60440900

CONTROL DATA CORPORATION

CONTROL DATA®
6683-D
SATELLITE COUPLER CHASSIS

GENERAL DESCRIPTION
OPERATION
INSTALLATION AND CHECKOUT
THEORY OF OPERATION
DIAGRAMS
PARTS DATA
APPENDIX
  CHASSIS TABS
  CABLE TABS

HARDWARE MAINTENANCE MANUAL

New features, as well as changes, deletions, and additions to information in the manual, are indicated by bars in the margins or by a dot near the page number if the entire page is affected. A bar by the page number indicates pagination rather than content has changed.

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St. Paul, Minnesota 55112

or use Comment Sheet in the back of this manual.

MANUAL TO EQUIPMENT LEVEL CORRELATION SHEET

This manual reflects the equipment configurations listed below.

EXPLANATION: Locate the equipment type and series number, as shown on the equipment FCO log, in the list below. Immediately to the right of the series number is an FCO number. If that number and all of the numbers underneath it match all of the numbers on the equipment FCO log, then this manual accurately reflects the equipment.

EQUIPMENT TYPE	SERIES	WITH FCOs	COMMENTS
6683-D	01	-	Released
	02	ECO38750	
	03	FCO44396	
	04	ECO44910	
	05	FCO46282	

PREFACE

This manual contains information for the CONTROL DATA® 6683-D Satellite Coupler Chassis. The following manuals contain supplementary information related to this equipment.

Control Data Publication	Publication Number
6682-A, 6683-A/B, 6683-D Satellite Couplers Reference Manual	60334300
Computer Systems Cordwood Modules Manual	60042700
Peripheral Controller Cabinets Manual	60224100
CDC CYBER 70/Models 72, 73, 74 6000 Computer Systems Input/Output Specifications Manual	60352500
CDC CYBER 170/Models 172, 173, 174, 175 Computer Systems Input/ Output Specifications Manual	19983600

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SECTION 1

GENERAL DESCRIPTION

GENERAL DESCRIPTION

FUNCTIONAL DESCRIPTION

The 6683-D Satellite Coupler is a piece of hardware used in pairs to make two-way communication possible between two 6000-, CDC CYBER 70-, or CYBER 170-series I/O channels. It is not necessary that the two I/O channels be of the same series. The 6683-D can check parity on information received from the I/O channel and the other satellite coupler. A 6683-D may be used with another satellite coupler without parity. In this case, the 6683-D can generate parity for transmission to the PPS. Manual switches select the parity modes. The maximum data transfer rate approaches 1 MHz. The 6683-D may have pass-on capability to other equipment.† Figure 1-1 shows a system configuration.

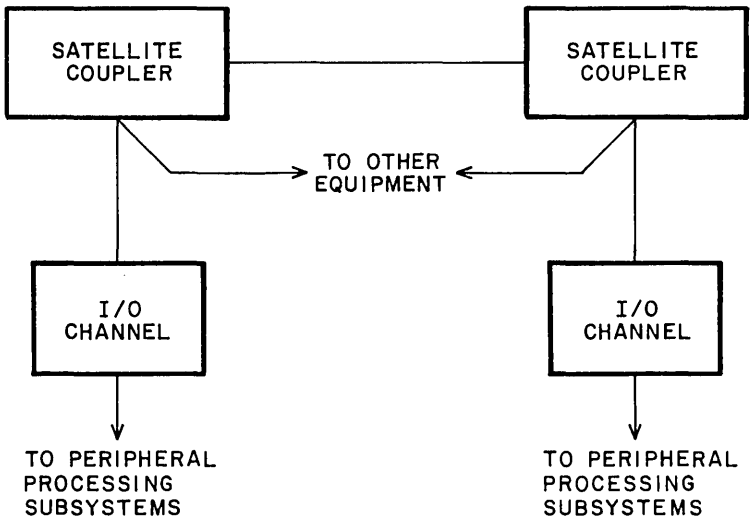

Figure 1-1. System Configuration

† If the 6683-D has a select code other than zero, a QSE is required.

PHYSICAL DESCRIPTION

A basic 6683-D Satellite Coupler consists of 59 cordwood logic modules,† one wired chassis, one terminator resistor, and one 61-pin cable that connects to the other satellite coupler. Two I/O channel cables are permanently connected to the chassis.

The chassis is approximately 16 inches (40.6 cm) high by 17.5 inches (44.5 cm) wide by 4.25 inches (10.8 cm) deep. It mounts into an A, B, or C type of peripheral controller cabinet.†† A pair of satellite couplers may be contained in a single cabinet, or each satellite coupler may be contained in a separate cabinet.

The cordwood logic modules are air-cooled by a blower in the cabinet. Power required is +6v dc and -6v dc for the logic, and +20v dc and -20v dc for the terminator resistor.

† Refer to the computer systems cordwood modules manual, publication number 60042700.

†† Refer to the peripheral controller cabinets manual, publication number 60224100.

SECTION 2

OPERATION

OPERATION

PROGRAMMING

The data word format for the 6683-D Satellite Coupler is 12 data bits plus one parity bit.

The 6683-D is controlled by a 12-bit function code word issued by a peripheral processor (PPS) through an I/O channel. Bits 2^9 through 2^{11} of the function code word form the equipment select code (S). This code is established at installation.† Bits 2^0 through 2^8 of the function word determine which function the 6683-D will perform.

The 6683-D checks the parity of function and data words. If a function word has bad parity, the function does not execute. Data with bad parity transfers, and status bits are set indicating where the parity error occurred. If the other coupler does not send a parity bit, the 6683-D generates a parity bit for incoming data. Manual switches select the parity modes.

The 6683-D generates status information during an operation. A PPS can read this information by issuing a status request. The 6683-D generates parity for the status word.

Status and function codes are listed in Table 2-1.

TABLE 2-1. FUNCTION AND STATUS CODES

Function Codes		Status Reply Codes	
Output	S000	Output Channel Request	0001
Input	S100	Input Channel Request	0002
Status Request	S200	Busy	0004
Master Clear	S700	Local Parity Error	0010
		Remote Parity Error	0020

Refer to the Satellite Coupler hardware reference manual, publication number 60334300, for additional programming information.

† A select code other than zero requires a QSE.

MANUAL CONTROL

The 6683-D chassis has a master clear button in the upper right corner. This switch clears the local coupler, and transmits a master clear signal to the remote coupler.

The logic module in chassis location D01 has four toggle switches. The bottom switch is not used. The other three switches are parity switches. The top parity switch is SW1 in the logic diagrams. The second switch down is SW2, and the third switch is SW3. Parity is enabled when all three parity switches are down. Putting the three parity switches in the up position disables parity. If the other satellite coupler in the system does not have parity checking, SW1 should be down, and SW2 and SW3 should be up.

SECTION 3

INSTALLATION AND CHECKOUT

INSTALLATION AND CHECKOUT

Before installation, give the equipment a thorough visual check. Look for damaged mechanical parts, bent pins, loose wires, etc.

Figure 3-1 shows a 6683-D Satellite Coupler chassis mounted in a type B cabinet. The peripheral controller cabinet manual, publication number 60224100, provides more information on cabinets.

The cabinet must contain a blower for air cooling the logic modules.

The logic modules plug into the chassis locations as indicated on the chassis map, page 5-2.

The equipment select code is determined at installation. The outputs of receiver module C11, which drive inputs 4, 6, and 8 of module A08 (part 1 logic diagram, lower left), determine the equipment select code.† Connect the C11 outputs to give the required combination of bit and $\overline{\text{bit}}$.

The cable connections are shown in Figure 3-1. The cable that connects the two satellite coupler chassis must connect to socket 1A1 on either chassis and socket 1A2 on the other chassis. The remaining socket (1A1 or 1A2) on each chassis must contain a terminator.

Power required for the terminators is +20v and -20v dc. The logic modules require +6v and -6v dc.

It is good practice to check power input connections for short circuits before applying power. At initial power-on, check to see if the supply voltages are within limits. Also check the blower operation.

Clock timing should be checked at installation and at one-year intervals. The clock diagram (part 9 logic diagram) shows how to check the clock timing.

Running the satellite coupler diagnostic, version 8 or 9 as applicable, checks the operation of the equipment.

† A select code other than zero requires a QSE.

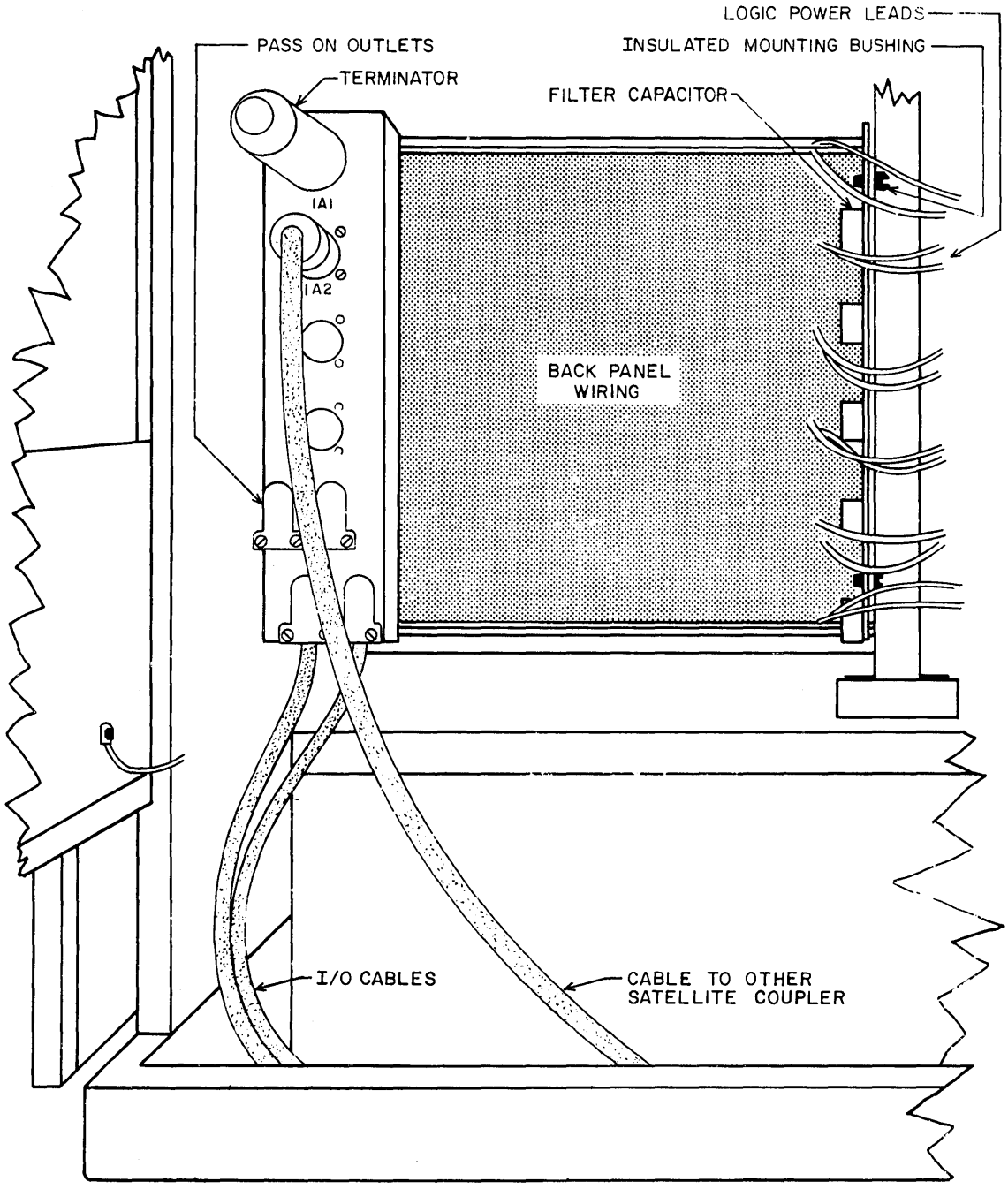

Figure 3-1. 6683-D in a Cabinet (Rear View)

ADDITIONAL CHASSIS INSTALLATION KIT

This is an installation kit for installing additional 5 or 6 row logic chassis in a B size cabinet. This procedure includes: chassis quantities, chassis location map, power wiring, terminator wiring grounding, and parts list.

REV A

DOCUMENT NO. 22725500

A

SHEET 2

CODE IDENT

INSTALLATION KIT - "B" CABINET CHASSIS

CONTROL DATA

CHASSIS QUANTITIES:

INSTALLATION, REFER TO FIG.	6681-F 6 ROW CHASSIS	6683-D 5 ROW CHASSIS	DT122-B 5 ROW CHASSIS	DK518-B 5 ROW CHASSIS
1	1			
2	2			
3	3			
4	4			
5		1		
6		2		
7		3		
8		4		
5			1	
6			2	
7			3	
8			4	
9	1	1		
12	1	2		
14	1	3		
9	1		1	
12	1		2	
14	1		3	
12	1	1	1	
14	1	2	1	
14	1	1	2	
10	2	1		
13	2	2		
10	2		1	
13	2		2	
13	2	1	1	
11	3	1		
11	3		1	
5				1
6				2
7				3
8				4
15	1			1
10	2			1
13	2	1		1
13	2		1	1
14	1	1	1	1

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CONTROL DATA

INSTALLATION KIT – "B" CABINET CHASSIS

CODE IDENT

SHEET 3

A

DOCUMENT NO. 22725500

REV A

CHASSIS QUANTITIES:

INSTALLATION, REFER TO FIG.	6681-F 6 ROW CHASSIS	6683-D 5 ROW CHASSIS	DT122-B 5 ROW CHASSIS	DK51A-B 5 ROW CHASSIS
7		2		1
8		2	1	1
7		1	1	1
8		1	2	1
6		1		1
6			1	1
7			2	1

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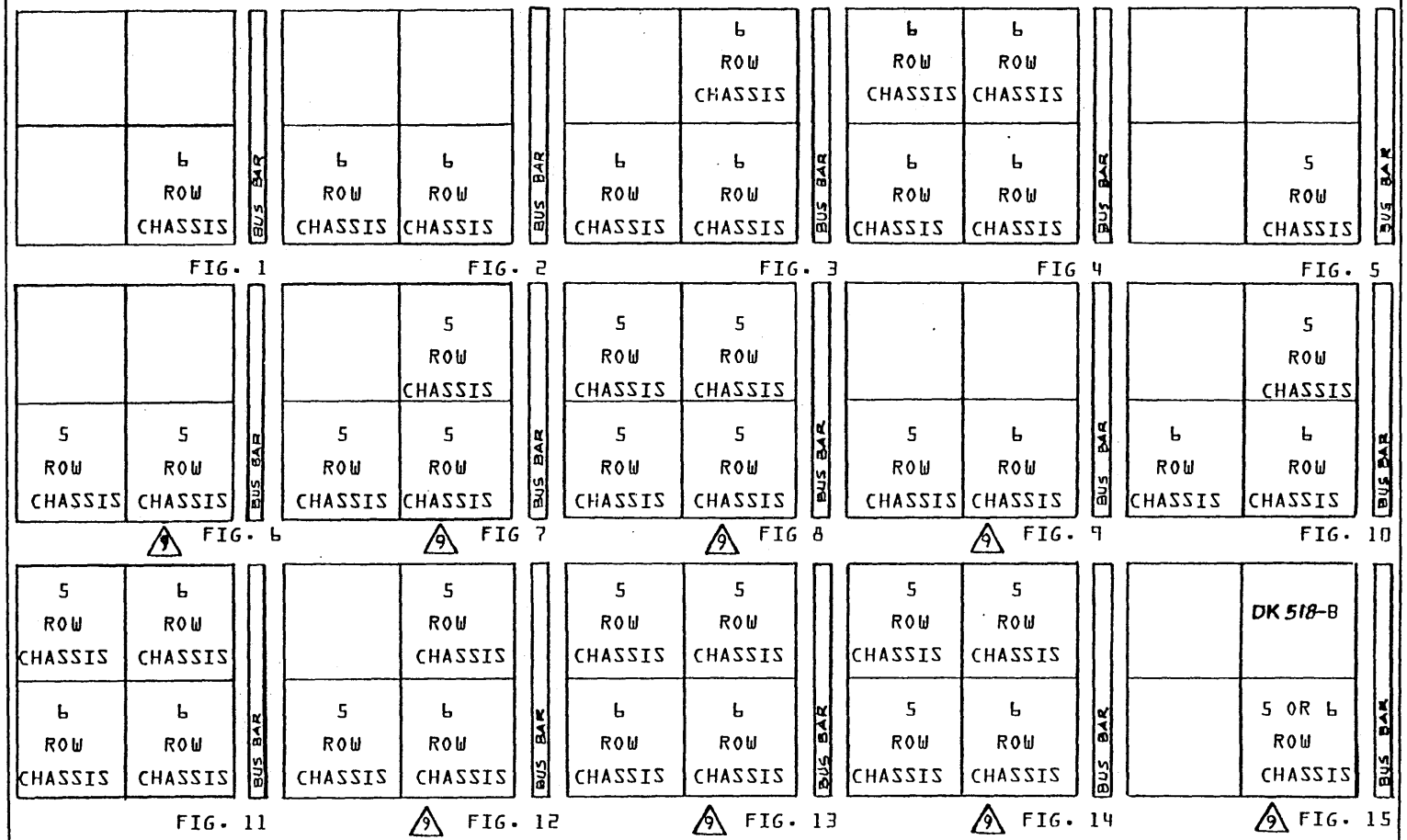
CONTROL DATA	INSTALLATION KIT — "B" CABINET CHASSIS	CODE IDENT	SHEET 4	A	DOCUMENT NO. 22725500	REV A

REAR VIEWS OF CABINETS



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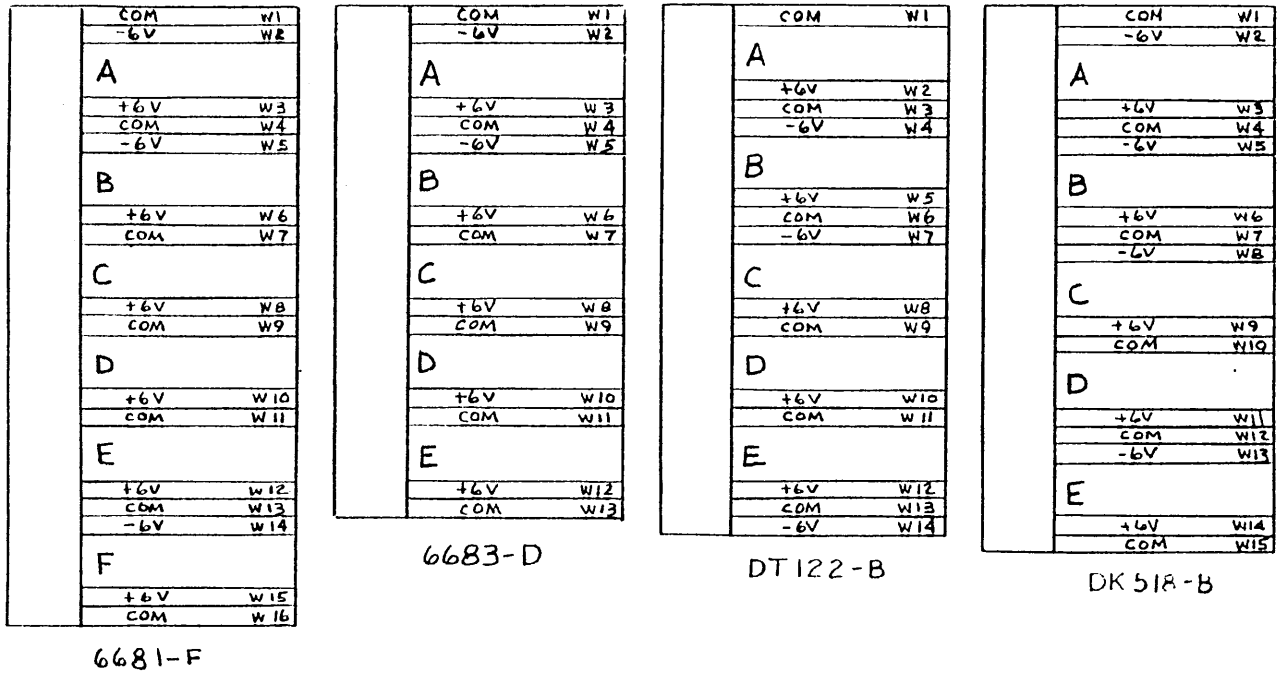
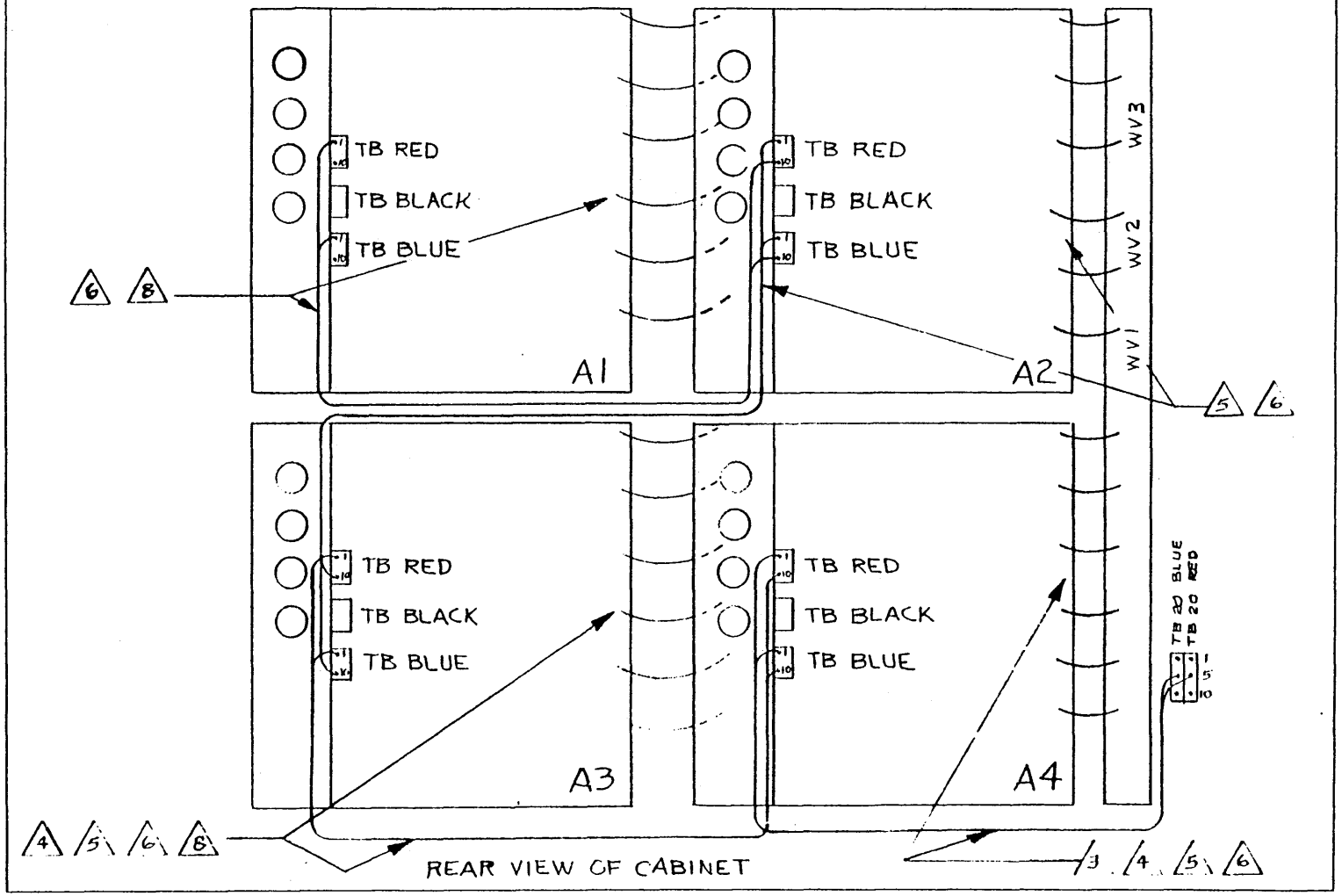
CONTROL DATA	INSTALLATION KIT — "B" CABINET CHASSIS	CODE IDENT	SHEET 5	A	DOCUMENT NO 22725500	REV A



CONTROL DATA	INSTALLATION KIT – "B" CABINET CHASSIS	CODE IDENT	SHEET 6	A	DOCUMENT NO. 22725500	REV. A



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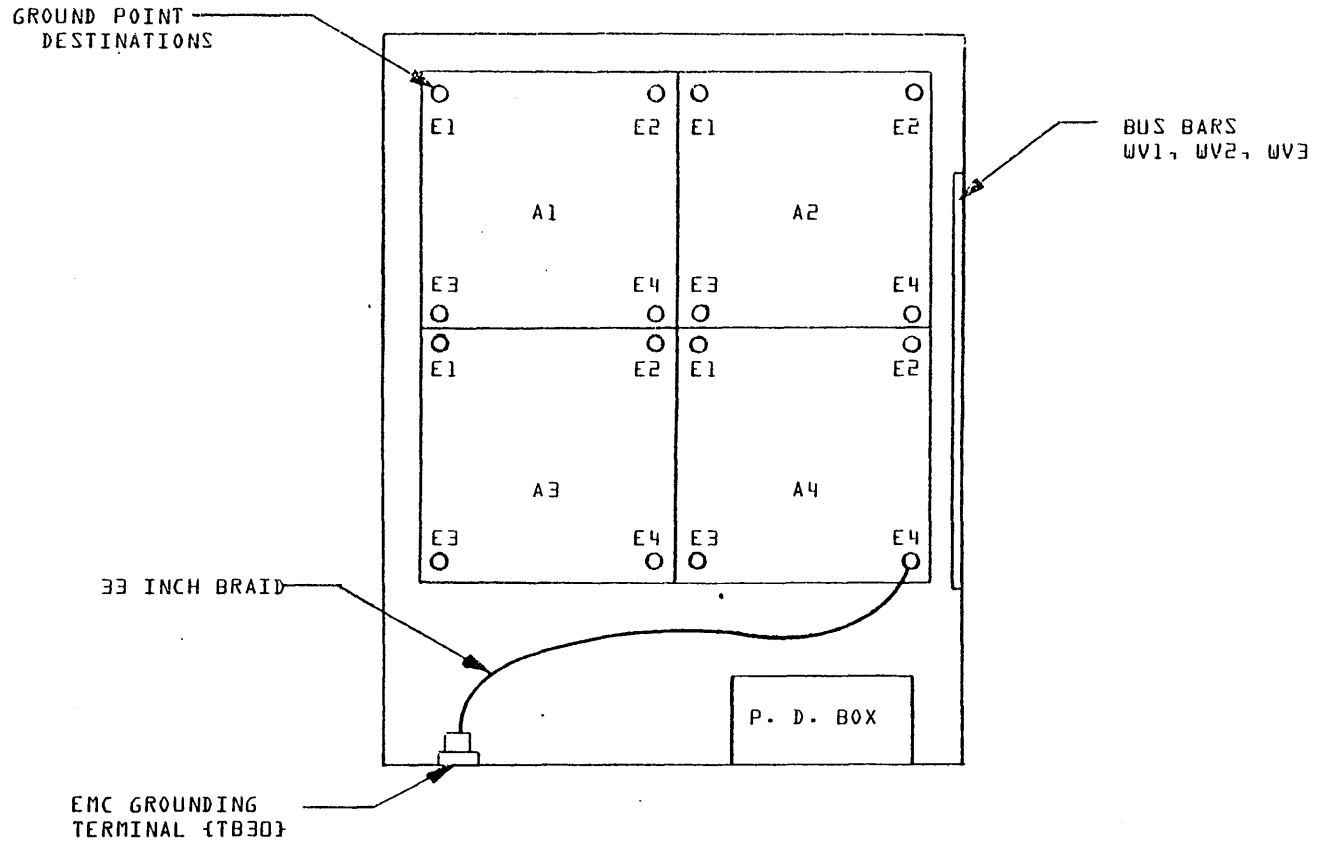
CONTROL DATA	INSTALLATION KIT — "B" CABINET CHASSIS	CODE IDENT	SHEET ?	A	DOCUMENT NO 22725500	REV A



REAR VIEW OF CABINET

CONTROL DATA	INSTALLATION KIT– "B" CABINET CHASSIS	CODE IDENT	SHEET 8	WL	DOCUMENT NO. 22725500	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	3	12	0		A4 ALL BUS BARS	COM		WV2	COM		D. C.
	1	12	2		A4 ALL BUS BARS	+6V		WV1	+6V		D. C.
	2	12	6		A4 ALL BUS BARS	-6V		WV3	-6V		D. C. (3)(4)(5)(6)
	4	16	2		A4 TB RED	1		TB20 RED	5		D. C.
	4	16	6		A4 TBBLUE	1		TB20 BLUE	5		D. C.
	3	12	0		A3 ALL BUS BARS	COM		A4 BUS BAR	COM		D. C.
	1	12	2		A3 ALL BUS BARS	+6V		A4 BUS BAR	+6V		D. C.
	2	12	6		A3 ALL BUS BARS	-6V		A4 BUS BAR	-6V		D. C.
	4	16	2		A3 TB RED	1		A4 TB Red	10		D. C. (4)(5)(6)(8)
	4	16	6		A3 TB BLUE	1		A4 TB BLUE	10		D. C.
	5	1 IN. BRAID			A3	E4		A4	E3		GROUND
	5	1 IN. BRAID			A3	E2		A4	E1		GROUND (19)
	3	12	0		A2 ALL BUS BARS	COM		WV2	COM		D. C.
	1	12	2		A2 ALL BUS BARS	+6V		WV1	+6V		D. C.
	2	12	6		A2 ALL BUS BARS	-6V		WV3	-6V		D. C. (5)(6)
	4	16	2		A2 TB RED	1		A3 TB RED	10		D. C.

CONTROL DATA | INSTALLATION KIT - "B" CABINET CHASSIS | CODE IDENT | SHEET 7 | VL | DOCUMENT NO 22725500 | REV A

CONDUCTOR IDENT	FIND NO	GAUGE (REF)	COLOR (REF)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO	DESTINATION		ACCESS FIND NO	REMARKS
	4	16	6		A2 TB BLUE	1		A3 TB BLUE	10		D. C.
	5	1 IN. BRAID			A2	E3		A4	E1		GROUND 5 6
	5	1 IN. BRAID			A2	E4		A4	E2		GROUND
	3	12	0		A1 ALL BUS BARS	COM		A2 BUS BAR	COM		D. C.
	1	12	3		A1 ALL BUS BARS	+6V		A2 BUS BAR	+6V		D. C.
	2	12	6		A1 ALL BUS BARS	-6V		A2 BUS BAR	-6V		D. C.
	4	16	2		A1 TB RED	1		A2 TB RED	10		D. C.
	4	16	6		A1 TB BLUE	1		A2 TB BLUE	10		D. C. 6 8
	5	1 IN. BRAID			A3	E1		A1	E3		GROUND
	5	1 IN. BRAID			A3	E2		A1	E4		GROUND
	5	1 IN. BRAID			A1	E2		A2	E1		GROUND

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CONTROL DATA	INSTALLATION KIT – "B" CABINET CHASSIS	CODE IDENT	SHEET 10	A	DOCUMENT NO. 22725500	REV A

NOTES:

1. REFERENCE DOCUMENTS:

2. IDENTIFY WITH PART NUMBER & REVISION BY MEANS OF A TAG, LABEL OR SIMILAR METHOD.

3. USE ONLY WITH ONE CHASSIS.

4. USE ONLY WITH TWO CHASSIS.

5. USE ONLY WITH THREE CHASSIS.

6. USE ONLY WITH FOUR CHASSIS.

7. WIRING BETWEEN BUS BARS TO BE DONE BETWEEN THE CLOSEST TWO TERMINALS.

8. ONE JUMPER TO A BUS BAR WHEN GOING FROM ONE CHASSIS TO ANOTHER.

11. WHEN A COMBINATION OF A 6683-D, DT122-B, or DK518-B IS USED (FROM THE REAR VIEW), THE DT122-B IS PLACED TO THE RIGHT OF THE 6683-D (NEAREST THE VERTICAL BUS BAR), AND THE DK518-B IS PLACED IN THE A2 DESIGNATION WHEN COMBINED WITH ANY OTHER CHASSIS. (5 ROW CHASSIS)

10. FOR CHASSIS 6681-F, 7 COMMON JUMPERS, 6 +6V JUMPERS, AND 3 -6V JUMPERS ARE REQUIRED.

11. FOR CHASSIS 6683-D, 6 COMMON JUMPERS, 5 +6V JUMPERS, AND 2 -6V JUMPERS ARE REQUIRED.

12. FOR CHASSIS DT122-B, 6 COMMON JUMPERS, 5 +6V JUMPERS, AND 3 -6V JUMPERS ARE REQUIRED.

13. FOR CHASSIS DK518-B, 6 COMMON JUMPERS, 5 +6V JUMPERS, AND 4 -6V JUMPERS ARE REQUIRED.

14. EXCLUDE THIS JUMPER IF 4 CHASSIS ARE BEING INSTALLED.

ASSEMBLY NUMBER	REV	CLASS	DW SZ	ASSEMBLY DESCRIPTION	DESIGN SOURCE	FIRST USAGE	RELEASE DATE	CLASSIFICATION NUMBER
2272550 J	A	CLA	A	INSTALLATION KIT B CAB CHASSIS	CA	6631-F	06/17/75	

MF

PROCESSING DATE	PAGE NUMBER
06/17/75	17 1

CONTROL DATA CORPORATION

ARDEN HILLS

ASSEMBLY PARTS LIST

SPARE CODE
S = SPARE PARTS
N = NON SPARE PARTS

FIND NUMBER	DW SZ	PART NUMBER	QUANTITY	UNIT MEAS.	PART DESCRIPTION	IN/OUT STATUS	CHANGE ORD. NUMBER	DATE EFFECTIVE	CLASSIFICATION NUMBER	OP NUMBER	MAKE/BUY PART TYPE	PN NC	S OR N
1	A	22832100	000	PC	CABLE ASSY-JUMPER,CHAS PWR RED	IN							N
2	A	22832101	400	PC	CABLE ASSY-JUMPER,CHAS PWR BLU	IN							N
3	A	22832102	700	PC	CABLE ASSY-JUMPER,CHAS PWR BLK	IN							N
4	A	22832260	100	PC	TERMINATOR CABLE ASSEMBLY	IN							N
5	A	53370600	200	PC	CABLE ASSY - JUMPER GROUNDING	IN							N

NUMBER OF LINE ITEMS = 5
HIGHEST FIND NUMBER = 5

PROJECT ENGINEER
W J HANSON

14 AA 2709 REV 4-75

SECTION 4

THEORY OF OPERATION

THEORY OF OPERATION

INTRODUCTION

Satellite couplers perform four operations:

- Output
- Input
- Status
- Master Clear

When a coupler initiates an output operation, the other coupler must perform an input operation and vice versa. Software synchronizes the two couplers.

The 6683-D checks parity on function words and data words. A parity error on a function word inhibits the coupler from transmitting an inactive signal to the peripheral processor subsystem, and the function does not execute. When data has bad parity, the transfer completes, and the parity bit received transfers unchanged with the data. For data errors, status bits indicating where the error occurred are set. During a status operation, the 6683-D generates an odd parity bit and transmits it with the status information. If the other coupler does not send a parity bit, the 6683-D operation is unchanged except on an input operation. The 6683-D generates parity on input data, and sends a parity bit to the PPS with data if SW2 is in the open position.

The subsections below provide an outline of the logic operation as each function executes. The term local coupler indicates the coupler initiating an operation. The other coupler is the remote coupler. Refer to the mode of operation diagram, Figure 4-1, while reading the subsections below.

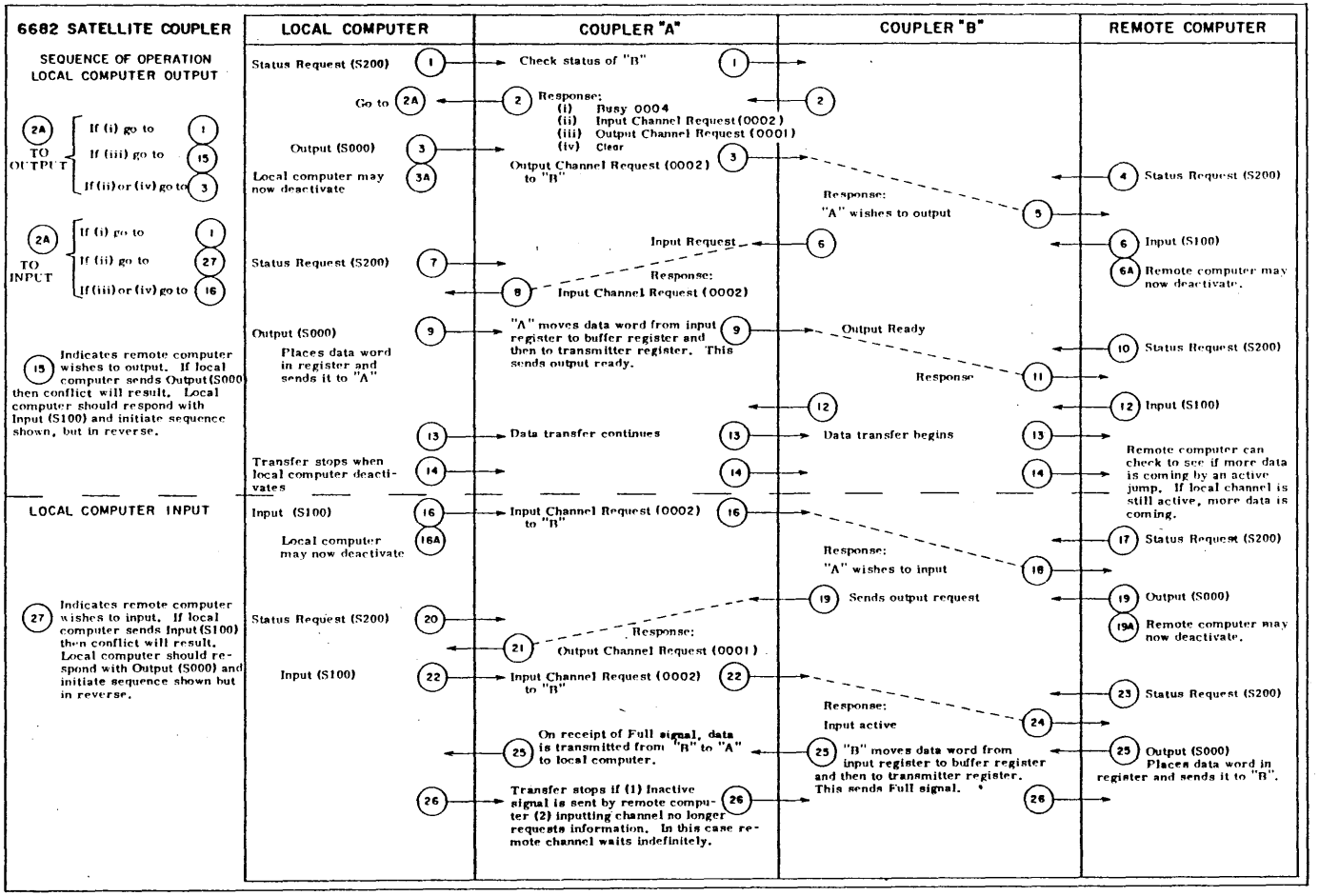


Figure 4-1. Mode of Operation

OUTPUT FUNCTION (S000)

Refer to the part 1 logic diagram during the following discussion unless otherwise noted.

1. The local coupler receives, in parallel, a function signal and a 12-bit function word plus 1 parity bit from the local peripheral processor subsystem (PPS).

   Logic module A08 (part 1 diagram, lower left) decodes the equipment select code. Output A08-12 causes an inactive signal to transmit to the local PPS if the function word parity is correct.

   Module D08 (part 10, lower left) decodes the function to be executed. D08-15 drives B08-27 (part 1, lower left). Output B08-28 and clock t_{25} cause output channel request FF1 in module A06 (right center) to set. A06-8 and clock t_{75} cause output channel request FF2 in module C04 (lower right) to set. Setting output channel request FF2 causes module A12 to transmit an output active signal to the remote coupler. This causes bit 2^0 (output channel request) to be set in the remote coupler status register. The output active signal stays up for the duration of the output operation.

2. The local coupler receives an active signal from the local PPS. The active signal sets the active flip-flop in module B08. B08-7 causes the busy flip-flop in module A09 (right center) to set. A09-25 sets bit 2^2 (busy) in the status register (E03, part 8). A09-27 enables the data transmitter (part 2, upper right).

3. The local coupler receives two data words accompanied by full signals and parity bits from the local PPS.

   The full signals and clock t_{75} cause the two data words to load into the input and buffer registers (part 2).

4. Module A11 (part 1, upper right) receives an input active signal from the remote coupler. A11-6 causes bit 2^1 (input channel request) to set in the local coupler status register (part 8).

5. The remote coupler receives an active signal from the PPS enabling the input request signal.

6. The local coupler sends a data word accompanied by an output ready signal and parity bit to the remote coupler. The local coupler receives an input request signal from the remote coupler. This enables a timing chain composed of full FF1 through full FF4 and xmtr register full FF1 and FF2 (part 2). Full signals from the PPS and clock t_{75} cause the timing chain to generate sequential signals which load the buffer and transmitter registers.

Xmtr register full FF2 causes an output ready signal to accompany each data word sent to the remote coupler. The local coupler receives an input request signal for each data word received by the remote coupler. The load buffer register signal causes an empty signal to transmit to the local PPS (part 1, upper left) for each data word received from the PPS. This sequence continues until the data transfer completes. Figure 4-2 shows the timing chain signal relationships.

7. The local PPS deactivates the I/O channel causing the active flip-flop to clear which in turn causes the output active signal to drop. This causes the output active FF3 (part 1, left upper center) in the remote coupler to set. The remote I/O channel then deactivates, and B05-27 (left center) generates a pulse which clears the active flip-flop in the remote coupler.

OUTPUT PARITY

If the function word has bad parity, output C02-21 (part 5, upper right) and clock t_{20} cause A03-28 (part 7) to set. Output A03-25 inhibits the gate in module C01 (part 1, upper left center). This prevents an inactive from transmitting to the local PPS. A03-28 drives D02-15 (part 10). D02-19 (part 10) clears full FF1 (part 2) and the function register (B08, part 1). D02-17 clears output channel request FF1 (part 1, A06, right center). Consequently, the function does not execute.

If a data word has bad parity, the signal at C02-21 (part 5), full, and t_{20} cause A03-26 (part 7) to set. This, in turn, causes A03-7 to set. A03-10 (part 7) then causes the local PE status bit (part 8) to set. A03-10 also causes a parity error signal to transmit to the remote coupler. A03-7 disables the gate at A07, thereby preventing the transmitted parity error signal from entering the local coupler status register as a remote parity status bit.

Module A05 (part 5) sends the parity bit accompanying the output data word to the remote coupler.

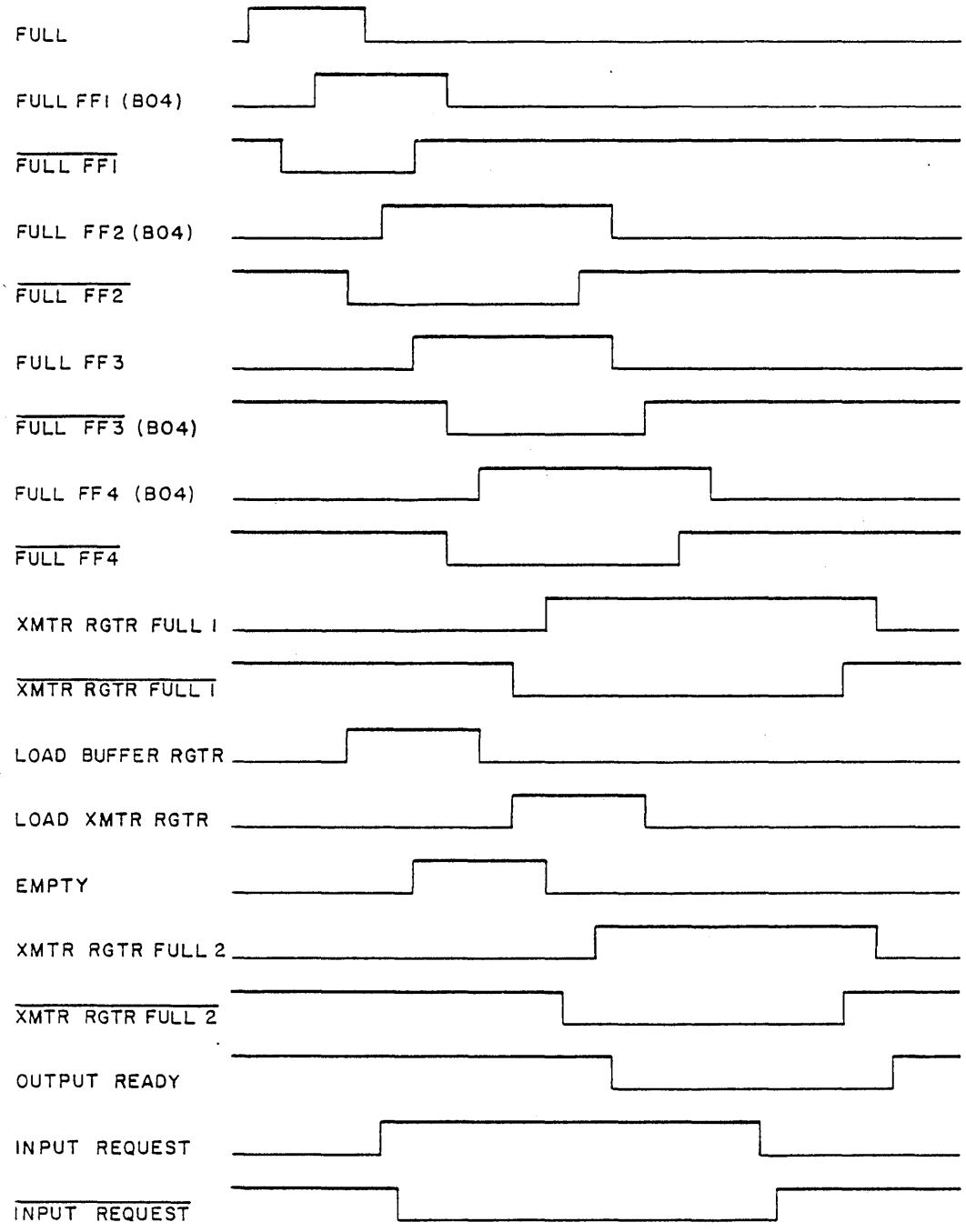


Figure 4-2. Output Timing Chain Signal Relationship (not to scale)

INPUT FUNCTION (S100)

Refer to the part 1 logic diagram during the following discussion unless otherwise noted.

1. The local coupler receives, in parallel, a function signal and a 12-bit function word plus 1 parity bit from the local peripheral processor subsystem (PPS).

   Logic module A08 (part 1, lower left) decodes the equipment select code. Output A08-12 causes an inactive signal to transmit to the local PPS if the function word parity is correct.

   Module D08 (part 10, lower left) decodes the function to be executed. D08-13 drives B08-23 (part 1, lower left). Output B08-26 and clock t_{25} cause the input request flip-flop on module A06 (right center) to set. This causes module A12 to send an input active signal to the remote coupler. The input active signal stays up for the duration of the input operation.

   Module A11 (upper right) in the remote coupler receives the input active signal. A11-6 causes bit 2^1 (input channel request) in the remote coupler status register to set.

2. Module A11 (part 1, upper right) receives an output active signal from the remote coupler. This causes bit 2^0 (output channel request) to set in the local coupler status register (part 8).

3. The local coupler receives an active signal from the local PPS. The active signal sets the active flip-flop in module B08. The active flip-flop partially enables the input request drive signal in module A08 (part 3).

4. The local coupler receives 12-bit data words from the remote coupler. An output ready signal accompanies each data word. The output ready signal drives a timing chain composed of output ready FF1 through output ready FF6 (part 3).

   The timing chain generates signals which cause the data words to pass through the output register (E05 and E06, part 4), the data fan in register (E07 and E08, part 4), and the output transmitter (D09 and D10, part 4). The output transmitter sends the data to the local PPS.

   Output ready FF5 causes module E09 (part 1, upper left) to send a full pulse to the PPS with each data word.

   The timing chain circuit also causes an input request signal to transmit to the remote coupler for each data word received. Figure 4-3 shows the timing chain signal relationships.

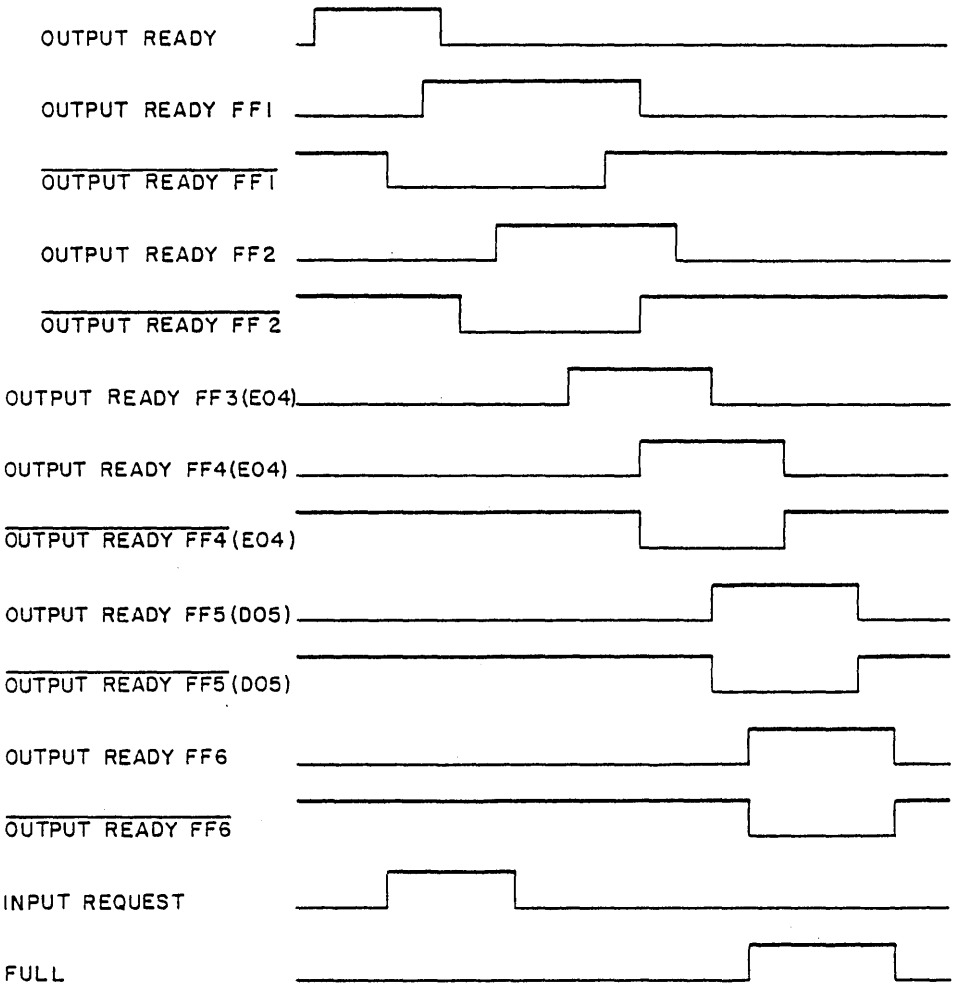


Figure 4-3. Input Timing Chain Signal Relationship (not to scale)

5. When the remote coupler completes the output operation, it causes the output active signal (A11, part 1 upper right) to drop. This causes the local coupler to transmit an inactive and the active flip-flop (B08, lower left) to clear.

INPUT PARITY

If the function word has bad parity, output C02-21 (part 5, upper right) and clock t_{20} cause A03-28 (part 7) to set. A03-25 inhibits the gate in module C01 (part 1, upper left center). This prevents an inactive from transmitting to the local PPS. A03-28 drives D02-15 (part 10). D02-17 (part 10) clears the input chan request flip-flop in module A06 (part 1, right center), and the function register (B08, part 1). Consequently, the function does not execute.

The remote coupler may or may not be capable of transmitting a parity bit with data. If the remote coupler does not transmit a parity bit, the switches on module D01 (part 7) should be set as follows:

SW1 - closed (down)
SW2 - open (up)
SW3 - open (up)

This enables the coupler to transmit an internally generated parity bit to the PPS. The parity network (part 6, modules B01 and B02) generates a parity bit for each incoming data word. This parity bit drives input A02-22 (part 7, upper right). Output A02-19 causes the flip-flop on module D02 (part 6, upper center) to set. This causes input A02-21 to activate. When the output ready FF5 signal appears on A02-23, a parity bit transmits to the local PPS.

If the remote coupler transmits a parity bit with data, the switches in module D01 (part 7) should be set as follows:

SW1 - closed (down)
SW2 - closed (down)
SW3 - closed (down)

This enables the coupler to transmit parity bits received from the remote coupler to the local PPS. The incoming parity bit causes the flip-flop on module A03 (part 6) to set. Output A03-2 drives input A02-18 (part 7). A02-19 causes the flip-flop on module D02 (part 6) to set. This causes input A02-21 to activate. When the output ready FF5 signal appears on A02-23, a parity bit transmits to the local PPS.

When the flip-flop on module A03 (part 6) sets, output A03-1 drives the parity checking network on module B01. If the incoming data has bad parity, output B01-21 drives A03-22. A03-12 drives A02-2 (part 7, center) if remote parity error status has not been sensed from the outputting coupler. Output A03-7 then sets. A03-10 causes the local PE FF on the status register (E03, part 8) to set. During a read operation, a remote parity error signal will not transmit to the remote coupler.

STATUS FUNCTION (S200)

Refer to the part 1 logic diagram during the following discussion unless otherwise noted.

1. The local coupler receives, in parallel, a function signal and a 12-bit function word plus 1 parity bit from the local PPS.

   Logic module A08 (lower left, part 1) decodes the equipment select code. Output A08-12 causes an inactive signal to transmit to the local PPS if the function word parity is correct.

   Module D08 (part 10, lower left) decodes the function to be executed. D08-9 drives B08-20 (part 1, lower left). Outputs B06-5, B06-9, and B06-13 partially enable the coupler for a status operation.

2. The local coupler receives an active signal from the local PPS.

   Output B06-17 (lower left) enables the gate on A04 which inhibits the inactive gate on module E09 (upper left).

   The active signal causes the gate on C01 (left, part 8) to enable. A07-12 (part 8) causes E09-16 (upper center, part 1) to set the flip-flop on module D04. D04-18 drives module B04. B04-4 causes the status word to gate into the fan-in register (E08, part 4).

   D04-20 drives module C01. C01-11 enables the gate on module A08. A08-20 then enables the full gate on module E09 (upper left, part 1).

3. Clock t_{75} causes the status word and full signal to transmit to the local PPS.

STATUS PARITY

If the function word has bad parity, output C02-21 (part 5, upper right) and clock t_{20} cause A03-28 (part 7) to set. A03-25 inhibits the gate in module C01 (part 1, upper left center). This prevents an inactive from transmitting to the local PPS. Consequently, the function does not execute.

Module E02 (part 8) monitors the status word and generates an odd parity bit. E02-15 drives A02-27 (part 6). A08-22 (part 1) enables the gate on module A02 (part 6) which drives transmitter module D03. Clock t_{75} causes the parity bit to transmit to the local PPS with the status word.

MASTER CLEAR (S700)

Refer to the part 1 logic diagram during the following discussion unless otherwise noted.

1. The local coupler receives, in parallel, a function signal and a 12-bit function word plus 1 parity bit from the local PPS.

   Logic module A08 (part 1 logic diagram, lower left) decodes the equipment select code. Output A08-12 causes an inactive signal to transmit to the local PPS if the function word parity is correct.

   Module D08 (part 10, lower left) determines which function executes. When bits 2^6, 2^7, and 2^8 are 111_2, D08-16 sets the master clear (MC) flip-flop on module A06.

   Module A05 transmits an MC signal which clears the remote coupler. A05-9 drives module D05 which is the MC fan-out for the local coupler. A05-10 causes the master clear flip-flop on module A06 to clear.

MASTER CLEAR PARITY

If the function word has bad parity, output C02-21 (part 5, upper right) and clock t_{20} cause A03-28 (part 7) to set. A03-25 inhibits the gate in module C01 (part 1, upper left center). This prevents an inactive from transmitting to the local PPS. Consequently, the function does not execute.

SECTION 5

DIAGRAMS

DIAGRAMS

This section contains a chassis map, a key to logic symbols, a block diagram, and logic diagrams.

	1	2	3	4	5	6	7	8	9	10	11	12
A	ZA PART 8,10	QH PART 5,6,7,8	ZD PART 6,7	TR PART 1,6,7,8,10	ZS PART 5,6,7,10	AE PART 1,10	TL PART 1,2,6,7,8,9	TB PART 1,2,3	AA PART 1,3	AA PART 1,2	ZR PART 1,2,3	ZT PART 1,2,3
B	AB PART 6	AB PART 6	V66 PART 10	TH PART 1,2	AE PART 1,2,10	TH PART 1	TD PART 2,6	ZD PART 1,2	ZS PART 2,4,6	ZS PART 2,4,6	ZS PART 2,4,6	ZS PART 2,4,5,6
C	TD PART 1,4,7,8	AB PART 5	AB PART 5	AE PART 1,2,3	PB PART 2	PB PART 2	PB PART 2	PB PART 2	QI PART 2,5,10	QI PART 2	QI PART 2,5	QI PART 2,5
D	RX PART 1,7	J59 PART 5,6,7,10	QJ PART 6	AE PART 1,2,3	TH PART 1,3,5,10	TC PART 9	TC PART 9	IV PART 10	QJ PART 4	QJ PART 4	QJ PART 1	QI PART 2,5
E		AB PART 1,7,8	PJ PART 8	TH PART 1,3,10	PJ PART 4	PJ PART 4	TE PART 4	TE PART 4	QH PART 1,3	HQ PART 9	TD PART 9	HQ PART 9

6683-D CHASSIS MAP (FRONT VIEW)

Each location indicates the module type and diagrams on which the module appears.

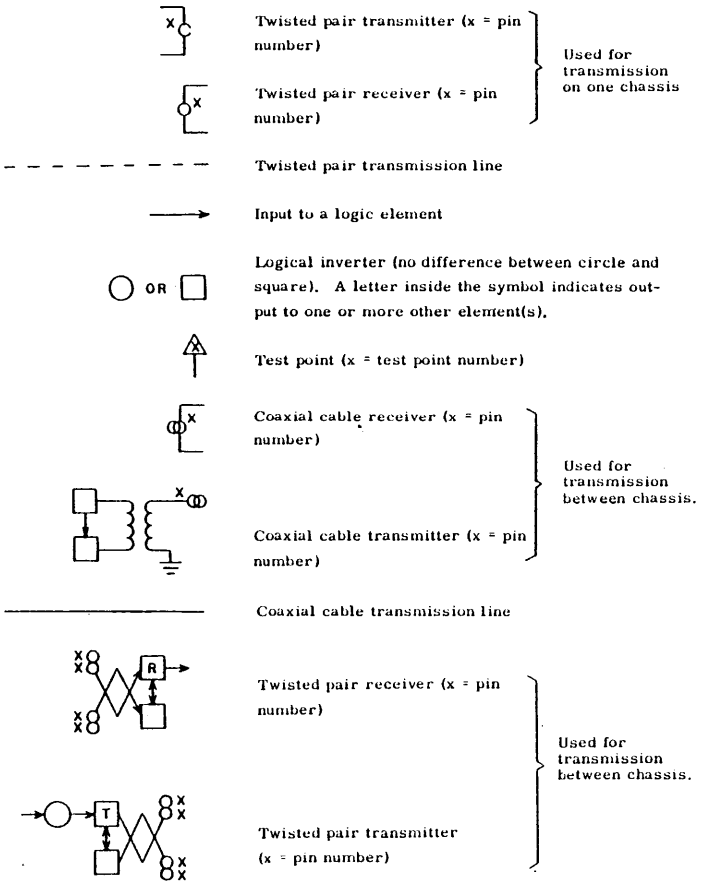
Example: Location B04 contains a TH module which appears on part 1 and 2 diagrams.

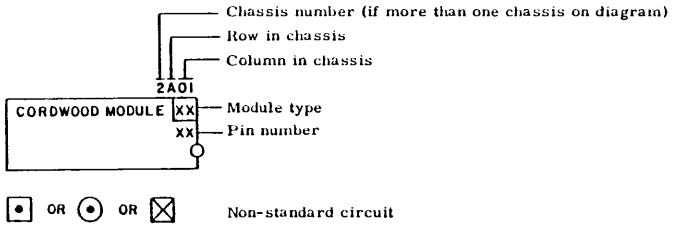
CORDWOOD MODULE LOGIC SYMBOLS

INTRODUCTION

Logic diagrams for devices using cordwood modules employ several symbols to represent logically the electrical circuits in the equipment. For detailed information concerning these symbols, see the Cordwood Modules Printed Circuit Manual, Pub. No. 60042700.

LOGIC SYMBOLS

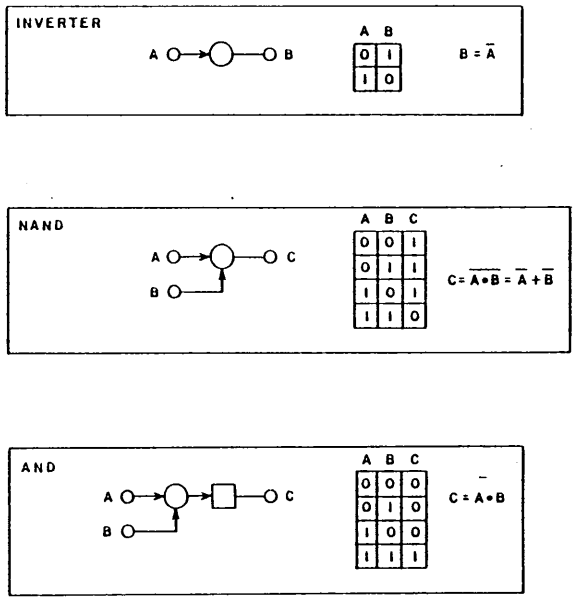




LOGIC FUNCTIONS

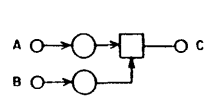
There are no specific symbols for standard logic functions (AND, OR, etc). Instead, logical inverters are combined to represent these functions. Some common combinations are shown here (with test points, pin numbers, and cordwood module symbols omitted). Gates may have more inputs or outputs than the examples.

GATES



GATES (Cont'd)

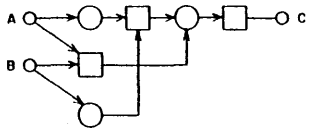
OR



A	B	C
0	0	0
0	1	1
1	0	1
1	1	1

C = A + B

EXCLUSIVE OR

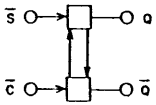


A	B	C
0	0	0
0	1	1
1	0	1
1	1	0

C = A ⊻ B

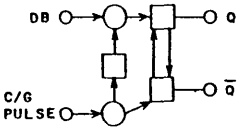
FLIP-FLOPS

STANDARD FF



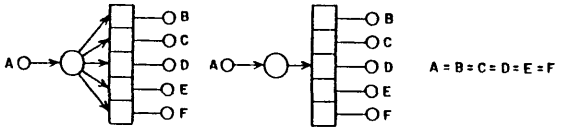
A "0" $\overline{S}$ input drives Q to "1" and $\overline{Q}$ to "0". A "0" $\overline{C}$ input drives $\overline{Q}$ to "1" and Q to "0".

FF WITH CLEAR/GATE NETWORK



The C/G pulse clears the FF (Q to "0", $\overline{Q}$ to "1"), and then gates DB into the FF. After the C/G pulse, Q=DB and $\overline{Q}=\overline{DB}$.

FANOUTS



A = B = C = D = E = F

LOGIC LEVELS

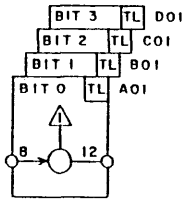
"0" = +1.2 v

"1" = +0.2 v

A grounded input acts as a "1".

MODULE STACKING

When several circuit paths are logically identical, the modules which make up the circuits may be stacked to save space.

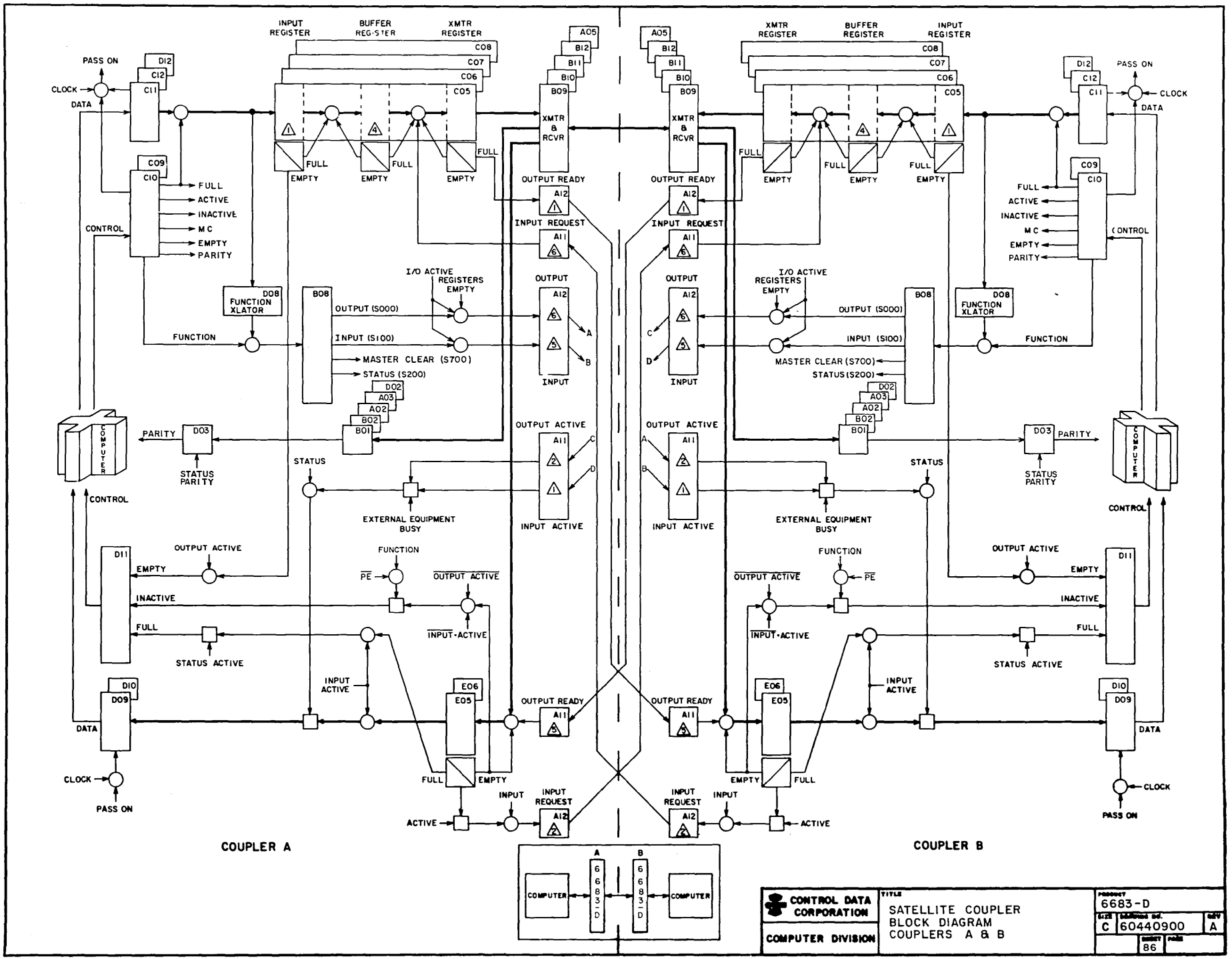


ABBREVIATIONS

CZ Constant "0" (+1.2 v)

NU Not Used

$\overline{XX}$ The bar over a term indicates that the signal is active at the "0" level.



CONTROL DATA CORPORATION COMPUTER DIVISION	TITLE SATELLITE COUPLER BLOCK DIAGRAM COUPLERS A & B	PRODUCT 6683-D SIZE C · DRAWING NO. 60440900 · REV A SHEET 86

PART 1 DIAGRAM

The part 1 diagram shows control logic for initiating and stopping operations.

Module A08 (lower left) decodes the equipment select code which is determined at installation.† If the function word parity is correct, A08-12 causes an inactive to transmit to the PPS. Module A08 also partially enables modules B08 (lower left), A06 (right center), and the function parity flip-flop in module A03 (part 7).

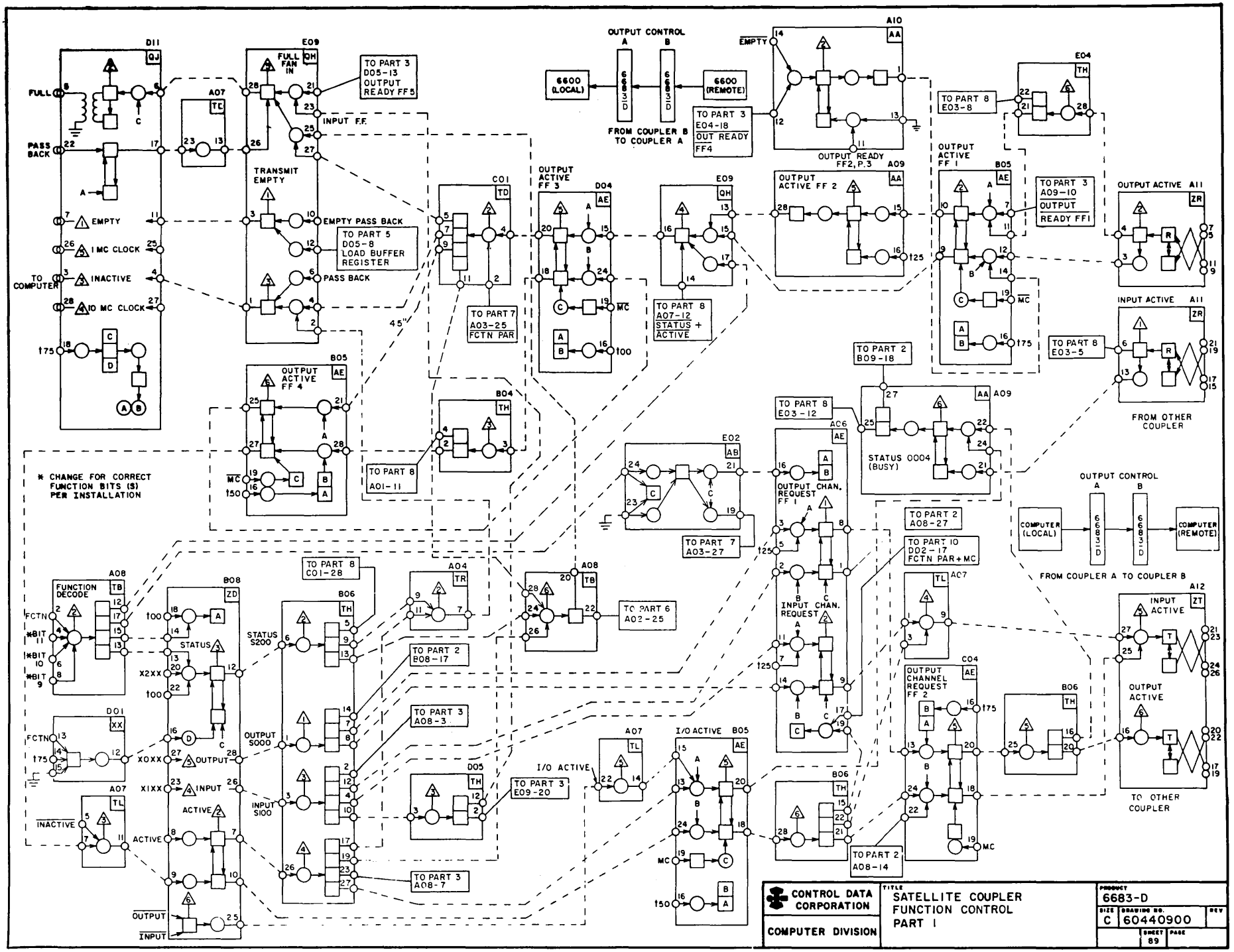
Module D08 (part 10) determines which function will execute, and drives the function select flip-flops on module B08 (lower left). Module B08 also contains the active flip-flop. Module B08 fans out the function select and active signals.

Modules A06, A07, and C04 (right lower center) cause module A12 to transmit an input active or output active signal to the remote coupler. These signals stay up for the duration of the operation. The I/O channel must be active before these signals will transmit.

Module A09 (right center) enables the data transmitter (part 2), and sets the output busy status bit (part 8).

Module A11 receives an output active or input active signal from the remote coupler. The input active signal sets the input active status bit (part 8). When the input active signal drops, it clears the output busy flip-flop on module A09. The output active signal sets the output active status bit (part 8), and enables output active FF1 and output active FF2 to set. When the output active signal drops, an inactive signal transmits to the local PPS, and the active flip-flop in module B08 (lower left) clears.

† A select code other than zero requires a QSE.


FULL
PASS BACK
EMPTY
1 MC CLOCK
TO COMPUTER
INACTIVE
10 MC CLOCK
TRANSMIT EMPTY
EMPTY PASS BACK
TO PART 5 D05-8 LOAD BUFFER REGISTER
PASS BACK
INPUT F.F.
FULL FAN IN
TO PART 3 D05-13 OUTPUT READY FF5
45"
TO PART 7 A03-25 FCTN PAR
OUTPUT ACTIVE FF 3
OUTPUT ACTIVE FF 4
TO PART 8 A01-11
TO PART 8 A07-12 STATUS + ACTIVE
OUTPUT CONTROL A B
6600 (LOCAL)
6600 (REMOTE)
FROM COUPLER B TO COUPLER A
TO PART 3 E04-18 OUT READY FF4
EMPTY
OUTPUT READY FF2, P.3
OUTPUT ACTIVE FF 2
OUTPUT ACTIVE FF 1
TO PART 8 E03-8
TO PART 3 A09-10 OUTPUT READY FF1
OUTPUT ACTIVE A11
INPUT ACTIVE A11
TO PART 8 E03-5
FROM OTHER COUPLER
TO PART 2 B09-18
TO PART 8 E03-12
STATUS 0004 (BUSY)
* CHANGE FOR CORRECT FUNCTION BITS (S) PER INSTALLATION
OUTPUT CHAN. REQUEST FF 1
TO PART 7 A03-27
TO PART 2 A08-27
TO PART 10 D02-17 FCTN PAR+MC
OUTPUT CONTROL A B
COMPUTER (LOCAL)
COMPUTER (REMOTE)
FROM COUPLER A TO COUPLER B
TO PART 8 C01-28
TO PART 6 A02-25
FUNCTION DECODE
STATUS S200
OUTPUT S000
INPUT S100
TO PART 2 B08-17
TO PART 3 A08-3
TO PART 3 A08-7
I/O ACTIVE
TO PART 3 E09-20
INPUT CHAN. REQUEST
OUTPUT CHANNEL REQUEST FF 2
TO PART 2 A08-14
INPUT ACTIVE
OUTPUT ACTIVE
TO OTHER COUPLER
CONTROL DATA CORPORATION
COMPUTER DIVISION
SATELLITE COUPLER FUNCTION CONTROL PART I
6683-D
C
60440900

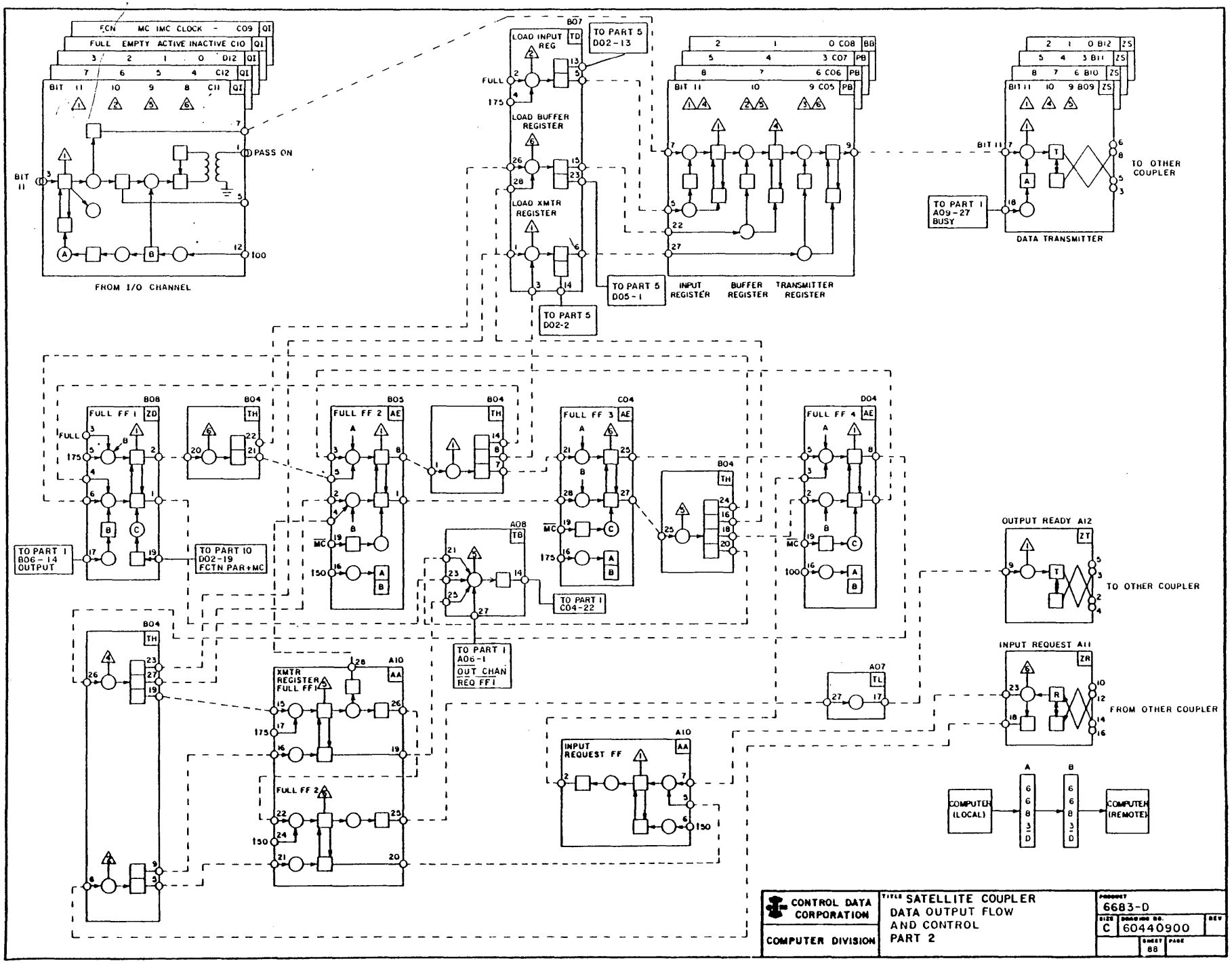
PART 2 DIAGRAM

The part 2 diagram shows logic which controls data flow during an output operation.

Full FF1 through full FF4 and xmtr register full FF1 and FF2 compose a timing chain. The timing chain generates sequential signals which load the buffer and transmitter registers. The timing chain also causes an output ready signal to accompany each data word to the remote coupler. Full signals from the I/O channel and clock t_{75} load the input register and drive the timing chain. Figure 4-2 shows the output timing chain signals.

The remote coupler sends an input request signal for each data word it receives. This signal causes the full FF4 input gate to enable. When it drops, the input request signal causes the output ready signal to appear.

A08-14 (left center) inhibits clearing of the output channel request FF2 on module C04 (part 1, lower right) until data transfer has stopped.


FCN MC IMC CLOCK - C09 Q1
FULL EMPTY ACTIVE INACTIVE C10 Q1
3 2 1 0 D12 Q1
7 6 5 4 C12 Q1
BIT 11 10 9 8 C11 Q1
PASS ON
BIT 11
100
FROM I/O CHANNEL
B07
LOAD INPUT REG
TO PART 5 D02-13
FULL
175
LOAD BUFFER REGISTER
LOAD XMTR REGISTER
TO PART 5 D05-1
TO PART 5 D02-2
2 1 0 C08 BB
5 4 3 C07 PB
8 7 6 C06 PB
BIT 11 10 9 C05 PB
INPUT REGISTER
BUFFER REGISTER
TRANSMITTER REGISTER
2 1 0 B12 ZS
5 4 3 B11 ZS
8 7 6 B10 ZS
BIT 11 10 9 B09 ZS
BIT 11
TO OTHER COUPLER
TO PART 1 A09-27 BUSY
DATA TRANSMITTER
B08
FULL FF 1 ZD
FULL
175
TO PART 1 B06-14 OUTPUT
TO PART 10 D02-19 FCTN PAR+MC
B04 TH
B05
FULL FF 2 AE
MC
150
A08 TB
TO PART 1 C04-22
C04
FULL FF 3 AE
175
B04 TH
D04
FULL FF 4 AE
100
OUTPUT READY A12
ZT
TO OTHER COUPLER
INPUT REQUEST A11
ZR
FROM OTHER COUPLER
B04 TH
A10
XMTR REGISTER FULL FF
175
FULL FF 2
150
TO PART 1 A06-1 OUT CHAN REQ FF
A07 TL
A10
INPUT REQUEST FF
150
A
B
6683D
6683D
COMPUTER (LOCAL)
COMPUTER (REMOTE)
CONTROL DATA CORPORATION
COMPUTER DIVISION
TITLE SATELLITE COUPLER DATA OUTPUT FLOW AND CONTROL PART 2
PRODUCT 6683-D
SIZE C
DRAWING NO. 60440900
REV
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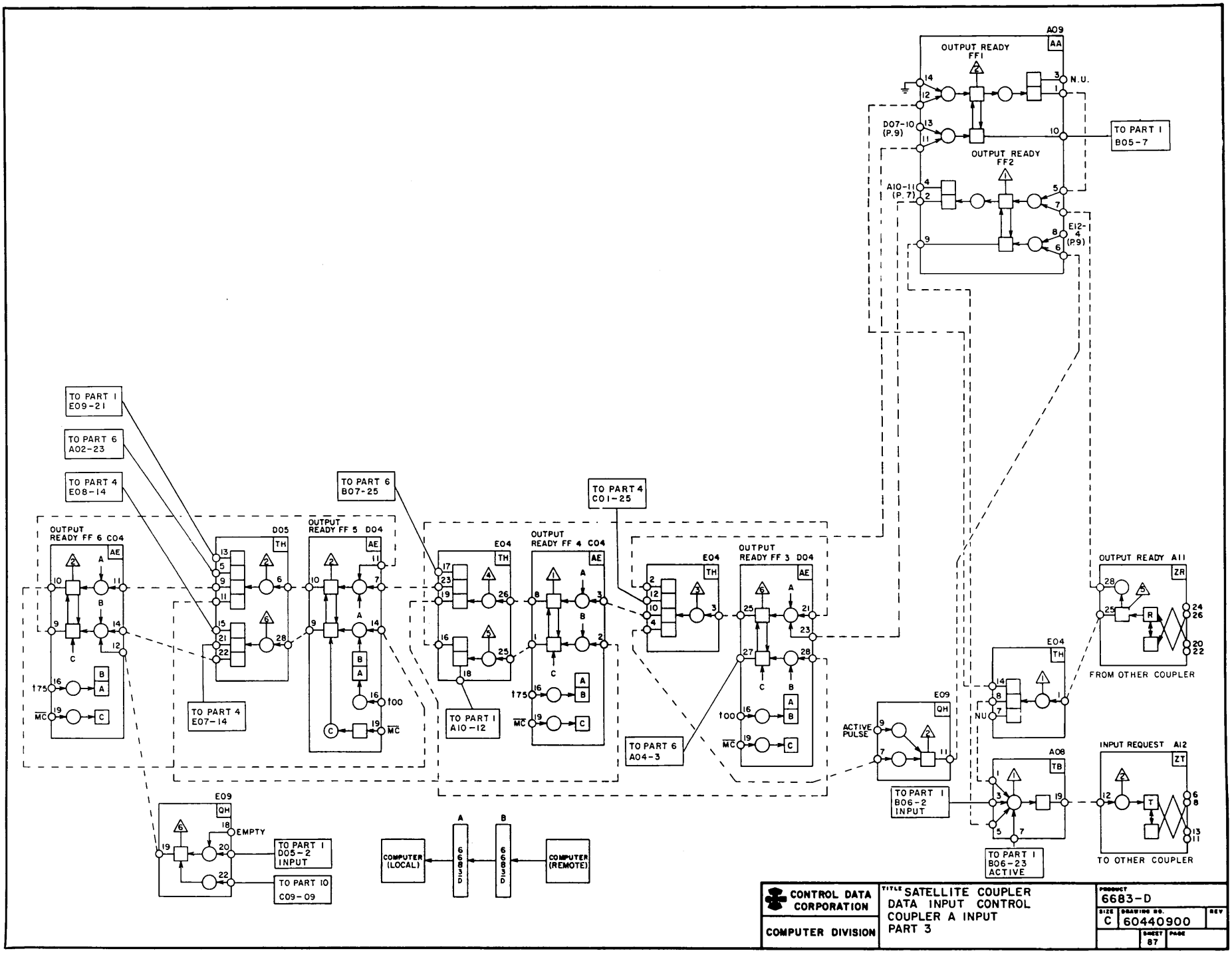
PAGE

PART 3 DIAGRAM

The part 3 diagram shows logic which controls the data flow during an input operation.

Output ready FF1 through FF6 composes a timing chain which controls data flow (part 4) during an input operation. Module A11 receives output ready signals accompanying the incoming data words from the remote coupler. These signals drive the timing chain. The timing chain also causes an input request signal to transmit to the remote coupler for each data word received. Figure 4-3 shows the input timing chain signals.


A09
AA
OUTPUT READY FF1
N.U.
D07-10 (P.9)
TO PART 1 B05-7
OUTPUT READY FF2
A10-11 (P.7)
E12-4 (P9)
TO PART 1 E09-21
TO PART 6 A02-23
TO PART 4 E08-14
TO PART 6 B07-25
TO PART 4 C01-25
OUTPUT READY FF 6 C04
D05
OUTPUT READY FF 5 D04
E04
OUTPUT READY FF 4 C04
OUTPUT READY FF 3 D04
TO PART 4 E07-14
TO PART 1 A10-12
TO PART 6 A04-3
OUTPUT READY A11
ZR
FROM OTHER COUPLER
E09
QH
EMPTY
TO PART 1 D05-2 INPUT
TO PART 10 C09-09
COMPUTER (LOCAL)
COMPUTER (REMOTE)
ACTIVE PULSE
TO PART 1 B06-2 INPUT
A08
TB
INPUT REQUEST A12
ZT
TO PART 1 B06-23 ACTIVE
TO OTHER COUPLER
CONTROL DATA CORPORATION
COMPUTER DIVISION
SATELLITE COUPLER DATA INPUT CONTROL COUPLER A INPUT PART 3
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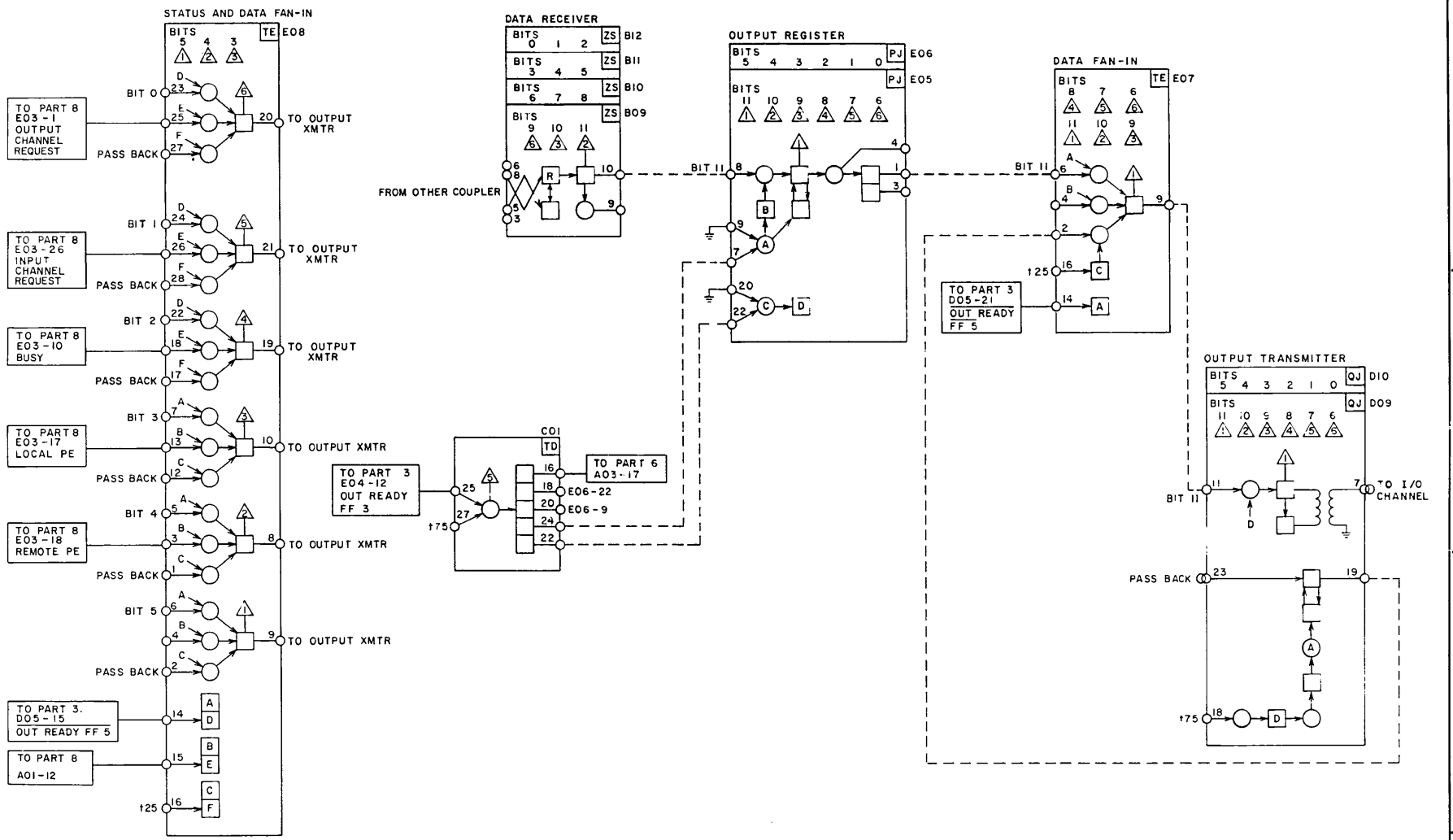
PART 4 DIAGRAM

The part 4 diagram shows the data flow during an input operation.

The out ready FF3 and $\overline{\text{out ready FF5}}$ signals sequentially load data words into the output and data fan in registers.

The $\overline{\text{out active FF3}}$ signal causes status information to load into module E08.



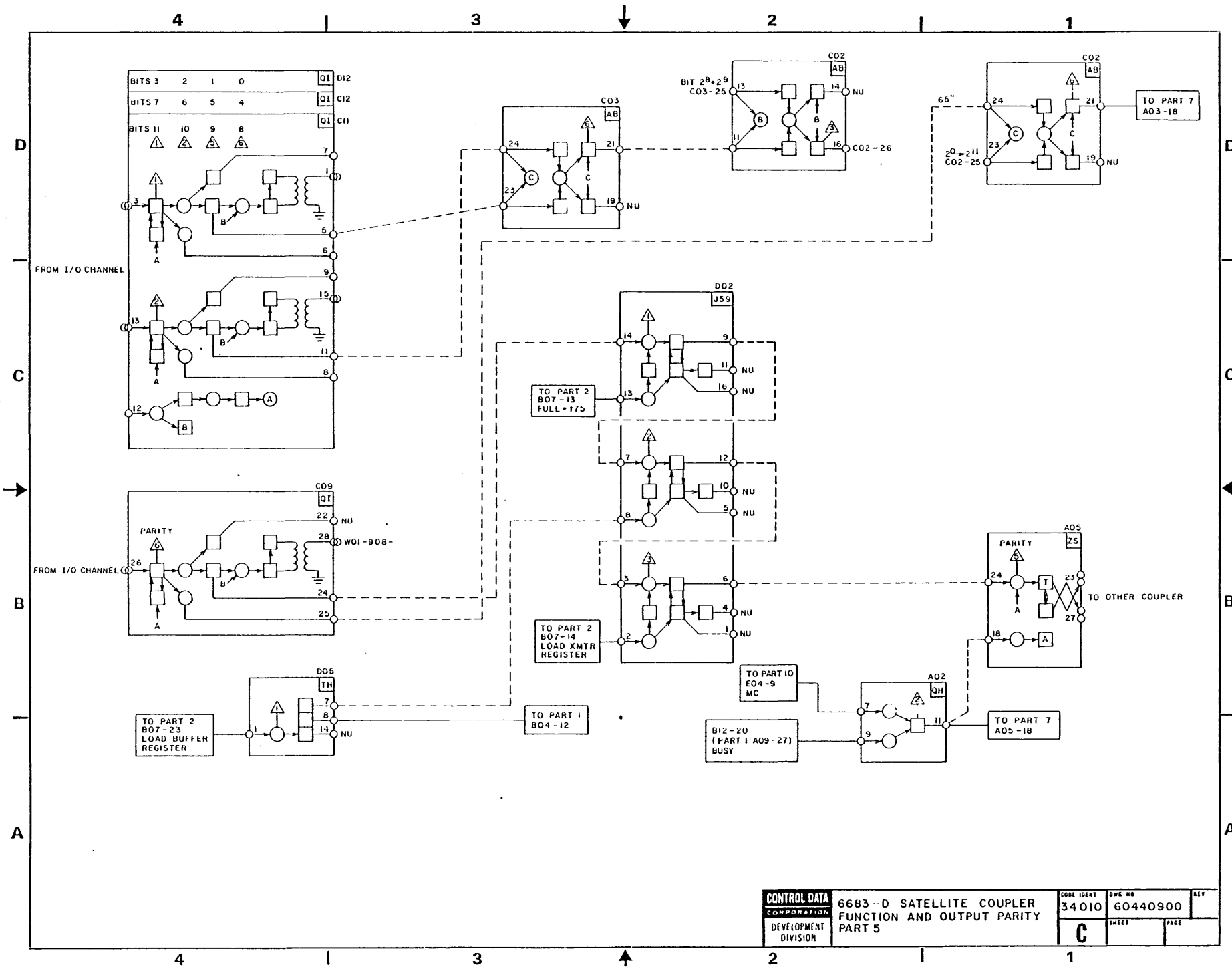
CONTROL DATA	6683-D SATELLITE COUPLER DATA INPUT FLOW PART 4	CODE IDENT 34010	DWG NO 60440900	REV
DEVELOPMENT DIVISION		C	SHEET	PAGE

PART 5 DIAGRAM

The part 5 diagram shows logic which checks parity on the function word for all operations, and on the data words during an output operation.

Module C09 receives the parity bit from the local PPS. Modules C02 and C03 check the parity of words received from the local PPS. C02-21 drives the parity control logic on the part 7 diagram.

Module D02 synchronizes the parity bit with the data word as it moves through the input, buffer, and transmitter registers. Module A05 transmits the parity bit to the remote coupler.



CONTROL DATA CORPORATION DEVELOPMENT DIVISION	6683 D SATELLITE COUPLER FUNCTION AND OUTPUT PARITY PART 5	CODE IDENT 34010	DWG NO 60440900	REV
		C	SHEET	PAGE

PART 6 DIAGRAM

The part 6 diagram shows logic which checks parity during an input operation.

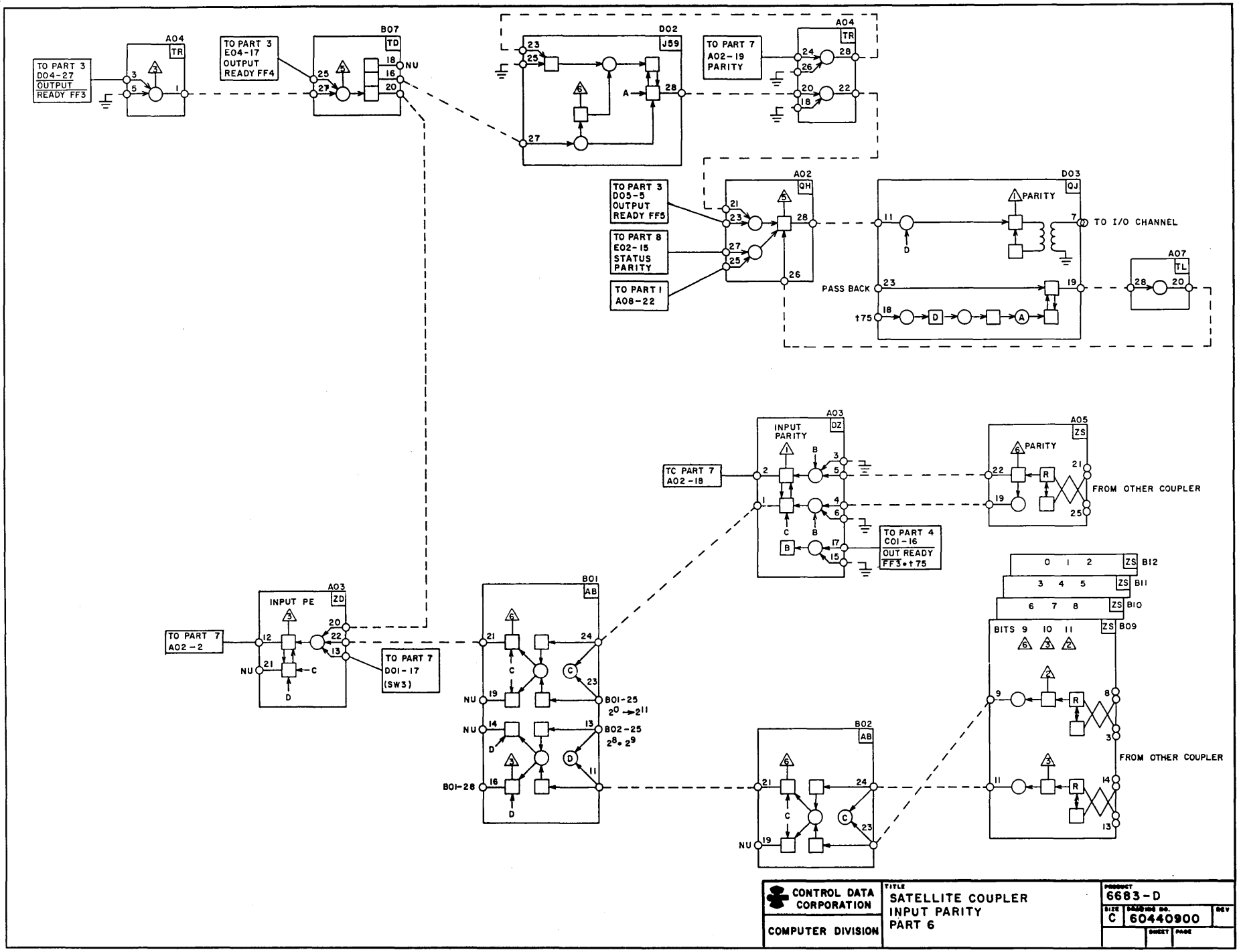
Module A05 receives the parity bit from the remote coupler. Modules B01 and B02 check the parity of data words received from the remote coupler.

The input parity flip-flop in module A03 (left center) drives module A02 (part 7, upper right). A02-19 (part 7) drives A04-24. A04-28 and B07-16 cause the flip-flop in module D02 to set before the data word loads into the fan-in register (part 4).

Output ready FF5 causes module D03 to send a parity bit to the local PPS in parallel with the data word.

If the remote coupler does not transmit a parity bit, B07-27 (not shown in the part 6 diagram) drives module A02 (part 7, upper right). A02-19 (part 7) then causes the internally generated parity bit to transmit to the local PPS as described above.

A03-12 causes the parity control logic (part 7) to send a parity error signal to the remote coupler. The local parity error status bit (part 8) also sets.


TO PART 3 D04-27 OUTPUT READY FF3
A04 TR
TO PART 3 E04-17 OUTPUT READY FF4
B07 TD
NU
D02 J59
TO PART 7 A02-19 PARITY
A04 TR
TO PART 3 D05-5 OUTPUT READY FF5
TO PART 8 E02-15 STATUS PARITY
TO PART 1 A08-22
A02 QH
D03 QJ
PARITY
TO I/O CHANNEL
PASS BACK
t75
A07 TL
A03 INPUT PARITY DZ
TC PART 7 A02-18
TO PART 4 C01-16 OUT READY FF3•t75
A05 ZS
PARITY
FROM OTHER COUPLER
A03 INPUT PE ZD
TO PART 7 A02-2
TO PART 7 D01-17 (SW3)
B01 AB
B01-25 $2^0 \rightarrow 2^{11}$
B02-25 $2^8 \cdot 2^9$
B01-28
B02 AB
0 1 2 ZS B12
3 4 5 ZS B11
6 7 8 ZS B10
BITS 9 10 11 ZS B09
FROM OTHER COUPLER
CONTROL DATA CORPORATION
COMPUTER DIVISION
TITLE
SATELLITE COUPLER
INPUT PARITY
PART 6
PRODUCT 6683-D
SIZE C
DRAWING NO. 60440900
REV
SHEET
PAGE

PART 7 DIAGRAM

The part 7 diagram shows the parity control logic.

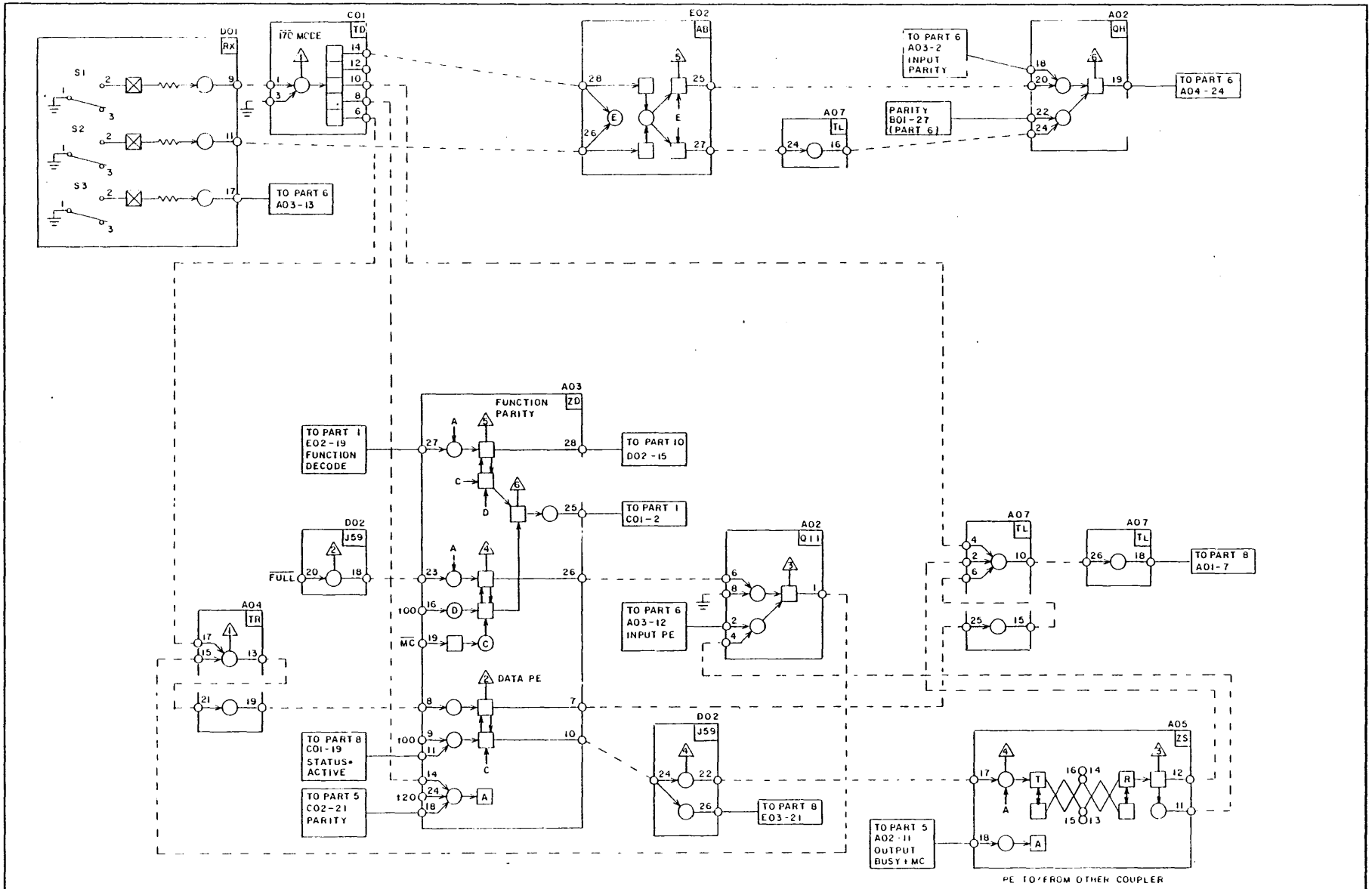
Switches SW1, SW2, and SW3 determine in which parity mode the 6683-D will operate. When SW1, SW2, and SW3 are closed (down), the 6683-D transmits received parity bits unchanged. When SW1 is closed and SW2 and SW3 are open (up), the 6683-D transmits an internally generated parity bit to the local PPS during an input operation. SW3 being open prevents a parity error status bit from being generated during an input operation.

The function parity flip-flop in module A03 sets when a function word has bad parity. A03-25 prevents an inactive from transmitting to the PPS. A03-28 drives D02-15 (part 10). This causes full FF1 (part 2), the channel request flip-flops (part 1, A06, right center), and the function register (B08, part 1) to clear.

The input PE signal drives A02-2 (center) when data has bad parity during an input operation. This causes the data PE flip-flop to set if a remote PE status signal is not available from the other coupler. A03-10 causes the local PE status bit (part 8) to set.

The center flip-flop in module A03 sets when data has bad parity during an output operation. This causes the data PE flip-flop to set. Operation then proceeds as described above. A03-7 prevents a transmitted parity error signal from driving the local coupler status register (part 8).

Module A05 transmits and receives parity error signals. An incoming parity error signal causes the remote PE status bit (part 8) to set.



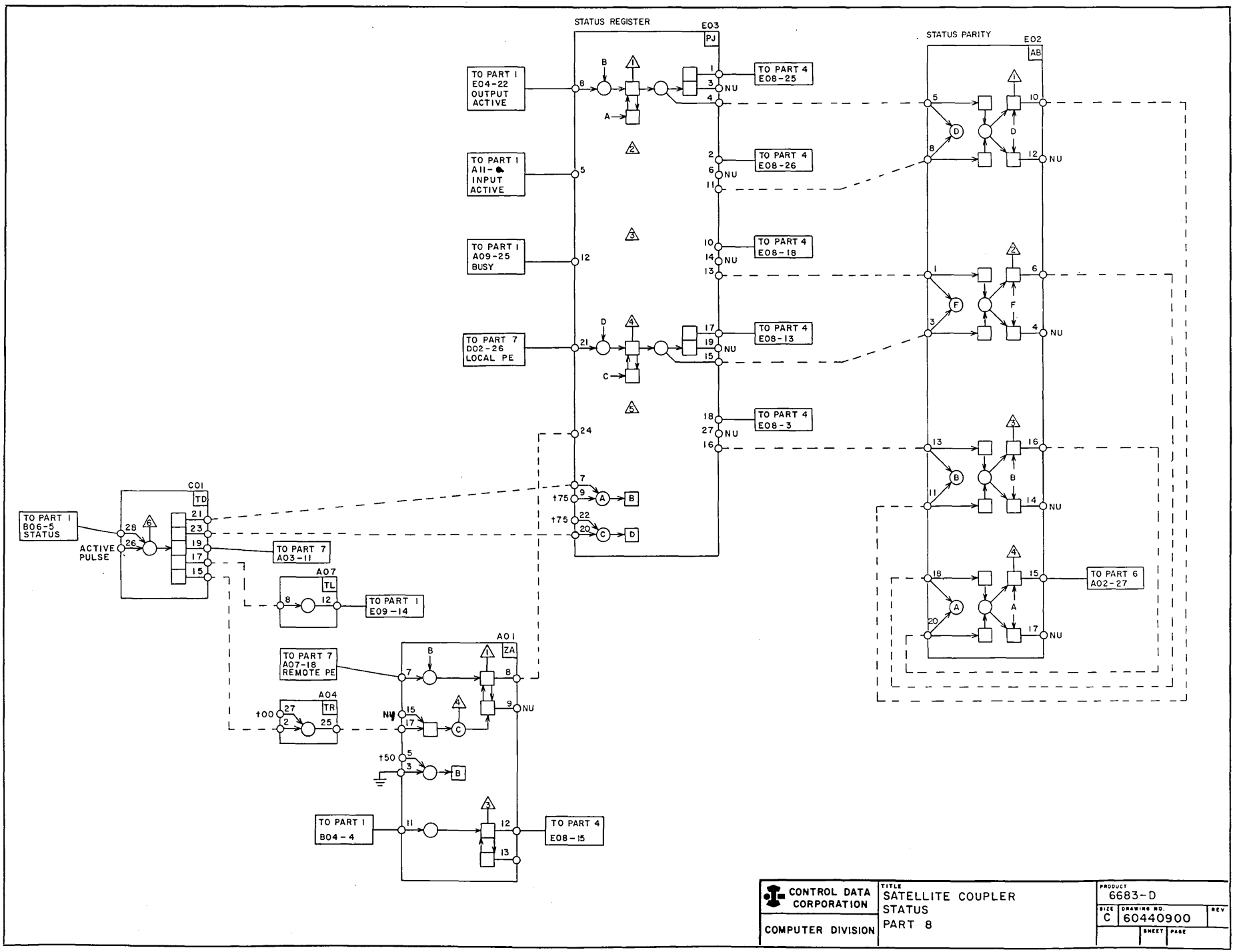
CONTROL DATA CORPORATION	TITLE: SATELLITE COUPLER PARITY CONTROL PART 7	PRODUCT: 6683-D	
COMPUTER DIVISION		SIZE: C	DRAWING NO: 60440900
		SHEET	PAGE

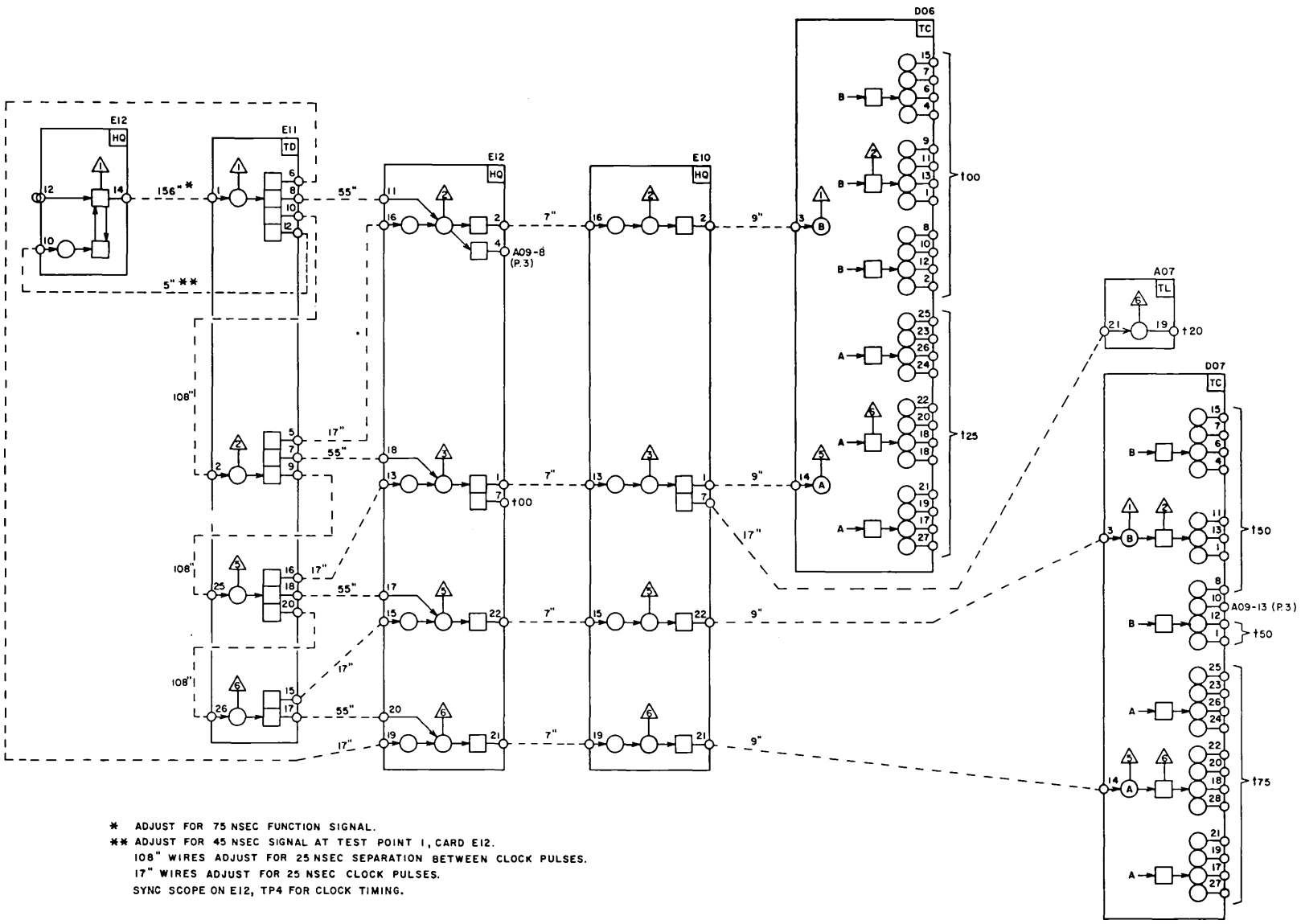
PART 8 DIAGRAM

Module E03 is the status register.

C01-21 and C01-23 cause the flip-flops in module E03 to set during a status operation. C01-19 clears the data PE flip-flop (part 7). C01-17 causes module B04 (part 1, left center) to generate $\overline{\text{output active FF3}}$. This loads the status information into the fan-in register (part 4).

Module E02 generates parity for the status information.


STATUS REGISTER
E03
PJ
STATUS PARITY
E02
AB
TO PART 1 E04-22 OUTPUT ACTIVE
TO PART 1 A11- INPUT ACTIVE
TO PART 1 A09-25 BUSY
TO PART 7 D02-26 LOCAL PE
TO PART 4 E08-25
TO PART 4 E08-26
TO PART 4 E08-18
TO PART 4 E08-13
TO PART 4 E08-3
TO PART 1 B06-5 STATUS
ACTIVE PULSE
C01
TD
TO PART 7 A03-11
A07
TL
TO PART 1 E09-14
A01
ZA
TO PART 7 A07-18 REMOTE PE
A04
TR
TO PART 1 B04-4
TO PART 4 E08-15
TO PART 6 A02-27
CONTROL DATA CORPORATION
COMPUTER DIVISION
SATELLITE COUPLER STATUS PART 8
6683-D
C
60440900

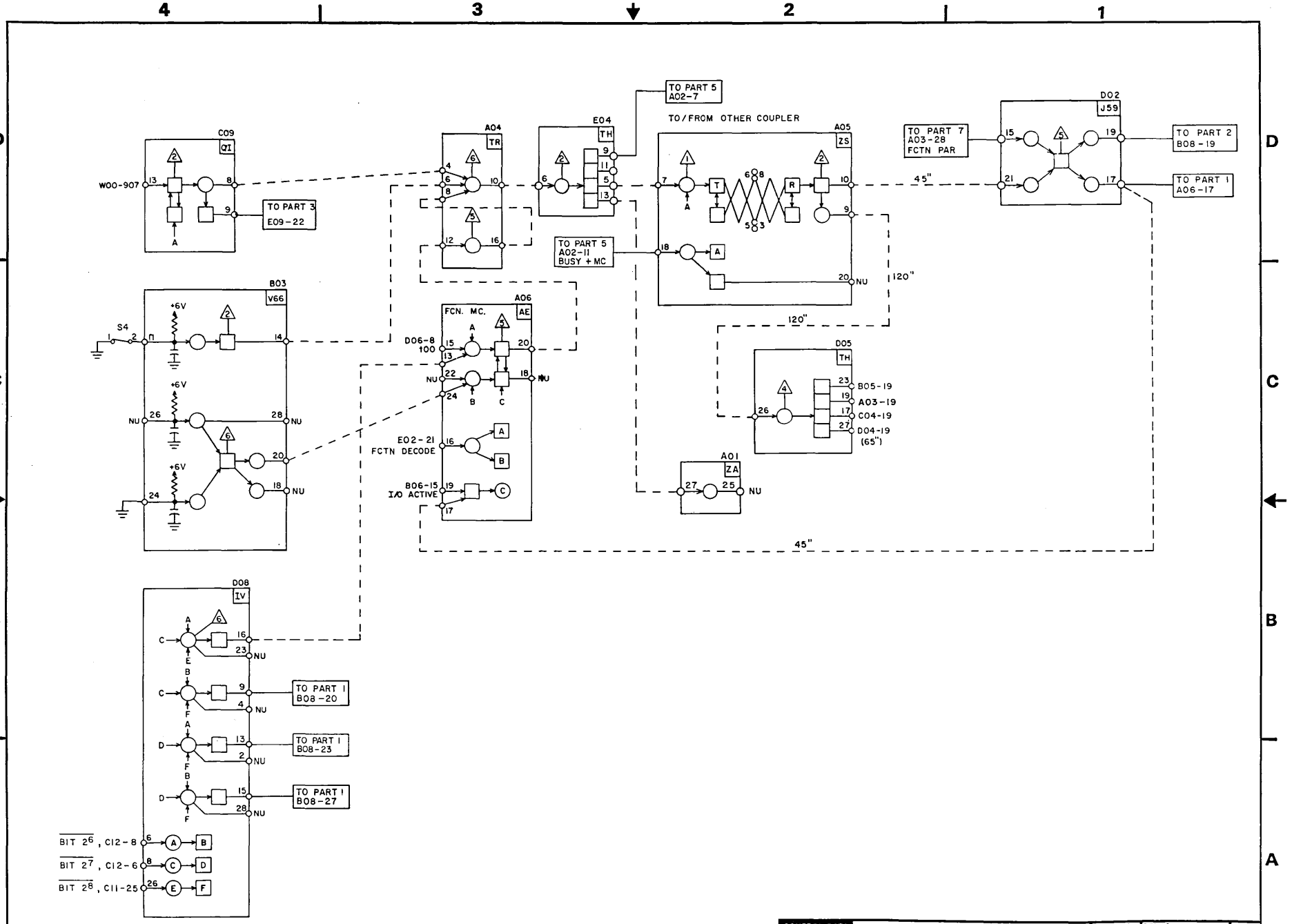


* ADJUST FOR 75 NSEC FUNCTION SIGNAL.
** ADJUST FOR 45 NSEC SIGNAL AT TEST POINT 1, CARD E12.
108" WIRES ADJUST FOR 25 NSEC SEPARATION BETWEEN CLOCK PULSES.
17" WIRES ADJUST FOR 25 NSEC CLOCK PULSES.
SYNC SCOPE ON E12, TP4 FOR CLOCK TIMING.

CONTROL DATA CORPORATION COMPUTER DIVISION	TITLE SATELLITE COUPLER CLOCK PART 9	PRODUCT 6683-D	
		SIZE C	DRAWING NO. 60440900 REV
		SHEET 90	PAGE

Module D08 determines which function will execute.

If bits 2^6, 2^7, and 2^8 are 111_2, D08-16 causes the FCN MC flip-flop on module A06 to set. This causes the local coupler to clear. Module A05 also transmits a master clear signal to the remote coupler.



CONTROL DATA	6683-D SATELLITE COUPLER MASTER CLEAR PART 10	CODE IDENT 34010	DWG NO 60440900	REV
DEVELOPMENT DIVISION		C	SHEET	PAGE

SECTION 6

MAINTENANCE

(Not Applicable)

SECTION 7

PARTS DATA

DOCUMENTS

The following parts data document is included in this section.

Title	Document Number
6683-D Mechanized Listing	23065400

MECHANIZED LISTING PREFACE

The parts list provides the identification and ordering data necessary for the replacement of electrical and hardware parts for this equipment. The equipment designation, final assembly number, and equipment name appear at the top of each page. The list is arranged in disassembly order, using levels of assembly to indicate the relationship of parts.

A typical parts list is shown below:

MAG14-C	18058800	D	MAG14C CENTRAL STORAGE MOD	
L E V E L†	PART NO	REV	DESCRIPTION	ECO-NO††
1	18515400	B	SYSTEM SUB-ASSY	
2	18074900	J	STOR MODULE ASSY WIRED	IN 064591
3	18074700	G	PL TOP STORAGE MODULE	
3	18074800	H	STACK AND DR DK ASSY WIRED	
4	18075000	G	STACK ASSY WIRED STOR MODULE	
5	63130100	F	PLANE ASSY INNER STOR MODULE	IN 620152
6	63702100	J	BOARD BLANK MEMORY PLANE IN	
3		00	0000000000000000000000000000000 †††	

Refer to the Literature Catalog, publication number 90310400, for related manuals on printed circuit card assemblies, peripheral cabinets, power supplies, and vendor parts lists necessary to complete a total parts breakdown of the equipment.

† The level of assembly in relation to the final cabinet assembly (2 is the subassembly of level 1, 3 is the subassembly of level 2, etc).

†† The engineering change order number on which the part is either added (IN) or deleted (OUT) in the equipment.

††† If the description column contains all zeros, the drawing is not released. Revisions show corrections.

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
1	15000700	F	EQUIPMENT IDENTIFICATION PLATE	N	IN	
1	23065500	B	TOP ASSY SATL COUPLER CHASSIS	N	IN	
2	22746500	A	CARD PLACEMENT-SATL CPLR CHAS	N	IN	
3	17660000	E	MODULE ASSEMBLY- TYPE ZD	N	IN	
4	17659900	C	BD/MA PRINTED CKT TYPE ZD		IN	
4	17659901	C	BD/MA PRINTED CKT TYPE ZD		IN	
4	17856750	S	IDENT PLATE, LOGIC MOD ZD		IN	
4	20219900	A	MODULE ASSY KIT		IN	021136
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	
4	24500043	F	RES FXD .25W 150 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
3	17814700	A	INSULATOR CARD MODULE	N	IN	
3	17876100	G	MODULE ASSY TYPE ZS	N	IN	
4	17838500	A	TRANSISTOR PNP SILICON		IN	
4	17856765	S	IDENT PLATE, LOGIC MOD ZS		IN	
4	17876000	E	BD/MA PRINTED CKT TYPE ZS		IN	
4	17876001	E	BD MA PRINTED CKT TYPE ZS		IN	
4	20219900	A	MODULE ASSY KIT		IN	021118
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500015	F	RES FXD .25W 10 OHMS		IN	
4	24500024	F	RES FXD .25W 24 OHMS		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	
4	24500043	F	RES FXD .25W 150 OHMS		IN	
4	24500046	F	RES FXD .25W 200 OHMS		IN	
4	24500049	F	RES FXD .25W 270 OHMS		IN	
4	24500051	F	RES FXD .25W 330 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500058	F	RES FXD .25W 620 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24500067	F	RES FXD .25W 1500 OHMS		IN	
4	24500077	F	RES FXD .25W 3900 OHMS		IN	
4	24500094	F	RES FXD .25W 20000 OHMS		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24525607	N	RES FXD MET F 1/8W 75 OHMS		IN	
4	24525608	N	RES FXD MET F 1/8W 100 OHMS		IN	
4	24525609	N	RES FXD MET F 1/8W 182 OHMS		IN	
4	24525610	N	RES FXD MET F 1/8W 332 OHMS		IN	
4	24553500	S	DIODE SILICON PLANAR		IN	
4	24553600	E	TRANSISTOR-NPN, SI PLANAR		IN	
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
3	17876300	G	MODULE ASSEMBLY-TYPE ZR	N	IN	
4	17838500	A	TRANSISTOR PNP SILICON		IN	
4	17856764	S	IDENT PLATE, LOGIC MOD ZR		IN	
4	17876200	D	BD/MA PRINTED CKT TYPE ZR		IN	
4	17876201	D	BD/MA PRINTED CKT TYPE ZR		IN	
4	20219900	A	MODULE ASSY KIT		IN	021118
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE	ECO-NO
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN
4	24500015	F	RES FXD .25W 10 OHMS		IN
4	24500033	F	RES FXD .25W 56 OHMS		IN
4	24500039	F	RES FXD .25W 100 OHMS		IN
4	24500041	F	RES FXD .25W 120 OHMS		IN
4	24500046	F	RES FXD .25W 200 OHMS		IN
4	24500049	F	RES FXD .25W 270 OHMS		IN
4	24500051	F	RES FXD .25W 330 OHMS		IN
4	24500055	F	RES FXD .25W 470 OHMS		IN
4	24500058	F	RES FXD .25W 620 OHMS		IN
4	24500067	F	RES FXD .25W 1500 OHMS		IN
4	24500094	F	RES FXD .25W 20000 OHMS		IN
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN
4	24553500	S	DIODE SILICON PLANAR		IN
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN
4	63036800	S	WIRE JUMPER		IN
3	17876500	G	MODULE ASSEMBLY TYPE ZT	N	IN
4	17838500	A	TRANSISTOR PNP SILICON		IN
4	17856766	S	IDENT PLATE, LOGIC MOD ZT		IN
4	17876400	E	BD/MA PRINTED CKT TYPE ZT		IN
4	17876401	E	BD/MA PRINTED CKT TYPE ZT		IN
4	20219900	A	MODULE ASSY KIT		IN 021151
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN
5	18764000	A	MODULE CAP ASSEMBLY		IN
6	17733602	F	CAP MODULE		IN
6	18747000	B	CONN RECEPTACLE TEST POINT		IN
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN
4	24500024	F	RES FXD .25W 24 OHMS		IN
4	24500031	F	RES FXD .25W 47 OHMS		IN
4	24500055	F	RES FXD .25W 470 OHMS		IN
4	24500077	F	RES FXD .25W 3900 OHMS		IN
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN
4	24525607	N	RES FXD MET F 1/8W 75 OHMS		IN
4	24525608	N	RES FXD MET F 1/8W 100 OHMS		IN
4	24525609	N	RES FXD MET F 1/8W 182 OHMS		IN
4	24525610	N	RES FXD MET F 1/8W 332 OHMS		IN
4	24553500	S	DIODE SILICON PLANAR		IN
4	24553600	E	TRANSISTOR-NPN, SI PLANAR		IN
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN
4	63036800	S	WIRE JUMPER		IN
3	17994100	G	BLANK CARD CAP	N	IN
3	18060300	E	MODULE ASSY TYPE TR	N	IN
4	17856608	C	IDENT PLATE, LOGIC MOD TR		IN
4	18060400	C	BOARD/MASTER P C TYPE TR		IN
4	18060401	C	BOARD/MASTER P C TYPE TR		IN
4	20219900	A	MODULE ASSY KIT		IN 021160
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN
5	18764000	A	MODULE CAP ASSEMBLY		IN
6	17733602	F	CAP MODULE		IN
6	18747000	B	CONN RECEPTACLE TEST POINT		IN
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN
4	24500031	F	RES FXD .25W 47 OHMS		IN
4	24500033	F	RES FXD .25W 56 OHMS		IN
4	24500041	F	RES FXD .25W 120 OHMS		IN
4	24500055	F	RES FXD .25W 470 OHMS		IN
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN
4	24553501	S	DIODE SILICON PLANAR		IN 034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN
4	63036800	S	WIRE JUMPER		IN
3	18294700	E	MODULE ASSY TYPE J59	N	IN
4	17857059	B	IDEN PL LOGIC MODULE J59		IN
4	18294800	C	BD/MA PRINTED CKT TYPE J59		IN
4	18294801	C	BD/MA PRINTED CKT TYPE J59		IN
4	20219900	A	MODULE ASSY KIT		IN 021154
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN
5	18764000	A	MODULE CAP ASSEMBLY		IN
6	17733602	F	CAP MODULE		IN
6	18747000	B	CONN RECEPTACLE TEST POINT		IN

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	
4	24500047	F	RES FXD .25W 220 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
3	18430000	G	MODULE ASSY TYPE V66	N	IN	
4	17936166	B	IDENT PLATE LOGIC MODULE		IN	
4	17948200	E	BOARD/MASTER P C TYPE V66		IN	
4	17948201	E	BOARD/MASTER P C TYPE V66		IN	
4	20219900	A	MODULE ASSY KIT		IN	021172
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	
4	24500043	F	RES FXD .25W 150 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500057	F	RES FXD .25W 560 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501737	J	CAP FXD CER DIELECTRIC		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
3	18455500	D	SCREW, CAPTIVE, LOG STOR MOD	N	IN	
3	18574100	F	MODULE ASSEMBLY TYPE RX	N	IN	
4	17856562	C	IDENT PLATE LOGIC MOD PN-TI		IN	
4	17942100	C	CAP MODULE		IN	
4	18574200	B	BD/MA PRINTED CKT TYPE RX		IN	
4	18574201	B	BD/MA PRINTED CKT TYPE RX		IN	
4	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	017614
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500037	F	RES FXD .25W 82 OHMS		IN	035202
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	
4	24500043	F	RES FXD .25W 150 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500057	F	RES FXD .25W 560 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	30093300	B	SWITCH, TOGGLE-SUBMINIATURE		IN	
4	63036800	S	WIRE JUMPER		IN	
3	20220000	A	MODULE RETAINER KIT,AIR COOLED	N	IN	
4	17814700	A	INSULATOR CARD MODULE		IN	
4	17901502	H	4-40SCR THD ROLL PHL H PAN		IN	
4	17949401	E	RETAINER MODULE ASSY		IN	
5	00843508	E	RING RETAINING		IN	024847
5	17733800	H	RETAINER MODULE-WIDE		IN	
5	18455500	D	SCREW, CAPTIVE, LOG STOR MOD		IN	024847
5	52751400	B	WASHER SPACER		IN	024847
3	52543200	C	MODULE ASSY TYPE AE	N	IN	
4	17856104	C	IDENT PLATE LOGIC MOD AA-DV		IN	
4	20219900	A	MODULE ASSY KIT		IN	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500043	F	RES FXD .25W 150 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500057	F	RES FXD .25W 560 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561903	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
4	63605800	B	BOARD MASTER PC TYPE AEA		IN	
4	63605900	B	BOARD MASTER PC TYPE AEB		IN	
3	52543500	C	MODULE ASSY TYPE AB	N	IN	
4	17856101	C	IDENT PLATE LOGIC MOD AA-DV		IN	
4	20219900	A	MODULE ASSY KIT		IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
4	63605200	F	BOARD MASTER PC TYPE ABA		IN	
4	63605300	F	BOARD MASTER PC TYPE ABB		IN	
3	52543600	D	MODULE ASSY TYPE AA	N	IN	
4	17856100	C	IDENT PLATE LOGIC MOD AA-DV		IN	
4	20219900	A	MODULE ASSY KIT		IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
4	63605000	D	BOARD/MASTER PC TYPE AAA		IN	
4	63605100	C	BOARD MASTER PC TYPE AAB		IN	
3	52544500	C	MODULE ASSY TYPE IV	N	IN	
4	17856329	C	IDENT PLATE LOGIC MOD HS-LN		IN	
4	20219900	A	MODULE ASSY KIT		IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500039	F	RES FXD .25W 100 OHMS		IN	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE	ECO-ND
4	24500041	F	RES FXD .25W 120 OHMS	IN	
4	24500043	F	RES FXD .25W 150 OHMS	IN	
4	24500055	F	RES FXD .25W 470 OHMS	IN	
4	24500057	F	RES FXD .25W 560 OHMS	IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA	IN	
4	24553501	S	DIODE SILICON PLANAR	IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V	IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR	IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP	IN	
4	63036800	S	WIRE JUMPER	IN	
4	63623600	E	BOARD MASTER PC TYPE IVA	IN	
4	63623700	E	BOARD MASTER PC TYPE IVB	IN	
3	52548700	B	MODULE ASSY TYPE PB	N IN	
4	17856488	C	IDENT PLATE LOGIC MOD PB	IN	
4	20219900	A	MODULE ASSY KIT	IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER	IN	
5	18764000	A	MODULE CAP ASSEMBLY	IN	
6	17733602	F	CAP MODULE	IN	
6	18747000	B	CONN RECEPTACLE TEST POINT	IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN	IN	
4	24500031	F	RES FXD .25W 47 OHMS	IN	
4	24500033	F	RES FXD .25W 56 OHMS	IN	
4	24500039	F	RES FXD .25W 100 OHMS	IN	
4	24500043	F	RES FXD .25W 150 OHMS	IN	
4	24500055	F	RES FXD .25W 470 OHMS	IN	
4	24500057	F	RES FXD .25W 560 OHMS	IN	
4	24500059	F	RES FXD .25W 680 OHMS	IN	
4	24501710	J	CAP FXD CER DIELECTRIC	IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA	IN	
4	24561307	F	CAP FIXED CERAMIC .1UF,25V	IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR	IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP	IN	
4	63036800	S	WIRE JUMPER	IN	
4	63640400	E	BOARD MASTER PC TYPE PBA	IN	
4	63640500	F	BOARD MASTER PC TYPE PBB	IN	
3	52549200	D	MODULE ASSY TYPE PJ	N IN	
4	17856496	C	IDENT PLATE LOGIC MOD PJ	IN	
4	20219900	A	MODULE ASSY KIT	IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER	IN	
5	18764000	A	MODULE CAP ASSEMBLY	IN	
6	17733602	F	CAP MODULE	IN	
6	18747000	B	CONN RECEPTACLE TEST POINT	IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN	IN	
4	24500031	F	RES FXD .25W 47 OHMS	IN	
4	24500033	F	RES FXD .25W 56 OHMS	IN	
4	24500039	F	RES FXD .25W 100 OHMS	IN	
4	24500041	F	RES FXD .25W 120 OHMS	IN	
4	24500043	F	RES FXD .25W 150 OHMS	IN	
4	24500047	F	RES FXD .25W 220 OHMS	IN	
4	24500055	F	RES FXD .25W 470 OHMS	IN	
4	24500057	F	RES FXD .25W 560 OHMS	IN	
4	24500059	F	RES FXD .25W 680 OHMS	IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA	IN	
4	24553501	S	DIODE SILICON PLANAR	IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V	IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR	IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP	IN	
4	63036800	S	WIRE JUMPER	IN	
4	63641800	D	BOARD MASTER PC TYPE PJA	IN	
4	63641900	D	BOARD MASTER PC TYPE PJB	IN	
3	52549700	E	MODULE ASSY TYPE QH	N IN	
4	17856520	C	IDENT PLATE LOGIC MOD PN-TI	IN	
4	20219900	A	MODULE ASSY KIT	IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER	IN	
5	18764000	A	MODULE CAP ASSEMBLY	IN	
6	17733602	F	CAP MODULE	IN	
6	18747000	B	CONN RECEPTACLE TEST POINT	IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN	IN	
4	24500031	F	RES FXD .25W 47 OHMS	IN	
4	24500033	F	RES FXD .25W 56 OHMS	IN	
4	24500041	F	RES FXD .25W 120 OHMS	IN	
4	24500055	F	RES FXD .25W 470 OHMS	IN	
4	24500059	F	RES FXD .25W 680 OHMS	IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA	IN	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
4	63646400	E	BOARD MASTER PC TYPE QHA		IN	
4	63646500	D	BOARD MASTER PC TYPE QHB		IN	
3	52549800	C	MODULE ASSY TYPE QI	N	IN	
4	17856521	C	IDENT PLATE LOGIC MOD PN-TI		IN	
4	20219900	A	MODULE ASSY KIT		IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500037	F	RES FXD .25W 82 OHMS		IN	035202
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	035202
4	24500043	F	RES FXD .25W 150 OHMS		IN	035202
4	24500051	F	RES FXD .25W 330 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500057	F	RES FXD .25W 560 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501710	J	CAP FXD CER DIELECTRIC		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553500	S	DIODE SILICON PLANAR		IN	
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	24573100	E	TRANSFOMER LOGIC		IN	
5	10392200	B	CORE TOROIDAL 230 MIL	N	IN	030270
5	24524401	AA	WIRE MAG RD POLY 33 GA RED	N	IN	030270
5	24524403	AA	WIRE MAG RD POLY 33 GA GREEN	N	IN	030270
5	24524413	AA	WIRE MAG ROUND,NATURAL	N	IN	034250
4	63036800	S	WIRE JUMPER		IN	
4	63646600	E	BOARD MASTER PC TYPE QIA		IN	
4	63646700	E	BOARD MASTER PC TYPE QIB		IN	
3	52549900	C	MODULE ASSY QJ	N	IN	
4	17856522	C	IDENT PLATE LOGIC MOD PN-TI		IN	
4	20219900	A	MODULE ASSY KIT		IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500037	F	RES FXD .25W 82 OHMS		IN	035202
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	035202
4	24500043	F	RES FXD .25W 150 OHMS		IN	035202
4	24500051	F	RES FXD .25W 330 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501710	J	CAP FXD CER DIELECTRIC		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	24573100	E	TRANSFOMER LOGIC		IN	
5	10392200	B	CORE TOROIDAL 230 MIL	N	IN	030270
5	24524401	AA	WIRE MAG RD POLY 33 GA RED	N	IN	030270
5	24524403	AA	WIRE MAG RD POLY 33 GA GREEN	N	IN	030270
5	24524413	AA	WIRE MAG ROUND,NATURAL	N	IN	034250
4	63036800	S	WIRE JUMPER		IN	
4	63646800	J	BOARD MASTER PC TYPE QJA		IN	
4	63646900	J	BOARD MASTER PC TYPE QJB		IN	
3	52551000	C	MODULE ASSY TYPE TB	N	IN	
4	17856592	C	IDENT PLATE LOGIC MOD PN-TI		IN	
4	20219900	A	MODULE ASSY KIT		IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE	ECO-NO
6	17733602	F	CAP MODULE	IN	
6	18747000	B	CONN RECEPTACLE TEST POINT	IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN	IN	
4	24500031	F	RES FXD .25W 47 OHMS	IN	
4	24500033	F	RES FXD .25W 56 OHMS	IN	
4	24500039	F	RES FXD .25W 100 OHMS	IN	
4	24500041	F	RES FXD .25W 120 OHMS	IN	
4	24500043	F	RES FXD .25W 150 OHMS	IN	
4	24500055	F	RES FXD .25W 470 OHMS	IN	
4	24500057	F	RES FXD .25W 560 OHMS	IN	
4	24500059	F	RES FXD .25W 680 OHMS	IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA	IN	
4	24553501	S	DIODE SILICON PLANAR	IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V	IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR	IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP	IN	
4	63036800	S	WIRE JUMPER	IN	
4	63651800	D	BOARD MASTER PC TYPE TBA	IN	
4	63651900	D	BOARD MASTER PC TYPE TBB	IN	
3	52551100	D	MODULE ASSY TYPE TC	N IN	
4	17856593	C	IDENT PLATE LOGIC MOD PN-TI	IN	
4	20219900	A	MODULE ASSY KIT	IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER	IN	
5	18764000	A	MODULE CAP ASSEMBLY	IN	
6	17733602	F	CAP MODULE	IN	
6	18747000	B	CONN RECEPTACLE TEST POINT	IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN	IN	
4	24500031	F	RES FXD .25W 47 OHMS	IN	
4	24500033	F	RES FXD .25W 56 OHMS	IN	
4	24500041	F	RES FXD .25W 120 OHMS	IN	
4	24500043	F	RES FXD .25W 150 OHMS	IN	
4	24500055	F	RES FXD .25W 470 OHMS	IN	
4	24500057	F	RES FXD .25W 560 OHMS	IN	
4	24500059	F	RES FXD .25W 680 OHMS	IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA	IN	
4	24553501	S	DIODE SILICON PLANAR	IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V	IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR	IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP	IN	
4	63036800	S	WIRE JUMPER	IN	
4	63652000	D	BOARD MASTER PC TYPE TCA	IN	
4	63652100	D	BOARD MASTER PC TYPE TCB	IN	
3	52551200	D	MODULE ASSY TYPE TD	N IN	
4	17856594	C	IDENT PLATE LOGIC MOD PN-TI	IN	
4	20219900	A	MODULE ASSY KIT	IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER	IN	
5	18764000	A	MODULE CAP ASSEMBLY	IN	
6	17733602	F	CAP MODULE	IN	
6	18747000	B	CONN RECEPTACLE TEST POINT	IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN	IN	
4	24500031	F	RES FXD .25W 47 OHMS	IN	
4	24500033	F	RES FXD .25W 56 OHMS	IN	
4	24500041	F	RES FXD .25W 120 OHMS	IN	
4	24500043	F	RES FXD .25W 150 OHMS	IN	
4	24500055	F	RES FXD .25W 470 OHMS	IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA	IN	
4	24553501	S	DIODE SILICON PLANAR	IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V	IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR	IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP	IN	
4	63036800	S	WIRE JUMPER	IN	
4	63652200	E	BOARD MASTER PC TYPE TDA	IN	
4	63652300	E	BOARD MASTER.PC TYPE TDB	IN	
3	52551300	D	MODULE ASSY TYPE TE	N IN	
4	17856595	C	IDENT PLATE LOGIC MOD PN-TI	IN	
4	20219900	A	MODULE ASSY KIT	IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER	IN	
5	18764000	A	MODULE CAP ASSEMBLY	IN	
6	17733602	F	CAP MODULE	IN	
6	18747000	B	CONN RECEPTACLE TEST POINT	IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN	IN	
4	24500031	F	RES FXD .25W 47 OHMS	IN	
4	24500033	F	RES FXD .25W 56 OHMS	IN	
4	24500041	F	RES FXD .25W 120 OHMS	IN	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
4	24500043	F	RES FXD .25W 150 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034286
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
4	63652400	D	BOARD MASTER PC TYPE TEA		IN	
4	63652500	D	BOARD MASTER PC TYPE TEB		IN	
3	52551500	D	MODULE ASSY TYPE TH	N	IN	
4	17856598	C	IDENT PLATE LOGIC MOD PN-TI		IN	
4	20219900	A	MODULE ASSY KIT		IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	
4	24500043	F	RES FXD .25W 150 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500057	F	RES FXD .25W 560 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501806	J	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
4	63653000	D	BOARD MASTER PC TYPE THA		IN	
4	63653100	D	BOARD MASTER PC TYPE THB		IN	
3	52551700	D	MODULE ASSY TYPE TL	N	IN	
4	17856602	C	IDENT PLATE, LOGIC MOD TL		IN	
4	20219900	A	MODULE ASSY KIT		IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
4	63653800	D	BOARD MASTER PC TYPE TLA		IN	
4	63653900	D	BOARD MASTER PC TYPE TLB		IN	
3	52562100	D	MODULE ASSY TYPE HQ	N	IN	
4	17856298	C	IDENT PLATE LOGIC MOD DW-HR		IN	
4	20219900	A	MODULE ASSY KIT		IN	
5	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	
5	18764000	A	MODULE CAP ASSEMBLY		IN	
6	17733602	F	CAP MODULE		IN	
6	18747000	B	CONN RECEPTACLE TEST POINT		IN	
5	24562600	R	CONN. CARD RIGHT ANGLE 30 PIN		IN	
4	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500037	F	RES FXD .25W 82 OHMS		IN	035202
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		IN	
4	24500043	F	RES FXD .25W 150 OHMS		IN	
4	24500055	F	RES FXD .25W 470 OHMS		IN	
4	24500057	F	RES FXD .25W 560 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	F	CAP FIXED CERAMIC .1UF,25V		IN	

6683-D	23065400	B	SATELLITE COUPLER CHASSIS			
LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	63036800	S	WIRE JUMPER		IN	
4	63617400	C	BOARD MASTER PC TYPE HQA		IN	
4	63617500	C	BOARD MASTER PC TYPE HQB		IN	
2	22748000	A	SATELLITE CPLR CHASSIS-WIRED	N	IN	
3	20261809		LOGIC WIRING-SATELLITE		IN	044396
3	10125106	C	HEXAGON MACHINE SCREW NUTS	N	IN	
3	10125605	D	PLAIN WASHERS	N	IN	
3	10126103	C	INTERNAL TOOTH LOCK WASHERS	N	IN	
3	10126104	C	INTERNAL TOOTH LOCK WASHERS	N	IN	
3	10126214	C	HEX SCH CAP SCR (1960SER)4-40	N	IN	
3	10126400	D	EXTERNAL TOOTH LOCK WASHERS	N	IN	
3	10126401	D	EXT TOOTH LOCK WASHERS NO.6	N	IN	
3	10126403	D	EXT TOOTH LOCK WASHERS NO.10	N	IN	
3	10127103	D	SCR MACH PAN PHL 4-40	N	IN	
3	10127110	D	SCR MACH PAN PHL 4-40	N	IN	
3	10127111	D	SCR MACH PAN PHL 6-32	N	IN	
3	10127112	D	SCR MACH PAN PHL 6-32	N	IN	
3	10127123	D	SCR MACH PAN PHL 8-32	N	IN	
3	10127141	D	SCR MACH PAN PHL 10-32	N	IN	
3	10127144	D	SCR MACH PAN PHL 10-32	N	IN	
3	11819100	D	CHASSIS PWR AND GROUND WIRING	N	IN	
3	17801700	C	MEMBER,FRAME CHASSIS- L SIDE	N	IN	
4	17778300	C	EXTRUSION CHASSIS		IN	
3	17801900	D	BAR,MOUNTING-CARD	N	IN	
3	17805300	C	SEAL RUBBER CONNECTOR	N	IN	
3	17847400	A	SEAL AIR LOWER	N	IN	
3	17900200	B	CLAMP BUS BAR	N	IN	
3	17903500	C	W LIST-PWR JMPRS SATELL. CPLR	N	IN	
4	17743002	W	LEAD ELECT 18 GA 5 IN RED		IN	
5	24500706	N	PIN TAPER		IN	024206
5	24552337	D	INS SLV, 5/8 LG 9 AWG CLR		IN	024206
5	93463222	F	WIRE ELECTRICAL 18 AWG -2		IN	024206
4	17743003	W	LEAD ELECT 18 GA 5 IN BLUE		IN	
5	24500706	N	PIN TAPER		IN	024206
5	24552337	D	INS SLV, 5/8 LG 9 AWG CLR		IN	024206
5	93463666	F	WIRE ELECTRICAL 18 AWG -6		IN	024206
4	24500702	N	PIN TAPER		IN	030437
4	24511440	P	LEAD ELEC 24 GA 2.25 IN BLACK		IN	
5	24500707	N	PIN TAPER		IN	024206
5	24548301	M	WIRE ELECT 24 AWG - C		IN	024206
4	24511441	P	LEAD ELEC 24 GA 2.25 IN RED		IN	
5	24500707	N	PIN TAPER		IN	024206
5	24500802	L	INSULATION SLEEVING ELECT		IN	024206
5	24548303	M	WIRE ELEC STRD INS. UL APPD		IN	024206
4	24511442	P	LEAD ELEC 24 GA 2.25 IN BLUE		IN	029005
5	24500707	N	PIN TAPER		IN	024206
5	24500802	L	INSULATION SLEEVING ELECT		IN	024206
5	24548307	M	WIRE ELEC STRD INS. UL APPD		IN	024206
4	24552316	D	INS SLV, 5/8 LG 8 AWG BLK		IN	030437
4	93463000	H	WIRE ELECTRICAL 18 AWG -0		IN	030437
3	17912702	M	INSULATOR STRIP BUS BAR	N	IN	
3	17925400	G	MEMBER FR CHASSIS-RIGHT SIDE	N	IN	
4	17778300	C	EXTRUSION CHASSIS		IN	
3	17928300	C	CLAMP BUS BAR	N	IN	
3	17932700	L	STRIP MARKER HORIZONTAL	N	IN	
3	17932701	L	STRIP MARKER HORIZONTAL	N	IN	
3	18027900	J	MOUNTING BAR RECEPTACLE	N	IN	
4	17899000	D	EXTRUSION MOUNTING BAR		IN	
3	18028000	E	BUS BAR HORIZONTAL	N	IN	
4	17899200	D	AL ALLOY BAR EXTRUDED		IN	
3	18055000	C	PANEL CONNECTOR	N	IN	
3	18164200	H	CAPACITOR FIXED ELECTRO 10V	N	IN	
3	18279600	C	JUMPER ASSY PWR-12 GAGE	N	IN	
4	18070301	A	PIN TAPER		IN	
4	24552318	D	INS SLV, 5/8 LG 6 AWG BLK		IN	014036
4	93509000	G	WIRE ELECTRICAL 12 AWG -0		IN	
3	18279601	C	JUMPER ASSY PWR-12 GAGE	N	IN	
4	18070301	A	PIN TAPER		IN	
4	24552318	D	INS SLV, 5/8 LG 6 AWG BLK		IN	014036
4	93509222	E	WIRE ELECTRICAL 12 AWG -2		IN	
3	18279602	C	JUMPER ASSY PWR-12 GAGE	N	IN	
4	18070301	A	PIN TAPER		IN	
4	24552318	D	INS SLV, 5/8 LG 6 AWG BLK		IN	014036

6683-D 23065400 B SATELLITE COUPLER CHASSIS

LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
4	93509666	E	WIRE ELECTRICAL 12 AWG -6		IN	
3	18727008	D	BAR SUPPORT LONG	N	IN	
3	18801100	A	FILTER CAPACITOR ASSEMBLY	N	IN	
4	18786200	B	CAPACITOR, FIXED CERAMIC DISC		IN	
4	24500707	N	PIN TAPER		IN	
4	24528602	M	INS SLEEVING, ELEC-BULK		IN	021646
3	20261809		LOGIC WIRING-SATELLITE		IN	044396
4	24511442	P	LEAD ELEC 24 GA 2.25 IN BLUE	N	IN	035986
5	24500707	N	PIN TAPER		IN	024206
5	24500802	L	INSULATION SLEEVING ELECT		IN	024206
5	24548307	M	WIRE ELEC STRD INS. UL APPD		IN	024206
4	24561201	Y	WIRE ELEC 3 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561202	Y	WIRE ELEC 5 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561203	Y	WIRE ELEC 7 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561204	Y	WIRE ELEC 9 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	024714
4	24561205	Y	WIRE ELEC 11 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561206	Y	WIRE ELEC 13 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561207	Y	WIRE ELEC 15 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561208	Y	WIRE ELEC 17 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561209	Y	WIRE ELEC 19 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	024714
4	24561220	Y	WIRE ELEC 41 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561222	Y	WIRE ELEC 45 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561227	Y	WIRE ELEC 55 IN WHITE/BLACK	N	IN	
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561230	Y	WIRE ELEC 108 IN WHITE/BLACK	N	IN	
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131

6683-0 23065400 B SATELLITE COUPLER CHASSIS

LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
4	24561232	Y	WIRE ELEC 156 IN WHITE/BLACK	N	IN	
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561234	Y	WIRE ELEC 96 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561235	Y	WIRE ELEC 120 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561236	Y	WIRE ELEC 65 IN WHITE/BLACK	N	IN	035986
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561243	Y	WIRE ELEC 121 IN WHITE/BLACK	N	IN	
5	24500707	N	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	M	WIRE ELECT 24 AWG - 0		IN	024547
5	24548310	M	WIRE ELEC STRD INS. UL APPD		IN	024714
3	22746700	A	MA CABLE TABS-SATL CPLR CHAS	N	IN	
3	22747900	B	CONNECTOR ASSY-61 PIN	N	IN	
3	22747901	B	CONNECTOR ASSY-61 PIN	N	IN	
3	22747902	B	CONNECTOR ASSY-61 PIN	N	IN	
4	00865003	K	GROM STR REL 0.453 ID	N	IN	
4	24500707	N	PIN TAPER	N	IN	
4	24500810	L	INSULATION SLEEVING ELECT	N	IN	
4	24548301	M	WIRE ELECT 24 AWG - 0	N	IN	
4	24548303	M	WIRE ELEC STRD INS. UL APPD	N	IN	
4	24548307	M	WIRE ELEC STRD INS. UL APPD	N	IN	
4	31000001	B	WIRE, 24GA TWIST, PR. BR-W/RD	N	IN	
4	31000002	B	WIRE, 24GA TWIST, PR. BR-W/YE	N	IN	
4	31000003	B	WIRE, 24GA TWIST, PR. BR-W/BL	N	IN	
4	31000004	B	WIRE, 24GA TWIST, PR. BR-W/GY	N	IN	
4	31000005	B	WIRE, 24GA TWIST, PR. BR-W/BL	N	IN	
4	31000006	B	WIRE, 24GA TWIST, PR. RD-W/RD	N	IN	
4	31000007	B	WIRE, 24GA TWIST, PR. RD-W/YE	N	IN	
4	31000008	B	WIRE, 24GA TWIST, PR. RD-W/BL	N	IN	
4	31000009	B	WIRE, 24GA TWIST, PR. RD-W/GY	N	IN	
4	31000010	B	WIRE, 24GA TWIST, PR. RD-W/BL	N	IN	
4	31000011	B	WIRE, 24GA TWIST, PR. OR-W/RD	N	IN	
4	31000012	B	WIRE, 24GA TWIST, PR. OR-W/YE	N	IN	
4	31000013	B	WIRE, 24GA TWIST, PR. OR-W/BL	N	IN	
4	31000014	B	WIRE, 24GA TWIST, PR. OR-W/GY	N	IN	
4	31000015	B	WIRE, 24GA TWIST, PR. OR-W/BL	N	IN	
4	31000016	B	WIRE, 24GA TWIST, PR. YE-W/R	N	IN	
4	31000017	B	WIRE, 24GA TWIST, PR. YE-W/YE	N	IN	
4	31000018	B	WIRE, 24GA TWIST, PR. YE-W/BL	N	IN	
4	31000019	B	WIRE, 24GA TWIST, PR. YE-W/GY	N	IN	
4	31000020	B	WIRE, 24GA TWIST, PR. YE-W/BL	N	IN	
4	31000022	B	WIRE, 24GA TWIST, PR. GR-W/YE	N	IN	
4	31000023	B	WIRE, 24GA TWIST, PR. GR-W/BL	N	IN	
4	31000024	B	WIRE, 24GA TWIST, PR. GR-W/GY	N	IN	
4	53102001	B	CONN. ASSY LESS SOCKET CONTACT	N	IN	035866
4	53102002	B	CONNECTOR RECEPTACLE 61 PIN	N	IN	035866
3	23232845	B	SCREW THD ROLLING SEMS PAN HD	N	IN	
3	24518201	D	CONN FLEX 90 DEG CONDUIT	N	IN	
3	24562500	N	CONN CARD REC TAPER PIN	N	IN	
3	30094402	A	CONN RECEPT 10 CONTACT (RED)	N	IN	
3	30094406	A	CONN RECEPT 10 CONTACT (BLUE)	N	IN	
3	30094410	A	CONN RECEPT 10 CONTACT (BLACK	N	IN	
3	52675100	K	COAXIAL CABLE WITH CONNECTOR	N	IN	
4	17620307	H	STRAP CABLE ADJUSTABLE		IN	035466
4	17944062	E	LABEL,CABLE LENGTH MARKING		IN	027468
4	18752702	L	CONN BODY,HOOD ASSY 20 POS		IN	027470
4	18752711	L	SINGLE PIECE CONTACT - COAX		IN	027782
4	18874300	B	MARKER,IDENT-CABLE STRAP		IN	027468
4	24500707	N	PIN TAPER		IN	029902
4	24500802	L	INSULATION SLEEVING ELECT		IN	033767

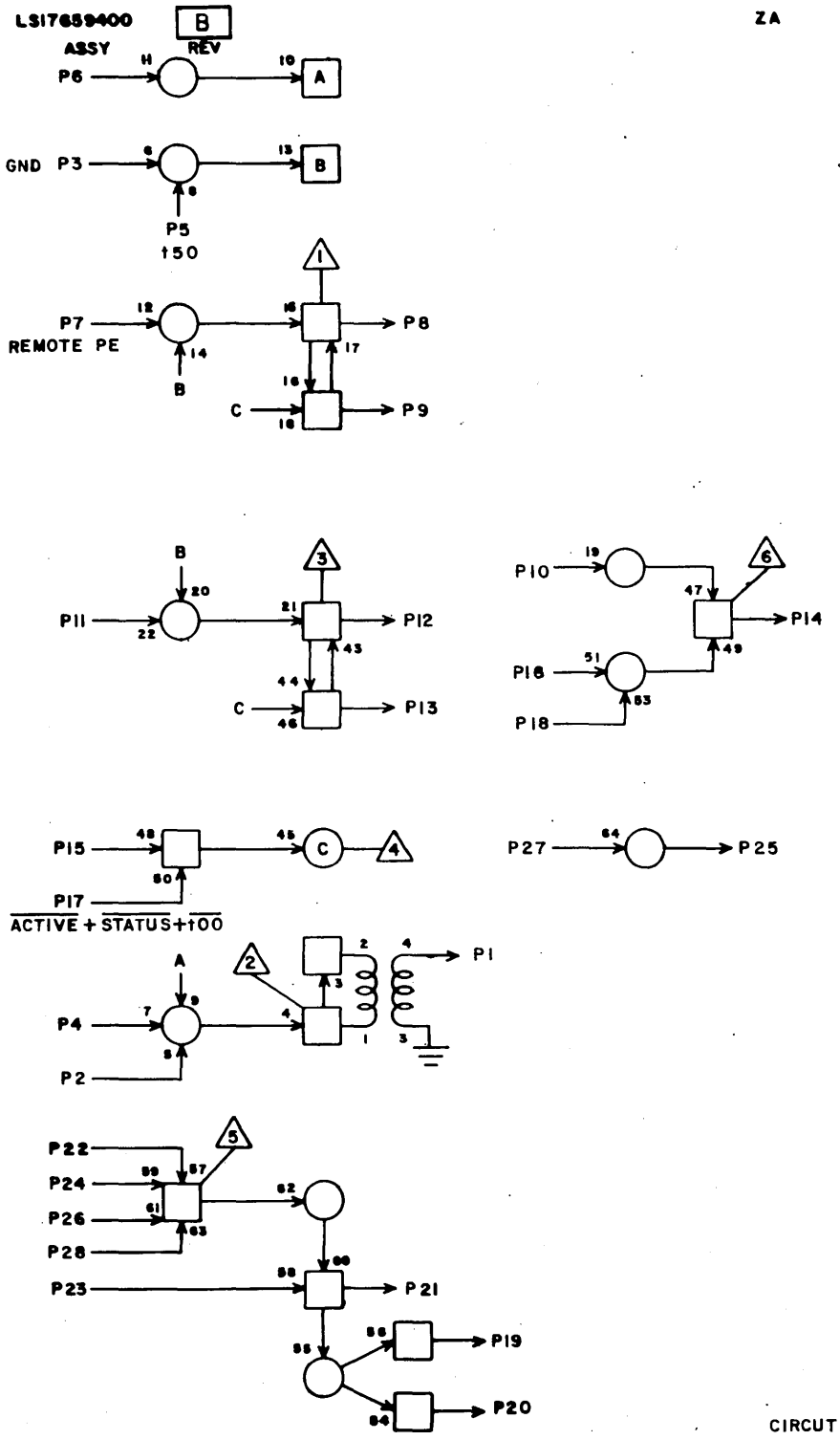
6883-D 23065400 B SATELLITE COUPLER CHASSIS

LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
4	24528640	M	INS SLEEVING, ELEC-BULK		IN	034959
4	24567000	J	CABLE,COAXIAL, 19 CONDUCTOR		IN	029902
3	52751400	B	WASHER SPACER	N	IN	
3	53161105	B	JUMPER-BRAIDED GROUND ASSEMBLY	N	IN	
4	13487200	D	TERMINAL,PRESSURE SCREW	N	IN	030101
4	24528639	M	INS SLEEVING, ELEC-BULK	N	IN	030101
4	24534811	E	SHIELD ELECT BRAIDED-BULK	N	IN	030101
3	53702800	B	W/L CONT PANEL ASSY SWIWRING	N	IN	
4	24500707	N	PIN TAPER	N	IN	
4	24500810	L	INSULATION SLEEVING ELECT	N	IN	
4	24523002	A	SWITCH PUSH SPST	N	IN	
4	31000334	B	WIRE, 24GA TWIST, PR. BL-W/YE	N	IN	
4	53702900	A	PANEL CONTROL	N	IN	
2	30001201	K	RESISTOR, ASSEMBLY TERMINATOR	N	IN	035666
3	17655610	F	WIRE TEFLON TYPE E TFE INSUL		IN	022985
3	17655611	F	WIRE TEFLON TYPE E TFE INSUL		IN	022985
3	17655612	F	WIRE TEFLON TYPE E TFE INSUL		IN	022985
3	17655613	F	WIRE TEFLON TYPE E TFE INSUL		IN	022985
3	17655614	F	WIRE TEFLON TYPE E TFE INSUL		IN	022985
3	17655615	F	WIRE TEFLON TYPE E TFE INSUL		IN	022985
3	17655616	F	WIRE TEFLON TYPE E TFE INSUL		IN	022985
3	17655617	F	WIRE TEFLON TYPE E TFE INSUL		IN	022985
3	17655618	F	WIRE TEFLON TYPE E TFE INSUL		IN	022985
3	17655619	F	WIRE TEFLON TYPE E TFE INSUL		IN	022985
3	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	022779
3	24554901	J	ENCLOSURE TERMINATOR ASSY.		IN	022779
4	00854100	A	KNOB, CABINET		IN	022515
4	09002006	C	SCR MACH RD PHL H NO. 8		IN	022515
4	09021701	A	NO. 4 SCR, SET CUPPED PT SCH		IN	022515
4	10126104	C	INTERNAL TOOTH LOCK WASHERS		IN	022515
4	30000403	S	CONNECTOR PLUG ELEC TERM		IN	025153
4	30001300	C	WASHER FLAT		IN	022515
4	30001400	B	PLATE MOUNTING RESISTOR ASSY		IN	022515
4	30001900	C	SHIELD ELECTRICAL CONNECTOR		IN	022515
4	30113701	E	SHIELD RESISTOR ASSY		IN	022515
3	30095400	F	TERMINATION STRIP		IN	022779
2	52347700	A	6/7000/CYBER PER.A-B-CCA8.GND	N	IN	
2	52675001	R	COAXIAL CABLE WITH CONN 70 FT	N	IN	
3	17620307	H	STRAP CABLE ADJUSTABLE		IN	035466
3	17944061	E	LABEL CABLE LENGTH MARKING		IN	027468
3	18752802	H	CONN BODY,HOOD ASSY,20 POS		IN	026130
3	18752811	H	SINGLE PIECE CONTACT - COAX		IN	029902
3	18874300	B	MARKER,IDENT-CABLE STRAP		IN	027468
3	24500707	N	PIN TAPER		IN	029902
3	24500802	L	INSULATION SLEEVING ELECT		IN	033767
3	24528640	M	INS SLEEVING, ELEC-BULK		IN	034959
3	24567000	J	CABLE,COAXIAL, 19 CONDUCTOR		IN	029902

APPENDIX A

CHASSIS TABS
CABLE TABS

CHASSIS TABS



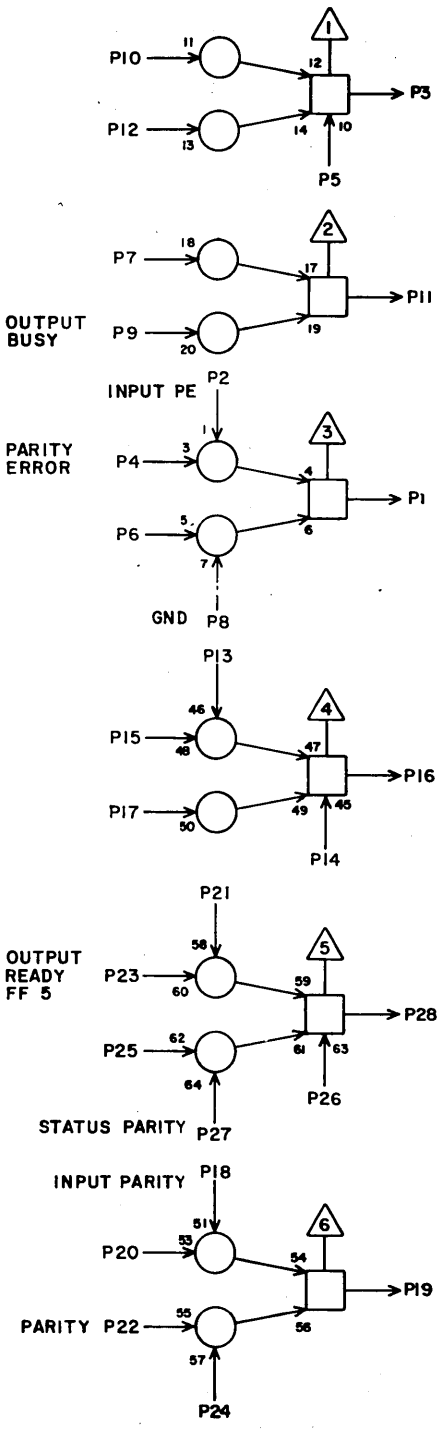
ZA

AOI

1			
2			
3	GND		2
4			
5	D7	8	15
6			
7	A7	18	9
8	E3	24	17
9			
10			
11	B04	4	9
12	E08	15	19
13			
14			
15			
16			
17	A4	25	7
18			
19			
20			
21			
22			
23			
24			
25			
26			
27	E4	13	17
28			
	JACK	PIN	LG

CIRCUT SPECIFICATION 11827600

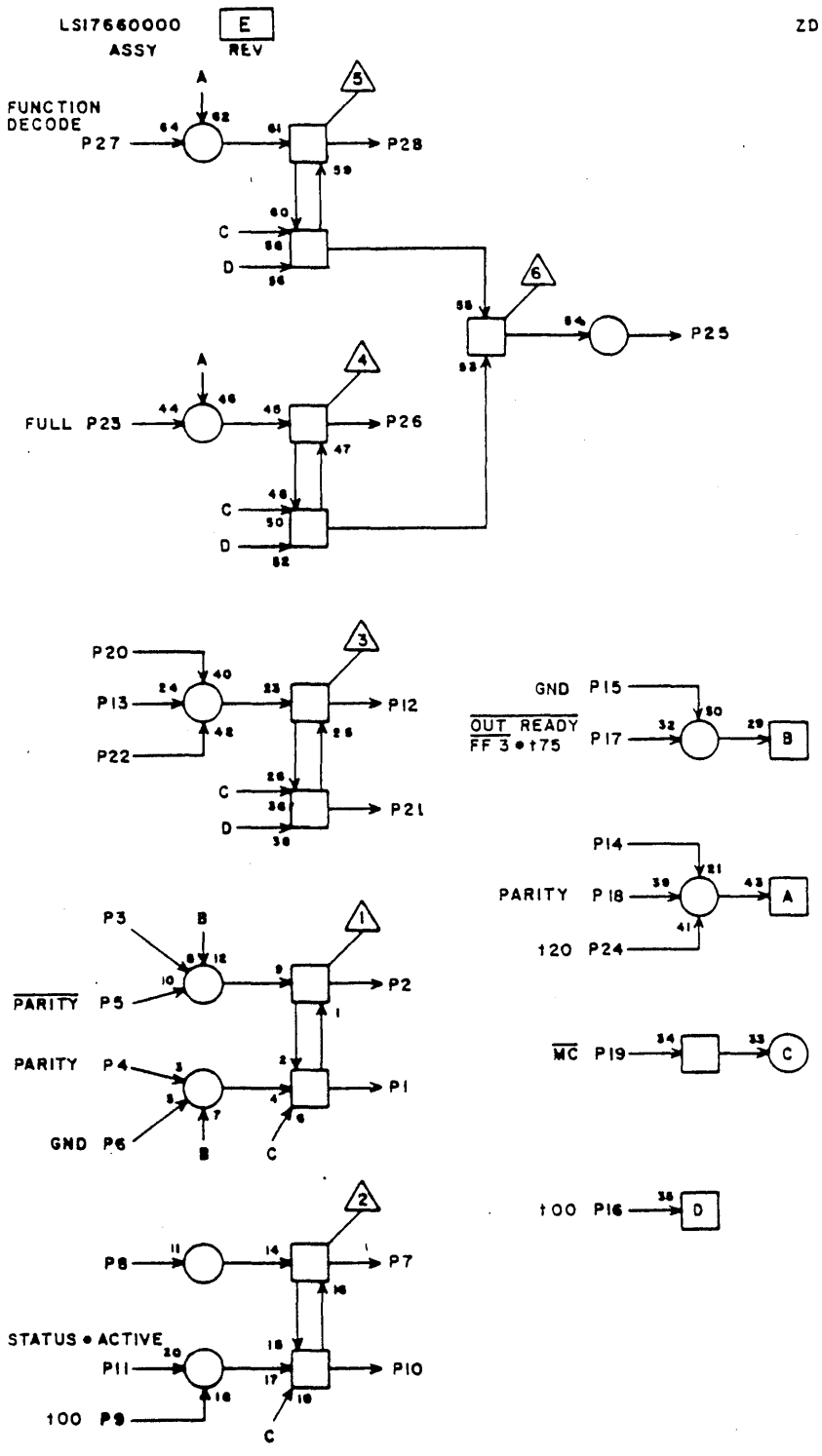
LS 52549700 ASSY | E REV



QH | A02

1	A4	15	7
2	A3	12	5
3			
4	A5	11	7
5			
6	A3	26	5
7	E4	9	17
8	GND		
9	B12	20	13
10			
11	A05	18	7
12			
13			
14			
15			
16			
17			
18	A3	2	5
19	A24	24	5
20	E2	25	17
21	A4	22	5
22	B1	27	7
23	D5	5	13
24	A7	16	9
25	A8	22	9
26	A7	20	9
27	E2	15	15
28	D3	11	13
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600



A03

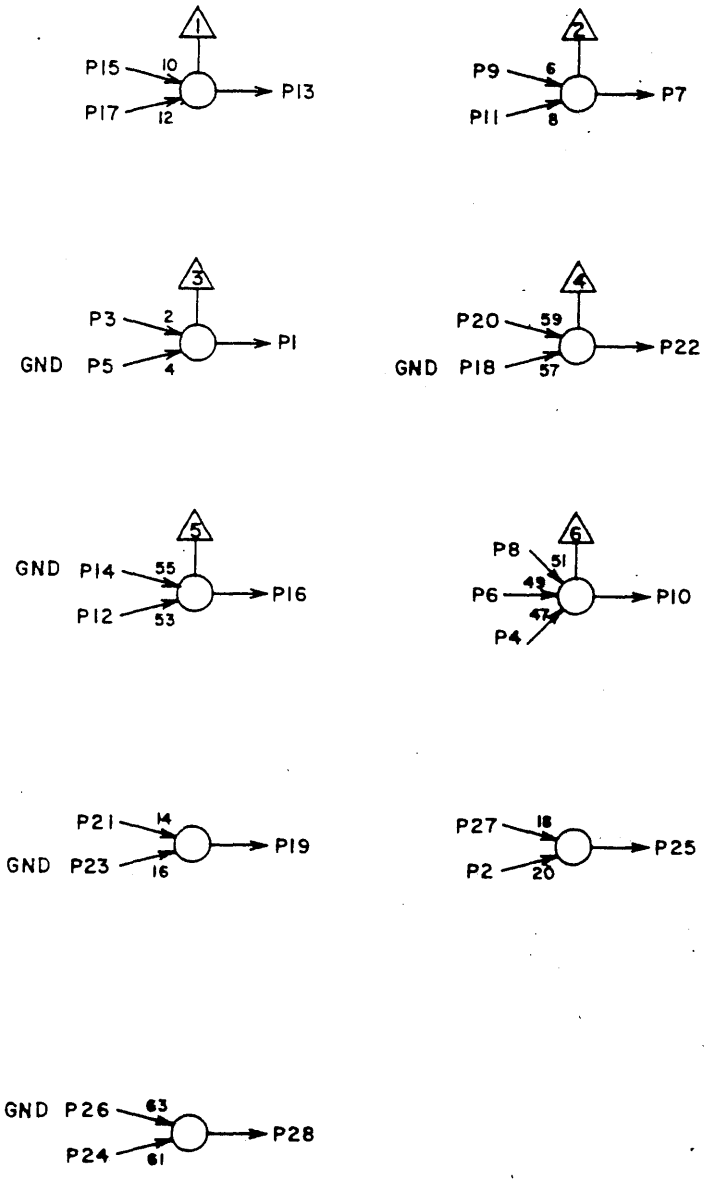
1	B1	24	9
2	A2	18	5
3	GND		2
4	A5	19	7
5	A5	22	5
6	GND		2
7	A7	25	9
8	A4	19	5
9	D6	12	15
10	D2	24	15
11	C1	19	11
12	A2	2	5
13	D1	17	13
14	C1	8	11
15	GND		2
16	D6	2	13
17	C1	16	11
18	C2	21	11
19	D5	19	13
20	B7	20	9
21			
22	B1	21	7
23	D2	18	13
24	A7	19	41
25	C1	2	45
26	A2	6	5
27	E2	19	15
28	D2	15	11
	JACK	PIN	LG

CIRCUIT SPEC
11827600

LS 18060300 ASSY | D REV.

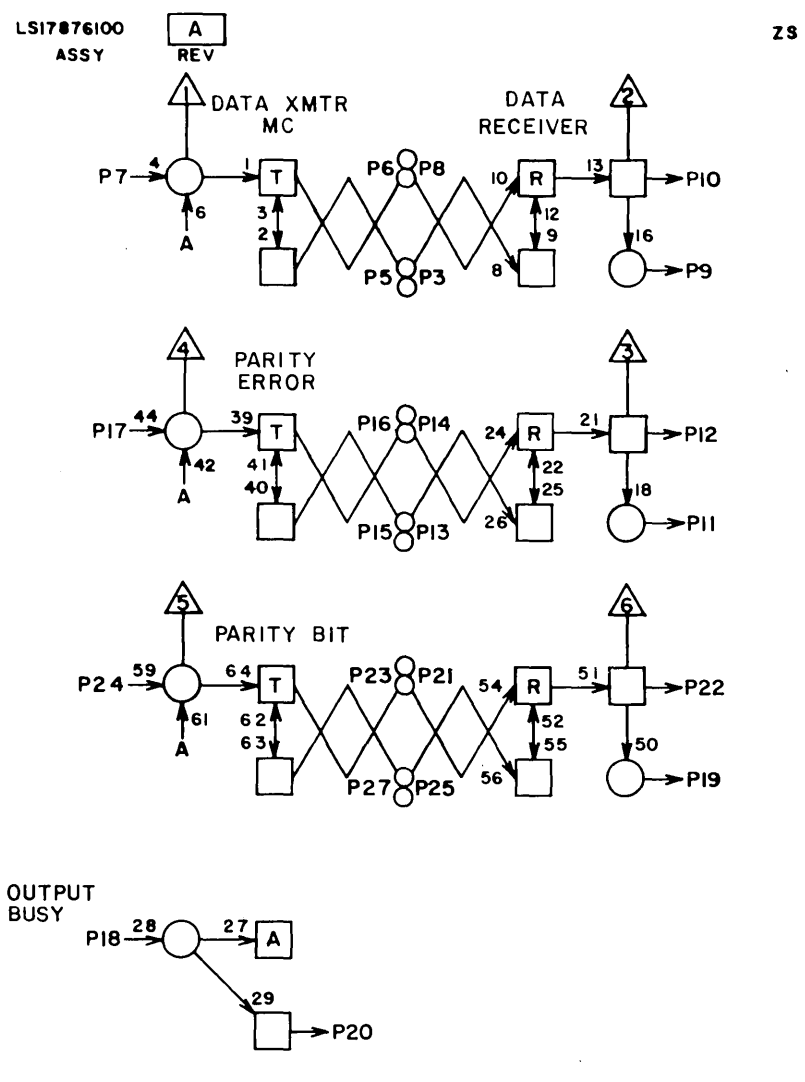
A04

TR



	JACK	PIN	LG
1	B07	27	11
2	C01	15	11
3	D04	27	15
4	C09	8	13
5	GND		2
6	B03	14	7
7	E09	2	17
8	A04	16	5
9	B06	9	7
10	E04	6	17
11	B06	17	41
12	A06	20	5
13	A04	21	5
14	GND		2
15	A02	1	7
16	A04	8	5
17	C01	6	11
18	GND		2
19	A03	8	5
20	D08	28	15
21	A04	13	5
22	A02	21	5
23	GND		2
24	A02	19	5
25	A01	17	7
26	GND		2
27	E12	7	19
28	D02	23	13

CIRCUIT SPECIFICATION 11827800



NOTES:

1. REFERENCE DRAWINGS:
   17876500 LOGIC SCHEMATIC ZT
   17876300 LOGIC SCHEMATIC ZR
2. THIS CIRCUIT IS A COMBINATION OF CIRCUITS ZR & ZT.
3. THE BASE RESISTORS ON TRANSISTOR 6, 42, & 61 ARE 150 OHMS.
4. THERE ARE ONLY TWO FILTER CAPACITORS. ONE BETWEEN +6V AND GROUND AND ONE BETWEEN -6V AND GROUND.

A05

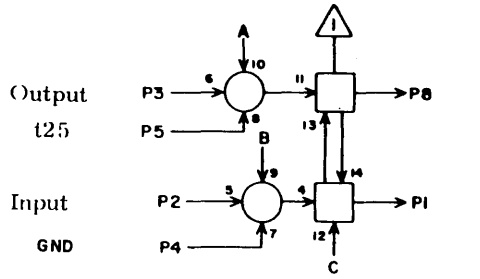
	JACK	PIN	LG
1			
2			
3	1A1	E8	
4			
5	1A2	E8	
6	1A1	E7	
7	E04	5	17
8	1A2	E7	
9	D05	26	120
10	D02	21	45
11	A02	4	7
12	A07	2	5
13	1A1	E4	
14	1A1	E3	
15	1A2	E4	
16	1A2	E3	
17	D02	22	15
18	A02	11	7
19	A03	4	7
20			
21	1A1	E5	
22	A03	5	5
23	1A2	E5	
24	D02	6	13
25	1A1	E6	
26			
27	1A2	E6	
28			

60440900 A

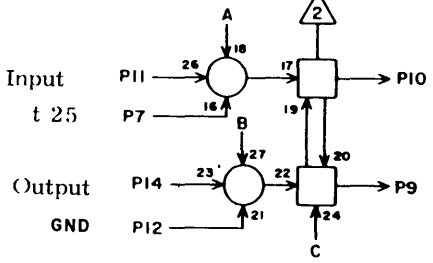
LS 63040400 ASSY | C REV

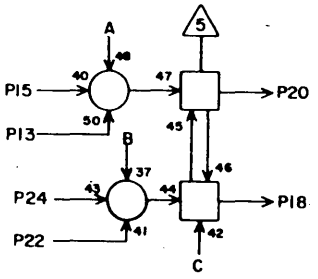
OUTPUT CHANNEL REQUEST: FF1 AE

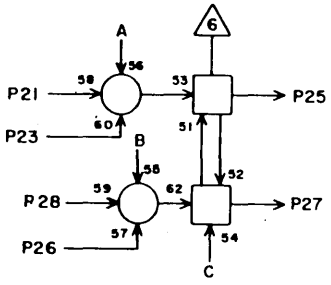
A06

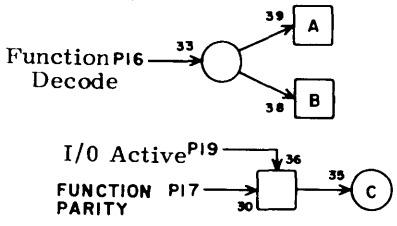


INPUT CHANNEL REQUEST









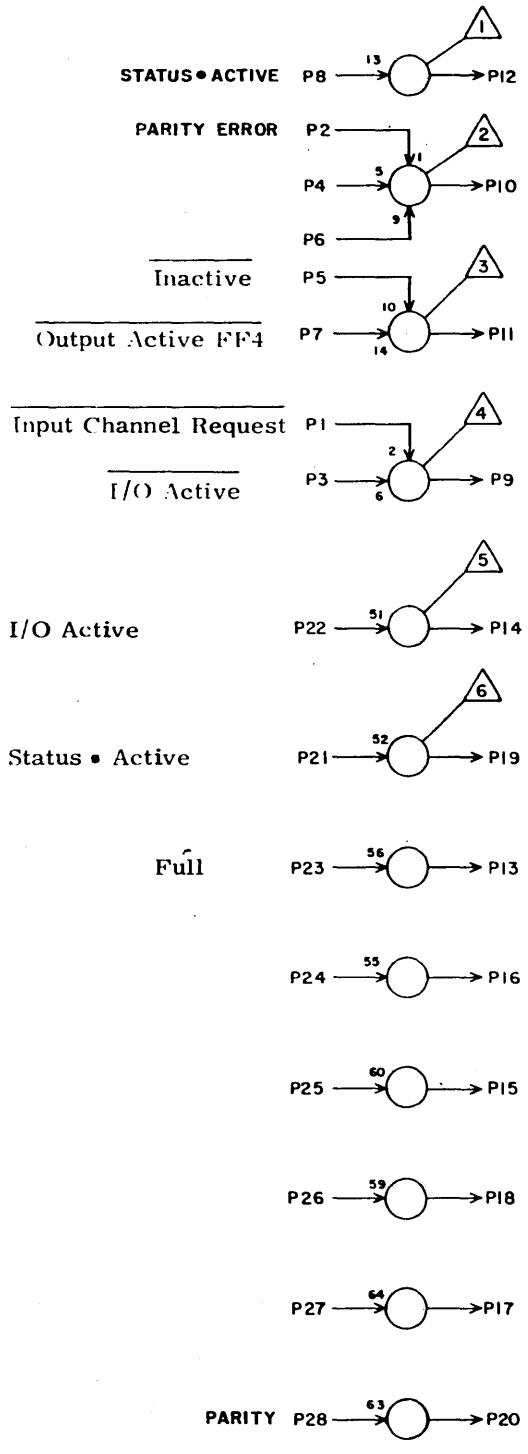
1	A8	27	5
2	B6	12	7
3	B6	7	5
4	Gnd		2
5	D6	20	13
6			
7	D6	18	13
8	C4	13	11
9	A7	1	3
10			
11	B6	4	5
12	Gnd		2
13	D08	16	13
14	B6	8	5
15	D06	8	13
16	E02	21	17
17	D02	17	45
18			
19	B6	15	5
20	A4	12	5
21			
22			
23			
24	B03	20	7
25			
26			
27			
28			

JACK PIN LG

CIRCUIT SPECIFICATION 1182700

60440900 A

LS 63064400 C
ASSY REV



TL

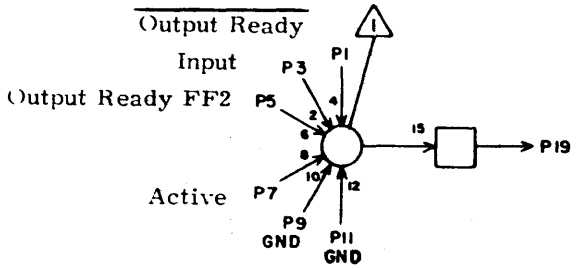
A07

1	A6	9	3
2	A05	12	5
3	B6	22	7
4	C01	10	13
5	C10	25	11
6	A07	15	5
7	B05	27	96
8	C01	17	13
9	A12	27	9
10	A07	26	5
11	B08	9	5
12	E09	14	17
13	E09	26	15
14	B05	15	7
15	A07	6	5
16	A02	24	9
17	A12	9	9
18	A01	7	9
19	A03	24	9
20	A02	26	9
21	E10	7	17
22	B08	25	7
23	D11	17	13
24	E02	27	19
25	A03	7	9
26	A07	10	5
27	A10	25	5
28	D03	19	13
	JACK	PIN	LG

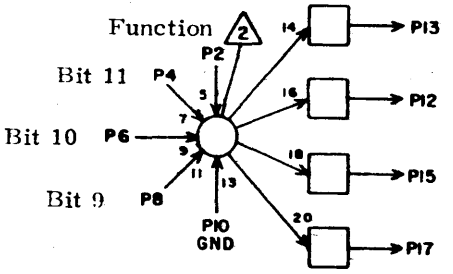
CIRCUIT SPECIFICATION 11827600

LS 63063400 ASSY | C REV

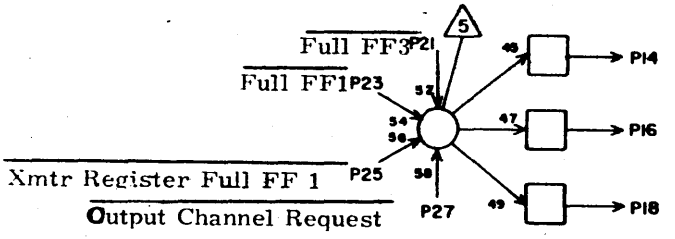
INPUT REQUEST

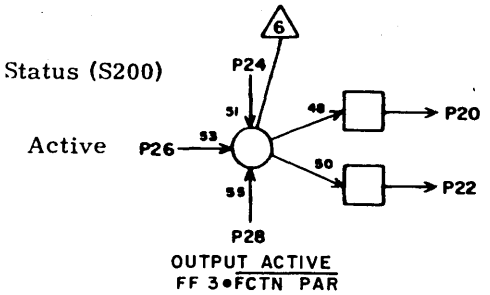


FUNCTION DECODE



INPUT + BUFFER + XMTR REGISTERS FULL + OUTPUT CHANNEL REQUEST





TB A8

1	E4	8	17
2	C9	5	9
3	B6	2	7
4	C11	6	9
5	A9	9	3
6	C11	8	9
7	B6	23	7
8	C11	23	11
9	Gnd		2
10	Gnd		2
11	Gnd		2
12	E9	17	12
13	B8	13	5
14	C4	22	11
15	B8	14	5
16			
17	E02	24	19
18			
19	A12	12	7
20	E9	25	15
21	B4	20	9
22	A02	25	9
23	B8	1	5
24	B6	13	5
25	A10	19	5
26	B6	19	5
27	A6	1	5
28	C01	11	13
	JACK	PIN	LG

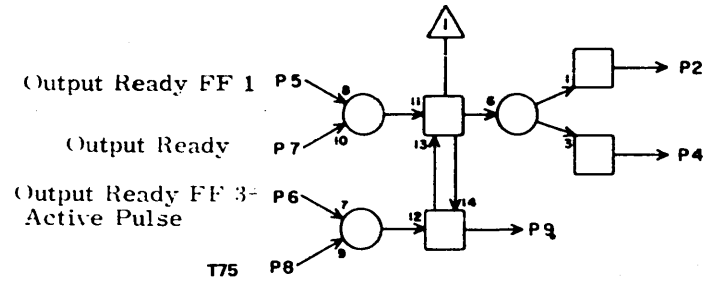
CIRCUIT SPECIFICATION 11827600

LS 63040000 ASSY | D REV

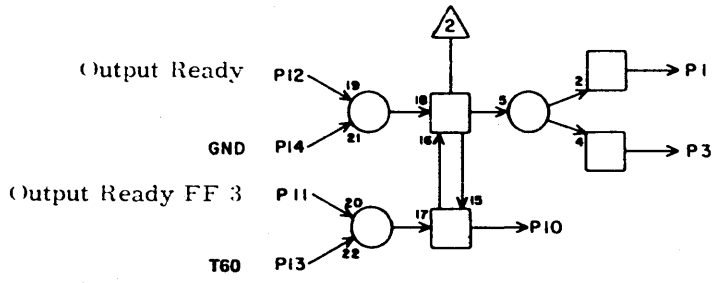
OUTPUT READY FF2

AA

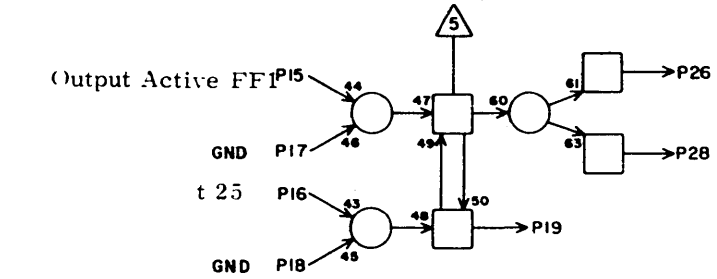
A9



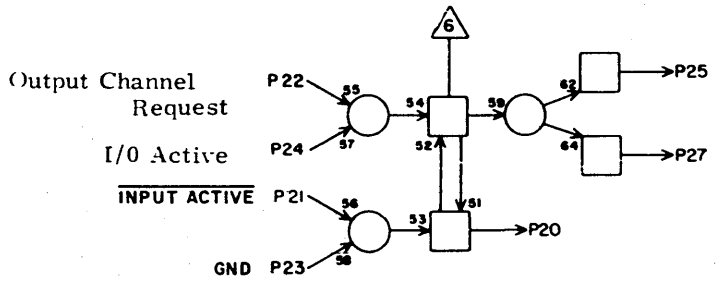
OUTPUT READY FF 1



OUTPUT ACTIVE FF 2



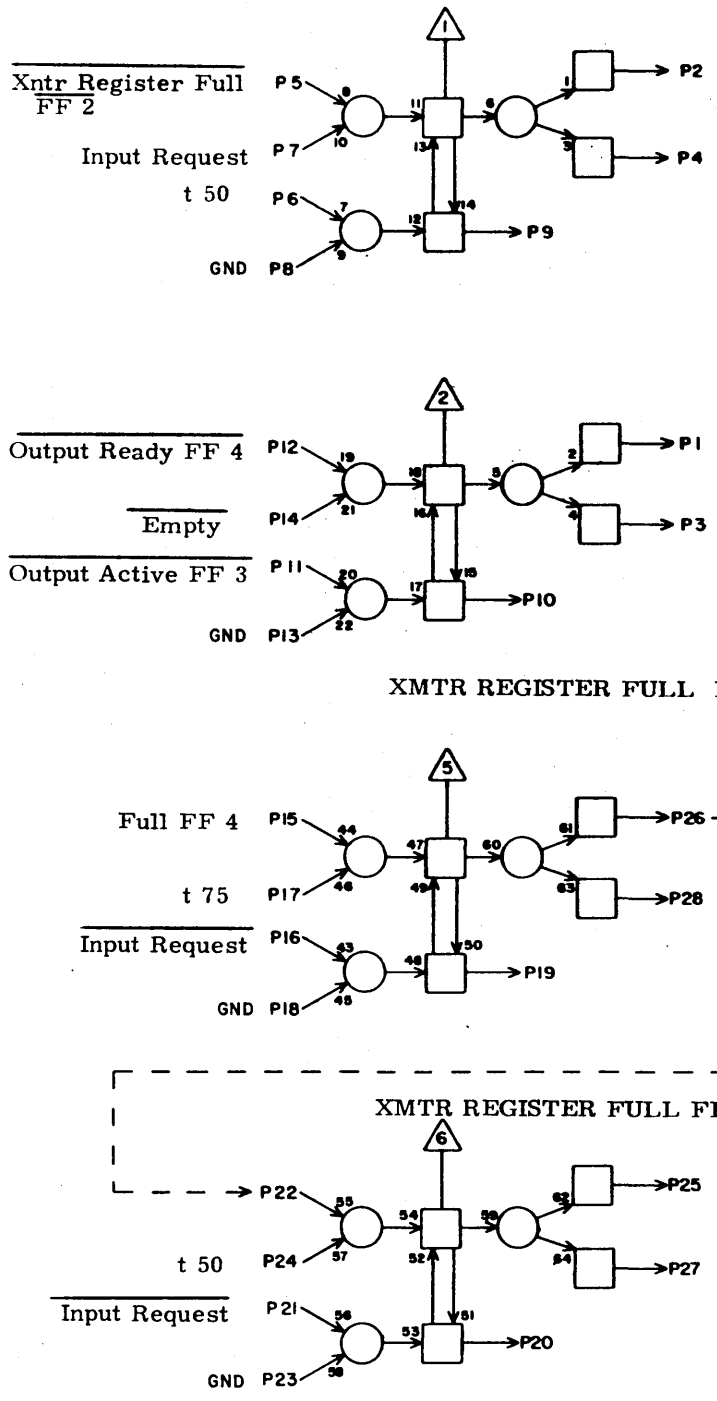
STATUS (XXX4): OUTPUT BUSY



	JACK	PIN	LG
1	A9	5	3
2	D4	23	15
3			
4	A10	11	7
5	A9	1	3
6	E9	11	15
7	A11	28	5
8	E12	4	15
9	A8	5	3
10	B5	7	9
11	E4	2	17
12	E4	14	17
13	D07	10	65
14	Gnd		2
15	B5	10	9
16	D6	21	13
17	Gnd		2
18	Gnd		2
19			
20			
21	A11	13	5
22	B6	16	7
23	Gnd		2
24	B5	20	7
25	E03	12	17
26			
27	B9	18	5
28	E9	13	15

CIRCUIT SPECIFICATION 11827600

LS 63040000 ASSY | D REV | INPUT REQUEST | AA | A10

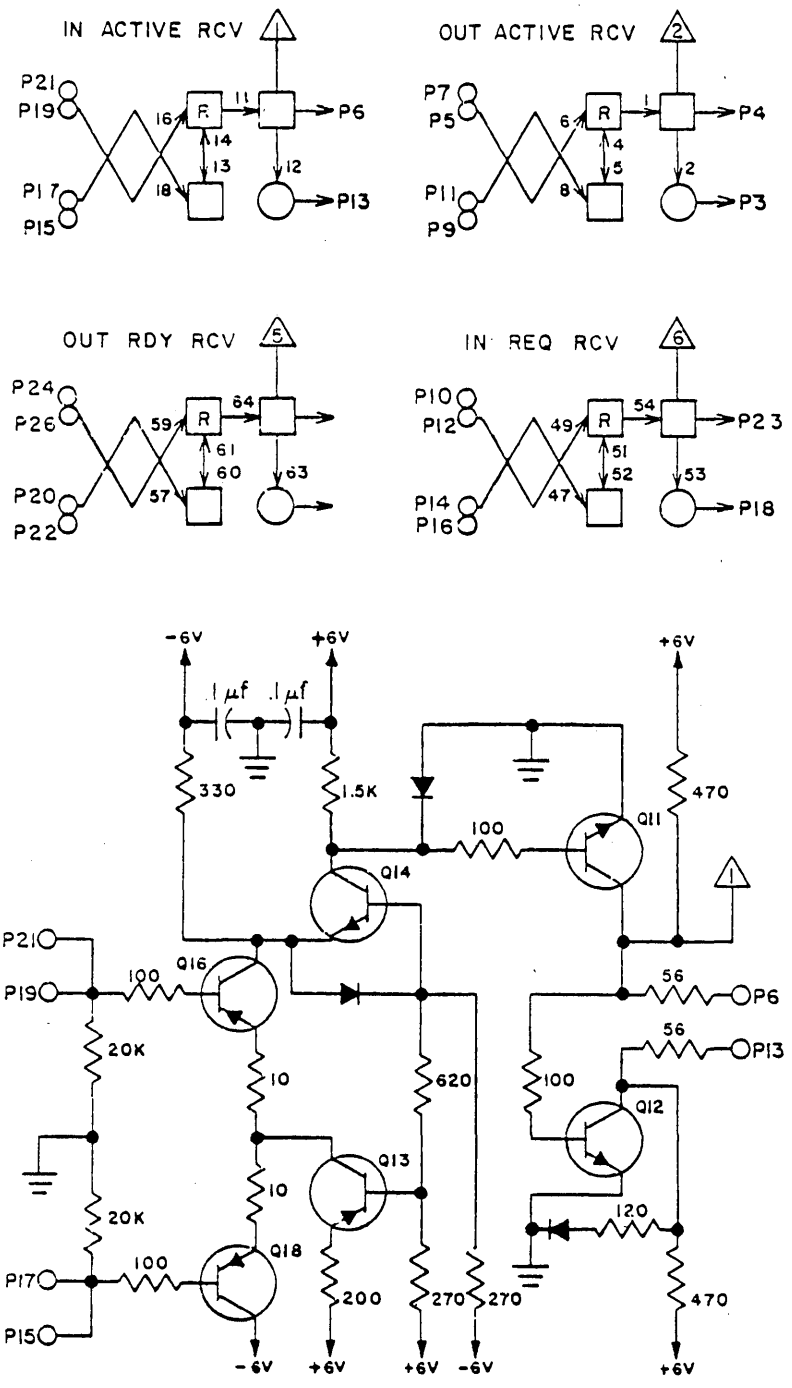


1	B5	14	9
2	D4	3	13
3			
4			
5	A10	20	3
6	D7	7	13
7	A11	23	3
8	Gnd		2
9			
10			
11	A09	4	7
12	E4	18	17
13	Gnd		2
14	C10	11	9
15	B4	19	9
16	B4	9	9
17	D7	27	13
18	Gnd		2
19	A8	25	5
20	A10	5	3
21	B4	5	9
22	A10	26	3
23	Gnd		2
24	D7	4	11
25	A07	27	5
26	A10	22	3
27			
28	B5	4	7
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600

S17876300 ASSY A REV

ZR



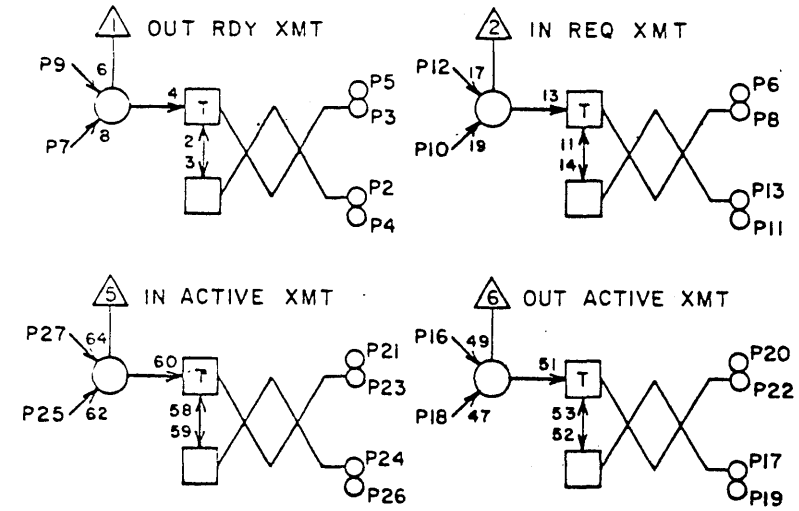
	A11		
1			
2			
3	B5	12	11
4	E4	28	19
5	1A2	C5	
6	E3	5	19
7	1A1	C7	
8			
9	1A2	C6	
10	1A1	D9	
11	1A1	C8	
12	1A2	D7	
13	A9	21	5
14	1A1	D10	
15	1A2	C10	
16	1A2	D8	
17	1A1	D2	
18	B4	6	11
19	1A2	C9	
20	1A1	D6	
21	1A1	D1	
22	1A2	D4	
23	A10	7	3
24	1A1	D5	
25	E4	1	15
26	1A2	D3	
27			
28	A9	7	5
	JACK	PIN	LG

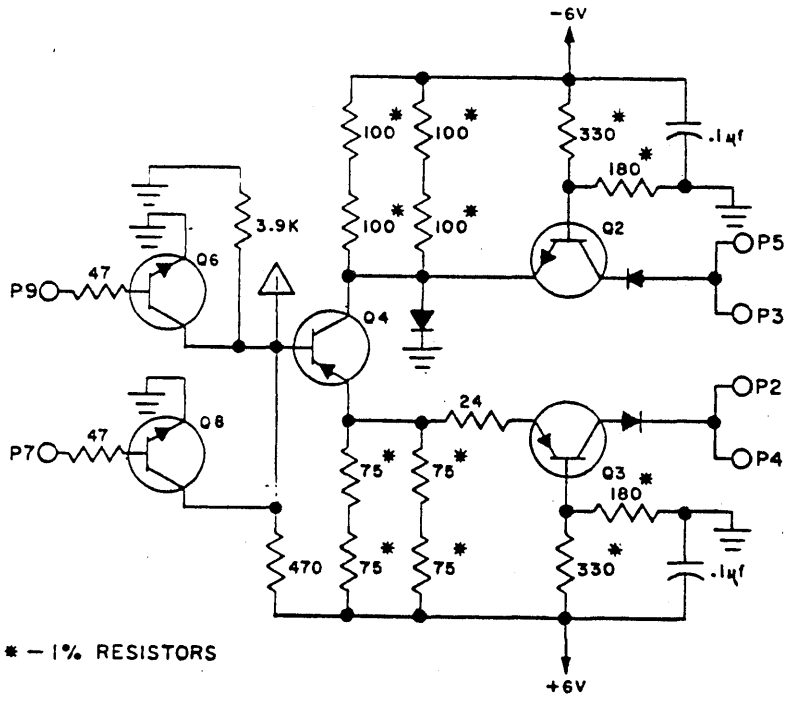
6682/83 COUPLER

LSI7876500 ASSY | A REV

ZT

A12





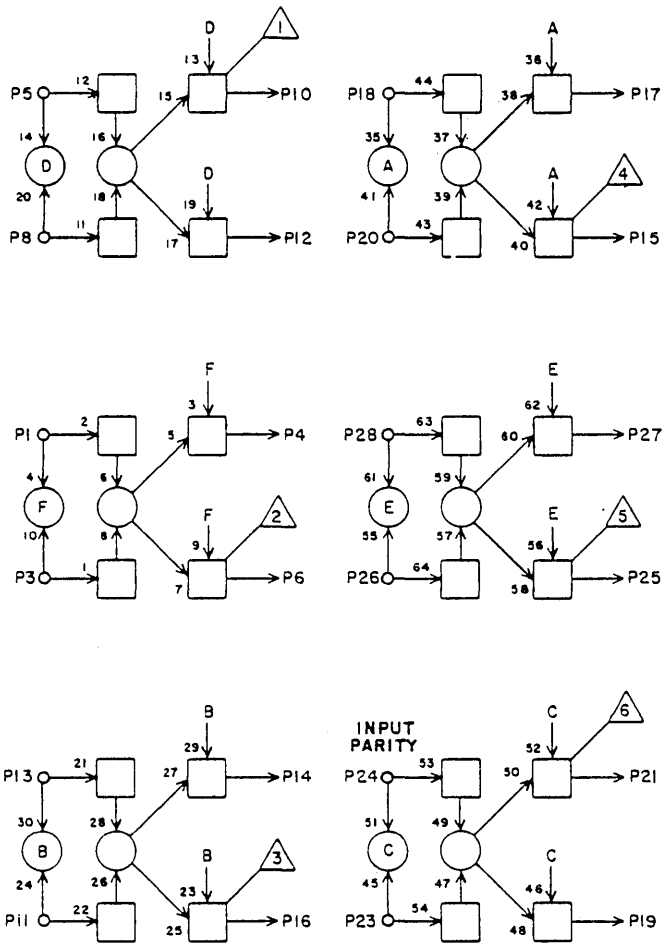
* — 1% RESISTORS

	JACK	PIN	LG
1			
2	1A1	D4	
3	1A2	D5	
4	1A2	D6	
5	1A1	D3	
6	1A1	D7	
7	Gnd		2
8	1A2	D9	
9	A7	17	9
10	Gnd		2
11	1A2	D10	
12	A8	19	7
13	1A1	D8	
14			
15			
16	B6	20	15
17	1A1	C6	
18	Gnd		2
19	1A2	C8	
20	1A1	C5	
21	1A1	C9	
22	1A2	C7	
23	1A2	D1	
24	1A1	C10	
25	C4	18	13
26	1A2	D2	
27	A07	9	9
28			

LS 52543500 ASSY C REV

AB

B1



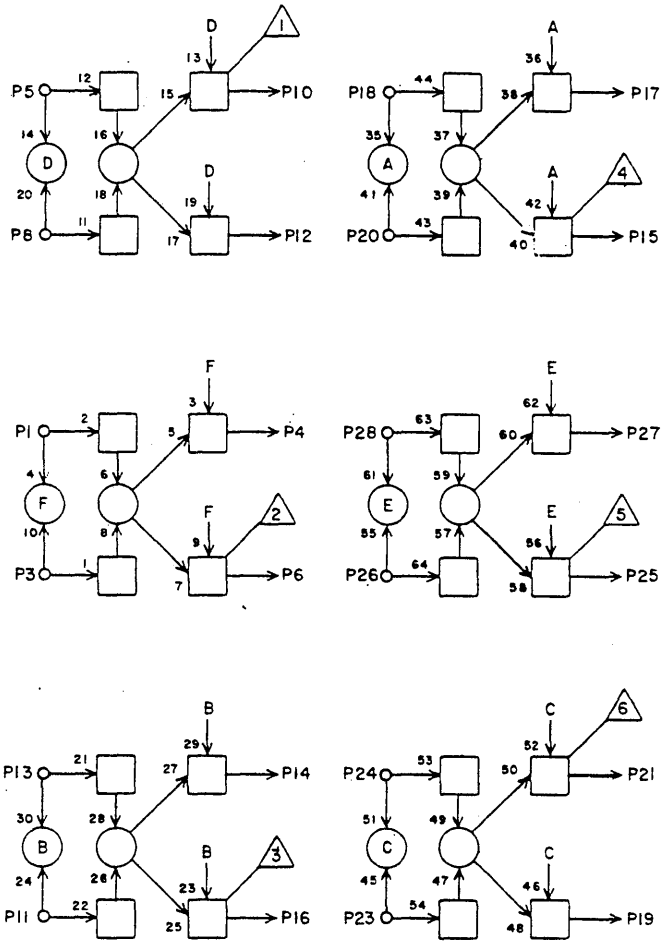
1	B2	16	5
2			
3	B2	15	5
4			
5	B2	10	5
6	B1	20	5
7			
8	B2	6	5
9			
10	B1	18	5
11	B2	21	5
12			
13	B2	25	5
14			
15	B1	26	5
16	B1	28	5
17			
18	B1	10	5
19			
20	B1	6	5
21	A3	22	7
22			
23	B1	25	3
24	A3	1	9
25	B1	23	3
26	B1	15	5
27	A2	22	7
28	B1	16	5
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600

LS 52543500 ASSY C REV

AB

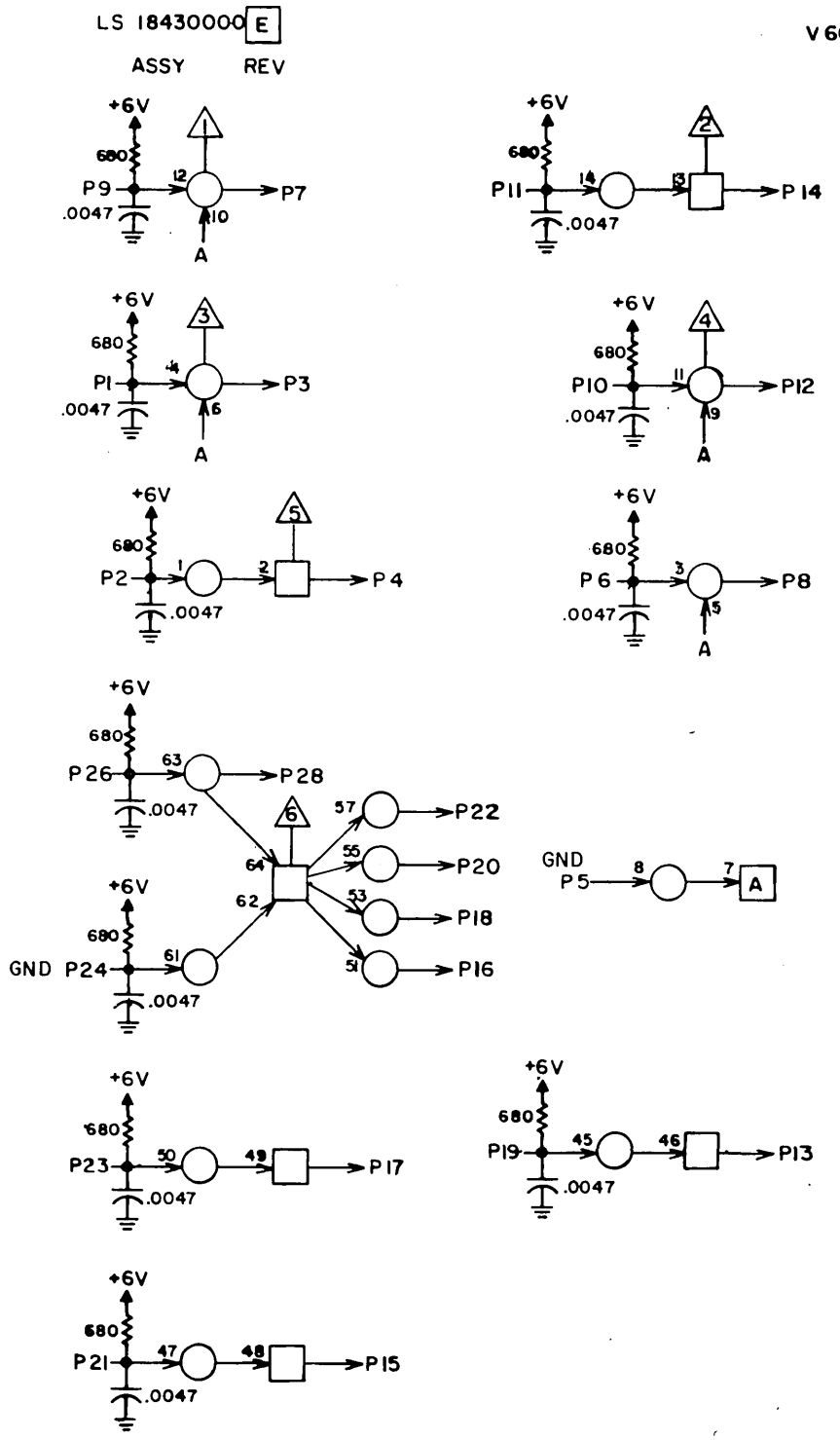
B2



1	B12	9	13
2			
3	B11	19	13
4			
5	B12	19	15
6	B1	8	5
7			
8	B12	11	15
9			
10	B1	5	5
11	B11	9	13
12			
13	B11	11	13
14			
15	B1	3	5
16	B1	1	5
17			
18	B10	19	11
19			
20	B10	11	13
21	B1	11	5
22			
23	B9	9	11
24	B9	11	11
25	B1	13	5
26	B9	19	11
27			
28	B10	9	13
	JACK	PIN	LG

6683-D COUPLER

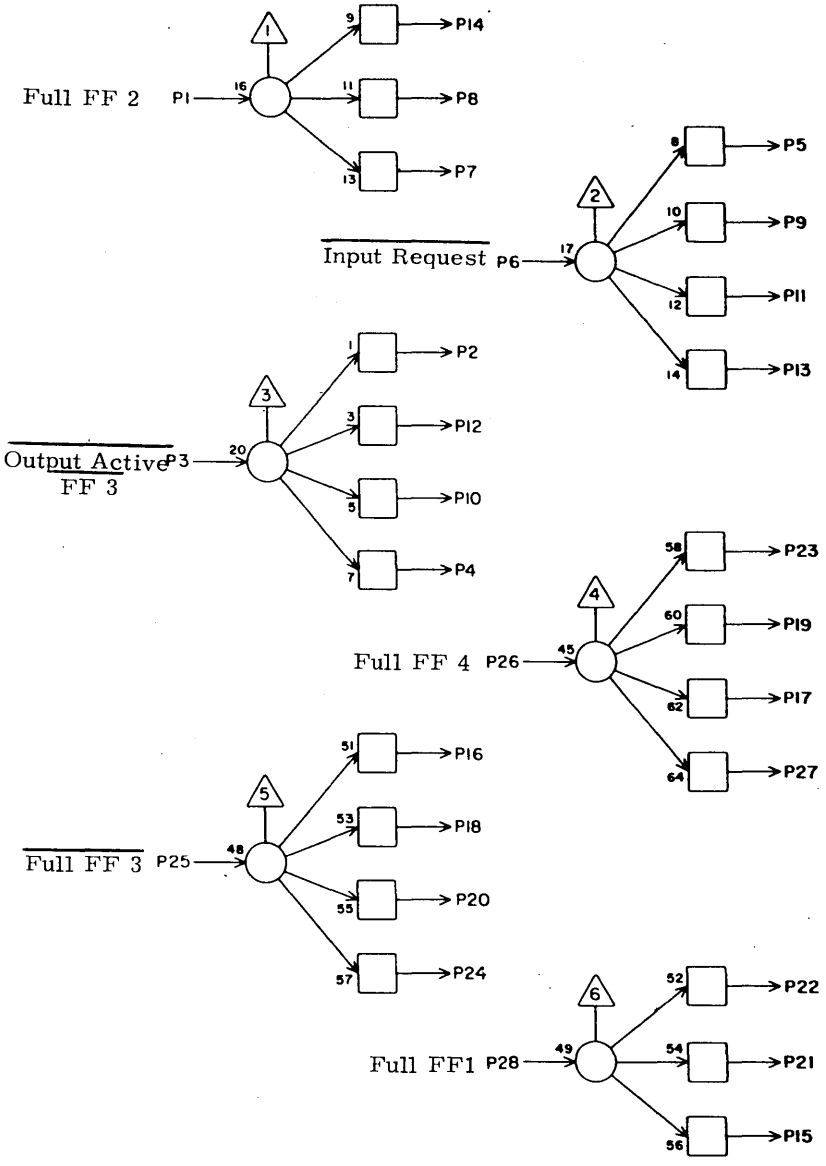
CIRCUIT SPECIFICATION 11827600


LS 18430000 E
ASSY REV
V66
B03
+6V
680
.0047
P9
P7
P11
P14
P1
P3
P10
P12
P2
P4
P6
P8
P26
P28
P22
P20
P18
P16
GND P24
GND P5
A
P23
P17
P19
P13
P21
P15
GND
A04
A06
JACK
PIN
LG
CIRCUIT SPECIFICATION 11827600
52000021

LS 63064000 ASSY C REV

TH

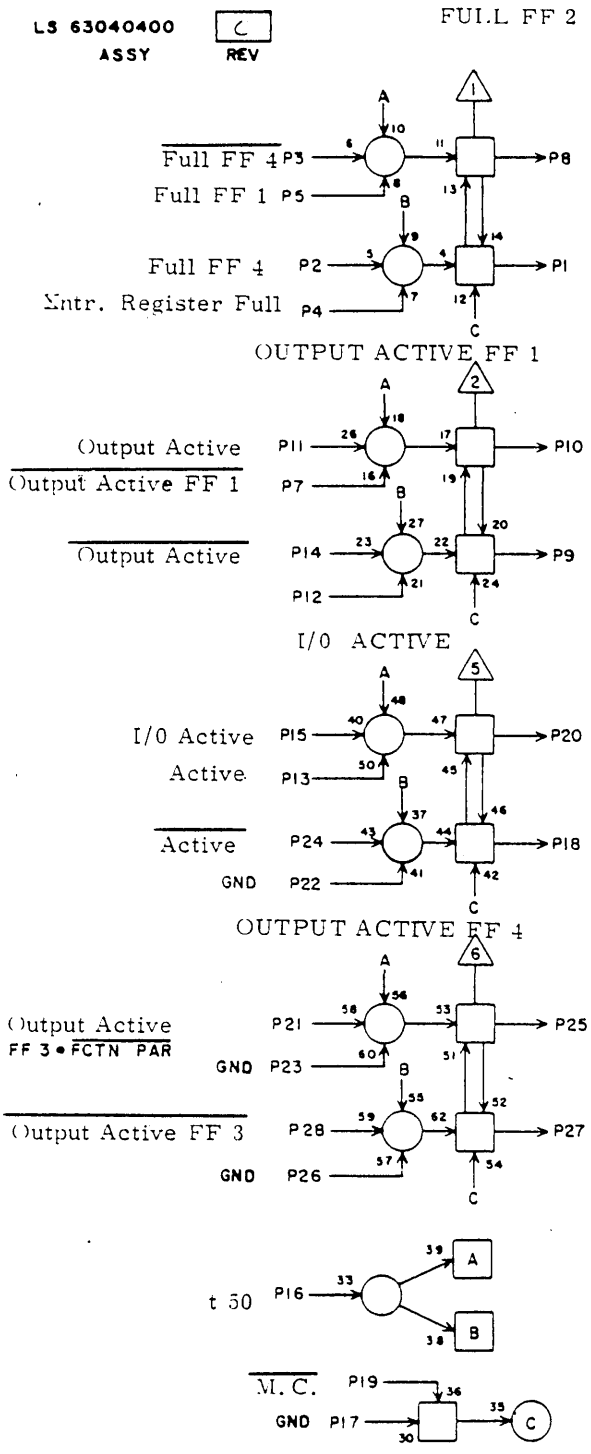
B4



	JACK	PIN	LG
1	B5	8	3
2	B5	28	5
3	D4	18	9
4	A01	11	9
5	A10	21	9
6	A11	18	11
7	C4	21	7
8	B7	3	5
9	A10	16	9
10			
11			
12			
13			
14	B8	4	7
15			
16	B7	28	5
17			
18	D4	2	7
19	A10	15	9
20	A8	21	9
21	B5	5	5
22	B7	26	5
23	B7	1	5
24	B8	6	7
25	C4	27	5
26	D4	8	7
27	B5	2	5
28	B8	2	7

CIRCUIT SPECIFICATION 1182780D

LS 63040400 ASSY C REV



AE

B5

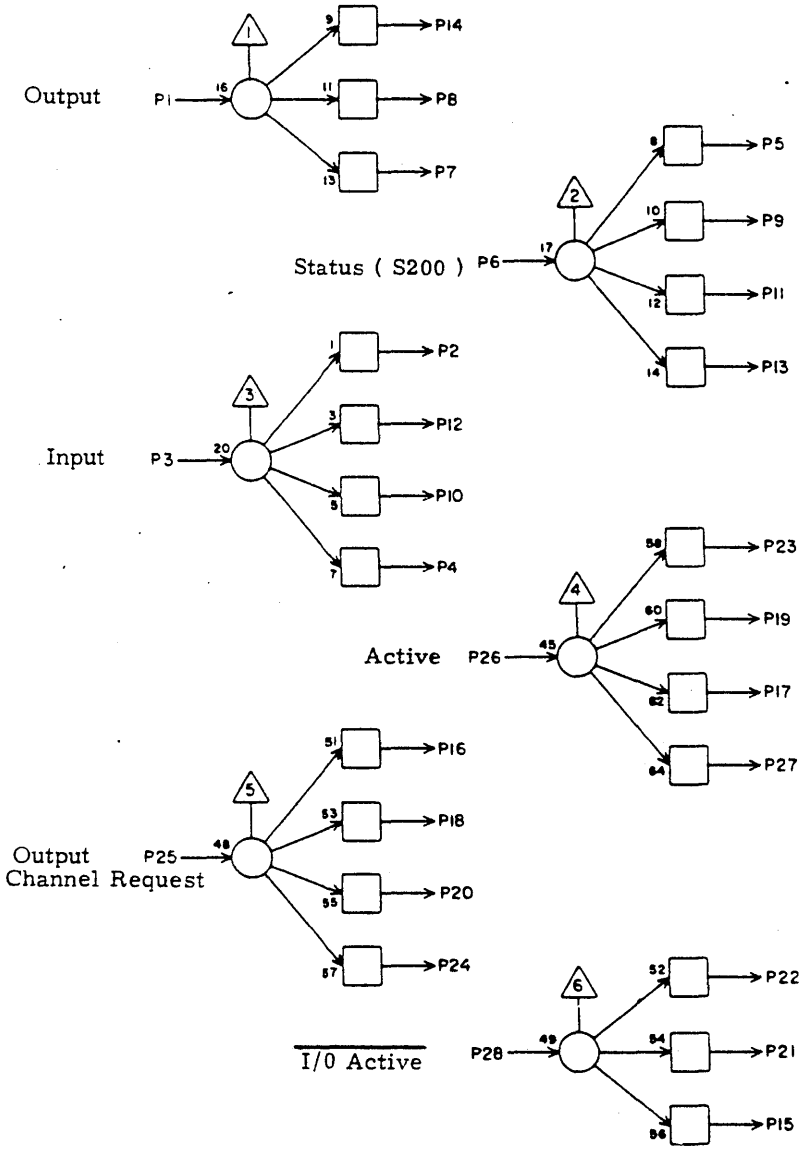
1	C4	28	7
2	B4	27	5
3	D4	1	9
4	A10	28	7
5	B4	21	5
6			
7	A9	10	9
8	B4	1	3
9	E9	15	13
10	A9	15	9
11	E4	21	13
12	A11	3	11
13	B6	27	3
14	A10	1	9
15	A07	14	7
16	D7	6	9
17	Gnd		2
18	B6	28	3
19	D5	23	9
20	A9	24	7
21	C01	9	45
22	Gnd		2
23	Gnd		2
24	B8	10	7
25	D4	24	9
26	Gnd		2
27	A07	7	7
28	B4	2	5
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600

LS 63064000 C
ASSY REV

TH

B6

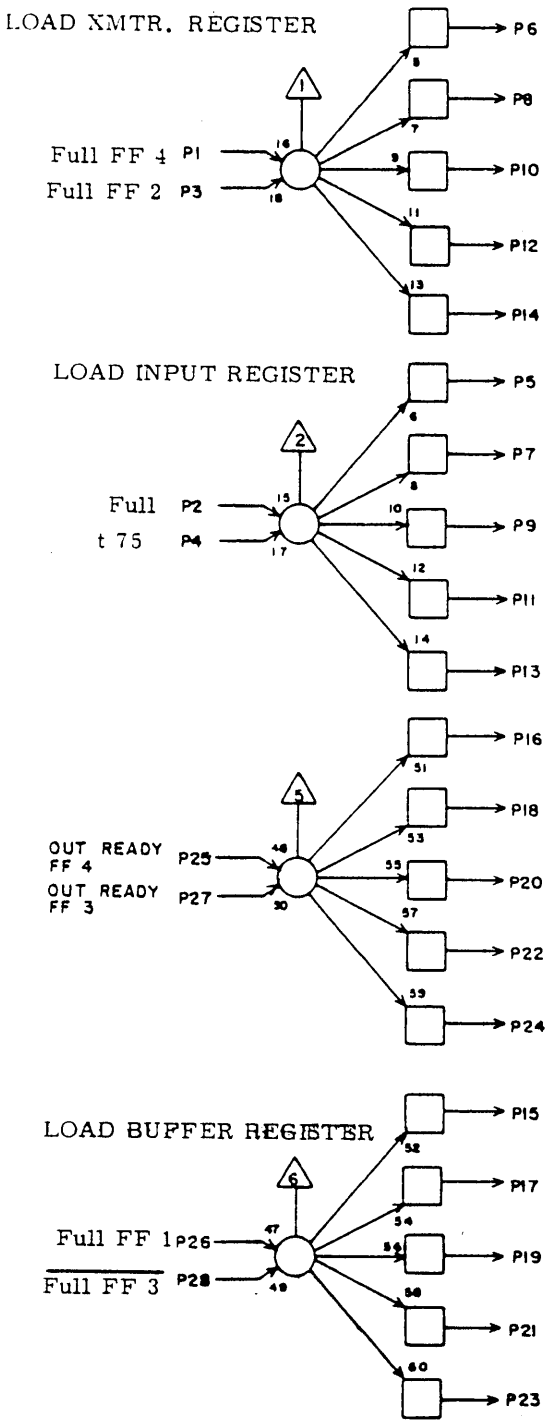


1	B8	28	5
2	A8	3	7
3	B8	26	5
4	A6	11	5
5	C01	28	11
6	B8	12	
7	A6	3	5
8	A6	14	5
9	A04	9	7
10	D5	3	9
11			
12	A6	2	7
13	A8	24	5
14	B8	17	5
15	A6	19	5
16	A9	22	7
17	A04	11	41
18			
19	A8	26	5
20	A12	16	15
21	C4	24	7
22	A7	3	7
23	A8	7	7
24			
25	C4	20	7
26	B8	7	5
27	B5	13	3
28	B5	18	3
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827800

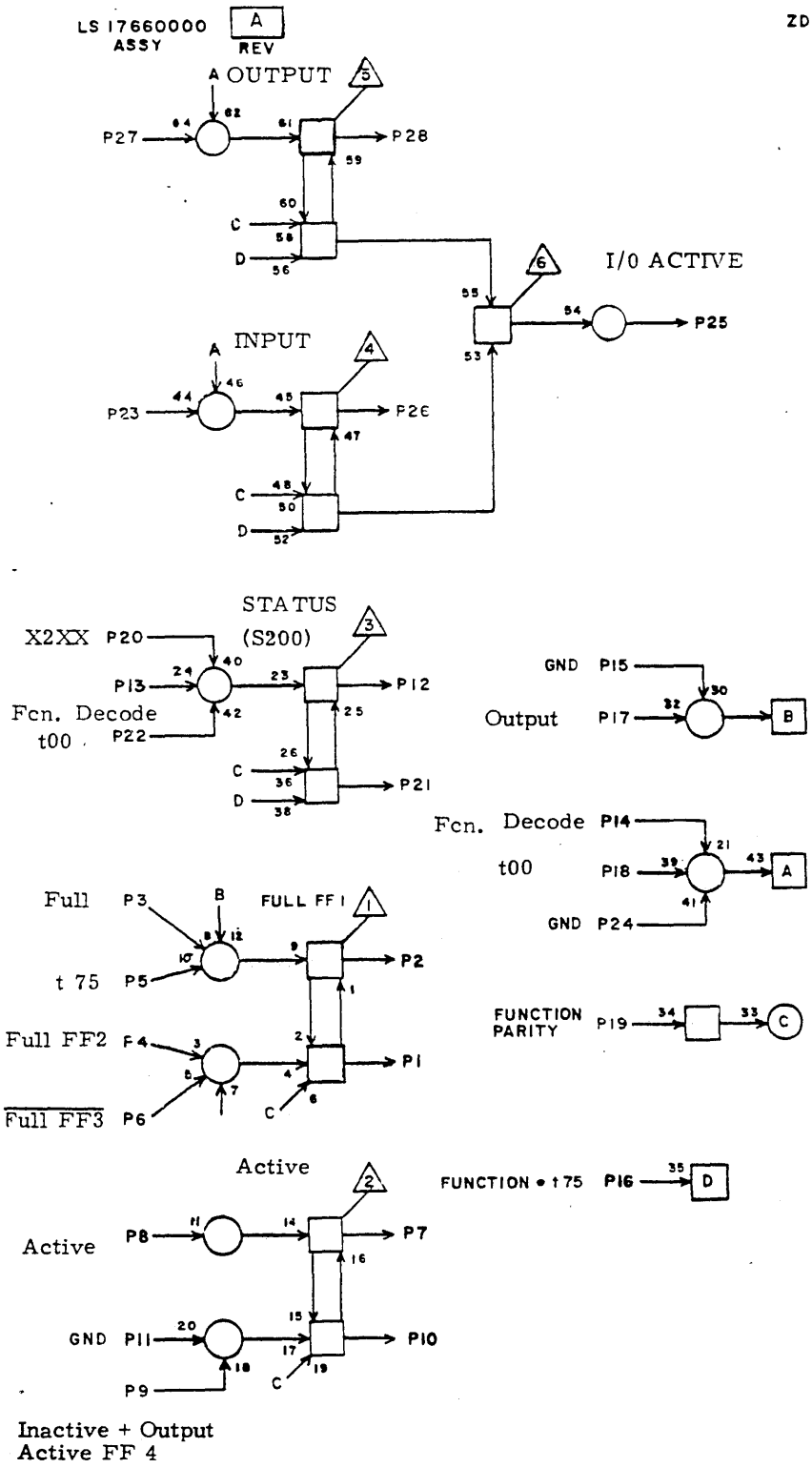
LS 63063600 ASSY | C REV

TD | B7



1	B4	23	5
2	C10	5	7
3	B4	8	7
4	D7	25	11
5	C5	5	7
6	C5	27	7
7	C6	5	5
8	C6	27	7
9	C7	5	5
10	C7	27	7
11	C8	5	5
12	C8	27	7
13	D02	13	13
14	D02	2	11
15	C5	22	5
16	D02	27	13
17	C6	22	5
18			
19	C7	22	5
20	A03	20	9
21	C8	22	5
22			
23	D05	1	9
24			
25	E04	17	13
26	B4	22	5
27	A04	1	11
28	B4	16	5
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600



Inactive + Output
Active FF 4

	B8		
1	A8	23	5
2	B4	28	7
3	C10	7	3
4	B4	14	5
5	D7	23	11
6	B4	24	7
7	B6	26	5
8	C10	18	7
9	A07	11	5
10	B5	24	7
11	Gnd		2
12	B6	6	5
13	A8	13	5
14	A8	15	5
15	Gnd		2
16	D1	12	13
17	B6	14	5
18	D6	15	9
19	D2	19	13
20	D8	9	9
21			
22	D6	7	7
23	D8	13	9
24	Gnd		2
25	A07	22	7
26	B6	3	5
27	D8	15	9
28	B6	1	5
	JACK	PIN	LG

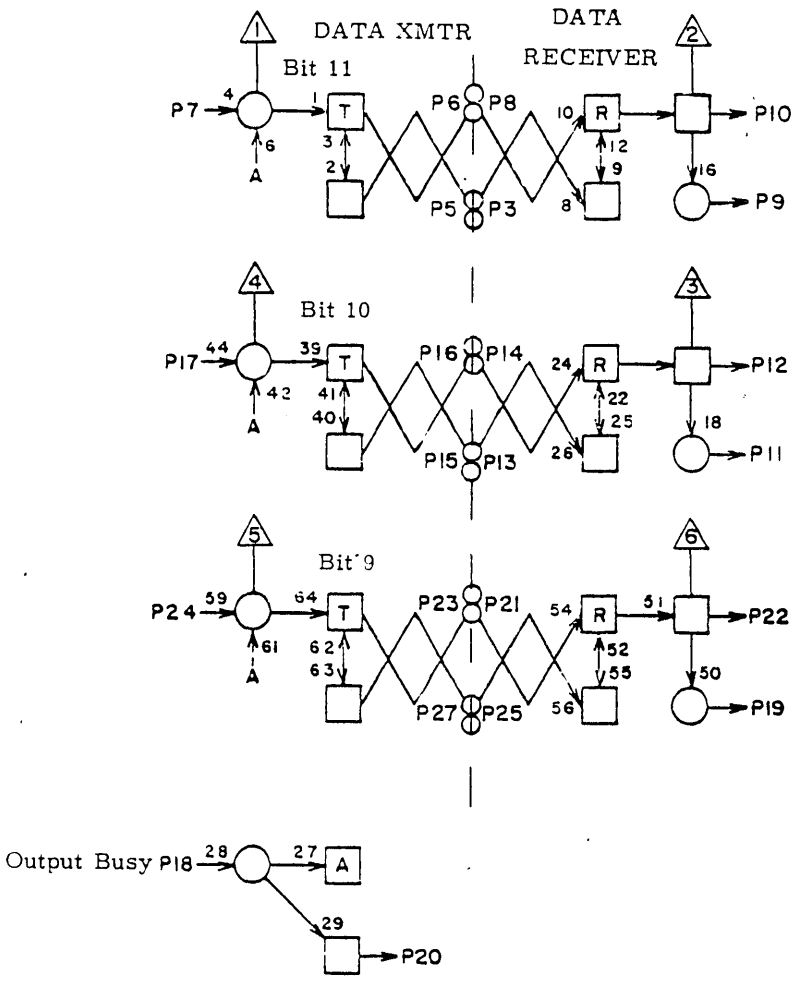
CIRCUIT SPEC
11827600

LS 17876100 ASSY

A REV

ZS

B9

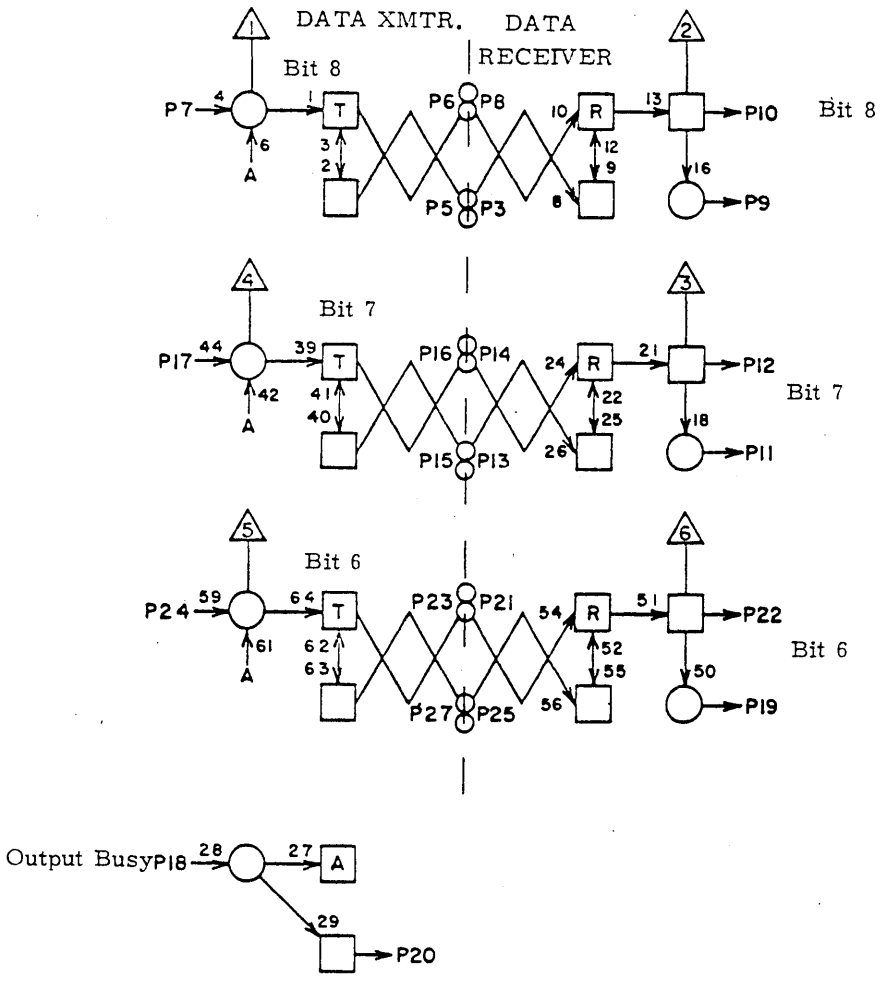


1	-6V		
2			
3	1A1	C4	
4			
5	1A2	C4	
6	1A1	C3	
7	C5	9	7
8	1A2	C3	
9	B2	23	11
10	E5	8	13
11	B2	24	11
12	E5	5	13
13	1A1	C2	
14	1A1	C1	
15	1A2	C2	
16	1A2	C1	
17	C5	3	7
18	A9	27	5
19	B02	26	11
20	B10	18	3
21	1A1	B9	
22	E5	12	13
23	1A2	B9	
24	C5	1	7
25	1A1	B10	
26			
27	1A2	B10	
28			
	JACK	PIN	LG

NOTES:

1. REFERENCE DRAWINGS:
   17876500 LOGIC SCHEMATIC ZT
   17876300 LOGIC SCHEMATIC ZR
2. THIS CIRCUIT IS A COMBINATION OF CIRCUITS ZR & ZT.
3. THE BASE RESISTORS ON TRANSISTOR 6, 42, & 61 ARE 150 OHMS.
4. THERE ARE ONLY TWO FILTER CAPACITORS. ONE BETWEEN +6V AND GROUND AND ONE BETWEEN -6V AND GROUND.

LSI7676100 ASSY | A REV | Z8



B10

1	-6V		
2			
3	1A1	B8	
4			
5	1A2	B8	
6	1A1	B7	
7	C6	9	7
8	1A2	B7	
9	B2	28	13
10	E5	21	15
11	B2	20	13
12	E5	24	15
13	1A1	B6	
14	1A1	B5	
15	1A2	B6	
16	1A2	B5	
17	C6	3	7
18	B9	20	3
19	B2	18	11
20	B11	18	3
21	1A1	B3	
22	E5	23	13
23	1A2	B3	
24	C6	1	7
25	1A1	B4	
26			
27	1A2	B4	
28			
	JACK	PIN	LG

NOTES:

1. REFERENCE DRAWINGS:
   17676500 LOGIC SCHEMATIC ZT
   17876300 LOGIC SCHEMATIC ZR
2. THIS CIRCUIT IS A COMBINATION OF CIRCUITS ZR & ZT.
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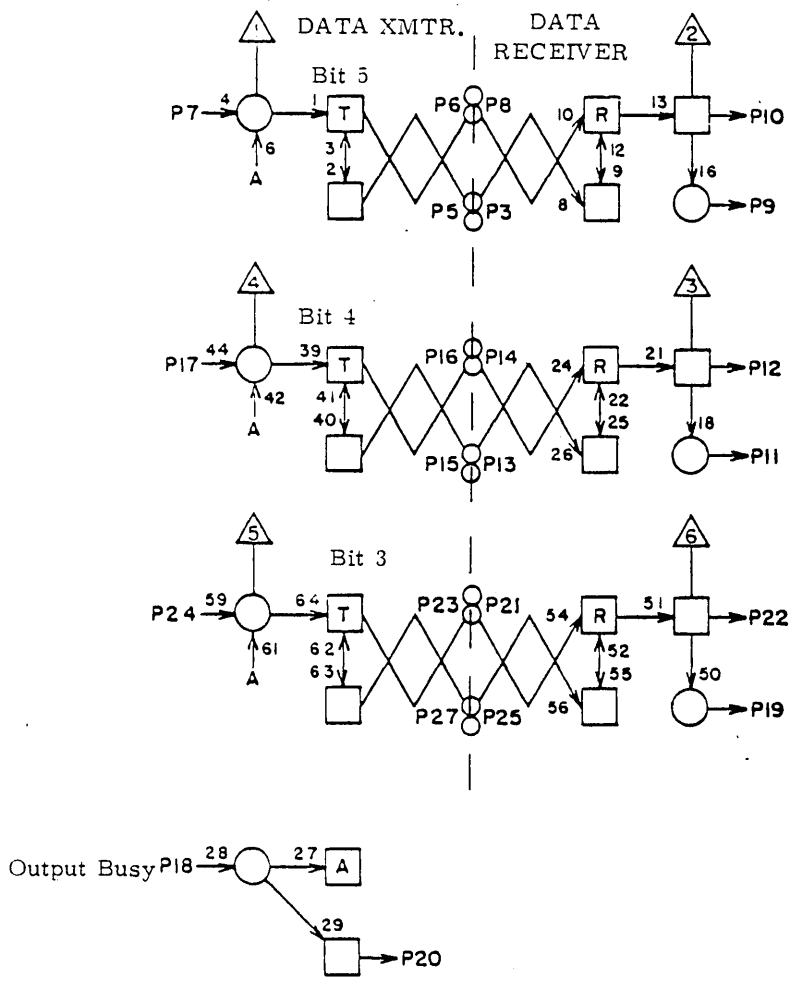
4. THERE ARE ONLY TWO FILTER CAPACITORS. ONE BETWEEN +6V AND GROUND AND ONE BETWEEN -6V AND GROUND.

LSI7876100 ASSY A REV

ZS



NOTES:

1. REFERENCE DRAWINGS:
   17876500 LOGIC SCHEMATIC ZT
   17876300 LOGIC SCHEMATIC ZR
2. THIS CIRCUIT IS A COMBINATION OF CIRCUITS ZR & ZT.
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4. THERE ARE ONLY TWO FILTER CAPACITORS. ONE BETWEEN +6V AND GROUND AND ONE BETWEEN -6V AND GROUND.

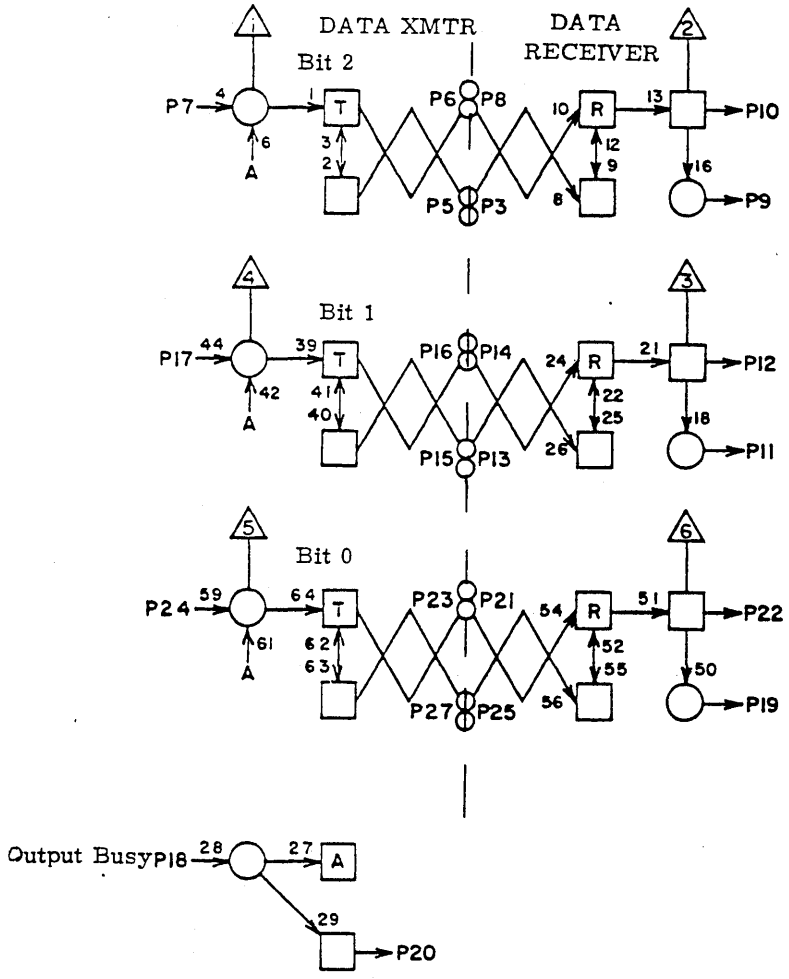
B11

	JACK	PIN	LG
1	-6V		
2			
3	1A1	B2	
4			
5	1A2	B2	
6	$\overline{1A1}$	B1	
7	C7	9	7
8	1A2	B1	
9	B2	11	13
10	E6	8	13
11	B2	13	13
12	E6	5	13
13	1A1	A10	
14	1A1	A9	
15	1A2	A10	
16	1A2	A9	
17	C7	3	7
18	B10	20	3
19	B2	3	13
20	B12	18	3
21	1A1	A7	
22	E6	12	13
23	1A2	A7	
24	C7	1	7
25	1A1	A8	
26			
27	1A2	A8	
28			

LSI7876100 ASSY | A REV

ZS

B12

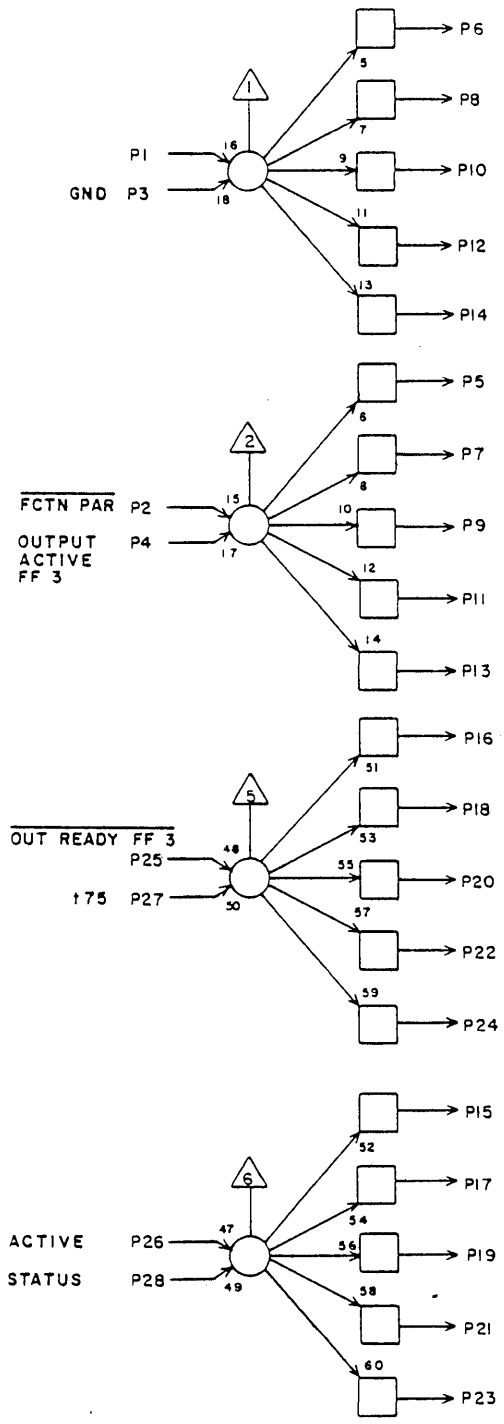


1	-6V		
2			
3	1A1	A6	
4			
5	1A2	A6	
6	1A1	A5	
7	C8	9	7
8	1A2	A5	
9	B2	1	13
10	E6	21	15
11	B2	8	15
12	E6	24	15
13	1A1	A4	
14	1A1	A3	
15	1A2	A4	
16	1A2	A3	
17	C8	3	7
18	B11	20	3
19	B2	5	15
20	A2	9	13
21	1A1	A1	
22	E6	23	15
23	1A2	A1	
24	C8	1	7
25	1A1	A2	
26			
27	1A2	A2	
28			
	JACK	PIN	LG

NOTES:

1. REFERENCE DRAWINGS:
   17876500 LOGIC SCHEMATIC ZT
   17876300 LOGIC SCHEMATIC ZR
2. THIS CIRCUIT IS A COMBINATION OF CIRCUITS ZR & ZT.
3. THE BASE RESISTORS ON TRANSISTOR 6, 42, & 61 ARE 150 OHMS.
4. THERE ARE ONLY TWO FILTER CAPACITORS. ONE BETWEEN +6V AND GROUND AND ONE BETWEEN -6V AND GROUND.

LS 52551200 L
ASSY REV



TD

C01

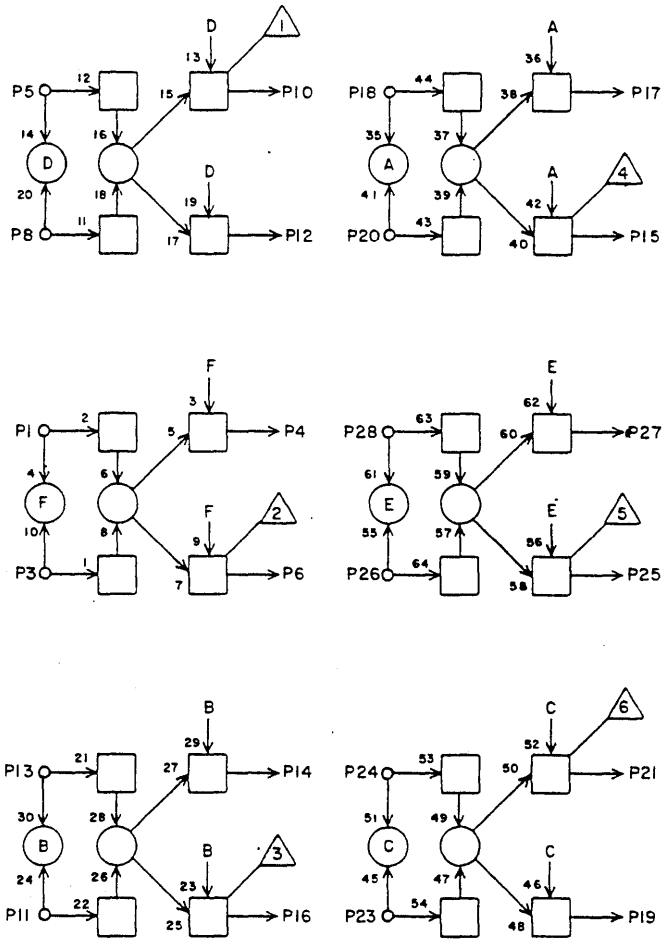
1	D1	9	7
2	A3	25	45
3	GND		2
4	D4	20	9
5	E9	27	15
6	A4	17	11
7	E9	4	13
8	A3	14	11
9	B5	21	45
10	A7	4	13
11	A8	28	13
12			
13			
14	E2	28	11
15	A4	2	11
16	A3	17	11
17	A7	8	13
18	E6	22	13
19	A3	11	11
20	E6	9	11
21	E3	7	9
22	E5	22	11
23	E3	20	11
24	E5	7	11
25	E4	12	9
26	D5	16	9
27	D7	17	11
28	B6	5	11
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600

LS 52543500 ASSY C REV

AB

C02



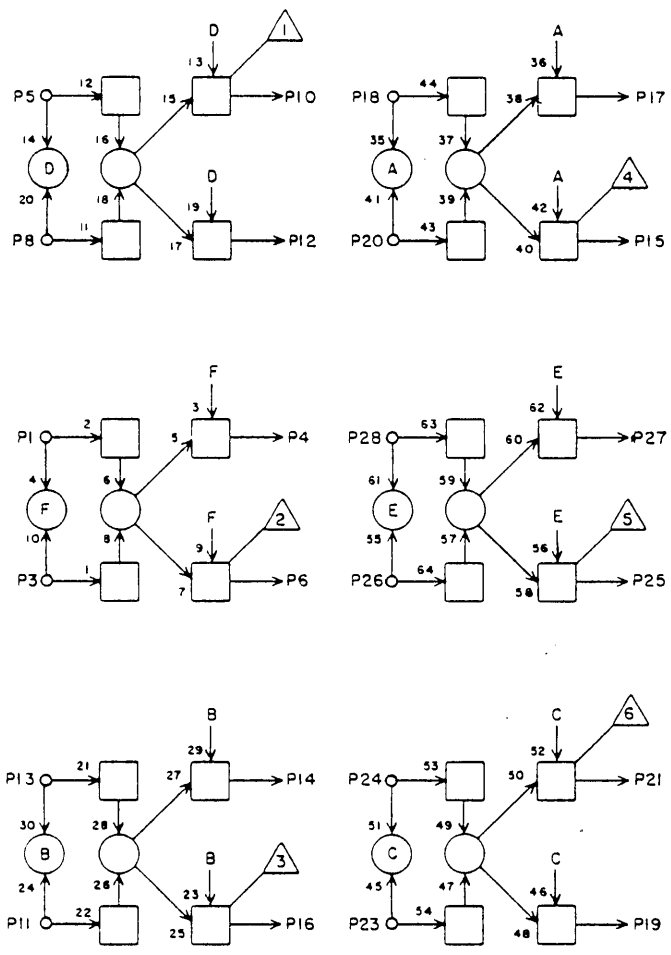
1	C3	16	5
2			
3	C3	15	5
4			
5	C3	10	5
6	C2	20	5
7			
8	C3	6	5
9			
10	C2	18	5
11	C3	21	5
12			
13	C3	25	5
14			
15	C2	28	5
16	C2	26	5
17			
18	C2	10	5
19			
20	C2	6	5
21	A3	18	11
22			
23	C2	25	3
24	C9	25	120
25	C2	23	3
26	C2	16	5
27			
28	C2	15	5
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600

LS 52543500 ASSY C REV

AB

C03



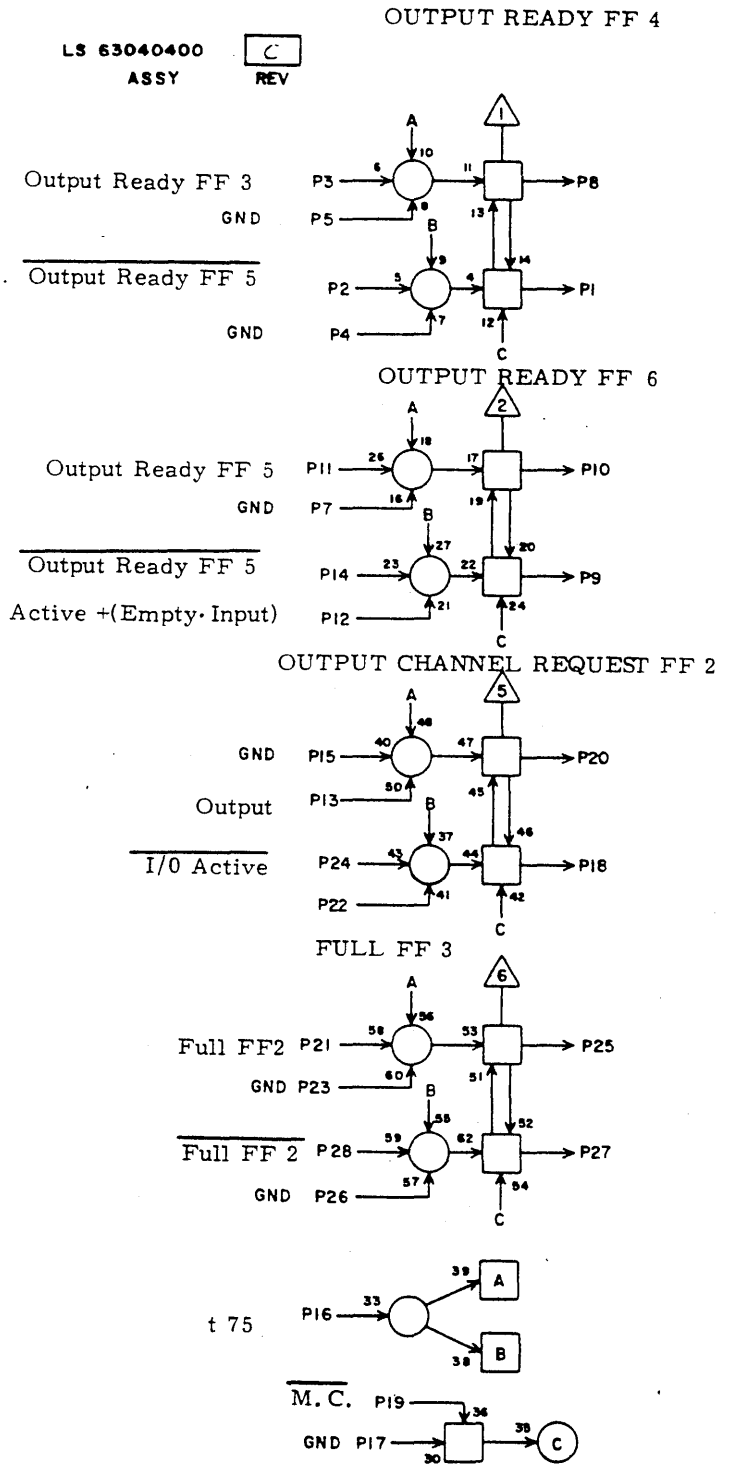
1	D12	11	15
2			
3	D12	5	15
4			
5	D12	24	15
6	C2	8	5
7			
8	D12	18	5
9			
10	C2	5	5
11	C12	18	13
12			
13	C12	24	13
14			
15	C2	3	5
16	C2	1	5
17			
18	C12	11	13
19			
20	C12	5	13
21	C2	11	5
22			
23	C11	5	13
24	C11	11	13
25	C2	13	5
26	C11	18	11
27			
28	C11	24	11
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600

LS 63040400 ASSY | C REV

AE

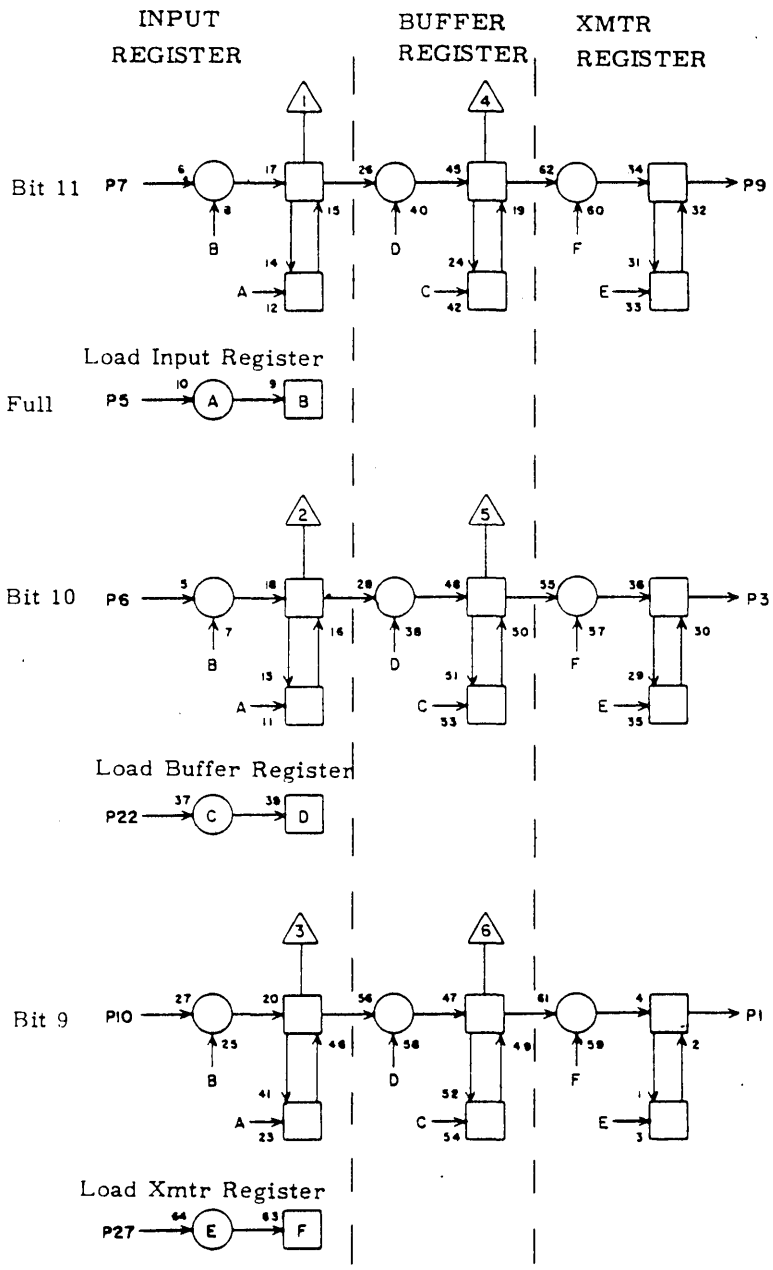
C4



1	E4	25	11
2	D5	11	9
3	E4	10	9
4	Gnd		2
5	Gnd		2
6			
7	Gnd		2
8	E4	26	11
9	D4	11	5
10	D4	14	5
11	D5	9	7
12	E9	19	11
13	A6	8	11
14	D5	22	7
15	GND		2
16	D7	24	7
17	Gnd		2
18	A12	25	13
19	D5	17	7
20	B6	25	7
21	B4	7	7
22	A8	14	11
23	Gnd		2
24	B6	21	7
25	D4	5	5
26	Gnd		2
27	B4	25	5
28	B5	1	7
	JACK	PIN	LG

CIRCUIT SPECIFICATION 1182800

LS 63057700 ASSY C REV



P8

C5

1	B9	24	7
2			
3	B9	17	7
4			
5	B7	5	7
6	C11	9	9
7	C11	7	9
8			
9	B9	7	7
10	C11	20	9
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22	B7	15	7
23			
24			
25			
26			
27	B7	6	7
28			
	JACK	PIN	LG

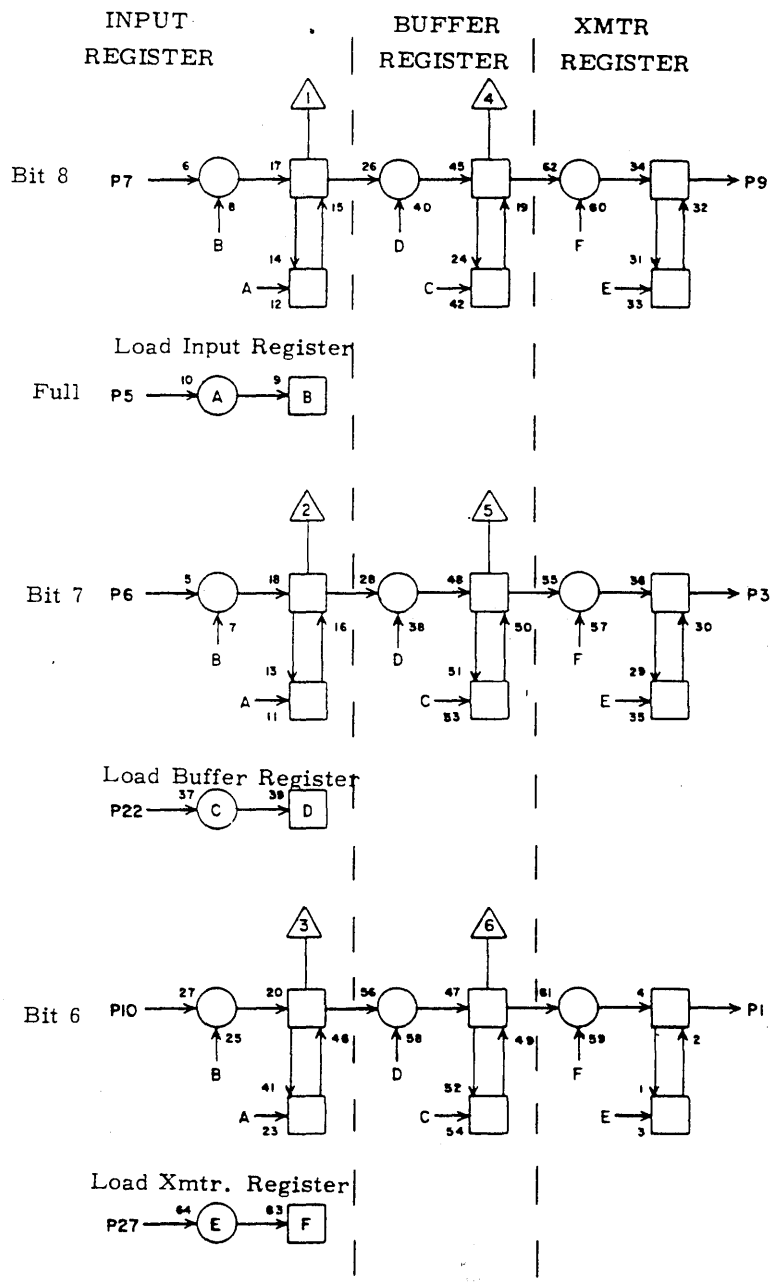
CIRCUIT SPECIFICATION 11827600

6682/83 COUPLER

LS 63057700 ASSY C REV

PB

C6



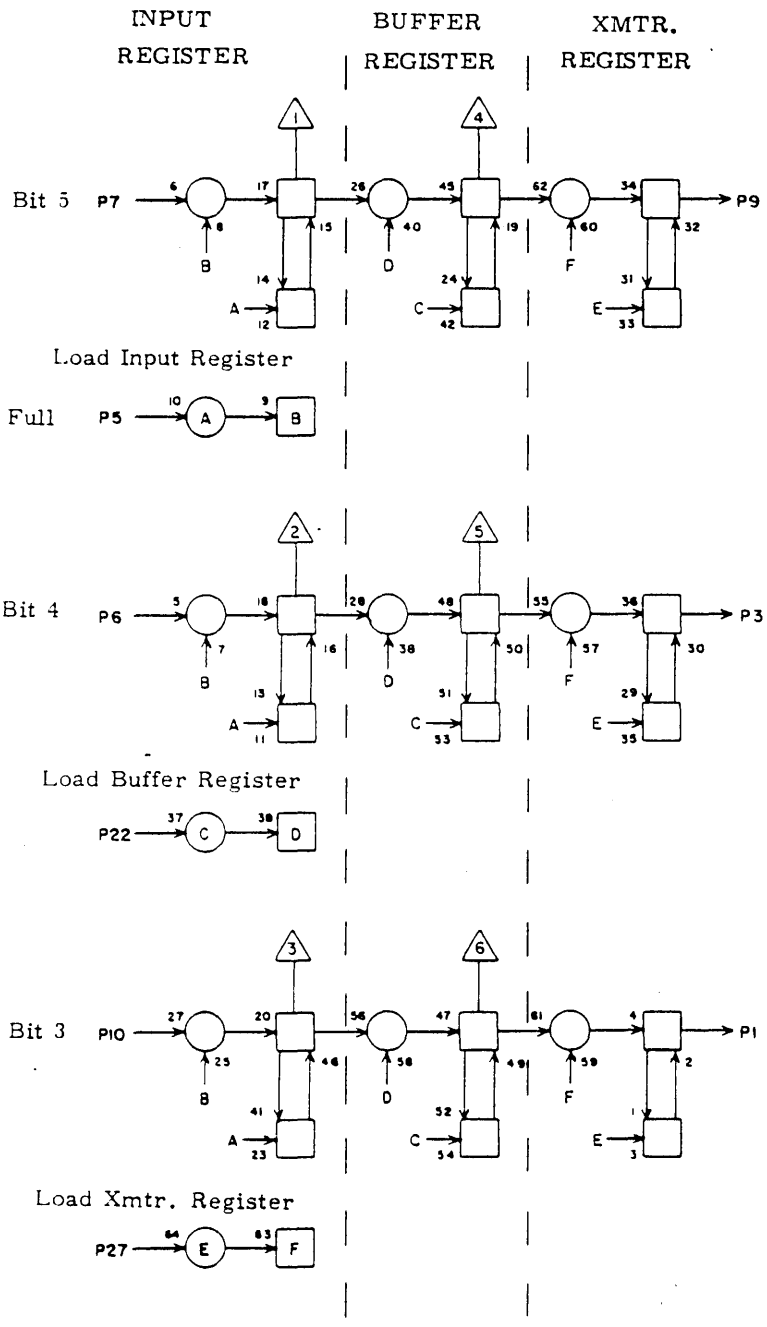
	JACK	PIN	LG
1	B10	24	7
2			
3	B10	17	7
4			
5	B7	7	5
6	C12	7	9
7	C11	22	7
8			
9	B10	7	7
10	C12	9	9
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22	B7	17	7
23			
24			
25			
26			
27	B7	8	7
28			

CIRCUIT SPECIFICATION IIB27600

LS 63057700 ASSY C REV

P8

C7



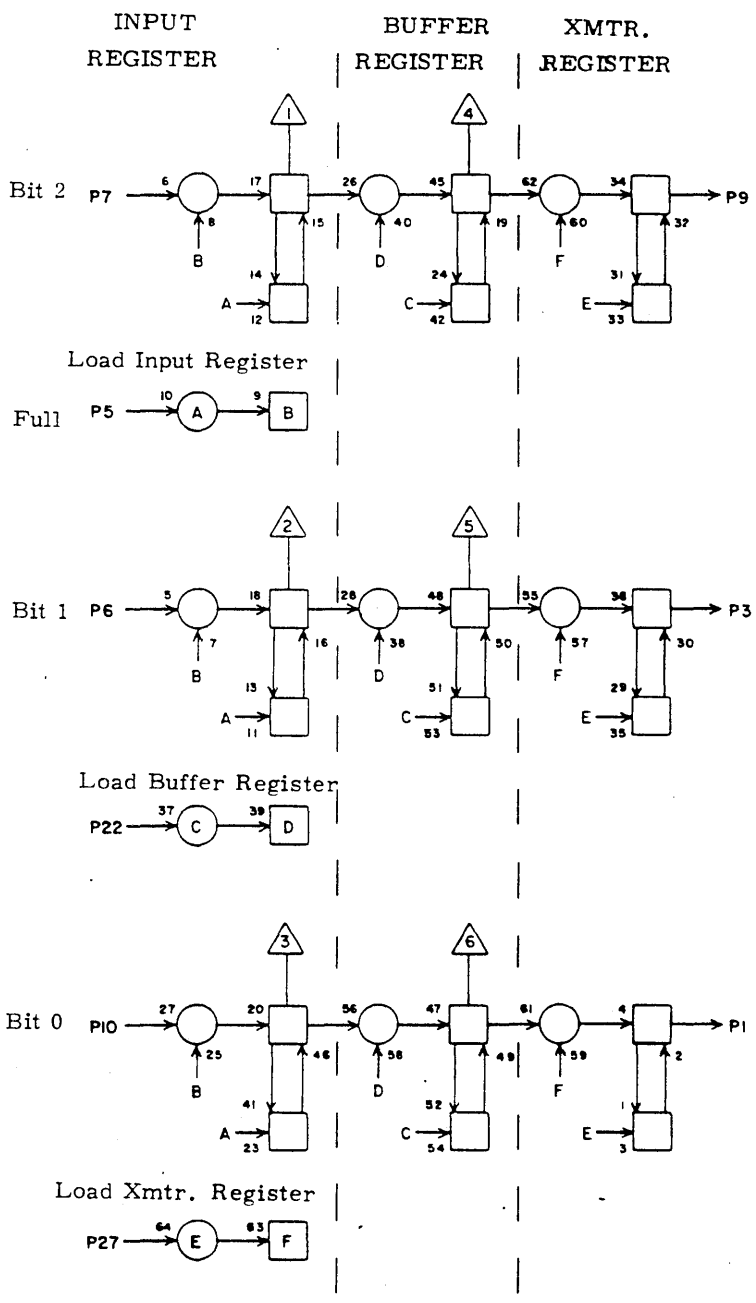
1	B11	24	7
2			
3	B11	17	7
4			
5	B7	9	5
6	C12	22	7
7	C12	20	7
8			
9	B11	7	7
10	D12	7	9
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22	B7	19	5
23			
24			
25			
26			
27	B7	10	7
28			
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600

6682/83 COUPLER

LS 63057700 ASSY C REV

P8 C8

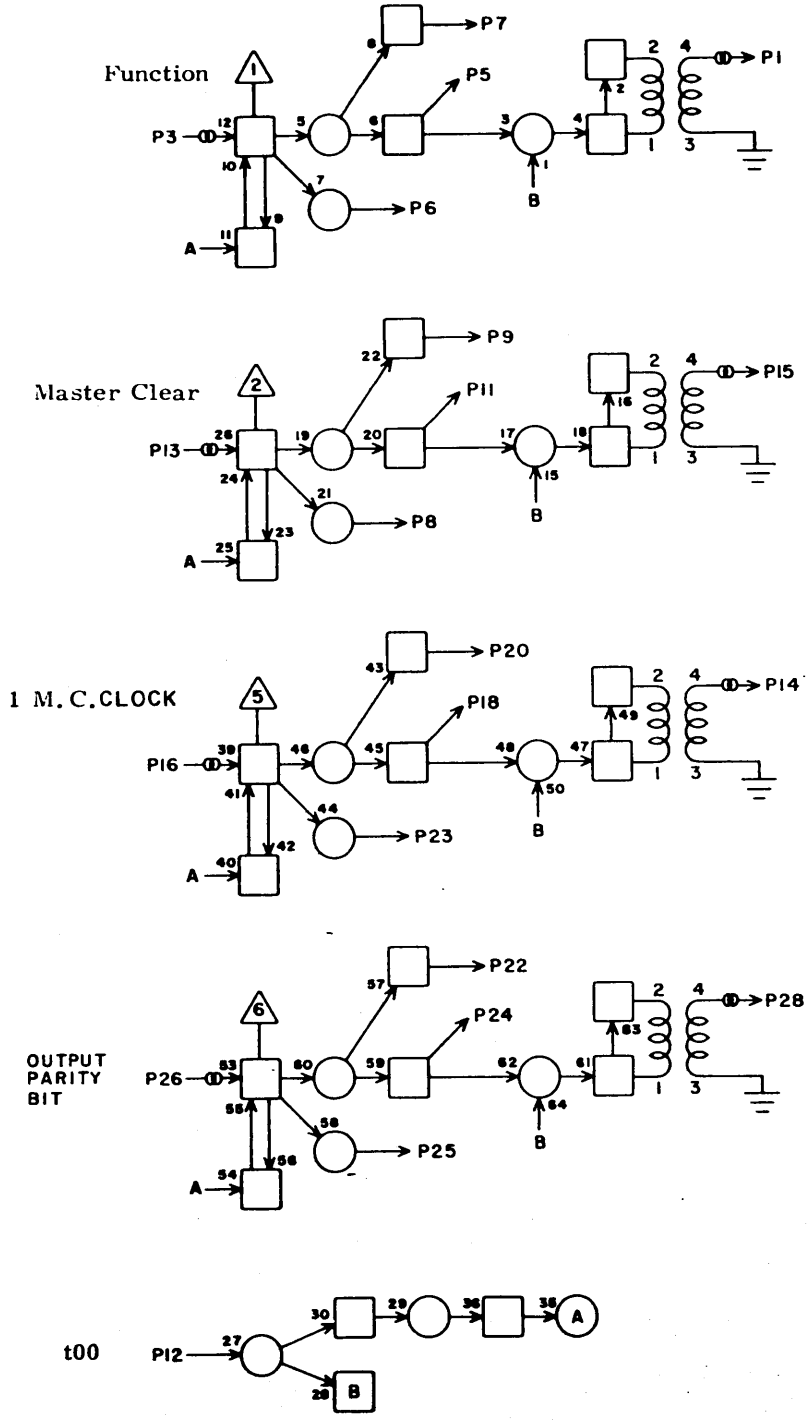


	JACK	PIN	LG
1	B12	24	7
2			
3	B12	17	7
4			
5	B7	11	5
6	D12	20	9
7	D12	9	7
8			
9	B12	7	7
10	D12	22	9
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22	B7	21	5
23			
24			
25			
26			
27	B7	12	7
28			

CIRCUIT SPECIFICATION 1827600

6682/83 COUPLER

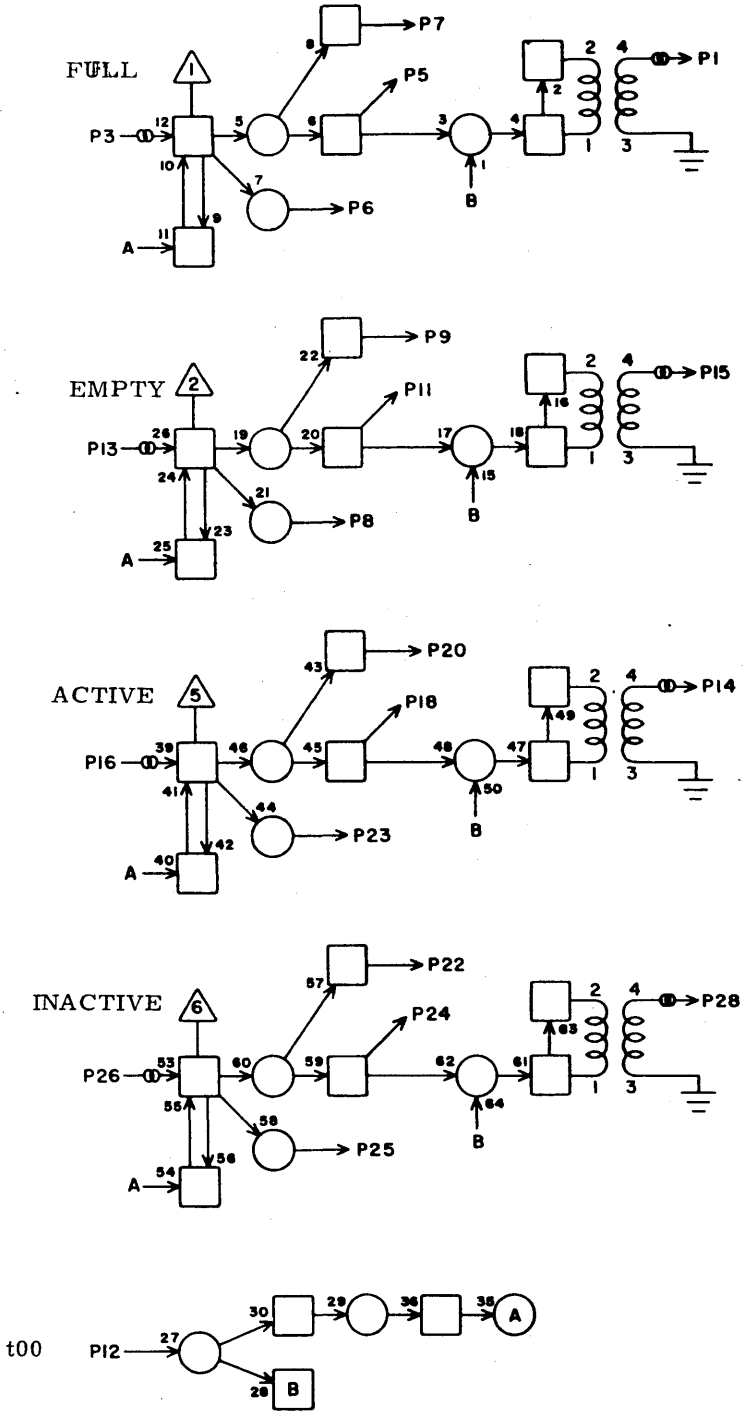
LS 63060800 ASSY | F REV | FROM COMPUTER | PASS ON 01 | C9



1	W01	906	
2			
3	W00	906	
4			
5	A8	2	9
6			
7	D1	13	13
8	A04	4	13
9	E09	22	11
10			
11	E09	9	9
12	D6	6	7
13	W00	907	
14			
15	W01	907	
16	W02	907	
17			
18			
19			
20	D11	25	7
21			
22			
23			
24	D02	14	11
25	C02	24	65
26	W00	908	
27			
28	W01	908	
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600

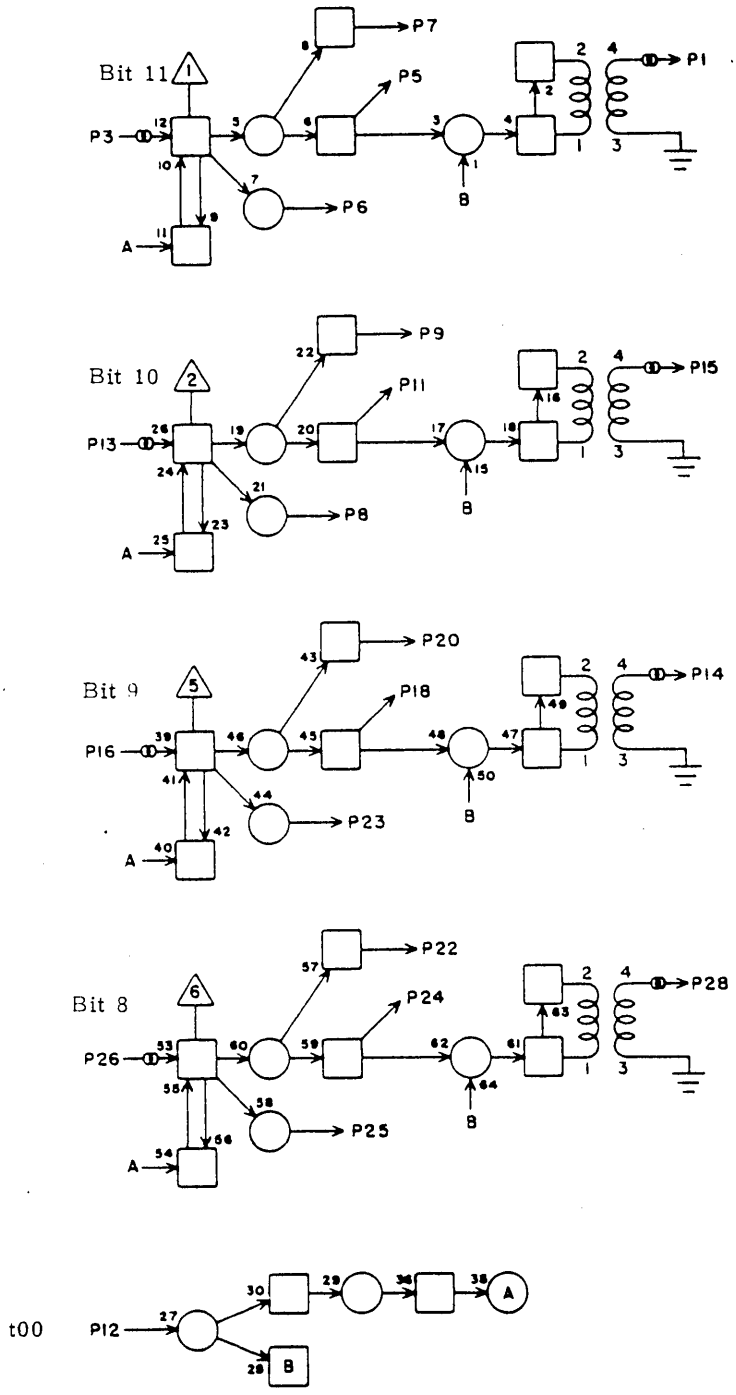
LS 63060800 ASSY | F REV | FROM COMPUTER | PASS ON 01 | C10



1	W01	904	
2			
3	W00	904	
4			
5	B7	2	7
6	D2	20	65
7	B8	3	7
8			
9	E9	18	9
10			
11	A10	14	9
12	D6	4	7
13	W00	905	
14	W01	902	
15	W01	905	
16	W00	902	
17			
18	B8	8	7
19			
20	D5	25	9
21			
22			
23			
24			
25	A07	5	11
26	W00	903	
27			
28	W01	903	
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827800

LS 63060800 ASSY | F REV | FROM COMPUTER | PASS ON | 01



C11

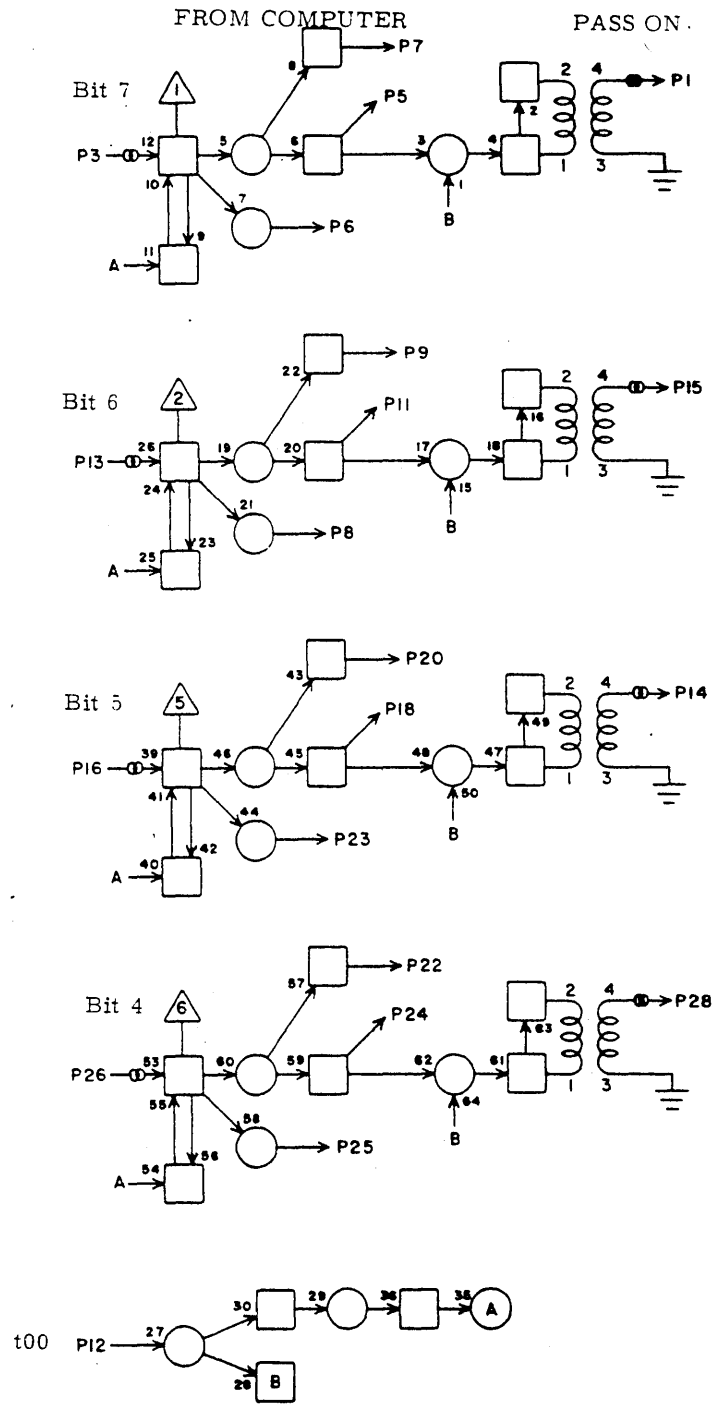
	JACK	PIN	LG
1	W01	901	
2			
3	W00	901	
4			
5	C3	23	13
6	A8	4	9
7	C5	7	9
8	A8	6	9
9	C5	6	9
10			
11	C3	24	13
12	D6	13	9
13	W00	900	
14	W01	99	
15	W01	900	
16	W00	99	
17			
18	C3	26	11
19			
20	C5	10	9
21			
22	C6	7	7
23	A8	8	11
24	C3	28	11
25	D8	26	9
26	W00	98	
27			
28	W01	98	

CIRCUIT SPECIFICATION 11827600

LS 63060800 ASSY | F REV

Q1

C12

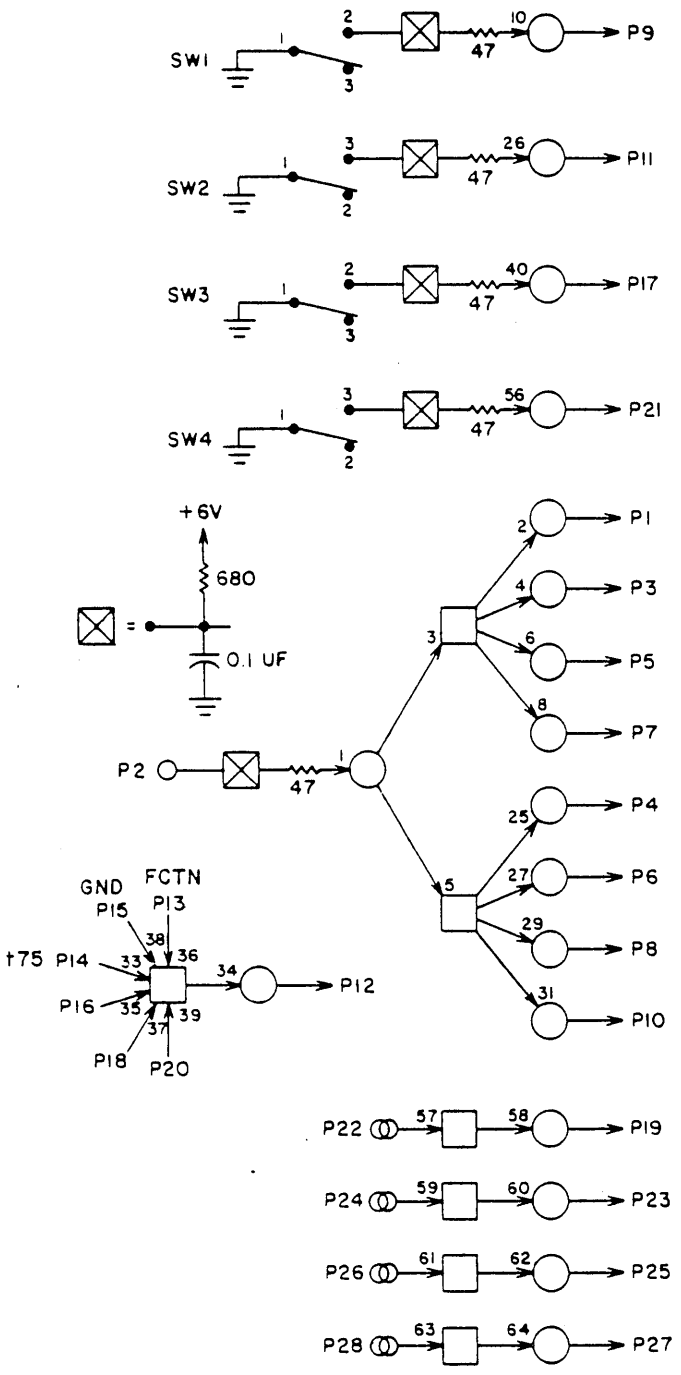


	JACK	PIN	LG
1	W01	97	
2			
3	W00	97	
4			
5	C3	20	13
6	D8	8	9
7	C6	6	9
8	D8	6	9
9	C6	10	9
10			
11	D8	18	13
12	D6	1	9
13	W00	96	
14	W01	95	
15	W01	96	
16	W00	95	
17			
18	C3	11	13
19			
20	C7	7	7
21			
22	C7	6	7
23			
24	C3	13	13
25			
26	W00	94	
27			
28	W01	94	

CIRCUIT SPECIFICATION 11627800

LS 18574100 ASSY REV

RX



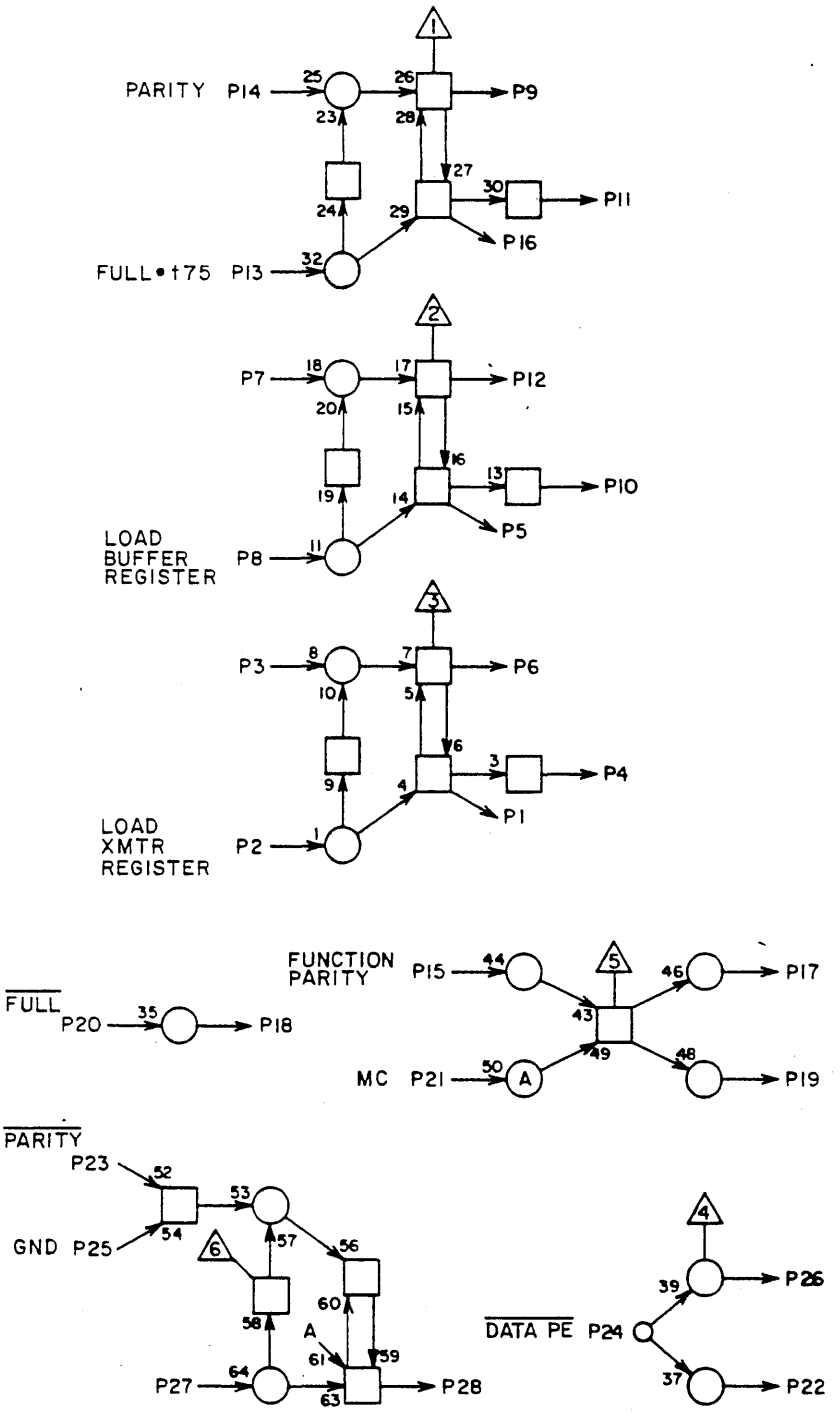
D01

1			
2			
3			
4			
5			
6			
7			
8			
9	C1	1	7
10			
11	E2	26	7
12	B8	16	13
13	C9	7	13
14	D7	26	9
15	GND		2
16			
17	A3	13	13
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
	JACK	PIN	LG

SEE CIRCUIT SPECIFICATION 11827600

LS 18294700 E
ASSY REV

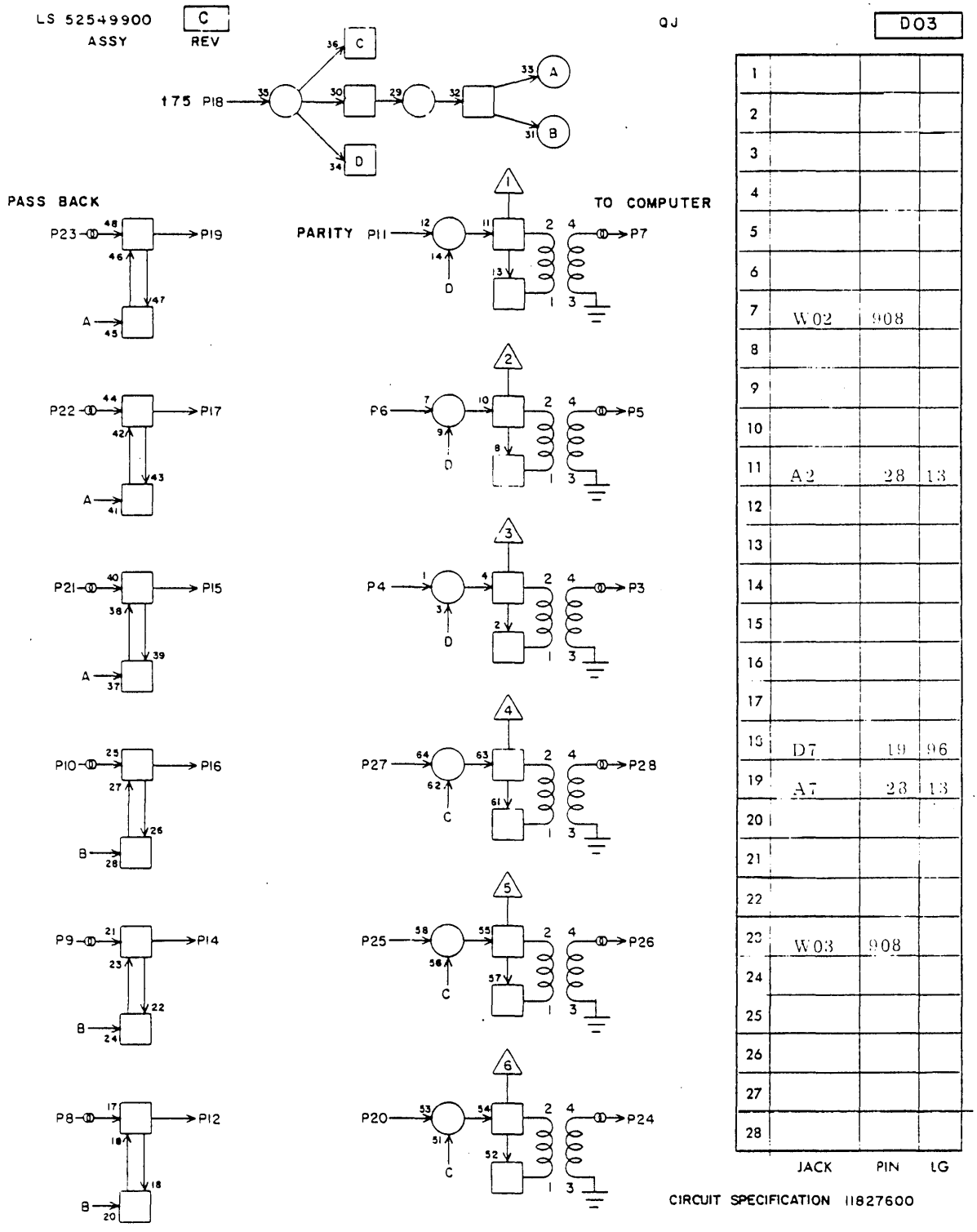
J59



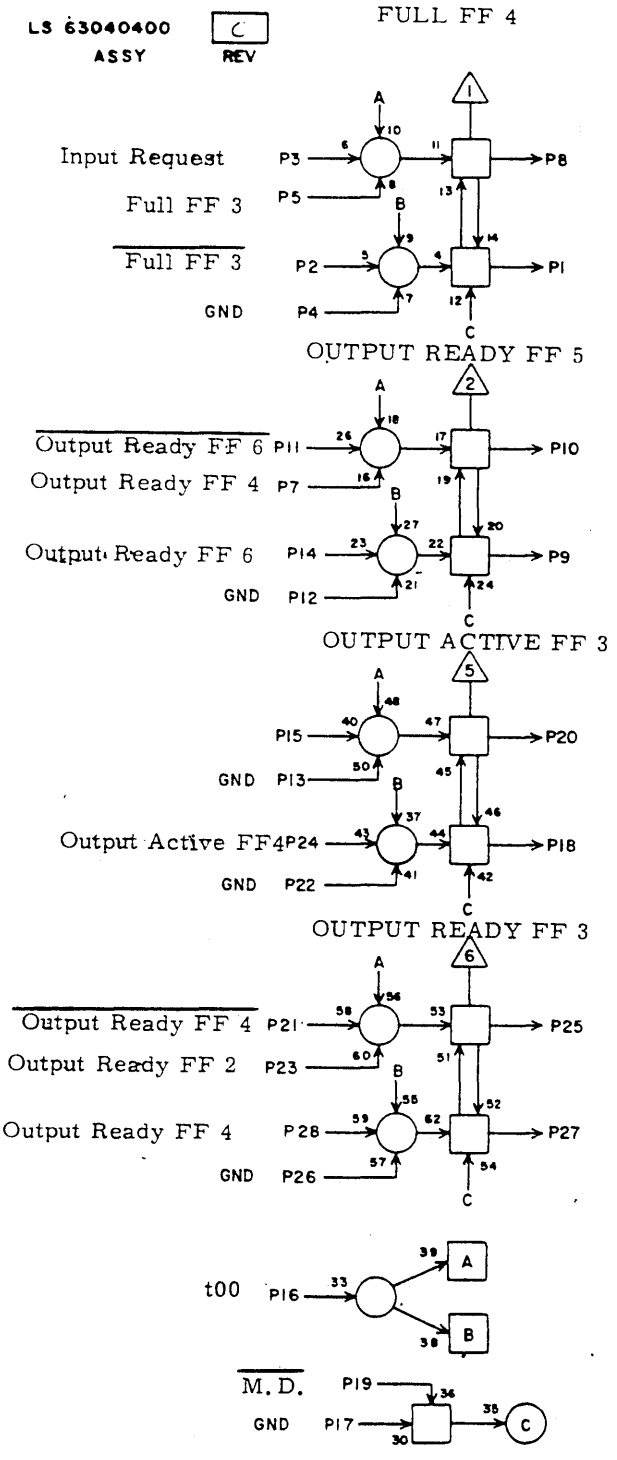
D02

1			
2	B17	14	11
3	D2	12	5
4			
5			
6	A5	24	13
7	D2	9	3
8	D5	7	7
9	D2	7	3
10			
11			
12	D2	3	5
13	B7	13	13
14	C9	24	11
15	A3	28	11
16			
17	A6	17	45
18	A3	23	13
19	B8	19	13
20	C10	6	13
21	A5	10	45
22	A5	17	15
23	A4	28	13
24	A3	10	15
25	GND		2
26	E3	21	7
27	B7	16	13
28	A4	20	15
	JACK	PIN	LG

SEE CIRCUIT SPECIFICATION 11827600


LS 52549900
ASSY
C
REV
QJ
D03
175 P18
PASS BACK
TO COMPUTER
PARITY P11
P23
P19
P22
P17
P21
P15
P10
P16
P9
P14
P8
P12
P6
P5
P4
P3
P27
P28
P25
P26
P20
P24
P7
W02 908
A2 28 13
D7 19 96
A7 23 13
W03 908
JACK
PIN
LG
CIRCUIT SPECIFICATION 11827600

LS 63040400 ASSY | C REV



AE

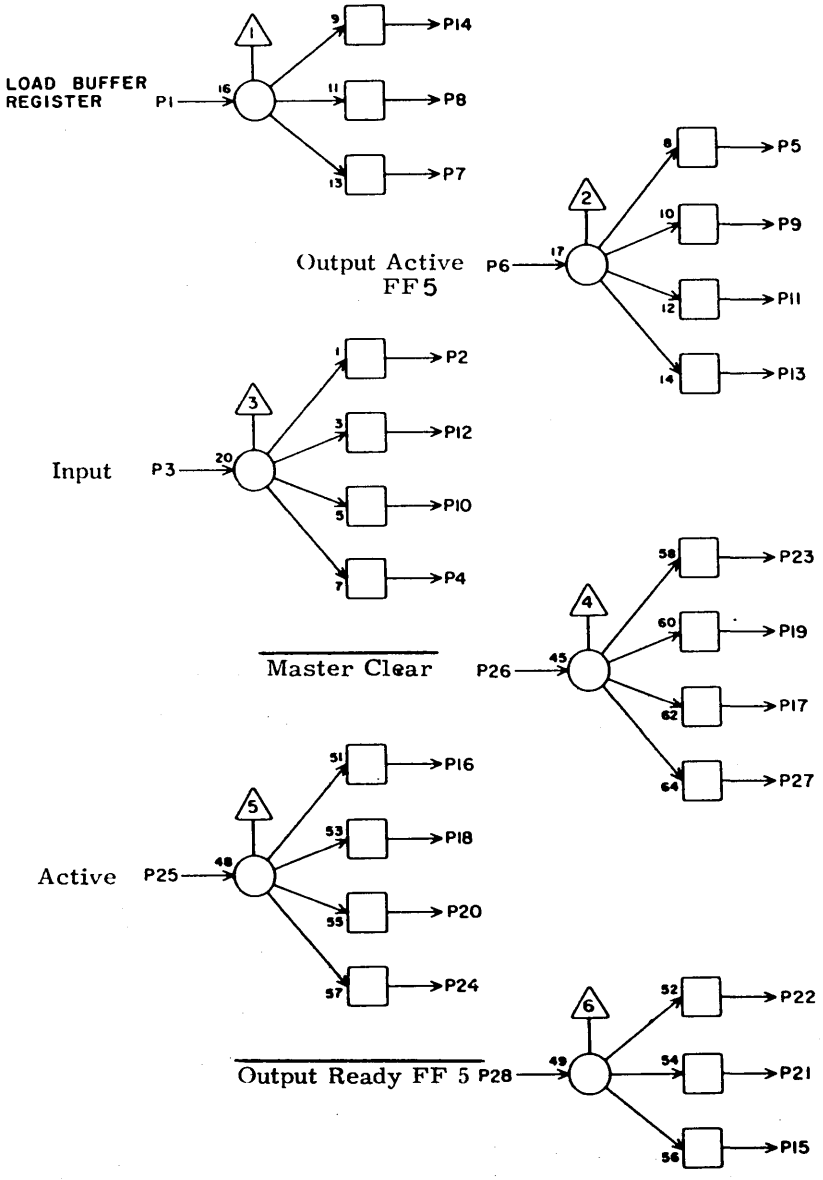
D4

1	B5	3	9
2	B4	18	7
3	A10	2	13
4	Gnd		2
5	C4	25	5
6			
7	E4	23	7
8	B4	26	7
9	D5	28	3
10	D5	6	5
11	C4	9	5
12	Gnd		2
13	Gnd		2
14	C4	10	5
15	E9	16	9
16	D6	9	5
17	Gnd		2
18	B4	3	9
19	D5	27	65
20	C1	4	9
21	E4	16	5
22	Gnd		2
23	A9	2	15
24	B5	25	9
25	E4	3	3
26	Gnd		2
27	A4	3	15
28	E4	19	5
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600

LS 63064000 ASSY C REV

TH



D5

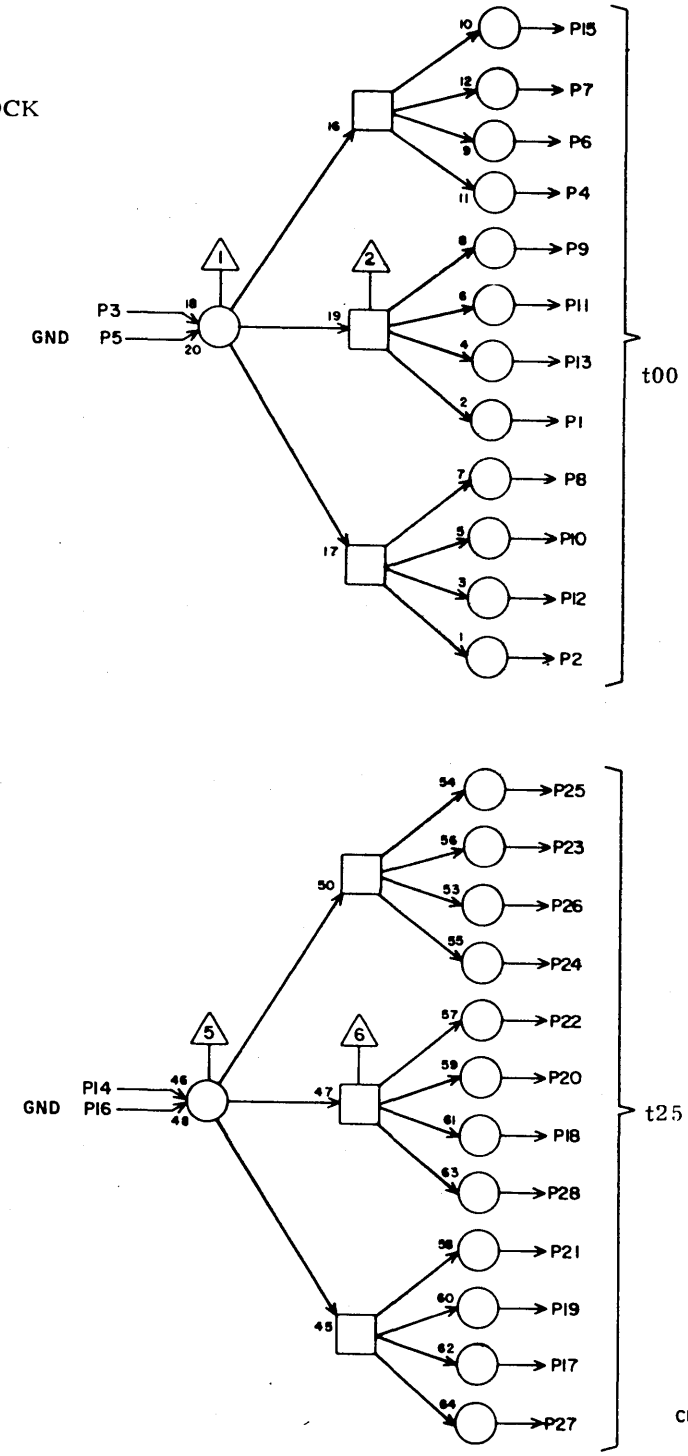
1	B7	23	9
2	E9	20	9
3	B6	10	9
4			
5	A2	23	13
6	D4	10	5
7	D2	8	7
8	E9	12	9
9	C4	11	7
10			
11	C4	2	9
12	E9	23	9
13	E9	21	9
14			
15	E8	14	9
16	C1	26	9
17	C4	19	7
18			
19	A3	19	13
20			
21	E7	14	7
22	C4	14	7
23	B5	19	9
24			
25	C10	20	9
26	A05	9	120
27	D4	19	65
28	D4	9	3
	JACK	PIN	LG

CIRCUIT SPECIFICATION 1182760D

LS 63063500 ASSY D REV

D6

CLOCK

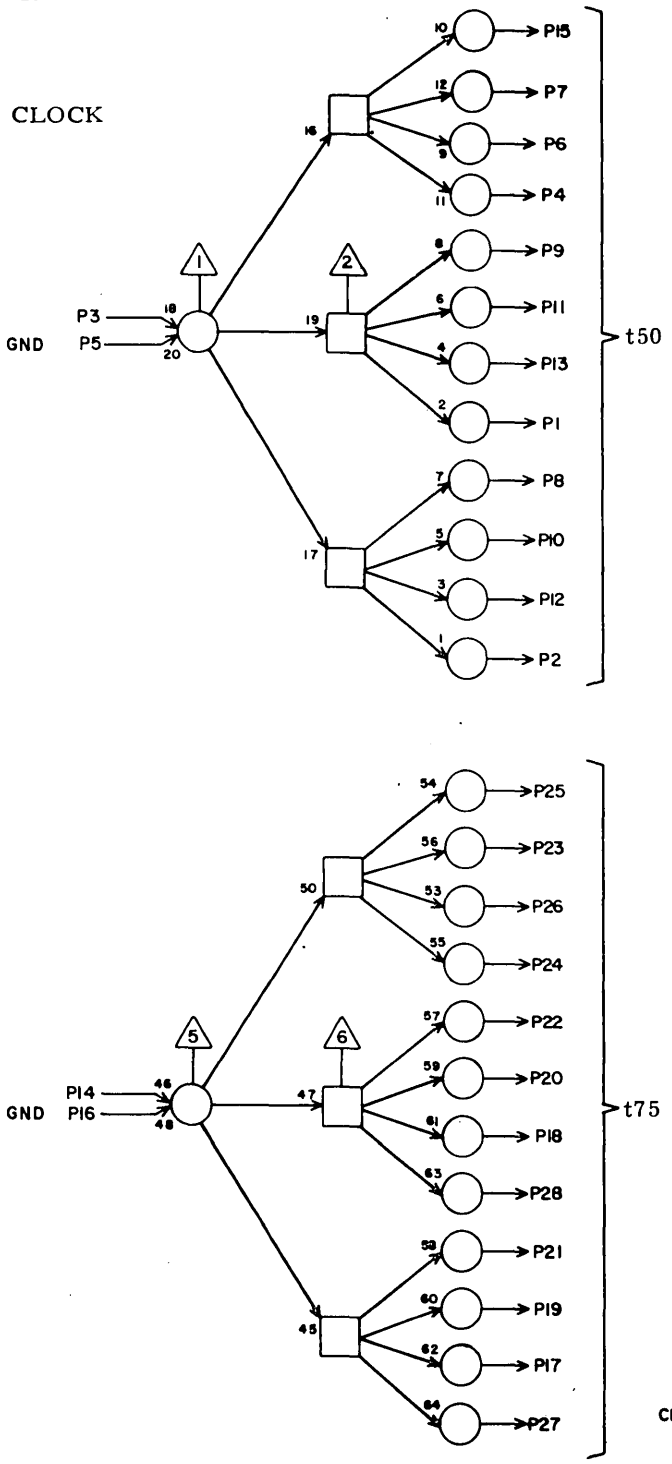


1	C12	12	9
2	A3	16	13
3	E10	2	9
4	C10	12	7
5	Gnd		2
6	C9	12	7
7	B8	22	7
8	A06	15	13
9	D4	16	5
10			
11	D12	12	7
12	A3	9	15
13	C11	12	9
14	E10	1	9
15	B8	18	9
16	Gnd		2
17			
18	A6	7	13
19			
20	A6	5	13
21	A9	16	13
22	E7	16	5
23			
24	E8	4	5
25	E8	16	5
26			
27			
28			
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600

LS 63063500 ASSY

D REV



D7

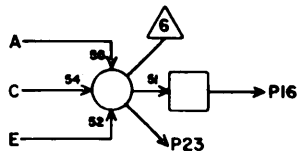
1			
2			
3	E10	22	9
4	A10	24	11
5	Gnd		2
6	B5	16	9
7	A10	6	13
8	A1	5	15
9			
10	A09	13	65
11			
12			
13			
14	E10	21	9
15			
16	Gnd		2
17	C1	27	11
18	D11	18	5
19	D3	18	96
20	D10	18	96
21	E3	9	9
22	D9	18	96
23	B8	5	11
24	C4	16	7
25	B7	4	11
26	D1	14	9
27	A10	17	13
28	E3	22	9
	JACK	PIN	LG

CIRCUIT SPECIFICATION 1827600

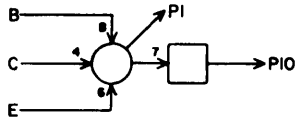
LS 63049300 ASSY D REV

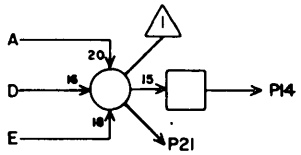
D8

IV

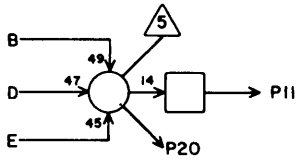


X7XX

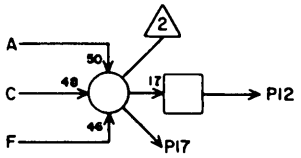




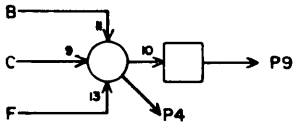
Bit 6 P6 59 A 60 B



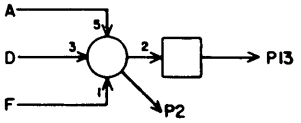
Bit 7 P8 61 C 62 D



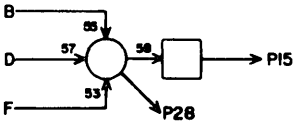
Bit 8 P26 63 E 64 F



X2XX



X1XX



XOXX

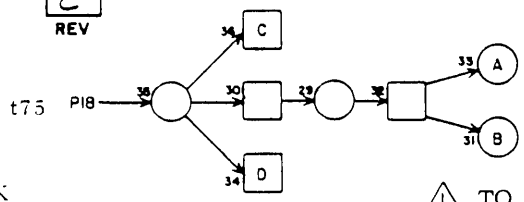
	JACK	PIN	LG
1			
2			
3			
4			
5			
6	C12	8	9
7			
8	C12	6	9
9	B8	20	9
10			
11			
12			
13	B8	23	9
14			
15	B8	27	9
16	A6	13	13
17			
18			
19			
20			
21			
22			
23			
24			
25			
26	C11	25	9
27			
28			

CIRCUIT SPECIFICATION 11827600

OUTPUT TRANSMITTER

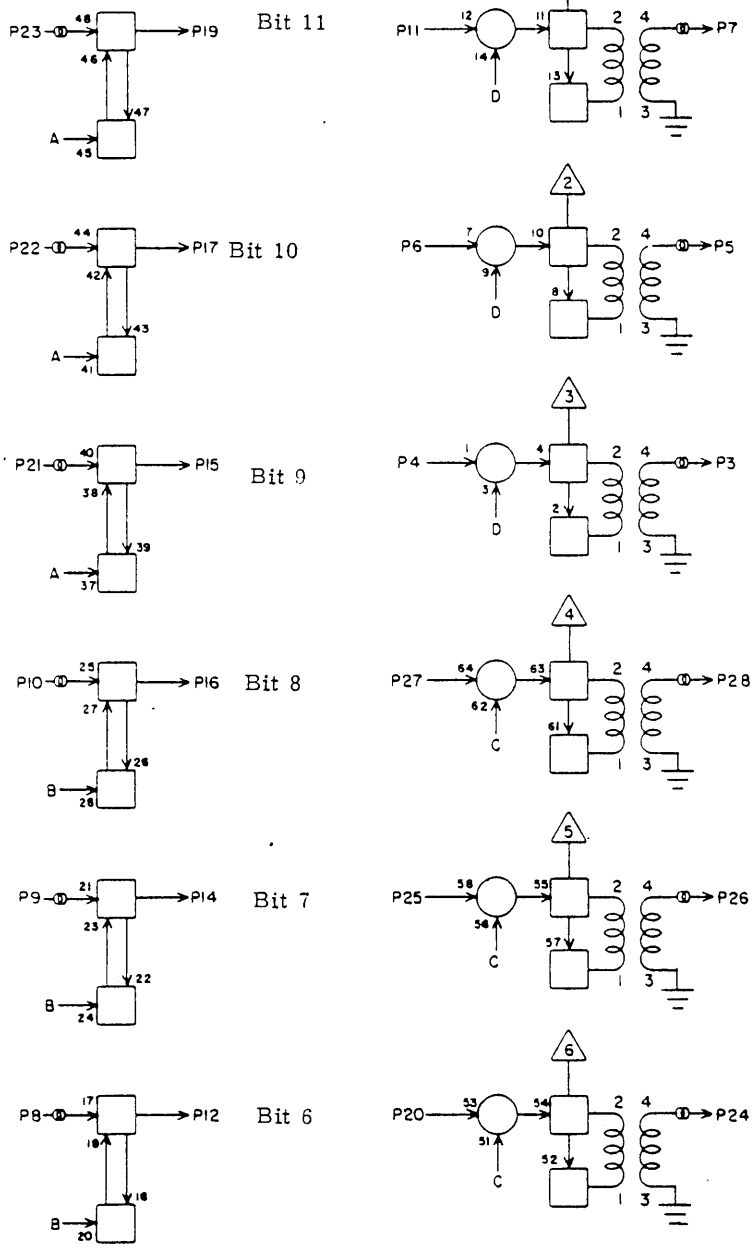
LS 63060900 ASSY C REV

QJ D9



PASS BACK

TO COMPUTER

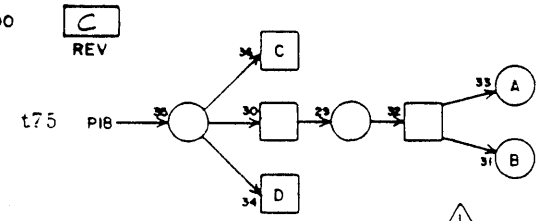


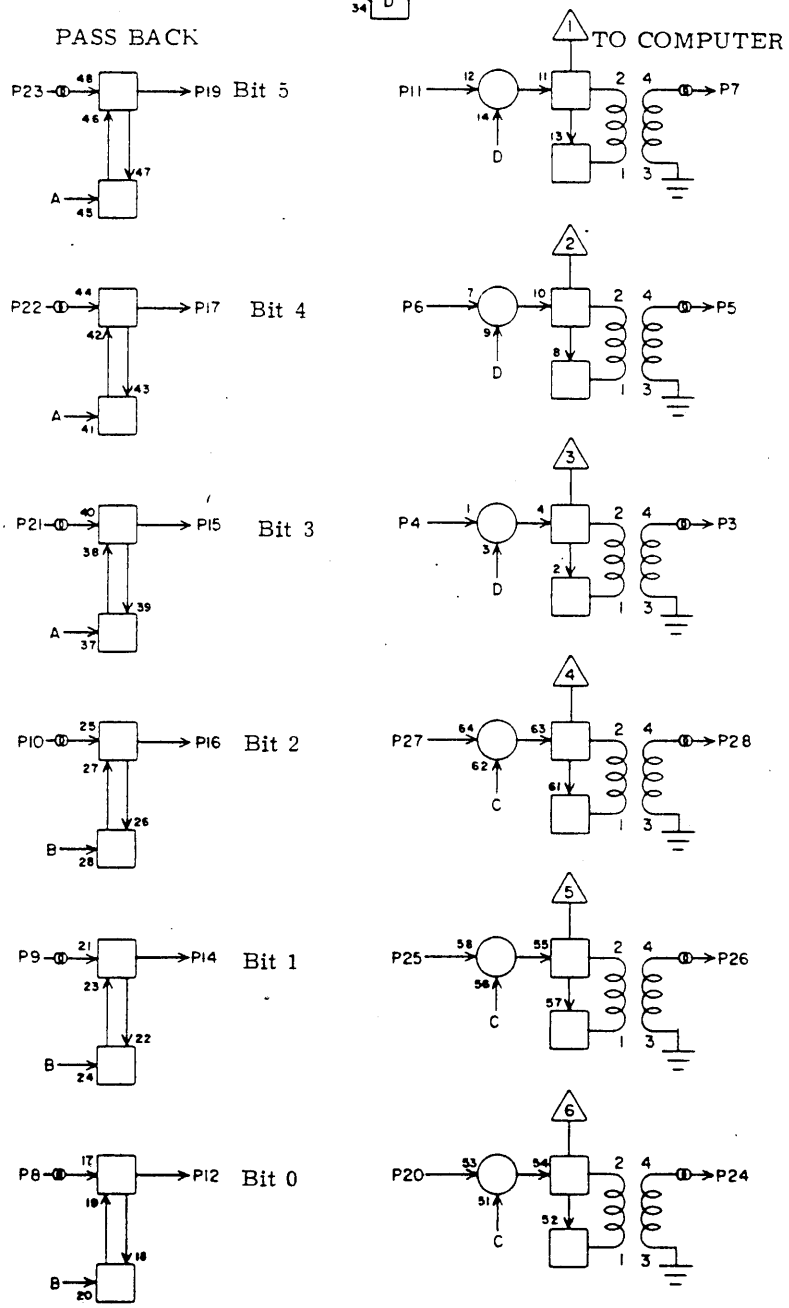
1			
2			
3	W02	99	
4	E7	10	7
5	W02	900	
6	E7	8	7
7	W02	901	
8	W03	96	
9	W03	97	
10	W03	98	
11	E7	9	7
12	E7	27	7
13			
14	E7	28	7
15	E7	12	7
16	E7	17	7
17	E7	1	7
18	D7	22	96
19	E7	2	5
20	E7	20	7
21	W03	99	
22	W03	900	
23	W03	901	
24	W02	96	
25	E7	21	7
26	W02	97	
27	E7	19	7
28	W02	98	
	JACK	PIN	LG

CIRCUIT SPECIFICATION 1H827600

OUTPUT TRANSMITTER

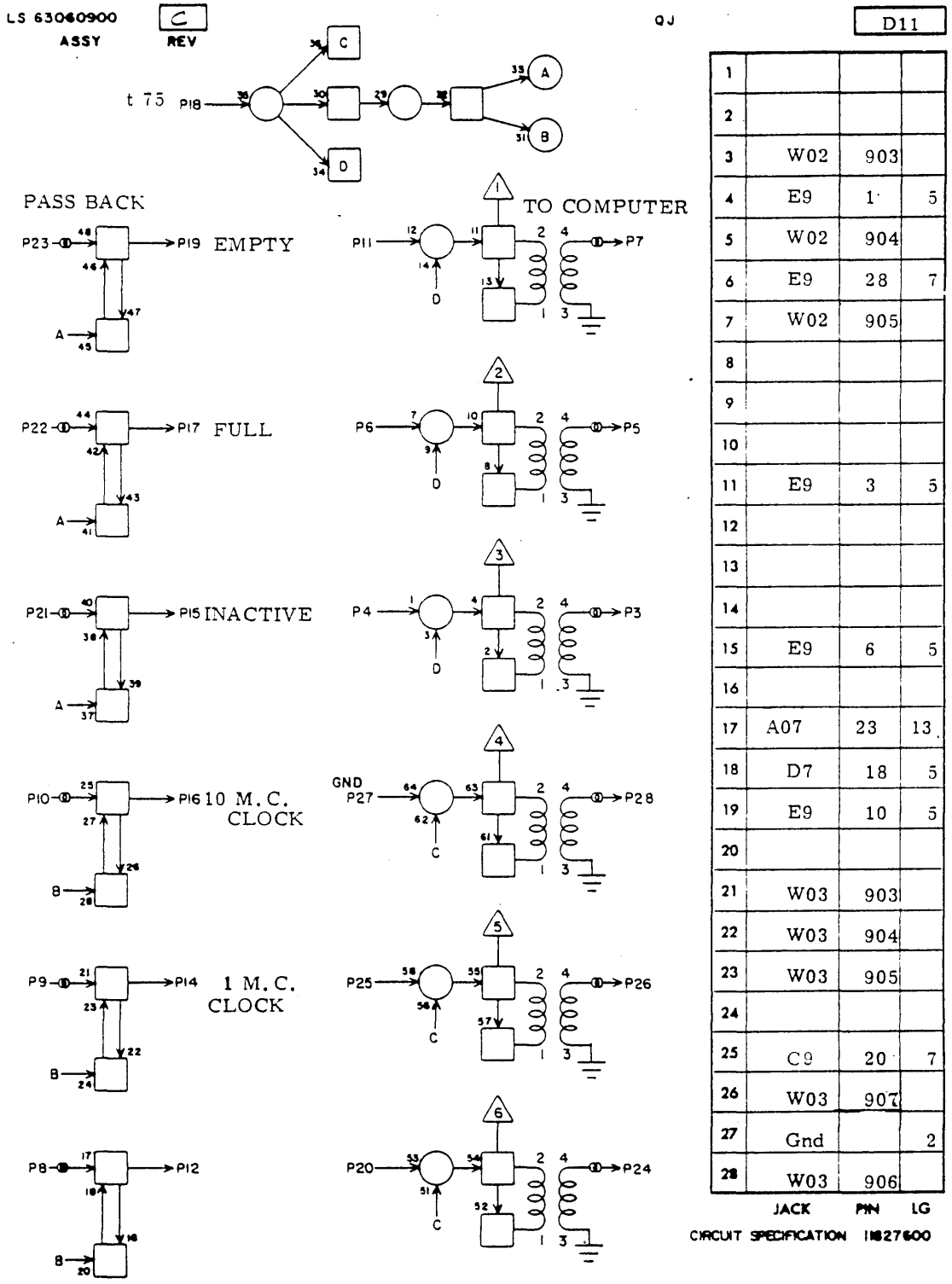
LS 63060900 ASSY | C REV | QJ | D10





1			
2			
3	W02	93	
4	E8	10	7
5	W02	94	
6	E8	8	7
7	W02	95	
8	W03	90	
9	W03	91	
10	W03	92	
11	E8	9	7
12	E8	27	7
13			
14	E8	28	7
15	E8	12	7
16	E8	17	7
17	E8	1	5
18	D7	20	96
19	E8	2	7
20	E8	20	7
21	W03	93	
22	W03	94	
23	W03	95	
24	W02	90	
25	E8	21	7
26	W02	91	
27	E8	19	5
28	W02	92	
	JACK	PIN	LG

CIRCUIT SPECIFICATION 1B27600



1			
2			
3	W02	903	
4	E9	1	5
5	W02	904	
6	E9	28	7
7	W02	905	
8			
9			
10			
11	E9	3	5
12			
13			
14			
15	E9	6	5
16			
17	A07	23	13
18	D7	18	5
19	E9	10	5
20			
21	W03	903	
22	W03	904	
23	W03	905	
24			
25	C9	20	7
26	W03	907	
27	Gnd		2
28	W03	906	
	JACK	PIN	LG

CIRCUIT SPECIFICATION 1B27600

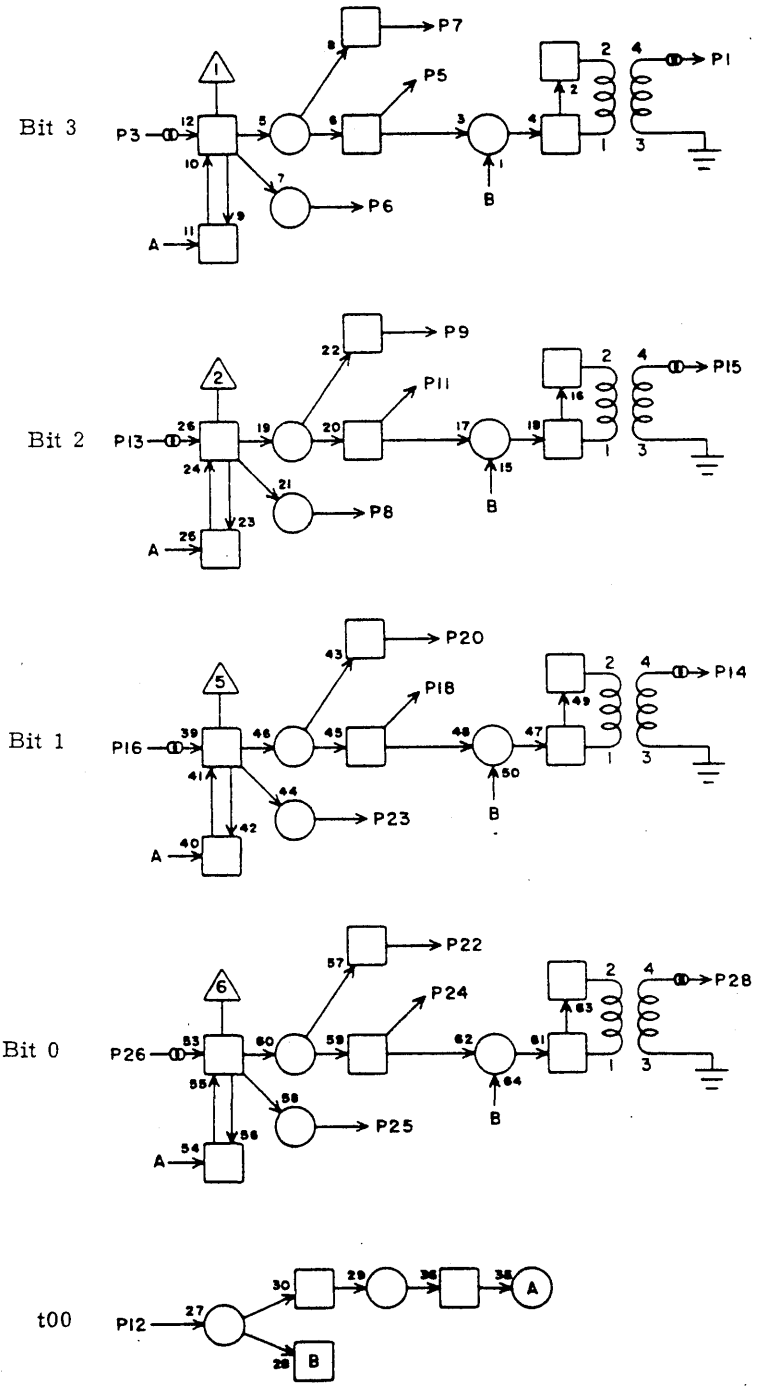
LS 63060800 F
ASSY REV

Q1

D12

FROM COMPUTER

PASS ON



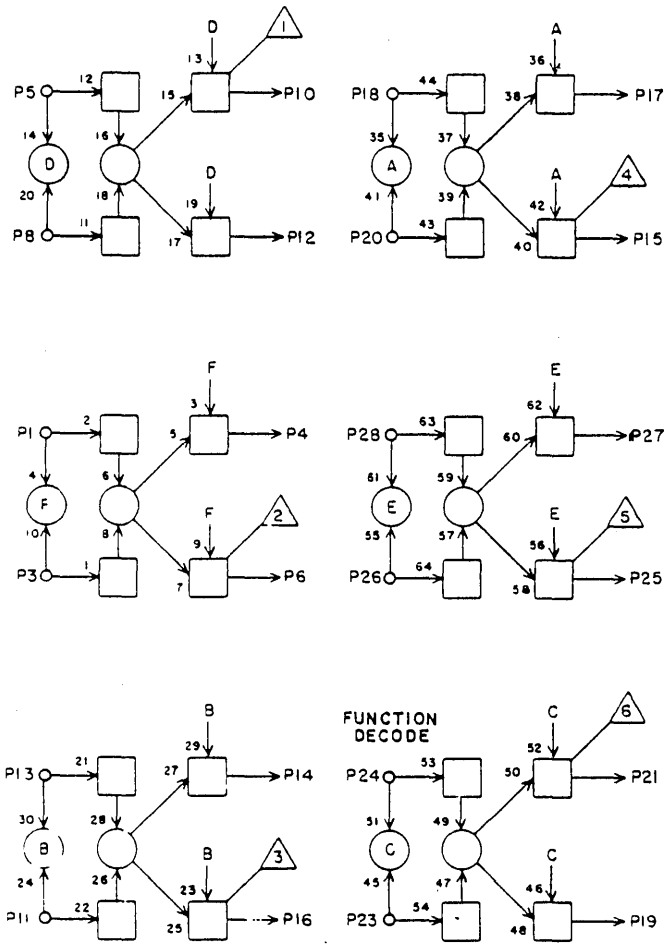
1	W01	93	
2			
3	W00	93	
4			
5	C3	3	15
6			
7	C7	10	9
8			
9	C8	7	7
10			
11	C3	1	15
12	D6	11	7
13	W00	92	
14	W01	91	
15	W01	92	
16	W00	91	
17			
18	C3	8	15
19			
20	C8	6	9
21			
22	C8	10	9
23			
24	C3	5	15
25			
26	W00	90	
27			
28	W01	90	
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827800

LS 52543500 ASSY C REV

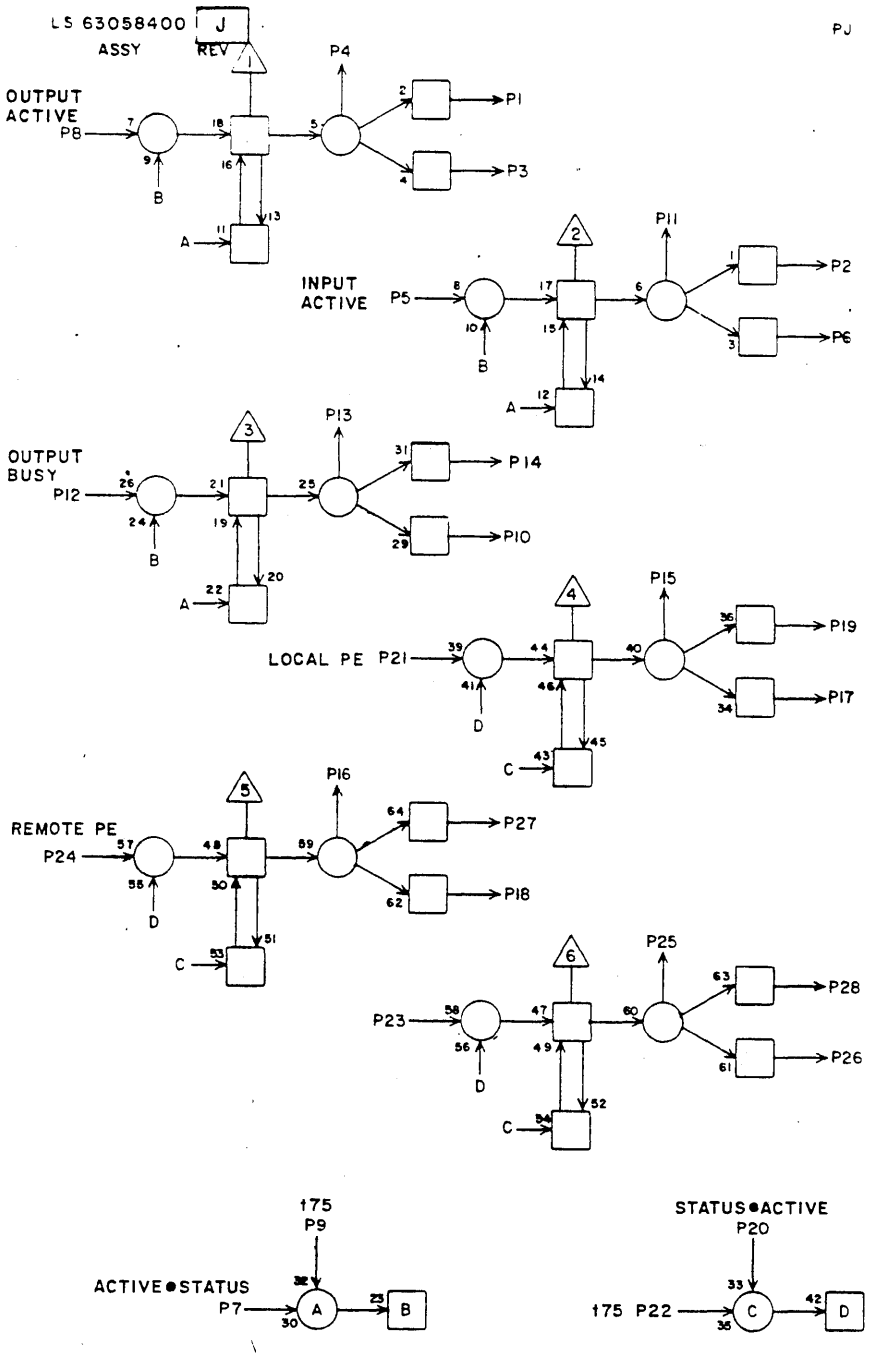
AB

E02



1	E3	13	5
2			
3	E3	15	5
4			
5	E3	4	5
6	E2	18	5
7			
8	E3	11	5
9			
10	E2	11	3
11	E2	10	3
12			
13	E3	16	5
14			
15	A2	27	15
16	E2	20	3
17			
18	E2	6	5
19	A3	27	15
20	E2	16	3
21	A6	16	7
22			
23	GND		2
24	A8	17	19
25	A2	20	17
26	D1	11	7
27	A7	24	19
28	C1	14	11
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600



PJ

E03

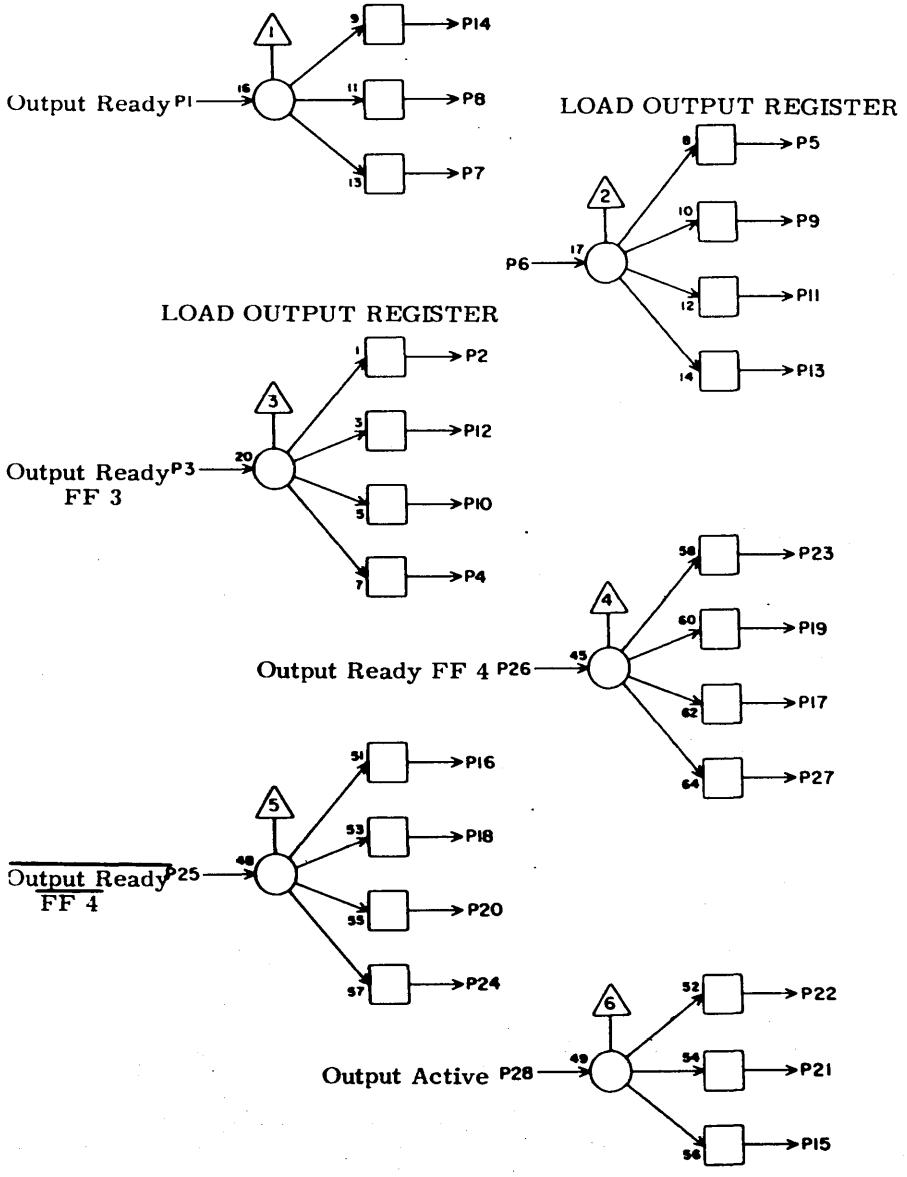
1	E8	25	9
2	E8	26	9
3			
4	E2	5	5
5	A11	6	19
6			
7	C1	21	9
8	E4	22	5
9	D7	21	9
10	E8	18	9
11	E2	8	5
12	A9	25	17
13	E2	1	5
14			
15	E2	3	5
16	E2	13	5
17	E8	13	9
18	E8	3	9
19			
20	C1	23	11
21	D2	26	7
22	D7	28	9
23			
24	A1	8	17
25			
26			
27			
28			
	JACK	PIN	LG

CIRCUIT SPECIFICATION 1182760C

LS 63064000 ASSY C REV

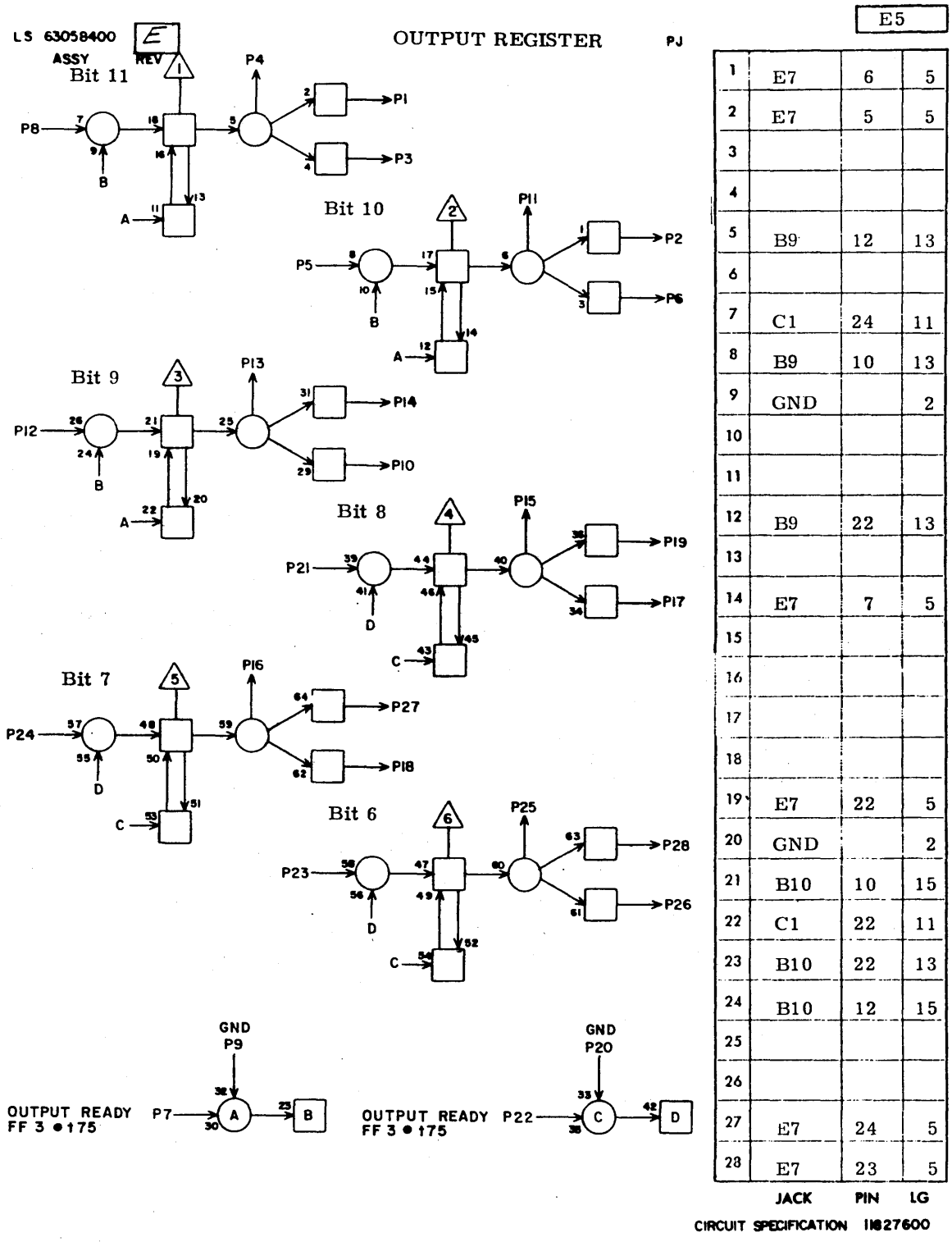
TH

E4



1	A11	25	15
2	A9	11	17
3	D4	25	3
4	E9	7	9
5	A5	7	17
6	A4	10	17
7			
8	A8	1	17
9	A2	7	17
10	C4	3	9
11	E09	9	9
12	C1	25	9
13	A1	27	17
14	A9	12	17
15			
16	D4	21	5
17	B7	25	13
18	A10	12	17
19	D4	28	5
20			
21	B5	11	13
22	E3	8	5
23	D4	7	7
24			
25	C4	1	11
26	C4	8	11
27			
28	A11	4	19
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827000

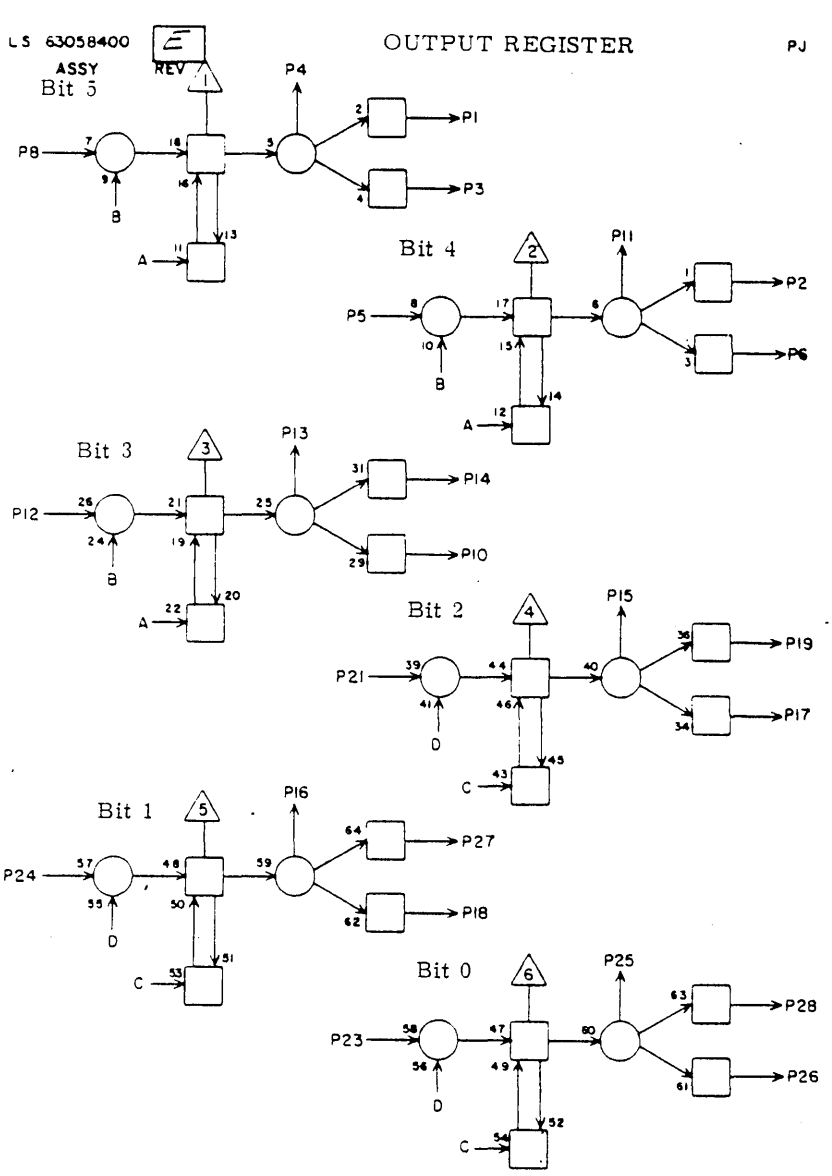


E5

	JACK	PIN	LG
1	E7	6	5
2	E7	5	5
3			
4			
5	B9	12	13
6			
7	C1	24	11
8	B9	10	13
9	GND		2
10			
11			
12	B9	22	13
13			
14	E7	7	5
15			
16			
17			
18			
19	E7	22	5
20	GND		2
21	B10	10	15
22	C1	22	11
23	B10	22	13
24	B10	12	15
25			
26			
27	E7	24	5
28	E7	23	5

CIRCUIT SPECIFICATION 1162760O

6682/83 COUPLER



E6

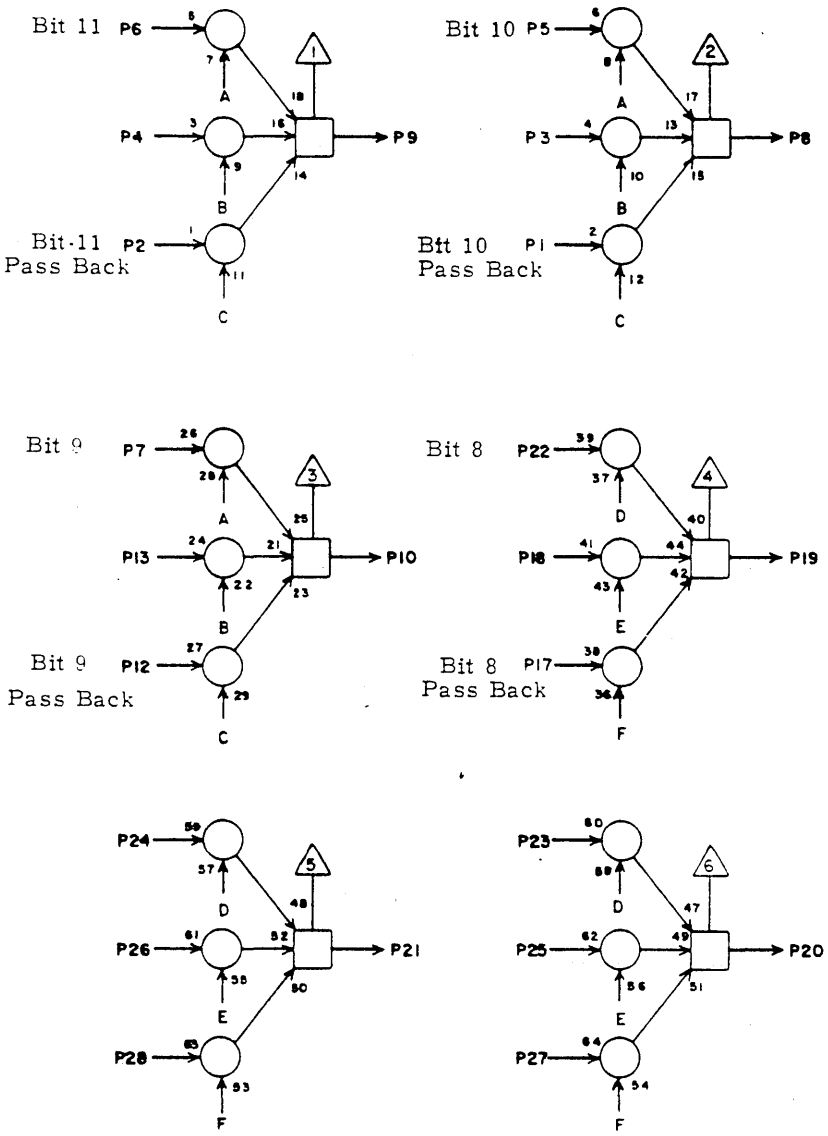
1	E8	6	5
2	E8	5	5
3			
4			
5	B11	12	13
6			
7	GND		2
8	B11	10	13
9	C1	20	11
10			
11			
12	B11	22	13
13			
14	E8	7	5
15			
16			
17			
18			
19	E8	22	5
20	GND		2
21	B12	10	15
22	C1	18	13
23	B12	22	15
24	B12	12	15
25			
26			
27	E8	24	5
28	E8	23	5
	JACK	PIN	LG

CIRCUIT SPECIFICATION 1827600

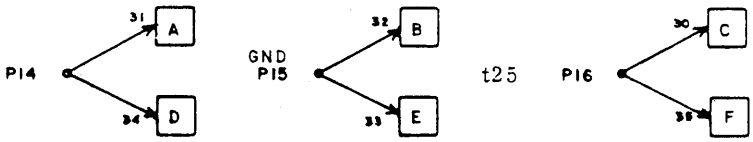
LS 63063700 ASSY C REV

STATUS AND DATA FAN-IN

TE E7



Output Ready FF 5



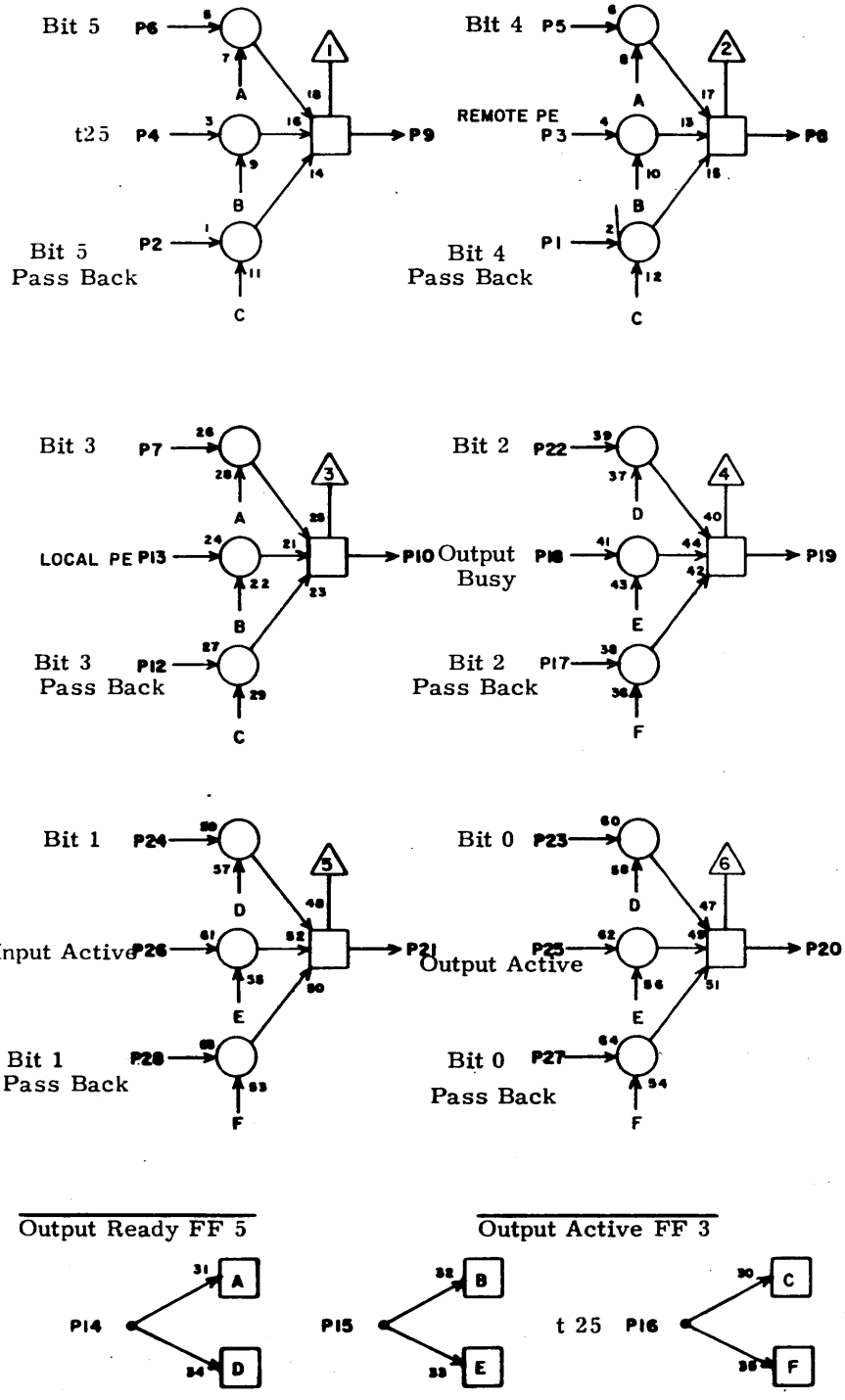
	JACK	PIN	LG
1	D9	17	7
2	D9	19	5
3			
4			
5	E5	2	5
6	E5	1	5
7	E5	14	5
8	D9	6	7
9	D9	11	7
10	D9	4	7
11			
12	D9	15	7
13			
14	D5	21	7
15	Gnd		2
16	D6	22	5
17	D9	16	7
18			
19	D9	27	7
20	D9	20	7
21	D9	25	7
22	E5	19	5
23	E5	28	5
24	E5	27	5
25			
26			
27	D9	12	7
28	D9	14	7

CIRCUIT SPECIFICATION 11827600

LS 63063700 ASSY C REV

STATUS AND DATA FAN-IN

TE



E8

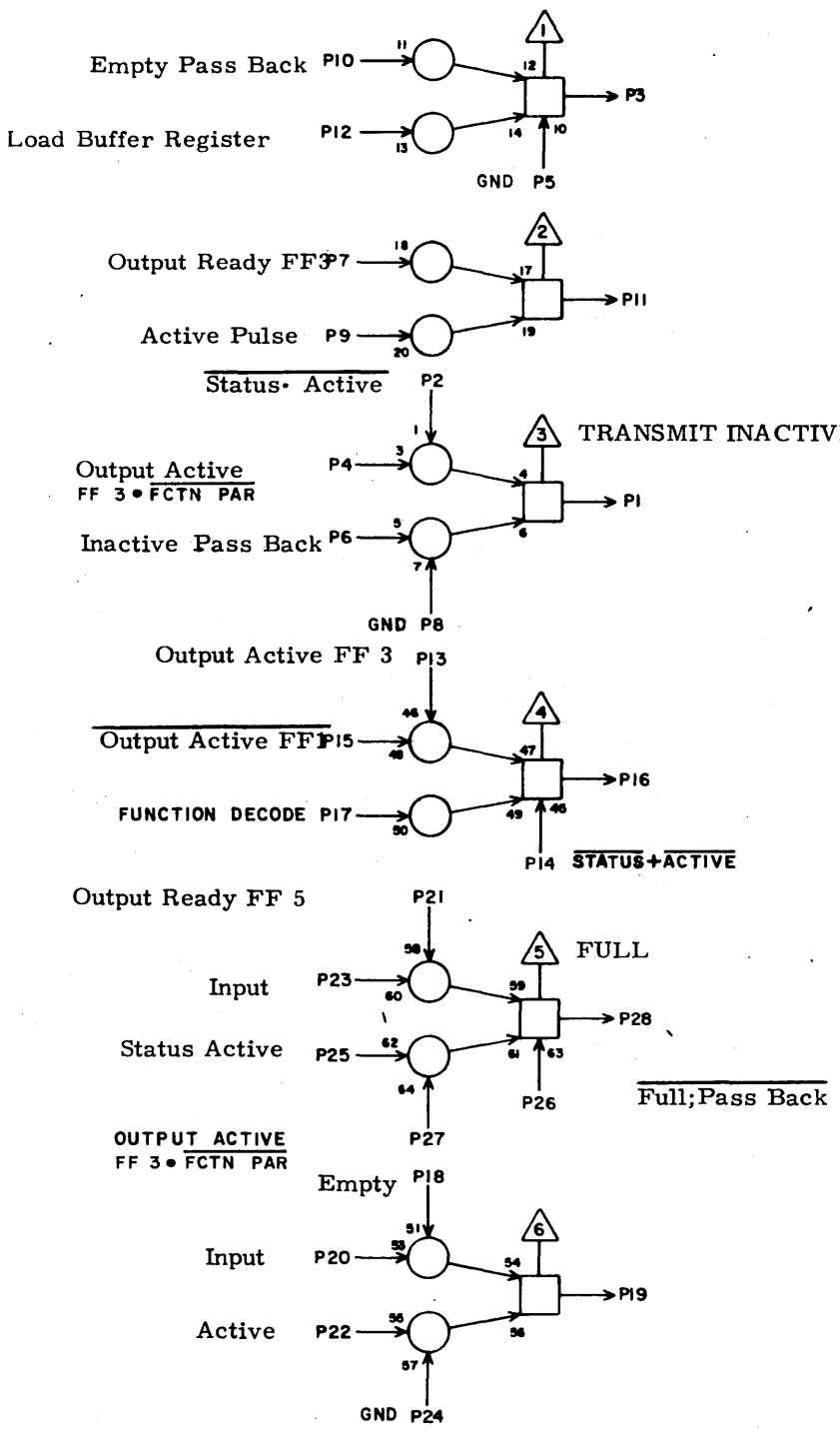
1	D10	17	5
2	D10	19	7
3	E3	18	9
4	D6	24	5
5	E6	2	5
6	E6	1	5
7	E6	14	5
8	D10	6	7
9	D10	11	7
10	D10	4	7
11			
12	D10	15	7
13	E3	17	9
14	D5	15	9
15	A01	12	19
16	D6	25	5
17	D10	16	7
18	E3	10	9
19	D10	27	5
20	D10	20	7
21	D10	25	7
22	E6	19	5
23	E6	28	5
24	E6	27	5
25	E3	1	9
26	E3	2	9
27	D10	12	7
28	D10	14	7

JACK PIN LG

CIRCUIT SPECIFICATION 11627800

LS 63060700 ASSY C REV

TRANSMIT EMPTY QN



E9

1	D11	4	5
2	A07	19	17
3	D11	11	5
4	C1	7	13
5	GND		2
6	D11	15	5
7	E4	4	9
8	GND		2
9	C09	11	9
10	D11	19	5
11	A9	6	17
12	D5	8	9
13	A9	28	15
14	A07	12	17
15	B5	9	13
16	D4	15	9
17	A8	12	17
18	C10	9	9
19	C4	12	11
20	D5	2	9
21	D5	13	9
22	C09	9	11
23	D5	12	9
24	GND		2
25	A8	20	15
26	A07	13	17
27	C01	5	15
28	D11	6	5
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11627600

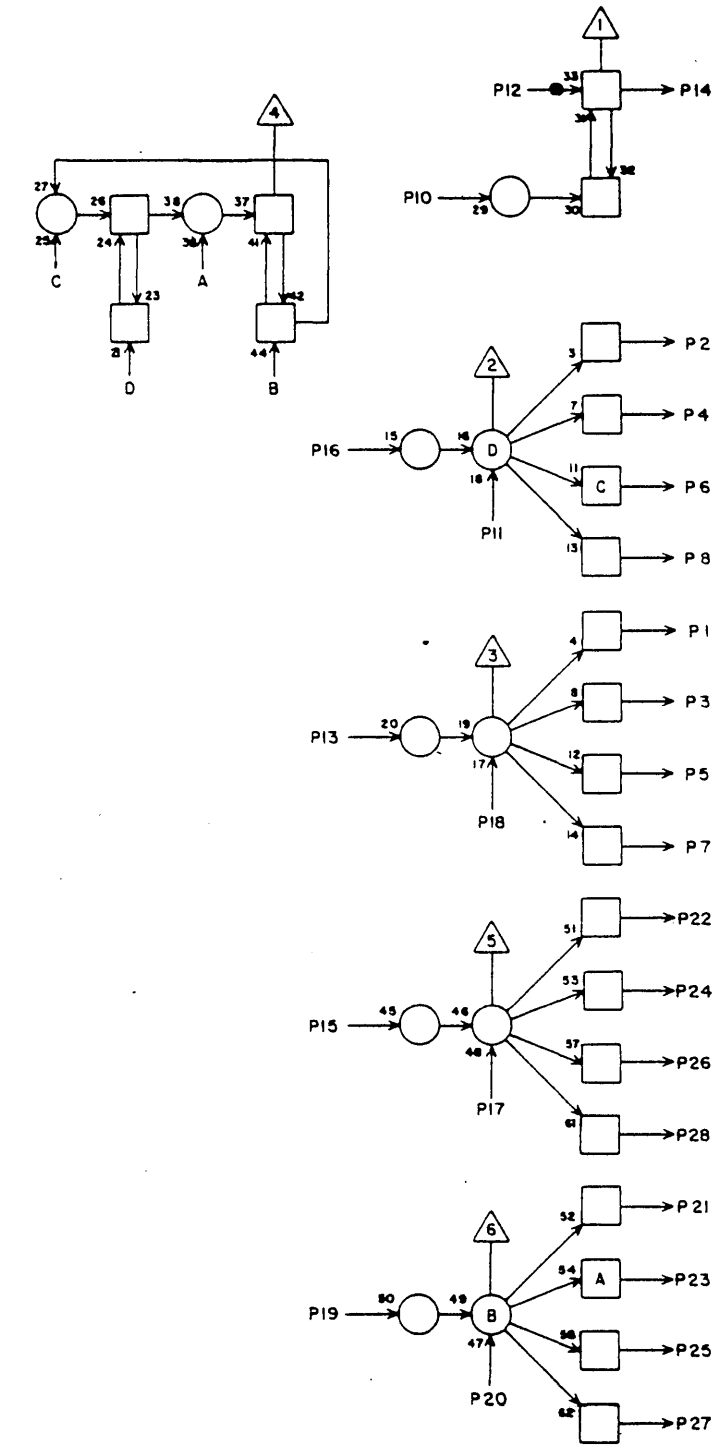
LS 63046200 ASSY

D REV

HQ

E10

CLOCK



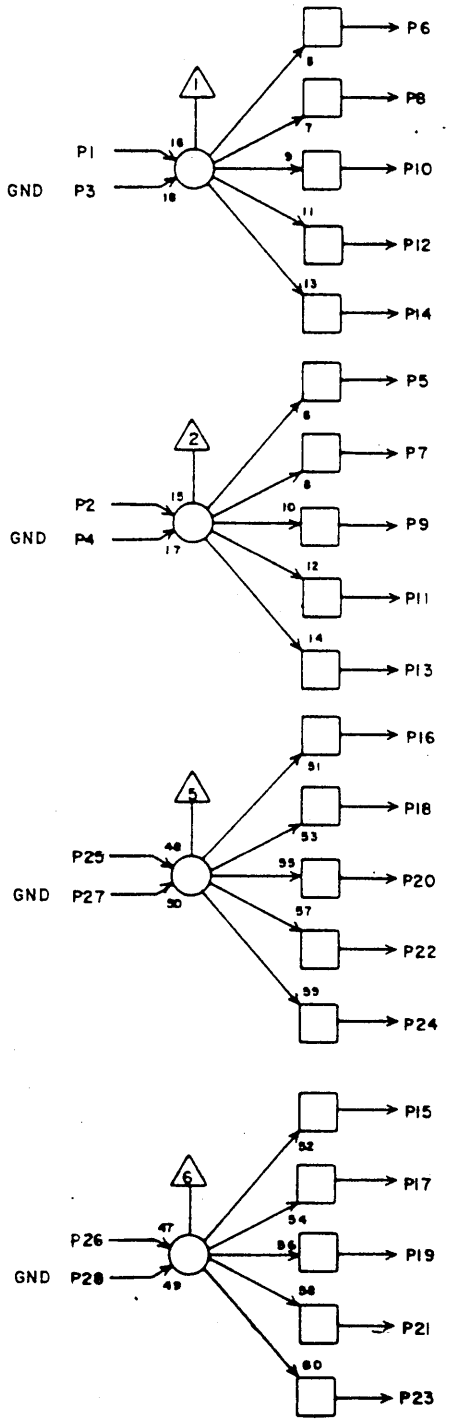
1	D6	14	9
2	D6	3	9
3			
4			
5			
6			
7	A7	21	17
8			
9			
10			
11	Gnd		2
12			
13	E12	1	7
14			
15	E12	22	7
16	E12	2	7
17	Gnd		2
18	Gnd		2
19	E12	21	7
20	Gnd		2
21	D7	14	9
22	D7	3	9
23			
24			
25			
26			
27			
28			
	JACK	PIN	LG

CIRCUIT SPECIFICATION H627800

LS 63063600 C
ASSY REV

CLOCK

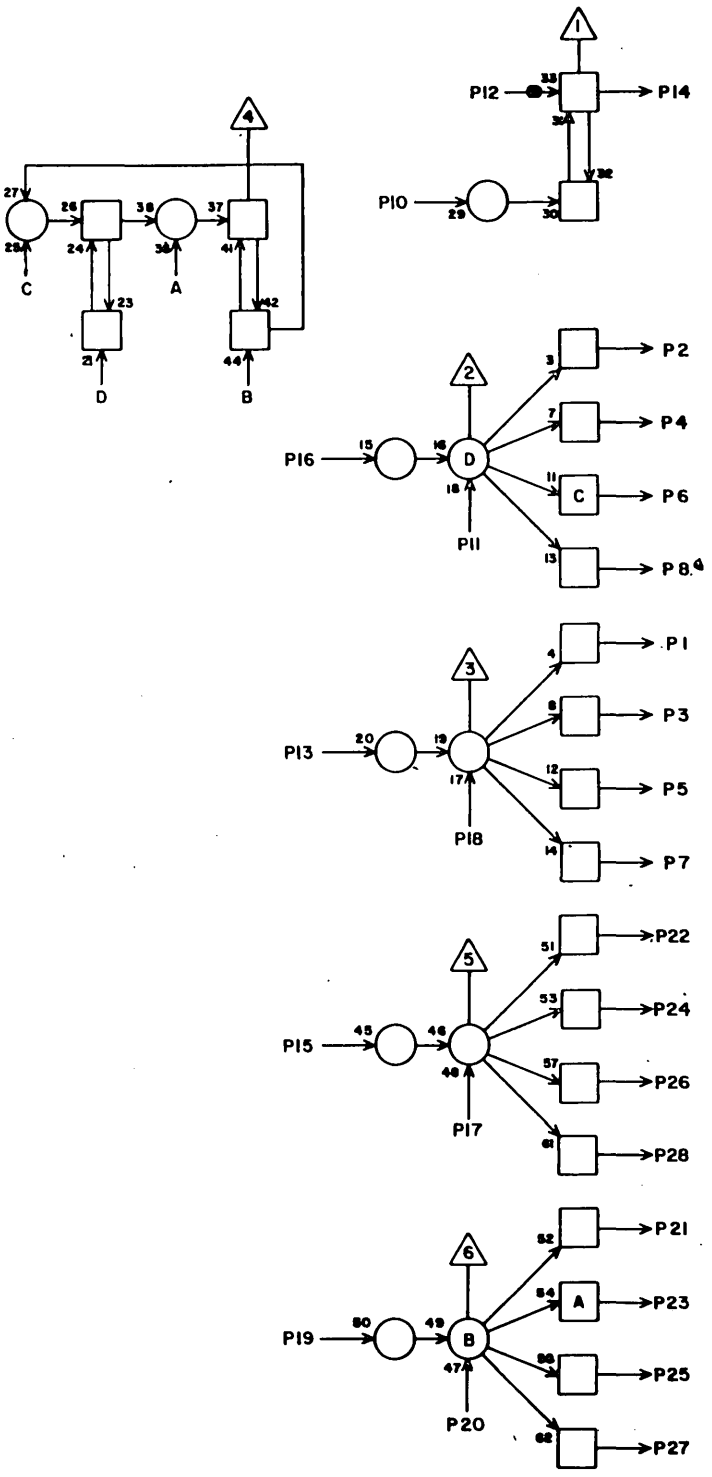
TD E11



1	E12	14	156
2	E11	10	108
3	Gnd		2
4	Gnd		2
5	E12	16	17
6	E12	19	17
7	E12	18	55
8	E12	11	55
9	E11	25	108
10	E11	2	108
11			
12	E12	10	41
13			
14			
15	E12	15	17
16	E12	13	17
17	E12	20	55
18	E12	17	55
19			
20	E11	26	108
21			
22			
23			
24			
25	E11	9	108
26	E11	20	108
27	Gnd		2
28	Gnd		2
	JACK	PIN	LG

CIRCUIT SPECIFICATION 11827600

LS 63046200 ASSY | D REV | CLOCK | HQ | E12



1	E10	13	7
2	E10	16	7
3			
4	A09	8	15
5			
6			
7	A4	27	19
8			
9			
10	E11	12	41
11	E11	8	55
12	W02	906	
13	E11	16	17
14	E11	1	156
15	E11	15	17
16	E11	5	17
17	E11	18	55
18	E11	7	55
19	E11	6	17
20	E11	17	55
21	E10	19	7
22	E10	15	7
23			
24			
25			
26			
27			
28			
	JACK	PIN	LG

CIRCUIT SPECIFICATION 1162700

The following list indicates the wiring between logic terminals and the coupler-to-coupler interface connectors. The list also shows the relationship of signals to cable conductors.

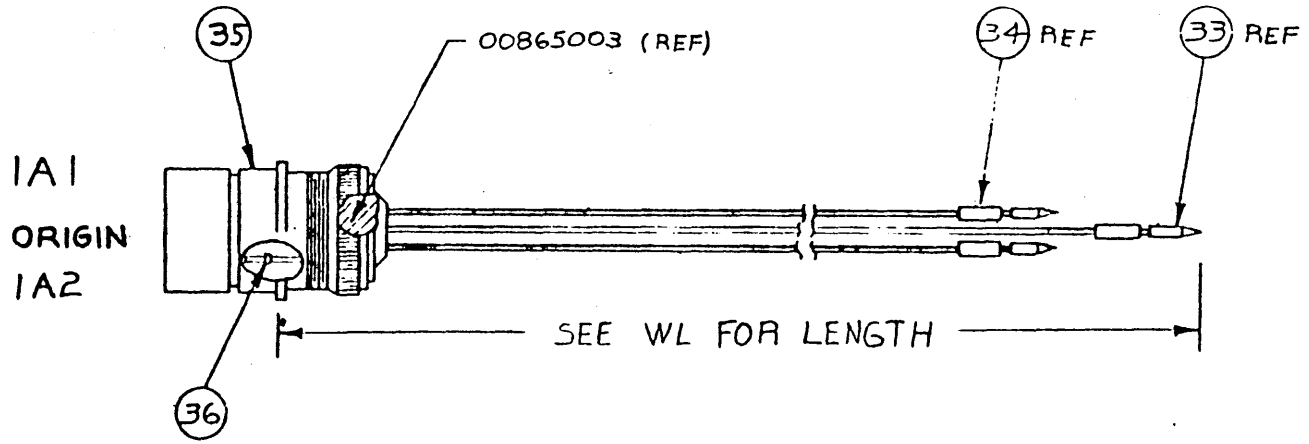
GENERAL SUPPLEMENT SHEET

CONTROL DATA CORPORATION

CONNECTOR ASSEMBLY-
61 PIN

	DOCUMENT NO.	REV.
A	22747900	A

SHEET 3 OF



REF DESIGNATION (FOR REF ONLY)	
GROUP	ORIGIN
22747900	1A1
22747900	1A2

FORM 587

BY		DATE	CHKD.		DATE	APPD.		DATE

CONTROL DATA	CONNECTOR ASSEMBLY-61 PIN	CODE IDENT	SHEET 4	WL	DOCUMENT NO 22747900	REV A

CONDUCTOR IDENT	FIND NO	GAUGE (REF)	COLOR (REF)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO	DESTINATION		ACCESS FIND NO	• REMARKS
	1	24	1	13	1A1	A1	36	B12	21	33,34	BIT 0 +
			92	13		A2		B12	25		BIT 0 -
	2		1	11		A3		B12	14		BIT 1 +
			94	11		A4		B12	13		BIT 1 -
	3		1	11		A5		B12	6		BIT 2 +
			96	11		A6		B12	3		BIT 2 -
	4		1	12		A7		B11	21		BIT 3 +
			98	12		A8		B11	25		BIT 3 -
	5		1	12		A9		B11	14		BIT 4 +
			90	12		A10		B11	13		BIT 4 -
	6		2	12		B1		B11	6		BIT 5 +
			92	12		B2		B11	3		BIT 5 -
	7		2	13		B3		B10	21		BIT 6 +
			94	13		B4		B10	25		BIT 6 -
	8		2	13		B5		B10	14		BIT 7 +
			96	13		B6		B10	13		BIT 7 -
	9		2	13		B7		B10	6		BIT 8 -
		24	98	13	1A1	B8	36	B10	3	33,34	BIT 8 -

CONTROL DATA	CONNECTOR ASSEMBLY-61 PIN	CODE IDENT	SHEET 5	WL	DOCUMENT NO 22747900	REV A

CONDUCTOR IDENT	FIND NO	GAUGE (REF)	COLOR (REF)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO	DESTINATION		ACCESS FIND NO	REMARKS
	10	24	2	14	1A1	B9	36	B9	21	33,34	BIT 9 +
		24	90	14	1A1	B10		B9	25	33,34	BIT 9 -
	11	24	3	14	1A1	C1		B9	14	33,34	BIT 10 +
		24	92	14	1A1	C2		B9	13	33,34	BIT 10 -
	12	24	3	13	1A1	C3		B9	6	33,34	BIT 11 +
		24	94	13	1A1	C4		B9	3	33,34	BIT 11 -
	31	24	2	9 1/2	1A1	F9		TB1	2	33,34	+20V TAPER PIN BLOCK
	32	24	6	8 1/2	1A1	F10		TB3	2	33,34	-20V TAPER PIN BLOCK
	30	24	0	10 1/2	1A1	GND		TB2	2	33,34	
	22	24	5	15	1A1	E3		A05	14	33,34	PARITY ERROR +
		24	94	15	1A1	E4		A05	13	33,34	PARITY ERROR-
	23	24	5	15	1A1	E5		A05	21	33,34	PARITY BIT +
		24	96	15	1A1	E6		A05	25	33,34	PARITY BIT -
	24	24	5	15	1A1	E7	36	A05	6	33,34	MASTER CLEAR +
		24	98	15	1A1	E8	36	A05	3	33,34	MASTER CLEAR -

A'H A'A	CONNECTOR ASSEMBLY-61 PIN	CODE IDENT	SHEET 6	WL	DOCUMENT NO 22747900	REV A

CONDUCTOR IDENT	FIND NO	GAUGE (REF)	COLOR (REF)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO	DESTINATION		ACCESS FIND NO	REMARKS
	13	24	3	10	1A1	C5	36	A12	20	33,34	OUTPUT ACTIVE TRANSMIT
			96	10		C6		A12	17		
	14		3	11		C7		A11	7		OUTPUT ACTIVE RECEIVE
			98	11		C8		A11	11		
	15		3	10		C9		A12	21		INPUT ACTIVE TRANSMIT
			90	10		C10		A12	24		
	16		4	10		D1		A11	21		INPUT ACTIVE RECEIVE
			92	10		D2		A11	17		
	17		4	10		D3		A12	5		OUTPUT READY TRANSMIT
			94	10		D4		A12	2		
	18		4	11		D5		A11	24		OUTPUT READY RECEIVE
			96	11		D6		A11	20		
	19		4	10		D7		A12	6		INPUT REQUEST TRANSMIT
			98	10		D8		A12	13		
	20		4	11		D9		A11	10		INPUT REQUEST RECEIVE
		24	90	11	1A1	D10	36	A11	14	33,34	

IN 4 A A	CONNECTOR ASSEMBLY -61 PIN	CODE IDENT	SHEET 7	WL	DOCUMENT NO. 22747900	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO	DESTINATION		ACCESS FIND NO	REMARKS
	1	24	1	13	1A2	A1	36	B12	23	33,34	BIT 0 +
			92	13		A2		B12	27		BIT 0 -
	2		1	11		A3		B12	16		BIT 1 +
			94	11		A4		B12	15		BIT 1 -
	3		1	11		A5		B12	8		BIT 2 +
			96	11		A6		B12	5		BIT 2 -
	4		1	12		A7		B11	23		BIT 3 +
			98	12		A8		B11	27		BIT 3 -
	5		1	12		A9		B11	16		BIT 4 +
			90	12		A10		B11	15		BIT 4 -
	6		2	12		B1		B11	8		BIT 5 +
			92	12		B2		B11	5		BIT 5 -
	7		2	13		B3		B10	23		BIT 6 +
			94	13		B4		B10	27		BIT 6 -
	8		2	13		B5		B10	16		BIT 7 +
			96	13		B6		B10	15		BIT 7 -
	9		2	13		B7		B10	8		BIT 8 +
		24	98	13	1A2	B8	36	B10	5	33,34	BIT 8 -

IN H[illegible] A 8	CONNECTOR ASSEMBLY-61 PIN	CODE IDENT	SHEET 8	WL	DOC[illegible]T NO. 22747900	REV. A

CONDUCTOR IDENT	FIND NO	GAUGE (REF)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO	REMARKS
	10	24	2	13	1A2	B9	36	B9	23	33,34	BIT 9 +
			90	13		B10			27		BIT 9 -
	11		3	14		C1			16		BIT 10 +
			92	14		C2			15		BIT 10 -
	12		3	13		C3			8		BIT 11 +
			94	13		C4		B9	5	33,34	BIT 11 -
	31		2	10		F9		TB1	3	33,34	-20V TAPER PIN BLOCK
	32		6	8 1/2		F10		TB3	3	33,34	-20V TAPER PIN BLOCK
	30		0	8 1/2		GND		TB2	3	33,34	
	22		5	15		E3		A05	16	33,34	PARITY ERROR +
			94	15		E4		A05	15	33,34	PARITY ERROR -
	23		5	15		E5		A05	23	33,34	PARITY BIT +
			96	15		E6		A05	27	34,34	PARITY BIT -
	24		5	15		E7	36	A05	8	33,34	MASTER CLEAR +
		24	98	15	1A2	E8	36	A05	5	33,34	MASTER CLEAR -

CONTROL DATA	CONNECTOR ASSEMBLY-61 PIN	CODE IDENT	SHEET 9	WL	DOCUMENT NO 22747900	REV A

CONDUCTOR IDENT	FIND NO	GAUGE (REF)	COLOR (REF)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO	DESTINATION		ACCESS FIND NO	REMARKS
	13	24	3	10	1A2	C5	36	A11	5	33,34	OUTPUT ACTIVE RECEIVE
			96	10		C6		A11	9		
	14		3	12		C7		A12	22		OUTPUT ACTIVE TRANSMIT
			98	12		C8		A12	19		
	15		3	10		C9		A11	19		INPUT ACTIVE RECEIVE
			90	10		C10		A11	15		
	16		4	11		D1		A12	23		INPUT ACTIVE TRANSMIT
			92	11		D2		A12	26		
	17		4	11		D3		A11	26		OUTPUT READY RECEIVE
			94	11		D4		A11	22		
	18		4	11		D5		A12	3		OUTPUT READY TRANSMIT
			96	11		D6		A12	4		
	19		4	11		D7		A11	12		INPUT REQUEST RECEIVE
			98	11		D8		A11	16		
	20		4	12		D9		A12	8		INPUT READY TRANSMIT
		24	90	12	1A2	D10	36	A12	11	33,34	

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CABLE TABS

6683-D to I/O Channel					Pass-on			
83D12-26	W00	90	W	OUTPUT DATA BIT 0	83D12-28	W01	90	W
83D12-16	W00	91	W	OUTPUT DATA BIT 1	83D12-14	W01	91	W
83D12-13	W00	92	W	OUTPUT DATA BIT 2	83D12-15	W01	92	W
83D12- 3	W00	93	W	OUTPUT DATA BIT 3	83D12- 1	W01	93	W
83C12-26	W00	94	W	OUTPUT DATA BIT 4	83C12-28	W01	94	W
83C12-16	W00	95	W	OUTPUT DATA BIT 5	83C12-14	W01	95	W
83C12-13	W00	96	W	OUTPUT DATA BIT 6	83C12-15	W01	96	W
83C12- 3	W00	97	W	OUTPUT DATA BIT 7	83C12- 1	W01	97	W
83C11-26	W00	98	W	OUTPUT DATA BIT 8	83C11-28	W01	98	W
83C11-16	W00	99	W	OUTPUT DATA BIT 9	83C11-14	W01	99	W
83C11-13	W00	900	W	OUTPUT DATA BIT 10	83C11-15	W01	900	W
83C11- 3	W00	901	W	OUTPUT DATA BIT 11	83C11- 1	W01	901	W
83C10-16	W00	902	W	ACTIVE	83C10-14	W01	902	W
83C10-26	W00	903	W	INACTIVE	83C10-28	W01	903	W
83C10- 3	W00	904	W	FULL	83C10- 1	W01	904	W
83C10-13	W00	905	W	EMPTY	83C10-15	W01	905	W
83C09- 3	W00	906	W	FUNCTION	83C09- 1	W01	906	W
83C09-13	W00	907	W	MASTER CLEAR	83C09-15	W01	907	W
83C09-26	W00	908	W	OUTPUT PARITY BIT	83C09-28	W01	908	W
83D10-24	W02	90	W	INPUT DATA BIT 0	83D10- 8	W03	90	W
83D10-26	W02	91	W	INPUT DATA BIT 1	83D10- 9	W03	91	W
83D10-28	W02	92	W	INPUT DATA BIT 2	83D10-10	W03	92	W
83D10- 3	W02	93	W	INPUT DATA BIT 3	83D10-21	W03	93	W
83D10- 5	W02	94	W	INPUT DATA BIT 4	83D10-22	W03	94	W
83D10- 7	W02	95	W	INPUT DATA BIT 5	83D10-23	W03	95	W
83D09-24	W02	96	W	INPUT DATA BIT 6	83D09- 8	W03	96	W
83D09-26	W02	97	W	INPUT DATA BIT 7	83D09- 9	W03	97	W
83D09-28	W02	98	W	INPUT DATA BIT 8	83D09-10	W03	98	W
83D09- 3	W02	99	W	INPUT DATA BIT 9	83D09-21	W03	99	W
83D09- 5	W02	900	W	INPUT DATA BIT 10	83D09-22	W03	900	W
83D09- 7	W02	901	W	INPUT DATA BIT 11	83D09-23	W03	901	W
83 -	W02	902	W	ACTIVE	83 -	W03	902	W
83D11- 3	W02	903	W	INACTIVE	83D11-21	W03	903	W
83D11- 5	W02	904	W	FULL	83D11-22	W03	904	W
83D11- 7	W02	905	W	EMPTY	83D11-23	W03	905	W
83E12-12	W02	906	W	10 MC CLOCK	83D11-28	W03	906	W
83C09-16	W02	907	W	1 MC CLOCK	83D11-26	W03	907	W
83D03- 7	W02	908	W	INPUT PARITY BIT	83D03-23	W03	908	W

COMMENT SHEET

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