TM 11-5815-612-40&P

GENERAL SUPPORT MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

FOR

CIRCUIT CARD ASSEMBLIES:
SM-D-915627
(NSN 5815-01-047-2654)

SM-D-915630
(NSN 5815-01-083-0731)

SM-D-915624
(NSN 5815-01-047-2653)

SM-D-915621
(NSN 5815-01-047-2652)

HEADQUARTERS, DEPARTMENT OF THE ARMY

1 JUNE 1986

5 SAFETY STEPS TO FOLLOW IF **SOMEONE IS THE VICTIM OF ELECTRICAL** SHOCK

1 DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL-

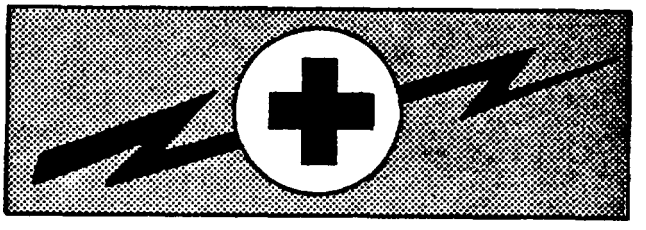
2 IF POSSIBLE TURN OFF THE ELECTRICAL POWER

3 IF YOU CANNOT TURN OFF THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A WOODEN POLE OR A ROPE OR SOME OTHER INSULATING MATERIAL

4 SEND FOR HELP AS SOON AS POSSIBLE

5 AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION

WARNING



HIGH VOLTAGE

is used in the operation of this equipment

DEATH ON CONTACT

may result if personnel fail to observe safety precautions

Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and who is competent in administering first aid. When the technician is aided by operators, he must warn them about dangerous areas.

Whenever possible, the power supply to the equipment must be shut off before beginning work on the equipment. Take particular care to ground every capacitor likely to hold a dangerous potential. When working inside the equipment, after the power has been turned off, always ground every part before touching it.

Be careful not to contact high-voltage connections or 115 volt ac input connections when installing or operating this equipment.

Whenever the nature of the operation permits, keep one hand away from the equipment to reduce the hazard of current flowing through the body.

Warning: Do not be misled by the term "low voltage." Potentials as low as 50 volts may cause death under adverse conditions.

For Artifical Respiration, refer to FM 21-11.

TECHNICAL MANUAL

TM 11-5815-612-40&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 1 June 1986

GENERAL SUPPORT MAINTENANCE MANUAL FOR CIRCUIT CARD ASSEMBLIES: INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

SM-D-915627, NSN 5815-01-047-2654
SM-D-915630, NSN 5815-01-083-0731
SM-D-915624, NSN 5815-01-047-2653
SM-D-915621, NSN 5815-01-047-2652

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 {Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-ME-MP, Fort Monmouth, New Jersey 07703-5007.

In either case, a reply will be furnished direct to you.

TABLE OF CONTENTS

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HOW TO USE THIS MANUAL

To test and repair any of the following AN/UGC-74 circuit card assemblies:

- Communications Board — SM-D-915627
- Print Control Board — SM-D-915630
- Memory Board — SM-D-915624
- CPU Board — SM-D-915621

EXAMPLE

- Prepare the test set. Setup procedures are found in paragraph 2-5.
- Run one of the board tests. Test procedures are shown in paragraph 2-7 through 2-10.
- If a fault occurs, troubleshoot and repair the fault, These procedures are shown in paragraph 2-7 through 2-10.
- After repair, retest the module.

CHAPTER 1

INTRODUCTION

1-1. SCOPE

a. Type of Manual

General Support Maintenance Manual

b. Model Number and Equipment

- SM-D-915627 — Communications Card
- SM-D-915630 — Print Control Card
- SM-D-915624 — Memory Card
- SM-D-915621 — CPU Card

c. Purpose of Manual

To show how to test and repair circuit card assemblies SM-D-915627 (Communications Card), SM-D-915630 (Print Control Card), SM-D-915624 (Memory Card), and SM-D-915621 (CPU Card) used in the AN/UGC-74A(V)3 Communications Terminal.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS

a. Reports of Maintenance and Unsatisfactory Equipment

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, as contained in Maintenance Management Update.

b. Report of Packaging and Handling Deficiencies

Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73A/AFR 400-54/MCO 4430.3F.

c. Discrepancy in Shipment Report (DISREP) (SF 361)

Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

1-3. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your equipment needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-ME-MP, Fort Monmouth, New Jersey 07703-5007. We'll send you a reply.

1-4. CONSOLIDATED INDEX OF ARMY PUBLICATIONS AND BLANK FORMS

Refer to the latest issue of DA PAM 310-1 to determine whether there are new editions, changes or additional publications pertaining to the equipment.

1-5. DESTRUCTION OF ARMY ELECTRONICS MATERIEL

Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2

CHAPTER 2
MAINTENANCE INSTRUCTIONS

Section I. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

2-1. COMMON TOOLS AND EQUIPMENT

For common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

2-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

Refer to the Repair Parts and Special Tools List TM 11-5815-602-24P.

2-3. REPAIR PARTS

Repair parts are listed and illustrated in the Repair Parts and Special Tools List (TM 11-5815-602-34P).

Section II. SERVICE UPON RECEIPT

2-4. CHECKING UNPACKED EQUIPMENT

a. Inspect the equipment visually for damage incurred during shipment. If the equipment has been damaged, report the damage on SF 364 (Report of Discrepancy (ROD)).

b. Check the equipment against the packing slip to see if the shipment is complete. Check for proper test program set (ICD, test program and TM 11-5815-612-40). Report all discrepancies in accordance with the instructions of DA Pam 738-750.

c. Check to see if the equipment has been modified. Check to ensure your maintenance manuals (refer to DA PAM 310-1) and test program sets (TPS) (tape cartridges) (refer to TB 43-0128) are the latest issue.

Section III. TROUBLESHOOTING

2-5. INTERFACE CONNECTION DEVICE (ICD) SURVEY TEST

The ICD J-4111/UGC-74A(V)3 survey test should be performed before circuit card troubleshooting begins This test is performed once a day and need not be performed again unless an ICD problem is suspected.

a. Equipment Required
- Digital Card Tester (DCT) AN/USM-465A
- ICD Survey Test Program Cassette J-4111/UGC-74A(V)3CP
- Loopback Accessories
  - B4035314-1
  - B4035314-2
  - B4035314-3
- Eight Test Prods B4035305 (WA-WH)
- ICD J-4111/UGC-74A(V)3

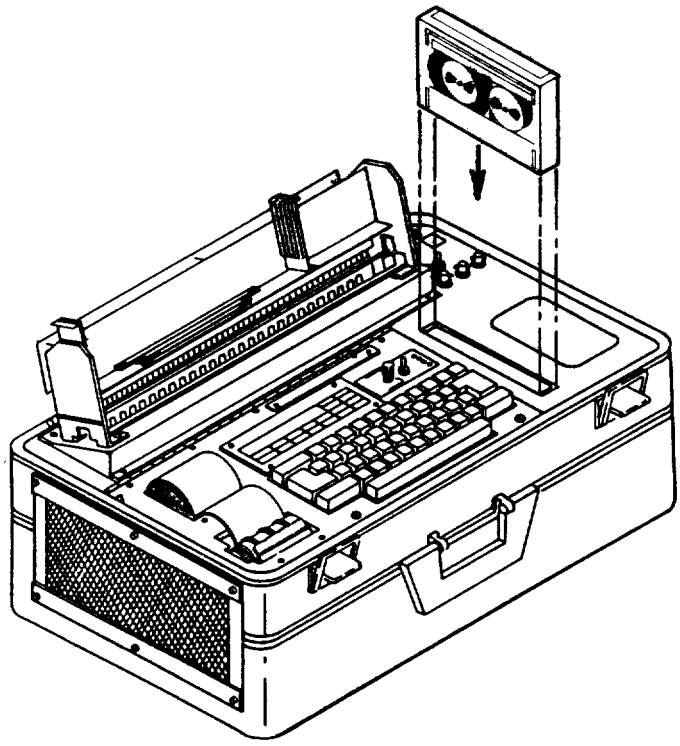
b. ICD Test Procedure

NOTE

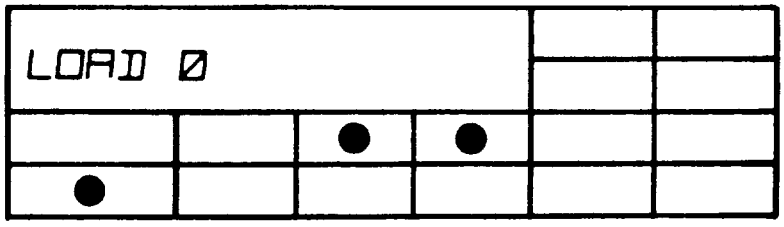
Unless illustrated here, follow instructions on the DCT printer.

(1) Power up and prepare DCT for UUT testing according to TM 11-6625-3038-10.

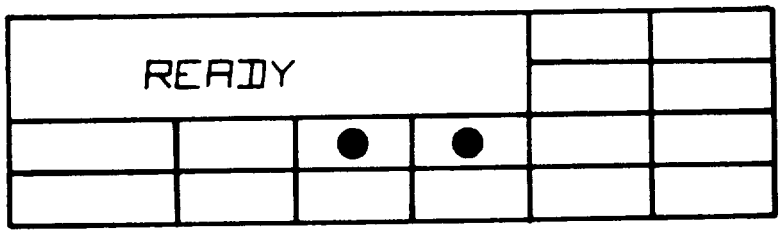
(2) Insert the survey test program cassette J-4111/UGC-74A(V)3CP into the DCT.



(3) Type [L] [O] [A] [D] [SPACE] and [*Ø] and then press [EXECUTE]
The display will show:



(4) When the display shows:



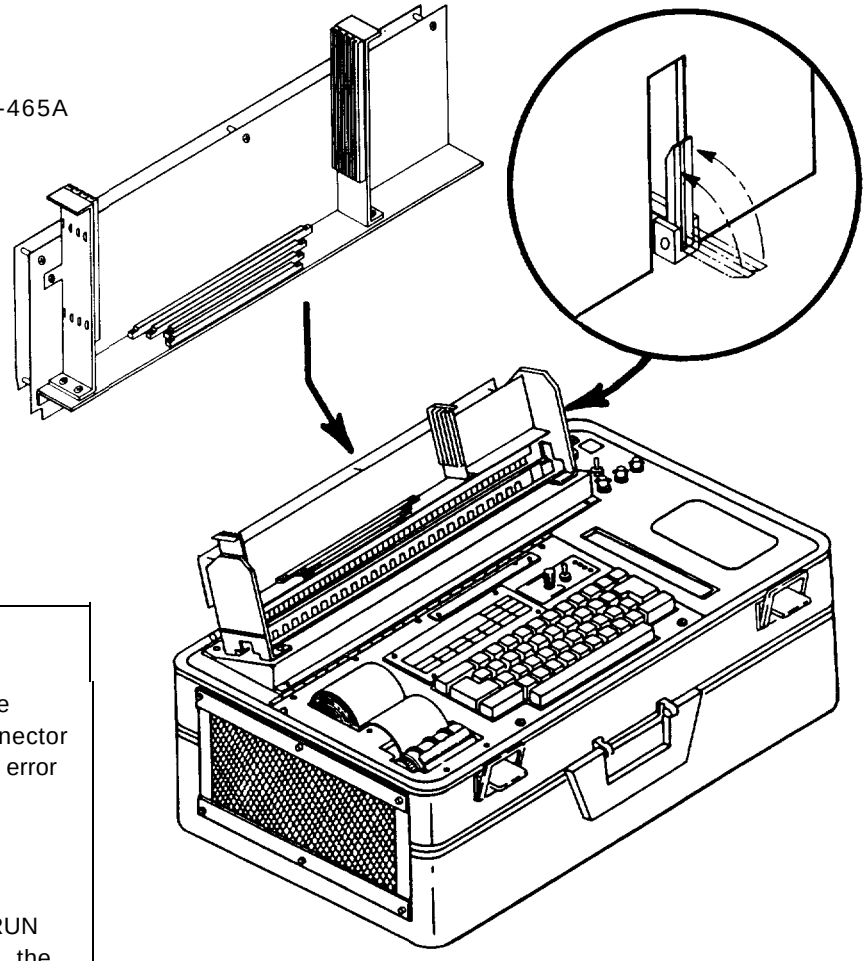
the DCT is ready to test the ICD.

(5) Type R U N and then press **EXECUTE** Follow the instructions displayed on the printer.

NOTE

support the printer instructions.

(6) Insert/Clamp ICD into the AN/USM-465A test connector



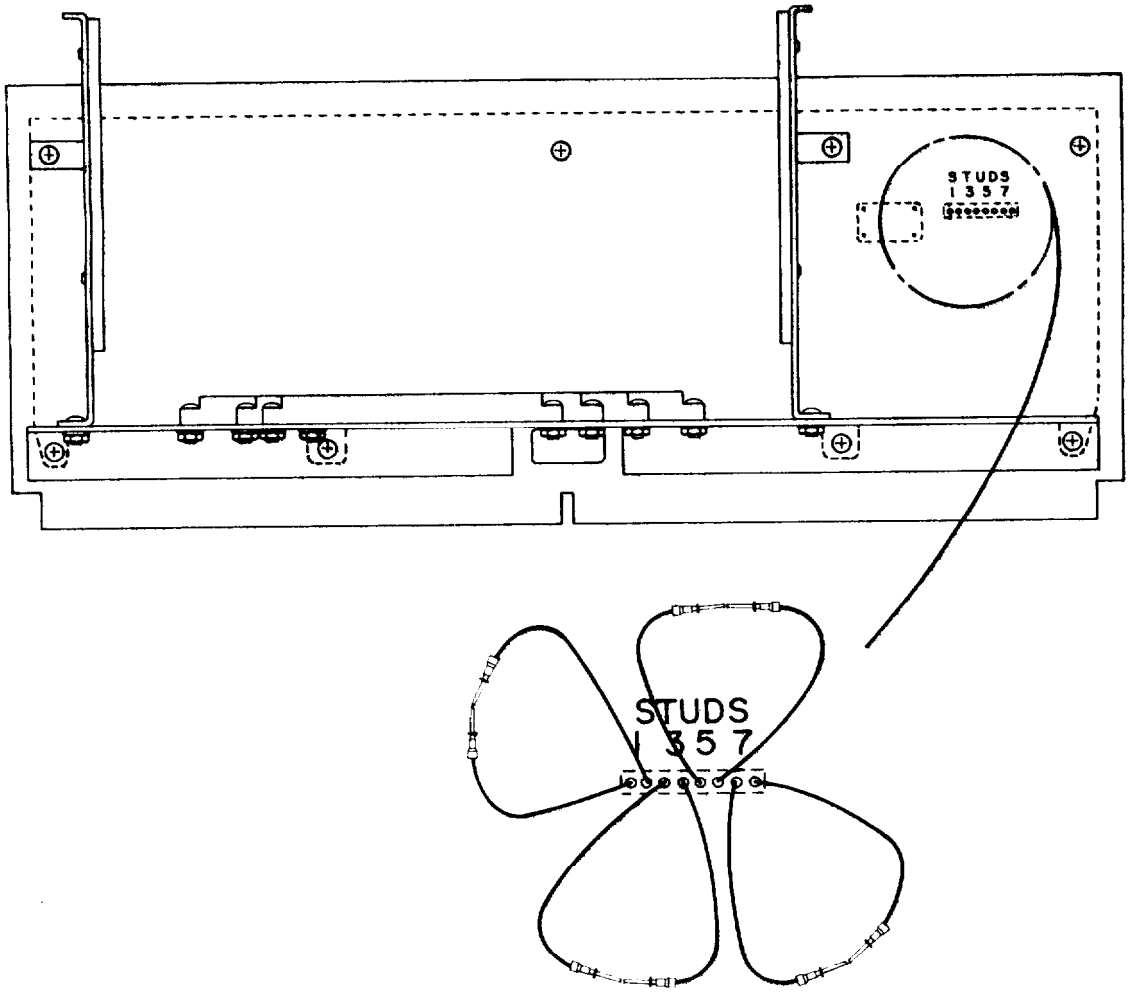
NOTE

If the ICD is not secured by the correct positioning of the connector clamp lever, (UP position), an error message
"INSURE ICD IS INSERTED CORRECTLY"
"VERIFY ICD IDENTIFICATION NUMBER IS CORRECT AND RUN TEST AGAIN" is printed when the test is run.

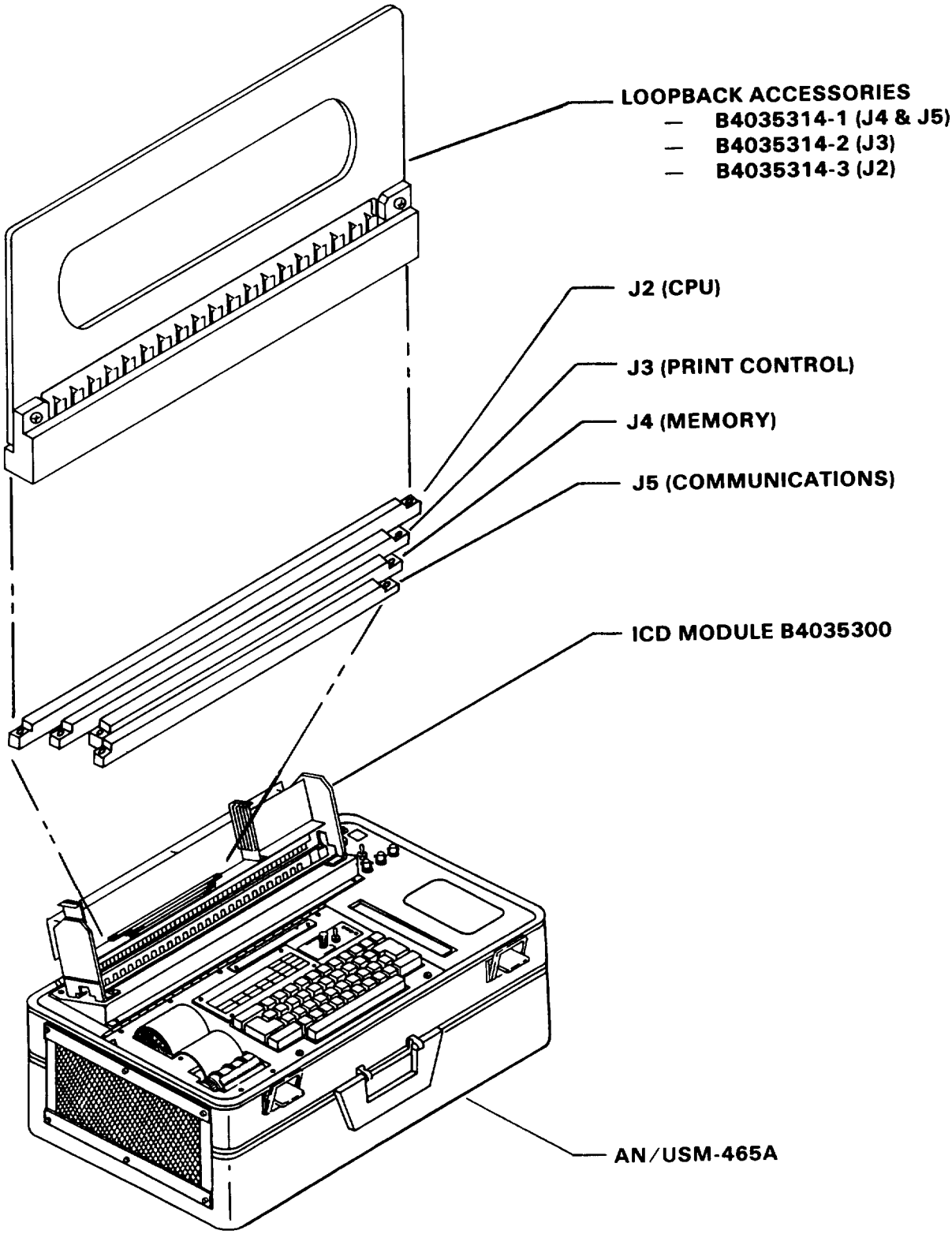
(7) Install the shunts on the P4 connector located under the hinged top panel as shown on printer. (Refer to TM 11-6625-3038-10.)

```
> (2) INSTALL THE
> SHUNTS ON THE P4
> CONNECTOR LOCATED
> UNDER THE HINGED TOP
> PANEL AS SHOWN BELOW.
>
> ********-P4-********
> *:::::::::::::::::::*
> *:::::::::::::::::::*
> *IIIIIIIIIIIIIIIII*
> **********************
> PRESS EXECUTE AFTER
  FOLLOWING
> PRINTER INSTRUCTIONS
```

(8) Attach the test prods as shown.



(9) Insert correct loopback accessory on that particular connector when instructed by DCT printer.



(10) Follow Printer Instructions

c. Maintenance Instructions

(1) If the ICD survey test fails:

- Remove the ICD and attach printout information.
- Forward for repair.
- Replace with another ICD and run the test again.

(2) If the ICD survey test passes:

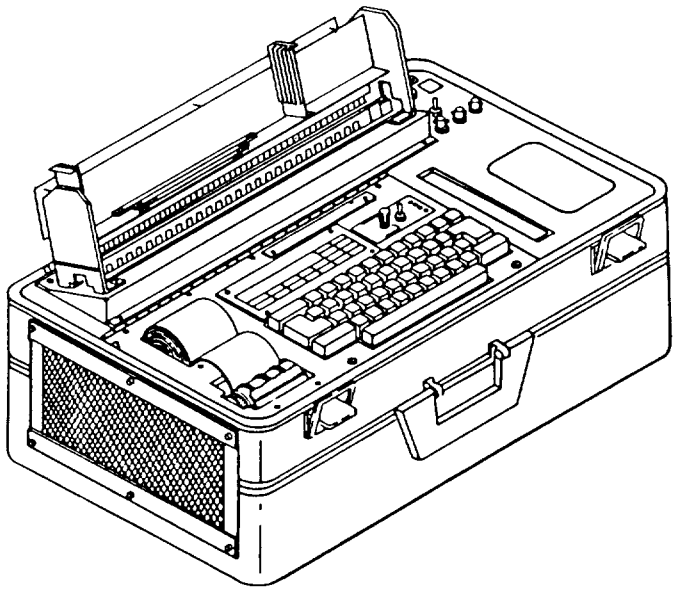
- The printer will print “ICD SURVEY TESTS PASS.”
- Do not remove ICD.
- Remove ICD survey test program cassette and return to box.
- The system is ready for circuit card assembly (UUT) testing.

2-6. UUT TEST DESCRIPTION

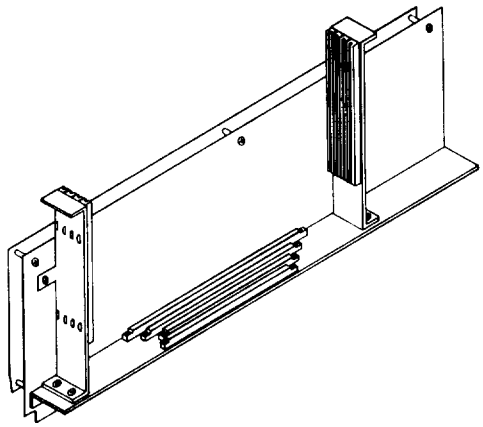
a. Introduction

Instructions for testing the SM-D-915627, SM-D-915630, SM-D-915624, and SM-D-915621 circuit cards are printed on the DCT printer. If the UUT fails the test, guided probe fault isolation begins. The DCT will locate the fault and print repair instructions. If the UUT passes the test, the message "ALL TESTS GO" will be printed.

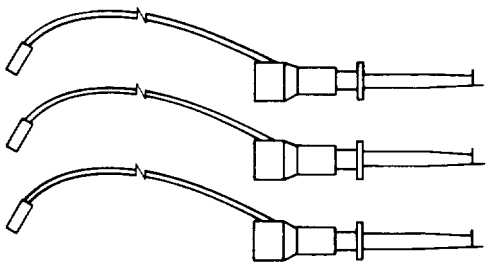
b. Equipment Required



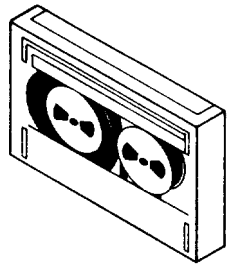
Digital Card Tester
AN/USM-465A



ICD-J-4111/UGC-74A(V)3



Test Prods



Test Program
Cassettes SM-D-915627CP
SM-D-915630CP
SM-D-915624CP
SM-D-915621CP

2-7. TROUBLESHOOTING SM-D-915627 (COMMUNICATIONS CARD)

a. Special Messages

The following messages will aid in troubleshooting the UUT after a fault has been detected:

> CHECK COPPER PATHS FOR OPEN/SHORTS BEFORE > REPLACING THE DEFECTIVE COMPONENT(S).	The DCT may fault a component when, in fact, there may be an open/shorted copper path at the component.
> FOR LOAD LIST OF ALL FAULT ASSOCIATED NODES, TYPE *ASIG,P* > AND EXECUTE. THEN TYPE IN DESIRED BAD NODE AND EXECUTE	When the DCT prints a probable fault, type [*] [A] [S] [I] [G] [,] [P] [*] then press [EXECUTE] and printer will print "?". At this point, type the probable fault originally listed and printer will print all components that are connected to the faulted part (load list).
> IF CLIPS ARE PRINTED IN FAULT LIST, VERIFY PRODS ARE ATTACHED > CORRECTLY AND MAKING CONTACT BEFORE REPLACING DEFECTIVE COMPONENT(S)	If a test clip is attached to a faulted component, make sure the clip is making good contact before replacing the faulted part.
> IF U31.19 FAULTED, *RUN 400* TO VERIFY	If any of these faults are listed, enter the run number [RUN 400], [RUN 800] or [RUN 300] and press [EXECUTE] to verify the fault.
> IF P1.25 OR U7.5 FAULTED, *RUN 800* TO VERIFY	
> IF U1.1 IS FAULTED, *RUN 300* TO VERIFY	
> IF U20.3 FAULTED, REPLACE U20 & U33 & U21	If these components are faulted, replace additional parts listed.
> IF P1.67 FAULTED WITHOUT PROBING, REPLACE U33, U21, AND U32	
> IF U22.8 FAULTED, REPLACE U12.6 AND OTHER FAULTED PARTS	

> BEFORE REPLACING
> U39, CHECK C25 AND
> R27 FOR OPENS/SHORTS

> REPLACE BOTH
> PROBABLE FAULT AND
> LOAD LIST IC(S)
> TO REPAIR UUT

b. Test Procedure

Unless illustrated here, follow instructions on the DCT printer.

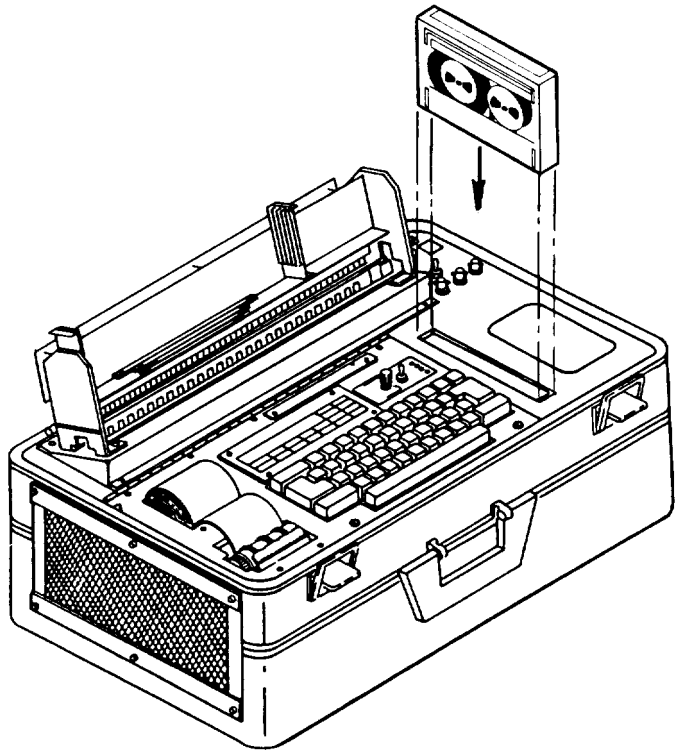
NOTE

The ICD survey test is normally performed only once a day when the system is powered-up or if the ICD is replaced. If the DCT is powered-up and ICD has already been tested and is installed in the DCT, go to step (3).

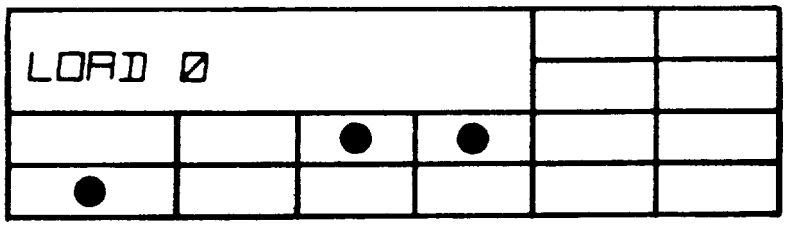
(1) Power up and prepare the DCT for UUT testing according to TM 11-6625-3038-10.

(2) Run the ICD survey test described in paragraph 2-5 of this chapter.

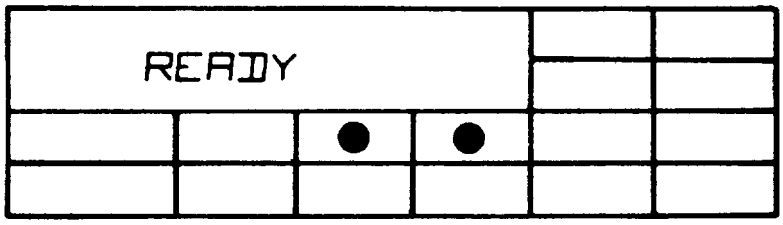
(3) Insert cassette SM-D-915629CP.



(4) Type [L] [O] [A] [D] [SPACE] and [*ø] and then press [EXECUTE] on the DCT. The display will show:



When the display shows:



the DCT is ready to test UUT.

(5) Type [R] [U] [N] and then press [EXECUTE]

- The printer will ask you to enter the test date:
- Enter 6-digit date:

```
> RUN
> TEST DATE:
> 07/14/83  (SAMPLE)
```

- The printer will print the UUT part number and name and the date the program was written and the program revision:

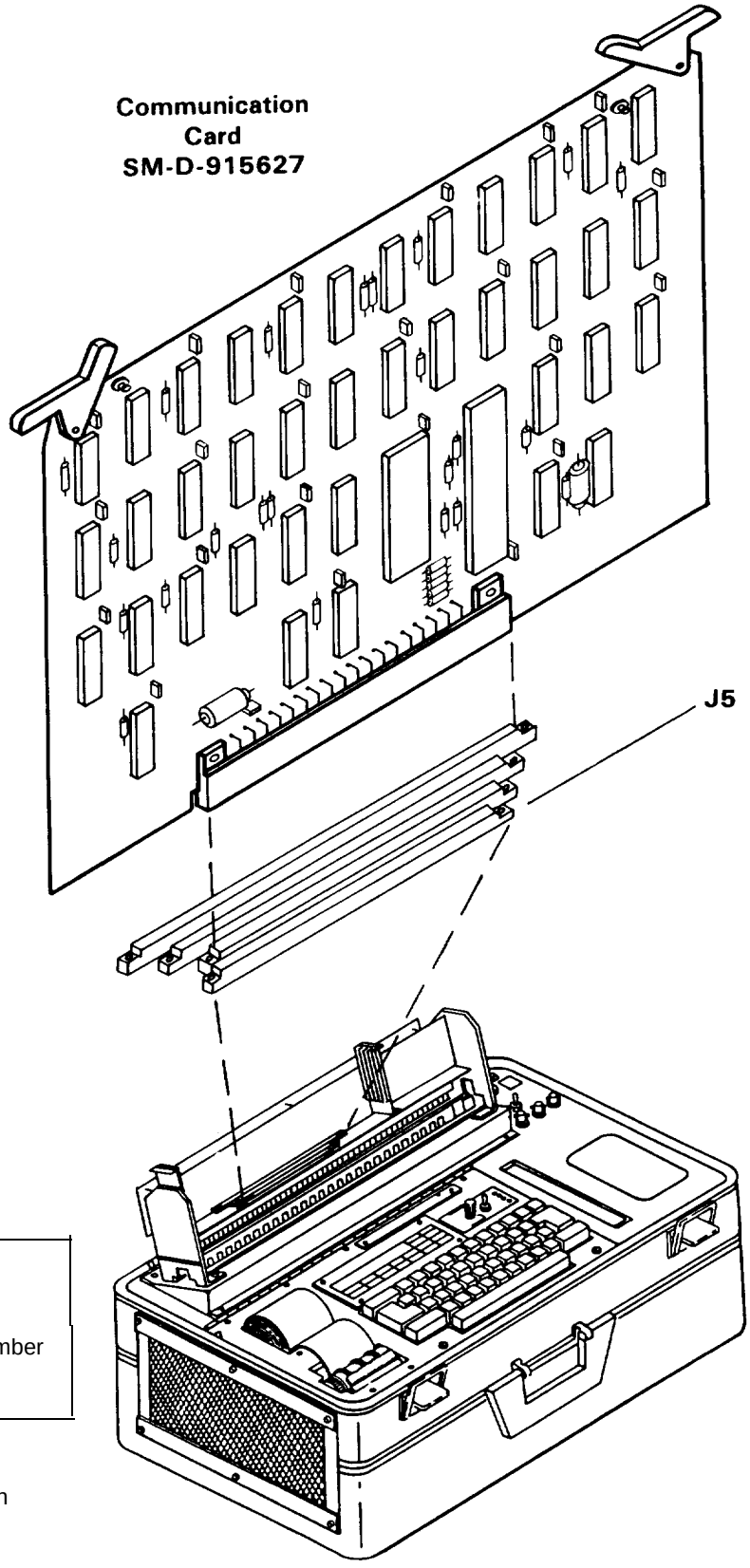
```
> UUT SM-D-915627
  (COMMUNICATION)
> PROGRAM DATE:
> 07/14/83  (SAMPLE)
> PROGRAM REV (010)
```

- The printer will ask you to enter the UUT serial number:

```
> ENTER UUT S/N
> UUT S/N: 0
```

(6) Follow printer instructions.

(7) Insert card to be tested into J5 on ICD.



NOTE

Only seven test clips are used (stud number six is not connected).

(8) Attach test clips as shown in figure 2-1.

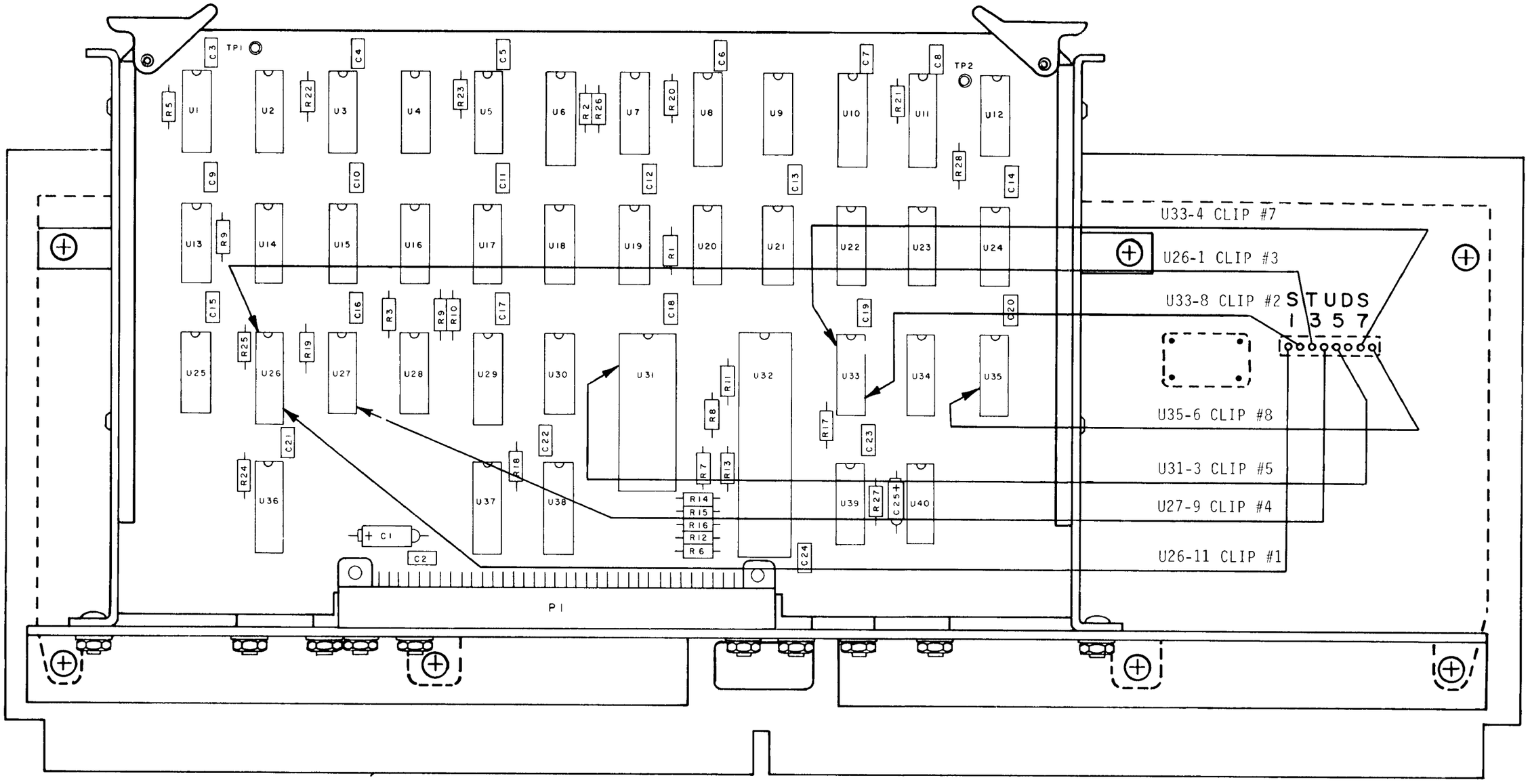


Figure 2-1.
Communications Card SM-D-915627 Test Clip Connections

(9) After all test clips are attached properly, press [EXECUTE] . The printer will ask you if you want to test the probe:

```
> DO YOU WANT TO TEST
  THE PROBE?
> ENTER 0 FOR NO, 1
  FOR YES
```

(10) After testing the probe or if option not to test was chosen, the printer will print "FUNCTIONAL TEST IN PROCESS" and begin testing the UUT.

(11) If the UUT passes test, "ALL TESTS GO" will be printed. Remove the UUT and return to stock. If not, continue.

c. Fault Indication

(1) If the UUT fails test, the DCT printer will print which UUT pin faulted and ask you to enter header information:

```
> FAULT AT LINE 19060
  PIN
> C5
> 002034 C5
> TYPE HEADER INFO
```

(EXAMPLE)

(2) The header information you are asked to type will be the part number for the UUT that is sent for repair, for example: [S] [M] [-] [D] [-] [9] [1] [5] [6] [2] [7] and press [EXECUTE]. This information will be attached to the UUT when it is sent for repair

(3) The DCT printer will ask you to probe various points on the UUT. Using guided probe tip, pierce conformal coating at point indicated on DCT printer.

(4) After making good contact, press the [SPACE] bar.

(5) DCT printer will instruct you to probe another point. Continue this process until the probable fault is printed.

(6) Remove the UUT, attach printout information, and forward for repair. To test another board, refer to paragraph b (7).

d. Repair Procedures

(1) Special Tools and Equipment. There are no special tools required for these procedures. Use tools normally available.

(2) Repair

- Inspect all copper paths for opens and/or shorts.
- Inspect for broken and/or shorted wires.
- Inspect for broken and/or shorted pins on the connectors.
- Follow any printer instructions for parts replacement.
- Once the trouble is located, repair or replace the part.

(3) Retest. After repair, return the ICD to the DCT for final acceptance testing and return to supply.

2-8. TROUBLESHOOTING SM-D-915630 (PRINT CONTROL CARD)

a. Special Messages

The following messages will aid in troubleshooting the UUT after a fault has been detected:

> CHECK COPPER PATHS FOR OPEN/SHORTS BEFORE > REPLACING THE DEFECTIVE COMPONENT(S).	The DCT may fault a component when, in fact, there may be an open/shorted copper path at the component.
> FOR LOAD LIST OF ALL FAULT ASSOCIATED NODES, TYPE *ASIG,P* > AND EXECUTE. THEN TYPE IN DESIRED BAD NODE AND EXECUTE	When the DCT prints a probable fault, type [*] [A] [S] [I] [G] [,] [P] [*] then press [EXECUTE] and printer will print "?". At this point, type the probable fault originally listed and printer will print all components that are connected to the faulted part (load list).
> IF CLIPS ARE PRINTED IN FAULT LIST, VERIFY PRODS ARE ATTACHED > CORRECTLY AND MAKING CONTACT BEFORE REPLACING DEFECTIVE COMPONENT(S)	If a test clip is attached to a faulted component, make sure the clip is making good contact before replacing the faulted part.
> CHECK ALL CAPACITORS (C1-C5)/RESISTORS (R16-R21) ASSOCIATED > WITH U14 BEFORE REPLACING U14 > REPLACE BOTH PROBABLE FAULT AND LOAD LIST IC(S) > TO REPAIR UUT	Capacitors and/or resistors may be bad and cause U14 to be printed as a fault.

b. Test Procedure

Unless illustrated here, follow instructions on the DCT printer.

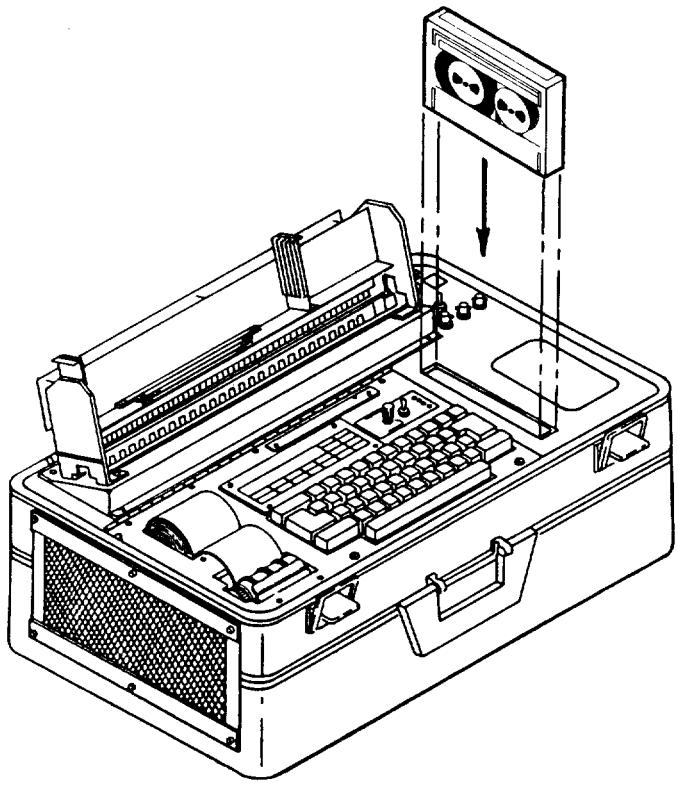
NOTE

The ICD survey test is normally performed only once a day when the system is powered-up or if the ICD is replaced. If the DCT is powered-up and ICD has already been tested and is installed in the DCT, go to step (3).

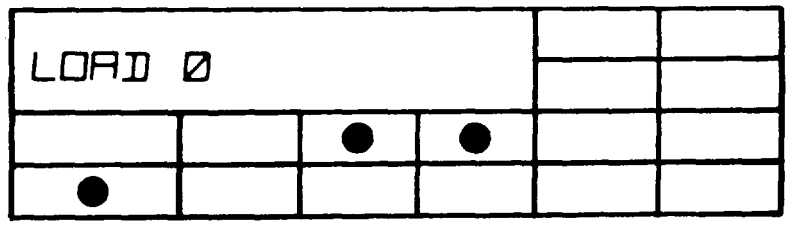
(1) Power up and prepare the DCT for UUT testing according to TM 11-6625-3038-10

(2) Run the ICD survey test described in paragraph 2-5 of this chapter.

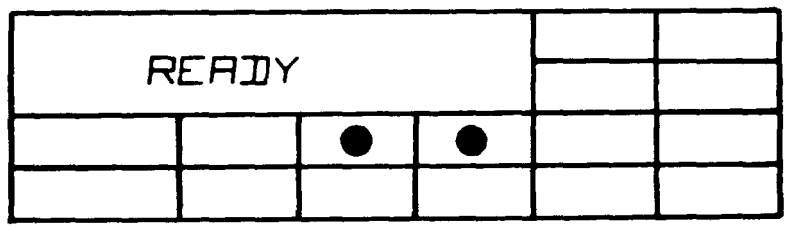
(3) Insert cassette SM-D-915630CP.



(4) Type L O A D SPACE and * Ø and then press EXECUTE on the DCT. The display will show:



When the display shows:



the DCT is ready to test UUT.

(5) Type R U N and then press EXECUTE

- The printer will ask you to enter the test date:
- Enter 6-digit date:

```
> RUN
> TEST DATE:
> 07/14/83  (SAMPLE)
```

- The printer will print the UUT part number and name and the date the program was written and the program revision:

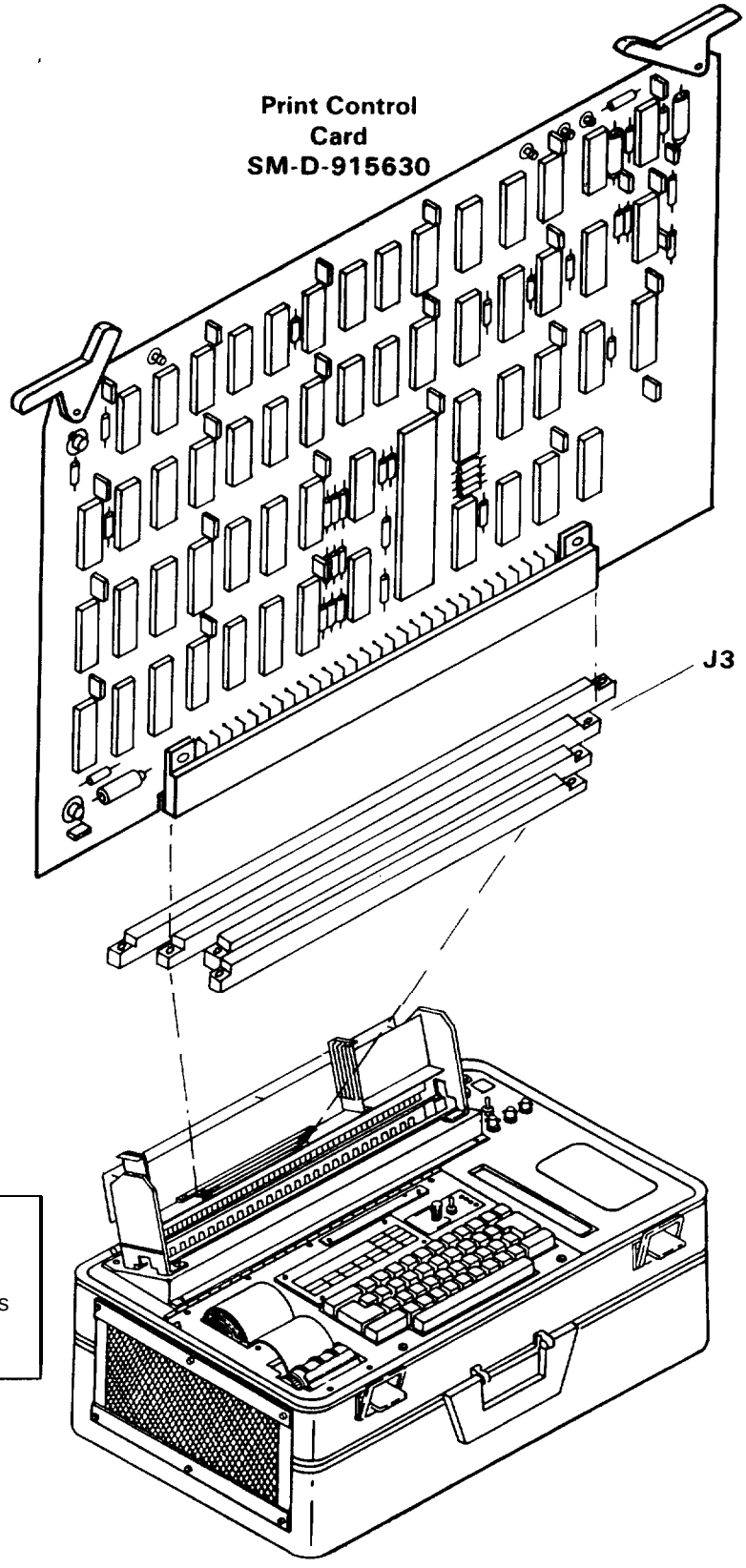
```
> UUT SM-D-915630
  (PRINT CONTROL)
> PROGRAM DATE:
> 07/14/83  (SAMPLE)
> PROGRAM REV (010)
```

- The printer will ask you to enter the UUT serial number:

```
> ENTER UUT S/N
> UUT S/N: 0
```

(6) Follow printer instructions

(7) Insert card to be tested into J3 on ICD.



NOTE

Only five test clips are used (stud numbers 4, 5, and 6 are not connected).

(8) Attach test clips as shown in figure 2-2.

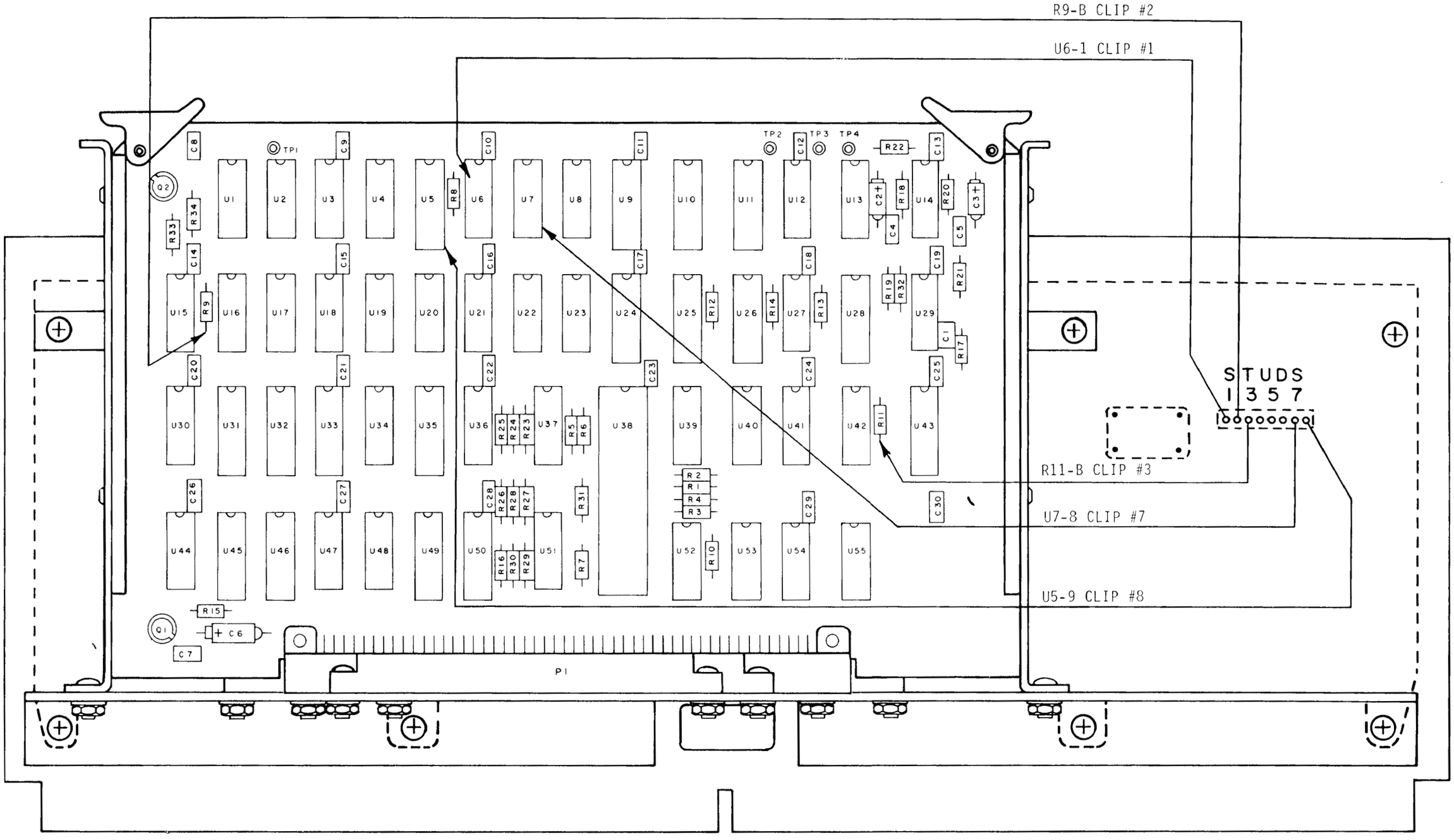


Figure 2-2.
Print Control Card SM-D-915630 Test Clip Connections

(9) After all test clips are attached properly, press [EXECUTE]. The printer will ask you if you want to test the probe:

```
> DO YOU WANT TO TEST
  THE PROBE?
> ENTER 0 FOR NO, 1
  FOR YES
```

(10) After testing the probe or if option not to test was chosen, the printer will print "FUNCTIONAL TEST IN PROCESS" and begin testing the UUT.

(11) If the UUT passes test, "ALL TESTS GO" will be printed. Remove the UUT and return to stock. If not, continue.

c. Fault Indication

(1) If the UUT fails test, the DCT printer will print which UUT pin faulted and ask you to enter header information:

```
> FAULT AT LINE 19060
  PIN
> C5
> 002034 C5
> TYPE HEADER INFO
```

(EXAMPLE)

(2) The header information You are asked to type will be the part number for the UUT that is sent for repair, for example: [S] [M] [-] [D] [-] [9] [1] [5] [6] [3] [0] and press [EXECUTE]. This information will be attached to the UUT when it is sent for repair.

(3) The DCT printer will ask you to probe various points on the UUT. Using guided probe tip, pierce conformal coating at point indicated on DCT printer.

(4) After making good contact, press the [SPACE] bar.

(5) DCT printer will instruct you to probe another point. Continue this process until the probable fault is printed.

(6) Remove the UUT, attach printout information, and forward for repair. To test another board, refer to paragraph b (7).

d. Repair Procedures

(1) Special Tools and Equipment. There are no special tools required for these procedures. Use tools normally available.

(2) Repair

- Inspect all copper paths for opens and/or shorts.
- Inspect for broken and/or shorted wires.
- Inspect for broken and/or shorted pins on the connectors.
- Follow any printer instructions for parts replacement.
- Once the trouble is located, repair or replace the part.

(3) Retest. After repair, return the ICD to the DCT for final acceptance testing and return to supply.

2-9. TROUBLESHOOTING SM-D-915624 (MEMORY CARD)

a. Special Messages

The following messages will aid in troubleshooting the UUT after a fault has been detected:

```
> CHECK COPPER PATHS
  FOR OPEN/SHORTS
  BEFORE
> REPLACING THE
  DEFECTIVE
  COMPONENT(S).
```

The DCT may fault a component when, in fact, there may be an open/shorted copper path at the component.

```
> FOR LOAD LIST OF ALL
  FAULT ASSOCIATED
  NODES, TYPE *ASIG,P*
> AND EXECUTE. THEN
  TYPE IN DESIRED BAD
  NODE AND EXECUTE
```

When the DCT prints a probable fault, type [*] [A] [S] [I] [G] [,] [P] [*] then press [EXECUTE] and printer will print "?", At this point, type the probable fault originally listed and printer will print all components that are connected to the faulted part (load list).

```
> RUN 200 FOR MORE
  INFORMATION IF RAM
  CHIPS
> ARE INDICATED AS
  PROBABLE FAULT. IF
  ALL 5 RAM
> CHIPS IN ANY ROW
  FAIL TOGETHER,
  ADDRESS DRIVERS
  U6, U12, U19, U29
> ARE NOT RECEIVING
  POWER OR HAVE
  ADJACENT PIN SHORTS
> REPLACE BOTH
  PROBABLE FAULT AND
  LOAD LIST IC(S)
  TO REPAIR UUT
```

If [RUN 200] is entered, the failing RAM or RAMs and the test number will be printed.

b. Test Procedure

Unless illustrated here, follow instructions on the DCT printer.

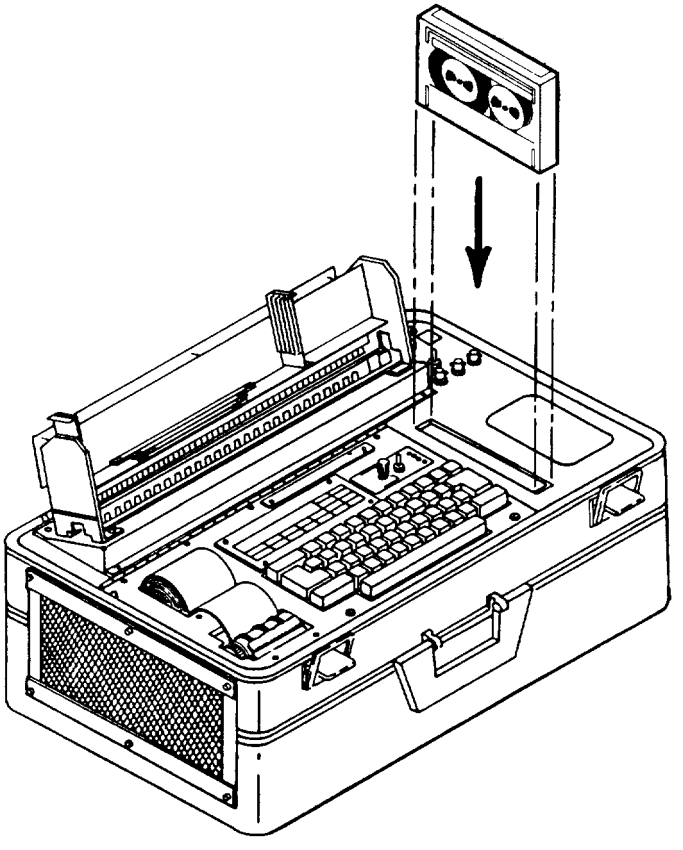
NOTE

The ICD survey test is normally performed only once a day when the system is powered-up or if the ICD is replaced. If the DCT is powe,ed-up and ICD has already been tested and is installed in the DCT, go to step (3).

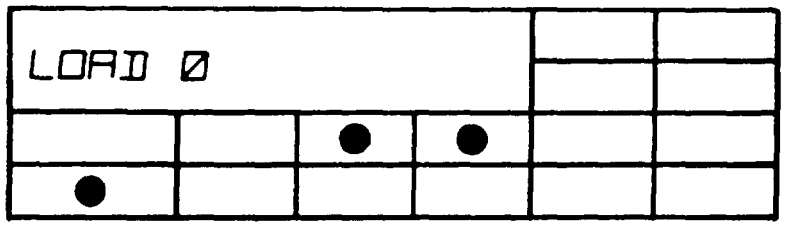
(1) Power up and prepare the DCT for UUT testing according to TM 11-6625-3038-10.

(2) Run the ICD survey test described in paragraph 2-5 of this chapter.

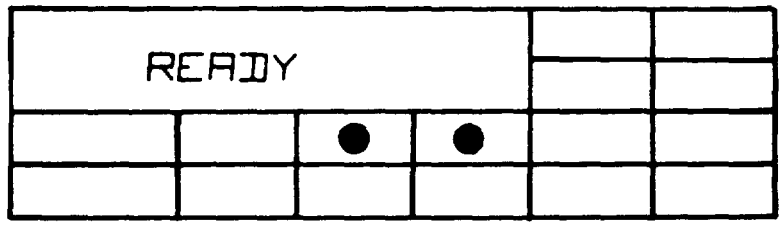
(3) Insert cassette SM-D-915624CP.



(4) Type L O A D SPACE and * ø and then press EXECUTE on the DCT. The display will show:



When the display shows:



the DCT is ready to test UUT.

(5) Type R U N and then press EXECUTE

- The printer will ask you to enter the test date:
- Enter 6-digit date:

```
> RUN
> TEST DATE:
> 07/14/83  (SAMPLE)
```

- The printer will print the UUT part number and name and the date the program was written and the program revision:

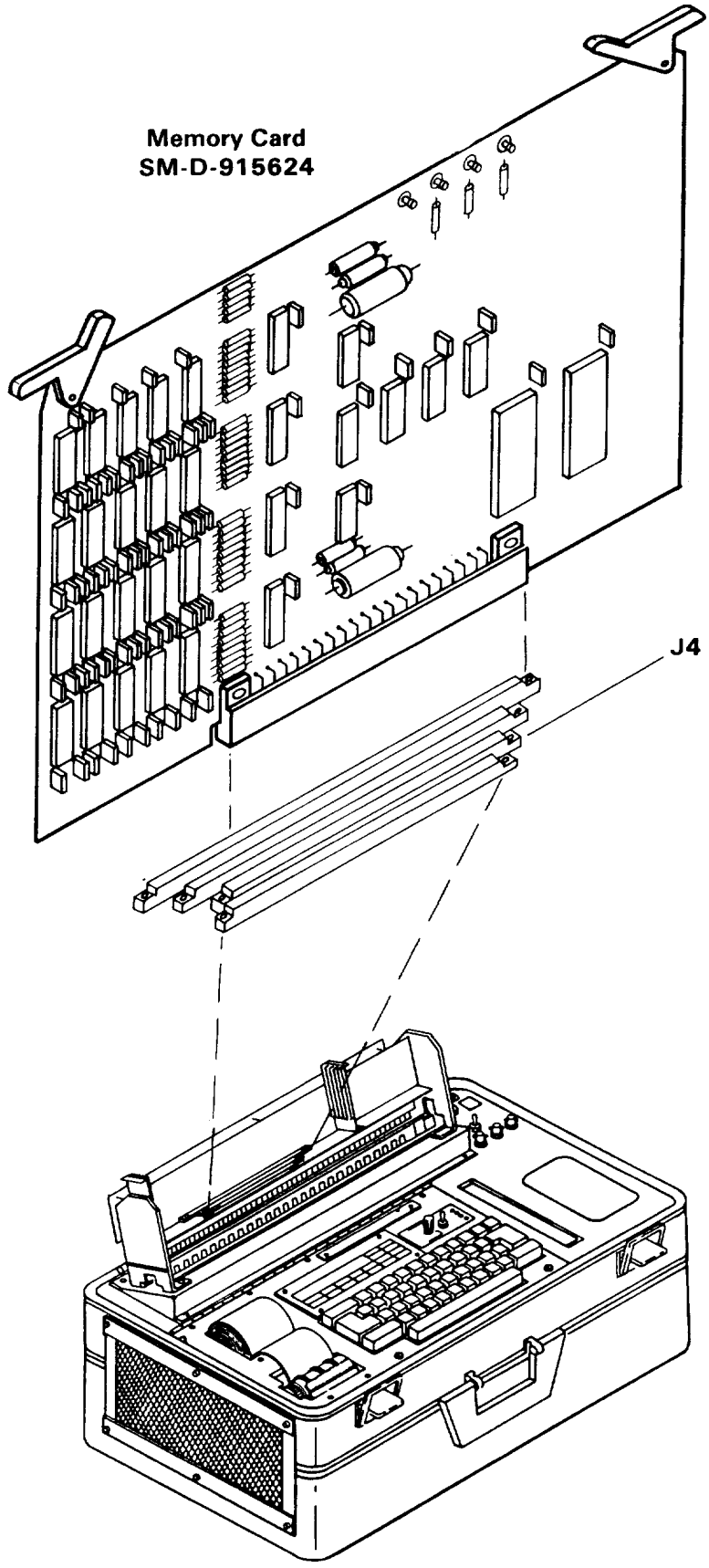
```
> UUT SM-D-915624
  (MEMORY)
> PROGRAM DATE:
> 07/14/83  (SAMPLE)
> PROGRAM REV (010)
```

- The printer will ask you to enter the UUT serial number:

```
> ENTER UUT S/N
> UUT S/N: 0
```

(6) Follow printer instructions.

(7) Insert card to be tested int J4 on ICD.



NOTE

No test clips are required.

(8) Press [EXECUTE]; the printer will ask you if you want to test the probe:

```
> DO YOU WANT TO TEST
  THE PROBE?
> ENTER 0 FOR NO. 1
  FOR YES
```

(9) After testing the probe or if option not to test was chosen, the printer will print "'FUNCTIONAL TEST IN PROCESS" and begin testing the UUT.

(10) If the UUT passes test, "ALL TESTS GO" will be printed. Remove the UUT and return to stock. If not, continue.

c. Fault Indication

(1) If the UUT fails test, the DCT printer will print which UUT pin faulted and ask you to enter header information:

```
> FAULT AT LINE 19060
  PIN
> C5
> 002034 C5
> TYPE HEADER INFO
```

(EXAMPLE)

(2) The header information you are asked to type will be the part number for the UUT that is sent for repair, for example: [S] [M] [-] [D] [-] [9] [1] [5] [6] [2] [4] and press [EXECUTE]. This information will be attached to the UUT when it is sent for repair.

(3) The DCT printer will ask you to probe various points on the UUT. Using guided probe tip, pierce conformal coating at point indicated on DCT printer.

(4) After making good contact, press the [SPACE] bar.

(5) DCT printer will instruct you to probe another point. Continue this process until the probable fault is printed.

(6) Remove the UUT, attach printout information, and forward for repair. To test another board, refer to paragraph b (7).

d. Repair Procedures

(1) Special Tools and Equipment. There are no special tools required for these procedures. Use tools normally available.

(2) Repair

- Inspect all copper paths for opens and/or shorts.
- Inspect for broken and/or shorted wires.
- Inspect for broken and/or shorted pins on the connectors.
- Follow any printer instructions for parts replacement.
- Once the trouble is located, repair or replace the part.

(3) Retest. After repair, return the ICD to the DCT for final acceptance testing and return to supply.

2-10. TROUBLESHOOTING SM-D-915621 (CPU CARD)

a. Special Messages

The following messages will aid in troubleshooting the UUT after a fault has been detected:

> CHECK COPPER PATHS FOR OPEN/SHORTS BEFORE > REPLACING THE DEFECTIVE COMPONENT(S).	The DCT may fault a component when, in fact, there may be an open/shorted copper path at the component.
> FOR LOAD LIST OF ALL FAULT ASSOCIATED NODES, TYPE *ASIG, P* > AND EXECUTE. THEN TYPE IN DESIRED BAD NODE AND EXECUTE	When the DCT prints a probable fault, type [*] [A] [S] [I] [G] [,] [P] [*] then press [EXECUTE] and printer will print "?". At this point, type the probable fault originally listed and printer-will print all components that are connected to the faulted part (load list).
> IF CLIPS ARE PRINTED IN FAULT LIST, VERIFY PRODS ARE ATTACHED > CORRECTLY AND MAKING CONTACT BEFORE REPLACING DEFECTIVE COMPONENT(S)	If a test clip is attached to a faulted component, make sure the clip is making good contact before replacing the faulted part.
> REPLACE BOTH PROBABLE FAULT AND LOAD LIST IC(S) > TO REPAIR UUT	Replace all parts indicated by the printer.

b. Test Procedure

Unless illustrated here, follow instructions on the DCT printer.

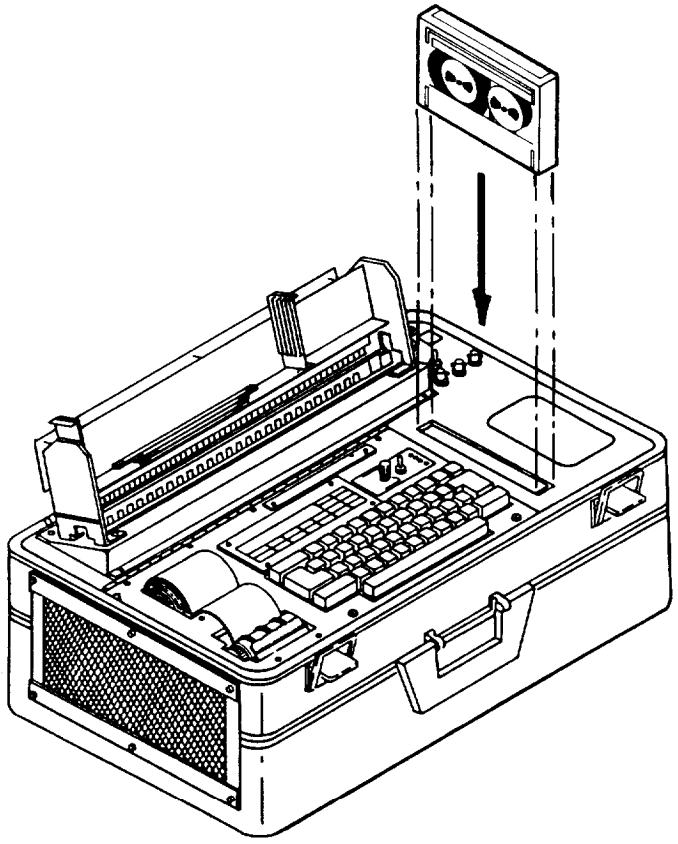
NOTE

The ICD survey test is normally performed only once a day when the system is powered-up or if the ICD is replaced. If the DCT is powered-up and ICD has already been tested and is installed in the DCT, go to step (3).

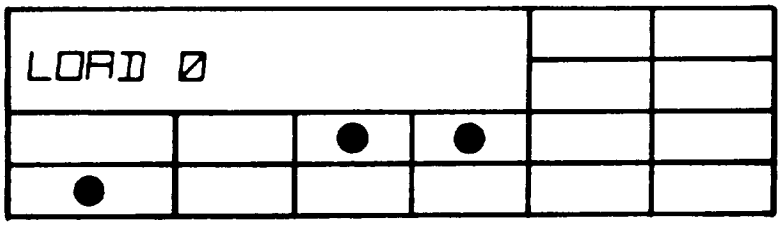
(1) Power up and prepare the DCT for UUT testing according to TM 11-6625-3038-10.

(2) Run the ICD survey test described in paragraph 2-5 of this chapter.

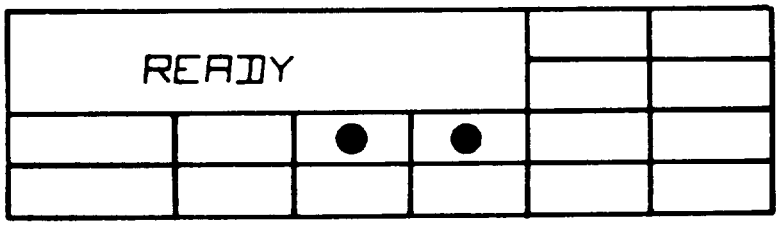
(3) Insert cassette SM-D-915621CP.



(4) Type L O A D SPACE and * Ø and then press EXECUTE on the DCT. The display will show:



When the display shows:



the DCT is ready to test UUT.

(5) Type R U N and then press EXECUTE

The printer will ask you to enter the test date:

- Enter 6-digit date:

```
> RUN
> TEST DATE:
> 07/14/83  (SAMPLE)
```

- The printer will print the UUT part number and name and the date the program was written and the program revision:

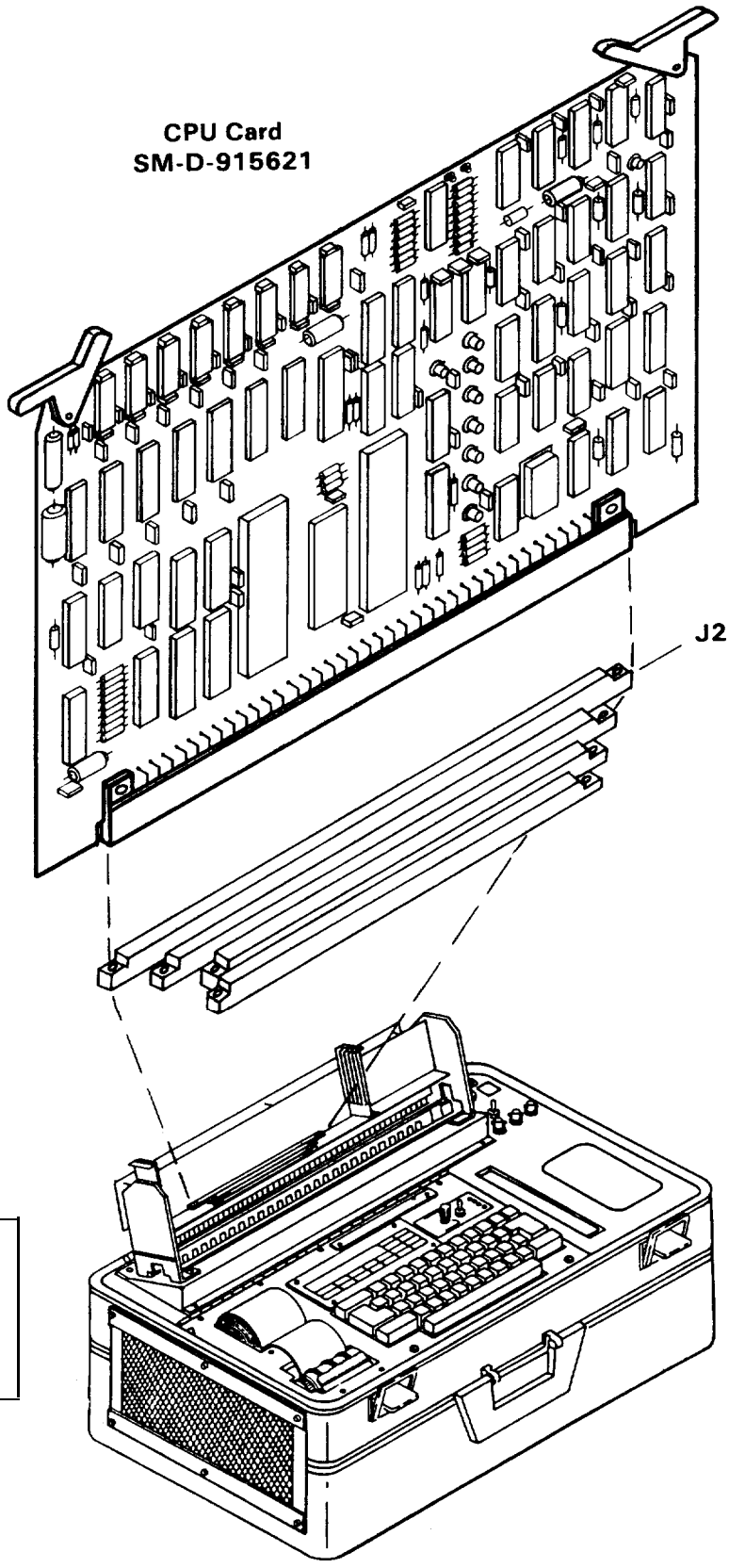
```
> UUT SM-D-915621
  (CPU)
> PROGRAM DATE:
> 07/14/83        (SAMPLE)
> PROGRAM REV (010)
```

- The printer will ask you to enter the UUT serial number:

```
> ENTER UUT S/N
> UUT S/N: 0
```

(6) Follow printer instructions.

(7) Insert card to be tested into J2 on ICD.



NOTE

Only two test clips are used (stud numbers 3 through 8 are not connected).

(8) Attach test clips as shown in figure 2-3.

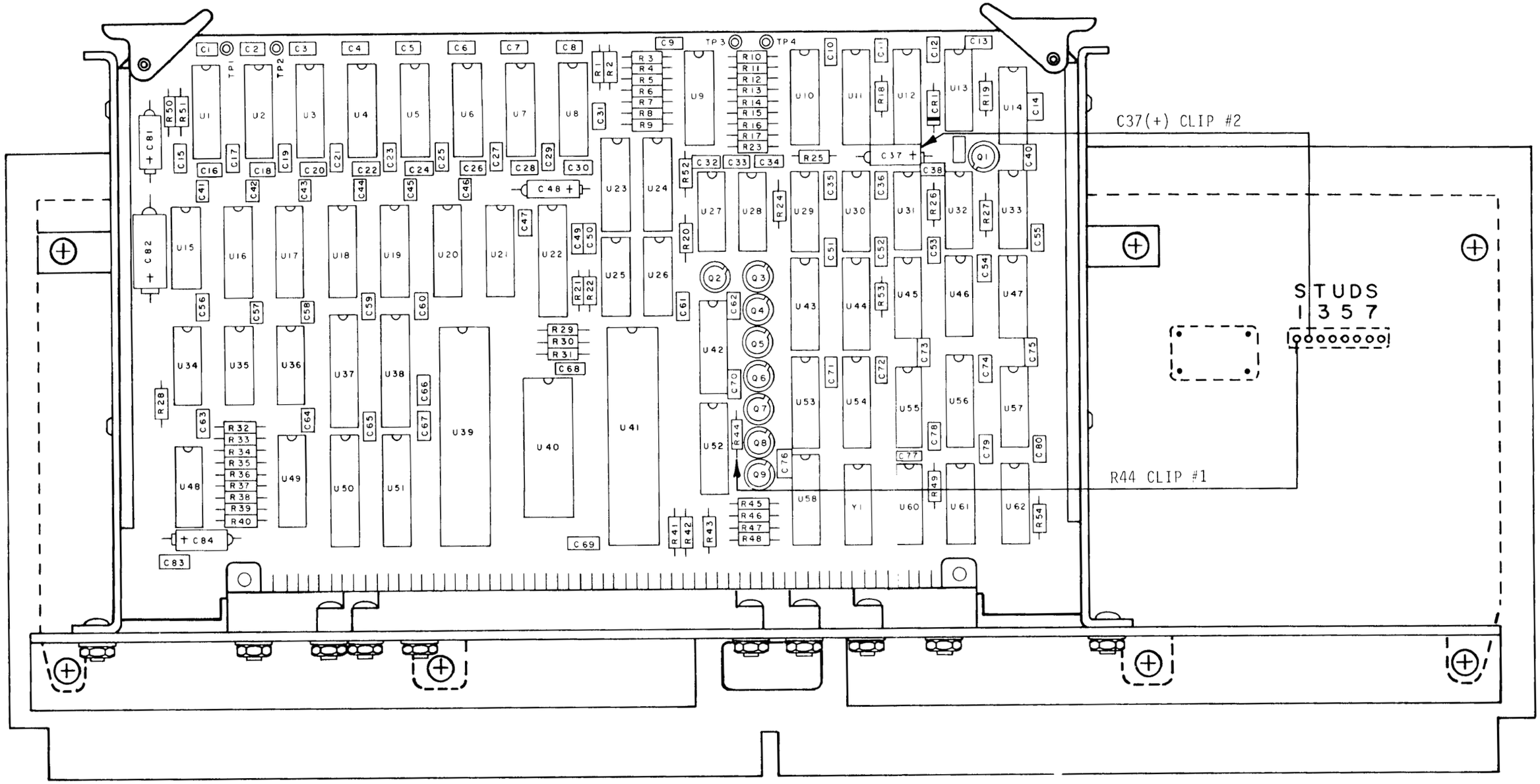


Figure 2-3.
CPU Card SM-D-915621 Clip Connections

(9) After all test clips are attached properly, press [EXECUTE]. The printer will ask you if you want to test the probe:

```
> DO YOU WANT TO TEST
  THE PROBE?
> ENTER 0 FOR NO, 1
  FOR YES
```

(10) After testing the probe or if option not to test was chosen, the printer will print "FUNCTIONAL TEST IN PROCESS" and begin testing the UUT.

(11) If the UUT passes test, "ALL TESTS GO" will be printed. Remove the UUT and return to stock. If not, continue.

c. Fault Indication

(1) If the UUT fails test, the DCT printer will print which UUT pin faulted and ask you to enter header information:

```
> FAULT AT LINE 19060
  PIN
> C5
> 002034 C5
> TYPE HEADER INFO
```

(EXAMPLE)

(2) The header information you are asked to type will be the part number for the UUT that is sent for repair, for example: [S] [M] [-] [D] [-] [9] [1] [5] [6] [2] [1] and press [EXECUTE]. This information will be attached to the UUT when it is sent for repair.

(3) The DCT printer will ask you to probe various points on the UUT, Using guided probe tip, pierce conformal coating at point indicated on DCT printer.

(4) After making good contact, press the [SPACE] bar.

(5) DCT printer will instruct you to probe another point. Continue this process until the probable fault is printed.

(6) Remove the UUT, attach printout information, and forward for repair. To test another board, refer to paragraph b (7).

d. Repair Procedures

(1) Special Tools and Equipment. There are no special tools required for these procedures. Use tools normally available.

(2) Repair

- Inspect all copper paths for opens and/or shorts.
- Inspect for broken and/or shorted wires.
- Inspect for broken and/or shorted pins on the connectors.
- Follow any printer instructions for parts replacement.
- Once the trouble is located, repair or replace the part.

(3) Retest. After repair, return the ICD to the DCT for final acceptance testing and return to supply.

2-11 SYSTEM SHUTDOWN

When all testing is done and UUT cards have been removed, unclamp and remove the ICD and perform system shutdown procedures according to TM 11-6625-3038-10.

APPENDIX A
REFERENCES

DA Pam 310-1	Consolidated Index of Army Publications and Blank Forms.
DA Pam 738-750	The Army Maintenance Management System (TAMMS).
TB 43-0128	CECOM Test Program Set Index.
TM 11-5815-602-24P	Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools) far Terminal, Communications AN/UGC-74A(V)3 (NSN 5815-01-062-8194).
TM 11-6625-3038-10	Operator's Manual: AN/USM-465A Test Set Digital Card Tester.
TM 11-6625-3083-24&P	Organizational, Direct Support, and General Support Maintenance Manual Including Repair Parts and Special Teals List For: Interface Connection Device ([CD), J-4111/UGC-74A(V)3 (NSN 5815-01-090-1246).
TM 750-244-2	Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command).

APPENDIX B
UUT ASSEMBLY DRAWINGS

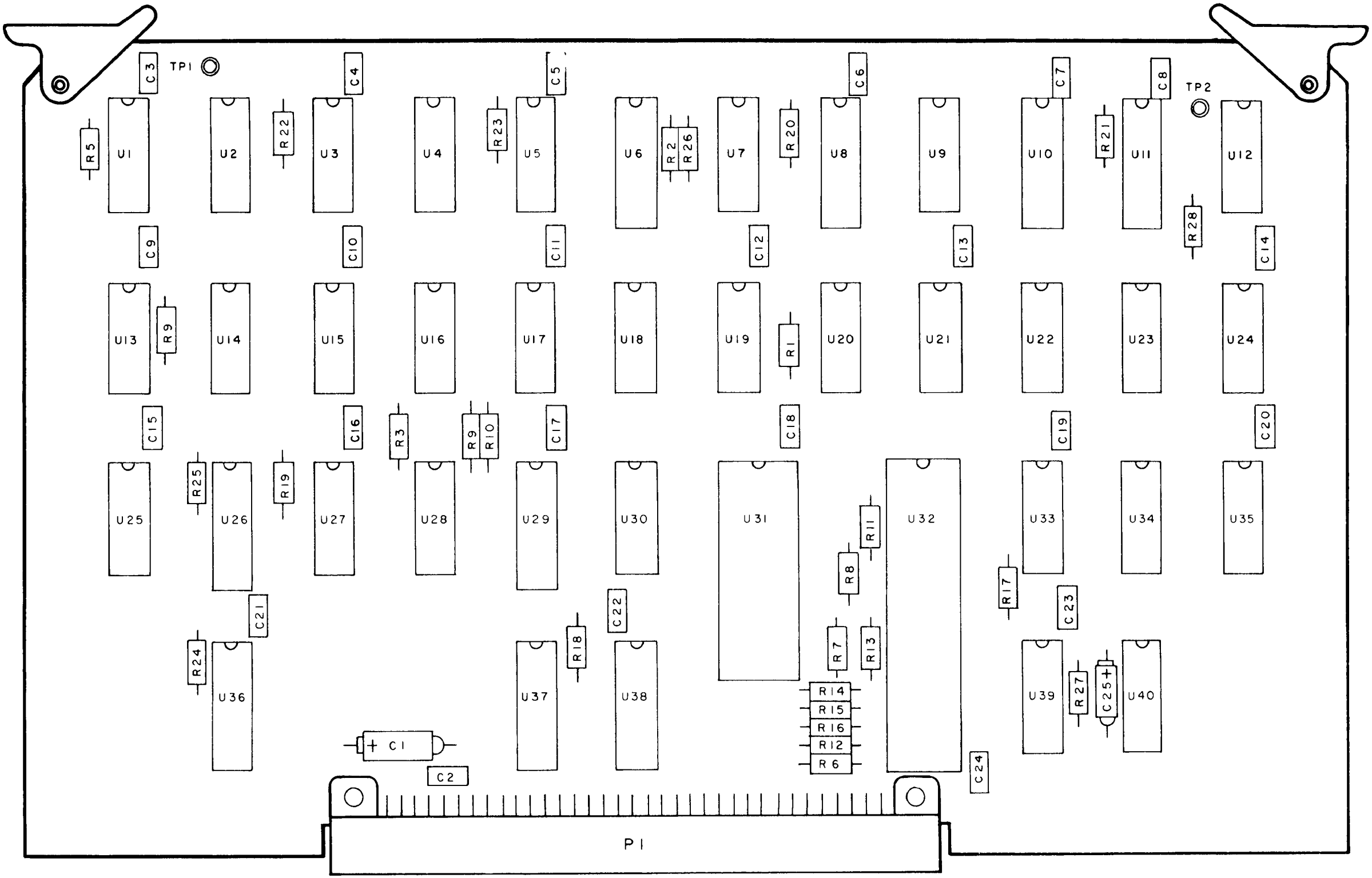


Figure B-1.
Communications Circuit Card Assembly Drawing

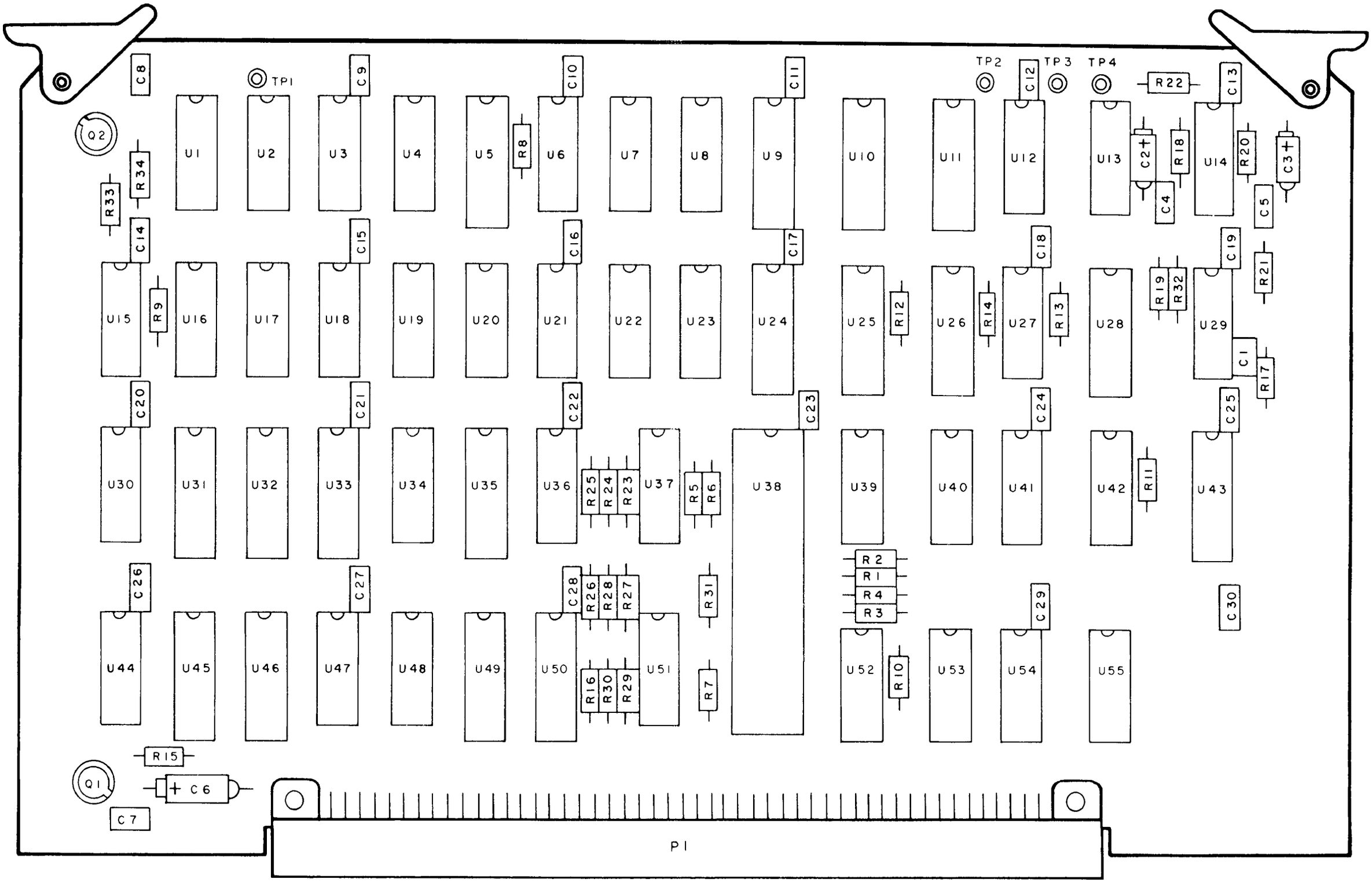


Figure B-2.
Print Control Card Assembly Drawing

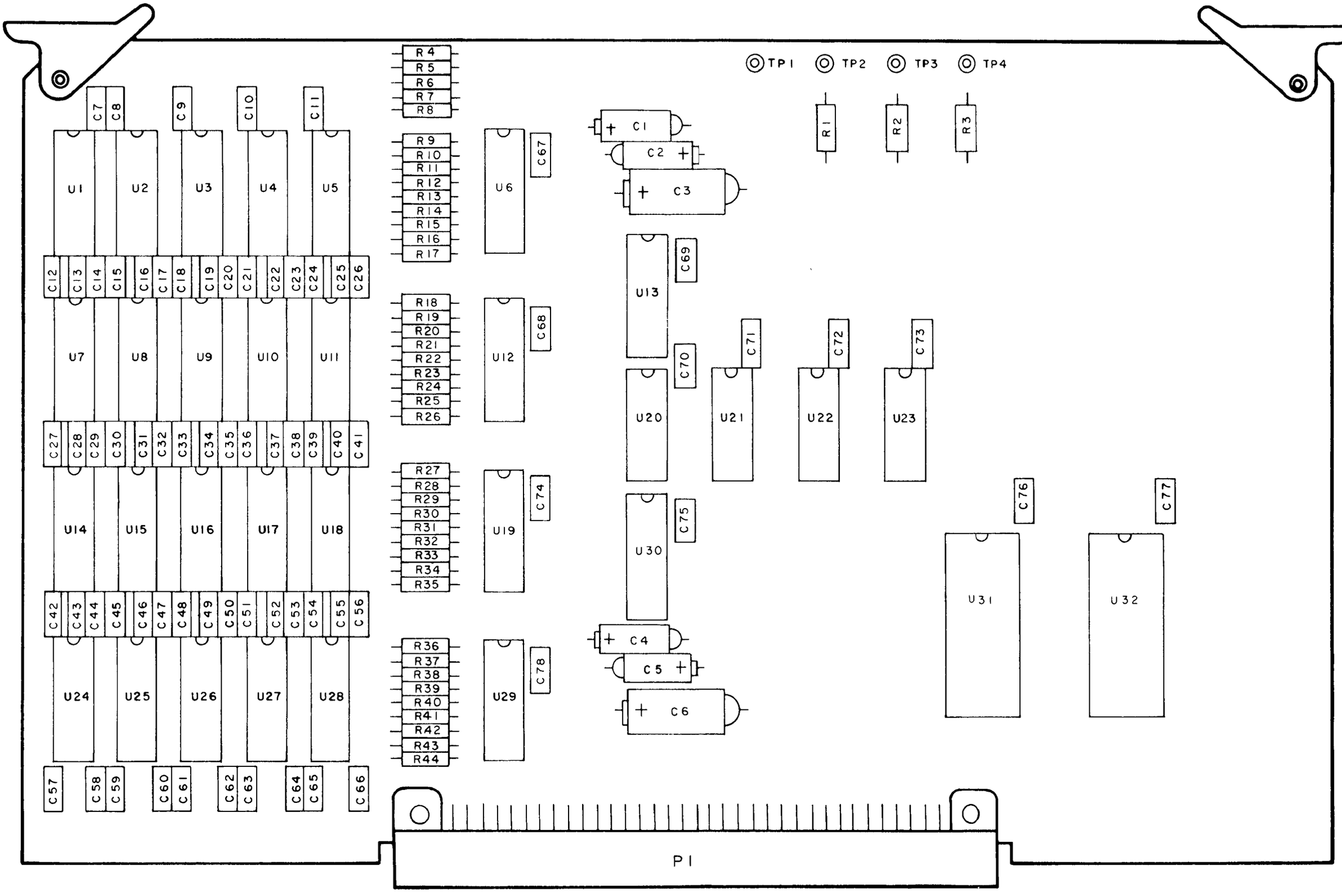


Figure B-3.
Memory Circuit Card Assembly

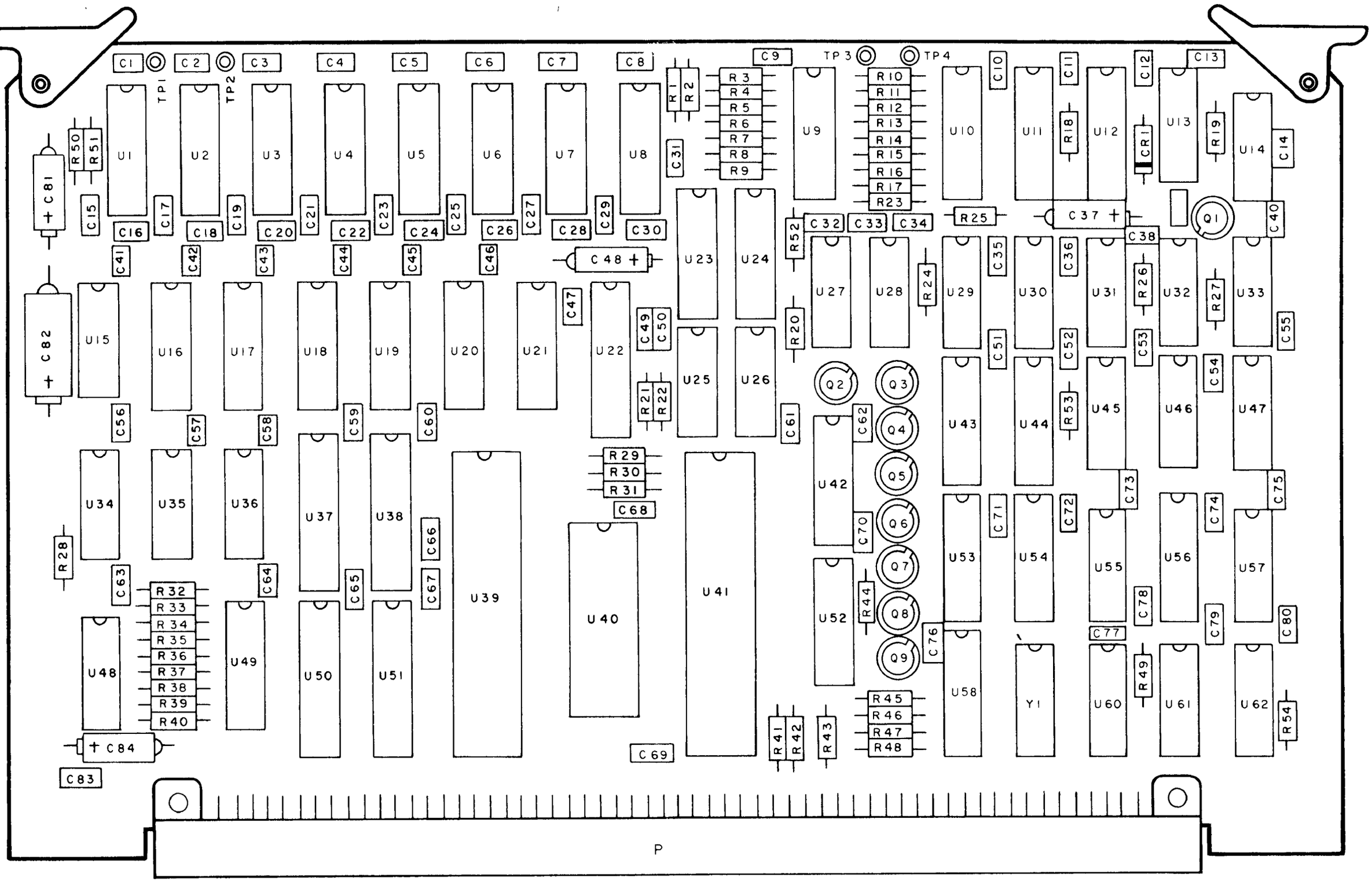


Figure B-4.
CPU Circuit Card Assembly

APPENDIX C
REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-1. Scope

This manual lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE), and other special support equipment required for performance of general support maintenance of the Circuit Card Assemblies. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special teals as indicated by the source, maintenance and recoverability (SMR) codes.

C-2. General

This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending numeric sequence, with the parts in each group listed in ascending item number sequence. Figure numbers are listed directly beneath the group header.

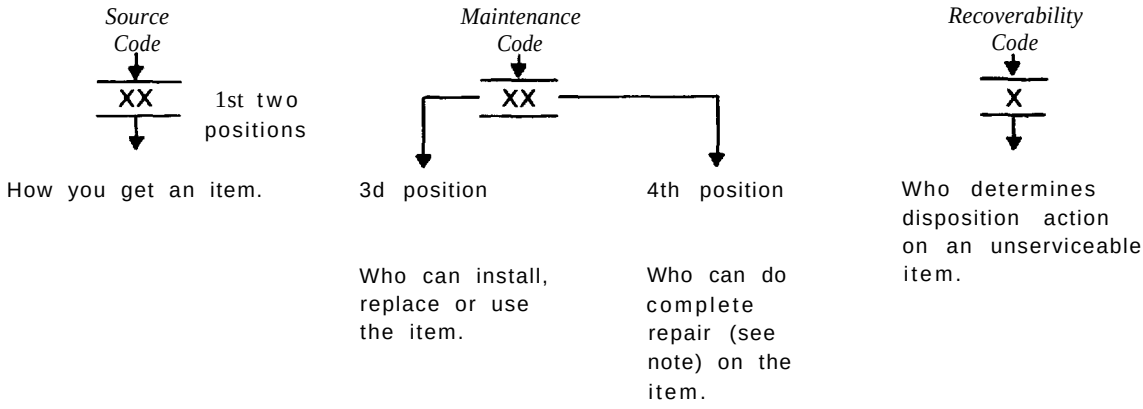
b. Section III. Special Tools List. Not" applicable.

c. Section IV. National Stock Number and Part Number Index. A list, in National item identification number (NIIN) sequence, of all National stock numbered items appearing in the listings, followed by a list in alphameric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross--referenced to each illustration figure and item number appearance.

C-3. Explanation of Columns (Section II and III)

a. Item No. (Column (1)). Indicates the number used to identify items called out in the illustration.

b. SMR Code (Column (2)). The source, maintenance, and recoverability (SMR) code is a five-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:



NOTE

Complete repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) *Source Code*. The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follows:

Code	*Explanation*
PA PB PC PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered In the third position of the SMR code. **NOTE** Items coded PC are subject to deterioration.
KD KF KB	items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the third position of the SMR code. The complete kit must be requisitioned and applied.
MO — Made at org/ AVUM category MF — Made at DS/ AVUM category MH — Made at GS category ML — Made at Specialized Repair Activity (SRA) MD — Made at Depot	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the description and usable on code (UOC) column and listed in the Bulk Material group of the repair parts list. If the item is authorized to you by the third position code of the SMR code, but the source code indicates it is made at a higher category, order the item from the higher category of maintenance.
AO — Assembled by org/ AVUM category AF — Assembled by DS/ AVIM category AH — Assembled by GS category AL — Assembled by SRA AD — Assembled by Depot	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the category of maintenance indicated by the source code. If the disposition code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher category, order the item from the higher category of maintenance.

XA — Do not requisition an "XA" coded item. Order its next higher assembly.
XB — If an "XB" item is not available from salvage, order it using the FSCM and part number given.
XC — installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturers part number.
XD — Item is not stocked. Order an "XD" coded item through normal supply channels using the FSCM and part number given, if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

(2) Maintenance Code. Maintenance codes tell you the category of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR code as fallows:

(a) The maintenance code entered in the third position tells you the lowest maintenance category authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the fallowing categories of maintenance.

Code *Application/Explanation*

C — Crew or operator maintenance done within organizational or aviation maintenance.
O — Organizational or aviation unit category can remove, replace, and use the item.
F — Direct support or aviation intermediate category can remove, replace, and use the item.
H — General support category can remove, replace, and use the item.
L — Specialized repair activity can remove, replace, and use the item.
D — Depot category can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance category with the capability to do complete repair (i.e., perform all authorized repair functions). This position will contain one of the following maintenance codes:

NOTE

Some limited repair may be done on the item at a lower category of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.

Code *Application/Explanation*

O — Organizational or aviation unit is the lowest category that can do complete repair of the item.
F — Direct support or aviation intermediate is the lowest category that can do complete repair of the item.
H — General support is the lowest category that can do complete repair of the item.
L — Specialized repair activity (designate the specialized repair activity) is the lowest category that can do complete repair of the item.
D — Depot is the lowest category that can do complete repair of the item.
Z —Nonreparable. No repair is authorized.
B — No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user category.

(3) *Recoverability Code.* Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

Recoverability codes	*Application/Explanation*

Z — Nonreparable item. When unserviceable, condemn and dispose of the item at the category of maintenance shown in the third position of SMR Code.

O — Reparable item. When uneconomically reparable, condemn and dispose of the item at organizational or aviation unit category.

F — Reparable item. When uneconomically reparable, condemn and dispose of the item at the direct support or aviation intermediate category.

H — Reparable item. When uneconomically reparable, condemn and dispose of the item at general support category.

D — Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot category.

L — Reparable item. Condemnation and disposal not authorized below specialized repair activity (SRA).

A — Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. FSCM (Column (3)). The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

d. Part Number (Column (4)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When you use a NSN to requisition an item, the item you receive may have a different part number from the part ordered.

e. Description and Usable on Code (UOC)(Column (5)). This column includes the following information.

(1) The Federal item name and, when required, a minimum description to identify the item.

(2) The statement “END OF FIGURE” appears just below the last item description in Column (5) for a given figure in both section II and section III.

f. Qty (Column (6)). Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A “V” appearing in this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

C-4. Explanation of Columns (Section IV)

a. National Stock Number (NSN) Index.

(1) Stock number column. This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN. When using this column to locate an item, ignore the first four digits of the NSN. When requisitioning items use the complete NSN (13 digits).

(2) *Fig. column.* This column lists the number of the figure where the item is identified/located. The illustrations are in numerical sequence in sections II and III.

(3) *Item column.* The item number identifies the item associated with the figure listed in the adjacent Fig. column. This item is also identified by the NSN listed on the same line.

b. Part Number index. Part numbers in this index are listed by part number in ascending alphameric sequence.

(1) FSCM column. This column lists the Federal supply code for manufacturer (FSCM).

(2) *Part number column.* This column indicates the part number assigned to the item.

(3) *Stock number column.* This column lists the National stock number for the associated port number and manufacturer identified in the part number and FSCM columns to the left.

(4) *Fig. column.* This column lists the number of the figure where the item is identified/located in sections II and III.

(5) *Item column.* The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

C-5. Special Information

Notional stock numbers (NSN'S) that are missing from P source coded items have been applied for and will be added to this TM by future change/revision when they are entered in the Army Master Data File (AMDF). Until the NSN'S are established and published, submit exception requisitions to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-MM, Fort Monmouth, NJ 07703-5006 for the part required to support your equipment.

C-6. How to Locate Repair Parts

a. When National stock number or part number is not known.

(1) *First.* Using the table of contents, determine the assembly group or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.

(2) *Second.* Find the figure covering the assembly group or subassembly group to which the item belongs.

(3) *Third.* Identify the item on the figure and note the item number.

(4) *Fourth.* Refer to the Repair Parts List for the figure to find the part number for the item number noted on the figure.

(5) Fifth. Refer to the Part Number Index to find the NSN, if assigned.

b. When National stock number or part number is known.

(1) First. Using the Index of National stock numbers and part numbers, find the pertinent National stock number or part number. The NSN index is in National item identification number (NIIN) sequence (para *4a* (1)). The part numbers in the part number index are listed in ascending alphameric sequence (para *4b).* Both indexes cross--reference you to the illustration figure and item number of the item you are looking for.

(2) *Second.* After finding the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

C-7. Abbreviations

Not applicable.

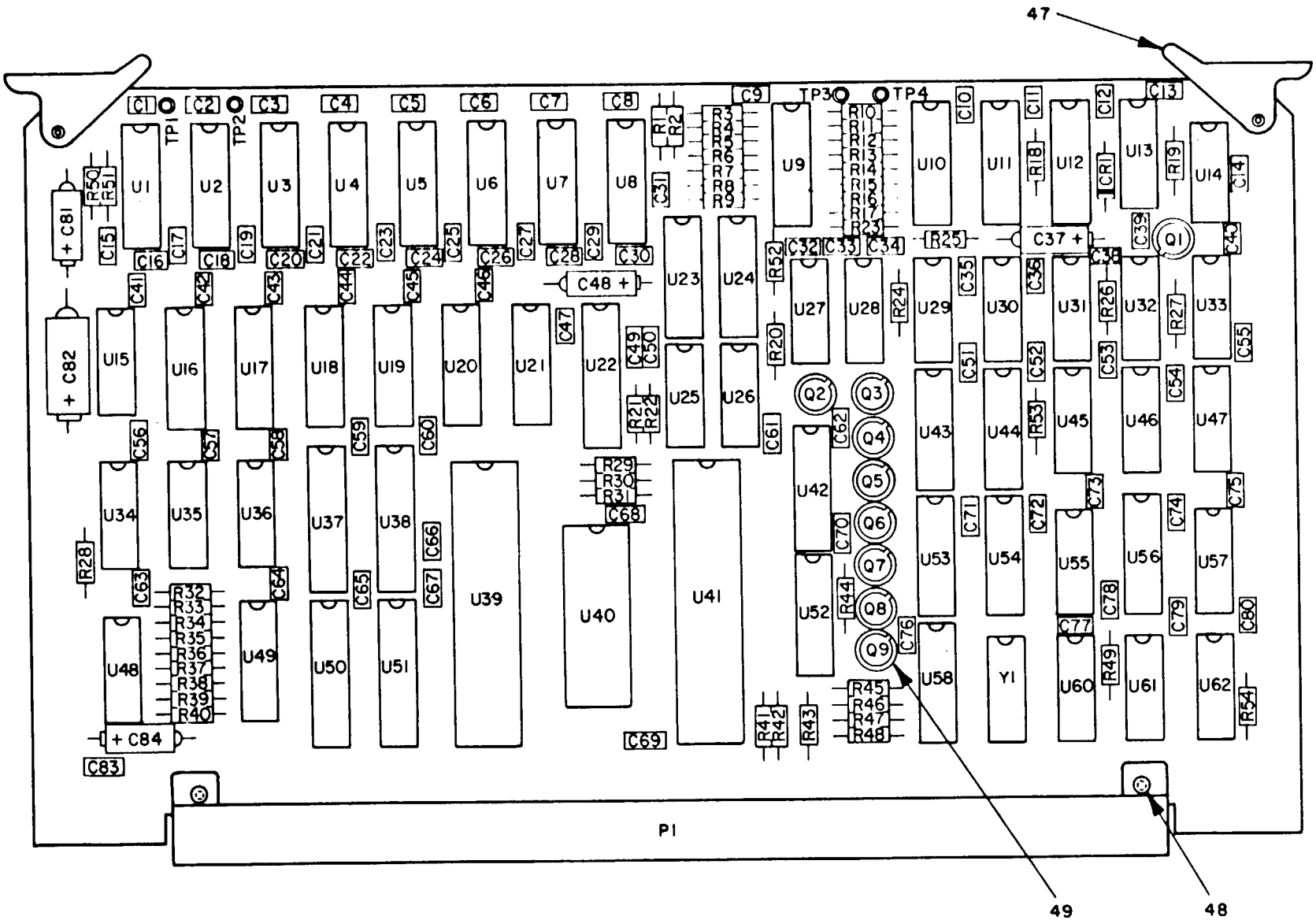


Figure C1. Circuit Card Assembly, CPU (3A1A1) (Sheet 1 of 2)

LEGEND

REF DES	ITEM NO.	REF DES	ITEM NO.	REF DES	ITEM NO.	REF DES	ITEM NO.	REF DES	ITEM NO.
C1	1	C44	1	Q1	7	R35	8	U20	26
C2	1	C45	1	Q2	7	R36	8	U21	26
C3	1	C46	1	Q3	7	R37	8	U22	27
C4	1	C47	1	Q4	7	R38	8	U23	28
C5	1	C48	3	Q5	7	R39	8	U24	29
C6	1	C49	1	Q6	7	R40	8	U25	30
C7	1	C50	1	Q7	7	R41	10	U26	31
C8	1	C51	1	Q8	7	R42	8	U27	32
C9	1	C52	1	Q9	7	R43	8	U28	23
C10	1	C53	1	R1	8	R44	10	U29	33
C11	1	C54	1	R2	8	R45	14	U30	34
C12	1	C55	1	R3	8	R46	10	U31	23
C13	1	C56	1	R4	8	R47	14	U32	21
C14	1	C57	1	R5	9	R48	10	U33	35
C15	1	C58	1	R6	9	R49	10	U34	31
C16	1	C59	1	R7	8	R50	10	U35	36
C17	1	C60	1	R8	8	R51	10	U36	37
C18	1	C61	1	R9	8	R52	10	U37	27
C19	1	C62	1	R10	10	R53	15	U38	27
C20	1	C63	1	R11	11	R54	15	U39	38
C21	1	C64	1	R12	11	TP1	16	U40	39
C22	1	C65	1	R13	11	TP2	16	U41	40
C23	1	C66	1	R14	11	TP3	16	U42	41
C24	1	C67	1	R15	11	TP4	16	U43	20
C25	1	C68	1	R16	11	U1	17	U44	24
C26	1	C69	1	R17	8	U2	17	U45	42
C27	1	C70	1	R18	10	U3	17	U46	35
C28	1	C71	1	R19	8	U4	17	U47	43
C29	1	C72	1	R20	11	U5	17	U48	42
C30	1	C73	1	R21	12	U6	17	U49	44
C31	1	C74	1	R22	13	U7	17	U50	27
C32	1	C75	1	R23	8	U8	17	U51	27
C33	1	C76	1	R24	8	U9	18	U52	41
C34	1	C77	1	R25	8	U10	19	U53	20
C35	1	C78	1	R26	13	U11	20	U54	24
C36	1	C79	1	R27	10	U12	20	U55	21
C37	2	C80	1	R28	10	U13	21	U56	45
C38	1	C81	2	R29	8	U14	22	U57	31
C39	1	C82	4	R30	8	U15	23	U58	25
C40	1	C83	1	R31	8	U16	24	U60	21
C41	1	C84	2	R32	8	U17	24	U61	21
C42	1	CR1	5	R33	8	U18	25	U62	23
C43	1	P1	6	R34	8	U19	25	Y1	46

EL3TG006

Figure C1. Circuit Card Assembly, CPU (3A1A1) (Sheet 2 of 2)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0101 CIRCUIT CARD ASSEMBLY, CPU (3A1A1)	
				FIGURE C-1	
1	PAHZZ	81349	M39014/01-1593	CAPACITOR,FIXED,CER	79
2	PAHZZ	81349	M39003/01-2991	CAPACITOR,FIXED,ELE	3
3	PAHZZ	81349	M39003/01-3024	CAPACITOR,FIXED,ELE	1
4	PAHZZ	81349	M39003/01-3011	CAPACITOR,FIXED,ELE	1
5	PAHZZ	81349	JAN1N914	SEMICONDUCTOR DECIV	1
6	PAHZZ	09922	ML2B130P-21	CONNECTOR	1
7	PAHZZ	81349	JAN2N2222A	TRANSISTOR	9
8	PAHZZ	81349	RLR07C1002GS	RESISTOR,FIXED,FILM	26
9	PAHZZ	81349	RLR07C3000GP	RESISTOR,FIXED,FILM	2
10	PAHZZ	81349	RLR07C1001GR	RESISTOR,FIXED,FILM	12
11	PAHZZ	81349	RLR07C3301GS	RESISTOR,FIXED,FILM	7
12	PAHZZ	81349	RLR07C3600GR	RESISTOR,FIXED,FILM	2
13	PAHZZ	81349	RLR07C7502GR	RESISTOR,FIXED,FILM	1
14	PAHZZ	81349	RLR07C2201GR	RESISTOR,FIXED,FILM	2
15	PAHZZ	81349	RLR07C5101GR	RESISTOR,FIXED,FILM	2
16	PAHZZ	82423	43435	TERMINAL STUD	4
17	PAHZZ	04713	SCM82004L	MICROCIRCUIT,DGTL	8
18	PAHZZ	07263	HL80532	MICROCIRCUIT,DGTL	1
19	PAHZZ	14933	7703501JB	MICROCIRCUIT,DIGITA	1
20	PAHZZ	81349	M38510/31504BEB	MICROCIRCUIT,DIGITA	4
21	PAHZZ	81349	M38510/30102BCB	MICROCIRCUIT,DIGITA	5
22	PAHZZ	04713	SC27451LH	MICROCIRCUIT,DGTL	1
23	PAHZZ	81349	M38510/30001BCB	MICROCIRCUIT,DIGITA	4
24	PAHZZ	81349	M38510/30703BEB	MICROCIRCUIT,DGTL	4
25	PAHZZ	80063	SM-A-915715	MICROCIRCUIT,DIGITA	3
26	PAHZZ	80063	SM-A-915716	MICROCIRCUIT,DIGITA	2
27	PAHZZ	80063	SM-A-915710	MICROCIRCUIT,DIGITA	5
28	PAHZZ	81349	M38510/10305BEB	MICROCIRCUIT,LINEAR	1
29	PAHZZ	14933	7705801EB	MICROCIRCUIT,DIGITA	1
30	PAHZZ	80063	SM-A-915714	MICROCIRCUIT,DIGITA	1
31	PAHZZ	81349	M38510-30003BCB	MICROCIRCUIT,DIGITA	3
32	PAHZZ	81349	M38510/00206BCB	MICROCIRCUIT,DIGITA	1
33	PAHZZ	04713	SC27445LH	MICROCIRCUIT,DGTL	1
34	PAHZZ	81349	M38510/30301BCB	MICROCIRCUIT,DIGITA	1
35	PAHZZ	77068	3183847-1-3B1	MICROCUIT LINEAR	2
36	P[AHZZ	81349	M38510/30501BCB	MICROCIRCUIT,DITIGA	1
37	PAHZZ	81349	M38510/31003BCB	MICROCIRCUIT,DIGITA	1
38	PAHZZ	81349	M38510/40001BQC	MICROCIRCUIT,DIGITA	1
39	PAHZZ	50088	MKS36011P	MICROCIRCUIT,DGTL	1
40	PAHZZ	80063	SM-A-915720	MICROCIRCUIT,DIGITA	1
41	PAHZZ	04713	SC27447LH	MICROCIRCUIT,DGTL	2
42	PAHZZ	81349	M38510/31004BCB	MICROCIRCUIT,DIGITA	2
43	PAHZZ	81349	M38510/31001BCB	MICROCIRCUIT,DIGITA	1
44	PAHZZ	80063	SM-A-915704	MICROCIRCUIT,DIGITA	1
45	PAHZZ	81349	M38510/30602BEB	MICROCIRCUIT,DIGITA	1
46	PAHZZ	04713	K1100A4.9152MHZ	OSCILLATOR	1

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
47	XBHZZ	80063	SM-C-915749	EXTRACTOR,CKT CD	2
48	PAHZZ	96906	MS16535-8	RIVET,TUBULAR	2
49	XBHZZ	05869	715899-042	MOUNTING PAD,ELECTR	9

END OF FIGURE

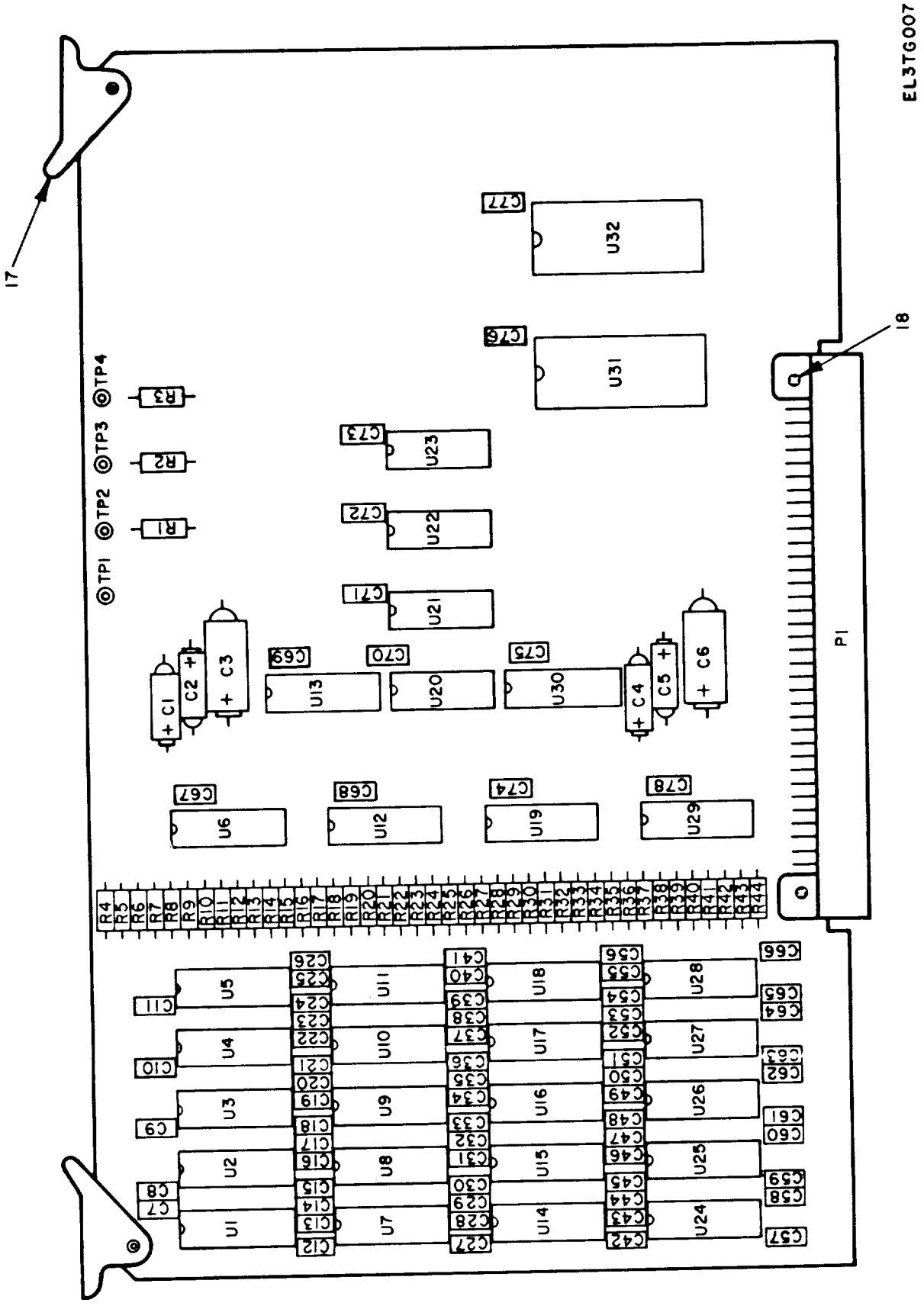


Figure C2. Circuit Card Assembly, Memory (3A1A2) (Sheet 1 of 2)

LEGEND

REF DES	ITEM NO.	REF DES	ITEM NO.	REF DES	ITEM NO.	REF DES	ITEM NO.
C1	1	C41	3	R2	5	R42	7
C2	1	C42	3	R3	5	R43	7
C3	2	C43	3	R4	6	R44	7
C4	1	C44	3	R5	6	TP1	8
C5	1	C45	3	R6	6	TP2	8
C6	2	C46	3	R7	6	TP3	8
C7	3	C47	3	R8	6	TP4	8
C8	3	C48	3	R9	7	U1	9
C9	3	C49	3	R10	7	U2	9
C10	3	C50	3	R11	7	U3	9
C11	3	C51	3	R12	7	U4	9
C12	3	C52	3	R13	7	U5	9
C13	3	C53	3	R14	7	U6	10
C14	3	C54	3	R15	7	U7	9
C15	3	C55	3	R16	7	U8	9
C16	3	C56	3	R17	7	U9	9
C17	3	C57	3	R18	7	U10	9
C18	3	C58	3	R19	7	U11	9
C19	3	C59	3	R20	7	U12	10
C20	3	C60	3	R21	7	U13	10
C21	3	C61	3	R22	7	U14	9
C22	3	C62	3	R23	7	U15	9
C23	3	C63	3	R24	7	U16	9
C24	3	C64	3	R25	7	U17	9
C25	3	C65	3	R26	7	U18	9
C26	3	C66	3	R27	7	U19	10
C27	3	C67	3	R28	7	U20	11
C28	3	C68	3	R29	7	U21	12
C29	3	C69	3	R30	7	U22	13
C30	3	C70	3	R31	7	U23	14
C31	3	C71	3	R32	7	U24	9
C32	3	C72	3	R33	7	U25	9
C33	3	C73	3	R34	7	U26	9
C34	3	C74	3	R35	7	U27	9
C35	3	C75	3	R36	7	U28	9
C36	3	C76	3	R37	7	U29	10
C37	3	C77	3	R38	7	U30	10
C38	3	C78	3	R39	7	U31	15
C39	3	P1	4	R40	7	U32	16
C40	3	R1	5	R41	7		

EL3TG008

Figure C2. Circuit Card Assembly, Memory (3A1A2) (Sheet 2 of 2)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0102 CIRCUIT CARD ASSEMBLY, MEMORY (3A1A2)	
				FIGURE C-2	
1	PAHZZ	81349	M39003/01-2991	CAPACITOR,FIXED,ELE	4
2	PAHZZ	81349	M39003/01-3011	CAPACITOR,FIXED,ELE	2
3	PAHZZ	81349	M39014-01-1593	CAPACITOR,FIXED,CER	72
4	PAHZZ	09922	ML2B70P-21	CONNECTOR	1
5	PAHZZ	81349	RLR07C1001GR	RESISTOR,FIXED,FILM	3
6	PAHZZ	81349	RLR07C2400GS	RESISTOR,FIXED,FILM	5
7	PAHZZ	81349	RLR07C24R0GR	RESISTOR,FIXED,FILM	36
8	PAHZZ	82423	43435	TERMINAL,STUD	4
9	PAHZZ	04713	SCM82004L	MICROCIRCUIT,DGTL	20
10	PAHZZ	80063	SM-A-915715	MICROCIRCUIT,DIGITA	6
11	PAHZZ	81349	M38510/30501BCB	MICROCIRCUIT,DIGITA	1
12	PAHZZ	81349	M38510/31004BCB	MICROCIRCUIT,DIGITA	1
13	PAHZZ	81349	M38510/30007BCB	MICROCIRCUIT,DIGITA	1
14	PAHZZ	81349	M38510-30003BCB	MICROCIRCUIT,DIGITA	1
15	PAHZZ	50088	MKB36004P	MICROCIRCUIT,DIGITA	1
16	PAHZZ	50088	MKB36005P	MICROCIRCUIT,DGTL	1
17	XBHZZ	80063	SM-C-915749	EXTRACTOR,CKT CD	2
18	PAHZZ	96906	MS16535-8	RIVET,TUBULAR	2
				END OF FIGURE	

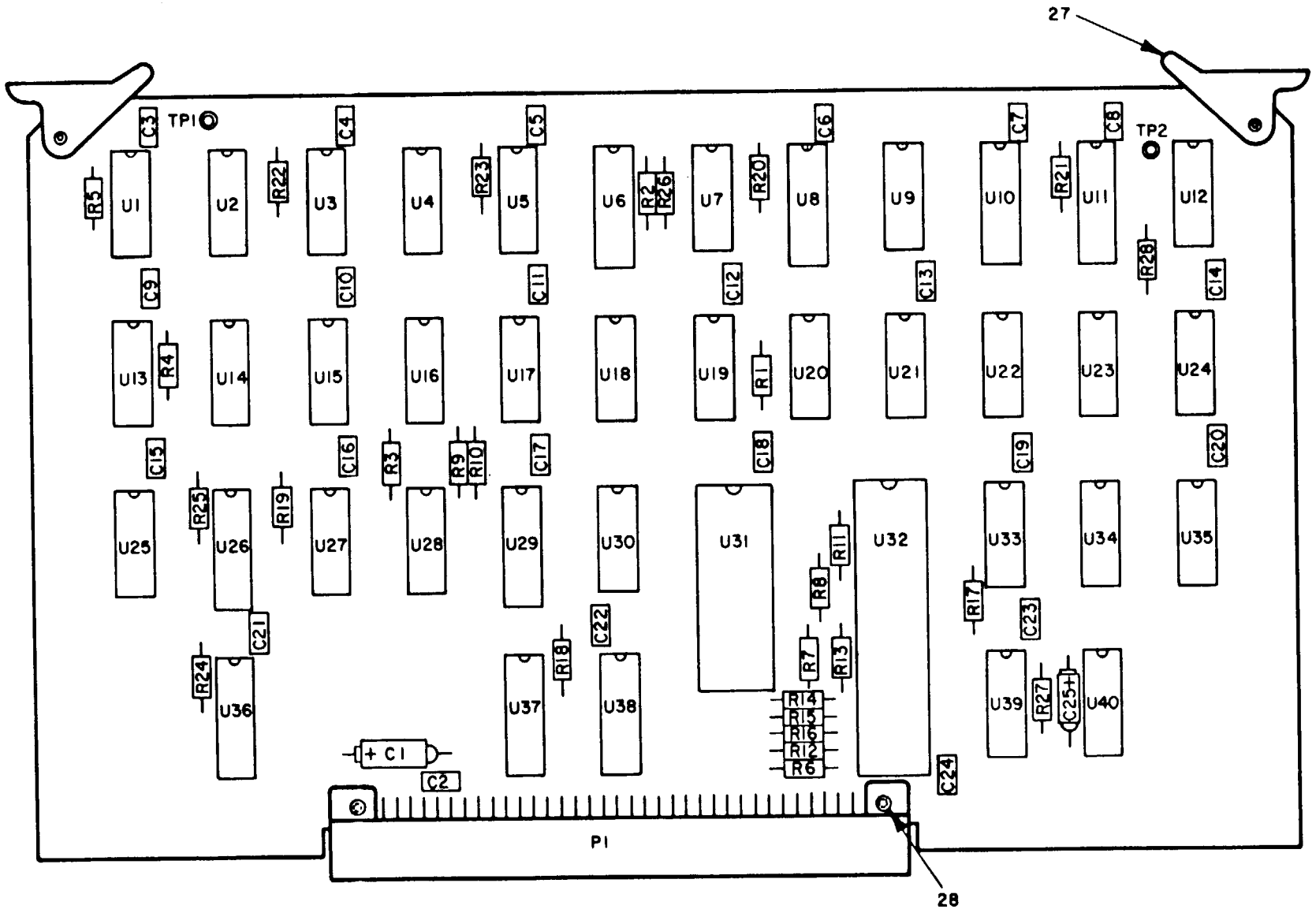


Figure C3. Circuit Card Assembly, Communications (3A1A3) (Sheet 1 of 2)

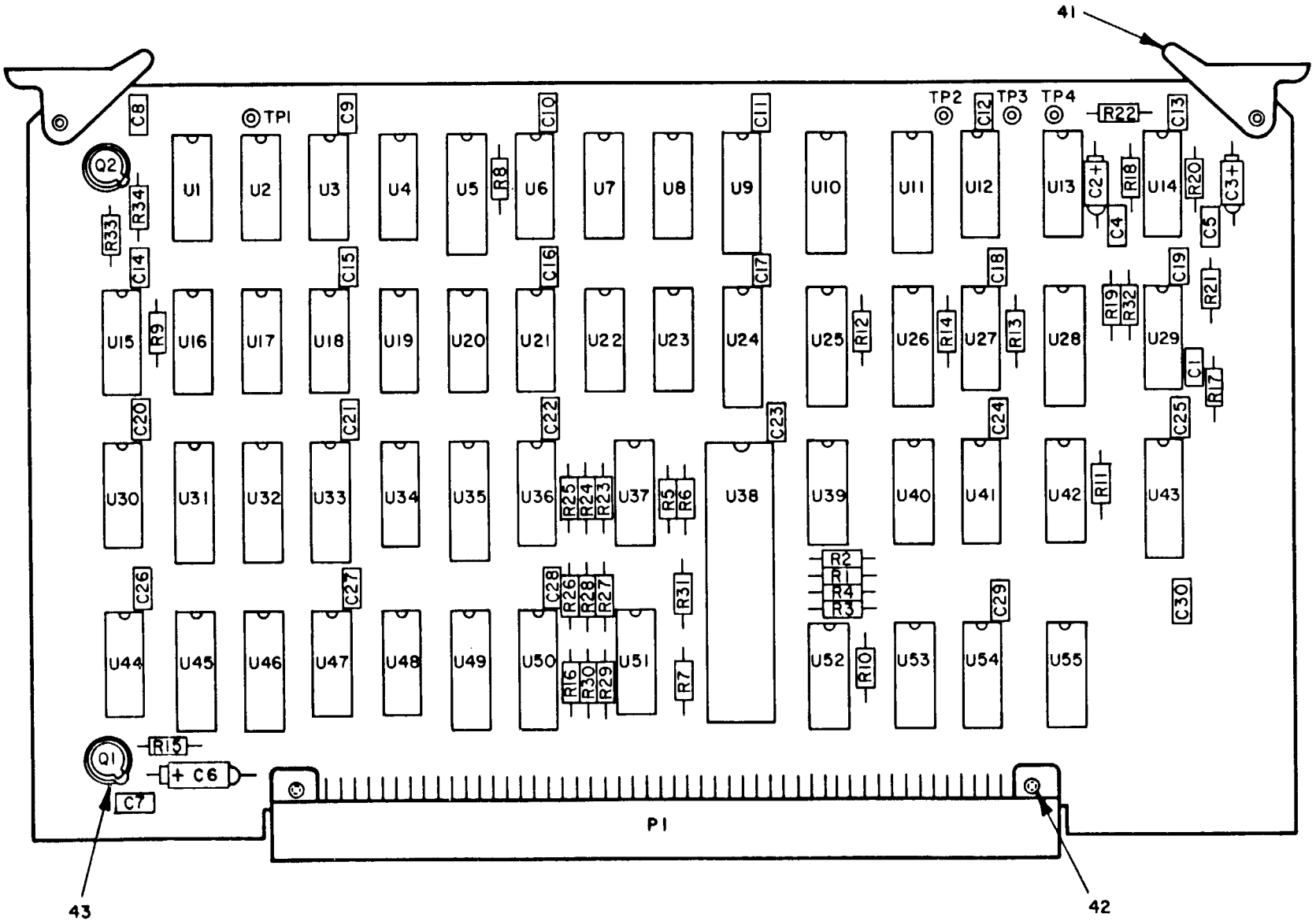
LEGEND

REF DES	ITEM NO.	REF DES	ITEM NO.	REF DES	ITEM NO.
C1	1	R7	5	U9	15
C2	2	R8	5	U10	16
C3	2	R9	5	U11	16
C4	2	R10	5	U12	15
C5	2	R11	5	U13	12
C6	2	R12	5	U14	17
C7	2	R13	5	U15	11
C8	2	R14	5	U16	18
C9	2	R15	5	U17	15
C10	2	R16	5	U18	9
C11	2	R17	6	U19	10
C12	2	R18	6	U20	10
C13	2	R19	6	U21	18
C14	2	R20	6	U22	10
C15	2	R21	6	U23	18
C16	2	R22	6	U24	19
C17	2	R23	6	U25	20
C18	2	R24	6	U26	16
C19	2	R25	6	U27	11
C20	2	R26	5	U28	17
C21	2	R27	7	U29	21
C22	2	R28	6	U30	16
C23	2	TP1	8	U31	22
C24	2	TP2	8	U32	23
C25	3	U1	9	U33	11
P1	4	U2	10	U34	15
R1	5	U3	11	U35	24
R2	5	U4	12	U36	16
R3	5	U5	11	U37	21
R4	5	U6	13	U38	16
R5	5	U7	11	U39	25
R6	5	U8	14	U40	26

EL3TG010

Figure C3. Circuit Card Assembly, Communications (3A1A3) (Sheet 2 of 2)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 0103 CIRCUIT CARD ASSEMBLY, COMMUNICATIONS (3A1A3)	
				FIGURE C-3	
1	PAHZZ	81349	M39003/01-2991	CAPACITOR,FIXED,ELE	1
2	PAHZZ	81349	M39014-01-1593	CAPACITOR,FIXED,CER	23
3	PAHZZ	81349	M39003/01-3006	CAPACITOR,FIXED,ELE	1
4	PAHZZ	09922	ML2B70P-21	CONNECTOR	1
5	PAHZZ	81349	RLR07C5101GR	RESISTOR,FIXED,FILM	17
6	PAHZZ	81349	RLR07C1001GR	RESISTOR,FIXED,FILM	10
7	PAHZZ	81349	RLR07C9102GS	RESISTOR,FIXED,FILM	1
8	PAHZZ	82423	43435	TERMINAL,STUD	2
9	PAHZZ	81349	M38510/30301BCB	MICROCIRCUIT,DIGITA	2
10	PAHZZ	81349	M38510/30001BCB	MICROCIRCUIT,DIGITA	4
11	PAHZZ	81349	M38510/30102BCB	MICROCIRCUIT,DIGITA	6
12	PAHZZ	04713	SC27445LH	MICROCIRCUIT,DGTL	2
13	PAHZZ	04713	SC27472LH	MICROCIRCUIT,DGTL	1
14	PAHZZ	04713	SC27446LH	MICROCIRCUIT,DGTL	1
15	PAHZZ	81349	M38510-30003BCB	MICROCIRCUIT,DIGITA	4
16	PAHZZ	81349	M38510/31504BEB	MICROCIRCUIT,DIGITA	6
17	PAHZZ	04713	SC27456LH	MICROCIRCUIT,DGTL	2
18	PAHZZ	81349	M38510/31004BCB	MICROCIRCUIT,DIGITA	3
19	PAHZZ	81349	M38510/30007BCB	MICROCIRCUIT,DIGITA	1
20	XDHZZ	04713	SC27449LH	MICROCIRCUIT,DIGITA	1
21	PAHZZ	80063	SM-A-915715	MICROCIRCUIT,DIGITA	2
22	PAHZZ	34335	SM-A-915721	MICROCIRCUIT,DGTL	1
23	PAHZZ	80063	SM-A-915720	MICROCIRCUIT,DIGITA	1
24	PAHZZ	77068	3183847-1-3B1	MICROCUIT LINEAR	1
25	PAHZZ	04713	SC27471LH	MICROCIRCUIT,DGTL	1
26	PAHZZ	04713	SC27452LH	MICROCIRCUIT,DGTL	1
27	XBHZZ	80063	SM-C-915749	EXTRACTOR,CKT CD	2
28	PAHZZ	96906	MS16535-8	RIVET,TUBULAR	2
				END 0F FIGURE	



EL3TG011

TM 11-5815-612-40&P

Figure C4. Circuit Card Assembly, Printer Control (3A1A4) (Sheet 1 of 2)

LEGEND

REF DES	ITEM NO.	REF DES	ITEM NO.	REF DES	ITEM NO.
C1	1	R10	9	U14	30
C2	2	R11	9	U15	19
C3	3	R12	9	U16	31
C4	4	R13	9	U17	32
C5	4	R14	9	U18	32
C6	5	R15	10	U19	32
C7	1	R16	11	U20	24
C8	1	R17	11	U21	24
C9	1	R18	12	U22	33
C10	1	R19	8	U23	19
C11	1	R20	13	U24	26
C12	1	R21	8	U25	27
C13	1	R22	9	U26	28
C14	1	R23	14	U27	34
C15	1	R24	14	U28	26
C16	1	R25	14	U29	19
C17	1	R26	14	U30	24
C18	1	R27	14	U31	28
C19	1	R28	15	U32	35
C20	1	R29	15	U33	35
C21	1	R30	16	U34	36
C22	1	R31	11	U35	37
C23	1	R32	11	U36	36
C24	1	R33	8	U37	19
C25	1	R34	17	U38	38
C26	1	TP1	18	U39	32
C27	1	TP2	18	U40	32
C28	1	TP3	18	U41	29
C29	1	TP4	18	U42	29
C30	1	U1	19	U43	39
P1	6	U2	20	U44	40
Q1	7	U3	21	U45	28
Q2	7	U4	22	U46	35
R1	8	U5	23	U47	36
R2	8	U6	19	U48	36
R3	8	U7	24	U49	37
R4	8	U8	25	U50	37
R5	8	U9	26	U51	36
R6	8	U10	27	U52	19
R7	8	U11	28	U53	33
R8	9	U12	29	U54	20
R9	9	U13	19	U55	31

EL3TG012

Figure C4. Circuit Card Assembly, Printer Control (3A1A4) (Sheet 2 of 2)

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 104 CIRCUIT CARD ASSEMBLY, PRINTER CONTROL (3A1A4)	
				FIGURE C-4	
1	PAHZZ	81349	M39014-01-1593	CAPACITOR,FIXED,CER	25
2	PAHZZ	81349	M39003-01-2988	CAPACITOR,FIXED,ELE	1
3	PAHZZ	81349	M39003-01-3002	CAPACITOR	1
4	PAHZZ	81349	M39014-01-1357	CAPACITOR,FIXED,CER	2
5	PAHZZ	81349	M39003/01-2991	CAPACITOR,FIXED,ELE	1
6	PAHZZ	09922	ML2B100P-21	CONNECTOR	1
7	PAHZZ	81349	JAN2N2222A	TRANSISTOR	2
8	PAHZZ	81349	RLR07C1002GS	RESISTOR,FIXED,FILM	10
9	PAHZZ	81349	RLR07C1001GR	RESISTOR,FIXED,FILM	8
10	PAHZZ	81349	RLR07C51R0GR	RESISTOR,FIXED,FILM	1
11	PAHZZ	81349	RLR07C5101GR	RESISTOR,FIXED,FILM	4
12	PAHZZ	81349	RLR07C2492FS	RESISTOR,FIXED,FILM	1
13	PAHZZ	81349	RLR07C127FS	RESISTOR,FIXED,FILM	1
14	PAHZZ	81349	RLR07C5600GR	RESISTOR,FIXED,FILM	5
15	PAHZZ	81349	RLR07C8200GS	RESISTOR,FIXED,FILM	2
16	PAHZZ	81349	RLR07C4701GR	RESISTOR,FIXED,FILM	1
17	PAHZZ	81349	RLR07C3000GP	RESISTOR,FIXED,FILM	1
18	PAHZZ	82423	43435	TERMINAL,STUD	4
19	PAHZZ	81349	M38510/30102BCB	MICROCIRCUIT,DIGITA	8
20	PAHZZ	81349	M38510/30007BCB	MICROCIRCUIT,DIGITA	2
21	PAHZZ	04713	SC27443LH	MICROCIRCUIT,DGTL	1
22	PAHZZ	81349	M38510/30009BCB	MICROCIRCUIT,DIGITA	1
23	PAHZZ	04713	SC27452LH	MICROCIRCUIT,DGTL	1
24	PAHZZ	81349	M38510-30003BCB	MICROCIRCUIT,DIGITA	4
25	PAHZZ	04713	SC27454LH	MICROCIRCUIT,DGTL	1
26	PAHZZ	04713	SC27450LH	MICROCIRCUIT,DGTL	3
27	PAHZZ	04713	SC27470LH	MICROCIRCUIT,DGTL	2
28	PAHZZ	81349	M38510/31504BEB	MICROCIRCUIT,DIGITA	4
29	XDHZZ	04713	SC27449LH	MICROCIRCUIT,DIGITA	3
30	PAHZZ	81349	M38510/10902BCB	MICROCIRCUIT,LINEAR	1
31	PAHZZ	81349	M38510/30301BCB	MICROCIRCUIT,DIGITA	2
32	PAHZZ	81349	M38510/30001BCB	MICROCIRCUIT,DIGITA	5
33	PAHZZ	81349	M38510/31004BCB	MICROCIRCUIT,DIGITA	2
34	PAHZZ	04713	SC27451LH	MICROCIRCUIT,DGTL	1
35	PAHZZ	81349	M38510/30701BEB	MICROCIRCUIT,DIGITA	3
36	PAHZZ	81349	M38510/00803BCB	MICROCIRCUIT,DIGITA	5
37	PAHZZ	80063	SM-A-915715	MICROCIRCUIT,DIGITA	3
38	PAHZZ	80063	SM-A-915720	MICROCIRCUIT,DIGITA	1
39	PAHZZ	81349	M38510/30702BEB	MICROCIRCUIT,DIGITA	1
40	PAHZZ	77068	3183847-1-3B1	MICROCUIT LINEAR	1
41	PAHZZ	18677	S208	RETAINER-EJECTOR,EL	2
42	PAHZZ	96906	MS16535-8	RIVET,TUBULAR	2
43	PAHZZ	05869	715899-042	MOUNTING PAD,ELECTR	2
				END OF FIGURE	

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5910-00-007-3974	C-1	2	5962-01-034-9830	C-1	37
	C-2	1	5962-01-034-9832	C-1	42
	C-3	1		C-2	12
	C-4	5		C-3	18
5910-00-010-8159	C-4	2		C-4	33
5910-00-010-8666	C-4	4	5962-01-034-9833	C-1	43
5910-00-010-8717	C-1	1	5962-01-035-7478	C-4	21
	C-2	3	5962-01-035-7479	C-3	17
	C-3	2	5962-01-039-6395	C-1	34
	C-4	1		C-3	9
5320-00-080-4402	C-1	48		C-4	31
	C-2	18	5962-01-041-3214	C-1	33
	C-3	28		C-3	12
	C-4	42	5955-01-041-6891	C-1	46
5910-00-113-5475	C-3	3	5905-01-047-1529	C-1	10
5910-00-114-0780	C-1	4		C-2	5
	C-2	2		C-3	6
5910-00-144-4381	C-1	3		C-4	9
5905-00-223-2610	C-4	10	5905-01-047-1530	C-1	14
5999-00-226-1755	C-4	43	5962-01-050-0918	C-4	35
5910-00-233-4029	C-4	3	5962-01-050-0921	C-1	41
5905-00-240-7980	C-4	14	5962-01-057-7054	C-3	26
5962-00-348-2718	C-1	32		C-4	23
5962-00-369-9839	C-4	36	5962-01-058-1539	C-1	21
5905-00-404-8838	C-1	13		C-3	11
5905-00-438-0505	C-4	16		C-4	19
5905-00-438-0506	C-1	15	5962-01-059-2592	C-4	27
	C-3	5	5962-01-061-6583	C-1	22
	C-4	11		C-4	34
5905-00-448-9355	C-1	9	5962-01-065-7026	C-1	20
	C-4	17		C-3	16
5962-00-528-1703	C-1	35		C-4	28
	C-3	24	5962-01-067-3073	C-1	45
	C-4	40	5962-01-067-9804	C-4	39
5961-00-842-9864	C-1	5	5962-01-068-9585	C-4	30
5961-00-951-8757	C-1	7	5962-01-076-8840	C-1	24
	C-4	7	5962-01-084-6427	C-3	25
5962-01-026-2493	C-2	13	5962-01-084-7397	C-1	19
	C-3	19	5962-01-091-0557	C-4	25
	C-4	20	5962-01-100-7994	C-1	29
5962-01-026-6055	C-4	22	5962-01-102-7613	C-1	38
5962-01-027-6863	C-1	31	5905-01-138-6261	C-1	11
	C-2	14	5905-01-138-6267	C-4	12
	C-3	15	5905-01-138-6272	C-2	6
	C-4	24	5905-01-139-5314	C-1	8
5962-01-031-1918	C-1	36		C-4	8
	C-2	11	5905-01-165-8592	C-3	7
5962-01-031-7030	C-1	23	5905-01-167-6965	C-4	15
	C-3	10	5905-01-178-6755	C-4	13
	C-4	32	5940-01-180-0059	C-1	16

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5940-01-180-0059	C-2	8			
	C-3	8			
	C-4	18			
5962-01-181-0263	C-3	13			
5935-01-181-3006	C-1	6			
5935-01-181-3007	C-2	4			
	C-3	4			
5935-01-181-3008	C-4	6			
5962-01-181-3104	C-1	39			
5962-01-181-3105	C-2	16			
5962-01-184-1405	C-1	25			
	C-2	10			
	C-3	21			
	C-4	37			
5962-01-184-1406	C-1	27			
5962-01-184-1407	C-1	44			
5962-01-184-1408	C-1	26			
5962-01-194-4475	C-3	22			
5962-01-196-9323	C-1	17			
	C-2	9			

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
07263	HL80532		C-1	18
81349	JAN1N914	5961-00-842-9864	C-1	5
81349	JAN2N2222A	5961-00-951-8757	C-1	7
			C-4	7
04713	K1100A4.9152MHZ	5955-01-041-6891	C-1	46
50088	MKB36004P		C-2	15
50088	MKB36005P	5962-01-181-3105	C-2	16
50088	MKS36011P	5962-01-181-3104	C-1	39
09922	ML2B100P-21	5935-01-181-3008	C-4	6
09922	ML2B130P-21	5935-01-181-3006	C-1	6
09922	ML2B70P-21	5935-01-181-3007	C-2	4
			C-3	4
96906	MS16535-8	5320-00-080-4402	C-1	48
			C-2	18
			C-3	28
			C-4	42
81349	M38510-30003BCB	5962-01-027-6863	C-1	31
			C-2	14
			C-3	15
			C-4	24
81349	M38510/00206BCB	5962-00-348-2718	C-1	32
81349	M38510/00803BCB	5962-00-369-9839	C-4	36
81349	M38510/10305BEB		C-1	28
81349	M38510/10902BCB	5962-01-068-9585	C-4	30
81349	M38510/30001BCB	5962-01-031-7030	C-1	23
			C-3	10
			C-4	32
81349	M38510/30007BCB	5962-01-026-2493	C-2	13
			C-3	19
			C-4	20
81349	M38510/30009BCB	5962-01-026-6055	C-4	22
81349	M38510/30102BCB	5962-01-058-1539	C-1	21
			C-3	11
			C-4	19
81349	M38510/30301BCB	5962-01-039-6395	C-1	34
			C-3	9
			C-4	31
81349	M38510/30501BCB	5962-01-031-1918	C-1	36
			C-2	11
81349	M38510/30602BEB	5962-01-067-3073	C-1	45
81349	M38510/30701BEB	5962-01-050-0918	C-4	35
81349	M38510/30702BEB	5962-01-067-9804	C-4	39
81349	M38510/30703BEB	5962-01-076-8840	C-1	24
81349	M38510/31001BCB	5962-01-034-9833	C-1	43
81349	M38510/31003BCB	5962-01-034-9830	C-1	37
81349	M38510/31004BCB	5962-01-034-9832	C-1	42
			C-2	12
			C-3	18
			C-4	33
81349	M38510/31504BEB	5962-01-065-7026	C-1	20
			C-3	16

CROSS-REFERENCE INDEXES

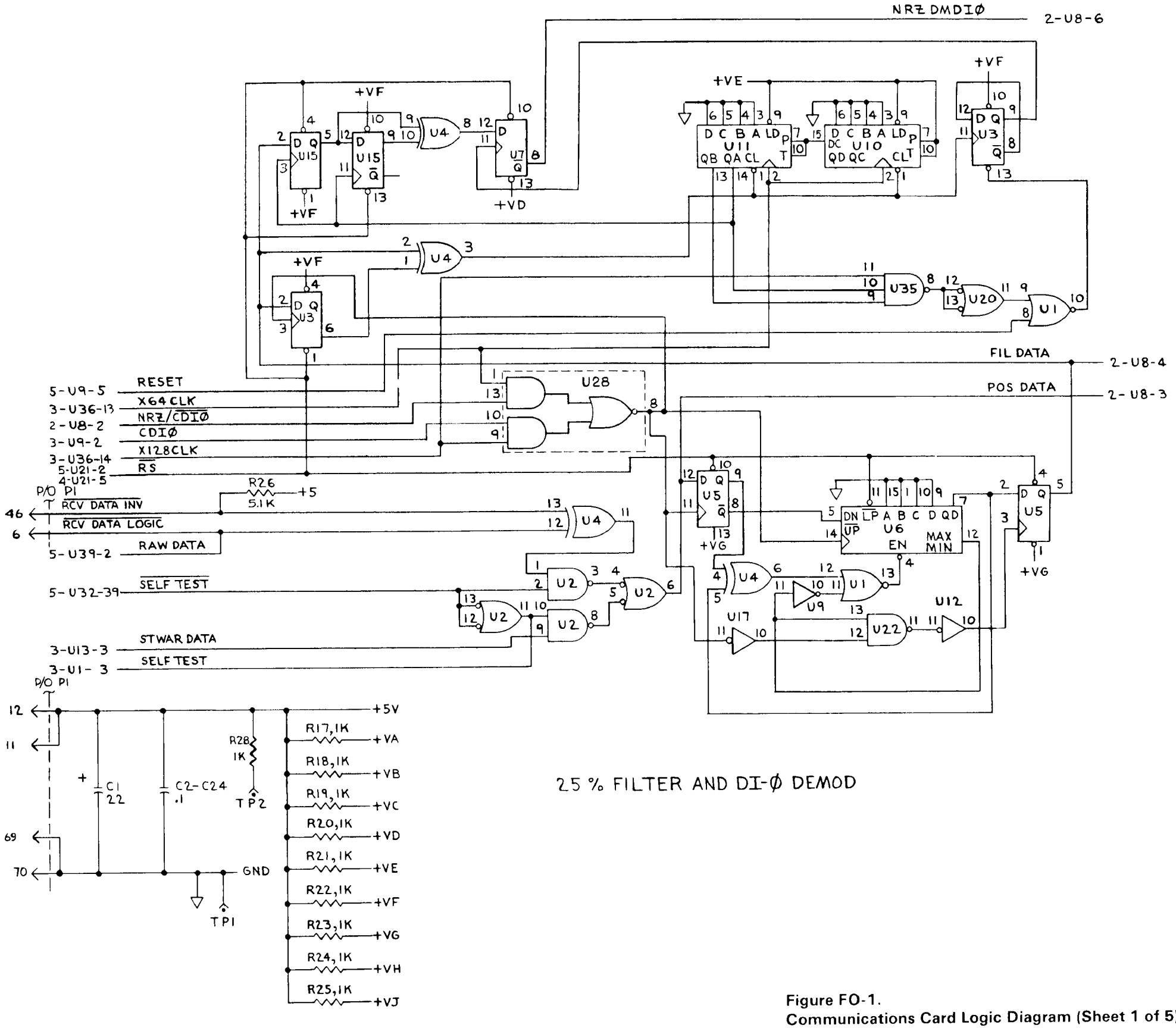
PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
81349	M38510/31504BEB	5962-01-065-7026	C-4	28
81349	M38510/40001BQC	5962-01-102-7613	C-1	38
81349	M39003-01-2988	5910-00-010-8159	C-4	2
81349	M39003-01-3002	5910-00-233-4029	C-4	3
81349	M39003/01-2991	5910-00-007-3974	C-1	2
			C-2	1
			C-3	1
			C-4	5
81349	M39003/01-3006	5910-00-113-5475	C-3	3
81349	M39003/01-3011	5910-00-114-0780	C-1	4
			C-2	2
81349	M39003/01-3024	5910-00-144-4381	C-1	3
81349	M39014-01-1357	5910-00-010-8666	C-4	4
81349	M39014-01-1593	5910-00-010-8717	C-2	3
			C-3	2
			C-4	1
81349	M39014/01-1593	5910-00-010-8717	C-1	1
81349	RLR07C1001GR	5905-01-047-1529	C-1	10
			C-2	5
			C-3	6
			C-4	9
81349	RLR07C1002GS	5905-01-139-5314	C-1	8
			C-4	8
81349	RLR07C127FS	5905-01-178-6755	C-4	13
81349	RLR07C2201GR	5905-01-047-1530	C-1	14
81349	RLR07C24R0GR		C-2	7
81349	RLR07C2400GS	5905-01-138-6272	C-2	6
81349	RLR07C2492FS	5905-01-138-6267	C-4	12
81349	RLR07C3000GP	5905-00-448-9355	C-1	9
			C-4	17
81349	RLR07C3301GS	5905-01-138-6261	C-1	11
81349	RLR07C3600GR		C-1	12
81349	RLR07C4701GR	5905-00-438-0505	C-4	16
81349	RLR07C51R0GR	5905-00-223-2610	C-4	10
81349	RLR07C5101GR	5905-00-438-0506	C-1	15
			C-3	5
			C-4	11
81349	RLR07C5600GR	5905-00-240-7980	C-4	14
81349	RLR07C7502GR	5905-00-404-8838	C-1	13
81349	RLR07C8200GS	5905-01-167-6965	C-4	15
81349	RLR07C9102GS	5905-01-165-8592	C-3	7
04713	SCM82004L	5962-01-196-9323	C-1	17
			C-2	9
04713	SC27443LH	5962-01-035-7478	C-4	21
04713	SC27445LH	5962-01-041-3214	C-1	33
			C-3	12
04713	SC27446LH		C-3	14
04713	SC27447LH	5962-01-050-0921	C-1	41
04713	SC27449LH		C-3	20
			C-4	29
04713	SC27450LH		C-4	26

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
04713	SC27451LH	5962-01-061-6583	C-1	22
			C-4	34
04713	SC27452LH	5962-01-057-7054	C-3	26
			C-4	23
04713	SC27454LH	5962-01-091-0557	C-4	25
04713	SC27456LH	5962-01-035-7479	C-3	17
04713	SC27470LH	5962-01-059-2592	C-4	27
04713	SC27471LH	5962-01-084-6427	C-3	25
04713	SC27472LH	5962-01-181-0263	C-3	13
80063	SM-A-915704	5962-01-184-1407	C-1	44
80063	SM-A-915710	5962-01-184-1406	C-1	27
80063	SM-A-915714		C-1	30
80063	SM-A-915715	5962-01-184-1405	C-1	25
			C-2	10
			C-3	21
			C-4	37
80063	SM-A-915716	5962-01-184-1408	C-1	26
80063	SM-A-915720		C-1	40
			C-3	23
			C-4	38
34335	SM-A-915721	5962-01-194-4475	C-3	22
80063	SM-C-915749		C-1	47
			C-2	17
			C-3	27
18677	S208		C-4	41
77068	3183847-1-3B1	5962-00-528-1703	C-1	35
			C-3	24
			C-4	40
82423	43435	5940-01-180-0059	C-1	16
			C-2	8
			C-3	8
			C-4	18
05869	715899-042		C-1	49
			C-4	43
14933	7703501JB	5962-01-084-7397	C-1	19
14933	7705801EB	5962-01-100-7994	C-1	29



25 % FILTER AND DI-Ø DEMOD

Figure FO-1.
Communications Card Logic Diagram (Sheet 1 of 5)

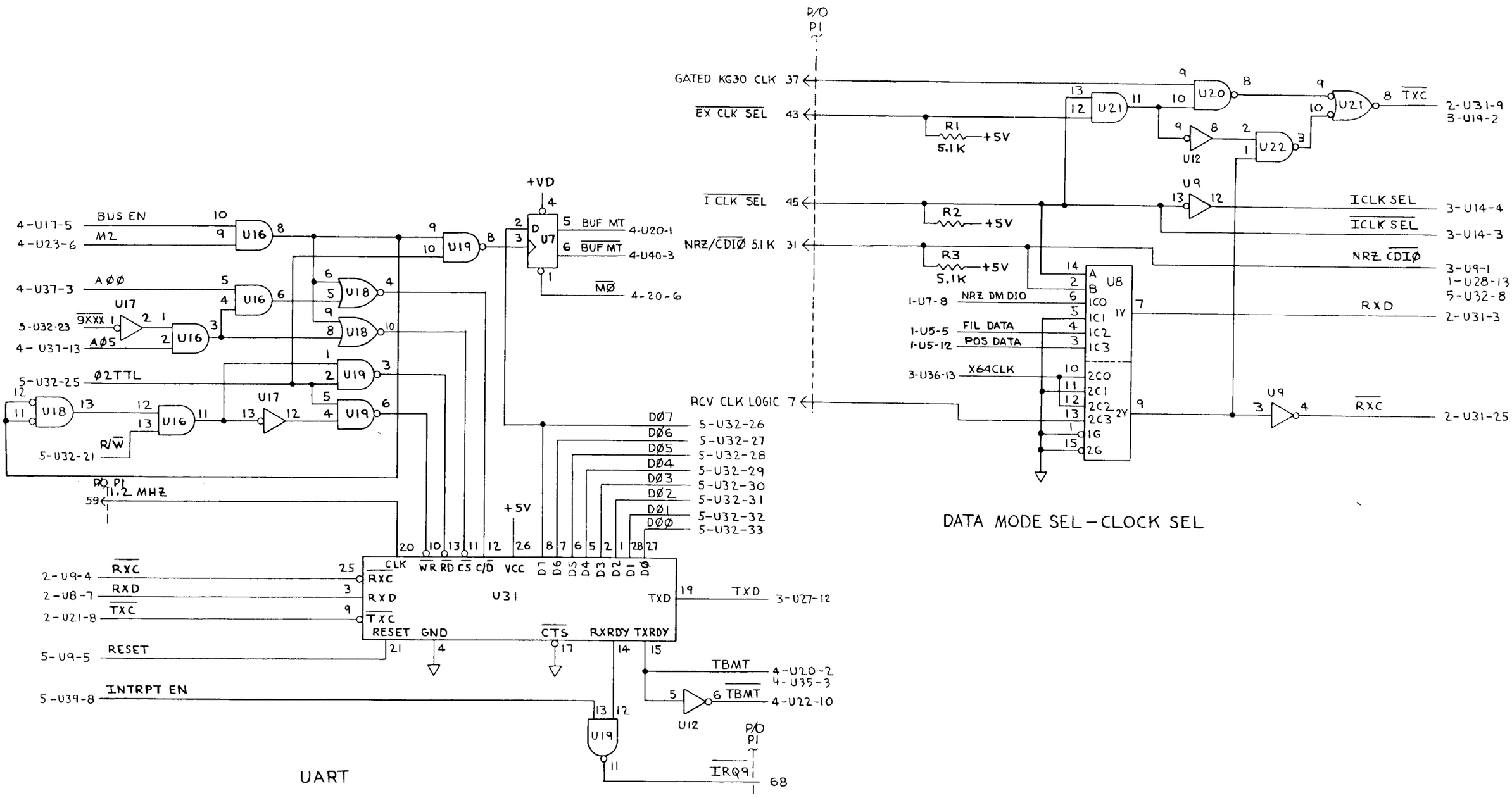
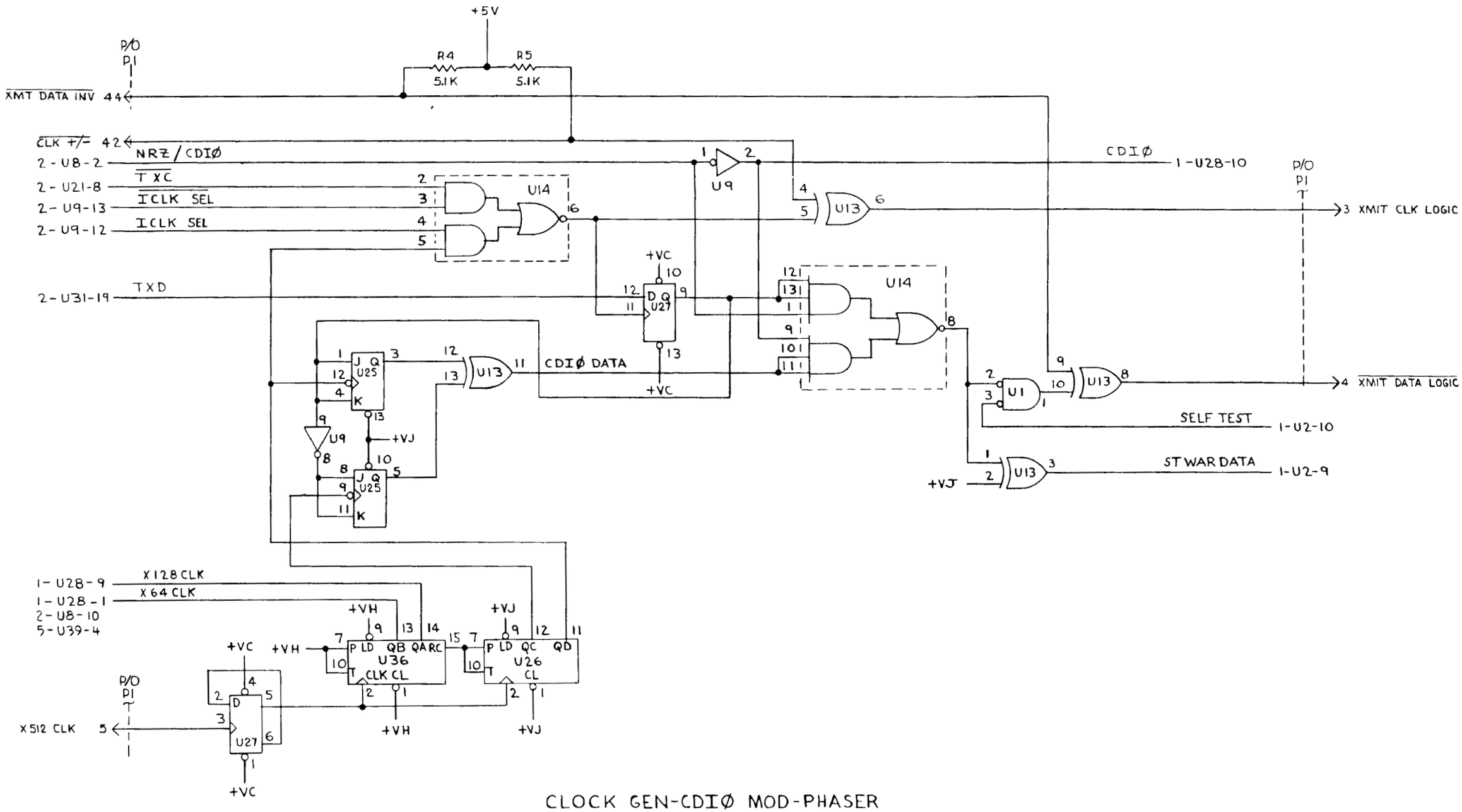
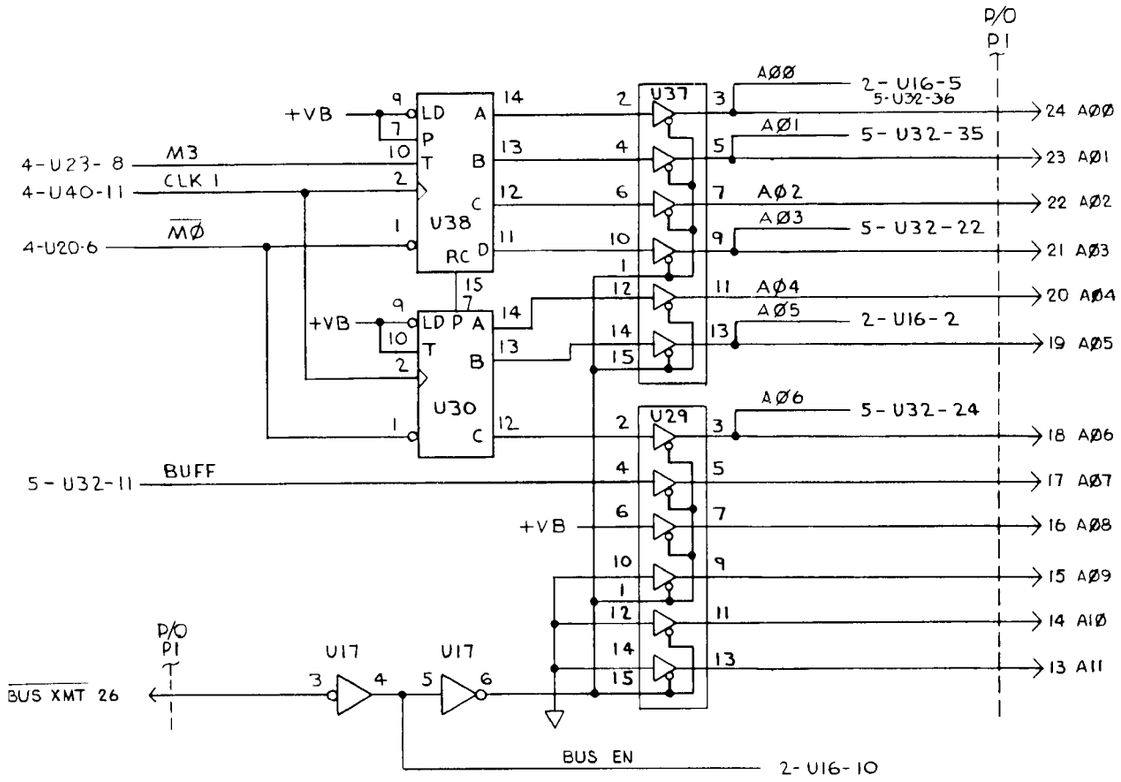


Figure FO-1.
Communications Card Logic Diagram (Sheet 2 of 5)

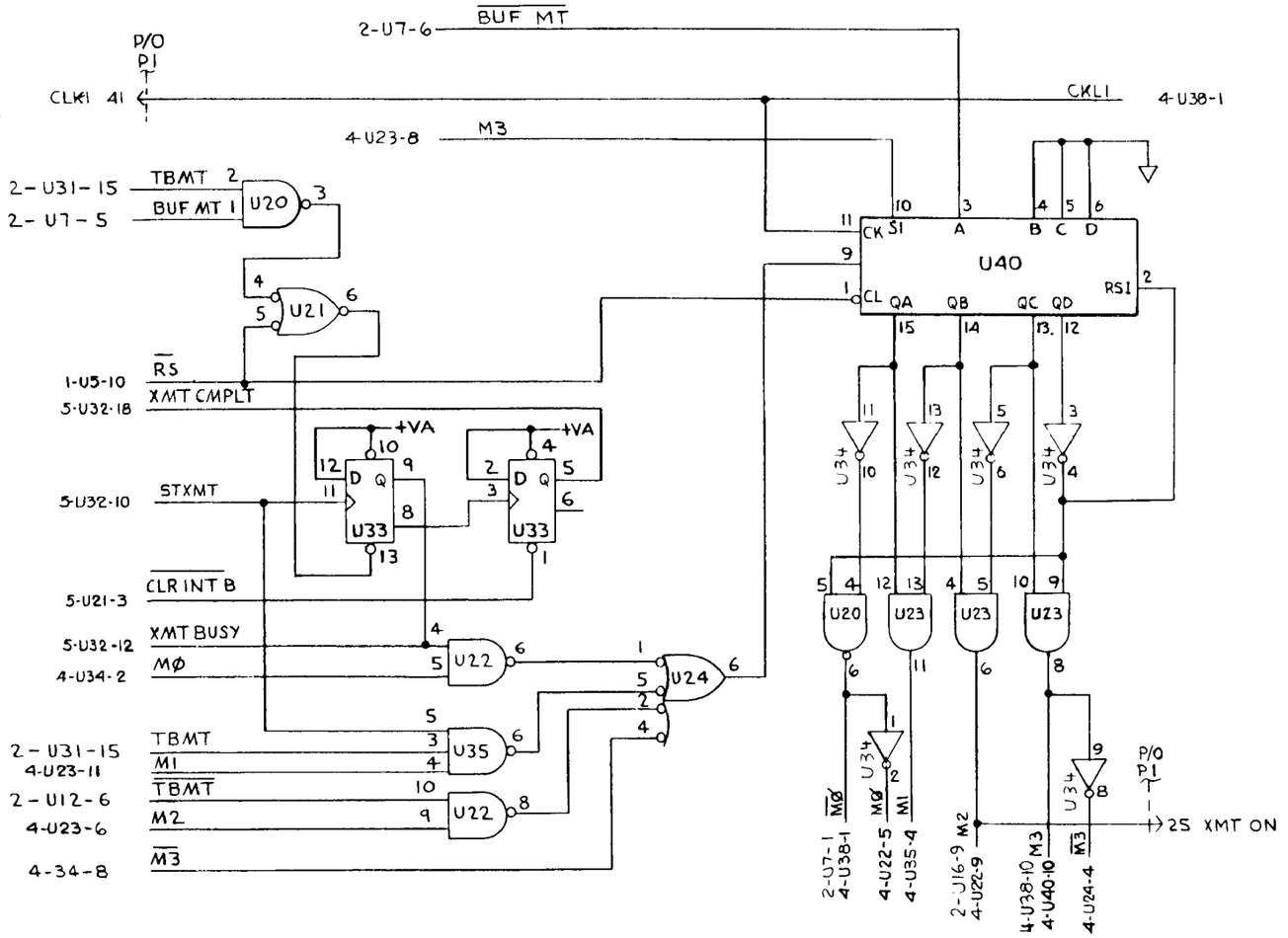


CLOCK GEN-CDIØ MOD-PHASER

Figure FO-1.
Communications Card Logic Diagram (Sheet 3 of 5)



ADDRESS CNTR - BUS DRIVERS



MODE CONTROL

Figure FO-1.
Communications Card Logic Diagram (Sheet 4 of 5)

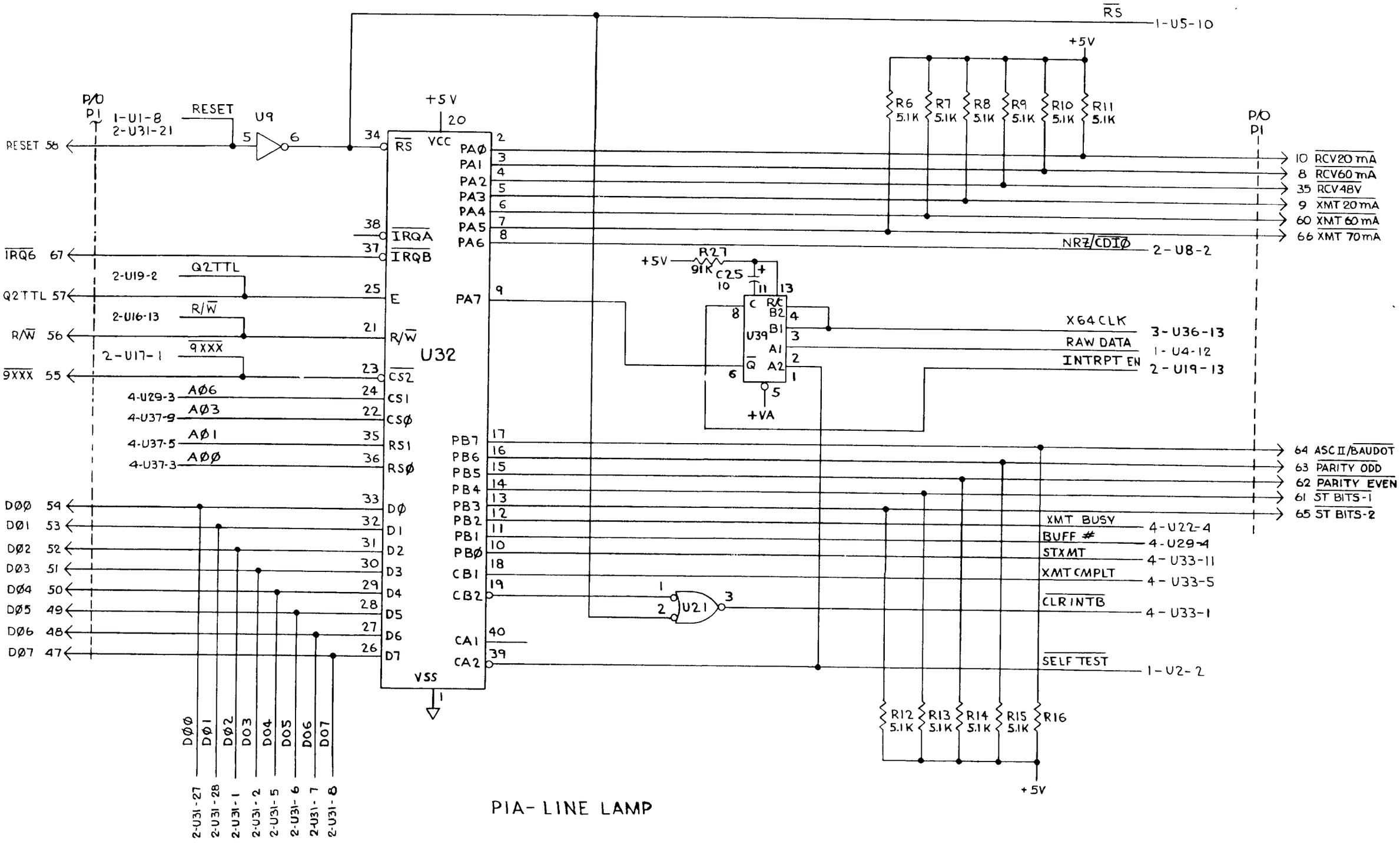


Figure FO-1.
Communications Card Logic Diagram (Sheet 5 of 5)

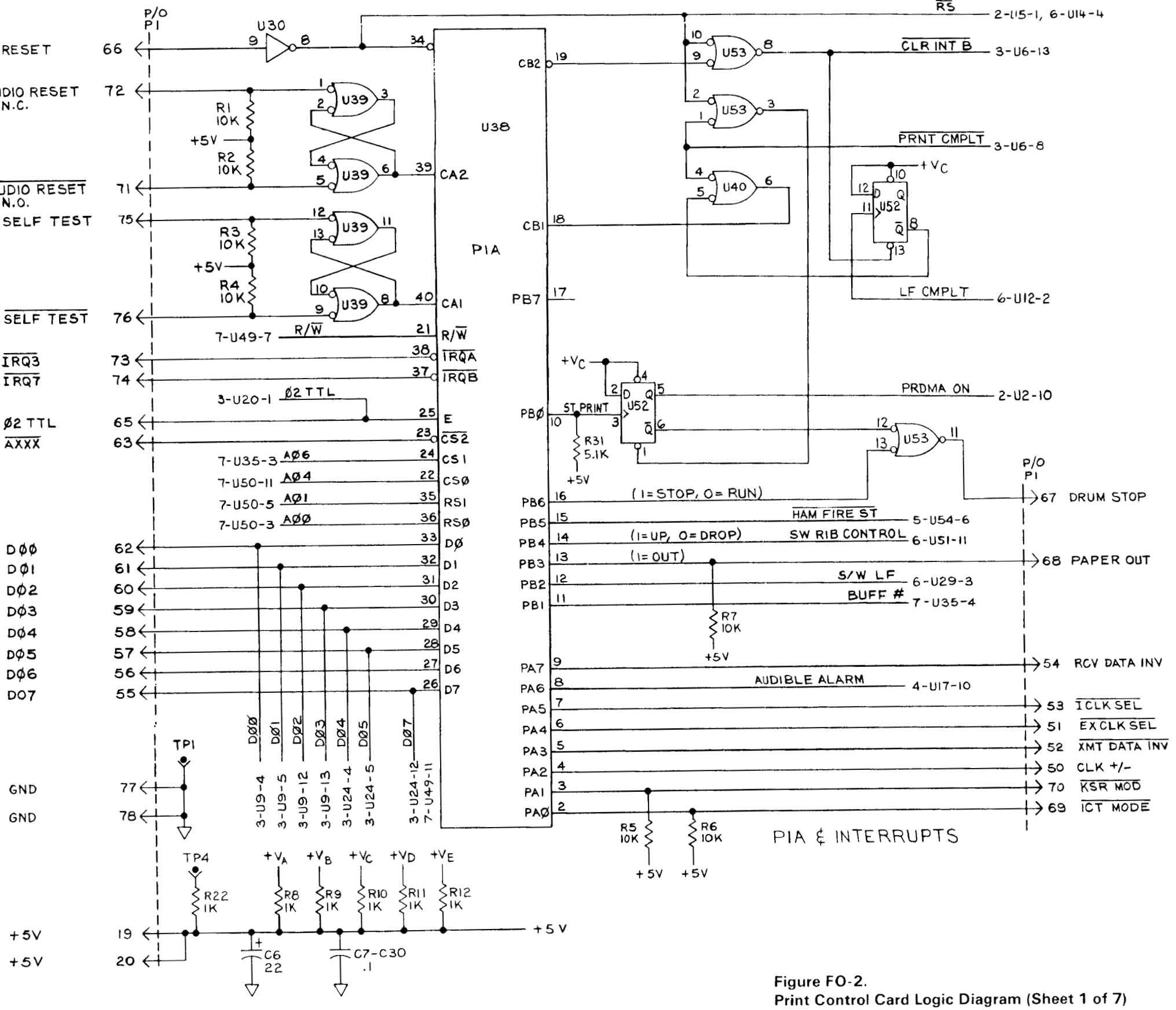


Figure FO-2.
Print Control Card Logic Diagram (Sheet 1 of 7)

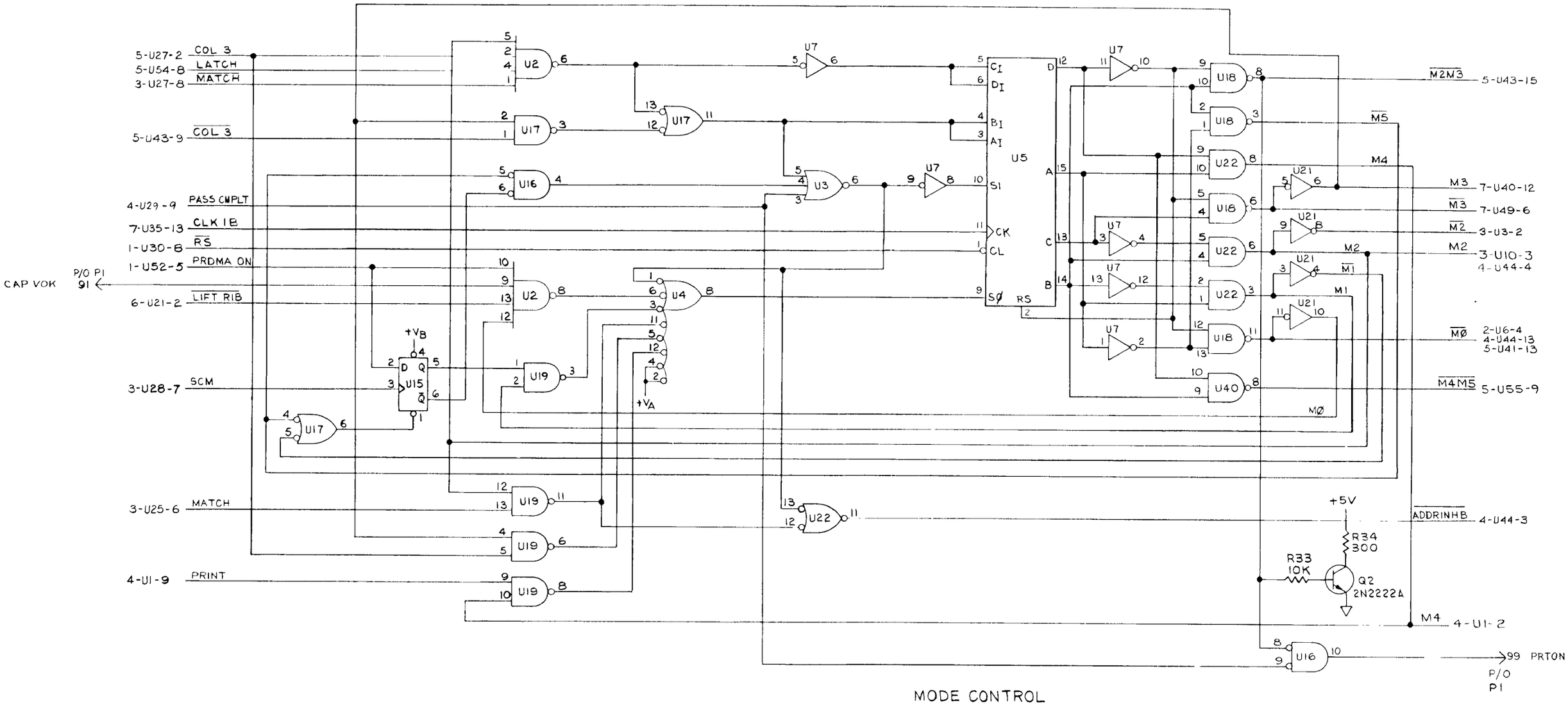
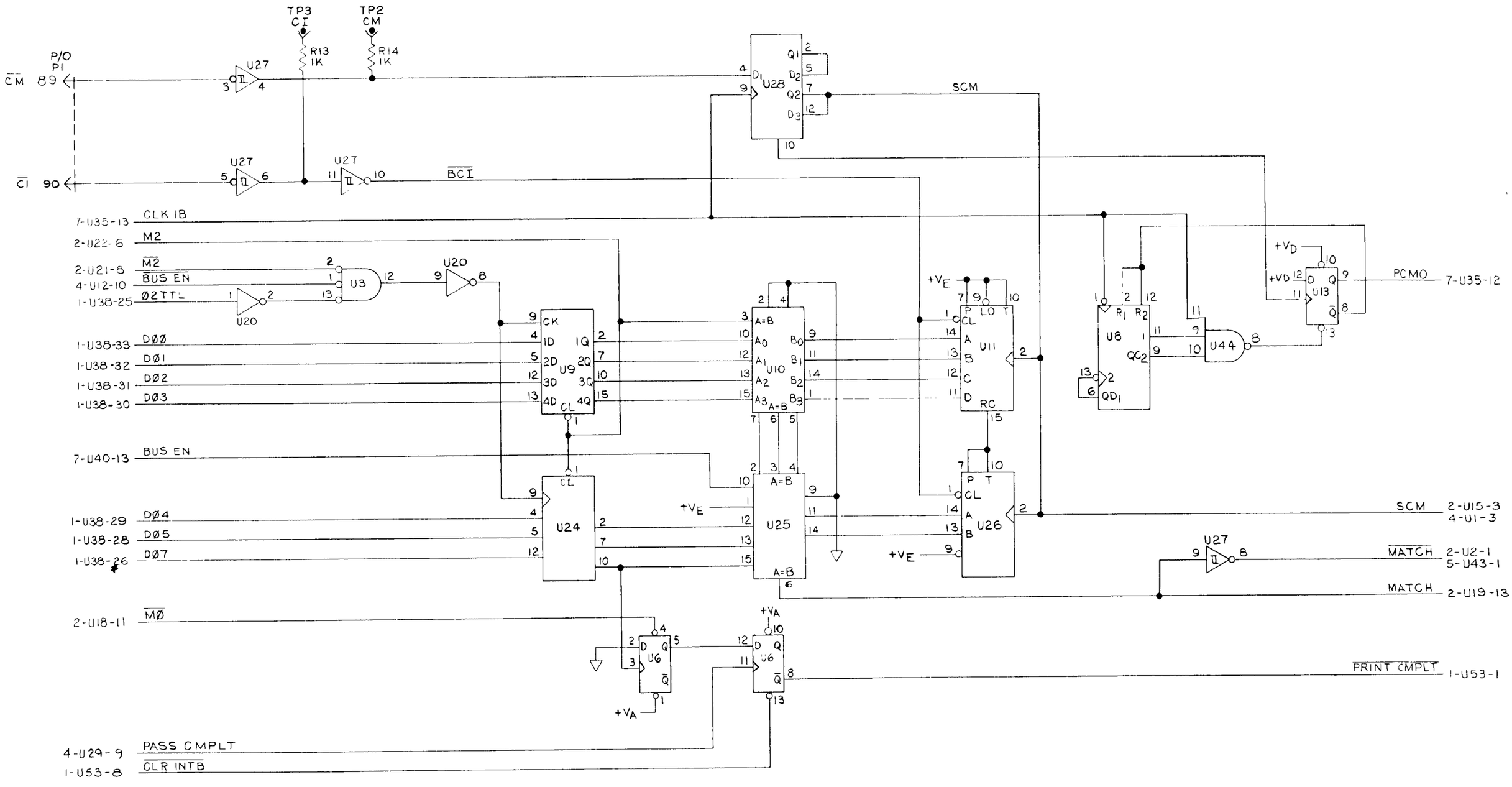
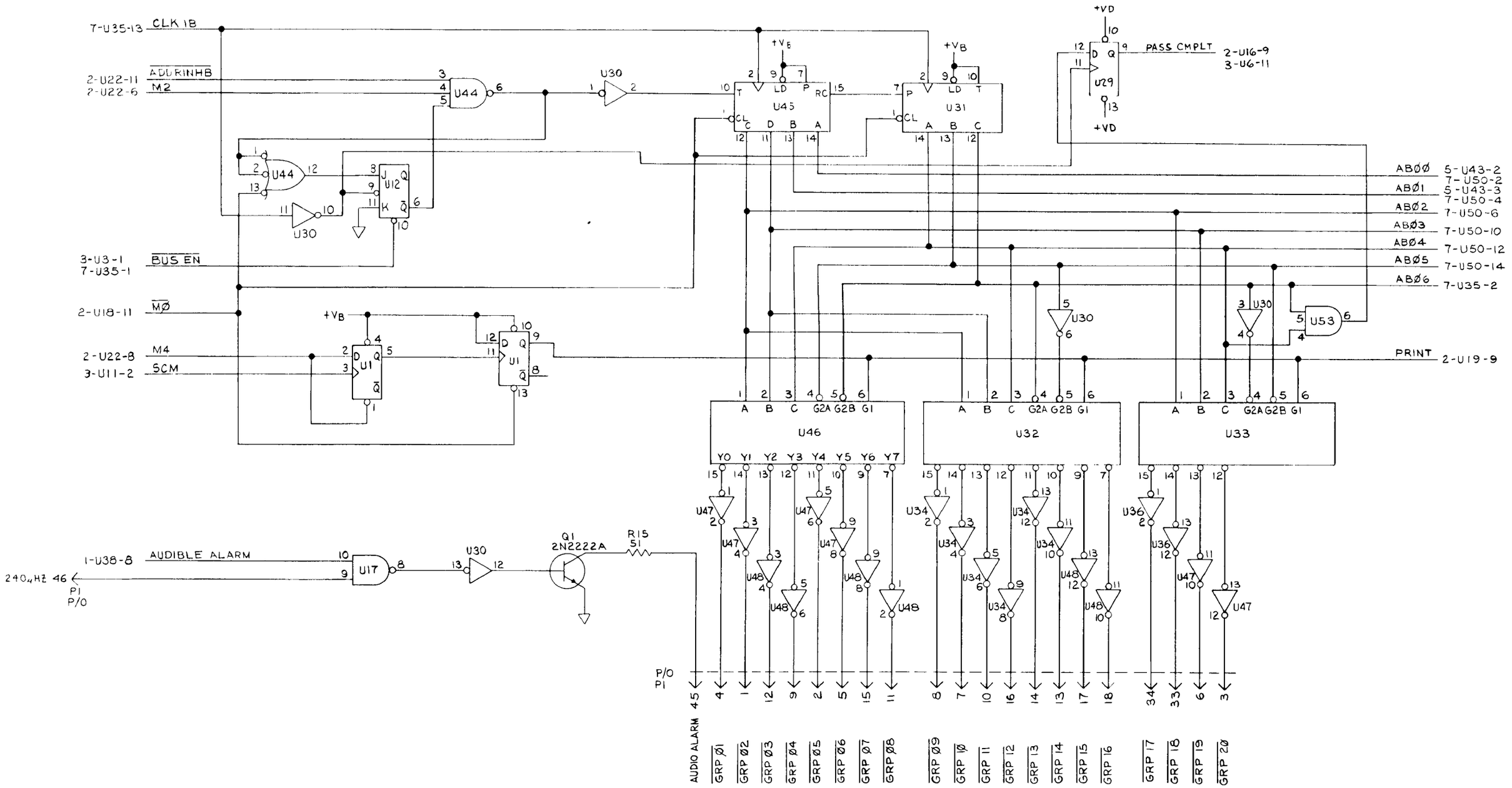


Figure FO-2.
Print Control Card Logic Diagram (Sheet 2 of 7)



CM DETECT & DATA COMPARE

Figure FO-2.
Print Control Card Logic Diagram (Sheet 3 of 7)



HAMMER DRIVER DECODE

Figure FO-2.
Print Control Card Logic Diagram (Sheet 4 of 7)

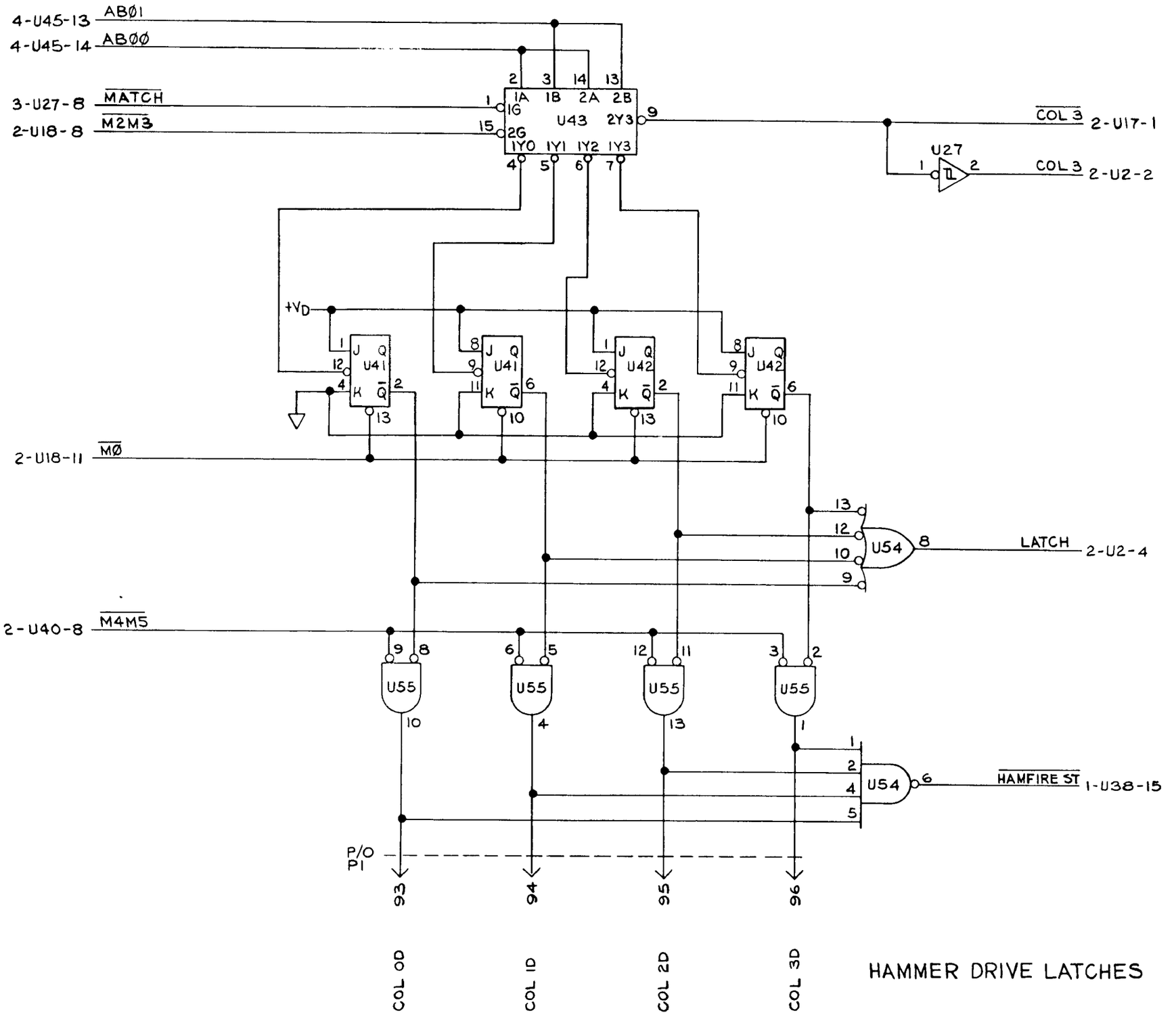
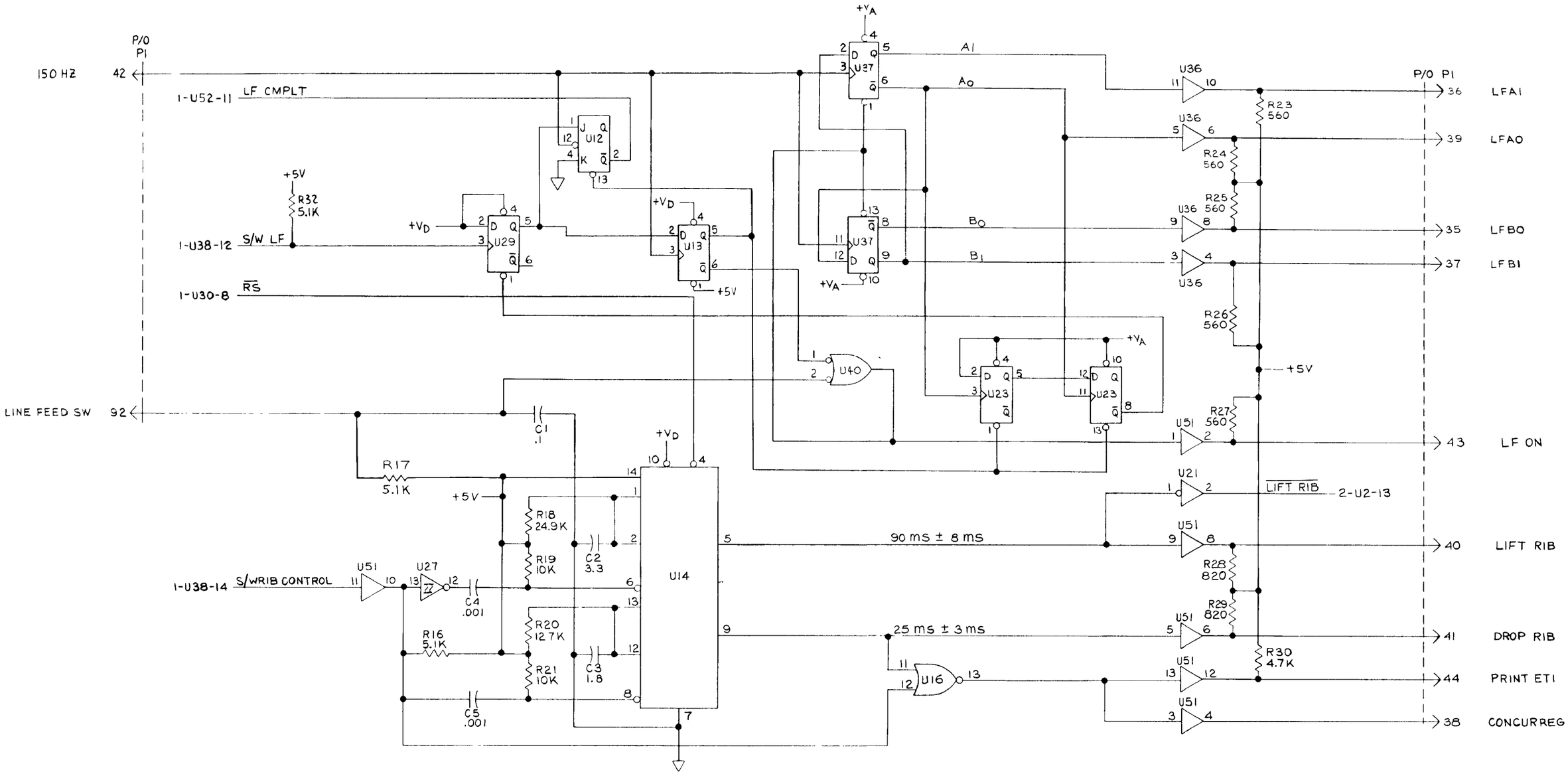


Figure FO-2.
Print Control Card Logic Diagram (Sheet 5 of 7)



LINE FEED & RIB LIFT

Figure FO-2.
Print Control Card Logic Diagram (Sheet 6 of 7)

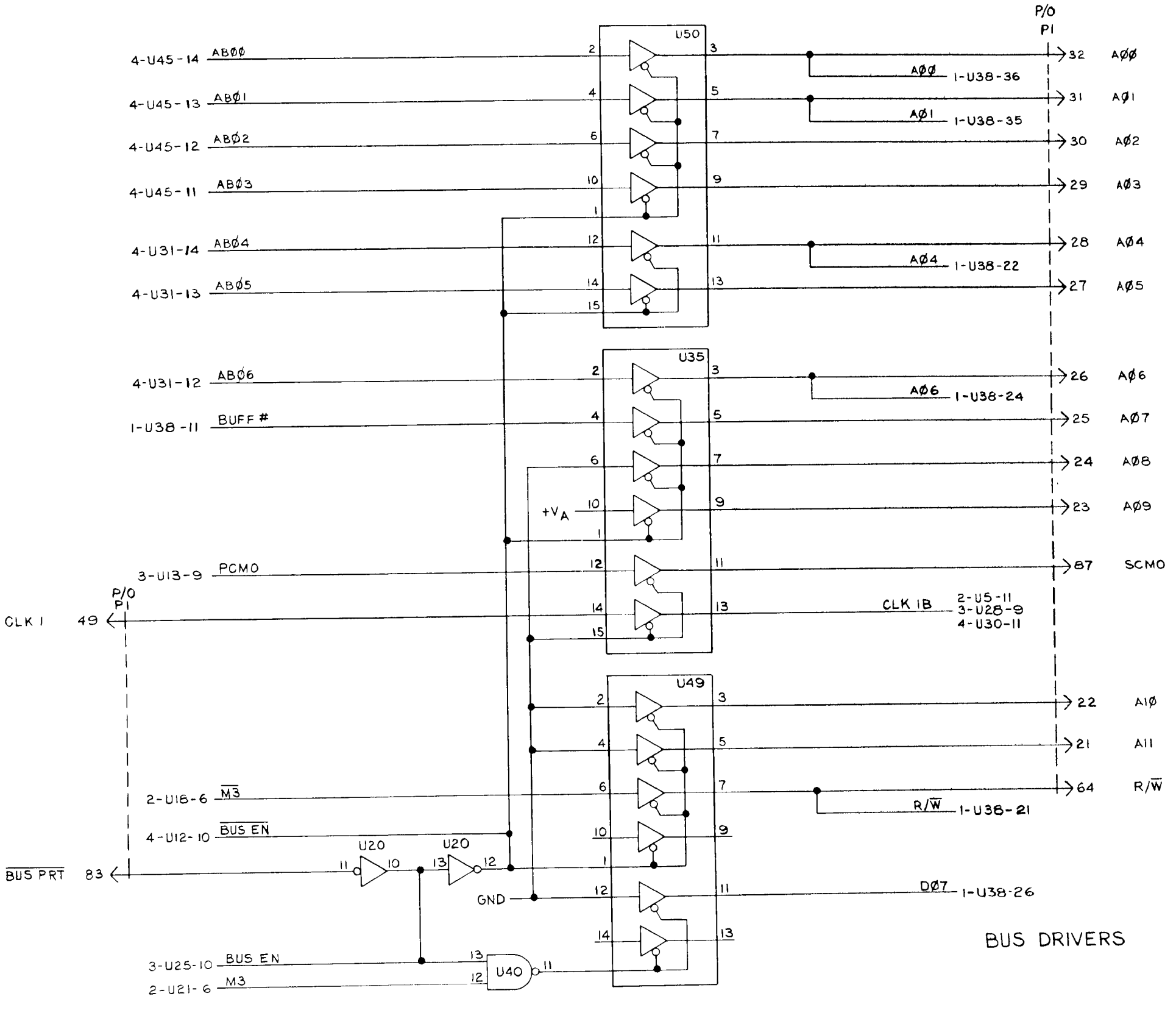


Figure FO-2.
Print Control Card Logic Diagram (Sheet 7 of 7)

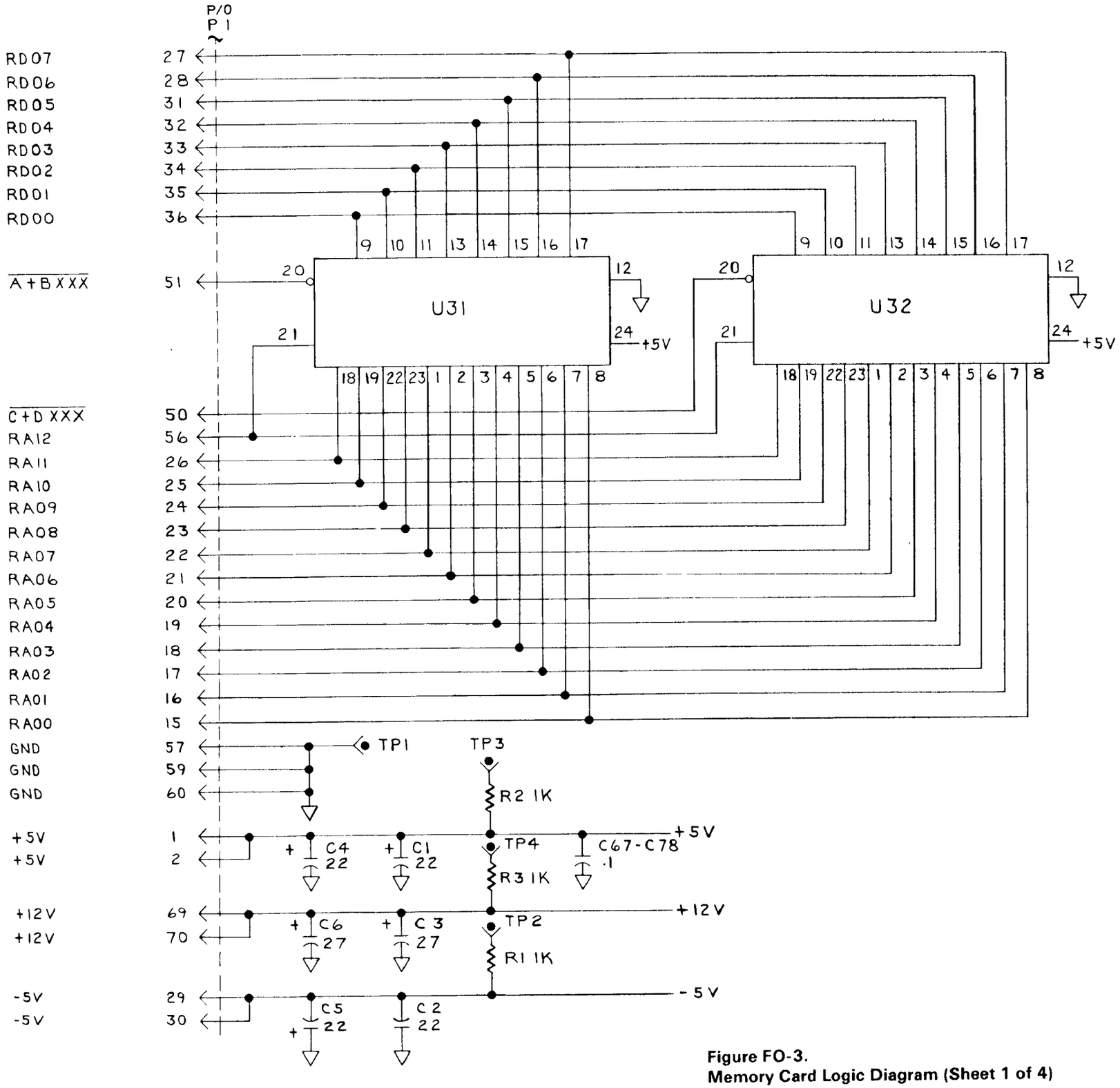


Figure FO-3.
Memory Card Logic Diagram (Sheet 1 of 4)

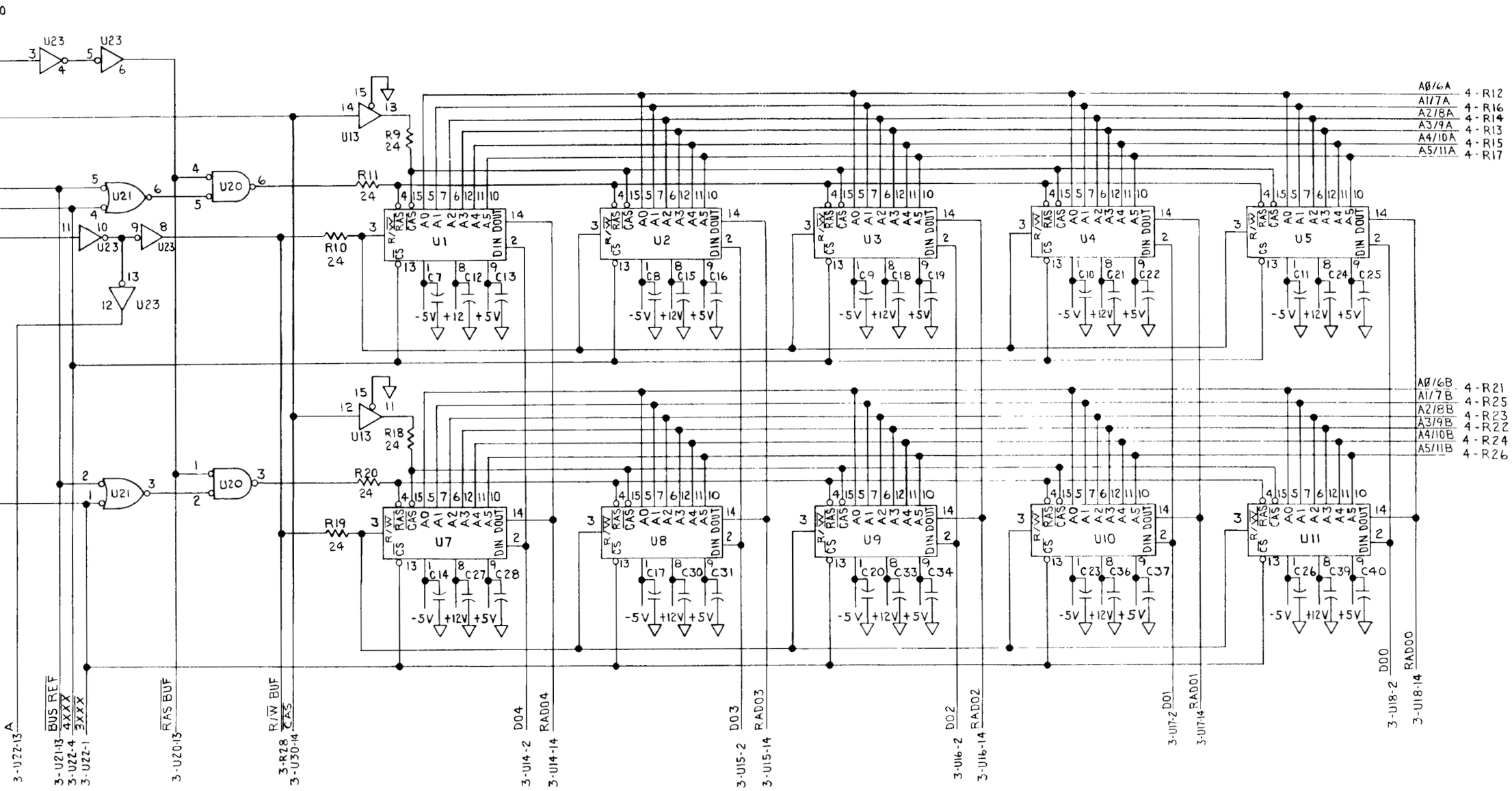


Figure FO-3.
Memory Card Logic Diagram (Sheet 2 of 4)

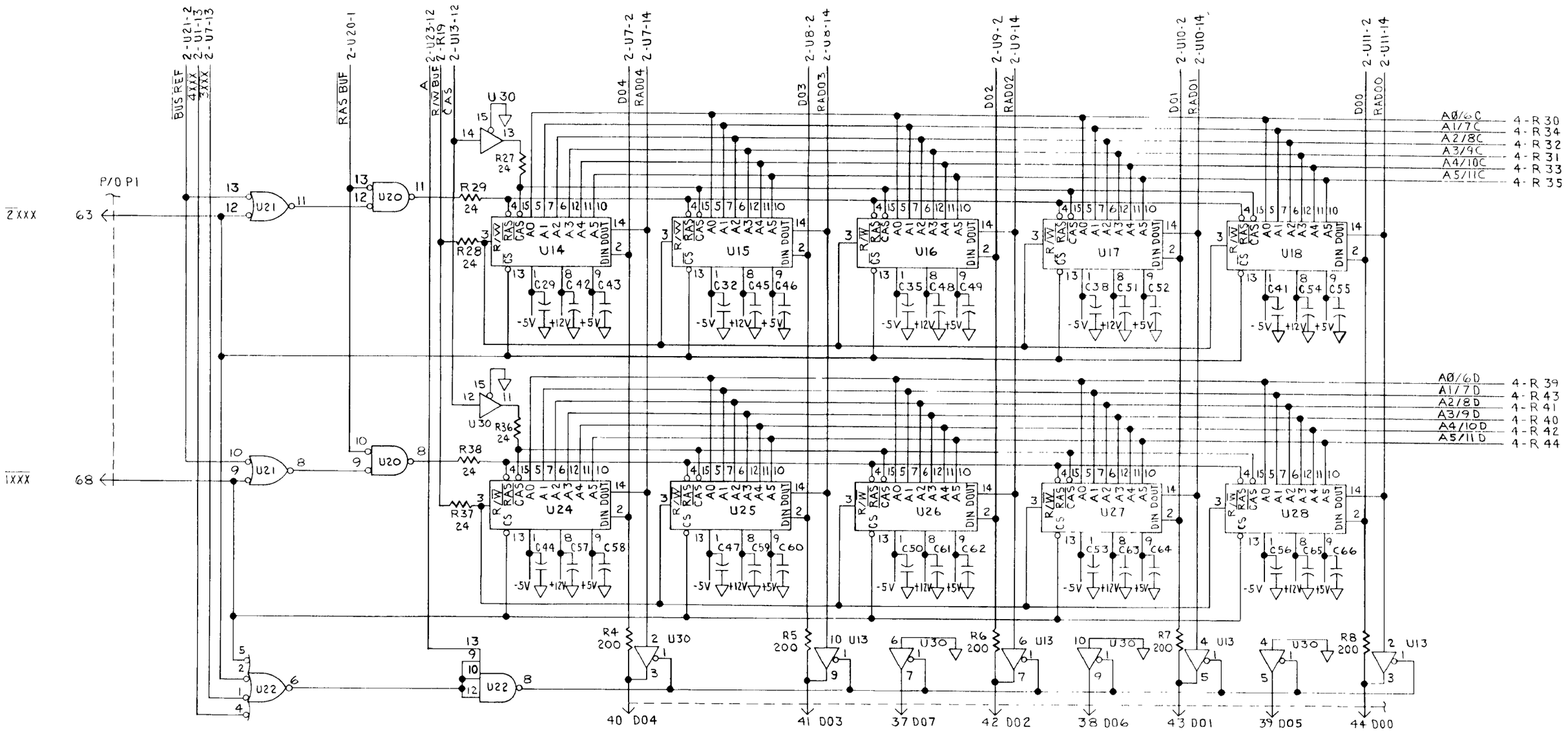


Figure FO-3.
Memory Card Logic Diagram (Sheet 3 of 4)

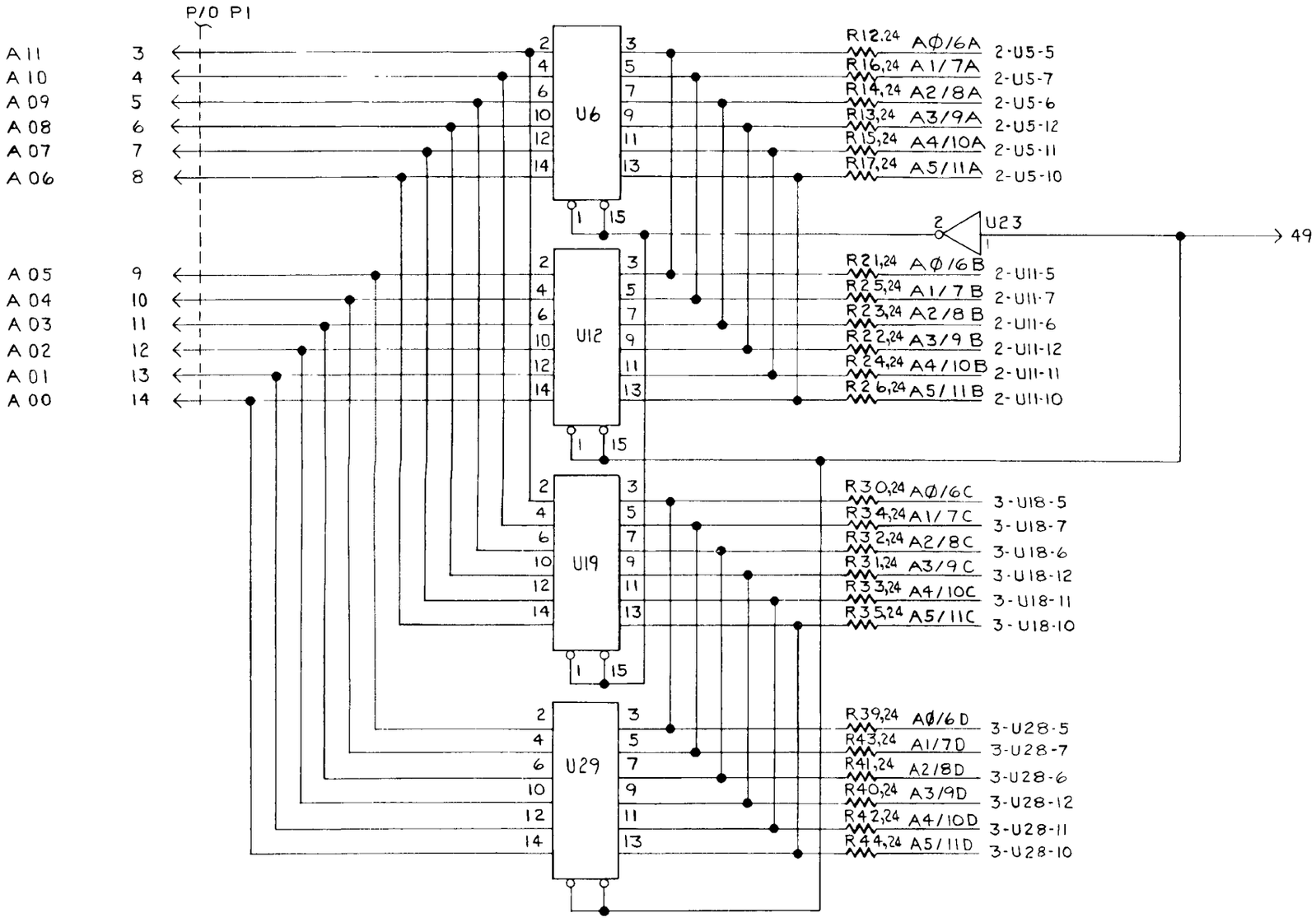


Figure FO-3.
Memory Card Logic Diagram (Sheet 4 of 4)

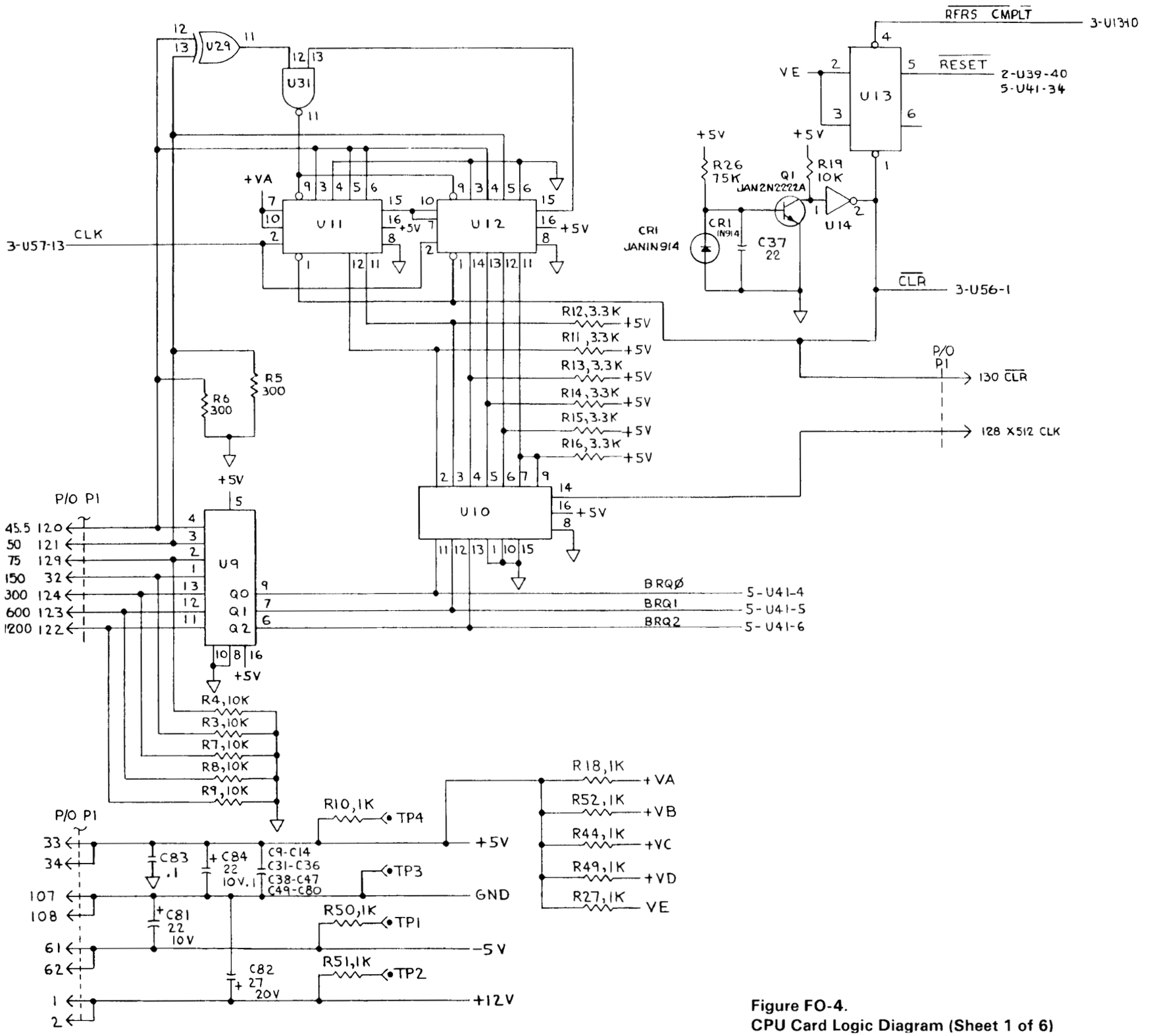


Figure FO-4.
CPU Card Logic Diagram (Sheet 1 of 6)

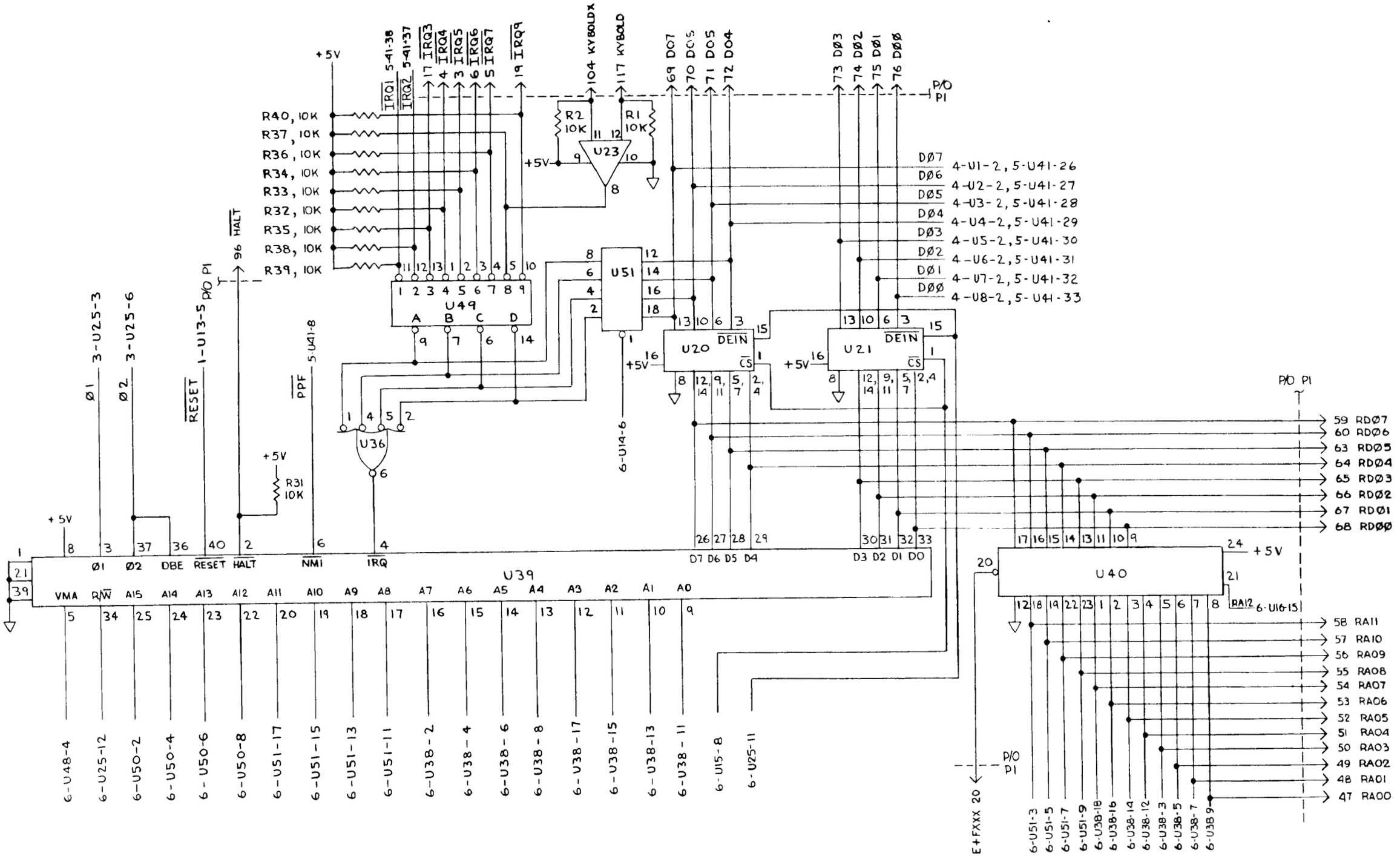


Figure FO-4.
CPU Card Logic Diagram (Sheet 2 of 6)

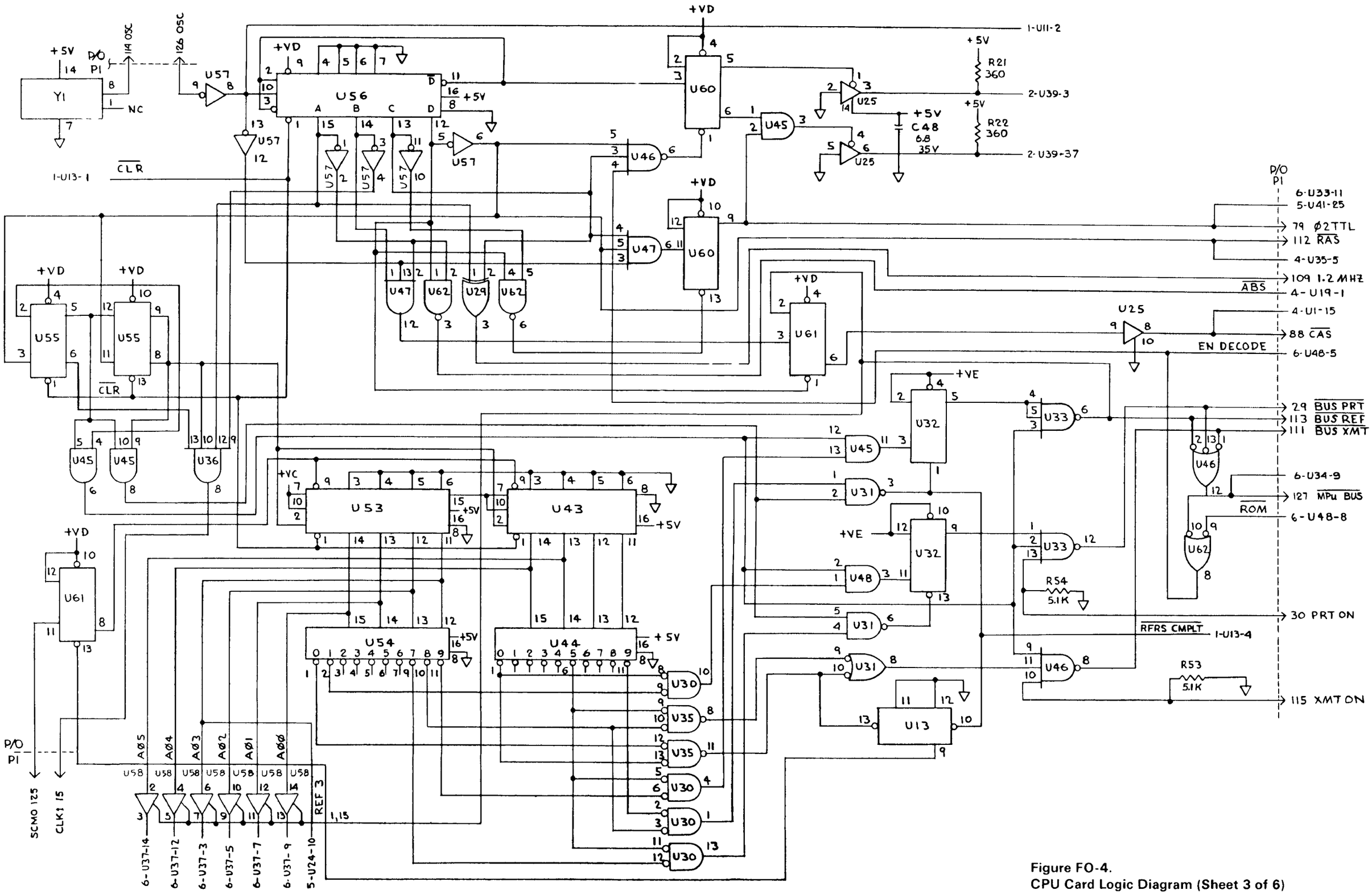


Figure FO-4.
CPU Card Logic Diagram (Sheet 3 of 6)

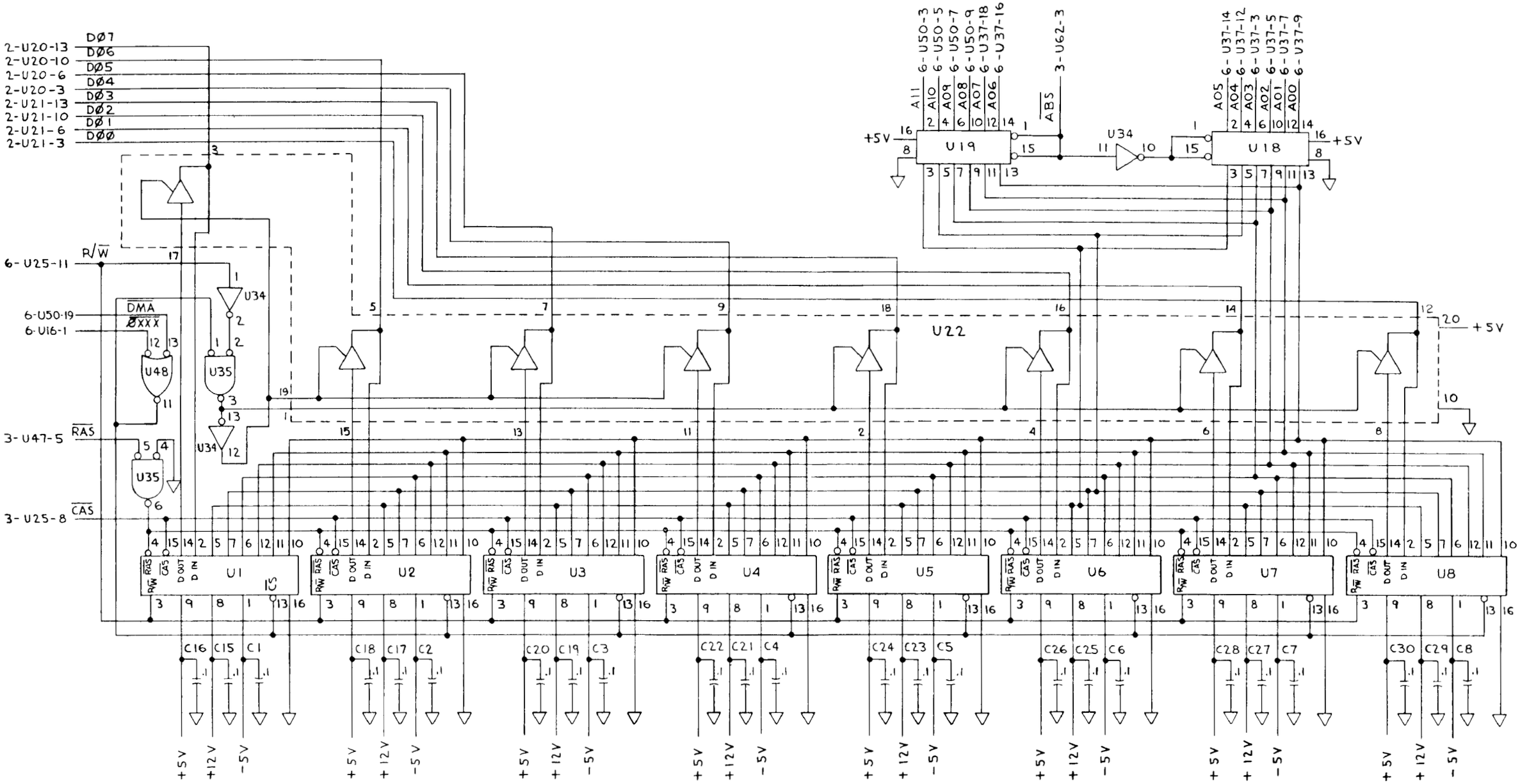


Figure FO-4.
CPU Card Logic Diagram (Sheet 4 of 6)

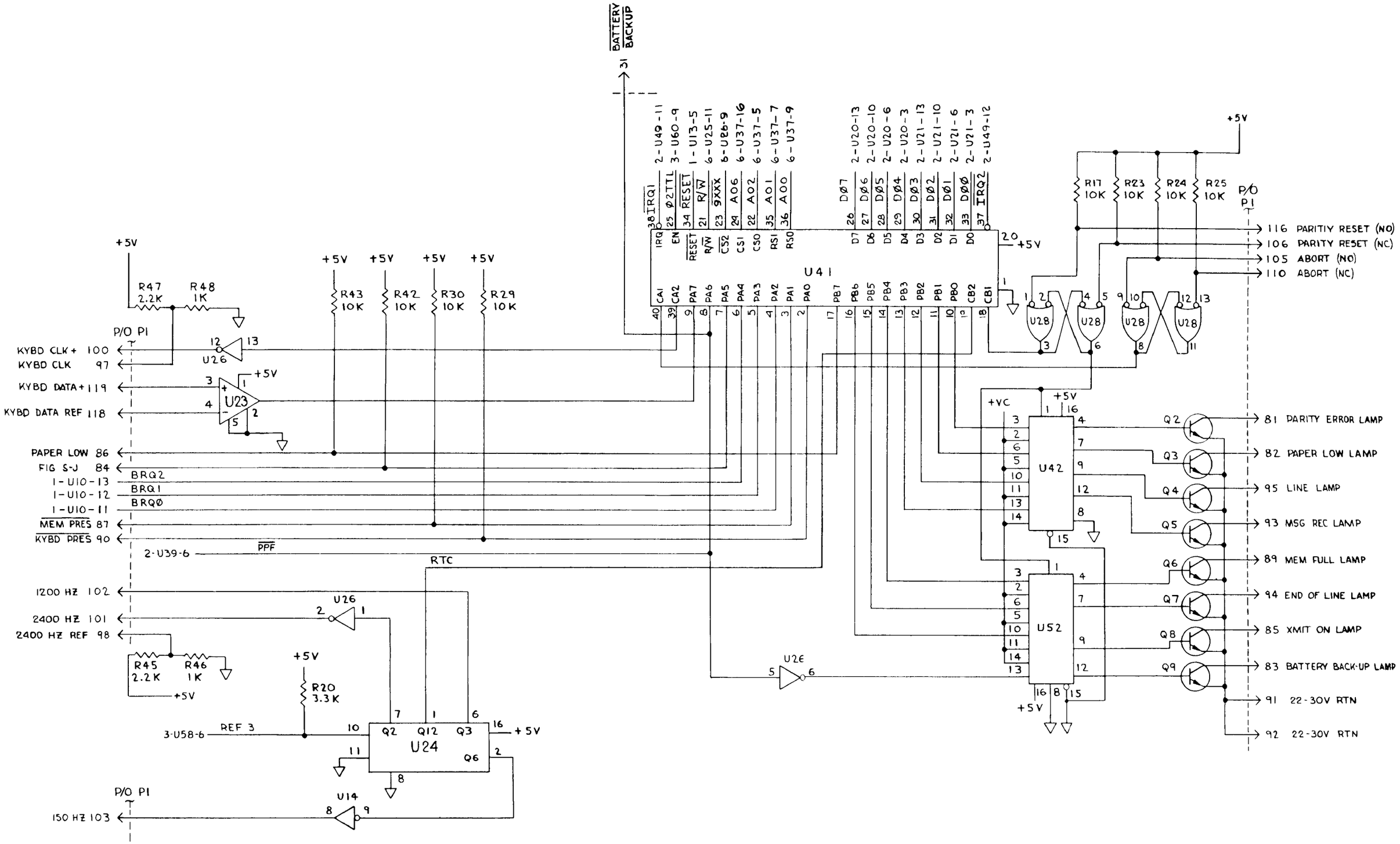


Figure FO-4.
CPU Card Logic Diagram (Sheet 5 of 6)

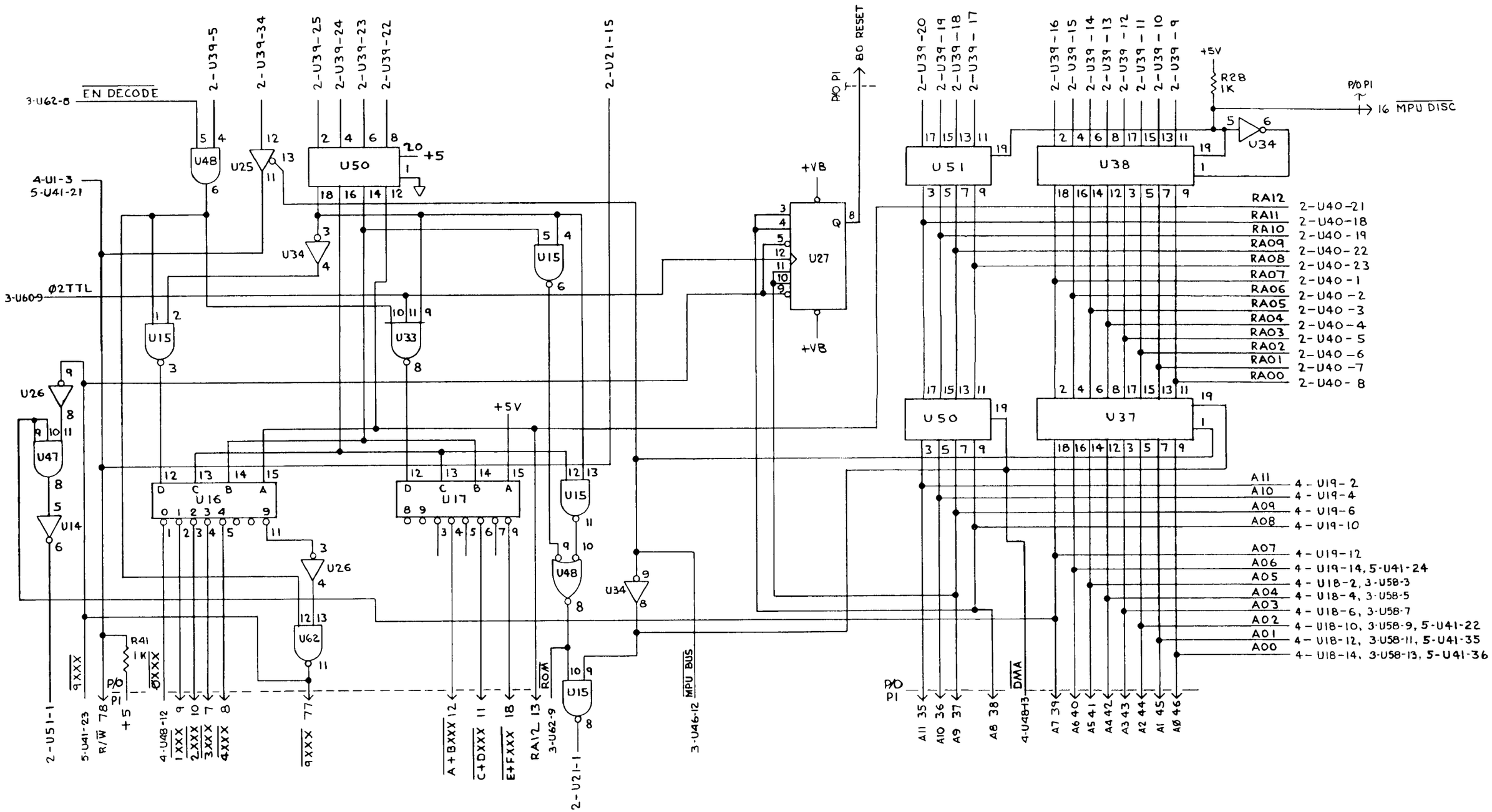


Figure FO-4.
CPU Card Logic Diagram (Sheet 6 of 6)

By Order of the Secretary of the Army:

JOHN A. WICKHAM JR.
General, United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

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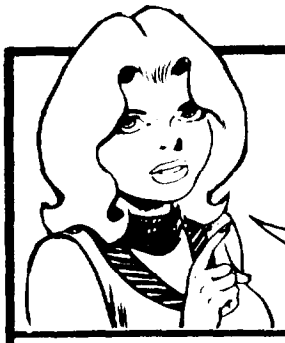

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DATE SENT
10 July 1975

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 11-5840-340-12	23 Jan 74	Radar Set AN/PRC-76

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PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
2-25	2-28		
3-10	3-3		3-1
5-6	5-8		
		F03	

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

Recommend that the installation antenna alignment procedure be changed throughout to specify a 2° IFF antenna lag rather than 1°.

REASON: Experience has shown that with only a 1° lag, the antenna servo system is too sensitive to wind gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 2° without degradation of operation.

Item 5, Function column. Change "2 db" to "3db."

REASON: The adjustment procedure for the TRANS POWER FAULT indicator calls for a 3 db (500 watts) adjustment to light the TRANS POWER FAULT indicator.

Add new step f.1 to read, "Replace cover plate removed in step e.1, above."

REASON: To replace the cover plate.

Zone C 3. On J1-2, change "+24 VDC to "+5 VDC."

REASON: This is the output line of the 5 VDC power supply. +24 VDC is the input voltage.

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER
SSG I. M. DeSpiritof 999-1776

SIGN HERE
SSG I. M. DeSpiritof

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PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
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PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

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THE METRIC SYSTEM AND EQUIVALENTS

'NEAR MEASURE

. Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

'VEIGHTS

Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 lb.
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq. Centimeter = 100 Sq. Millimeters = 0.155 Sq. Inches
1 Sq. Meter = 10,000 Sq. Centimeters = 10.76 Sq. Feet
1 Sq. Kilometer = 1,000,000 Sq. Meters = 0.386 Sq. Miles

CUBIC MEASURE

1 Cu. Centimeter = 1000 Cu. Millimeters = 0.06 Cu. Inches
1 Cu. Meter = 1,000,000 Cu. Centimeters = 35.31 Cu. Feet

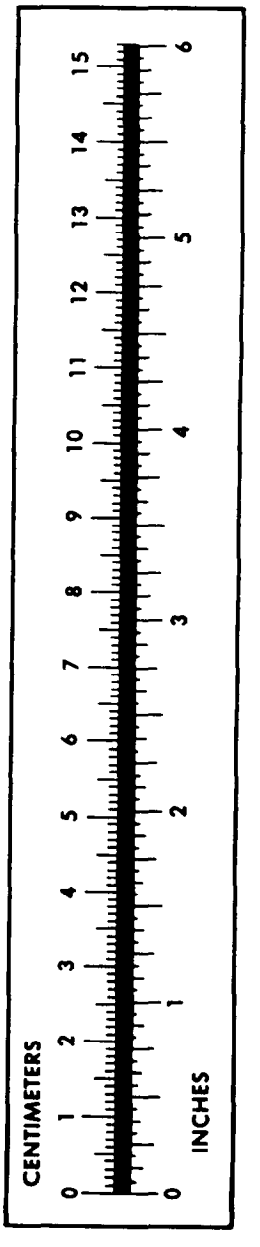
TEMPERATURE

5/9(°F - 32) = °C
212° Fahrenheit is evuivalent to 100° Celsius
90° Fahrenheit is equivalent to 32.2° Celsius
32° Fahrenheit is equivalent to 0° Celsius
9/5C° + 32 =°F

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
ıts	Liters	0.473
arts	Liters	0.946
allons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
ers	Gallons	0.264
ms	Ounces	0.035
ograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pounds-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
lometers per Liter	Miles per Gallon	2.354
meters per Hour	Miles per Hour	0.621



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