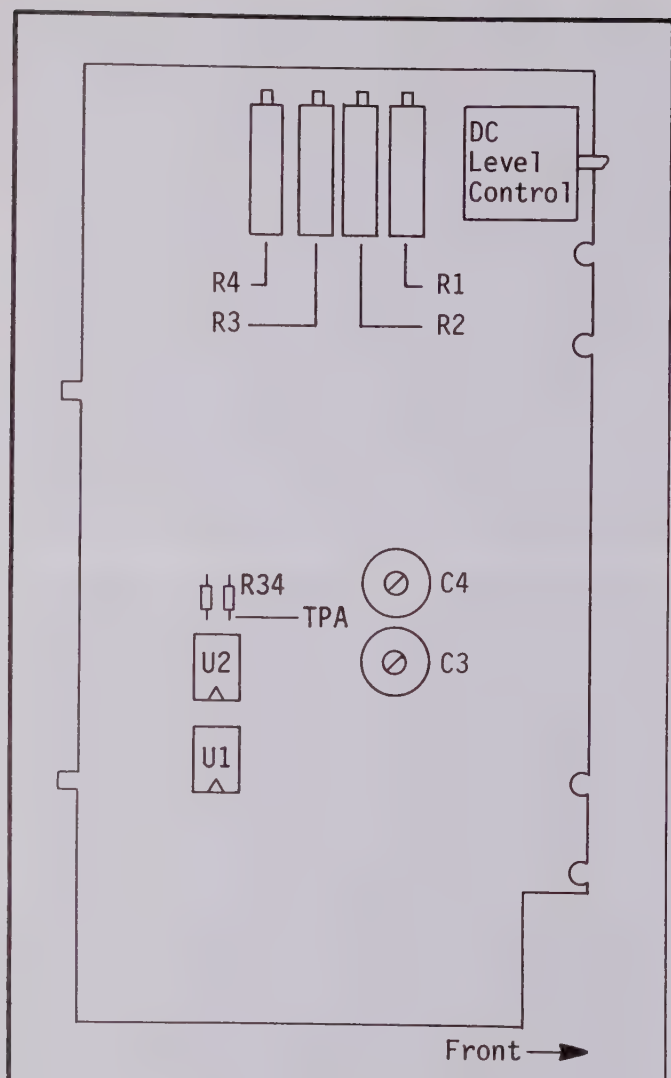


Figure 7 - Left side view

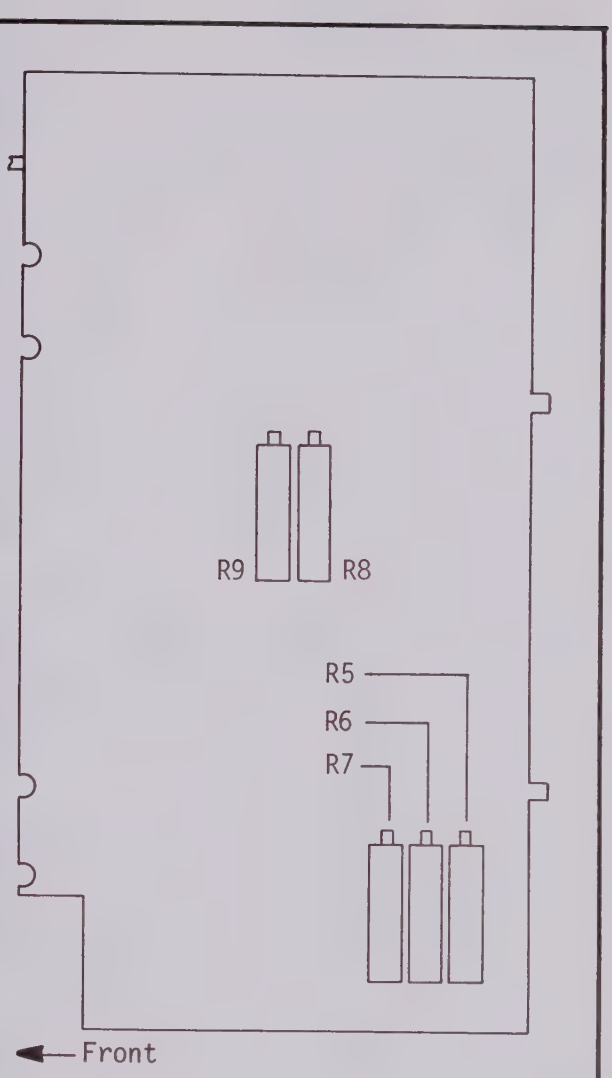
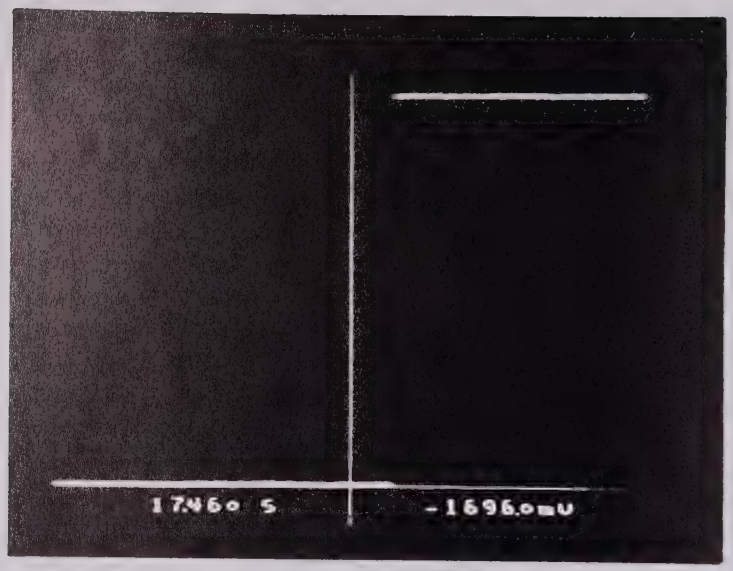


Figure 8 - Right side view

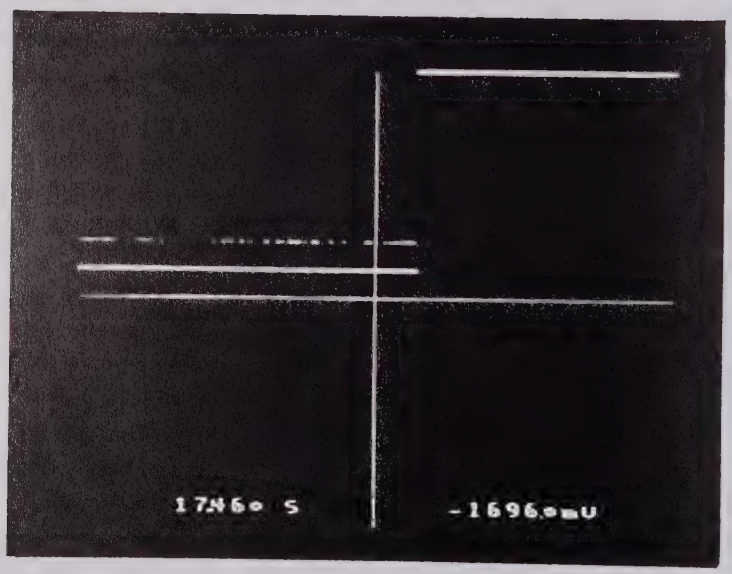
7.0 GAIN CALIBRATION

7.1 1V RANGE

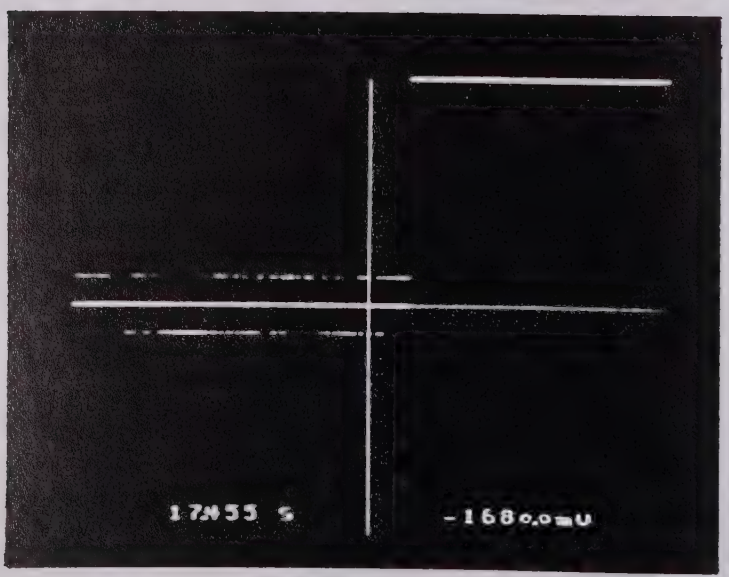
1. Memory switch: Q1
2. Filter switch: ON
3. Time Per Point: 5 mS
4. Autocenter switch: OFF
5. Vertical Expansion switch: OFF
6. Range Multiplier: X1
7. Range: 1V
8. Signal Generator output: 0.2 Hz Square wave
   a. Adjust for a 3/4 full screen display.
      NOTE: The Offset and Trigger Level controls may require adjustment.
9. Multimeter range: 0-4V
10. Apply same square wave square to multimeter.
11. Record both (+) and (-) multimeter readings and ADD absolute values to obtain the peak-to-peak voltage.



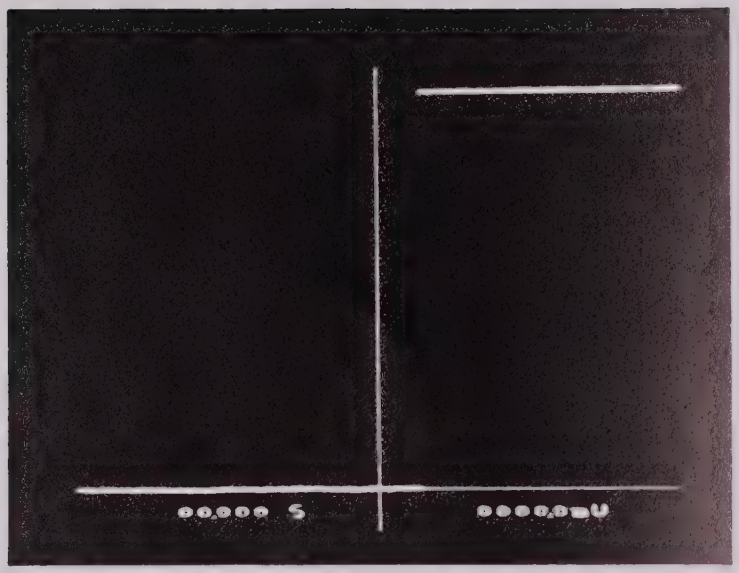
12. Depress the HOLD NEXT pushbutton.
    a. Wait until the waveform has been stored. (Hold Last led lit only.)



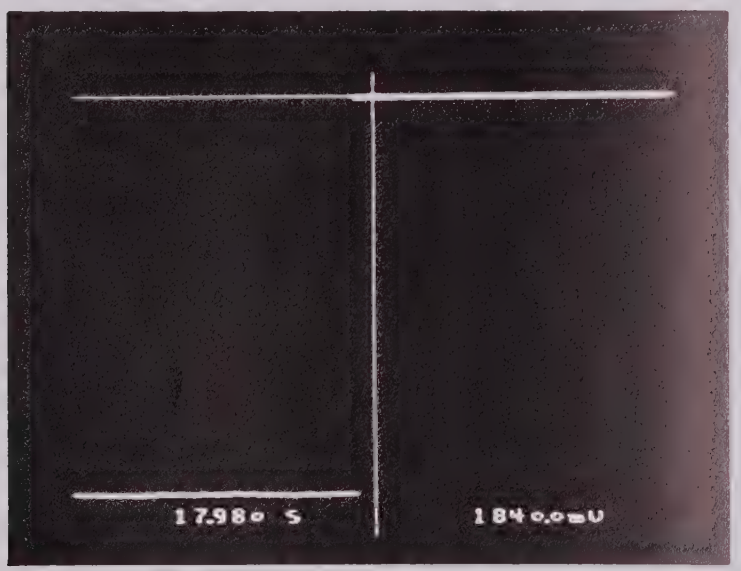
13. Autocenter switch: ON
14. Vertical Expansion switch: X64



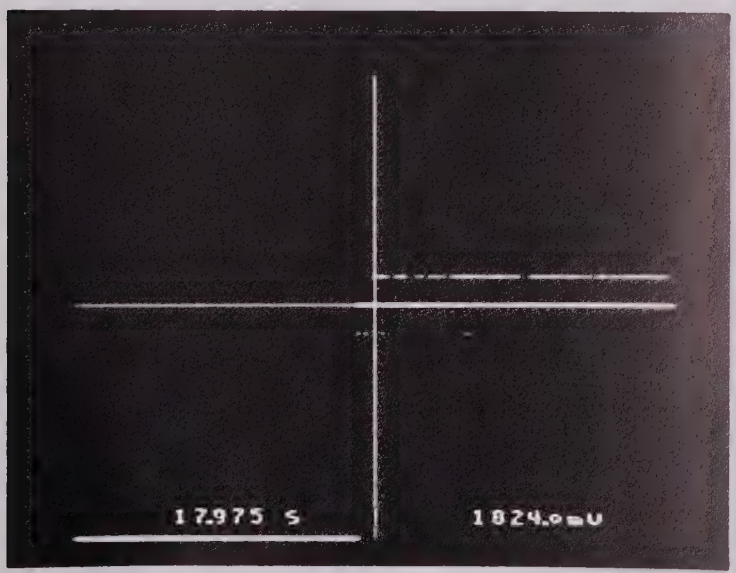
15. Several levels of data points will be displayed due to a certain amount of "noise." Select the level with the majority of data points by moving the horizontal marker line.



16. Vertical Expansion switch: OFF
17. Function switch: RESET
18. Depress the Execute button.
    a. Time and voltage numerics indicate zero.



19. Position the vertical marker line to the opposite peak of the waveform.



20. Vertical Expansion switch: X64
21. Select the level with the majority of data points.
    a. Record the peak-to-peak voltage displayed on the oscilloscope.

22. Compute the Percent Error.
    a. The percent error should be less than 0.2%.

$$\text{Percent Error} = \left| \frac{\text{Multimeter } (V_{pp}) - \text{Scope } (V_{pp})}{\text{Multimeter } (V_{pp})} \right| \times 100$$

23. Adjust R3 (Figure 7).
    a. CW to increase. CCW to decrease.
24. Depress the LIVE pushbutton.
25. Vertical Expansion switch: OFF
26. Autocenter switch: OFF
27. Repeat Procedure 7.1, Steps 12 thru 26 until percent error is less than 0.2%.

7.2 2V, 4V, 100 mV & 10V RANGES

Repeat Procedure 7.1 (1V Range) for each of the Range Calibrations and substitute the steps listed in the table below.

RANGE TO BE CALIBRATED	STEP 6	STEP 7	STEP 9	STEP 23
	Range Multiplier	Range	Multimeter Range	Trimpot
2V	X2	1V	0-4V	R2
4V	X4	1V	0-10V	R1
100 mV	X1	100 mV	0-200 mV	R7
10V	X1	10V	0-40V	R9

NOTE: Disconnect the multimeter when the Range Calibrations have been completed.

8.0 -10V RANGE ADJUSTMENT

1. Time Per Point: 500 nS
2. Memory switch: ALL
3. Signal Generator output: 1 kHz Square wave
    a. Adjust for a 3/4 full screen display.
        NOTE: The Offset and Trigger Level controls may require adjustment.

4. Apply same signal to the (-) input BNC.
   NOTE: The square wave signal must be applied to both the (+) and (-) input BNCs.
5. (-) Input switch: SIG
6. Vertical Expansion switch: X32
7. Autocenter switch: ON
8. Adjust R8 (Figure 8) for the best straight line.

9.0 FREQUENCY COMPENSATION

1. Vertical Expansion switch: OFF
2. Autocenter switch: ON
3. (-) Input switch: GND
4. Filter switch: OFF
5. Signal Generator output: 10 kHz Square wave
6. Apply square wave signal to the (+) input BNC using the Frequency Compensation network illustrated in Figure 1.
   a. Adjust for a 3/4 full screen display.
7. Vertical Expansion switch: X32
8. Horizontal Expansion switch: X16
9. Adjust C4 (Figure 7) for minimum overshoot or undershoot on the negative portion of the waveform.
10. Vertical Expansion switch: OFF
11. Disconnect signal from the (+) input BNC.
12. Ground the (+) input BNC.
13. (-) Input switch: SIG
14. Apply square wave signal to the (-) input BNC using the Frequency Compensation network.
    a. Adjust for a 3/4 full screen display.
15. Vertical Expansion switch: X32
16. Adjust C3 (Figure 7) for minimum overshoot or undershoot on the negative portion of the waveform.

DISPLAY ALIGNMENT

TRIM POTS ACCESS

The display trimpots are accessible from the bottom of the oscilloscope. Refer to Figure A-1.

> WARNING: High voltages exist in the oscilloscope. Use care during the following procedures.

ALIGNMENT PROCEDURE

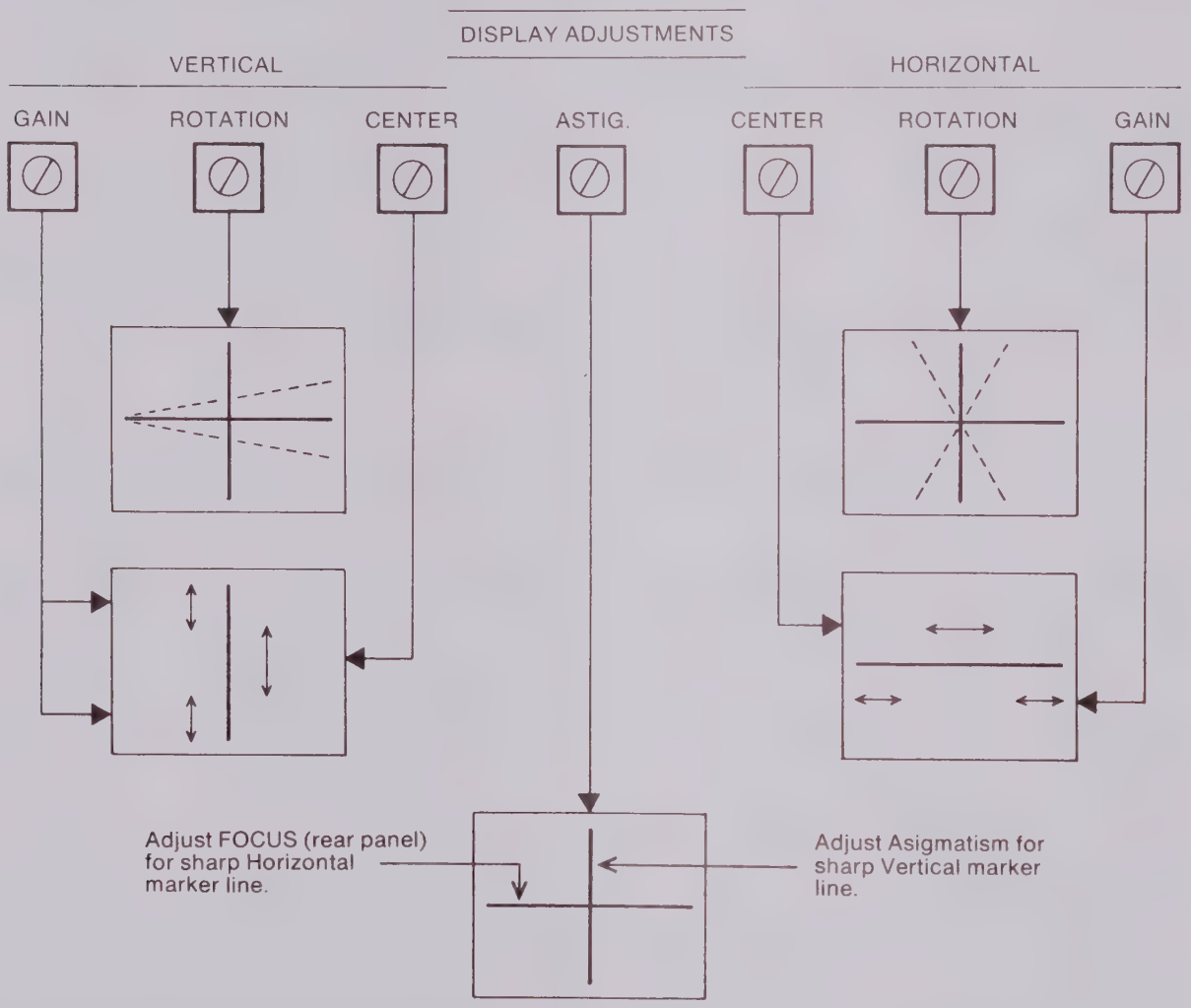
It is recommended that the following alignment procedure be followed in the sequence as listed. Perform the alignment(s) if required.

1. Ground all (+) and (-) input BNC's.
2. Switch the FUNCTION selector to the ERASE position (spring loaded) and depress the EXECUTE pushbutton.
3. HORIZONTAL ROTATE: Rotates the entire display with the screen center acting as the pivot point.
   a. Adjust until the vertical marker line is straight up and down.
4. VERTICAL ROTATE: Rotates the entire display with the left side of the screen acting as the pivot point.
   a. Adjust until the horizontal marker line is level.
5. HORIZONTAL CENTER: Positions the display either left or right.
   a. Adjust until the horizontal marker line is evenly centered on the screen.
6. HORIZONTAL GAIN: Expands or contracts the display in the horizontal plane.
   a. Adjust until both ends of the horizontal marker line are approximately 3/16" from the sides of the screen.
7. VERTICAL CENTER: Positions the display either up or down.
   a. Adjust until the vertical marker line is approximately 1/4" from the top of the screen.
8. VERTICAL GAIN: Expands or contracts the display in the vertical plane.
   a. Adjust until the vertical marker line is approximately 1/8" from the bottom of the screen.
   b. Repeat Step 7 and 8 until the vertical marker line is approximately 1/4" from the bottom of the screen.

9. ASTIGMATISM: Adjust the sharpness of the display and is used in conjunction with the FOCUS adjustment located on the rear panel.

   a. Adjust the Astigmatism trimpot for a sharp vertical marker line.

   b. Adjust the FOCUS control for a sharp horizontal marker line.



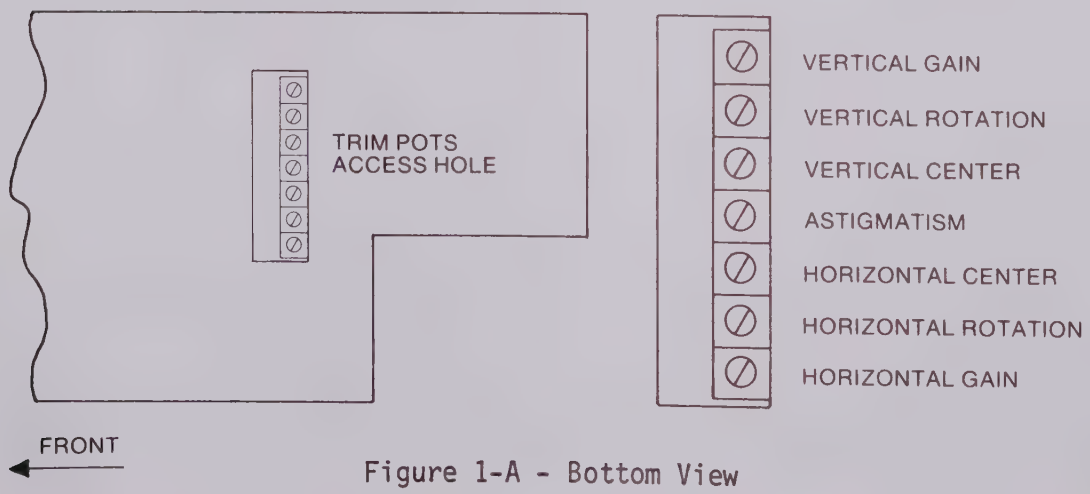


Figure 1-A - Bottom View

FOCUS AND INTENSITY CONTROLS

The Focus and Intensity controls are located on the rear panel.

- FOCUS: The Focus control is used in conjunction with the Astigmatism trimpot described above in Step 9.

- INTENSITY: The Intensity control brightens or darkens the display. This control may be adjusted, when using the scope camera, to permit optimum results while capturing displays on film.

MAINTENANCE

The following guidelines should be observed when cleaning the Explorer.

- SCOPE FACE: Clean the display face with a slightly damp, soft cloth.

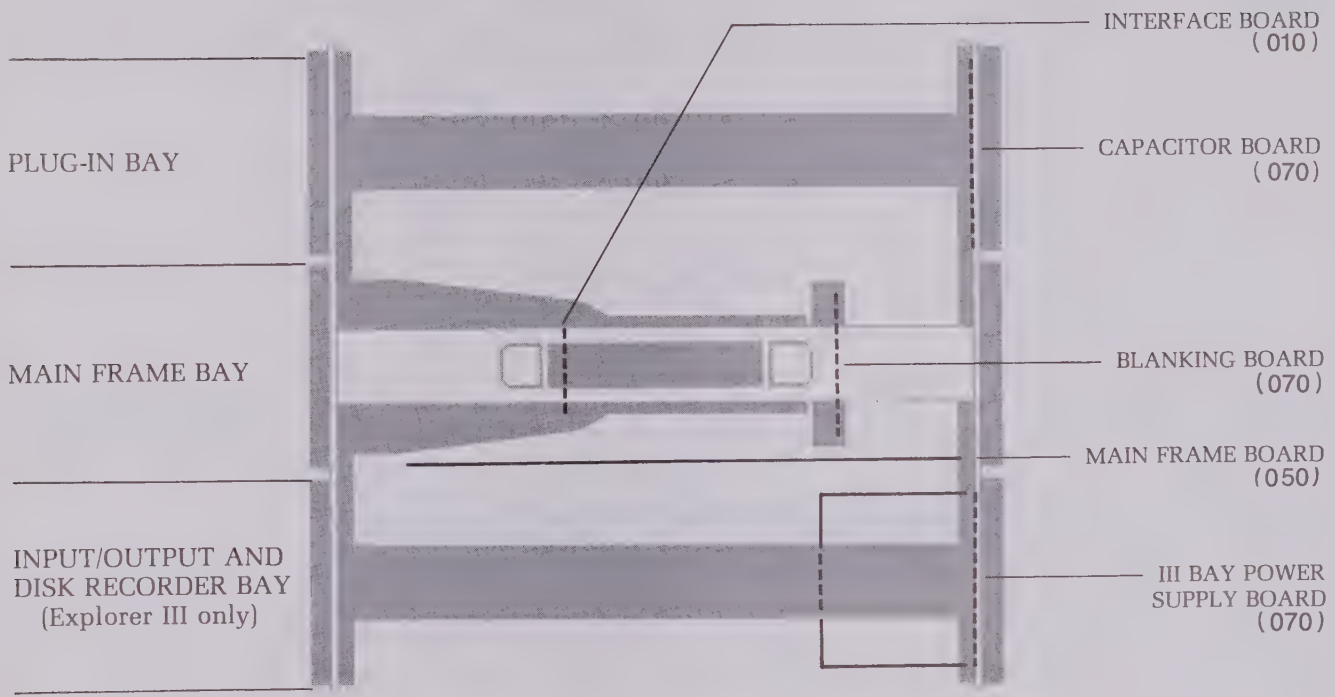
- CABINET: Clean the external surfaces with a slightly damp, soft cloth using a mild detergent.

- AIR FILTER: The dust filter on the rear panel should be inspected at regular intervals and cleaned whenever an accumulation of dust appears.

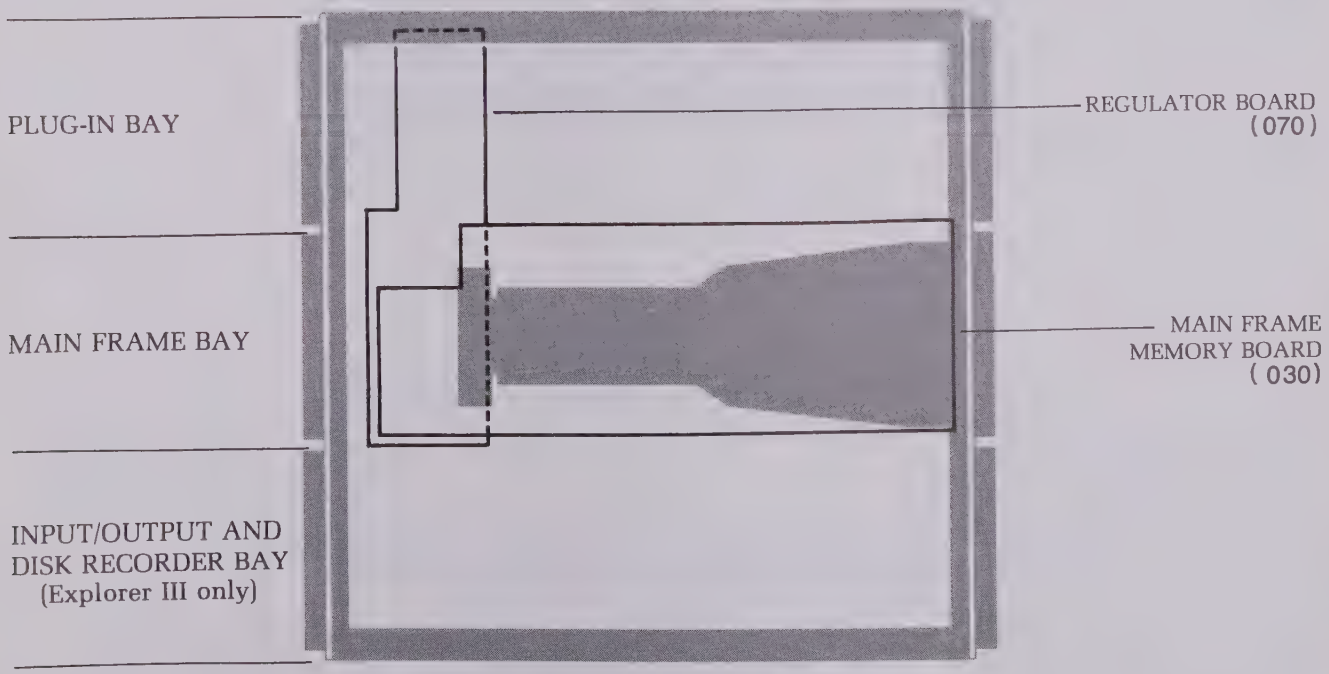
To clean the filter: Remove the four retaining screws, remove the surface dust with either compressed air or a soft-bristle brush. Reinstall the filter.

MAIN FRAME

(Diagram pages in parentheses)



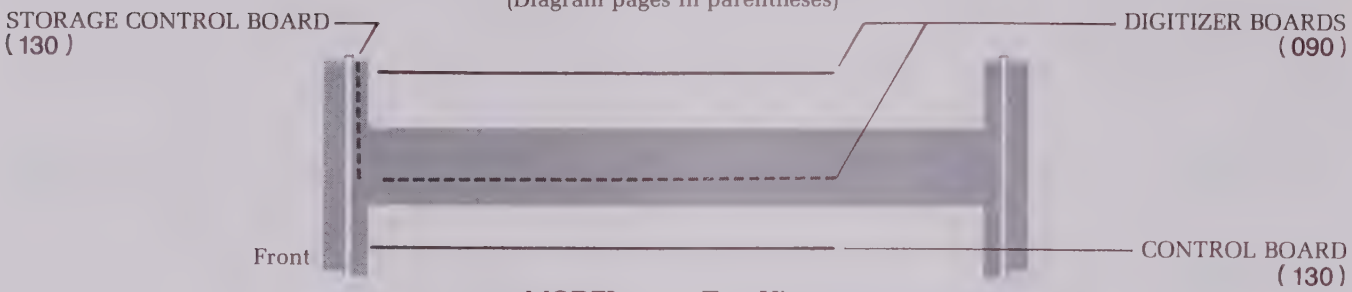
EXPLORER III - Top View



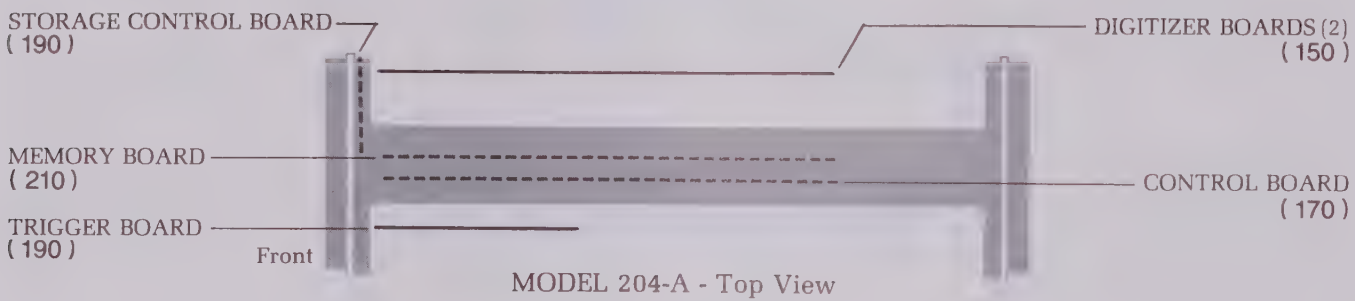
EXPLORER III - Bottom View

PLUG-IN BAY

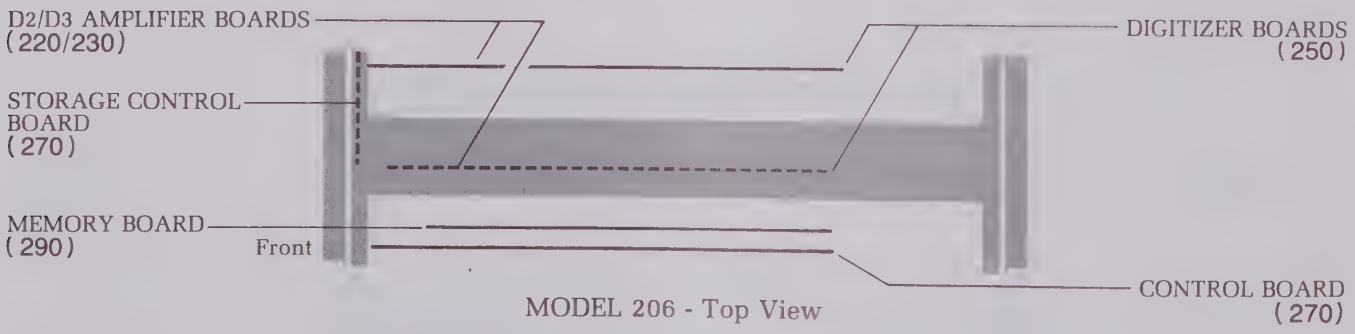
(Diagram pages in parentheses)



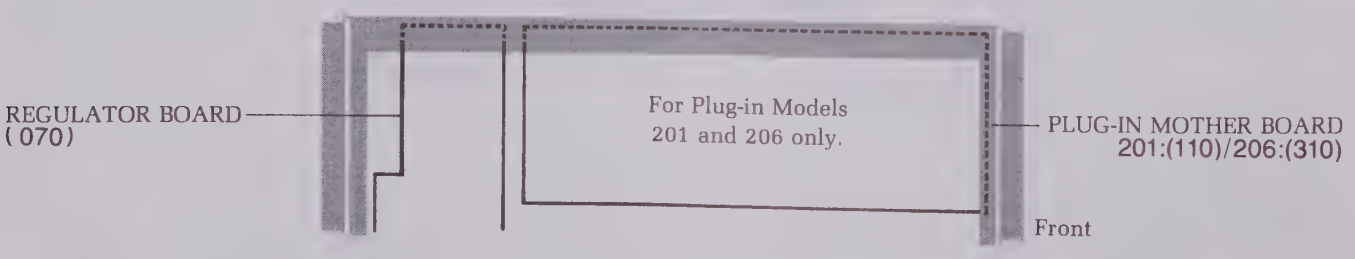
MODEL 201 - Top View



MODEL 204-A - Top View



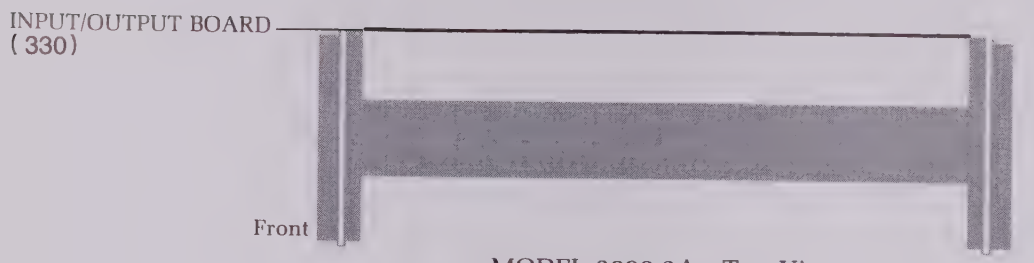
MODEL 206 - Top View



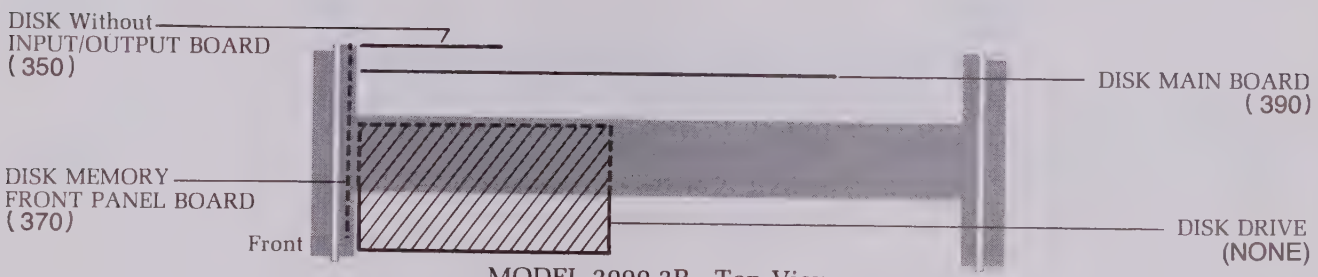
MODELS 201 & 206 - Bottom View

INPUT/OUTPUT•DISK RECORDER BAY
Model 2090-3 Configurations

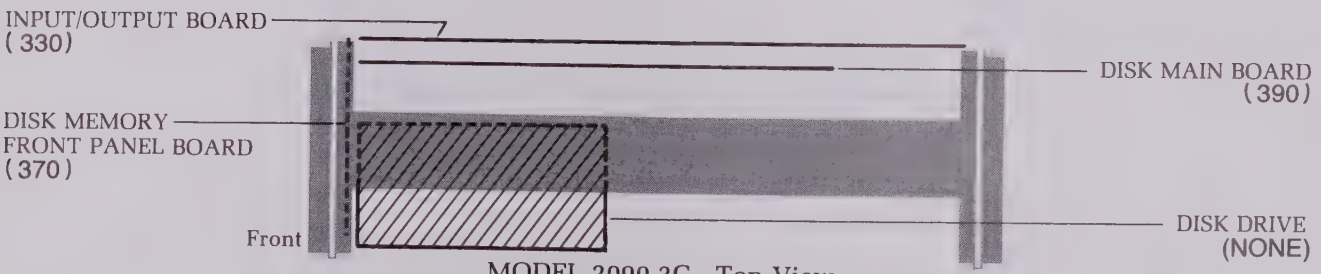
(Diagram pages in parentheses)



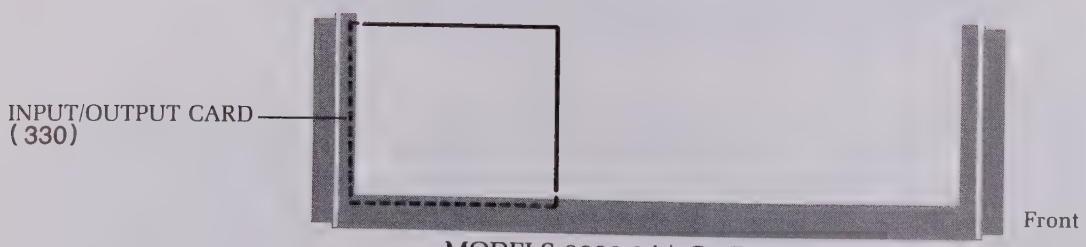
MODEL 2090-3A - Top View



MODEL 2090-3B - Top View



MODEL 2090-3C - Top View

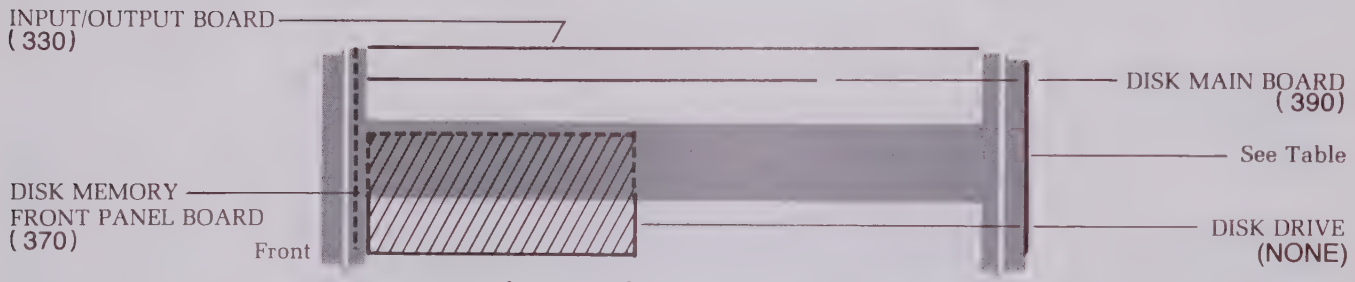


MODELS 2090-3A/3C - Bottom View

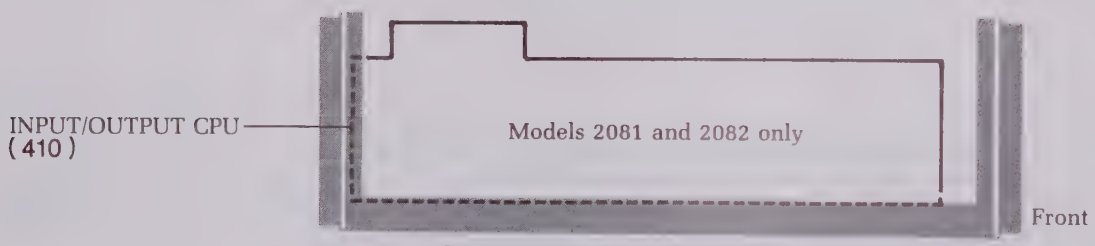
INPUT/OUTPUT•DISK RECORDER BAY
Accessories 2081 • 2082 • 2085N • 003

(Diagram pages in parentheses)

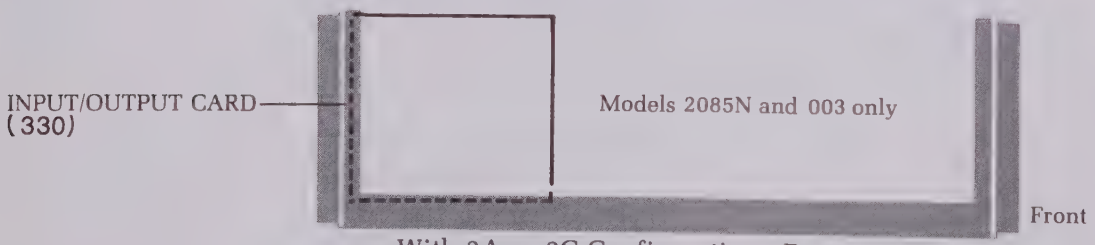
With 3A Configuration - Top View



With 3C Configuration - Top View



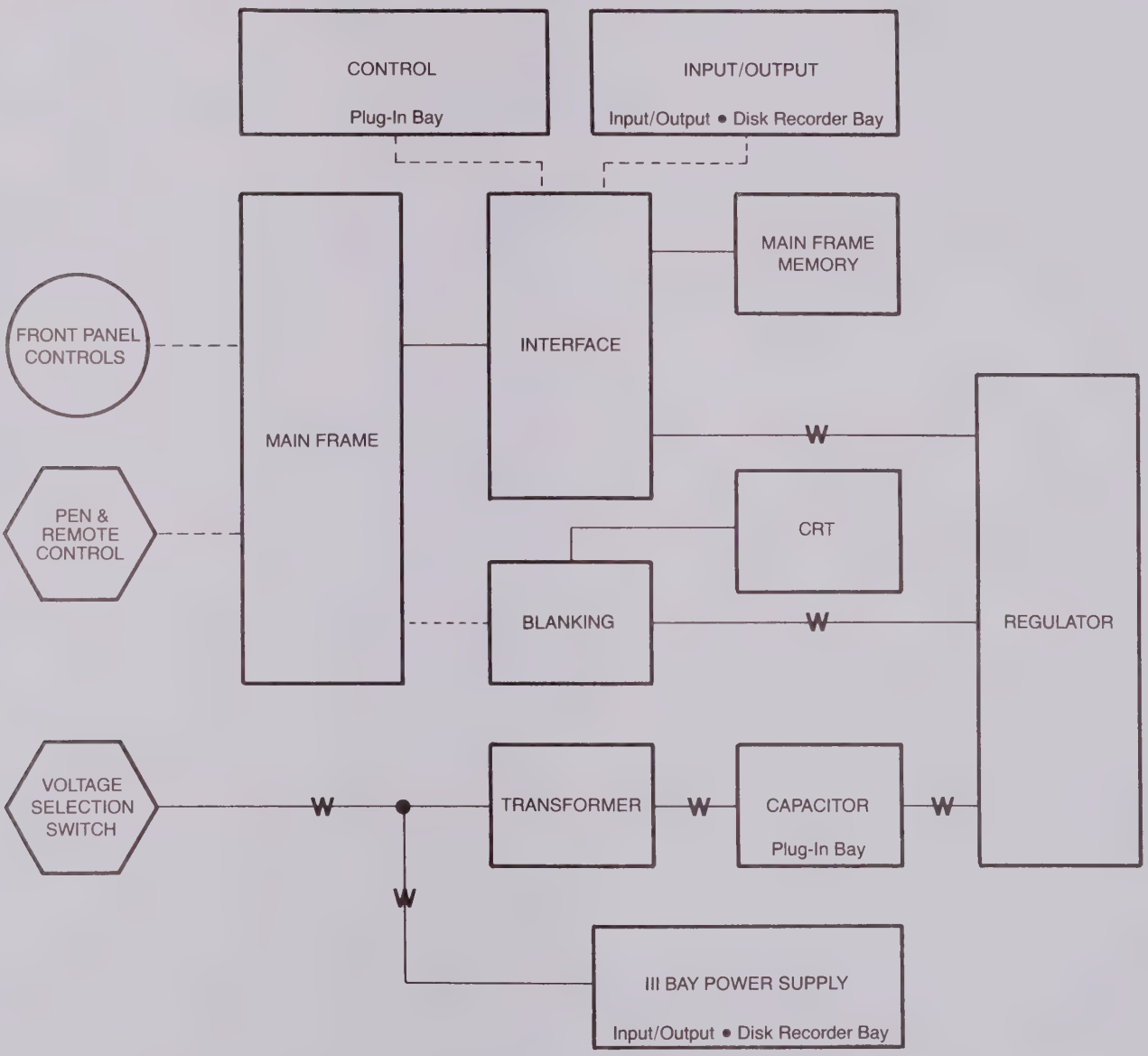
With 3A or 3C Configuration - Bottom View



With 3A or 3C Configuration - Bottom View

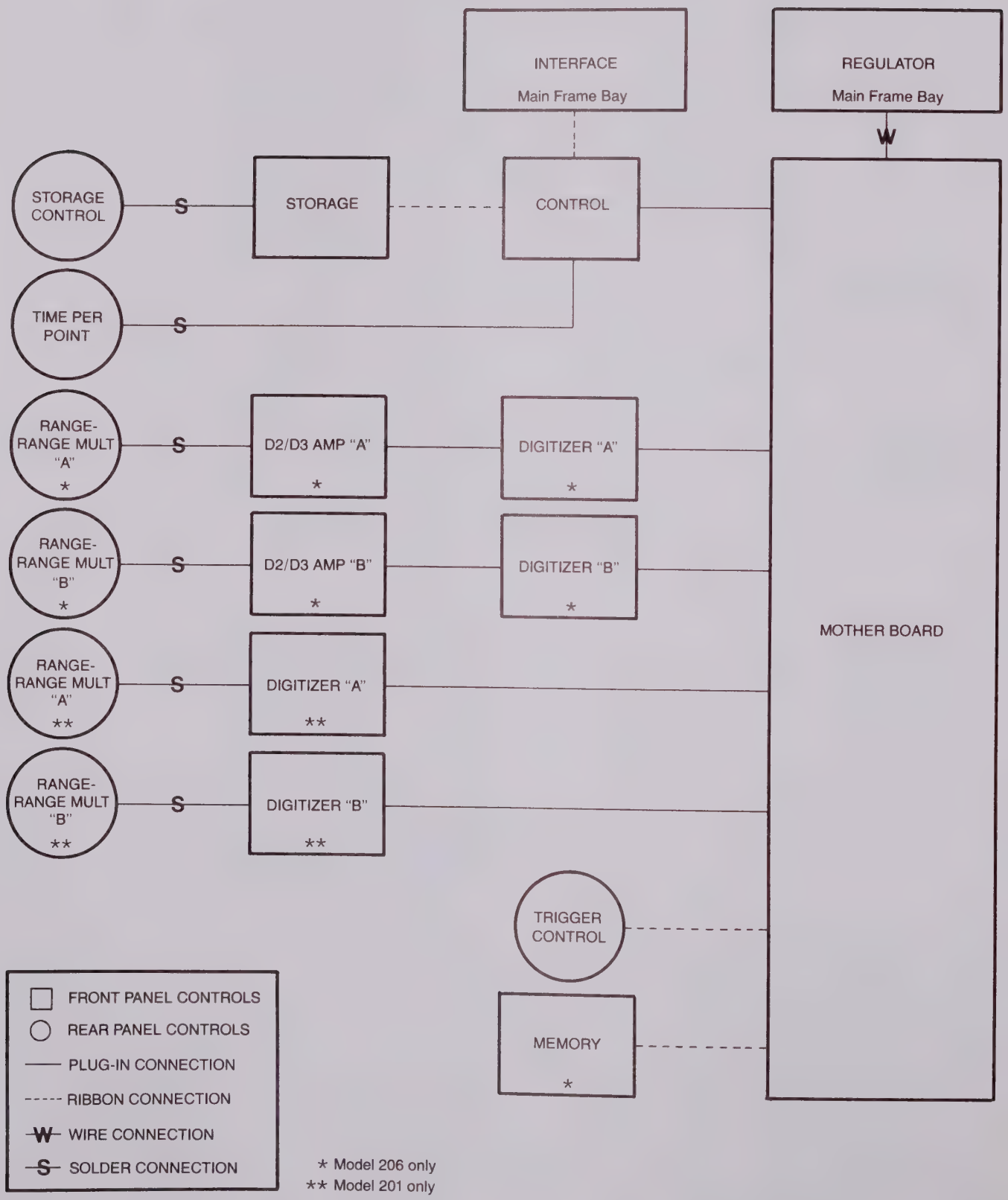
MODEL NUMBER	BOARD	DIAGRAM PAGE
2081	GP-IB Board	(420)
2082	RS232C Interface	(430)
2085N	Calculator Interface	(440)
003	Input/Output Accessory Board	(460)

MAIN FRAME


CONTROL
Plug-In Bay
INPUT/OUTPUT
Input/Output • Disk Recorder Bay
MAIN FRAME MEMORY
INTERFACE
FRONT PANEL CONTROLS
MAIN FRAME
PEN & REMOTE CONTROL
CRT
BLANKING
REGULATOR
VOLTAGE SELECTION SWITCH
TRANSFORMER
CAPACITOR
Plug-In Bay
III BAY POWER SUPPLY
Input/Output • Disk Recorder Bay
W
PRINTED CIRCUIT BOARDS
FRONT PANEL CONTROLS
REAR PANEL CONTROLS
PLUG-IN CONNECTION
RIBBON CONNECTION
WIRE CONNECTION
SOLDER CONNECTION

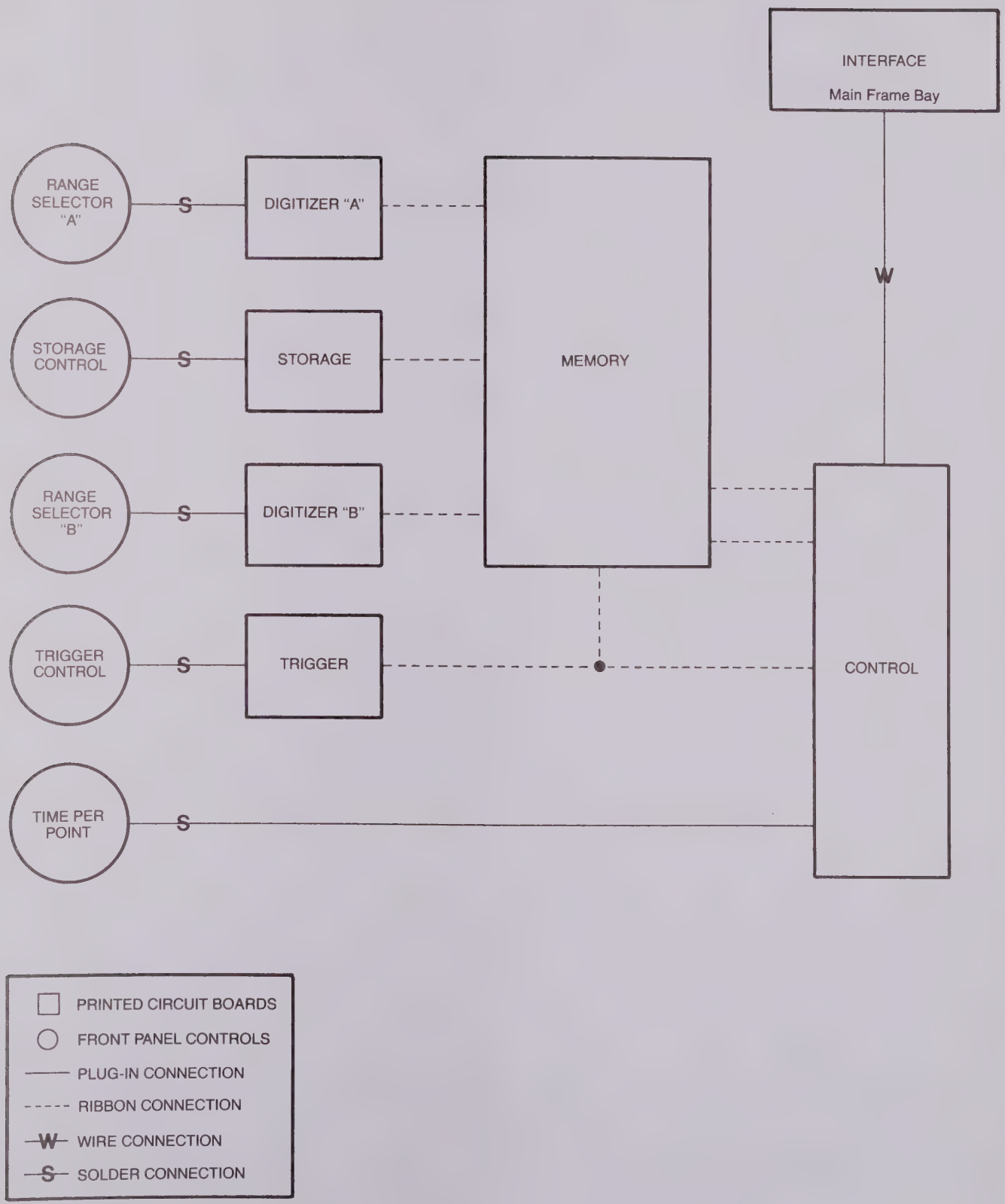
PLUG-IN BAY

Models 201 & 206



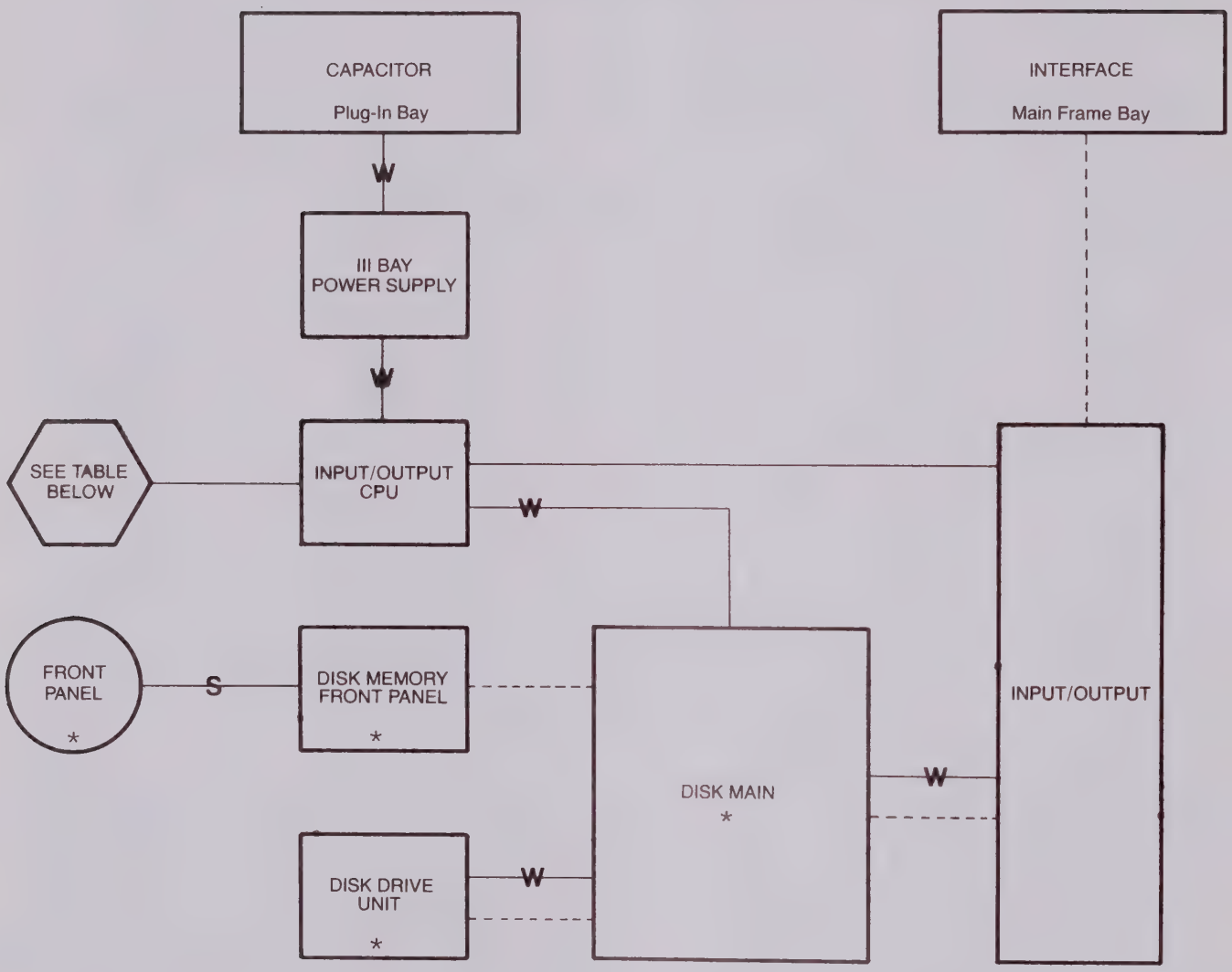
PLUG-IN BAY

Model 204 - A



INPUT/OUTPUT • DISK RECORDER

With 3A/3C Configuration & 2081/2082 Interface



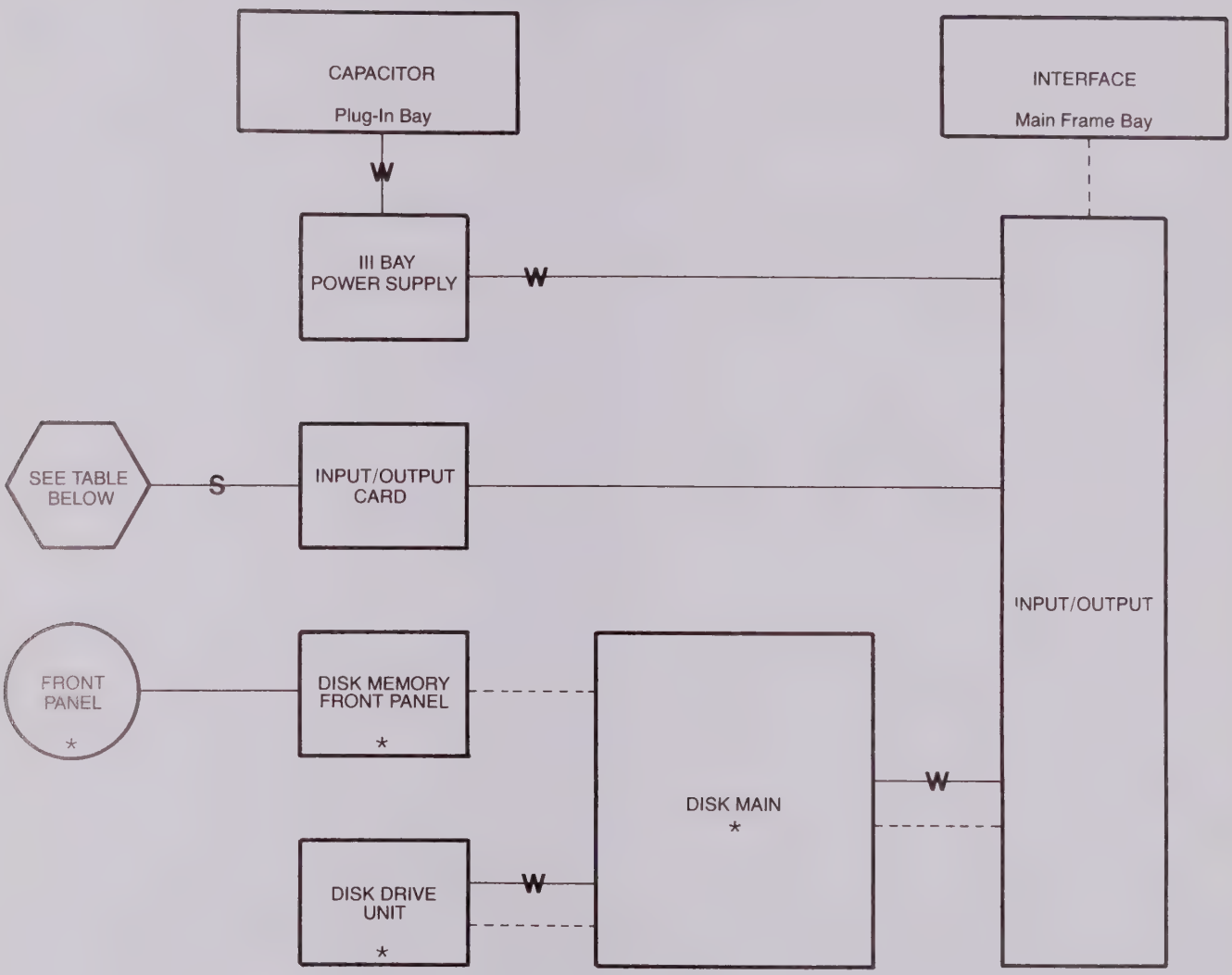
PRINTED CIRCUIT BOARDS
FRONT PANEL CONTROLS
REAR PANEL CONTROLS
PLUG-IN CONNECTION
RIBBON CONNECTION
W WIRE CONNECTION
S SOLDER CONNECTION

* 3C Configuration only

MODEL NUMBER	BOARD
2081	GP-1B Board
2082	RS232C Interface

INPUT/OUTPUT • DISK RECORDER

With 3A/3C Standard Configuration



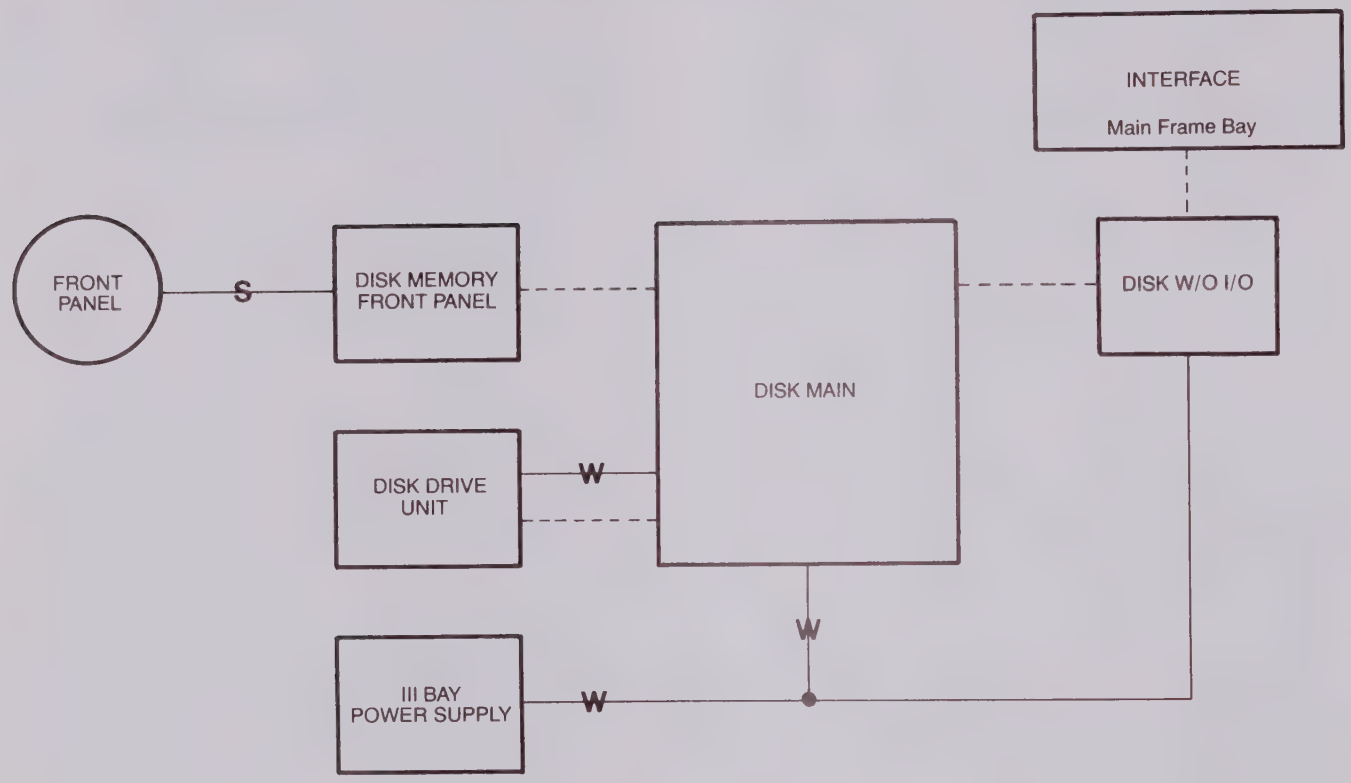
PRINTED CIRCUIT BOARDS
FRONT PANEL CONTROLS
REAR PANEL CONTROLS
PLUG-IN CONNECTION
RIBBON CONNECTION
W WIRE CONNECTION
S SOLDER CONNECTION

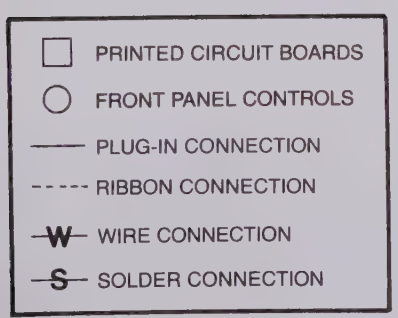
* 3C Configuration only

MODEL NUMBER	BOARD
2085N	Calculator Interface
003	Input/Output Accessory Cable

INPUT/OUTPUT • DISK RECORDER

With 3B Configurations





MNEMONICS

ADC	ANALOG-TO-DIGITAL CONVERTER	MEM	MEMORY
BD	BOARD	M.F.	MAIN FRAME
CNTL	CONTROL	M.F.F.P.	MAIN FRAME FRONT PANEL
CONN	CONNECTOR	M.F. BD	MAIN FRAME BOARD
EXT	EXTERNAL	PL	PLUG-IN
FLOPPY F.P.	FLOPPY FRONT PANEL	STR	STORAGE
F.P.	FRONT PANEL	TRIG	TRIGGER
I/O	INPUT/OUTPUT		

The following pages contain mnemonic listings to help identify the origins and destinations of specific signals labeled in the diagrams.

The word "same," under heading DESTINATION, indicates that the signal remains on the same board where the signal originated.

The listings above are common abbreviations used on the following pages.

MNEMONIC	NAME	ORIGINATES	DESTINATION
A TRIG	CHANNEL "A" INTERNAL TRIGGER	204A ADC	204A TRIG
$\overline{AA}$	ADDRESS ADVANCE	I/O	SAME
AAS	ADVANCE SCRATCHPAD ADDRESS	201 CNTL	SAME
AC SW	AUTOCENTER SWITCH	M.F.F.P.	M.F.
AC1	ADDRESS CONTROL BIT 1	DISK MAIN	I/O
$\overline{AC1}$	ADDRESS CONTROL BIT 1	I/O CPU --------- EXT CONN --------	I/O I/O
AC2	ADDRESS CONTROL BIT 2	DISK MAIN	I/O
$\overline{AC2}$	ADDRESS CONTROL BIT 2	I/O ---------- EXT CONN --------	I/O I/O
ADDQ	ADVANCE ADDRESS BY QUARTERS	I/O	SAME
ADD1	ADVANCE ADDRESS BY 1	I/O	SAME
AL	CHANNEL "A" LOWER 1K	204A MEM	SAME
AN2, 3, 6, 8	CHANNEL "A" NORMALIZATION BITS	204A ADC	204A MEM
ASA	ADVANCE SCRATCHPAD ADDRESS	206 CNTL	206 MEM
ASW	CHANNEL "A" ON/OFF SWITCH	206 STR CNTL ---- 204A MEM -------- 201 STR CNTL ----	206 CNTL SAME CNTL
ATN	ATTENTION	IEEE CONN	2081
ATNI	INTERNAL ATTENTION IN	2081	SAME
ATRK/RELSW	ADVANCE TRACK OR RELSW	EXT CONN	I/O
$\overline{ATRK/RELSW}$	ADVANCE TRACK OR RELSW	I/O CPU	I/O
AU	CHANNEL "A" UPPER 1K	204A MEM	SAME
AUTO	AUTO TRIGGER MODE	206 F.P. -------- 204A CNTL ------- 201 MOTHER ------	206 MOTHER 204A TRIG SAME
AXA	ADVANCE PL ADDRESS COUNTER	206 CNTL	SAME
B SEL	SELECT CH "B" NORMALIZATION	201 CNTL	201 MOTHER
B TRIG	CHANNEL "B" INTERNAL TRIGGER	204A ADC	204A TRIG
BC0 thru BC2	BUSS CONTROL BITS 0 THRU 2	M.F.	SAME
BL	CHANNEL "B" LOWER 1K	204A MEM	SAME
$\overline{BLANK}$	DISPLAY BLANKING	M.F.	BLANKING
BN2, 3, 6, 8	CHANNEL "B" NORMALIZATION BITS	204A ADC	204A MEM
BSW	CHANNEL "B" ON/OFF SWITCH	206 STR CNTL ---- 204A MEM -------- 201 STR CNTL ----	206 CNTL SAME 201 CNTL
BU	CHANNEL "B" UPPER 1K	204A MEM	SAME
BUSS 0 thru 11	MAINFRAME BUSS	M.F.	M.F. MEM

MNEMONIC	NAME	ORIGINATES	DESTINATION
BUSSO THR 11	PLUG-IN BUSS	PL CNTL --------- I/O ----------	M.F. MEM M.F. MEM
CFFJ	CLEAR FLIP FLOP JUMP	I/O	SAME
CI	CARRY IN	M.F.	SAME
$\overline{\text{CIL}}$	CLOCK INPUT LATCH	I/O	SAME
$\overline{\text{CLOK A}}$	M.F. ADDRESS CLOCK	M.F.	SAME
$\overline{\text{CLOK XA}}$	PLUG-IN ADDRESS CLOCK	PL CNTL --------- 204A CNTL ------- 206 CNTL -------- 201 CNTL --------	I/O M.F. MEM M.F. MEM M.F. MEM
CLOK 1	CLOCK 1 (4MHZ)	PL CNTL	M.F. MEM
CLOK 1 13	CLOCK 1 (4MHZ)	206 CNTL	SAME
CLR TIMER	CLEAR TIMER	DISK MAIN	SAME
COL	CLOCK OUTPUT LATCH	I/O	SAME
CONT SWP	CONTINUOUS SWEEP	206 CNTL	SAME
$\overline{\text{COUNT 13}}$	COUNT 13	DISK MAIN	SAME
CRL	CURSOR LOCK	204A TRIG	204A CNTL
CRUCLK	9900 CRU CLOCK	DISK MAIN	SAME
CRUIN	9900 CRU IN	DISK MAIN ------- 2081 ---------- 2082 ----------	SAME I/O CPU I/O CPU
CRUOUT	9900 CRU OUT	DISK MAIN ------- I/O CPU --------- I/O CPU ---------	SAME 2081 2082
CTLI	BECOMES $\overline{\text{I/O ACTIVE}}$	HP CABLE	2085N
$\overline{\text{CTLO}}$	CONTROL LINE Ø	HP CABLE	2085N
C0 thru C3	2901 COMMAND CODE	M.F.	SAME
C1 thru C4	TIMING SIGNALS	206 CNTL	SAME
D R/$\overline{\text{W}}$	DATA READ/WRITE	M.F. ---------- I/O CPU --------- 2085N ----------	M.F. MEM I/O I/O
D W/$\overline{\text{R}}$	DATA WRITE/READ	DISK MAIN	I/O
DAB	DISK ACTIVE BUFFER	I/O	SAME
$\overline{\text{DACI}}$	INTERNAL DATA ACCEPTED IN	2081	SAME
$\overline{\text{DACO}}$	INTERNAL DATA ACCEPTED OUT	2081	SAME
DATA E	DATA ENABLE	201 CNTL	201 MOTHER
DAV	DATA AVAILABLE	EXT IEEE	2081
$\overline{\text{DAVI}}$	INTERNAL DATA AVAILABLE IN	2081	SAME
DAVO	INTERNAL DATA AVAILABLE OUT	2081	SAME

MNEMONIC	NAME	ORIGINATES	DESTINATION
DBIN	9900 DATA BUSS IN	I/O CPU DISK MAIN	2081, 2082 SAME
DEC12	DECISION 1 & 2	201 CNTL 201 CNTL	201 MOTHER 201 ADC
DEC34	DECISION 3 & 4	201 CNTL 201 CNTL	201 MOTHER 201 ADC
DEC56	DECISION 5 & 6	201 CNTL 201 CNTL	201 MOTHER 201 ADC
$\overline{\text{DEN}}$	DATA ENABLE (SAME AS $\overline{\text{INT}}$)	206 CNTL	SAME
DI 0 thru DI 11	DATA IN	2085N	I/O
$\overline{\text{DIRECTION}}$	FLOPPLY HEAD DIRECTION	DISK MAIN	FLOPPY
DISK ACTIVE	DISK ACTIVE	DISK MAIN DISK MAIN I/O	FLOPPY F.P. I/O CPU I/O CPU
$\overline{\text{DISK ACTIVE}}$	DISK ACTIVE	DISK MAIN	I/O
$\overline{\text{DISK ERROR}}$	DISK ERROR	DISK MAIN DISK MAIN	I/O CPU I/O
DISK PROTECTED	DISK PROTECTED	DISK MAIN	FLOPPY F.P.
DISK/$\overline{\text{PL}}$	DISK/PLUG-IN	I/O	SAME
DO 0 thru DO 11	DATA OUT	I/O	2085N
DOT	NUMERIC DISPLAY DOT	M.F.	SAME
$\overline{\text{DOWN}}$	VERTICAL CURSOR DOWN	M.F.F.P.	M.F.
$\overline{\text{DRCS}}$	DISK REQUEST CONTINUOUS SWEEP	DISK MAIN	I/O
DUMP RET	DUMP RETURN	206 CNTL	SAME
DUMP	DUMP	206 CNTL 201 CNTL	SAME SAME
DWELL	INTERNAL SAMPLE CLOCK	206 CNTL	SAME
$\overline{\text{EC}}$	ENABLE CLEAR	I/O	SAME
$\overline{\text{EL}}$	ENABLE LOAD	I/O	SAME
EN SHIFT COUNT	ENABLE SHIFT COUNT	DISK MAIN	SAME
EN WAIT	ENABLE WAIT	DISK MAIN	SAME
EOC	END OF CONVERSION	206 PL CNTL	SAME
EOI	END OR IDENTIFY	EXT IEEE	2081
EOII	INTERNAL END OR IDENTIFY IN	2081	SAME
EOIO	INTERNAL END OR IDENTIFY OUT	2081	SAME
EP	EXTERNAL PULSE	206 MOTHER 204A TRIG	206 CNTL SAME
EX	EXECUTE	M.F.F.P.	M.F.

MNEMONIC	NAME	ORIGINATES	DESTINATION
$\overline{EX}$	EXECUTE	M.F.	M.F.F.P.
F.P. LED	FRONT PANEL LED (ON/OFF LED)	M.F.	M.F.F.P.
$\overline{FAIL}$	FAIL	DISK MAIN	SAME
$\overline{FAST}$	FAST	206 CNTL	206 MEM
FG0 thru FG2	FORCED MEMORY GROUP	206 CNTL	SAME
FN0 thru FN2	FUNCTION SWITCH	M.F.F.P.	M.F.
FORCE XA	FORCE PLUG-IN ADDRESS COUNTER	201 CNTL	SAME
G0 thru G2	MEMORY GROUP SWITCH	M.F.F.P. -------- M.F. M.F.F.P. -------- 201 CNTL M.F.F.P. -------- 204A CNTL M.F.F.P. -------- 206 CNTL M.F.F.P. -------- I/O M.F.F.P. -------- DISK MAIN	
G0/T0	MEMORY GROUP OR TRACK SELECT	I/O ---------- I/O CPU I/O ---------- I/O DRIVER	
G1/T1	MEMORY GROUP OR TRACK SELECT	I/O ---------- I/O CPU I/O ---------- I/O DRIVER	
G2/T2	MEMORY GROUP OR TRACK SELECT MEMORY GROUP OR TRACK SELECT	I/O ---------- I/O CPU I/O ---------- I/O DRIVER	
H D/A	HORIZONTAL DAC OUTPUT	M.F.	BLANKING
$\overline{H\ LAST}$	HOLD LAST	REMOTE CONN	M.F.
HOLD LAST	SAME AS $\overline{H\ LAST}$	206 STR CNTL ---- 206 CNTL 201 STR CNTL ---- 201 CNTL 204A STR CNTL --- 204A CNTL I/O ---------- DISK MAIN I/O ---------- PL CONNECTOR 2081/2082 ------- I/O CPU	
$\overline{H\ NEXT}$	HOLD NEXT	REMOTE CONN	M.F.
HOLD NEXT	SAME AS $\overline{H\ NEXT}$	206 STR CNTL ---- 206 CNTL 201 STR CNTL ---- 201 CNTL 204A STR CNTL --- 204A CNTL I/O ---------- DISK MAIN I/O ---------- PL CONNECTOR 2081/2082 ------- I/O CPU	
$\overline{H.K.}$	HORIZONTAL CURSOR	M.F.	206 CNTL
$\overline{HALT}$	HALT	DISK MAIN	SAME
$\overline{HEAD\ LOAD}$	FLOPPY HEAD LOAD	DISK MAIN	FLOPPY
HEX0 thru HEX2	HORIZONTAL EXPANSION SWITCH	M.F.F.P.	M.F.
HK0 thr HK11	HORIZ CURSOR BITS 1 THRU 11	206 CNTL	SAME
HN0 thru HN9	HORIZONTAL NORMALIZATION	201 CNTL	SAME
HOLD	HOLD	201 CNTL	201 ADC

MNEMONIC	NAME	ORIGINATES	DESTINATION
$\overline{\text{HOLD}}$	HOLD	I/O	SAME
I TRIG	INTERNAL TRIGGER	201 ADC	201 MOTHER
I/O ACTIVE	I/O ACTIVE	I/O	DISK MAIN
I/O ACTIVE B	I/O ACTIVE BUFFERED	DISK MAIN	FLOPPY F.P.
$\overline{\text{I/O ACTIVE}}$	I/O ACTIVE	2085N ----------	I/O
		2081/2082 -------	I/O CPU
		I/O CPU ---------	I/O
I/O FLAG	I/O FLAG	I/O -------------	DIK MAIN
		I/O -------------	I/O CPU
$\overline{\text{I/O FLAG}}$	I/O FLAG	I/O DRIVER	2085N
I/O LITE	EXECUTE LED	M.F.	M.F.F.P.
$\overline{\text{I/O RCS}}$	I/O REQUEST CONTINUOUS SWEEP	I/O DRIVER ------	I/O
		I/O CPU ---------	I/O
I/O STEP	I/O STEP	DISK MAIN	I/O
$\overline{\text{I/O STEP}}$	I/O STEP	I/O CPU ---------	I/O
		I/O DRIVER ------	I/O
$\overline{\text{I/O}}$	BECOMES $\overline{\text{D R/W}}$ or $\overline{\text{N R/W}}$	2085N	I/O
IA0 thru IA8	PROGRAM PROM ADDRESS	M.F.	SAME
IFC	INTERFACE CLEAR	IEEE CONN	2081
INDEX P	INDEX PULSE	DISK MAIN	SAME
$\overline{\text{INDEX}}$	FLOPPY GENERATED INDEX PULSE	FLOPPY	DISK MAIN
$\overline{\text{INT}}$	SAME AS $\overline{\text{PL INT}}$	I/O -------------	PL CONNECTOR
		206 CNTL --------	SAME
		201 CNTL --------	SAME
		204A CNTL -------	SAME
$\overline{\text{INTR DISK}}$	INTERRUPT DISK	I/O CPU	SAME
$\overline{\text{INTR LIVE}}$	INTERRUPT LIVE	I/O CPU	SAME
INT1 thru INT4	INTERRUPT 1-4	2081.2082	I/O CPU
I0 thru I8	2901 INSTRUCTION	M.F.	SAME
$\overline{\text{JUMP}}$	JUMP	M.F.	SAME
J0 thru J3	M.F. JUMP CODES	M.F.	SAME
K2 thru K11	M.F. CONSTANTS	M.F.	SAME
$\overline{\text{LAJ}}$	LOAD ADDRESS JUMP	I/O	SAME
LED1 thru LED8	FLOPPY TRACK LEDS	DISK MAIN	FLOPPY F.P.
$\overline{\text{LEFT}}$	HORIZONTAL CURSOR LEFT	M.F.F.P.	MAIN FRAME
LISTEN	LISTEN	2081	SAME
$\overline{\text{LIVE B}}$	BUFFERED LIVE	I/O -------------	DISK MAIN
		I/O -------------	I/O DRIVER
		I/O DRIVER ------	2085N

MNEMONIC	NAME	ORIGINATES	DESTINATION
LIVE B	BUFFERED LIVE	I/O DRIVER	2085N
LIVE	LIVE MODE	PL CONNECTOR ---- 206 CNTL -------- 201 CNTL -------- 204A TRIG -------	I/O 206 MOTHER 201 MOTHER SAME
LOAD	LOAD	206 CNTL -------- I/O ------------	206 ADC SAME
LOAD/SHIFT	LOAD/SHIFT	DISK MAIN	SAME
LOOP	LOOP	206 CNTL	SAME
MCK	MEMORY CLOCK	204A CNTL	204A MEM
MDP	MEMORY DISK PROTECTED	FLOPPY	DISK MAIN
MEMEN	MEMORY ENABLE	DISK MAIN ------- I/O CPU ---------	SAME SAME
MEX	MEMORY EXECUTE	204A CNTL	204A MEM
MF -> PL	MAIN FRAME TO PLUG-IN	I/O ------------ 206 CNTL --------	M.F. MEM M.F. MEM
MF CLOK	MAIN FRAME CLOCK	M.F. MEM	M.F.
MF INT	MAIN FRAME INTERRUPT	M.F.	M.F. MEM
MF R/W	MAIN FRAME READ/WRITE	M.F.	M.F. MEM
MFBC	MAIN FRAME BUSS CONTROL	M.F.	M.F. MEM
MFBCN	M.F. BUSS CONTL NORMALIZATION	M.F.	M.F. MEM
MFN R/W	M.F. NORMALIZATION READ/WRITE	M.F.	M.F. MEM
MG0 & MG1	MEMORY GROUP BITS 0 & 1	201 CNTL -------- 206 CNTL --------	SAME SAME
MID SW	MID CURSOR TRIGGER SWITCH	201 MOTHER	201 CNTL
MID	MID SIGNAL TRIGGER	206 MOTHER ------ 201 MOTHER ------ 204A TRIG -------	206 CNTL 201 CNTL SAME
MOTOR ON	FLOPPY MOTOR ON	DISK MAIN	FLOPPY
MRX	MEMORY REGISTER	DISK MAIN	SAME
MR0	MEMORY REGISTER 0	DISK MAIN	SAME
MR0 B	BUFFERED MEM REGISTER 0	DISK MAIN	SAME
MR1 thru MR4	MEMORY REGISTER 1, 2, 3, 4	I/O CPU	2081
MR1	MEMORY REGISTER 1	DISK MAIN	SAME
MSWP	MEMORY SWEEP	206 CNTL	SAME
N SEL	NORMALIZATION SELECT	206 MEM	206 MOTHER
N W/R	NORMALIZATION	DISK MAIN	I/O
NA2, NA3, NA6, NA8	CHANNEL "A" NORMALIZATION BITS	201 ADC	201 MOTHER

MNEMONIC	NAME	ORIGINATES	DESTINATION
NB2, NB3, NB6, NB8	CHANNEL "B" NORMALIZATION BITS	201 ADC	201 MOTHER
NEXT	NEXT	201 CNTL	SAME
NI	NORMALIZATION IN	I/O DRIVER	I/O
NO	NORMALIZATION OUT	I/O	I/O CPU
NO-OP	NO OPERATION	M.F.	SAME
NRFD	NOT READY FOR DATA	IEEE CONN	2081
N2, N3, N6, N8	NORMALIZATION BITS	206 ADC --------- 201 MOTHER ------	SAME 201 CNTL
ON LINE	RS232 ON LINE	2082	SAME
OVR	2901 OVERFLOW	M.F.	SAME
$\overline{\text{PCE}}$	PLUG-IN CONTROL ENABLE	I/O	SAME
$\overline{\text{PCTL}}$	BECOMES I/O $\overline{\text{STEP}}$	HP CABLE	2085N
PEN H	HORIZONTAL PEN OUTPUT	M.F.	REAR PANEL BNC
PEN V	VERTICAL PEN OUTPUT	M.F.	REAR PANEL BNC
PFLG	BECOMES $\overline{\text{I/O FLAG}}$	HP CABLE	2085N
PL BUSY	PLUG-IN BUSY	206 CNTL	I/O
$\overline{\text{PL INT}}$	PLUG-IN INTERRUPT (See $\overline{\text{INT}}$)	PL CONN	M.F. MEM
PL NORM	PLUG-IN NORMALIZATION	PL CNTL	M.F. MEM
PL NR/$\overline{\text{W}}$	PL NORMALIZATION READ/WRITE	I/O ---------- M.F. ---------- DISK MAIN ------- PL CNTL --------- I/O CPU --------- 2085N ----------	M.F. MEM M.F. MEM I/O M.F. I/O I/O
PL R/$\overline{\text{W}}$	PLUG-IN READ/WRITE	PL CNTL	M.F. MEM
$\overline{\text{PL/DISK}}$	PLUG-IN/DISK	I.O. DRIVER ----- I/O CPU --------- 2085N ----------	I/O I/O I/O
$\overline{\text{PLBC}}$	PLUG-IN BUSS CONTROL	201 CNTL	M.F. MEM
$\overline{\text{PLJ2}}$ & $\overline{\text{PLJ3}}$	PLUG-IN JUMP 2 & 3	M.F.	NOT USED
$\overline{\text{PLP}}$	PARALLEL LOAD PULSE	DISK MAIN	SAME
$\overline{\text{PP}}$	TIMING SIGNAL (4MHZ)	206 CNTL	SAME
$\overline{\text{PRESET}}$	PRESET	HP CABLE	SAME
$\overline{\text{PSTS}}$	BECOMES $\overline{\text{DISK ACTIVE}}$	HP CABLE	2085N
P1 thru P8	TRACK LEDS	FLOPPY F.P.	DISK MAIN
P1, P2, P3, P4	TIMING SIGNALS	206 CNTL -------- 201 CNTL --------	206 ADC SAME
P7	TIMING SIGNAL	206 CNTL	206 ADC

MNEMONIC	NAME	ORIGINATES	DESTINATION
QSWP1	QUICK SWEEP 1	206 CNTL	SAME
R/$\overline{W}$	READ/WRITE	206 MEM	SAME
$\overline{\text{RAM CE}}$	RAM CHIP ENABLE	DISK MAIN -------	SAME
		I/O CPU ---------	SAME
$\overline{\text{RCFF}}$	RESET CLEAR FLIP FLOP	I/O	SAME
$\overline{\text{RCL}}$	FLOPPY RECALL	FLOPPY F.P. -----	DISK MAIN
		I/O -------------	DISK MAIN
RCS	REQUEST CONTINUOUS SWEEP	I/O	SAME
$\overline{\text{RCS}}$	REQUEST CONTINUOUS SWEEP	I/O -------------	206 CNTL
		I/O -------------	201 CONTL
RE	READ ENABLE	DISK MAIN	SAME
$\overline{\text{READ DATA}}$	READ FLOPPY DATA	FLOPPY	DISK MAIN
READ EN	READ ENABLE	DISK MAIN	SAME
READY	READY	DISK MAIN	SAME
$\overline{\text{RELSW}}$	RELEASE SWITCH (LIVE MODE)	REMOTE CONN -----	M.F.
		DISK MAIN -------	I/O
		STR CNTL --------	PL CNTL
		204A TRIG -------	SAME
		206 STR CNTL ----	206 MOTHER
		2085N -----------	I/O DRIVER
		I/O CPU ---------	I/O
REN	REMOTE ENABLE	IEEE CONN	2081
$\overline{\text{RENI}}$	INTERNAL REMOTE ENABLE IN	2081	SAME
$\overline{\text{RESET}}$	RESET	DISK MAIN -------	SAME
		I/O CPU ---------	SAME
$\overline{\text{RFDI}}$	INTERNAL READY FOR DATA IN	2081	SAME
RFDO	INTERNAL READY FOR DATA OUT	2081	SAME
$\overline{\text{RI/OF}}$	RESET I/O FLAG	I/O	SAME
$\overline{\text{RIGHT}}$	HORIZONTAL CURSOR RIGHT	M.F.F.P.	M.F.
$\overline{\text{ROMI CS}}$	CHIP SELECT ROM I	I/O CPU	SAME
RR0 thru RR3	RETAIN REFERENCE SWITCH	204A STR CNTL	SAME
RSP	READ SHIFT PULSE	DISK MAIN	SAME
$\overline{\text{RTI}}$	RESET TIMER INTERRUPT	DISK MAIN	SAME
RW	READ WRITE	201 CNTL	SAME
RXA	RESET PL ADDRESS COUNTER	206 CNTL --------	SAME
		201 CNTL --------	SAME
SA R/$\overline{W}$	SCRATCH PAD MEMORY READ/WRITE	206 CNTL	SAME
SA0 thru SA9	SCRATCH PAD MEMORY ADDRESS	206 MEM ---------	SAME
		201 CNTL --------	SAME

MNEMONIC	NAME	ORIGINATES	DESTINATION
SA00	SCRATCHPAD ADDRESS ØØ	206 CNTL	206 MEM
SDCLK	SERIAL DATA CLOCK	DISK MAIN	SAME
SDI	SERIAL DATA IN	DISK MAIN	SAME
SDMP	SET DUMP	206 CNTL	SAME
SDO	SERIAL DATA OUT	DISK MAIN	SAME
SEL PL	SELECT PLUG-IN	201 CNTL	201 MOTHER
SEL SCRATCH	SELECT SCRATCHPAD MEMORY	201 CNTL	SAME
SEP CLK	SEPARATE CLOCK PULSES	DISK MAIN	SAME
SEP DATA	SEPARATE DATA PULSES	DISK MAIN	SAME
SET SYNCH	SET SYNCH	206 CNTL	SAME
SJ1 & SJ2	SET JUMP 1 & 2	206 CNTL	SAME
SK SWP	SKIP SWEEP	STR CNTL	PL CNTL
SKIP	SKIP	206 CNTL	SAME
SRQ	SERVICE REQUEST	IEEE CONN	2081
SRQO	SERVICE REQUEST OUT	2081	SAME
SRXA	SET RXA	206 CNTL	SAME
$\overline{\text{STEP}}$	FLOPPY STEP	DISK MAIN	FLOPPY
$\overline{\text{STIO}}$	BECOMES LIVE	2081	SAME
$\overline{\text{STO}}$	FLOPPY STORE	I/O	DISK MAIN
STOP+	STOP +	201 CNTL	201 MOTHER
SWP	SWEEP	206 CNTL --------	206 MOTHER
		201 CNTL --------	201 MOTHER
		204A ----------	SAME
SWP	SWEEP	206 CNTL --------	206 MOTHER
		201 CNTL --------	201 MOTHER
SWPEND	SWEEP END	201 CNTL	SAME
SWP1	SWEEP 1	206 CNTL	SAME
$\overline{\text{SWP2}}$	SWEEP 2	206 CNTL --------	206 MEM
		204A CNTL -------	204A MEM
S0 thru S4	MEMORY SELECT	FLOPPY F.P.	DISK MAIN
TALK	TALK	2081	SAME
$\overline{\text{THD}}$	TRANSFER HORIZONTAL DISPLAY	M.F.	SAME
TIM-I	TIMER INTERRUPT	DISK MAIN	SAME
TIMER	TIMER	DISK MAIN	SAME
TOG DUMP	TOGGLE DUMP	201 CNTL	SAME
TRIG L	TRIGGER PULSE	204A TRIG	SAME
TRIG P	TRIGGER LED	201 MOTHER	SAME

DESTINATION	ORIGINATES	NAME	MNEMONIC
TRIG	TRIGGERED	206 MOTHER	206 CNTL
$\overline{\text{TRIG}}$	TRIGGERED	201 CNTL	201 MOTHER
$\overline{\text{TRK 00}}$	TRACK ZERO	FLOPPY	DISK MAIN
TRKF	TRACK FORWARD	I/O	DISK MAIN
TSB	TRACK SELECT BACKWARD	FLOPPY F.P.	DISK MAIN
$\overline{\text{TSF}}$	TRACK SELECT FORWARD	I/O ----------	DISK MAIN
		FLOPPY F.P. -----	DISK MAIN
$\overline{\text{TVD}}$	TRANSFER VERTICAL DISPLAY	M.F.	SAME
T0 thru T2	TRACK NUMBER BITS	DISK MAIN -------	I/O
		DISK MAIN -------	I/O CPU
UP+	UP PLUS	206 CNTL	SAME
UP-	UP MINUS	M.F.F.P.	M.F.
V D/A	VERTICAL DAC OUTPUT	M.F.	BLANKING
VEX0 thru VEX2	VERTICAL EXPANSION SWITCH	M.F.F.P.	M.F.
VN0 thru VN9	VERTICAL NORMALIZATION	PL CNTL	SAME
W	WRITE	201 CNTL	SAME
W/$\overline{\text{R}}$ D	WRITE/READ DATA	DISK MAIN	I/O
W/$\overline{\text{R}}$ N	WRITE/READ NORMALIZATION	DISK MAIN	I/O
$\overline{\text{WE}}$	WRITE ENABLE	DISK MAIN -------	I/O
		I/O CPU ---------	2081/2082
WG	WRITE GATE	DISK MAIN	SAME
$\overline{\text{WRITE DATA}}$	WRITE DATA TO FLOPPY	DISK MAIN	FLOPPY
WRITE GATE	WRITE GATE	DISK MAIN	FLOPPY
$\overline{\text{WSP}}$	WRITE SHIFT PULSE	DISK MAIN	SAME
$\overline{\text{X TO B}}$	DATA TO PL BUSS	I/O	SAME
$\overline{\text{XA EN}}$	PL ADDRESS COUNTER ENABLE	206 CNTL	SAME
$\overline{\text{XA TO B}}$	ADDRESS TO PL BUSS	I/O	SAME
XAEN	PL ADDRESS COUNTER ENABLE	201 CNTL	SAME
XA0 thr SA11	PLUS IN ADDRESS	206 CNTL	SAME
		201 CNTL	SAME
XCHE	PLUG-IN CURSOR HORIZONTAL END	206 CNTL	SAME
$\overline{\text{XCHE INHB}}$	PLUG-IN CURSOR HOR END INHIBIT	206 CNTL	SAME
$\overline{\text{YT}}$	XY OR YT MODE SWITCH	M.F.F.P.	M.F.
01 thru 04	9900 CLOCK PHASES	DISK MAIN -------	SAME
		I/O CPU ---------	2081/2082
2 CH	TWO CHANNELS	206 CNTL --------	SAME
		201 CNTL --------	I/O
4MHZ	CLOCK FREQUENCY (Same as CLOK 1)	PL CNTL ---------	I/O

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(*) P = Component placement diagrams; S = Schematics.

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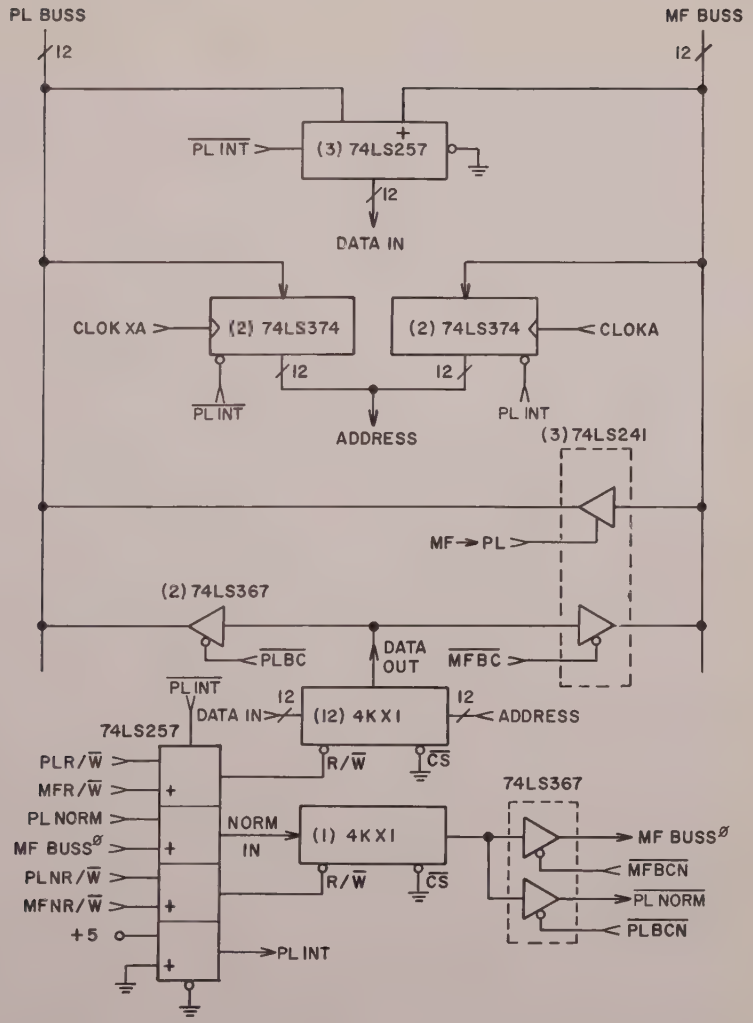
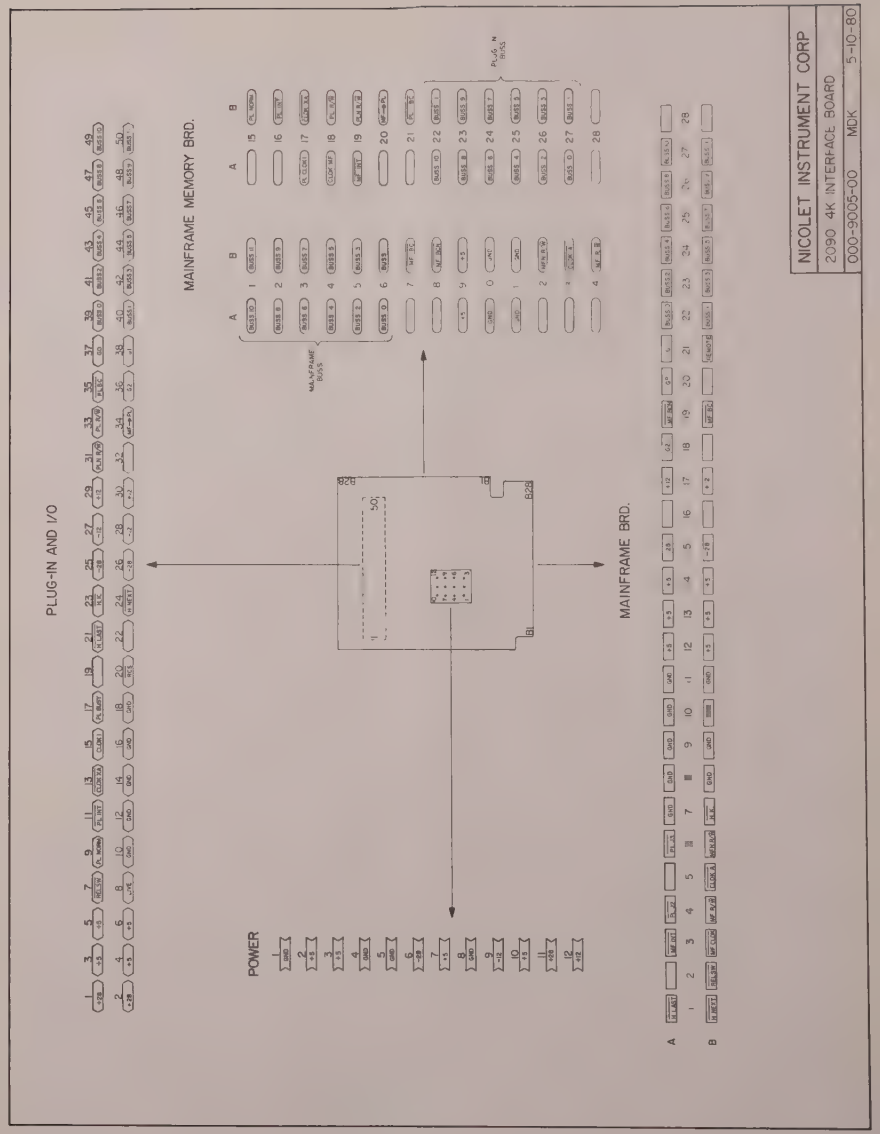
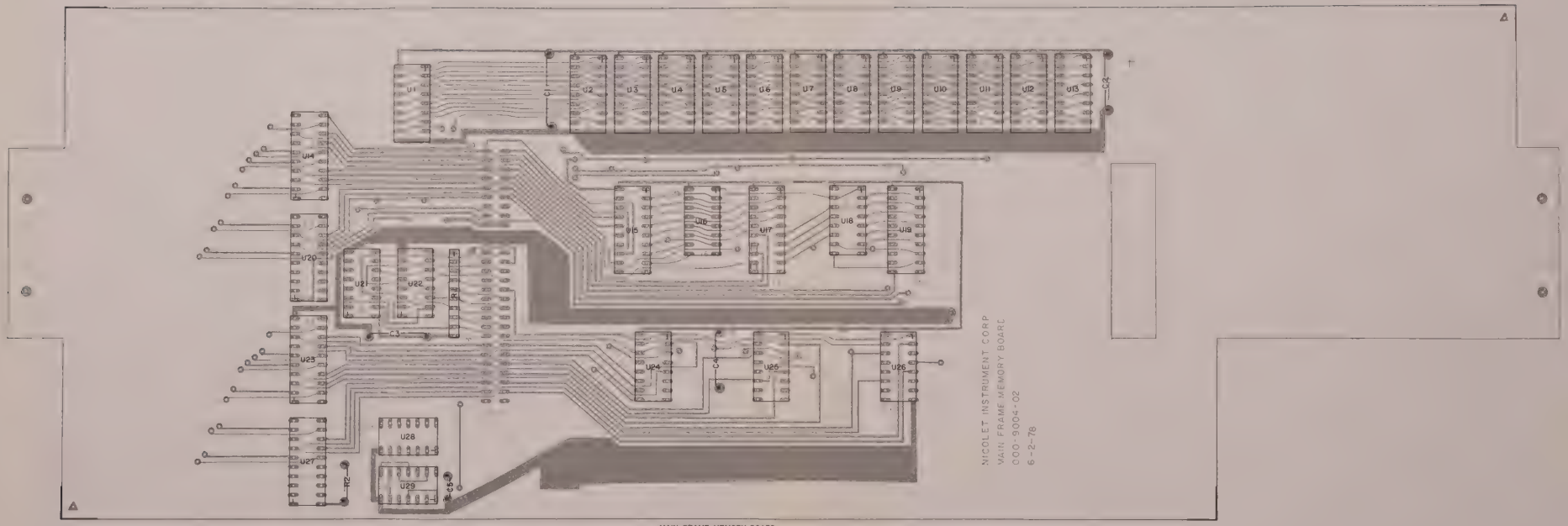
240	P	206 PLUG-IN DIGITIZER BOARD	000-9009-05
250	S	206 PLUG-IN DIGITIZER BOARD	000-9009-05
260	P	STORAGE CONTROL CARD	000-9008-06
260	P	206 PLUG-IN CONTROL BOARD	000-9012-07
270	S	206 PLUG-IN CONTROL BOARD	000-9012-07
280	P	206 PLUG-IN MEMORY BOARD	000-9090-00
290	S	206 PLUG-IN MEMORY BOARD	000-9090-00
300	P	206 PLUG-IN MOTHER BOARD	000-9011-03
310	S	206 PLUG-IN MOTHER BOARD	000-9011-03
320	P	I/O BOARD	000-9022-06
330	S	I/O BOARDS	000-9022-05
340	P	I/O DRIVER BOARD	000-9024-01
340	P	DISK WITHOUT I/O	000-9027-02
350	S	DISK WITHOUT I/O	000-9027-02
360	-	Blank Page	----------
370	S	DISK MEMORY FRONT PANEL BOARD	000-9020-01
380	P	DISK MAIN BOARD	000-9019-05
390	S	DISK MAIN BOARD	000-9019-05
400	P	I/O CPU BOARD	000-9042-04
410	S	I/O CPU BOARD	000-9042-04
420	P	2081 GP-IB BOARD	000-9041-02
420	S	2081 GP-IB BOARD	000-9041-02
430	P	2082 RS-232 BOARD	000-9045-02
430	S	2082 RS-232 BOARD	000-9045-02
440	P	2085N CALCULATOR INTERFACE	000-9026-02
440	S	2085N CALCULATOR INTERFACE	000-9026-01, 02
450	S	REAR PANEL WIRING DIAGRAM	----------
450	S	FRONT PANEL MAIN FRAME WIRING DIAGRAM	----------
460	S	INPUT/OUTPUT ACCESSORY BOARD (003)	000-9025-02

(*) P = Component placement diagrams; S = Schematics.

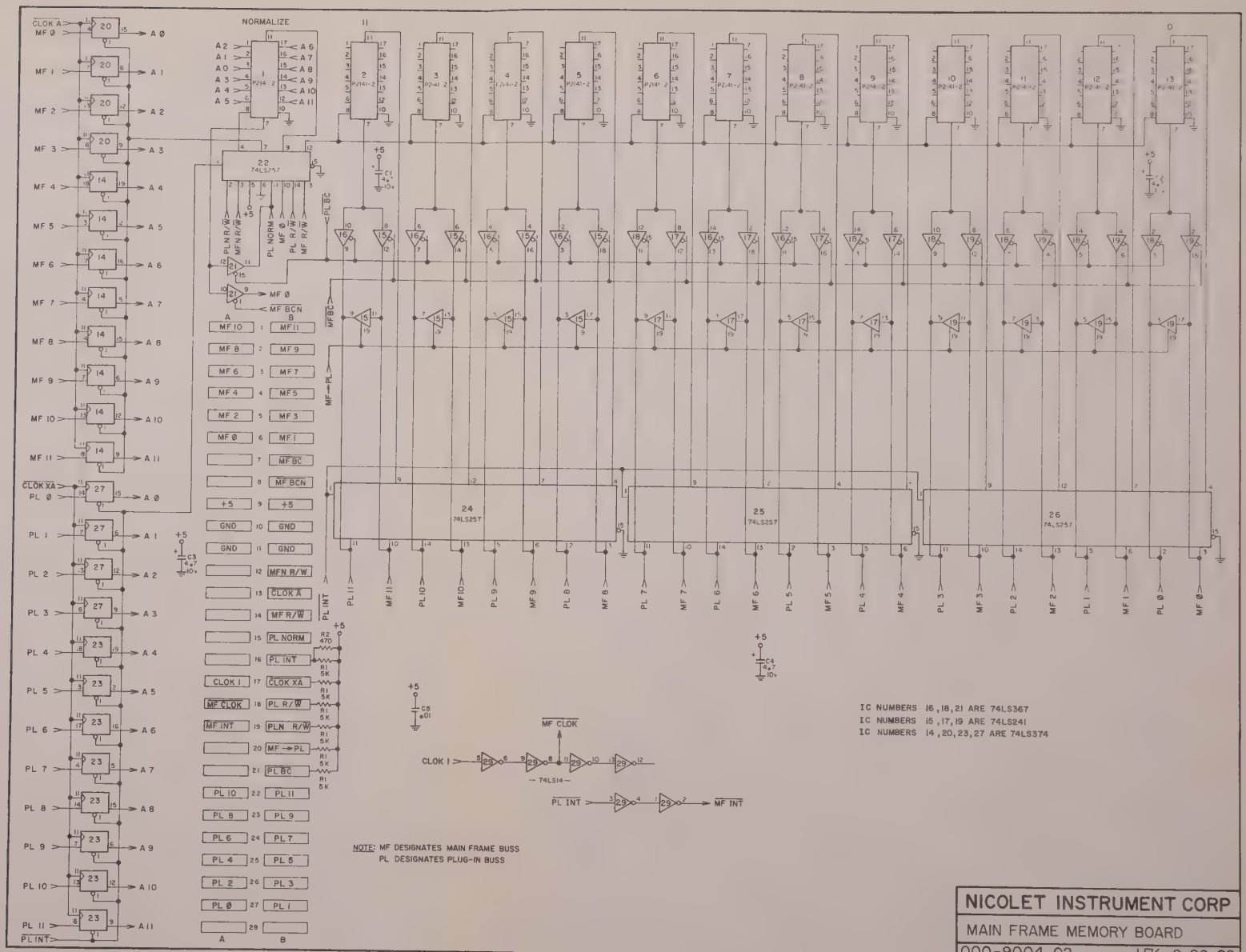


4K RAM MAIN FRAME

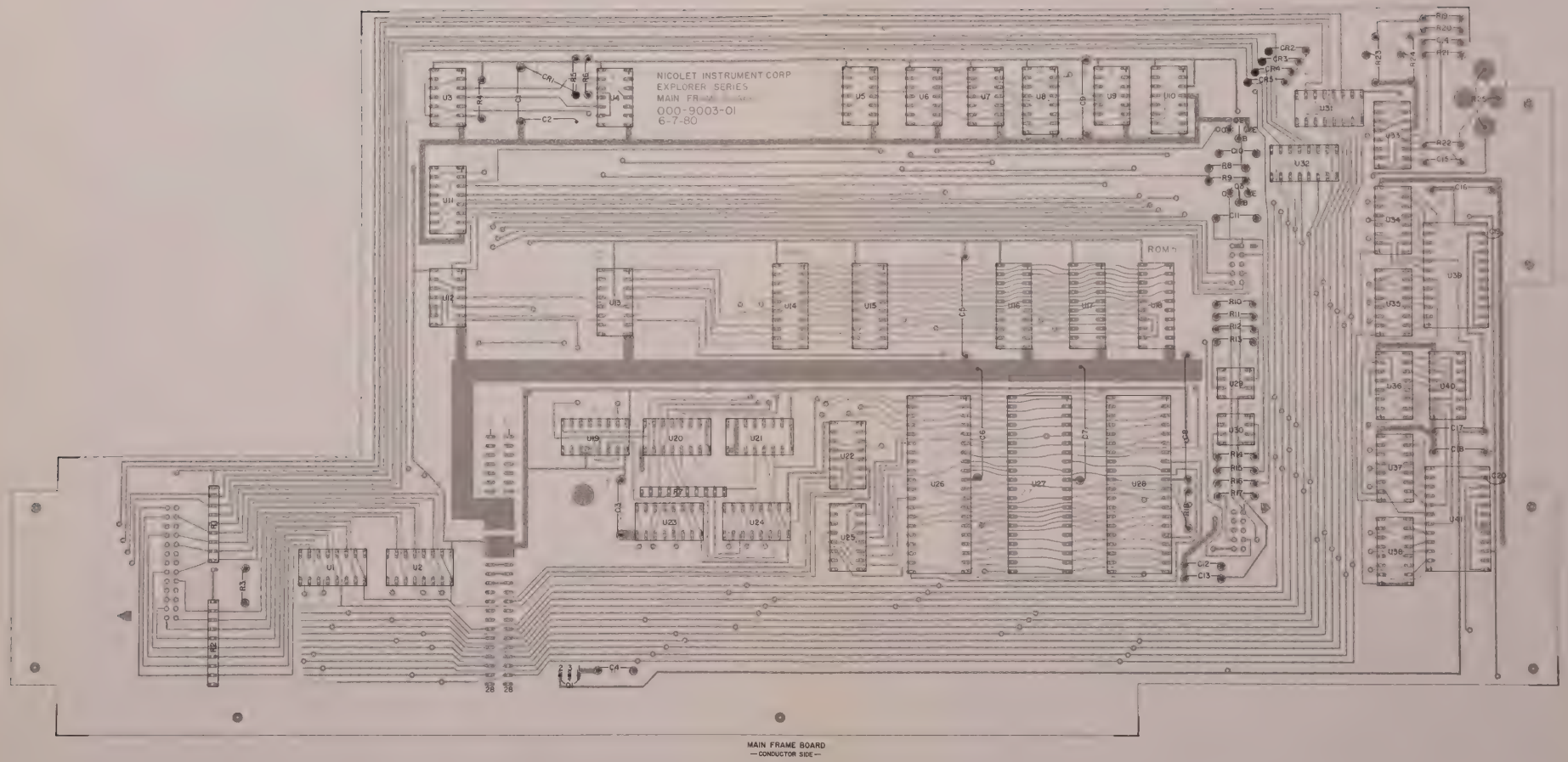


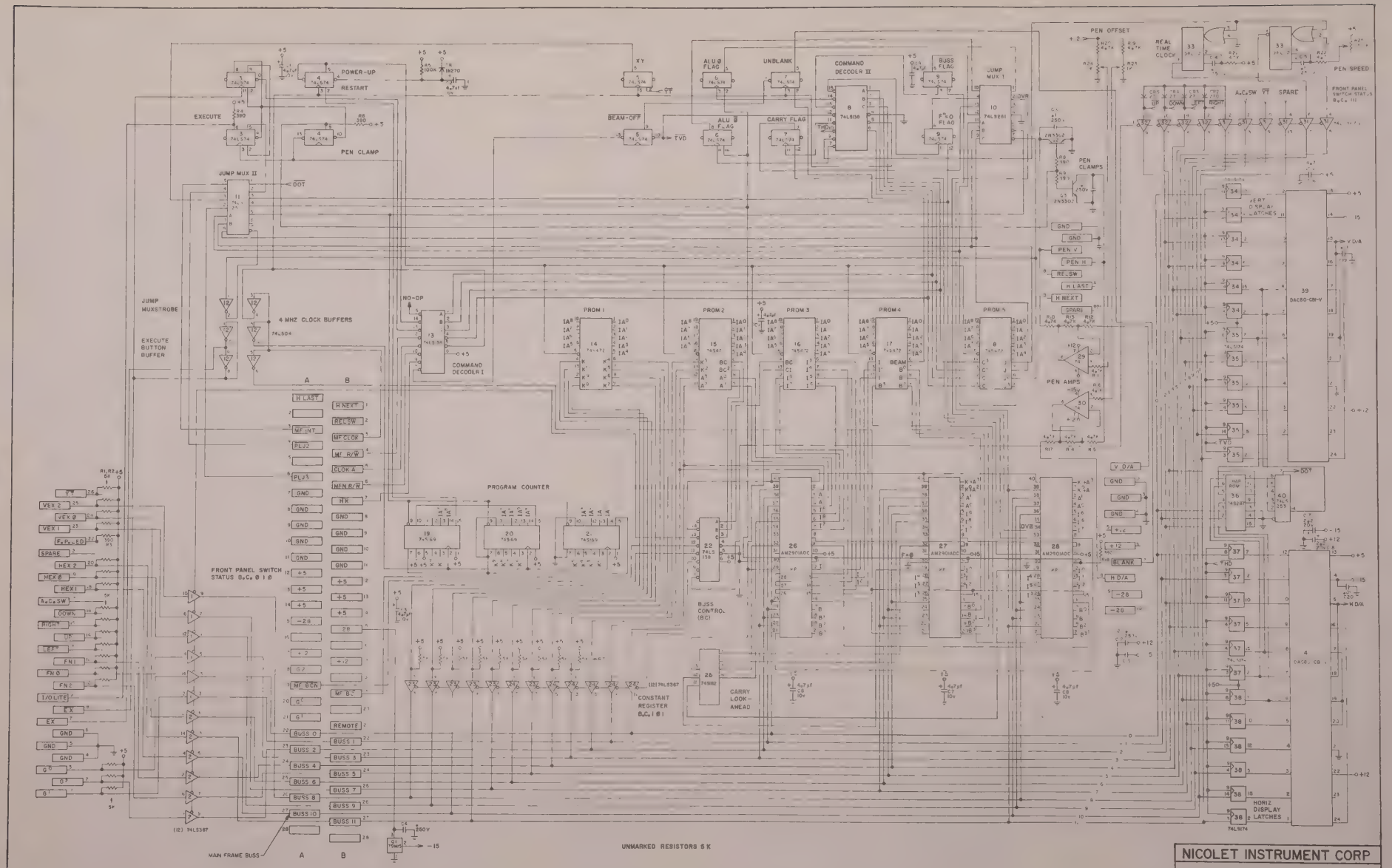


MAIN FRAME MEMORY BOARD
— CONDUCTOR SIDE —

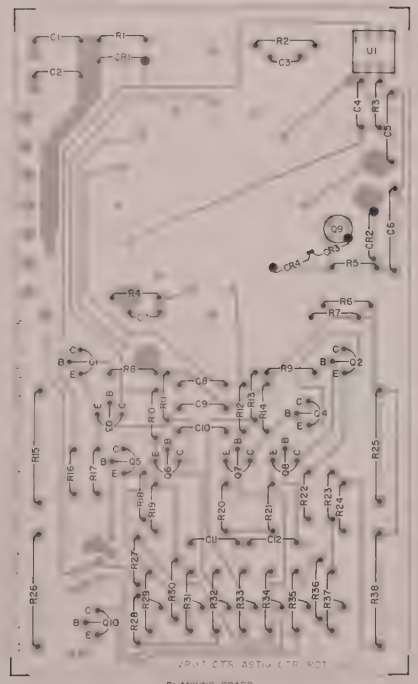


NICOLET INSTRUMENT CORP	
MAIN FRAME MEMORY BOARD	
000-9004-02	LEK 9-26-80

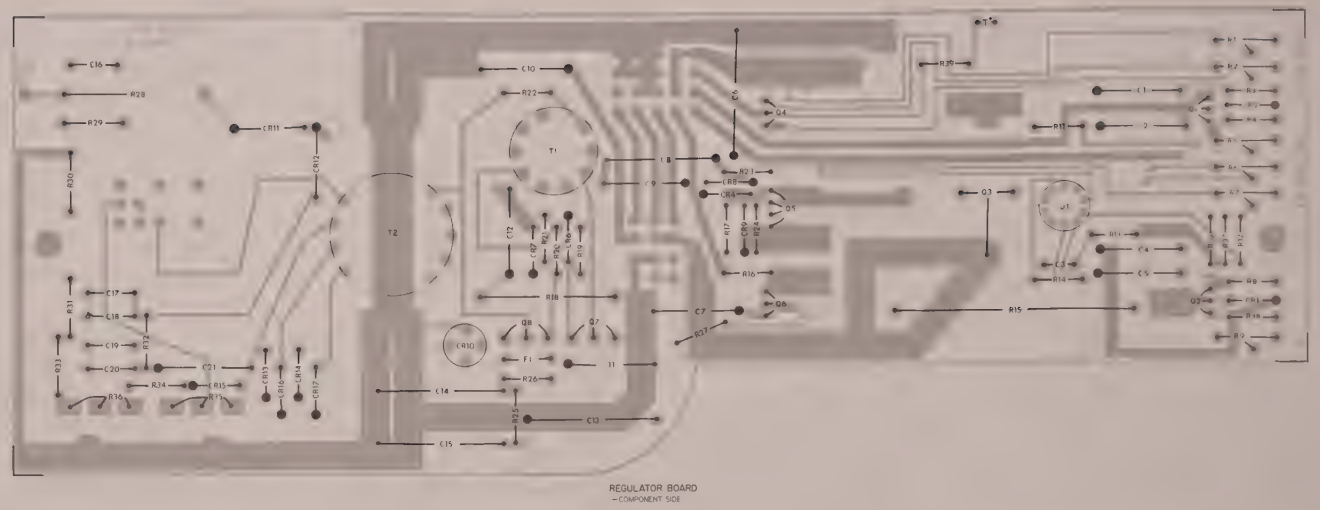




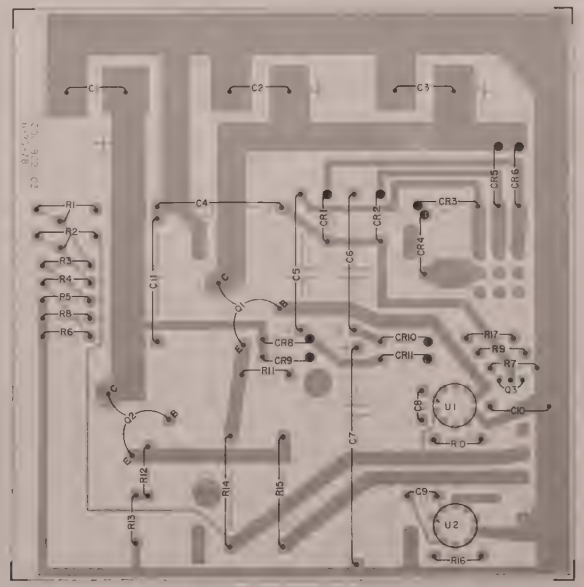
NICOLET INSTRUMENT CORP	
MAIN FRAME BOARD	
000-9003-01	LEK 10-6-80



BLANKING BOARD
— CONDUCTOR SIDE

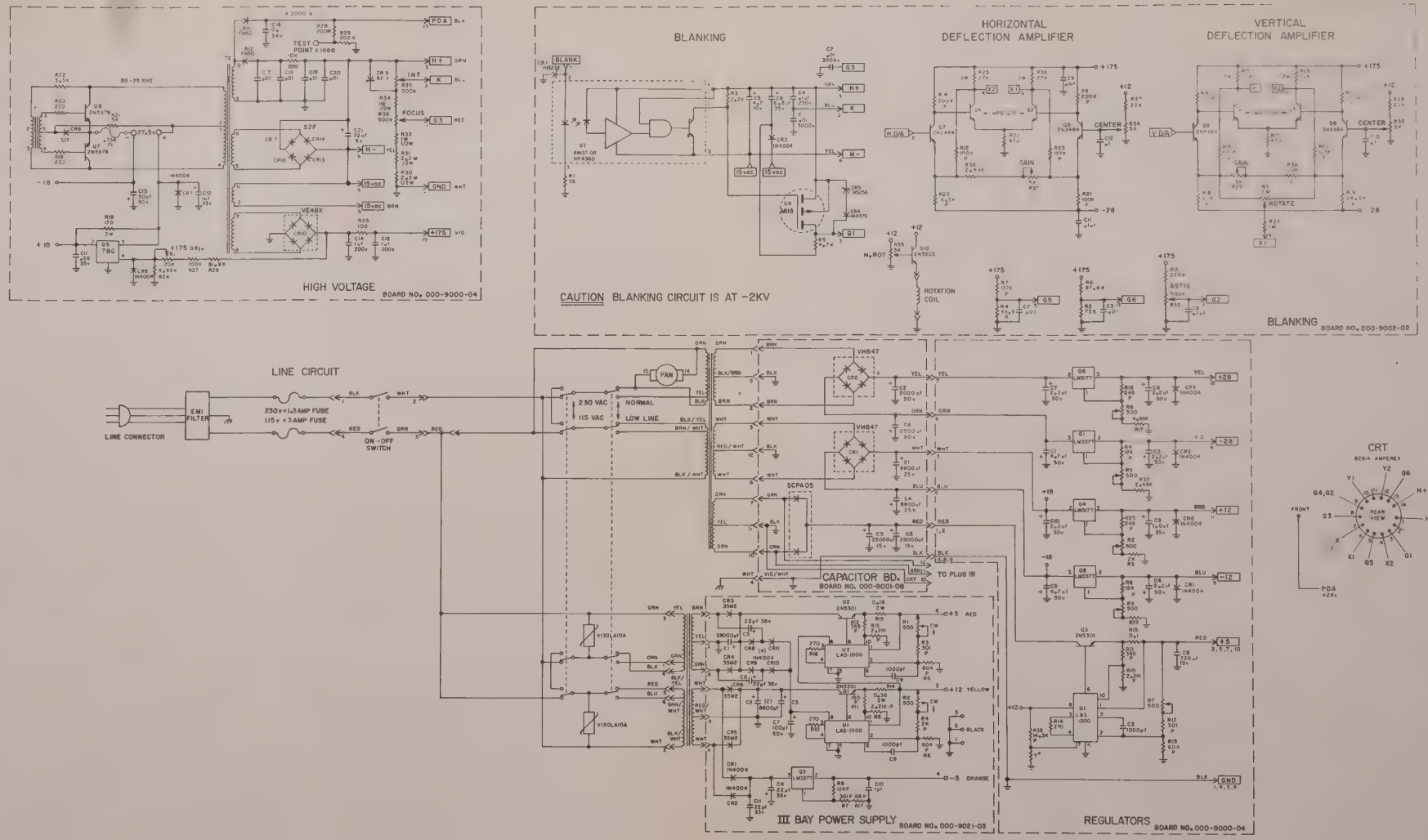


REGULATOR BOARD
— COMPONENT SIDE

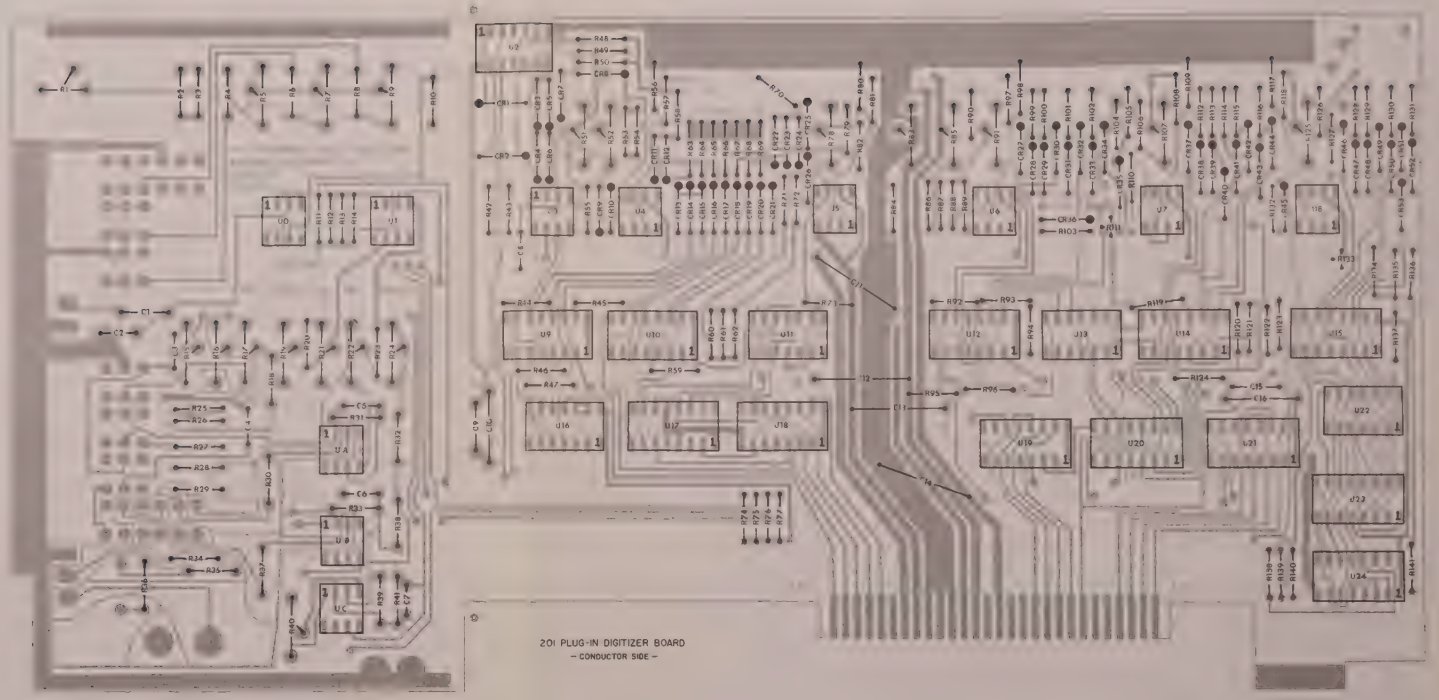


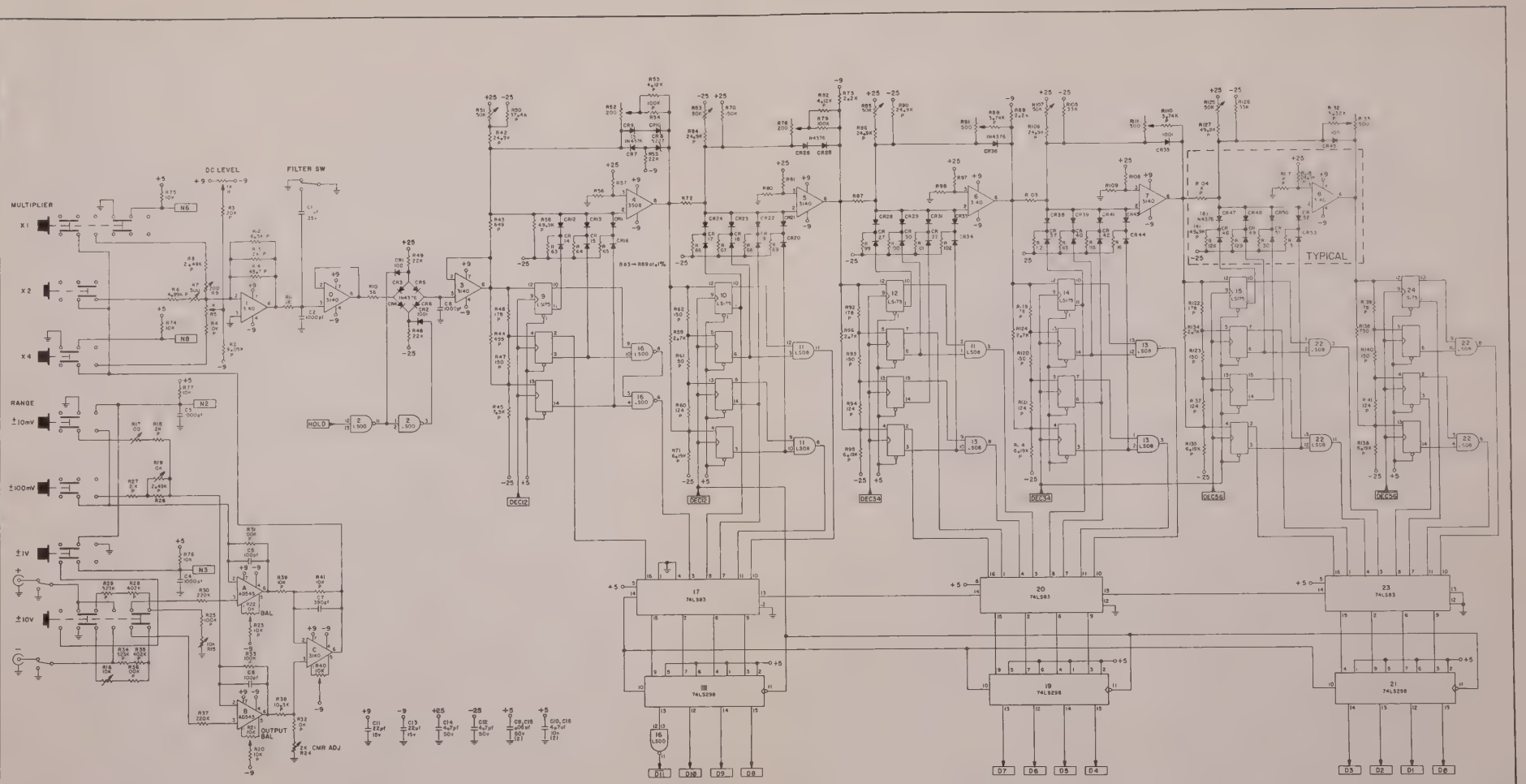
III BAY POWER SUPPLY BOARD
— CONDUCTOR SIDE —

CAPACITOR BOARD
— CONDUCTOR SIDE —

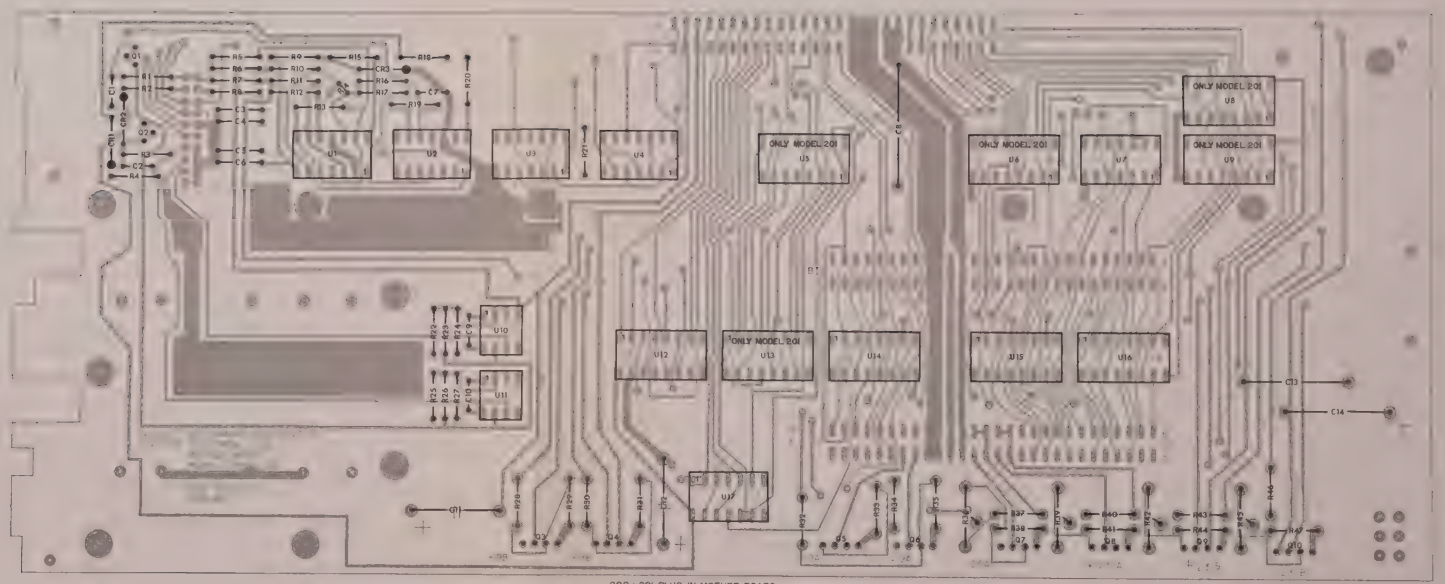


NICOLET INSTRUMENT CORP	
POWER SUPPLY, BLANKING & LINE CIRCUIT	
LEK	10-7-80

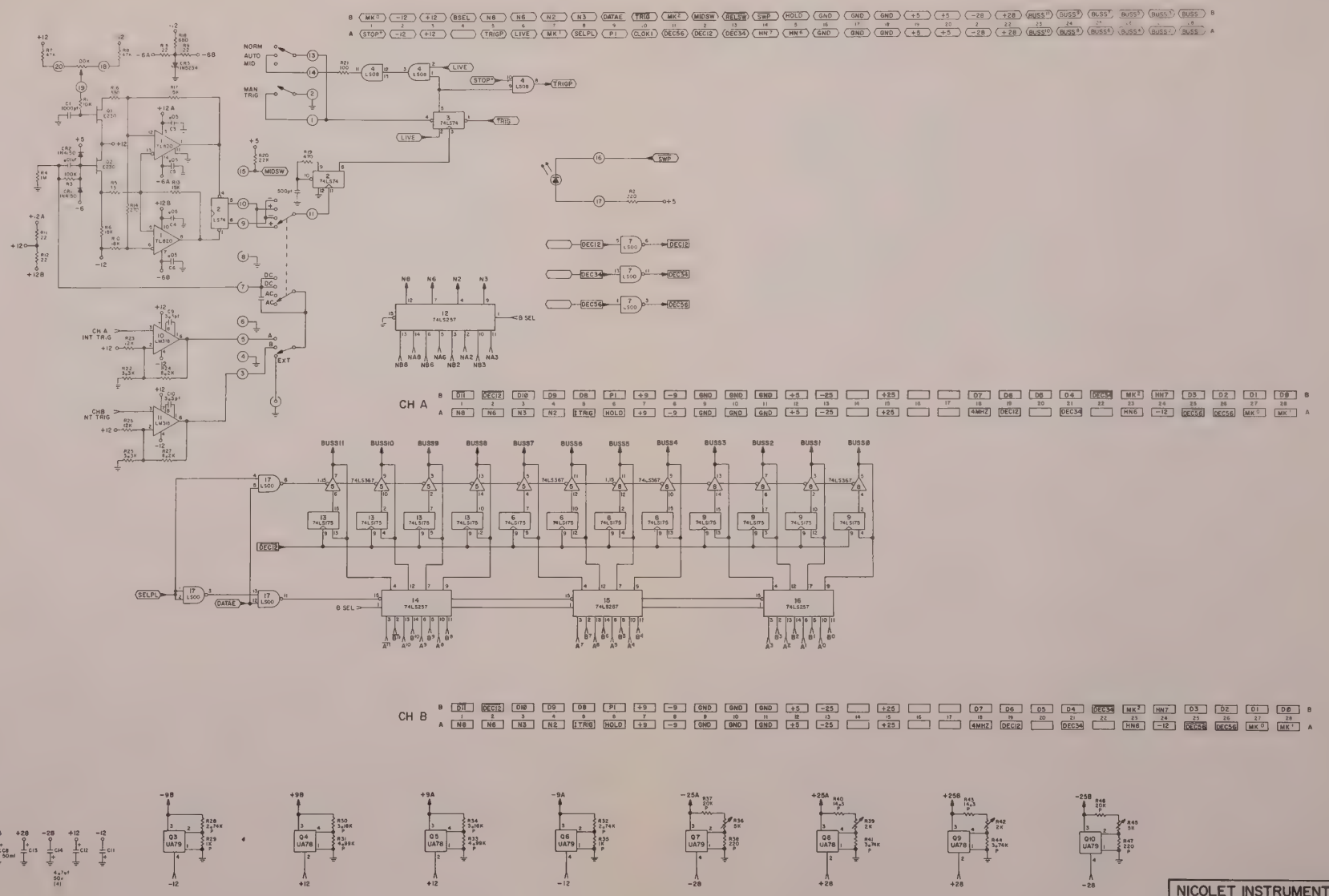




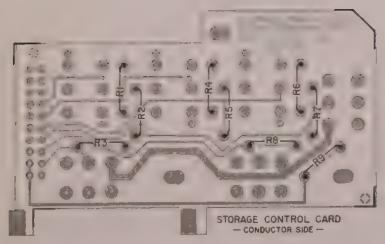
NICOLET INSTRUMENT CORP		
201 PLUG-IN DIGITIZER BOARD		
000-9040-06	LBK	12-10-80

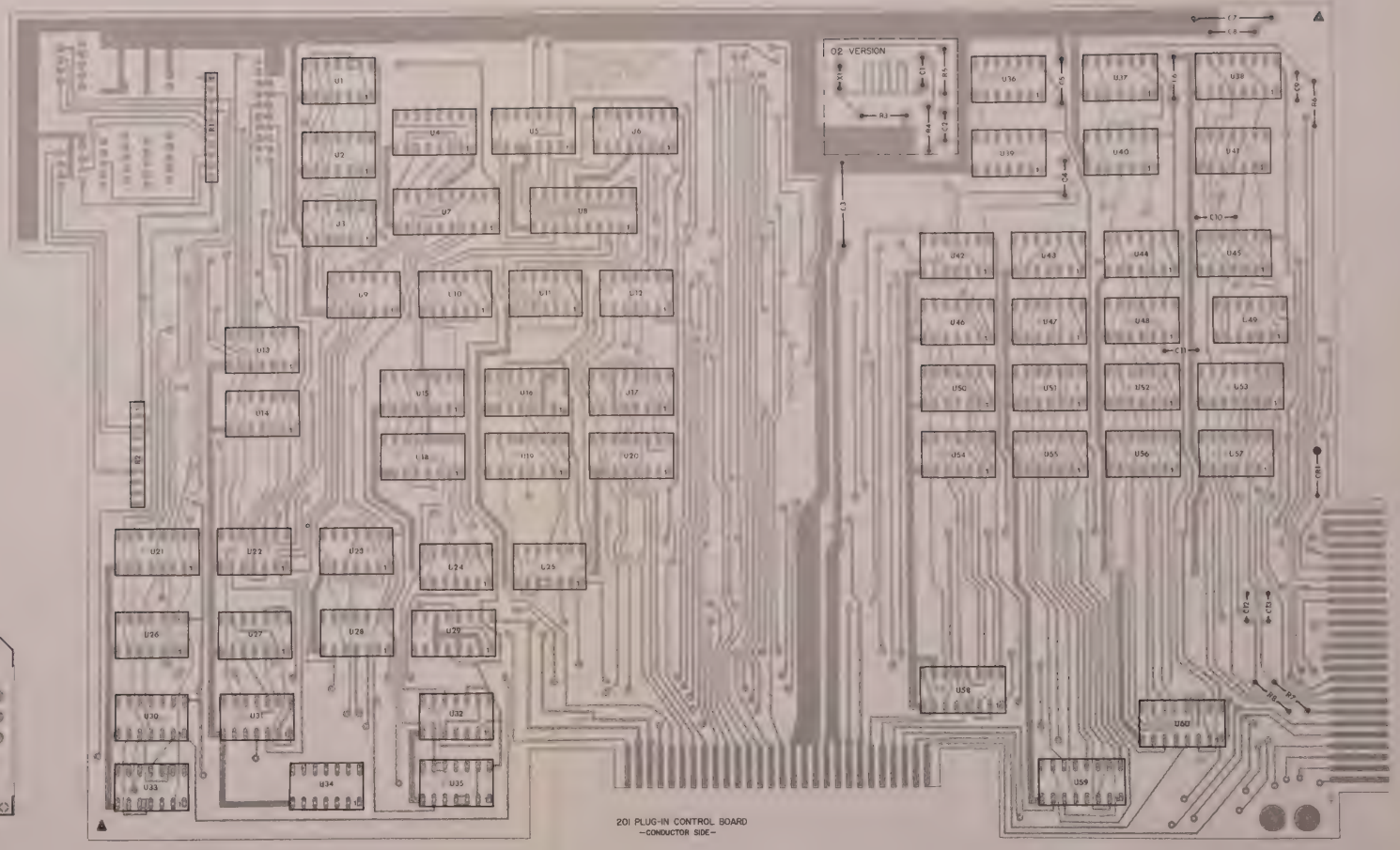


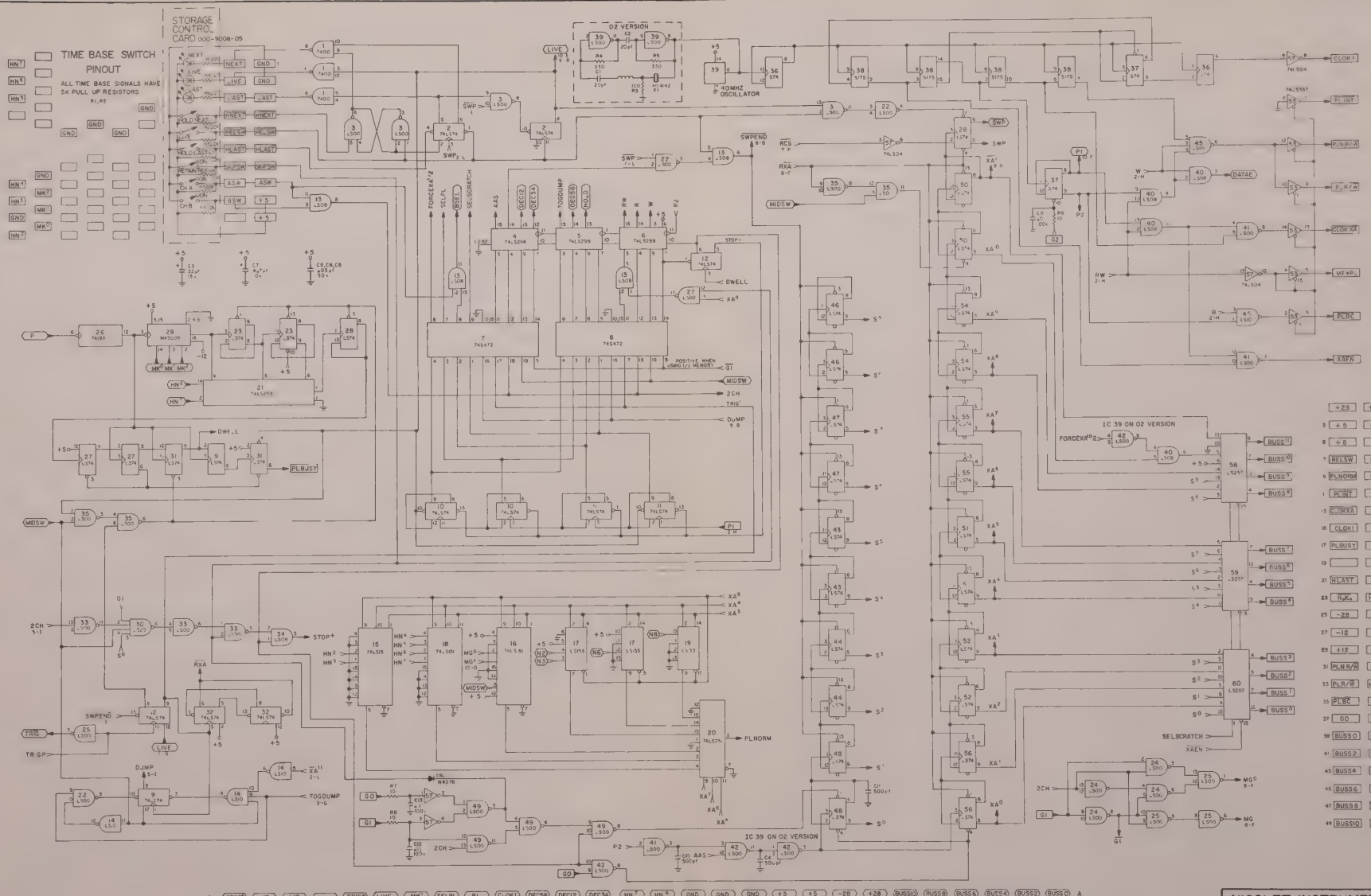
200+201 PLUG-IN MOTHER BOARD
-CONDUCTOR SIDE-



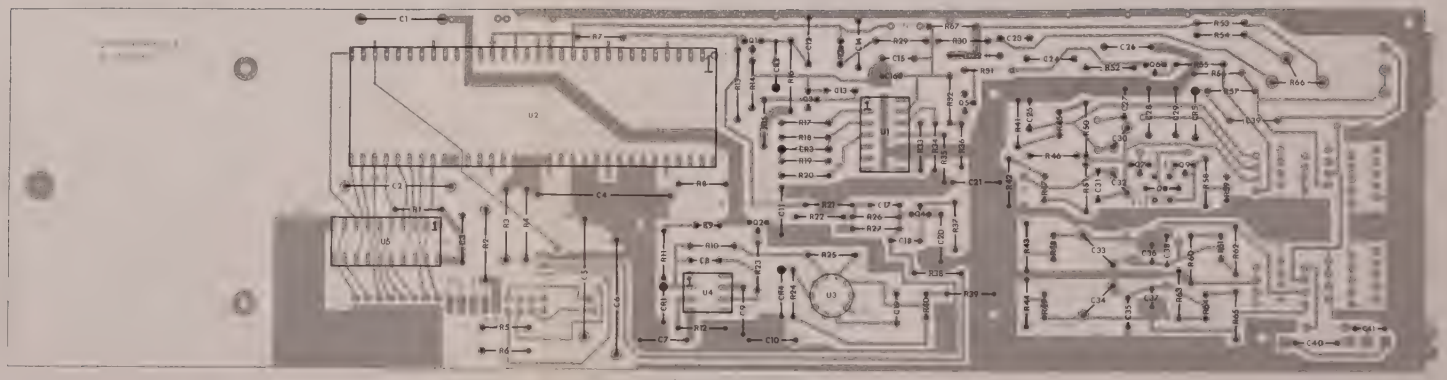
NICOLET INSTRUMENT CORP		
201 PLUG-IN MOTHER BOARD		
000-9039-04	LEK	09-22-80



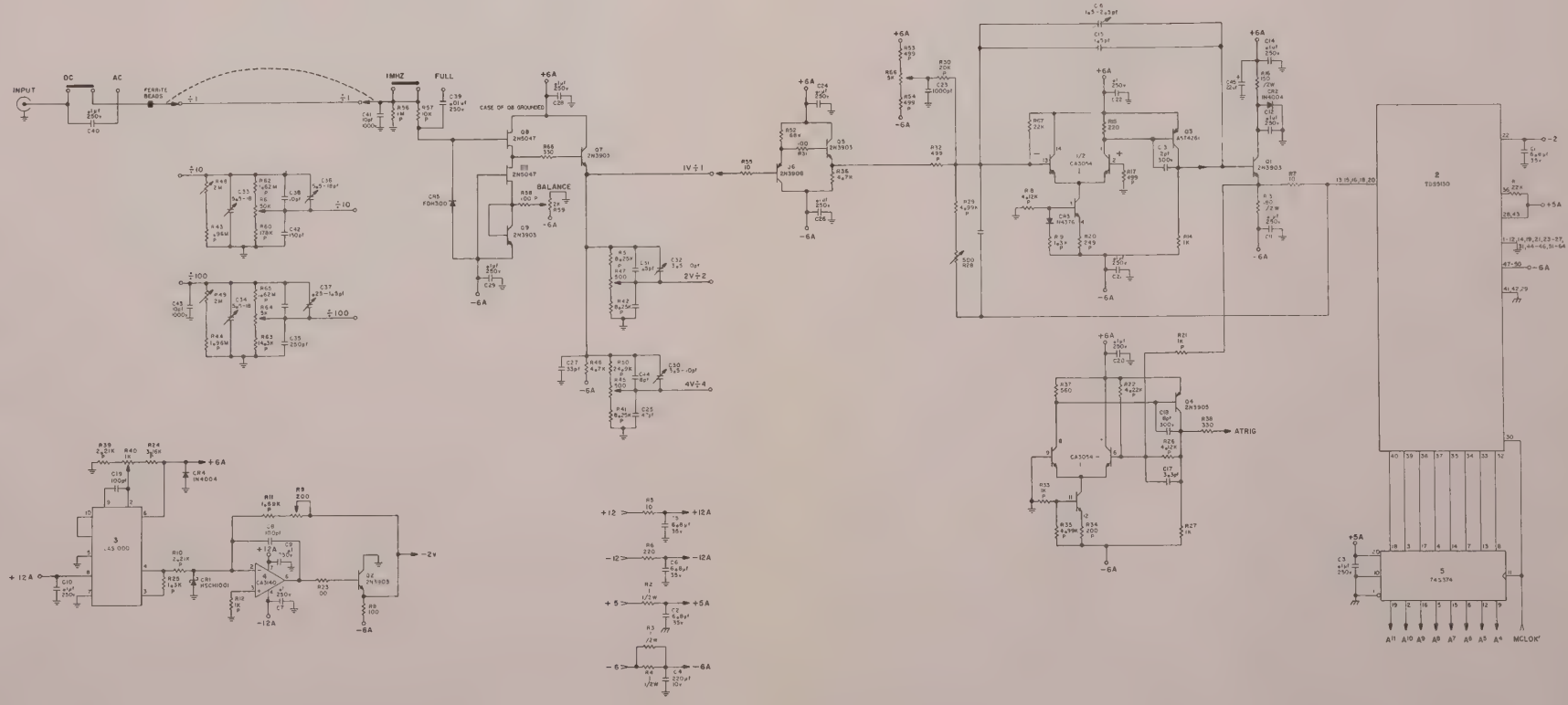




NICOLET INSTRUMENT CORP		
201 PLUG-IN CONTROL BOARD		
000-9038-02,04	LEK	12-10-80



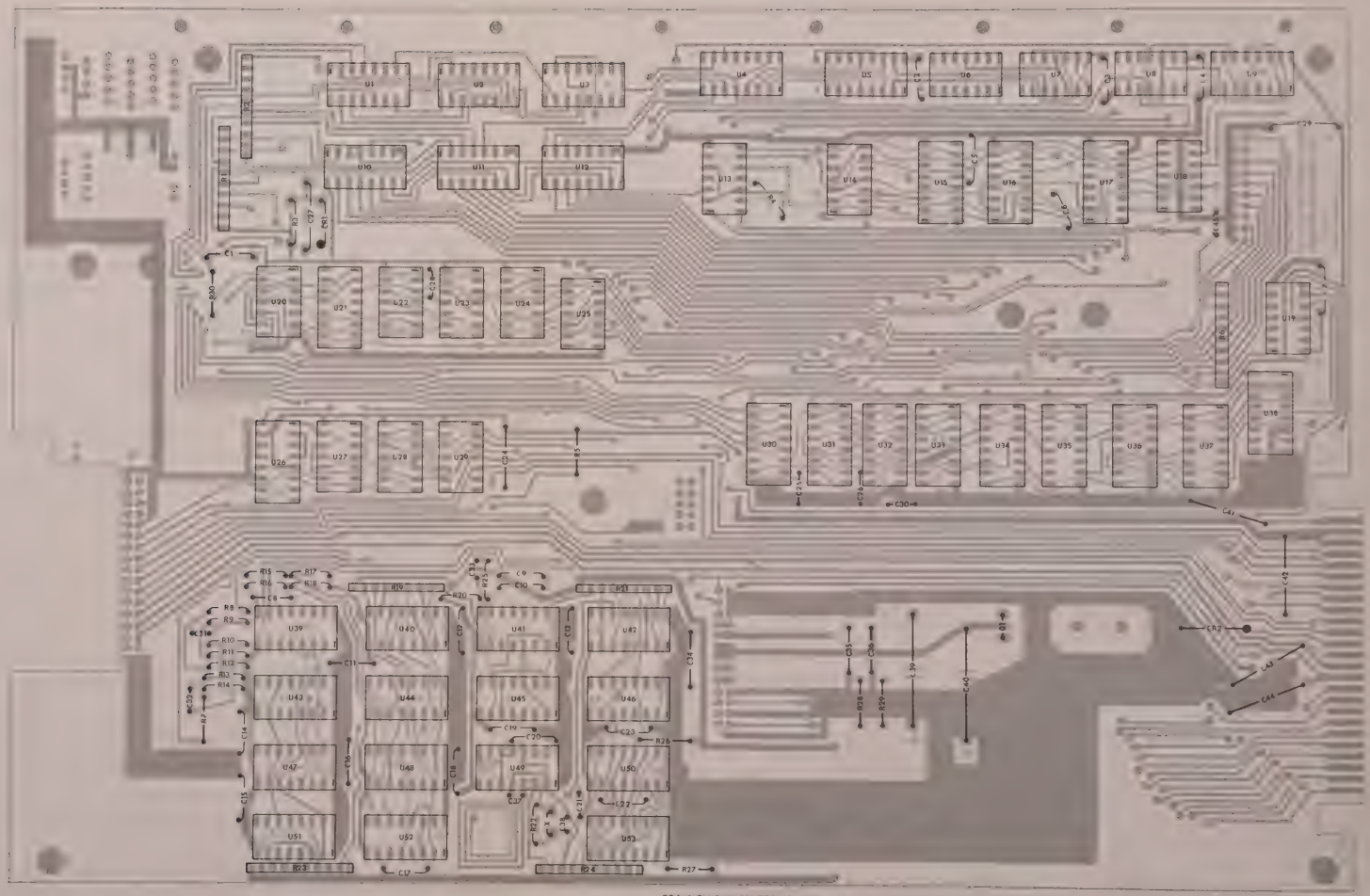
204-A PLUG-IN DIGITIZER BOARD
- COMPONENT SIDE -



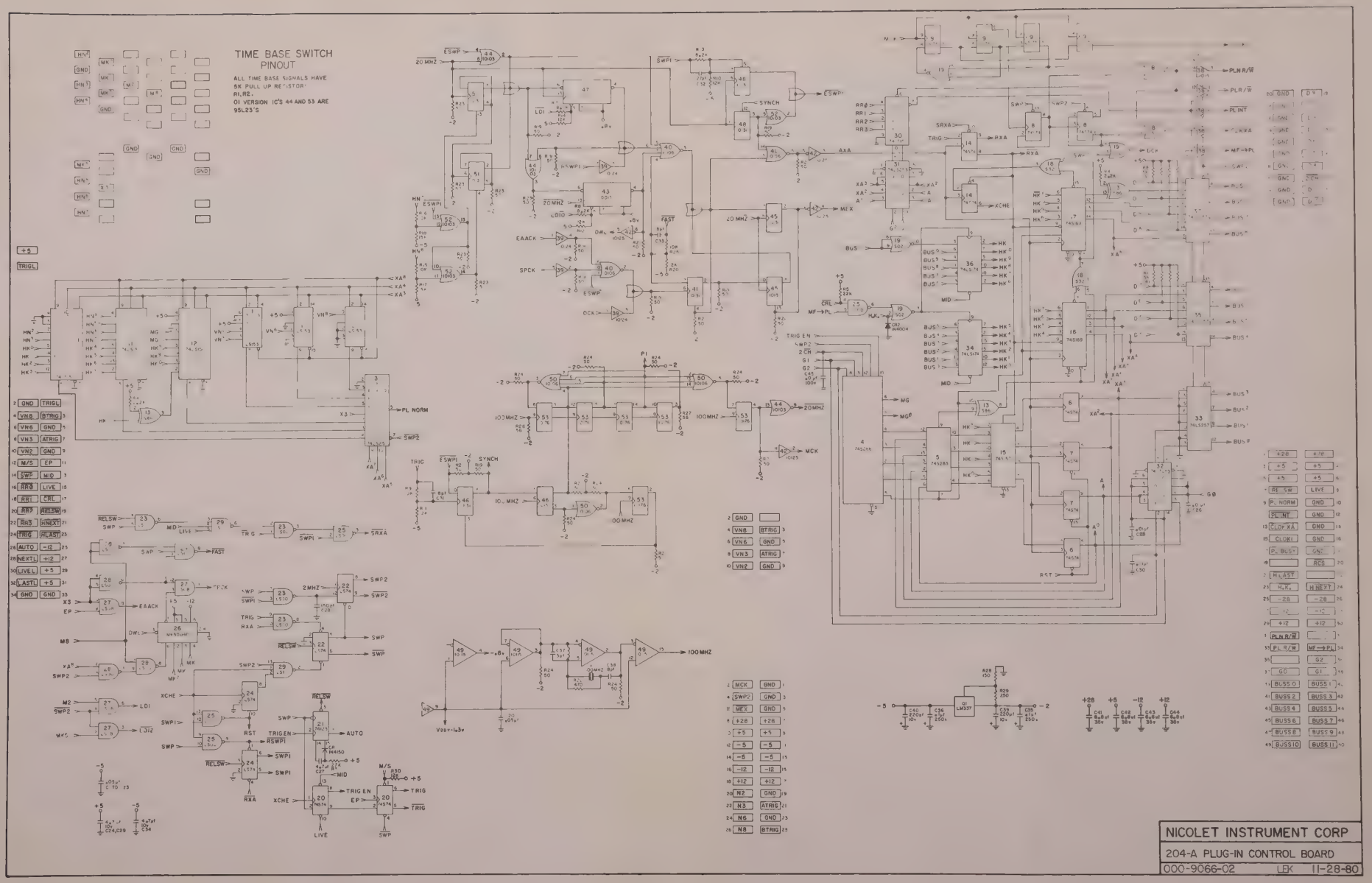
34	32	30	28	26	24	22	20	18	16	14	12	10	8	6	4	2
A⁴	A⁵	A⁶	A⁷	A⁸	A⁹	A¹⁰	A¹¹	-12	-6	-6	+12	+5	AN8	ATRIG	GND	GND
GND	GND	GND	GND	GND	GND	GND	GND	-12	-6	-6	+12	+5	AN2	AN3	AN6	MCLOK'
33	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1

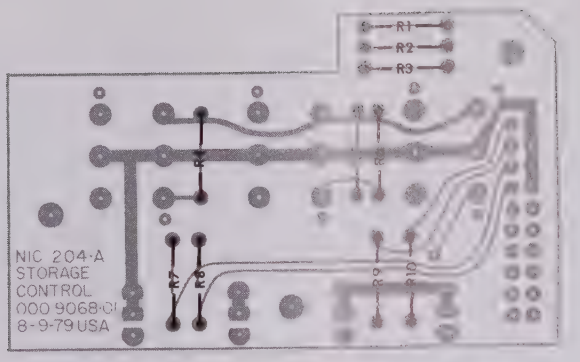
[CHANNEL B CONNECTOR IS THE SAME PINOUT —— REPLACE A's WITH B's]

NICOLET INSTRUMENT CORP		
204-A PLUG-IN DIGITIZER BOARD		
000-9063-03	MDK	11-20-80

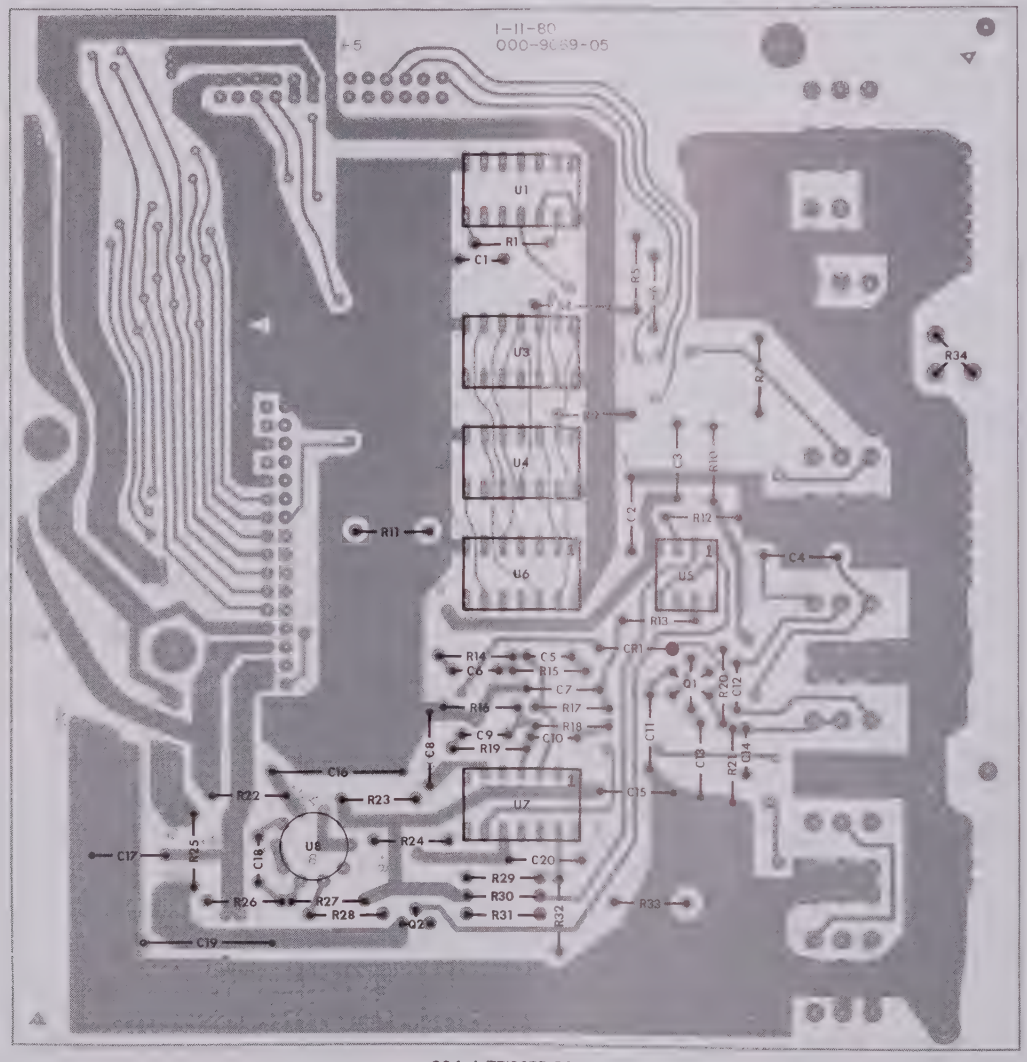


204-A PLUG-IN CONTROL BOARD
- CONDUCTOR SIDE -

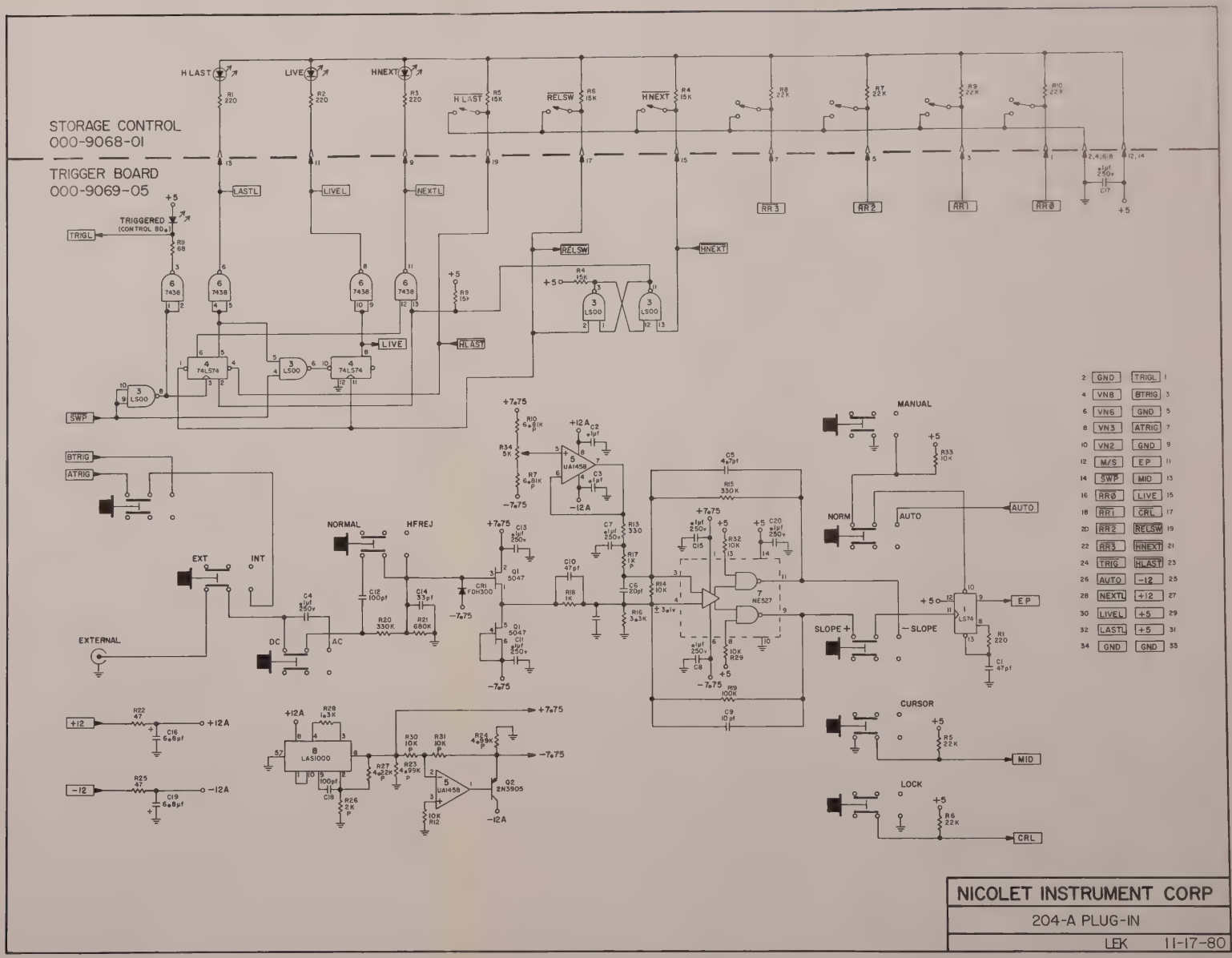

TIME BASE SWITCH PINOUT
ALL TIME BASE SIGNALS HAVE 5K PULL UP RESISTOR
R1,R2.
01 VERSION IC'S 44 AND 53 ARE 95L23'S
NICOLET INSTRUMENT CORP
204-A PLUG-IN CONTROL BOARD
000-9066-02 LBK 11-28-80



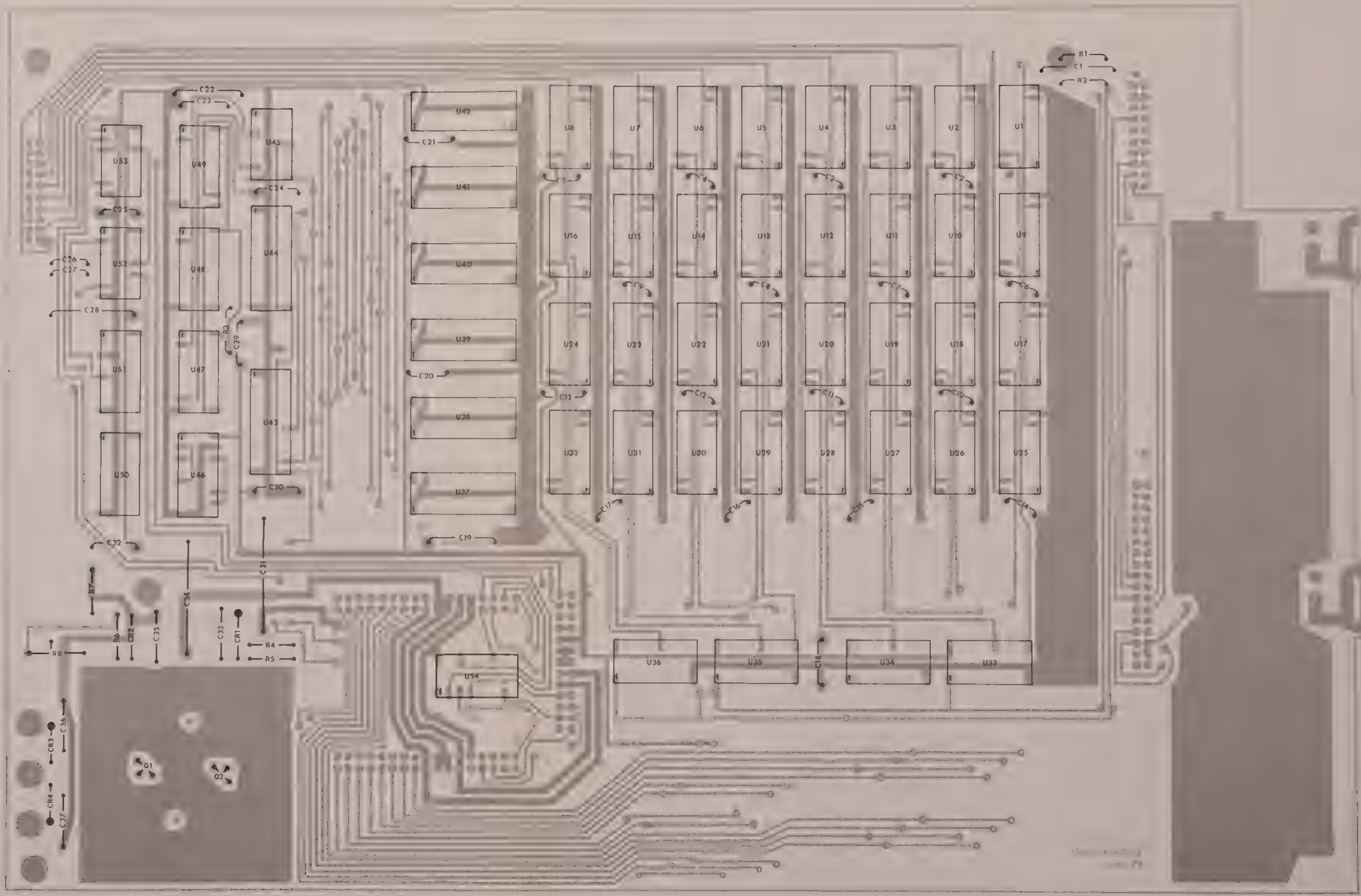
204-A STORAGE CONTROL
- CONDUCTOR SIDE -



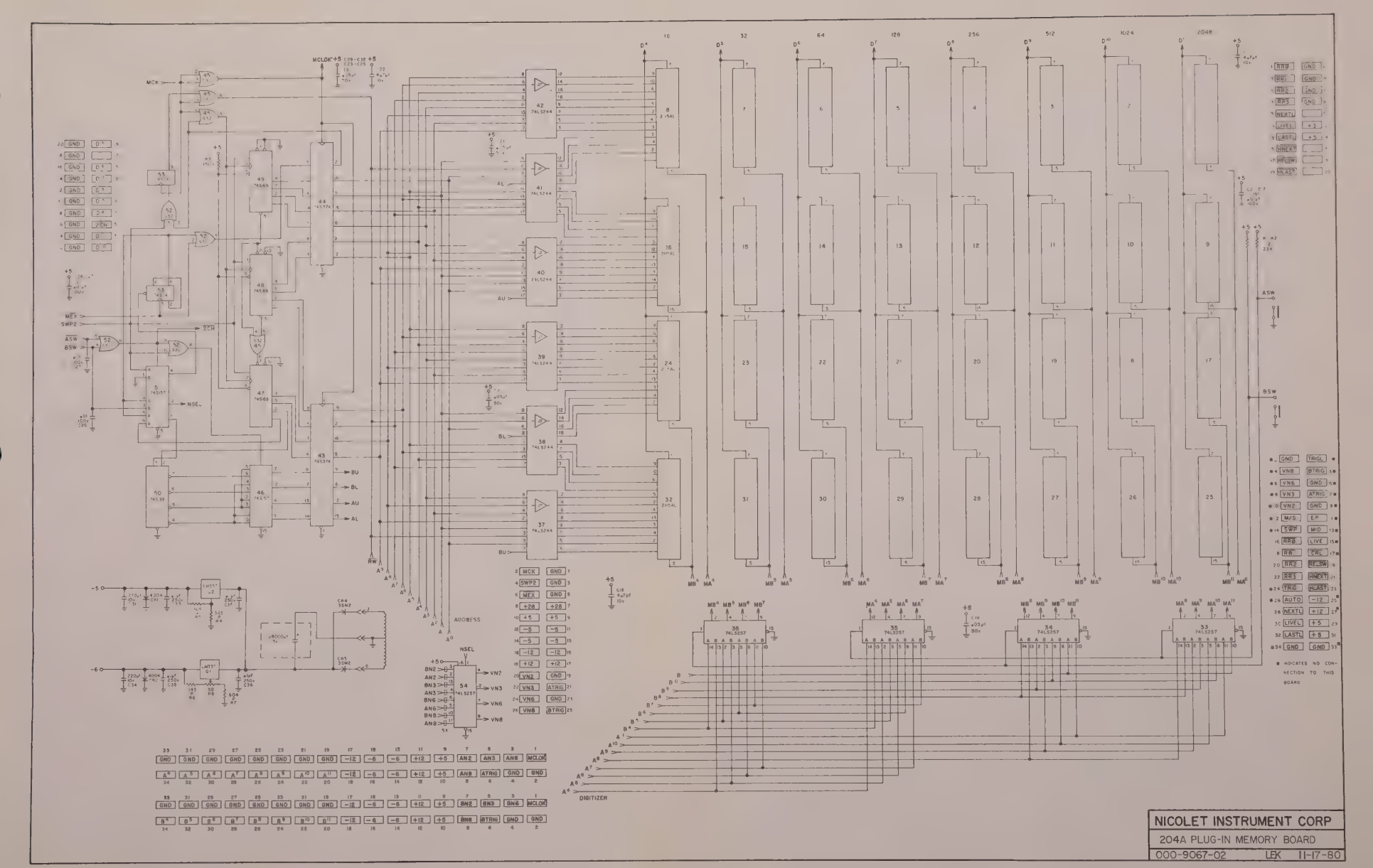
204-A TRIGGER BOARD
-COMPONENT SIDE-

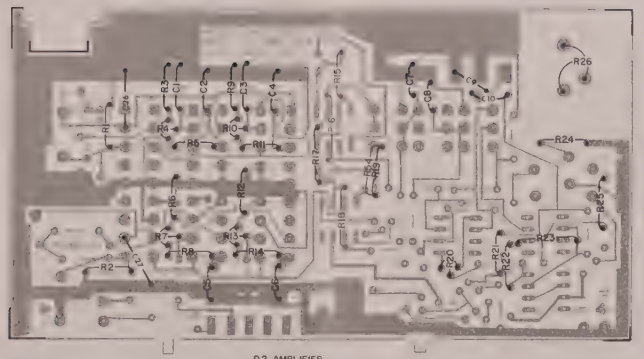


NICOLET INSTRUMENT CORP
204-A PLUG-IN
LEK 11-17-80

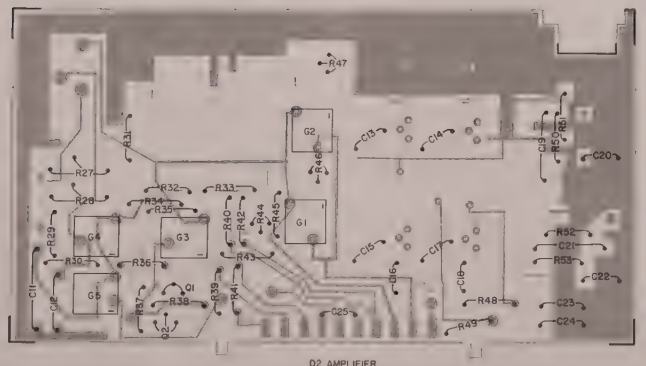


204-A PLUG IN MEMORY BOARD
— COMPONENT SIDE —

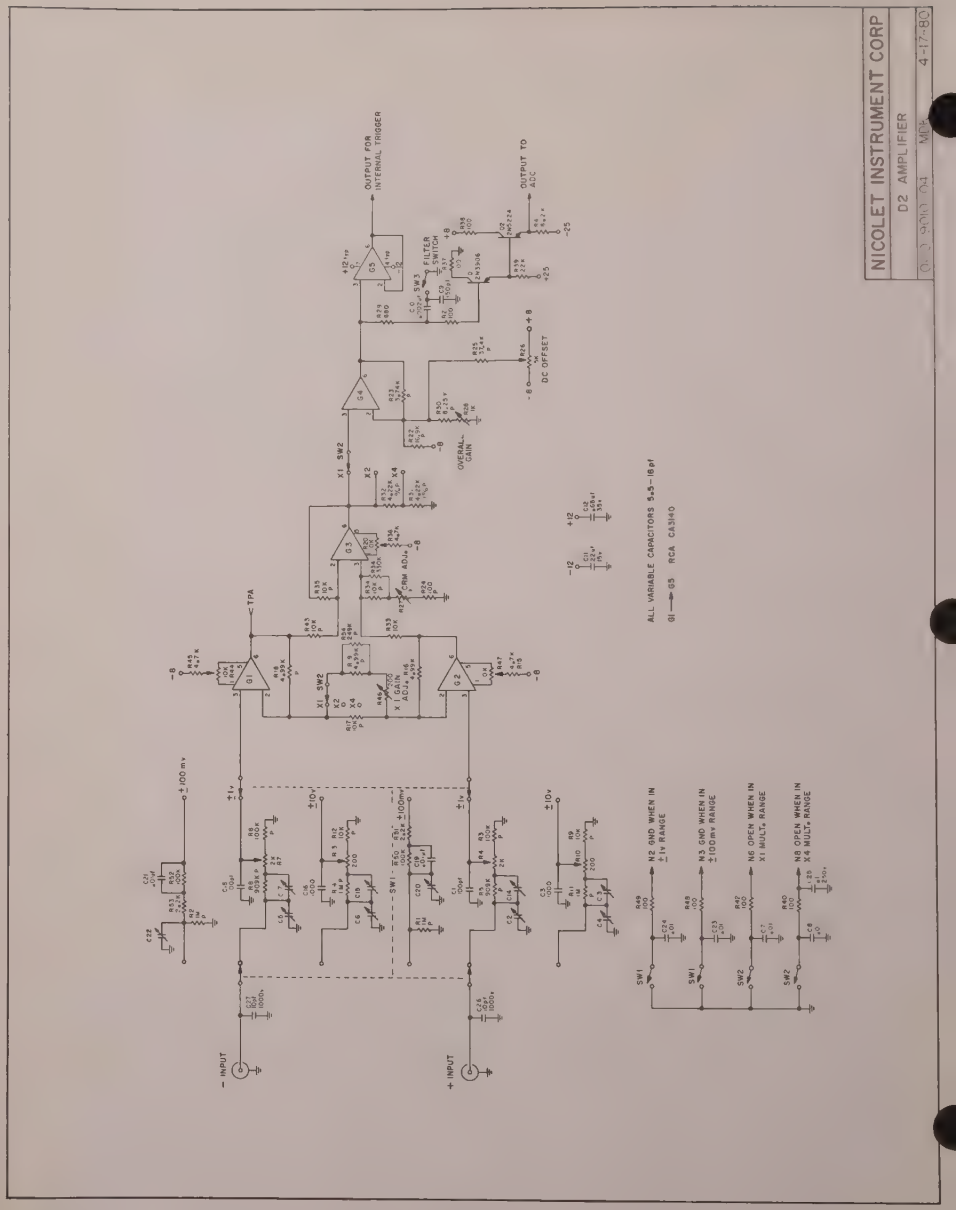

NICOLET INSTRUMENT CORP
204A PLUG-IN MEMORY BOARD
000-9067-02 LBK 11-17-80
DIGITIZER
ADDRESS
NSEL

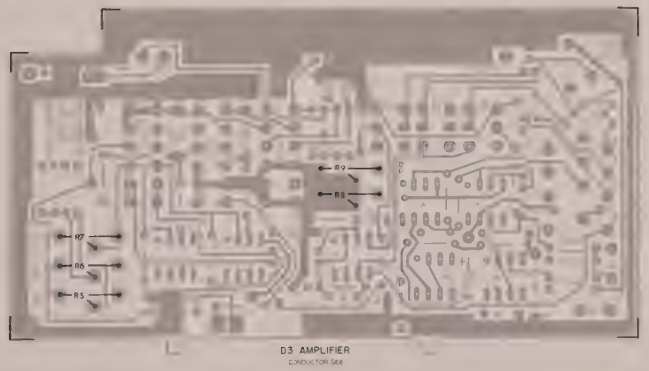


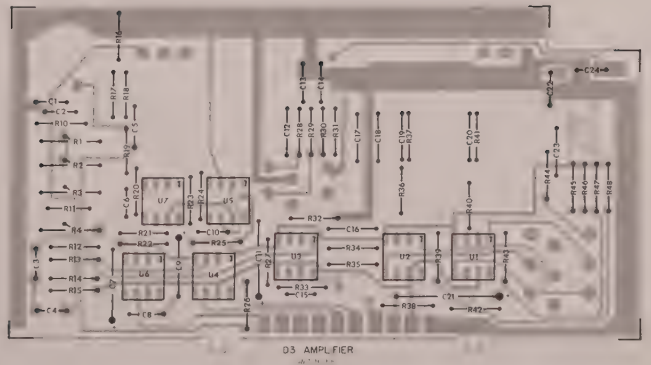
D2 AMPLIFIER
— CONDUCTOR SIDE —

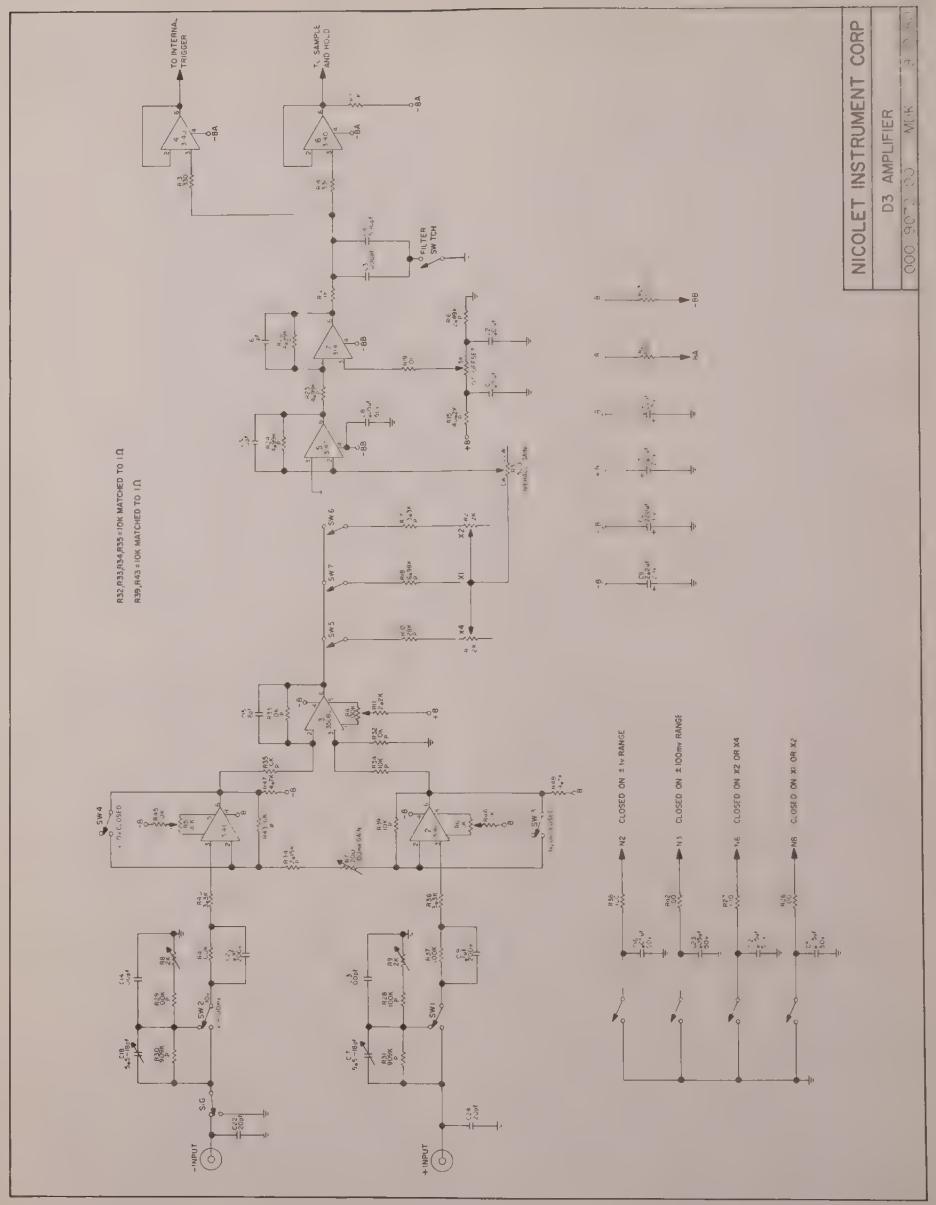


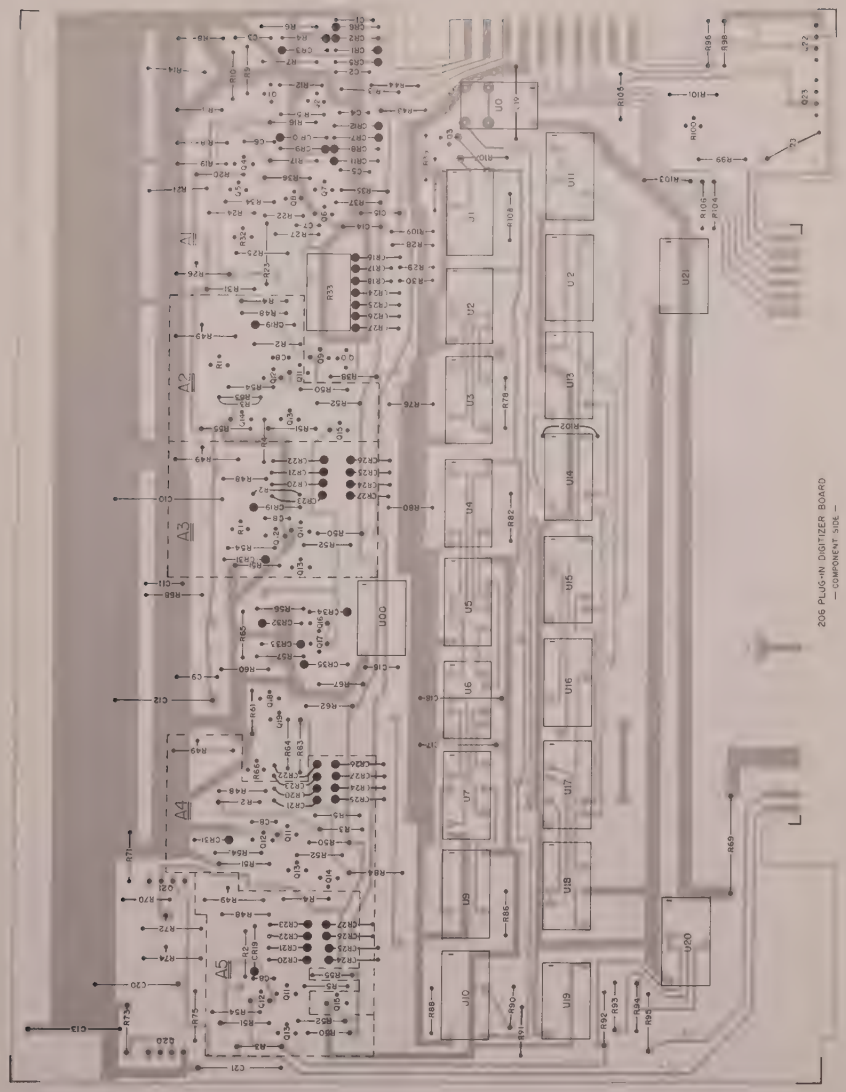
D2 AMPLIFIER
— SWITCH SIDE —

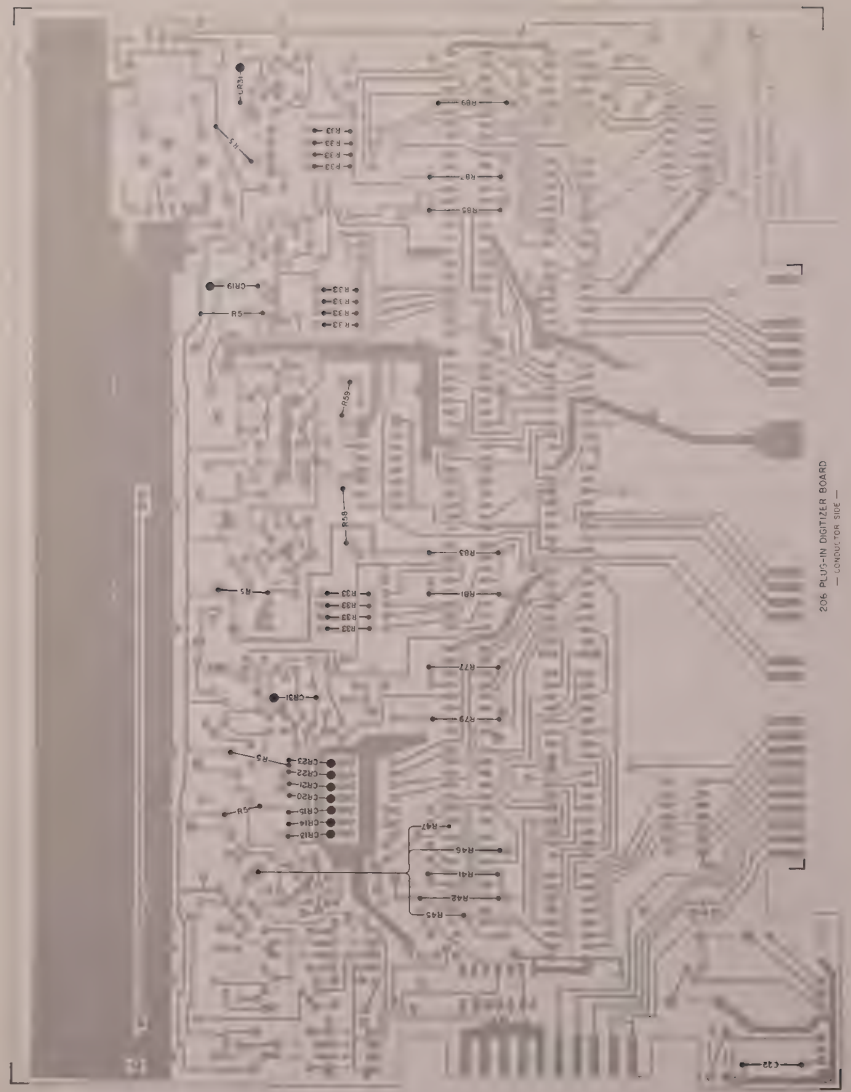


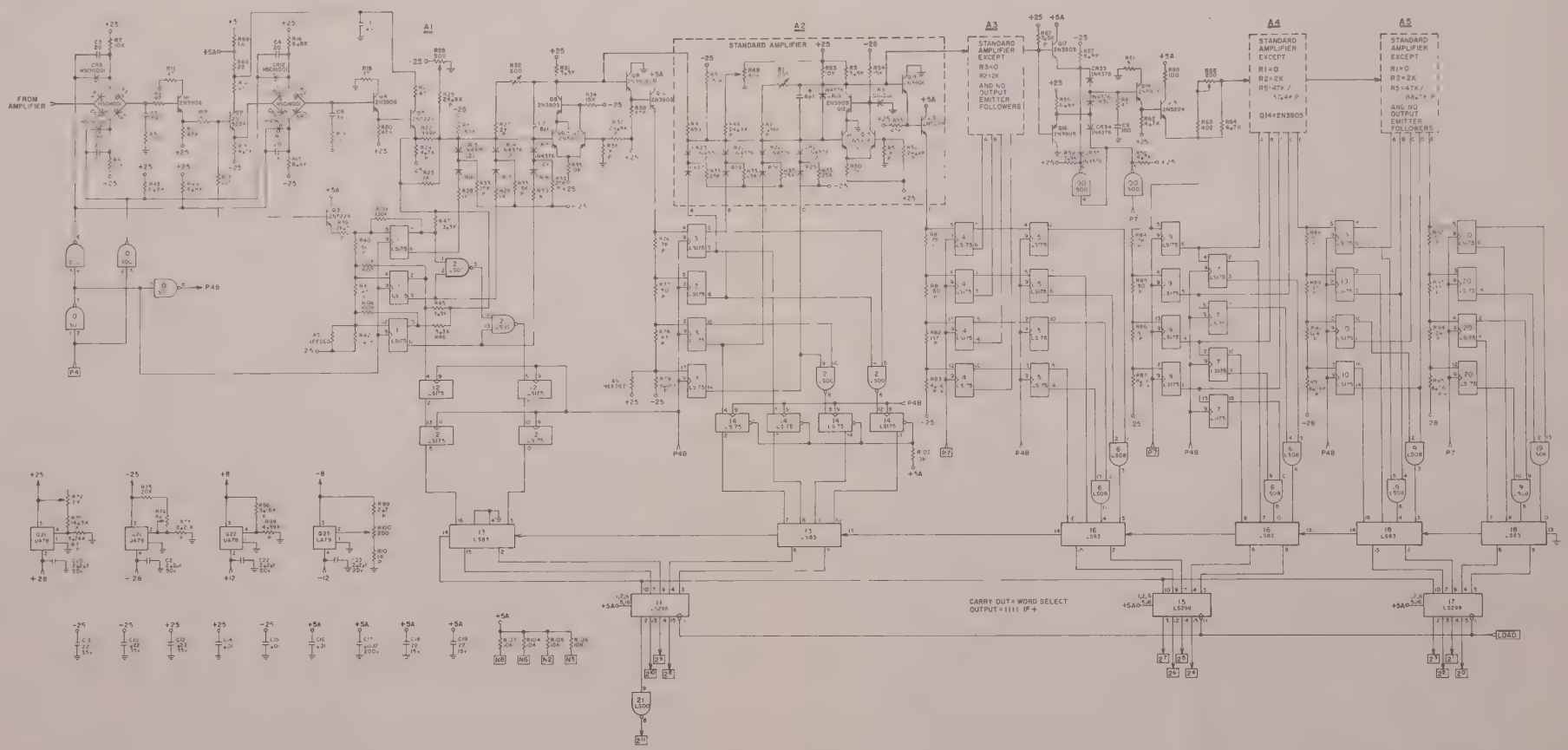




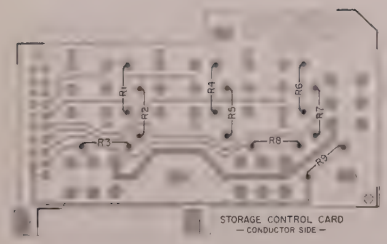


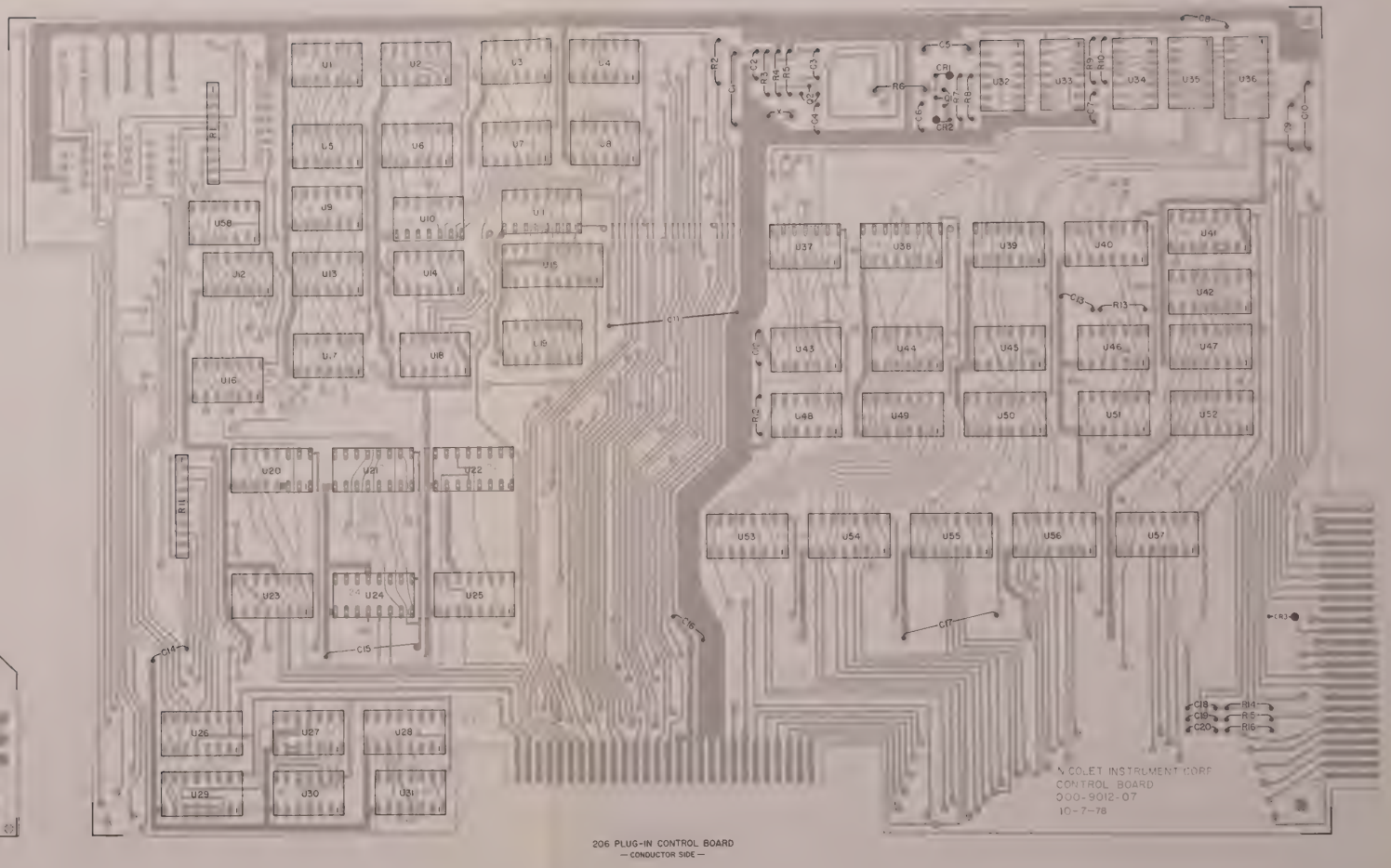




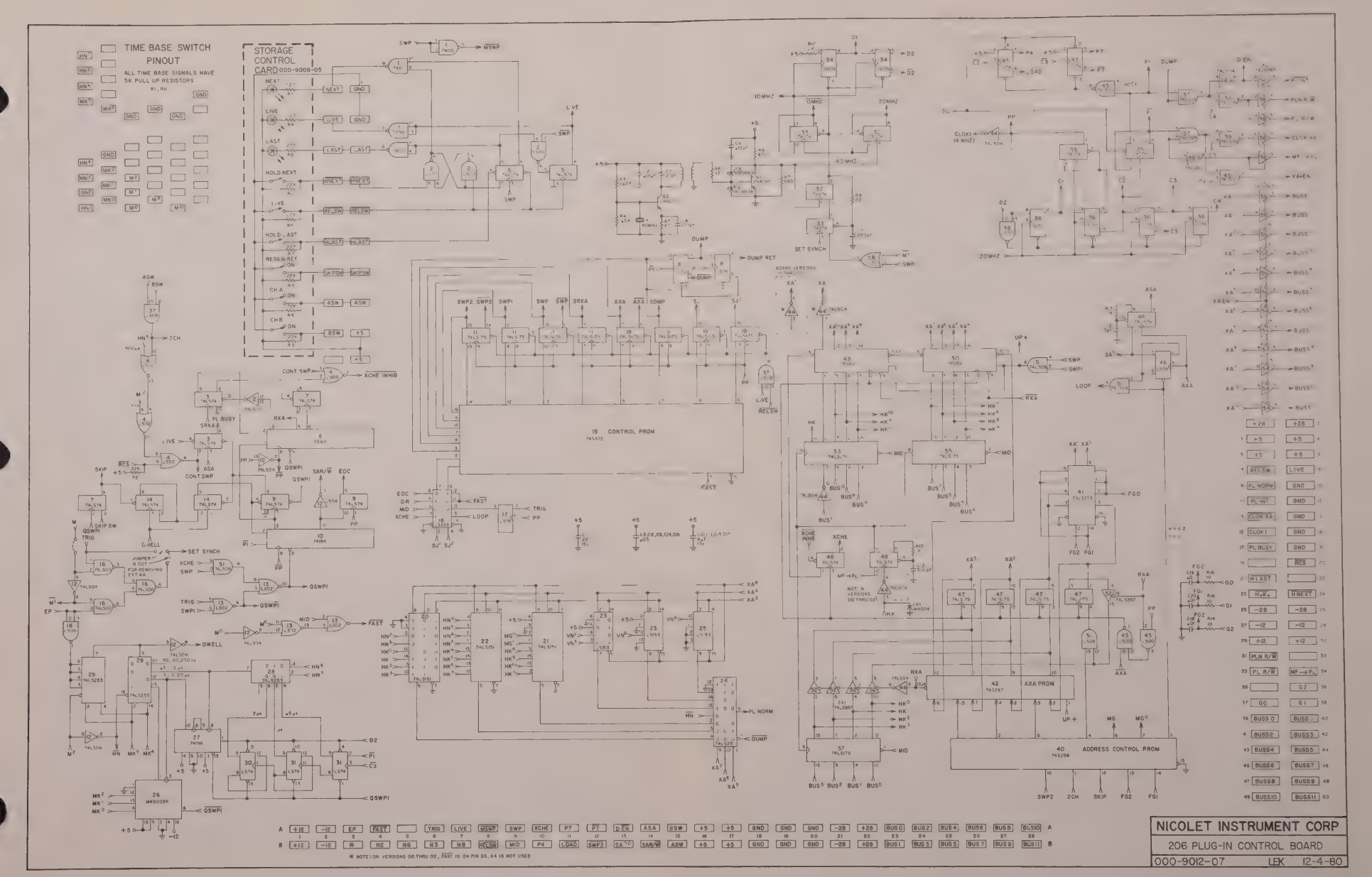


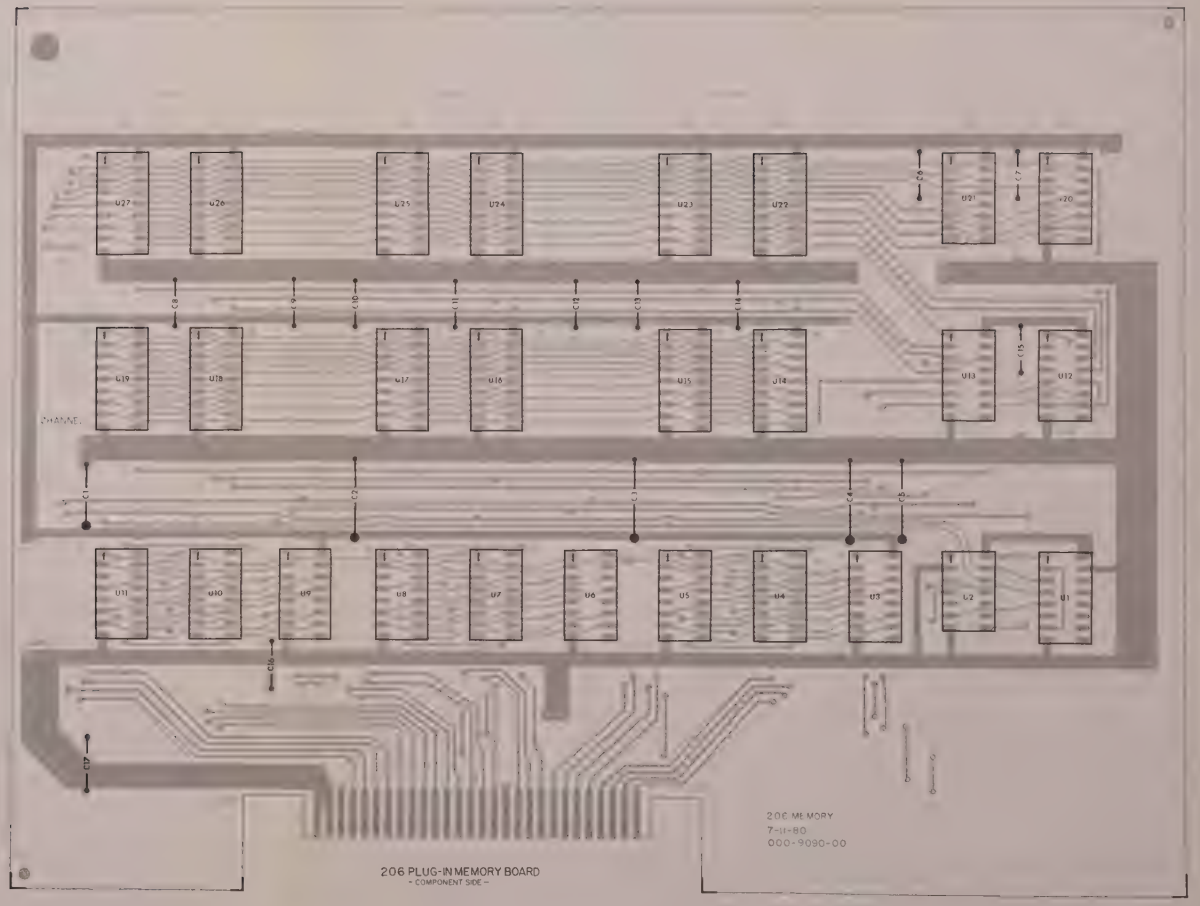
NICOLET INSTRUMENT CORP		
206 PLUG-IN DIGITIZER BOARD		
000-9009-05	LEK	12-4-80

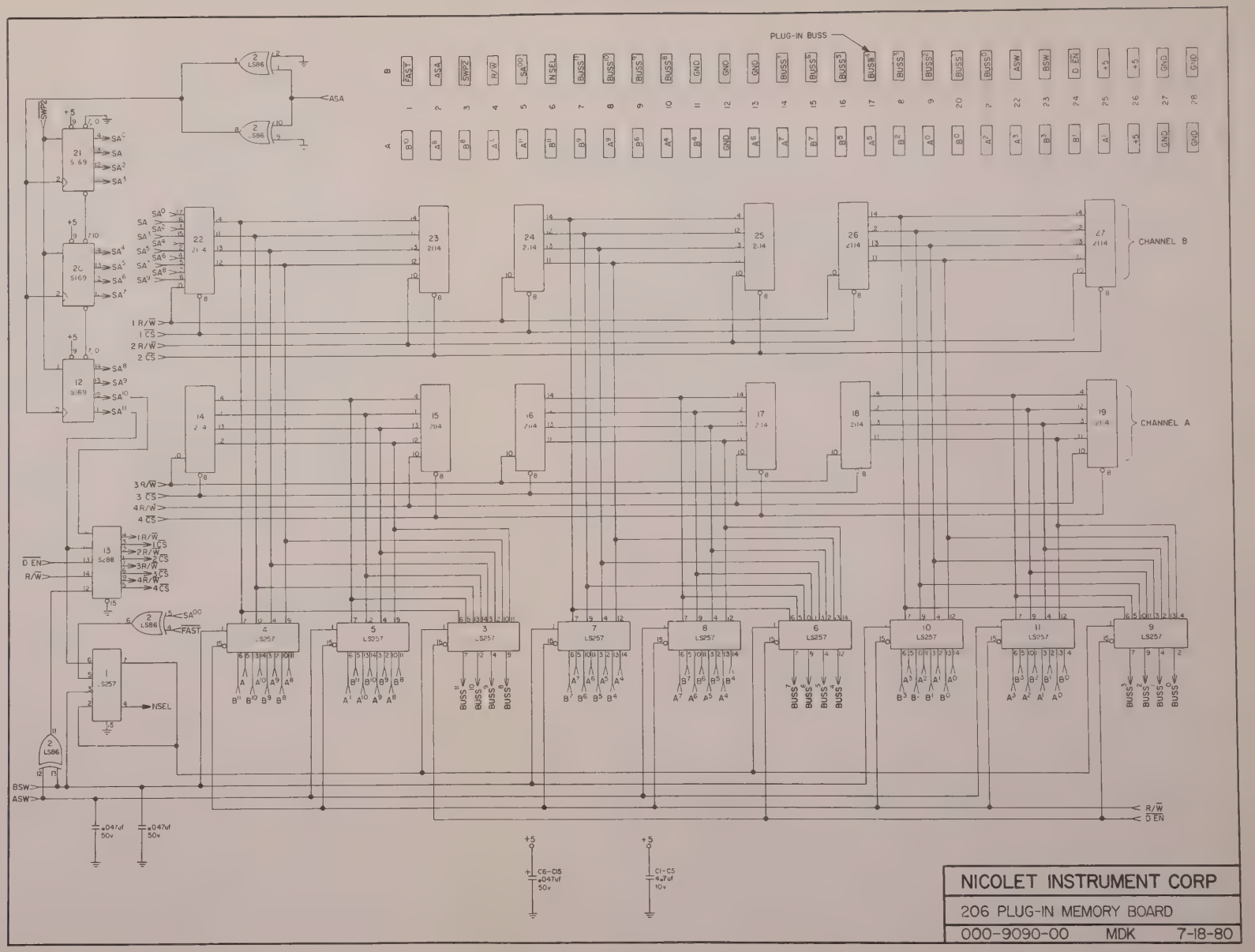


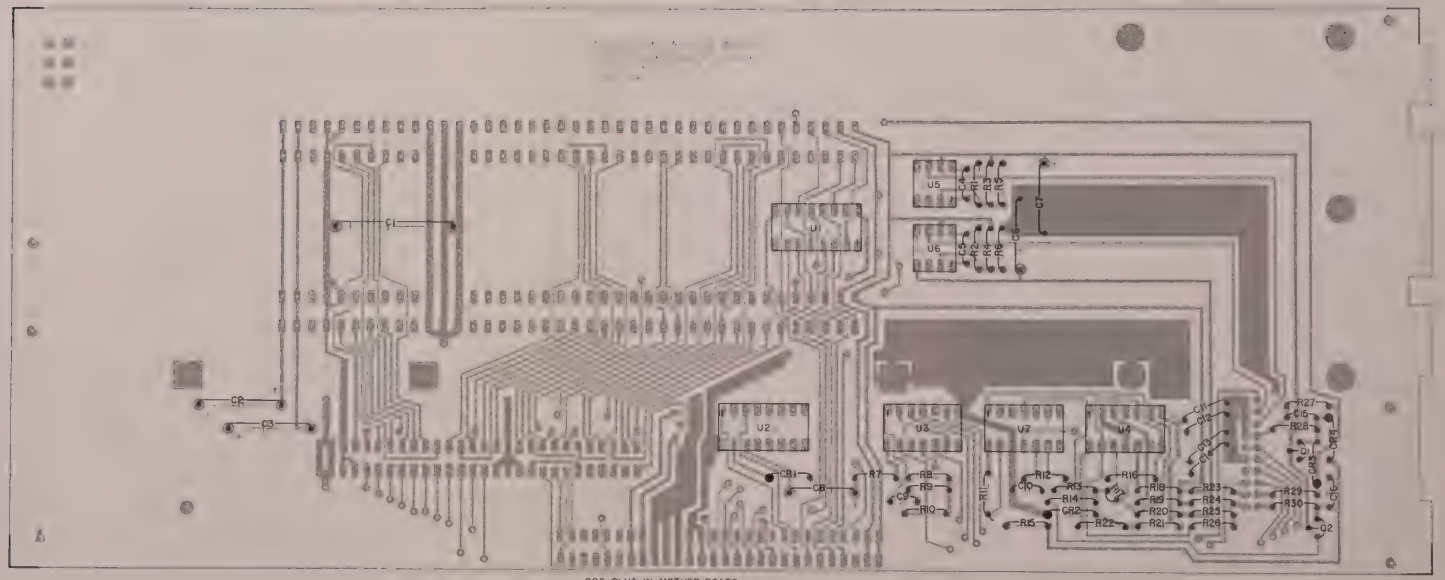


206 PLUG-IN CONTROL BOARD
— CONDUCTOR SIDE —

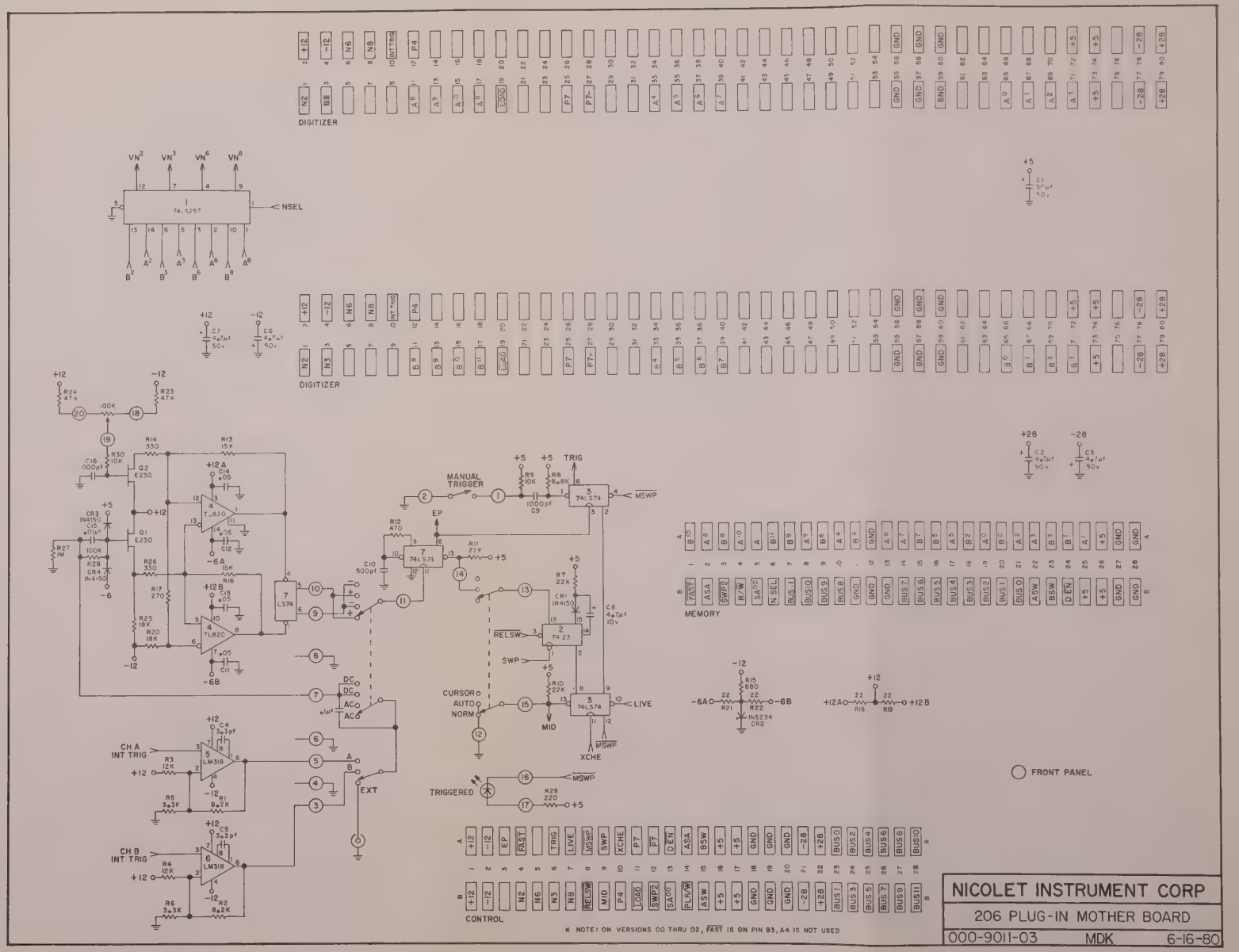

TIME BASE SWITCH PINOUT
ALL TIME BASE SIGNALS HAVE 5K PULL UP RESISTORS
STORAGE CONTROL CARD 000-9008-05
15 CONTROL PROM 74S472
40 ADDRESS CONTROL PROM 74S288
42 AXA PROM 74S287
NICOLET INSTRUMENT CORP
206 PLUG-IN CONTROL BOARD
000-9012-07 LEK 12-4-80

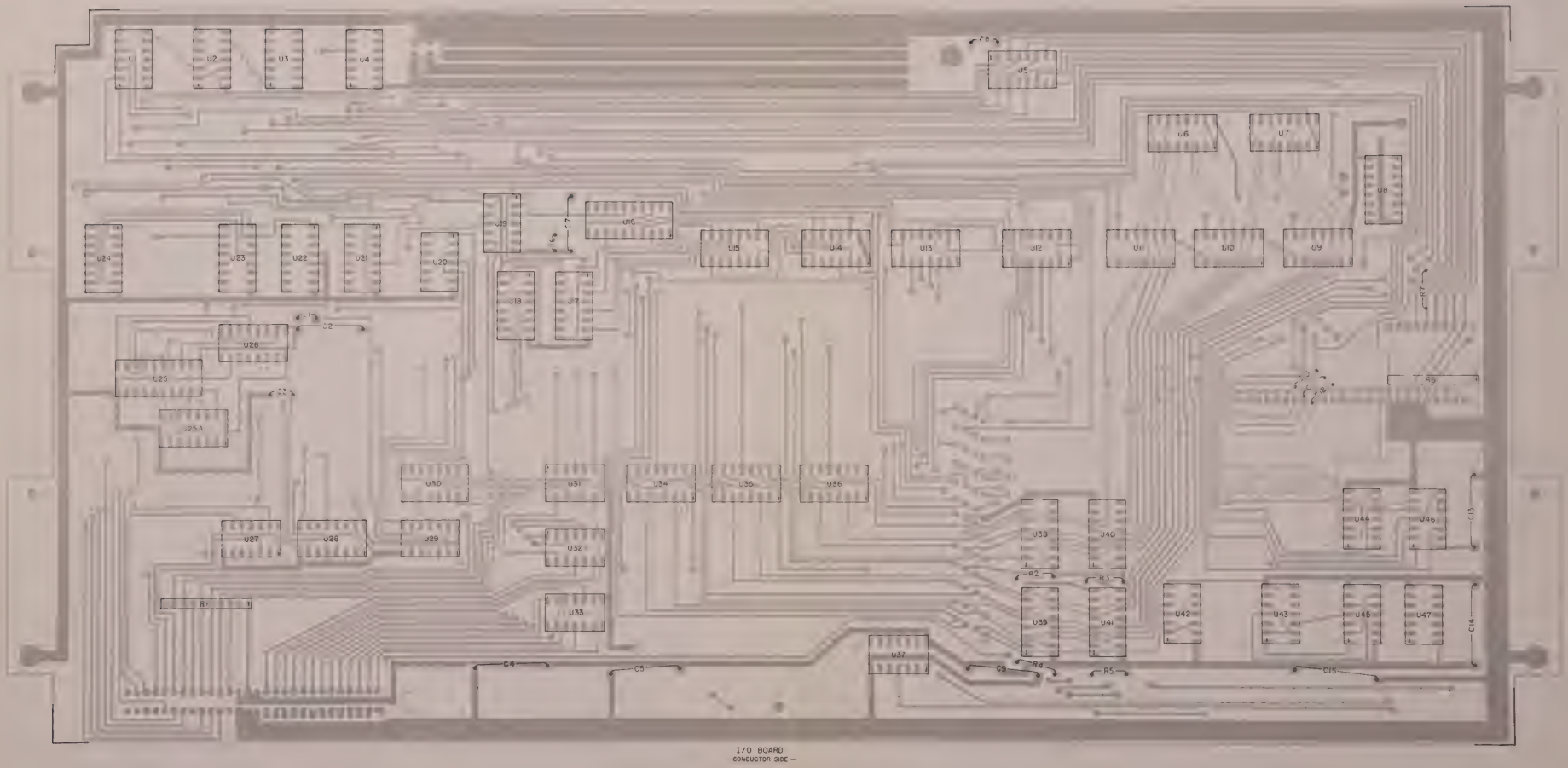



PLUG-IN BUSS
CHANNEL B
CHANNEL A
NICOLET INSTRUMENT CORP
206 PLUG-IN MEMORY BOARD
000-9090-00 MDK 7-18-80

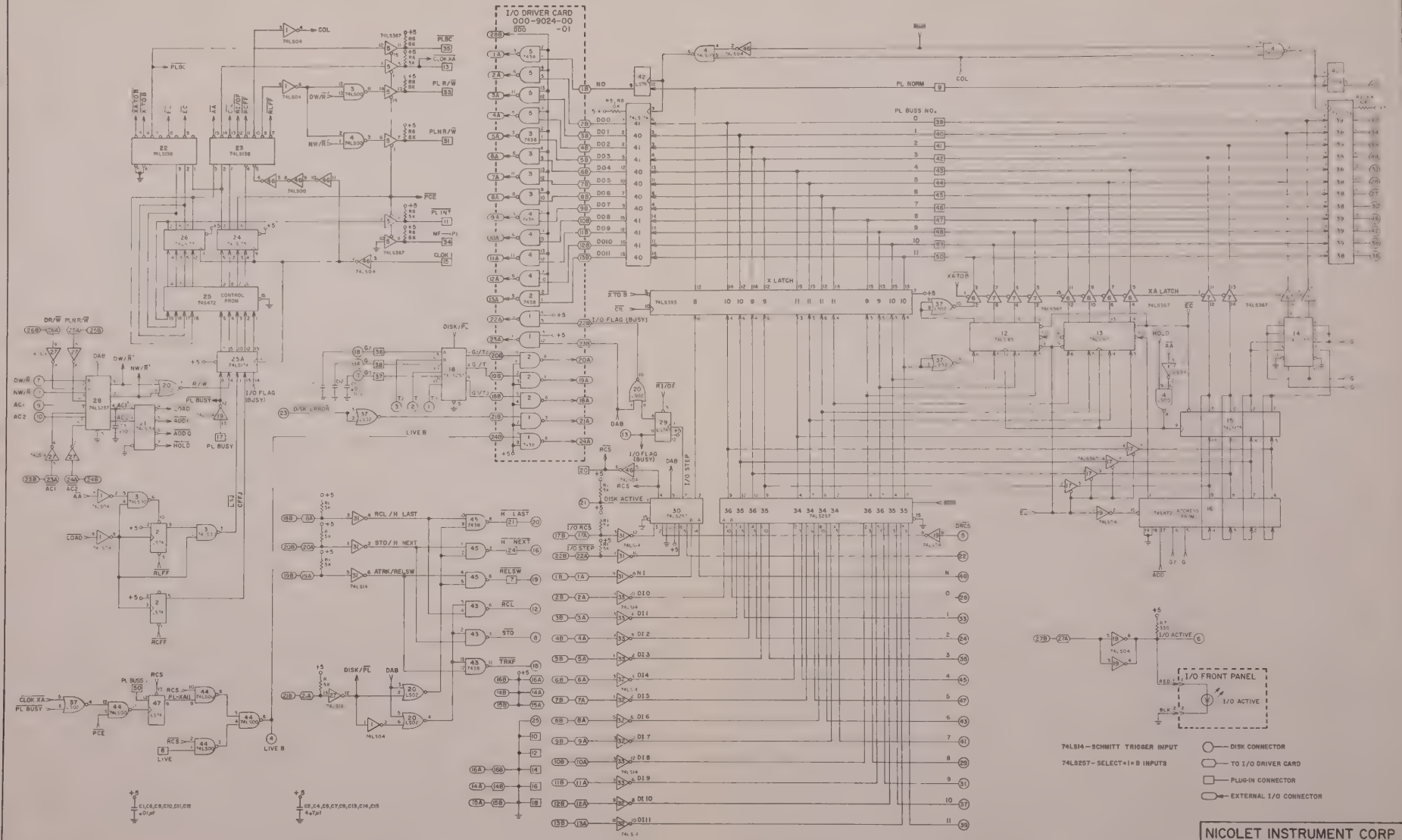


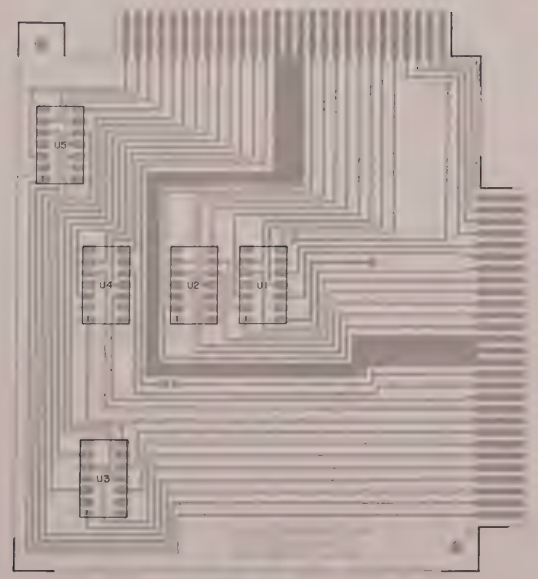
206 PLUG-IN MOTHER BOARD
— CONDUCTOR SIDE —


DIGITIZER
DIGITIZER
NSEL
MANUAL TRIGGER
TRIG
MSWP
EP
RELSW
SWP
CURSOR
AUTO
NORM
MID
LIVE
XCHE
TRIGGERED
CH A INT TRIG
CH B INT TRIG
EXT
MEMORY
CONTROL
FRONT PANEL
NICOLET INSTRUMENT CORP
206 PLUG-IN MOTHER BOARD
000-9011-03 MDK 6-16-80
* NOTE: ON VERSIONS 00 THRU 02, FAST IS ON PIN B3, A4 IS NOT USED

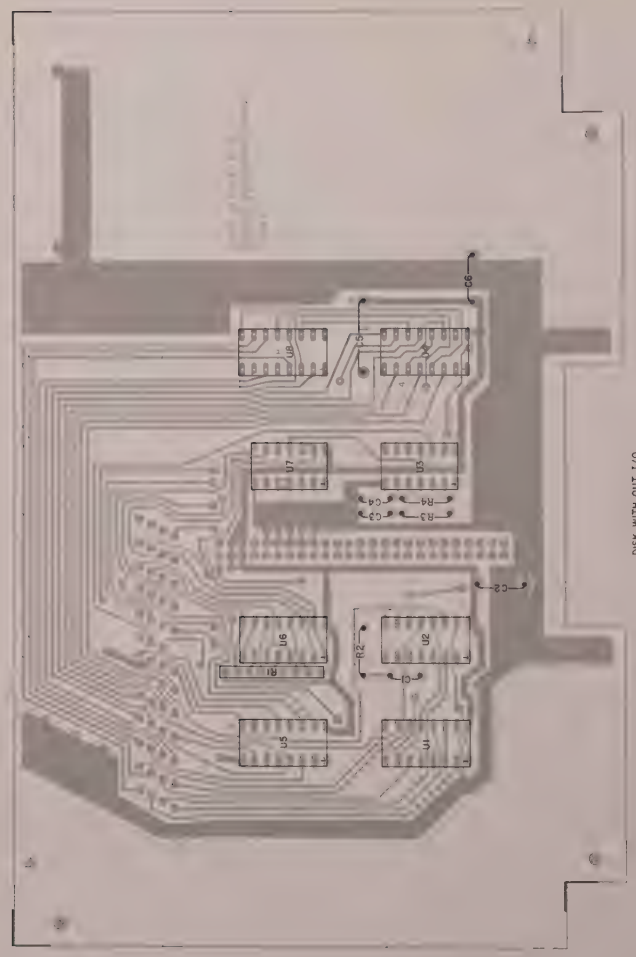


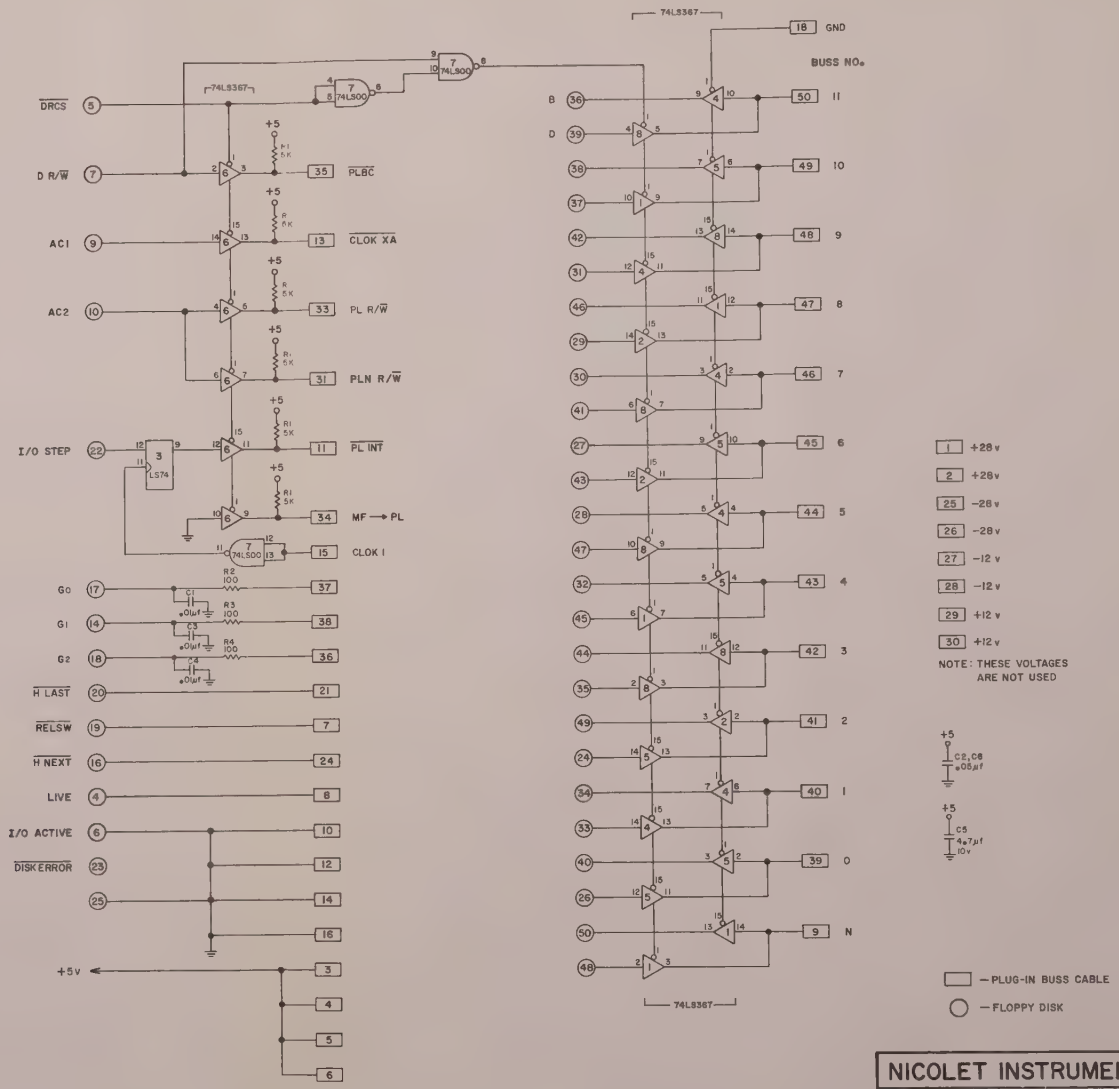
I/O BOARD
— CONDUCTOR SIDE —


I/O DRIVER CARD
000-9024-00
000 -01
PLBC
PL R/W
PLNR/W
PCE
PL INT
MF—PI
CLOK I
COL
PL NORM
PL BUSS NO.
X LATCH
XA LATCH
I/O FLAG (BUSY)
DISK/PL
DISK ERROR
LIVE B
PL BUSY
I/O STEP
DISK ACTIVE
H LAST
H NEXT
RELSW
RCL
STO
TRKF
I/O ACTIVE
I/O FRONT PANEL
74LS14—SCHMITT TRIGGER INPUT
74LS257—SELECT=1=B INPUTS
DISK CONNECTOR
TO I/O DRIVER CARD
PLUG-IN CONNECTOR
EXTERNAL I/O CONNECTOR
NICOLET INSTRUMENT CORP
I/O BOARDS
000-9022-05
LEK 9-26-80



I/O DRIVER BOARD
— CONDUCTOR SIDE —





NICOLET INSTRUMENT CORP		
DISK WITH OUT I/O		
000-9027-02	LEK	12-5-80

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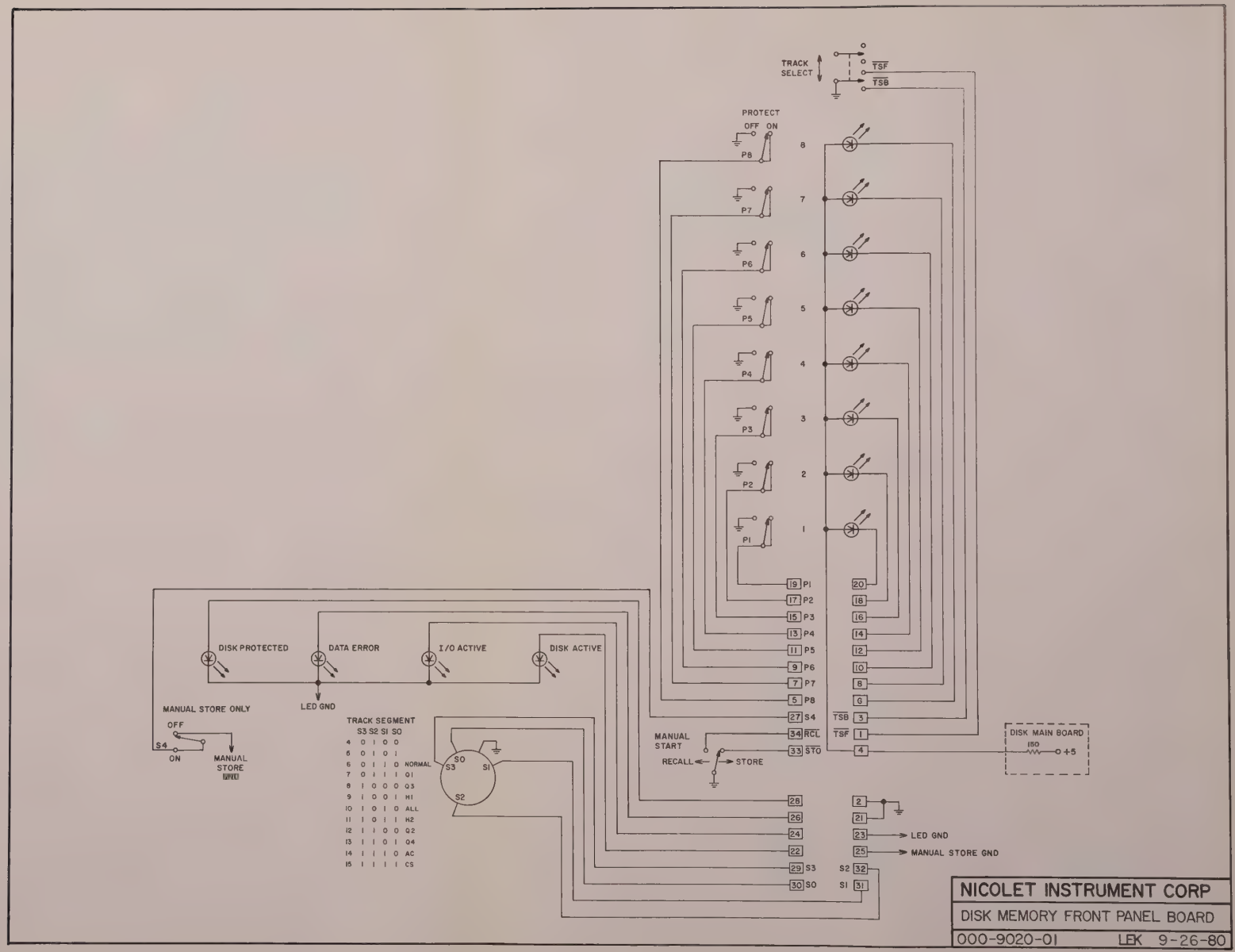
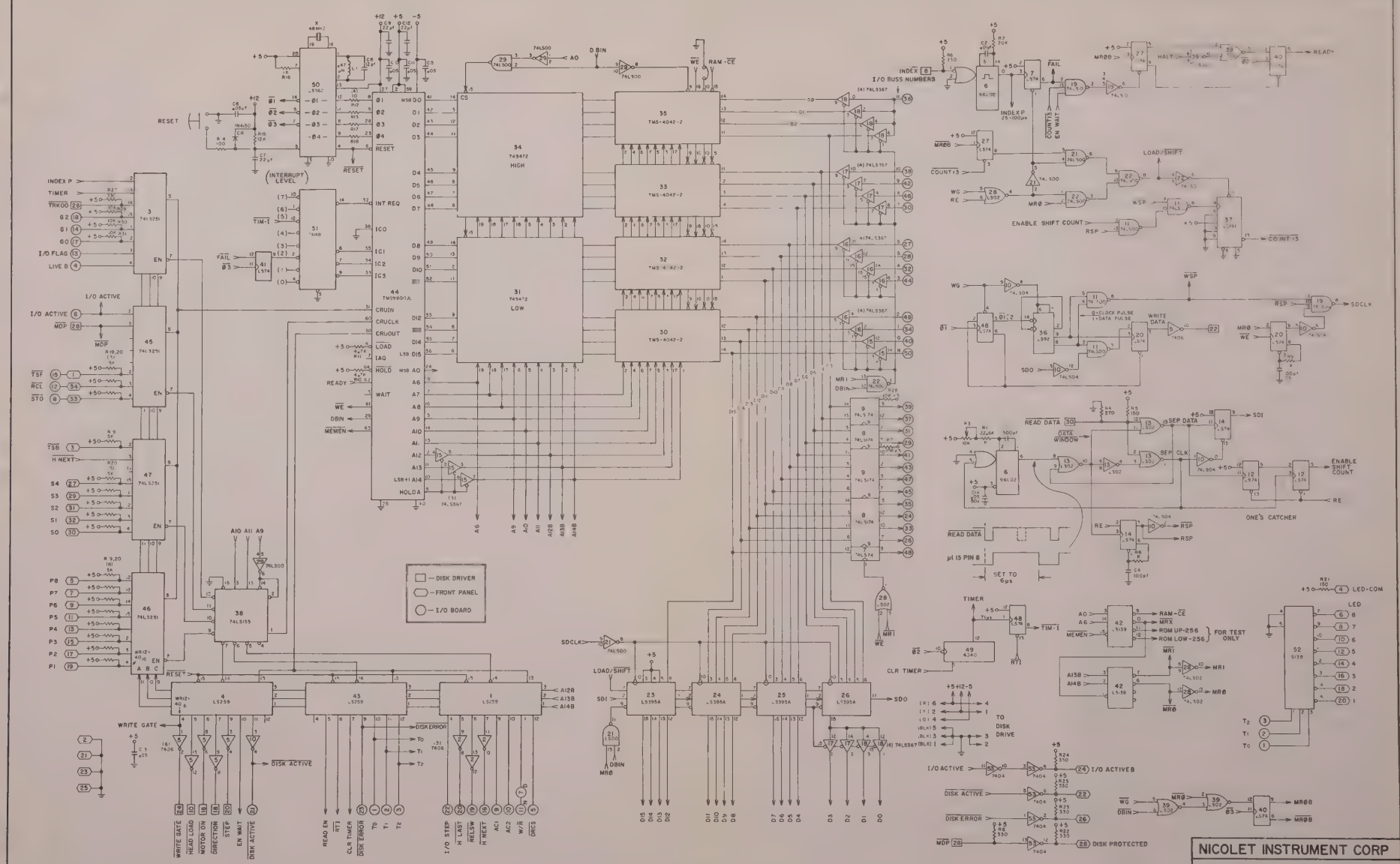
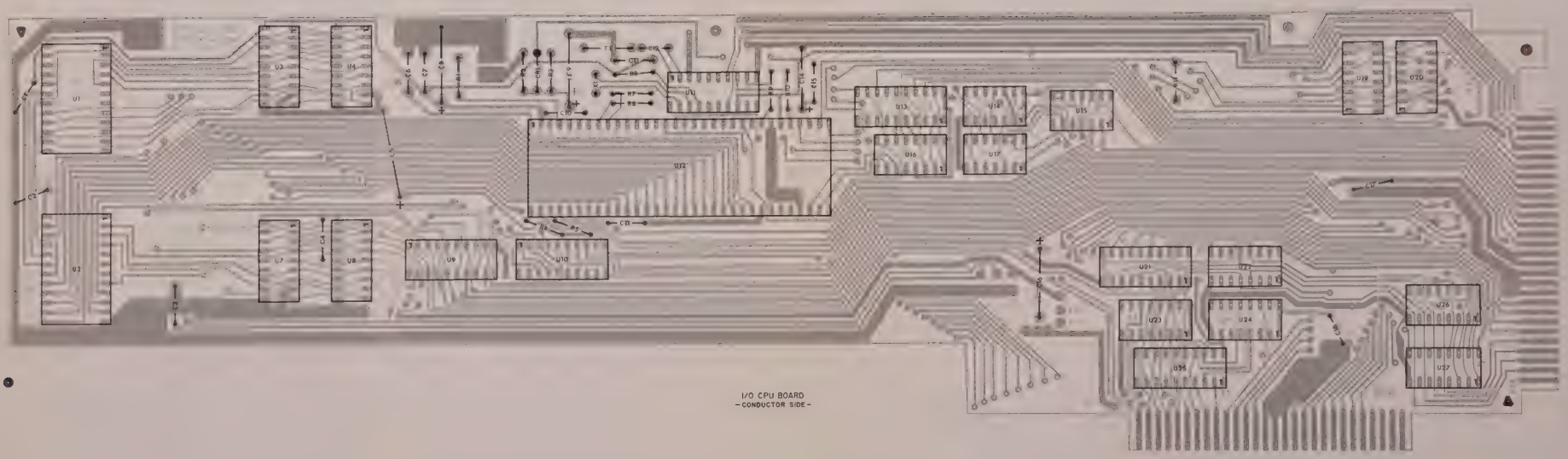


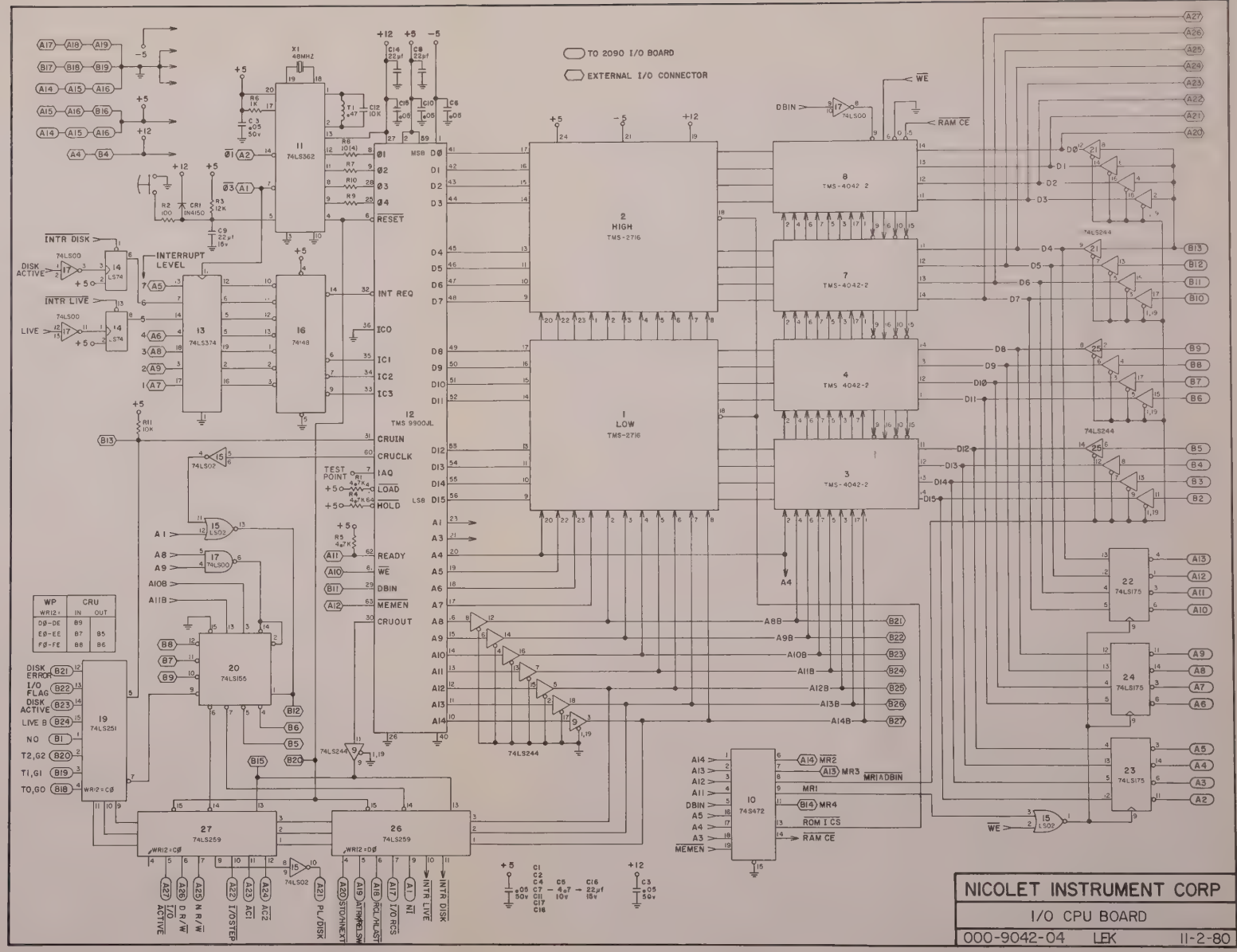
NICOLET INSTRUMENT CORP	
DISK MEMORY FRONT PANEL BOARD	
000-9020-01	LEK 9-26-80

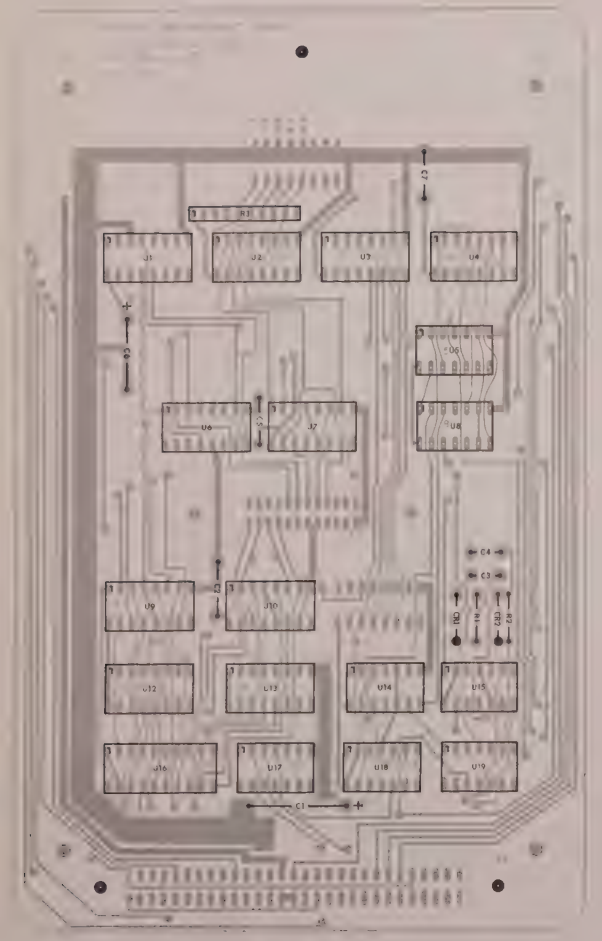
DISK MAIN BOARD
— CONDUCTOR SIDE —


NICOLET INSTRUMENT CORP
DISK MAIN BOARD
000-9019-05 LEK 12-5-80

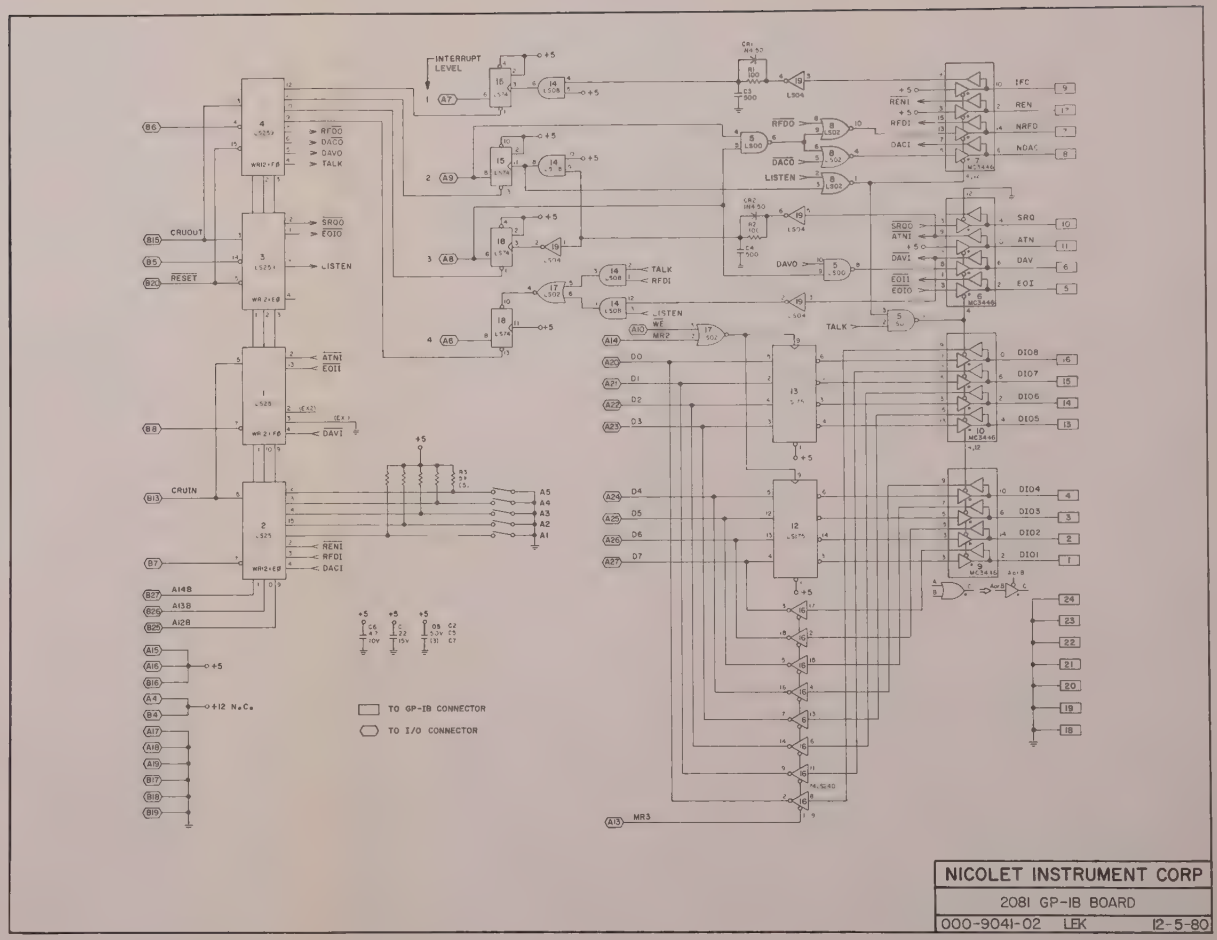


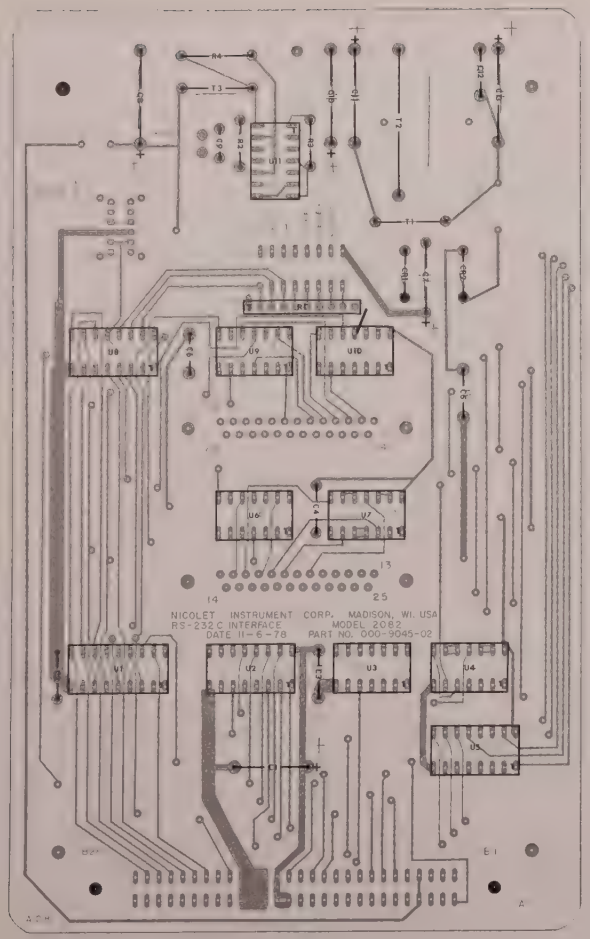
I/O CPU BOARD
– CONDUCTOR SIDE –


TO 2090 I/O BOARD
EXTERNAL I/O CONNECTOR
NICOLET INSTRUMENT CORP
I/O CPU BOARD
000-9042-04 LEK 11-2-80

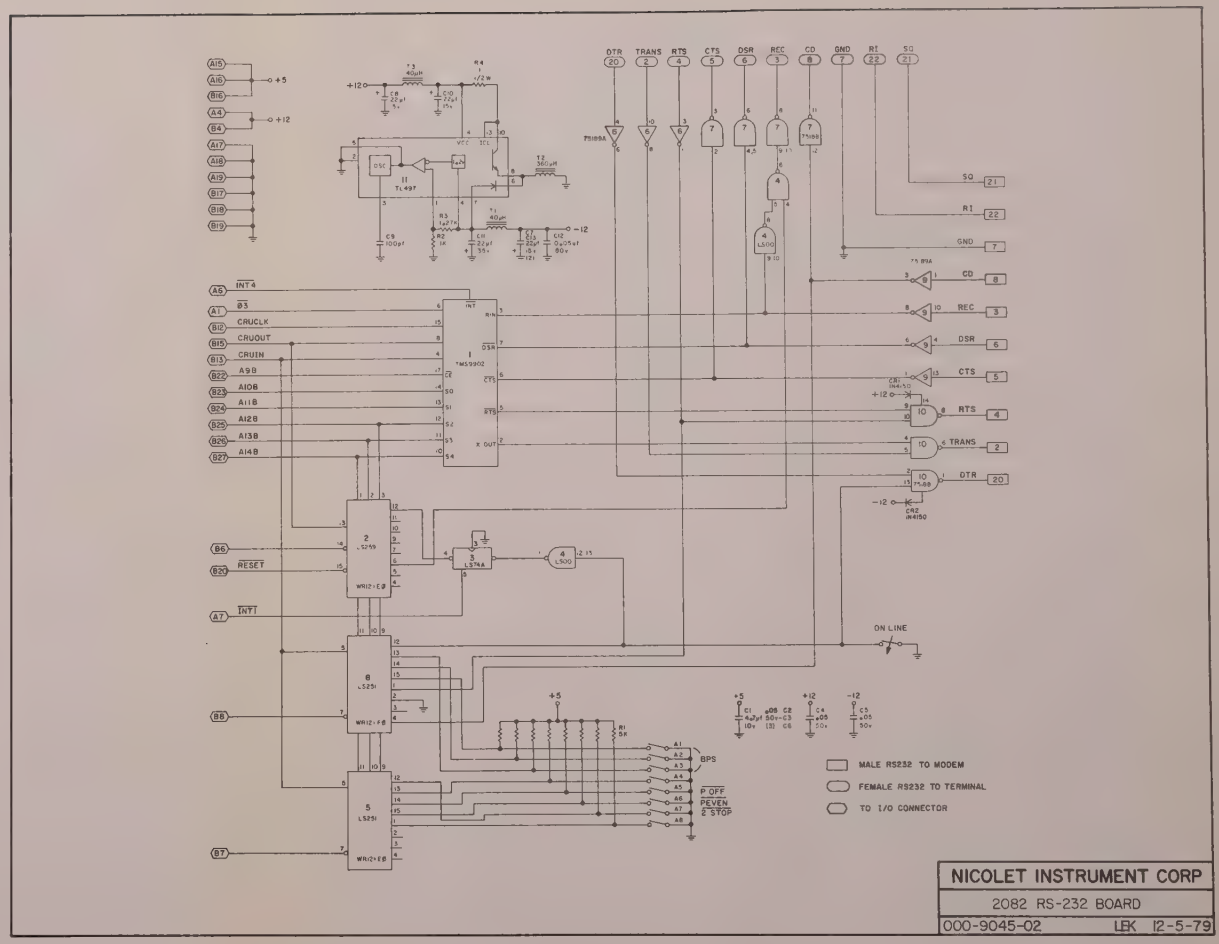


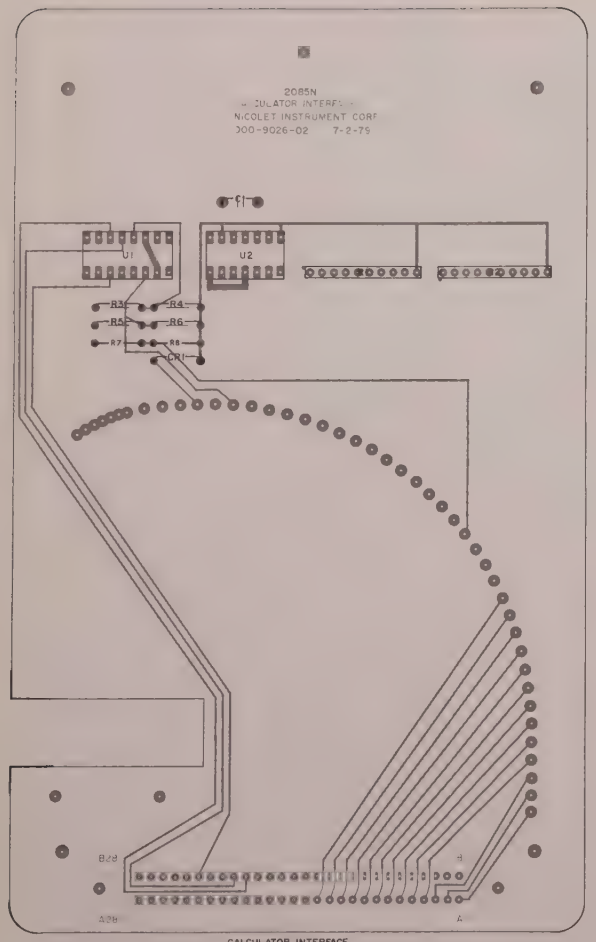
2081 GP-IB BOARD
- CONDUCTOR SIDE -



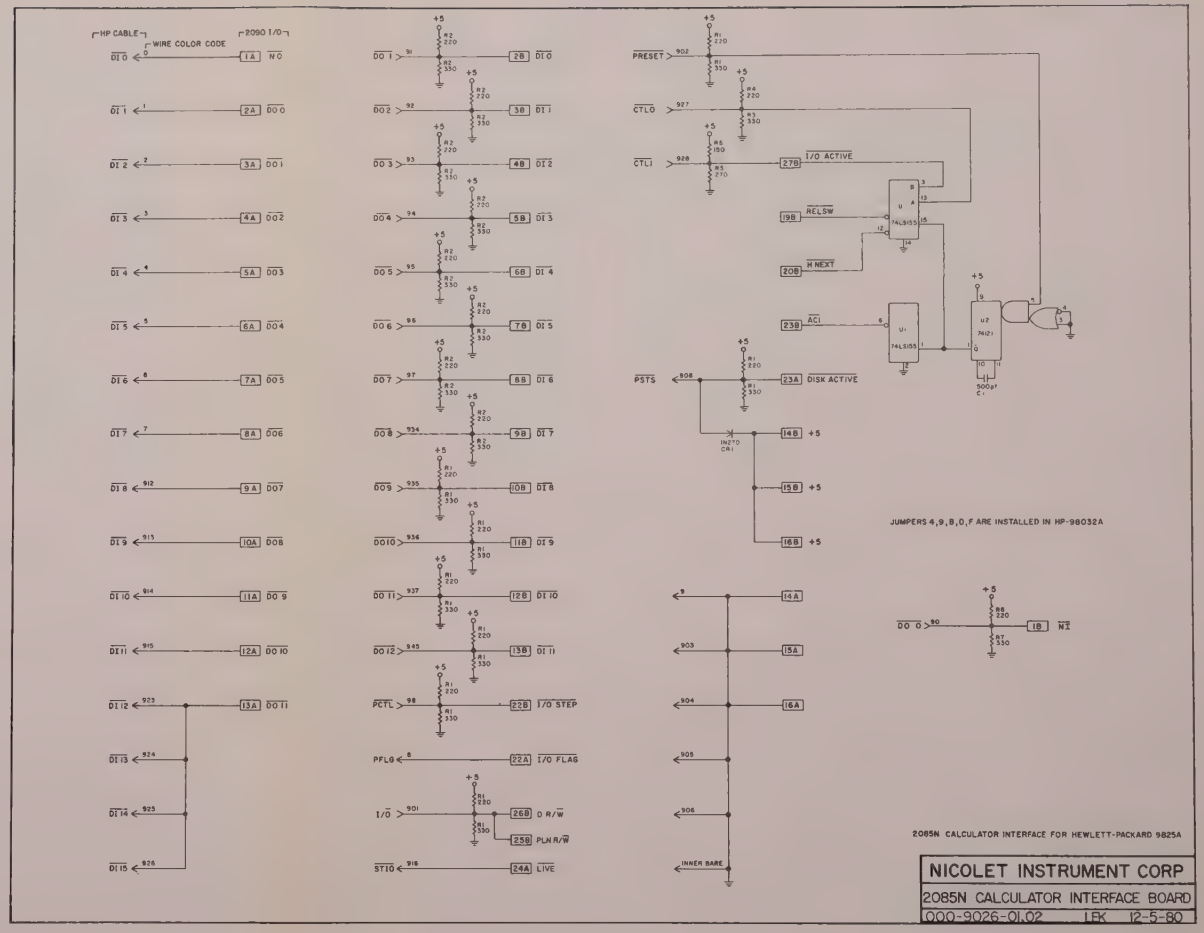


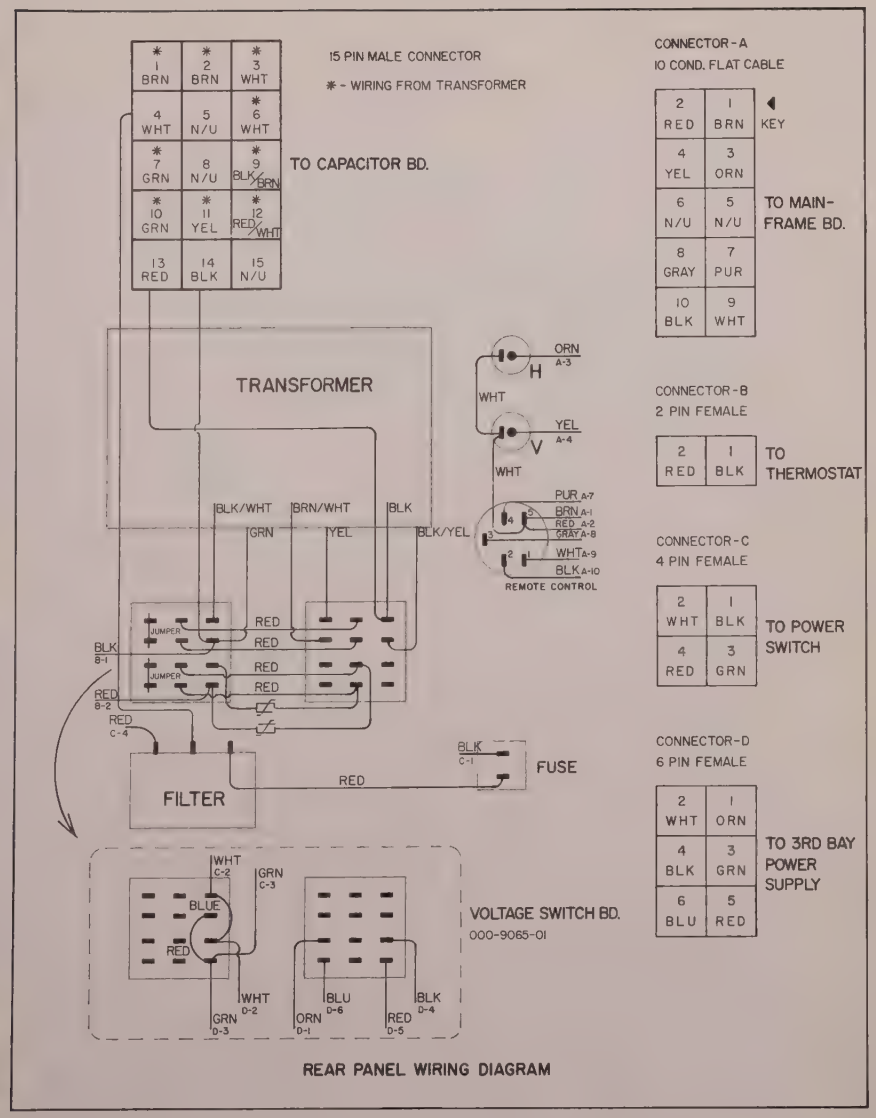
2082 RS-232 BOARD
— CONDUCTOR SIDE —



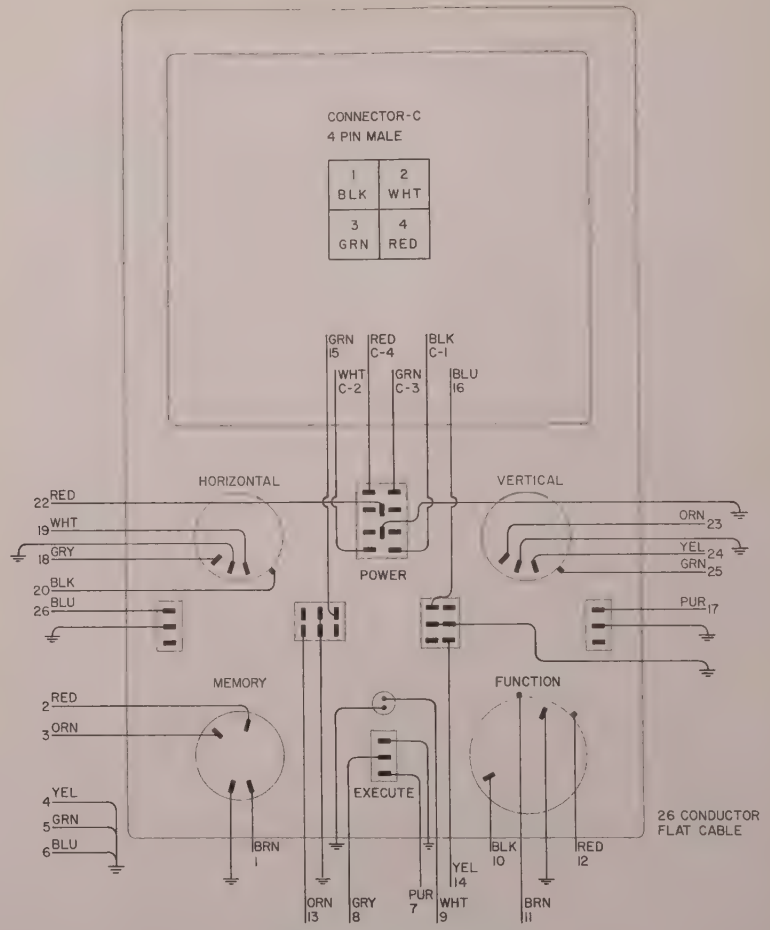


CALCULATOR INTERFACE

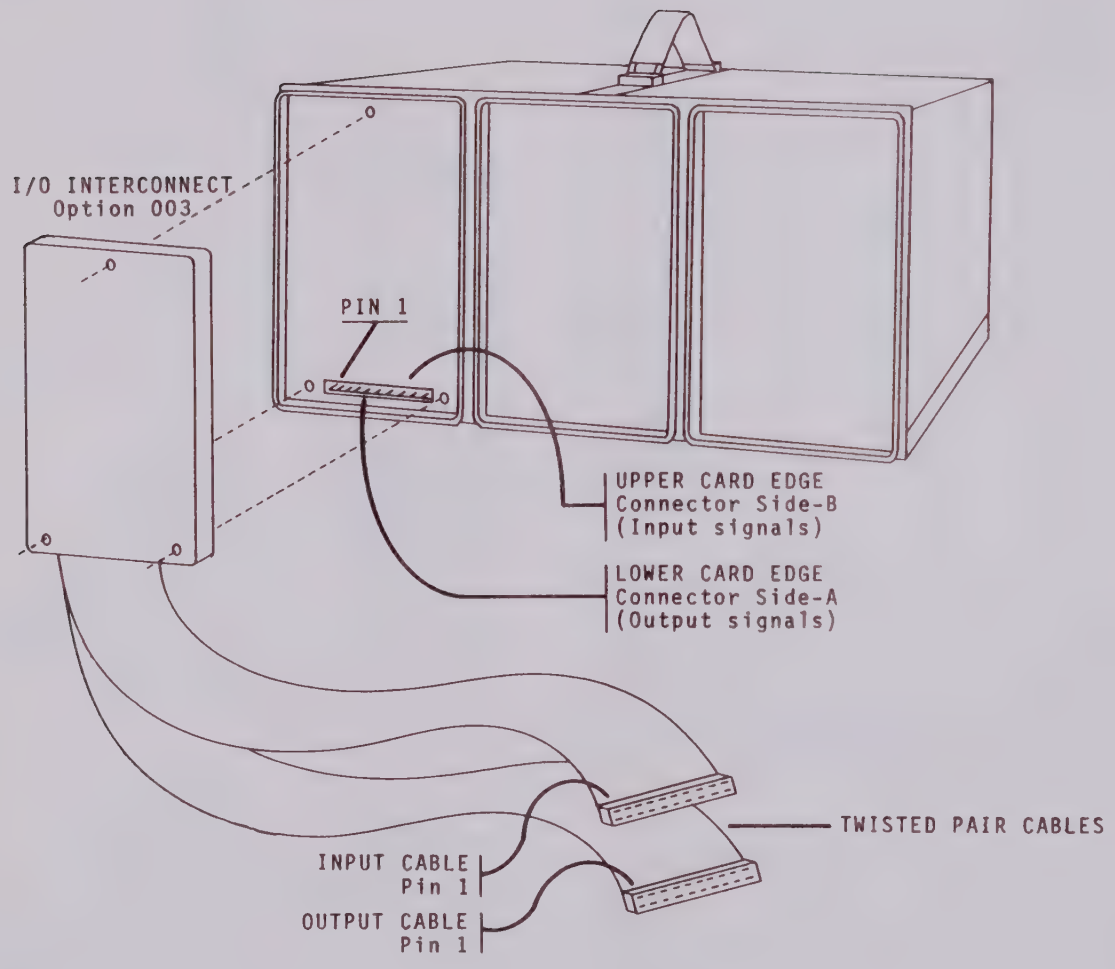




REAR PANEL WIRING DIAGRAM



FRONT PANEL MAIN FRAME WIRING DIAGRAM

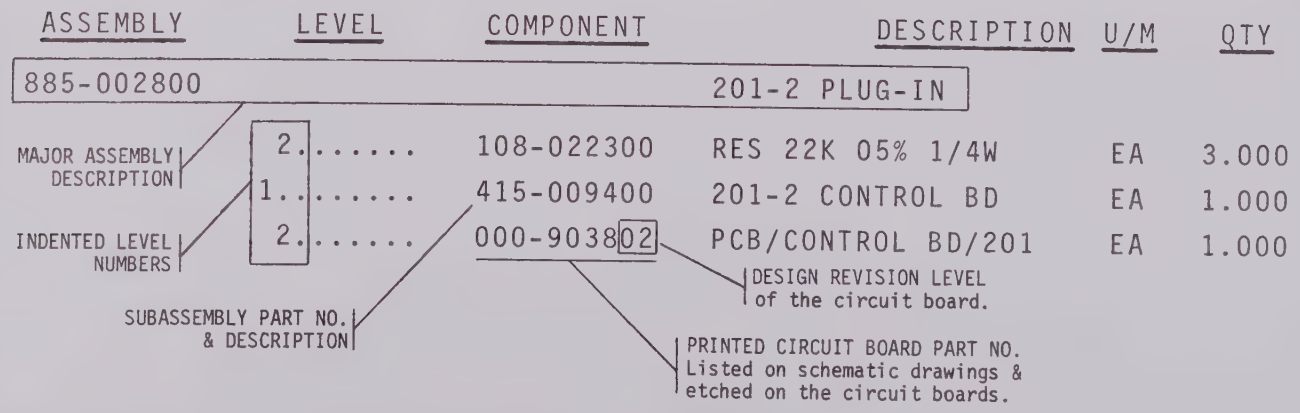


I/O INTERCONNECT
Option 003

PARTS LIST INDEX

The major assemblies listed in the Parts List Index are tabulated in the order they appear on the parts lists.

NOTE: The page numbers repeat for each major assembly. Therefore, locate the major assembly description (see below) and scan the listings until the appropriate list is located.



NOTE: When referencing complete printed circuit board subassemblies, always use both the subassembly part number and the printed circuit board part number.

To locate a circuit board subassembly:

1. Determine which major assembly the subassembly is a part of.
   (i.e., The Model 201-2 Plug-In Control Board subassembly is a part of the Model 201-2 Plug-In.)
2. Locate the major assembly parts listing as previously explained.
3. Scan the indented level numbers within that major assembly parts listing to locate the desired subassembly.

NOTE: The part numbers etched on the printed circuit boards are not the subassembly numbers for that completed assembly.

PARENT ITEM NO.
415-004000

DESCRIPTION 206 MEMORY BD (4K)
ENGR DRAW

BATCH QTY

RELATIVE LEVEL	COMPONENT ITEM NO.	DESCRIPTION	ENGINEERING DRAWING NUMBER	QUANTITY PER	ITEM UM	ITEM TYP
.1	000-909000	PCB/206 MEMORY (4K)	X	1.000	EA	4
.1	023-711100	CAP 4.7MF 10V 10% TANT G KEM		5.000	EA	4
.1	023-722300	CAP .047MF 50V CERM G CLB		12.000	EA	4
.1	024-715900	CON 16F DIP/SOL 641262-3 AMP		1.000	EA	4
.1	134-717903	IC/74LS86N 2-XOR		1.000	EA	4
.1	134-719503	IC/18S030 PROM (74S288)		1.000	EA	4
.1	134-723903	IC/74LS257 MULTIPLEXER		10.000	EA	4
.1	134-724903	IC/74S169 COUNTER		3.000	EA	4
.1	134-755000	IC/2114 1K X 4 RAM 450NS NAT		12.000	EA	4

PARENT ITEM NO.
415-011400

DESCRIPTION 206 DIII AMP BD
ENGR DRAW

RELATIVE LEVEL	COMPONENT ITEM NO.	DESCRIPTION	ENGINEERING DRAWING NUMBER	QUANTITY PER	UM	ITEM TYPE
.1	000-907201	PCB/206 DIII AMP	X	1.000	EA	4
.1	023-029200	CAP 22MF 15V 10% TANT G KEM		1.000	EA	4
.1	023-700100	CAP 100PF 500V 05% MICA R ARC		2.000	EA	4
.1	023-700200	CAP 1000PF 100V 05% MICA R ARC		1.000	EA	4
.1	023-700300	CAP 500PF 500V 05% MICA R ARC		1.000	EA	4
.1	023-701600	CAP 2.2MF 20V 10% TANT G KEM		2.000	EA	4
.1	023-702400	CAP .01MF 100V 20% CERM R SPG		2.000	EA	4
.1	023-709100	CAP 20PF 500V 05% MICA R ARC		2.000	EA	4
.1	023-710200	CAP 5.5 TO 18PF 50V CERM STT		2.000	EA	4
.1	023-710600	CAP 10PF 1000V 10% CERM R CLB		2.000	EA	4
.1	023-711200	CAP 220MF 10V 10% TANT G KEM		1.000	EA	4
.1	023-711300	CAP .1MF 250V 10% PLYE R SEC		2.000	EA	4
.1	023-715100	CAP .05MF 50V CERM R ARC		5.000	EA	4
.1	023-717900	CAP 8PF 300V 6.2% MICA R ARC		1.000	EA	4
.1	024-712500	CON/20F EDG/SOL CIN 2521030160		1.000	EA	4
.1	024-743100	CON/8F DIP/SOL AMP 641260-3		1.000	EA	4
.1	025-734800	SW/SL 2P2T CK 1101M2AB		2.000	EA	4
.1	025-735600	SW/PB 3L2PL SH		1.000	EA	4
.1	025-735800	SW/PB 3L4PL SH		1.000	EA	4
.1	026-705300	POT 200 PCB .7W 3006P1201 BRS		1.000	EA	4
.1	026-705400	POT 500 PCB .7W 3006P1501 BRS		1.000	EA	4
.1	026-705600	POT 2K PCB .7W 3006P1202 BRS		4.000	EA	4
.1	026-705800	POT 10K PCB .7W 3006P1103 BRS		2.000	EA	4
.1	026-706300	POT 100K PCB .7W 3006P1104 BRS		1.000	EA	4
.1	108-010100	RES 100 05% 1/4W		7.000	EA	4
.1	108-010200	RES 1K 05% 1/4W		1.000	EA	4
.1	108-010300	RES 10K 05% 1/4W		2.000	EA	4
.1	108-010400	RES 100K 05% 1/4W		2.000	EA	4
.1	108-020200	RES 2K 05% 1/4W		1.000	EA	4
.1	108-022200	RES 2.2K 05% 1/4W		1.000	EA	4
.1	108-033100	RES 330 05% 1/4W		2.000	EA	4
.1	108-033200	RES 3.3K 05% 1/4W		2.000	EA	4
.1	108-047200	RES 4.7K 05% 1/4W		2.000	EA	4
.1	134-730603	IC/CA3140E		6.000	EA	4
.1	134-743000	IC/3508J OPAMP BURR BROWN		1.000	EA	4
.1	201-100300	RES 100K 01% 1/8W PRES		2.000	EA	4
.1	201-133200	RES 13.3K 01% 1/8W PRES		1.000	EA	4
.1	201-215100	RES 2.15K 01% 1/8W PRES		1.000	EA	4
.1	201-249100	RES 2.49K 01% 1/8W PRES		1.000	EA	4
.1	201-280200	RES 28K 01% 1/8W PRES		1.000	EA	4
.1	201-402200	RES 40.2K 01% 1/8W PRES		1.000	EA	4
.1	201-499100	RES 4.99K 01% 1/8W PRES		3.000	EA	4
.1	201-698100	RES 6.98K 01% 1/8W PRES		1.000	EA	4
.1	201-909300	RES 909K 01% 1/8W PRES		2.000	EA	4
.1	214-010300	RES 10K .1% 1/8W PRES		6.000	EA	4

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002800			201-2 PLUG-IN				1
	1.....	415-006000	206 STORAGE CONTROL BD			EA	1.000
	2.....	000-900806	PCB/206 STORAGE CONTROL	X		EA	1.000
	2.....	025-726900	SW/PB/GREEN LED			EA	1.000
	2.....	025-733800	SW/PB 1P2TM SH SRUL/RED			EA	2.000
	2.....	035-701800	BUTT/RECT SH SRKL/BLK W/RED			EA	2.000
	2.....	085-708700	CBL/20 COND/AP 922531-20-99-3			EA	1.000
	2.....	108-022100	RES 220 05% 1/4W			EA	3.000
	2.....	108-022200	RES 2.2K 05% 1/4W			EA	3.000
	2.....	108-022300	RES 22K 05% 1/4W			EA	3.000
	1.....	415-009400	201-2 CONTROL BD			EA	1.000
	2.....	000-903802	PCB/CONTROL BD/201	X		EA	1.000
	2.....	022-711600	DIO TRRF 1N4376 10V .05A G FCH			EA	1.000
	2.....	023-029200	CAP 22MF 15V 10% TANT G KEM			EA	1.000
	2.....	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	1.000
	2.....	023-700300	CAP 500PF 500V 5% MICA R ARC			EA	2.000
	2.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	3.000
	2.....	023-709100	CAP 20PF 500V 5% MICA R ARC			EA	2.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	1.000
	2.....	023-715100	CAP .05MF 50V CERM R ARC			EA	3.000
	2.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	3.000
	2.....	024-734000	CONN/IC SOC/20 PIN			EA	2.000
	2.....	025-727000	SW/ROT/32 POS.			EA	1.000
	2.....	100-700700	RES NET/CSP10E-01-502J			EA	2.000
	2.....	108-010000	RES 10 05% 1/4W			EA	3.000
	2.....	108-033100	RES 330 05% 1/4W			EA	2.000
	2.....	108-047100	RES 470 05% 1/4W			EA	1.000
	2.....	134-701803	IC/7400N 2-NAND			EA	1.000
	2.....	134-711203	IC/74S74N FLIP-FLOP			EA	2.000
	2.....	134-712803	IC/74LS00N 2-NAND			EA	10.000
	2.....	134-712903	IC/74LS04N HEX INVERTER			EA	1.000
	2.....	134-713003	IC/74LS20N 4-NAND			EA	1.000
	2.....	134-713203	IC/74LS74N FLIP-FLOP			EA	21.000
	2.....	134-713703	IC/74LS253N MULTIPLEXER			EA	1.000
	2.....	134-713900	IC/MK5009P MOS LSI			EA	1.000
	2.....	134-715503	IC/74LS153N MULTIPLEXER			EA	2.000
	2.....	134-716203	IC/74S175N REGISTER			EA	1.000
	2.....	134-719103	IC/74196N COUNTER			EA	1.000
	2.....	134-719403	IC/74LS151N MULTIPLEXER			EA	3.000
	2.....	134-720803	IC/74LS10N 3-NAND			EA	2.000
	2.....	134-722303	IC/74LS298N REGISTER			EA	3.000
	2.....	134-722703	IC/74LS08N 2-AND			EA	3.000
	2.....	134-723903	IC/74LS257 MULTIPLEXER			EA	3.000
	2.....	134-728803	IC/74S472 PROM			EA	2.000
	2.....	134-730903	IC/74LS367N HEX DRIVER			EA	1.000
	2.....	134-731603	IC/74LS251N MULTIPLEXER			EA	1.000
	2.....	191-704600	CRYS/HC18/U 40 MHZ .005			EA	1.000
	1.....	415-009500	201-2 MOTHER BD			EA	1.000
	2.....	000-903902	PCB/201 MOTHER	X		EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002800			201-2 PLUG-IN				1
	2.	021-706200	TRN FETJN E230 40V .35W B SLX			EA	2.000
	2.	022-703800	DIO ZENR 1N5234 6.2V .5W G MOT			EA	1.000
	2.	022-709400	DIO TRRF 1N4150 50V .2A G TXI			EA	2.000
	2.	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	1.000
	2.	023-700300	CAP 500PF 500V 5% MICA R ARC			EA	1.000
	2.	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	1.000
	2.	023-706900	CAP 50MF 50V ALUM G SPG			EA	1.000
	2.	023-708000	CAP 3.3PF 1000V 15% CERM R CLB			EA	2.000
	2.	023-713500	CAP 4.7MF 50V 10% TANT G KEM			EA	4.000
	2.	023-715100	CAP .05MF 50V CERM R ARC			EA	4.000
	2.	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	6.000
	2.	024-733200	CON/6M HDR/SOL AMP 9-350259-2			EA	1.000
	2.	024-737200	CONN/56PIN/AMP 67907.3			EA	3.000
	2.	026-705600	POT/2K PCB DAL 784-20-202			EA	2.000
	2.	026-705700	POT/5K PCB DAL 784-20-502			EA	2.000
	2.	108-010100	RES 100 05% 1/4W			EA	1.000
	2.	108-010300	RES 10K 05% 1/4W			EA	1.000
	2.	108-010400	RES 100K 05% 1/4W			EA	1.000
	2.	108-010500	RES 1M 05% 1/4W			EA	1.000
	2.	108-012300	RES 12K 05% 1/4W			EA	2.000
	2.	108-015300	RES 15K 05% 1/4W			EA	2.000
	2.	108-018300	RES 18K 05% 1/4W			EA	2.000
	2.	108-022000	RES 22 05% 1/4W			EA	4.000
	2.	108-022100	RES 220 05% 1/4W			EA	1.000
	2.	108-022300	RES 22K 05% 1/4W			EA	1.000
	2.	108-027100	RES 270 05% 1/4W			EA	1.000
	2.	108-033100	RES 330 05% 1/4W			EA	2.000
	2.	108-033200	RES 3.3K 05% 1/4W			EA	2.000
	2.	108-047100	RES 470 05% 1/4W			EA	1.000
	2.	108-047300	RES 47K 05% 1/4W			EA	2.000
	2.	108-068100	RES 680 05% 1/4W			EA	1.000
	2.	108-082200	RES 8.2K 05% 1/4W			EA	2.000
	2.	121-702700	REG 5 TO 30V .5A 78MGU1C E FCH			EA	4.000
	2.	121-702800	REG -2.2/-30V.5A 79MGU1C E FCH			EA	4.000
	2.	134-711900	IC/LM318H OPAMP			EA	2.000
	2.	134-712703	IC/TCL820CN3			EA	1.000
	2.	134-712803	IC/74LS00N 2-NAND			EA	2.000
	2.	134-713203	IC/74LS74N FLIP-FLOP			EA	2.000
	2.	134-718803	IC/74LS175N REGISTER			EA	3.000
	2.	134-722703	IC/74LS08N 2-AND			EA	1.000
	2.	134-723903	IC/74LS257 MULTIPLEXER			EA	4.000
	2.	134-730903	IC/74LS367N HEX DRIVER			EA	2.000
	2.	201-100100	RES 1K 01% 1/8W PRES			EA	2.000
	2.	201-143200	RES 14.3K 01% 1/8W PRES			EA	2.000
	2.	201-200200	RES 20K 01% 1/8W PRES			EA	2.000
	2.	201-221100	RES 2.21K 01% 1/8W PRES			EA	2.000
	2.	201-274100	RES 2.74K 01% 1/8W PRES			EA	2.000
	2.	201-316100	RES 3.16K 01% 1/8W PRES			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002800			201-2 PLUG-IN				1
	2.....	201-374100	RES 3.74K 01% 1/8W PRES			EA	2.000
	2.....	201-499100	RES 4.99K 01% 1/8W PRES			EA	2.000
	1.....	415-009600	201-2 ADC BD			EA	2.000
	2.....	000-904004	PCB/201 ADC	X		EA	2.000
	2.....	022-703400	DIO ZENR 1N5227 3.6V .5W G MOT			EA	2.000
	2.....	022-711600	DIO TRRF 1N4376 10V .05A G FCH			EA	96.000
	2.....	022-714100	DIO SCHT HSCH1001 60V15MAG HPC			EA	8.000
	2.....	023-029200	CAP 22MF 15V 10% TANT G KEM			EA	4.000
	2.....	023-700100	CAP 100PF 500V 5% MICA R ARC			EA	4.000
	2.....	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	8.000
	2.....	023-704700	CAP 1MF 35V 10% TANT G KEM			EA	2.000
	2.....	023-706700	CAP 390PF 500V 5% MICA R ARC			EA	2.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	4.000
	2.....	023-713500	CAP 4.7MF 50V 10% TANT G KEM			EA	4.000
	2.....	023-715100	CAP .05MF 50V CERM R ARC			EA	4.000
	2.....	023-718800	CAP 4.7PF 500V CERM G ERI			EA	2.000
	2.....	023-724800	CAP 3PF 500V CERM G ERI			EA	2.000
	2.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	12.000
	2.....	024-743100	CONN/8F DIP/SOL AMP 640463-3	X		EA	22.000
	2.....	025-732000	SW/4STA/PB/2KG-C03100312			EA	2.000
	2.....	025-732100	SW/3STA/PB/2KGC021000311			EA	2.000
	2.....	026-705300	POT/200 PCB DAL 784-20-201			EA	6.000
	2.....	026-705400	POT/500 PCB DAL 784-20-501			EA	4.000
	2.....	026-705500	POT/1K PCB DAL 784-20-102			EA	2.000
	2.....	026-705600	POT/2K PCB DAL 784-20-202			EA	2.000
	2.....	026-705800	POT/10K PCB DAL 784-20-103			EA	10.000
	2.....	026-706200	POT/50K PCB DAL 784-20-503			EA	12.000
	2.....	026-706600	POT/100 PCB DAL 784-20-101			EA	2.000
	2.....	026-711100	POT/83CID-E20-J10/1K4			EA	2.000
	2.....	026-711400	POT/ET14P-500R MEPCO			EA	4.000
	2.....	035-701300	BUTT/PUSH CL J52305-04500			EA	14.000
	2.....	108-010200	RES 1K 05% 1/4W			EA	2.000
	2.....	108-010300	RES 10K 05% 1/4W			EA	8.000
	2.....	108-010400	RES 100K 05% 1/4W			EA	2.000
	2.....	108-015400	RES 150K 05% 1/4W			EA	2.000
	2.....	108-022200	RES 2.2K 05% 1/4W			EA	4.000
	2.....	108-022300	RES 22K 05% 1/4W			EA	6.000
	2.....	108-022400	RES 220K 05% 1/4W			EA	4.000
	2.....	108-027200	RES 2.7K 05% 1/4W			EA	8.000
	2.....	108-033300	RES 33K 05% 1/4W			EA	4.000
	2.....	108-056000	RES 56 05% 1/4W			EA	2.000
	2.....	134-710203	IC/74LS83N ADDER			EA	6.000
	2.....	134-712803	IC/74LS00N 2-NAND			EA	4.000
	2.....	134-718803	IC/74LS175N REGISTER			EA	12.000
	2.....	134-722303	IC/74LS298N REGISTER			EA	6.000
	2.....	134-722703	IC/74LS08N 2-AND			EA	6.000
	2.....	134-730600	IC/CA3140S OPAMP			EA	16.000
	2.....	134-743000	IC/3508J OPAMP BURR BROWN			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002800			201-2 PLUG-IN				1
	2	134-743500	IC/AD 545L OP AMP ANALOG DEV.			EA	4.000
	2	201-100100	RES 1K 01% 1/8W PRES			EA	18.000
	2	201-100200	RES 10K 01% 1/8W PRES			EA	12.000
	2	201-100300	RES 100K 01% 1/8W PRES			EA	10.000
	2	201-105200	RES 10.5K 01% 1/8W PRES			EA	2.000
	2	201-124000	RES 124 01% 1/8W PRES			EA	10.000
	2	201-150000	RES 150 01% 1/8W PRES			EA	14.000
	2	201-165200	RES 16.5K 01% 1/8W PRES			EA	2.000
	2	201-178000	RES 178 01% 1/8W PRES			EA	10.000
	2	201-200100	RES 2K 01% 1/8W PRES			EA	4.000
	2	201-200200	RES 20K 01% 1/8W PRES			EA	2.000
	2	201-210200	RES 21K 01% 1/8W PRES			EA	2.000
	2	201-249100	RES 2.49K 01% 1/8W PRES			EA	4.000
	2	201-249200	RES 24.9K 01% 1/8W PRES			EA	20.000
	2	201-332100	RES 3.32K 01% 1/8W PRES			EA	2.000
	2	201-374100	RES 3.74K 01% 1/8W PRES			EA	4.000
	2	201-374200	RES 37.4K 01% 1/8W PRES			EA	2.000
	2	201-402300	RES 402K 01% 1/8W PRES			EA	4.000
	2	201-412100	RES 4.12K 01% 1/8W PRES			EA	6.000
	2	201-487200	RES 48.7K 01% 1/8W PRES			EA	2.000
	2	201-499000	RES 499 01% 1/8W PRES			EA	2.000
	2	201-499100	RES 4.99K 01% 1/8W PRES			EA	2.000
	2	201-499200	RES 49.9K 01% 1/8W PRES			EA	28.000
	2	201-523300	RES 523K 01% 1/8W PRES			EA	4.000
	2	201-619100	RES 6.19K 01% 1/8W PRES			EA	10.000
	2	201-649000	RES 649 01% 1/8W PRES			EA	2.000
	2	201-750000	RES 750 01% 1/8W PRES			EA	2.000
	2	201-750100	RES 7.5K 01% 1/8W PRES			EA	2.000
	2	201-909100	RES 9.09K 01% 1/8W PRES			EA	2.000
	2	214-499200	RES 49.9K .1% 1.8W PRES			EA	14.000
	1	465-002100	201-2 FRONT PANEL			EA	1.000
	2	010-700900	NUT/BL ANODI W-NU-17D			EA	1.000
	2	011-721607	BRKT/MOTHER BD/EXPL	X		EA	1.000
	2	022-714500	DIO LED6 40o6 1.9V 10mA M 1NM			EA	1.000
	2	024-058900	CON/1F CxL/SOL APH F-UU 657-U			EA	5.000
	2	025-718000	SW/C + K #8531			EA	1.000
	2	025-727600	SW/CTS/#T202/2 POLE/2-STA			EA	3.000
	2	025-727900	SW/GF-126-PC-G20-18			EA	9.000
	2	026-710000	POT/100K/C.L. BA147-0134			EA	1.000
	2	045-703200	KNOB/KFN-500BA/1/8			EA	3.000
	2	045-703500	KNOB/KFN-900BA-1/4"			EA	1.000
	2	045-703600	KNOB/KN-500BA-1/8"			EA	3.000
	2	068-736903	PAN/201-2 FRONT	X		EA	1.000
	2	068-741200	PAN/201-2 FRONT SUB	X		EA	1.000
	2	085-900100	CBL/20 COND/PLUG-IN FRONT	X		EA	1.000
	2	093-702400	FASTNR/SCR 6-32 X 1/4" BLK			EA	4.000
	1	475-003300	201-2 MECH ASSY			EA	1.000
	2	020-701808	CHAS/PLUG-IN			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002800			201-2 PLUG-IN				1
	2.....	034-713300	GUIDE/SCANBE #11633-4			EA	2.000
	2.....	042-711001	COVER/206 AMP DIVIDER	X		EA	1.000
	2.....	085-705400	PROBE/COLINE 900-90-505			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002500			204-1 PLUG IN				1
	1.....	415-007800	204 ADC BD			EA	1.000
	2.....	000-903001	PCB/204 ADC			EA	1.000
	2.....	021-702200	TRANSIS/2N3903			EA	6.000
	2.....	021-703200	TRANSIS/2N5047			EA	4.000
	2.....	021-704700	TRANSIS/2N5224/NPN/12V/.6MW			EA	8.000
	2.....	021-710200	TRANS/2N5179			EA	8.000
	2.....	021-710300	TRANS/A400			EA	7.000
	2.....	021-710400	TRANS/SD-203DC			EA	5.000
	2.....	021-710700	TRANS/A-406			EA	2.000
	2.....	021-710800	TRANS/A-440			EA	1.000
	2.....	022-708000	DIODE/1N5236/ZENER/7.5V			EA	2.000
	2.....	022-711500	DIODE/REGULATOR 78GUIC			EA	2.000
	2.....	022-711600	DIODE/1N4376/.75 NS TRR/20V			EA	11.000
	2.....	022-713000	DIODE/FDH-300			EA	1.000
	2.....	022-714100	DIODE/HSCH 1001/SCHOTTKY			EA	31.000
	2.....	022-715500	DIODE/HSCH 1004			EA	1.000
	2.....	023-029200	CAP/22MF 10% 15V TANT AXL			EA	2.000
	2.....	023-700100	CAP/100PF 5% 500V MICA RAD			EA	2.000
	2.....	023-700500	CAP/250PF 5% 500V MICA RAD			EA	1.000
	2.....	023-702400	CAP/.01MF 20% 100V CERM RAD			EA	6.000
	2.....	023-708000	CAP/3.3PF 15% 1000V CERM RAD			EA	1.000
	2.....	023-708800	CAP/33PF 5% 500V MICA RAD			EA	1.000
	2.....	023-710200	CAP/5.5-18PF 50V CERM RAD			EA	2.000
	2.....	023-710600	CAP/10PF 10% 1000V CERM RAD			EA	2.000
	2.....	023-710800	CAP/.1MF 10% 200V PLYE AXL			EA	2.000
	2.....	023-711200	CAP/220MF 10% 10V TANT AXL			EA	3.000
	2.....	023-713400	CAP/1MFD 50V			EA	2.000
	2.....	023-715500	CAP/1.5PFD-.25PFD			EA	5.000
	2.....	023-716500	CAP/2.0 PF ERIE 500VDC			EA	1.000
	2.....	023-717900	CAP/8PFD 300V			EA	2.000
	2.....	023-718800	CAP/4.7PFD			EA	4.000
	2.....	023-722600	CAP/.1MFD @ 250V 5%			EA	15.000
	2.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	13.000
	2.....	024-739300	CONN/MOLEX 22-12-2101			EA	1.000
	2.....	025-731000	SW/1055P/REL-18-3			EA	1.000
	2.....	026-705500	POT/1K PCB DAL 784-20-102			EA	1.000
	2.....	026-711100	POT/831D-E20-J10/1K4			EA	1.000
	2.....	026-711300	POT/ET14P-100R MEPCO			EA	5.000
	2.....	026-711400	POT/ET14P-500R MEPCO			EA	3.000
	2.....	026-711500	POT/ET14P-1K MEPCO			EA	4.000
	2.....	026-711600	POT/ET14P-2K MEPCO			EA	1.000
	2.....	026-711700	POT/ET14P-5K MEPCO			EA	1.000
	2.....	026-711800	POT/ET14P-50K MEPCO			EA	1.000
	2.....	026-711900	POT/ET14P-1MEG MEPCO			EA	2.000
	2.....	100-701900	RES NET/CSP10E-01-500J			EA	7.000
	2.....	108-010100	RES/100OHM/1/4W/5%			EA	3.000
	2.....	108-010200	RES/1K/1/4W/5%			EA	6.000
	2.....	108-010300	RES/10K/1/4W/5%			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002500			204-1 PLUG IN				1
	2.....	108-012100	RES/1200HM/1/4W/5%			EA	3.000
	2.....	108-012200	RES/1.2K/1/4W/5%			EA	1.000
	2.....	108-015100	RES/1500HM/1/4W/5%			EA	2.000
	2.....	108-015500	RES/1.5M/1/4W/5%			EA	1.000
	2.....	108-018100	RES/1800HM/1/4W/5%			EA	1.000
	2.....	108-018200	RES/1.8K/1/4W/5%			EA	1.000
	2.....	108-022100	RES/2200HM/1/4W/5%			EA	1.000
	2.....	108-022200	RES/2.2K/1/4W/5%			EA	2.000
	2.....	108-022500	RES/2.2MEG/1/4W/5%			EA	1.000
	2.....	108-027100	RES/2700HM/1/4W/5%			EA	6.000
	2.....	108-027200	RES/2.7K/1/4W/5%			EA	1.000
	2.....	108-033000	RES/330HM/1/4W/5%			EA	7.000
	2.....	108-033200	RES/3.3K/1/4W/5%			EA	1.000
	2.....	108-039000	RES/390HM/1/4W/5%			EA	1.000
	2.....	108-039200	RES/3.9K/1/4W/5%			EA	2.000
	2.....	108-047000	RES/470HM/1/4W/5%			EA	6.000
	2.....	108-047100	RES/4700HM/1/4W/5%			EA	3.000
	2.....	108-047200	RES/4.7K/1/4W/5%			EA	3.000
	2.....	108-056100	RES/5600HM/1/4W/5%			EA	1.000
	2.....	108-068000	RES/680HM/1/4W/5%			EA	4.000
	2.....	108-068100	RES/6800HM/1/4W/5%			EA	5.000
	2.....	108-082000	RES/820HM/1/4W/5%			EA	1.000
	2.....	108-082100	RES/820 OHM 1/4W 5%			EA	1.000
	2.....	134-737900	IC/F100150FC ECL FLIP-FLOP			EA	4.000
	2.....	134-738000	IC/F95L23DC			EA	6.000
	2.....	134-738100	IC/F95102DC			EA	1.000
	2.....	134-738200	IC/F10176DC ECL FLIP-FLOP			EA	2.000
	2.....	134-738300	IC/F95107DC			EA	2.000
	2.....	134-738400	IC/F10125PC ECL TRANSLATOR			EA	2.000
	2.....	201-100100	PRES/ 1/8W 1K			EA	1.000
	2.....	201-100400	PRES 1/8W/1. MEG 1/8W			EA	1.000
	2.....	201-105100	PRES 1/8W/1.05K I.R.C.			EA	4.000
	2.....	201-124200	PRES 1/8W/12.4K			EA	1.000
	2.....	201-130100	PRES 1/8W/1.3K MF5C T-0			EA	1.000
	2.....	201-143200	PRES 1/8W/14.3K			EA	2.000
	2.....	201-162400	RES/P 1.62M			EA	2.000
	2.....	201-169200	PRES 1/8W/16.9K I.R.C.			EA	11.000
	2.....	201-178000	RES/1/8W./178 OHM			EA	3.000
	2.....	201-178100	PRES 1/8W/1.78K I.R.C.			EA	1.000
	2.....	201-178300	PRES 1/8W/178K			EA	1.000
	2.....	201-200100	PRES 1/8W/2K IRC			EA	1.000
	2.....	201-249200	PRES 1/8W/24.9K			EA	1.000
	2.....	201-332100	PRES 1/8W/3.32K I.R.C.			EA	1.000
	2.....	201-365000	PRES/ 1/8W 365 OHM 1%			EA	1.000
	2.....	201-374100	PRES 1/8W/3.74K			EA	3.000
	2.....	201-412100	PRES 1/8W/4.12K			EA	1.000
	2.....	201-499100	PRES 1/8W/4.99K			EA	3.000
	2.....	201-499900	PRES 1/8W/49.9 OHM			EA	4.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002500			204-1 PLUG IN				1
	2.....	201-576100	PRES/ 1/8W /5.76K 1%			EA	1.000
	2.....	201-681000	PRES 1/8W/I.R.C. 6.81K			EA	4.000
	2.....	201-681900	PRES 1/8W/68.1 OHMS CEA-			EA	4.000
	2.....	201-715000	PRES/ 1/8W /715 OHM			EA	2.000
	2.....	201-750000	RES/1/8W/1%/750OHM			EA	2.000
	2.....	201-806100	PRES/ 1/8W 8.06K 1%			EA	1.000
	2.....	201-825000	PRES 1/8W/825 OHM I.R.C.			EA	5.000
	2.....	201-825100	PRES 1/8W/8.25K			EA	3.000
	1.....	415-008000	STORAGE CNTRL BRD/204			EA	1.000
	2.....	000-903201	P.C.B./STOR CONT/204	X		EA	1.000
	2.....	024-739800	CONN/MOLEX 22-10-2031			EA	3.000
	2.....	025-721600	SW/PB 1P2TM SH SRL/BLK/RED			EA	2.000
	2.....	025-726900	SW/PB/GREEN LED			EA	1.000
	2.....	108-015300	RES/15K/1/4W/5%			EA	3.000
	2.....	108-022100	RES/2200HM/1/4W/5%			EA	3.000
	1.....	415-008100	204 MEMORY BD			EA	1.000
	2.....	000-902902	P.C.B./MEM BD/204	X		EA	1.000
	2.....	015-706300	PIN/350663-6 AMP SPOOL			EA	3.000
	2.....	021-708800	TRANSIS/2N5301			EA	1.000
	2.....	022-700800	DIODE/1N4004/1 AMP/400V			EA	1.000
	2.....	022-707100	DIODE/3 SM2			EA	2.000
	2.....	022-714000	DIODE/REG/LAS723			EA	1.000
	2.....	023-700200	CAP/1000PF 5% 300V MICA RAD			EA	1.000
	2.....	023-701600	CAP/2.2MF 10% 20V TANT AXL			EA	1.000
	2.....	023-702400	CAP/.01MF 20% 100V CERM RAD			EA	18.000
	2.....	023-711100	CAP/4.7MF 10% 10V TANT AXL			EA	4.000
	2.....	023-711200	CAP/220MF 10% 10V TANT AXL			EA	1.000
	2.....	023-715100	CAP/.05MF 50V CERM RAD			EA	9.000
	2.....	024-727000	CON/6M REC/CRP AMP 1-350234-9			EA	1.000
	2.....	024-739900	CONN/MOLEX 22-16-2051			EA	1.000
	2.....	032-700800	INSUL/DIODE			EA	1.000
	2.....	034-715500	GUIDE/SCANBE 11633-1			EA	4.000
	2.....	085-708600	CBL/34 COND/AP 922541-34-99-3			EA	2.000
	2.....	098-700400	HT SNK/P.C.B. COOLER			EA	1.000
	2.....	103-010100	RES 1W/100 OHM			EA	1.000
	2.....	108-015200	RES/1.5K/1/4W/5%			EA	1.000
	2.....	108-022300	RES/22K/1/4W/5%			EA	2.000
	2.....	108-033000	RES/330HM/1/4W/5%			EA	1.000
	2.....	134-711203	IC/74S74N FLIP-FLOP			EA	1.000
	2.....	134-723903	IC/74LS257 MULTIPLEXER			EA	4.000
	2.....	134-724900	IC/74S169 COUNTER			EA	3.000
	2.....	134-737400	IC/P2115AL			EA	32.000
	2.....	134-739003	IC/74S374N REGISTER			EA	2.000
	2.....	134-739103	IC/74LS244N OCTAL BUFFER			EA	6.000
	2.....	134-739203	IC/74S32N 2-OR			EA	2.000
	2.....	134-739303	IC/74S139N DEMULTIPLEXER			EA	1.000
	2.....	134-739403	IC/74S157N MULTIPLEXER			EA	2.000
	2.....	201-124100	PRES 1/8W/1.24K MF5C			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002500			204-1 PLUG IN				1
	2.....	201-221100	PRES 1/8W/2.21K			EA	1.000
	2.....	201-316100	PRES 1/8W/3.16K IRC			EA	1.000
	2.....	201-825000	PRES 1/8W/825 OHM I.R.C.			EA	1.000
	1.....	415-008200	204 CONTROL BD			EA	1.000
	2.....	000-903303	PCB/204 CONTROL	X		EA	1.000
	2.....	019-704500	CHOKE/COIL			EA	2.000
	2.....	019-708800	XFORMER/INDUCT/AGUIRE			EA	1.000
	2.....	021-702200	TRANSIS/2N3903			EA	1.000
	2.....	021-703800	TRANSIS/2N5978			EA	1.000
	2.....	021-705100	TRANSIS/2N2905A			EA	1.000
	2.....	022-709400	DIODE/1N4150			EA	1.000
	2.....	022-713000	DIODE/FDH-300			EA	2.000
	2.....	022-715800	DIODE/REGULATOR/TI SG3524J			EA	1.000
	2.....	022-715900	DIODE/VARO VSK 540			EA	1.000
	2.....	023-029200	CAP/22MF 10% 15V TANT AXL			EA	1.000
	2.....	023-702400	CAP/.01MF 20% 100V CERM RAD			EA	5.000
	2.....	023-706800	CAP/150PF 5% 500V MICA RAD			EA	1.000
	2.....	023-711000	CAP/22MF 10% 35V TANT AXL			EA	2.000
	2.....	023-711100	CAP/4.7MF 10% 10V TANT AXL			EA	5.000
	2.....	023-711200	CAP/220MF 10% 10V TANT AXL			EA	2.000
	2.....	023-715100	CAP/.05MF 50V CERM RAD			EA	26.000
	2.....	023-716400	CAP/12PFD 300V			EA	1.000
	2.....	023-717000	CAP/3PFD 300V			EA	1.000
	2.....	023-717500	CAP/28KMF 15V ALUM SCW			EA	1.000
	2.....	023-718200	CAP/27PF 5% 300V MICA RAD			EA	1.000
	2.....	023-719600	CAP/18PFD 300V			EA	2.000
	2.....	023-722600	CAP/.1MFD @ 250V 5%			EA	1.000
	2.....	024-714400	CON/20F REC/IDP MMM 3421-0000			EA	2.000
	2.....	024-715500	CONN/3399-6000			EA	2.000
	2.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	6.000
	2.....	024-739900	CONN/MOLEX 22-16-2051			EA	1.000
	2.....	024-740000	CONN/MOLEX 22-16-2101			EA	2.000
	2.....	025-727000	SW/ROT/32 POS.			EA	1.000
	2.....	034-715500	GUIDE/SCANBE 11633-1			EA	4.000
	2.....	040-707900	CLIP/RICHCO V-1011			EA	1.000
	2.....	098-705300	HT SNK/6072B			EA	1.000
	2.....	100-700700	RES NET/CSP10E-01-502J			EA	3.000
	2.....	100-701900	RES NET/CSP10E-01-500J			EA	3.000
	2.....	101-010900	RES/1/2W/5 10%/1 OHM			EA	1.000
	2.....	105-082100	RES/820HM/2W/5%			EA	1.000
	2.....	108-010000	RES/10 OHM/1/4W/5%			EA	1.000
	2.....	108-010300	RES/10K/1/4W/5%			EA	4.000
	2.....	108-010500	RES/1MEG/1/4W/5%			EA	1.000
	2.....	108-012300	RES/12K/1/4W/5%			EA	5.000
	2.....	108-015300	RES/15K/1/4W/5%			EA	2.000
	2.....	108-022100	RES/220OHM/1/4W/5%			EA	1.000
	2.....	108-022200	RES/2.2K/1/4W/5%			EA	1.000
	2.....	108-022300	RES/22K/1/4W/5%			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002500			204-1 PLUG IN				1
	2	108-027300	RES/27K/1/4W/5%			EA	1.000
	2	108-033000	RES/330HM/1/4W/5%			EA	1.000
	2	108-047100	RES/4700HM/1/4W/5%			EA	3.000
	2	108-082200	RES/8.2K/1/4W/5%			EA	3.000
	2	134-711203	IC/74S74N FLIP-FLOP			EA	5.000
	2	134-712803	IC/74LS00N 2-NAND			EA	3.000
	2	134-713203	IC/74LS74N FLIP-FLOP			EA	2.000
	2	134-713703	IC/74LS253N MULTIPLEXER			EA	2.000
	2	134-713900	IC/MK5009P MOS LSI			EA	1.000
	2	134-715503	IC/74LS153N MULTIPLEXER			EA	2.000
	2	134-716003	IC/74S86 2-XOR			EA	1.000
	2	134-716803	IC/74123N MONOSTABLE			EA	1.000
	2	134-718303	IC/74S02N 2-NOR			EA	1.000
	2	134-718803	IC/74LS175N REGISTER			EA	1.000
	2	134-719403	IC/74LS151N MULTIPLEXER			EA	4.000
	2	134-719503	IC/74S288N PROM			EA	1.000
	2	134-720503	IC/74LS174N REGISTER			EA	2.000
	2	134-720803	IC/74LS10N 3-NAND			EA	1.000
	2	134-722703	IC/74LS08N 2-AND			EA	1.000
	2	134-723903	IC/74LS257 MULTIPLEXER			EA	3.000
	2	134-724900	IC/74S169 COUNTER			EA	2.000
	2	134-730903	IC/74LS367N HEX DRIVER			EA	1.000
	2	134-731603	IC/74LS251N MULTIPLEXER			EA	1.000
	2	134-736003	IC/74S283 J ADDER			EA	1.000
	2	134-738000	IC/F95L23DC			EA	2.000
	2	134-738100	IC/F95102DC			EA	2.000
	2	134-738200	IC/F10176DC ECL FLIP-FLOP			EA	1.000
	2	134-738400	IC/F10125PC ECL TRANSLATOR			EA	1.000
	2	134-738500	IC/F10010DC ECL DECADE COUNTER			EA	2.000
	2	134-738600	IC/F10106DC			EA	2.000
	2	134-738700	IC/F10115DC ECL RECEIVER			EA	1.000
	2	134-738800	IC/F10131DC ECL FLIP-FLOP			EA	5.000
	2	134-738900	IC/F10124PC ECL TRANSLATOR			EA	1.000
	2	134-739203	IC/74S32N 2-OR			EA	1.000
	2	134-739403	IC/74S157N MULTIPLEXER			EA	1.000
	2	191-705600	CRYS/100 MHZ .0025%			EA	1.000
	2	201-127100	FRES 1/8W/1.27K			EA	1.000
	2	201-237100	FRES 1/8W/2.37K I.R.C.			EA	3.000
	2	201-750100	FRES 1/8W/7.5K			EA	1.000
	1	415-008900	204-1 FRONT PANEL BD			EA	1.000
	2	000-903103	PCB/204 FRONT PANEL	X		EA	1.000
	2	021-703200	TRANSIS/2N5047			EA	1.000
	2	021-704700	TRANSIS/2N5224/NPN/12V/.6MW			EA	1.000
	2	021-708600	TRANSIS/SD211			EA	3.000
	2	021-710200	TRANS/2N5179			EA	3.000
	2	022-703700	DIODE/1N5231/ZENER/5.1V			EA	1.000
	2	022-709400	DIODE/1N4150			EA	1.000
	2	022-711600	DIODE/1N4376/.75 NS TRR/20V			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002500			204-1 PLUG IN				1
	2.....	023-700100	CAP/100PF 5% 500V MICA RAD			EA	3.000
	2.....	023-700400	CAP/47PF 5% 500V MICA RAD			EA	2.000
	2.....	023-702400	CAP/.01MF 20% 100V CERM RAD			EA	1.000
	2.....	023-710600	CAP/10PF 10% 1000V CERM RAD			EA	1.000
	2.....	023-722600	CAP/.1MFD @ 250V 5%			EA	5.000
	2.....	024-739400	CONN/MOLEX 22-17-2102			EA	1.000
	2.....	024-739500	CONN/MOLEX 22-10-2051			EA	3.000
	2.....	024-739600	CONN/MOLEX 22-10-2101			EA	1.000
	2.....	024-739700	CONN/MOLEX 09-48-3032			EA	3.000
	2.....	024-740800	CONN/2 PIN/6010-22-18-2023			EA	1.000
	2.....	025-730500	SW/CL2K811AC1S45XXX			EA	1.000
	2.....	025-730600	SW/CL2K813AC1S45XXXX			EA	7.000
	2.....	025-730700	SW/CL 2KK9BBB2-XXXXX			EA	2.000
	2.....	025-730800	SW/CL 2KK9CCBZ-XXXXX			EA	2.000
	2.....	026-711200	POT/3862C-366-353A/25K			EA	1.000
	2.....	035-701300	BUTT/PUSH CL J52305-04500			EA	24.000
	2.....	100-700700	RES NET/CSP10E-01-502J			EA	1.000
	2.....	134-701803	IC/7400N 2-NAND			EA	1.000
	2.....	134-712803	IC/74LS00N 2-NAND			EA	1.000
	2.....	134-713203	IC/74LS74N FLIP-FLOP			EA	2.000
	2.....	134-723903	IC/74LS257 MULTIPLEXER			EA	1.000
	1.....	475-002400	204-1 MECH ASSY			EA	1.000
	2.....	022-714500	DIODE/LED 406 GREEN			EA	1.000
	2.....	024-058900	CON/1F CXL/SOL APH F-UG 657-U			EA	3.000
	2.....	044-705400	SHIELD/204 PLUG-IN	X		EA	1.000
	2.....	044-706500	SHIELD/204 SWITCH	X		EA	1.000
	2.....	045-703500	KNOB/KPN-900BA-1/4"			EA	2.000
	2.....	045-703600	KNOB/KN-500BA-1/8"			EA	2.000
	2.....	045-704100	KNOB/KNS-501BA ALCO			EA	1.000
	2.....	068-733401	PAN/FRONT/204-1	X		EA	1.000
	2.....	085-705400	PROBE/COLINE 900-90-505			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-003500			204A PLUG-IN				1
	1..........	415-010500	204A STORAGE CONTROL BD			EA	1.000
	2.........	000-906801	PCB/204A STORAGE CONTROL	X		EA	1.000
	2.........	025-726900	SW/PB/GREEN LED			EA	1.000
	2.........	025-733800	SW/PB 1P2TM SH SRUL/RED			EA	2.000
	2.........	025-734600	SW/TO 1PL2T AL TT11D6-PC-4			EA	4.000
	2.........	035-701800	BUTT/RECT SH SRKL/BLK W/RED			EA	2.000
	2.........	108-015300	RES 15K 05% 1/4W			EA	3.000
	2.........	108-022100	RES 220 05% 1/4W			EA	3.000
	2.........	108-022300	RES 22K 05% 1/4W			EA	4.000
	1..........	415-010600	204A TRIGGER BD			EA	1.000
	2.........	000-906901	PCB/204A TRIGGER	X		EA	1.000
	2.........	021-701800	TRN PNP 2N3905 40V .35W B MOT			EA	1.000
	2.........	021-703200	TRN FETJN 2N5047 50V .2W A MOT			EA	1.000
	2..........	022-713000	DIO RECT FDH300 150V .2A G FCH			EA	1.000
	2.........	023-700100	CAP 100PF 500V 5% MICA R ARC			EA	2.000
	2.........	023-700400	CAP 47PF 500V 5% MICA R ARC			EA	2.000
	2.........	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	1.000
	2.........	023-707500	CAP 6.8MF 35V 10% TANT G KEM			EA	2.000
	2.........	023-708800	CAP 33PF 500V 5% MICA R ARC			EA	1.000
	2.........	023-709100	CAP 20PF 500V 5% MICA R ARC			EA	1.000
	2.........	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	10.000
	2.........	023-718800	CAP 4.7PF 500V CERM G ERI			EA	1.000
	2.........	025-734700	SW/PB 1BL2T CL			EA	1.000
	2.........	026-713400	POT/5K PCB 2W 81C1DE20A BRS			EA	1.000
	2.........	108-010200	RES 1K 05% 1/4W			EA	1.000
	2.........	108-010300	RES 10K 05% 1/4W			EA	5.000
	2.........	108-010400	RES 100K 05% 1/4W			EA	1.000
	2.........	108-022100	RES 220 05% 1/4W			EA	1.000
	2.........	108-022300	RES 22K 05% 1/4W			EA	2.000
	2.........	108-033100	RES 330 05% 1/4W			EA	1.000
	2.........	108-033200	RES 3.3K 05% 1/4W			EA	1.000
	2.........	108-033400	RES 330K 05% 1/4W			EA	2.000
	2.........	108-047000	RES 47 05% 1/4W			EA	2.000
	2.........	108-068000	RES 68 05% 1/4W			EA	1.000
	2.........	108-068400	RES 680K 05% 1/4W			EA	1.000
	2.........	121-702600	REG 2T038V .15A LAS1000 A LAM			EA	1.000
	2.........	134-712803	IC/74LS00N 2 NAND			EA	1.000
	2.........	134-713203	IC/74LS74N FLIP FLOP			EA	2.000
	2.........	134-715303	IC/7438N O/C 2 NAND			EA	2.000
	2.........	134-727600	IC/1458 OPAMP			EA	1.000
	2.........	134-749100	IC/NE527 VOLTAGE COMPARATOR			EA	1.000
	2.........	201-100100	RES 1K 01% 1/8W PRES			EA	1.000
	2.........	201-100200	RES 10K 01% 1/8W PRES			EA	2.000
	2.........	201-130100	RES 1.3K 01% 1/8W PRES			EA	1.000
	2.........	201-200100	RES 2K 01% 1/8W PRES			EA	1.000
	2.........	201-499100	RES 4.99K 01% 1/8W PRES			EA	3.000
	2.........	201-909100	RES 9.09K 01% 1/8W PRES			EA	2.000
	1..........	415-010700	204A ADC BD			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-003500			204A PLUG-IN				1
	2.....	000-906301	PCB/204A ADC	X		EA	2.000
	2.....	021-701800	TRN PNP 2N3905 40V .35W B MOT			EA	6.000
	2.....	021-702200	TRN NPN 2N3903 40V 1W B MOT			EA	10.000
	2.....	021-703200	TRN FETJN 2N5047 50V .2W A MOT			EA	2.000
	2.....	022-700800	DIO RECT 1N4004 400V 1A G TXI			EA	4.000
	2.....	022-711600	DIO TRRF 1N4376 10V .05A G FCH			EA	2.000
	2.....	022-713000	DIO RECT FDH300 150V .2A G FCH			EA	2.000
	2.....	022-714100	DIO SCHT HSCH1001 60V15MAG HPC			EA	2.000
	2.....	023-700100	CAP 100PF 500V 5% MICA R ARC			EA	4.000
	2.....	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	2.000
	2.....	023-700500	CAP 250PF 500V 5% MICA R ARC			EA	2.000
	2.....	023-707500	CAP 6.8MF 35V 10% TANT G KEM			EA	8.000
	2.....	023-708800	CAP 33PF 500V 5% MICA R ARC			EA	2.000
	2.....	023-710200	CAP 5.5 TO 18PF 50V CERM STT			EA	4.000
	2.....	023-710600	CAP 10PF 1000V 10% CERM R CLB			EA	2.000
	2.....	023-711200	CAP 220MF 10V 10% TANT G KEM			EA	2.000
	2.....	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	32.000
	2.....	023-715300	CAP 3.3PF 500V 25% CERM G ERI			EA	2.000
	2.....	023-715500	CAP 1.5 TO .25PF TRIMMER R EFJ			EA	6.000
	2.....	023-716400	CAP 12PF 300V 5% MICA R ARC			EA	4.000
	2.....	023-716900	CAP 1.5 PFD ERIE			EA	2.000
	2.....	023-717900	CAP 8PF 300V 6.2% MICA R ARC			EA	4.000
	2.....	023-725900	CAP 3.5 TO 10PF 63V CERM STT			EA	4.000
	2.....	024-745000	CON/64F DIP/SOL BDY DILBQ64P			EA	2.000
	2.....	025-734500	SW/SL 1P2T CK 1101M2AV2B			EA	2.000
	2.....	025-734800	SW/SL 2P2T CK 1101M2AB			EA	2.000
	2.....	025-735100	SW/RO 6PL9PS SG 1378P/REL-18-3			EA	2.000
	2.....	026-707500	NOT ON FILE			EA	2.000
	2.....	026-708000	POT/2K PCB 3299W-1-202			EA	2.000
	2.....	026-710700	POT/200 PCB BRS 3299W-1-201			EA	2.000
	2.....	026-712000	POT 1K PCB .5W 3299W1101 BRS			EA	2.000
	2.....	026-712500	POT/5K PCB BRS 3299W-1-502			EA	2.000
	2.....	026-713200	POT 500 PCB .5W 3299W1501 BRS			EA	6.000
	2.....	026-713300	POT 2M PCB .5W 3299W1205 BRS	X		EA	4.000
	2.....	026-713500	POT/5K PCB 1W 83C1DE28J BRS	X		EA	2.000
	2.....	098-700200	HT SNK/207CB W			EA	2.000
	2.....	101-010100	RES 100 05% 1/2W			EA	2.000
	2.....	101-010900	RES 1 10% 1/2W			EA	6.000
	2.....	101-082000	RES 82 05% 1/2W			EA	2.000
	2.....	108-010000	RES 10 05% 1/4W			EA	6.000
	2.....	108-010100	RES 100 05% 1/4W			EA	8.000
	2.....	108-010200	RES 1K 05% 1/4W			EA	4.000
	2.....	108-022100	RES 220 05% 1/4W			EA	4.000
	2.....	108-022300	RES 22K 05% 1/4W			EA	2.000
	2.....	108-047200	RES 4.7K 05% 1/4W			EA	6.000
	2.....	108-056100	RES 560 05% 1/4W			EA	2.000
	2.....	121-702600	REG 2T038V ,15A LAS1000 A LAM			EA	2.000
	2.....	134-730600	IC/CA3140S OPAMP			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-003500			204A PLUG-IN				1
	2.....	134-739003	IC/74S374N REGISTER			EA	2.000
	2.....	134-748900	IC/TDS 5130 8 BIT 50NS ADC			EA	2.000
	2.....	134-749000	IC/CA3054 OP AM			EA	2.000
	2.....	201-100100	RES 1K 01% 1/8W PRES			EA	6.000
	2.....	201-100200	RES 10K 01% 1/8W PRES			EA	2.000
	2.....	201-100400	RES 1M 01% 1/8W PRES			EA	2.000
	2.....	201-130100	RES 1.3K 01% 1/8W PRES			EA	4.000
	2.....	201-143200	RES 14.3K 01% 1/8W PRES			EA	2.000
	2.....	201-162400	RES 1.62M 01% 1/8W PRES			EA	4.000
	2.....	201-178100	RES 1.78K 01% 1/8W PRES			EA	2.000
	2.....	201-178300	RES 178K 01% 1/8W PRES			EA	2.000
	2.....	201-196400	RES 1.96M 01% 1/8W PRES			EA	4.000
	2.....	201-200000	RES 200 01% 1/8W PRES			EA	2.000
	2.....	201-200100	RES 2K 01% 1/8W PRES			EA	2.000
	2.....	201-200200	RES 20K 01% 1/8W PRES			EA	2.000
	2.....	201-249000	RES 249 01% 1/8W PRES			EA	4.000
	2.....	201-249100	RES 2.49K 01% 1/8W PRES			EA	2.000
	2.....	201-249200	RES 24.9K 01% 1/8W PRES			EA	2.000
	2.....	201-316100	RES 3.16K 01% 1/8W PRES			EA	2.000
	2.....	201-412100	RES 4.12K 01% 1/8W PRES			EA	4.000
	2.....	201-499000	RES 499 01% 1/8W PRES			EA	8.000
	2.....	201-499100	RES 4.99K 01% 1/8W PRES			EA	6.000
	2.....	201-825100	RES 8.25K 01% 1/8W PRES			EA	6.000
	1.....	415-010800	204A MEMORY BD			EA	1.000
	2.....	000-906701	PCB/204A MEMORY	X		EA	1.000
	2.....	021-708800	TRN NPN 2N5301 40V 200W D MOT			EA	1.000
	2.....	022-700800	DIO RECT 1N4004 400V 1A G TXI			EA	1.000
	2.....	022-707100	DIO TRRM 3SM2 200V 2A G SEM			EA	1.000
	2.....	022-714100	DIO SCHT HSCH1001 60V15MAG HPC			EA	1.000
	2.....	022-715900	DIO SCHT VSK540 40V 5A G VAR			EA	2.000
	2.....	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	1.000
	2.....	023-701600	CAP 2.2MF 20V 10% TANT G KEM			EA	1.000
	2.....	023-702400	CAP .01MF 100V 20% CERM E SPG			EA	18.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	4.000
	2.....	023-711200	CAP 220MF 10V 10% TANT G KEM			EA	1.000
	2.....	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	1.000
	2.....	023-715100	CAP .05MF 50V CERM R ARC			EA	9.000
	2.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	32.000
	2.....	024-727000	CON/6M REC/CRP AMP 1-350234-9			EA	1.000
	2.....	024-739900	CONN/MOLEX 22-16-2051			EA	1.000
	2.....	025-734800	SW/SL 2P2T CK 1101M2AB			EA	2.000
	2.....	032-700800	INSUL/DIODE			EA	1.000
	2.....	034-715500	GUIDE/SCANBE 11633-1			EA	4.000
	2.....	085-708600	CBL/34 COND/AP 922541-34-99-3			EA	2.000
	2.....	098-700400	HT SNK/P.C.B. COOLER			EA	1.000
	2.....	100-700700	RES NET/CSP10E-01-502J			EA	1.000
	2.....	103-010100	RES 100 05% 1W			EA	1.000
	2.....	108-010000	RES 10 05% 1/4W			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-003500			204A PLUG-IN				1
	2.....	108-015200	RES 1.5K 05% 1/4W			EA	1.000
	2.....	108-022300	RES 22K 05% 1/4W			EA	2.000
	2.....	121-702600	REG 2T038V .15A LAS1000 A LAM			EA	1.000
	2.....	134-711203	IC/74S74N FLIP-FLOP			EA	1.000
	2.....	134-723903	IC/74LS257 MULTIPLEXER			EA	5.000
	2.....	134-724903	IC/74S169 COUNTER			EA	3.000
	2.....	134-737400	IC/P2115AL			EA	32.000
	2.....	134-739003	IC/74S374N REGISTER			EA	2.000
	2.....	134-739103	IC/74LS244N OCTAL BUFFER			EA	6.000
	2.....	134-739203	IC/74S32N 2-OR			EA	2.000
	2.....	134-739303	IC/74S139N DEMULTIPLEXER			EA	1.000
	2.....	134-739403	IC/74S157N MULTIPLEXER			EA	2.000
	2.....	201-169100	RES 1.69K 01% 1/8W PRES			EA	1.000
	2.....	201-237100	RES 2.37K 01% 1/8W PRES			EA	1.000
	2.....	201-316100	RES 3.16K 01% 1/8W PRES			EA	1.000
	2.....	201-825000	RES 825 01% 1/8W PRES			EA	1.000
	1.....	415-010900	204A CONTROL BD			EA	1.000
	2.....	000-906601	PCB/204A CONTROL	X		EA	1.000
	2.....	022-709400	DIO TRRF 1N4150 50V .2A G TXI			EA	1.000
	2.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	4.000
	2.....	023-706800	CAP 150PF 500V 5% MICA R ARC			EA	1.000
	2.....	023-707500	CAP 6.8MF 35V 10% TANT G KEM			EA	4.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	4.000
	2.....	023-711200	CAP 220MF 10V 10% TANT G KEM			EA	2.000
	2.....	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	2.000
	2.....	023-715100	CAP .05MF 50V CERM R ARC			EA	23.000
	2.....	023-716400	CAP 12PF 300V 5% MICA R ARC			EA	1.000
	2.....	023-717000	CAP 3PF 300V 16% MICA R ARC			EA	1.000
	2.....	023-717500	CAP 28KMF 15V ALUM S MEP			EA	1.000
	2.....	023-718200	CAP 27PF 300V 5% MICA R ARC			EA	1.000
	2.....	023-719600	CAP 18PF 300V 5% MICA R ARC			EA	2.000
	2.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	6.000
	2.....	024-740800	CONN/2 PIN/6010-22-18-2023			EA	1.000
	2.....	025-727000	SW/ROT/32 POS.			EA	1.000
	2.....	034-715500	GUIDE/SCANBE 11633-1			EA	4.000
	2.....	040-707900	CLIP/RICHCO V-1011			EA	1.000
	2.....	085-708800	CBL/26 COND/AP 922521-26-99-3			EA	1.000
	2.....	085-708900	CBL/20 COND/AP 922521-20-99-03			EA	2.000
	2.....	085-900200	CBL/10 & 34 COND/AP 204A INTER	X		EA	1.000
	2.....	098-705300	HT SNK/6072B			EA	1.000
	2.....	100-700700	RES NET/CSP10E-01-502J			EA	3.000
	2.....	100-701900	RES NET/CSP10E-01-500J			EA	4.000
	2.....	108-010300	RES 10K 05% 1/4W			EA	4.000
	2.....	108-012300	RES 12K 05% 1/4W			EA	5.000
	2.....	108-015300	RES 15K 05% 1/4W			EA	2.000
	2.....	108-022200	RES 2.2K 05% 1/4W			EA	1.000
	2.....	108-022300	RES 22K 05% 1/4W			EA	1.000
	2.....	108-027300	RES 27K 05% 1/4W			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-003500			204A PLUG-IN				1
	2.....	108-047100	RES 470 05% 1/4W			EA	1.000
	2.....	108-056000	RES 56 05% 1/4W			EA	2.000
	2.....	108-082200	RES 8.2K 05% 1/4W			EA	3.000
	2.....	121-701400	REG 2.5 TO 32V .1A 1469R D MOT			EA	1.000
	2.....	134-711203	IC/74S74N FLIP-FLOP			EA	5.000
	2.....	134-712803	IC/74LS00N 2-NAND			EA	3.000
	2.....	134-713203	IC/74LS74N FLIP-FLOP			EA	2.000
	2.....	134-713703	IC/74LS253N MULTIPLEXER			EA	2.000
	2.....	134-713900	IC/MK5009P MOS LSI			EA	1.000
	2.....	134-715503	IC/74LS153N MULTIPLEXER			EA	2.000
	2.....	134-716003	IC/74S86 2-XOR			EA	1.000
	2.....	134-716803	IC/74123N MONOSTABLE			EA	1.000
	2.....	134-718303	IC/74S02N 2-NOR			EA	1.000
	2.....	134-718803	IC/74LS175N REGISTER			EA	1.000
	2.....	134-719403	IC/74LS151N MULTIPLEXER			EA	4.000
	2.....	134-719503	IC/74S288N PROM			EA	1.000
	2.....	134-720503	IC/74LS174N REGISTER			EA	2.000
	2.....	134-720803	IC/74LS10N 3-NAND			EA	1.000
	2.....	134-722703	IC/74LS08N 2 AND			EA	1.000
	2.....	134-723903	IC/74LS257 MULTIPLEXER			EA	3.000
	2.....	134-724903	IC/74S169 COUNTER			EA	2.000
	2.....	134-730903	IC/74LS367N HEX DRIVER			EA	1.000
	2.....	134-731603	IC/74LS251N MULTIPLEXER			EA	1.000
	2.....	134-736003	IC/74S283J ADDER			EA	1.000
	2.....	134-738000	IC/F95L23DC			EA	2.000
	2.....	134-738200	IC/F10176DC ECL FLIP-FLOP			EA	1.000
	2.....	134-738400	IC/F10125PC ECL TRANSLATOR			EA	1.000
	2.....	134-738500	IC/F10010DC ECL DECADE COUNTER			EA	2.000
	2.....	134-738600	IC/F10060C			EA	2.000
	2.....	134-738700	IC/F10115DC ECL RECEIVER			EA	1.000
	2.....	134-738800	IC/F10131DC ECL FLIP-FLOP			EA	5.000
	2.....	134-738900	IC/F10124PC ECL TRANSLATOR			EA	1.000
	2.....	134-739203	IC/74S32N 2-OR			EA	1.000
	2.....	134-739403	IC/74S157N MULTIPLEXER			EA	1.000
	2.....	191-705600	CRYS/100 MHZ .002%			EA	1.000
	2.....	201-150000	RES 150 01% 1/8W PRES			EA	1.000
	2.....	201-249000	RES 249 01% 1/8W PRES			EA	1.000
	1.....	465-002700	204A FRONT PANEL			EA	1.000
	2.....	011-900300	BRKT/204A FRONT RETAINER	X		EA	1.000
	2.....	022-716600	DIO LEDG MV52124 2V 35MA L MON			EA	1.000
	2.....	024-721400	CON/1F CXL/SOL APH 31-010			EA	3.000
	2.....	035-701300	BUTT/PUSH CL J52305-04500			EA	9.000
	2.....	045-703500	KNOB/KPN-900BA-1/4"			EA	3.000
	2.....	045-703600	KNOB/KN-500BA-1/8"			EA	3.000
	2.....	068-900302	PAN/204A FRONT	X		EA	1.000
	2.....	068-900401	PAN/204A FRONT SUB	X		EA	1.000
	2.....	123-707400	MECH MISC/RECT LED ADAPTER			EA	1.000
	1.....	475-004000	204A MECHANICAL, MISC.			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-003500			204A PLUG-IN				1
	2.....	011-728000	BRKT/204 SUPPORT	X		EA	1.000
	2.....	044-900001	SHIELD/204A ADC FRONT	X		EA	2.000
	2.....	044-900101	SHIELD/204A ADC REAR	X		EA	2.000
	2.....	044-900200	SHIELD/204A MEMORY BD	X		EA	1.000
	2.....	044-900300	SHIELD/204A TRIGGER BD	X		EA	1.000
	2.....	085-705400	PROBE/COLINE 900-90-505			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001900			206-1 PLUG-IN				1
	1.....	415-005900	206 CONTROL BD			EA	1.000
	2.....	000-901206	PCB/206 CONTROL	X		EA	1.000
	2.....	021-702700	TRANSIS/2N4265			EA	2.000
	2.....	022-706000	DIODE/REG/MBD-101			EA	2.000
	2.....	023-029200	CAP/22MF 10% 15V TANT AXL			EA	1.000
	2.....	023-700100	CAP/100PF 5% 500V MICA RAD			EA	2.000
	2.....	023-700300	CAP/500PF 5% 500V MICA RAD			EA	1.000
	2.....	023-700500	CAP/250PF 5% 500V MICA RAD			EA	1.000
	2.....	023-702400	CAP/.01MF 20% 100V CERM RAD			EA	5.000
	2.....	023-710600	CAP/10PF 10% 1000V CERM RAD			EA	1.000
	2.....	023-711100	CAP/4.7MF 10% 10V TANT AXL			EA	4.000
	2.....	023-715100	CAP/.05MF 50V CERM RAD			EA	5.000
	2.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	2.000
	2.....	024-734000	CONN/IC SOC/20 PIN			EA	1.000
	2.....	025-727000	SW/ROT/32 POS.			EA	1.000
	2.....	100-700700	RES NET/CSP10E-01-502J			EA	2.000
	2.....	108-010000	RES/10 OHM/1/4W/5%			EA	3.000
	2.....	108-010200	RES/1K/1/4W/5%			EA	2.000
	2.....	108-010300	RES/10K/1/4W/5%			EA	1.000
	2.....	108-015200	RES/1.5K/1/4W/5%			EA	1.000
	2.....	108-022100	RES/2200HM/1/4W/5%			EA	1.000
	2.....	108-022200	RES/2.2K/1/4W/5%			EA	2.000
	2.....	108-033200	RES/3.3K/1/4W/5%			EA	1.000
	2.....	108-047000	RES/470HM/1/4W/5%			EA	2.000
	2.....	108-047100	RES/4700HM/1/4W/5%			EA	1.000
	2.....	108-068100	RES/6800HM/1/4W/5%			EA	1.000
	2.....	134-701803	IC/7400N 2-NAND			EA	1.000
	2.....	134-710103	IC/74164N SHIFT REGISTER			EA	2.000
	2.....	134-711203	IC/74S74N FLIP-FLOP			EA	5.000
	2.....	134-712803	IC/74LS00N 2-NAND			EA	4.000
	2.....	134-712903	IC/74LS04N HEX INVERTER			EA	2.000
	2.....	134-713203	IC/74LS74N FLIP-FLOP			EA	11.000
	2.....	134-713703	IC/74LS253N MULTIPLEXER			EA	4.000
	2.....	134-713900	IC/MK5009P MOS LSI			EA	1.000
	2.....	134-715503	IC/74LS153N MULTIPLEXER			EA	2.000
	2.....	134-716203	IC/74S175N REGISTER			EA	1.000
	2.....	134-717403	IC/74S287N PROM			EA	1.000
	2.....	134-717903	IC/74LS86N 2-XOR			EA	1.000
	2.....	134-718803	IC/74LS175N REGISTER			EA	6.000
	2.....	134-719103	IC/74196N COUNTER			EA	1.000
	2.....	134-719403	IC/74LS151N MULTIPLEXER			EA	3.000
	2.....	134-719503	IC/74S288N PROM			EA	1.000
	2.....	134-720403	IC/74LS02N 2-NOR			EA	2.000
	2.....	134-722703	IC/74LS08N 2-AND			EA	2.000
	2.....	134-724900	IC/74S169 COUNTER			EA	2.000
	2.....	134-728803	IC/74S472 PROM			EA	1.000
	2.....	134-730903	IC/74LS367N HEX DRIVER			EA	4.000
	2.....	134-731603	IC/74LS251N MULTIPLEXER			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001900			206-1 PLUG-IN				1
	2.....	191-704600	CRYS/HC18/U 40 MHZ .005			EA	1.000
	1.....	415-006000	206 STORAGE CONTROL BD			EA	1.000
	2.....	000-900806	PCB/206 STORAGE CONTROL			EA	1.000
	2.....	024-714400	CON/20F REC/IDP MMM 3421-0000			EA	2.000
	2.....	025-721600	SW/PB 1P2TM SH SRL/BLK/RED			EA	2.000
	2.....	025-726900	SW/PB/GREEN LED			EA	1.000
	2.....	025-727900	SW/GF-126-PC-G20-18			EA	3.000
	2.....	108-022100	RES/2200HM/1/4W/5%			EA	3.000
	2.....	108-022200	RES/2.2K/1/4W/5%			EA	3.000
	2.....	108-022300	RES/22K/1/4W/5%			EA	3.000
	1.....	415-006100	206 MEMORY BD			EA	1.000
	2.....	000-901403	PCB/206 MEMORY	X		EA	1.000
	2.....	023-711100	CAP/4.7MF 10% 10V TANT AXL			EA	5.000
	2.....	023-715100	CAP/.05MF 50V CERM RAD			EA	5.000
	2.....	134-717903	IC/74LS86N 2-XOR			EA	1.000
	2.....	134-722403	IC/74LS139N MULTIPLEXER			EA	1.000
	2.....	134-723903	IC/74LS257 MULTIPLEXER			EA	11.000
	2.....	134-724900	IC/74S169 COUNTER			EA	3.000
	2.....	134-725103	IC/2102LIDCQP			EA	48.000
	1.....	415-006200	206 MOTHER BD			EA	1.000
	2.....	000-901103	PCB/206 MOTHER	X		EA	1.000
	2.....	015-702700	PIN/350036-2 26.18 GA			EA	3.000
	2.....	021-706200	TRANSIS/E-230/SILICONIX			EA	2.000
	2.....	022-703800	DIODE/1N5234/ZENER/6.2V			EA	1.000
	2.....	022-709400	DIODE/1N4150			EA	3.000
	2.....	023-700200	CAP/1000PF 5% 300V MICA RAD			EA	2.000
	2.....	023-700300	CAP/500PF 5% 500V MICA RAD			EA	1.000
	2.....	023-702400	CAP/.01MF 20% 100V CERM RAD			EA	1.000
	2.....	023-706900	CAP/50MF 50V ALUM AXL			EA	1.000
	2.....	023-708000	CAP/3.3PF 15% 1000V CERM RAD			EA	2.000
	2.....	023-711100	CAP/4.7MF 10% 10V TANT AXL			EA	1.000
	2.....	023-713500	CAP/4.7MF 10% 50V TANT AXL			EA	4.000
	2.....	023-715100	CAP/.05MF 50V CERM RAD			EA	4.000
	2.....	024-733200	CON/6M HDR/SOL AMP 9-350259-2			EA	1.000
	2.....	024-737200	CONN/56PIN/AMP 67907.3			EA	2.000
	2.....	024-744700	CON/80F EDG/SOL MCP MP0125-40			EA	2.000
	2.....	108-010300	RES/10K/1/4W/5%			EA	2.000
	2.....	108-010400	RES/100K/1/4W/5%			EA	1.000
	2.....	108-010500	RES/1MEG/1/4W/5%			EA	1.000
	2.....	108-012300	RES/12K/1/4W/5%			EA	2.000
	2.....	108-015300	RES/15K/1/4W/5%			EA	2.000
	2.....	108-018300	RES/18K/1/4W/5%			EA	2.000
	2.....	108-022000	RES/220HM/1/4W/5%			EA	4.000
	2.....	108-022100	RES/2200HM/1/4W/5%			EA	1.000
	2.....	108-022300	RES/22K/1/4W/5%			EA	3.000
	2.....	108-027100	RES/2700HM/1/4W/5%			EA	1.000
	2.....	108-033100	RES/3300HM/1/4W/5%			EA	2.000
	2.....	108-033200	RES/3.3K/1/4W/5%			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001900			206-1 PLUG-IN				1
	2.....	108-047100	RES/4700HM/1/4W/5%			EA	1.000
	2.....	108-047300	RES/47K/1/4W/5%			EA	2.000
	2.....	108-068100	RES/6800HM/1/4W/5%			EA	1.000
	2.....	108-068200	RES/6.8K/1/4W/5%			EA	1.000
	2.....	108-082200	RES/8.2K/1/4W/5%			EA	2.000
	2.....	134-711900	IC/LM318H OPAMP			EA	2.000
	2.....	134-712703	IC/TCL820CN3			EA	1.000
	2.....	134-713203	IC/74LS74N FLIP-FLOP			EA	2.000
	2.....	134-716803	IC/74123N MONOSTABLE			EA	1.000
	2.....	134-723903	IC/74LS257 MULTIPLEXER			EA	1.000
	1.....	415-006300	EXTENDER BD/PLUG-IN			EA	1.000
	2.....	000-902301	PCB/EXTENDER BD/PLUG-IN	X		EA	1.000
	2.....	024-712500	CON/20F EDG/SOL CIN 2521030160			EA	1.000
	1.....	465-001600	206 FRONT PANEL			EA	1.000
	2.....	010-700900	NUT/BL ANODI W-NU-17D			EA	1.000
	2.....	011-721607	BRKT/MOTHER BD/EXPL	X		EA	1.000
	2.....	011-723400	BRKT/206 RETAINER	X		EA	1.000
	2.....	020-701808	CHAS/PLUG-IN			EA	1.000
	2.....	022-714500	DIODE/LED 406 GREEN			EA	1.000
	2.....	023-722600	CAP/.1MFD @ 250V 5%			EA	1.000
	2.....	024-058900	CON/1F CXL/SOL APH F-UG 657-U			EA	1.000
	2.....	024-714400	CON/20F REC/IDP MMM 3421-0000			EA	1.000
	2.....	025-718000	SW/C + K #8531			EA	1.000
	2.....	025-727600	SW/CTS/#T202/2 POLE/2-5STA			EA	3.000
	2.....	026-710000	POT/100K/C.L. BA147-0134			EA	1.000
	2.....	034-713300	GUIDE/SCANBE #11633-4			EA	2.000
	2.....	045-703200	KNOB/KPN-500BA/1/8			EA	3.000
	2.....	045-703500	KNOB/KPN-900BA-1/4"			EA	1.000
	2.....	045-703600	KNOB/KN-500BA-1/8"			EA	1.000
	2.....	051-700100	BUMPER/SJ5004X			EA	3.000
	2.....	068-727708	PAN/206 FRONT			EA	1.000
	2.....	093-702200	FASTNR/STUD/PEM CFHC-632-4			EA	4.000
	2.....	093-702400	FASTNR/SCR 6-32 X 1/4" BLK			EA	4.000
	1.....	465-001700	BLANK PANEL/AMP			EA	1.000
	2.....	068-729700	PANEL/BLANK/D II AMP	X		EA	1.000
	1.....	475-001900	206 FINAL ASSEMBLY			EA	1.000
	2.....	034-714300	GUIDE/W/TAPE			EA	3.000
	2.....	042-711000	COVER/96B	X		EA	1.000
	2.....	044-705000	SHIELD/MEM BD/206	X		EA	1.000
	1.....	845-000200	DII AMP			EA	1.000
	2.....	415-005800	206/205 ADC BD			EA	1.000
	3.....	000-900904	PCB/206/205 ADC	X		EA	1.000
	3.....	021-701800	TRANSIS/2N3905			EA	2.000
	3.....	021-702200	TRANSIS/2N3903			EA	8.000
	3.....	021-704700	TRANSIS/2N5224/NPN/12V/.6MW			EA	5.000
	3.....	021-706300	TRANSIS/2N3906			EA	15.000
	3.....	022-711400	DIODE/REGULATOR 79GUIC			EA	2.000
	3.....	022-711500	DIODE/REGULATOR 78GUIC			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001900			206-1 PLUG-IN				1
	3.....	022-711600	DIODE/1N4376/.75 NS TRR/20V			EA	46.000
	3.....	022-714100	DIODE/HSCH 1001/SCHOTTKY			EA	16.000
	3.....	023-029200	CAP/22MF 10% 15V TANT AXL			EA	2.000
	3.....	023-701600	CAP/2.2MF 10% 20V TANT AXL			EA	2.000
	3.....	023-702400	CAP/.01MF 20% 100V CERM RAD			EA	4.000
	3.....	023-702700	CAP/.22MF 10% 35V TANT AXL			EA	2.000
	3.....	023-706700	CAP/390PF 5% 500V MICA RAD			EA	2.000
	3.....	023-706800	CAP/150PF 5% 500V MICA RAD			EA	1.000
	3.....	023-709100	CAP/20PF 5% 500V MICA RAD			EA	4.000
	3.....	023-711000	CAP/22MF 10% 35V TANT AXL			EA	1.000
	3.....	023-712200	CAP/.022MF 10% 200V PLYE AXL			EA	1.000
	3.....	023-717800	CAP/6PFD 300V			EA	5.000
	3.....	023-719700	CAP/2.2MFD 50V			EA	2.000
	3.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	6.000
	3.....	026-705600	POT/2K PCB DAL 784-20-202			EA	1.000
	3.....	026-705700	POT/5K PCB DAL 784-20-502			EA	1.000
	3.....	026-706200	POT/50K PCB DAL 784-20-503			EA	5.000
	3.....	026-707700	POT/ET 14W-200 MEPCO			EA	5.000
	3.....	100-700900	RES NET/7X25K/.01%			EA	1.000
	3.....	108-010100	RES/100OHM/1/4W/5%			EA	3.000
	3.....	108-010200	RES/1K/1/4W/5%			EA	3.000
	3.....	108-010300	RES/10K/1/4W/5%			EA	13.000
	3.....	108-010400	RES/100K/1/4W/5%			EA	3.000
	3.....	108-015100	RES/150OHM/1/4W/5%			EA	1.000
	3.....	108-015300	RES/15K/1/4W/5%			EA	5.000
	3.....	108-022000	RES/220HM/1/4W/5%			EA	1.000
	3.....	108-022100	RES/220OHM/1/4W/5%			EA	1.000
	3.....	108-033200	RES/3.3K/1/4W/5%			EA	4.000
	3.....	108-039200	RES/3.9K/1/4W/5%			EA	3.000
	3.....	108-047000	RES/470HM/1/4W/5%			EA	7.000
	3.....	108-047200	RES/4.7K/1/4W/5%			EA	6.000
	3.....	108-047300	RES/47K/1/4W/5%			EA	7.000
	3.....	108-068200	RES/6.8K/1/4W/5%			EA	6.000
	3.....	134-710203	IC/74LS83N ADDER			EA	3.000
	3.....	134-710403	IC/74S00N 2-NAND			EA	2.000
	3.....	134-712803	IC/74LS00N 2-NAND			EA	2.000
	3.....	134-718803	IC/74LS175N REGISTER			EA	10.000
	3.....	134-722303	IC/74LS298N REGISTER			EA	3.000
	3.....	134-722703	IC/74LS08N 2-AND			EA	2.000
	3.....	201-001000	RES/F 1/8W/1 OHM			EA	1.000
	3.....	201-100100	PRES/ 1/8W 1K			EA	7.000
	3.....	201-110200	PRES 1/8W /11.0K			EA	1.000
	3.....	201-124000	PRES 1/8W/124 OHMS			EA	2.000
	3.....	201-137000	PRES 1/8W /137 OHM			EA	3.000
	3.....	201-143000	PRES 1/8W /143 OHM			EA	2.000
	3.....	201-143200	PRES 1/8W/14.3K			EA	1.000
	3.....	201-150000	PRES 1/8W/150 OHM			EA	7.000
	3.....	201-150300	PRES/150K/ 1/8 W/1%			EA	3.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001900			206-1 PLUG-IN				1
	3.....	201-178000	RES/1/8W./178 OHM			EA	3.000
	3.....	201-200100	PRES 1/8W/2K IRC			EA	5.000
	3.....	201-200200	PRES 1/8W/20K I.R.C.			EA	1.000
	3.....	201-221100	PRES 1/8W/2.21K			EA	1.000
	3.....	201-249200	PRES 1/8W/24.9K			EA	22.000
	3.....	201-267900	PRES 1/8W /26.7 OHM			EA	1.000
	3.....	201-270100	RES P/2.7K 1% 1/8W			EA	1.000
	3.....	201-316100	PRES 1/8W/3.16K IRC			EA	1.000
	3.....	201-374100	PRES 1/8W/3.74K			EA	1.000
	3.....	201-374200	PRES 1/8W/37.4K			EA	1.000
	3.....	201-402000	PRES 1/8W/402 OHM IRC			EA	1.000
	3.....	201-499000	PRES 1/8W/499 OHM			EA	4.000
	3.....	201-499100	PRES 1/8W/4.99K			EA	1.000
	3.....	201-750100	PRES 1/8W/7.5K			EA	1.000
	3.....	201-806100	PRES/ 1/8W 8.06K 1%			EA	5.000
	3.....	201-887200	PRES 1/8W/88.7 K			EA	1.000
	2.....	415-006400	206/205 DII AMP B0			EA	1.000
	3.....	000-901004	PCB/206/205 DII AMP	X		EA	1.000
	3.....	021-704700	TRANSIS/2N5224/NPN/12V/.6MW			EA	1.000
	3.....	021-706300	TRANSIS/2N3906			EA	1.000
	3.....	023-029200	CAP/22MF 10% 15V TANT AXL			EA	1.000
	3.....	023-700200	CAP/1000PF 5% 300V MICA RAD			EA	2.000
	3.....	023-702400	CAP/.01MF 20% 100V CERM RAD			EA	4.000
	3.....	023-702800	CAP/.68MF 10% 35V TANT AXL			EA	1.000
	3.....	023-706800	CAP/150PF 5% 500V MICA RAD			EA	1.000
	3.....	023-710200	CAP/5.5-18PF 50V CERM RAD			EA	10.000
	3.....	023-710600	CAP/10PF 10% 1000V CERM RAD			EA	2.000
	3.....	023-711400	CAP/.0022MF 10% 200V PLYE AXL			EA	1.000
	3.....	023-712100	CAP/.01MF 10% 200V PLYE AXL			EA	2.000
	3.....	023-718100	CAP/150PF 5% 50V MICA RAD			EA	2.000
	3.....	023-722600	CAP/.1MFD @ 250V 5%			EA	1.000
	3.....	024-712500	CON/20F EDG/SOL CIN 2521030160			EA	1.000
	3.....	025-726700	SW/PB-15/3 STA/6 POLE C.i.			EA	1.000
	3.....	025-726800	SW/PB-10/3 STA/2 POLE C.L			EA	1.000
	3.....	026-705500	POT/1K PCB DAL 784-20-102			EA	2.000
	3.....	026-707700	POT/ET 14W-200 MEPCO			EA	3.000
	3.....	026-709800	POT/10K/MEPCO ET14-10K			EA	3.000
	3.....	026-709900	POT-25/MEPCO ET14-25			EA	2.000
	3.....	108-010100	RES/1000HM/1/4W/5%			EA	7.000
	3.....	108-010400	RES/100K/1/4W/5%			EA	2.000
	3.....	108-022200	RES/2.2K/1/4W/5%			EA	2.000
	3.....	108-022300	RES/22K/1/4W/5%			EA	1.000
	3.....	108-033400	RES/330K/1/4W/5%			EA	1.000
	3.....	108-047200	RES/4.7K/1/4W/5%			EA	3.000
	3.....	108-068100	RES/6800HM/1/4W/5%			EA	1.000
	3.....	108-082200	RES/8.2K/1/4W/5%			EA	1.000
	3.....	134-730600	IC/CA3140S OPAMP			EA	5.000
	3.....	201-100000	PRES 1/8W/100 OHMS MF5C 1/8W			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001900			206-1 PLUG-IN				1
	3.....	201-100200	PRES 1/8W/10K 1/8W			EA	6.000
	3.....	201-100300	PRES 1/8W/100K 1/8W			EA	2.000
	3.....	201-100400	PRES 1/8W/1. MEG 1/8W			EA	4.000
	3.....	201-105200	PRES 1/8W/10.5K			EA	1.000
	3.....	201-169200	PRES 1/8W/16.9K I.R.C.			EA	1.000
	3.....	201-249300	PRES 1/8W/249K I.R.C.			EA	1.000
	3.....	201-374100	PRES 1/8W/3.74K			EA	1.000
	3.....	201-374200	PRES 1/8W/37.4K			EA	1.000
	3.....	201-499100	PRES 1/8W/4.99K			EA	3.000
	3.....	201-887100	PRES/8.87K 1/8W			EA	1.000
	3.....	201-909300	PRES/909K/ 1/8 W/1%			EA	2.000
	3.....	214-422100	PRS/RES 4.22K .1% 1/8W			EA	2.000
	2.....	475-002100	206/205 DII AMP FINAL ASSY			EA	1.000
	3.....	024-058900	CON/1F CXL/SOL APH F-UG 657-U			EA	2.000
	3.....	025-705500	SW/SL 2P2T CW GF-126-G20-28			EA	1.000
	3.....	026-712200	POT/BD MTG/5K			EA	1.000
	3.....	035-701300	BUTT/PUSH CL J52305-04500			EA	6.000
	3.....	044-704504	SHIELD/D11 AMP	X		EA	1.000
	3.....	045-703600	KNOB/KN-500BA-1/8"			EA	1.000
	3.....	068-728105	PAN/FRT/D11 AMP	X		EA	1.000
	3.....	085-705400	PROBE/COLINE 900-90-505			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002000			206-2 PLUG IN				1
	1.....	415-005900	206 CONTROL BD			EA	1.000
	2.....	000-901207	PCB/206 CONTROL	X		EA	1.000
	2.....	021-702700	TRN NPN 2N4265 12V .35W B MOT			EA	2.000
	2.....	022-706000	DIO SCHT MBD101 4V .1A B MOT			EA	2.000
	2.....	023-029200	CAP 22MF 15V 10% TANT G KEM			EA	1.000
	2.....	023-700100	CAP 100PF 500V 5% MICA R ARC			EA	2.000
	2.....	023-700300	CAP 500PF 500V 5% MICA R ARC			EA	1.000
	2.....	023-700500	CAP 250PF 500V 5% MICA R ARC			EA	1.000
	2.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	5.000
	2.....	023-710600	CAP 10PF 1000V 10% CERM R CLB			EA	1.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	4.000
	2.....	023-715100	CAP .05MF 50V CERM R ARC			EA	5.000
	2.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	2.000
	2.....	024-734000	CONN/IC SOC/20 PIN			EA	1.000
	2.....	025-727000	SW/ROT/32 POS.			EA	1.000
	2.....	100-700700	RES NET/CSP10E-01-502J			EA	2.000
	2.....	108-010000	RES 10 05% 1/4W			EA	3.000
	2.....	108-010200	RES 1K 05% 1/4W			EA	2.000
	2.....	108-010300	RES 10K 05% 1/4W			EA	1.000
	2.....	108-015200	RES 1.5K 05% 1/4W			EA	1.000
	2.....	108-022100	RES 220 05% 1/4W			EA	1.000
	2.....	108-022200	RES 2.2K 05% 1/4W			EA	2.000
	2.....	108-033200	RES 3.3K 05% 1/4W			EA	1.000
	2.....	108-047000	RES 47 05% 1/4W			EA	2.000
	2.....	108-047100	RES 470 05% 1/4W			EA	1.000
	2.....	108-068100	RES 680 05% 1/4W			EA	1.000
	2.....	134-701803	IC/7400N 2-NAND			EA	1.000
	2.....	134-710103	IC/74164N SHIFT REGISTER			EA	2.000
	2.....	134-711203	IC/74S74N FLIP-FLOP			EA	5.000
	2.....	134-712803	IC/74LS00N 2-NAND			EA	4.000
	2.....	134-712903	IC/74LS04N HEX INVERTER			EA	2.000
	2.....	134-713203	IC/74LS74N FLIP-FLOP			EA	11.000
	2.....	134-713703	IC/74LS253N MULTIPLEXER			EA	4.000
	2.....	134-713900	IC/MK5009P MOS LSI			EA	1.000
	2.....	134-715503	IC/74LS153N MULTIPLEXER			EA	2.000
	2.....	134-716203	IC/74S175N REGISTER			EA	1.000
	2.....	134-717403	IC/74S287N PROM			EA	1.000
	2.....	134-717903	IC/74LS86N 2-XOR			EA	1.000
	2.....	134-718803	IC/74LS175N REGISTER			EA	6.000
	2.....	134-719103	IC/74196N COUNTER			EA	1.000
	2.....	134-719403	IC/74LS151N MULTIPLEXER			EA	3.000
	2.....	134-719503	IC/74S288N PROM			EA	1.000
	2.....	134-720403	IC/74LS02N 2-NOR			EA	2.000
	2.....	134-722703	IC/74LS08N 2-AND			EA	2.000
	2.....	134-724903	IC/74S169 COUNTER			EA	2.000
	2.....	134-728803	IC/74S472 PROM			EA	1.000
	2.....	134-730903	IC/74LS367N HEX DRIVER			EA	4.000
	2.....	134-731603	IC/74LS251N MULTIPLEXER			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002000			206-2 PLUG IN				1
	2.....	191-704600	CRYS/HC18/U 40 MHZ .005			EA	1.000
	1.....	415-006000	206 STORAGE CONTROL BD			EA	1.000
	2.....	000-900806	PCB/206 STORAGE CONTROL	X		EA	1.000
	2.....	025-726900	SW/PB/GREEN LED			EA	1.000
	2.....	025-733800	SW/PB 1P2TM SH SRUL/RED			EA	2.000
	2.....	035-701800	BUTT/RECT SH SRKL/BLK W/RED			CA	2.000
	2.....	085-708700	CBL/20 COND/AP 922531-20-99-3			EA	1.000
	2.....	108-022100	RES 220 05% 1/4W			EA	3.000
	2.....	108-022200	RES 2.2K 05% 1/4W			EA	3.000
	2.....	108-022300	RES 22K 05% 1/4W			EA	3.000
	1.....	415-006100	206 MEMORY BD			EA	1.000
	2.....	000-901404	PCB/206 MEMORY	X		EA	1.000
	2.....	009-711200	SPCR/1/2" RICHCO 1CBS-8N			EA	2.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	5.000
	2.....	023-715100	CAP .05MF 50V CERM R ARC			EA	5.000
	2.....	134-717903	IC/74LS86N 2-XOR			EA	1.000
	2.....	134-722403	IC/74LS139N MULTIPLEXER			EA	1.000
	2.....	134-723903	IC/74LS257 MULTIPLEXER			EA	11.000
	2.....	134-724903	IC/74S169 COUNTER			EA	3.000
	2.....	134-725103	IC/2102LIDCQP			EA	48.000
	1.....	415-006200	206 MOTHER BD			EA	1.000
	2.....	000-901103	PCB/206 MOTHER	X		EA	1.000
	2.....	015-702700	PIN/350036-2 26.18 GA			EA	3.000
	2.....	021-706200	TRN FETJN E230 40V .35W B SLX			EA	2.000
	2.....	022-703800	DIO ZENR 1N5234 6.2V .5W G MOT			EA	1.000
	2.....	022-709400	DIO TRRF 1N4150 50V .2A G TXI			EA	3.000
	2.....	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	2.000
	2.....	023-700300	CAP 500PF 500V 5% MICA R ARC			EA	1.000
	2.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	1.000
	2.....	023-706900	CAP 50MF 50V ALUM G SPG			EA	1.000
	2.....	023-708000	CAP 3.3PF 1000V 15% CERM R CLB			EA	2.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	1.000
	2.....	023-713500	CAP 4.7MF 50V 10% TANT G KEM			EA	4.000
	2.....	023-715100	CAP .05MF 50V CERM R ARC			EA	4.000
	2.....	024-733200	CON/6M HDR/SOL AMP 9-350259-2			EA	1.000
	2.....	024-737200	CONN/56PIN/AMP 67907.3			EA	2.000
	2.....	024-744700	CON/80F EDG/SOL MCP MP0125-40			EA	2.000
	2.....	108-010300	RES 10K 05% 1/4W			EA	2.000
	2.....	108-010400	RES 100K 05% 1/4W			EA	1.000
	2.....	108-010500	RES 1M 05% 1/4W			EA	1.000
	2.....	108-012300	RES 12K 05% 1/4W			EA	2.000
	2.....	108-015300	RES 15K 05% 1/4W			EA	2.000
	2.....	108-018300	RES 18K 05% 1/4W			EA	2.000
	2.....	108-022000	RES 22 05% 1/4W			EA	4.000
	2.....	108-022100	RES 220 05% 1/4W			EA	1.000
	2.....	108-022300	RES 22K 05% 1/4W			EA	3.000
	2.....	108-027100	RES 270 05% 1/4W			EA	1.000
	2.....	108-033100	RES 330 05% 1/4W			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002000			206-2 PLUG IN				1
	2.....	108-033200	RES 3.3K 05% 1/4W			EA	2.000
	2.....	108-047100	RES 470 05% 1/4W			EA	1.000
	2.....	108-047300	RES 47K 05% 1/4W			EA	2.000
	2.....	108-068100	RES 680 05% 1/4W			EA	1.000
	2.....	108-068200	RES 6.8K 05% 1/4W			EA	1.000
	2.....	108-082200	RES 8.2K 05% 1/4W			EA	2.000
	2.....	134-711900	IC/LM318H OPAMP			EA	2.000
	2.....	134-712703	IC/TCL820CN3			EA	1.000
	2.....	134-713203	IC/74LS74N FLIP-FLOP			EA	2.000
	2.....	134-716803	IC/74123N MONOSTABLE			EA	1.000
	2.....	134-723903	IC/74LS257 MULTIPLEXER			EA	1.000
	1.....	415-006300	206 DII EXTENDER BD			EA	1.000
	2.....	000-902301	PCB/EXTENDER BD/PLUG-IN	X		EA	1.000
	2.....	024-712500	CON/20F EDG/SOL CIN 2521030160			EA	1.000
	1.....	465-001600	206 FRONT PANEL			EA	1.000
	2.....	010-700900	NUT/BL ANODI W-NU-17D			EA	1.000
	2.....	011-721607	BRKT/MOTHER BD/EXPL	X		EA	1.000
	2.....	011-723401	BRKT/206 RETAINER	X		EA	1.000
	2.....	020-701808	CHAS/PLUG-IN			EA	1.000
	2.....	022-714500	DIO LEDG 4060 1.9V 10MA M 1NM			EA	1.000
	2.....	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	1.000
	2.....	024-058900	CON/1F CXL/SOL APH F-UG 657-U			EA	1.000
	2.....	025-718000	SW/C + K #8531			EA	1.000
	2.....	025-727600	SW/CTS/#T202/2 POLE/2-5STA			EA	3.000
	2.....	025-727900	SW/GF-126-PC-020-18			EA	3.000
	2.....	026-710000	POT/100K/C.L. BA147-0134			EA	1.000
	2.....	034-713300	GUIDE/SCANBE #11633-4			EA	2.000
	2.....	045-703200	KNOB/KPN-500BA/1/8			EA	3.000
	2.....	045-703500	KNOB/KPN-900BA-1/4"			EA	1.000
	2.....	045-703600	KNOB/KN-500BA-1/8"			EA	1.000
	2.....	051-700100	BUMPER/SJ5004X			EA	3.000
	2.....	068-727709	PAN/206 FRONT	X		EA	1.000
	2.....	068-740800	PAN/206 FRONT SUB	X		EA	1.000
	2.....	085-900100	CBL/20 COND/PLUG-IN FRONT	X		EA	1.000
	2.....	093-702400	FASTNR/SCR 6-32 X 1/4" BLK			EA	4.000
	1.....	475-001900	206 FINAL ASSEMBLY			EA	1.000
	2.....	034-714300	GUIDE/W/TAPE			EA	3.000
	2.....	042-711001	COVER/206 AMP DIVIDER	X		EA	1.000
	2.....	044-705001	SHIELD/206 MEMORY BD	X		EA	1.000
	1.....	845-000200	206 DII AMP/ADC			EA	2.000
	2.....	415-005800	206 ADC BD			EA	2.000
	3.....	000-900905	PCB/206 ADC	X		EA	2.000
	3.....	021-701800	TRN PNP 2N3905 40V .35W B MOT			EA	4.000
	3.....	021-702200	TRN NPN 2N3903 40V 1W B MOT			EA	16.000
	3.....	021-704700	TRN NPN 2N5224 12V .35W B MOT			EA	10.000
	3.....	021-706300	TRN PNP 2N3906 40V .625W B TXI			EA	30.000
	3.....	022-711600	DIO TRRF 1N4376 10V .05A G FCH			EA	92.000
	3.....	022-714100	DIO SCHT HSCH1001 60V15MAG HPC			EA	32.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002000			206-2 PLUG IN				1
	3.....	023-029200	CAP 22MF 15V 10% TANT G KEM			EA	4.000
	3.....	023-701600	CAP 2.2MF 20V 10% TANT G KEM			EA	4.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	8.000
	3.....	023-702700	CAP .22MF 35V 10% TANT G KEM			EA	4.000
	3.....	023-706700	CAP 390PF 500V 5% MICA R ARC			EA	4.000
	3.....	023-706800	CAP 150PF 500V 5% MICA R ARC			EA	2.000
	3.....	023-709100	CAP 20PF 500V 5% MICA R ARC			EA	8.000
	3.....	023-711000	CAP 22MF 35V 10% TANT G KEM			EA	2.000
	3.....	023-712200	CAP .022MF 200V 10% PLYE G SPG			EA	2.000
	3.....	023-717800	CAP 6PF 300V 8.3% MICA R ARC			EA	10.000
	3.....	023-719700	CAP 2.2MF 50V 10% TANT G KEM			EA	4.000
	3.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	12.000
	3.....	026-705600	POT/2K PCB DAL 784-20-202			EA	2.000
	3.....	026-705700	POT/5K PCB DAL 784-20-502			EA	2.000
	3.....	026-706200	POT/50K PCB DAL 784-20-503			EA	10.000
	3.....	026-707700	POT/ET 14W-200 MEPCO			EA	10.000
	3.....	100-700900	RES NET/7X25K/.01%			EA	2.000
	3.....	108-010100	RES 100 05% 1/4W			EA	6.000
	3.....	108-010200	RES 1K 05% 1/4W			EA	6.000
	3.....	108-010300	RES 10K 05% 1/4W			EA	26.000
	3.....	108-010400	RES 100K 05% 1/4W			EA	6.000
	3.....	108-015100	RES 150 05% 1/4W			EA	2.000
	3.....	108-015300	RES 15K 05% 1/4W			EA	10.000
	3.....	108-022000	RES 22 05% 1/4W			EA	2.000
	3.....	108-022100	RES 220 05% 1/4W			EA	2.000
	3.....	108-033200	RES 3.3K 05% 1/4W			EA	8.000
	3.....	108-039200	RES 3.9K 05% 1/4W			EA	6.000
	3.....	108-047000	RES 47 05% 1/4W			EA	14.000
	3.....	108-047200	RES 4.7K 05% 1/4W			EA	12.000
	3.....	108-047300	RES 47K 05% 1/4W			EA	14.000
	3.....	108-068200	RES 6.8K 05% 1/4W			EA	12.000
	3.....	121-702700	REG 5 TO 30V .5A 78MGU1C E FCH			EA	4.000
	3.....	121-702800	REG -2.2/-30V.5A 79MGU1C E FCH			EA	4.000
	3.....	134-710203	IC/74LS83N ADDER			EA	6.000
	3.....	134-710403	IC/74S00N 2-NAND			EA	4.000
	3.....	134-712803	IC/74LS00N 2-NAND			EA	4.000
	3.....	134-718803	IC/74LS175N REGISTER			EA	20.000
	3.....	134-722303	IC/74LS298N REGISTER			EA	6.000
	3.....	134-722703	IC/74LS08N 2-AND			EA	4.000
	3.....	201-001000	RES 1 01% 1/8W PRES			EA	2.000
	3.....	201-100100	RES 1K 01% 1/8W PRES			EA	14.000
	3.....	201-110200	RES 11K 01% 1/8W PRES			EA	2.000
	3.....	201-124000	RES 124 01% 1/8W PRES			EA	4.000
	3.....	201-137000	RES 137 01% 1/8W PRES			EA	6.000
	3.....	201-143000	RES 143 01% 1/8W PRES			EA	4.000
	3.....	201-143200	RES 14.3K 01% 1/8W PRES			EA	2.000
	3.....	201-150000	RES 150 01% 1/8W PRES			EA	14.000
	3.....	201-150300	RES 150K 01% 1/8W PRES			EA	6.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002000			206-2 PLUG IN				1
	3.....	201-178000	RES 178 01% 1/8W PRES			EA	6.000
	3.....	201-200100	RES 2K 01% 1/8W PRES			EA	10.000
	3.....	201-200200	RES 20K 01% 1/8W PRES			EA	2.000
	3.....	201-221100	RES 2.21K 01% 1/8W PRES			EA	2.000
	3.....	201-249200	RES 24.9K 01% 1/8W PRES			EA	44.000
	3.....	201-267900	RES 26.7 01% 1/8W PRES			EA	2.000
	3.....	201-274100	RES 2.74K 01% 1/8W PRES			EA	2.000
	3.....	201-316100	RES 3.16K 01% 1/8W PRES			EA	2.000
	3.....	201-374100	RES 3.74K 01% 1/8W PRES			EA	2.000
	3.....	201-374200	RES 37.4K 01% 1/8W PRES			EA	2.000
	3.....	201-402000	RES 402 01% 1/8W PRES			EA	2.000
	3.....	201-499000	RES 499 01% 1/8W PRES			EA	8.000
	3.....	201-499100	RES 4.99K 01% 1/8W PRES			EA	2.000
	3.....	201-750100	RES 7.5K 01% 1/8W PRES			EA	2.000
	3.....	201-806100	RES 8.06K 01% 1/8W PRES			EA	10.000
	3.....	201-887200	RES 88.7K 01% 1/8W PRES			EA	2.000
	2.....	415-006400	206 DII AMP BD			EA	2.000
	3.....	000-901004	PCB/206 DII AMP	X		EA	2.000
	3.....	021-704700	TRN NPN 2N5224 12V .35W B MOT			EA	2.000
	3.....	021-706300	TRN PNP 2N3906 40V .625W B TXI			EA	2.000
	3.....	023-029200	CAP 22MF 15V 10% TANT G KEM			EA	2.000
	3.....	023-700100	CAP 100PF 500V 5% MICA R ARC			EA	4.000
	3.....	023-700200	CAP 1000PF 300V 5% MICA F ARC			EA	4.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	8.000
	3.....	023-702800	CAP .68MF 35V 10% TANT G KEM			EA	2.000
	3.....	023-706800	CAP 150PF 500V 5% MICA R ARC			EA	2.000
	3.....	023-710200	CAP 5.5 TO 18PF 50V CERM STT			EA	20.000
	3.....	023-710600	CAP 10PF 1000V 10% CERM R CLB			EA	4.000
	3.....	023-711300	CAP .1MF 250V 10% PLYE M SEC			EA	2.000
	3.....	023-711400	CAP .0022MF 200V 10%PLYE G SPG			EA	2.000
	3.....	023-712100	CAP .01MF 200V 10% PLYE G SPG			EA	4.000
	3.....	024-712500	CON/20F EDG/SOL CIN 2521030160			EA	2.000
	3.....	025-726700	SW/PB-15/3 STA/6 POLE C.I.			EA	2.000
	3.....	025-726800	SW/PB-10/3 STA/2 POLE C.I			EA	2.000
	3.....	026-705500	POT/1K PCB DAL 784-20-102			EA	4.000
	3.....	026-707700	POT/ET 14W 200 MEPCO			EA	6.000
	3.....	026-709800	POT/10K/MEPCO ET14-10K			EA	6.000
	3.....	026-709900	POT-25/MEPCO ET14-25			EA	4.000
	3.....	108-010100	RES 100 05% 1/4W			EA	14.000
	3.....	108-010400	RES 100K 05% 1/4W			EA	4.000
	3.....	108-022200	RES 2.2K 05% 1/4W			EA	4.000
	3.....	108-022300	RES 22K 05% 1/4W			EA	2.000
	3.....	108-033400	RES 330K 05% 1/4W			EA	2.000
	3.....	108-047200	RES 4.7K 05% 1/4W			EA	6.000
	3.....	108-068100	RES 680 05% 1/4W			EA	2.000
	3.....	108-082200	RES 8.2K 05% 1/4W			EA	2.000
	3.....	134-730600	IC/CA3140S OPAMP			EA	10.000
	3.....	201-100000	RES 100 01% 1/8W PRES			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002000			206-2 PLUG IN				1
	3.....	201-100200	RES 10K 01% 1/8W PRES			EA	12.000
	3.....	201-100300	RES 100K 01% 1/8W PRES			EA	4.000
	3.....	201-100400	RES 1M 01% 1/8W PRES			EA	8.000
	3.....	201-105200	RES 10.5K 01% 1/8W PRES			EA	2.000
	3.....	201-169200	RES 16.9K 01% 1/8W PRES			EA	2.000
	3.....	201-249300	RES 249K 01% 1/8W PRES			EA	2.000
	3.....	201-374100	RES 3.74K 01% 1/8W PRES			EA	2.000
	3.....	201-374200	RES 37.4K 01% 1/8W PRES			EA	2.000
	3.....	201-499100	RES 4.99K 01% 1/8W PRES			EA	6.000
	3.....	201-825100	RES 8.25K 01% 1/8W PRES			EA	2.000
	3.....	201-909300	RES 909K 01% 1/8W PRES			EA	4.000
	3.....	214-422100	RES 4.22K .1% 1/8W PRES			EA	4.000
	2.....	475-002100	206 DII AMP FINAL ASSEMBLY			EA	2.000
	3.....	024-058900	CON/1F CXL/SOL APH F-UG 657-U			EA	4.000
	3.....	025-705500	SW/SL 2P2T CW GF-126-G20-28			EA	2.000
	3.....	026-712200	POT/5K PCB BRS 83C1D-E20-J13-5			EA	2.000
	3.....	035-701300	BUTT/PUSH CL J52305-04500			EA	12.000
	3.....	044-704504	SHIELD/DII AMP	X		EA	2.000
	3.....	045-703600	KNOB/KN-500BA-1/8"			EA	2.000
	3.....	068-728108	PAN/206 DII FRONT	X		EA	2.000
	3.....	085-705400	PROBE/COLINE 900-90-505			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001600			2090-2 EXPLORER II				1
	1.....	415-004900	2090 MAIN FRAME BD			EA	1.000
	2.....	000-900301	PCB/MAIN FRAME/EXP SERIES	X		EA	1.000
	2.....	021-702500	TRN NPN 2N3302 30V .36W A MOT			EA	2.000
	2.....	022-701100	DIO GERM 1N270 80V .2A G ITT			EA	5.000
	2.....	023-701600	CAP 2.2MF 20V 10% TANT G KEM			EA	2.000
	2.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	2.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	9.000
	2.....	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	7.000
	2.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	1.000
	2.....	024-721300	CON/24F DIP/SOL AMP 640361-3			EA	2.000
	2.....	024-724800	CON/40F DIP/SOL AMP 640379-3			EA	3.000
	2.....	024-734000	CONN/IC SOC/20 PIN			EA	5.000
	2.....	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	2.....	026-705500	POT/1K PCB DAL 784-20-102			EA	2.000
	2.....	100-700700	RES NET/CSP10E-01-502J			EA	3.000
	2.....	108-010300	RES 10K 05% 1/4W			EA	1.000
	2.....	108-010400	RES 100K 05% 1/4W			EA	1.000
	2.....	108-039100	RES 390 05% 1/4W			EA	6.000
	2.....	108-047200	RES 4.7K 05% 1/4W			EA	11.000
	2.....	108-047300	RES 47K 05% 1/4W			EA	1.000
	2.....	121-700900	REG -15V .35A 79M15AUC E FCH			EA	1.000
	2.....	134-705703	IC/741CP			EA	2.000
	2.....	134-712903	IC/74LS04N HEX INVERTER			EA	1.000
	2.....	134-713203	IC/74LS74N FLIP-FLOP			EA	6.000
	2.....	134-713703	IC/74LS253N MULTIPLEXER			EA	1.000
	2.....	134-717403	IC/74S287N PROM			EA	1.000
	2.....	134-718503	IC/74S182N CARRY LOOKAHEAD			EA	1.000
	2.....	134-720503	IC/74LS174N REGISTER			EA	4.000
	2.....	134-724500	IC/DAC80-CBI-V 12BIT DAC			EA	2.000
	2.....	134-724903	IC/74S169 COUNTER			EA	3.000
	2.....	134-728803	IC/74S472 PROM			EA	5.000
	2.....	134-730903	IC/74LS367N HEX DRIVER			EA	6.000
	2.....	134-731003	IC/74LS138N MULTIPLEXER			EA	3.000
	2.....	134-731603	IC/74LS251N MULTIPLEXER			EA	2.000
	2.....	134-732100	IC/96L02 MONOSTABLE			EA	1.000
	2.....	134-734300	IC/2901A 4BIT SLICE			EA	3.000
	1.....	415-005000	2090 BLANKING BD			EA	1.000
	2.....	000-900202	PCB/2090 BLANKING	X		EA	1.000
	2.....	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	2.....	017-704200	LABEL/HI VOLT/EXPL	X		EA	1.000
	2.....	021-700600	TRN NPN 2N2484 60V .36W A MOT			EA	4.000
	2.....	021-702200	TRN NPN 2N3903 40V 1W B MOT			EA	1.000
	2.....	021-711100	TRN NPN MPSU10 300V 1W E MOT			EA	4.000
	2.....	021-711400	TRN FETP M113 30V .22W A SLX			EA	1.000
	2.....	022-700800	DIO RECT 1N4004 400V 1A G TXI			EA	1.000
	2.....	022-711600	DIO TRRF 1N4376 10V .05A G FCH			EA	1.000
	2.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	2.000
	2.....	023-707500	CAP 6.8MF 35V 10% TANT G KEM			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001600			2090-2 EXPLORER II				1
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	1.000
	2.....	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	6.000
	2.....	023-719400	CAP .01MF 3000V 20% CERM R SPG			EA	2.000
	2.....	024-719900	CON/15F REC/CRP AMP 1-350244-9			EA	1.000
	2.....	024-724600	CON/10F REC/IDP MMM 3473-6000			EA	1.000
	2.....	024-734900	CON/8M HDR/SOL BRG 65532-108			EA	2.000
	2.....	024-735900	CONN/10PIN/3M3474.0001T			EA	1.000
	2.....	026-705700	POT/5K PCB DAL 784-20-502			EA	5.000
	2.....	026-705900	POT/500K PCB DAL 784-20-504			EA	1.000
	2.....	026-706400	POT/1MEG PCB DAL 784-20-105			EA	1.000
	2.....	032-700600	INSUL/TRANSIS PAD			EA	4.000
	2.....	042-711400	COVER/BLANK-2090	X		EA	1.000
	2.....	042-712600	COVER/BLANKING BD	X		EA	1.000
	2.....	105-022300	RES 22K 05% 2W			EA	2.000
	2.....	105-027300	RES 27K 05% 2W			EA	2.000
	2.....	108-010500	RES 1M 05% 1/4W			EA	1.000
	2.....	108-022200	RES 2.2K 05% 1/4W			EA	1.000
	2.....	108-022300	RES 22K 05% 1/4W			EA	2.000
	2.....	108-022400	RES 220K 05% 1/4W			EA	1.000
	2.....	108-047100	RES 470 05% 1/4W			EA	2.000
	2.....	108-047200	RES 4.7K 05% 1/4W			EA	1.000
	2.....	108-056000	RES 56 05% 1/4W			EA	1.000
	2.....	134-729400	IC/6N137			EA	1.000
	2.....	201-100300	RES 100K 01% 1/8W PRES			EA	2.000
	2.....	201-127300	RES 127K 01% 1/8W PRES			EA	3.000
	2.....	201-165200	RES 16.5K 01% 1/8W PRES			EA	1.000
	2.....	201-200200	RES 20K 01% 1/8W PRES			EA	3.000
	2.....	201-200300	RES 200K 01% 1/8W PRES			EA	4.000
	2.....	201-243200	RES 24.3K 01% 1/8W PRES			EA	1.000
	2.....	201-249100	RES 2.49K 01% 1/8W PRES			EA	1.000
	2.....	201-499200	RES 49.9K 01% 1/8W PRES			EA	1.000
	2.....	201-750200	RES 75K 01% 1/8W PRES			EA	1.000
	2.....	201-976200	RES 97.6K 01% 1/8W PRES			EA	1.000
	1.....	415-007000	2090 4K MEMORY BD			EA	1.000
	2.....	000-900402	P.C.B./2090 MEMORY 4K	X		EA	1.000
	2.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	4.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	13.000
	2.....	024-734400	CON/18F DIP/SOL AMP 640359-3			EA	1.000
	2.....	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	2.....	100-700700	RES NET/CSP10E-01-502J			EA	1.000
	2.....	108-047100	RES 470 05% 1/4W			EA	1.000
	2.....	134-723003	IC/74LS14N HEX INVERTER			EA	4.000
	2.....	134-723903	IC/74LS257 MULTIPLEXER			EA	3.000
	2.....	134-730903	IC/74LS367N HEX DRIVER			EA	4.000
	2.....	134-736803	IC/74LS374N REGISTER			EA	3.000
	2.....	134-736903	IC/74LS241N OCTAL BUFFER			EA	13.000
	2.....	134-742300	IC/2141-2			EA	1.000
	1.....	415-007200	2090-2 INNER CONN BD 4K				

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001600			2090-2 EXPLORER II				1
	2.....	000-900500	PCB/INTERFACE BD/2090	X		EA	1.000
	2.....	024-725000	CON/12M HDR/SOL AMP 9-350264-1			EA	1.000
	2.....	085-707800	CBL/50 COND/13 IN./SPEC			EA	1.000
	1.....	465-001400	2090 FRONT PANEL			EA	1.000
	2.....	011-723001	BRKT/2090 STRAIN RELIEF	X		EA	1.000
	2.....	015-706300	PIN/350663-6 AMP SPOOL			EA	4.000
	2.....	017-704600	LABEL/LOGO/JEWEL			EA	1.000
	2.....	022-714800	DIO LEDG FLV340 2.3V20MA L FCH			EA	1.000
	2.....	024-721700	CON/4M REC/CRP AMP 1-350233-9			EA	1.000
	2.....	025-715500	SW/PA166-011-0AA			EA	2.000
	2.....	025-718100	SW/7215J612ZCE-2 C&K			EA	2.000
	2.....	025-718500	SW/LB 2P2T LI 01-700155			EA	1.000
	2.....	025-721300	SW/TOGGLE #LFH-123			EA	2.000
	2.....	025-727100	SW/845773-SK-1			EA	1.000
	2.....	025-727200	SW/C & K SPDT 8121-J82			EA	1.000
	2.....	025-734300	SW/RO 1PL2-7PS CL PA166-025			EA	1.000
	2.....	045-703301	KNOB/KX-12322 1/8"			EA	4.000
	2.....	068-726905	PAN/2090 FRONT BAY 2	X		EA	1.000
	2.....	068-741001	PAN/2090 FRONT SUB BAY 2	X		EA	1.000
	2.....	085-900000	CBL/26 COND/2090 FRONT	X		EA	1.000
	2.....	093-702400	FASTNR/SCR 6-32 X 1/4" BLK			EA	4.000
	1.....	475-001400	2090-2 FINAL ASSY			EA	1.000
	2.....	011-724500	BRKT/FRAME GROUND/2090			EA	1.000
	2.....	017-704301	LABEL/2090-2	X		EA	1.000
	2.....	024-727000	CON/6M REC/CRP AMP 1-350234-9			EA	1.000
	2.....	026-707800	POT/BA811-6670C.L. 250K			EA	1.000
	2.....	042-710802	COVER/BOTTOM/EXPL II	X		EA	1.000
	2.....	042-712500	COVER/LINE VOLTAGE	X		EA	1.000
	2.....	042-712702	COVER/L SIDE-2090-2	X		EA	2.000
	2.....	051-700300	BUMPER/5025			EA	10.000
	2.....	085-703800	CORD/A/C/LINE P2392 SW			EA	1.000
	2.....	164-700500	GRAT/BLUE/EXPL.	X		EA	1.000
	2.....	268-703001	BEZEL/EXP SERIES	X		EA	1.000
	2.....	268-704200	MECH MISC/TILT STAND/8"			EA	1.000
	1.....	475-001600	2090-2 CABINET ASSY			EA	1.000
	2.....	010-701500	NUT/SQUARE .860" #8-32	X		EA	1.000
	2.....	024-740300	CONN/AMP 87499-3/2PIN			EA	1.000
	2.....	027-700600	C.R.T./82D14GH/AMPEREX			EA	1.000
	2.....	034-714701	RAIL/TOP CENTER/EXPL.	X		EA	1.000
	2.....	034-714803	RAIL/SIDE EXPL			EA	2.000
	2.....	034-714901	RAIL/CONN/EXPL	X		EA	2.000
	2.....	034-715401	RAIL/PLUG IN	X		EA	1.000
	2.....	034-716200	RAIL/EXP II SUPPORT	X		EA	1.000
	2.....	044-704305	SHIELD/2090 CRT	X		EA	1.000
	2.....	049-700100	HANDLE/VINYLUXE			EA	1.000
	2.....	129-900101	FRAME/2090 ROUNDED END	X		EA	4.000
	1.....	645-000400	2090 M.F.POWER SUPPLY			EA	1.000
	2.....	415-005300	2090 POWER SUPPLY BD			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001600			2090-2 EXPLORER II				1
	3.....	000-900004	PCB/2090 REGULATOR	X		EA	1.000
	3.....	006-701400	WASH/NO J TEFLON			EA	2.000
	3.....	011-716401	BRKT/H.V. XFORMER 60HZ	X		EA	1.000
	3.....	011-720900	BRKT/INTEN. FOCUS/2090	X		EA	1.000
	3.....	011-721000	BRKT/PWR SPLY MTG/2090	X		EA	2.000
	3.....	011-723101	BRKT/HI VOLT XFORMER/EXPL	X		EA	1.000
	3.....	015-706400	PIN/350665-2 AMP SPOOL			EA	30.000
	3.....	017-704200	LABEL/HI VOLT/EXPL	X		EA	6.000
	3.....	019-706000	XFORMER/ITA-1552-11			EA	1.000
	3.....	019-707000	XFORMER/HV WINDING/EXPL2 3	X		EA	1.000
	3.....	021-703800	TRN NPN 2N5978 60V 75W E		MOT	EA	2.000
	3.....	021-708800	TRN NPN 2N5301 40V 200W D		MOT	EA	1.000
	3.....	022-700800	DIO RECT 1N4004 400V 1A G		TXI	EA	6.000
	3.....	022-705100	DIO ZENR 1N5268 82V .5W G		MOT	EA	1.000
	3.....	022-706900	DIO TRRF FM50 5KV .01A G		SEM	EA	2.000
	3.....	022-707000	DIO TRRF S2F 200V 1A G		SEM	EA	5.000
	3.....	022-711900	DIO BRID VE48X 400V 1A C		VAR	EA	1.000
	3.....	023-029200	CAP 22MF 15V 10% TANT G		KEM	EA	1.000
	3.....	023-700200	CAP 1000PF 300V 5% MICA R		ARC	EA	1.000
	3.....	023-702800	CAP .68MF 35V 10% TANT G		KEM	EA	1.000
	3.....	023-704700	CAP 1MF 35V 10% TANT G		KEM	EA	2.000
	3.....	023-706900	CAP 50MF 50V ALUM G		SPG	EA	1.000
	3.....	023-707300	CAP 1MF 200V 10% MYLR G		TRW	EA	2.000
	3.....	023-711200	CAP 220MF 10V 10% TANT G		KEM	EA	1.000
	3.....	023-713500	CAP 4.7MF 50V 10% TANT G		KEM	EA	2.000
	3.....	023-719400	CAP .01MF 3000V 20% CERM R		SPG	EA	5.000
	3.....	023-719700	CAP 2.2MF 50V 10% TANT G		KEM	EA	5.000
	3.....	024-719600	CON/15M HDR/SOL AMP 9-350268-1			EA	1.000
	3.....	024-722500	CON/12F REC/CRP AMP 1-350243-9			EA	2.000
	3.....	024-723400	CON/2M HDR/SOL AMP 9-350360-1			EA	1.000
	3.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	3.....	026-705400	POT/500 PCB DAL 784-20-501			EA	5.000
	3.....	026-706000	POT/20K PCB DAL 784-20-203			EA	1.000
	3.....	026-706500	POT/BRNS 500K			EA	2.000
	3.....	032-700800	INSUL/DIODE			EA	1.000
	3.....	032-700900	INSUL/DIODE			EA	7.000
	3.....	044-704600	SHIELD/H.V. EXPL.	X		EA	1.000
	3.....	067-700300	CORE/E1960-S-011A			EA	2.000
	3.....	070-703400	FUSE/.75 A/276.750 LITTLEFUSE			EA	1.000
	3.....	079-700000	THERMOS/165 DEG 7BTL6B10			EA	1.000
	3.....	098-700200	HT SNK/207CB W			EA	1.000
	3.....	098-704000	HT SNK/EXPL P.S.	X		EA	1.000
	3.....	098-704300	HT SNK	X		EA	1.000
	3.....	101-010500	RES 1M 10% 1/2W			EA	2.000
	3.....	101-022500	RES 2.2M 10% 1/2W			EA	2.000
	3.....	105-012100	RES 120 05% 2W			EA	1.000
	3.....	106-703500	RES .1 05% 10W			EA	1.000
	3.....	106-703600	RES 200M 10% 1W			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001600			2090-2 EXPLORER II				1
	3.....	108-010300	RES 10K 05% 1/4W			EA	1.000
	3.....	108-015300	RES 15K 05% 1/4W			EA	1.000
	3.....	108-022100	RES 220 05% 1/4W			EA	2.000
	3.....	108-027100	RES 270 05% 1/4W			EA	1.000
	3.....	108-033200	RES 3.3K 05% 1/4W			EA	1.000
	3.....	121-702100	REG 5 TO 30V 1A 78GU1C E FCH			EA	1.000
	3.....	121-702300	REG 1.2 TO 37V 1.5A 317T E NAT			EA	2.000
	3.....	121-702400	REG -1.2TO-37V 1.5A 337T E NAT			EA	2.000
	3.....	121-702600	REG 2TO38V .15A LAS1000 A LAM			EA	1.000
	3.....	201-100300	RES 100K 01% 1/8W PRES			EA	1.000
	3.....	201-124000	RES 124 01% 1/8W PRES			EA	2.000
	3.....	201-200100	RES 2K 01% 1/8W PRES			EA	1.000
	3.....	201-200300	RES 200K 01% 1/8W PRES			EA	1.000
	3.....	201-221100	RES 2.21K 01% 1/8W PRES			EA	1.000
	3.....	201-249000	RES 249 01% 1/8W PRES			EA	2.000
	3.....	201-249100	RES 2.49K 01% 1/8W PRES			EA	1.000
	3.....	201-301000	RES 301 01% 1/8W PRES			EA	1.000
	3.....	201-365000	RES 365 01% 1/8W PRES			EA	1.000
	3.....	201-499100	RES 4.99K 01% 1/8W PRES			EA	2.000
	3.....	201-604000	RES 604 01% 1/8W PRES			EA	1.000
	3.....	201-619200	RES 61.9K 01% 1/8W PRES			EA	1.000
	3.....	201-825000	RES 825 01% 1/8W PRES			EA	1.000
	2.....	465-001200	2090 REAR PANEL BAY 2			EA	1.000
	3.....	015-706300	PIN/350663-6 AMP SPOOL			EA	12.000
	3.....	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	3.....	019-708700	XFORMER/DJ346			EA	1.000
	3.....	024-711500	CON/5F CIR/SOL SWC 61HA5F			EA	1.000
	3.....	024-711600	CON/5M CIR/SOL SWC 12CL5M			EA	1.000
	3.....	024-721400	CON/1F CXL/SOL APH 31-010			EA	2.000
	3.....	024-721600	CON/4F REC/CRP AMP 1-350240-9			EA	1.000
	3.....	024-723300	CON/2F REC/CRP AMP 1-350354-9			EA	1.000
	3.....	024-724600	CON/10F REC/IDP MMM 3473-6000			EA	1.000
	3.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	3.....	024-730800	CONN/15 PIN 1-350237-9			EA	1.000
	3.....	025-727500	SW/CW/GF-642			EA	2.000
	3.....	068-726608	PAN/2090 REAR BAY 2	X		EA	1.000
	3.....	070-701100	FUSE/348890 BODY			EA	1.000
	3.....	070-701200	FUSE/348007 CAP			EA	1.000
	3.....	102-700200	MOVISTOR/V130LA10A			EA	2.000
	3.....	114-701800	FLTR/6 AMP 6H9 CORCOM			EA	1.000
	2.....	465-001300	2090 REAR PANEL BAY 1			EA	1.000
	3.....	415-005200	2090 CAP BD F.S. BAY 1			EA	1.000
	4.....	000-900106	P.C.B./CAP BD/EXP SERIES	X		EA	1.000
	4.....	015-706300	PIN/350663-6 AMP SPOOL			EA	12.000
	4.....	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	4.....	022-705300	D10 BRID VS647 600V 2A J VAR			EA	2.000
	4.....	023-716200	CAP 8800MF 25V ALUM S CAL			EA	2.000
	4.....	023-717500	CAP 28KMF 15V ALUM S MEP			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-001600			2090-2 EXPLORER II				1
	4.....	023-719000	CAP 2000MF 50V ALUM S CAL			EA	2.000
	4.....	024-719900	CON/15F REC/CRP AMP 1-350244-9			EA	1.000
	4.....	024-721800	CON/12M REC/CRP AMP 1-350236-9			EA	1.000
	4.....	085-702400	CORD/428-=056 ROTRON			EA	1.000
	3.....	475-002500	MECH MISC/BAY 1 P.S.			EA	1.000
	4.....	022-713800	DIO RECT SCPE05 50V 5A Q SEM			EA	1.000
	4.....	068-726706	PAN/2090 REAR BAY 1	X		EA	1.000
	4.....	072-700100	FAN/WISPER WR2A1			EA	1.000
	4.....	114-702600	FLTR./FAN/PAMOTER#5502			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002100			2090-3A/DIGITAL I/O				1
	1	465-001900	DIGITAL I/O FRONT PANEL			EA	1.000
	2	022-713700	DIO LEDR 406-R 2V 10MA M INM			EA	1.000
	2	024-723300	CON/2F REC/CRP AMP 1-350354-9			EA	1.000
	2	068-727102	PAN/2090 FRONT BAY 3	X		EA	1.000
	1	845-000300	2090-3 MAIN FRAME			EA	1.000
	2	415-004900	2090 MAIN FRAME BD			EA	1.000
	3	000-900301	PCB/MAIN FRAME/EXP SERIES	X		EA	1.000
	3	021-702500	TRN NPN 2N3302 30V .36W A MOT			EA	2.000
	3	022-701100	DIO GERM 1N270 80V .2A G ITT			EA	5.000
	3	023-701600	CAP 2.2MF 20V 10% TANT G KEM			EA	2.000
	3	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	2.000
	3	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	9.000
	3	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	7.000
	3	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	1.000
	3	024-721300	CON/24F DIP/SOL AMP 640361-3			EA	2.000
	3	024-724800	CON/40F DIP/SOL AMP 640379-3			EA	3.000
	3	024-734000	CONN/IC SOC/20 PIN			EA	5.000
	3	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	3	026-705500	POT/1K PCB DAL 784-20-102			EA	2.000
	3	100-700700	RES NET/CSP10E-01-502J			EA	3.000
	3	108-010300	RES 10K 05% 1/4W			EA	1.000
	3	108-010400	RES 100K 05% 1/4W			EA	1.000
	3	108-039100	RES 390 05% 1/4W			EA	6.000
	3	108-047200	RES 4.7K 05% 1/4W			EA	11.000
	3	108-047300	RES 47K 05% 1/4W			EA	1.000
	3	121-700900	REG -15V .35A 79M15AUC E FCH			EA	1.000
	3	134-705703	IC/741CP			EA	2.000
	3	134-712903	IC/74LS04N HEX INVERTER			EA	1.000
	3	134-713203	IC/74LS74N FLIP-FLOP			EA	6.000
	3	134-713703	IC/74LS253N MULTIPLEXER			EA	1.000
	3	134-717403	IC/74S287N PROM			EA	1.000
	3	134-718503	IC/74S182N CARRY LOOKAHEAD			EA	1.000
	3	134-720503	IC/74LS174N REGISTER			EA	4.000
	3	134-724500	IC/DAC80-CBI-V 12BIT DAC			EA	2.000
	3	134-724903	IC/74S169 COUNTER			EA	3.000
	3	134-728803	IC/74S472 PROM			EA	5.000
	3	134-730903	IC/74LS367N HEX DRIVER			EA	6.000
	3	134-731003	IC/74LS138N MULTIPLEXER			EA	3.000
	3	134-731603	IC/74LS251N MULTIPLEXER			EA	2.000
	3	134-732100	IC/96L02 MONOSTABLE			EA	1.000
	3	134-734300	IC/2901A 4BIT SLICE			EA	3.000
	2	415-005000	2090 BLANKING BD			EA	1.000
	3	000-900202	PCB/2090 BLANKING	X		EA	1.000
	3	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	3	017-704200	LABEL/HI VOLT/EXPL	X		EA	1.000
	3	021-700600	TRN NPN 2N2484 60V .36W A MOT			EA	4.000
	3	021-702200	TRN NPN 2N3903 40V 1W B MOT			EA	1.000
	3	021-711100	TRN NPN MPSU10 300V 1W E MOT			EA	4.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002100			2090-3A/DIGITAL I/O				1
	3.....	021-711400	TRN FETP M113 30V .22W A SLX			EA	1.000
	3.....	022-700800	DIO RECT 1N4004 400V 1A G TXI			EA	1.000
	3.....	022-711600	DIO TRRF 1N4376 10V .05A G FCH			EA	1.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	2.000
	3.....	023-707500	CAP 6.8MF 35V 10% TANT G KEM			EA	1.000
	3.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	1.000
	3.....	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	6.000
	3.....	023-719400	CAP .01MF 3000V 20% CERM R SPG			EA	2.000
	3.....	024-719900	CON/15F REC/CRP AMP 1-350244-9			EA	1.000
	3.....	024-724600	CON/10F REC/IDP MMM 3473-6000			EA	1.000
	3.....	024-734900	CON/8M HDR/SOL BRG 65532-108			EA	2.000
	3.....	024-735900	CONN/10PIN/3M3474.0001T			EA	1.000
	3.....	026-705700	POT/5K PCB DAL 784-20-502			EA	5.000
	3.....	026-705900	POT/500K PCB DAL 784-20-504			EA	1.000
	3.....	026-706400	POT/1MEG PCB DAL 784-20-105			EA	1.000
	3.....	032-700600	INSUL/TRANSIS PAD			EA	4.000
	3.....	042-711400	COVER/BLANK-2090	X		EA	1.000
	3.....	042-712600	COVER/BLANKING BD	X		EA	1.000
	3.....	105-022300	RES 22K 05% 2W			EA	2.000
	3.....	105-027300	RES 27K 05% 2W			EA	2.000
	3.....	108-010500	RES 1M 05% 1/4W			EA	1.000
	3.....	108-022200	RES 2.2K 05% 1/4W			EA	1.000
	3.....	108-022300	RES 22K 05% 1/4W			EA	2.000
	3.....	108-022400	RES 220K 05% 1/4W			EA	1.000
	3.....	108-047100	RES 470 05% 1/4W			EA	2.000
	3.....	108-047200	RES 4.7K 05% 1/4W			EA	1.000
	3.....	108-056000	RES 56 05% 1/4W			EA	1.000
	3.....	134-729400	IC/6N137			EA	1.000
	3.....	201-100300	RES 100K 01% 1/8W PRES			EA	2.000
	3.....	201-127300	RES 127K 01% 1/8W PRES			EA	3.000
	3.....	201-165200	RES 16.5K 01% 1/8W PRES			EA	1.000
	3.....	201-200200	RES 20K 01% 1/8W PRES			EA	3.000
	3.....	201-200300	RES 200K 01% 1/8W PRES			EA	4.000
	3.....	201-243200	RES 24.3K 01% 1/8W PRES			EA	1.000
	3.....	201-249100	RES 2.49K 01% 1/8W PRES			EA	1.000
	3.....	201-499200	RES 49.9K 01% 1/8W PRES			EA	1.000
	3.....	201-750200	RES 75K 01% 1/8W PRES			EA	1.000
	3.....	201-976200	RES 97.6K 01% 1/8W PRES			EA	1.000
	2.....	415-007000	2090 4K MEMORY BD			EA	1.000
	3.....	000-900402	P.C.B./2090 MEMORY 4K	X		EA	1.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	1.000
	3.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	4.000
	3.....	024-734400	CON/18F DIP/SOL AMP 640359-3			EA	13.000
	3.....	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	3.....	100-700700	RES NET/CSP10E-01-502J			EA	1.000
	3.....	108-047100	RES 470 05% 1/4W			EA	1.000
	3.....	134-723003	IC/74LS14N HEX INVERTER			EA	1.000
	3.....	134-723903	IC/74LS257 MULTIPLEXER			EA	4.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002100			2090-3A/DIGITAL I/O				1
	3	134-730903	IC/74LS367N HEX DRIVER			EA	3.000
	3	134-736803	IC/74LS374N REGISTER			EA	4.000
	3	134-736903	IC/74LS241N OCTAL BUFFER			EA	3.000
	3	134-742300	IC/2141-2			EA	13.000
	2	415-007100	2090-3 INNER CONN BD 4K			EA	1.000
	3	000-900500	PCB/INTERFACE BD/2090	X		EA	1.000
	3	024-725000	CON/12M HDR/SOL AMP 9-350264-1			EA	1.000
	3	085-707900	CBL/50 COND/DAISY CHAIN			EA	1.000
	2	465-001400	2090 FRONT PANEL			EA	1.000
	3	011-723001	BRKT/2090 STRAIN RELIEF	X		EA	1.000
	3	015-706300	PIN/350663-6 AMP SPOOL			EA	4.000
	3	017-704600	LABEL/LOGO/JEWEL			EA	1.000
	3	022-714800	DIO LEDG FLV340 2.3V20MA L FCH			EA	1.000
	3	024-721700	CON/4M REC/CRP AMP 1-350233-9			EA	1.000
	3	025-715500	SW/PA166-011-0AA			EA	2.000
	3	025-718100	SW/7215J612ZCE-2 C&K			EA	2.000
	3	025-718500	SW/LB 2P2T LI 01-700155			EA	1.000
	3	025-721300	SW/TOGGLE #LFH-123			EA	2.000
	3	025-727100	SW/845773-SK-1			EA	1.000
	3	025-727200	SW/C & K SPDT 8121-J82			EA	1.000
	3	025-734300	SW/RO 1PL2-7PS CL PA166-025			EA	1.000
	3	045-703301	KNOB/KX-12322 1/8"			EA	4.000
	3	068-726905	PAN/2090 FRONT BAY 2	X		EA	1.000
	3	068-741001	PAN/2090 FRONT SUB BAY 2	X		EA	1.000
	3	085-900000	CBL/26 COND/2090 FRONT	X		EA	1.000
	3	093-702400	FASTNR/SCR 6-32 X 1/4" BLK			EA	4.000
	2	475-001500	2090-3 FINAL ASMB			EA	1.000
	3	011-724500	BRKT/FRAME GROUND/2090			EA	1.000
	3	017-704101	LABEL/2090-3	X		EA	1.000
	3	026-707800	POT/BA811-6670C.L. 250K			EA	1.000
	3	042-710903	COVER/BOTTOM/EXPL.III	X		EA	1.000
	3	042-712500	COVER/LINE VOLTAGE	X		EA	1.000
	3	042-712803	COVER/2090-3 L SIDE	X		EA	2.000
	3	051-700100	BUMPER/SJ5004X			EA	2.000
	3	051-700300	BUMPER/5025			EA	5.000
	3	085-703800	CORD/A/C/LINE P2392 SW			EA	1.000
	3	164-700500	GRAT/BLUE/EXPL.	X		EA	1.000
	3	268-703001	BEZEL/EXP SERIES	X		EA	1.000
	3	268-704300	MECH MISC/TILT STAND/14"			EA	1.000
	2	475-001700	2090-3 CAB ASMB			EA	1.000
	3	010-701500	NUT/SQUARE .860" #8-32	X		EA	1.000
	3	024-740300	CONN/AMP 87499-3/2PIN			EA	1.000
	3	027-700600	C.R.T./82D14GH/AMPEREX			EA	1.000
	3	034-714701	RAIL/TOP CENTER/EXPL.	X		EA	1.000
	3	034-714803	RAIL/SIDE EXPL			EA	2.000
	3	034-714901	RAIL/CONN/EXPL	X		EA	8.000
	3	034-715301	RAIL/CORNER SUPPORT	X		EA	1.000
	3	034-715401	RAIL/PLUG IN	X		EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002100			2090-3A/DIGITAL I/O				1
	3.....	044-704305	SHIELD/2090 CRT	X		EA	1.000
	3.....	049-700100	HANDLE/VINYLUXE			EA	1.000
	3.....	129-702100	FRAME/2090/END	X		EA	2.000
	3.....	129-900101	FRAME/2090 ROUNDED END	X		EA	4.000
	2.....	645-000400	2090 M.F.POWER SUPPLY			EA	1.000
	3.....	415-005300	2090 POWER SUPPLY BD			EA	1.000
	4.....	000-900004	PCB/2090 REGULATOR	X		EA	1.000
	4.....	006-701400	WASH/NO J TEFLON			EA	2.000
	4.....	011-716401	BRKT/H.V. XFORMER 60HZ	X		EA	1.000
	4.....	011-720900	BRKT/INTEN. FOCUS/2090	X		EA	1.000
	4.....	011-721000	BRKT/PWR SPLY MTG/2090	X		EA	2.000
	4.....	011-723101	BRKT/HI VOLT XFORMER/EXPL	X		EA	1.000
	4.....	015-706400	PIN/350665-2 AMP SPOOL			EA	30.000
	4.....	017-704200	LABEL/HI VOLT/EXPL	X		EA	6.000
	4.....	019-706000	XFORMER/ITA-1552-11			EA	1.000
	4.....	019-707000	XFORMER/HV WINDING/EXPL2 3	X		EA	1.000
	4.....	021-703800	TRN NPN 2N5978 60V 75W E MOT			EA	2.000
	4.....	021-708800	TRN NPN 2N5301 40V 200W D MOT			EA	1.000
	4.....	022-700800	DIO RECT 1N4004 400V 1A G TXI			EA	6.000
	4.....	022-705100	DIO ZENR 1N5268 82V .5W G MOT			EA	1.000
	4.....	022-706900	DIO TRRF FM50 5KV .01A G SEM			EA	2.000
	4.....	022-707000	DIO TRRF S2F 200V 1A G SEM			EA	5.000
	4.....	022-711900	DIO BRID VE48X 400V 1A C VAR			EA	1.000
	4.....	023-029200	CAP 22MF 15V 10% TANT G KEM			EA	1.000
	4.....	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	1.000
	4.....	023-702800	CAP .68MF 35V 10% TANT G KEM			EA	1.000
	4.....	023-704700	CAP 1MF 35V 10% TANT G KEM			EA	2.000
	4.....	023-706900	CAP 50MF 50V ALUM G SPG			EA	1.000
	4.....	023-707300	CAP 1MF 200V 10% MYLR G TRW			EA	2.000
	4.....	023-711200	CAP 220MF 10V 10% TANT G KEM			EA	1.000
	4.....	023-713500	CAP 4.7MF 50V 10% TANT G KEM			EA	2.000
	4.....	023-719400	CAP .01MF 3000V 20% CERM R SPG			EA	5.000
	4.....	023-719700	CAP 2.2MF 50V 10% TANT G KEM			EA	5.000
	4.....	024-719600	CON/15M HDR/SOL AMP 9-350268-1			EA	1.000
	4.....	024-722500	CON/12F REC/CRP AMP 1-350243-9			EA	2.000
	4.....	024-723400	CON/2M HDR/SOL AMP 9-350360-1			EA	1.000
	4.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	4.....	026-705400	POT/500 PCB DAL 784-20-501			EA	5.000
	4.....	026-706000	POT/20K PCB DAL 784-20-203			EA	1.000
	4.....	026-706500	POT/BRNS 500K			EA	2.000
	4.....	032-700800	INSUL/DIODE			EA	1.000
	4.....	032-700900	INSUL/DIODE			EA	7.000
	4.....	044-704600	SHIELD/H.V. EXPL.	X		EA	1.000
	4.....	067-700300	CORE/E1960-S-011A			EA	2.000
	4.....	070-703400	FUSE/.75 A/276.750 LITTLEFUSE			EA	1.000
	4.....	079-700000	THERMOS/165 DEG 7BTL6B10			EA	1.000
	4.....	098-700200	HT SNK/207CB W			EA	1.000
	4.....	098-704000	HT SNK/EXPL P.S.	X		EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002100			2090-3A/DIGITAL I/O				1
	4.....	098-704300	HT SNK	X		EA	1.000
	4.....	101-010500	RES 1M 10% 1/2W			EA	2.000
	4.....	101-022500	RES 2.2M 10% 1/2W			EA	2.000
	4.....	105-012100	RES 120 05% 2W			EA	1.000
	4.....	106-703500	RES .1 05% 10W			EA	1.000
	4.....	106-703600	RES 200M 10% 1W			EA	1.000
	4.....	108-010300	RES 10K 05% 1/4W			EA	1.000
	4.....	108-015300	RES 15K 05% 1/4W			EA	1.000
	4.....	108-022100	RES 220 05% 1/4W			EA	2.000
	4.....	108-027100	RES 270 05% 1/4W			EA	1.000
	4.....	108-033200	RES 3.3K 05% 1/4W			EA	1.000
	4.....	121-702100	REG 5 TO 30V 1A 78GU1C E FCH			EA	1.000
	4.....	121-702300	REG 1.2 TO 37V 1.5A 317T E NAT			EA	2.000
	4.....	121-702400	REG -1.2TO-37V 1.5A 337T E NAT			EA	2.000
	4.....	121-702600	REG 2TO30V .15A LAS1000 A LAM			EA	1.000
	4.....	201-100300	RES 100K 01% 1/8W PRES			EA	1.000
	4.....	201-124000	RES 124 01% 1/8W PRES			EA	2.000
	4.....	201-200100	RES 2K 01% 1/8W PRES			EA	1.000
	4.....	201-200300	RES 200K 01% 1/8W PRES			EA	1.000
	4.....	201-221100	RES 2.21K 01% 1/8W PRES			EA	1.000
	4.....	201-249000	RES 249 01% 1/8W PRES			EA	2.000
	4.....	201-249100	RES 2.49K 01% 1/8W PRES			EA	1.000
	4.....	201-301000	RES 301 01% 1/8W PRES			EA	1.000
	4.....	201-365000	RES 365 01% 1/8W PRES			EA	1.000
	4.....	201-499100	RES 4.99K 01% 1/8W PRES			EA	2.000
	4.....	201-604000	RES 604 01% 1/8W PRES			EA	1.000
	4.....	201-619200	RES 61.9K 01% 1/8W PRES			EA	1.000
	4.....	201-825000	RES 825 01% 1/8W PRES			EA	1.000
	3.....	465-001200	2090 REAR PANEL BAY 2			EA	1.000
	4.....	015-706300	PIN/350663-6 AMP SPOOL			EA	12.000
	4.....	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	4.....	019-708700	XFORMER/DJ346			EA	1.000
	4.....	024-711500	CON/5F CIR/SOL SWC 61HA5F			EA	1.000
	4.....	024-711600	CON/5M CIR/SOL SWC 12CL5M			EA	1.000
	4.....	024-721400	CON/1F CXL/SOL APH 31-010			EA	2.000
	4.....	024-721600	CON/4F REC/CRP AMP 1-350240-9			EA	1.000
	4.....	024-723300	CON/2F REC/CRP AMP 1-350354-9			EA	1.000
	4.....	024-724600	CON/10F REC/IDP MMM 3473-6000			EA	1.000
	4.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	4.....	024-730800	CONN/15 PIN 1-350237-9			EA	1.000
	4.....	025-727500	SW/CW/GF-642			EA	2.000
	4.....	068-726608	PAN/2090 REAR BAY 2	X		EA	1.000
	4.....	070-701100	FUSE/348890 BODY			EA	1.000
	4.....	070-701200	FUSE/348007 CAP			EA	1.000
	4.....	102-700200	MOVISTOR/V130LA10A			EA	2.000
	4.....	114-701800	FLTR/6 AMP 6H9 CORCOM			EA	1.000
	3.....	465-001300	2090 REAR PANEL BAY 1			EA	1.000
	4.....	415-005200	2090 CAP BD P.S. BAY 1			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002100			2090-3A/DIGITAL I/O				1
	5.....	000-900106	P.C.B./CAP BD/EXP SERIES	X		EA	1.000
	5.....	015-706300	PIN/350663-6 AMP SPOOL			EA	12.000
	5.....	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	5.....	022-705300	DIO BRID VS647 600V 2A J VAR			EA	2.000
	5.....	023-716200	CAP 8800MF 25V ALUM S CAL			EA	2.000
	5.....	023-717500	CAP 28KMF 15V ALUM S MEP			EA	2.000
	5.....	023-719000	CAP 2000MF 50V ALUM S CAL			EA	2.000
	5.....	024-719900	CON/15F REC/CRP AMP 1-350244-9			EA	1.000
	5.....	024-721800	CON/12M REC/CRP AMP 1-350236-9			EA	1.000
	5.....	085-702400	CORD/428-=056 ROTRON			EA	1.000
	4.....	475-002500	MECH MISC/BAY 1 P.S.			EA	1.000
	5.....	022-713800	DIO RECT SCPE05 50V 5A Q SEM			EA	1.000
	5.....	068-726706	FAN/2090 REAR BAY 1	X		EA	1.000
	5.....	072-700100	FAN/WISPER WR2A1			EA	1.000
	5.....	114-702600	FLTR./FAN/PAMOTER#5502			EA	1.000
	2.....	645-000500	2090 BAY 3 POWER SUPPLY			EA	1.000
	3.....	415-005500	2090 POWER SUPPLY BD BAY 3			EA	1.000
	4.....	000-902103	P.C.B./2090 BAY 3 SUPPLY	X		EA	1.000
	4.....	006-701400	WASH/NO J TEFLON			EA	4.000
	4.....	011-721900	BRKT/THIRD BAY P.S./2090.3	X		EA	2.000
	4.....	015-706300	PIN/350663-6 AMP SPOOL			EA	6.000
	4.....	021-708800	TRN NPN 2N5301 40V 200W D MOT			EA	2.000
	4.....	022-700800	DIO RECT 1N4004 400V 1A G TXI			EA	6.000
	4.....	022-707100	DIO TRRM 3SM2 200V 2A G SEM			EA	4.000
	4.....	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	2.000
	4.....	023-704700	CAP 1MF 35V 10% TANT G KEM			EA	1.000
	4.....	023-711000	CAP 22MF 35V 10% TANT G KEM			EA	4.000
	4.....	023-714000	CAP 100MF 50V ALUM G SPG			EA	1.000
	4.....	023-716200	CAP 8800MF 25V ALUM S CAL			EA	2.000
	4.....	023-717500	CAP 28KMF 15V ALUM S MEP			EA	1.000
	4.....	024-719500	CON/9M HDR/SOL AMP 9-350262-1			EA	1.000
	4.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	4.....	026-705400	POT/500 PCB DAL 784-20-501			EA	2.000
	4.....	032-700800	INSUL/DIODE			EA	2.000
	4.....	098-704700	HT SNK/THM6006B-2-2			EA	1.000
	4.....	106-701800	RES .18 10% 2W			EA	1.000
	4.....	106-702700	RES .36 05% 2W			EA	1.000
	4.....	108-022200	RES 2.2K 05% 1/4W			EA	2.000
	4.....	108-027100	RES 270 05% 1/4W			EA	2.000
	4.....	121-702400	REG -1.2TO-37V 1.5A 337T E NAT			EA	1.000
	4.....	121-702600	REG 2TO38V ,15A LAS1000 A LAM			EA	2.000
	4.....	201-124000	RES 124 01% 1/8W PRES			EA	1.000
	4.....	201-150000	RES 150 01% 1/8W PRES			EA	1.000
	4.....	201-200100	RES 2K 01% 1/8W PRES			EA	1.000
	4.....	201-301000	RES 301 01% 1/8W PRES			EA	2.000
	4.....	201-365000	RES 365 01% 1/8W PRES			EA	1.000
	4.....	201-604000	RES 604 01% 1/8W PRES			EA	2.000
	4.....	201-681900	RES 68.1 01% 1/8W PRES			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002100			2090-3A/DIGITAL I/O				1
	3.....	475-003100	MECH MISC/BAY 3 P.S.			EA	1.000
	4.....	002-706500	PLATE/I/O COVER	X		EA	1.000
	4.....	015-706300	PIN/350663-6 AMP SPOOL			EA	6.000
	4.....	015-706400	PIN/350665-2 AMP SPOOL			EA	6.000
	4.....	019-707700	XFORMER/DG-447 FOREST			EA	1.000
	4.....	024-719800	CON/9F REC/CRP AMP 1-350242-9			EA	1.000
	4.....	024-727000	CON/6M REC/CRP AMP 1-350234-9			EA	1.000
	4.....	068-728003	PAN/2090 REAR BAY 3	X		EA	1.000
	4.....	070-703000	FUSE/SLO BLO 3AG3			EA	2.000
	1.....	845-000700	DIGITAL I/O - A ADD			EA	1.000
	2.....	415-006800	I/O CONN CARD			EA	1.000
	3.....	000-902401	P.C.B./I/O CARD/2090-3	X		EA	1.000
	3.....	011-721000	BRKT/PWR SPLY MTG/2090	X		EA	1.000
	3.....	134-715303	IC/7438N O/C 2-NAND			EA	5.000
	2.....	415-007400	2090 DIGITAL I/O BD			EA	1.000
	3.....	000-902205	PCB/2090 I/O	X		EA	1.000
	3.....	015-706400	PIN/350665-2 AMP SPOOL			EA	6.000
	3.....	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	1.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	6.000
	3.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	8.000
	3.....	024-723400	CON/2M HDR/SOL AMP 9-350360-1			EA	1.000
	3.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	3.....	024-733200	CON/6M HDR/SOL AMP 9-350259-2			EA	1.000
	3.....	024-734000	CONN/IC SOC/20 PIN			EA	2.000
	3.....	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	3.....	085-707700	CBL/50 COND/7 IN./SPEC			EA	1.000
	3.....	100-700700	RES NET/CSP10E-01-502J			EA	2.000
	3.....	108-010300	RES 10K 05% 1/4W			EA	4.000
	3.....	108-033100	RES 330 05% 1/4W			EA	1.000
	3.....	134-712803	IC/74LS00N 2-NAND			EA	3.000
	3.....	134-712903	IC/74LS04N HEX INVERTER			EA	3.000
	3.....	134-713203	IC/74LS74N FLIP-FLOP			EA	4.000
	3.....	134-713703	IC/74LS253N MULTIPLEXER			EA	1.000
	3.....	134-715303	IC/7438N O/C 2-NAND			EA	2.000
	3.....	134-718803	IC/74LS175N REGISTER			EA	3.000
	3.....	134-720403	IC/74LS02N 2-NOR			EA	2.000
	3.....	134-720503	IC/74LS174N REGISTER			EA	5.000
	3.....	134-721203	IC/74LS163N COUNTER			EA	2.000
	3.....	134-722403	IC/74LS139N MULTIPLEXER			EA	1.000
	3.....	134-723003	IC/74LS14N HEX INVERTER			EA	4.000
	3.....	134-723903	IC/74LS257 MULTIPLEXER			EA	6.000
	3.....	134-728803	IC/74S472 PROM			EA	2.000
	3.....	134-730903	IC/74LS367N HEX DRIVER			EA	4.000
	3.....	134-731003	IC/74LS138N MULTIPLEXER			EA	2.000
	3.....	134-731903	IC/74LS395N SHIFT REGISTER			EA	4.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002200			2090-3B/DISK				1
	1.....	845-000300	2090-3 MAIN FRAME			EA	1.000
	2.....	415-004900	2090 MAIN FRAME BD			EA	1.000
	3.....	000-900301	PCB/MAIN FRAME/EXP SERIES	X		EA	1.000
	3.....	021-702500	TRN NPN 2N3302 30V .36W A MOT			EA	2.000
	3.....	022-701100	DIO GERM 1N270 80V .2A G ITT			EA	5.000
	3.....	023-701600	CAP 2.2MF 20V 10% TANT G KEM			EA	2.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	2.000
	3.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	9.000
	3.....	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	7.000
	3.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	1.000
	3.....	024-721300	CON/24F DIP/SOL AMP 640361-3			EA	2.000
	3.....	024-724800	CON/40F DIP/SOL AMP 640379-3			EA	3.000
	3.....	024-734000	CONN/IC SOC/20 PIN			EA	5.000
	3.....	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	3.....	026-705500	POT/1K PCB DAL 784-20-102			EA	2.000
	3.....	100-700700	RES NET/CSP10E-01-502J			EA	3.000
	3.....	108-010300	RES 10K 05% 1/4W			EA	1.000
	3.....	108-010400	RES 100K 05% 1/4W			EA	1.000
	3.....	108-039100	RES 390 05% 1/4W			EA	6.000
	3.....	108-047200	RES 4.7K 05% 1/4W			EA	11.000
	3.....	108-047300	RES 47K 05% 1/4W			EA	1.000
	3.....	121-700900	REG -15V .35A 79M15AUC E FCH			EA	1.000
	3.....	134-705703	IC/741CP			EA	2.000
	3.....	134-712903	IC/74LS04N HEX INVERTER			EA	1.000
	3.....	134-713203	IC/74LS74N FLIP-FLOP			EA	6.000
	3.....	134-713703	IC/74LS253N MULTIPLEXER			EA	1.000
	3.....	134-717403	IC/74S287N PROM			EA	1.000
	3.....	134-718503	IC/74S182N CARRY LOOKAHEAD			EA	1.000
	3.....	134-720503	IC/74LS174N REGISTER			EA	4.000
	3.....	134-724500	IC/DAC80-CBI-V 12BIT DAC			EA	2.000
	3.....	134-724903	IC/74S169 COUNTER			EA	3.000
	3.....	134-728803	IC/74S472 PROM			EA	5.000
	3.....	134-730903	IC/74LS367N HEX DRIVER			EA	6.000
	3.....	134-731003	IC/74LS138N MULTIPLEXER			EA	3.000
	3.....	134-731603	IC/74LS251N MULTIPLEXER			EA	2.000
	3.....	134-732100	IC/96L02 MONOSTABLE			EA	1.000
	3.....	134-734300	IC/2901A 4BIT SLICE			EA	3.000
	2.....	415-005000	2090 BLANKING BD			EA	1.000
	3.....	000-900202	PCB/2090 BLANKING	X		EA	1.000
	3.....	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	3.....	017-704200	LABEL/HI VOLT/EXPL	X		EA	1.000
	3.....	021-700600	TRN NPN 2N2484 60V .36W A MOT			EA	4.000
	3.....	021-702200	TRN NPN 2N3903 40V 1W B MOT			EA	1.000
	3.....	021-711100	TRN NPN MPSU10 300V 1W E MOT			EA	4.000
	3.....	021-711400	TRN FETP MI13 30V .22W A SLX			EA	1.000
	3.....	022-700800	DIO RECT 1N4004 400V 1A G TXI			EA	1.000
	3.....	022-711600	DIO TRRF 1N4376 10V .05A G FCH			EA	1.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002200			2090-3B/DISK				1
	3.....	023-707500	CAP 6.8MF 35V 10% TANT G KEM			EA	1.000
	3.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	1.000
	3.....	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	6.000
	3.....	023-719400	CAP .01MF 3000V 20% CERM R SPG			EA	2.000
	3.....	024-719900	CON/15F REC/CRP AMP 1-350244-9			EA	1.000
	3.....	024-724600	CON/10F REC/IDP MMM 3473-6000			EA	1.000
	3.....	024-734900	CON/8M HDR/SOL BRG 65532-108			EA	2.000
	3.....	024-735900	CONN/10PIN/3M3474.0001T			EA	1.000
	3.....	026-705700	POT/5K PCB DAL 784-20-502			EA	5.000
	3.....	026-705900	POT/500K PCB DAL 784-20-504			EA	1.000
	3.....	026-706400	POT/1MEG PCB DAL 784-20-105			EA	1.000
	3.....	032-700600	INSUL/TRANSIS PAD			EA	4.000
	3.....	042-711400	COVER/BLANK-2090	X		EA	1.000
	3.....	042-712600	COVER/BLANKING BD	X		EA	1.000
	3.....	105-022300	RES 22K 05% 2W			EA	2.000
	3.....	105-027300	RES 27K 05% 2W			EA	2.000
	3.....	108-010500	RES 1M 05% 1/4W			EA	1.000
	3.....	108-022200	RES 2.2K 05% 1/4W			EA	1.000
	3.....	108-022300	RES 22K 05% 1/4W			EA	2.000
	3.....	108-022400	RES 220K 05% 1/4W			EA	1.000
	3.....	108-047100	RES 470 05% 1/4W			EA	2.000
	3.....	108-047200	RES 4.7K 05% 1/4W			EA	1.000
	3.....	108-056000	RES 56 05% 1/4W			EA	1.000
	3.....	134-729400	IC/6N137			EA	1.000
	3.....	201-100300	RES 100K 01% 1/8W PRES			EA	2.000
	3.....	201-127300	RES 127K 01% 1/8W PRES			EA	3.000
	3.....	201-165200	RES 16.5K 01% 1/8W PRES			EA	1.000
	3.....	201-200200	RES 20K 01% 1/8W PRES			EA	3.000
	3.....	201-200300	RES 200K 01% 1/8W PRES			EA	4.000
	3.....	201-243200	RES 24.3K 01% 1/8W PRES			EA	1.000
	3.....	201-249100	RES 2.49K 01% 1/8W PRES			EA	1.000
	3.....	201-499200	RES 49.9K 01% 1/8W PRES			EA	1.000
	3.....	201-750200	RES 75K 01% 1/8W PRES			EA	1.000
	3.....	201-976200	RES 97.6K 01% 1/8W PRES			EA	1.000
	2.....	415-007000	2090 4K MEMORY BD			EA	1.000
	3.....	000-900402	P.C.B./2090 MEMORY 4K	X		EA	1.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	1.000
	3.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	4.000
	3.....	024-734400	CON/18F DIP/SOL AMP 640359-3			EA	13.000
	3.....	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	3.....	100-700700	RES NET/CSP10E-01-502J			EA	1.000
	3.....	108-047100	RES 470 05% 1/4W			EA	1.000
	3.....	134-723003	IC/74LS14N HEX INVERTER			EA	1.000
	3.....	134-723903	IC/74LS257 MULTIPLEXER			EA	4.000
	3.....	134-730903	IC/74LS367N HEX DRIVER			EA	3.000
	3.....	134-736803	IC/74LS374N REGISTER			EA	4.000
	3.....	134-736903	IC/74LS241N OCTAL BUFFER			EA	3.000
	3.....	134-742300	IC/2141-2			EA	13.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002200			2090-3B/DISK				1
	2.....	415-007100	2090-3 INNER CONN BD 4K			EA	1.000
	3.....	000-900500	PCB/INTERFACE BD/2090	X		EA	1.000
	3.....	024-725000	CON/12M HDR/SOL AMP 9-350264-1			EA	1.000
	3.....	085-707900	CBL/50 COND/DAISY CHAIN			EA	1.000
	2.....	465-001400	2090 FRONT PANEL			EA	1.000
	3.....	011-723001	BRKT/2090 STRAIN RELIEF	X		EA	1.000
	3.....	015-706300	PIN/350663-6 AMP SPOOL			EA	4.000
	3.....	017-704600	LABEL/LOGO/JEWEL			EA	1.000
	3.....	022-714800	DIO LEDG FLV340 2.3V20MA L FCH			EA	1.000
	3.....	024-721700	CON/4M REC/CRP AMP 1-350233-9			EA	1.000
	3.....	025-715500	SW/PA166-011-0AA			EA	2.000
	3.....	025-718100	SW/7215J612ZCE-2 C&K			EA	2.000
	3.....	025-718500	SW/LB 2P2T LI 01-700155			EA	1.000
	3.....	025-721300	SW/TOGGLE #LFH-123			EA	2.000
	3.....	025-727100	SW/845773-SK-1			EA	1.000
	3.....	025-727200	SW/C & K SPDT 8121-J82			EA	1.000
	3.....	025-734300	SW/RO 1PL2-7PS CL PA166-025			EA	1.000
	3.....	045-703301	KNOB/KX-12322 1/8"			EA	4.000
	3.....	068-726905	PAN/2090 FRONT BAY 2	X		EA	1.000
	3.....	068-741001	PAN/2090 FRONT SUB BAY 2	X		EA	1.000
	3.....	085-900000	CBL/26 COND/2090 FRONT	X		EA	1.000
	3.....	093-702400	FASTNR/SCR 6-32 X 1/4" BLK			EA	4.000
	2.....	475-001500	2090-3 FINAL ASMB			EA	1.000
	3.....	011-724500	BRKT/FRAME GROUND/2090			EA	1.000
	3.....	017-704101	LABEL/2090-3	X		EA	1.000
	3.....	026-707800	POT/BA811-6670C.L. 250K			EA	1.000
	3.....	042-710903	COVER/BOTTOM/EXPL.III	X		EA	1.000
	3.....	042-712500	COVER/LINE VOLTAGE	X		EA	1.000
	3.....	042-712803	COVER/2090-3 L SIDE	X		EA	2.000
	3.....	051-700100	BUMPER/SJ5004X			EA	2.000
	3.....	051-700300	BUMPER/5025			EA	5.000
	3.....	085-703800	CORD/A/C/LINE P2392 SW			EA	1.000
	3.....	164-700500	GRAT/BLUE/EXPL.	X		EA	1.000
	3.....	268-703001	BEZEL/EXP SERIES	X		EA	1.000
	3.....	268-704300	MECH MISC/TILT STAND/14"			EA	1.000
	2.....	475-001700	2090-3 CAB ASMB			EA	1.000
	3.....	010-701500	NUT/SQUARE .860" #8-32	X		EA	1.000
	3.....	024-740300	CONN/AMP 87499-3/2PIN			EA	1.000
	3.....	027-700600	C.R.T./82D14GH/AMPEREX			EA	1.000
	3.....	034-714701	RAIL/TOP CENTER/EXPL.	X		EA	1.000
	3.....	034-714803	RAIL/SIDE EXPL			EA	2.000
	3.....	034-714901	RAIL/CONN/EXPL	X		EA	8.000
	3.....	034-715301	RAIL/CORNER SUPPORT	X		EA	1.000
	3.....	034-715401	RAIL/PLUG IN	X		EA	2.000
	3.....	044-704305	SHIELD/2090 CRT	X		EA	1.000
	3.....	049-700100	HANDLE/VINYLUXE			EA	1.000
	3.....	129-702100	FRAME/2090/END	X		EA	2.000
	3.....	129-900101	FRAME/2090 ROUNDED END	X		EA	4.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002200			2090-3B/DISK				1
	2.....	645-000400	2090 M.F.POWER SUPPLY			EA	1.000
	3.....	415-005300	2090 POWER SUPPLY BD			EA	1.000
	4.....	000-900004	PCB/2090 REGULATOR	X		EA	1.000
	4.....	006-701400	WASH/NO J TEFLON			EA	2.000
	4.....	011-716401	BRKT/H.V. XFORMER 60HZ	X		EA	1.000
	4.....	011-720900	BRKT/INTEN. FOCUS/2090	X		EA	1.000
	4.....	011-721000	BRKT/PWR SPLY MTG/2090	X		EA	2.000
	4.....	011-723101	BRKT/HI VOLT XFORMER/EXPL	X		EA	1.000
	4.....	015-706400	PIN/350665-2 AMP SPOOL			EA	30.000
	4.....	017-704200	LABEL/HI VOLT/EXPL	X		EA	6.000
	4.....	019-706000	XFORMER/ITA-1552-11			EA	1.000
	4.....	019-707000	XFORMER/HV WINDING/EXPL2 3	X		EA	1.000
	4.....	021-703800	TRN NPN 2N5978 60V 75W E		MOT	EA	2.000
	4.....	021-708800	TRN NPN 2N5301 40V 200W D		MOT	EA	1.000
	4.....	022-700800	DIO RECT 1N4004 400V 1A G		TXI	EA	6.000
	4.....	022-705100	DIO ZENR 1N5268 82V .5W G		MOT	EA	1.000
	4.....	022-706900	DIO TRRF FM50 5KV .01A G		SEM	EA	2.000
	4.....	022-707000	DIO TRRF S2F 200V 1A G		SEM	EA	5.000
	4.....	022-711900	DIO BRID VE48X 400V 1A C		VAR	EA	1.000
	4.....	023-029200	CAP 22MF 15V 10% TANT G		KEM	EA	1.000
	4.....	023-700200	CAP 1000PF 300V 5% MICA R		ARC	EA	1.000
	4.....	023-702800	CAP .68MF 35V 10% TANT G		KEM	EA	1.000
	4.....	023-704700	CAP 1MF 35V 10% TANT G		KEM	EA	2.000
	4.....	023-706900	CAP 50MF 50V ALUM G		SPG	EA	1.000
	4.....	023-707300	CAP 1MF 200V 10% MYLR G		TRW	EA	2.000
	4.....	023-711200	CAP 220MF 10V 10% TANT G		KEM	EA	1.000
	4.....	023-713500	CAP 4.7MF 50V 10% TANT G		KEM	EA	2.000
	4.....	023-719400	CAP .01MF 3000V 20% CERM R		SPG	EA	5.000
	4.....	023-719700	CAP 2.2MF 50V 10% TANT G		KEM	EA	5.000
	4.....	024-719600	CON/15M HDR/SOL AMP 9-350268-1			EA	1.000
	4.....	024-722500	CON/12F REC/CRP AMP 1-350243-9			EA	2.000
	4.....	024-723400	CON/2M HDR/SOL AMP 9-350360-1			EA	1.000
	4.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	4.....	026-705400	POT/500 PCB DAL 784-20-501			EA	5.000
	4.....	026-706000	POT/20K PCB DAL 784-20-203			EA	1.000
	4.....	026-706500	POT/BRNS 500K			EA	2.000
	4.....	032-700800	INSUL/DIODE			EA	1.000
	4.....	032-700900	INSUL/DIODE			EA	7.000
	4.....	044-704600	SHIELD/H.V. EXPL.	X		EA	1.000
	4.....	067-700300	CORE/E1960-S-011A			EA	2.000
	4.....	070-703400	FUSE/.75 A/276.750 LITTLEFUSE			EA	1.000
	4.....	079-700000	THERMOS/165 DEG 7BTL6B10			EA	1.000
	4.....	098-700200	HT SNK/207CB W			EA	1.000
	4.....	098-704000	HT SNK/EXPL P.S.	X		EA	1.000
	4.....	098-704300	HT SNK	X		EA	1.000
	4.....	101-010500	RES 1M 10% 1/2W			EA	2.000
	4.....	101-022500	RES 2.2M 10% 1/2W			EA	2.000
	4.....	105-012100	RES 120 05% 2W			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002200			2090-3B/DISK				1
	4.....	106-703500	RES .1 05% 1W			EA	1.000
	4.....	106-703600	RES 200M 10% 1W			EA	1.000
	4.....	108-010300	RES 10K 05% 1/4W			EA	1.000
	4.....	108-015300	RES 15K 05% 1/4W			EA	1.000
	4.....	108-022100	RES 220 05% 1/4W			EA	2.000
	4.....	108-027100	RES 270 05% 1/4W			EA	1.000
	4.....	108-033200	RES 3.3K 05% 1/4W			EA	1.000
	4.....	121-702100	REG 5 TO 30V 1A 78GU1C E FCH			EA	1.000
	4.....	121-702300	REG 1.2 TO 37V 1.5A 317T E NAT			EA	2.000
	4.....	121-702400	REG -1.2TO-37V 1.5A 337T E NAT			EA	2.000
	4.....	121-702600	REG 2TO38V .15A LAS1000 A LAM			EA	1.000
	4.....	201-100300	RES 100K 01% 1/8W PRES			EA	1.000
	4.....	201-124000	RES 124 01% 1/8W PRES			EA	2.000
	4.....	201-200100	RES 2K 01% 1/8W PRES			EA	1.000
	4.....	201-200300	RES 200K 01% 1/8W PRES			EA	1.000
	4.....	201-221100	RES 2.21K 01% 1/8W PRES			EA	1.000
	4.....	201-249000	RES 249 01% 1/8W PRES			EA	2.000
	4.....	201-249100	RES 2.49K 01% 1/8W PRES			EA	1.000
	4.....	201-301000	RES 301 01% 1/8W PRES			EA	1.000
	4.....	201-365000	RES 365 01% 1/8W PRES			EA	1.000
	4.....	201-499100	RES 4.99K 01% 1/8W PRES			EA	2.000
	4.....	201-604000	RES 604 01% 1/8W PRES			EA	1.000
	4.....	201-619200	RES 61.9K 01% 1/8W PRES			EA	1.000
	4.....	201-825000	RES 825 01% 1/8W PRES			EA	1.000
	3.....	465-001200	2090 REAR PANEL BAY 2			EA	1.000
	4.....	015-706300	PIN/350663-6 AMP SPOOL			EA	12.000
	4.....	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	4.....	019-708700	XFORMER/DJ346			EA	1.000
	4.....	024-711500	CON/5F CIR/SOL SWC 61HA5F			EA	1.000
	4.....	024-711600	CON/5M CIR/SOL SWC 12CL5M			EA	1.000
	4.....	024-721400	CON/1F CXL/SOL APH 31-010			EA	2.000
	4.....	024-721600	CON/4F REC/CRP AMP 1-350240-9			EA	1.000
	4.....	024-723300	CON/2F REC/CRP AMP 1-350354-9			EA	1.000
	4.....	024-724600	CON/10F REC/IDP MMM 3473-6000			EA	1.000
	4.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	4.....	024-730800	CONN/15 PIN 1-350237-9			EA	1.000
	4.....	025-727500	SW/CW/GF-642			EA	2.000
	4.....	068-726608	FAN/2090 REAR BAY 2	X		EA	1.000
	4.....	070-701100	FUSE/348890 BODY			EA	1.000
	4.....	070-701200	FUSE/348007 CAP			EA	1.000
	4.....	102-700200	MOVISTOR/V130LA10A			EA	2.000
	4.....	114-701800	FLTR/6 AMP 6H9 CORCOM			EA	1.000
	3.....	465-001300	2090 REAR PANEL BAY 1			EA	1.000
	4.....	415-005200	2090 CAP BD P.S. BAY 1			EA	1.000
	5.....	000-900106	P.C.B./CAP BD/EXP SERIES	X		EA	1.000
	5.....	015-706300	PIN/350663-6 AMP SPOOL			EA	12.000
	5.....	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	5.....	022-705300	D10 BRID VS647 600V 2A J VAR			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002200			2090-3B/DISK				1
	5.....	023-716200	CAP 8800MF 25V ALUM S CAL			EA	2.000
	5.....	023-717500	CAP 28KMF 15V ALUM S MEP			EA	2.000
	5.....	023-719000	CAP 2000MF 50V ALUM S CAL			EA	2.000
	5.....	024-719900	CON/15F REC/CRP AMP 1-350244-9			EA	1.000
	5.....	024-721800	CON/12M REC/CRP AMP 1-350236-9			EA	1.000
	5.....	085-702400	CORD/428-=056 ROTRON			EA	1.000
	4.....	475-002500	MECH MISC/BAY 1 P.S.			EA	1.000
	5.....	022-713800	DIO RECT SCPE05 50V 5A Q SEM			EA	1.000
	5.....	068-726706	PAN/2090 REAR BAY 1	X		EA	1.000
	5.....	072-700100	FAN/WISPER WR2A1			EA	1.000
	5.....	114-702600	FLTR./FAN/PAMOTER#5502			EA	1.000
	2.....	645-000500	2090 BAY 3 POWER SUPPLY			EA	1.000
	3.....	415-005500	2090 POWER SUPPLY BD BAY 3			EA	1.000
	4.....	000-902103	P.C.B./2090 BAY 3 SUPPLY	X		EA	1.000
	4.....	006-701400	WASH/NO J TEFLON			EA	4.000
	4.....	011-721900	BRKT/THIRD BAY P.S./2090.3	X		EA	2.000
	4.....	015-706300	PIN/350663-6 AMP SPOOL			EA	6.000
	4.....	021-708800	TRN NPN 2N5301 40V 200W D MOT			EA	2.000
	4.....	022-700800	DIO RECT 1N4004 400V 1A G TXI			EA	6.000
	4.....	022-707100	DIO TRRM 3SM2 200V 2A G SEM			EA	4.000
	4.....	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	2.000
	4.....	023-704700	CAP 1MF 35V 10% TANT G KEM			EA	1.000
	4.....	023-711000	CAP 22MF 35V 10% TANT G KEM			EA	4.000
	4.....	023-714000	CAP 100MF 50V ALUM G SPG			EA	1.000
	4.....	023-716200	CAP 8800MF 25V ALUM S CAL			EA	2.000
	4.....	023-717500	CAP 28KMF 15V ALUM S MEP			EA	1.000
	4.....	024-719500	CON/9M HDR/SOL AMP 9-350262-1			EA	1.000
	4.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	4.....	026-705400	POT/500 PCB DAL 784-20-501			EA	2.000
	4.....	032-700800	INSUL/DIODE			EA	2.000
	4.....	098-704700	HT SNK/THM6006B-2-2			EA	1.000
	4.....	106-701800	RES .18 10% 2W			EA	1.000
	4.....	106-702700	RES .36 05% 2W			EA	1.000
	4.....	108-022200	RES 2.2K 05% 1/4W			EA	2.000
	4.....	108-027100	RES 270 05% 1/4W			EA	2.000
	4.....	121-702400	REG -1.2TO-37V 1.5A 337T E NAT			EA	1.000
	4.....	121-702600	REG 2TO38V ,15A LAS1000 A LAM			EA	2.000
	4.....	201-124000	RES 124 01% 1/8W PRES			EA	1.000
	4.....	201-150000	RES 150 01% 1/8W PRES			EA	1.000
	4.....	201-200100	RES 2K 01% 1/8W PRES			EA	1.000
	4.....	201-301000	RES 301 01% 1/8W PRES			EA	2.000
	4.....	201-365000	RES 365 01% 1/8W PRES			EA	1.000
	4.....	201-604000	RES 604 01% 1/8W PRES			EA	2.000
	4.....	201-681900	RES 68.1 01% 1/8W PRES			EA	1.000
	3.....	475-003100	MECH MISC/BAY 3 P.S.			EA	1.000
	4.....	002-706500	PLATE/I/O COVER	X		EA	1.000
	4.....	015-706300	PIN/350663-6 AMP SPOOL			EA	6.000
	4.....	015-706400	PIN/350665-2 AMP SPOOL			EA	6.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002200			2090-3B/DISK				1
	4.....	019-707700	XFORMER/DG-447 FOREST			EA	1.000
	4.....	024-719800	CON/9F REC/CRP AMP 1-350242-9			EA	1.000
	4.....	024-727000	CON/6M REC/CRP AMP 1-350234-9			EA	1.000
	4.....	068-728003	PAN/2090 REAR BAY 3	X		EA	1.000
	4.....	070-703000	FUSE/SLO BLO 3AG3			EA	2.000
	1.....	845-000400	DISK-B ADD			EA	1.000
	2.....	415-005700	2090 DISK BD			EA	1.000
	3.....	000-901903	PCB/2090	X		EA	1.000
	3.....	015-701500	PIN/SOC 61173-1			EA	4.000
	3.....	019-707800	INDUCT/NYTRONICS/WEE 0.47UH			EA	1.000
	3.....	022-709400	DIO TRRF 1N4150 50V .2A G TXI			EA	1.000
	3.....	023-029200	CAP 22MF 15V 10% TANT G KEM			EA	3.000
	3.....	023-700300	CAP 500PF 500V 5% MICA R ARC			EA	3.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	1.000
	3.....	023-710600	CAP 10PF 1000V 10% CERM R CLB			EA	1.000
	3.....	023-715100	CAP .05MF 50V CERM R ARC			EA	6.000
	3.....	024-703600	CON/4F REC/CRP AMP 1-480424-0			EA	1.000
	3.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	4.000
	3.....	024-733200	CON/6M HDR/SOL AMP 9-350259-2			EA	1.000
	3.....	024-734000	CONN/IC SOC/20 PIN			EA	3.000
	3.....	024-734400	CON/18F DIP/SOL AMP 640359-3			EA	4.000
	3.....	024-745000	CON/64F DIP/SOL BDY DILBQ64P			EA	1.000
	3.....	025-718000	SW/C + K #8531			EA	1.000
	3.....	026-705700	POT/5K PCB DAL 784-20-502			EA	1.000
	3.....	085-709100	CBL/34 COND/AP 922523-34-99-12			EA	1.000
	3.....	100-700700	RES NET/CSP10E-01-502J			EA	2.000
	3.....	108-010000	RES 10 05% 1/4W			EA	4.000
	3.....	108-010100	RES 100 05% 1/4W			EA	1.000
	3.....	108-010200	RES 1K 05% 1/4W			EA	3.000
	3.....	108-010300	RES 10K 05% 1/4W			EA	5.000
	3.....	108-012300	RES 12K 05% 1/4W			EA	1.000
	3.....	108-015100	RES 150 05% 1/4W			EA	2.000
	3.....	108-027100	RES 270 05% 1/4W			EA	1.000
	3.....	108-033100	RES 330 05% 1/4W			EA	7.000
	3.....	108-047200	RES 4.7K 05% 1/4W			EA	2.000
	3.....	134-705303	IC/7404N HEX INVERTER			EA	1.000
	3.....	134-712803	IC/74LS00N 2-NAND			EA	4.000
	3.....	134-712903	IC/74LS04N HEX INVERTER			EA	1.000
	3.....	134-713203	IC/74LS74N FLIP-FLOP			EA	8.000
	3.....	134-716903	IC/74148N PRIORITY ENCODER			EA	1.000
	3.....	134-717503	IC/74S138N DEMULTIPLEXER			EA	1.000
	3.....	134-718103	IC/74LS191N COUNTER			EA	1.000
	3.....	134-720403	IC/74LS02N 2-NOR			EA	3.000
	3.....	134-720503	IC/74LS174N REGISTER			EA	2.000
	3.....	134-720803	IC/74LS10N 3-NAND			EA	1.000
	3.....	134-722005	IC/4040B CMOS 12 STAGE BIN COU			EA	1.000
	3.....	134-722403	IC/74LS139N MULTIPLEXER			EA	1.000
	3.....	134-725303	IC/7406N O/C HEX INVERTER			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002200			2090-3B/DISK				1
	3	134-728803	IC/74S472 PROM			EA	2.000
	3	134-730903	IC/74LS367N HEX DRIVER			EA	4.000
	3	134-731300	IC/9900JL PROCESSOR			EA	1.000
	3	134-731403	IC/74LS362N CLOCK DRIVER			EA	1.000
	3	134-731503	IC/74LS259N ADDRESSABLE LATCH			EA	3.000
	3	134-731603	IC/74LS251N MULTIPLEXER			EA	4.000
	3	134-731700	IC/2111A-4N 256 X 4 STATIC RAM			EA	4.000
	3	134-731803	IC/74LS155N DEMULTIPLEXER			EA	1.000
	3	134-731903	IC/74LS395N SHIFT REGISTER			EA	4.000
	3	134-732003	IC/74LS92N COUNTER			EA	1.000
	3	134-732100	IC/96L02 MONOSTABLE			EA	1.000
	3	191-705400	CRYSTAL/48MHZ/.05%			EA	1.000
	3	201-200200	RES 20K 01% 1/8W PRES			EA	1.000
	3	201-250200	RES 25K 01% 1/8W PRES			EA	1.000
	2	465-001500	2090 DISK FRONT PANEL			EA	1.000
	3	000-902001	P.C.B./LED BD/MINI DISK/EXP	X		EA	1.000
	3	011-722403	BRKT/DISK/EXP	X		EA	1.000
	3	022-707900	DIO LEDR FLV110 1.7V 20MAL FCH			EA	4.000
	3	022-714800	DIO LEDG FLV340 2.3V20MA L FCH			EA	8.000
	3	025-715500	SW/PA166-011-0AA			EA	1.000
	3	025-718100	SW/7215J612ZCE-2 C&K			EA	2.000
	3	025-719600	SW/7101J60 C+K			EA	9.000
	3	045-703301	KNOB/KX-12322 1/8"			EA	1.000
	3	068-727806	PAN/2090 DISK FRONT	X		EA	1.000
	3	068-740901	PAN/2090 DISK FRONT SUB	X		EA	1.000
	3	085-709000	CBL/34 COND/AP 922522-34-99-06			EA	1.000
	2	475-001800	2090 DISK MECH ASSY			EA	1.000
	3	020-702700	CHAS/2090 DISK SLIDE			EA	1.000
	3	034-715500	GUIDE/SCANBE 11633-1			EA	4.000
	3	222-009000	DISK DRIVE/SHUGART #SA400			EA	1.000
	3	270-700800	DISK/DYSAN 140/1			EA	2.000
	1	845-000500	2090-3B I/O			EA	1.000
	2	415-009000	2090 DISK W/O I/O BD			EA	1.000
	3	000-902702	PCB/2090 DISK W/O I/O	X		EA	1.000
	3	015-706400	PIN/350665-2 AMP SPOOL			EA	6.000
	3	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	3.000
	3	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	1.000
	3	023-715100	CAP .05MF 50V CERM R ARC			EA	2.000
	3	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	3	024-727000	CON/6M REC/CRP AMP 1-350234-9			EA	1.000
	3	024-745000	CON/64F DIP/SOL BDY DILBQ64P			EA	1.000
	3	085-707800	CBL/50 COND/13 IN./SPEC			EA	1.000
	3	100-700700	RES NET/CSP10E-01-502J			EA	1.000
	3	108-010100	RES 100 05% 1/4W			EA	3.000
	3	134-712803	IC/74LS00N 2-NAND			EA	1.000
	3	134-713203	IC/74LS74N FLIP-FLOP			EA	1.000
	3	134-730903	IC/74LS367N HEX DRIVER			EA	6.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002300			2090-3C/DISK & DIGITAL I/O				1
	1.....	845-000300	2090-3 MAIN FRAME			EA	1.000
	2.....	415-004900	2090 MAIN FRAME BD			EA	1.000
	3.....	000-900301	PCB/MAIN FRAME/EXP SERIES	X		EA	1.000
	3.....	021-702500	TRN NPN 2N3302 30V .36W A MOT			EA	2.000
	3.....	022-701100	DIO GERM 1N270 80V .2A G ITT			EA	5.000
	3.....	023-701600	CAP 2.2MF 20V 10% TANT G KEM			EA	2.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	2.000
	3.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	9.000
	3.....	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	7.000
	3.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	1.000
	3.....	024-721300	CON/24F DIP/SOL AMP 640361-3			EA	2.000
	3.....	024-724800	CON/40F DIP/SOL AMP 640379-3			EA	3.000
	3.....	024-734000	CONN/IC SOC/20 PIN			EA	5.000
	3.....	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	3.....	026-705500	POT/1K PCB DAL 784-20-102			EA	2.000
	3.....	100-700700	RES NET/CSP10E-01-502J			EA	3.000
	3.....	108-010300	RES 10K 05% 1/4W			EA	1.000
	3.....	108-010400	RES 100K 05% 1/4W			EA	1.000
	3.....	108-039100	RES 390 05% 1/4W			EA	6.000
	3.....	108-047200	RES 4.7K 05% 1/4W			EA	11.000
	3.....	108-047300	RES 47K 05% 1/4W			EA	1.000
	3.....	121-700900	REG -15V .35A 79M15AUC E FCH			EA	1.000
	3.....	134-705703	IC/741CP			EA	2.000
	3.....	134-712903	IC/74LS04N HEX INVERTER			EA	1.000
	3.....	134-713203	IC/74LS74N FLIP-FLOP			EA	6.000
	3.....	134-713703	IC/74LS253N MULTIPLEXER			EA	1.000
	3.....	134-717403	IC/74S287N PROM			EA	1.000
	3.....	134-718503	IC/74S182N CARRY LOOKAHEAD			EA	1.000
	3.....	134-720503	IC/74LS174N REGISTER			EA	4.000
	3.....	134-724500	IC/DAC80-CBI-V 12BIT DAC			EA	2.000
	3.....	134-724903	IC/74S169 COUNTER			EA	3.000
	3.....	134-728803	IC/74S472 PROM			EA	5.000
	3.....	134-730903	IC/74LS367N HEX DRIVER			EA	6.000
	3.....	134-731003	IC/74LS138N MULTIPLEXER			EA	3.000
	3.....	134-731603	IC/74LS251N MULTIPLEXER			EA	2.000
	3.....	134-732100	IC/96L02 MONOSTABLE			EA	1.000
	3.....	134-734300	IC/2901A 4BIT SLICE			EA	3.000
	2.....	415-005000	2090 BLANKING BD			EA	1.000
	3.....	000-900202	PCB/2090 BLANKING	X		EA	1.000
	3.....	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	3.....	017-704200	LABEL/HI VOLT/EXPL	X		EA	1.000
	3.....	021-700600	TRN NPN 2N2484 60V .36W A MOT			EA	4.000
	3.....	021-702200	TRN NPN 2N3903 40V 1W B MOT			EA	1.000
	3.....	021-711100	TRN NPN MPSU10 300V 1W E MOT			EA	4.000
	3.....	021-711400	TRN FETP M113 30V .22W A SLX			EA	1.000
	3.....	022-700800	DIO RECT 1N4004 400V 1A G TXI			EA	1.000
	3.....	022-711600	DIO TRRF 1N4376 10V .05A G FCH			EA	1.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002300			2090-3C/DISK & DIGITAL I/O				1
	3.....	023-707500	CAP 6.8MF 35V 10% TANT G KEM			EA	1.000
	3.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	1.000
	3.....	023-711300	CAP .1MF 250V 10% PLYE R SEC			EA	6.000
	3.....	023-719400	CAP .01MF 3000V 20% CERM R SPG			EA	2.000
	3.....	024-719900	CON/15F REC/CRP AMP 1-350244-9			EA	1.000
	3.....	024-724600	CON/10F REC/IDP MMM 3473-6000			EA	1.000
	3.....	024-734900	CON/8M HDR/SOL BRG 65532-108			EA	2.000
	3.....	024-735900	CONN/10PIN/3M3474.0001T			EA	1.000
	3.....	026-705700	POT/5K PCB DAL 784-20-502			EA	5.000
	3.....	026-705900	POT/500K PCB DAL 784-20-504			EA	1.000
	3.....	026-706400	POT/1MEG PCB DAL 784-20-105			EA	1.000
	3.....	032-700600	INSUL/TRANSIS PAD			EA	4.000
	3.....	042-711400	COVER/BLANK-2090	X		EA	1.000
	3.....	042-712600	COVER/BLANKING BD	X		EA	1.000
	3.....	105-022300	RES 22K 05% 2W			EA	2.000
	3.....	105-027300	RES 27K 05% 2W			EA	2.000
	3.....	108-010500	RES 1M 05% 1/4W			EA	1.000
	3.....	108-022200	RES 2.2K 05% 1/4W			EA	1.000
	3.....	108-022300	RES 22K 05% 1/4W			EA	2.000
	3.....	108-022400	RES 220K 05% 1/4W			EA	1.000
	3.....	108-047100	RES 470 05% 1/4W			EA	2.000
	3.....	108-047200	RES 4.7K 05% 1/4W			EA	1.000
	3.....	108-056000	RES 56 05% 1/4W			EA	1.000
	3.....	134-729400	IC/6N137			EA	1.000
	3.....	201-100300	RES 100K 01% 1/8W PRES			EA	2.000
	3.....	201-127300	RES 127K 01% 1/8W PRES			EA	3.000
	3.....	201-165200	RES 16.5K 01% 1/8W PRES			EA	1.000
	3.....	201-200200	RES 20K 01% 1/8W PRES			EA	3.000
	3.....	201-200300	RES 200K 01% 1/8W PRES			EA	4.000
	3.....	201-243200	RES 24.3K 01% 1/8W PRES			EA	1.000
	3.....	201-249100	RES 2.49K 01% 1/8W PRES			EA	1.000
	3.....	201-499200	RES 49.9K 01% 1/8W PRES			EA	1.000
	3.....	201-750200	RES 75K 01% 1/8W PRES			EA	1.000
	3.....	201-976200	RES 97.6K 01% 1/8W PRES			EA	1.000
	2.....	415-007000	2090 4K MEMORY BD			EA	1.000
	3.....	000-900402	P.C.B./2090 MEMORY 4K .	X		EA	1.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	1.000
	3.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	4.000
	3.....	024-734400	CON/18F DIP/SOL AMP 640359-3			EA	13.000
	3.....	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	3.....	100-700700	RES NET/CSP10E-01-502J			EA	1.000
	3.....	108-047100	RES 470 05% 1/4W			EA	1.000
	3.....	134-723003	IC/74LS14N HEX INVERTER			EA	1.000
	3.....	134-723903	IC/74LS257 MULTIPLEXER			EA	4.000
	3.....	134-730903	IC/74LS367N HEX DRIVER			EA	3.000
	3.....	134-736803	IC/74LS374N REGISTER			EA	4.000
	3.....	134-736903	IC/74LS241N OCTAL BUFFER			EA	3.000
	3.....	134-742300	IC/2141-2			EA	13.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002300			2090-3C/DISK & DIGITAL I/O				1
	2	415-007100	2090-3 INNER CONN BD 4K			EA	1.000
	3	000-900500	PCB/INTERFACE BD/2090	X		EA	1.000
	3	024-725000	CON/12M HDR/SOL AMP 9-350264-1			EA	1.000
	3	085-707900	CBL/50 COND/DAISY CHAIN			EA	1.000
	2	465-001400	2090 FRONT PANEL			EA	1.000
	3	011-723001	BRKT/2090 STRAIN RELIEF	X		EA	1.000
	3	015-706300	PIN/350663-6 AMP SPOOL			EA	4.000
	3	017-704600	LABEL/LOGO/JEWEL			EA	1.000
	3	022-714800	DIO LEDG FLV340 2.3V20MA L FCH			EA	1.000
	3	024-721700	CON/4M REC/CRP AMP 1-350233-9			EA	1.000
	3	025-715500	SW/PA166-011-0AA			EA	2.000
	3	025-718100	SW/7215J612ZCE-2 C&K			EA	2.000
	3	025-718500	SW/LB 2P2T LI 01-700155			EA	1.000
	3	025-721300	SW/TOGGLE #LFH-123			EA	2.000
	3	025-727100	SW/845773-SK-1			EA	1.000
	3	025-727200	SW/C & K SPDT 8121-J82			EA	1.000
	3	025-734300	SW/RO 1PL2-7PS CL PA166-025			EA	1.000
	3	045-703301	KNOB/KX-12322 1/8"			EA	4.000
	3	068-726905	PAN/2090 FRONT BAY 2	X		EA	1.000
	3	068-741001	PAN/2090 FRONT SUB BAY 2	X		EA	1.000
	3	085-900000	CBL/26 COND/2090 FRONT	X		EA	1.000
	3	093-702400	FASTNR/SCR 6-32 X 1/4" BLK			EA	4.000
	2	475-001500	2090-3 FINAL ASMB			EA	1.000
	3	011-724500	BRKT/FRAME GROUND/2090			EA	1.000
	3	017-704101	LABEL/2090-3	X		EA	1.000
	3	026-707800	POT/BA811-6670C.L. 250K			EA	1.000
	3	042-710903	COVER/BOTTOM/EXPL.III	X		EA	1.000
	3	042-712500	COVER/LINE VOLTAGE	X		EA	1.000
	3	042-712803	COVER/2090-3 L SIDE	X		EA	2.000
	3	051-700100	BUMPER/SJ5004X			EA	2.000
	3	051-700300	BUMPER/5025			EA	5.000
	3	085-703800	CORD/A/C/LINE P2392 SW			EA	1.000
	3	164-700500	GRAT/BLUE/EXPL.	X		EA	1.000
	3	268-703001	BEZEL/EXP SERIES	X		EA	1.000
	3	268-704300	MECH MISC/TILT STAND/14"			EA	1.000
	2	475-001700	2090-3 CAB ASMB			EA	1.000
	3	010-701500	NUT/SQUARE .860" #8-32	X		EA	1.000
	3	024-740300	CONN/AMP 87499-3/2PIN			EA	1.000
	3	027-700600	C.R.T./82D14GH/AMPEREX			EA	1.000
	3	034-714701	RAIL/TOP CENTER/EXPL.	X		EA	1.000
	3	034-714803	RAIL/SIDE EXPL			EA	2.000
	3	034-714901	RAIL/CONN/EXPL	X		EA	8.000
	3	034-715301	RAIL/CORNER SUPPORT	X		EA	1.000
	3	034-715401	RAIL/PLUG IN	X		EA	2.000
	3	044-704305	SHIELD/2090 CRT	X		EA	1.000
	3	049-700100	HANDLE/VINYLUXE			EA	1.000
	3	129-702100	FRAME/2090/END	X		EA	2.000
	3	129-900101	FRAME/2090 ROUNDED END	X		EA	4.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002300			2090-3C/DISK & DIGITAL I/O				1
	2.....	645-000400	2090 M.F.POWER SUPPLY			EA	1.000
	3.....	415-005300	2090 POWER SUPPLY BD			EA	1.000
	4.....	000-900004	PCB/2090 REGULATOR	X		EA	1.000
	4.....	006-701400	WASH/NO J TEFLON			EA	2.000
	4.....	011-716401	BRKT/H.V. XFORMER 60HZ	X		EA	1.000
	4.....	011-720900	BRKT/INTEN. FOCUS/2090	X		EA	1.000
	4.....	011-721000	BRKT/PWR SPLY MTG/2090	X		EA	2.000
	4.....	011-723101	BRKT/HI VOLT XFORMER/EXPL	X		EA	1.000
	4.....	015-706400	PIN/350665-2 AMP SPOOL			EA	30.000
	4.....	017-704200	LABEL/HI VOLT/EXPL	X		EA	6.000
	4.....	019-706000	XFORMER/ITA-1552-11			EA	1.000
	4.....	019-707000	XFORMER/HV WINDING/EXPL2 3	X		EA	1.000
	4.....	021-703800	TRN NPN 2N5978 60V 75W E MOT			EA	2.000
	4.....	021-708800	TRN NPN 2N5301 40V 200W D MOT			EA	1.000
	4.....	022-700800	DIO RECT 1N4004 400V 1A G TXI			EA	6.000
	4.....	022-705100	DIO ZENR 1N5268 82V .5W G MOT			EA	1.000
	4.....	022-706900	DIO TRRF FM50 5KV .01A G SEM			EA	2.000
	4.....	022-707000	DIO TRRF S2F 200V 1A G SEM			EA	5.000
	4.....	022-711900	DIO BRID VE48X 400V 1A C VAR			EA	1.000
	4.....	023-029200	CAP 22MF 15V 10% TANT G KEM			EA	1.000
	4.....	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	1.000
	4.....	023-702800	CAP .68MF 35V 10% TANT G KEM			EA	1.000
	4.....	023-704700	CAP 1MF 35V 10% TANT G KEM			EA	2.000
	4.....	023-706900	CAP 50MF 50V ALUM G SPG			EA	1.000
	4.....	023-707300	CAP 1MF 200V 10% MYLR G TRW			EA	2.000
	4.....	023-711200	CAP 220MF 10V 10% TANT G KEM			EA	1.000
	4.....	023-713500	CAP 4.7MF 50V 10% TANT G KEM			EA	2.000
	4.....	023-719400	CAP .01MF 3000V 20% CERM R SPG			EA	5.000
	4.....	023-719700	CAP 2.2MF 50V 10% TANT G KEM			EA	5.000
	4.....	024-719600	CON/15M HDR/SOL AMP 9-350268-1			EA	1.000
	4.....	024-722500	CON/12F REC/CRP AMP 1-350243-9			EA	2.000
	4.....	024-723400	CON/2M HDR/SOL AMP 9-350360-1			EA	1.000
	4.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	4.....	026-705400	POT/500 PCB DAL 784-20-501			EA	5.000
	4.....	026-706000	POT/20K PCB DAL 784-20-203			EA	1.000
	4.....	026-706500	POT/BRNS 500K			EA	2.000
	4.....	032-700800	INSUL/DIODE			EA	1.000
	4.....	032-700900	INSUL/DIODE			EA	7.000
	4.....	044-704600	SHIELD/H.V. EXPL.	X		EA	1.000
	4.....	067-700300	CORE/E1960-S-011A			EA	2.000
	4.....	070-703400	FUSE/.75 A/276.750 LITTLEFUSE			EA	1.000
	4.....	079-700000	THERMOS/165 DEG 7BTL6B10			EA	1.000
	4.....	098-700200	HT SNK/207CB W			EA	1.000
	4.....	098-704000	HT SNK/EXPL P.S.	X		EA	1.000
	4.....	098-704300	HT SNK	X		EA	1.000
	4.....	101-010500	RES 1M 10% 1/2W			EA	2.000
	4.....	101-022500	RES 2.2M 10% 1/2W			EA	2.000
	4.....	105-012100	RES 120 05% 2W			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002300			2090-3C/DISK & DIGITAL I/O				1
	4.....	106-703500	RES .1 05% 10W			EA	1.000
	4.....	106-703600	RES 200M 10% 1W			EA	1.000
	4.....	108-010300	RES 10K 05% 1/4W			EA	1.000
	4.....	108-015300	RES 15K 05% 1/4W			EA	1.000
	4.....	108-022100	RES 220 05% 1/4W			EA	2.000
	4.....	108-027100	RES 270 05% 1/4W			EA	1.000
	4.....	108-033200	RES 3.3K 05% 1/4W			EA	1.000
	4.....	121-702100	REG 5 TO 30V 1A 78GU1C E FCH			EA	1.000
	4.....	121-702300	REG 1.2 TO 37V 1.5A 317T E NAT			EA	2.000
	4.....	121-702400	REG -1.2TO-37V 1.5A 337T E NAT			EA	2.000
	4.....	121-702600	REG 2TO38V ,15A LAS1000 A LAM			EA	1.000
	4.....	201-100300	RES 100K 01% 1/8W PRES			EA	1.000
	4.....	201-124000	RES 124 01% 1/8W PRES			EA	2.000
	4.....	201-200100	RES 2K 01% 1/8W PRES			EA	1.000
	4.....	201-200300	RES 200K 01% 1/8W PRES			EA	1.000
	4.....	201-221100	RES 2.21K 01% 1/8W PRES			EA	1.000
	4.....	201-249000	RES 249 01% 1/8W PRES			EA	2.000
	4.....	201-249100	RES 2.49K 01% 1/8W PRES			EA	1.000
	4.....	201-301000	RES 301 01% 1/8W PRES			EA	1.000
	4.....	201-365000	RES 365 01% 1/8W PRES			EA	1.000
	4.....	201-499100	RES 4.99K 01% 1/8W PRES			EA	2.000
	4.....	201-604000	RES 604 01% 1/8W PRES			EA	1.000
	4.....	201-619200	RES 61.9K 01% 1/8W PRES			EA	1.000
	4.....	201-825000	RES 825 01% 1/8W PRES			EA	1.000
	3.....	465-001200	2090 REAR PANEL BAY 2			EA	1.000
	4.....	015-706300	PIN/350663-6 AMP SPOOL			EA	12.000
	4.....	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	4.....	019-708700	XFORMER/DJ346			EA	1.000
	4.....	024-711500	CON/5F CIR/SOL SWC 61HA5F			EA	1.000
	4.....	024-711600	CON/5M CIR/SOL SWC 12CL5M			EA	1.000
	4.....	024-721400	CON/1F CXL/SOL APH 31-010			EA	2.000
	4.....	024-721600	CON/4F REC/CRP AMP 1-350240-9			EA	1.000
	4.....	024-723300	CON/2F REC/CRP AMP 1-350354-9			EA	1.000
	4.....	024-724600	CON/10F REC/IDP MMM 3473-6000			EA	1.000
	4.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	4.....	024-730800	CONN/15 PIN 1-350237-9			EA	1.000
	4.....	025-727500	SW/CW/GF-642			EA	2.000
	4.....	068-726608	PAN/2090 REAR BAY 2	X		EA	1.000
	4.....	070-701100	FUSE/348890 BODY			EA	1.000
	4.....	070-701200	FUSE/348007 CAP			EA	1.000
	4.....	102-700200	MOVISTOR/V130LA10A			EA	2.000
	4.....	114-701800	FLTR/6 AMP 6H9 CORCOM			EA	1.000
	3.....	465-001300	2090 REAR PANEL BAY 1			EA	1.000
	4.....	415-005200	2090 CAP BD P.S. BAY 1			EA	1.000
	5.....	000-900106	P.C.B./CAP BD/EXP SERIES	X		EA	1.000
	5.....	015-706300	PIN/350663-6 AMP SPOOL			EA	12.000
	5.....	015-706400	PIN/350665-2 AMP SPOOL			EA	12.000
	5.....	022-705300	D10 BRID VS647 600V 2A J VAR			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002300			2090-3C/DISK & DIGITAL I/O				1
	5.....	023-716200	CAP 8800MF 25V ALUM S CAL			EA	2.000
	5.....	023-717500	CAP 28KMF 15V ALUM S MEP			EA	2.000
	5.....	023-719000	CAP 2000MF 50V ALUM S CAL			EA	2.000
	5.....	024-719900	CON/15F REC/CRP AMP 1-350244-9			EA	1.000
	5.....	024-721800	CON/12M REC/CRP AMP 1-350236-9			EA	1.000
	5.....	085-702400	CORD/428-=056 ROTRON			EA	1.000
	4.....	475-002500	MECH MISC/BAY 1 P.S.			EA	1.000
	5.....	022-713800	DIO RECT SCPE05 50V 5A Q SEM			EA	1.000
	5.....	068-726706	FAN/2090 REAR BAY 1	X		EA	1.000
	5.....	072-700100	FAN/WISPER WR2A1			EA	1.000
	5.....	114-702600	FLTR./FAN/PAMOTER#5502			EA	1.000
	2.....	645-000500	2090 BAY 3 POWER SUPPLY			EA	1.000
	3.....	415-005500	2090 POWER SUPPLY BD BAY 3			EA	1.000
	4.....	000-902103	P.C.B./2090 BAY 3 SUPPLY	X		EA	1.000
	4.....	006-701400	WASH/NO J TEFLON			EA	4.000
	4.....	011-721900	BRKT/THIRD BAY P.S./2090.3	X		EA	2.000
	4.....	015-706300	PIN/350663-6 AMP SPOOL			EA	6.000
	4.....	021-708800	TRN NPN 2N5301 40V 200W D MOT			EA	2.000
	4.....	022-700800	DIO RECT 1N4004 400V 1A G TXI			EA	6.000
	4.....	022-707100	DIO TRRM 3SM2 200V 2A G SEM			EA	4.000
	4.....	023-700200	CAP 1000PF 300V 5% MICA R ARC			EA	2.000
	4.....	023-704700	CAP 1MF 35V 10% TANT G KEM			EA	1.000
	4.....	023-711000	CAP 22MF 35V 10% TANT G KEM			EA	4.000
	4.....	023-714000	CAP 100MF 50V ALUM G SPG			EA	1.000
	4.....	023-716200	CAP 8800MF 25V ALUM S CAL			EA	2.000
	4.....	023-717500	CAP 28KMF 15V ALUM S MEP			EA	1.000
	4.....	024-719500	CON/9M HDR/SOL AMP 9-350262-1			EA	1.000
	4.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	4.....	026-705400	POT/500 PCB DAL 784-20-501			EA	2.000
	4.....	032-700800	INSUL/DIODE			EA	2.000
	4.....	098-704700	HT SNK/THM6006B-2-2			EA	1.000
	4.....	106-701800	RES .18 10% 2W			EA	1.000
	4.....	106-702700	RES .36 05% 2W			EA	1.000
	4.....	108-022200	RES 2.2K 05% 1/4W			EA	2.000
	4.....	108-027100	RES 270 05% 1/4W			EA	2.000
	4.....	121-702400	REG -1.2TO-37V 1.5A 337T E NAT			EA	1.000
	4.....	121-702600	REG 2TO30V .15A LAS1000 A LAM			EA	2.000
	4.....	201-124000	RES 124 01% 1/8W PRES			EA	1.000
	4.....	201-150000	RES 150 01% 1/8W PRES			EA	1.000
	4.....	201-200100	RES 2K 01% 1/8W PRES			EA	1.000
	4.....	201-301000	RES 301 01% 1/8W PRES			EA	2.000
	4.....	201-365000	RES 365 01% 1/8W PRES			EA	1.000
	4.....	201-604000	RES 604 01% 1/8W PRES			EA	2.000
	4.....	201-681900	RES 68.1 01% 1/8W PRES			EA	1.000
	3.....	475-003100	MECH MISC/BAY 3 P.S.			EA	1.000
	4.....	002-706500	PLATE/I/O COVER	X		EA	1.000
	4.....	015-706300	PIN/350663-6 AMP SPOOL			EA	6.000
	4.....	015-706400	PIN/350665-2 AMP SPOOL			EA	6.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002300			2090-3C/DISK & DIGITAL I/O				1
	4.....	019-707700	XFORMER/DG-447 FOREST			EA	1.000
	4.....	024-719800	CON/9F REC/CRP AMP 1-350242-9			EA	1.000
	4.....	024-727000	CON/6M REC/CRP AMP 1-350234-9			EA	1.000
	4.....	068-728003	FAN/2090 REAR BAY 3	X		EA	1.000
	4.....	070-703000	FUSE/SLO BLO 3AG3			EA	2.000
	1.....	845-000400	DISK-B ADD			EA	1.000
	2.....	415-005700	2090 DISK BD			EA	1.000
	3.....	000-901903	PCB/2090	X		EA	1.000
	3.....	015-701500	PIN/SOC 61173-1			EA	4.000
	3.....	019-707800	INDUCT/NYTRONICS/WEE 0.47UH			EA	1.000
	3.....	022-709400	DIO TRRF 1N4150 50V .2A G TXI			EA	1.000
	3.....	023-029200	CAP 22MF 15V 10% TANT G KEM			EA	3.000
	3.....	023-700300	CAP 500PF 500V 5% MICA R ARC			EA	3.000
	3.....	023-702400	CAP .01MF 100V 20% CERM R SPG			EA	1.000
	3.....	023-710600	CAP 10PF 1000V 10% CERM R CLB			EA	1.000
	3.....	023-715100	CAP .05MF 50V CERM R ARC			EA	6.000
	3.....	024-703600	CON/4F REC/CRP AMP 1-480424-0			EA	1.000
	3.....	024-715900	CON/16F DIP/SOL AMP 640358-3			EA	4.000
	3.....	024-733200	CON/6M HDR/SOL AMP 9-350259-2			EA	1.000
	3.....	024-734000	CONN/IC SOC/20 PIN			EA	3.000
	3.....	024-734400	CON/18F DIP/SOL AMP 640359-3			EA	4.000
	3.....	024-745000	CON/64F DIP/SOL BDY DILBQ64P			EA	1.000
	3.....	025-718000	SW/C + K #8531			EA	1.000
	3.....	026-705700	POT/5K PCB DAL 784-20-502			EA	1.000
	3.....	085-709100	CBL/34 COND/AP 922523-34-99-12			EA	1.000
	3.....	100-700700	RES NET/CSP10E-01-502J			EA	2.000
	3.....	108-010000	RES 10 05% 1/4W			EA	4.000
	3.....	108-010100	RES 100 05% 1/4W			EA	1.000
	3.....	108-010200	RES 1K 05% 1/4W			EA	3.000
	3.....	108-010300	RES 10K 05% 1/4W			EA	5.000
	3.....	108-012300	RES 12K 05% 1/4W			EA	1.000
	3.....	108-015100	RES 150 05% 1/4W			EA	2.000
	3.....	108-027100	RES 270 05% 1/4W			EA	1.000
	3.....	108-033100	RES 330 05% 1/4W			EA	7.000
	3.....	108-047200	RES 4.7K 05% 1/4W			EA	2.000
	3.....	134-705303	IC/7404N HEX INVERTER			EA	1.000
	3.....	134-712803	IC/74LS00N 2-NAND			EA	4.000
	3.....	134-712903	IC/74LS04N HEX INVERTER			EA	1.000
	3.....	134-713203	IC/74LS74N FLIP-FLOP			EA	8.000
	3.....	134-716903	IC/74148N PRIORITY ENCODER			EA	1.000
	3.....	134-717503	IC/74S138N DEMULTIPLEXER			EA	1.000
	3.....	134-718103	IC/74LS191N COUNTER			EA	1.000
	3.....	134-720403	IC/74LS02N 2-NOR			EA	3.000
	3.....	134-720503	IC/74LS174N REGISTER			EA	2.000
	3.....	134-720803	IC/74LS10N 3-NAND			EA	1.000
	3.....	134-722005	IC/4040B CMOS 12 STAGE BIN COU			EA	1.000
	3.....	134-722403	IC/74LS139N MULTIPLEXER			EA	1.000
	3.....	134-725303	IC/7406N O/C HEX INVERTER			EA	2.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002300			2090-3C DISK & DIGITAL I/O				1
	3........	134-728803	IC/74S472 PROM			EA	2.000
	3........	134-730903	IC/74LS367N HEX DRIVER			EA	4.000
	3........	134-731300	IC/9900JL PROCESSOR			EA	1.000
	3........	134-731403	IC/74LS362N CLOCK DRIVER			EA	1.000
	3........	134-731503	IC/74LS259N ADDRESSABLE LATCH			EA	3.000
	3........	134-731603	IC/74LS251N MULTIPLEXER			EA	4.000
	3........	134-731700	IC/2111A-4N 256 X 4 STATIC RAM			EA	4.000
	3........	134-731803	IC/74LS155N DEMULTIPLEXER			EA	1.000
	3........	134-731903	IC/74LS395N SHIFT REGISTER			EA	4.000
	3........	134-732003	IC/74LS92N COUNTER			EA	1.000
	3........	134-732100	IC/96L02 MONOSTABLE			EA	1.000
	3........	191-705400	CRYSTAL/48MHZ/.05%			EA	1.000
	3........	201-200200	RES 20K .01% 1/8W PRES			EA	1.000
	3........	201-250200	RES 25K .01% 1/8W PRES			EA	1.000
	2........	465-001500	2090 DISK FRONT PANEL			EA	1.000
	3........	000-902001	P.C.B./LED BD/MINI DISK/EXP	X		EA	1.000
	3........	011-722403	BRKT/DISK/EXP	X		EA	1.000
	3........	022-707900	DIO LEDR FLV110 1.7V 20MAL TCH			EA	4.000
	3........	022-714800	DIO LEDG FLV340 2.3V20MA L TCH			EA	8.000
	3........	025-715500	SW/FA166-011-0AA			EA	1.000
	3........	025-718100	SW/7215J612ZQE-2 C&K			EA	2.000
	3........	025-719600	SW/7101J60 C&K			EA	9.000
	3........	045-703301	KNOB/KK-12322 1/8"			EA	1.000
	3........	068-727806	PAN/2090 DISK FRONT	X		EA	1.000
	3........	068-740901	PAN/2090 DISK FRONT SUB	X		EA	1.000
	3........	085-709000	CBL/34 COND/AP 92252-34-99-06			EA	1.000
	2........	475-001800	2090 DISK MECH ASSY			EA	1.000
	3........	020-702700	CHAS/2090 DISK SLIDE			EA	1.000
	3........	034-715500	GUIDE/SCANBE [illegible]			EA	4.000
	3........	222-009000	DISK DRIVE/SHUGART [illegible]			EA	1.000
	3........	270-700800	DISK,[illegible]			EA	2.000
	1........	845-000700	DIGITAL I/O [illegible] ADD			EA	1.000
	2........	415-006800	I/O CONN CARD			EA	1.000
	3........	000-902401	P.C.B./I/O CARD/2090-3	X		EA	1.000
	3........	011-7[illegible]1000	BRKT [illegible]	X		EA	1.000
	3........	134-715303	IC/7438N O.C [illegible] NAND			EA	5.000
	2........	415-007400	2090 DIGITAL I/O [illegible]			EA	1.000
	3........	000-902205	PCB/2090 I/O			EA	1.000
	3........	015-706400	FIN/3500[illegible] 2 AMP [illegible]			EA	6.000
	3........	023-700200	CAP 1000PF 300V 5% MICA [illegible]			EA	1.000
	3........	023-702400	CAP .01MF 100V 20% [illegible]			EA	6.000
	3........	023-711100	CAP 4.7MF [illegible] 10% TANT [illegible]			EA	8.000
	3........	024-725400	CON [illegible]M HDR [illegible] AMP [illegible]			EA	1.000
	3........	024-726900	CON/[illegible] REC/[illegible] AMP 1-[illegible]			EA	1.000
	3........	024-733200	CON/[illegible]M HDR/[illegible] AMP [illegible]			EA	1.000
	3........	024-734000	CONN/IC SOC/[illegible] PIN			EA	2.000
	3........	024-737200	CONN/56PIN/AMP [illegible]			EA	1.000
	3........	085-707700	CBL/50 COND/[illegible]			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002300			2090-3C/DISK & DIGITAL I/O				1
	3.....	100-700700	RES NET/CSP10E-01-502J			EA	2.000
	3.....	108-010300	RES 10K 05% 1/4W			EA	4.000
	3.....	108-033100	RES 330 05% 1/4W			EA	1.000
	3.....	134-712803	IC/74LS00N 2-NAND			EA	3.000
	3.....	134-712903	IC/74LS04N HEX INVERTER			EA	3.000
	3.....	134-713203	IC/74LS74N FLIP-FLOP			EA	4.000
	3.....	134-713703	IC/74LS253N MULTIPLEXER			EA	1.000
	3.....	134-715303	IC/7438N O/C 2-NAND			EA	2.000
	3.....	134-718803	IC/74LS175N REGISTER			EA	3.000
	3.....	134-720403	IC/74LS02N 2-NOR			EA	2.000
	3.....	134-720503	IC/74LS174N REGISTER			EA	5.000
	3.....	134-721203	IC/74LS163N COUNTER			EA	2.000
	3.....	134-722403	IC/74LS139N MULTIPLEXER			EA	1.000
	3.....	134-723003	IC/74LS14N HEX INVERTER			EA	4.000
	3.....	134-723903	IC/74LS257 MULTIPLEXER			EA	6.000
	3.....	134-728803	IC/74S472 PROM			EA	2.000
	3.....	134-730903	IC/74LS367N HEX DRIVER			EA	4.000
	3.....	134-731003	IC/74LS138N MULTIPLEXER			EA	2.000
	3.....	134-731903	IC/74LS395N SHIFT REGISTER			EA	4.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002700			NIC 2081				1
	1.....	415-009100	2081 GPIB I/O BD			EA	1.000
	2.....	000-904102	PCB/GP IB BD/2081	X		EA	1.000
	2.....	022-709400	DIO TRRF 1N4150 50V .2A G TXI			EA	2.000
	2.....	023-029200	CAP 22MF 15V 10% TANT G NEM			EA	1.000
	2.....	023-700300	CAP 500PF 500V 5% MICA R ARC			EA	2.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G NEM			EA	1.000
	2.....	023-715100	CAP .05MF 50V CERM R ARL			EA	3.000
	2.....	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	2.....	024-742200	CONN/AMP 552230-1			EA	1.000
	2.....	025-731800	SW/TH 1P1T8 AM 1-435668-8			EA	1.000
	2.....	093-702700	FASTNER/CON/HWD AMP 552633-2			EA	1.000
	2.....	100-700700	RES NET/CSP10E 01-502J			EA	1.000
	2.....	108-010100	REZ 100 05% 1/4W			EA	2.000
	2.....	134-712803	IC/74LS00N 2-NAND			EA	1.000
	2.....	134-712903	IC/74LS04N HEX INVERTER			EA	1.000
	2.....	134-713203	IC/74LS74N FLIP FLOP			EA	2.000
	2.....	134-718803	IC/74LS175N REGISTER			EA	2.000
	2.....	134-720403	IC/74LS02N 2-NOR			EA	2.000
	2.....	134-722703	IC/74LS08N 2 AND			EA	1.000
	2.....	134-731503	IC/74LS259N ADDRESSABLE LATCH			EA	2.000
	2.....	134-731603	IC/74LS251N MULTIPLEXER			EA	2.000
	2.....	134-740903	IC/74LS240N OCTAL BUFFER			EA	1.000
	2.....	134-742400	IC/3446 488 TRANSCEIVER			EA	4.000
	1.....	415-009200	2081/82 I/O [illegible]			EA	1.000
	2.....	000-904204	PCB/2081/82 I O GPI	X		EA	1.000
	2.....	011-721000	BRKT/PWR SPLY MTG/2000	X		EA	1.000
	2.....	011-725701	BRKT/MTG/2081	X		EA	3.000
	2.....	015-706400	PIN/350650-2 AMP 21000			EA	6.000
	2.....	019-707800	INDUCT/NYTRONICS/WEE 0.47UH			EA	1.000
	2.....	022-709400	DIO TRRF 1N4150 50V .2A G TXI			EA	1.000
	2.....	023-029200	CAP 22MF 15V 10% TANT G NEM			EA	4.000
	2.....	023-710600	CAP 10PF [illegible] CERM P CER			EA	1.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G NEM			EA	1.000
	2.....	023-715100	CAP .05MF 50V CERM R ARL			EA	12.000
	2.....	024-721300	CONN/IC DIP 20P AMP 640361-3			EA	2.000
	2.....	024-726900	CONN/[illegible]			EA	1.000
	2.....	024-733200	CONN/[illegible] AMP			EA	1.000
	2.....	024-734000	CONN/IC 20 20 PIN			EA	6.000
	2.....	024-734300	CON/18P DIP 20L AMP 640359-3			EA	4.000
	2.....	025-718000	SW/T [illegible]			EA	1.000
	2.....	108-010000	REZ 10 05% 1/4W			EA	4.000
	2.....	108-010100	RES 100 05% 1/4W			EA	1.000
	2.....	108-010300	REZ 1K 05% 1/4W			EA	1.000
	2.....	108-010400	RES 10K 05% 1/4W			EA	1.000
	2.....	108-012300	RES 12K 05% 1/4W			EA	1.000
	2.....	108-047200	REZ 4.7K 05% 1/4W			EA	3.000
	2.....	134-712803	IC/74LS00N 2 NAND			EA	1.000
	2.....	134-713203	IC/74LS74N FLIP-FLOP			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002700			NIC 2081				1
	2.....	134-716903	IC/74148N PRIORITY ENCODER			EA	1.000
	2.....	134-718803	IC/74LS175N REGISTER			EA	3.000
	2.....	134-720403	IC/74LS02N 2-NOR			EA	1.000
	2.....	134-728803	IC/74S472 PROM			EA	1.000
	2.....	134-731300	IC/9900JL PROCESSOR			EA	1.000
	2.....	134-731403	IC/74LS362N CLOCK DRIVER			EA	1.000
	2.....	134-731503	IC/74LS259N ADDRESSABLE LATCH			EA	2.000
	2.....	134-731603	IC/74LS251N MULTIPLEXER			EA	1.000
	2.....	134-731700	IC/2111A-4N 256 X 4 STATIC RAM			EA	4.000
	2.....	134-731803	IC/74LS155N DEMULTIPLEXER			EA	1.000
	2.....	134-736803	IC/74LS374N REGISTER			EA	1.000
	2.....	134-739103	IC/74LS244N OCTAL BUFFER			EA	3.000
	2.....	134-741400	IC/2716 MOS EPROM			EA	2.000
	2.....	191-705400	CRYSTAL/48MHZ/.05%			EA	1.000
	1.....	475-003200	2081 MECH ASSY			EA	1.000
	2.....	042-718501	COVER/2081 I/O	X		EA	1.000
	2.....	093-701900	FASTNR/BUT HD. SCR.			EA	4.000
	2.....	123-706900	HDWR MISC/KNURL SER. RAF598-SS			EA	3.000
	2.....	123-707000	HDWR MISC/RET.RING/RAF1058-SS			EA	3.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002900			2082/RS232C I.O.				1
	1.....	405-001600	2082/CABLE			EA	1.000
	2.....	085-900300	CBL/2082 RS-232-C INTERCONNECT			EA	1.000
	1.....	415-009200	2081/82 I/O CPU			EA	1.000
	2.....	000-904204	PCB/2081/82 I/O CPU	X		EA	1.000
	2.....	011-721000	BRKT/PWR SPLY MTG/2090	X		EA	1.000
	2.....	011-725701	BRKT/MTG/2081	X		EA	3.000
	2.....	015-706400	PIN/350665-2 AMP SPOOL			EA	6.000
	2.....	019-707800	INDUCT/NYTRONICS/WEE 0.47UH			EA	1.000
	2.....	022-709400	DIO TRRF 1N4150 50V .2A G TXI			EA	1.000
	2.....	023-029200	CAP 22MF 15V 10% TANT G NEM			EA	4.000
	2.....	023-710600	CAP 10PF 1000V 10% CERM R CLB			EA	1.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G NEM			EA	1.000
	2.....	023-715100	CAP .05MF 50V CERM R ARC			EA	12.000
	2.....	024-721300	CON/24F DIP/SOL AMP 640361-3			EA	2.000
	2.....	024-726900	CON/6F REC/CRP AMP 1-350241-9			EA	1.000
	2.....	024-733200	CON/6M HDR/SOL AMP 9-350259-2			EA	1.000
	2.....	024-734000	CONN/IC SOC/20 PIN			EA	6.000
	2.....	024-734400	CON/18F DIP/SOL AMP 640359-3			EA	4.000
	2.....	025-718000	SW/C + K #8531			EA	1.000
	2.....	108-010000	RES 10 05% 1/4W			EA	4.000
	2.....	108-010100	RES 100 05% 1/4W			EA	1.000
	2.....	108-010200	RES 1K 05% 1/4W			EA	1.000
	2.....	108-010300	RES 10K 05% 1/4W			EA	1.000
	2.....	108-012300	RES 12K 05% 1/4W			EA	1.000
	2.....	108-047200	RES 4.7K 05% 1/4W			EA	3.000
	2.....	134-712803	IC/74LS00N 2-NAND			EA	1.000
	2.....	134-713203	IC/74LS74N FLIP-FLOP			EA	1.000
	2.....	134-716903	IC/74148N PRIORITY ENCODER			EA	1.000
	2.....	134-718803	IC/74LS175N REGISTER			EA	3.000
	2.....	134-720403	IC/74LS02N 2-NOR			EA	1.000
	2.....	134-728803	IC/74S472 PROM			EA	1.000
	2.....	134-731300	IC/9900JL PROCESSOR			EA	1.000
	2.....	134-731403	IC/74LS362N CLOCK DRIVER			EA	1.000
	2.....	134-731503	IC/74LS259N ADDRESSABLE LATCH			EA	2.000
	2.....	134-731603	IC/74LS251N MULTIPLEXER			EA	1.000
	2.....	134-731700	IC/2111A-4N 256 X 4 STATIC RAM			EA	4.000
	2.....	134-731803	IC/74LS155N DEMULTIPLEXER			EA	1.000
	2.....	134-736803	IC/74LS374N REGISTER			EA	1.000
	2.....	134-739103	IC/74LS244N OCTAL BUFFER			EA	3.000
	2.....	134-741400	IC/2716 MOS EPROM			EA	2.000
	2.....	191-705400	CRYSTAL/48MHZ/.05%			EA	1.000
	1.....	415-009900	2082/ I/O BOARD			EA	1.000
	2.....	000-904502	PCB/2082 I/O	X		EA	1.000
	2.....	019-709300	INDUCT/40 UH @ 100 MA BIAS	X		EA	2.000
	2.....	019-709400	INDUCT/360 UH @ 100 MA BIAS	X		EA	1.000
	2.....	022-709400	DIO TRRF 1N4150 50V .2A G TXI			EA	2.000
	2.....	023-029200	CAP 22MF 15V 10% TANT G NEM			EA	4.000
	2.....	023-700100	CAP 100PF 500V 5% MICA R ARC			EA	1.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
885-002900			2082/RS232C I.O.				1
	2.....	023-711000	CAP 22MF 35V 10% TANT G KEM			EA	1.000
	2.....	023-711100	CAP 4.7MF 10V 10% TANT G KEM			EA	1.000
	2.....	023-715100	CAP .05MF 50V CERM R ARC			EA	6.000
	2.....	024-723100	CON/25F REC/SOL AMP 205738-1			EA	1.000
	2.....	024-723200	CON/25M REC/SOL AMP 205737-1			EA	1.000
	2.....	024-734400	CON/18F DIP/SOL AMP 640359-3			EA	1.000
	2.....	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	2.....	025-721100	SW/ALCO MSS-4200			EA	1.000
	2.....	025-731800	SW/TH 1P1T8 AM 1-435668-8			EA	1.000
	2.....	051-700700	BUMPER/SJ-5017			EA	2.000
	2.....	093-702100	FASTNER/SCR LOCK			EA	2.000
	2.....	100-700700	RES NET/CSP10E-01-502J			EA	1.000
	2.....	101-010900	RES 1 10% 1/2W			EA	1.000
	2.....	134-712803	IC/74LS00N 2-NAND			EA	1.000
	2.....	134-713203	IC/74LS74N FLIP-FLOP			EA	1.000
	2.....	134-731503	IC/74LS259N ADDRESSABLE LATCH			EA	1.000
	2.....	134-731603	IC/74LS251N MULTIPLEXER			EA	2.000
	2.....	134-741503	IC/497AC SWITCHING VOLT REG			EA	1.000
	2.....	134-741600	IC/9902 CRU UART			EA	1.000
	2.....	134-741703	IC/75188 QUAD LINE DRIVER			EA	2.000
	2.....	134-741803	IC/75189 QUAD LINE RECEIVER			EA	2.000
	2.....	201-110200	RES 11K 01% 1/8W PRES			EA	1.000
	2.....	201-127100	RES 1.27K 01% 1/8W PRES			EA	1.000
	1.....	475-003600	2082/ MECH ASSY			EA	1.000
	2.....	042-719502	COVER/2082 I/O	X		EA	1.000
	2.....	093-701900	FASTNR/BUT HD. SCR.			EA	4.000
	2.....	123-706900	HDWR MISC/KNURL SER. RAF598-SS			EA	3.000
	2.....	123-707000	HDWR MISC/RET.RING/RAF1058-SS			EA	3.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
845-000900			2085 CAL I/O				1
	1	415-007500	CALCULATOR BD/2085			EA	1.000
	2	000-902601	PCB/2085 CALCULATOR	X		EA	1.000
	2	022-701100	DIO GERM 1N270 80V .2A G ITT			EA	1.000
	2	023-700300	CAP 500PF 500V 5% MICA R ARC			EA	1.000
	2	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	2	085-705800	CBL/98032A H.P.			EA	1.000
	2	100-701700	RES NET/BECK 785-5-R-220/330			EA	2.000
	2	108-015100	RES 150 05% 1/4W			EA	1.000
	2	108-022100	RES 220 05% 1/4W			EA	1.000
	2	108-027100	RES 270 05% 1/4W			EA	1.000
	2	108-033100	RES 330 05% 1/4W			EA	1.000
	2	134-709703	IC/74121N MONOSTABLE			EA	1.000
	2	134-731803	IC/74LS155N DEMULTIPLEXER			EA	1.000
	1	475-002800	MECH MISC/2085			EA	1.000
	2	042-713200	COVER/CAL.I/O/9825A CAL	X		EA	1.000
	2	093-702400	FASTNR/SCR 6-32 X 1/4" BLK			EA	4.000
	2	123-706900	HDWR MISC/KNURL SER. RAF598-SS			EA	3.000
	2	123-707000	HDWR MISC/RET.RING/RAF1058-SS			EA	3.000

ASSEMBLY	LEVEL	COMPONENT	DESCRIPTION	ENG DWG	VENDOR	U/M	QTY
845-000800			OPTION 003				1
	1	415-006900	I/O BD/OPT 003			EA	1.000
	2	000-902502	PCB/2090 I/O ACC	X		EA	1.000
	2	024-713000	CON/50M HDR/IDP MMM 3426-0000			EA	2.000
	2	024-713500	CONN/3425-0000			EA	2.000
	2	024-737200	CONN/56PIN/AMP 67907.3			EA	1.000
	2	100-701700	RES NET/BECK 785-5-R-220/330			EA	3.000
	2	108-022100	RES 220 05% 1/4W			EA	1.000
	2	108-033100	RES 330 05% 1/4W			EA	1.000
	1	475-002700	MECH MISC/OPT. 003			EA	1.000
	2	042-711502	COVER/I/O/002-003			EA	1.000
	2	093-701900	FASTNR/BUT HD. SCR.			EA	4.000
	2	123-706900	HDWR MISC/KNURL SER. RAF598-SS			EA	3.000
	2	123-707000	HDWR MISC/RET.RING/RAF1058-SS			EA	3.000

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