60440800

CONTROL DATA CORPORATION

CONTROL DATA®
6681-F
DATA CHANNEL CONVERTER

GENERAL DESCRIPTION
OPERATION
INSTALLATION AND CHECKOUT
THEORY OF OPERATION
DIAGRAMS
MAINTENANCE
PARTS DATA
WIRE LISTS

CUSTOMER ENGINEERING MANUAL

New features, as well as changes, deletions, and additions to information in this 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.

REVISION RECORD

REVISION	DESCRIPTION
A	Manual released.
(12-74)	
B	Manual revised; includes Engineering Change Order 36388. Page v is revised. Pages 3-7 through
(10-28-75)	3-17 are added.
C	Manual revised; includes Engineering Change Order 36753. Front cover, title page, 5-iii, 5-iv,
(3-24-76)	5-11, 5-13, 5-15, 9-28, 9-54, 9-57, 9-58, 9-60, 9-61, 9-65, 9-66, 9-67, 9-68, and 9-69 are
	revised. Correlation sheet and 9-70 are added.
D	Manual revised; includes Field Change Order 37417. Pages 3-1, 5-ii, 5-iv, 5-3, 5-5, 5-7, 5-13,
(11-23-76)	5-15, 9-14, 9-24, 9-26, 9-28, 9-30, 9-31, 9-39, 9-56, 9-58, 9-59, 9-64, and 9-65 are revised.
	Page 9-24.1/9-24.2 is added.
E	Manual revised; includes Field Change Order 38590. Pages 5-ii, 5-13, 9-24, 9-39, and 9-64
(2-14-78)	are revised.

Publication No.
60440800

REVISION LETTERS I, O, Q AND X ARE NOT USED

Printed in the United States of America

Address comments concerning this manual to:

Control Data Corporation
Publications and Graphics Division
4201 North Lexington Avenue
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
6681-F	F01 F02 F03 F04	ECO36388 ECO36753 FCO37417 FCO38590	

PREFACE

This manual provides customer engineering information for personnel who maintain the CONTROL DATA® 6681-F Data Channel Converter, a parity enhanced version of the standard data channel converter. The 6681-F customer engineering manual covers the hardware features only of the data channel converter.

Refer to the following publications for additional information.

Control Data Publication	Publication No.
6681-B/C/D/E/F, 6684-1/2 Data Channel Converters Hardware Reference Manual	60334400
Computer Systems Cordwood Modules Printed Circuit Manual (Volumes 1 through 3)	60042700
Peripheral Controller Cabinets Reference/Customer Engineering Manual	60224100
GH431-A/B/C Peripheral Controller Cabinets Reference/Customer Engineering Manual	Not available
Power Supplies Applicable to Active 6000/CYBER 70 Series Computing Equipment Customer Engineering Manual	60427200
Power Supplies Applicable to Inactive Computing Equipment Reference/Customer Engineering Manual	60427400
Ault Power Supplies for Control Data Systems Reference/Customer Engineering Manual	60107300
Computer Aided Maintenance Schedule CAMS Version 2.0 Customer Engineering Manual	60373500

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SECTION 1

GENERAL DESCRIPTION

Additional information for this section is included in the 6681-B/C/D/E/F, 6684-1/2 Data Channel Converters Hardware Reference Manual, Publication Number 60334400.

FUNCTIONAL DESCRIPTION

The CONTROL DATA® 6681-F Data Channel Converter (DCC) is an interface which permits 6000 series computer systems or CDC CYBER 70 (Models 72, 73, and 74) or CDC CYBER 170 (Models 172, 173, 174 and 175) series computer systems to use standard 3000 series peripheral equipment (Figure 1-1).

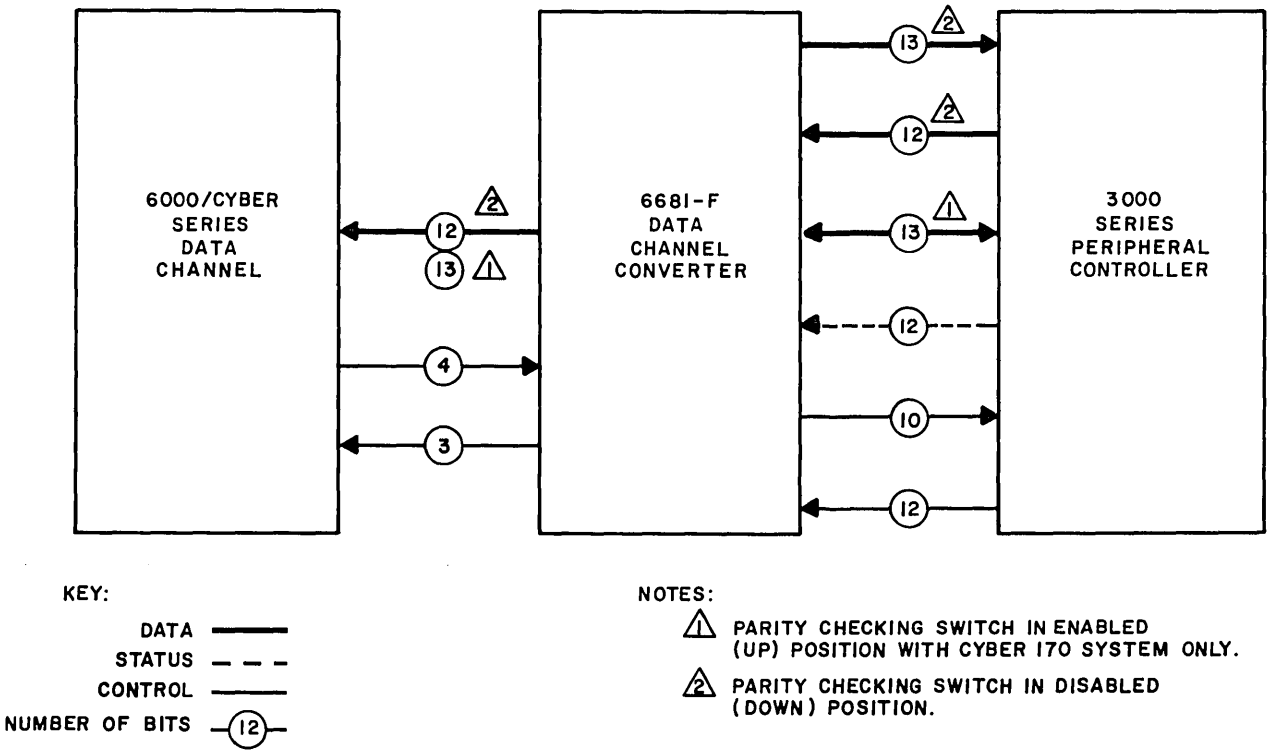

Figure 1-1. System Configuration

PHYSICAL DESCRIPTION

The 6681-F DCC logic chassis (Figures 1-2 and 1-3) is typically housed in the GH431-A/B/C Peripheral Controller Cabinet but it may be housed in any 6000/CDC CYBER peripheral controller cabinet which supplies ±6 volt direct current power. The DCC logic chassis consists of six rows of 6000/CDC CYBER air-cooled cordwood modules. Each row has 12 card locations. The 6681-F uses less than the full complement of 72 locations (refer to the chassis map in section 5). Refer to Table 1-1 for a listing of physical characteristics common to the DCC and to the respective peripheral controller cabinets manual for a listing of the unique physical characteristics for a particular cabinet.

BACKPANEL INTERCONNECTIONS

All backpanel module interconnections are made by twisted-pair wires with taper pins on each end.

30-PIN BOARD CONNECTOR

The 30-pin board connector consists of a double-row 15-position female connector. The 30 contact positions are numerically designated 1, 3, 5, . . . 27, and 29 on the left pin column of the module, and 2, 4, 6, . . . 28, and 30 on the right pin column of the module.

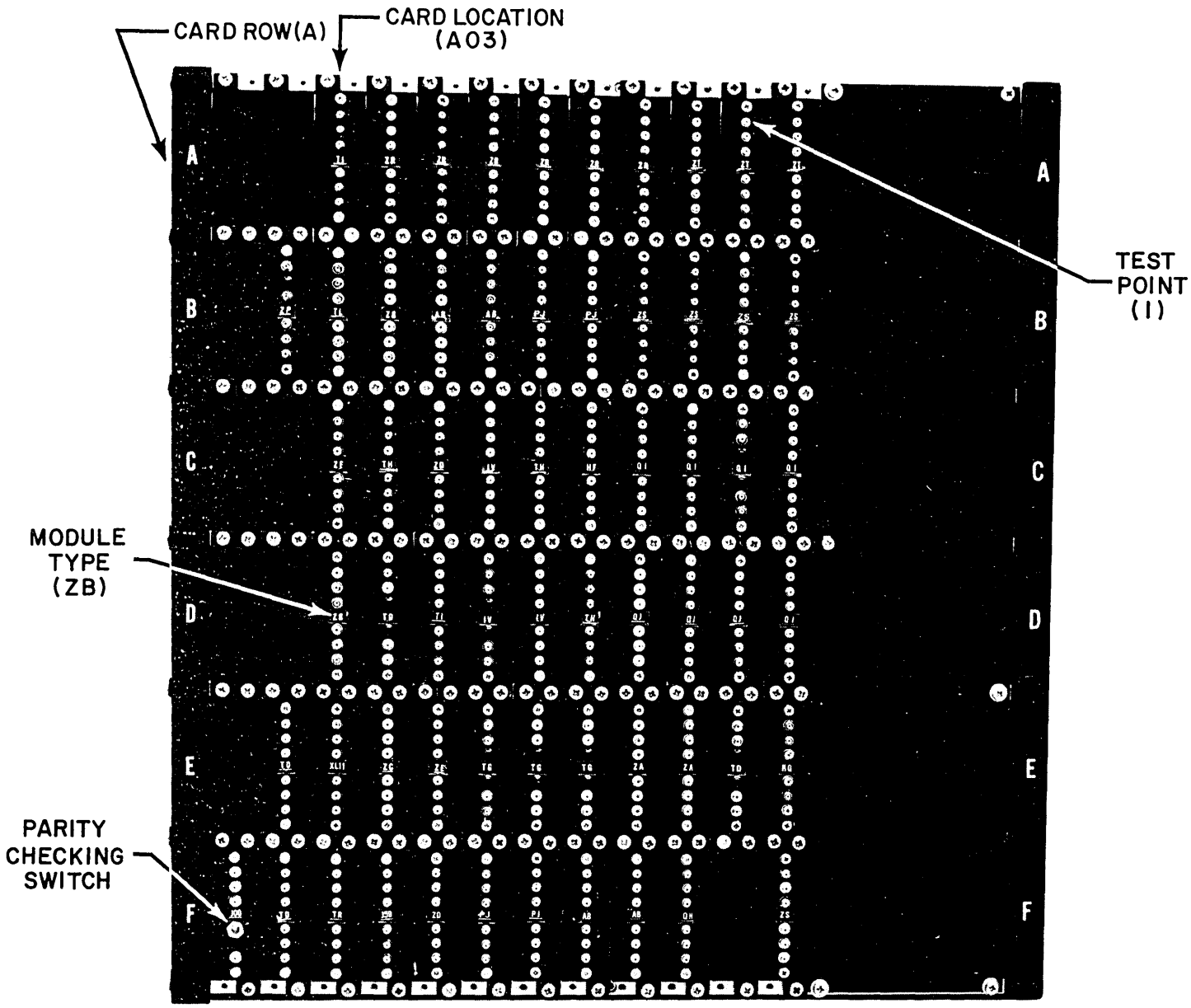

Figure 1-2. 6681-F Logic Chassis - Front View

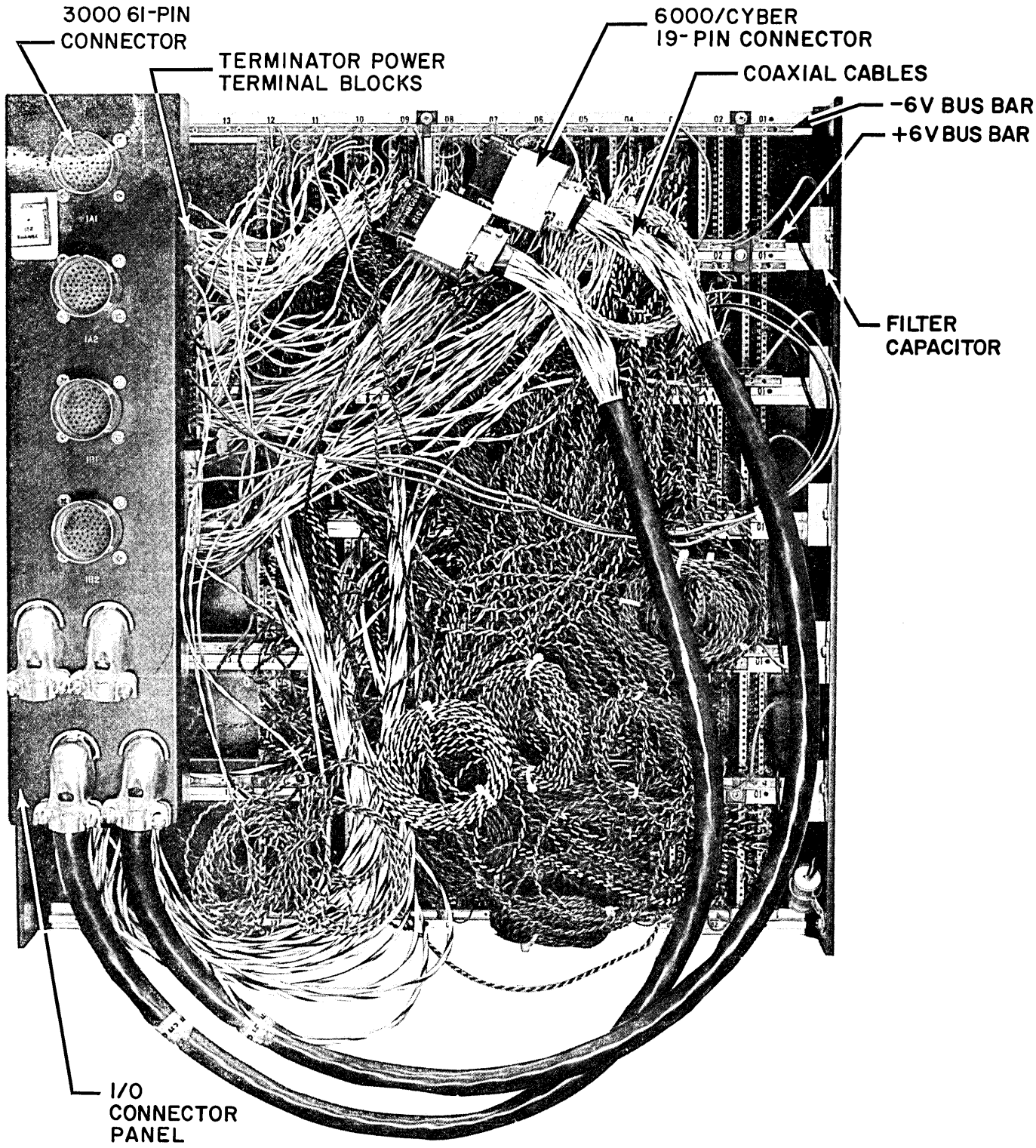

Figure 1-3. 6681-F Logic Chassis - Rear View

TABLE 1-1. PHYSICAL CHARACTERISTICS

Item	Description	
Cabinet input power	400-Hz, 120/208 vac, 3 ∅ 50/60-Hz, 120 vac, 1 ∅	
Logic chassis input power	±6 vdc	
External terminator power	40 vdc	
Type of cooling	Air	
Source of cooling	Blowers	
Permissible range of room relative humidity	30% to 80%	
Maximum operating temperature	90°F (32.2°C)	
Recommended operating temperature	74°F (23.3°C)	
Minimum operating temperature	60°F (15.6°C)	
Maximum storage temperature	150°F (65.6°C)	
Minimum storage temperature	-30°F (-34.4°C)	
Signal cables	3000	6000/CDC CYBER
Quantity	2	4
Connector pins	61	19
Maximum length	200 feet (61 meters)	2 at 70 feet (21.3 meters) 2 at 5 feet (1.5 meters)

LOGIC CIRCUIT PACKAGING

The 6000/CDC CYBER logic circuits are packaged on modules (Figure 1-4) which use printed circuit wiring. Circuit components are mounted on and between two printed circuit boards in a method referred to as cordwood packaging. A double-rowed 30-pin male connector, fastened at one end of the module, allows electrical access to the circuits. The module connector mates with a chassis connector; the pins of which are wired to other circuits. An anodized aluminum plate with captive chassis holding screws is fastened to the module at the end opposite the connector. This plate fastens the module to the chassis mechanically and carries the identifying number and/or letter for the module and six test point terminals. The test points are numbered one through six from top to bottom and are connected to various parts of a circuit to allow circuit operation to be viewed on an oscilloscope.

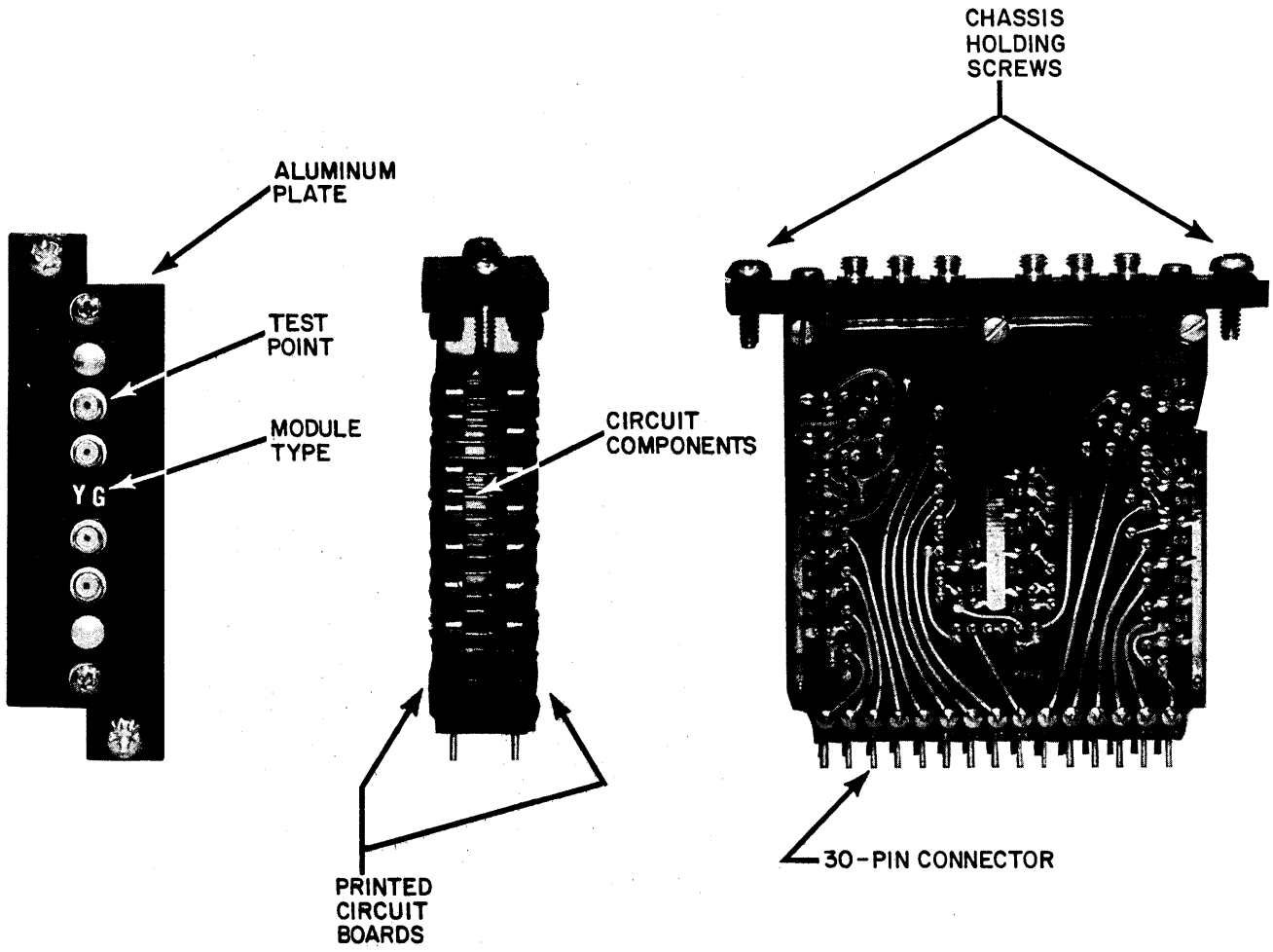

Figure 1-4. Cordwood Module Packaging

TRANSMISSION TECHNIQUES

The following transmission techniques are employed in the data channel converter.

TABLE 1-2. TRANSMISSION TECHNIQUES

Routing	Transmission Technique	Type of Wiring
Between the data channel converter and the 6000/CDC CYBER data channel.	One shot, nonrepeditive	Coaxial cable
Between cordwood modules in the data channel converter.	-	Twisted-pair
Between the data channel converter and the 3000 data channel.	3000 differential	Twisted-pair

MODULE COOLING

Modules are mounted vertically without compartment side walls. They are supported at the top and bottom by bars at the front of the logic chassis. Air is forced up through the modules and may or may not be refrigerated. Blank module locations are covered with a plate.

LOGIC AND VOLTAGE LEVELS

1 = +0.2v (or circuit tied to ground or circuit open)

0 = +1.2v

SECTION 2

OPERATION

The programming information for this section is included in the 6681-B/C/D/E/F, 6684-1/2 Data Channel Converters Hardware Reference Manual, Publication Number 60334400.

OPERATION

PARITY CHECKING SWITCH

The parity checking toggle switch is on module type J00 at location F01 in the logic chassis. F01 is located at the extreme lower left corner of the logic chassis as one faces the front of the 6681-F cabinet. The parity checking switch has two positions: up (enabled) and down (disabled). The following operations are possible when the parity checking switch is in the enabled position.

- Detecting parity errors on function codes or data received from the 6000/CDC CYBER data channel.
- Detecting parity errors on data received from the 3000 peripheral controller.
- Generating and transmitting parity for status information sent to the 6000/CDC CYBER data channel.

The 6681-F operates functionally as a 6681-B/C/D/E (without parity checking) when the parity checking switch is in the disabled position.

SECTION 3

INSTALLATION AND CHECKOUT

INSTALLATION AND CHECKOUT

UNCRATING

Inspect the equipment for damages or shortage. Damage or shortage should be reported promptly to Control Data and the carrier.

INITIAL INSTALLATION PROCEDURES

The 6681-F Data Channel Converter comes installed in a cabinet or as a separate unit to be installed on site. Refer to Figure 3-1 for callouts.

DCC INSTALLED IN CABINET

The data channel converter chassis is typically shipped to a customer installed in a GH431-A/B/C Peripheral Controller Cabinet. It may also be installed in any 6000/CDC CYBER peripheral controller cabinet with a ±6 vdc power supply.

Terminator Power Cable Hook-Up

Install terminator power cable in accordance with local electrical codes.

(1) Use 3-wire 40 vdc terminator power input cable. Connect +20 volt line (red wire) from terminator power source to any open pin on terminal board 1. Connect ground line (black wire) from terminator power source to any open pin on terminal board 2. Connect -20 volt line (blue wire) from terminator power source to any open pin on terminal board 3.

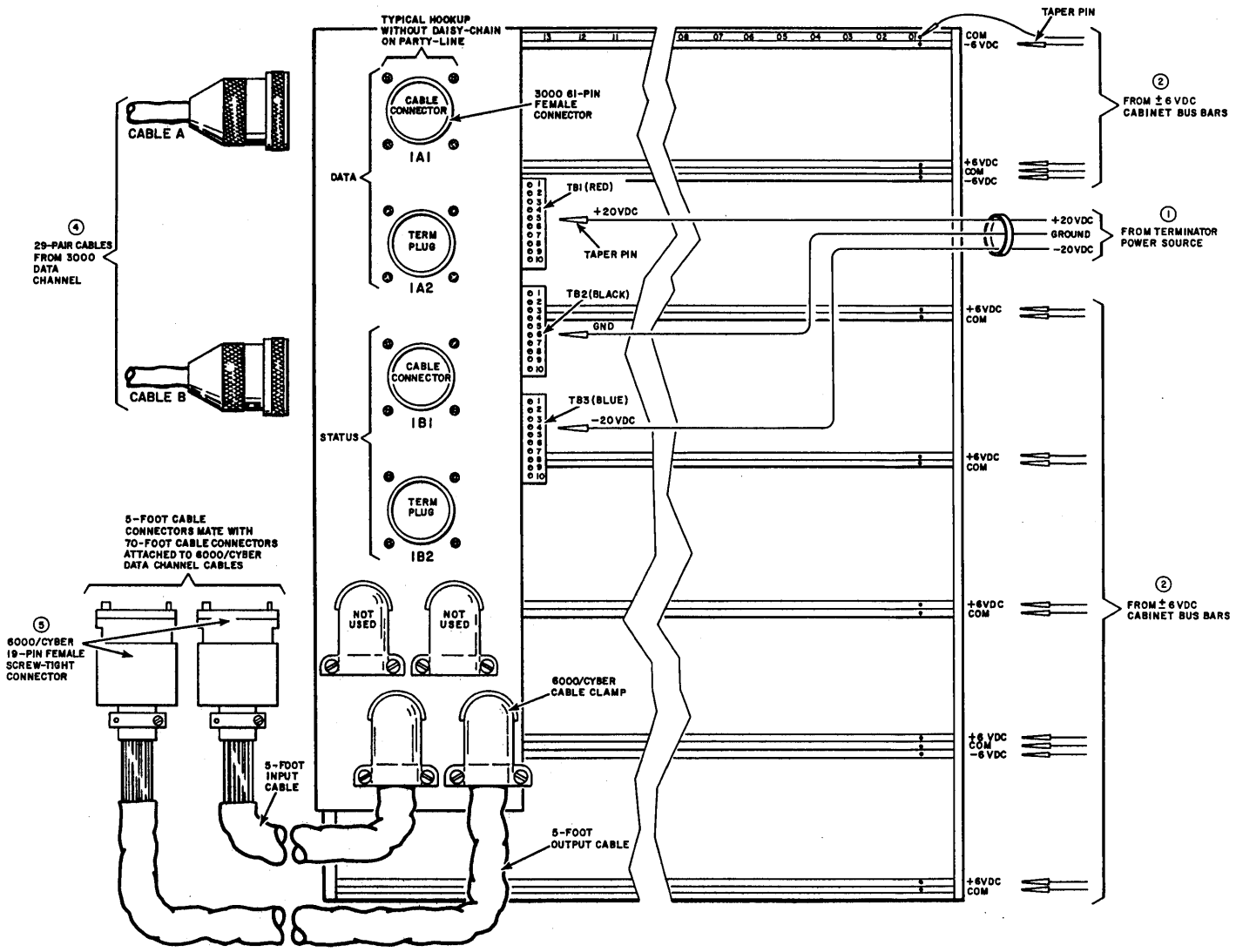

Figure 3-1. Power and Signal Cable Hook-Up

Logic Power Hook-Up

Logic power is installed prior to shipment of unit to customer.

3000 Signal Cable Hook-Up

(4) Connect 3000 data channel signal cables and terminator assemblies (plugs) as shown in Figure 3-1 (typical hook-up only). The two terminator plugs are replaced with two signal cables extending to the next equipment if the DCC is not the last equipment on the party-line cables.

CAUTION

The peripheral cabinet's direct current terminator power switch must be in the OFF position when terminator plugs or 3000 input/output cables are installed or removed.

6000/CDC CYBER Signal Cable Hook-Up

(5) Connect 5-foot input cable, attached to screw-tight connector, to 70-foot input cable coming from 6000/CDC CYBER computer system. Connect 5-foot output cable, attached to screw-tight connector, to 70-foot output cable coming from 6000/CDC CYBER computer system.

DCC INSTALLED ON SITE

Logic Chassis Installation

Install data channel converter logic chassis in 6000/CDC CYBER peripheral controller cabinet using four plastic inserts, four bolts, and washers provided. Refer to Figure 3-2.

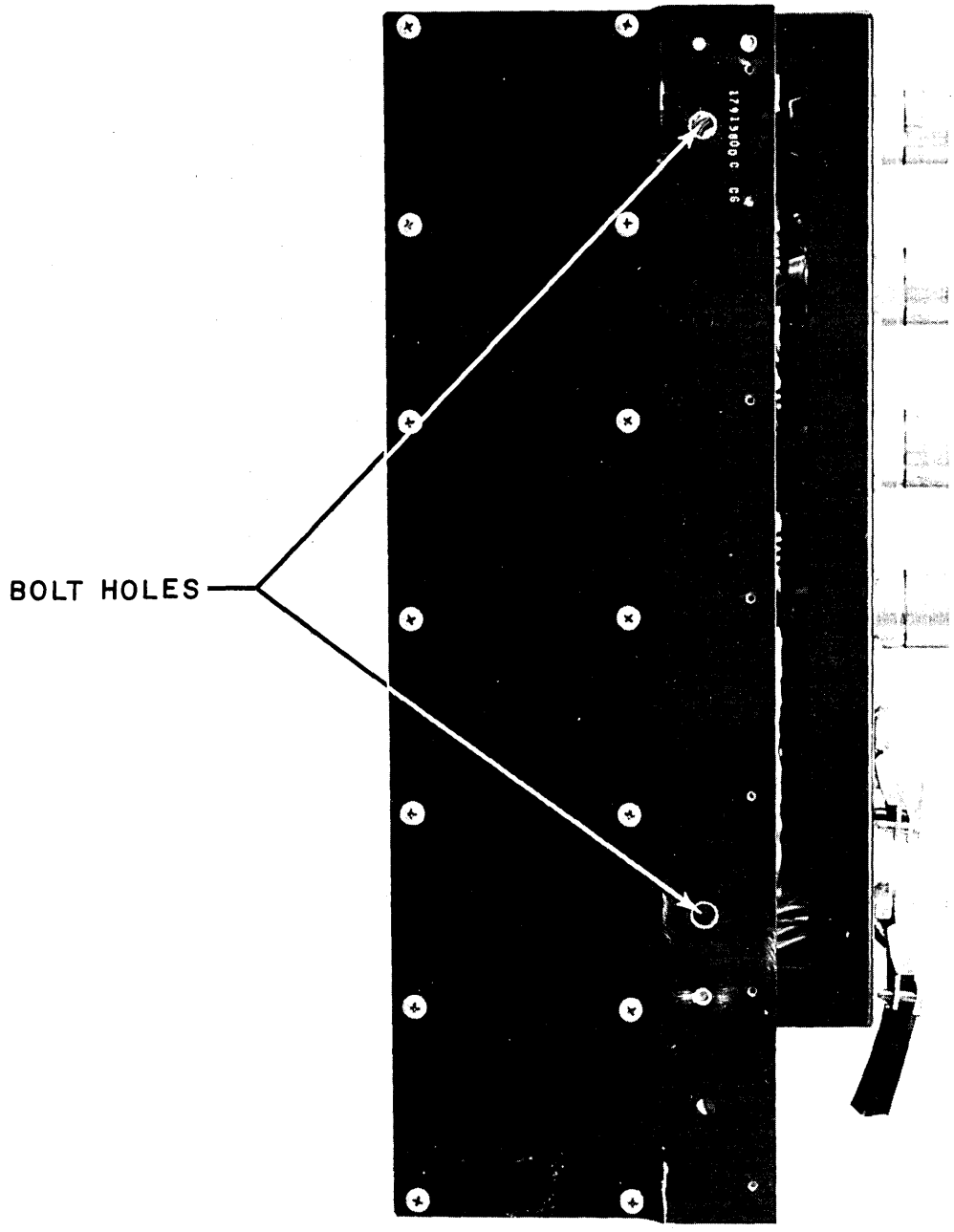

Figure 3-2. Chassis Installation

Terminator Power Cable Hook-Up

Install terminator power cable in accordance with local electrical codes.

(1) Use 3-wire 40 vdc terminator power input cable. Connect +20 volt line (red wire) from terminator power source to any open pin on terminal board 1. Connect ground line (black wire) from terminator power source to any open pin on terminal board 2. Connect -20 volt line (blue wire) from terminator power source to any open pin on terminal board 3.

Logic Power Hook-Up

(2) Connect seven black common (ground) wires from ± 6 vdc cabinet bus bars to holes on right end of logic chassis bus bars. Connect six red +6 vdc wires from cabinet bus bars to chassis bus bars. Connect three blue -6 vdc wires from cabinet bus bars to chassis bus bars.

3000 Signal Cable Hook-Up

(4) Connect 3000 data channel signal cables and terminator plugs as shown in Figure 3-1 (typical hook-up only). The two terminator plugs are replaced with two signal cables extending to the next equipment if the DCC is not the last equipment on the party-line cables.

6000/CDC CYBER Signal Cable Hook-Up

(5) Connect 5-foot input cable, attached to screw-tight connector, to 70-foot input cable coming from 6000/CDC CYBER computer system. Connect 5-foot output cable, attached to screw-tight connector, to 70-foot output cable coming from 6000/CDC CYBER computer system.

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.

CONTROL DATA

INSTALLATION KIT – "B" CABINET CHASSIS

CODE IDENT A

SHEET 2

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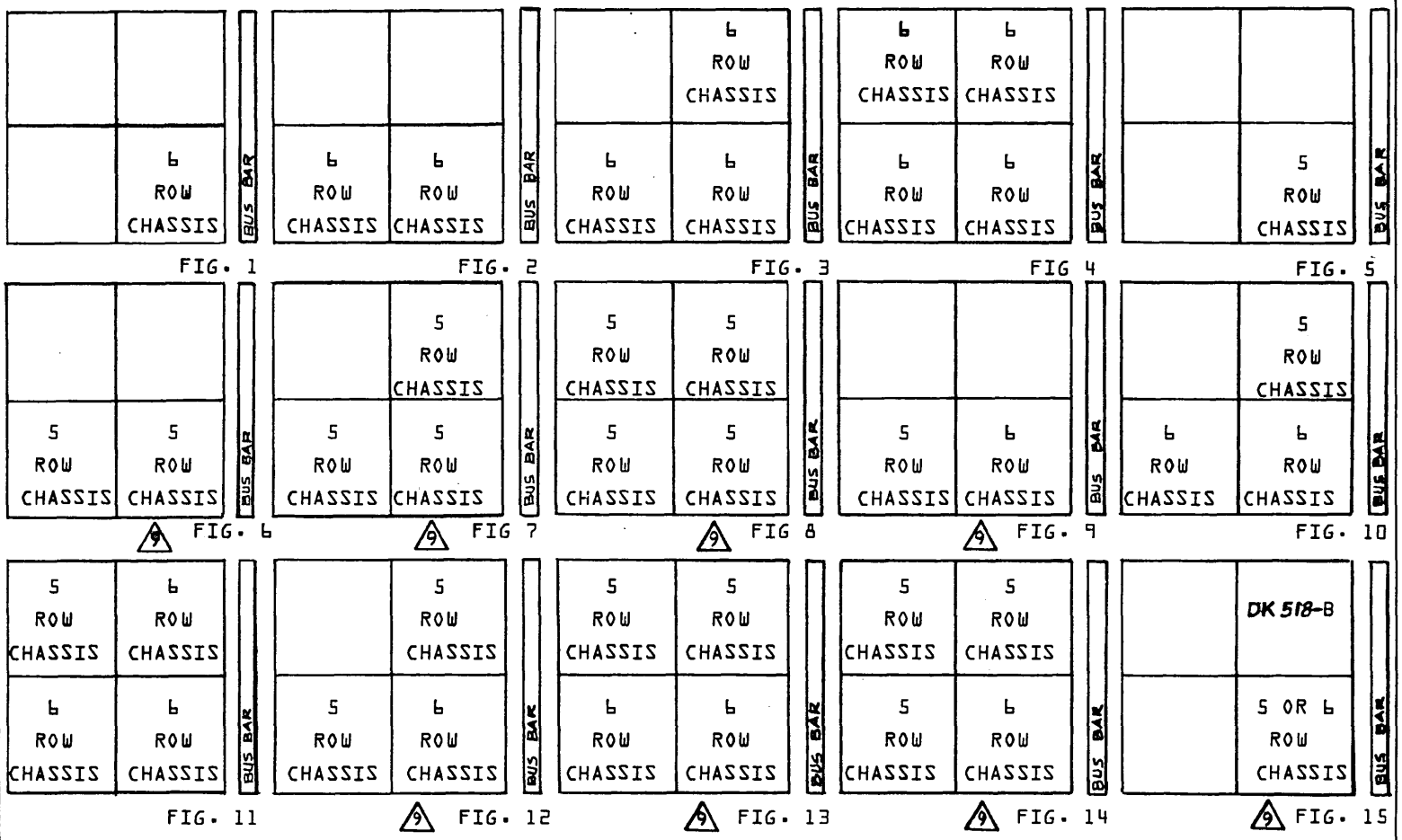
CONTROL DATA	INSTALLATION KIT — "B" CABINET CHASSIS	CODE IDENT	SHEET 4	A	DOCUMENT NO. 22725500	REV. A

REAR VIEWS OF CABINETS



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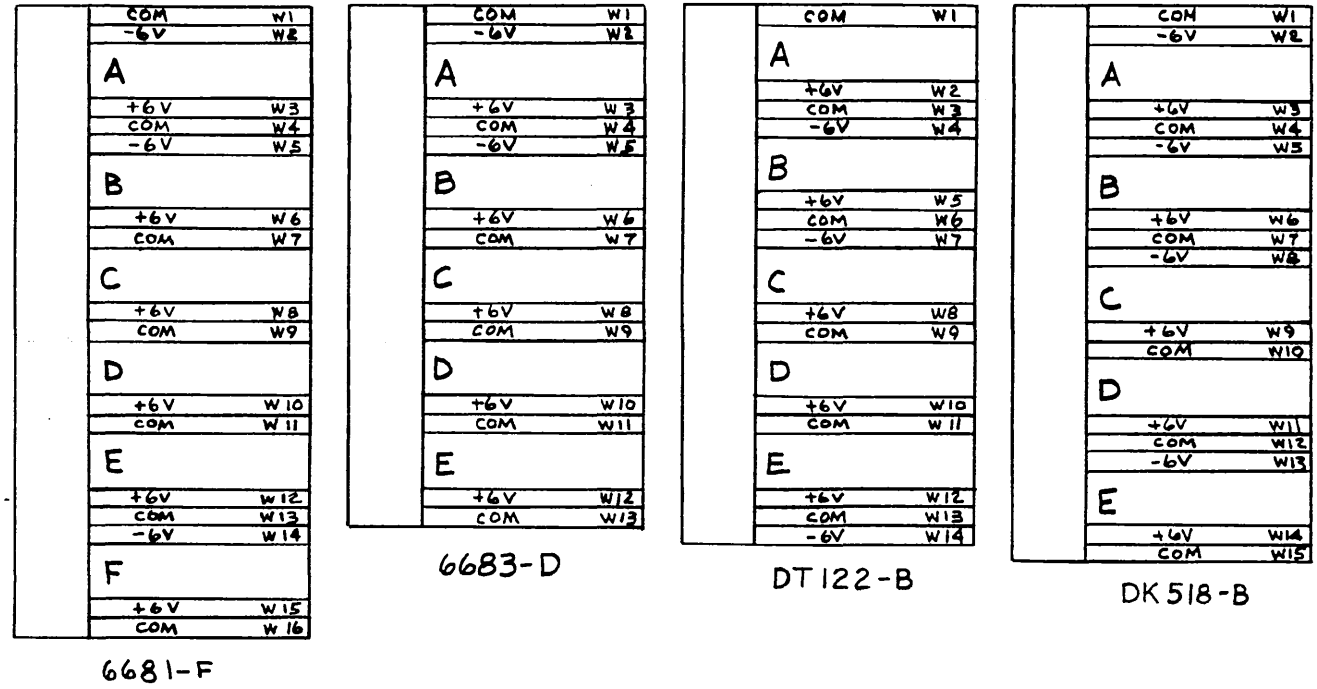
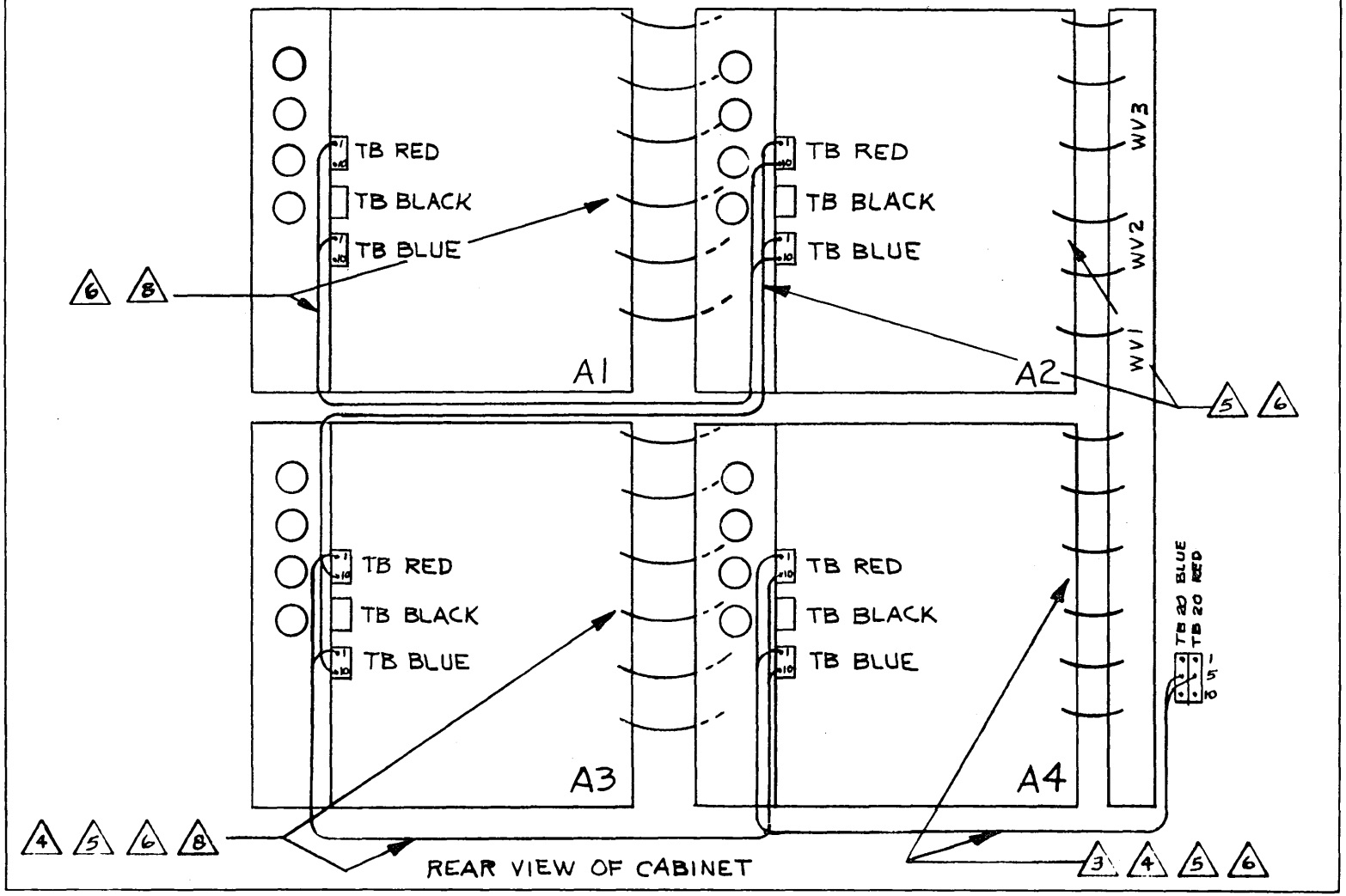
CONTROL DATA	INSTALLATION KIT — "B" CABINET CHASSIS	CODE IDENT	SHEET 5	A	DOCUMENT NO. 22725500	REV. A



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



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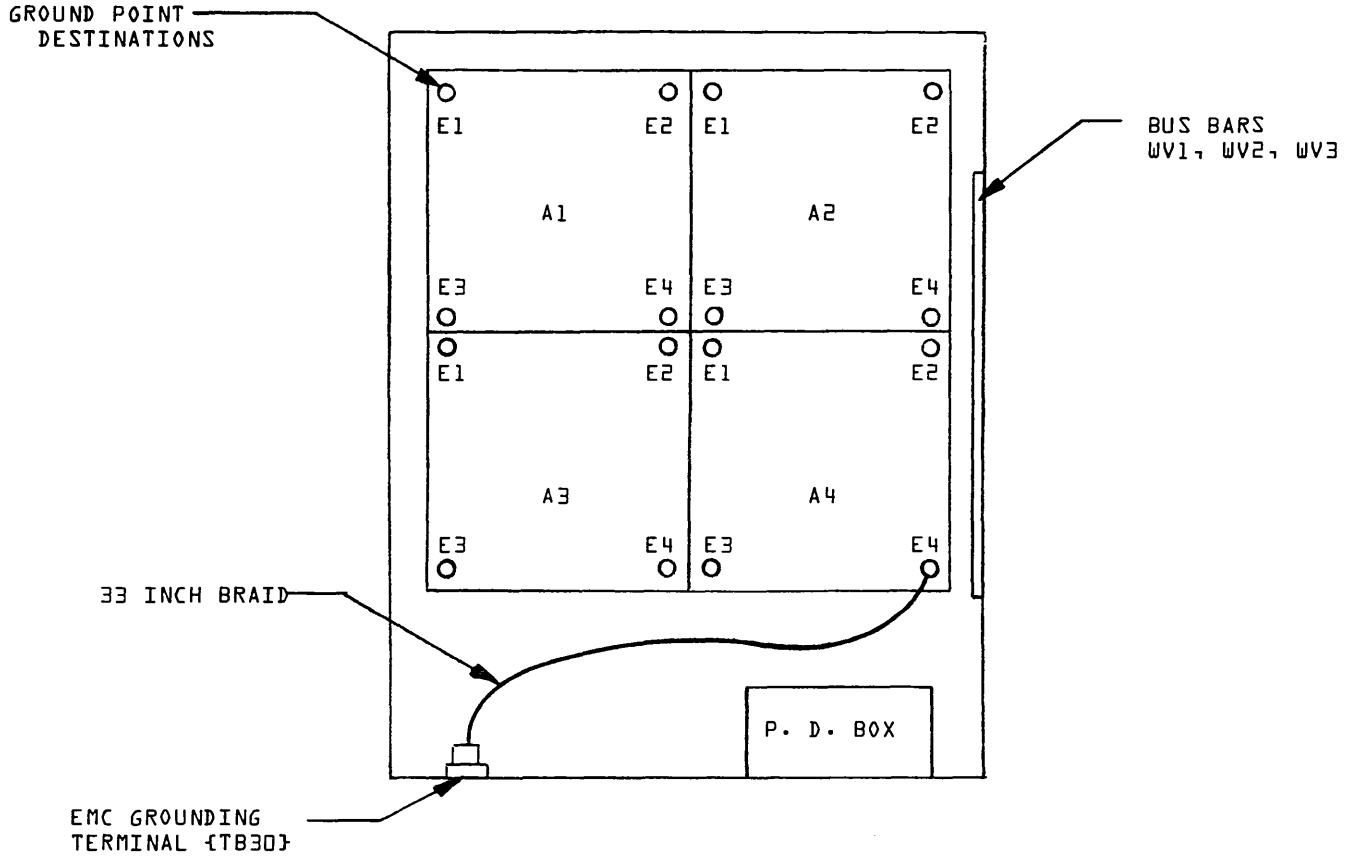
CONTROL DATA	INSTALLATION KIT — "B" CABINET CHASSIS	CODE IDENT	SHEET 7	A	DOCUMENT NO. 22725500	REV A



REAR VIEW OF CABINET

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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 BUS ALL BARS	COM		WV2	COM		D. C.
	1	12	2		A4 BUS ALL BARS	+6V		WV1	+6V		D. C.
	2	12	6		A4 BUS ALL 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 BUS ALL BARS	COM		A4 BUS BAR	COM		D. C.
	1	12	2		A3 BUS ALL BARS	+6V		A4 BUS BAR	+6V		D. C.
	2	12	6		A3 BUS ALL 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 14
	3	12	0		A2 BUS ALL BARS	COM		WV2	COM		D. C.
	1	12	2		A2 BUS ALL BARS	+6V		WV1	+6V		D. C.
	2	12	6		A2 BUS ALL 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 9	WL	DOCUMENT NO. 2272550	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	2		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

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.

9. 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	A	CLA	A	INSTALLATION KIT B CAB CHASSIS	CA	6631-F	06/17/75	

MF

PROCESSING DATE	PAGE NUMBER
06/17/75	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	2283210	000	PC	CABLE ASSY-JUMPER,CHAS PWR RED	IN							N
2	A	2283211	400	PC	CABLE ASSY-JUMPER,CHAS PWR BLU	IN							N
3	A	2283212	700	PC	CABLE ASSY-JUMPER,CHAS PWR BLK	IN							N
4	A	2283220	100	PC	TERMINATOR CABLE ASSEMBLY	IN							N
5	A	5337000	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

PASS ON FEATURE

The 6681-F can pass on the data received from the 6000/CDC CYBER data channel to another equipment sharing the same data channel. The data is passed on only if the DCC is deselected. The data channel converter differs from other 6000/CDC CYBER series equipment in two ways:

1. A master clear signal selects the converter.
2. The converter must be the first equipment connected to the data channel.

SPEED

The data channel converter processes DCC function codes as rapidly as the 6000/CDC CYBER system responds.

The master clear signal to the 3000 peripheral controller has a pulse width of 30 microseconds. The master clear signal blocks the connect signal going out during the time the 3000 peripheral controller is master cleared.

The speed with which connect or function codes or data is sent to the external equipment depends on the type of external equipment and the cable length between the data channel converter and the 3000 peripheral controller.

INTERFACE SIGNALS

DEFINTIONS OF SIGNALS BETWEEN THE DCC AND THE 3000 PERIPHERAL CONTROLLER.

Refer to Figure 4-1.

Data Bits

The 12 lines which carry data are bidirectional and performs as follows:

1. During a read operation, 13 bits (12 data bits and 1 parity bit) are transmitted from the 3000 peripheral controller to the data channel converter. The DCC drops the parity bit and sends 12 data bits to the 6000/CDC CYBER data channel.
2. During a write operation, 12 data bits are transmitted from the 6000/CDC CYBER data channel to the data channel converter. The DCC appends a parity bit and sends 13 bits (12 data bits and 1 parity bit) to the 3000 peripheral controller.

Parity Bit

A parity bit accompanies each 12-bit data/function word transmitted from the DCC to the 3000 peripheral controller. A parity bit also accompanies the 12-bit data word received from the 3000 peripheral controller. This bit is used for parity error detection if this feature is selected (CDC CYBER 170 systems only). Odd parity is used. Therefore, the total number of 1 bits is always an odd number.

Master Clear

The master clear signal, 30 microseconds in length, is generated by the DCC upon receipt of a master clear pulse or 1700 function code from the 6000/CDC CYBER computer system.

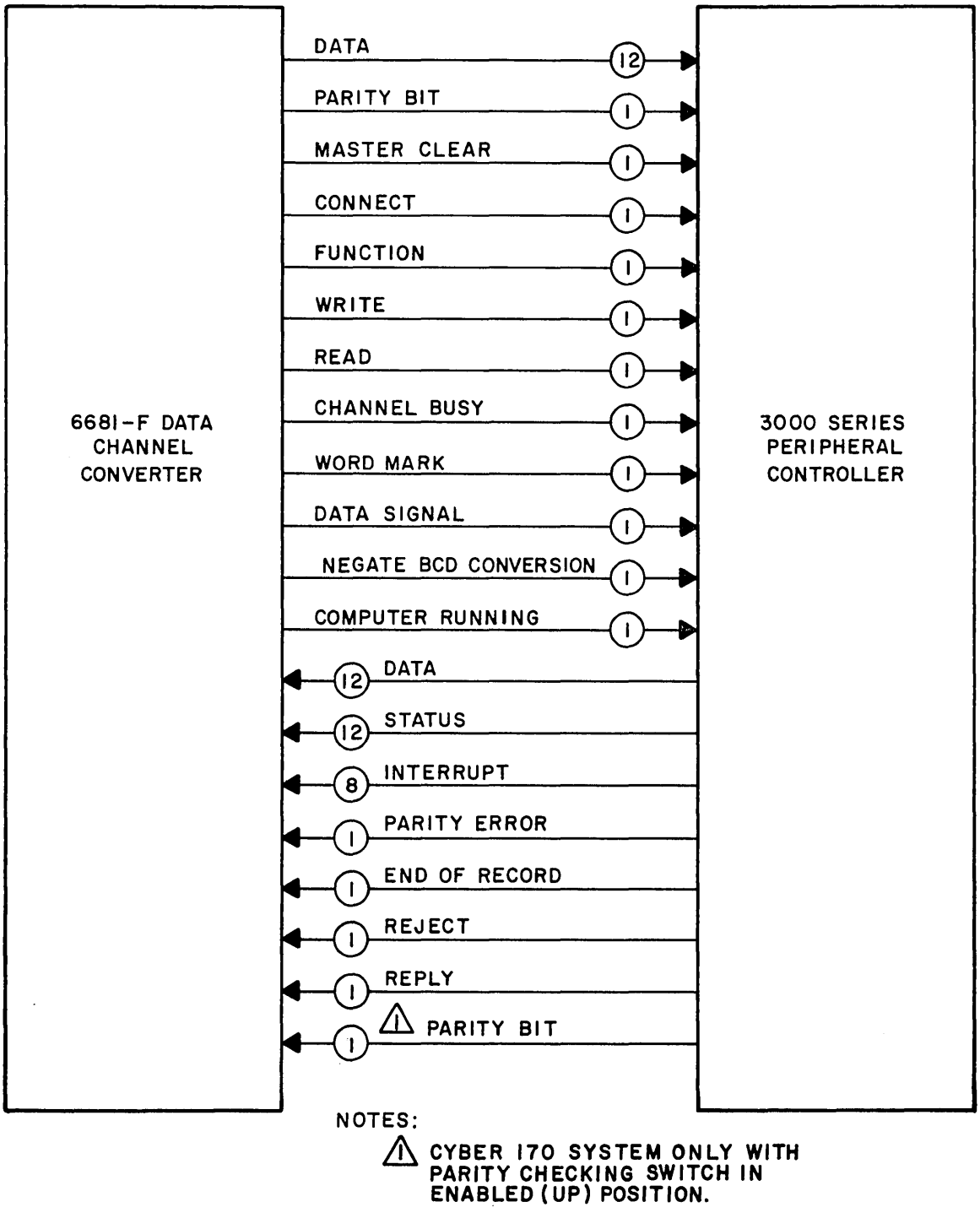

Figure 4-1. Signals Between DCC and Peripheral Controller

Connect

The connect signal is sent to the 3000 peripheral controller when the 12-bit connect code is available on the data lines. The connect signal drops when the 3000 peripheral controller returns a reply or a reject signal to the DCC.

Function

The function signal is sent to the 3000 peripheral controller when the 12-bit function code is available on the data lines. The function signal drops when the 3000 peripheral controller returns a reply or a reject signal to the DCC.

Write

The write signal is generated by the DCC and the channel is active (output from 6000/CDC CYBER computer system) when a write operation is selected.

Read

The read signal is generated by the DCC and the channel is active (input to 6000/CDC CYBER computer system) when a read operation is selected.

Channel Busy

The channel busy signal is generated by the DCC while the channel is active and an output operation is selected.

Word Mark

The word mark signal is sent to the 3000 peripheral controller with every data signal during a read/write operation. The word mark signal is transmitted 0.1 microseconds prior to the data signal and remains up for the duration of the data signal.

Data Signal

The data signal is sent to the 3000 peripheral controller during both read and write operations. The data signal drops when a reply signal is received from the 3000 peripheral controller.

1. During a read operation, the data signal indicates that the DCC is ready to accept a 12-bit word from the 3000 peripheral controller.
2. During a write operation, the data signal indicates that the DCC has placed a 12-bit word on the data lines going to the 3000 peripheral controller.

Negate BCD Conversion

The negate BCD conversion signal is generated by the DCC when a negate BCD function is selected. The negate BCD conversion signal directs the 3000 peripheral controller not to convert BCD codes from external to internal during a read operation (1401 or 1501). During a write operation (1601), the negate BCD conversion signal directs the 3000 peripheral controller not to convert BCD codes from internal to external.

Computer Running

The computer running signal is generated by the DCC when it is selected.

Status Bits

The 3000 peripheral controller uses the 12 status lines to indicate the condition of the external equipment to the DCC.

Interrupt Lines

An external equipment has reached a predetermined condition when its corresponding interrupt line is a 1. A DCC may communicate with up to eight external equipment via 3000 peripheral controllers. Each 3000 peripheral controller uses one interrupt line.

Parity Error

The parity error signal is generated by the 3000 peripheral controller if the total number of 1 bits in the 12 bits of data plus the parity bit is not an odd number.

End of Record

The end of record signal is generated (instead of a reply signal) by the 3000 peripheral controller during a read operation in response to the data signal if the end of a block of data is reached. The DCC sends an inactive signal to the 6000/CDC CYBER data channel upon receipt of the end of record signal from the 3000 peripheral controller. The end of record signal drops when the data signal drops.

Reject

The reject signal is generated by the 3000 peripheral controller in response to a connect or function signal if a connect cannot be made or a function cannot be performed at the time the 3000 peripheral controller receives the respective signal.

Reply

The reply signal is generated by the 3000 peripheral controller in response to a connect, function, or data signal. The reply signal drops when the connect, function, or data signal drops.

1. The 3000 peripheral controller connects and sends a reply signal to the DCC if a connect can be made when the connect signal is received.
2. The 3000 peripheral controller initiates a function and sends a reply signal to the DCC if the specified function can be performed when the function signal is received.
3. During a read operation, the 3000 peripheral controller sends a reply signal to the DCC when it places a 12-bit word on the data lines in response to the data signal.
4. During a write operation, the 3000 peripheral controller sends a reply signal to the DCC when it samples the data lines in response to the data signal.

The DCC generates an internal reject signal whenever the peripheral controller does not respond to a connect or function operation within 100 microseconds.

DEFINITIONS OF SIGNALS FROM THE 6000/CDC CYBER DATA CHANNEL TO THE DCC

Refer to Figure 4-2.

Data Bits 0 through 11

The 12 data lines carry the data and function codes from the 6000/CDC CYBER data channel to the DCC.

Parity Bit

A parity bit accompanies each 12-bit data word sent from the 6000/CDC CYBER data channel to the DCC (CDC CYBER 170 systems only). Odd parity is used. Therefore, the total number of 1 bits transmitted is always an odd number.

Master Clear

The master clear signal is a 25-nanosecond pulse sent to the DCC.

Clock

10-Megahertz Clock

The 10-MHz clock pulses generate multiple phase clocks for incremental gating signals. The 10-MHz clock also synchronizes the DCC with the 6000/CDC CYBER data channel.

1-Megahertz Clock

The 1-MHz clock is not used in the DCC. It is passed on for possible use in other channel equipment.

Inactive

The inactive signal, generated by the 6000/CDC CYBER data channel, deactivates the DCC after some input operations and after all output or status operations.

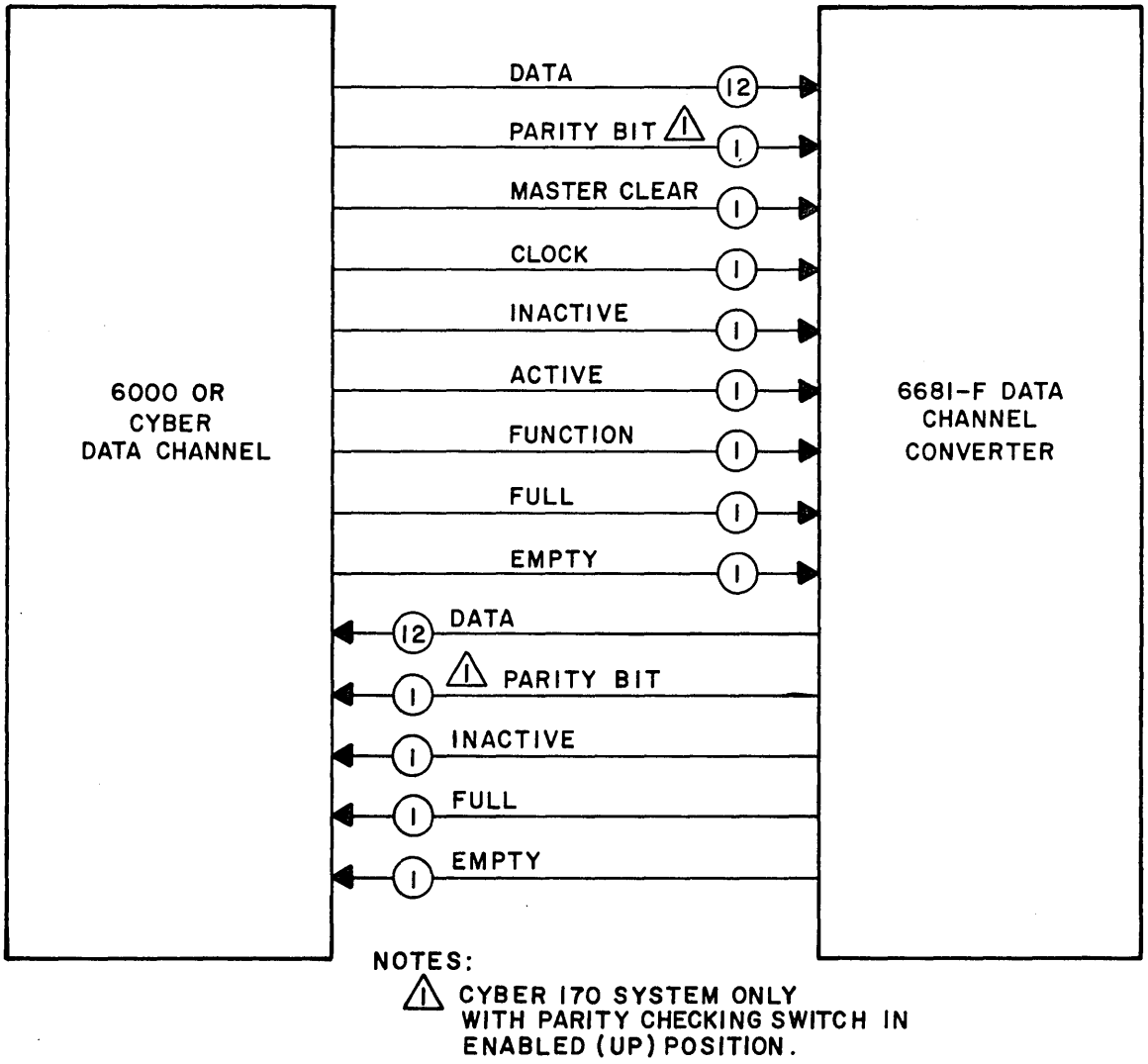

Figure 4-2. Signals Between 6000/CDC CYBER Data Channel and DCC

Active

The active signal, generated by the 6000/CDC CYBER data channel, activates the DCC before an input/output or status operation.

Function

The function signal, generated by the 6000/CDC CYBER data channel, accompanies the function code to the DCC.

Full

The full signal, generated by the 6000/CDC CYBER data channel, accompanies the data word when the computer is outputting information.

Empty

The empty signal, generated by the 6000/CDC CYBER data channel, is sent to the DCC to indicate acceptance of the data word when the computer is inputting information.

DEFINITIONS OF SIGNALS FROM THE DCC TO THE 6000/CDC CYBER DATA CHANNEL

Refer to Figure 4-2.

Data Bits 0 through 11

The 12 data lines carry the data and status codes from the DCC to the 6000/CDC CYBER data channel.

Parity Bit

A parity bit accompanies each 12-bit data word transmitted from the DCC to the 6000/CDC CYBER data channel (CDC CYBER 170 systems only). Odd parity is used. Therefore, the total number of 1 bits transmitted is always an odd number.

Inactive

The inactive signal, generated by the DCC, deactivates the 6000/CDC CYBER data channel in the following instances.

1. In response to the function signal sent by the 6000/CDC CYBER computer system.
2. In response to the end of record signal sent by the 3000 peripheral controller.
3. In response to an abnormal end of operation interrupt when selected in the DCC and 3000 peripheral controller.

Full

The full signal, generated by the DCC, accompanies the data word when the computer is inputting information.

Empty

The empty signal, generated by the DCC, is sent to the 6000/CDC CYBER data channel to indicate acceptance of the data word when the computer is outputting information.

Active

Not used.

SECTION 5

DIAGRAMS

MODULE LOCATION INDEX

The module location index has three sections with three columns of information in each section. The left column of each section shows the logic chassis row (A, B, ..., or F) and the slot numbers (01-12) for each module type. The middle column shows the module type at a particular location. The right column shows the logic diagram sheet number(s) where the module type is found. For example, the logic for module type IV, physically located in the logic chassis in row C slot 06, is shown on logic diagram sheet number 1.

MODULE LOCATION INDEX

CHASSIS NO. 1

A	MODULE TYPE	SHEET NO.
01		
02		
03	TI	3,4,6
04	ZR	2
05	ZR	2
06	ZR	2
07	ZR	2
08	ZR	2
09	ZR	2
10	ZT	3,4
11	ZT	3
12	ZT	2,3
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
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32		
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34		
35		
36		
37		
38		
39		
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41		
42		

B	MODULE TYPE	SHEET NO.
01		
02	ZP	2,3,5
03	TL	1,2,3,4,7
04	ZG	3,6
05	AB	7
06	AB	7
07	PJ	1
08	PJ	1
09	ZS	1
10	ZS	1
11	ZS	1
12	ZS	1
13		
14		
15		
16		
17		
18		
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36		
37		
38		
39		
40		
41		
42		

C	MODULE TYPE	SHEET NO.
01		
02	TR	2,6,7
03	ZF	2,3
04	TH	2,3,4
05	ZD	2,3
06	IV	1
07	TH	1,2,7
08	HF	5
09	QI	2,7
10	QI	1,2
11	QI	1
12	QI	1
13		
14		
15		
16		
17		
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32		
33		
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37		
38		
39		
40		
41		
42		

MODULE LOCATION INDEX

CHASSIS NO. 1

D	MODULE TYPE	SHEET NO.
01		
02		
03	ZB	3, 4
04	TD	1, 3
05	TI	1, 2, 3
06	IV	1
07	IV	1
08	TH	3, 4, 5, 7
09	QJ	1
10	QJ	1
11	QJ	3, 4
12	QI	1
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
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31		
32		
33		
34		
35		
36		
37		
38		
39		
40		
41		
42		

E	MODULE TYPE	SHEET NO.
01		
02	TD	3, 4, 7
03	XL11	3, 4
04	ZC	1, 3, 4
05	ZE	2, 3, 4
06	TG	1
07	TG	1
08	TG	1
09	ZA	2, 3, 4
10	ZA	4, 6
11	TD	5
12	HQ	5
13		
14		
15		
16		
17		
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39		
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41		
42		

F	MODULE TYPE	SHEET NO.
01	J00	7
02	TD	6
03	TR	6, 7
04	J59	7
05	ZD	6
06	PJ	6
07	PJ	6
08	AB	6
09	AB	6
10	QH	6
11	TH	7
12	ZS	6
13		
14		
15		
16		
17		
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42		

CHASSIS MAP

The chassis map shows the physical location of each cordwood module in the 6681-F logic chassis and the type of module at each location. For example, at logic chassis F10 is a QH module.

CARD SIDE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
A	BLANK		TI	ZR	ZR	ZR	ZR	ZR	ZR	ZT	ZT	ZT	BLANK				A
B	BLANK	ZP	TL	ZG	AB	AB	PJ	PJ	ZS	ZS	ZS	ZS					B
C	BLANK	TR	ZF	TH	ZD	IV	TH	HF	QI	QI	QI	QI					C
D	BLANK		ZB	TD	TI	IV	IV	TH	QJ	QJ	QJ	QI					D
E	BLANK	TD	XLII	ZC	ZE	TG	TG	TG	ZA	ZA	TD	HQ					E
F	J00	TD	TR	J59	ZD	PJ	PJ	AB	AB	QH	TH	ZS					F
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

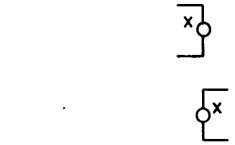
6000/CYBER AIR-COOLED
CORDWOOD MODULES

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



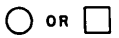
Twisted pair transmitter (x = pin number)

Twisted pair receiver (x = pin number)

Used for transmission on one chassis

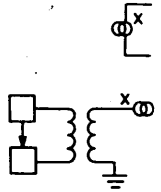
Twisted pair transmission line

Input to a logic element



Logical inverter (no difference between circle and square). A letter inside the symbol indicates output to one or more other element(s).

Test point (x = test point number)

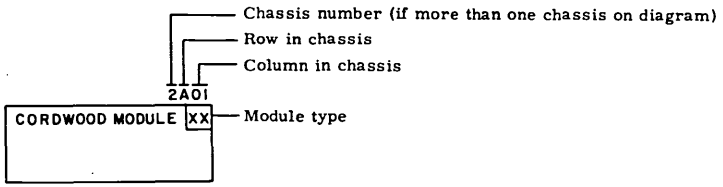


Coaxial cable receiver (x = pin number)

Coaxial cable transmitter (x = pin number)

Used for transmission between chassis.

Coaxial cable transmission line

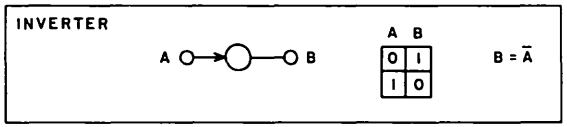


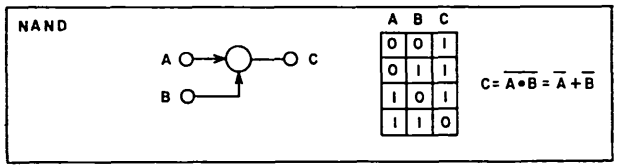
Non-standard circuit

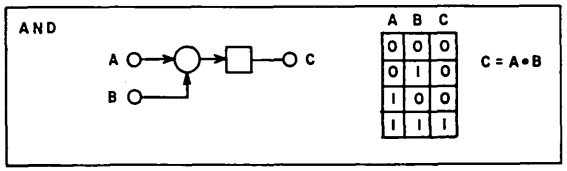
LOGIC FUNCTIONS

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

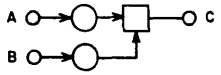






GATES (Cont'd)

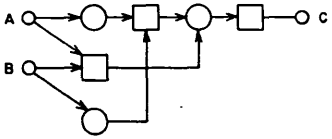
OR



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

C = A+B

EXCLUSIVE OR

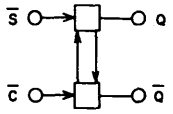


A	B	C
0	0	0
0	1	1
1	0	1
1	1	0

C = A ⊻ B

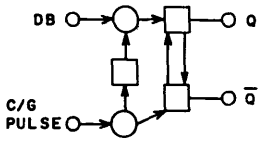
FLIP-FLOPS

STANDARD FF



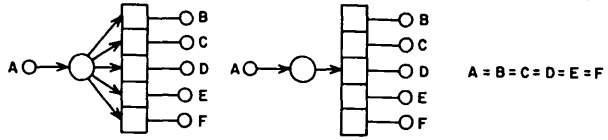
A "0" $\overline{S}$ input drives Q to "1" and $\overline{Q}$ to "0". A "0" $\overline{C}$ input drives $\overline{Q}$ to "1" and Q to "0".

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

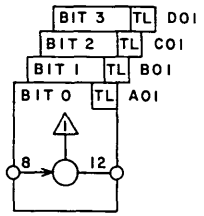
"0" = +1.2 v

"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.

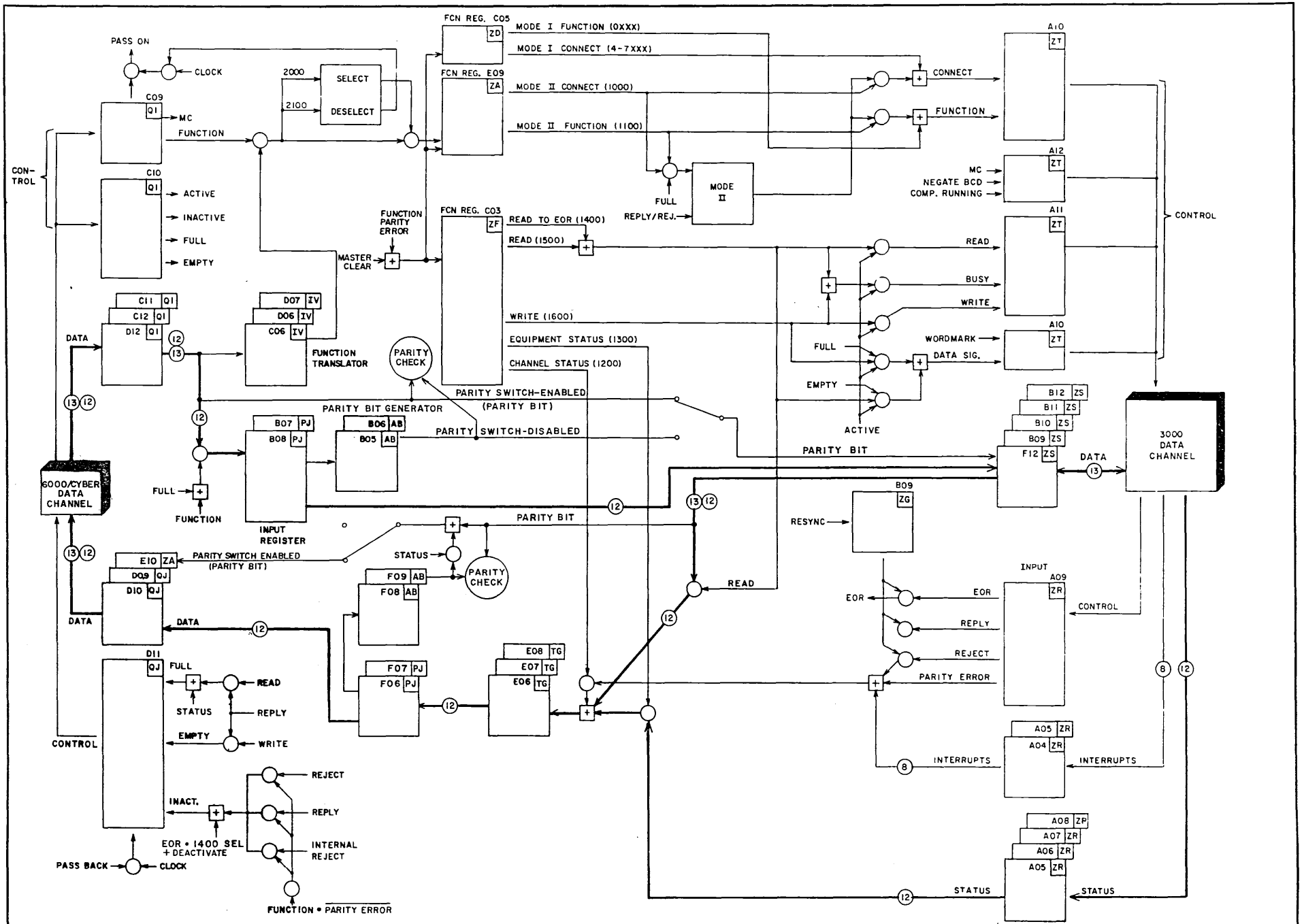


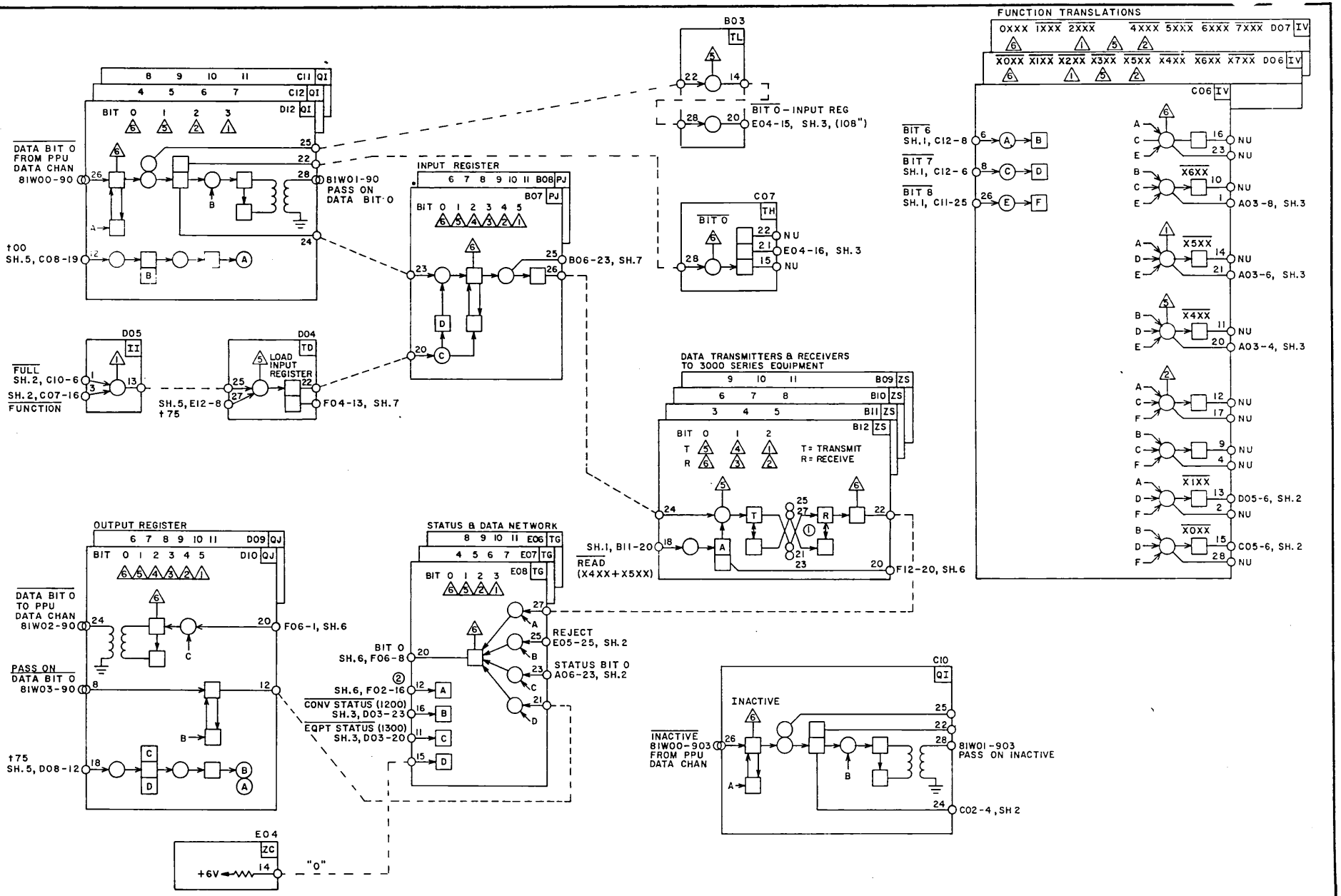
ABBREVIATIONS

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.


PASS ON
CLOCK
C09 Q1
MC
FUNCTION
2000
2100
SELECT
DESELECT
FCN REG. C05 ZD
FCN REG. E09 ZA
MODE I FUNCTION (0XXX)
MODE I CONNECT (4-7XXX)
MODE II CONNECT (1000)
MODE II FUNCTION (1100)
CONNECT
FUNCTION
A10 ZT
A12 ZT
MC
NEGATE BCD
COMP. RUNNING
FULL
REPLY/REJ.
MODE II
CON-TROL
C10 Q1
ACTIVE
INACTIVE
FULL
EMPTY
FUNCTION PARITY ERROR
MASTER CLEAR
FCN REG. C03 ZF
READ TO EOR (1400)
READ (1500)
WRITE (1600)
EQUIPMENT STATUS (1300)
CHANNEL STATUS (1200)
A11 ZT
READ
BUSY
WRITE
FULL
EMPTY
ACTIVE
WORDMARK
DATA SIG.
A10 ZT
CONTROL
C11 Q1
C12 Q1
D12 Q1
DATA
D07 IV
D06 IV
C06 IV
FUNCTION TRANSLATOR
PARITY CHECK
PARITY SWITCH-ENABLED (PARITY BIT)
PARITY BIT GENERATOR
PARITY SWITCH-DISABLED
B07 PJ
B08 PJ
B06 AB
B05 AB
INPUT REGISTER
FULL
FUNCTION
6000/CYBER DATA CHANNEL
PARITY BIT
B12 ZS
B11 ZS
B10 ZS
B09 ZS
F12 ZS
DATA
3000 DATA CHANNEL
B09 ZG
RESYNC
E10 ZA
D09 QJ
D10 QJ
PARITY SWITCH ENABLED (PARITY BIT)
STATUS
PARITY CHECK
F09 AB
F08 AB
READ
INPUT
A09 ZR
EOR
REPLY
REJECT
PARITY ERROR
CONTROL
D11 QJ
FULL
STATUS
EMPTY
READ
REPLY
WRITE
F07 PJ
F06 PJ
E08 TG
E07 TG
E06 TG
INTERRUPTS
A05 ZR
A04 ZR
INTERRUPTS
REJECT
INACT.
REPLY
INTERNAL REJECT
EOR • 1400 SEL + DEACTIVATE
PASS BACK
CLOCK
FUNCTION • PARITY ERROR
A08 ZP
A07 ZR
A06 ZR
A05 ZR
STATUS
STATUS
KEY:
DATA/STATUS
CONTROL
NUMBER OF BITS
CONTROL DATA CORPORATION
COMPUTER DIVISION
TITLE
BLOCK DIAGRAM
PRODUCT
SIZE C
DRAWING NO. 60440800
REV A
SHEET
PAGE 5-1

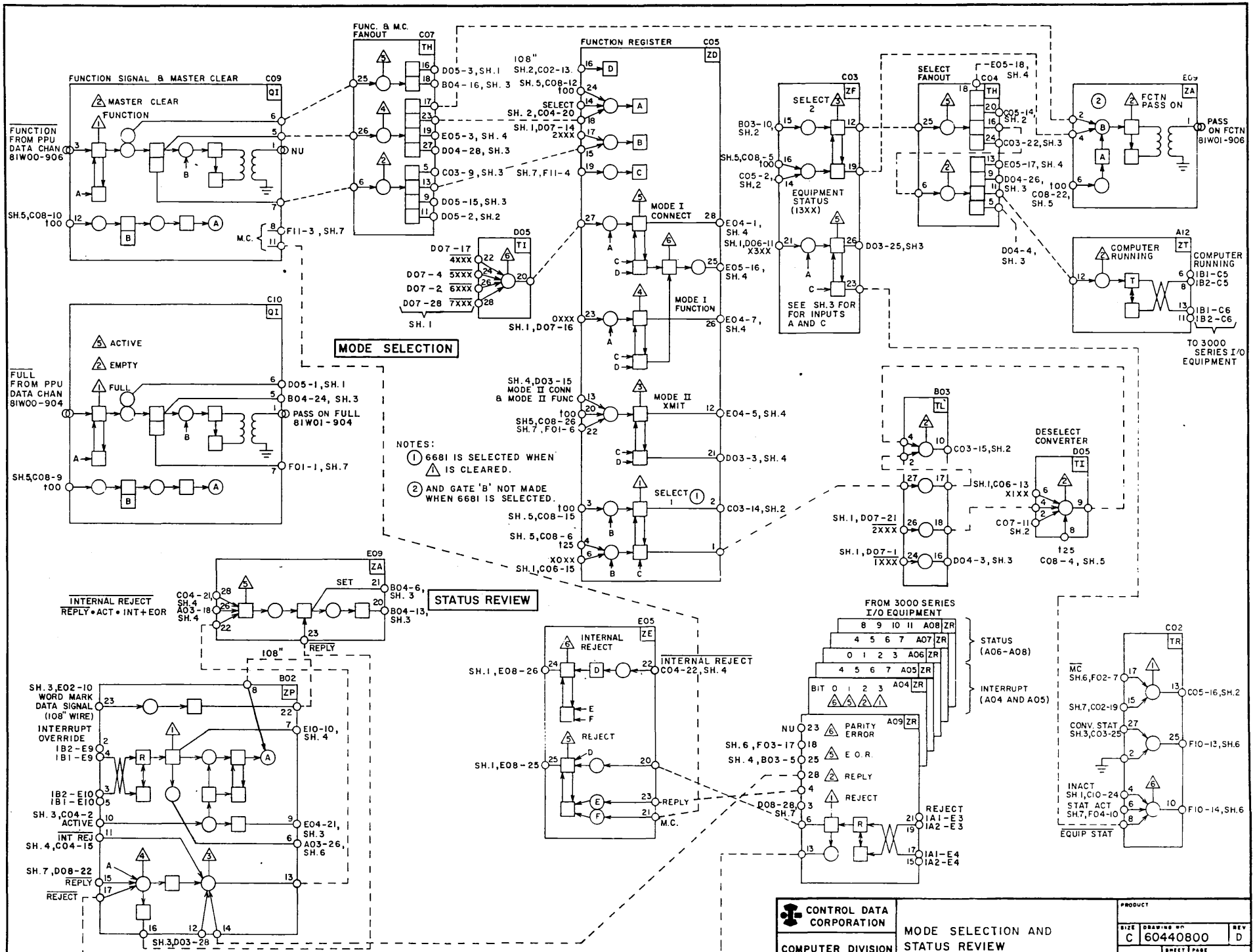


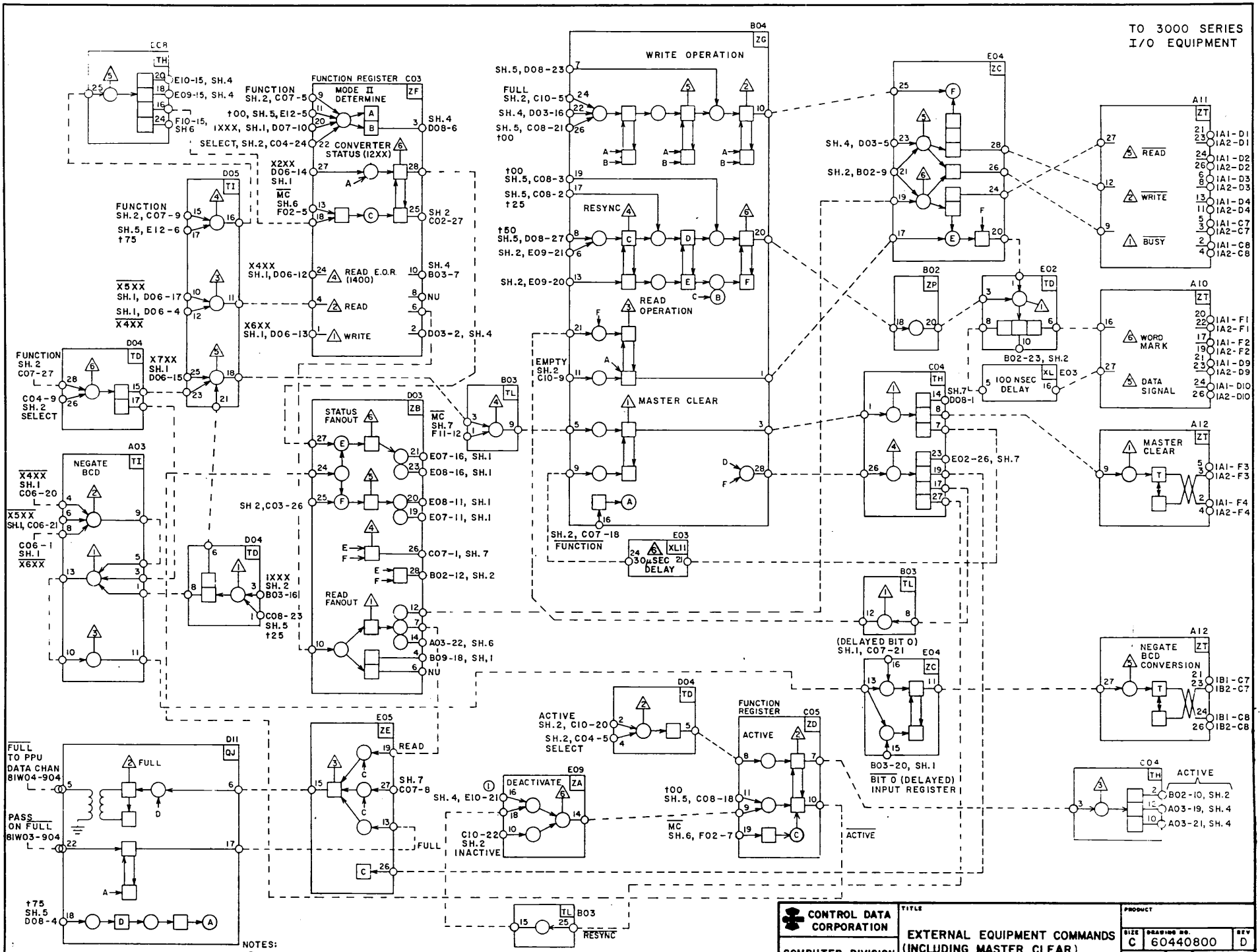
NOTES:

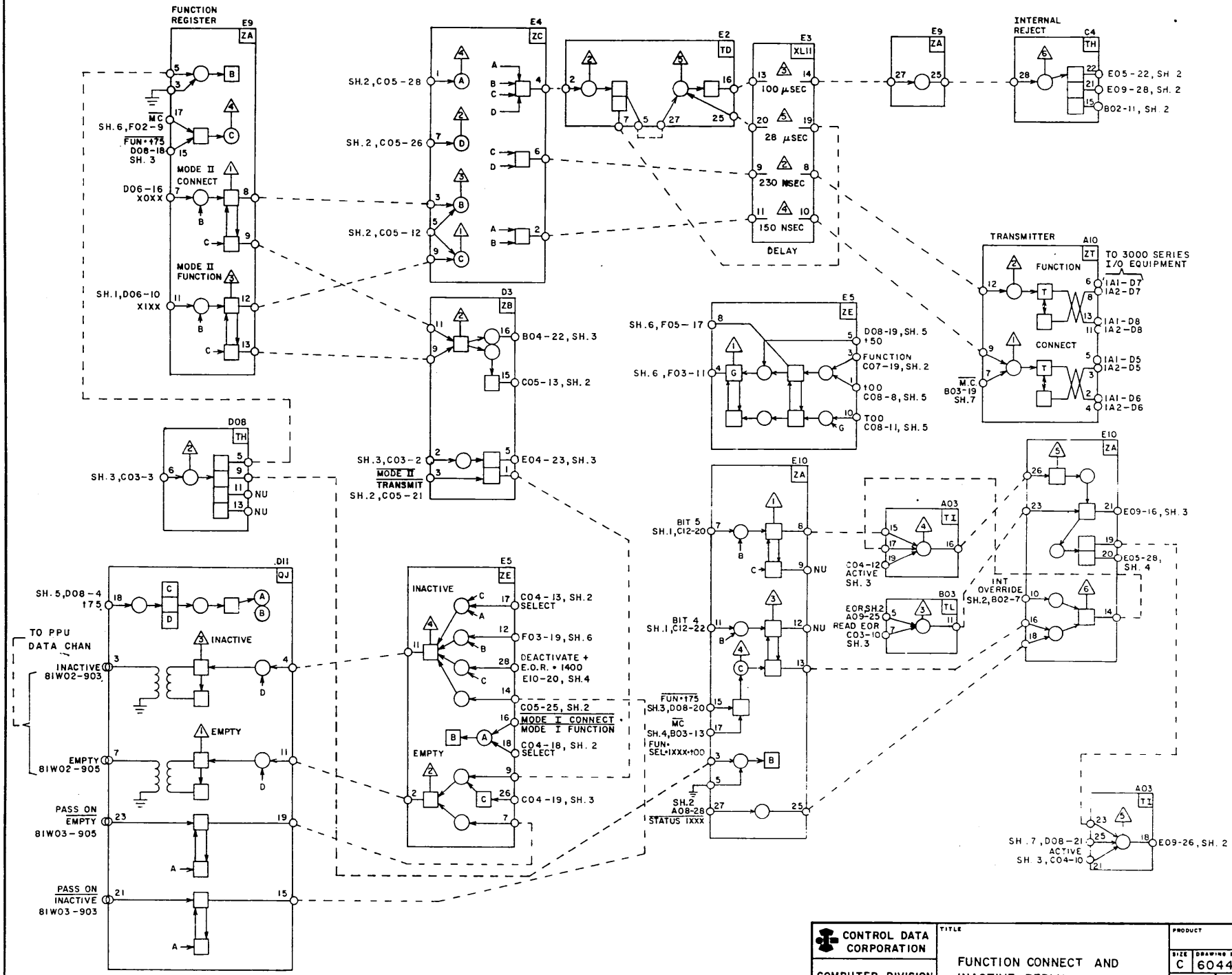
① B12-25 TO IA1-A2
B12-27 TO IA2-A2
B12-21 TO IA1-A1
B12-23 TO IA2-A1

② INTERRUPT OVERRIDE • $\overline{\text{REPLY}}$ • $\overline{\text{READ}}$

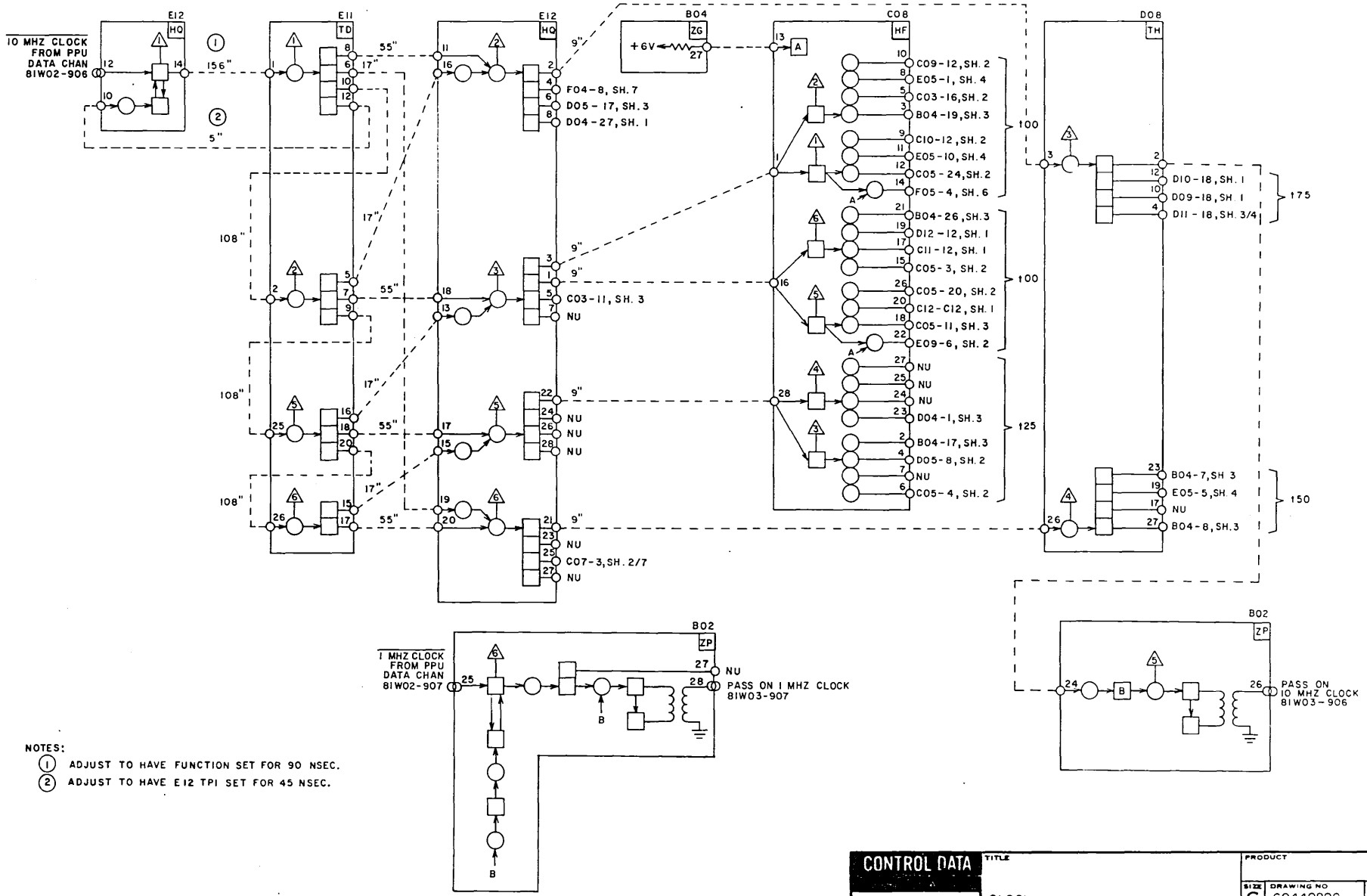
CONTROL DATA CORPORATION	TITLE: DATA FLOW	PRODUCT	
COMPUTER DIVISION		SIZE C	DRAWING NO 60440800 REV D
		SHEET 1	PAGE 5-3


MODE SELECTION
STATUS REVIEW
FUNCTION SIGNAL & MASTER CLEAR
FUNCTION REGISTER
FUNC. & M.C. FANOUT
SELECT FANOUT
SELECT 2
MODE I CONNECT
MODE I FUNCTION
MODE II XMIT
SELECT 1
DESELECT CONVERTER
COMPUTER RUNNING
FCTN PASS ON
EQUIPMENT STATUS (13XX)
SEE SH.3 FOR FOR INPUTS A AND C
FROM 3000 SERIES I/O EQUIPMENT
STATUS (A06-A08)
INTERRUPT (A04 AND A05)
TO 3000 SERIES I/O EQUIPMENT
NOTES:
1 6681 IS SELECTED WHEN ⚠ IS CLEARED.
2 AND GATE 'B' NOT MADE WHEN 6681 IS SELECTED.
CONTROL DATA CORPORATION
COMPUTER DIVISION
MODE SELECTION AND STATUS REVIEW
SIZE C
60440800
REV D
SHEET 2
PAGE 5-5


TO 3000 SERIES I/O EQUIPMENT
WRITE OPERATION
READ OPERATION
MASTER CLEAR
RESYNC
FUNCTION REGISTER C03
MODE II DETERMINE
CONVERTER STATUS (12XX)
STATUS FANOUT
READ FANOUT
NEGATE BCD
NEGATE BCD CONVERSION
FUNCTION REGISTER C05
ACTIVE
DEACTIVATE
100 NSEC DELAY
30μSEC DELAY
READ E.O.R. (1400)
BIT 0 (DELAYED) INPUT REGISTER
NOTES:
① EOR+DEACTIVATE
CONTROL DATA CORPORATION
COMPUTER DIVISION
EXTERNAL EQUIPMENT COMMANDS (INCLUDING MASTER CLEAR)
PRODUCT
SIZE C
DRAWING NO. 60440800
REV D
SHEET 3
PAGE 5-7



CONTROL DATA CORPORATION	TITLE	PRODUCT	
COMPUTER DIVISION	FUNCTION CONNECT AND INACTIVE REPLY	SIZE C	DRAWING NO. 60440800 REV A
		SHEET 4	PAGE 5-9

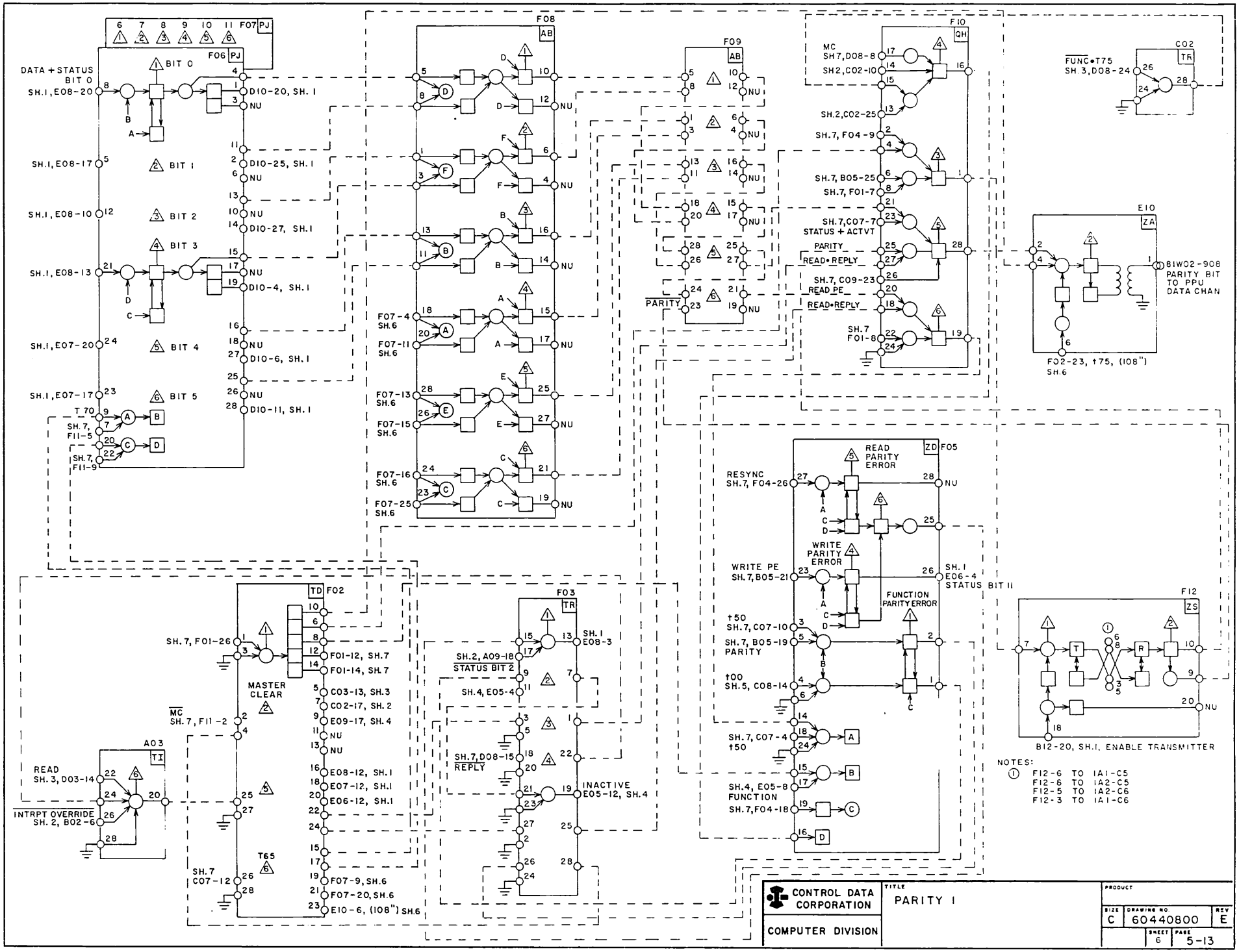


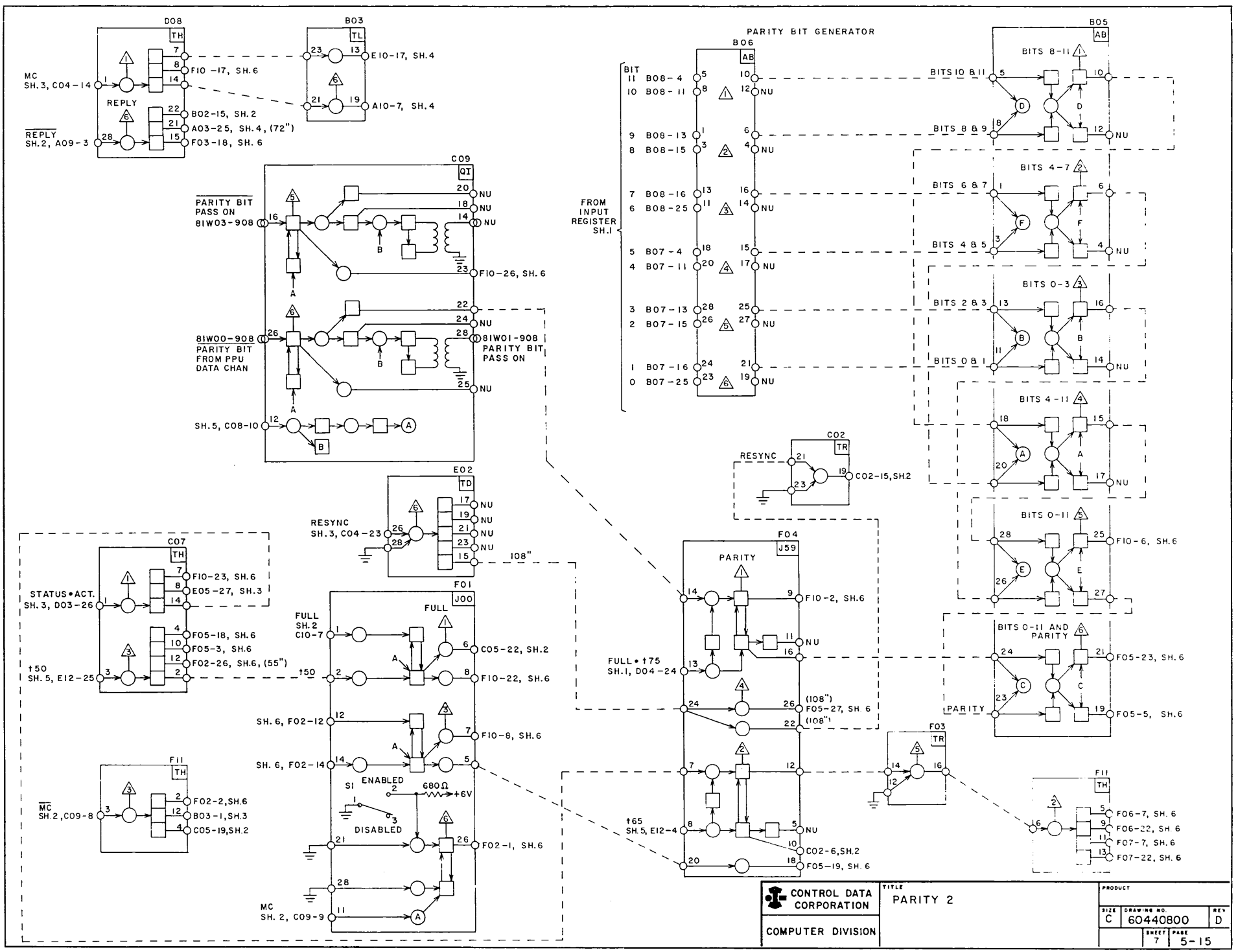
NOTES:

(1) ADJUST TO HAVE FUNCTION SET FOR 90 NSEC.

(2) ADJUST TO HAVE E12 TP1 SET FOR 45 NSEC.

CONTROL DATA	TITLE	PRODUCT	
DEVELOPMENT DIVISION	CLOCK	SIZE C	DRAWING NO 60440800 REV C
		SHEET 5	PAGE 5-11


DATA + STATUS BIT 0
SH.1, E08-20
BIT 0
D10-20, SH. 1
SH.1, E08-17
BIT 1
D10-25, SH. 1
SH.1, E08-10
BIT 2
D10-27, SH.1
SH.1, E08-13
BIT 3
D10-4, SH.1
SH.1, E07-20
BIT 4
D10-6, SH.1
SH.1, E07-17
BIT 5
D10-11, SH.1
T 70
SH. 7, F11-5
SH. 7, F11-9
F06 PJ
F07 PJ
F08 AB
F09 AB
F07-4 SH.6
F07-11 SH.6
F07-13 SH.6
F07-15 SH.6
F07-16 SH.6
F07-25 SH.6
PARITY
F10 QH
MC SH 7, D08-8
SH2, C02-10
SH.2, C02-25
SH.7, F04-9
SH.7, B05-25
SH.7, F01-7
SH.7, C07-7 STATUS + ACTVT
PARITY
READ•REPLY
SH.7, C09-23
READ PE
READ•REPLY
SH.7 F01-8
C02 TR
FUNC•T75 SH.3, D08-24
E10 ZA
81W02-908 PARITY BIT TO PPU DATA CHAN
F02-23, †75, (108") SH.6
ZD F05
READ PARITY ERROR
RESYNC SH.7, F04-26
WRITE PARITY ERROR
WRITE PE SH.7, B05-21
SH. 1 E06-4 STATUS BIT 11
FUNCTION PARITY ERROR
†50 SH.7, C07-10
SH.7, B05-19 PARITY
†00 SH.5, C08-14
SH.7, C07-4 †50
SH.4, E05-8 FUNCTION SH.7, F04-18
F12 ZS
B12-20, SH.1, ENABLE TRANSMITTER
NOTES:
① F12-6 TO 1A1-C5
F12-6 TO 1A2-C5
F12-5 TO 1A2-C6
F12-3 TO 1A1-C6
TD F02
SH. 7, F01-26
MASTER CLEAR
MC SH. 7, F11-2
F01-12, SH.7
F01-14, SH.7
C03-13, SH.3
C02-17, SH. 2
E09-17, SH.4
E08-12, SH.1
E07-12, SH.1
E06-12, SH.1
F07-9, SH.6
F07-20, SH.6
E10-6, (108") SH.6
A03 TI
READ SH. 3, D03-14
INTRPT OVERRIDE SH. 2, B02-6
T65
SH. 7 C07-12
F03 TR
SH. 1 E08-3
SH.2, A09-18 STATUS BIT 2
SH.4, E05-4
SH.7, D08-15 REPLY
INACTIVE E05-12, SH.4
CONTROL DATA CORPORATION
COMPUTER DIVISION
TITLE
PARITY 1
PRODUCT
SIZE C
DRAWING NO. 60440800
REV E
SHEET 6
PAGE 5-13



CONTROL DATA CORPORATION	TITLE: PARITY 2	PRODUCT	
COMPUTER DIVISION		SIZE: C	DRAWING NO.: 60440800 REV: D
		SHEET: 7	PAGE: 5-15

SECTION 6

MAINTENANCE

DCC - 6000/CDC CYBER CABLES

The DCC communicates with the 6000/CDC CYBER computer system via two 19-pin coaxial cables. Refer to Table 6-1.

TABLE 6-1. COAXIAL CABLE LINES BETWEEN THE DCC AND THE 6000/CDC CYBER DATA CHANNEL

Input Cable	Color Code	Output Cable
Data bit 0	90	Data bit 0
Data bit 1	91	Data bit 1
Data bit 2	92	Data bit 2
Data bit 3	93	Data bit 3
Data bit 4	94	Data bit 4
Data bit 5	95	Data bit 5
Data bit 6	96	Data bit 6
Data bit 7	97	Data bit 7
Data bit 8	98	Data bit 8
Data bit 9	99	Data bit 9
Data bit 10	900	Data bit 10
Data bit 11	901	Data bit 11
Active	902	Active
Inactive	903	Inactive
Full	904	Full
Empty	905	Empty
10-MHz clock	906	Function
1-MHz clock	907	Master clear
Parity bit	908	Parity bit

DCC - 3000 CABLES

The DCC communicates with the 3000 peripheral controller via two bidirectional, 29-pin twisted pair cables. Refer to Tables 6-2 and 6-3.

TABLE 6-2. DCC TO 3000 PERIPHERAL CONTROLLER INPUT/OUTPUT CABLE A

Pins	Signal
A1, A2	Data bit 0
A3, A4	Data bit 1
A5, A6	Data bit 2
A7, A8	Data bit 3
A9, A10	Data bit 4
B1, B2	Data bit 5
B3, B4	Data bit 6
B5, B6	Data bit 7
B7, B8	Data bit 8
B9, B10	Data bit 9
C1, C2	Data bit 10
C3, C4	Data bit 11
C5, C6	Parity bit
C7, C8	Channel busy
C9, C10	Not used
D1, D2	Read
D3, D4	Write
D5, D6	Connect
D7, D8	Function
D9, D10	Data signal
E1, E2	Reply
E3, E4	Reject
E5, E6	End of record
E7, E8	Parity error
E9, E10	Not used
F1, F2	Word mark
F3, F4	Master clear
F5, F6	Not used
F7, F8	Not used
F9, F10†	Termination power

† The 29-pair cables terminate in 61-pin connectors. Pins F9 and F10 of each connector provide power to the terminator assembly and do not connect to lines in the input/output cable.

TABLE 6-3. DCC TO 3000 PERIPHERAL CONTROLLER INPUT/OUTPUT CABLE B

Pins	Signal
A1, A2	Status bit 0
A3, A4	Status bit 1
A5, A6	Status bit 2
A7, A8	Status bit 3
A9, A10	Status bit 4
B1, B2	Status bit 5
B3, B4	Status bit 6
B5, B6	Status bit 7
B7, B8	Status bit 8
B9, B10	Status bit 9
C1, C2	Status bit 10
C3, C4	Status bit 11
C5, C6	Computer running
C7, C8	Negate BCD conversion
C9, C10	Not used
D1, D2	Interrupt line 0
D3, D4	Interrupt line 1
D5, D6	Interrupt line 2
D7, D8	Interrupt line 3
D9, D10	Interrupt line 4
E1, E2	Interrupt line 5
E3, E4	Interrupt line 6
E5, E6	Interrupt line 7
E7, E8	Not used
E9, E10	Not used
F1, F2	Not used
F3, F4	Not used
F5, F6	Not used
F7, F8	Not used
F9, F10†	Termination power

† The 29-pair cables terminate in 61-pin connectors. Pins F9 and F10 of each connector provide power to the terminator assembly and do not connect to lines in the input/output cable.

PREVENTIVE MAINTENANCE INDEX/PROCEDURES

The preventive maintenance index/procedures below are taken from the computer aided maintenance schedule (CAMS) maintenance information file (MIF). The MIF includes the following data: type of procedure (description), frequency between procedures (interval), whether the procedure can be performed on-line (system) or off-line, and the estimated time to complete the procedure. Refer to the Control Data Computer Aided Maintenance Schedule CAMS Version 2.0 Customer Engineering Manual listed in the preface for additional information.

MAINT INDEX= 6681 -000
INTERVAL= 04 WEEKS
CATEGORY= OFF LINE
TRIGGER LEVEL=

ESTIMATED TIME= 010 MINUTES
PRIORITY= 6
CPU REQUIRED= NO
ALLOW CHAINING YES

D E S C R I P T I O N

********** CLEAN CABINET AND AIR FILTER **********

MAINT INDEX= 6681 -100
INTERVAL= 12 WEEKS
CATEGORY= SYSTEM
TRIGGER LEVEL=

ESTIMATED TIME= 015 MINUTES
PRIORITY= 4
CPU REQUIRED= YES
ALLOW CHAINING

D E S C R I P T I O N

********** DELAY PROBE HQ E12 TP2,3,5,AND 6 **********

DELAY PROBE 18697562
WHILE SYSTEM IS BEING TESTED UNDER EXC, WHERE
SUITABLE, LOAD APPLICABLE DIAGNOSTIC FOR DEVICE
TO BE TESTED.
DELAY PROBE EACH TEST POINT FOR ONE PASS OF
THE DIAGNOSTIC.

MAINT INDEX= 6681 -103
INTERVAL= 12 WEEKS
CATEGORY= SYSTEM
TRIGGER LEVEL=

ESTIMATED TIME= 015 MINUTES
PRIORITY= 4
CPU REQUIRED= YES
ALLOW CHAINING

D E S C R I P T I O N

********** I/O VOLTAGE MARGIN **********

WHILE SYSTEM IS BEING TESTED UNDER EXC, WHERE
SUITABLE, LOAD APPLICABLE DIAGNOSTIC FOR DEVICE
TO BE TESTED.
INCREASE VOLTAGE TO PLUS TEN PERCENT
RUN DIAGNOSTIC, ONE PASS.
DECREASE VOLTAGE TO MINUS 10 PERCENT
RUN DIAGNOSTIC, ONE PASS.
RETURN VOLTAGE TO NORMAL.
FOR ADDITION INFORMATION ON VOLTAGE MARGINS.
REFERENCE THE 6000 MAINTENANCE PMI/PMP 60309600.

MAINT INDEX= 6681 -111
INTERVAL= 52 WEEKS
CATEGORY= SYSTEM
TRIGGER LEVEL=

ESTIMATED TIME= 015 MINUTES
PRIORITY= 4
CPU REQUIRED= YES
SPECIFIED CTR=1

D E S C R I P T I O N

****************** SHOCK TEST LEVEL 1 **********************

SHOCK TEST TOOL P/N 12209308 AND 12210773.
WHILE SYSTEM IS BEING TESTED UNDER EXC, WHERE
SUITABLE, LOAD APPLICABLE DIAGNOSTIC FOR DEVICE TO
BE TESTED.
START TEST.
SHOCK TEST AROUND THE PERIMETER OF THE CHASSIS
EVERY SIX INCHES AND SLAP THE WIRE MAT WITH
THE PALM OF THE HAND.
FOR ADDITIONAL INFORMATION ON SHOCK TESTING.
REFERENCE THE 6000 MAINTENANCE PMI/PMF 60309600.

MAINT INDEX= 6681 -112
INTERVAL= 52 WEEKS
CATEGORY= SYSTEM
TRIGGER LEVEL=

ESTIMATED TIME= 015 MINUTES
PRIORITY= 4
CPU REQUIRED= YES
SPECIFIED CTR=3

D E S C R I P T I O N

****************** SHOCK TEST LEVEL 2 **********************

SHOCK TEST TOOL P/N 12209308 AND 12210773.
WHILE SYSTEM IS BEING TESTED UNDER EXC, WHERE
SUITABLE, LOAD APPLICABLE DIAGNOSTIC FOR DEVICE TO
BE TESTED.
START TEST.
SHOCK TEST EACH MODULE A MINIMUM OF ONCE
AND A MAXIMUM OF TWICE.
FOR ADDITIONAL INFORMATION ON SHOCK TESTING,
REFERENCE THE 6000 MAINTENANCE PMI/PMP 60309600

```
  MAINT INDEX= 6681  -113                                          ESTIMATED TIME= 015 MINUTES
     INTERVAL= 52 WEEKS                                                 PRIORITY= 4
     CATEGORY= SYSTEM                                              CPU REQUIRED= NO
TRIGGER LEVEL=                          D E S C R I P T I O N     SPECIFIED QTR=2

                    ******************  I/O POWER SUPPLIES          **********************

                                        DIGITAL VOLTMETER
                                        OSGILLOSCOPE
                                        POWER SUPPLY MANUALS, 60120700.
                                        REFERENCE POWER SUPPLY MANUAL FOR DIODE
                                        LOCATION, CHECK ALL DIODES FOR PROPER OPERATION.
                                        REFERENCE MANUAL FOR MAXIMUM RIPPLE.
                                        FOR ADDITIONAL INFORMATION REFERENCE THE 6000
                                        MAINTENANCE PMI/PMP 60309600.


  MAINT INDEX= 6681  -114                                          ESTIMATED TIME= 005 MINUTES
     INTERVAL= 04 WEEKS                                                 PRIORITY= 5
     CATEGORY= OFF LINE                                            CPU REQUIRED= NO
TRIGGER LEVEL=                          D E S C R I P T I O N     ALLOW CHAINING  YES

                    ******************  CHECK BLOWERS AND PERCENT METER **********************


  MAINT INDEX= 6681  -115                                          ESTIMATED TIME= 015 MINUTES
     INTERVAL= 52 WEEKS                                                 PRIORITY= 3
     CATEGORY= SYSTEM                                              CPU REQUIRED= YES
TRIGGER LEVEL=                          D E S C R I P T I O N     ALLOW CHAINING

                    ******************  NOISE IMMUNITY              **********************

                                        TEST EQUIPMENT
                                          ELECTRICAL INTERFERENCE GENERATOR NM-5
                                          CDC PART NUMBER 53744400
                                        TO PREFORM, USE OPERATION TEST PROCEDURE UNDER
                                        MAINTENANCE DOCUEMENT 1404, EPS SYSTEM GROUNDING
```

TIMING

Check the following and adjust as required if the DCC exhibits random or intermittent timing problems.

1. Length of function signal.

   Monitor C09, TP1. Adjust the wire between E12-14 and E11-1 so that the function signal is 90 nanoseconds long.

2. Separation of clock phases.

   Monitor E12, TP2, TP3, TP5, and TP6. Use E12, TP2 as time 75. Adjust the following.

   a. E11-10 to E11-2 for time 00 on E12, TP3.

   b. E11-9 to E11-25 for time 25 on E12, TP5.

   c. E11-20 to E11-26 for time 50 on E12, TP6.

3. Width of clock pulses.

   Adjust the following wires so that each clock pulse is 25 nanoseconds wide at the respective test point.

   a. E11-5 to E12-16 on D08, TP3.

   b. E11-16 to E12-13 on C08, TP2.

   c. E11-15 to E12-15 on C08, TP4.

   d. E11-6 to E12-19 on D08, TP4.

SECTION 7

MAINTENANCE AIDS

(Not applicable to this equipment.)

SECTION 8

PARTS DATA

PARTS DATA

DOCUMENTS

The following parts data document is included in this section.

Title	Document Number
6681-F Mechanized Listing	23066200

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 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	00000000000000000000000000000000†††	

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.

6681-F 23066200 A DATA CHNL COVERTER CHASSIS

LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
1	15000700	F	EQUIPMENT IDENTIFICATION PLATE	N	IN	
1	23065300	A	TOP ASSY-DATA CHAN CONV CHAS	N	IN	
2	22696200	A	CARD PLACEMENT-DATA CHAN CONV	N	IN	
3	17659400	F	MODULE ASSEMBLY- TYPE ZA	N	IN	
4	17659300	C	BD/MA PRINTED CKT TYPE ZA		IN	
4	17659301	C	BD/MA PRINTED CKT TYPE ZA		IN	
4	17856747	S	IDENT PLATE, LOGIC MOD ZA		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		OUT	035202
4	24500043	F	RES FXD .25W 150 OHMS		OUT	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	24553500	S	DIODE SILICON PLANAR		IN	
4	24561307	E	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	Y	WIRE MAG RD POLY 33 GA RED	N	IN	030270
5	24524403	Y	WIRE MAG RD POLY 33 GA GREEN	N	IN	030270
5	24524413	Y	WIRE MAG ROUND,NATURAL	N	IN	034250
4	63036800	S	WIRE JUMPER		IN	
3	17659600	F	MODULE ASSEMBLY- TYPE ZB	N	IN	
4	17659500	C	BD/MA PRINTED CKT TYPE ZB		IN	
4	17659501	C	BD/MA PRINTED CKT TYPE ZB		IN	
4	17856748	S	IDENT PLATE, LOGIC MOD ZB		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	015048
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	E	CAP FIXED CERAMIC .1UF,25V		IN	

6681-F 23066200 A DATA CHNL COVERTER 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	
3	17659800	M	MODULE ASSEMBLY- TYPE ZC	N	IN	
4	17659700	D	BD/MA PRINTED CKT TYPE ZC		IN	
4	17659701	D	BD/MA PRINTED CKT TYPE ZC		IN	
4	17856749	S	IDENT PLATE, LOGIC MOD ZC		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	24500057	F	RES FXD .25W 560 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	013655
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	E	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	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	E	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	17660200	E	MODULE ASSEMBLY- TYPE ZE	N	IN	
4	17660100	B	BD/MA PRINTED CKT TYPE ZE		IN	
4	17660101	B	BD/MA PRINTED CKT TYPE ZE		IN	

6681-F	23066200	A	DATA CHNL COVERTER CHASSIS			
LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
4	17856751	S	IDENT PLATE, LOGIC MOD ZE		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	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	E	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	17660400	D	MODULE ASSEMBLY- TYPE ZF	N	IN	
4	17660300	B	BD/MA PRINTED CKT TYPE ZF		IN	
4	17660301	B	BD/MA PRINTED CKT TYPE ZF		IN	
4	17856752	S	IDENT PLATE, LOGIC MOD ZF		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	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	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24561307	E	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	17660600	G	MODULE ASSEMBLY- TYPE ZG	N	IN	
4	17660500	C	BD/MA PRINTED CKT TYPE ZG		IN	
4	17660501	C	BD/MA PRINTED CKT TYPE ZG		IN	
4	17856753	S	IDENT PLATE, LOGIC MOD ZG		IN	
4	20219900	A	MODULE ASSY KIT		IN	021124
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	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
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	24500059	F	RES FXD .25W 680 OHMS		IN	016425
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	E	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	E	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	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
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	
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	E	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	E	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
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	E	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	
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	E	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	18377800	D	MODULE ASSY TYPE J00	N	IN	
4	11802900	K	CA DIODE		IN	
4	17857000	B	IDEN PL LOGIC MODULE J00		IN	
4	17942000	C	CAP MODULE		IN	
4	18376500	C	BD/MA PRINTED CKT TYPE J00		IN	
4	18376501	C	BD/MA PRINTED CKT TYPE J00		IN	
4	18601200	D	ROLLPIN 5/64 DIA COPPER		IN	017614
4	24500031	F	RES FXD .25W 47 OHMS		IN	

6681-F	23066200	A	DATA CHNL COVERTER CHASSIS			
LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
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	24561307	E	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24562800	B	CONN RECEPTACLE TEST POINT		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	30093300	B	SWITCH, TOGGLE-SUBMINIATURE		IN	
4	63036800	S	WIRE JUMPER		IN	
3	18455500	D	SCREW, CAPTIVE, LOG STOR MOD	N	IN	
3	18549800	G	MODULE ASSY TYPE ZP	N	IN	
4	17838500	A	TRANSISTOR PNP SILICON		IN	
4	17856762	S	IDENT PLATE, LOGIC MOD ZP		IN	
4	18549900	B	BD/MA PRINTED CKT TYPE ZP		IN	
4	18549901	B	BD/MA PRINTED CKT TYPE ZP		IN	
4	20219900	A	MODULE ASSY KIT		IN	021150
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	24500031	F	RES FXD .25W 47 OHMS		IN	
4	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500035	F	RES FXD .25W 68 OHMS		OUT	035202
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		OUT	035202
4	24500043	F	RES FXD .25W 150 OHMS		OUT	035202
4	24500046	F	RES FXD .25W 200 OHMS		IN	
4	24500047	F	RES FXD .25W 220 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	24500094	F	RES FXD .25W 20000 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	E	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	Y	WIRE MAG RD POLY 33 GA RED	N	IN	030270
5	24524403	Y	WIRE MAG RD POLY 33 GA GREEN	N	IN	030270
5	24524413	Y	WIRE MAG ROUND,NATURAL	N	IN	034250

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
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	52536700	B	MODULE ASSY TYPE XL11	N	IN	
4	17620410	A	CAP. FIXED SOLID TA PERCENT		IN	
4	17620412	A	CAP. FIXED SOLID TA PERCENT		IN	
4	17620417	A	CAP.FIXED SOLID TA PERCENT		IN	
4	17623802	E	CAPACITOR,FIXED,CERAMIC MINAT		IN	
4	17623804	E	CAPACITOR,FIXED,CERAMIC MINAT		IN	
4	17623809	E	CAPACITOR,FIXED,CERAMIC MINAT		IN	
4	17623811	E	CAPACITOR,FIXED,CERAMIC MINAT		IN	
4	17623821	E	CAPACITOR FXD CER MINAT		IN	
4	17856790	S	IDENT PLATE LOGIC MOD XL11		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	24500033	F	RES FXD .25W 56 OHMS		IN	
4	24500043	F	RES FXD .25W 150 OHMS		IN	
4	24500059	F	RES FXD .25W 680 OHMS		IN	
4	24500085	F	RES FXD .25W 8200 OHMS		IN	
4	24501806	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553500	S	DIODE SILICON PLANAR		IN	
4	24561307	E	CAP FIXED CERAMIC .1UF,25V		IN	
4	24561900	H	TRANSISTOR SILICON NPN,PLANAR		IN	
4	24563700	D	INSULATION SLEEVING HIGH TEMP		IN	
4	52579800	G	MODULE ASSY XL00-XL14		IN	
4	63036800	S	WIRE JUMPER		IN	
4	63656000	E	BOARD MASTER PC TYPE XLA		IN	
4	63656100	D	BOARD MASTER PC TYPE XLB		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	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	E	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	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	
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	E	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	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	E	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	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
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	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	E	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	24500035	F	RES FXD .25W 68 OHMS		OUT	035202
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500041	F	RES FXD .25W 120 OHMS		OUT	035202
4	24500043	F	RES FXD .25W 150 OHMS		OUT	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	E	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	Y	WIRE MAG RD POLY 33 GA RED	N	IN	030270
5	24524403	Y	WIRE MAG RD POLY 33 GA GREEN	N	IN	030270
5	24524413	Y	WIRE MAG ROUND,NATURAL	N	IN	034250
4	63036800	S	WIRE JUMPER		IN	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
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	24500035	F	RES FXD .25W 68 OHMS		OUT	035202
4	24500039	F	RES FXD .25W 100 OHMS		IN	
4	24500043	F	RES FXD .25W 150 OHMS		OUT	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	E	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	Y	WIRE MAG RD POLY 33 GA RED	N	IN	030270
5	24524403	Y	WIRE MAG RD POLY 33 GA GREEN	N	IN	030270
5	24524413	Y	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	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	E	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	52551400	C	MODULE ASSY TYPE TG	N	IN	

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
4	17856597	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	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	E	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	63652800	G	BOARD MASTER PC TYPE TGA		IN	
4	63652900	G	BOARD MASTER PC TYPE TGB		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	D	WIRE ELECT SOLID COPPER 24 GA		IN	
4	24553501	S	DIODE SILICON PLANAR		IN	034288
4	24561307	E	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	52551600	D	MODULE ASSY TYPE TI	N	IN	
4	17856599	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	

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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	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	E	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	63653200	E	BOARD MASTER PC TYPE TIA		IN	
4	63653300	E	BOARD MASTER PC TYPE TIB		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	E	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	24500035	F	RES FXD .25W 68 OHMS		OUT	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	E	CAP FIXED CERAMIC .1UF,25V		IN	

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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	
3	52567400	C	MODULE ASSY TYPE HF	N	IN	
4	17856287	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	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	E	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	63615200	C	BOARD MASTER PC TYPE HFA		IN	
4	63615300	C	BOARD MASTER PC TYPE HFB		IN	
2	22696400	A	CHANNEL CHASSIS WIRED	N	IN	
3	10125106	C	HEXAGON MACHINE SCREW NUTS	N	IN	
3	10125605	D	PLAIN WASHERS	N	IN	
3	10126101	C	INTERNAL TOOTH LOCK WASHERS	N	IN	
3	10126103	C	INTERNAL TOOTH LOCK WASHERS	N	IN	
3	10126104	C	INTERNAL TOOTH LOCK WASHERS	N	IN	
3	10126105	C	INTERNAL TOOTH LOCK WASHERS	N	IN	
3	10126214	C	HEX SCH CAP SCR (1960SER)4-40	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	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	17912702	M	INSULATOR STRIP BUS BAR	N	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	

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L E V E L	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
4	17899000	D	EXTRUSION MOUNTING BAR		IN	
3	18028000	D	BUS BAR HORIZONTAL	N	IN	
4	17899200	D	AL ALLOY BAR EXTRUDED		IN	
3	18031900	K	MEMBER FRAME CHASSIS SIDE RH	N	IN	
4	17778300	C	EXTRUSION CHASSIS		IN	
3	18032000	J	MEMBER FRAME CHASSIS SIDE LH	N	IN	
4	17778300	C	EXTRUSION CHASSIS		IN	
3	18055000	C	PANEL CONNECTOR	N	IN	
3	18727009	D	BAR SUPPORT LONG	N	IN	
3	22678600	A	PANEL-FILLER,FRONT 6 ROW	N	IN	
3	22696100	A	CONN ASSY-61 PIN	N	IN	
3	22696101	A	CONN ASSY-61 PIN,181-182	N	IN	
3	22696102	A	CONN ASSY-61 PIN,KIT	N	IN	
4	00865004	K	GROM STR REL 0.468 ID	N	IN	
4	24500707	L	PIN TAPER	N	IN	
4	24500810	L	INSULATION SLEEVING ELECT	N	IN	
4	24548301	L	WIRE ELECT 24 AWG - 0	N	IN	
4	24548303	L	WIRE ELEC STRD INS. UL APPD	N	IN	
4	24548307	L	WIRE ELEC STRD INS. UL APPD	N	IN	
4	30000901	AG	CONN. RECP ELEC 61 PIN CONT	N	IN	
4	30000902	AG	FEMALE CONTACT	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	31000021	B	WIRE, 24GA TWIST, PR. GR-W/RD	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	31000025	B	WIRE, 24GA TWIST, PR. GR-W/BL	N	IN	
4	31000026	B	WIRE, 24GA TWIST, PR. BLU-W/R	N	IN	
4	31000027	B	WIRE, 24GA TWIST, PR. BLU-W/Y	N	IN	
4	31000028	B	WIRE, 24GA TWIST, PR. BLU-W/B	N	IN	
4	31000029	B	WIRE, 24GA TWIST, PR. BLU-W/B	N	IN	
3	22696300	A	W/L-PHR JUMPERS,DCC	N	IN	
4	17743002	V	LEAD ELECT 18 GA 5 IN RED	N	IN	
5	24500706	L	PIN TAPER		IN	024206

6681-F	23066200	A	DATA CHNL COVERTER CHASSIS		
LEVEL	PART-NO	REV	DESCRIPTION	SPARE	ECO-NO
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	V	LEAD ELECT 18 GA 5 IN BLUE	N	IN
5	24500706	L	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	18164200	H	CAPACITOR FIXED ELECTRO 10V	N	IN
4	18801100	A	FILTER CAPACITOR ASSEMBLY	N	IN
5	18786200	B	CAPACITOR, FIXED CERAMIC DISC		IN
5	24500707	L	PIN TAPER		IN
5	24528602	M	INS SLEEVING, ELEC-BULK		IN 021040
4	24500707	L	PIN TAPER	N	IN
4	24511440	P	LEAD ELEC 24 GA 2.25 IN BLACK	N	IN
5	24500707	L	PIN TAPER		IN 024206
5	24548301	L	WIRE ELECT 24 AWG - 0		IN 024206
4	24511441	P	LEAD ELEC 24 GA 2.25 IN RED	N	IN
5	24500707	L	PIN TAPER		IN 024206
5	24500802	L	INSULATION SLEEVING ELECT		IN 024206
5	24548303	L	WIRE ELEC STRD INS. UL APPD		IN 024206
4	24511442	P	LEAD ELEC 24 GA 2.25 IN BLUE	N	IN
5	24500707	L	PIN TAPER		IN 024206
5	24500802	L	INSULATION SLEEVING ELECT		IN 024206
5	24548307	L	WIRE ELEC STRD INS. UL APPD		IN 024206
4	24552316	D	INS SLV, 5/8 LG 8 AWG BLK	N	IN
4	24552338	D	INS SLV, 5/8 LG 8 AWG CLR	N	IN
4	93463000	F	WIRE ELECTRICAL 18 AWG -0	N	IN
4	93463666	F	WIRE ELECTRICAL 18 AWG -6	N	IN
3	22696500	A	L/W-DATA CHANNEL CONVERTER	N	IN
4	24511442	P	LEAD ELEC 24 GA 2.25 IN BLUE	N	IN
5	24500707	L	PIN TAPER		IN 024206
5	24500802	L	INSULATION SLEEVING ELECT		IN 024206
5	24548307	L	WIRE ELEC STRD INS. UL APPD		IN 024206
4	24561201	W	WIRE ELEC 3 IN WHITE/BLACK	N	IN
5	24500707	L	PIN TAPER		IN 024347
5	24500802	L	INSULATION SLEEVING ELECT		IN 035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN 024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN 035131
4	24561202	W	WIRE ELEC 5 IN WHITE/BLACK	N	IN
5	24500707	L	PIN TAPER		IN 024347
5	24500802	L	INSULATION SLEEVING ELECT		IN 035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN 024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN 035131
4	24561203	W	WIRE ELEC 7 IN WHITE/BLACK	N	IN
5	24500707	L	PIN TAPER		IN 024347
5	24500802	L	INSULATION SLEEVING ELECT		IN 035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN 024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN 035131
4	24561204	W	WIRE ELEC 9 IN WHITE/BLACK	N	IN
5	24500707	L	PIN TAPER		IN 024347
5	24500802	L	INSULATION SLEEVING ELECT		IN 035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN 024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN 024714
4	24561205	W	WIRE ELEC 11 IN WHITE/BLACK	N	IN

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561206	W	WIRE ELEC 13 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561207	W	WIRE ELEC 15 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561208	W	WIRE ELEC 17 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561209	W	WIRE ELEC 19 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	024714
4	24561210	W	WIRE ELEC 21 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561220	W	WIRE ELEC 41 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561227	W	WIRE ELEC 55 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561228	W	WIRE ELEC 60 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561229	W	WIRE ELEC 84 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	024714
4	24561230	W	WIRE ELEC 108 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347

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LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561232	H	WIRE ELEC 156 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561236	H	WIRE ELEC 65 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
4	24561239	H	WIRE ELEC 72 IN WHITE/BLACK	N	IN	
5	24500707	L	PIN TAPER		IN	024347
5	24500802	L	INSULATION SLEEVING ELECT		IN	035131
5	24548301	L	WIRE ELECT 24 AWG - 0		IN	024347
5	24548310	L	WIRE ELEC STRD INS. UL APPD		IN	035131
3	22696600	A	MASTER CABLE TABS	N	IN	
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	J	COAXIAL CABLE WITH CONNECTOR	N	IN	
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	L	PIN TAPER		IN	029902
4	24500802	L	INSULATION SLEEVING ELECT		IN	033767
4	24528640	M	INS SLEEVING, ELEC-BULK		IN	034959
4	24567000	J	CABLE,COAXIAL, 19 CONDUCTOR		IN	029902
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	D	SHIELD ELECT BRAIDED-BULK	N	IN	030101
2	30001201	K	RESISTOR, ASSEMBLY TERMINATOR	N	IN	
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

6681-F 23066200 A DATA CHNL COVERTER CHASSIS

LEVEL	PART-NO	REV	DESCRIPTION	SPARE		ECO-NO
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	E	TERMINATION STRIP		IN	022779
2	52347700	A	6/7000/CYBER PER.A-B-CCAB.GND	N	IN	
2	52675001	P	COAXIAL CABLE WITH CONN 70 FT	N	IN	
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	L	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

SECTION 9

WIRE LISTS

WIRE LISTS

The following wire lists are included in this section.

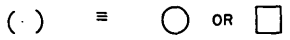
Title	Document Number
Chassis Tabs	Not applicable.
Cable Tabs	
6000/CDC CYBER Data Channel to DCC - Output Operation	Not applicable.
DCC Pass On - Output Operation	Not applicable.
DCC to 6000/CDC CYBER Data Channel - Input Operation	Not applicable.
DCC Pass On - Input Operation	Not applicable.
Connector Assembly - 61-Pin	22696100
Hand Tabs	
Power Jumpers	22696300

CHASSIS TABS

KEY TO CHASSIS TAB SYMBOLOGY

Chassis tabs given in this manual are produced on a line printer. Line printer renditions present, within the capabilities of the printer character set, equivalents of the logic symbols and circuiry for each card.

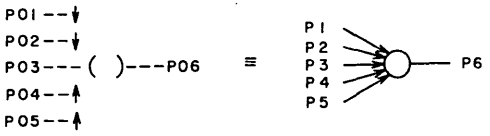
1. Inverters are represented by two parentheses. No differentiation is made between inverters traditionally shown as either a circle or a square.



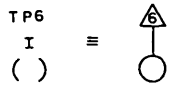
2. Flip-flops are represented by two inverters linked by two F's.

3. Inputs are shown by dotted lines for twisted pair wires and by a series of asterisks for coaxial cables.

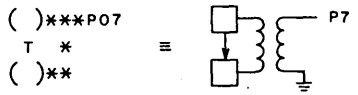
4. Multiple inputs are stacked in columns as shown. Logic flow is conventional, left to right. In this example pin 6 is an output.



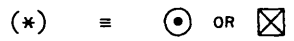
5. Test points are denoted by TPX, where X indicates the test-point number. These are usually linked to their inverter by a vertical line.



6. Coaxial cable transmitters are represented as shown below. Note the 'T' which designates the symbol as a transmitter.



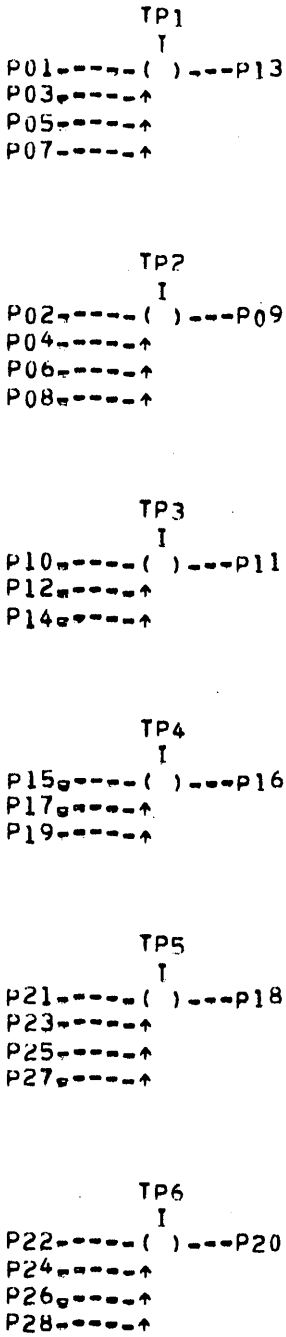
7. Nonstandard logic is shown by an asterisk within the inverter.



8. Annotation is shown in four positions:
   a. Under the appropriate pin.
   b. Against the test point number at the bottom of the page.
   c. As a title to the top of the page.
   d. As a note, marked by an asterisk, under pin 28.

   Note that a logical negation is shown by a dollar sign:

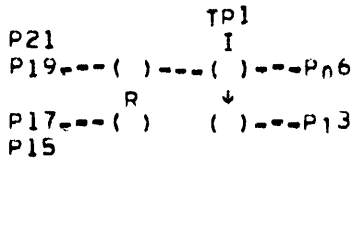
   $\overline{(\overline{EXCHANGE} \cdot T75) + BRANCH}$ = $((\$EXCHANGE \cdot T75) + BRANCH)$



1	D04-8	13
2	A03-X	2
3	D04-17	13
4	C06-20	11
5	A03-9	84
6	C06-21	11
7	A03-X	2
8	C06-1	9
9	A03-5	84
10	A03-13	3
11	F04-13	15
12	A03-X	2
13	A03-10	3
14	A03-X	2
15	E10-8	65
16	F10-26	19
17	E10-14	19
18	E09-26	19
19	C04-12	9
20	F02-25	19
21	C04-10	9
22	D03-14	11
23	E10-19	19
24	F03-22	19
25	D08-21	72
26	B02-6	5
27	A03-X	2
28	A03-X	2

6681-F

LOCATION A03 MODULE TI CHASSIS 1 REV A 60440800

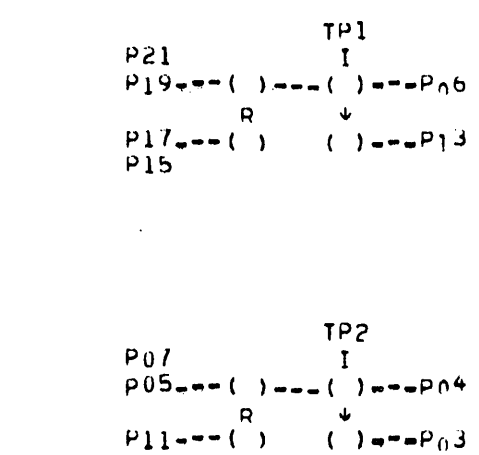


FOR ELECTRICAL SCHEMATIC
SEE PRINTED CIRCUIT MANUAL

1		
2		
3		
4	E07-26	17
5		
6	E07- 3	15
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23	E08- 4	15
24		
25	E07-25	15
26		
27		
28		

6681-F

LOCATION A04 MODULE ZR CHASSIS 1 REV A 60440800

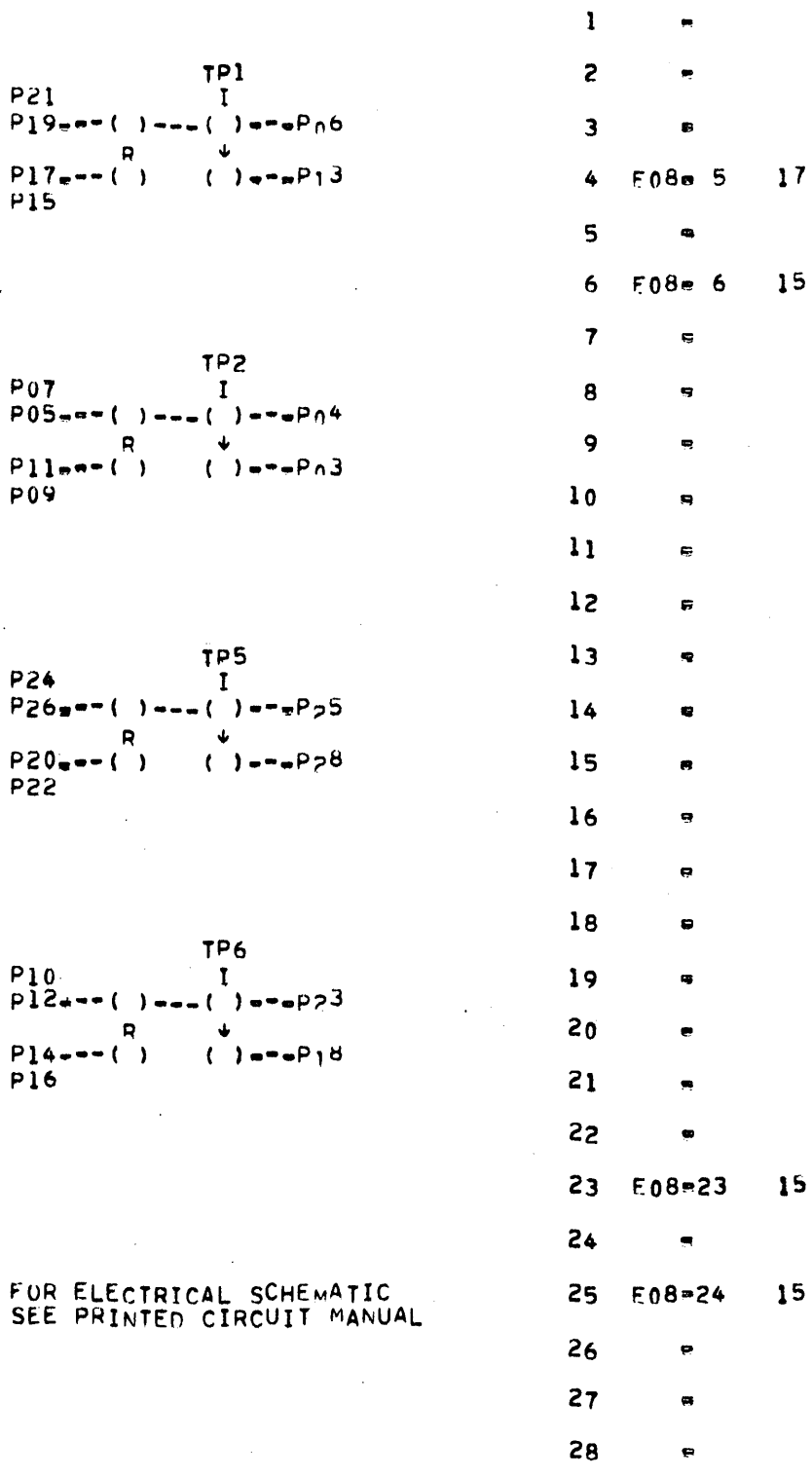


1	-		
2	-		
3	-		
4	F06-26	17	
5	-		
6	F06- 3	15	
7	-		
8	-		
9	-		
10	-		
11	-		
12	-		
13	-		
14	-		
15	-		
16	-		
17	-		
18	-		
19	-		
20	-		
21	-		
22	-		
23	E07- 4	15	
24	-		
25	F06-25	15	
26	-		
27	-		
28	-		

FOR ELECTRICAL SCHEMATIC
SEE PRINTED CIRCUIT MANUAL

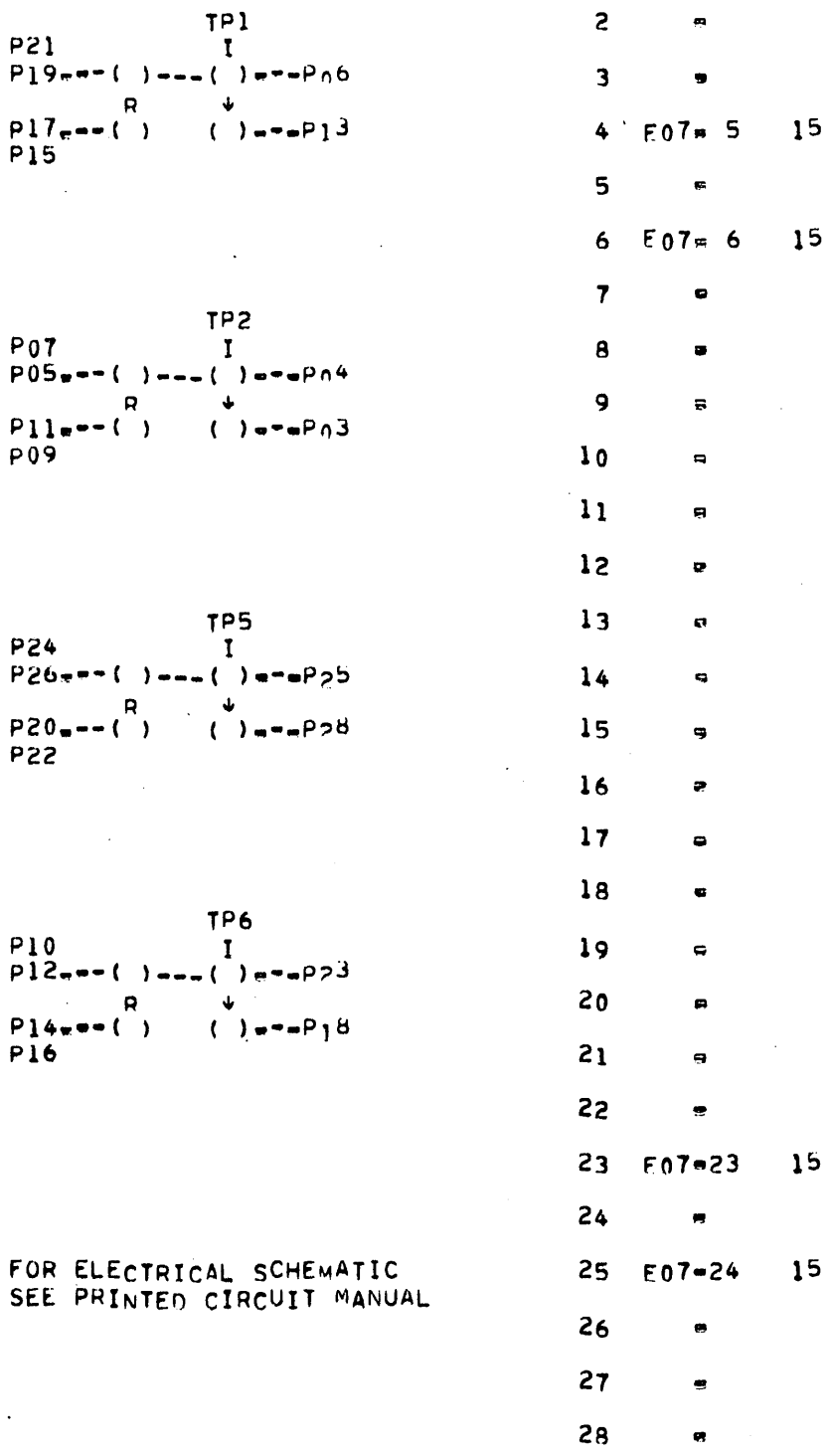
WAS MODULE REV A

LOCATION A05 MODULE ZR CHASSIS 1 6681-F REV A 60440800

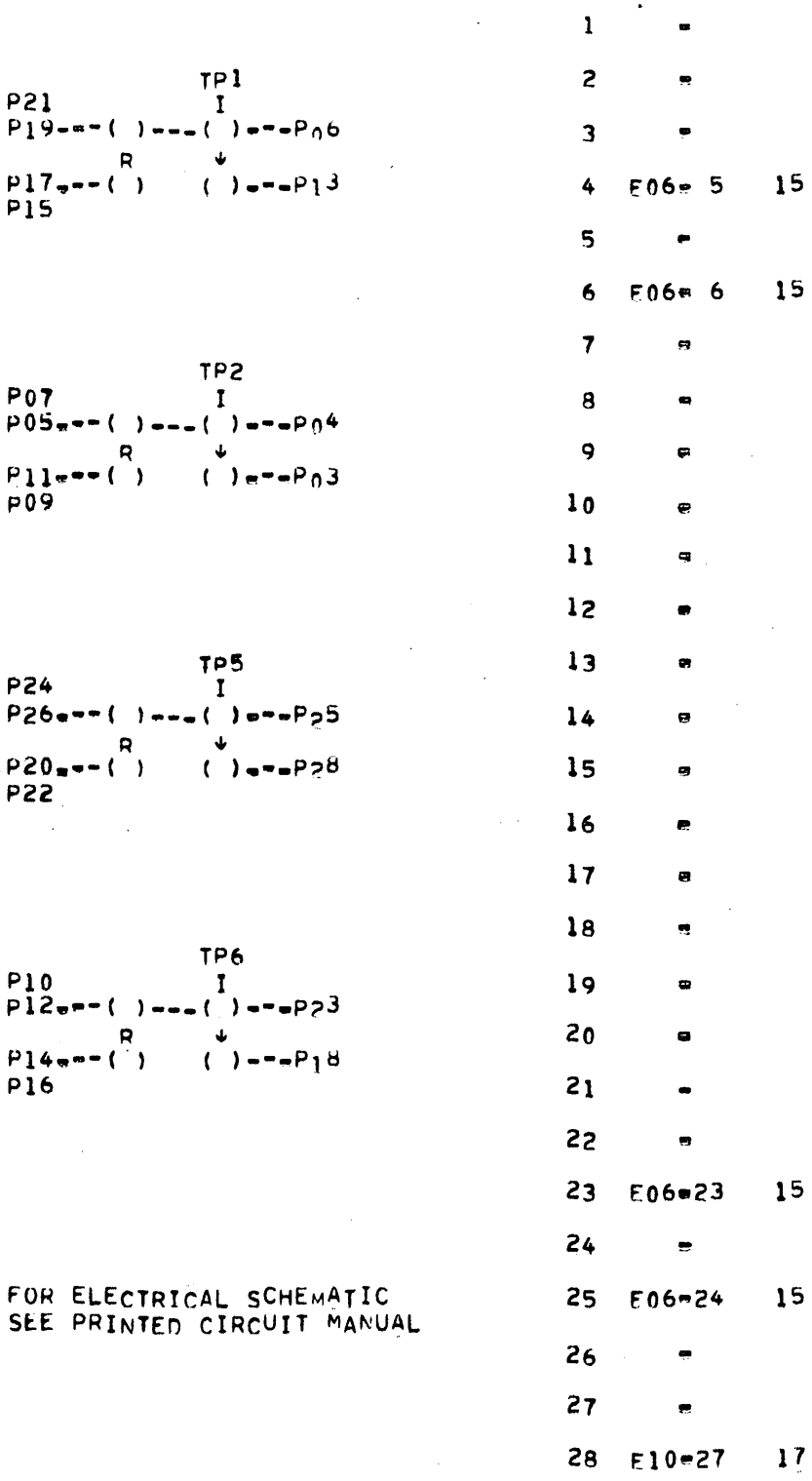


6681-F

LOCATION A06 MODULE ZR CHASSIS 1 REV A 60440800



LOCATION A07 MODULE ZR CHASSIS 1 6681-F REV A 60440800



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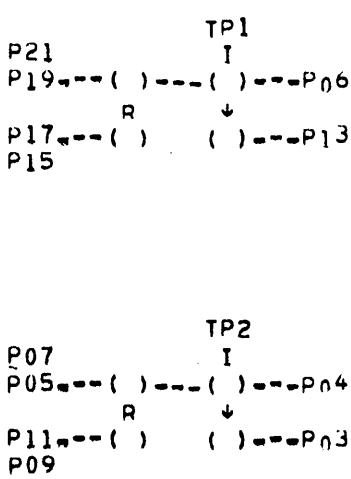
LOCATION A08 MODULE ZR CHASSIS 1 REV A 60440800



1		
2		
3	D08-28	15
4	E05-23	17
5		
6	F05-20	17
7		
8		
9		
10		
11		
12		
13	B02-17	11
14		
15		
16		
17		
18	F03-17	21
19		
20		
21		
22		
23		
24		
25	B03- 5	11
26		
27		
28	B02-14	11

FOR ELECTRICAL SCHEMATIC
SEE PRINTED CIRCUIT MANUAL

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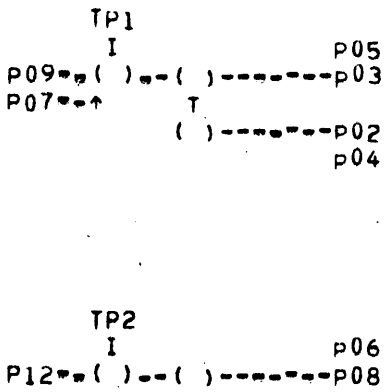
LOCATION A09 MODULE ZR CHASSIS 1 REV A 60440800



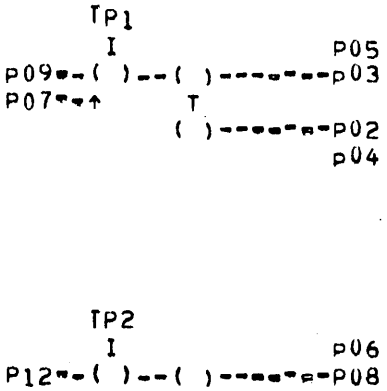
FOR ELECTRICAL SCHMETIC

OF THIS MODULE SEE THE

PRINTED CIRCUIT MANUAL

1		
2		
3		
4		
5		
6		
7	B03=19	13
8		
9	F03=10	17
10	A10= X	2
11		
12	E03= 8	17
13		
14		
15		
16	E02= 6	17
17		
18	A10= X	2
19		
20		
21		
22		
23		
24		
25	A10= X	2
26		
27	F03=16	17
28		

LOCATION A10 MODULE ZT CHASSIS 1 6681-F REV A 60440800



FOR ELECTRICAL SCHMETIC

OF THIS MODULE SEE THE

PRINTED CIRCUIT MANUAL

WAS MODULE REV A

1			
2			
3			
4			
5			
6			
7	A11	X	2
8			
9	E04	26	19
10	A11	X	2
11			
12	E04	28	19
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25	A11	X	2
26			
27	E04	24	17
28			

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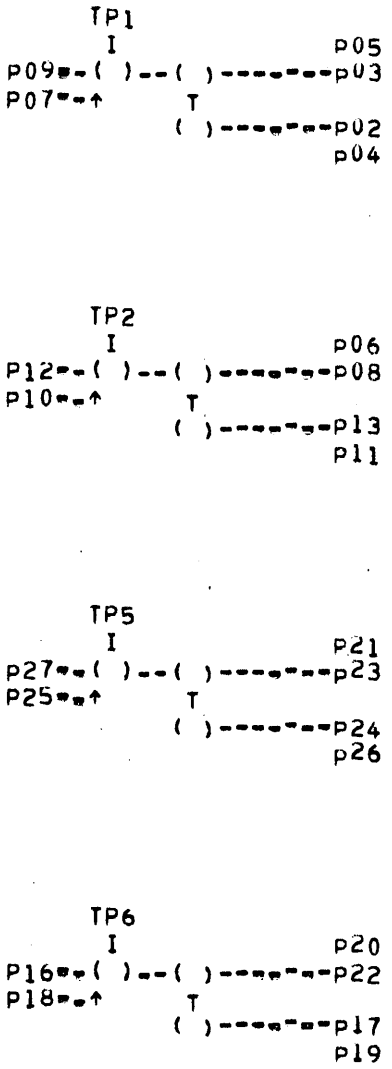
LOCATION A11 MODULE ZT CHASSIS 1 REV A 60440800



FOR ELECTRICAL SCHMETIC

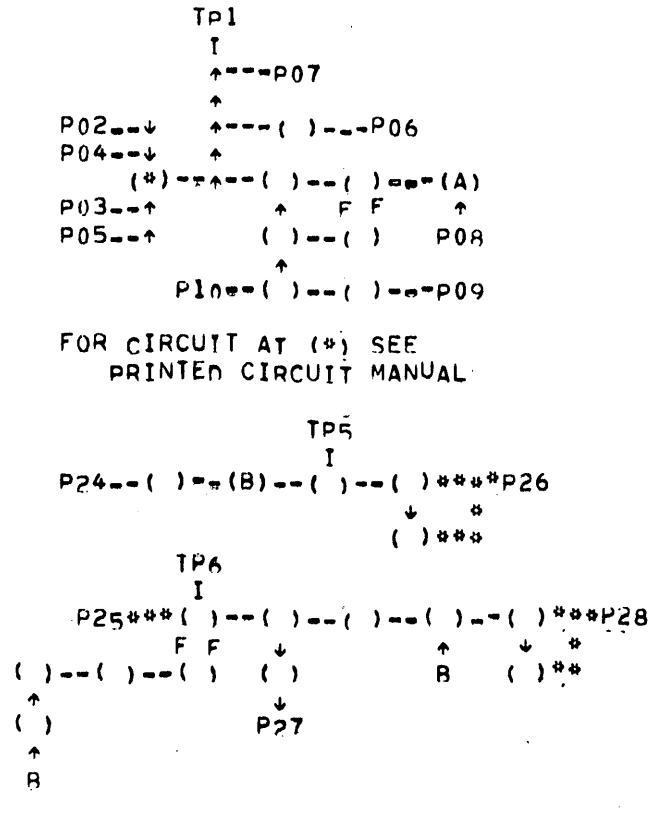
OF THIS MODULE SEE THE

PRINTED CIRCUIT MANUAL

WAS MODULE REV A

1		
2		
3		
4		
5		
6		
7	A12 X	2
8		
9	C04 8	13
10	A12 X	2
11		
12	C04 11	13
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25	A12 X	2
26		
27	E04 11	17
28		

LOCATION A12 MODULE ZT CHASSIS 1 6681-F REV A 60440800



1		
2		
3		
4		
5		
6	A03-26	5
7	E10-10	17
8	B02-22	108
9	E04-21	13
10	C04- 2	7
11	C04-15	7
12	D03-28	11
13	E09-22	15
14	A09-28	11
15	D08-22	13
16	E09-23	15
17	A09-13	11
18	B04-20	5
19		
20	F02- 3	11
21	B02- X	2
22	B02- 8	108
23	E02-10	108
24	D08- 2	11
25	W02 907 W 1 MC CLOCK	
26	W03 906 W 10 MC CLOCK	
27		
28	W03 907 W 1 MC CLOCK	

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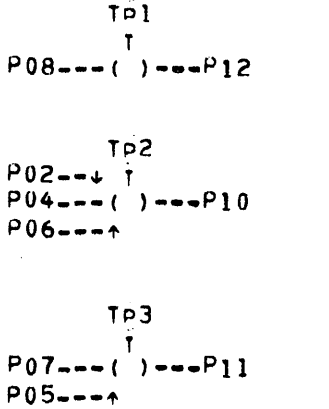
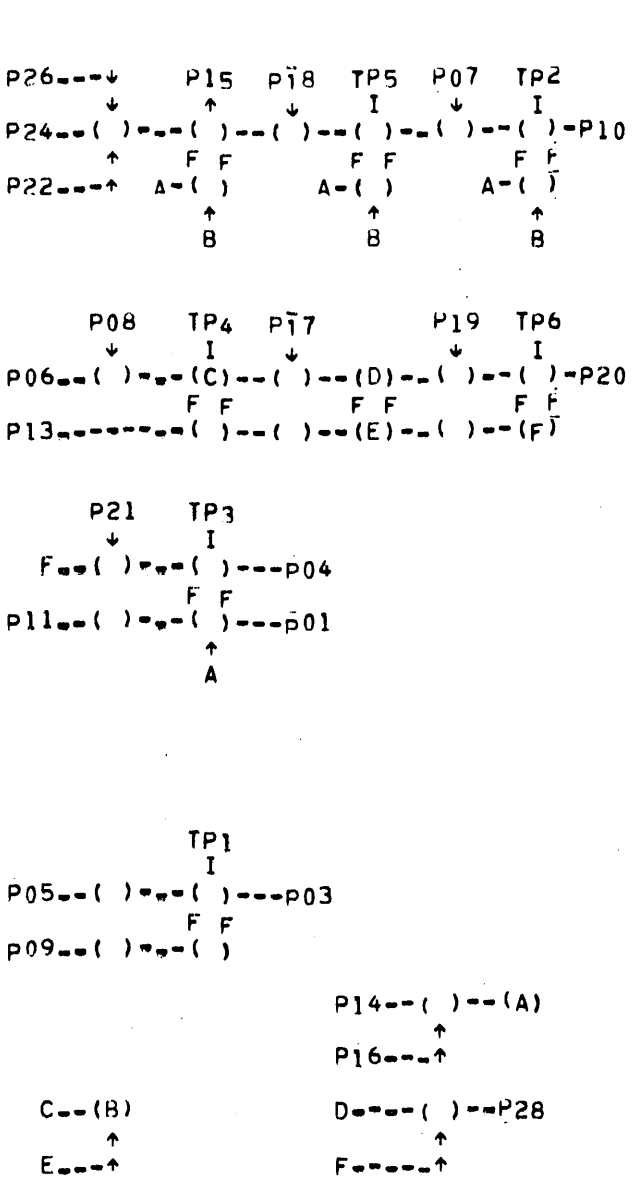
LOCATION B02 MODULE ZP CHASSIS 1 REV A 60440800



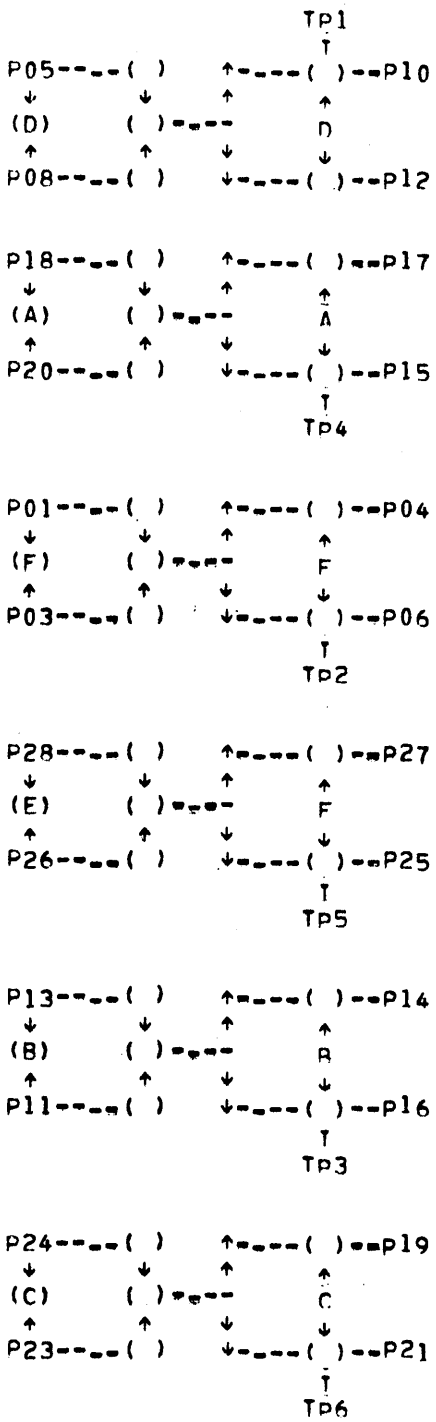
1	F11-12	21
2	B03=17	3
3	D05=18	11
4	D05= 9	11
5	A09=25	11
6	B03= X	2
7	C03=10	7
8	C04=17	7
9	B04= 5	3
10	C03=15	7
11	F10=23	17
12	B04=21	5
13	E10=17	17
14	B03=28	72
15	E09=18	15
16	D04= 3	9
17	B03= 2	3
18	D05= 4	9
19	A10= 7	13
20	E04=15	108
21	D08=14	11
22	D12=25	108
23	D08= 7	11
24	D07= 1	9
25	C04=27	7
26	D07=21	11
27	C05= 1	5
28	B03=14	72

LOCATION B03 MODULE TL CHASSIS 1 6681-F REV C 60440800



1	F04=17	13
2	=	
3	C04= 1	5
4	=	
5	B03= 9	3
6	E09=21	15
7	D08=23	11
8	D08=27	13
9	E03=24	13
10	E04=25	15
11	C10= 9	9
12	=	
13	E09=20	15
14	=	
15	=	
16	C07=18	7
17	C08= 2	7
18	B04= X	2
19	C08= 3	7
20	B02=18	5
21	B03=12	5
22	D03=16	9
23	=	
24	C10= 5	9
25	=	
26	C08=21	7
27	C08=13	7
28	C04=26	5

LOCATION B04 MODULE ZG CHASSIS 1 6681-F REV A 60440800



1	B06=16	3
2	=	
3	B06=15	3
4	=	
5	B06=10	3
6	B05=20	3
7	=	
8	B06= 6	3
9	=	
10	B05=18	3
11	B06=21	3
12	=	
13	B06=25	3
14	=	
15	B05=28	3
16	B05=26	3
17	=	
18	B05=10	3
19	F05= 5	15
20	B05= 6	3
21	F05=23	15
22	=	
23	B05=27	3
24	F04=16	15
25	F10= 6	17
26	B05=16	3
27	B05=23	3
28	B05=15	3

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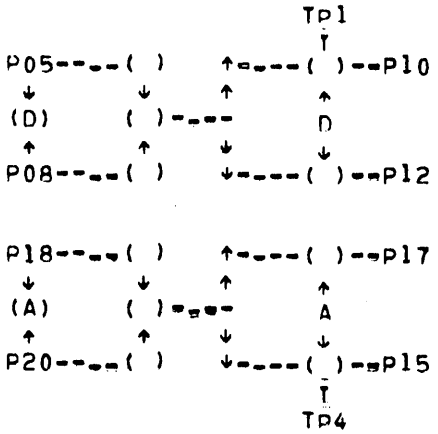
LOCATION B05 MODULE AB CHASSIS 1 REV A 60440800



1	B08=13	5
2	=	
3	B08=15	5
4	=	
5	B08= 4	5
6	B05= 8	3
7	=	
8	B08=11	5
9	=	
10	B05= 5	3
11	B08=25	5
12	=	
13	B08=16	5
14	=	
15	B05= 3	3
16	B05= 1	3
17	=	
18	B07= 4	3
19	=	
20	B07=11	3
21	B05=11	3
22	=	
23	B07=25	3
24	B07=16	3
25	B05=13	3
26	B07=15	5
27	=	
28	B07=13	5

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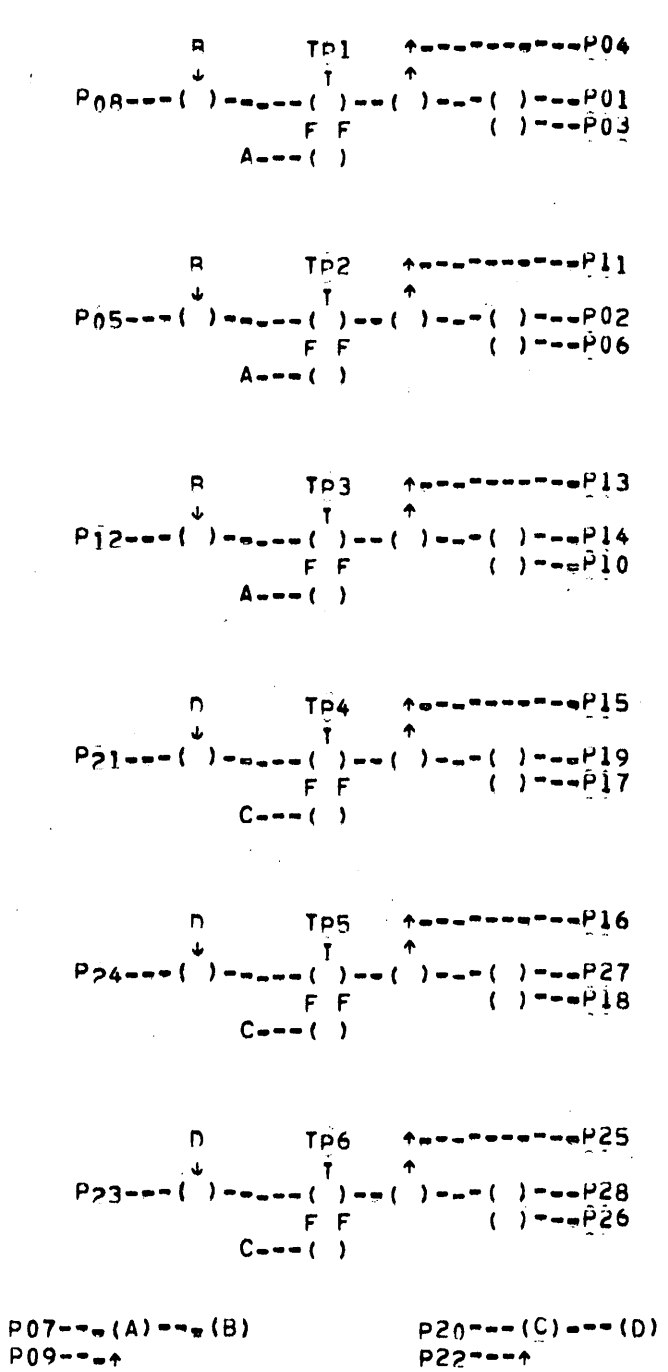
LOCATION B06 MODULE AB CHASSIS 1 REV A 60440800



1	B11= 7	7
2	B11=17	7
3	=	
4	B06=18	3
5	C12=24	9
6	=	
7	B07= X	2
8	C12=18	9
9	D04=20	11
10	B11=24	7
11	B06=20	3
12	D12= 5	11
13	B06=28	5
14	=	
15	B06=26	5
16	B06=24	3
17	B12= 7	7
18	B12=17	7
19	=	
20	D04=22	11
21	D12=11	11
22	B07= X	2
23	D12=24	11
24	D12=18	11
25	B06=23	3
26	B12=24	7
27	=	
28	=	

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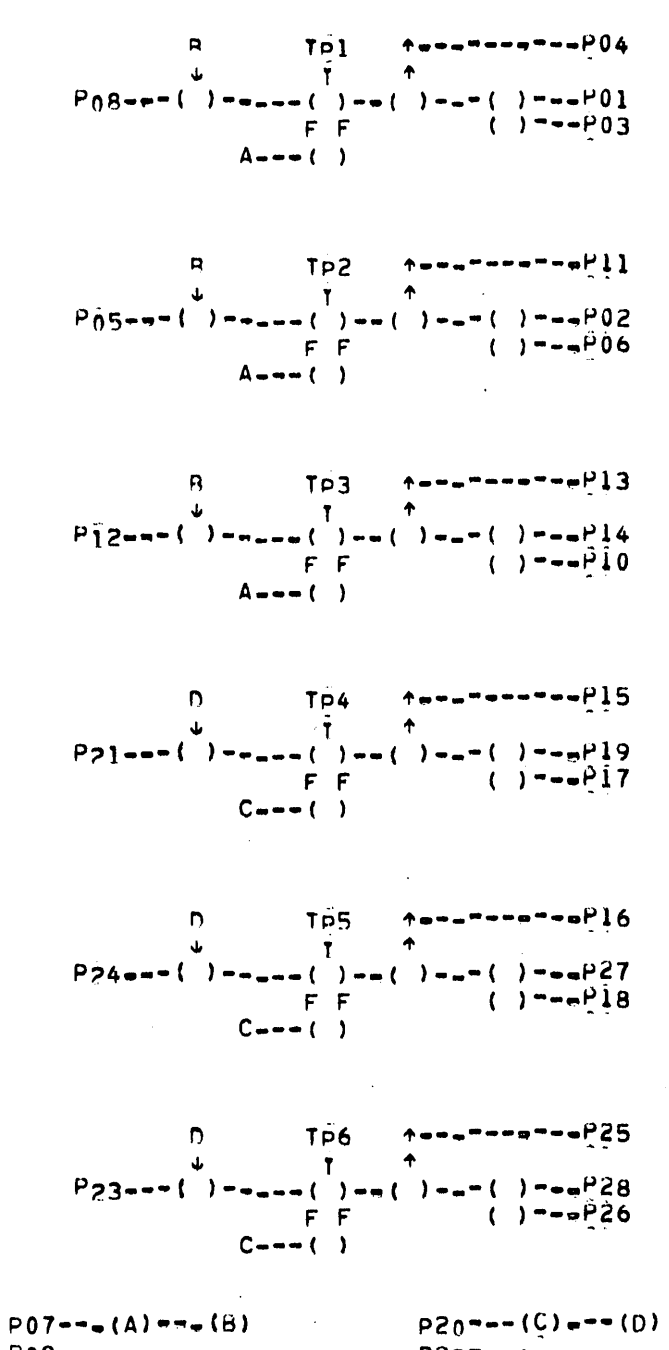
LOCATION B07 MODULE PJ CHASSIS 1 REV A 60440800



1	B09= 7	3
2	B09=17	5
3	=	
4	B06= 5	5
5	C11=11	7
6	=	
7	B08= X	2
8	C11= 5	7
9	D04=16	11
10	B09=24	5
11	B06= 8	5
12	C11=18	7
13	B06= 1	5
14	=	
15	B06= 3	5
16	B06=13	5
17	B10= 7	5
18	B10=17	5
19	=	
20	D04=18	11
21	C11=24	7
22	=	
23	C12=11	7
24	C12= 5	7
25	B06=11	5
26	B10=24	5
27	=	
28	=	

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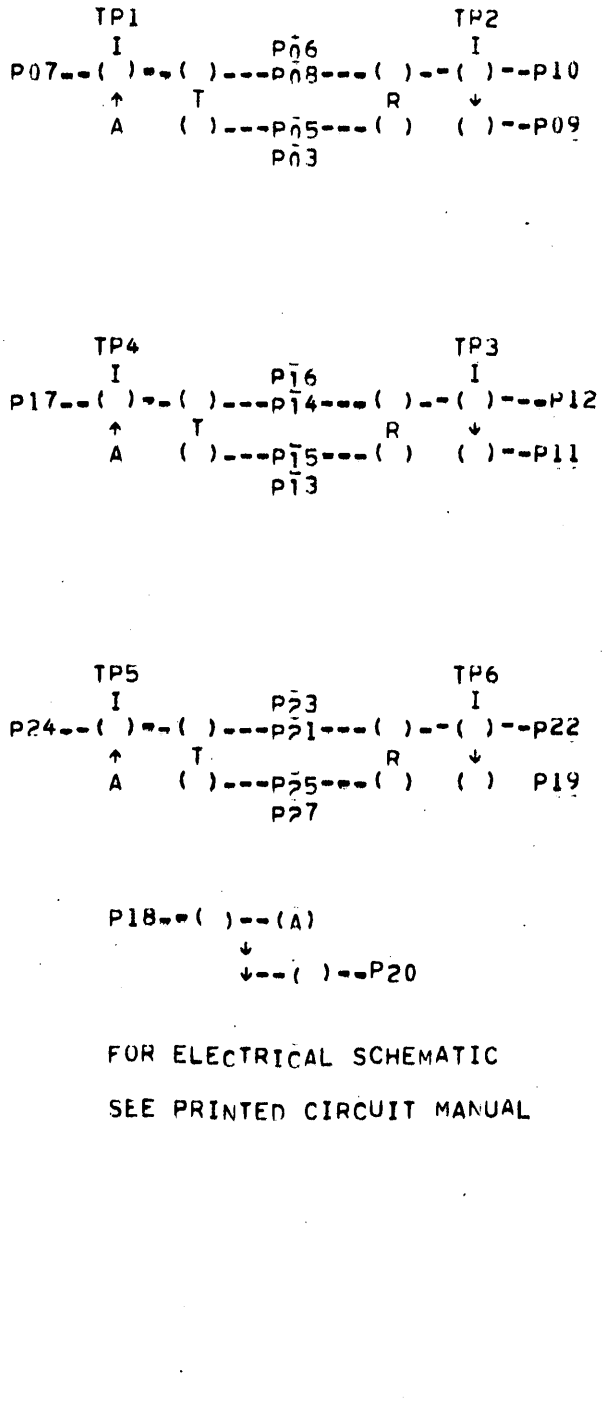
LOCATION B08 MODULE PJ CHASSIS 1 REV A 60440800



1	=		
2	=		
3	=		
4	=		
5	=		
6	=		
7	B08=	1	3
8	=		
9	=		
10	E06=	2	13
11	=		
12	F06=	1	13
13	=		
14	=		
15	=		
16	=		
17	B08=	2	5
18	D03=	4	15
19	=		
20	B10=18		3
21	=		
22	E06=28		13
23	=		
24	B08=10		5
25	=		
26	=		
27	=		
28	=		

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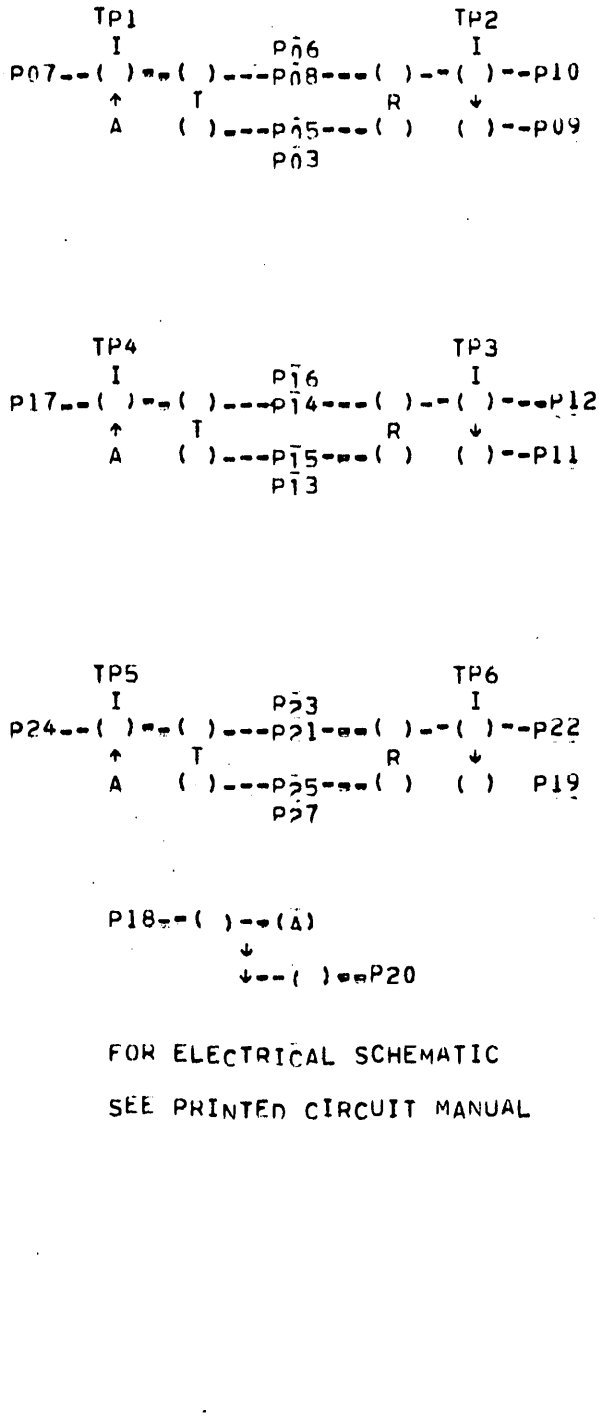
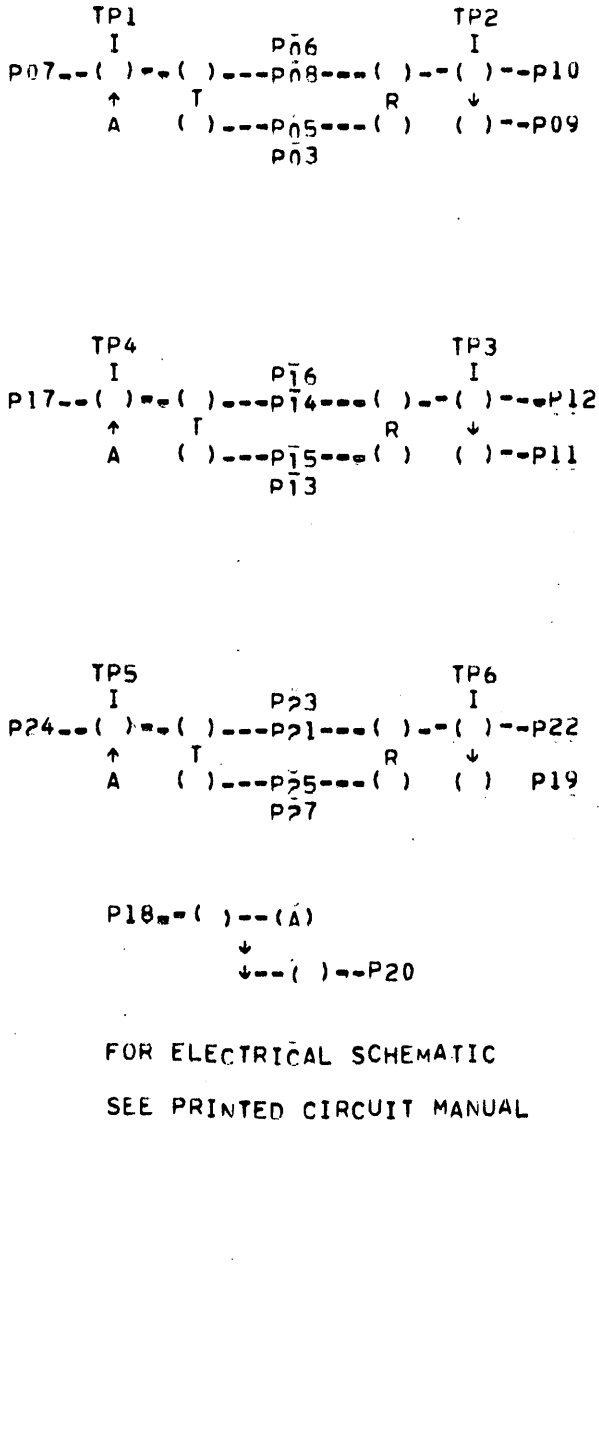
LOCATION B09 MODULE ZS CHASSIS 1 REV A 60440800_0



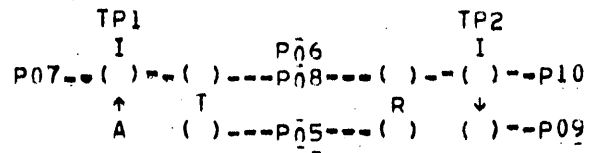
1		
2		
3		
4		
5		
6		
7	B08=17	5
8		
9		
10	E06=27	15
11		
12	E07= 2	13
13		
14		
15		
16		
17	B08=18	5
18	B09=20	3
19		
20	B11=18	3
21		
22	E07= 1	11
23		
24	B08=26	5
25		
26		
27		
28		

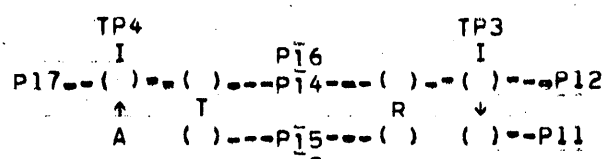
LOCATION B10 MODULE ZS CHASSIS 1 6681-F REV A 60440800

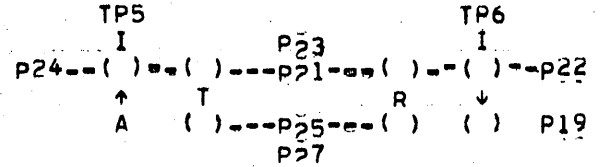


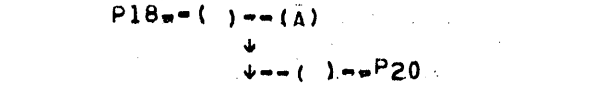
1		
2		
3		
4		
5		
6		
7	B07= 1	7
8		
9		
10	F07=28	15
11		
12	E07=27	15
13		
14		
15		
16		
17	B07= 2	7
18	R10=20	3
19		
20	B12=18	3
21		
22	E08= 2	11
23		
24	B07=10	7
25		
26		
27		
28		

LOCATION B11 MODULE ZS CHASSIS 1 6681-F REV A 60440800









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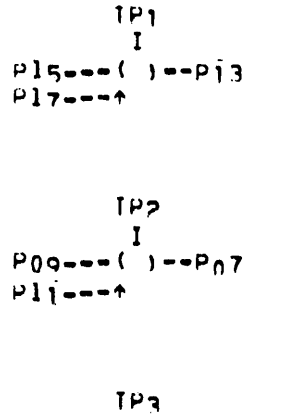
1		
2		
3		
4		
5		
6		
7	B07-17	7
8		
9		
10	E08- 1	13
11		
12	E08-28	15
13		
14		
15		
16		
17	B07-18	7
18	B11-20	3
19		
20	F12-18	15
21		
22	E08-27	13
23		
24	B07-26	7
25		
26		
27		
28		

LOCATION B12 MODULE ZS CHASSIS 1 6681-F REV A 60440800



1	-	
2	C02- X	2
3	-	
4	C10 - 24	13
5	-	
6	F04 - 10	15
7	-	
8	C03 - 23	5
9	-	
10	F10 - 14	17
11	-	
12	-	
13	C05 - 16	7
14	-	
15	C02 - 19	3
16	-	
17	F02 - 7	13
18	-	
19	C02 - 15	3
20	-	
21	F04 - 22	53
22	-	
23	C02 - X	2
24	C02- X	2
25	F10 - 13	45
26	D08- 24	11
27	C03- 25	45
28	F10- 15	17

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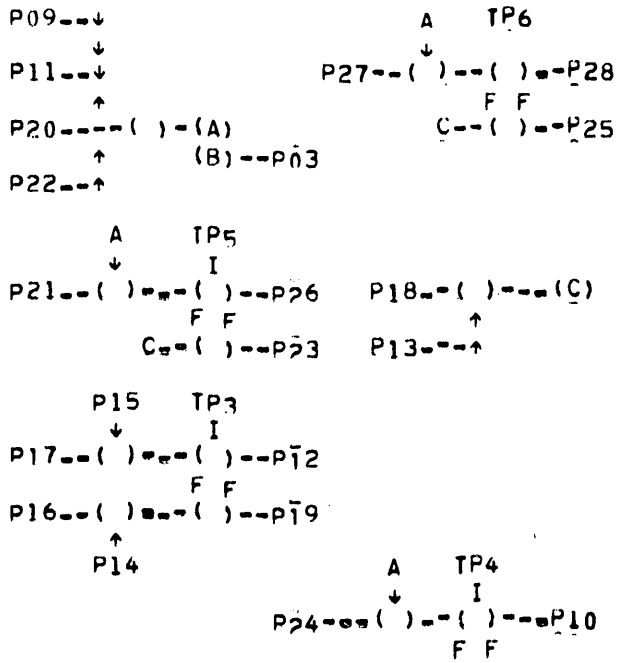
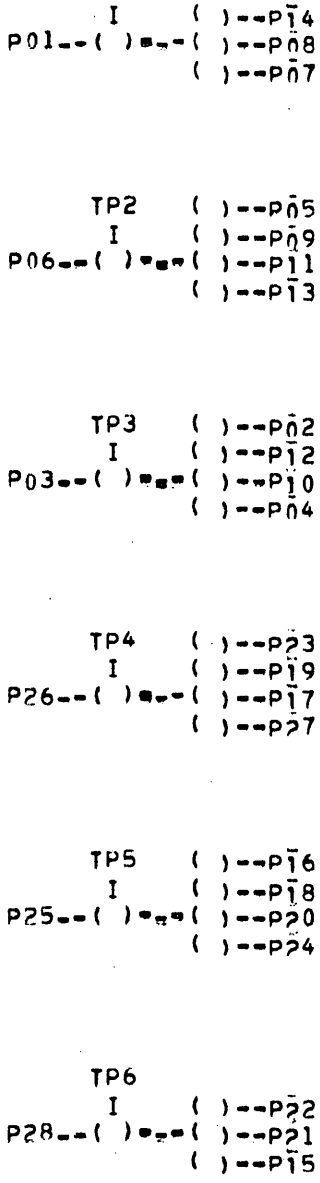
LOCATION C02 MODULE TR CHASSIS 1 REV C 60440800



1	D06=13	7
2	D03= 2	5
3	D08= 6	9
4	D05=11	7
5	=	
6	D03=10	5
7	=	
8	=	
9	C07= 5	7
10	B03= 7	7
11	E12= 5	15
12	C04=25	5
13	F02= 5	13
14	C05= 2	5
15	B03=10	7
16	C08= 5	9
17	C03= X	2
18	D08=16	9
19	E09= 4	11
20	D07=10	7
21	D06=11	7
22	C04=24	3
23	C02=8	5
24	D06=12	7
25	C02=27	45
26	D03=25	5
27	D06=14	5
28	D03=27	5

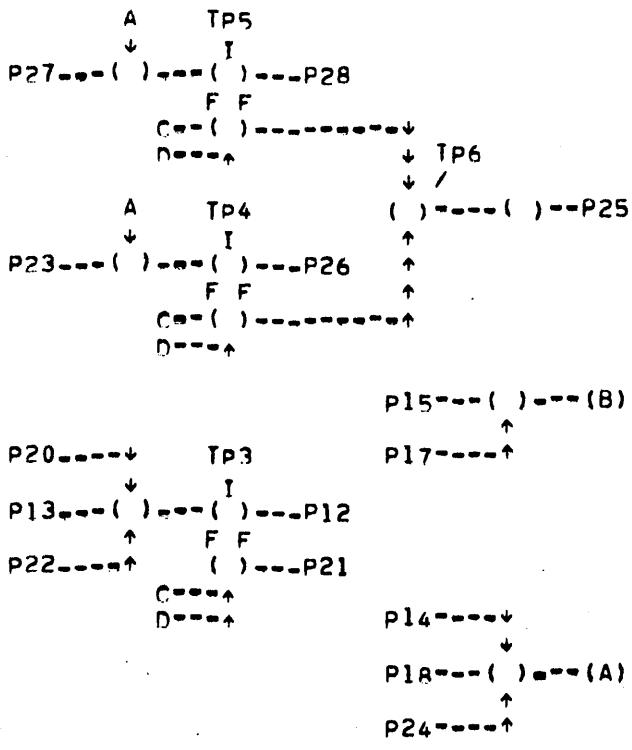
6681=F

LOCATION C03 MODULE ZF CHASSIS 1 REV C 60440800



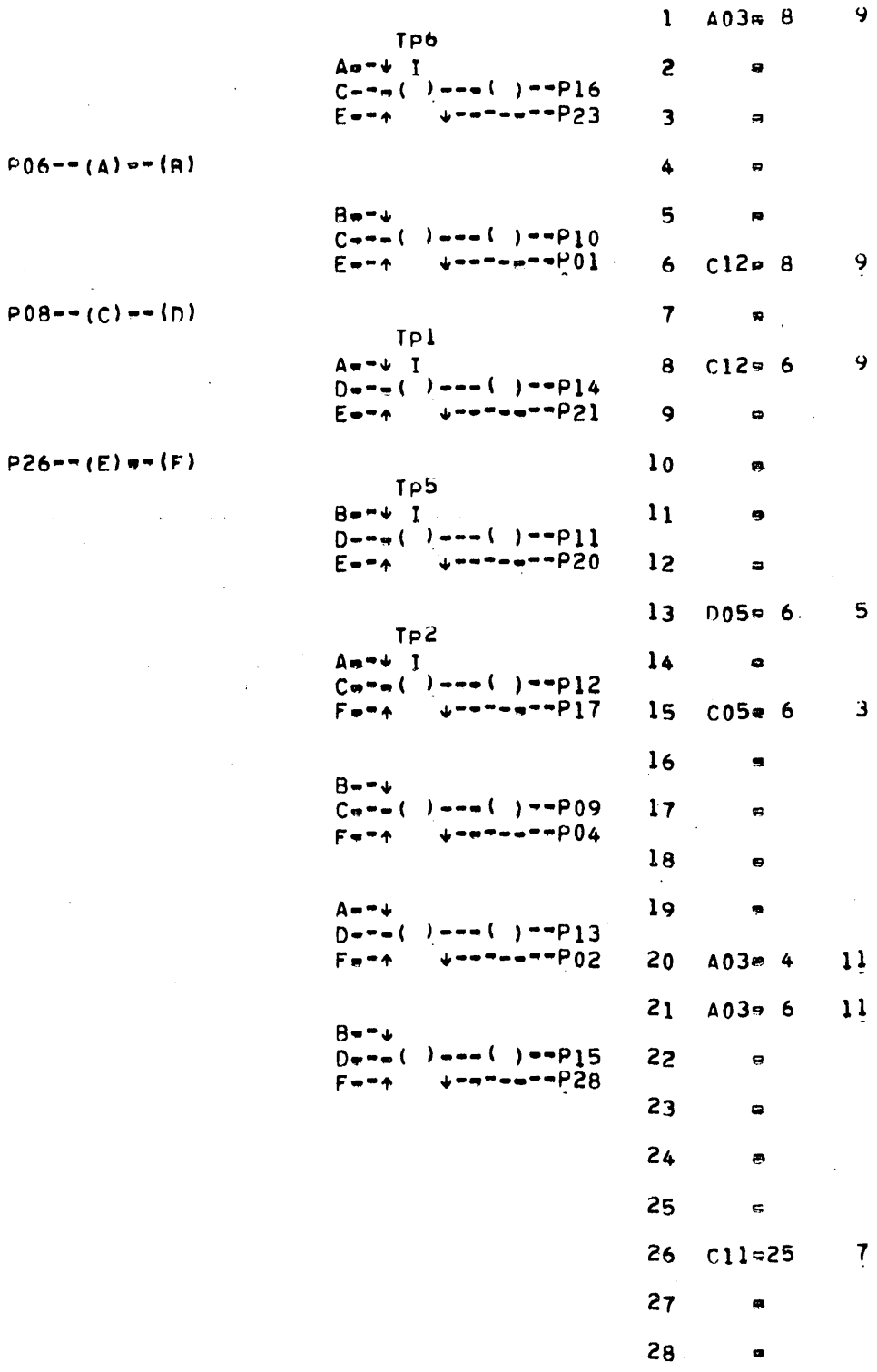
1	B04= 3	5
2	B02=10	7
3	C05= 7	5
4	=	
5	D04= 4	5
6	C04=16	3
7	E03=21	11
8	A12= 9	13
9	D04=26	7
10	A03=21	9
11	A12=12	13
12	A03=19	9
13	E05=17	9
14	D08= 1	9
15	B02=11	7
16	C04= 6	3
17	B03= 8	7
18	E05=18	9
19	F05=26	9
20	C05=14	3
21	E09=28	11
22	E05=22	9
23	E02=26	11
24	C03=22	3
25	C03=12	5
26	B04=28	5
27	B03=25	7
28	E09=25	11

LOCATION C04 MODULE TH CHASSIS 1 6681-F REV A 60440800



1	B03=27	5
2	C03=14	5
3	C08=15	5
4	C08= 6	5
5	C05= X	2
6	C06=15	3
7	C04= 3	5
8	D04= 5	5
9	E09=14	11
10	D03=24	7
11	C08=18	7
12	E04= 5	9
13	D03=15	7
14	C04=20	3
15	C07=13	5
16	C02-13	7
17	D07=14	5
18	C07=23	5
19	F11-4	15
20	C08=26	5
21	D03= 3	5
22	F01= 6	13
23	D07=16	5
24	C08=12	5
25	E05=16	9
26	E04= 7	7
27	D05=20	5
28	E04= 1	7

LOCATION C05 MODULE ZD CHASSIS 1 6681-F REV C 60440800



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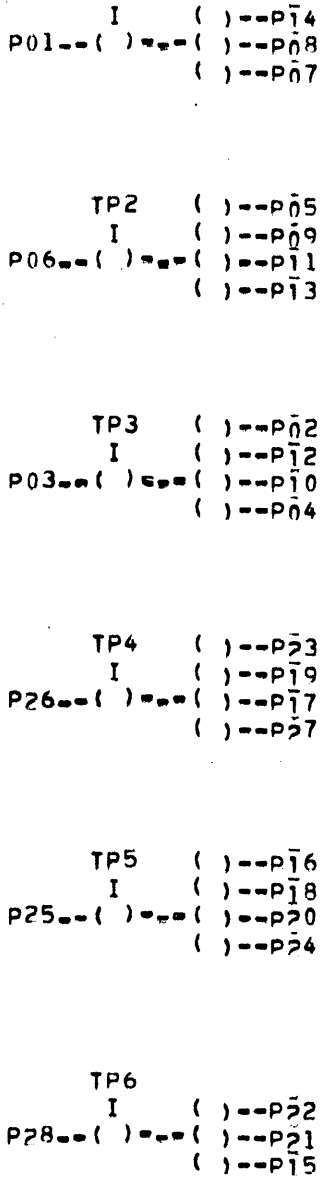
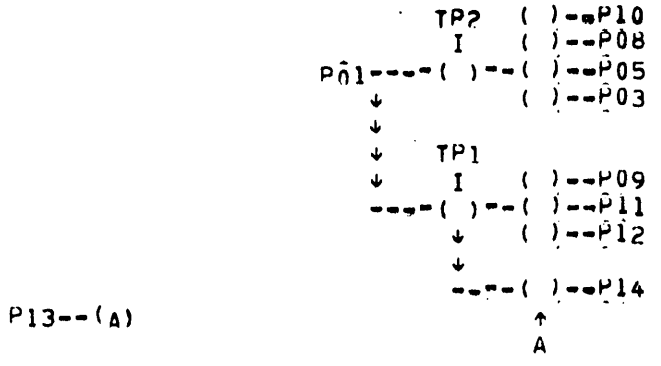
LOCATION C06 MODULE IV CHASSIS 1 REV A 60440800



1	D03-26	11
2	F01- 2	15
3	E12-25	13
4	F05-18	15
5	C03- 9	7
6	C09- 7	5
7	F10-23	15
8	F05-27	11
9	D05-15	7
10	F05- 3	13
11	D05- 2	7
12	F02-26	55
13	C05-15	5
14	F04- 7	65
15	-	
16	D05- 3	5
17	E09- 2	9
18	B04-16	7
19	E05- 3	9
20	-	
21	E04-16	60
22	-	
23	C05-18	5
24	-	
25	C09- 6	5
26	C09- 5	5
27	D04-28	41
28	D12-22	108

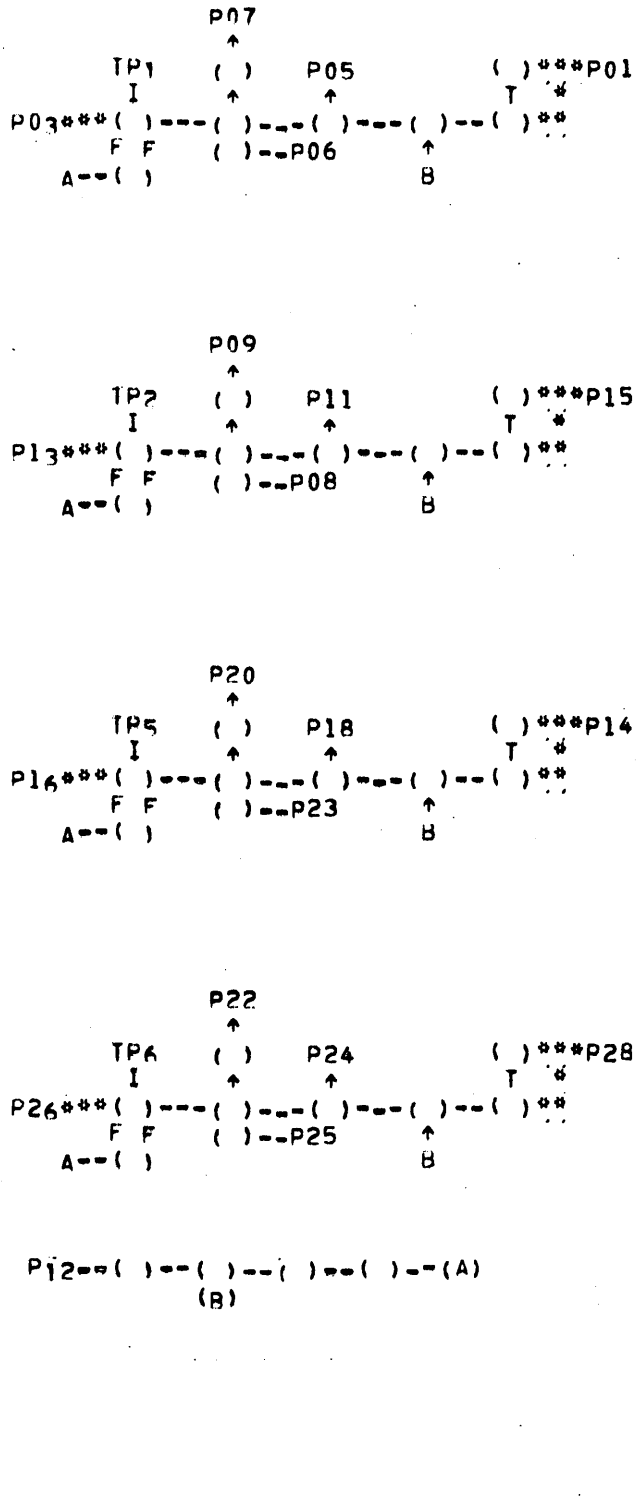
6681-F

LOCATION C07 MODULE TH CHASSIS 1 REV C 60440800



1	E12= 3	11
2	B04=17	7
3	B04=19	7
4	D05= 8	7
5	C03=16	9
6	C05= 4	5
7	=	
8	F05= 1	9
9	C10=12	5
10	C09=12	3
11	E05=10	11
12	C05=24	5
13	B04=27	7
14	F05= 4	13
15	C05= 3	5
16	E12= 1	9
17	C11=12	5
18	C05=11	7
19	D12=12	7
20	C12=12	7
21	B04=26	7
22	F09= 6	7
23	D04= 1	9
24	=	
25	=	
26	C05=20	5
27	=	
28	E12=22	9

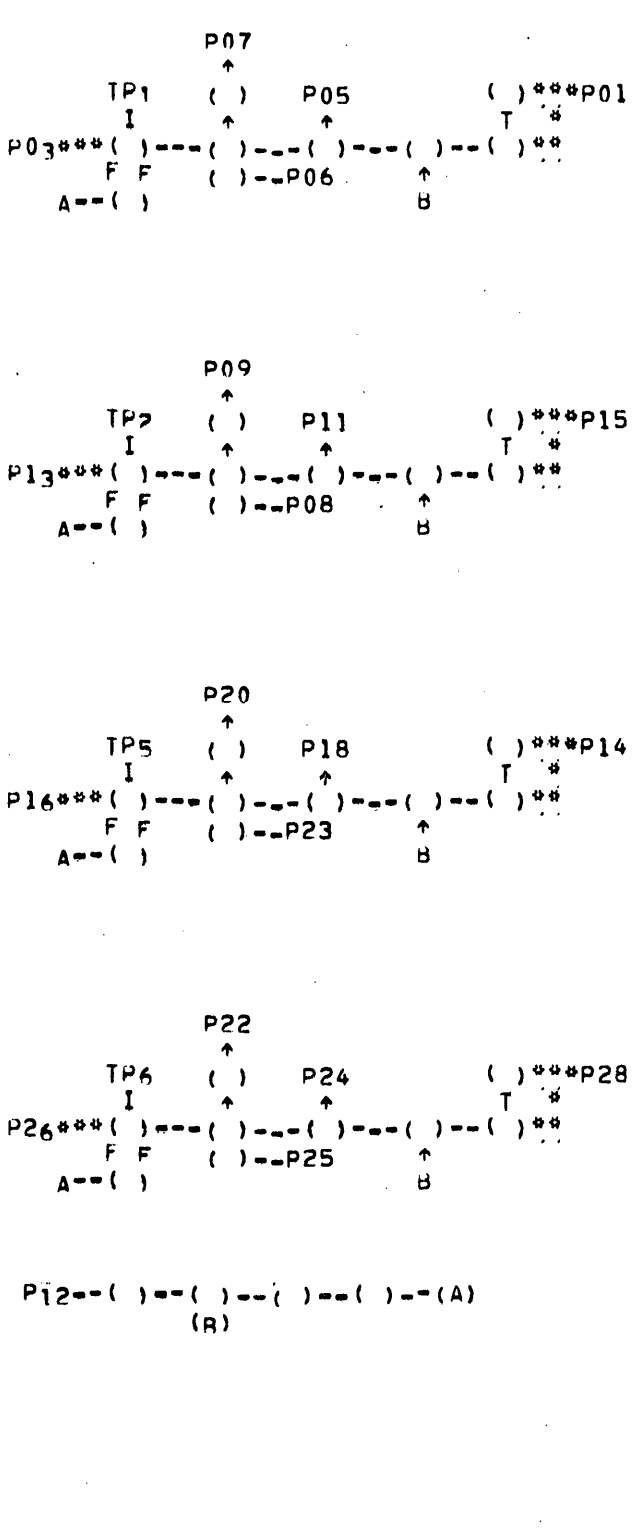
LOCATION C08 MODULE HF CHASSIS 1 6681-F REV A 60440800




```
1     =
2     =
3   W00  906  W          -
      FUNCTION
4     =
5   C07=26     5
6   C07=25     5
7   C07= 6     5
8   F02= 2    15
9   F11-3     13
10    =
11  E05=21    11
12  C08=10     3
13  W00  907  W          =
      MASTER CLEAR
14    =
15  W01  907  W          =
      MASTER CLEAR
16  W03  908  W          =
      PASSON INPUT PARITY BIT
17    =
18    =
19    =
20    =
21    =
22  F04=14    15
23  F10=26    13
24    =
25    =
26  W00  908  W          -
      OUTPUT PARITY BIT
27    =
28  W01  908  W          -
      PASSON PARITY BIT
```

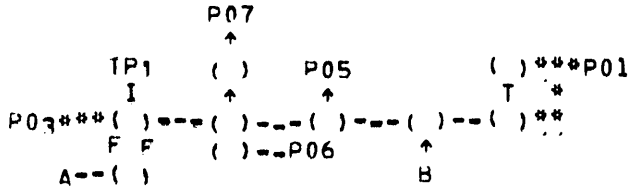
6681-F

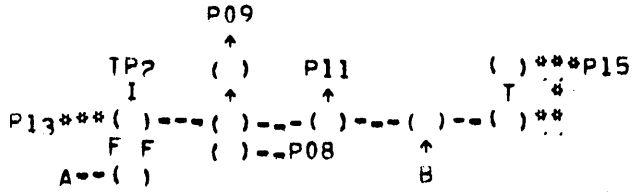
LOCATION C09 MODULE QI CHASSIS 1 REV C 604408_{00}

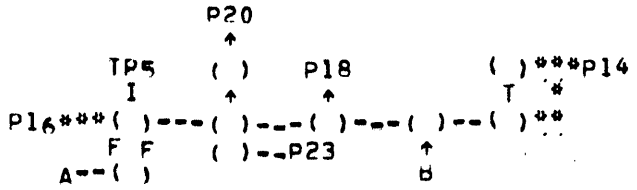


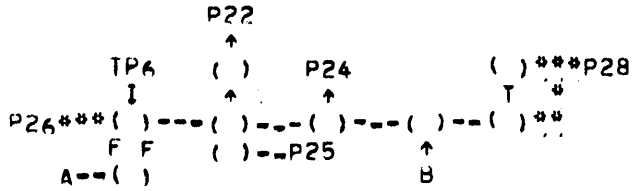

```
 1  W01  904  W
       FULL
 2     =
 3  W00  904  W
       FULL
 4     =
 5  B04=24     9
 6  D05= 1      9
 7  F01= 1     17
 8     =
 9  B04=11     9
10     =
11     =
12  C08= 9      5
13  W00  905  W
       EMPTY
14  W01  902  W
       ACTIVE
15  W01  905  W
       EMPTY
16  W00  902  W
       ACTIVE
17     =
18     =
19     =
20  D04= 2      9
21     =
22                7
23     =
24  C02=4       13
25     =
26  W00  903  W
       INACTIVE
27     =
28  W01  903  W
       INACTIVE
```

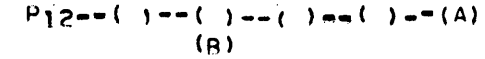
LOCATION C10 MODULE QI CHASSIS 1 6681-F REV C 60440800












```
1  W01  901  W          -       (
     PASSON OUTPUT DATA BIT 11
2     =
3  W00  901  W          -       (
     OUTPUT DATA BIT 11
4     =
5  B08= 8    7
6     =
7  D07=26    9
8     =
9  D07= 8    9
10    =
11 B08= 5    7
12 C08=17    5
13 W00  900  W          -       (
     OUTPUT DATA BIT 10
14 W01   99  W          -       (
     PASSON OUTPUT DATA BIT  9
15 W01  900  W          -       (
     PASSON OUTPUT DATA BIT 10
16 W00   99  W          -       (
     OUTPUT DATA BIT  9
17    =
18 B08=12    7
19    =
20 D07= 6    7
21    =
22 D06=26    9
23    =
24 B08=21    7
25 C06=26    7
26 W00   98  W          -       (
     OUTPUT DATA BIT  8
27    =
28 W01   98  W          -       (
     PASSON OUTPUT DATA BIT  8
```

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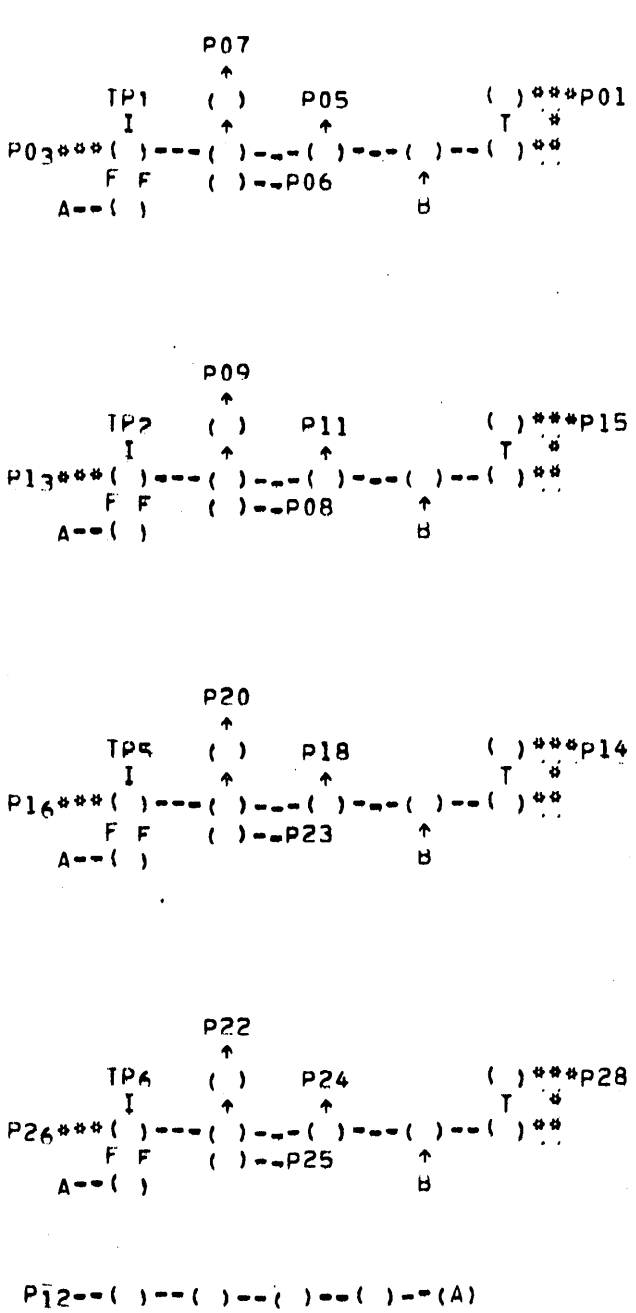
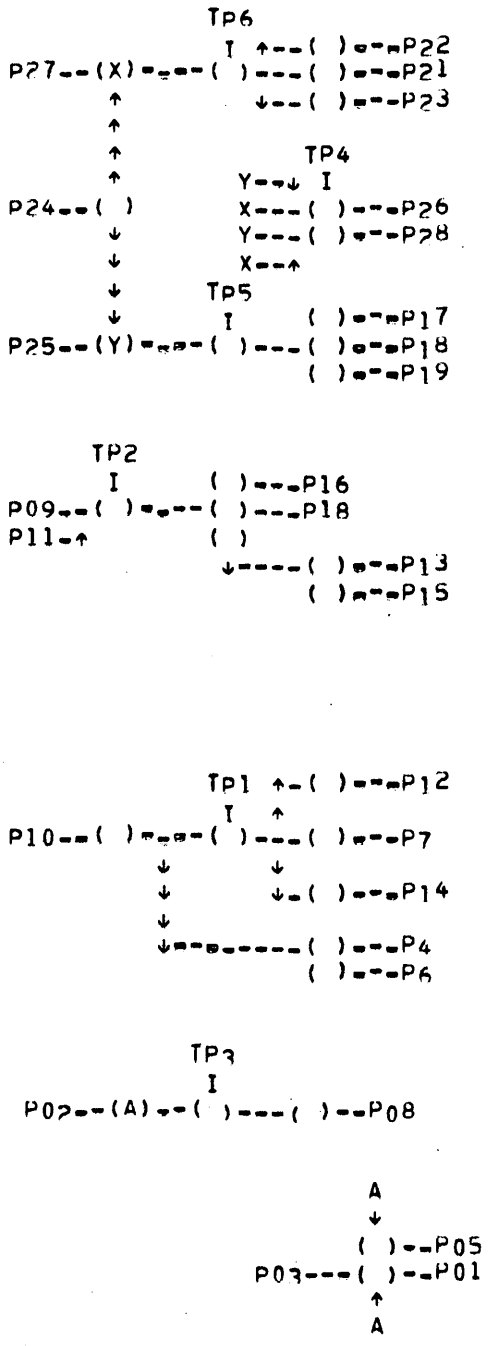
LOCATION C11 MODULE QI CHASSIS 1 REV A 60440800




```
1  W01   97  W          -        (
      PASSON OUTPUT DATA BIT  7
2     -
3  W00   97  W          -        (
      OUTPUT DATA BIT  7
4     -
5  B08-24    7
6  C06- 8    9
7  D06- 8   11
8  C06- 6    9
9  D06- 6   11
10    -
11 B08-23    7
12 C08-20    7
13 W00   96  W          -        (
      OUTPUT DATA BIT  6
14 W01   95  W          -        (
      PASSON OUTPUT DATA BIT  5
15 W01   96  W          -        (
      PASSON OUTPUT DATA BIT  6
16 W00   95  W          -        (
      OUTPUT DATA BIT  5
17    -
18 B07- 8    9
19    -
20 E10- 7    9
21    -
22 E10-11    9
23    -
24 B07- 5    9
25    -
26 W00   94  W          -        (
      OUTPUT DATA BIT  4
27    -
28 W01   94  W          -        (
      PASSON OUTPUT DATA BIT  4
```

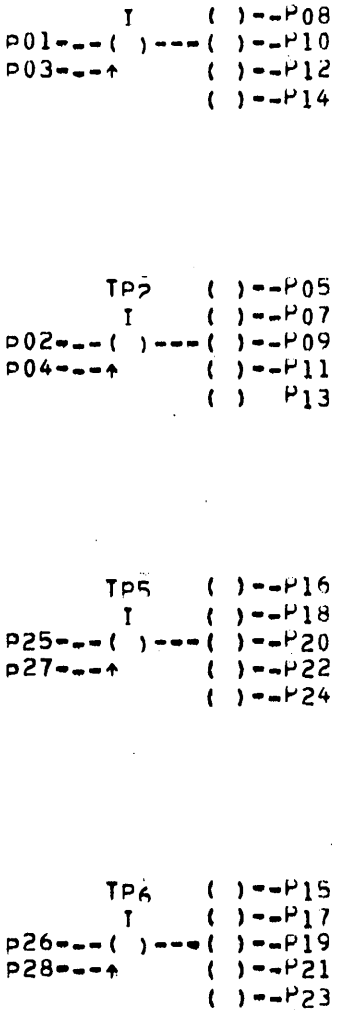
6681-F

LOCATION C12 MODULE QI CHASSIS 1 REV A 60440800



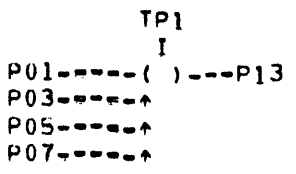
1	E05= 9	7
2	C03= 2	5
3	C05=21	5
4	B09=18	15
5	E04=23	7
6	=	
7	E05=19	7
8	=	
9	E09=13	9
10	C03= 6	5
11	F09= 9	9
12	E04=19	7
13	=	
14	A03=22	11
15	C05=13	7
16	B04=22	9
17	E06=11	7
18	=	
19	E07=11	7
20	F08=11	9
21	E07=16	7
22	E06=16	7
23	F08=16	7
24	C05=10	7
25	C03=26	5
26	C07= 1	11
27	C03=28	5
28	B02=12	11

LOCATION D03 MODULE Z8 CHASSIS 1 6681=F REV A 60440800



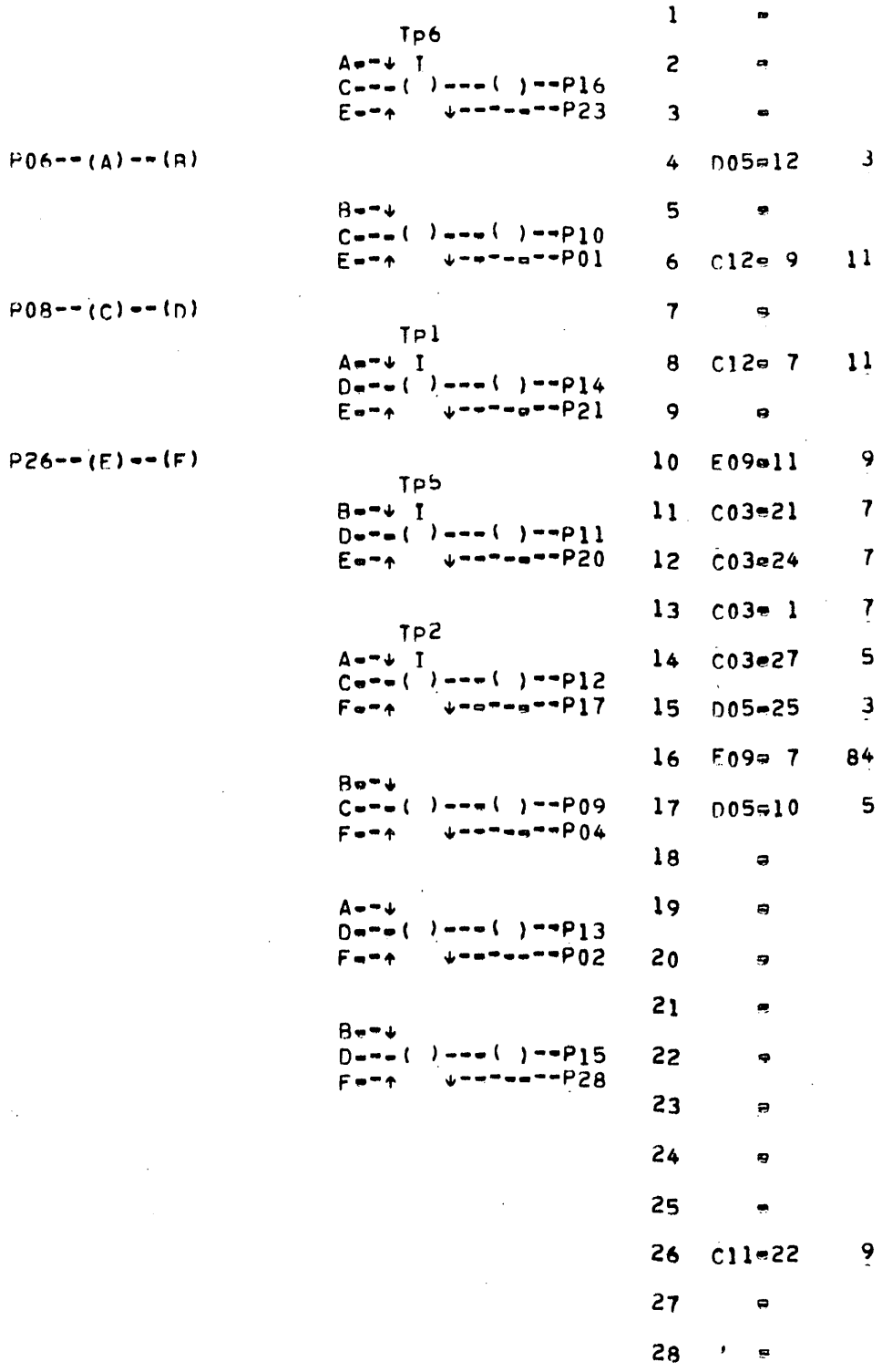
1	C08=23	9
2	C10=20	9
3	B03=16	9
4	C04= 5	5
5	C05= 8	5
6	D05=21	5
7	=	
8	A03= 1	13
9	=	
10	=	
11	=	
12	=	
13	=	
14	=	
15	D05=23	5
16	B08= 9	11
17	A03= 3	13
18	B08=20	11
19	=	
20	B07= 9	11
21	=	
22	B07=20	11
23	=	
24	F04=13	9
25	D05=13	5
26	C04= 9	7
27	E12= 8	11
28	C07=27	41

LOCATION D04 MODULE TD CHASSIS 1 6681-F REV A 60440800

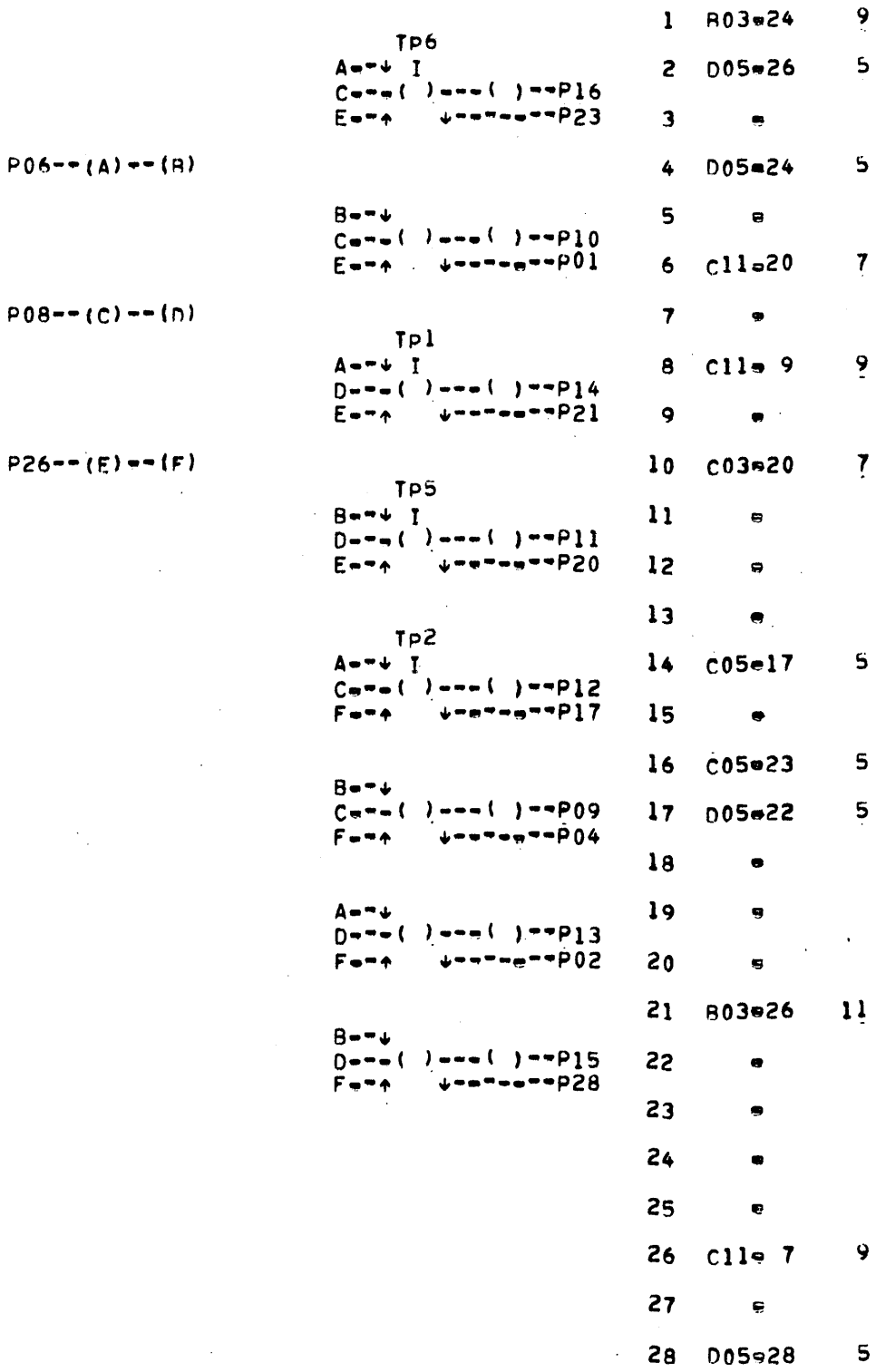


1	C10= 6	9
2	C07=11	7
3	C07=16	5
4	B03=18	9
5	D05= X	2
6	C06=13	5
7	D05= X	2
8	C08= 4	7
9	B03= 4	11
10	D06=17	5
11	C03= 4	7
12	D06= 4	3
13	D04=25	5
14	D05= X	2
15	C07= 9	7
16	D08=25	7
17	E12= 6	11
18	B03= 3	11
19	D05= X	2
20	C05=27	5
21	D04= 6	5
22	D07=17	5
23	D04=15	5
24	D07= 4	5
25	D06=15	3
26	D07= 2	5
27	D05= X	2
28	D07=28	5

LOCATION D05 MODULE TI CHASSIS 1 6681=F REV A 60440800



LOCATION D06 MODULE IV CHASSIS 1 6681-F REV A 60440800



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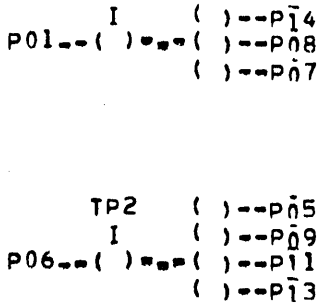
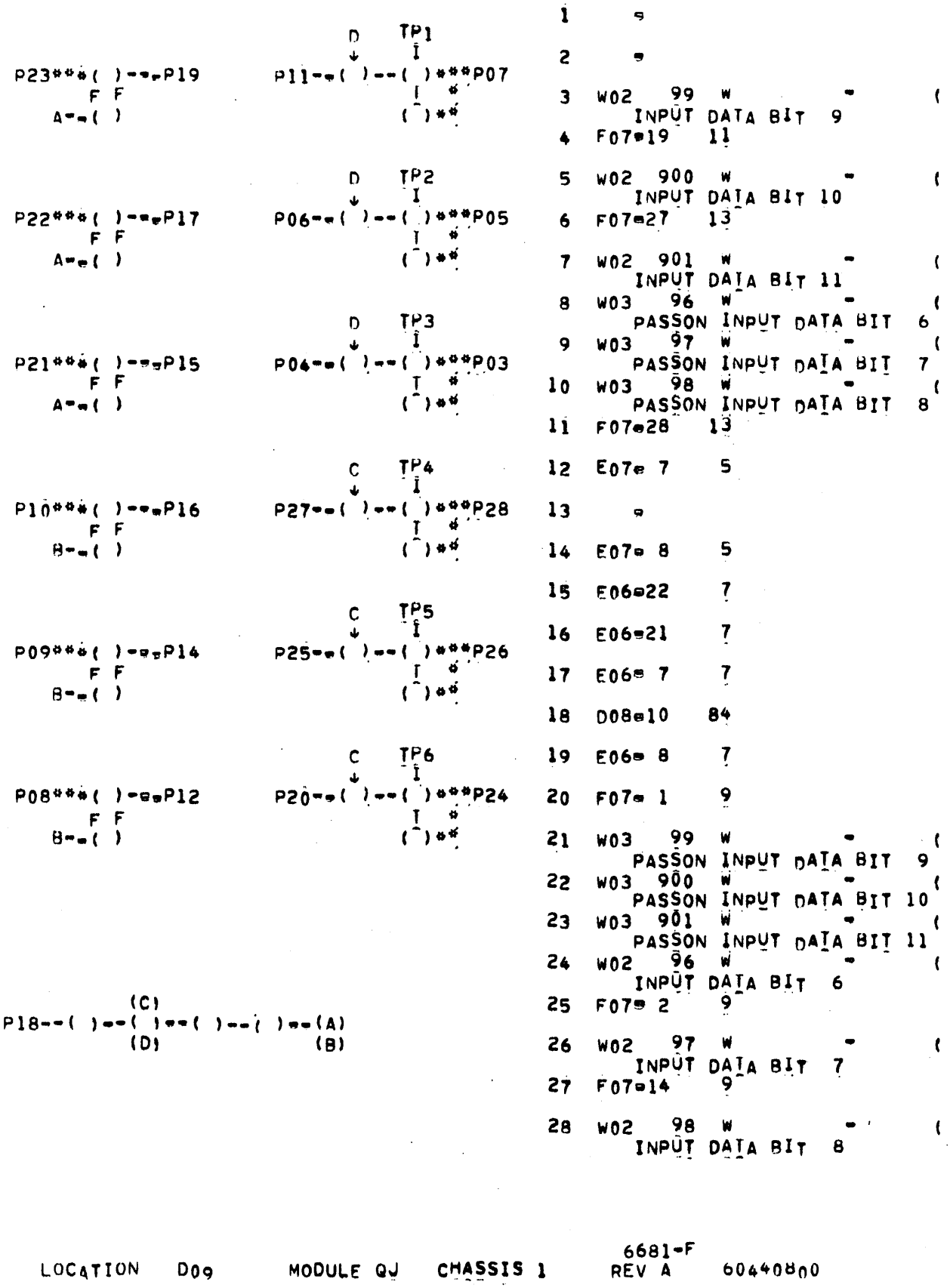
LOCATION D07 MODULE IV CHASSIS 1 REV A 60440800



1	C04-14	9
2	B02-24	11
3	E12- 2	9
4	D11-18	7
5	E09- 5	7
6	C03- 3	9
7	B03-23	11
8	F10-17	13
9	E10- 3	7
10	D09-18	84
11	-	
12	D10-18	84
13	-	
14	B03-21	11
15	F03-18	13
16	C03-18	9
17	-	
18	E09-15	7
19	E05- 5	7
20	E10-15	7
21	A03-25	72
22	B02-15	13
23	B04- 7	11
24	C02-26	11
25	D05-16	7
26	E12-21	9
27	B04- 8	13
28	A09- 3	15

LOCATION D08 MODULE TH CHASSIS 1 6681-F REV C 60440800

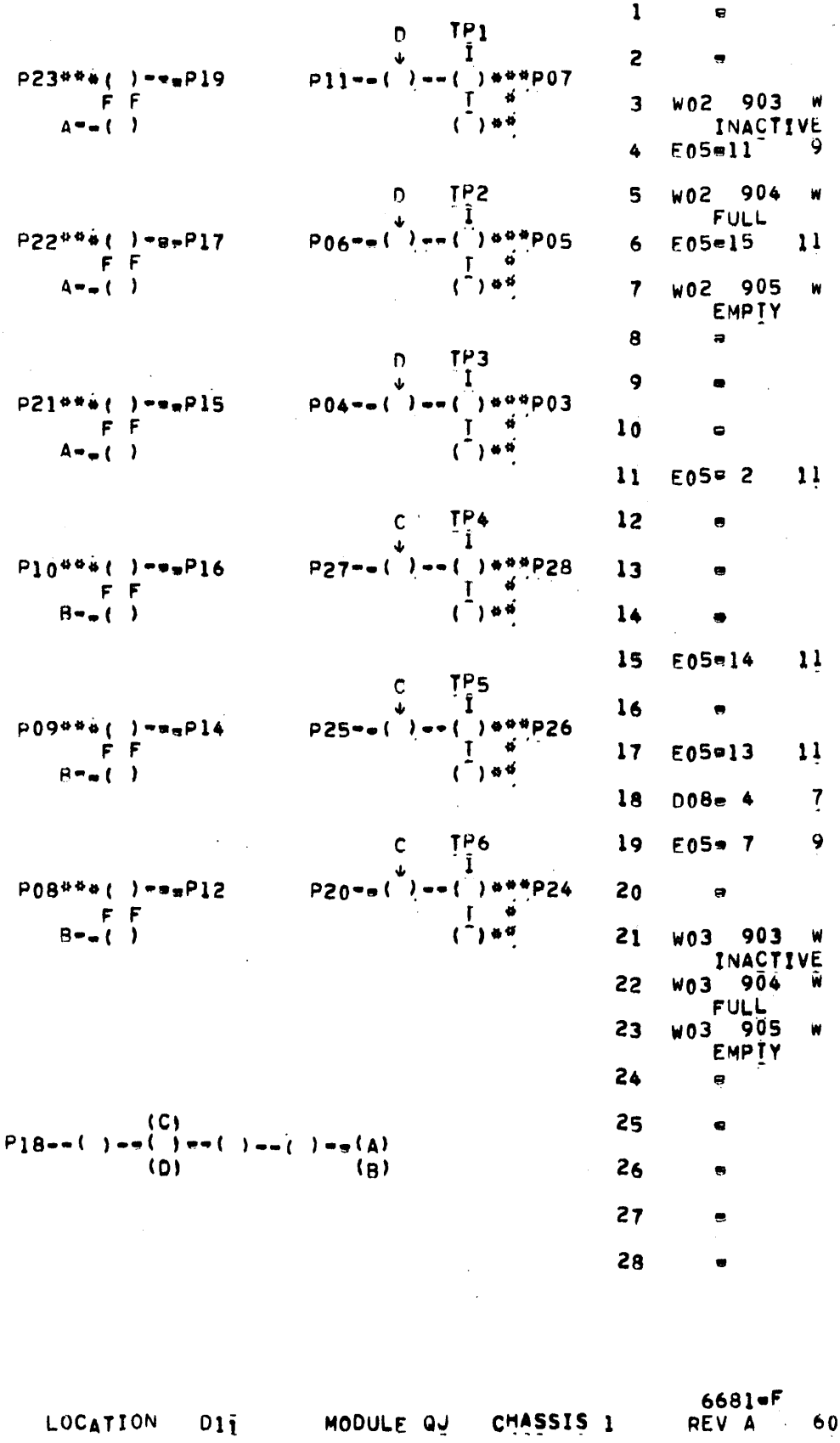


LOCATION D09 MODULE QJ CHASSIS 1 6681-F REV A 60440800

```
                                  D    TP1
                                  ↓     I
P23***( )-=-P19        P11--( )--( )***P07
      F F                          I  *
   A--( )                         ( )**

                                  D    TP2
                                  ↓     I
P22***( )-=-P17        P06--( )--( )***P05
      F F                          I  *
   A--( )                         ( )**

                                  D    TP3
                                  ↓     I
P21***( )-=-P15        P04--( )--( )***P03
      F F                          I  *
   A--( )                         ( )**

                                  C    TP4
                                  ↓     I
P10***( )-=-P16        P27--( )--( )***P28
      F F                          I  *
   B--( )                         ( )**

                                  C    TP5
                                  ↓     I
P09***( )-=-P14        P25--( )--( )***P26
      F F                          I  *
   B--( )                         ( )**

                                  C    TP6
                                  ↓     I
P08***( )-=-P12        P20--( )--( )***P24
      F F                          I  *
   B--( )                         ( )**

            (C)
P18--( )--( )--( )--( )=-(A)
            (D)              (B)
```

```
 1      =
 2      =
 3  W02   93  W          -        (
      INPUT DATA BIT  3
 4  F06=19   13
 5  W02   94  W          -        (
      INPUT DATA BIT  4
 6  F06=27   13
 7  W02   95  W          -        (
      INPUT DATA BIT  5
 8  W03   90  W          -        (
      PASSON INPUT DATA BIT  0
 9  W03   91  W          -        (
      PASSON INPUT DATA BIT  1
10  W03   92  W          -        (
      PASSON INPUT DATA BIT  2
11  F06=28   13
12  E08=21    7
13      =
14  E08=22    7
15  E08= 8    7
16  E08= 7    7
17  E07=21    7
18  D08=12   84
19  E07=22    7
20  F06= 1    9
21  W03   93  W          -        (
      PASSON INPUT DATA BIT  3
22  W03   94  W          -        (
      PASSON INPUT DATA BIT  4
23  W03   95  W          -        (
      PASSON INPUT DATA BIT  5
24  W02   90  W          -        (
      INPUT DATA BIT  0
25  F06= 2    9
26  W02   91  W          -        (
      INPUT DATA BIT  1
27  F06=14   11
28  W02   92  W          -        (
      INPUT DATA BIT  2
```

```
                                            6681-F
LOCATION  D10     MODULE QJ   CHASSIS 1     REV A     60440800
```

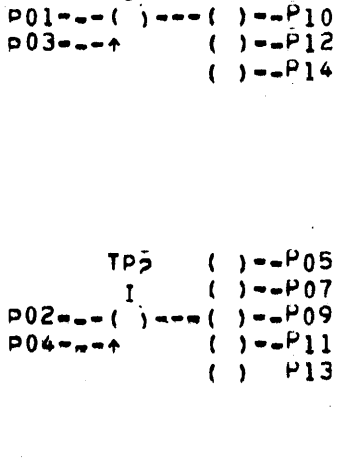


LOCATION D11 MODULE QJ CHASSIS 1 6681-F REV A 60440800

```
           P07
            ↑
    TP1    ( )     P05          ( )***P01
     I      ↑       ↑            T  *
P03***( )---( )---( )---( )--( )**
     F F   ( )--P06          ↑
  A--( )                     B

           P09
            ↑
    TP2    ( )     P11          ( )***P15
     I      ↑       ↑            T  *
P13***( )---( )---( )---( )--( )**
     F F   ( )--P08          ↑
  A--( )                     B

           P20
            ↑
    TP5    ( )     P18          ( )***P14
     I      ↑       ↑            T  *
P16***( )---( )---( )---( )--( )**
     F F   ( )--P23          ↑
  A--( )                     B

           P22
            ↑
    TP6    ( )     P24          ( )***P28
     I      ↑       ↑            T  *
P26***( )---( )---( )---( )--( )**
     F F   ( )--P25          ↑
  A--( )                     B

  P12--( )--( )--( )--( )--(A)
            (B)
```

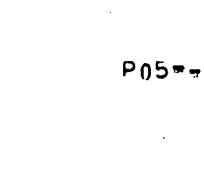
```
1  W01   93  W          -       (
      PASSON OUTPUT DATA BIT   3
2     -
3  W00   93  W          -       (
      OUTPUT DATA BIT   3
4     -
5  B07-12    11
6     -
7     -
8     -
9     -
10    -
11 B07-21    11
12 C08-19     7
13 W00   92  W          -       (
      OUTPUT DATA BIT   2
14 W01   91  W          -       (
      PASSON OUTPUT DATA BIT   1
15 W01   92  W          -       (
      PASSON OUTPUT DATA BIT   2
16 W00   91  W          -       (
      OUTPUT DATA BIT   1
17    -
18 B07-24    11
19    -
20    -
21    -
22 C07-28   108
23    -
24 B07-23    11
25 B03-22   108
26 W00   90  W          -       (
      OUTPUT DATA BIT   0
27    -
28 W01   90  W          -       (
      PASSON OUTPUT DATA BIT   0
```

```
                                              6681-F
LOCATION   D12     MODULE QI   CHASSIS 1     REV A     60440800
```



1	E04=20	5
2	E04= 4	5
3	B02=20	11
4	E02= X	2
5	E02=27	5
6	A10=16	17
7	E03=19	5
8	E03= 5	3
9	=	
10	B02=23	108
11	=	
12	=	
13	=	
14	=	
15	F04=24	108
16	E03=13	3
17	=	
18	=	
19	=	
20	=	
21	=	
22	=	
23	=	
24	=	
25	E03=20	3
26	C04=23	11
27	E02= 5	5
28	E02= X	2

LOCATION E02 MODULE TD CHASSIS 1 6681-F REV A 60440800



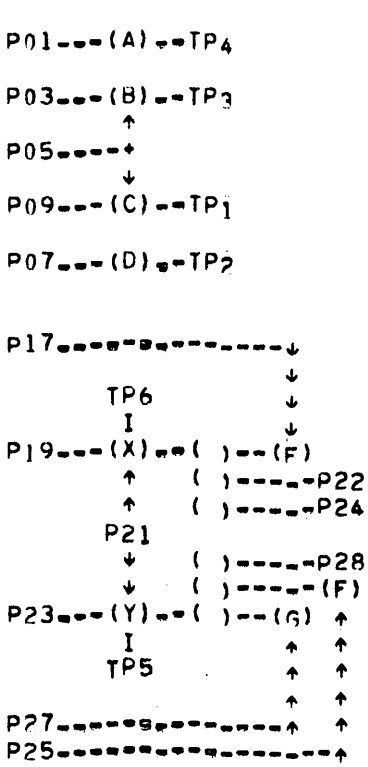
CAPACATIVE DELAY MODULE, SEE PRINTED CIRCUIT MANUAL FOR CIRCUITS

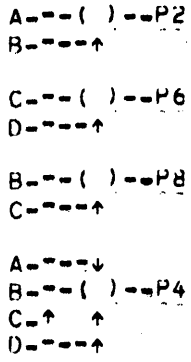
1		
2		
3		
4		
5	E02 8	3
6		
7		
8	A10 12	17
9	E04 6	3
10	A10 9	17
11	E04 2	3
12		
13	F02 16	3
14	E09 27	9
15		
16	A10 27	17
17		
18		
19	E02 7	5
20	E02 25	3
21	C04 7	11
22		
23		
24	B04 9	13
25		
26		
27		
28		

TP1 100NS
TP2 230NS
TP3 100US
TP4 150NS
TP5 28US
TP6 30US

6681-F

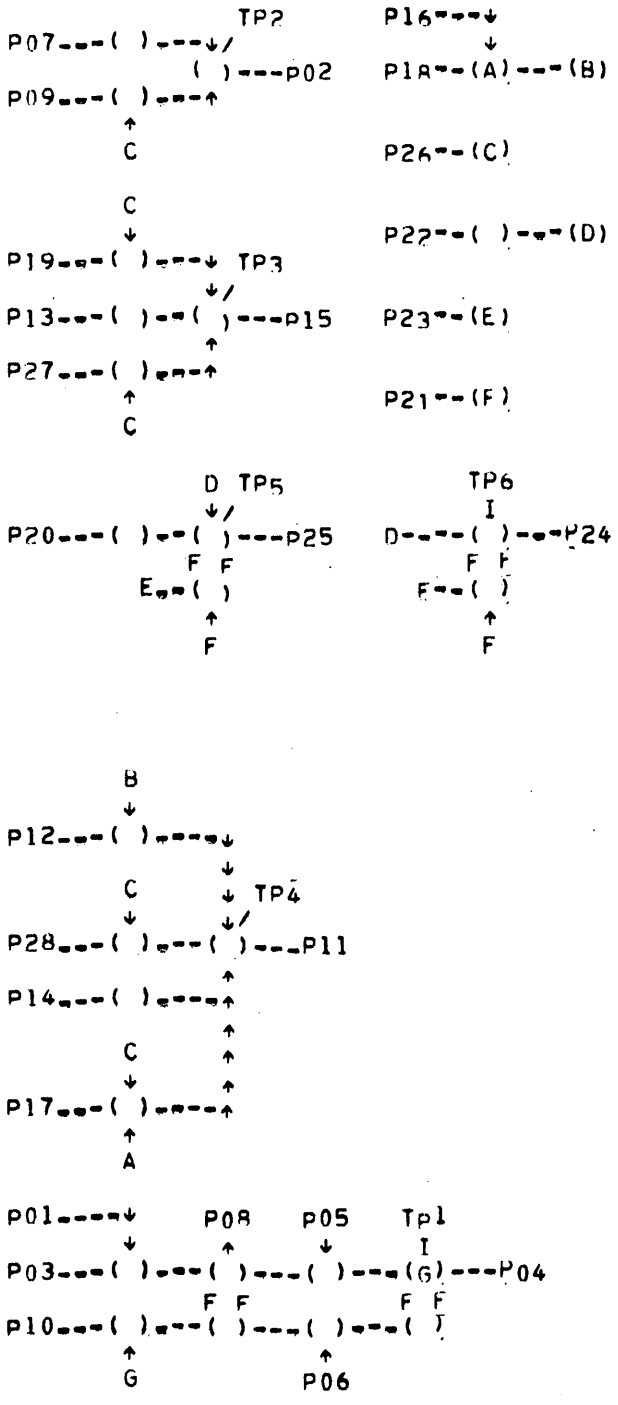
LOCATION E03 MODULE XL CHASSIS 1 REV A 60440800





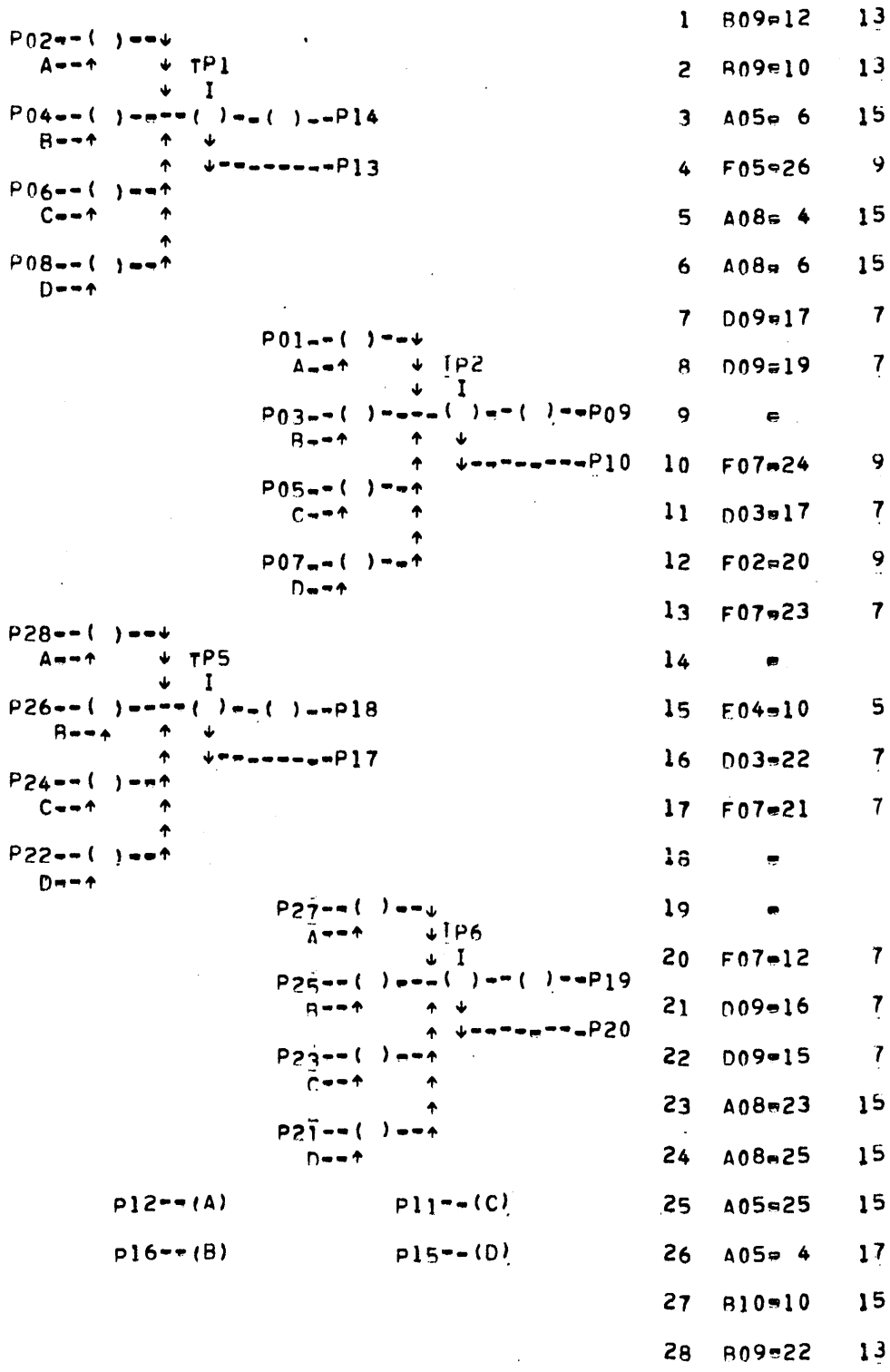
1	C05-28	7
2	F03-11	3
3	E09- 8	7
4	F02- 2	5
5	C05-12	9
6	E03- 9	3
7	C05-26	7
8	-	
9	E09-12	7
10	E06-15	5
11	A12-27	17
12	E07-15	5
13	A03-11	15
14	E08-15	7
15	B03-20	108
16	C07-21	60
17	B04- 1	13
18	-	
19	D03-12	7
20	E02- 1	5
21	B02- 9	13
22	-	
23	D03- 5	7
24	A11-27	17
25	B04-10	15
26	A11- 9	19
27	E04- X	2
28	A11-12	19

LOCATION E04 MODULE ZC CHASSIS 1 6681-F REV A 60440800

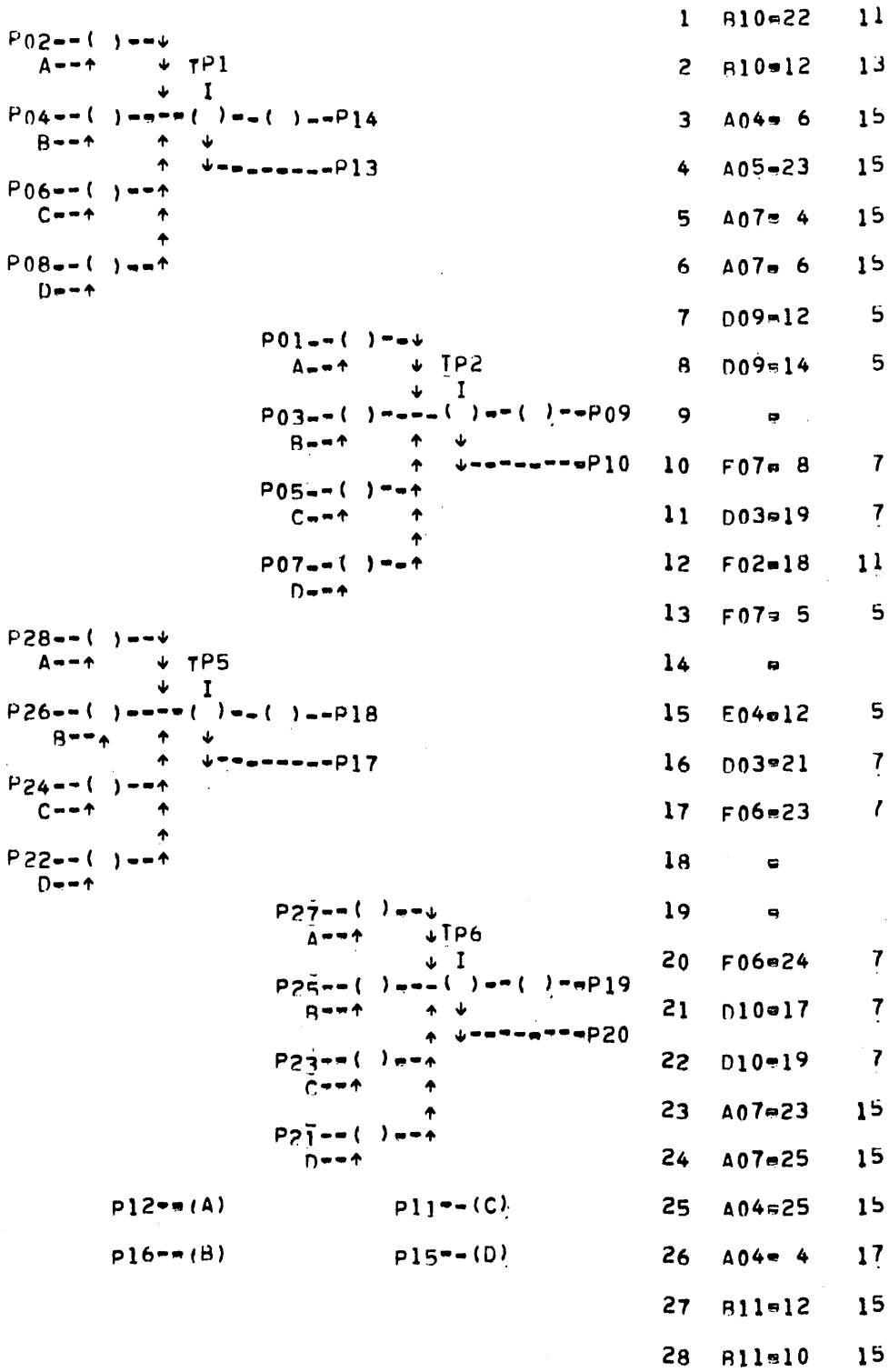


1	C08= 8	9
2	D11=11	11
3	C07=19	9
4	F03=11	7
5	D08=19	7
6	E05= X	2
7	D11=19	9
8	F05=17	7
9	D03= 1	7
10	C08=11	11
11	D11= 4	9
12	F03=19	7
13	D11=17	11
14	D11=15	11
15	D11= 6	11
16	C05=25	9
17	C04=13	9
18	C04=18	9
19	D03= 7	7
20	A09= 6	17
21	C09=11	11
22	C04=22	9
23	A09= 4	17
24	E08=26	5
25	E08=25	5
26	C04=19	9
27	C07= 8	11
28	E10=20	9

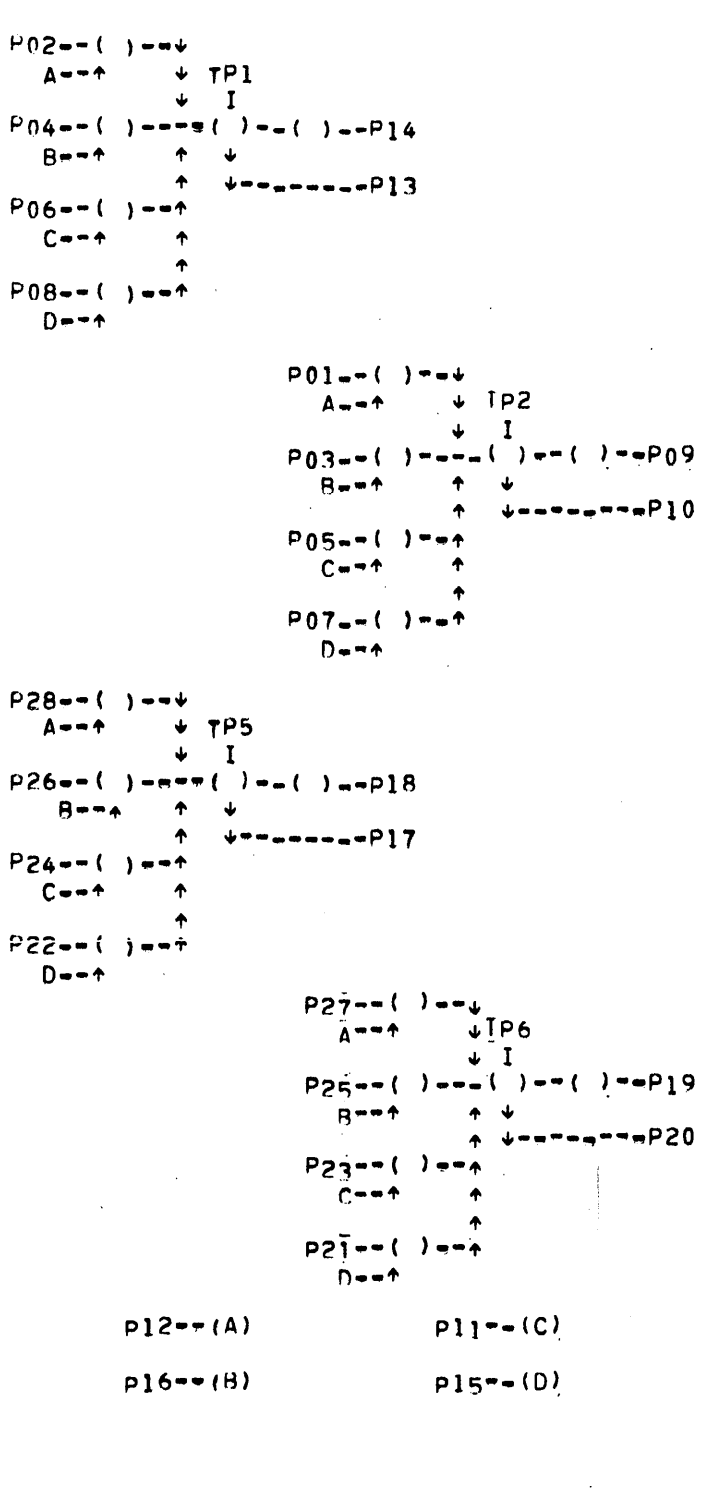
LOCATION E05 MODULE ZE CHASSIS 1 6681-F REV A 60440800



LOCATION E06 MODULE TG CHASSIS 1 6681-F REV A 60440800

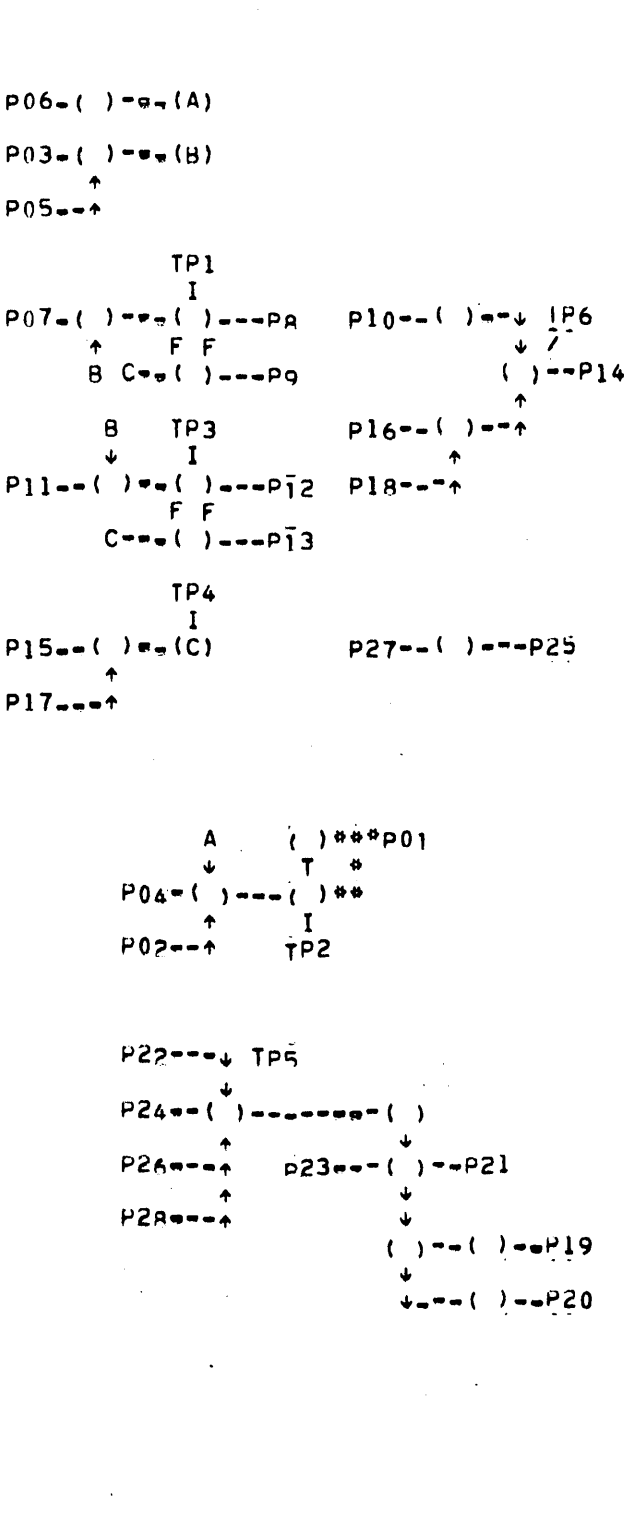


LOCATION E07 MODULE TG CHASSIS 1 6681-F REV A 60440800



1	B12=10	13
2	B11=22	11
3	F03=13	11
4	A04=23	15
5	A06= 4	17
6	A06= 6	15
7	D10=16	7
8	D10=15	7
9	=	
10	F06=12	7
11	D03=20	9
12	F02=16	11
13	F06=21	9
14	=	
15	E04=14	7
16	D03=23	7
17	F06= 5	7
18	=	
19	=	
20	F06= 8	7
21	D10=12	7
22	D10=14	7
23	A06=23	15
24	A06=25	15
25	E05=25	5
26	E05=24	5
27	B12=22	13
28	B12=12	15

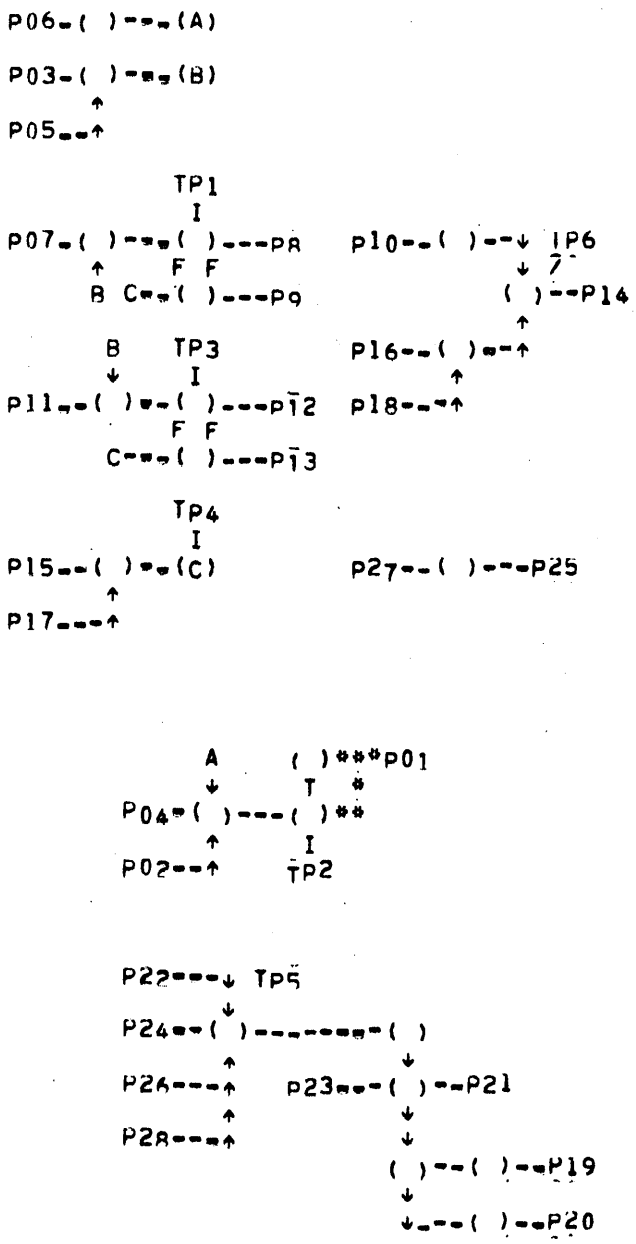
LOCATION E08 MODULE TG CHASSIS 1 6681-F REV A 60440800



1	W01 906 W	
	FUNCTION	
2	C07=17	9
3	F09= X	2
4	C03=19	11
5	D08= 5	7
6	C08=22	7
7	D06=16	84
8	E04= 3	7
9	D03=11	9
10	C10=22	7
11	D06=10	9
12	F04= 9	7
13	D03= 9	9
14	C05= 9	11
15	D08=18	7
16	E10=21	5
17	F02= 9	11
18	B03=15	15
19	=	
20	B04=13	15
21	B04= 6	15
22	B02=13	15
23	B02=16	15
24	=	
25	C04=28	11
26	A03=18	19
27	E03=14	9
28	C04=21	11

6681-F

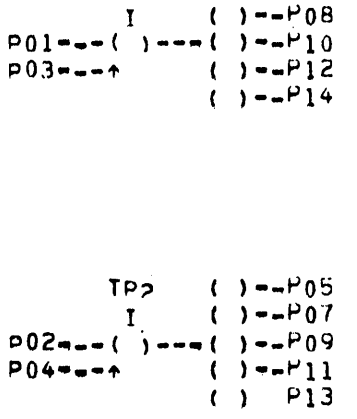
LOCATION E09 MODULE ZA CHASSIS 1 REV A 60440800



1	W02	908	W
		INPUT PARITY B1	
2	F10	28	9
3	D08	9	7
4	F02	10	13
5	E10	X	2
6	F02	23	108
7	C12	20	9
8	A03	15	65
9			
10	B02	7	17
11	C12	22	9
12			
13	E10	16	3
14	A03	17	19
15	D08	20	7
16	E10	13	3
17	B03	13	17
18	E10	25	5
19	A03	23	19
20	E05	28	9
21	E09	16	5
22	E10	X	2
23	B03	11	17
24	E10	X	2
25	E10	18	5
26	A03	16	19
27	A08	28	17
28	E10	X	2

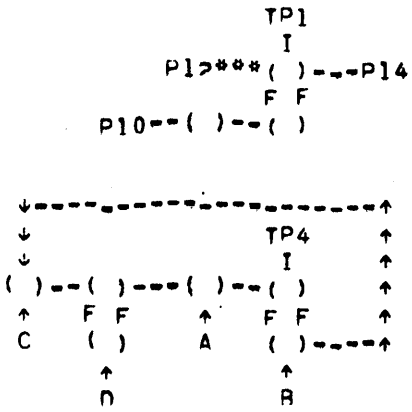
6681-F

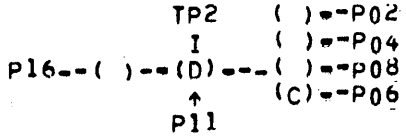
LOCATION E10 MODULE ZA CHASSIS 1 REV A 60440800

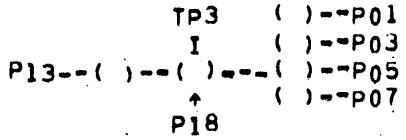


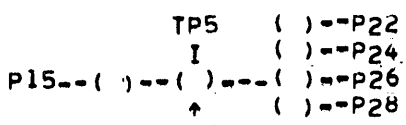
1	E12-14	156
2	E11-10	108
3	F11- X	2
4	F11- X	2
5	E12-16	17
6	F12-19	17
7	E12-18	55
8	E12-11	55
9	E11-25	108
10	F11- 2	108
11	-	
12	E12-10	5
13	-	
14	-	
15	E12-15	17
16	E12-13	17
17	E12-20	55
18	E12-17	55
19	-	
20	E11-26	108
21	-	
22	-	
23	-	
24	-	
25	E11- 9	108
26	E11-20	108
27	F11- X	2
28	F11- X	2

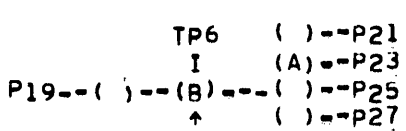
LOCATION E11 MODULE TD CHASSIS 1 6681-F REV A 60440800





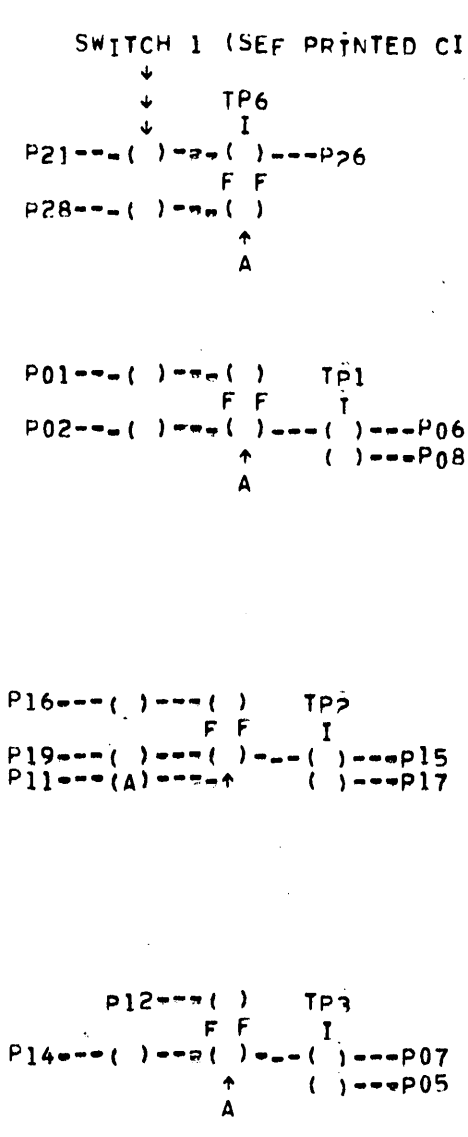






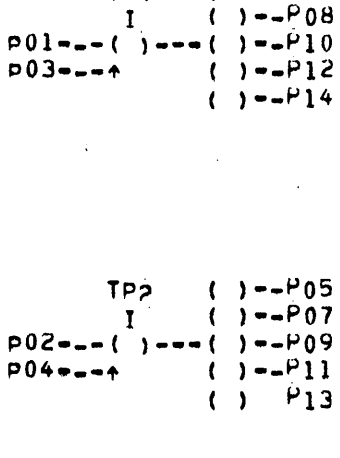
1	C08-16	9
2	D08- 3	9
3	C08- 1	11
4	F04- 8	13
5	C03-11	15
6	D05-17	11
7	-	
8	D04-27	11
9	-	
10	E11-12	5
11	E11- 8	55
12	W02 906 W 10 MC CLOCK	
13	E11-16	17
14	E11- 1	156
15	E11-15	17
16	F11- 5	17
17	E11-18	55
18	E11- 7	55
19	E11- 6	17
20	F11-17	55
21	D08-26	9
22	C08-28	9
23	-	
24	-	
25	C07- 3	13
26	-	
27	-	
28	-	

LOCATION E12 MODULE HQ CHASSIS 1 6681-F REV A 60440800



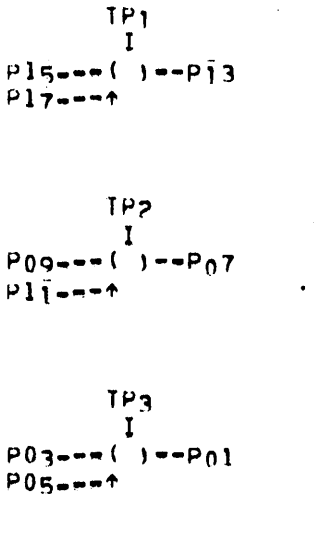
1	C10= 7	17
2	C07= 2	15
3	=	
4	=	
5	F04=20	7
6	C05=22	13
7	F10= 8	13
8	F10=22	13
9	=	
10	=	
11	C09= 9	17
12	F02=12	5
13	=	
14	F02=14	5
15	=	
16	=	
17	=	
18	=	
19	=	
20	=	
21	F01= X	2
22	=	
23	=	
24	=	
25	=	
26	F02= 1	7
27	=	
28	F01= X	2

LOCATION F01 MODULE J00 CHASSIS 1 6681-F REV A 60440800



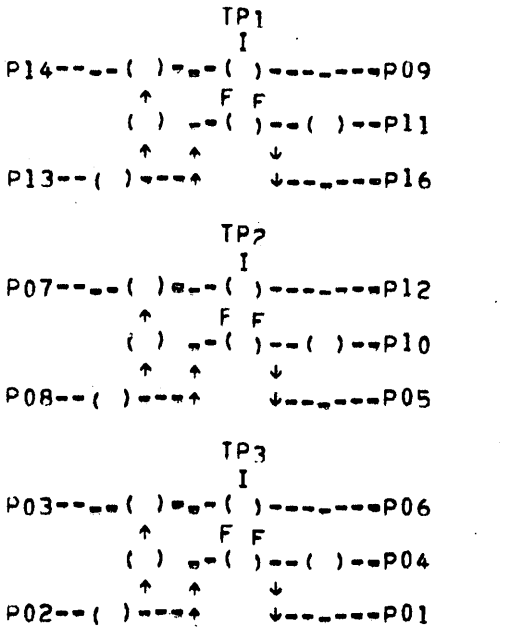
1	F01=26	7
2	F11-2	13
3	F02= X	2
4	F03=28	5
5	C03=13	13
6	F10= 4	11
7	C02-17	13
8	F05=15	7
9	F09=17	11
10	E10= 4	13
11		
12	F01=12	5
13	=	
14	F01=14	5
15	F06= 9	7
16	E08=12	11
17	F06=20	7
18	E07=12	11
19	F07= 9	9
20	E06=12	9
21	F07=20	9
22	F03= 3	5
23	E10= 6	108
24	F03=27	5
25	A03=20	19
26	C07=12	55
27	F02= X	2
28	F02= X	2

LOCATION F02 MODULE TD CHASSIS 1 6681-F REV C 60440800



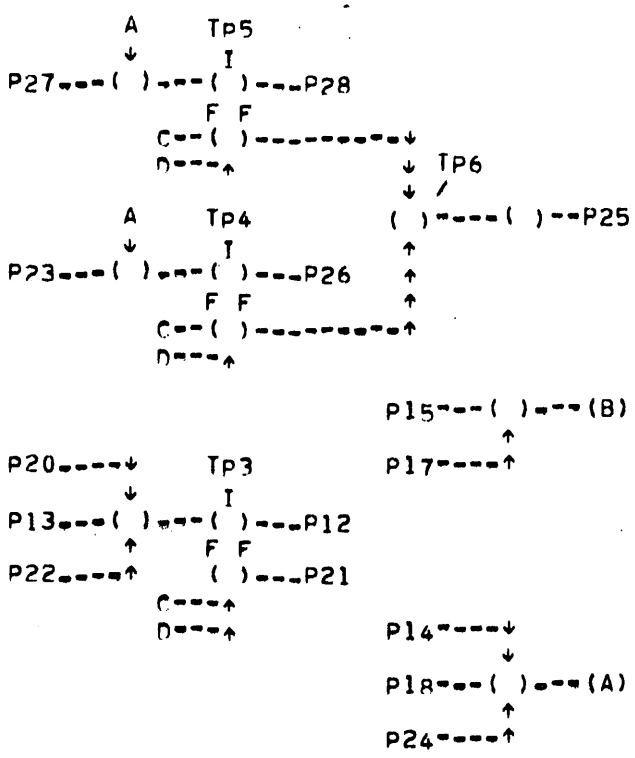
1	F10=27	11
2	F03= X	2
3	F02=22	5
4	=	
5	F03= X	2
6	=	
7	F03=21	5
8	=	
9	F05= 1	5
10	=	
11	E05= 4	7
12	F03- X	2
13	F08= 3	11
14	F04-12	5
15	F05=25	5
16	F11- 6	11
17	A09=18	21
18	D08=15	13
19	E05=12	7
20	F03= X	2
21	F03= 7	5
22	A03=24	19
23	F03= X	2
24	F03= X	2
25	F10=18	11
26	F05= 2	7
27	F02=24	5
28	F02= 4	5

LOCATION F03 MODULE TR CHASSIS 1 6681-F REV A 60440800



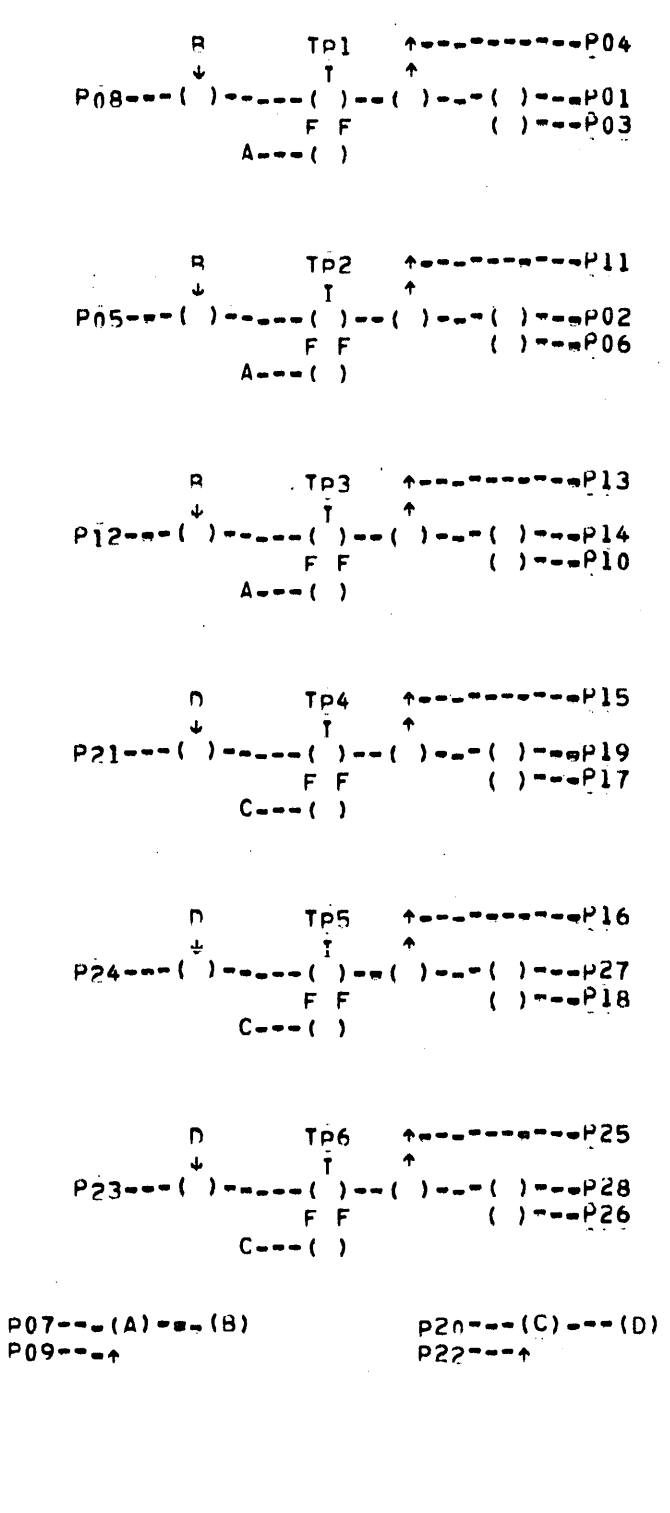
1	=	
2	=	
3	=	
4	=	
5	=	
6	=	
7	C07-14	65
8	E12- 4	13
9	F10= 2	9
10	C02=6	15
11	=	
12	F03-14	5
13	D04=24	9
14	C09=22	15
15	=	
16	B05=24	15
17	=	
18	F05=19	5
19	=	
20	F01= 5	7
21	=	
22	C02-21	53
23	=	
24	E02=15	108
25	=	
26	F05=27	108
27	=	
28	=	

LOCATION F04 MODULE J59 CHASSIS 1 6681=F REV C 60440800



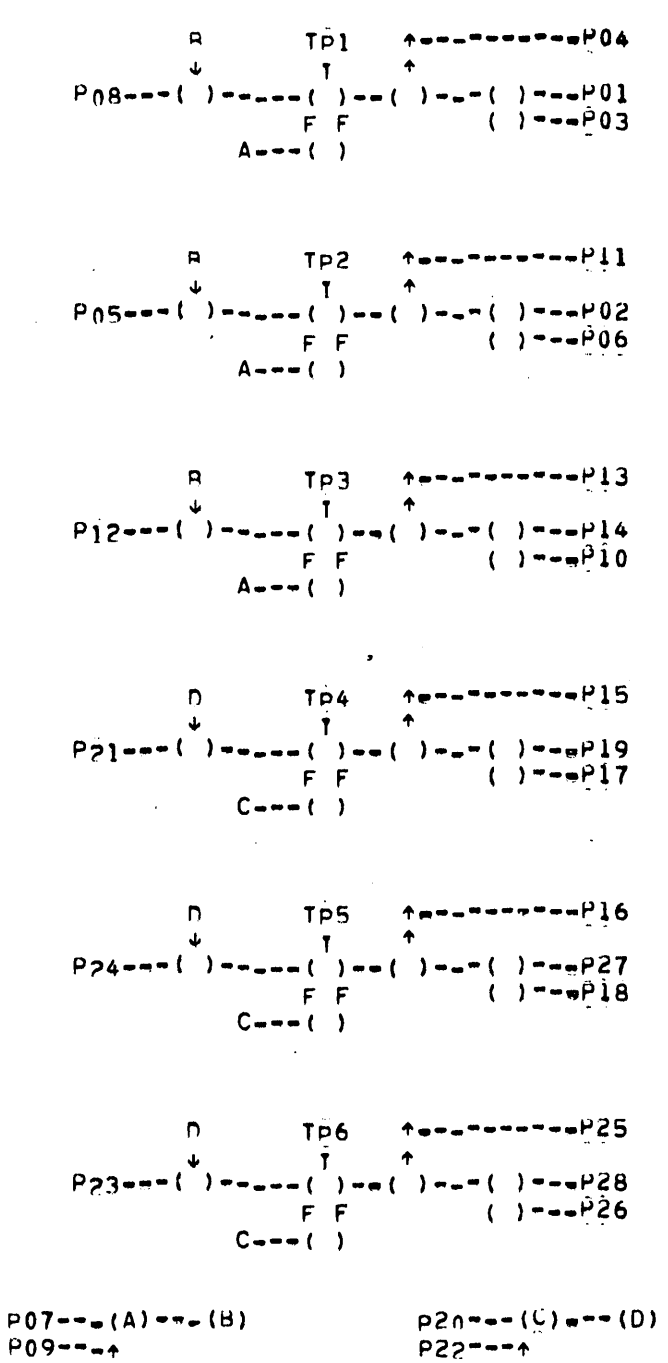
1	F03= 9	5
2	F03=26	7
3	C07=10	13
4	C08=14	13
5	B05=19	15
6	F05= X	2
7	=	
8	=	
9	=	
10	=	
11	=	
12	=	
13	=	
14	F10=19	9
15	F02= 8	7
16	F10-16	9
17	E05= 8	7
18	C07= 4	15
19	F04=18	5
20	=	
21	=	
22	=	
23	B05=21	15
24	F05= X	2
25	F03=15	5
26	E06= 4	9
27	F04=26	108
28	=	

LOCATION F05 MODULE ZD CHASSIS 1 6681-F REV C 60440800



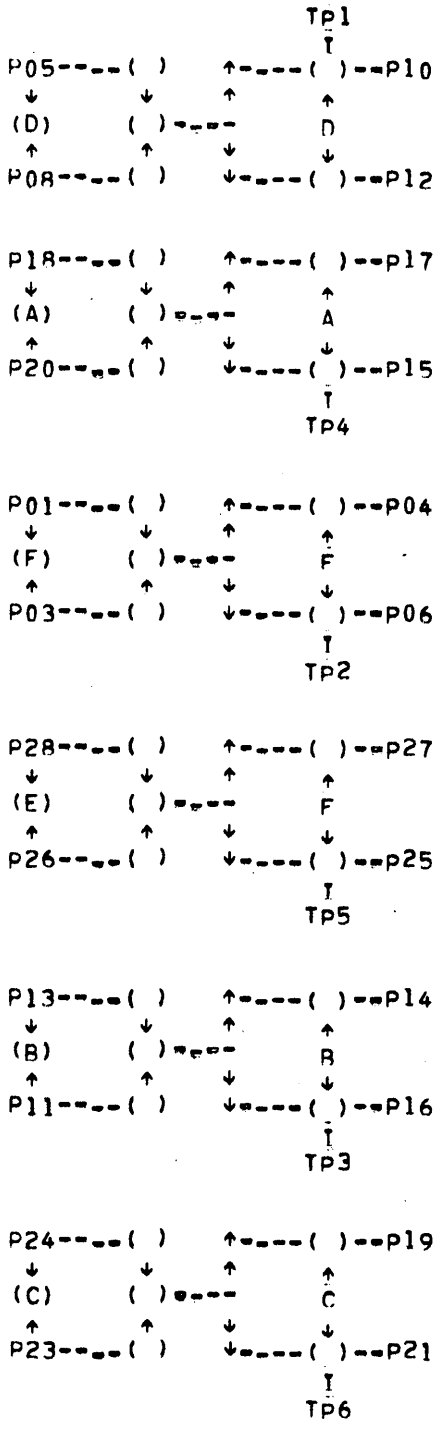
1	D10=20	9
2	D10=25	9
3	=	
4	F08= 5	5
5	E08=17	7
6	=	
7	F11- 5	9
8	E08=20	7
9	F02=15	7
10	=	
11	F08= 8	5
12	E08=10	7
13	F08= 1	5
14	D10=27	11
15	F08= 3	5
16	F08=13	5
17	=	
18	=	
19	D10= 4	13
20	F02=17	7
21	E08=13	9
22	F11- 9	9
23	E07=17	7
24	E07=20	7
25	F08=11	7
26	=	
27	D10= 6	13
28	D10=11	13

LOCATION F06 MODULE PJ CHASSIS 1 6681-F REV A 60440800



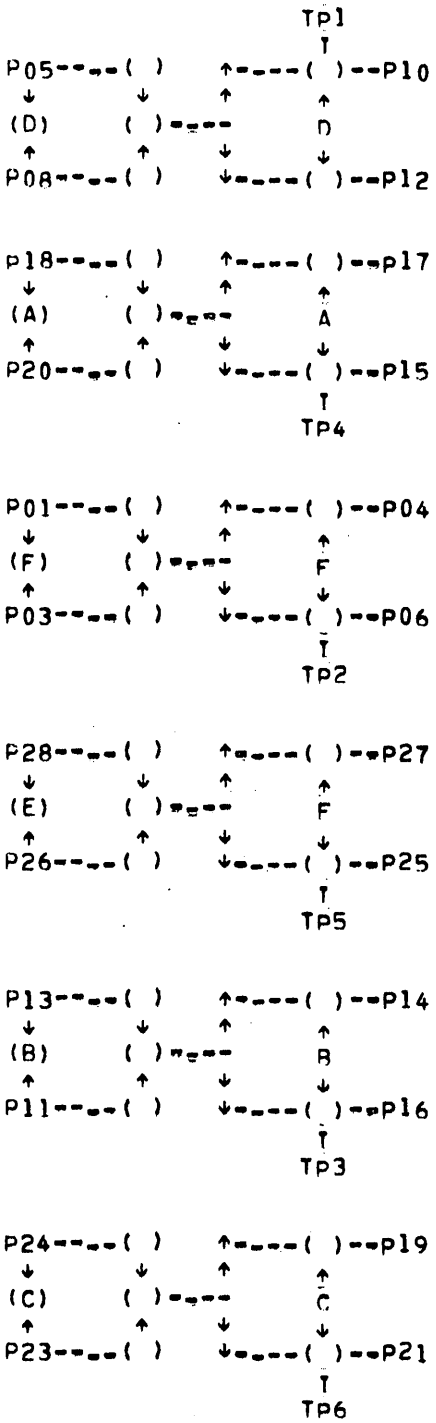
1	D09-20	9
2	D09-25	9
3	-	
4	F08-18	5
5	F07-13	5
6	-	
7	F11-11	7
8	E07-10	7
9	F02-19	9
10	-	
11	F08-20	5
12	F06-20	7
13	F08-28	5
14	D09-27	9
15	F08-26	5
16	F08-24	5
17	-	
18	-	
19	D09- 4	11
20	F02-21	9
21	E06-17	7
22	F11-13	9
23	E06-13	7
24	E06-10	9
25	F08-23	5
26	-	
27	D09- 6	13
28	D09-11	13

LOCATION F07 MODULE PJ CHASSIS 1 6681-F REV A 60440800



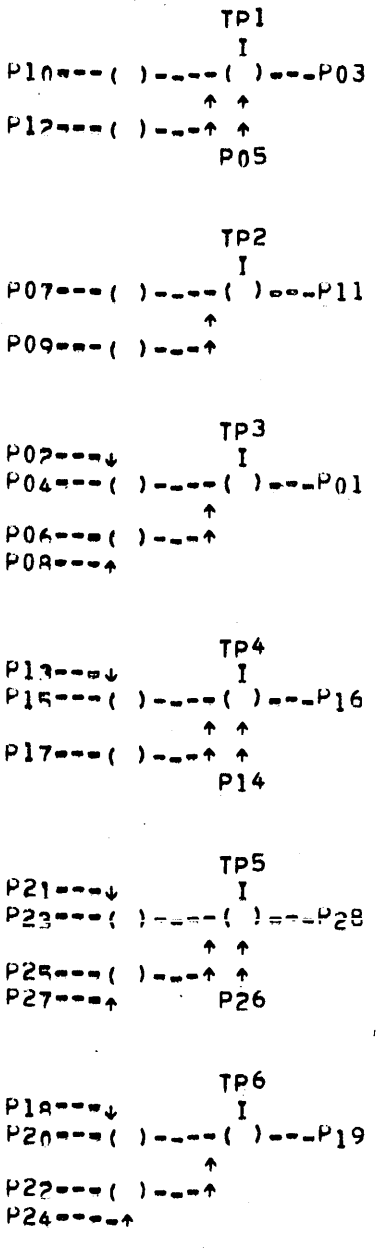
1	F06=13	5
2	=	
3	F06=15	5
4	=	
5	F06= 4	5
6	F09= 8	5
7	=	
8	F06=11	5
9	=	
10	F09= 5	5
11	F06=25	7
12	=	
13	F06=16	5
14	=	
15	F09= 3	5
16	F09= 1	5
17	=	
18	F07= 4	5
19	=	
20	F07=11	5
21	F09=11	5
22	=	
23	F07=25	5
24	F07=16	5
25	F09=13	5
26	F07=15	5
27	=	
28	F07=13	5

LOCATION FOR MODULE AB CHASSIS 1 6681-F REV A 60440800



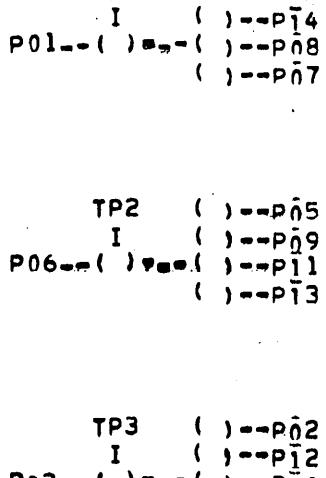
1	F08=16	5
2	=	
3	F08=15	5
4	=	
5	F08=10	5
6	F09=20	5
7	=	
8	F08= 6	5
9	=	
10	F09=18	5
11	F08=21	5
12	=	
13	F08=25	5
14	=	
15	F09=28	5
16	F09=26	5
17	=	
18	F09=10	5
19	=	
20	F09= 6	5
21	F10=20	5
22	=	
23	F12= 9	7
24	F09=25	3
25	F09=24	3
26	F09=16	5
27	F10=21	5
28	F09=15	5

LOCATION F09 MODULE AB CHASSIS 1 6681-F REV A 60440800



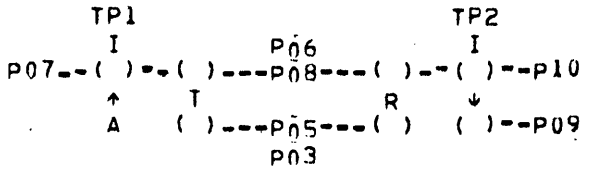
1	F12= 7	5
2	F04= 9	9
3	=	
4	F02= 6	11
5	=	
6	B05=25	17
7	=	
8	F01= 7	13
9	=	
10	=	
11	=	
12	=	
13	C02=25	45
14	C02=10	17
15	C02-28	17
16	F05=16	9
17	D08=8	13
18	F03=25	11
19	F05=14	9
20	F09=21	5
21	F09=27	5
22	F01= 8	13
23	C07= 7	15
24	F10= X	2
25	F12=10	5
26	C09=23	13
27	F03= 1	11
28	F10= 2	9

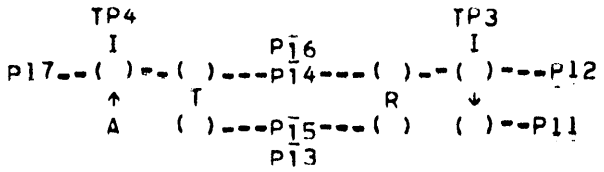
LOCATION F10 MODULE QH CHASSIS 1 6681-F REV C 60440800

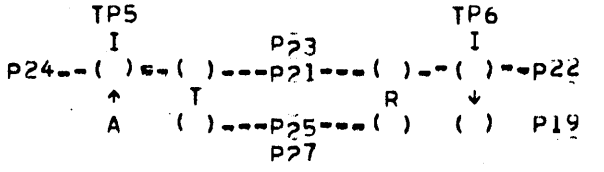


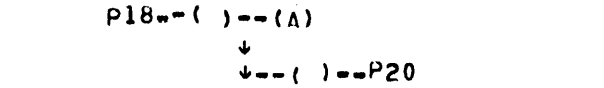
1		
2	F02-2	13
3	C09-8	13
4	C05-19	15
5	F06-7	9
6	F03-16	11
7		
8		
9	F06-22	9
10		
11	F07-7	7
12	B03-1	21
13	F07-22	9
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		

LOCATION F11 MODULE TH CHASSIS 1 6681-F REV C 60440800









FOR ELECTRICAL SCHEMATIC

SEE PRINTED CIRCUIT MANUAL

```
1     =
2     =
3     =
4     =
5     =
6     =
7   F10=  1     5
8     =
9   F09=23     7
10  F10=25     5
11    =
12    =
13    =
14    =
15    =
16    =
17    =
18  B12=20    15
19    =
20    =
21    =
22    =
23    =
24    =
25    =
26    =
27    =
28    =
```

LOCATION F12 MODULE ZS CHASSIS 1 6681-F REV A 60440800

81W00	90	D12	26	Data Bit 0
81W00	91	D12	16	Data Bit 1
81W00	92	D12	13	Data Bit 2
81W00	93	D12	3	Data Bit 3
81W00	94	C12	26	Data Bit 4
81W00	95	C12	16	Data Bit 5
81W00	96	C12	13	Data Bit 6
81W00	97	C12	3	Data Bit 7
81W00	98	C11	26	Data Bit 8
81W00	99	C11	16	Data Bit 9
81W00	900	C11	13	Data Bit 10
81W00	901	C11	3	Data Bit 11
81W00	902	C10	16	Active
81W00	903	C10	26	Inactive
81W00	904	C10	3	Full
81W00	905	C10	13	Empty
81W00	906	C09	3	Function
81W00	907	C09	13	Master Clear
81W00	908	C09	26	Parity Bit

DCC PASS ON - OUTPUT OPERATION

81W01	90	D12	28	Data Bit 0
81W01	91	D12	14	Data Bit 1
81W01	92	D12	15	Data Bit 2
81W01	93	D12	1	Data Bit 3
81W01	94	C12	28	Data Bit 4
81W01	95	C12	14	Data Bit 5
81W01	96	C12	15	Data Bit 6
81W01	97	C12	1	Data Bit 7
81W01	98	C11	28	Data Bit 8
81W01	99	C11	14	Data Bit 9
81W01	900	C11	15	Data Bit 10
81W01	901	C11	1	Data Bit 11
81W01	902	C10	14	Active
81W01	903	C10	28	Inactive
81W01	904	C10	1	Full
81W01	905	C10	15	Empty
81W01	906	E09	1	Function
81W01	907	C09	15	Master Clear
81W01	908	C09	28	Parity Bit

DCC TO 6000/CDC CYBER DATA CHANNEL - INPUT OPERATION

81W02	90	D10	24	Data Bit 0
81W02	91	D10	26	Data Bit 1
81W02	92	D10	28	Data Bit 2
81W02	93	D10	3	Data Bit 3
81W02	94	D10	5	Data Bit 4
81W02	95	D10	7	Data Bit 5
81W02	96	D09	24	Data Bit 6
81W02	97	D09	26	Data Bit 7
81W02	98	D09	28	Data Bit 8
81W02	99	D09	3	Data Bit 9
81W02	900	D09	5	Data Bit 10
81W02	901	D09	7	Data Bit 11
81W02	902			Active
81W02	903	D11	3	Inactive
81W02	904	D11	5	Full
81W02	905	D11	7	Empty
81W02	906	E12	12	10-Megahertz Clock
81W02	907	B02	25	1-Megahertz Clock
81W02	908	E10	1	Parity Bit

DCC PASS ON - INPUT OPERATION

81W03	90	D10	8	Data Bit 0
81W03	91	D10	9	Data Bit 1
81W03	92	D10	10	Data Bit 2
81W03	93	D10	21	Data Bit 3
81W03	94	D10	22	Data Bit 4
81W03	95	D10	23	Data Bit 5
81W03	96	D09	8	Data Bit 6
81W03	97	D09	9	Data Bit 7
81W03	98	D09	10	Data Bit 8
81W03	99	D09	21	Data Bit 9
81W03	900	D09	22	Data Bit 10
81W03	901	D09	23	Data Bit 11
81W03	902			Active
81W03	903	D11	21	Inactive
81W03	904	D11	22	Full
81W03	905	D11	23	Empty
81W03	906	B02	26	10-Megahertz Clock
81W03	907	B02	28	1-Megahertz Clock
81W03	908	C09	16	Parity Bit

CABLE TABS

60440800 A

DWN	K. McLAUGHLIN	8-12-74	CONTROL DATA	TITLE CONNECTOR ASSEMBLY - 61 PIN	PREFIX A	DOCUMENT NO. 22696100	REV. A
CHKD	P. Hawks	8-16-74					
ENG		8/22/74	ARHOPS				
MFG		8-23-74	CODE IDENT	FIRST USED ON 6681-F		SHEET 1 OF 18	
APPR		8/22/74					

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SHEET REVISION STATUS

REVISION RECORD

REV	ECO	DESCRIPTION	DRFT	DATE	APP
A		CLASS A DRAWING	KM	8-12-4	

NOTES:

1. WIRE LENGTH TOLERANCES TO BE: 6 TO 12 INCHES, $^{+0.50}_{-0.00}$; 12 TO 48 INCHES, $^{+1.00}_{-0.00}$
2. IDENTIFY CONNECTORS WITH APPLICABLE ORIGIN DESIGNATION.
3. IDENTIFY WITH PART NUMBER AND REVISION LETTER BY MEANS OF A TAG, LABEL, OR SIMILAR METHOD.

PL 22696100 -02

DETACHED LISTS

GENERAL SUPPLEMENT SHEET

CONTROL DATA MINNEAPOLIS, MINNESOTA	CONNECTOR ASSEMBLY - 61 PIN	A	DOCUMENT NO. 22696100	REV. A
			SHEET 2 OF	

NOTES CONTINUED:

4. DETACHED LIST 22696102 DETAILS THE TOTAL PARTS REQUIREMENT FOR CABLES 22696100 AND 22696101. DETACHED LISTS 22696101 AND 22696100 DETAIL THE PARTS REQUIREMENT FOR THE INDIVIDUAL CABLES. CHANGES TO ANY OF THE INDIVIDUAL CABLES MUST BE REFLECTED IN THE 2269102 DETACHED LIST.

FORM AA 1670

BY		DATE	CHKD.		DATE	APPD.		DATE

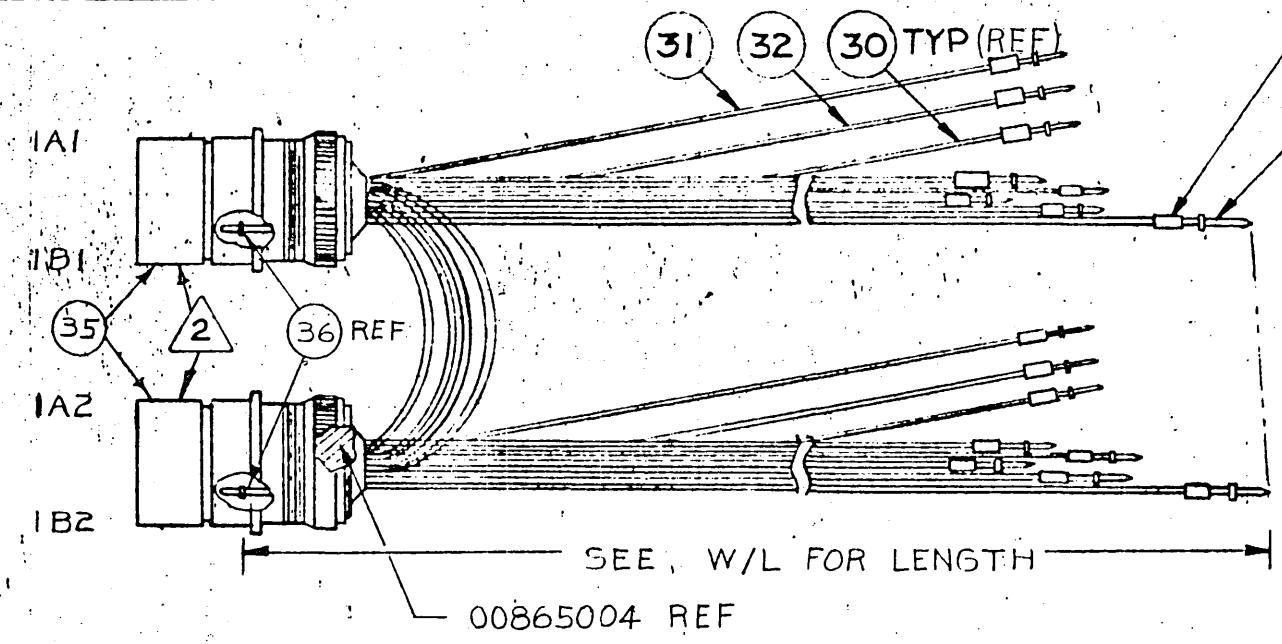
GENERAL SUPPLEMENT SHEET

CONTROL DATA
COMPUTER DIVISION

CONNECTOR ASSEMBLY - 61 PIN

DOCUMENT NO.	REV.
A 22696100	A

SHEET 3 OF



REF DESIGNATION (FOR REFERENCE ONLY)	
GROUP	ORIGINS
22696100	1A1 - 1A2
22696101	1B1 - 1B2

BY	DATE	CHKD.	DATE	APPD.	DATE

FORM 587

CONTROL DATA | CONNECTOR ASSEMBLY - 61 PIN | CODE IDENT | SHEET 4 | DOCUMENT NO. 22696100 | REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	1	24	1	11	1A1	A1	36	B12	21	33,34	BIT 0 +
			92	12.50		A2		B12	25		BIT 0 -
	2		1	11		A3		B12	14		BIT 1 +
			94	10.50		A4		B12	13		BIT 1 -
	3		1	10.50		A5		B12	6		BIT 2 +
			96	10		A6		B12	3		BIT 2 -
	4		1	11.50		A7		B11	21		BIT 3 +
			98	12		A8		B11	25		BIT 3 -
	5		1	11.50		A9		B11	14		BIT 4 +
			90	11.50		A10		B11	13		BIT 4 -
	6		2	11.50		B1		B11	6		BIT 5 +
			92	11		B2		B11	3		BIT 5 -
	7		2	12.50		B3		B10	21		BIT 6 +
			94	12.50		B4		B10	25		BIT 6 -
	8		2	12.50		B5		B10	14		BIT 7 +
			96	12		B6		B10	13		BIT 7 -
	9		2	12.50		B7		B10	6		BIT 8 +
		24	98	12	1A1	B8	36	B10	3	33,34	BIT 8 -

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CONTROL DATA	CONNECTOR ASSEMBLY - 61 PIN -	CODE IDENT	SHEET 5		DOCUMENT NO. 22696100	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	10	24	2	13.50	1A1	B9	36	B9	21	33, 34	BIT 9 +
			90	13.50		B10		B9	25		BIT 9 -
	11		3	13.50		C1		B9	14		BIT 10 +
			92	13		C2		B9	13		BIT 10 -
	12		3	13		C3		B9	6		BIT 11 +
			94	13		C4		B9	3		BIT 11 -
	13		3	24		C5		F12	6		PARITY +
			96	24		C6		F12	3		PARITY -
	14		3	10.50		C7		A11	5		CHANNEL BUSY +
			98	11		C8		A11	2	33, 34	CHANNEL BUSY -
	15		3	6		C9		1A2	C9	34	JUMPER
			90	6		C10		1A2	C10	34	JUMPER
	16		4	10.50		D1		A11	21	33, 34	READ +
			92	11		D2		A11	24		READ -
	17		4	10.50		D3		A11	6		WRITE +
			94	10.50		D4		A11	13		WRITE -
	18		4	11.50		D5		A10	5		CONNECT +
		24	96	12	1A1	D6	36	A10	2	33, 34	CONNECT -

CONTROL DATA	CONNECTOR ASSEMBLY - 61 PIN	CODE IDENT	SHEET 6	DOCUMENT NO. 22696100	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	19	24	4	11.50	1A1	D7	36	A10	6	33, 34	FUNCTION +
			98	11.50		D8		A10	13		FUNCTION -
	20		4	11.50		D9		A10	21		DATA SIGNAL +
			90	12		D10		A10	24		DATA SIGNAL -
	21		5	12.50		E1		A09	7		REPLY +
			92	12.50		E2		A09	11		REPLY -
	22		5	12.50		E3		A09	21		REJECT +
			94	12.50		E4		A09	17		REJECT -
	23		5	13		E5		A09	24		END OF RECORD +
			96	13		E6		A09	20		END OF RECORD -
	24		5	12.50		E7		A09	10		PARITY ERROR +
			98	12.50		E8		A09	14	33, 34	PARITY ERROR -
	25		5	6		E9		1A2	E9	34	JUMPER
			90	6		E10		1A2	E10	34	JUMPER
	26		6	11.50		F1		A10	20	33, 34	WORD MARK +
			92	11.50		F2		A10	17		WORD MARK -
	27		6	9.50		F3		A12	5		MASTER CLEAR +
		24	94	10	1A1	F4	36	A12	2	33, 34	MASTER CLEAR -

CONTROL DATA	CONNECTOR ASSEMBLY - 61 PIN	CODE IDENT	SHEET 7		DOCUMENT NO. 22696100	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	28	24	6	6	1A1	F5	36	1A2	F5	34	JUMPER
			96	6		F6		1A2	F6		JUMPER
	29		6	6		F7		1A2	F7		JUMPER
			98	6		F8		1A2	F8	34	JUMPER
	31		2	8.50		F9		TB1	2	33, 34	+20V. TAPER PIN BLOCK
	32		6	10.50	1A1	F10		TB3	2	33, 34	-20V. TAPER PIN BLOCK
	30	24	0	12.50	1A1	GND	36	TB2	2	33, 34	

CONTROL DATA CONNECTOR ASSEMBLY - 61 PIN | CODE IDENT | SHEET 8 | DOCUMENT NO. 22696100 | REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	1	24	1	9.50	1A2	A1	36	B12	23	33, 34	BIT 0 +
			92	9.50		A2		B12	27		BIT 0 -
	2		1	9.50		A3		B12	16		BIT 1 +
			94	9.50		A4		B12	15		BIT 1 -
	3		1	9.50		A5		B12	8		BIT 2 +
			96	9.50		A6		B12	5		BIT 2 -
	4		1	10.50		A7		B11	23		BIT 3 +
			98	10.50		A8		B11	27		BIT 3 -
	5		1	10.50		A9		B11	16		BIT 4 +
			90	10.50		A10		B11	15		BIT 4 -
	6		2	10.50		B1		B11	8		BIT 5 +
			92	10.50		B2		B11	5		BIT 5 -
	7		2	11.50		B3		B10	23		BIT 6 +
			94	11.50		B4		B10	27		BIT 6 -
	8		2	11.50		B5		B10	16		BIT 7 +
			96	11.50		B6		B10	15		BIT 7 -
	9		2	11.50		B7		B10	8		BIT 8 +
		24	98	11.50	1A2	B8	36	B10	5	33, 34	BIT 8 -

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CONTROL DATA — CONNECTOR ASSEMBLY - 61 PIN | CODE IDENT | SHEET 9 | DOCUMENT NO. 22696100 | REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	10	24	2	12.50	1A2	B9	36	B9	23	33, 34	BIT 9 +
			90	12.50		B10		B9	27		BIT 9 -
	11		3	13.50		C1		B9	16		BIT 10 +
			92	12.50		C2		B9	15		BIT 10 -
	12		3	13		C3		B9	8		BIT 11 +
			94	12.50		C4		B9	5		BIT 11 -
	13		3	22		C5		E12	8		PARITY +
			96	22		C6		F12	5		PARITY -
	14		3	11.50		C7		A11	3		CHANNEL BUSY +
			98	12		C8		A11	4	33, 34	CHANNEL BUSY -
						C9		1A1	C9	34	JUMPER } REFERENCE
						C10		1A1	C10	34	JUMPER }
	16		4	11		D1		A11	23	33, 34	READ +
			92	11		D2		A11	26		READ -
	17		4	11.50		D3		A11	8		WRITE +
			94	11.50		D4		A11	11		WRITE -
	18		4	12.50		D5		A10	3		CONNECT +
		24	96	12.50	1A2	D6	36	A10	4	33, 34	CONNECT -

CONTROL DATA	CONNECTOR ASSEMBLY - 61 PIN	CODE IDENT	SHEET 10	DOCUMENT NO. 22696100	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	19	24	4	12.50	1A2	D7	36	A10	8	33, 34	FUNCTION +
			98	12.50		D8		A10	11		FUNCTION -
	20		4	12		D9		A10	23		DATA SIGNAL +
			90	10.50		D10		A10	26		DATA SIGNAL -
	21		5	13		E1		A09	5		REPLY +
			92	13		E2		A09	9		REPLY -
	22		5	13		E3		A09	19		REJECT +
			94	13		E4		A09	15		REJECT -
	23		5	13.50		E5		A09	26		END OF RECORDER +
			96	13.50		E6		A09	22		END OF RECORDER -
	24		5	13		E7		A09	12		PARITY ERROR +
			98	13		E8		A09	16	33, 34	PARITY ERROR -
						E9		1A1	E9	34	JUMPER } REFERENCE
						E10		1A1	E10	34	JUMPER }
	26		6	12		F1		A10	22	33, 34	WORD MARK +
			92	12		F2		A10	19		WORD MARK -
	27		6	11		F3		A12	3		MASTER CLEAR +
		24	94	11	1A2	F4	36	A12	4	33, 34	MASTER CLEAR -

CONTROL DATA	CONNECTOR ASSEMBLY - 61 PIN	CODE IDENT	SHEET 11		DOCUMENT NO. 22696100	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
		24			1A2	F5	36	1A1	F5	34	JUMPER
						F6		1A1	F6		JUMPER
						F7		1A1	F7		JUMPER
						F8		1A1	F8	34	JUMPER
	31		2	8 .50		F9		TB1	3	33, 34	+20V. TAPER PIN BLOCK
	32		6	8 .50	1A2	F10		TB3	3	33, 34	-20V. TAPER PIN BLOCK
	30	24	0	10.50	1A2	GND	36	TB2	3	33, 34	

REFERENCE

CONTROL DATA	CONNECTOR ASSEMBLY - 61 PIN	CODE IDENT	SHEET 12	DOCUMENT NO. 22696100	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	1	24	1	17.50	1B1	A1	36	A6	10	33, 34	STATUS BIT 0
			92	17		A2		A6	14		
	2		1	16.50		A3		A6	24		STATUS BIT 1
			94	16.50		A4		A6	20		
	3		1	17		A5		A6	7		STATUS BIT 2
			96	17		A6		A6	11		
	4		1	16.50		A7		A6	21		STATUS BIT 3
			98	16.50		A8		A6	17		
	5		1	16.50		A9		A7	10		STATUS BIT 4
			90	16.50		A10		A7	14		
	6		2	16		B1		A7	24		STATUS BIT 5
			92	16		B2		A7	20		
	7		2	16		B3		A7	7		STATUS BIT 6
			94	16		B4		A7	11		
	8		2	15.50		B5		A7	21		STATUS BIT 7
			96	15.50		B6		A7	17		
	9		2	15.50		B7		A8	10		STATUS BIT 8
		24	98	15.50	1B1	B8	36	A8	14	33, 34	

CONTROL DATA	CONNECTOR ASSEMBLY - 61 PIN	CODE IDENT	SHEET 13	DOCUMENT NO. 22696100	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	10	24	2	15	181	B9	36	A8	24	33, 34	STATUS BIT 9
			90	15		B10		A8	20		
	11		3	15		C1		A8	7		STATUS BIT 10
			92	15		C2		A8	11		
	12		3	15		C3		A8	21		STATUS BIT 11
	94		94	15		C4		A8	17		
	13		3	12.50		C5		A12	6		COMPUTER RUNNING
			96	12.50		C6		A12	13	33, 34	
	14		3	13		C7		A12	21	33, 34	NEGATE BCD
			98	13		C8		A12	24	33, 34	NEGATE BCD
	15		3	6		C9		182	C9	34	JUMPER
			90	6		C10		182	C10	34	JUMPER
	16		4	19		D1		A4	10	33, 34	INTERRUPT 0
			92	19		D2		A4	14		
	17		4	18.50		D3		A4	24		INTERRUPT 1
			94	18.50		D4		A4	20		
	18		4	19		D5		A4	7		INTERRUPT 2
		24	96	18.50	181	D6	36	A4	11	33, 34	

CONTROL DATA	CONNECTOR ASSEMBLY - 61 PIN	CODE IDENT	SHEET 14	DOCUMENT NO. 22696100	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	19	24	4	18.50	1B1	D7	36	A4	21	33, 34	INTERRUPT 3
			98	18.50		D8		A4	17		
	20		4	18		D9		A5	10		INTERRUPT 4
			90	18		D10		A5	14		
	21		5	17.50		E1		A5	24		INTERRUPT 5
			92	17.50		E2		A5	20		
	22		5	18		E3		A5	7		INTERRUPT 6
			94	17.50		E4		A5	11		
	23		5	17.50		E5		A5	21		INTERRUPT 7
			96	17.50		E6		A5	17	33, 34	
	24		5	6		E7		1B2	E7	34	JUMPER
			98	6		E8		1B2	E8		JUMPER
	25		5	21		E9		B2	4		INT. LOCKOUT OVERIDE
			90	21		E10		B2	5		
	26		6	6		F1		1B2	F1		JUMPER
			92	6		F2		1B2	F2		JUMPER
	27		6	6		F3		1B2	F3		JUMPER
		24	94	6	1B1	F4	36	1B2	F4	34	JUMPER

CONTROL DATA | CONNECTOR ASSEMBLY - 61 PIN | CODE IDENT | SHEET 15 | DOCUMENT NO. 22696100 | REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	28	24	6	6	1B1	F5	36	1B2	F5	34	JUMPER
			96	6		F6		1B2	F6		JUMPER
	29		6	6		F7		1B2	F7		JUMPER
			98	6		F8		1B2	F8	34	JUMPER
	31		2	10		F9		TB1	4	33, 34	+20V. TAPER PIN BLOCK
	32		6	8.50	1B1	F10		TB3	4	33, 34	-20V. TAPER PIN BLOCK
	31	24	0	8.50	1B1	GND	36	TB2	4	33, 34	

CONTROL DATA	CONNECTOR ASSEMBLY - 61 PIN	CODE IDENT	SHEET 16		DOCUMENT NO. 22696100	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	1	24	1	18.50	182	A1	36	A6	12	33, 34	STATUS BIT 0
			92	18.50		A2		A6	16		
	2		1	18		A3		A6	26		STATUS BIT 1
			94	18		A4		A6	22		
	3		1	19		A5		A6	5		STATUS BIT 2
			96	18.50		A6		A6	9		
	4		1	19.50		A7		A6	19		STATUS BIT 3
			98	18.50		A8		A6	15		
	5		1	18		A9		M7	12		STATUS BIT 4
			90	18		A10		A7	16		
	6		2	17		B1		A7	26		STATUS BIT 5
			92	17.50		B2		A7	22		
	7		2	18		B3		A7	5		STATUS BIT 6
			94	18		B4		A7	9		
	8		2	17.50		B5		A7	19		STATUS BIT 7
			96	17.50		B6		A7	15		
	9		2	17.50		B7		A8	12		STATUS BIT 8
		24	98	17	182	B8	36	A8	16	33, 34	

CONTROL DATA	CONNECTOR ASSEMBLY - 61 PIN	CODE IDENT	SHEET 17	DOCUMENT NO. 22696100	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	10	24	2	16.50	182	B9	36	A8	26	33, 34	STATUS BIT 9
			90	17		B10		A8	22		
	11		3	17.50		C1		A8	5		STATUS BIT 10
			92	17.50		C2		A8	9		
	12		3	16.50		C3		A8	19		STATUS BIT 11
			94	17		C4		A8	15		
	13		3	15		C5		A12	8		COMPUTER RUNNING
			96	15		C6		A12	11	33, 34	
	14		3	15		C7		A12	23	33, 34	NEGATE BCD
			98	15		C8		A12	26	33, 34	
				6		C9		1B1	C9	34	JUMPER
				6		C10		1B1	C10	34	JUMPER (REFERENCE)
	16		4	20		D1		A4	12	33, 34	INTERRUPT 0
			92	20		D2		A4	16		
	17		4	19.50		D3		A4	26		INTERRUPT 1
			94	20		D4		A4	22		
	18		4	20.50		D5		A4	5		INTERRUPT 2
		24	96	20	182	D6	36	A4	9	33, 34	

CONTROL DATA | CONNECTOR ASSEMBLY - 61 PIN | CODE IDENT. | SHEET 18 | DOCUMENT NO. 22696100 | REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	19	24	4	19.50	1B2	D7	36	A4	19	33, 34	INTERRUPT 3
			98	20		D8		A4	15		
	20		4	19.50		D9		A5	12		INTERRUPT 4
			90	19.50		D10		A5	16		
	21		5	18.50		E1		A5	26		INTERRUPT 5
			92	19		E2		A5	22		
	22		5	19.50		E3		A5	5		INTERRUPT 6
			94	19		E4		A5	9		
	23		5	19		E5		A5	19		INTERRUPT 7
			96	19		E6		A5	15	33, 34	
						E7		1B1	E7	34	JUMPER
						E8		1B1	E8		JUMPER
	25		5	21		E9		B2	2		INT. LOCKOUT OVER RIDE
			90	21		E10		B2	3		
	26		6	6		F1		1B1	F1		JUMPER
			92	6		F2		1B1	F2		JUMPER
	27		6	6		F3		1B1	F3		JUMPER
		24	94	6	1B2	F4	36	1B1	F4	34	JUMPER

REFERENCE

REFERENCE

AA3183

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HAND TABS

60440800 A

DWN	K. McLAUGHLIN	8-9-4	CONTROL DATA
CHKD	[illegible]	8-13-74	
ENG	[illegible]	8-22-74	ARHOPS
MFG	[illegible]	8-23-74	CODE IDENT
APPR	[illegible]	8-22-74	

TITLE	PREFIX	DOCUMENT NO.	REV.
WIRE LIST - POWER JUMPERS, DATA CHANNEL CONVERTER	WL	22696300	A
FIRST USED ON 6681-F		SHEET 1 OF 5	

SHEET REVISION STATUS

5	4	3	2	1
A	A	A	A	A

REVISION RECORD

REV	ECO	DESCRIPTION	DRFT	DATE	APP
A		CLASS A DRAWING	KM	8-9-4	[illegible]

NOTES:

PL 22696300
DETACHED LISTS

AA3180 REV. 8/71

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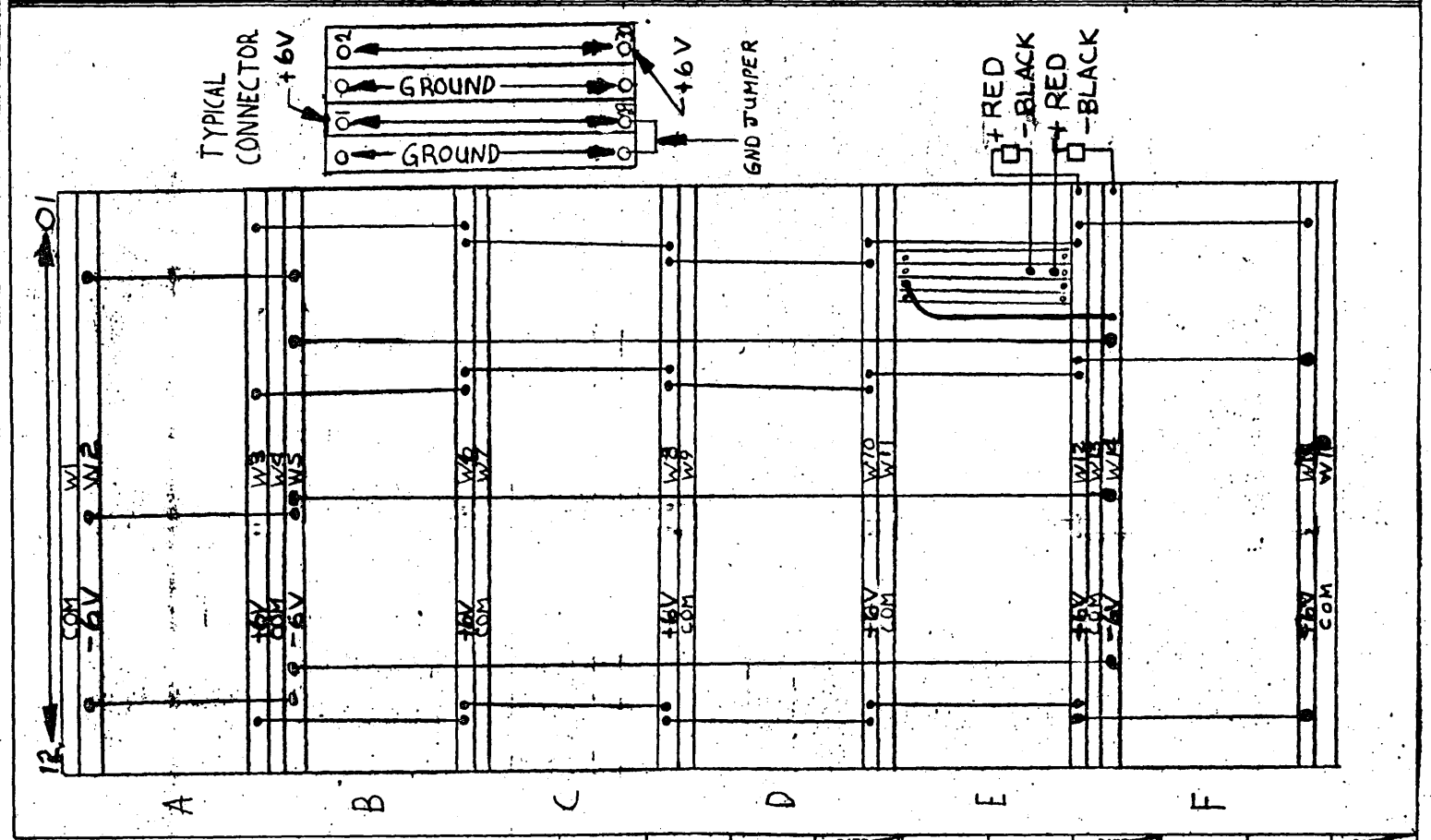
GENERAL SUPPLEMENT SHEET

CONTROL DATA CORPORATION
COMPUTER DIVISION

WIRE LIST - POWER JUMPERS, DATA CHANNEL CONVERTER

DOCUMENT NO.	REV.
WL 22696300	A

SHEET 2 OF



FORM 587

BY	DATE	CHKD.	DATE	APPD.	DATE

CONTROL DATA	W/L - PWR JUMPERS DCC	CODE IDENT	SHEET 3	WL	DOCUMENT NO. 22696300	REV. A

CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
	1	24	2	2	ALL CONN	PIN 30		ALL BUS BARS	+6		72 JUMPERS
	2	24	0	2	ALL CONN	GND		ALL CONN	PIN 29		72 JUMPERS
	3	24	6	2	CONN 4↔12 ROW A	PIN 1		BUS BAR W 2	-6V		9 JUMPERS
	3	24	6	2	CONN 2, 9↔12 ROW B	PIN 1		BUS BAR W 5	-6V		5 JUMPERS
	3	24	6	2	CONN 12 ROW F	PIN 1		BUS BAR W 14	-6V		1 JUMPER
	6	18	2	5	W3	+6V	7	W6	+6V	7	PUT (3) WIRES FROM
					W6	+6V		W8	+6V		ONE +6V BUS BAR TO
					W8	+6V		W10	+6V		THE OTHER +6V BUS
					W10	+6V		W12	+6V		BAR BELOW AT. SEE
	6	18	2	5	W12	+6V		W15	+6V		SHEET 2.
	4	18	6	5	W2	-6V	7	W5	-6V	7	3 JUMPERS (SEE SHT 2)
	12	18	6	18	W5	-6V	9, 10	W14	-6V		3 JUMPERS (SEE SHT 2)
	5				CONN	GND		ALL BUS BARS	-6		-6V (3 CAPACITORS) 1
	5				ALL BUS BARS	+6		CONN	GND		+6V (6 CAPACITORS) 2
	8	18	0	18	TB 2	PIN 6	9, 10	LOGIC CHASS GND		9, 10	CONN TO NEAREST LOGIC CHASS. GND.
	11				C1			TB 1	PIN 10		CONNECT CAPACITORS
	11				C1 & C2			TB 2	PIN 1&10		BETWEEN TERMINATOR
	11				C2			TB 3	PIN 1		BLOCKS ON CABLE BRACKET

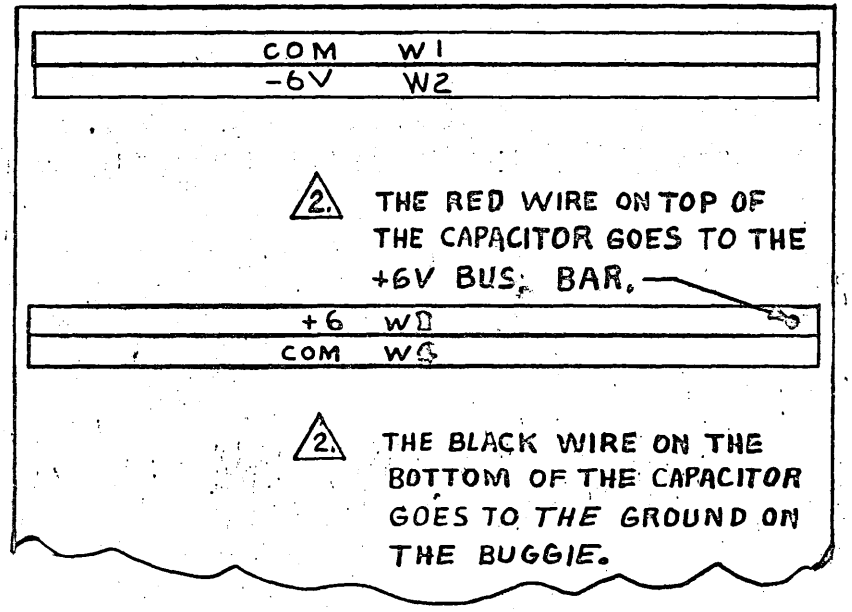
GENERAL SUPPLEMENT SHEET

CONTROL DATA CORPORATION
COMPUTER DIVISION

WIRE LIST - POWER JUMPERS, DATA CHANNEL CONVERTER

WL 22696300 REV. A

SHEET 4 OF



FRONT VIEW (CHASSIS)

1. THE CAPACITOR FOR THE -6V BUS BAR MUST HAVE THE BLACK LEAD INSTALLED IN THE -6V BUS BAR AND THE RED LEAD INSTALLED IN THE GROUND OF THE BUGGIE.

FORM 587

BY		DATE	CHKD.		DATE	APPD.		DATE

GENERAL SUPPLEMENT SHEET

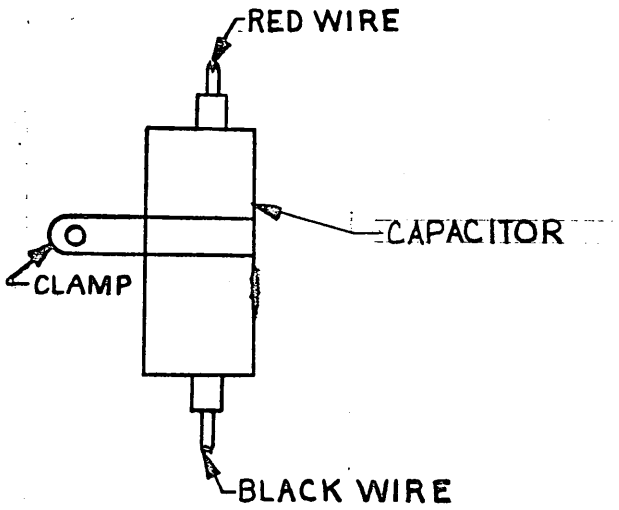
CONTROL DATA CORPORATION
COMPUTER DIVISION

WIRE LIST - POWER JUMPERS, DATA CHANNEL CONVERTER

DOCUMENT NO.	REV.
WL 22696300	A

SHEET 5 OF

SIDE VIEW (RIGHT SIDE OF CHASSIS)



FORM 587

BY		DATE	CHKD.		DATE	APPD.		DATE

SECTION 10

EQUATION SUMMARY

(Not applicable to this equipment.)

COMMENT SHEET

MANUAL TITLE CDC 6681-F Data Channel Converter
Customer Engineering Manual

PUBLICATION NO. 60440800 REVISION E

FROM: NAME: _____

BUSINESS ADDRESS: _____

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