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UNIVAC

9200/9200 II
9300/9300 II
9400 SYSTEMS

1004/1005
SUBSYSTEM

OPERATORS
REFERENCE

CONTENTS

1. GENERAL

The UNIVAC 1004/1005 Subsystem (Figure 1) can be connected online to one of the UNIVAC 9000 Series Systems by means of one of the multiplexer sub-channels and an F0943—99 Channel Adapter to provide card reading, card punching, and printing capability. This subsystem, which has arithmetic, logical, and editing capabilities, comprises independent processing units allied to a modular 961-character core storage. Standard peripheral units for this subsystem are a 400-cpm or 615-cpm card reader and a 400-lpm or 600-lpm line printer with a 63-character set and 132-character print line width. A card punch operating at 200 cpm may also be included.

A prewired connection panel provided with the channel adapter must be installed in the subsystem central processor. In the UNIVAC 1005 Subsystem, it is necessary to replace the existing connection panel with the new one.

The UNIVAC 1004/1005 Subsystem retains freestanding processing power when used online with a 9000 Series System. Therefore, the subsystem can be switched at any time to the offline mode to operate as a standard freestanding model.

For detailed descriptions of this subsystem, see UNIVAC 1004/1005 Subsystem References UP-5042, UP-2541, UP-2543, and UP-3927 (current versions).
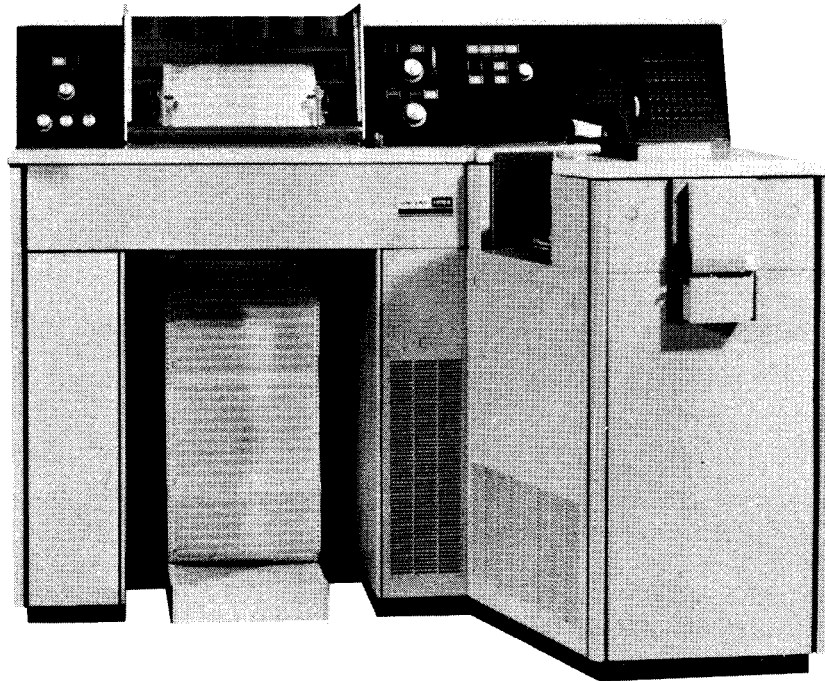

Figure 1. UNIVAC 1004/1005 Subsystem

The UNIVAC 1004/1005 Subsystem characteristics are as follows:

ONLINE AND OFFLINE CHARACTERISTICS

Card reading speed	400 or 615 cards/minute
Card punching speed	200 cards/minute
Printing speed	400 or 600 lines/minute
Printable characters per line	63 plus space
Number of print positions per line	132
Line spacing	6 or 8 lines/inch
Main storage capacity	961 storage locations (standard)
	2048 or 4096 storage locations (optional)
Number of input/output channels used	1

REQUIREMENTS OF ADDITIONAL FEATURES

80-column read capability	Required if reader is used online to a
Code image read	UNIVAC 9000 Series central processor
Punch stacker select	Required if punch is used online to a
Code image punch	UNIVAC 9000 Series central processor
External interrupt (Component package 152)	

2. OPERATION

Operating procedures for the subsystem and the different central processors of the UNIVAC 9200/9300 Systems and the UNIVAC 9400 System are provided as follows:

■ UNIVAC 1004/1005 Subsystem with the UNIVAC 9200/9300 Systems

■ UNIVAC 1004/1005 Subsystem with the UNIVAC 9400 System

2.1. UNIVAC 1004/1005 Subsystem and UNIVAC 9200/9300 System Operating Procedures

The procedures for operating the UNIVAC 1004/1005 Subsystem with a UNIVAC 9200/9300 Card Operating System are provided in 9.5 of the *UNIVAC 9200/9200 II/ 9300/9300 II Systems Card System IOCS Programmers Reference, UP-7728* (current version). The procedures for operating the UNIVAC 1004/1005 Subsystem with a UNIVAC 9200/9300 Tape/Disc Operating System are provided in 9.6 of *UNIVAC 9200/9200 II/9300/9300 II Systems IOCS Programmers Reference, UP-7526* (current version).

2.2. UNIVAC 1004/1005 Subsystem and UNIVAC 9400 System Operating Procedures

The procedures for operating the UNIVAC 1004/1005 Subsystem online to the central processor in the UNIVAC 9400 System are as follows:

■ Device Preparation

Standard UNIVAC 1004/1005 Subsystem procedures should be used for peripheral device preparation in conjunction with the following:

- The card reader of the subsystem must be loaded with input cards before the subsystem can be initialized, even though the card reader may not be used for the current job.

- The card punch should be turned on, but this is not a requirement. However, if the card punch is used, the CHECK light on the punch front panel must be off.

- The EI ENABLE (External Interrupt) switch on the subsystem must be on.

When the above conditions are met, press the CLEAR, START, FEED, and RUN switches on the subsystem.

■ Device Error Recovery

- Whenever an I/O error is detected on a UNIVAC 1004/1005 Subsystem device, the operator is informed by means of a console output message. For example:

    hh:mm 04 SE00 xxx ABN R

    where: xxx = device identification code

- After a message, such as that in the preceding example, is received, the recovery procedure is as follows:

    (1) Bring the subsystem to an orderly halt by typing the message:

        04 ⑤, STOP ⑤

    The mask panel on the subsystem then indicates to the operator what the problem is.

    (2) Follow standard subsystem error recovery procedures.

    (3) Upon completion of these procedures, press the RUN switch.

    (4) Inform the UNIVAC 9400 Operating System (UNIVAC 1004/1005 Handler) that the I/O error has been corrected and the operations can be resumed. To do this, the following message is typed in:

        04 ⑤, xxx R

    where: xxx = device identification code.

    NOTE: Operations cannot be resumed on any device until this message has been received by the UNIVAC 9400 System.

3. DIFFERENCES BETWEEN UNIVAC 1004/1005 AND 9000 SERIES PRINTERS

The more significant differences between the printer of the UNIVAC 1004/1005 Subsystem and the printer of the UNIVAC 9000 Series System are as follows:

■ Character set differences

■ Skip code differences

The load code for the UNIVAC 9000 Series printer results in no operation for the 1004/1005 printer.

3.1. Character Set Differences

The standard UNIVAC 1004/1005 Subsystem printer character set contains five characters which are not available on the UNIVAC 9000 Series printers. These characters, together with their software-translated equivalent, are listed in the following table.

UNIVAC 1004/1005 PRINTER CHARACTER	UNIVAC 9000 SERIES TRANSLATED EQUIVALENT	
	HEXADECIMAL CODE	PRINTER CHARACTER
Δ (delta)	4A	¢ (cents sign)
[(left bracket)	4F		(absolute
≠ (not equal)	5F	¬ (logical not)
¤ (lozenge)	6D	_ (underline)
] (right bracket)	7F	" (quote)

3.2. Skip Code Differences

The UNIVAC 1004/1005 Subsystem printer and the UNIVAC 9000 Series printer
use different skip codes, whose equivalents are listed as follows:

FORM CONTROL LOOP CONTROL EQUIVALENT

9000 SERIES PRINTER	1004/1005 PRINTER
No space	No space
Space 1 line	Space 1 line
Space 2 lines	Space 2 lines
Space 3 lines	Space 3 lines
Skip 4	Skip 2
Skip 5	Skip 3
Skip 6	Skip 4
Skip 7	Skip 5
Skip 8	Skip 6
Skip 9 (from overflow)	Skip 1 (form overflow)
Skip 10	
Skip 11	No form advance takes place with these skip options for either a write or a control command.
Skip 12	
Skip 13	
Skip 14 (home paper 6 lpi)	Skip 7 (home paper)
Skip 15 (home paper 8 lpi)	Skip 7 (home paper)

4. CONNECTION PANEL

Since the connection panel is prewired at the factory, point-to-point wiring tables
are not provided in this document. However, a general flowchart of the UNIVAC
1004/9000 Series Adapter (Figure 2) and a connection panel program of the
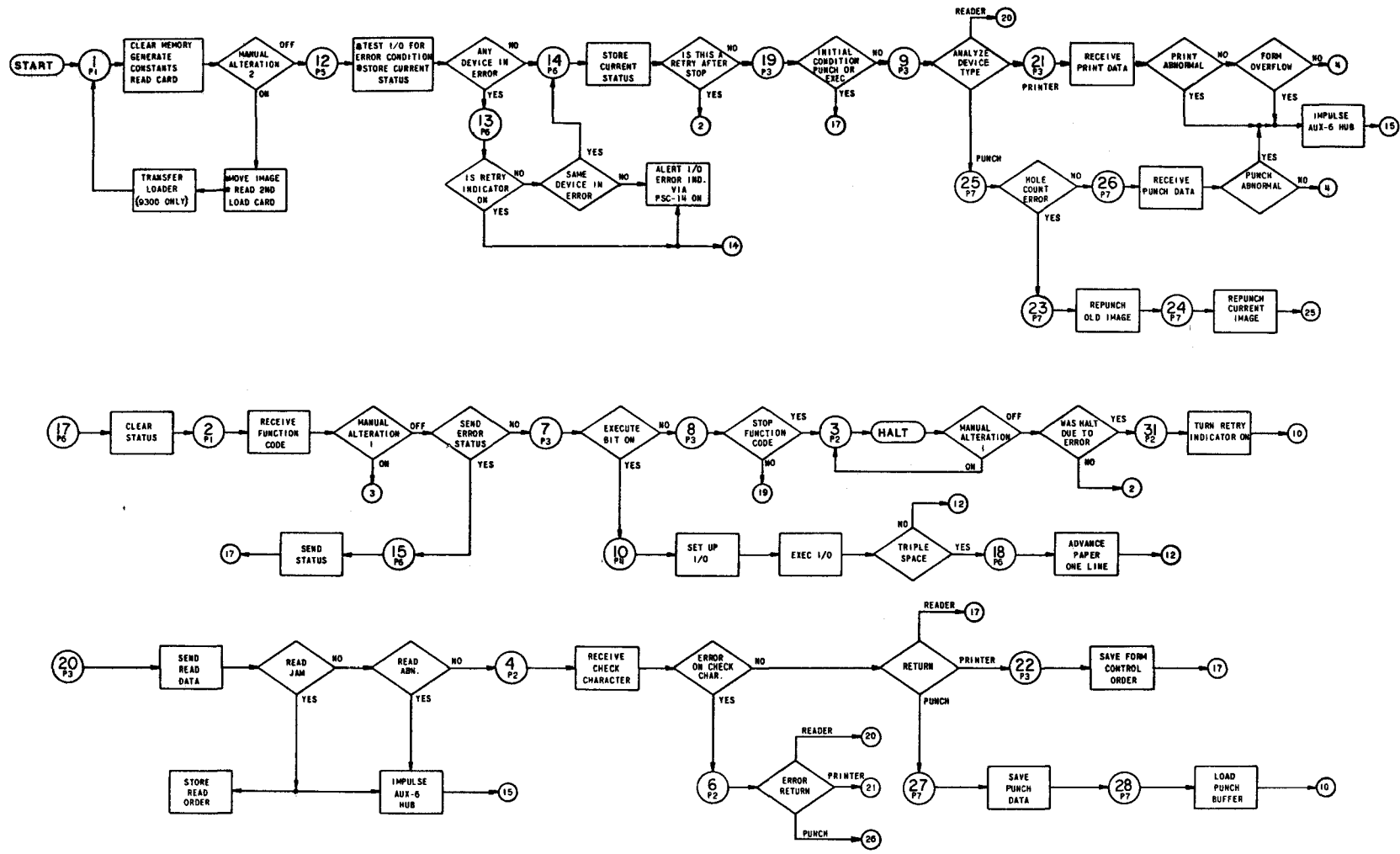UNIVAC 1004/9000 Series Adapter (Figure 3) are provided.

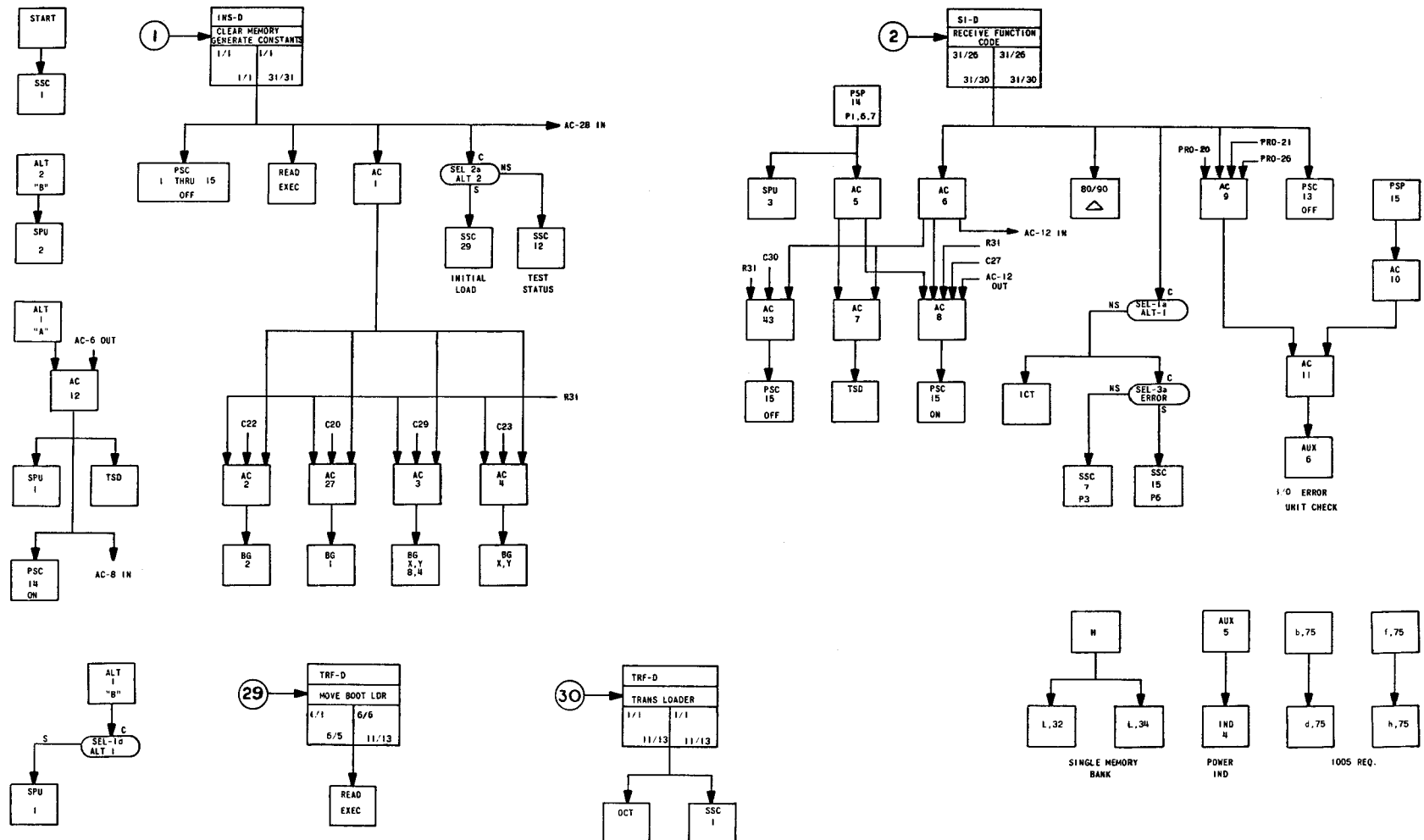Figure 2. UNIVAC 1004/9000 Series Adapter General Flowchart

Figure 3. UNIVAC 1004/9000 Series Adapter Connection Panel Program
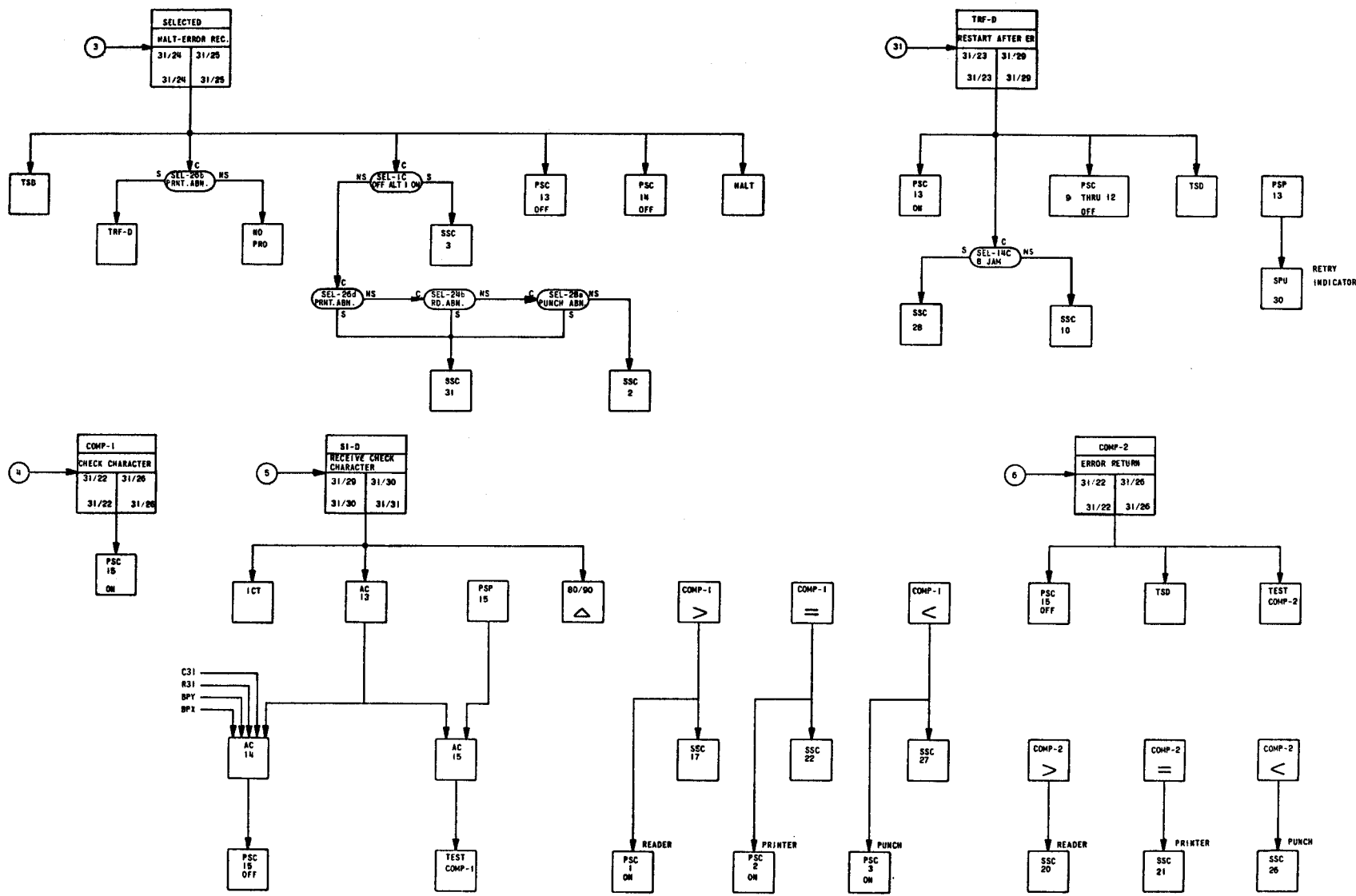(Part 1 of 7)

Figure 3. UNIVAC 1004/9000 Series Adapter Connection Panel Program
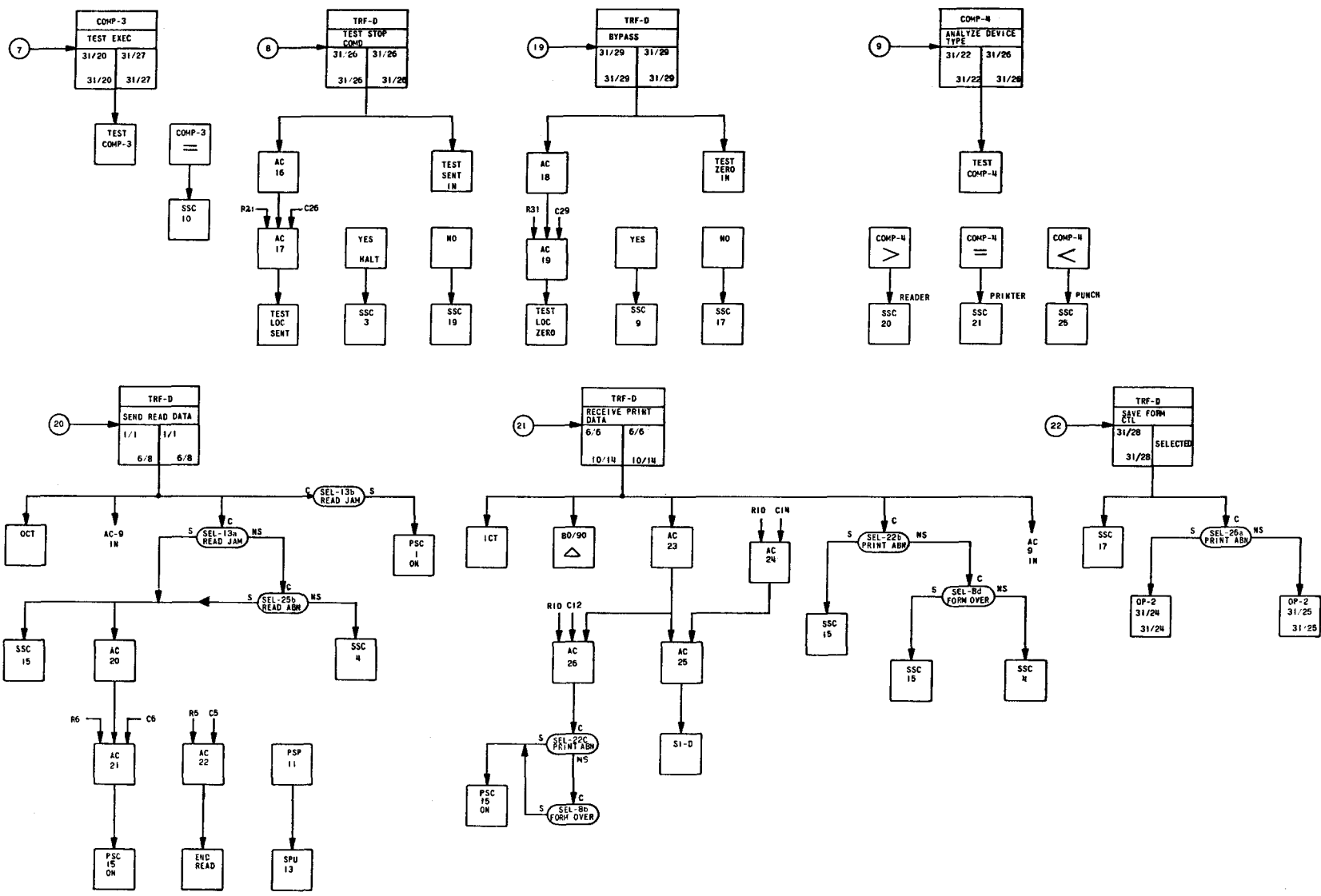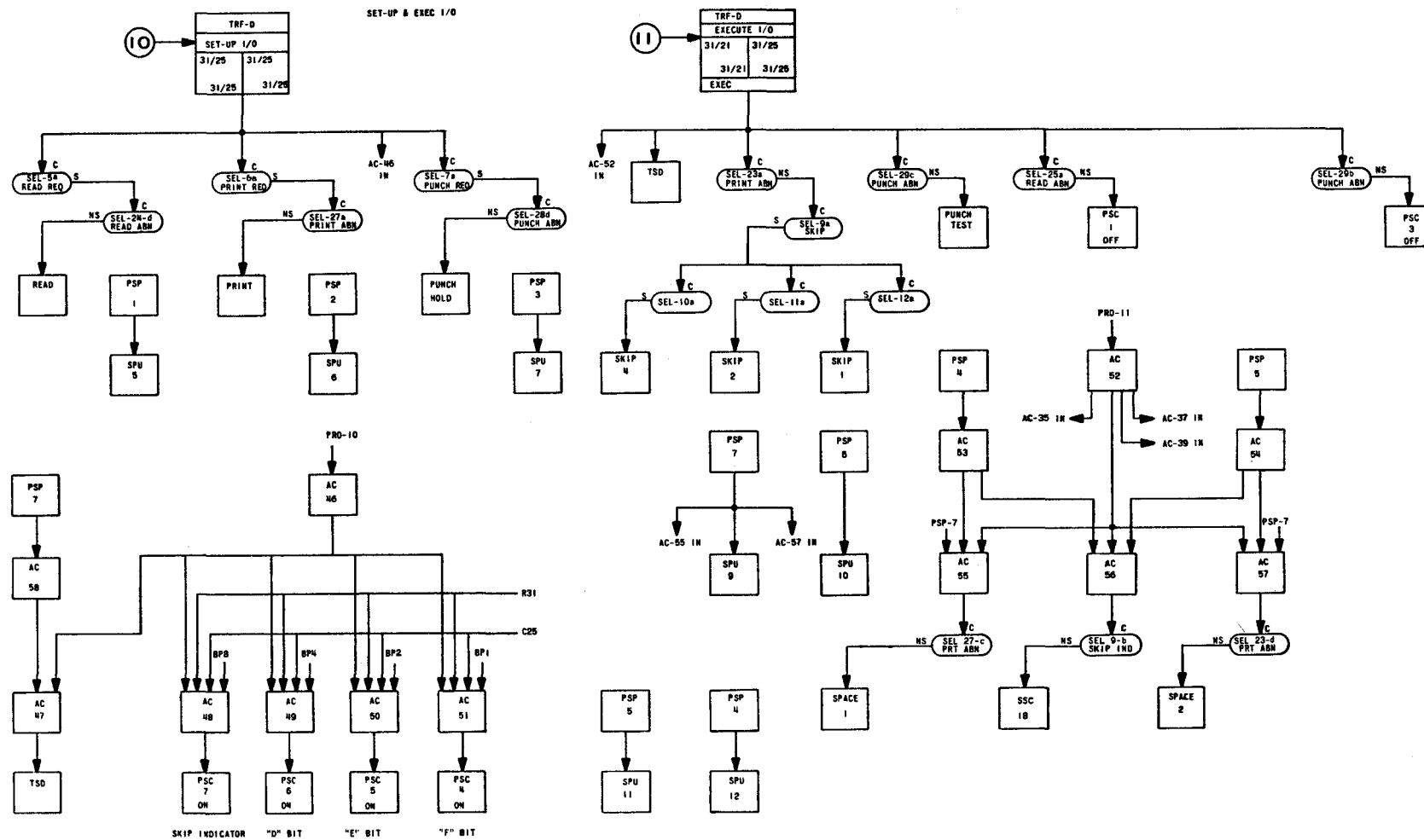(Part 2 of 7)

COMP-3 | TEST EXEC | 31/20 | 31/27 | 31/20 | 31/27

⑦

TEST COMP-3

COMP-3 =

SSC 10

TRF-D | TEST STOP COMD | 31/26 | 31/26 | 31/26 | 31/26

⑧

AC 16

TEST SENT IN

R21 — C26

AC 17

YES HALT

NO

TEST LOC SENT

SSC 3

SSC 19

TRF-D | BYPASS | 31/29 | 31/29 | 31/29 | 31/29

⑲

AC 18

TEST ZERO IN

R31 C29

AC 19

YES

NO

TEST LOC ZERO

SSC 9

SSC 17

COMP-4 | ANALYZE DEVICE TYPE | 31/22 | 31/26 | 31/22 | 31/26

⑨

TEST COMP-4

COMP-4 >

COMP-4 =

COMP-4 <

READER

PRINTER

PUNCH

SSC 20

SSC 21

SSC 25

TRF-D | SEND READ DATA | 1/1 | 1/1 | 6/8 | 6/8

⑳

C SEL-13b READ JAM S

OCT

AC-9 IN

S SEL-13a READ JAM NS

PSC 1 ON

S SEL-25b READ ABN NS

SSC 15

AC 20

SSC 4

R6 — C6

AC 21

R5 C5

AC 22

PSP 11

PSC 15 ON

ENC READ

SPU 13

TRF-D | RECEIVE PRINT DATA | 6/6 | 6/6 | 10/14 | 10/14

㉑

ICT

BO/90 △

AC 23

RIO C14

AC 24

S SEL-22b PRINT ABN NS

AC 9 IN

RIO C12

AC 26

AC 25

SSC 15

S SEL-8d FORM OVER NS

SSC 15

SSC N

S SEL-22c PRINT ABN C NS

SI-D

PSC 15 ON

S SEL-8b FORM OVER C

TRF-D | SAVE FORM CTL | 31/28 | SELECTED | 31/28

㉒

SSC 17

S SEL-26a PRINT ABN NS

OP-2 31/24 31/24

OP-2 31/25 31/25

Figure 3. UNIVAC 1004/9000 Series Adapter Connection Panel Program
(Part 3 of 7)

Figure 3. UNIVAC 1004/9000 Series Adapter Connection Panel Program
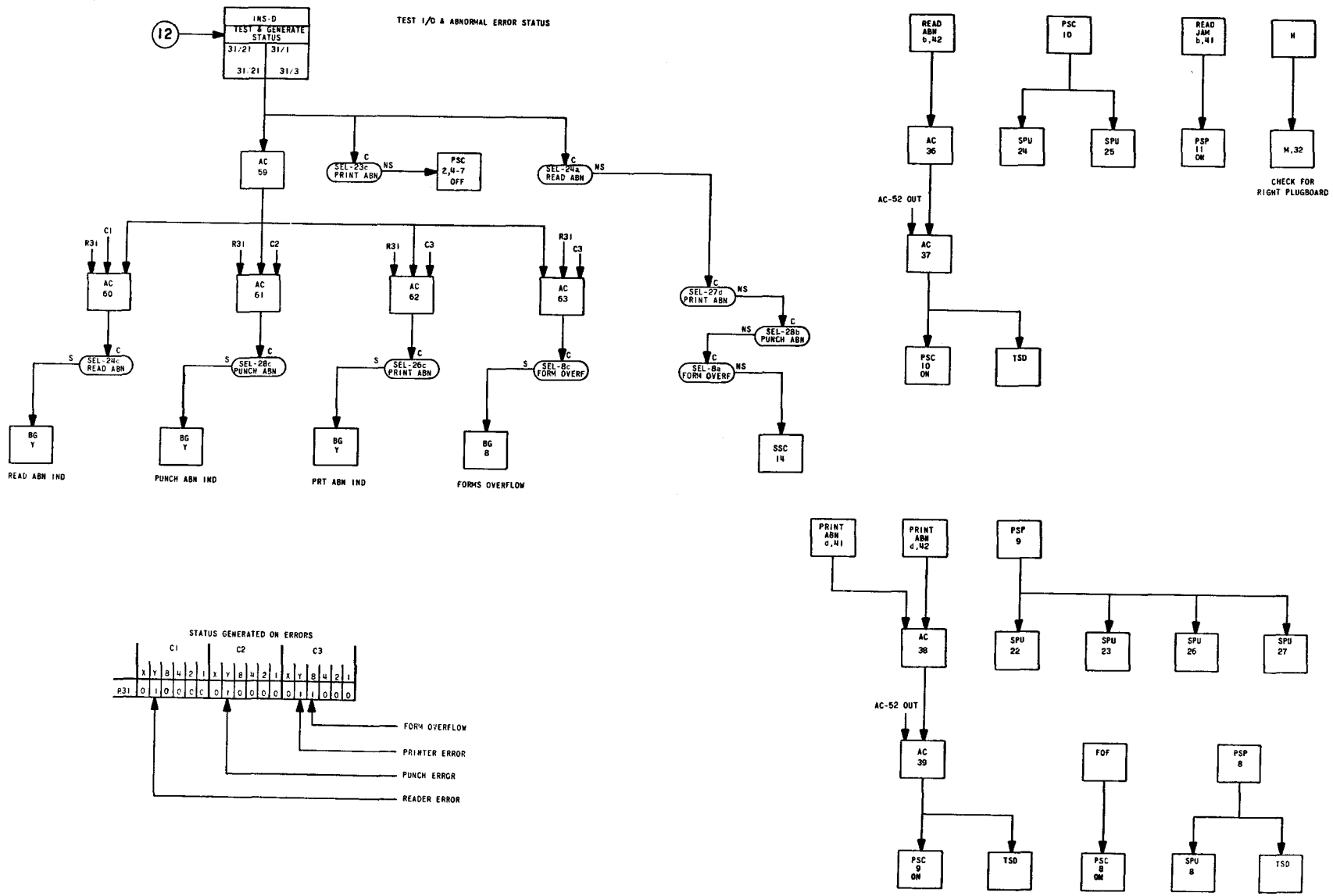(Part 4 of 7)

Figure 3. UNIVAC 1004/9000 Series Adapter Connection Panel Program
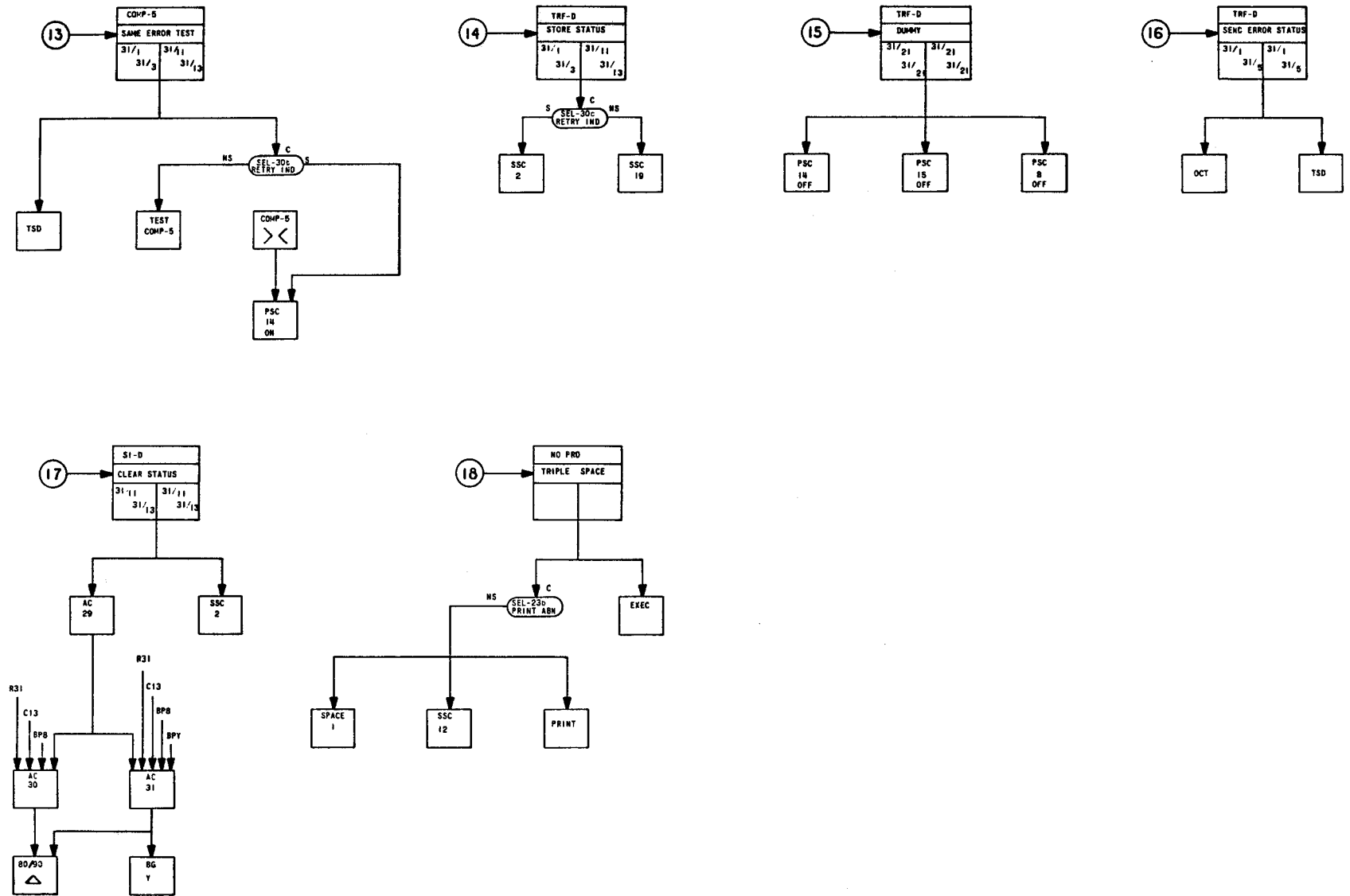(Part 5 of 7)

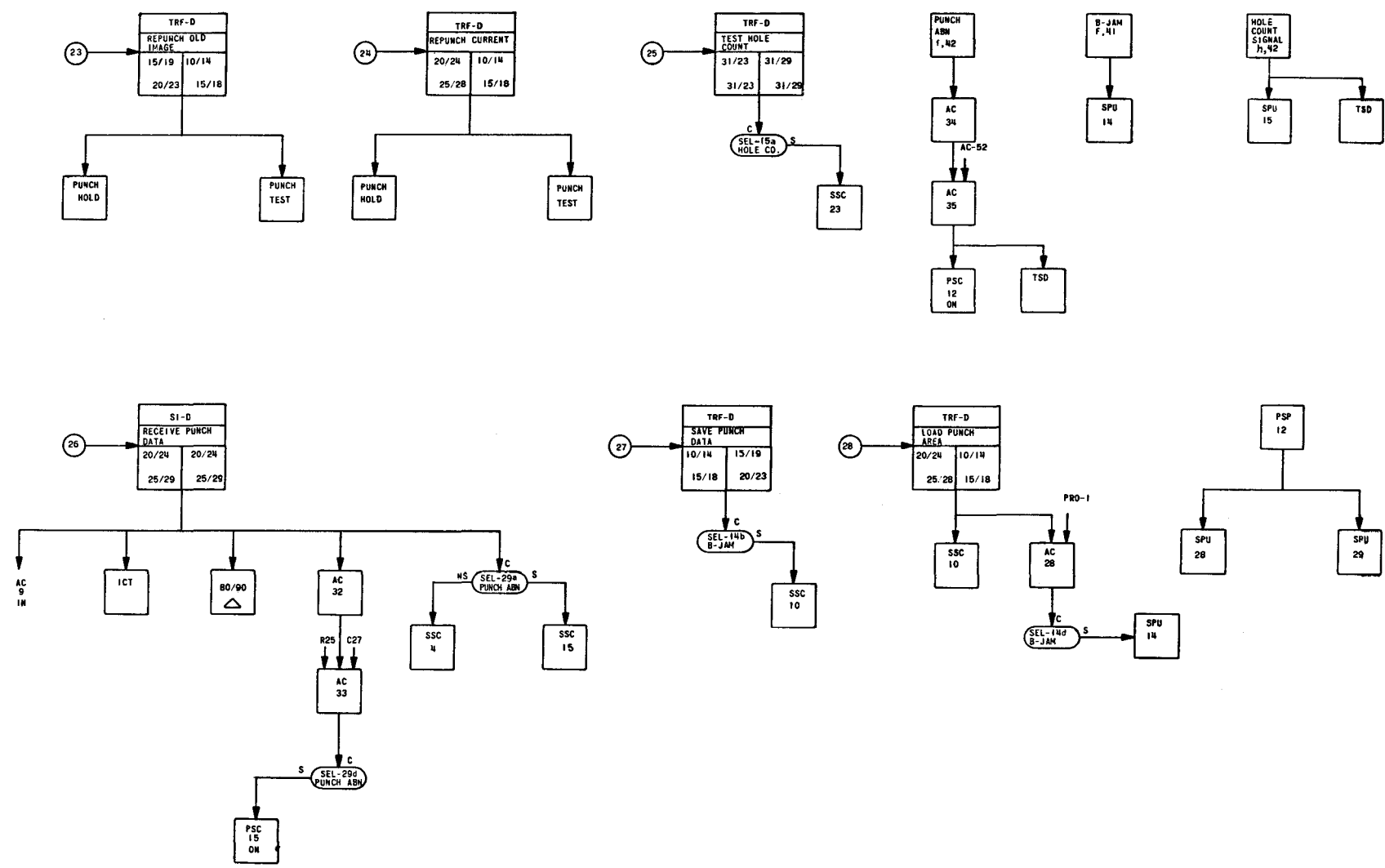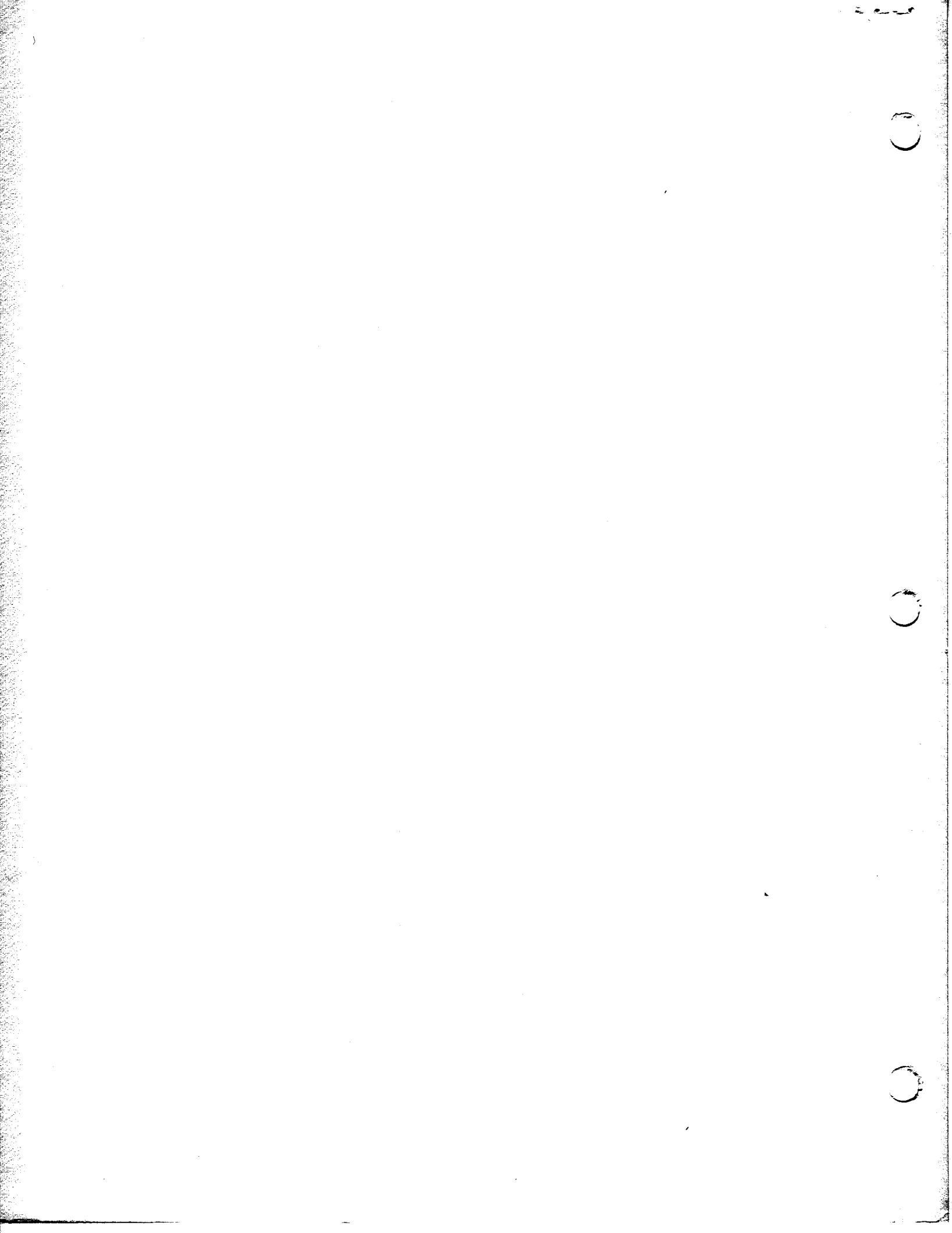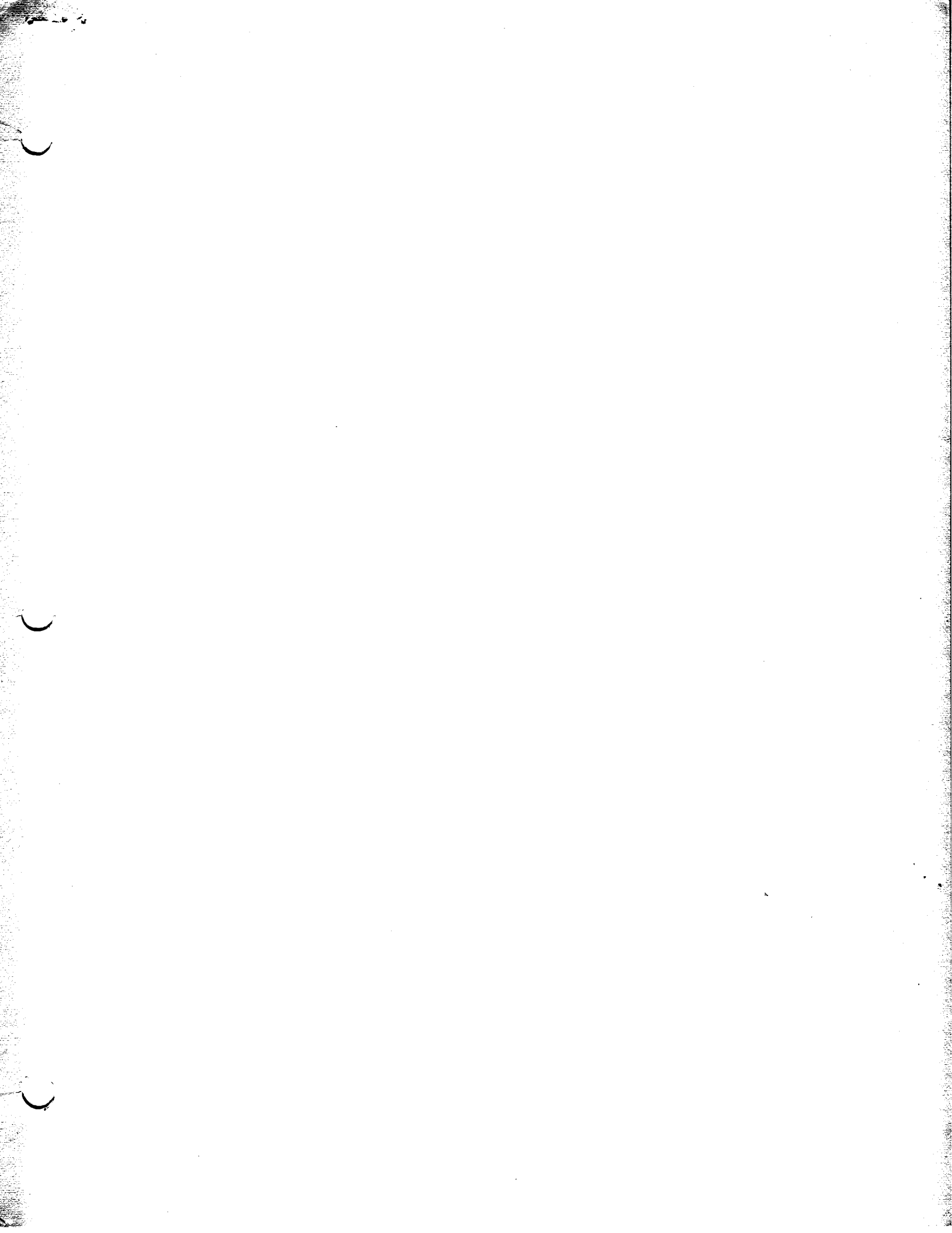Figure 3. UNIVAC 1004/9000 Series Adapter Connection Panel Program
(Part 6 of 7)

Figure 3. UNIVAC 1004/9000 Series Adapter Connection Panel Program
(Part 7 of 7)

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