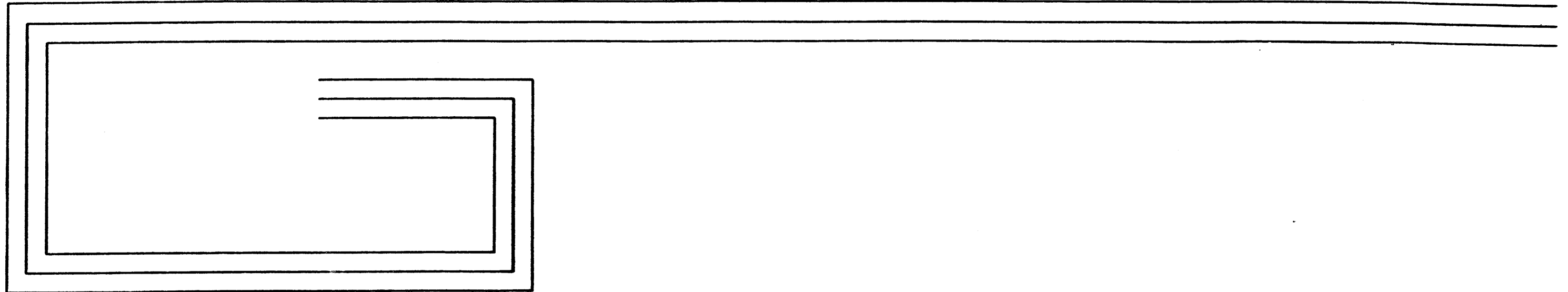


Honeywell



SYSTEM CONSOLE

~~WLCC001/2A~~

UNIT MANUAL

58009846

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RECORD OF REVISION			
REV	DATE	AUTHORIZATION	PAGES AFFECTED
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C	7/81	PHAFKJ905	58009846-040 58009846-030 58009846-014 58009846-015, 1-1F 58009846-017, 2 58009846-001, 1F 58009846-051, 2-1 thru 2-5F 58009846-100, 3-14, 3-24, 3-25, 3-26
D	7/82	PHAFKJ086	58009846-040 58009846-014, 1F 58009846-015, 1-1F 58009846-017, 4F 58009846-051, 2-2
E	5/83	PHAFKJ915	58009846-040 58009846-014, 1F 58009846-015, 1-1F 58009846-017, 4F 58009846-051, 2-2 58009846-100, 3-1, 3-7, 3-8, 3-11, 3-12, 3-13, 3-25

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G	4/85	PHAFKJ921	58009846-031 58009846-040 58009846-014, 1F 58009846-001, 1 thru 4F 58009846-051, 2-1 thru 2-8F 58009846-100, 3-6, 3-7, 3-19, 3-24 thru 3-27, 3-31 3-33 thru 3-35, 3-44 58009846-900, 1F
H	1/86	PHAFKJ924	58009846-040 58009846-014, 1F 58009846-015, 1-1F 58009846-100, 3-6, 3-25, 3-27 thru 3-32

HONEYWELL CONFIDENTIAL & PROPRIETARY

TABLE OF CONTENTS

BINDER, B-SIZE, 4-RING, 2-INCH (RED)	58009884-008
STANDARD SEPARATOR TABS	58009885-016
SPINE (1-INCH)	58009846-031
TITLE PAGE	58009846-040
PREFACE PAGE	58009846-011
RECORD OF REVISION	58009846-014
TABLE OF CONTENTS	58009846-001
GENERAL (TAB)	58009846-015
PHYSICAL OUTLINE (TAB)	58009846-051
THEORY OF OPERATION (TAB)	58009846-100
WIRE LIST (TAB)	58009846-800
CKT/LOGIC (TAB)	
CONJK-1 LOGIC BOARD	<u>IDENT NO.</u>
FUNCTIONAL PWA CONJK-1	58081298
FIRMWARE ACCUMULATION KIT	58081300
FIRMWARE COMPONENT INSTALLATION LIST	58081301
FIRMWARE INSTALLATION INSTRUCTIONS	58081299
ASSEMBLY DRAWING CONJK HDUHC	58053000 RSS
COMPONENT INSTALLATION LIST	58053002
LOGIC DIAGRAM	58053004

<u>DESCRIPTION</u>	<u>PAGE NO.</u>
GENERAL	1-1
INTRODUCTION	1-1
CONTENTS OF MANUAL	1-1
REFERENCE DOCUMENTATION	1-1
FEEDBACK	1-1
PHYSICAL OUTLINE	2-1
GENERAL DESCRIPTION	2-2
VIP7205/7201(60Hz)/7255/7251(50Hz) VIDEO DISPLAY TERMINALS	2-2
ROSY 26/26.1/32 RECEIVE ONLY (RO) TELEPRINTER TERMINALS (WITHOUT KEYBOARD)	2-2
ROSY 26/26.1 SERIAL PRINTER (WITH KEYBOARD)	2-3
SYSTEM CONSOLE LARGE SCREEN MONITOR	2-3
SYSTEM CONSOLE PEDESTAL (WITH SWITCH OPTION)	2-4
SYSTEM CONSOLE POD OPTION (PROCESSOR ACTIVITY MONITOR)	2-5

<u>DESCRIPTION</u>	<u>PAGE NO.</u>
THEORY OF OPERATION	3-1
DESCRIPTION	3-1
IOM CHANNEL ADAPTER (CONJK-1 BOARD)	3-1
LOCAL INTERFACE	3-1
SLAVE INTERFACE	3-1
REMOTE INTERFACE	3-1
CSU (CENTRAL SYSTEM UNIT) DPU INTERFACE	3-1
IOM INTERFACE	3-2
INTERTERMINAL DIALOG	3-2
CONFIGURATION	3-2
TYPICAL CHANNEL ADAPTER CONFIGURATION	3-3
CHANNEL ADAPTER SCC CONFIGURATION	3-3
SWITCHING CAPABILITY (NOT REMOTE MAINTENANCE)	3-4
SINGLE CHANNEL CONFIGURATION	3-4
DUAL CHANNEL CONFIGURATION	3-5
CHANNEL ADDRESS SWITCH	3-6
CHANNEL ADAPTER SELF-TEST	3-6
TERMINAL DEVICES	3-7
LOCAL TERMINAL	3-7
DISPLAY	3-8
INTERFACE	3-8
VIP KEYBOARDS	3-8
ALPHANUMERIC/SPECIAL GRAPHIC KEYS	3-8
COMMAND CONTROL KEYS	3-8
NUMERIC KEYPAD	3-10
EDITING CONTROL FUNCTION KEYS	3-10
KEYBOARD CONSIDERATIONS	3-11
BUFFERED TRANSMISSION (VIP7205/7255)	3-11
DISPLAY CONSIDERATIONS	3-11
CURSOR FUNCTION OPERATION	3-11
HOST SYSTEM REQUIREMENTS	3-12
PARITY ERROR IN CHARACTER CODES	3-12
OPERATOR ACCESSIBLE CONTROLS AND INDICATORS	3-12
FRONT PANEL CONTROLS AND INDICATORS (VIP7205/7255)	3-12
FRONT PANEL CONTROLS AND INDICATORS (VIP7201/7251)	3-12
REAR PANEL CONTROLS (VIP7205/7255)	3-13
INTERNAL SWITCHES (VIP7205/7255)	3-14
INITIAL POWER-UP/POWER-DOWN PROCEDURES (VIP7205/7255)	3-14
SLAVE TERMINALS	3-14
TRANSMISSION	3-15
PRINTING	3-15
ELECTRICAL (ROSY 26/26.1)	3-16
ENVIRONMENT	3-16
APPLYING POWER (ROSY 26/26.1)	3-16

HONEYWELL CONFIDENTIAL & PROPRIETARY

<u>DESCRIPTION</u>	<u>PAGE NO.</u>
REMOVING POWER (ROSY 26/26.1)	3-16
PRINT TEST (ROSY 26/26.1)	3-16
PRINT TEST (ROSY 32)	3-16
HORIZONTAL TABULATION (ROSY 26/26.1)	3-16
VERTICAL TABULATION AND PAGE LENGTH SET (ROSY 26/26.1)	3-16
OPERATOR PANEL (ROSY 26/26.1)	3-18
OPERATOR AND CONFIGURATION PANELS (ROSY 32/S32)	3-19
OPERATOR PANEL CONTROLS AND INDICATORS	3-19
CONFIGURATION PANEL CONTROLS	3-20
REMOTE TERMINALS	3-22
CONTROLS AND INDICATORS	3-22
KEYBOARD	3-22
GRAPHIC CHARACTER SET	3-22
KEYBOARD COMMAND KEYS	3-23
LARGE SCREEN MONITOR 58056588-015	3-24
ELECTRICAL	3-24
SYNCHRONIZATION	3-24
RETRACE TIME	3-24
DISPLAY	3-24
POWER SUPPLY	3-24
ENVIRONMENTAL	3-24
MECHANICAL	3-24
HUMAN FACTORS	3-24
INITIAL TURN-ON PROCEDURE	3-25
VERTICAL CIRCUIT ADJUSTMENT	3-25
HORIZONTAL CIRCUIT ADJUSTMENT	3-25
PROCESSOR ACTIVITY DISPLAY (POD)	3-26
CSU BAR GRAPH CALIBRATION	3-26
LEVEL 66/68 AND DPS 8 SERIES BAR GRAPH CALIBRATION	3-26
SWITCH PANEL OPTION	3-27
SWITCHING PROCEDURE	3-28
PRINTER SWITCH	3-28
MODEM SWITCH	3-28
SPECIAL CHARACTERS	3-29
ESCAPE CHARACTER	3-29
IGNORE CHARACTER	3-29
SPACE CHARACTER	3-29
ILLEGAL FORMATS	3-30
ASCII CODE	3-30
HORIZONTAL TAB	3-30
OPERATOR INPUTS	3-31

<u>DESCRIPTION</u>	<u>PAGE NO.</u>
CONTROL SEQUENCES AND SPECIAL CHARACTER COMMANDS	3-31
OPERATOR REQUEST	3-31
OPERATOR INPUT ERROR	3-31
END OF MESSAGE	3-31
CHANNEL ADAPTER BAUD RATE	3-31
SYSTEM INITIALIZE	3-31
SYSTEM BOOTLOAD	3-31
LOAD FIRMWARE (CSU ONLY)	3-31
DPU INITIALIZE (CSU ONLY)	3-31
REMOTE MAINTENANCE INTERFACE	3-32
REMOTE MAINTENANCE MODE CONDITIONS	3-32
RELINQUISH MODE CONDITIONS	3-32
REMOTE MAINTENANCE COMMANDS (VERBS)	3-33
#ENABLE REMOTE	3-33
#DISABLE REMOTE	3-33
#ENABLE MAINTENANCE	3-33
#ALLOW MAINTENANCE	3-34
#ENABLE TEXT	3-34
#ENABLE CONSOLE	3-34
#ENABLE MONITOR	3-34
#DISABLE MONITOR	3-34
#ENABLE INITIALIZE	3-34
#DISABLE INITIALIZE	3-34
#RELINQUISH	3-35
#ENABLE CHANNEL	3-35
#STATUS	3-35
PERIPHERAL CONTROL WORD (PCW)	3-36
PERIPHERAL CONTROL WORD FORMAT	3-36
DEVICE INSTRUCTION (BITS 0-5)	3-36
DEVICE ADDRESS (BITS 6-11)	3-36
ADDRESS EXTENSION (BITS 12-17)	3-36
MASK (BIT 21)	3-36
CONTINUE (BIT 22)	3-36
NOT USED (BITS 23-35)	3-36
ADDRESS EXTENSION	3-37
SERVICES	3-37
LIST SERVICES	3-37
NOT USED (BITS 0-17, 31-32)	3-37
ADDRESS EXTENSION (BITS 18-20, 33-35)	3-37
CHANNEL NUMBER (BITS 21-26)	3-37
SERVICE REQUEST (BITS 27-29)	3-37
MOD FIELD (BIT 30)	3-37
DATA CONTROL WORD (DCW) LIST	3-38
DATA CONTROL WORD FORMAT	3-38
IGNORED (BITS 0-17, 24-35)	3-38
CHARACTER POSITION (BITS 18-20)	3-38
TYPE (BITS 22-23)	3-38

HONEYWELL CONFIDENTIAL & PROPRIETARY

<u>DESCRIPTION</u>	<u>PAGE NO.</u>
DATA SERVICE	3-38
STATUS SERVICE	3-39
CHARACTER POSITION AND READ (BITS 0-3)	3-39
NOT USED (BITS 4-17, 30-32)	3-39
CHANNEL NUMBER (BITS 21-26)	3-39
SERVICE REQUEST (BITS 27-29)	3-39
ENTRY PRESENT (BIT 0)	3-39
POWER (BIT 1)	3-39
MAJOR AND SUBSTATUS (BITS 2-11)	3-39
SOFTWARE STATUS (BITS 12-15)	3-39
INITIATION INTERRUPT (BIT 16)	3-39
ABORT (BIT 17)	3-39
IOM/CHANNEL STATUS (BITS 18-23)	3-39
MBZ (BITS 24-35)	3-39
PROGRAM INTERRUPT SERVICE	3-39
NOT USED (BITS 0-12, 16-20, 30-35)	3-40
PROGRAM INTERRUPT LEVEL (BITS 13-15)	3-40
CHANNEL NUMBER (BITS 21-26)	3-40
SERVICE REQUEST (BITS 27-29)	3-40
USER FAULTS	3-40
IOM CENTRAL-DETECTED USER FAULTS	3-40
CHANNEL-DETECTED USER FAULTS	3-40
SYSTEM FAULTS	3-40
INSTRUCTIONS	3-41
READ (03)	3-41
WRITE (13)	3-42
WRITE ALERT (51)	3-42
REQUEST STATUS (00)	3-42
RESET STATUS (40)	3-43
ASCII WRITE (33)	3-43
READ ASCII (23)/READ UNECHOED ASCII (43)	3-44
T&D READ (07)	3-44
STATUS	3-44
CHANNEL READY (0000)	3-45
NO SUBSTATUS (000000)	3-45
DEVICE ATTENTION (0010)	3-45
DATA ALERT (0011)	3-45
TRANSFER TIMING ERROR (000001)	3-45
OPERATOR INPUT ERROR (000100)	3-45

<u>DESCRIPTION</u>	<u>PAGE NO.</u>
OPERATOR DISTRACTED (001000)	3-45
INCORRECT FORMAT (0100X0)	3-45
MESSAGE LENGTH ALERT (100000)	3-45
COMMAND REJECT (0101)	3-45
INVALID INSTRUCTION CODE (000001)	3-45
OPTIMUM REPLACEABLE UNIT (ORU)	3-45
TEST AND DIAGNOSTIC PROGRAMS	3-45
FINAL CHECKOUT	3-46

LIST OF ILLUSTRATIONS

<u>FIGURE</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
2-1	SYSTEM CONSOLE (VIP7205/7255 AND PRINTER R26/R26.1)	2-1
2-1.1	SYSTEM CONSOLE (VIP7201/7251 AND PRINTER R32/S32)	2-2
2-1.2	SYSTEM CONSOLE (VIP7201/7251 AND PRINTER R32/S32)(NEW FURN) ..	2-3
2-2	VIDEO DISPLAY TERMINALS	2-4
2-3	RECEIVE ONLY (RO) TELEPRINTER TERMINALS (WITHOUT KEYBOARD) ..	2-4
2-4	ROSY 26/26.1 REMOTE TERMINAL (WITH KEYBOARD)	2-5
2-5	SYSTEM CONSOLE LARGE SCREEN MONITOR	2-5
2-6	SYSTEM CONSOLE PEDESTAL WLCC011A (WITH SWITCH OPTION)	2-6
2-6.1	SYSTEM CONSOLE FURNITURE (NEW)	2-6
2-7	SYSTEM CONSOLE POD WLCC012A	2-7
2-7.1	SYSTEM CONSOLE POD WLCC012B	2-8
3-1	TYPICAL CHANNEL ADAPTER CONFIGURATION	3-3
3-2	CHANNEL ADAPTER SCC CONFIGURATION	3-3
3-3	SWITCHING CAPABILITY	3-4
3-4	CHANNEL ADAPTER CONFIGURED FOR SINGLE CHANNEL OPERATION	3-4
3-5	CHANNEL ADAPTER CONFIGURED FOR DUAL CHANNEL OPERATION	3-5
3-6	IOM CHANNEL ADAPTER (CONJK-1 BOARD)	3-6
3-7	LOCAL TERMINALS	3-8
3-8	VIP KEYBOARDS	3-9
3-9	VIP7205(60Hz)/7255(50Hz) FRONT PANEL CONTROLS AND INDICATORS	3-12
3-10	VIP7201/7251 FRONT PANEL CONTROLS AND INDICATORS	3-12
3-11	VIP7205(60Hz)/7255(50Hz) REAR PANEL CONTROLS	3-13
3-12	VIP7205(60Hz)/7255(50Hz) INTERNAL SWITCH SETTINGS	3-14
3-13	SLAVE TERMINALS (WITHOUT KEYBOARD)	3-15
3-14	ROSY 26/26.1 INTERNAL SWITCH SETTINGS WITH CPU-2 BOARD, 78118450	3-17
3-15	ROSY 26/26.1 INTERNAL SWITCH SETTINGS WITH CPU-2A BOARD, 78119300	3-17

HONEYWELL CONFIDENTIAL & PROPRIETARY

LIST OF ILLUSTRATIONS (CONT.)

<u>FIGURE</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
3-16	ROSY 26/26.1 OPERATOR PANEL	3-18
3-17	ROSY 32/S32 OPERATOR AND CONFIGURATION PANELS	3-19
3-18	ROSY 26/26.1 PRINTING TEST FLOWCHART	3-21
3-19	ROSY 26/26.1 CHECKOUT FLOWCHART	3-21
3-20	ROSY 26/26.1 REMOTE TERMINAL (WITH KEYBOARD)	3-22
3-21	ROSY 26/26.1 KEYBOARD CHARACTER LAYOUT	3-23
3-22	LARGE SCREEN MONITOR 58056588-015	3-25
3-23	(DELETED)	
3-24	PROCESSOR ACTIVITY DISPLAY (POD)	3-26
3-25	STAND-UP VERSION OF THE PEDESTAL WITH SWITCH PANEL OPTION	3-27
3-26	SWITCH PANEL OPTION SHOWING PRINTER SWITCH IN PORT 1 POSITION	3-28
3-27	SWITCH PANEL OPTION SHOWING MODEM SWITCH	3-28
3-28	MAINTENANCE MODE DATA FLOW	3-32

LIST OF TABLES

<u>TABLE NO.</u>	<u>DESCRIPTION</u>	<u>PAGE NO.</u>
3-1	CHANNEL ADAPTER (CONJK-1 BOARD) SELF-TEST LED DISPLAY	3-7
3-2	VIP7205(60Hz)/7255(50Hz) FRONT PANEL CONTROLS AND INDICATORS	3-12
3-3	VIP7205(60Hz)/7255(50Hz) REAR PANEL CONTROLS	3-13
3-4	6- TO 7-BIT CODE CONVERSION	3-29
3-5	7- TO 6-BIT CODE CONVERSION	3-30
3-6	RM! COMMANDS (VERBS)	3-33
3-7	CHARACTERS RECEIVED FROM ACTIVE KEYBOARD - SINGLE CHANNEL ,OR EITHER KEYBOARD - DUAL CHANNEL	3-37
3-8	CHARACTERS RECEIVED FROM INACTIVE KEYBOARD - SINGLE CHANNEL, OR EITHER KEYBOARD - DUAL CHANNEL	3-36

HONEYWELL CONFIDENTIAL & PROPRIETARY

GENERAL

INTRODUCTION

This manual is intended to be an aid to the Customer Services Division (CSD) personnel charged with the maintenance of the System Console and its attendant options.

CONTENTS OF MANUAL

This manual is divided into the following sections:

GENERAL

Includes general information such as tab contents description. It identifies the associated freestanding documentation and contains a "feedback" statement.

PHYSICAL OUTLINE

Contains illustrations of the various components of the System Console design.

THEORY OF OPERATION

WIRE LISTS

REFERENCE DOCUMENTATION

The following documents are associated with the System Console:

o EPS-1 Input/Output Multiplexer	43A239854
o Rosy 24 Serial Printer EPS	78120075
o Rosy 26 Serial Printer EPS	78120074
o Teleprinter Terminals Operation	A327
o Rosy 24/26 Switch Setting Chart	60134929
o Rosy 24 Serial Printer Purchase Spec	58040010
o Rosy 26 Serial Printer Purchase Spec	58040011
o VIP7205(60Hz)/7255(50Hz) Video Display Product Manual ..	FN66
o Feature Application Data	58052564
o Special Tools List	58056800
o System Console Installation Instructions	58009849
o Channel Adapter, CONJK-1 Board	58053000
o Component Installation List (CONJK-1)	58053002
o Logic Diagram (CONJK-1)	58053004
o Engineering Wire List (CONJK-1)	58053005
o Rosy 26.1 Teleprinter Product Design Description	A78120758
o Setup Guide for VIP7201 Display Terminals	CP91
o VIP7201 Display Terminal User's Reference Manual	CP92
o R32 Product Description	78398210

FEEDBACK

In order to keep this manual useful, current, and error-free, requests for corrections and suggestions to improve content and format are always welcome. Please submit to Honeywell, CSD Large Systems Product Support, P.O. Box 8000, MS-C84, Phoenix, AZ 85066.

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PHYSICAL OUTLINE

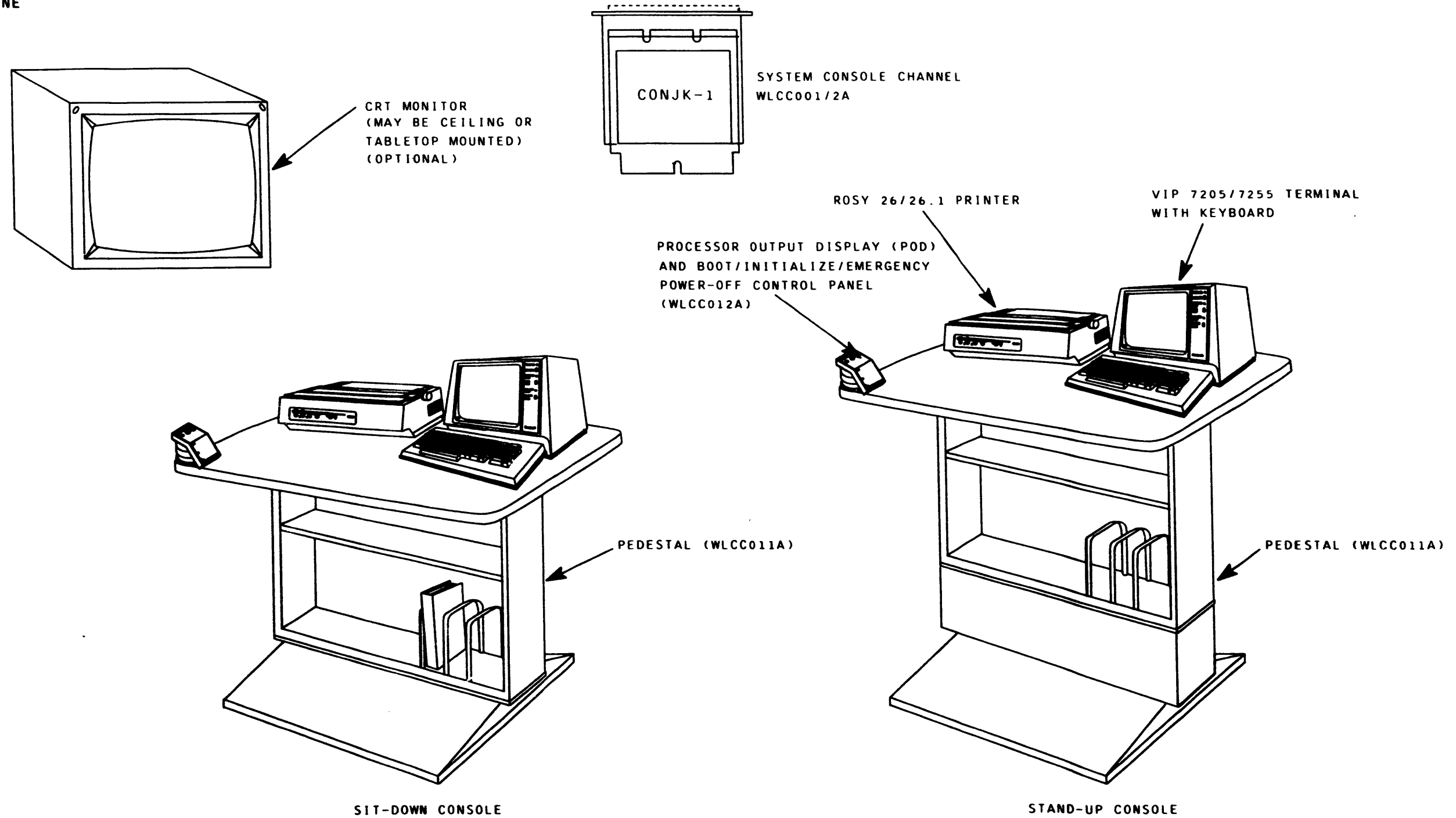


FIGURE 2-1. SYSTEM CONSOLE (VIP7205/7255 AND PRINTER R26/26.1)

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PHYSICAL OUTLINE (CONT.)

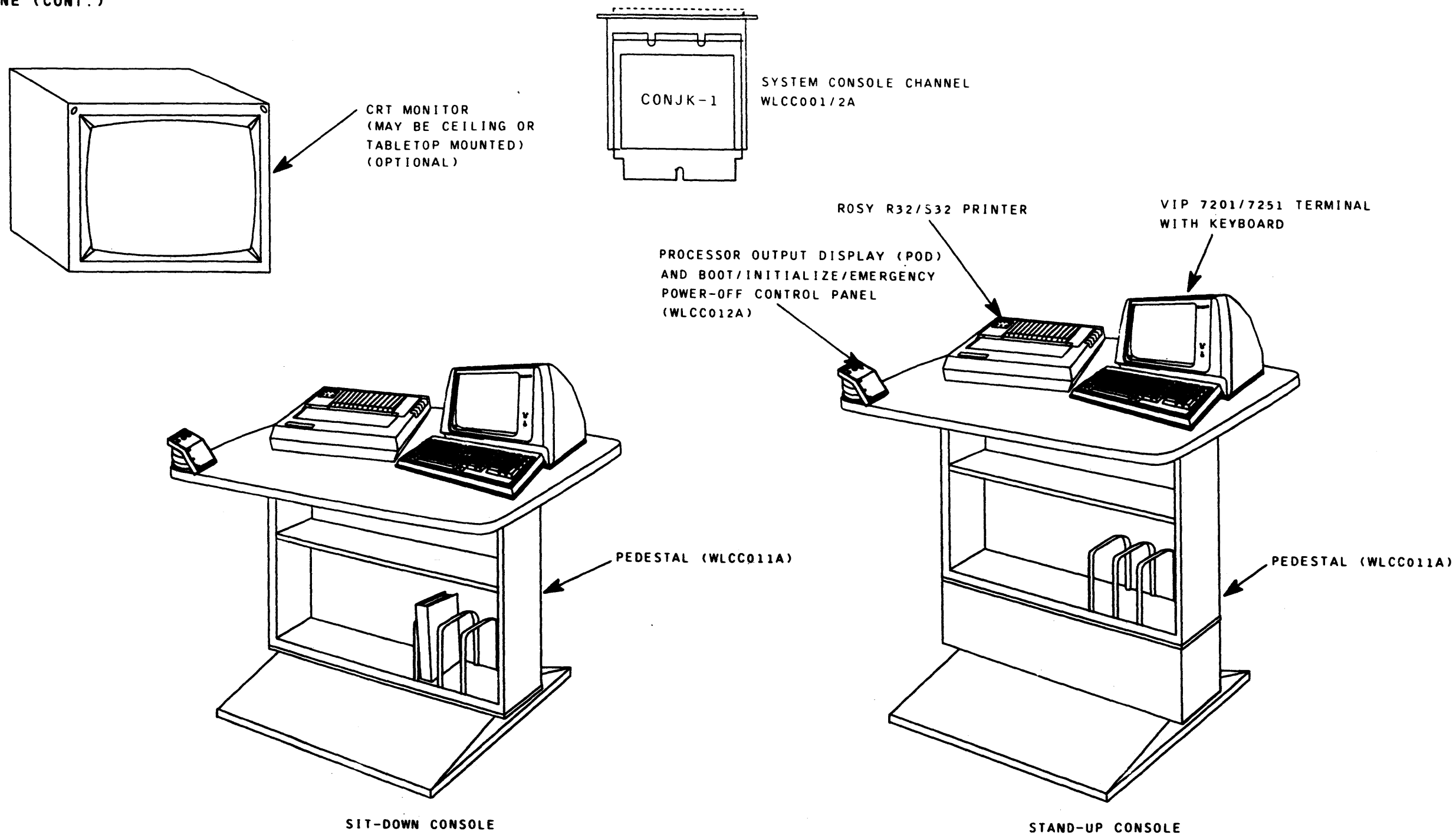
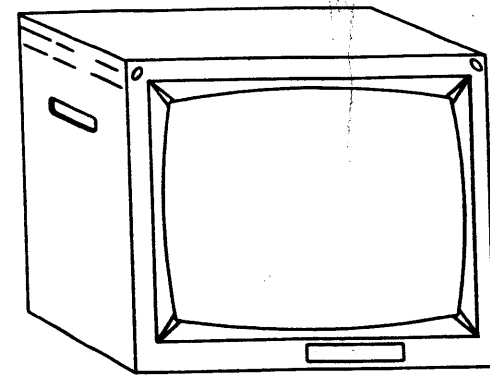


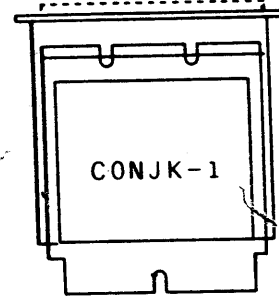
FIGURE 2-1.1 SYSTEM CONSOLE (VIP7201/7251 AND PRINTER R32/S32)

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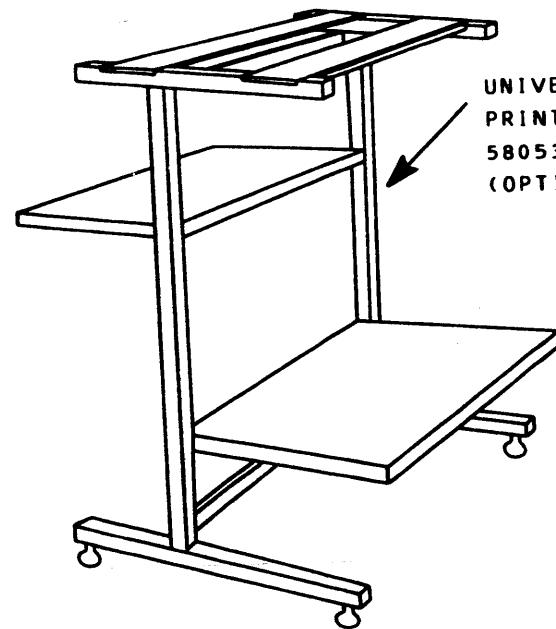
PHYSICAL OUTLINE (CONT.)



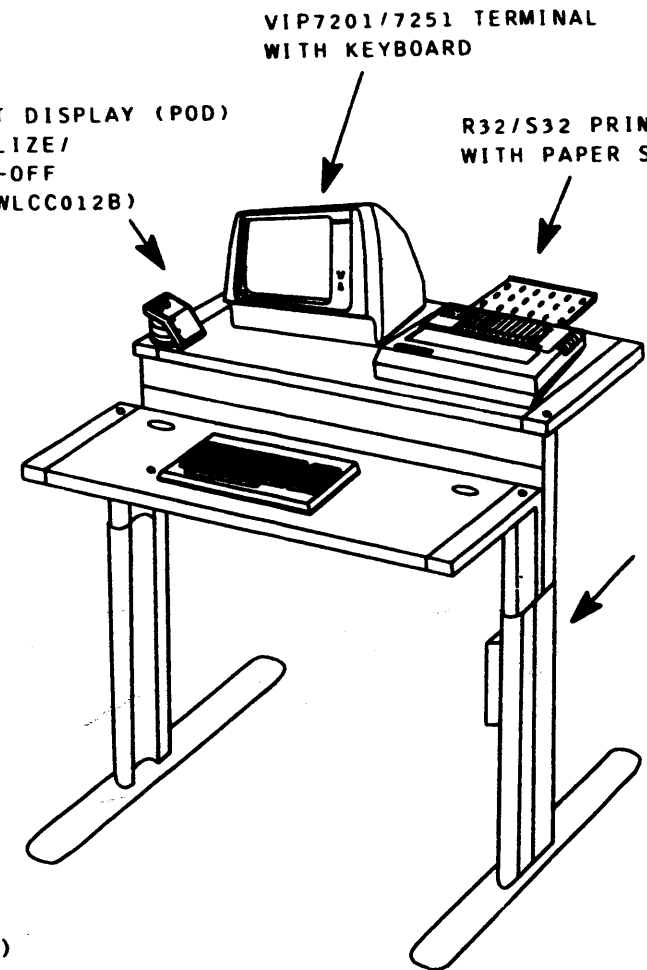
CRT MONITOR
(MAY BE CEILING OR
TABLETOP MOUNTED)
(OPTIONAL)



SYSTEM CONSOLE CHANNEL
WLCC001/2A



UNIVERSAL
PRINTER STAND
58053442-009
(OPTIONAL)



VIP7201/7251 TERMINAL
WITH KEYBOARD

PROCESSOR OUTPUT DISPLAY (POD)
AND BOOT/INITIALIZE/
EMERGENCY POWER-OFF
CONTROL PANEL (WLCC012B)

R32/S32 PRINTER
WITH PAPER STACKER

CONSOLE TABLE
58053442-002

(NEW CONSOLE FURNITURE AND POD)

FIGURE 2-1.2 SYSTEM CONSOLE (VIP7201/7251 AND PRINTER R32/S32)

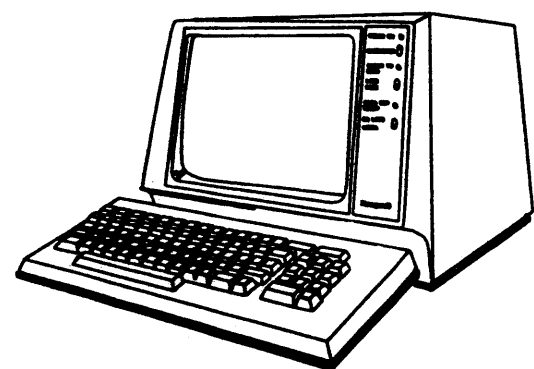
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GENERAL DESCRIPTION

VIP7205/7201(60Hz)/7255/7251(50Hz) VIDEO DISPLAY TERMINALS

The Visual Information Projection (VIP) video display terminals are self-contained tabletop devices, each with a keyboard connected by a ribbon cable to its CRT display (see Figure 2-2.) Each terminal provides both keyboard data entry and visual data display. The keyboard generates the 96 ASCII character set including both upper and lower case alphabet. The keyboard also contains function and control keys. The terminals communicate in the bit and character asynchronous mode at a transfer rate of 1200 bits per second (bps). The 12-inch CRT screen displays 1920 characters on 24 lines of 80 characters each.

NOTE: The VIP7201/7251 requires Keylock Modification Kit 58082247 which inhibits the tab key (|<--/-->|) to prevent an unwanted initialize signal being sent to the system (See: Modification Instruction 58082248 located in System Console Installation Manual 58009849 under Configuration "A" section, sheet 4-1).



VIP7205(60Hz)/7255(50Hz)



VIP7201(60Hz)/7251(50Hz)

FIGURE 2-2. VIDEO DISPLAY TERMINALS

PHYSICAL DESCRIPTION

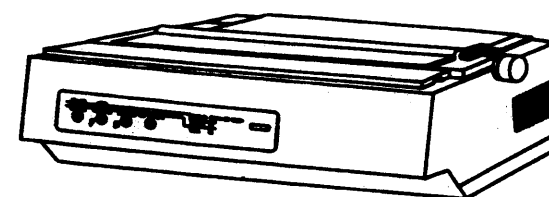
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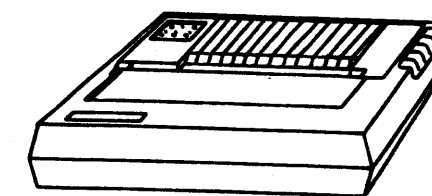
ROSY 26/26.1/32 RECEIVE ONLY (RO) TELEPRINTER TERMINALS (WITHOUT KEYBOARD)

The ROSY 26/26.1 teleprinter terminals are desk-top serial dot matrix receive only (RO) printers (see Figure 2-3). The dot matrix printers print the 96 ASCII character set in uppercase at a speed of 160 cps over 132 print positions. When more than 132 characters are received from the Host System without CR (carriage return) and LF (line feed) commands, the printers start a new line by automatically performing CR and LF command functions. The printers do not print during line feed or carriage return intervals. If a continuous data stream exists, characters are stored in a character buffer.

- NOTES: 1. One difference between the ROSY 26 and the 26.1/32 is the paper feed mechanism. In the ROSY 26, the paper is fed in at the top under the red plastic plate. In the ROSY 26.1/32, the paper is fed in at the lower rear. Unless otherwise specified in this manual, all references to the ROSY 26 also apply to the ROSY 26.1/32. The ROSY 32 operator panel is located at the top left rear corner instead of the front panel.
2. The Rosy 32 (R32) printer 58056588-028 and the S32 printer 58052598-001 are interchangeable. Everywhere in this manual that the ROSY 32 (R32) printer is referenced it also applies to the S32 printer.



ROSY 26/26.1



ROSY 32/S32

FIGURE 2-3. RECEIVE ONLY (RO) TELEPRINTER TERMINALS (WITHOUT KEYBOARD)

ROSY 26/26.1 SERIAL PRINTER (WITH KEYBOARD)

The ROSY 26 is a keyboard send/receive (KSR) printer used for data entry and/or hard copy output applications. The keyboard is similar to the standard typewriter keyboard. The 60 keys can generate all 128 codes of the ASCII set. The printable characters include 26 alphabetic upper and lowercase characters, 10 numeric and 34 special characters. The keyboard also includes 10 control keys (see Figure 2-4).

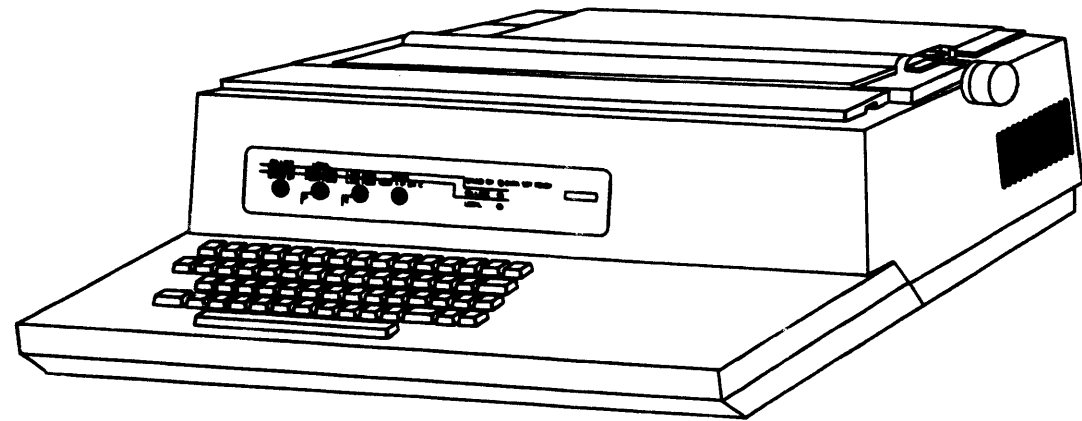


FIGURE 2-4. ROSY 26/26.1 REMOTE TERMINAL (WITH KEYBOARD)

SYSTEM CONSOLE LARGE SCREEN MONITOR

The System Console monitor is a solid state unit for use in industrial, commercial, and data display fields.

The System Console monitor has a single plug-in circuit board with silicon transistors. The unit is equipped with differential input for composite video signal to minimize hum and other extraneous pickup on long video feed cables. The 23-inch monitor is available with or without studs for versatile mounting configuration (see Figure 2-5). Several types of video monitors are available. Types 58056588-006 and 58056588-015 connect to the VIP7205/7255 terminals. Types 58056588-030/58081386-001 (60Hz) and 58056588-036/58081385-001 (50Hz) connect to the VIP7201/7251 terminals.

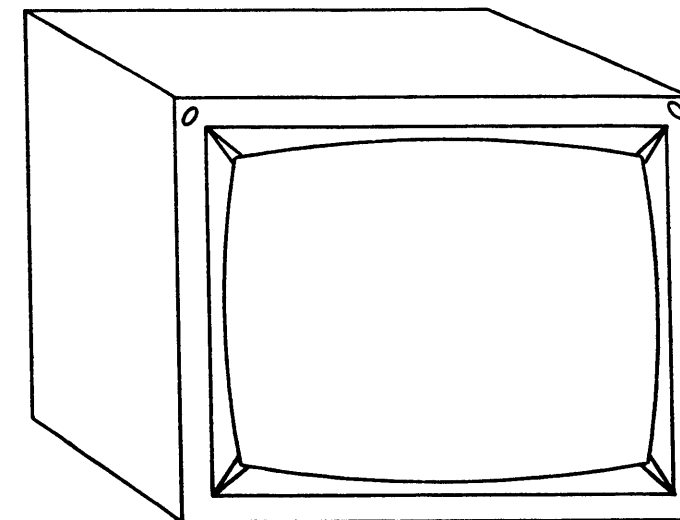


FIGURE 2-5. SYSTEM CONSOLE LARGE SCREEN MONITOR (TYPICAL)

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SYSTEM CONSOLE PEDESTAL WLCC011A (WITH SWITCH OPTION)

The System Console Pedestal is available in two styles, a stand-up version and a sit-down version. The pedestal supports both a VIP and a printer. It also supports the POD and the Communication Switch option (see Figures 2-6 and 2-7).

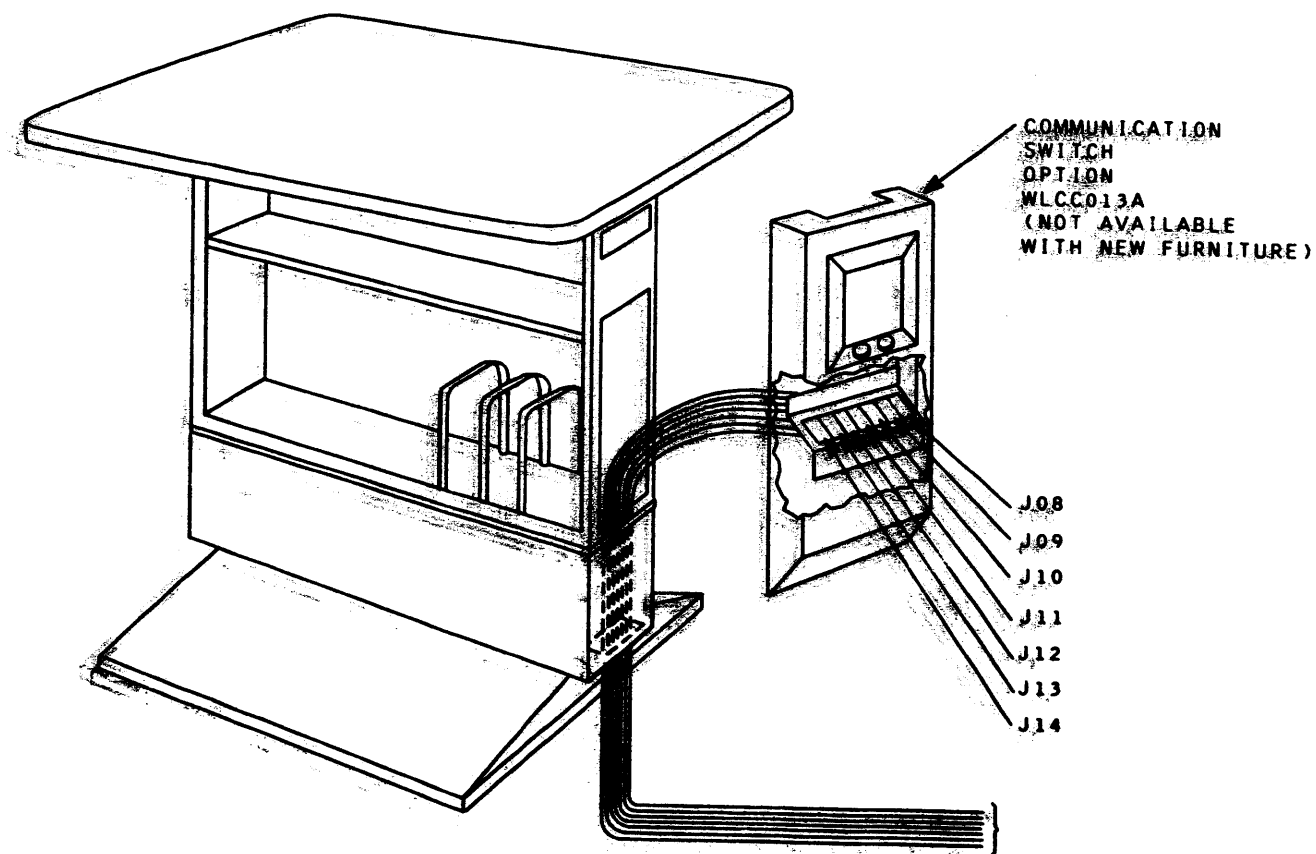


FIGURE 2-6. SYSTEM CONSOLE PEDESTAL WLCC011A (WITH SWITCH OPTION)

SYSTEM CONSOLE FURNITURE (NEW)

The new system console furniture consists of an adjustable split-table for the VIP/keyboard and printer and an optional universal printer stand (see Figure 2-6.1). The VIP table is also used to mount POD WLCC012B.

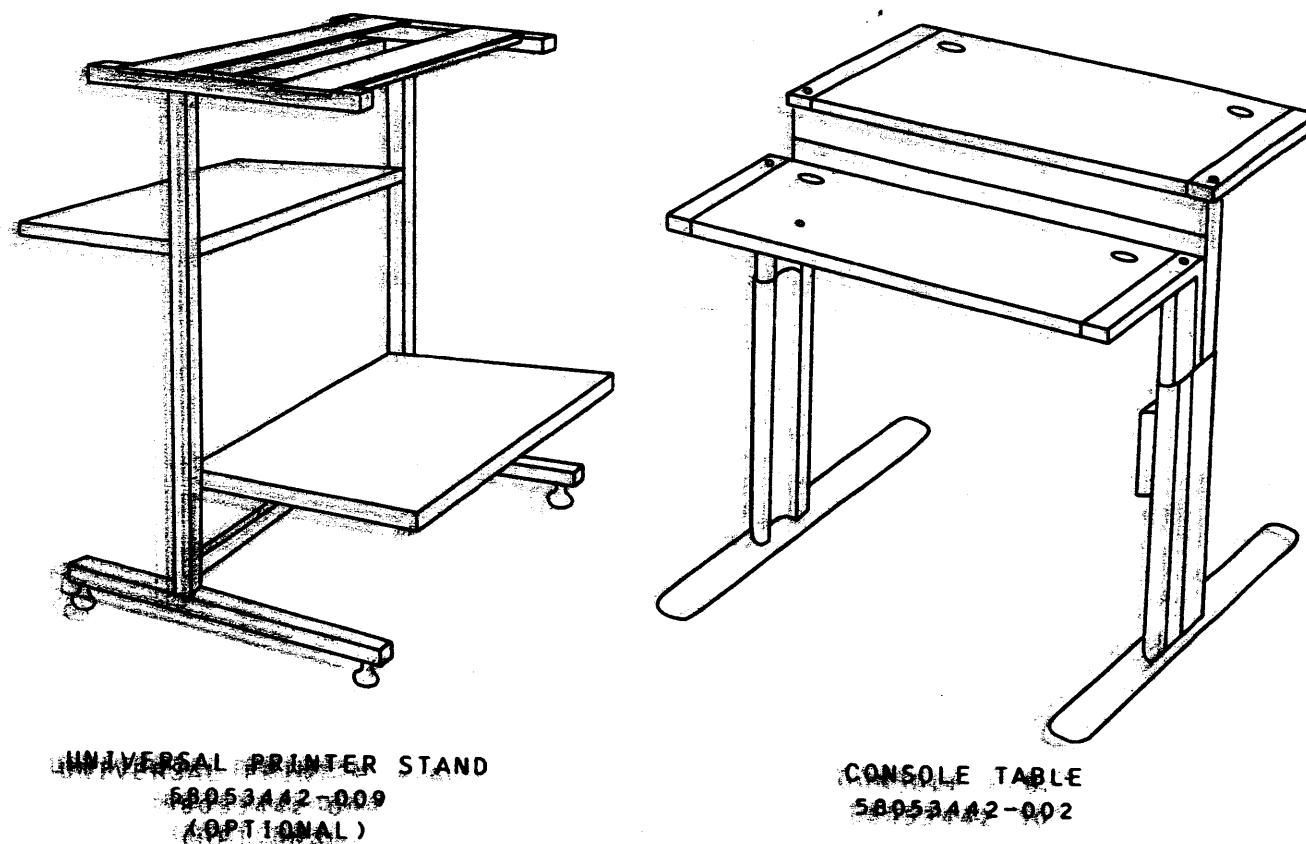


FIGURE 2-6.1 SYSTEM CONSOLE FURNITURE (NEW)

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PHYSICAL DESCRIPTION

SYSTEM CONSOLE POD (WLCC012A/WLCC012B)

NOTE: POD WLCC012A mounts on pedestal WLCC011A (ref: Installation Instruction 58052248); POD WLCC012B mounts on VIP table 58053442-002 (ref: Installation Instruction 58082620).

The POD is composed of three basic elements (see Figures 2-7 and 2-7.1):

- o A processor activity display panel and a control panel.
- o Cable connectors J01-J07 and a terminal board TB1.
- o A harness connecting the POD to the cable connectors and terminal board.

The POD includes the following indicators and pushbutton switches:

- o EMERGENCY POWER OFF Switch - This switch is used to turn off all power to the system in an emergency.
- o INITIALIZE Switch - This switch is used to initialize the system.
- o BOOT Switch - This switch is used to bootload the system.
- o CPU Activity Indicators - These indicators display the CPU instruction rate as a percentage of the maximum instruction rate for the CPU. One CPU activity indicator per CPU to a maximum of six.
- o DIS Indicator - This indicator is illuminated when the CPU is waiting for an interrupt. One CPU mode indicator per CPU to a maximum of six.

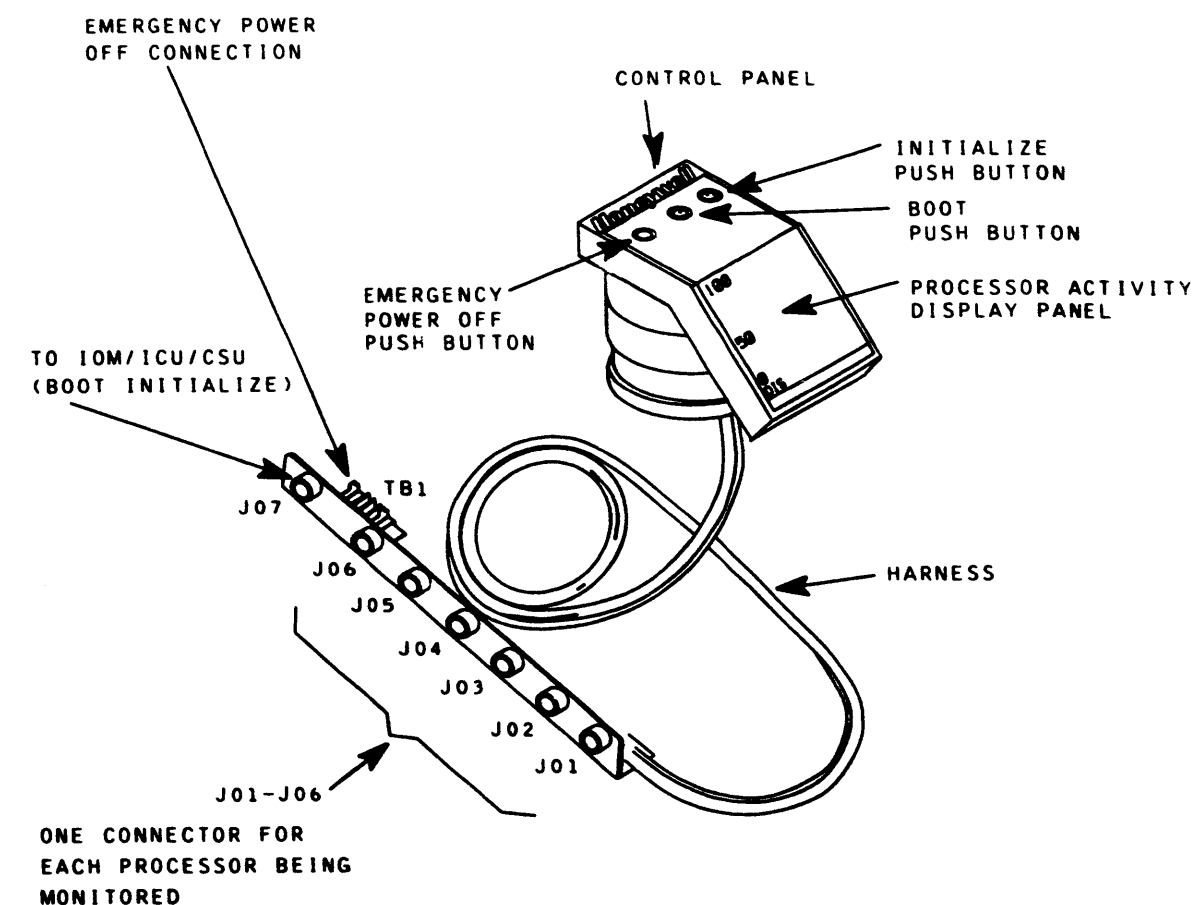


FIGURE 2-7. SYSTEM CONSOLE POD WLCC012A

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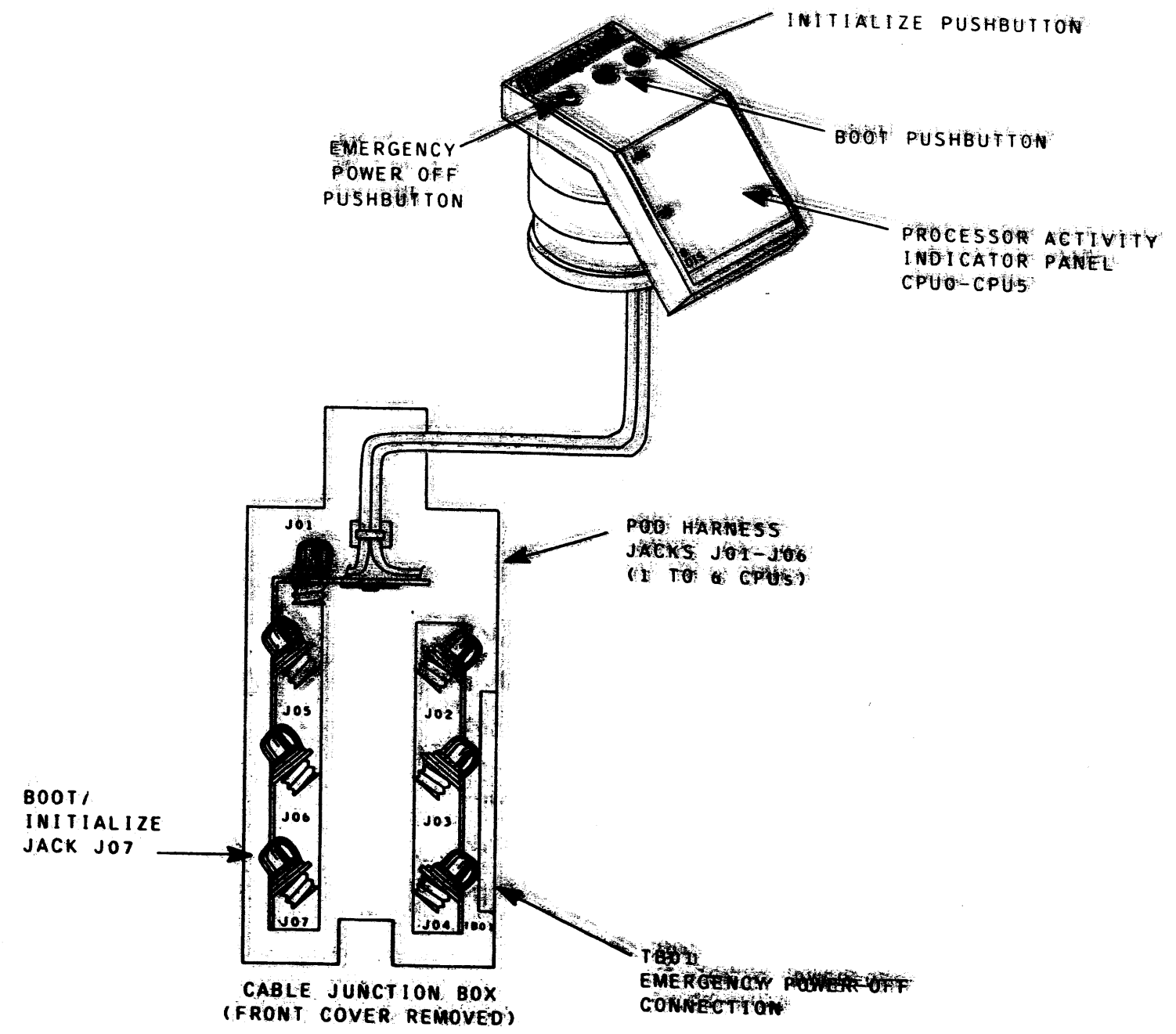


FIGURE 2-77.1 SYSTEM CONSOLE POD WLCC012B
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PHYSICAL DESCRIPTION

THEORY OF OPERATION

DESCRIPTION

The Low Cost Console (LCC) is a system which provides an operational and maintenance communication path through which onsite and offsite system diagnosis and maintenance may be accomplished on levels 66/68, 66/68DPS, DPS-E, DPSC and the CSU system using standard Honeywell terminal devices.

IOM CHANNEL ADAPTER (CONJK BOARD)

The LCC Channel Adapter (CONJK board) provides the means through which communications between LCC terminal devices, the CPU, the IOM, the CSU and the system software is made possible. There is, however, no communications path between CSU DPU and the IOM through the channel adapter. In an L66/68 DPS system, the DPU appears as a terminal device to the channel adapter. The IOM channel adapter is capable of supporting three RS232 interfaces and an interface for the CSU (Central System Unit) Diagnostic Processor Unit. The three RS232 interfaces are identified as:

- Local
- Slave - to the local
- Remote

Local Interface

The local interface is used for the connection of a VIP7205 or A TWU1005 (Rosy 26) keyboard printer. Devices connected to this interface have full operational control of the system including systems initialize and bootload.

Slave Interface

This console channel adapter interface is used for the connection of a VIP and the large 23-inch CRT monitor. The 23-inch monitor connects to the VIP. The slave interface may also consist of a PRU1002 (Rosy 26) printer without a keyboard. Data available at this interface is a copy of that input/output available at the local interface. This interface cannot be used for any console input.

Remote Interface

This interface will support a dial-in communication line capability which will provide for the remote connection of either a TWU1005 keyboard/printer or a VIP. This configuration is supported on the CSU and other Level 66/68, L66/68 DPS systems which do not use the DPS-E DPU. On DPS-E systems this connection is to the DPS-E DPU.

The DPS-E DPU will then support the remote terminal connection. This interface and the devices connected to it is dedicated to remote maintenance activities and will not be available for any customer utilization.

Operation of this interface will be disabled should the Local Console (local interface) fail.

The channel adapter, after initialization and the return key is depressed, performs a self test, identifies the bit rate of the terminal devices and causes a terminal device to print an opening message such as "Console Ready 1.3#". Should the self test fail the terminal then prints "#Self Test Failed#". (See "Self Test.")

The local and remote channel adapter communication ports operate in the full duplex one way simultaneous mode with the channel adapter performing echoplexing. The echoplexing function is enabled only when a read command is received from the system and for the operator command verbs.

The remote channel logic flow depends upon whether one or two addressable IOM channels are configured. When the channel adapter is configured for one addressable IOM channel, the remote channel is controlled by the channel adapter and not by the software. When two addressable IOM channels are configured, the highest channel number assigned to the channel adapter, which must be an odd number, is logically connected to the remote channel.

The channel adapter is compatible with the present L66/68 console software and provides the capability to allow separation of operational and maintenance console traffic over a single console channel adapter.

CSU (Central System Unit) DPU Interface

In addition to the three interfaces mentioned, the Low Cost Console Channel Adapter also supports an interface to the CSU DPU. This interface provides a communications path between the CSU DPU and the LCC console devices. This interface does not communicate with the host operating system.

The CSU DPU interface consists of seven bidirectional data lines, one strobe line to the DPU, one interrupt request line from the DPU, one operational line from the DPU, and one abort line to the DPU.

Operator dialogue with this interface will be enabled whenever (if the operational line is in the logical true state) the "#Enable Maintenance" command is received from an interactive console device.

The CSU DPU may initiate a communication by placing a Control D character on the interface and activating the interrupt line to the channel adapter. The channel adapter will service the CSU DPU interrupt only when there are no outstanding system activities. After the adapter has responded to an CSU DPU interrupt, any command received from the system will be delayed until the CSU DPU transaction is completed. An unsolicited message from the CSU DPU does not establish operator dialogue, as dialogue is established by receipt of the "#Enable Maintenance" command from an interactive console device only.

The channel adapter controls all data transfer between the CSU DPU and the channel adapter. When transferring data to the DPU, the DPU must accept the data when the channel adapter activates the strobe line.

When the DPU is transferring data to the channel adapter, the DPU signals the presence of data on the interface by activating the interrupt request line. The interrupt request line remains active until the channel adapter signals acceptance of the data by activating the strobe line which results in the interrupt request line from the DPU being reset.

IOM Interface

Two methods of establishing communications are used between the IOM central and the channel adapter. (1) A Peripheral Control Word (PCW) is issued to the channel by the IOM as a result of a connect instruction. (2) A request for service specifying the type of service required is received by the IOM from the channel.

Interterminal Dialogue

The LCC Channel Adapter permits conversation between the Local Terminal Device and the Remote Terminal Device without any interaction on the part of the operating system. The request for such a communication mode may come from either terminal station operator. Once this conversation mode is entered, all traffic between the console devices and the host Operating System(OS) will be delayed during the time the LCC Channel Adapter is busy in the interconsole communication process. No console traffic will be lost. Normal OS/console traffic can take place between interconsole messages. Either the local or remote operator will be able to disable the conversational mode.

The purpose of this mode of console interaction is to provide each customer installation with the capability for a unique remote console log-on procedure. In addition, once the remote terminal is on line, this conversational mode can be entered at any time by either console station for operator communication in managing system activities.

Configuration

The number of LCCs that may be supported by a system is dependent upon the operating system being used. Up to four LCCs including options may be supported by systems using GCOS. Level 68 Multics CP-6 will support one LCC and its attendant options.

TYPICAL CHANNEL ADAPTER CONFIGURATION -- The Low Cost Console configuration shown in Figure 3-1 depicts the IOM Channel Adapter (CONJK Logic Board) configured with one or two addressable IOM channels and three terminal devices. The terminal devices and channel adapter ports are labeled L(Local), S(Slave) and R(Remote) to identify the control function of each.

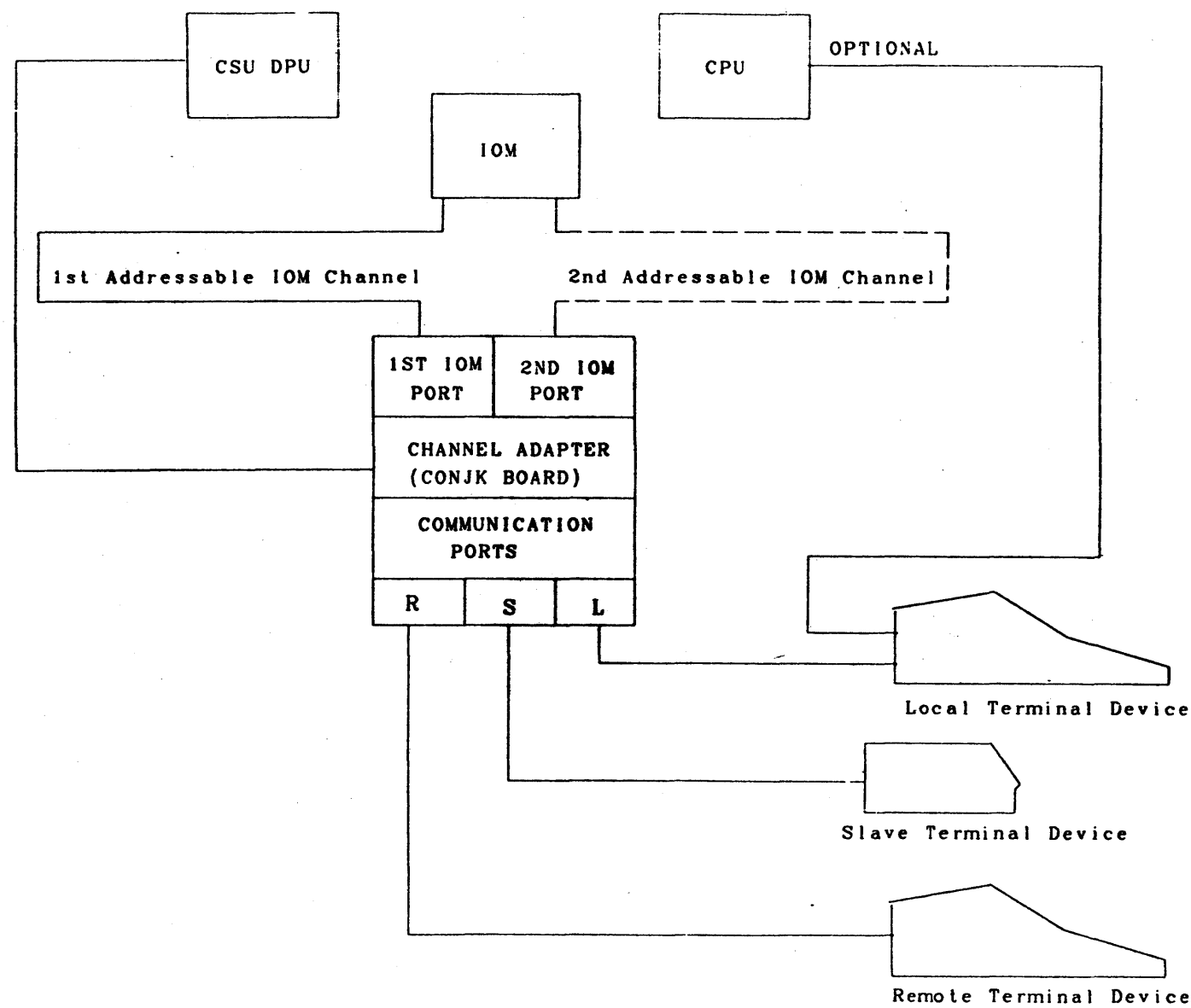


FIGURE 3-1. TYPICAL CHANNEL ADAPTER CONFIGURATION

CHANNEL ADAPTER SYSTEM CONTROL CONSOLE(SCC) CONFIGURATION -- The LCC provides the same console functions as that provided by the SCC as noted in Figure 3-2.

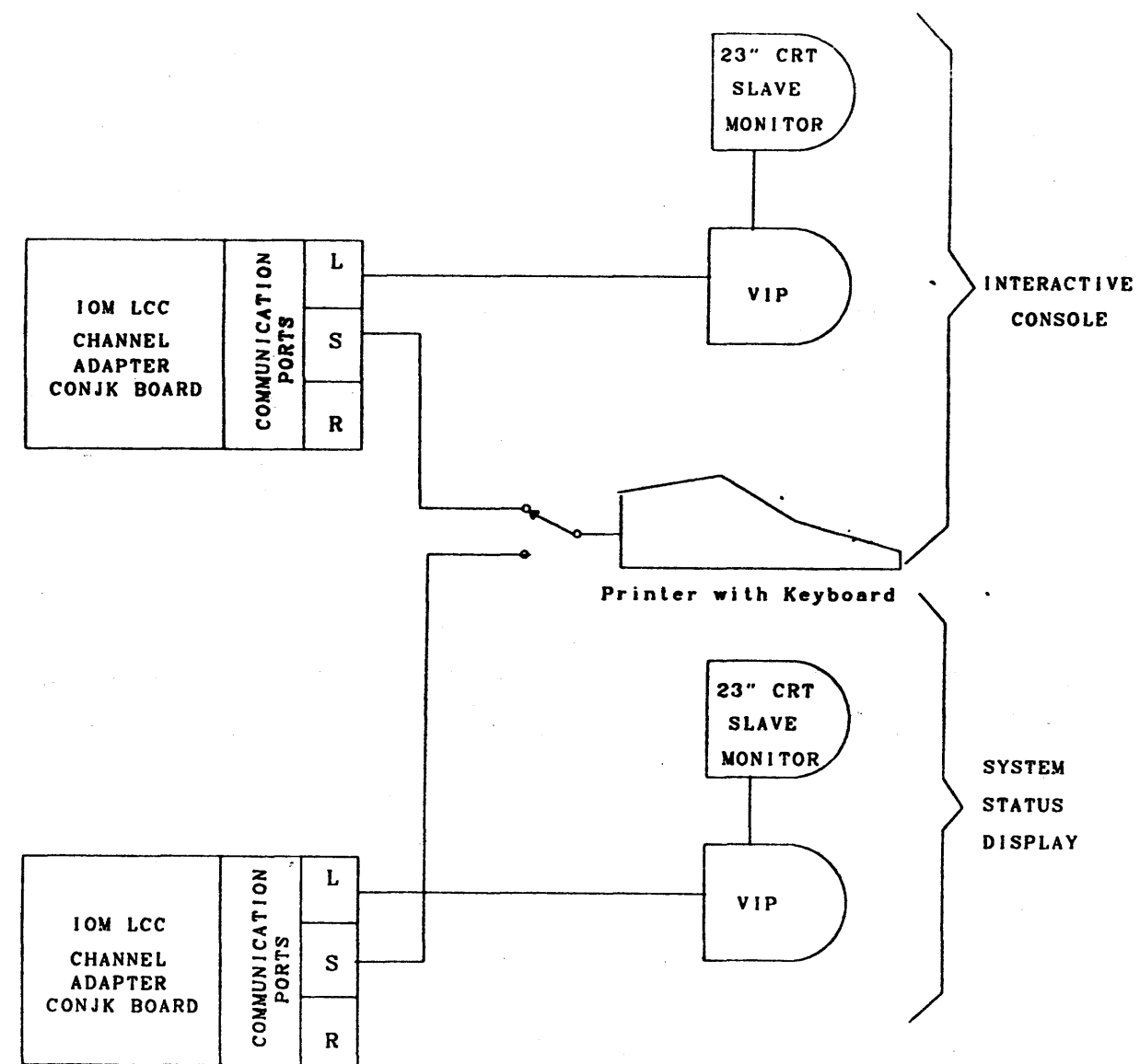


FIGURE 3-2. CHANNEL ADAPTER SCC CONFIGURATION

SWITCHING CAPABILITY (NOT REMOTE MAINTENANCE) -- The capability to allow the operator to physically switch to a remote terminal device and maintain local console printing is shown in Figure 3-3. In this configuration, when the Local Communication Port connection is switched to the remote device, the printer (a local device) is switched to the slave channel for the local hard copy.

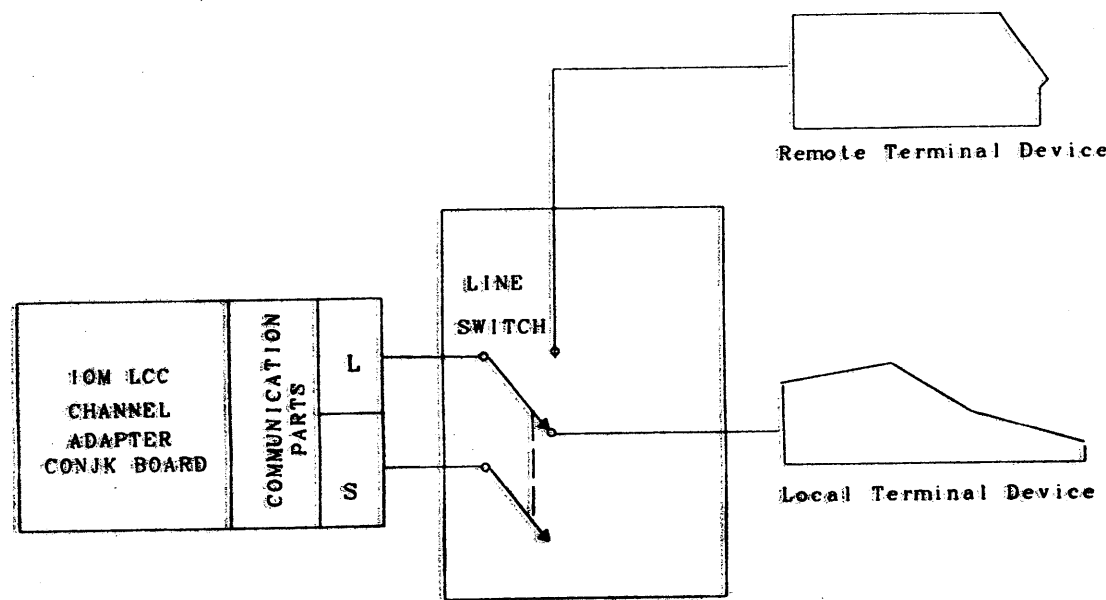


FIGURE 3-3. SWITCHING CAPABILITY

SINGLE CHANNEL CONFIGURATION -- The channel adapter control of the terminal device ports in a single channel configuration is depicted in Figure 3-4. In the single channel configuration, data from the IOM is printed simultaneously on both the local and remote terminals. However, only one terminal may input data to the IOM at any given time. Therefore, one keyboard is designated as "active" and one as "inactive". This designation is controlled by the break and control X characters. The active keyboard is shown diagrammatically as a physical switch in Figure 3-4.

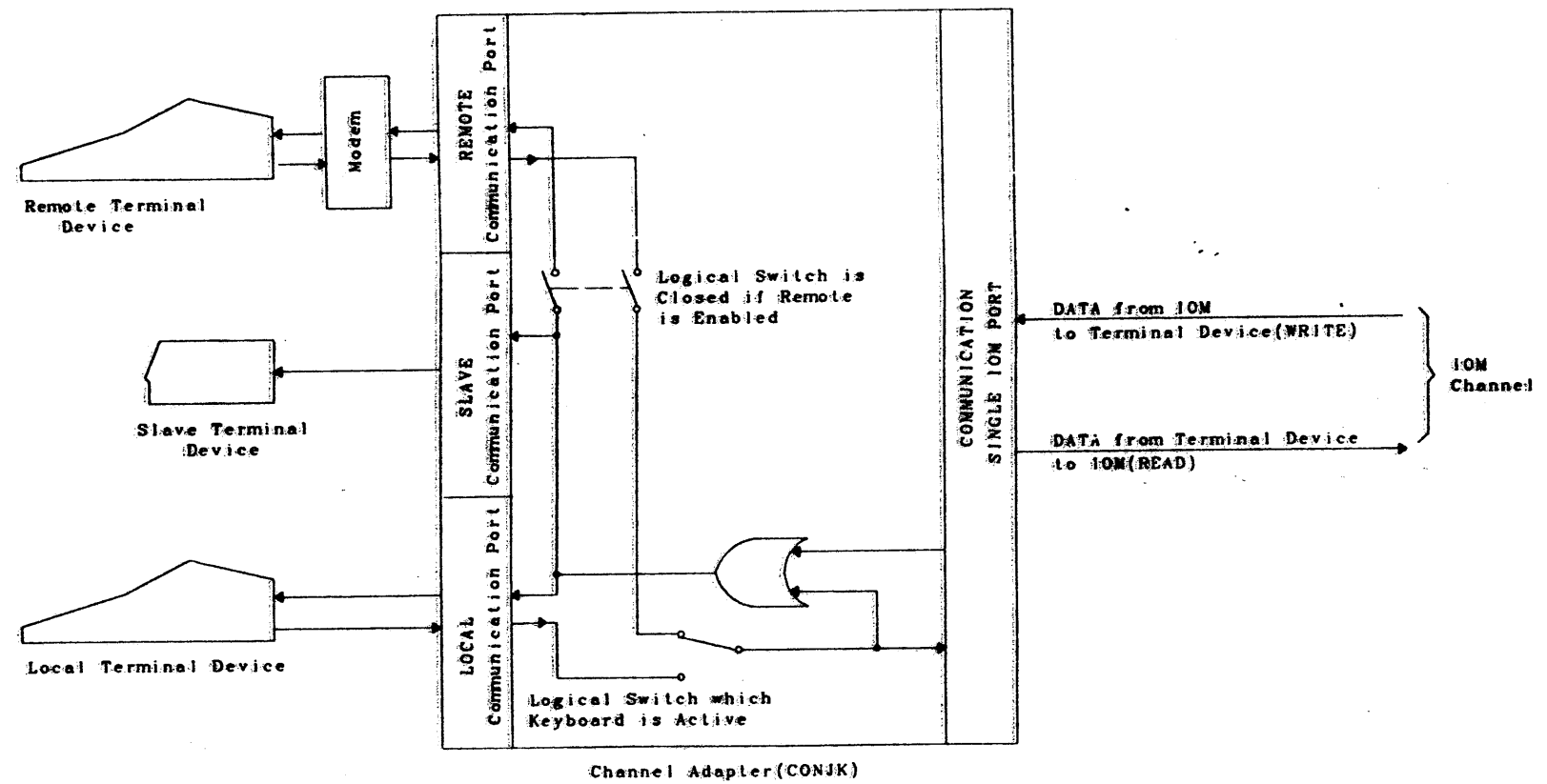


FIGURE 3-4. CHANNEL ADAPTER CONFIGURED FOR SINGLE CHANNEL OPERATION

DUAL CHANNEL CONFIGURATION: The dual channel operation of the channel adapter is depicted in Figure 3-5. The Remote Communication Port is addressed by the system as an independent channel. The remote port must be activated by a command from the local port before any I/O is allowed via the remote port. When the remote port terminal is enabled by a command from the local port terminal, the channel adapter will provide input control treating the local and remote keyboards as active.

Monitoring the remote port terminal may be disabled by use of the "#DISABLE MONITOR" command from the local/port terminal. Any error detected in performing the monitoring function to the local port terminal is not reported to the system.

The interpretation of the above functions depends on the operational state of the channel adapter.

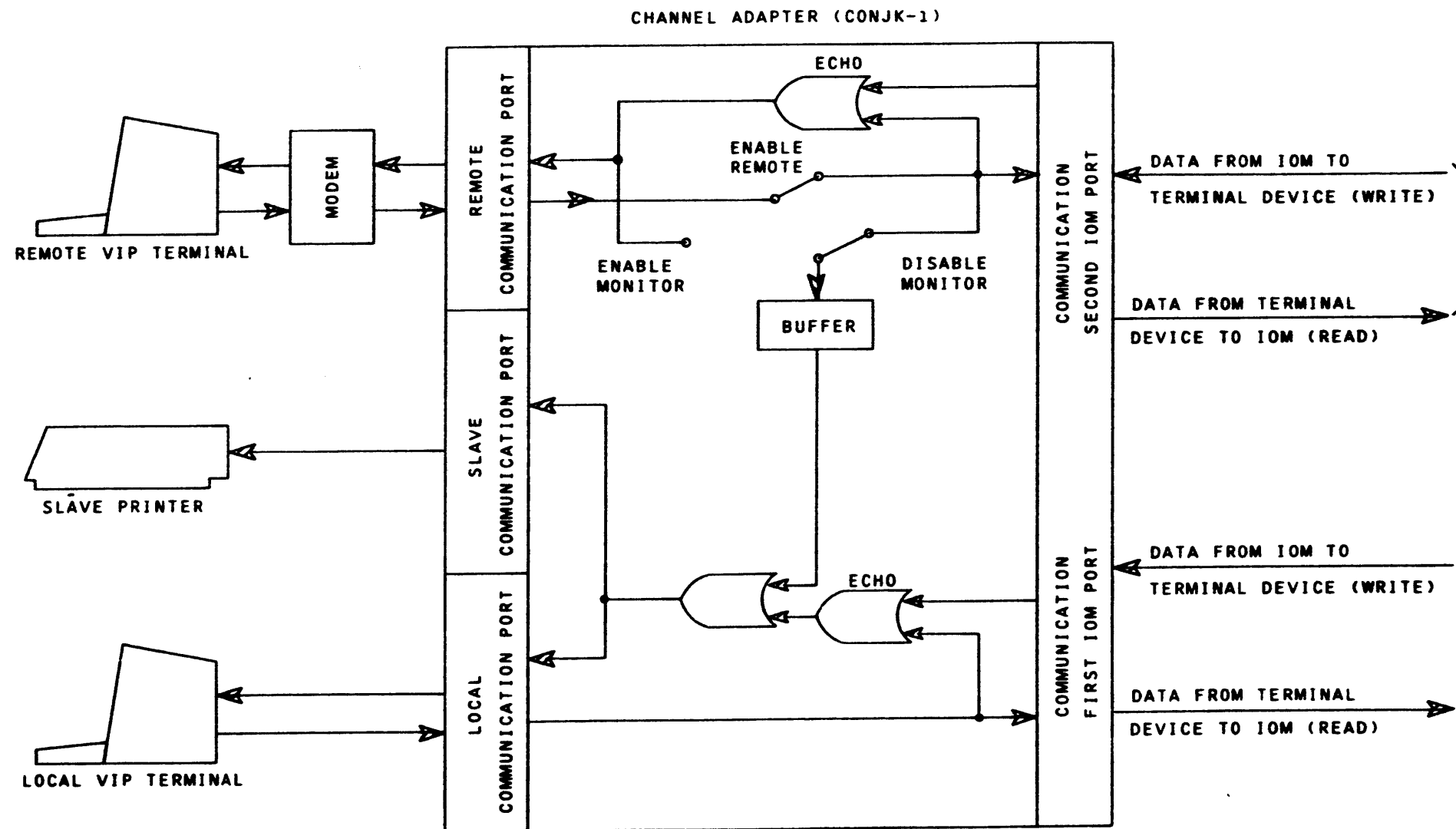


FIGURE 3-5. CHANNEL ADAPTER CONFIGURED FOR DUAL CHANNEL OPERATION

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An LED board is located on the right free edge of CONJK-1 board. This LED board contains six LED displays. Each display is off (not illuminated) when the self-test is initialized on power-up.

The following table defines the functions of the LED display.

TABLE 3-1. CHANNEL ADAPTER (CONJK-1 BOARD) SELF-TEST LED DISPLAY

LAMPS (a) (f)						CHIP	LOC.	REMARKS
R	R	R	R	R	G			
0	0	0	0	0	0	----		(b)
0	0	0	0	0	1	----		ALL TESTS PASSED
0	0	0	0	1	X	2V-613	29P	MICROPROCESSOR
0	0	0	1	0	X	----		(c)
0	0	0	1	1	X	2R3646	20H	EPROM 0
0	0	1	0	0	X	2R3646	20F	EPROM 1
0	0	1	0	1	X	2R3646	20D	EPROM 2
0	0	1	1	0	X	2R3646	20B	EPROM 3
0	0	1	1	1	X	2R3646	33H	EPROM 4
1	1	0	0	0	X	2R3646	33F	EPROM 5
0	1	0	0	0	X	1A0351	19N	RAM 0
0	1	0	0	1	X	1A0351	20M	RAM 1
0	1	0	1	0	X	1A0351	20L	RAM 2
0	1	0	1	1	X	1A0351	20K	RAM 3
0	1	1	0	0	X	1A0351	30L	RAM 4
0	1	1	0	1	X	1A0351	30K	RAM 5
0	1	1	1	0	X	1A0351	40L	RAM 6
0	1	1	1	1	X	1A0351	40K	RAM 7
1	0	0	0	0	X	2V-574	35R	TIMER
1	0	0	0	1	X	2V3605	20R	USART 0 (d)
1	0	0	1	0	X	2V3605	17T	USART 1 (e)

(a) R = RED, G = GREEN, 1 = ON, 0 = OFF, X = ON OR OFF

(b) DEAD MICROPROCESSOR SYMPTOM - CHECK MICROPROCESSOR, XTAL, AND LEDs.

(c) MICROPROCESSOR TESTS WHICH USE RAM COULD BE MICROPROCESSOR OR RAM SUBSYSTEM.

(d) PROBLEM MAY BE CAUSED BY TIMER, 2V574, OR CHIPS 08N, 25V, 08Q, 08L, 08M.

(e) PROBLEM MAY BE CAUSED BY TIMER, 2V574, OR CHIPS 08M, 08L, 08P, 08L, 08M.

(f) IF G LAMP IS LIGHTED ALONG WITH SOME R LAMPS, THE SYSTEM CONSOLE FIRMWARE IS STILL RUNNING ALTHOUGH A TEST HAS FAILED.

TERMINAL DEVICES

The terminal devices used in the System Console design are described on the following pages.

LOCAL TERMINAL

The local terminal is a VIP7205/7201(60Hz)/7255/7251(50Hz) keyboard terminal device, logically connected to the channel adapter's Local Communication Port (see Figure 3-7). This terminal contains full console control at all times and operates at a configured rate of 1200 baud. All operator commands are executed via the local terminal and transmitted to the active slave terminal.

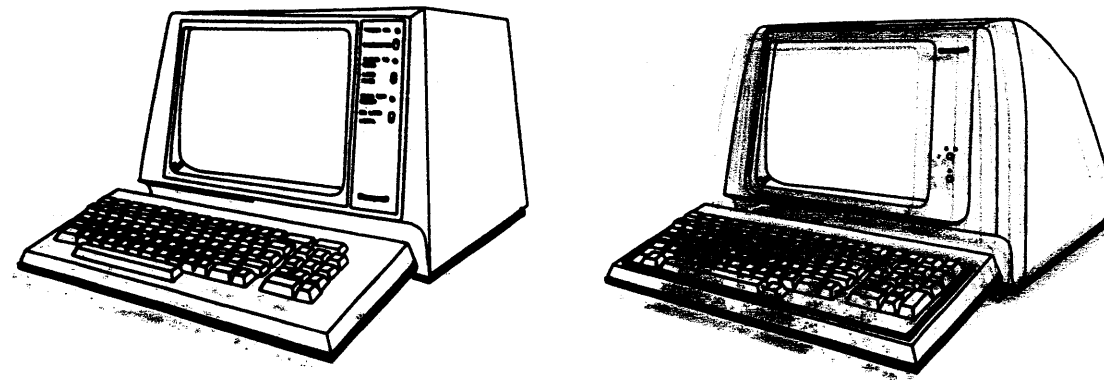
The terminal is a top-line entry device with the first position of the top line as the cursor home position. Data is entered in either page or roll mode. In the page mode, data entry is limited to the page displayed on the screen. In the roll mode, the top line rolls off the screen after the page is full, allowing data entry to continue on a new bottom line. Full cursor control allows data entry at any location on the page.

The terminal has a four-wire, full-duplex interface capable of two-way simultaneous or two-way alternate data transfer using either 20-mA/60-mA current loop or EIA RS232C voltage levels on the interface leads. It can operate with Western Electric modems 103A, 103E, 103G (or equivalent full-duplex modems not requiring control of interface lead or line turnarounds), and Western Electric modems 202C and 202D (or equivalent half-duplex modems requiring control of interface leads or line turnarounds).

All 128 ASCII character codes can be generated from the keyboard. The terminal buffers and transmits a single-keyed character in character mode, or a line or page (up to the cursor location) in the line or page mode. Special code sequences using escape and another keyboard character will generate special codes for non-ASR/KSR33 functions.

Start, parity, and stop bits are added to each character before it is transmitted. The number of stop bits can be selected at either one or two, and parity can be selected to add an odd bit, an even bit, or a mark bit. Thus, in combination with the 7-bit ASCII code, either 10- or 11-bit characters can be transmitted and received. When the mark bit parity setting is selected for the transmitted data, the parity testing on received data is simultaneously set to a "DON'T CARE" condition.

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VIP7205 (60Hz/7255 (50Hz))

VIP7201 (60Hz/7251 (50Hz))

FIGURE 3-7. LOCAL TERMINALS

DISPLAY: Display characteristics include:

- o Screen display area of 54 square inches.
- o Total of 1920 characters displayed in 24 lines of 80 characters each.
- o Total of 63 displayable graphic characters plus space.
- o Top line entry: Cursor homes at left margin of top line.
- o Full cursor control.
- o Automatic carriage return/line feed.
- o Audible alarm upon entry of keyed data in column 72.
- o Buffered line or page with local edit via keyboard.
- o Page or roll mode of operation.
- o Parity check and display of ? on recognition of error.
- o Line turnaround control for half-duplex communication data sets.

INTERFACE: The VIP terminal has the following interface capabilities:

1. Selectable communication interface: EIA RS232C.
2. Selectable baud rate set to 1200 baud.
3. Character length: 10 bits (start, 7 data, parity, and stop).
4. Parity: Even (always a mark on transmit and "DON'T CARE" on receive).
5. Selectable operating mode:
 - a. Full-duplex: Not Used
 - b. Full-duplex, local display: Full-duplex capability with display responding directly to keyboard (no echoplex) and/or to received data.
 - c. Half-duplex: Not Used
 - d. Half-duplex, buffered mode: Not Used
 - e. Local display: Keyed data displayed directly on screen for test purposes: no transmission of data over communication line.
6. Extensions port for auxiliary input/output device: Not Used.

VIP KEYBOARDS

Alphanumeric/Special Graphic Keys: The alphanumeric keys consist of 48 character keys including 26 alphabetic, ten combination numeric and graphic keys, 11 dual graphic, and a SPACE bar (see Figure 3-8).

Command Control Keys: The 10 command control keys shown in Figure 3-8 and described in the following text are nondisplayable keys that have a decided effect on the operational state of the VIP terminal by producing certain control codes. These control codes are generated by either a single stroke key action of the designated key(s) in the nonshift mode or in the shift and control mode by simultaneously pressing the designated key and any one of the command control keys.

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SHIFT

The SHIFT key causes no output code generation by itself, but when pressed in combination with any applicable key it generates codes to correspond to ASCII alphabetic lower-case characters or to the codes corresponding to the upper legends engraved on the keytop. For operator convenience, the keyboard features two SHIFT keys.

CTL (Control)

This key is used to generate the control function codes of the ASCII code set, but must always be used with another key to produce the desired code. This key causes no output code generation by itself, but causes bits six and seven of another character to become zero (if not already zero) while the keys are being pressed.

RETURN

Used to produce ASCII code CR (Carriage Return - independent of SHIFT, CAPS LOCK, and CONTROL keys).

LF (Line Feed)

Used to produce ASCII code LF (independent of SHIFT, CAPS LOCK, and CONTROL keys).

RPT (Repeat)

Produces no output when activated alone. When first pressed in conjunction with another key it causes repeated generation of the output code of that key as long as the RPT key is kept pressed.

BRK (Break)

This key allows the operator to generate an interrupt (a "key break-in" to the host processor) which can be used to suspend transmission. A spacing of all zeros condition is generated for 130 milliseconds but the key is useful only in full-duplex operation.

BLANK KEYPAD

This key is included on the keyboard for future use. At present level of definition, no logic function or output action results from pressing the key.

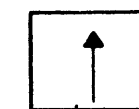
END OF MESSAGE

This is used to provide line turnaround control when operating the VIP in its character-by-character half-duplex mode. Pressing the key switches the terminal logically from a send to a receive state.

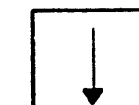
Numeric Keypad -- The numeric keypad as shown in Figure 3-8 consists of 11 keys, with numeric legends 0 through 9 and the decimal point (period). When pressed, these keys always generate ASCII codes.

The actions of these keys are independent of the SHIFT AND CAPS LOCK keys. If pressed in combination with the CONTROL key, no output code is generated.

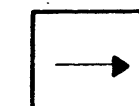
Editing Control Function Keys -- The editing control function key group consists of eight nondisplayable keys that provide a variety of editing capabilities involving the "active position" indicator known as the cursor. Except for the ERASE EOP/EOL (which operates with the SHIFT key), these keys are independent of the position of the SHIFT, CAPS LOCK, and CONTROL keys.

Cursor Up
(CUU)

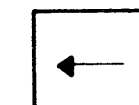
Moves cursor up one line. If cursor is present on top line, it wraps around and appears on the bottom line of the display in the same column (wraps around column 81 to 1 or else column 1 to 81).

Cursor Down
(CUD)

Moves cursor down one line. If cursor is present on bottom line, it wraps around and appears on the top line of the display in the same column (wraps around column 1 to 81 or else column 81 to 1).

Cursor Forward
(CUF)

Moves cursor right one character position. Movement does not erase or modify contents of memory display. If cursor was located at end of line, receipt of this code advances cursor forward one position to a phantom (nondisplayable) position. If cursor is located at phantom position, receipt of code causes a cursor wraparound to first position of next line. If cursor is already located on last line of display, it will wrap around to HOME position.

Cursor Backward
(CUB)

Moves cursor left one character position. Movement does not erase or modify contents of memory display. If cursor was at start of a line (column one), receipt of this code causes a cursor wraparound to a phantom (nondisplayable) position of previous line. If cursor is located at phantom position, receipt of code causes cursor to appear in column 80. If cursor was at HOME position, receipt of code causes a cursor wrap-around to phantom position (column 81) on last line of display.

HOME	Cursor Home (CUH)	Moves cursor to HOME position, i.e., the first position of the top line (line one).
CLR	Clear(RIS)	Reset to Initial State(RIS) clears display screen, moves cursor to HOME position, and sets display function to normal screen intensity.
ERASE EOP/EOL	Erase-End of Page(ED)	EOP erases all screen data displayed from active cursor position to end of page (EOP is used with SHIFT key).
	Erase-End of Line(EL)	EOL erases all data displayed from active cursor position to end of line.
XMIT	Transmit(MC)	XMIT key used to initiate transmission of data from VIP to host system only when VIP is in one of the buffered transmission modes(LINE/PAGE). Data is transmitted from beginning of line or page up to but not including the cursor position.

It must be noted that the function codes (F1 through F7) are not stored and are therefore not included in a buffered transmission. Depending on the setting of the internal switches at the time of the VIP installation, a buffered transmission may end with an END OF MESSAGE character that is selected to be either a CR (CARRIAGE RETURN), ETX (END OF TEXT), or an EOT(END OF TRANSMISSION) code.

DISPLAY CONSIDERATIONS -- The display responds to character codes received from the communications interface. With the exception of BEL, LF, CR, and NUL, the remaining nondisplayable ASCII communication control characters are ignored by the display unit and have no effect on the VIP screen.

The VIP terminal is configured to receive as well as to display transmitted data provided it is acceptable to the operating convention of the host processing system. The terminal response described for received data also applies to the transmitted data. To implement this configuration, however, it becomes necessary for the host system to view the VIP terminal as a non-echoplex operation rather than an echoplex (full-duplex).

When the VIP terminal is configured for LOCAL COPY non-echoplex operation (though transmission is four-wire, full-duplex) the keyboard output is displayed and simultaneously transmitted to the host system. When configured for full-duplex ECHO operation, the host system must echo the keyboard output back to the terminal for it to be displayed.

Cursor Function Operation -- The cursor is a reverse video, blinking block that initially appears in the HOME position (first column, top line one of display). As data is keyed-in, the cursor indicates the next position into which data may be entered. Any character written in column 80 moves the cursor into a nonexistent column (i.e., outside the data display area). The next character entered causes an automatic CR/LF(CARRIAGE RETURN/LINE FEED) and the character appears in the first column of the next line.

The cursor movement keys(←, ↑, →, and ↓) move the cursor one character space in the direction indicated. The HOME key moves the cursor directly to the home position. When used in conjunction with the repeat (RPT) key, the cursor moves at the rate of 15 character spaces per second until the repeat key is released.

However, upon completion of line 24 the user can set the ROLL/PAGE switch to PAGE to prevent scrolling and loss of line one data.

KEYBOARD CONSIDERATIONS -- Six keys on the keyboard that do not generate or cause a code to be transmitted to the system processor are the SHIFT, CTL, RPT, BRK, END OF MESSAGE, and CAPS LOCK keys. All other keys, when activated, generate a code that is transmitted to the system processor. The processor in turn interprets these codes as information or control data. The DEL(delete) key is used to produce the nondisplayable ASCII code DEL(independent of SHIFT, CAPS LOCK, and CONTROL keys).

The VIP terminal complements the host system convention for interpreting data either in an all uppercase configuration(Teletype-compatible) or in a non-Teletype environment. The CAPS LOCK keyboard feature ensures that capital letters of the alphabet will be transmitted to complement a teletype environment. The terminal can be internally configured and set during initial installation by Honeywell Field Engineering Personnel(FED) to the desired configuration.

Buffered Transmission -- For buffered transmission to occur, press the TRANSMIT key and set the CHARACTER/BUFFER switch to the BUFFER position. The LINE/PAGE switch will define the maximum extent of the transmission. Data transmission is always from the beginning of line or page to the current cursor position. A remote transmit command from the host system can cause a buffered transmission from the VIP terminal to the host system regardless of the CHARACTER/BUFFER switch setting, and data transmitted will be that data defined by the LINE/PAGE switch and position of the cursor.

HOST SYSTEM REQUIREMENTS -- In general, the supporting software must be aware of the auxiliary device characteristics since the level of support required may be different from that required by the VIP terminal. For example, when data is sent to a VIP terminal with an unbuffered printer attached as an auxiliary device, a time delay is required following a carriage return/line feed. Also, supporting software must manage any inconsistencies in control characters or functions used by the VIP and auxiliary device. For example, terminal control characters used for cursor forward space, cursor backspace, and clear screen functions may not be compatible with the use of these control characters by the auxiliary device.

PARITY ERROR IN CHARACTER CODES -- If a parity error is detected in any received graphic or control character code, this invalid character or function code will be replaced by the seven-bit code 3/15 in the display's memory, and the error is indicated on the display screen by the graphic ?

Parity error in multicharacter control functions can result in several different conditions. If the error occurs in the first character (the ESC code), it is replaced by the ? and the following characters interpreted independently and displayed accordingly. Should an error occur in the second character, the two-character sequence is aborted and replaced by the ? character. In the HVP four-character sequence, an error in the third character will cause an abort and display of a ? with the fourth character displayed as a graphic. An error in the fourth character will cause a ? to be displayed at the new Px position, as a result of valid reception and interpretation of the first three characters.

OPERATOR ACCESSIBLE CONTROLS AND INDICATORS --

Front Panel Controls and Indicators -- Three switches and three indicators are located on the front panel to the right of the screen. They are shown in Figure 3-9 and described in Table 3-2.

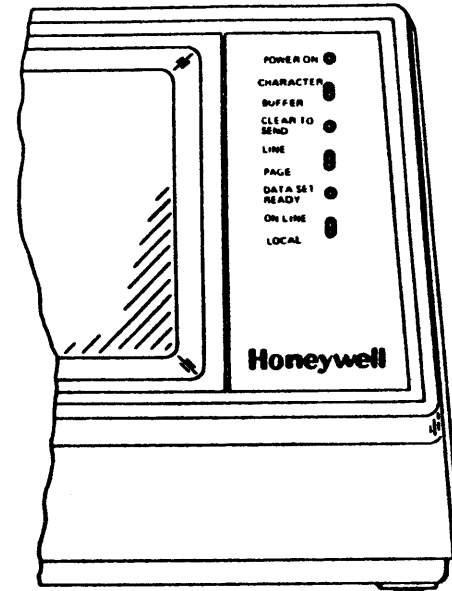


FIGURE 3-9. VIP7205 FRONT PANEL OPERATOR ACCESSIBLE CONTROLS AND INDICATORS

TABLE 3-2. VIP7205 FRONT PANEL CONTROLS AND INDICATORS

CONTROL/INDICATOR	FUNCTION
POWER ON indicator	Illuminates when power switch is on and dc power is present.
<u>CHARACTER/BUFFER</u> switch (a)	CHARACTER position. This allows terminal to transmit characters as they are keyed.
CLEAR TO SEND indicator	Illuminates when interface signal CB (Clear to Send) is on.
<u>LINE/PAGE</u> switch (a)	Selects line for block mode transmission. Transmission starts at beginning of line and continues to cursor position.
DATA SET READY indicator	Illuminates when interface signal CC (Data Set Ready) is on, indicating that a communication link has been established.
<u>ON LINE/LOCAL</u> switch (a)	In ON LINE position, CD is on and terminal is capable of data communication.

(a) Set switches to the position indicated by the underscore

Rear Panel Controls -- The operator-accessible switches on the back of the terminal are identified in Figure 3-10. The functions of these switches are described in Table 3-3.

TABLE 3-3. VIP7205 REAR PANEL CONTROLS

CONTROL/INDICATOR	FUNCTION
POWER OFF/ON	Controls application of ac power to terminal.
<u>ROLL</u> /PAGE (a)	ROLL position allows continuous data entry. When page is full, top line rolls off page to provide blank bottom line.
HALF/ <u>FULL</u> DUPLEX (a)	In FULL duplex position, CA (Request to Send) is in high state.
<u>HI</u> /LO MODEM SPEED (a) (Either Setting)	In conjunction with internal rate select switch, indicates 1200-baud operation to modem. Must be set appropriately for European/UK applications.
BAUD RATE <u>9</u> (a)	Permits selection of communication interface baud rate from 75 to 9600 baud. (Baud rate 9 = 1200 baud.)
LOCAL COPY/ <u>ECHO</u> (a)	In ECHO position, display receives signal from communication interface (echoplex).
<u>1</u> or 2 STOP BITS (a)	Selects 1 stop bit per character.
BRIGHTNESS	Adjusts intensity of display.

(a) Set switches to the position indicated by the underscore.

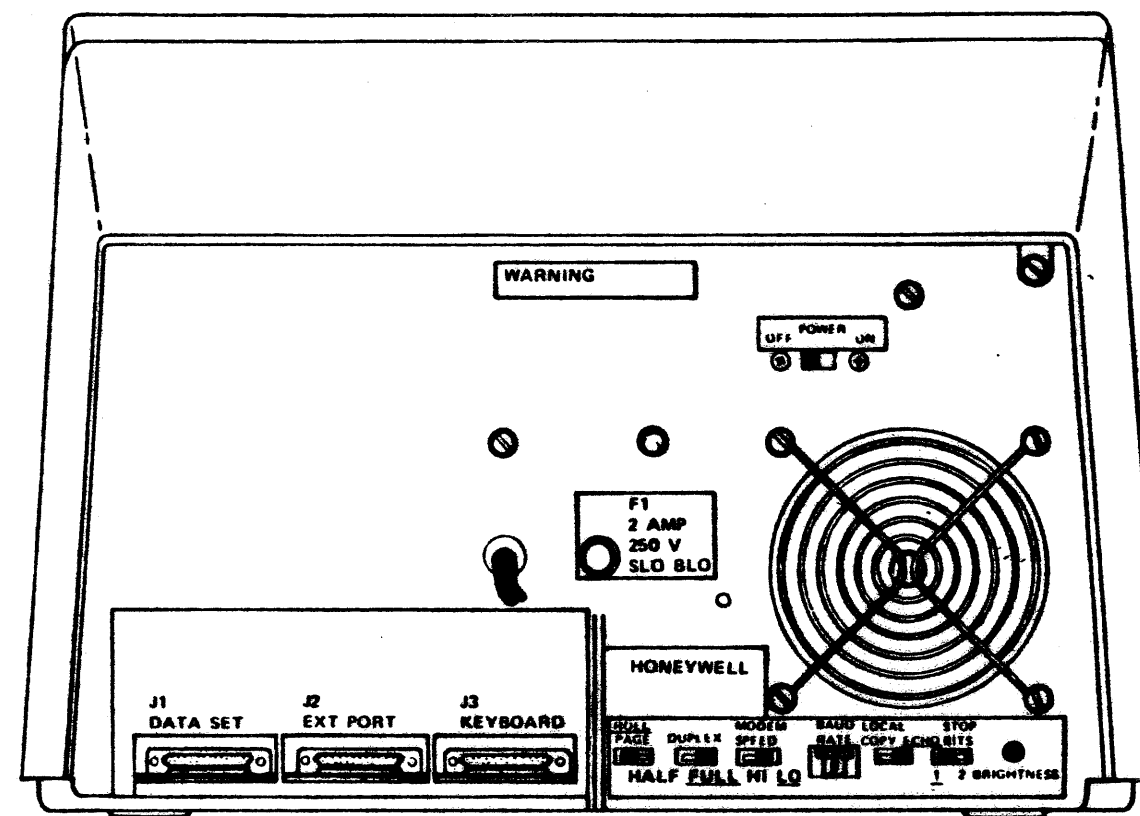


FIGURE 3-10. VIP7205 REAR PANEL OPERATOR ACCESSIBLE CONTROLS

Internal Switches

These switches are normally set at the factory or by the installing Field Representative and are dependent upon the type of PWA installed into the VIP7205. See Figure 3-11.

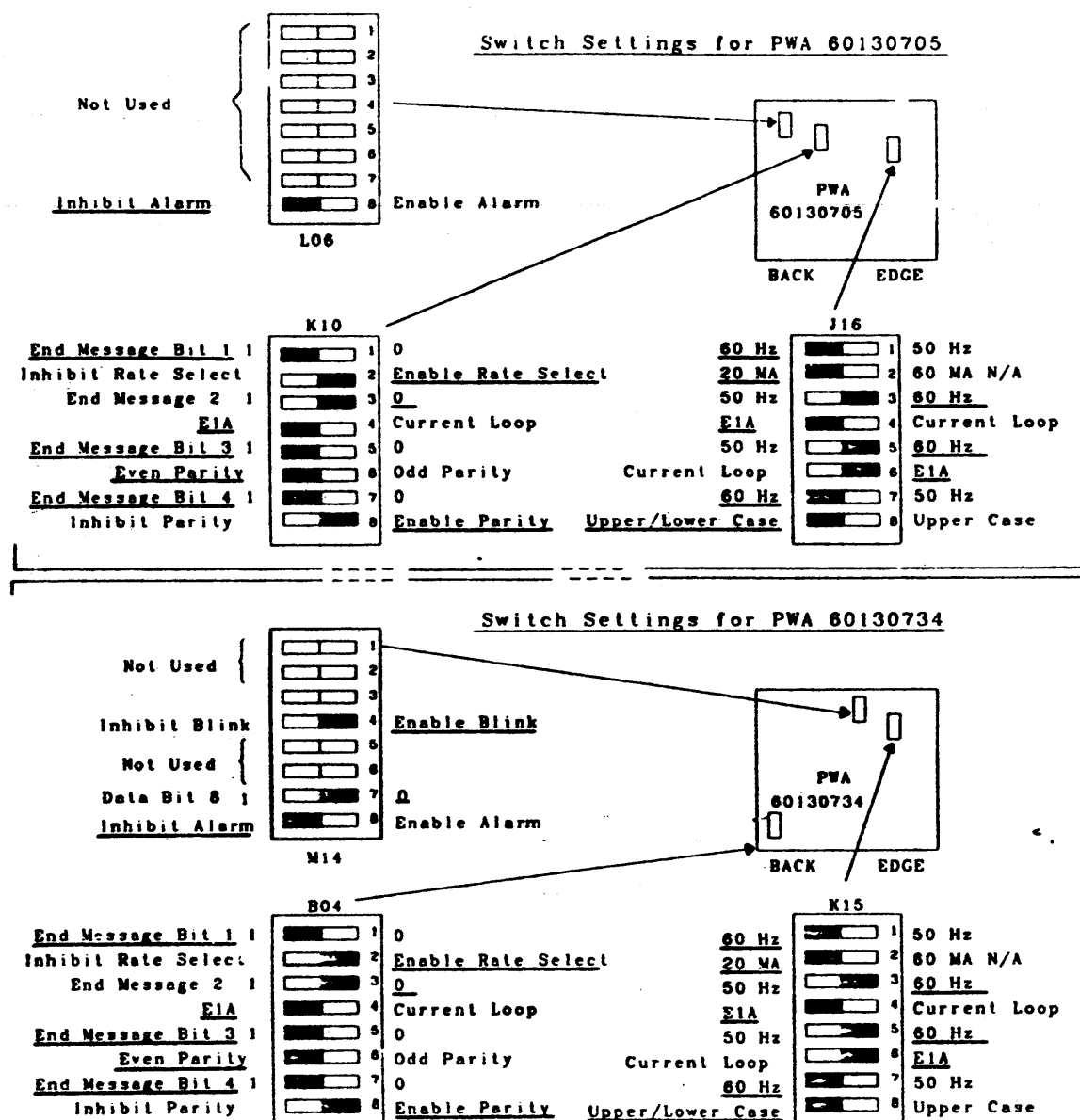


FIGURE 3-11. VIP7205 INTERNAL SWITCH SETTINGS

Initial Power-Up and Power-Down Procedures

In the following procedure it is assumed that all electrical cables have been properly connected and secured and that power is applied to the terminal.

To power-up the device:

1. Set the power switch located at the rear of the device to ON. The POWER ON indicator at the front of the device will light.
2. Set the ONLINE/LOCAL switch to LOCAL and the LOCAL COPY/ECHO switch to LOCAL COPY position.
3. Enter a line or two of data while in the LOCAL mode (offline) and notice the intensity of the screen display. Image intensity can be varied by the BRIGHTNESS control. Rotating the control clockwise intensifies the image; rotating it counterclockwise causes the image to become less intense.
4. Set the ONLINE/LOCAL switch to ONLINE position.
5. Set the LOCAL COPY/ECHO switch to ECHO.
6. Set the CHARACTER/BUFFER switch to CHARACTER.
7. Set the DUPLEX HALF/FULL switch to FULL DUPLEX.
8. Set the MODEM HI/LO switch to HI.
9. Set the BAUD RATE switch to 9.
10. Set the STOP BIT switch to the 1 position.

To power-down the device:

1. Set the POWER ON/OFF switch to the OFF position. The POWER ON indicator will go out.

SLAVE TERMINAL

The slave terminal device is a Rosy 26 printer without a keyboard, therefore, it is a Receive Only (RO) device and serves as a slave monitor to the local terminal. The "ON" or "OFF" state of the slave terminal does not affect the normal operation of the Channel Adapter (CONJK Board). The data transfer rate of the slave terminal is the same as the local terminal device. See Figure 3-12.

The Rosy 26 teleprinter terminal is a desk top matrix serial printer designed for low-medium volume printing. The teleprinter can print the 96 printable characters of the ASCII code up to 120cps (characters per second) in monodirectional mode with a 7x9 dot matrix scheme. Up to 132 print positions per line are provided. The main printer components are:

- Printer mechanism
- Microprocessor based control electronics

- Modem adapter electronics
- Operator panel
- Desk top enclosure (can be used freestanding)

The wire matrix print head prints the 96-character ASCII set at a speed of 120cps with over 132 print positions. The dots, less than half a millimeter in diameter, are printed as a matrix pattern consisting of seven vertical dots and nine horizontal dots. The characters generated are 2.5mm (0.1 inches) high and 1.8mm (.07 inches) wide.

As the head moves laterally over the paper, it prints a line of perfectly formed and fully aligned characters. Complete visibility of each character printed is achieved because the head positions itself automatically to the left or to the right of the last character printed. As soon as a new character is to be printed, the head returns to its original position and printing continues.

When more than 132 characters are received from a host system without CR(carriage return) and LF(line feed) commands, the printer starts a new line by automatically performing CR and LF commands.

Paper feed is controlled by "tractors." The righthand tractor is movable, to allow the use of variable-width paper of 4 to 15 inches. A form thickness control and paper-out sensor are also provided.

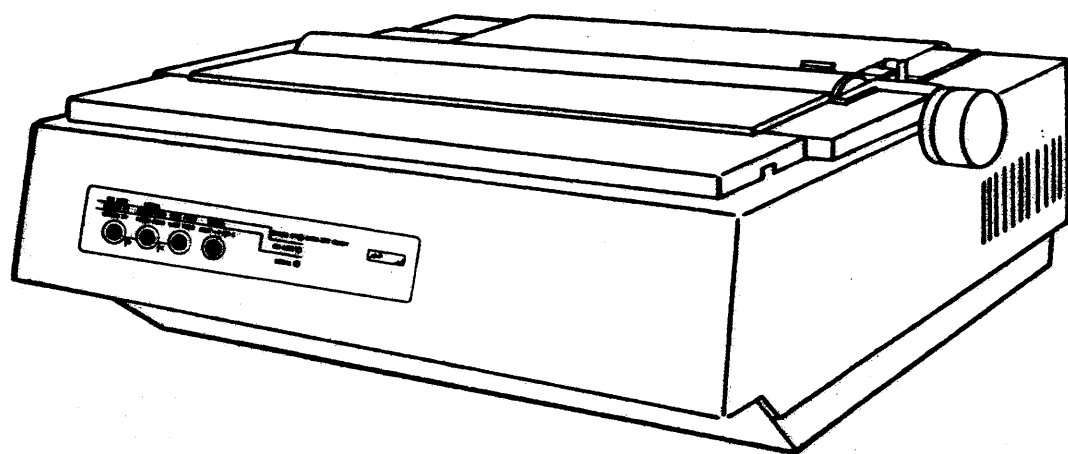


FIGURE 3-12. ROSY 26 SLAVE TERMINAL(WITHOUT KEYBOARD)

TRANSMISSION --

Code — ASCII 7 + 1 (even/odd parity)

Interface — RS232C

Speed — 1200 baud

Mode — Full duplex

Type — Asynchronous

Procedure — TTY like

Buffer — 64 character (loaded automatically during CR, LF, and print head movement for print visibility)

PRINTING --

Print Speed — 120 cps printing in forward movement only. Backward movement rated at approximately equivalent to 300 cps

Type — Serial

Print Positions — 132

Print Format — 10 cpi, horizontal; 6 lpi, vertical

Character Set — 128 character ASCII code set with 96 printable characters

Matrix Font — 7x9 dot; equal to 10 point type

Print Ribbon — Cartridge type, replaceable by operator

Cartridge Type — M3918(1/4 inch tape); M3917(1/2 inch tape)

Paper Stock — Standard continuous paper forms with feed holes on each edge with or without margin perforations; sprocket holes: 0.156 in. (3.97 mm) in diameter

Forms Length — 3.0 in. to 17 in. (7.62 cm to 43.2 cm)

Forms Width — 4.0 in. to 15 in. (10.16 cm to 38.1 cm)

Number of Copies — Original plus up to 4 copies

Paper Feeding — Tractor type; right tractor operator adjustable

ELECTRICAL --

Power — 117VAC + 10%, -15% (three wire — 1 phase, 1 ground, 1 neutral)

Power Consumption — 0.27kVA

Heat Dissipation — 0.9Btu/hr (0.23 kcal/hr)

Frequency — 60Hz ± .5Hz

ENVIRONMENT --

Temperature — 50°F to 100°F (10°C to 38°C)

Relative Humidity — 10% to 90%

Internal (Selector) Switches — These switches are normally set at the factory or by the installing Field Engineer. The switch settings vary dependent upon the type of CPU board internal to the printer. See Figures 3-13 and 3-14.

APPLYING POWER --

1. Set Main Power Switch, on rear of the teleprinter terminal, to ON (STANDBY illuminates).

2. Press START button (READY illuminates).

REMOVING POWER --

1. Press the STOP button (STANDBY illuminates).

2. Set Main Power Switch, on rear of the teleprinter terminal, to OFF (STANDBY extinguishes).

PRINT TEST -- To check print quality and print the entire character set, do the following:

1. Press the STOP button.
2. Press the LOCAL button.
3. Press the TEST button.
4. Press the START button (printing begins).
5. Press the STOP button to terminate the print test.

If print test fails to cause carriage movement, make a carriage test following the same steps as in the print test except at step 4, press the LOCAL button (carriage moves without printing). When printer malfunction is suspected, it will assist the service representative if the results of these tests are reported. See Test Flowcharts, Figures 3-16 and 3-17.

HORIZONTAL TABULATION -- The sequences to load TABs for horizontal tabulation is as follows:

By keyboard, with the device in either the LOCAL or ON LINE mode:

1. Give the clear horizontal TAB command (ESC key and the 2 key).

2. Move the print head to required TAB position, then give the set horizontal TAB command (ESC key and the 1 key)

By line, with the device in the ON LINE mode (mandatory):

1. Send the clear horizontal TAB command.
2. Send a message with the CR command at the beginning and then a sequence of SPACES (BLANKS) characters with TAB set command inside.

Remember that the first TAB is the column where the print head will stop after a CR.

Maximum number of TABs = 16.

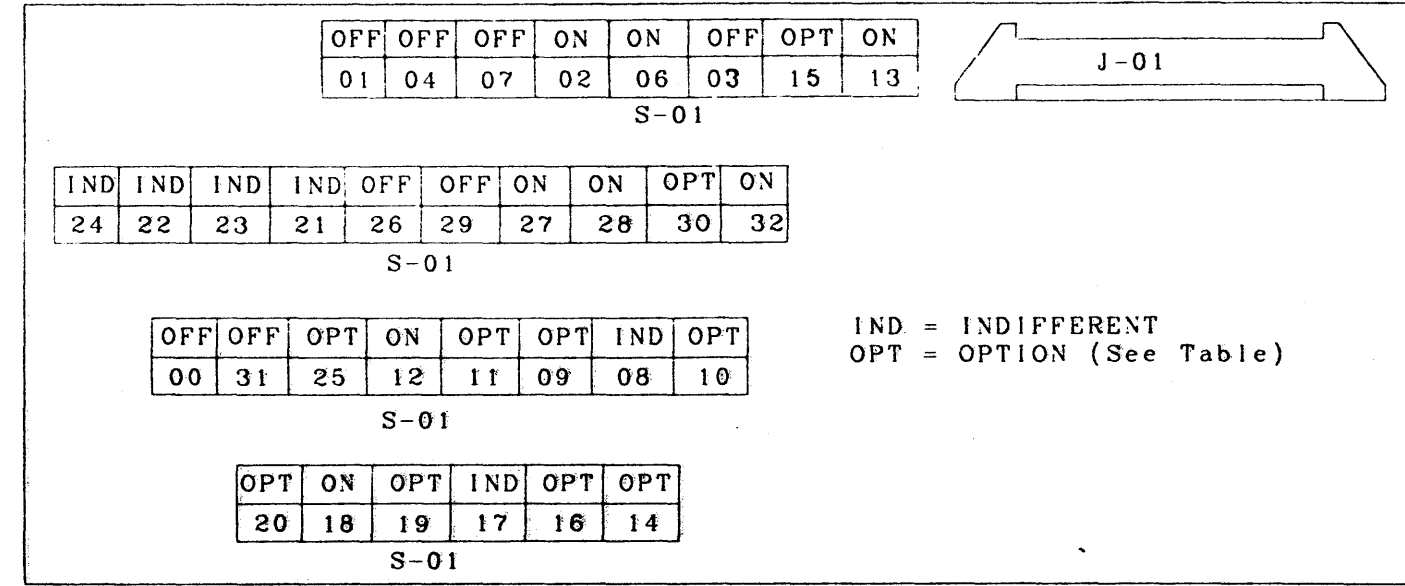
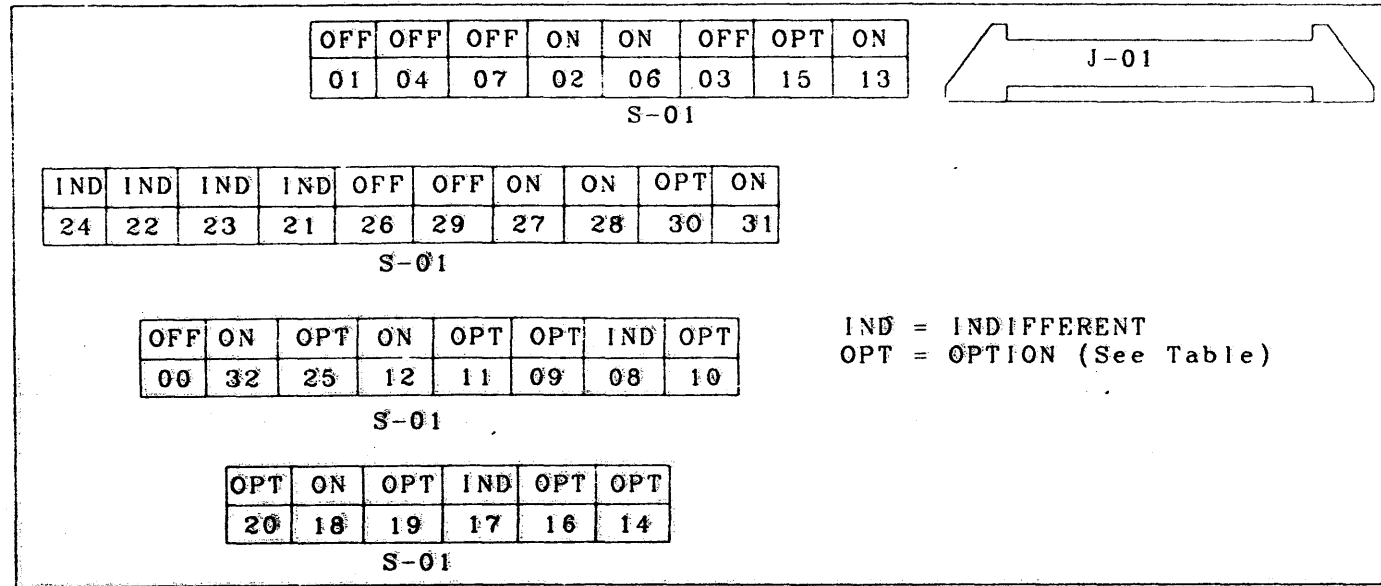
VERTICAL TABULATION AND PAGE LENGTH SET -- The sequence to load TABs for vertical tabulation is as follows:

By keyboard, with the device in either the LOCAL or ON LINE mode:

1. Give the clear vertical TAB command.
2. Give the FF command to reset the line counter.
3. Align the first line of the continuous form under the print head.
4. Move the continuous form (by only LF commands) to the required TAB position, then give the vertical TAB set command (ESC key and the 3 key).

SWITCH SETTING ON CPU-2 BOARD 78118450

SWITCH SETTING ON CPU-2A BOARD 78119300



S1 SWITCH SETTINGS FOR CPU-2 BOARD, 78118450

		PRU/TWU 1005
		ROSY 26
09	ON-READY STATUS AT POWER ON	ON
	OFF-STANDBY AT POWER ON	
10	ON-132 COLUMNS	OFF
	OFF- 80 COLUMNS	
11	ON- IF PARITY ERROR	ON
	OFF-NO PARITY CHECK	
14	ON-NORMAL	ON
	OFF-VIP7200 CONNECTION	
15	ON-FULL DUPLEX	ON
	OFF-HALF DUPLEX	
16	ON-VERTICAL TAB ENABLE	OFF
	OFF-VERTICAL TAB DISABLE	
19	ON-	OFF
	OFF-BUFFER OVERFLOW SIGNAL	
20	ON-UPPER AND LOWER CASE	ON
	OFF-UPPER CASE ONLY	
25	ON-WITHOUT APP OPTION	ON
	OFF-WITH APP OPTION	
30	ON-TAPE LOOP VFU OR NO VFU	ON
	OFF-ROTARY SWITCH VFU	

S1 SWITCH SETTINGS FOR CPU-2A BOARD, 78119300

		PRU/TWU 1005
		ROSY 26
09	ON-READY STATUS AT POWER ON	ON
	OFF-STANDBY AT POWER ON	
10	ON-132 COLUMNS	OFF
	OFF- 80 COLUMNS	
11	ON-◇ IF PARITY ERROR	ON
	OFF-NO PARITY CHECK	
14	ON-NORMAL	ON
	OFF-VIP7200 CONNECTION	
15	ON-FULL DUPLEX	ON
	OFF-HALF DUPLEX	
16	ON-VERTICAL TAB ENABLE	OFF
	OFF-VERTICAL TAB DISABLE	
19	ON-	OFF
	OFF-BUFFER OVERFLOW SIGNAL	
20	ON-UPPER AND LOWER CASE	ON
	OFF-UPPER CASE ONLY	
25	ON-WITHOUT APP OPTION	ON
	OFF-WITH APP OPTION	
30	ON-TAPE LOOP VFU OR NO VFU	ON
	OFF-ROTARY SWITCH VFU	

FIGURE 3-13. ROSY 26 INTERNAL SWITCH SETTINGS WITH CPU-2 BOARD, 78118450

FIGURE 3-14. ROSY 26 INTERNAL SWITCH SETTINGS WITH CPU-2A BOARD, 78119300

OPERATOR PANEL -- The legend above the upper red line is used when the STANDBY indicator is lit; the legend between the red horizontal lines, when the ON LINE indicator is lit; and the legend beneath the lower red line when the LOCAL indicator is lit. Refer to Figure 3-15.

ON LINE(STANDBY) -- To change from LOCAL mode to ON LINE mode, press the ON LINE button twice. The first depression causes a transition to the standby state (lighting the STANDBY indicator) and the second, to the ON LINE mode. (The STANDBY indicator goes off and the ON LINE and DATA SET READY indicators light when the communications interface is ready for data transfer.

STANDBY(ON LINE) -- Pressing the STANDBY button is the first step in changing from LOCAL mode to ON LINE mode.

LOCAL(FORM FEED) -- Pressing the LOCAL button causes a transition from the standby state to the LOCAL mode. In the LOCAL mode the teleprinter can be used independent of the system.

FORM FEED(LOCAL) -- Pressing the FORM FEED button allows form feeding independent of the keyboard.

LINE FEED(TEST + P OR C) -- Pressing the LINE FEED button allows line feeding independent of the keyboard.

TEST + P OR C(LINE FEED) -- Pressing the TEST button when in the LOCAL mode conditions the teleprinter for a print carriage test. See Figures 3-16 and 3-17.

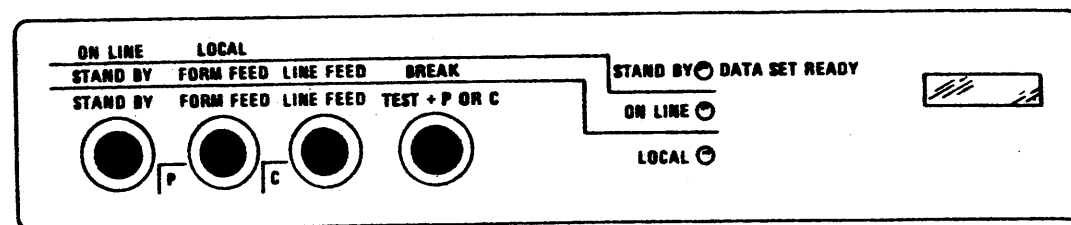


FIGURE 3-15 ROSY 26 OPERATOR PANEL

BREAK-STOP TEST/STANDBY -- Pressing the BREAK button when in the ON LINE mode causes a 200-ms break in the transmit data interface circuit.

Pressing the STOP TEST button during a PRINT TEST stops the print test.

Pressing the STANDBY button changes from the ON LINE mode to the LOCAL mode.

STANDBY/DATA SET READY -- If the ON LINE indicator is not lit, but the STANDBY/DATA SET READY indicator is lit indicates that the teleprinter is powered up, physically connected to the system, but not ready to communicate with the system. If both the ON LINE and the STANDBY/DATA SET READY indicators are lit, data transfer can begin.

ON LINE -- If the ON LINE indicator alone is lit, the teleprinter is in ready state(logically connected to the system). Only when the DATA SET READY indicator also lights is the teleprinter ready to communicate with the system.

LOCAL -- The LOCAL indicator indicates that the teleprinter terminal is in the LOCAL mode and can be operated independent of the system.

PRINT POSITION INDICATOR -- The print position indicator(option), a three-position display located on the operator panel, indicates the number of the next print position.

AUDIBLE ALARM-ERROR REPORTING -- A half-second acoustic signal is activated whenever a bell code is received from the communication line to indicate to the operator that an error condition exists.

PARITY ERROR INDICATOR -- A parity check is made for each character sent/received by the terminal. Whenever an error occurs, a diamond symbol (\diamond) can be printed in place of the character.

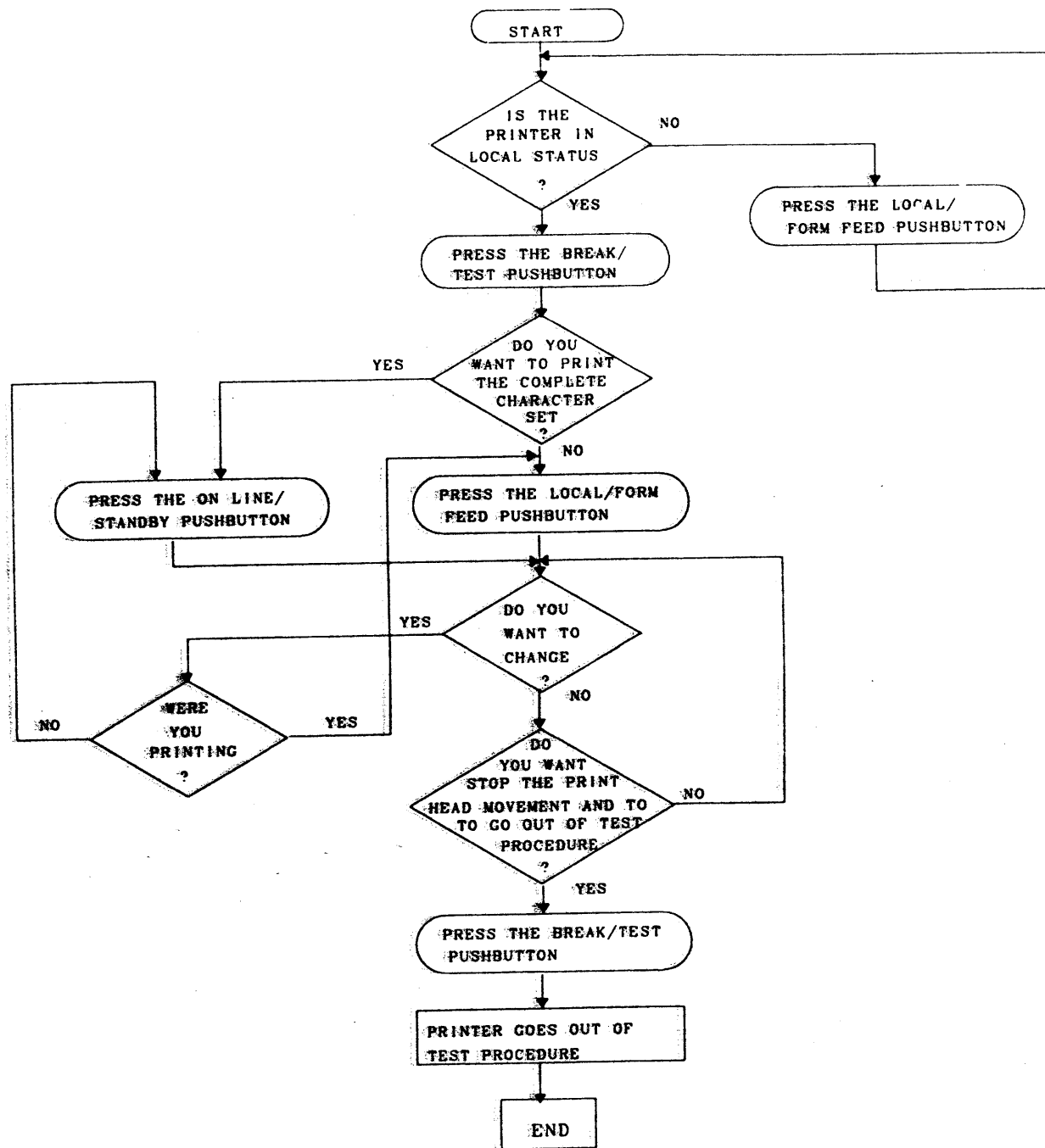


FIGURE 3-16 ROSY 26 PRINTING TEST FLOWCHART

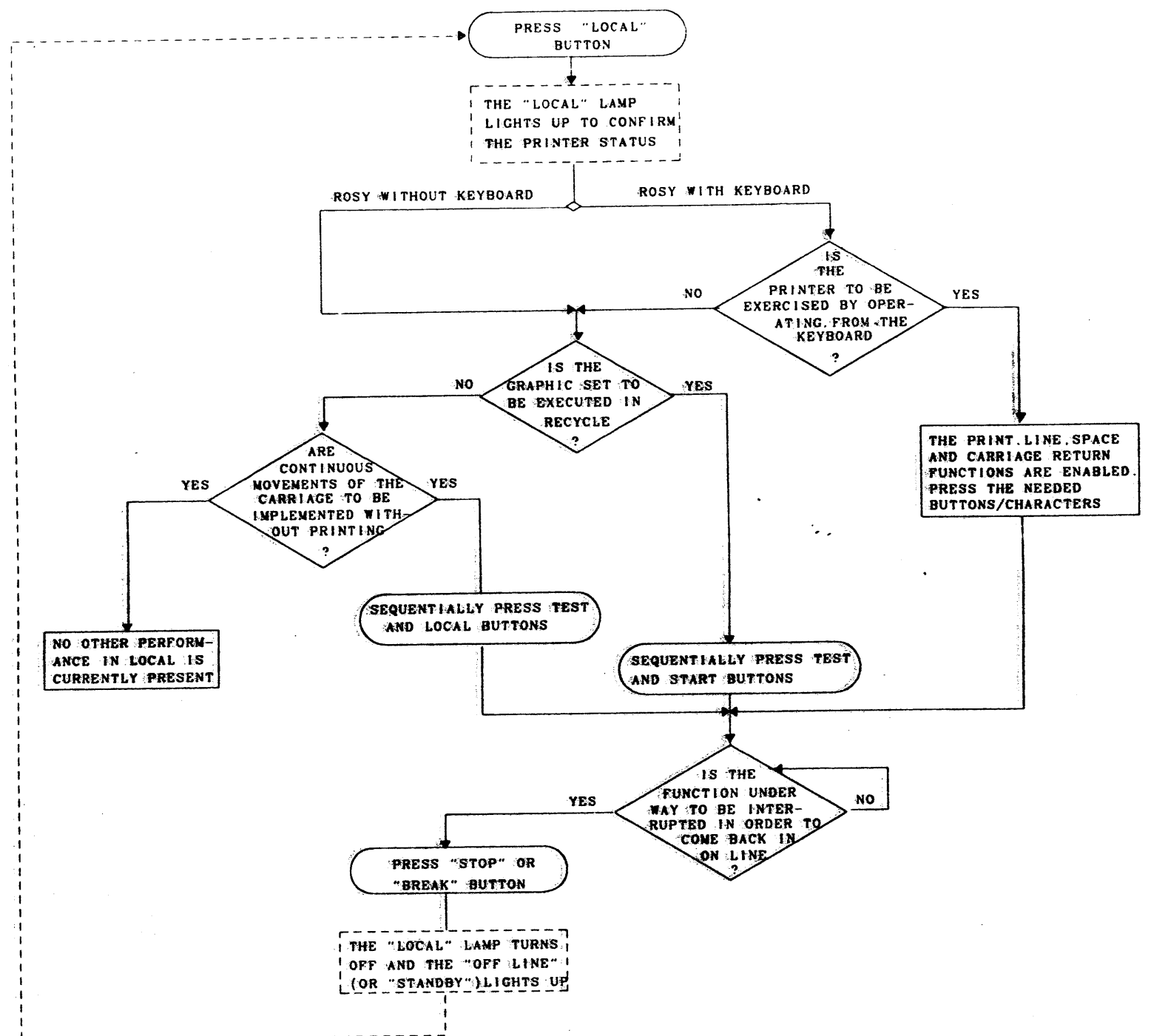


FIGURE 3-17 ROSY 26 CHECKOUT FLOWCHART

OPERATOR AND CONFIGURATION PANELS (ROSY 32/S32)

The operator and configuration panels are located on the top of the printer, at the rear left corner (see Figure 3-17). The configuration panel is located under the printer cover and is accessed by lifting the cover. The printer power ON/OFF switch is located at the bottom of the printer, at the rear right corner.

NOTE: The Rosy 32 (R32) printer 58056588-028 and the S32 printer 58052598-001 are interchangeable. Everywhere in this manual that the ROSY 32 (R32) printer is referenced it also applies to the S32 printer.

OPERATOR PANEL CONTROLS AND INDICATORS

STANDBY Pushbutton and Indicator: Pressing this pushbutton sets the printer into the standby state and its indicator lights. If the indicator flashes, it means that the print buffer still contains printable characters. These characters are printed if the online state is entered, but are lost if the local state is entered.

ON LINE Pushbutton and Indicator: Pressing this pushbutton sets the printer into the online (Ready) state, and its indicator lights. If the indicator flashes, it means that the printer is ready but the host is not ready to transmit data.

LOCAL Pushbutton and Indicator: Pressing this pushbutton sets the printer to the local state, and its indicator lights. The local state can only be entered from the standby state.

BREAK Pushbutton: Pressing this pushbutton sends a signal to the host indicating an abort or other condition. This pushbutton operates only in the online state (not used for DPS 8).

PAPER FEED Pushbutton: Momentarily pressing and releasing this pushbutton feeds paper a single line at a time; keeping the pushbutton depressed feeds paper continuously until the pushbutton is released or the top of the next form is reached. This pushbutton operates under any printer state.

PAPER OUT Indicator: This indicator lights when the PAPER OUT sensor is uncovered. The printer goes into the standby state if it is in the online state. If the printer is in the local state, it remains in the local state.

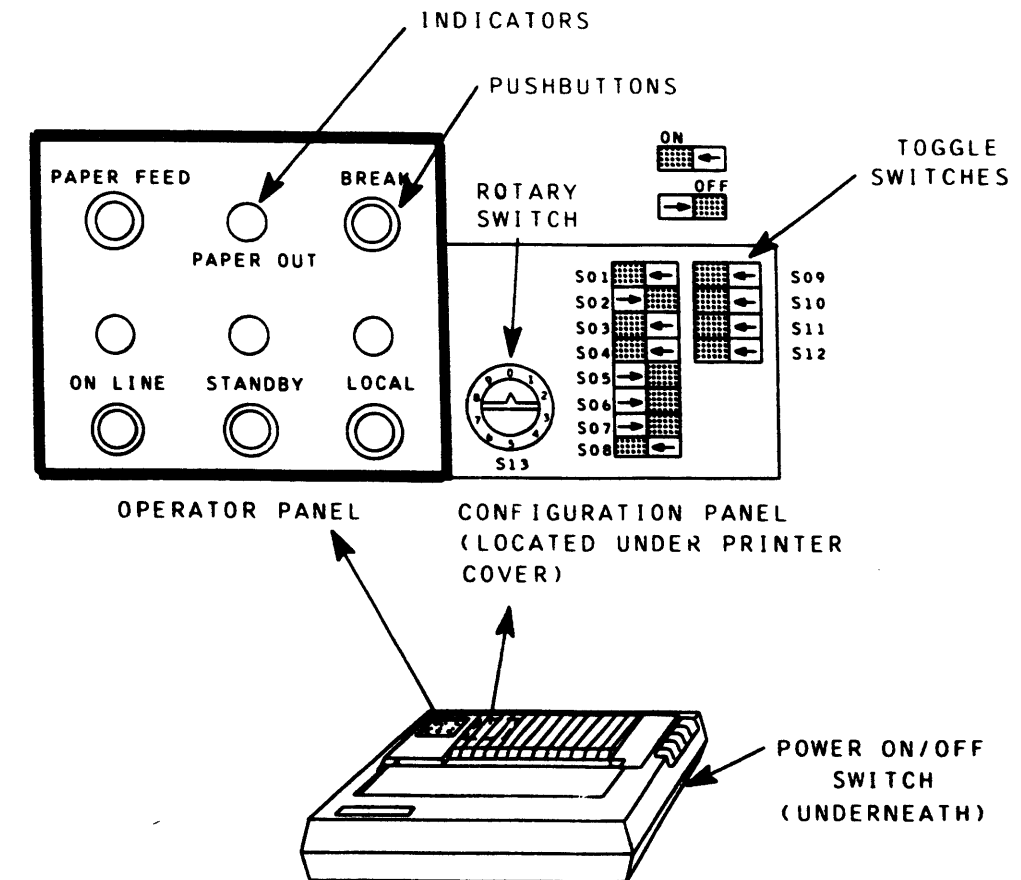


FIGURE 3-17. ROSY 32/S32 OPERATOR AND CONFIGURATION PANELS

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CONFIGURATION PANEL CONTROLS

The configuration panel has 12 toggle switches and one rotary switch. All switches should be set as shown in Figure 3-17 and are described below according to these settings. (For other settings, see detail attached to the inside of the printer cover.)

- Rotary Switch S13 This switch set to 0 selects the form length of 3-1/2".
- Toggle Switches S01 and S02 These switches select the printer 1200 baud rate (S01=ON, S02=OFF).
- Toggle Switches S03 and S04 Switch S03 performs no function with switch S04 ON. With switch S04 ON, the printer enters the online (Ready) state when printer power is turned on.
- Toggle Switch S05 This switch in the OFF position selects an even parity check to be performed.
- Toggle Switch S06 This switch in the OFF position selects the line length of 13.2 inches.
- Toggle Switch S07 This switch in the OFF position selects a print density of 10 characters per inch.
- Toggle Switch S08 This switch in the ON position performs a printer carriage return only (no line feed) when a carriage return code is received from the host.
- Toggle Switch S09 This switch in the ON position monitors the data stream control (DSC) signal which indicates a busy signal.
- Toggle Switches S10, S11, and S12 These three switches when ON select the international character set for operation.

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Large Screen Monitor

The LCC monitor is an optional feature of the Low Cost Console design. It consists of a 23-inch CRT mounted in a cabinet which may be hung from a wall or ceiling or mounted on any suitable flat surface. This option monitors the activity of the local or remote terminal and is a receive only device (see Figure 3-20). The Large Screen Monitor specifications consist of the following:

Electrical --

Video Amplifier

Input impedance: 10 K Ω Hi-Z; 75 Ω Low Z.
Rear panel switch for Hi-Z or 75 Ω termination.

Input connector: UHF-looping

Input level: .30 to 2.0V p-p composite

Low frequency tilt: 5% or less with window input signal

DC restorer: Keyed backporch clamp

Gray scale: Linear response to staircase signal

Bandwidth: 17.5MHZ at -3db

Rise and fall time: Less than 20 nanoseconds

Synchronization --

Internal: Composite video only

Vertical retrace blanking: Yes

Line rate/Field rate: 525/60 Hz or 625/50 Hz(with 50 Hz AC)

Retrace Time --

Horizontal: 8 μ seconds

Vertical: 600 μ seconds

Display --

Picture tube: 23 inch rectangular

Center resolution: 800 TV lines minimum(P4 at 30 FT-L no panel)

Geometric distortion: Less than 2% of active raster height

Power Supply --

Input voltage: 100 to 240 AC, 50/60Hz

Input power: 46W nominal

Output voltage: +57VDC short circuit protected
+18KV nominal(w/o high voltage regulation)

Environmental --

Temperature: Operating range: 5°C to 55°C ambient
Storage range: -40°C to 65°C ambient

Humidity: 5 to 80% (noncondensing)

Altitude: Operating: up to 10,000 ft.
Storage: up to 14,000 ft.

Mechanical --

Front panel controls: Off/On, brightness and contrast controls

Remaining controls: Internal

DIMENSIONS(NOMINAL)

MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT(LBS)
Similar to TD23M	18"	23-1/16"	18-1/2"	65

Human Factors --

X-radiation: Complies with DHEW Radiation specifications requirements

Designed to meet UL requirements: UL Standard 796,
Printed Wiring Board

UL Standard 478,
Standard for Electronic
Data Processing Units

UL Standard 114,
Standard for Office
Appliances

INITIAL TURN-ON PROCEDURE -- The TD monitor was tested and aligned before shipment, and should not require further adjustment after installation. The following procedure is recommended for turning on the monitor for the first time.

1. Connect the monitor to a 120VAC, 60Hz power source.
2. Connect a video cable to video input connector at rear of chassis.
3. Set the video termination and differential input switches to the desired position.
4. Place power switch in ON position. Adjust Brightness and Contrast controls for desired effect.

VERTICAL CIRCUIT ADJUSTMENT --

1. Apply a crosshatch video signal to the unit via J1 or J2.
2. Adjust the Vertical Hold control R154 to the center of its range.
3. Adjust the Vertical Height control R158 for a full raster from top to bottom.
4. Adjust the Vertical Linearity control R160 and Vertical Height control R158 for equal spacing between the horizontal lines of the crosshatch signal.

HORIZONTAL CIRCUIT ADJUSTMENT --

1. Apply a crosshatch video signal to the monitor through jacks J1 or J2.
2. Adjust the Horizontal Hold control R187 to lock in the signal.
3. Adjust the Width Coil L103 for a full raster from left to right.
4. Adjust the linearity sleeve on the CRT neck for equal spacing between the vertical lines of the input signal.

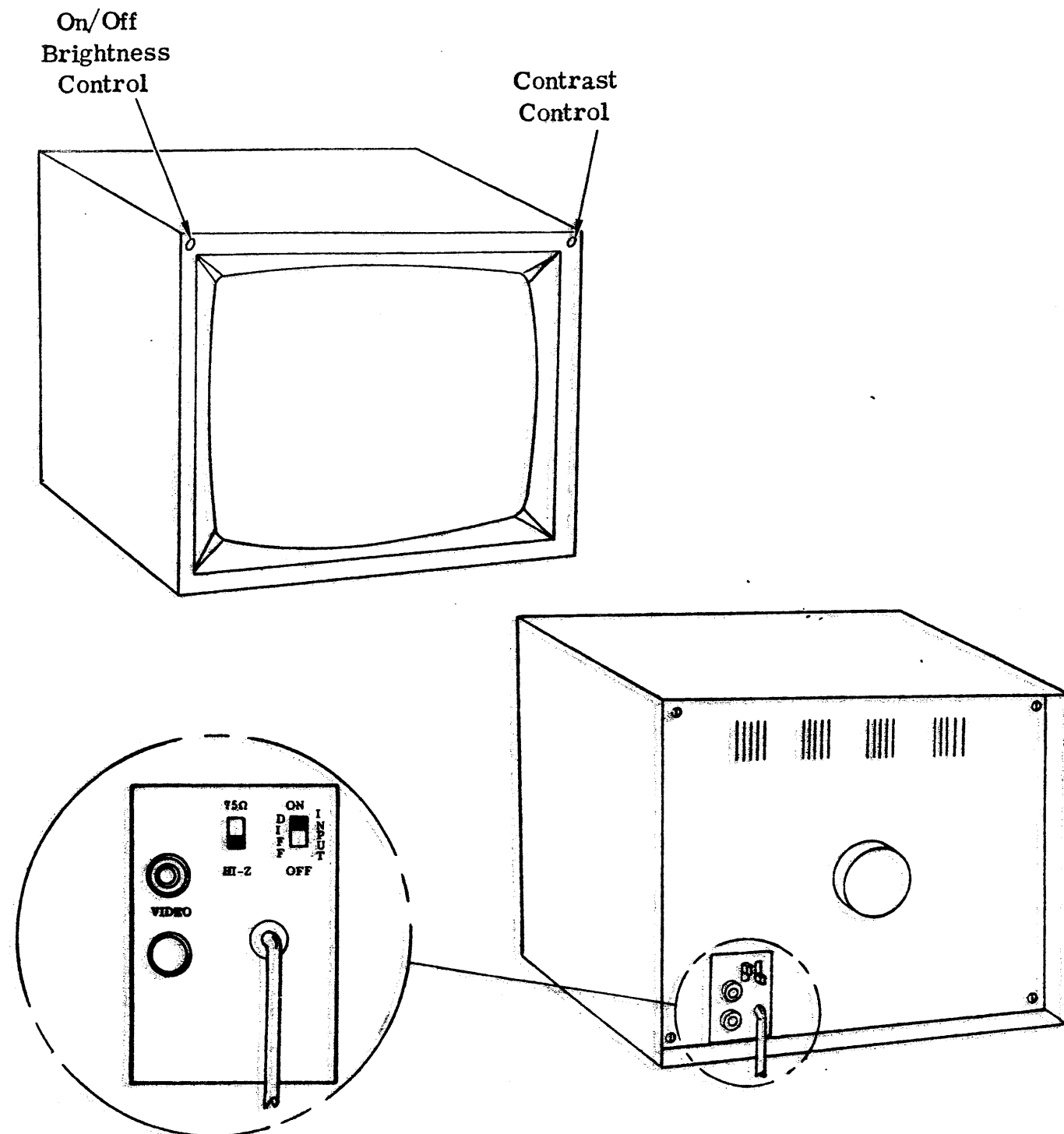


FIGURE 3-20. FRONT AND REAR VIEW OF LCC LARGE SCREEN MONITOR

KEYBOARD COMMAND KEYS

SHIFT Pressing the SHIFT key with an applicable key generates the associated uppercase character.

CTL Pressing the CTL (Control) key generates the control function codes of the ASCII set.

RPT Pressing the RPT (Repeat) key simultaneously with another key causes repeated generation of the other key as long as both are pressed.

LF Pressing the LF (Line Feed) key advances the last line upwards one line position. Pressing the CTL key and the J key simultaneously also produces a line feed.

BRK Pressing the BRK (Break) key allows the operator to generate a 200ms interrupt to the system (not used for DPS 8).

RETURN Pressing the RETURN key causes the carriage to return to the first character position in the same line.

DEL Pressing the DEL (Delete) key together with the SHIFT key generates and sends an ASCII hex code to the host.

CLR Pressing the CLR (Clear) key generates and sends an ASCII hex code to the host, thereby generating the Form Feed command. The same code can also be generated by pressing the CTL key together with the L key.

ESC Pressing the ESC (Escape) key generates and sends an ASCII hex code to the host. The same code can also be generated by simultaneously pressing the CTL, SHIFT, and left bracket keys.

CAP LOCK Pressing the CAP LOCK key locks the keyboard in an uppercase only operating mode (alpha keys only). The lowercase characters are obtained by pressing their respective keys; uppercase characters are obtained by the use of the SHIFT key. CAP LOCK is not released until the CAP LOCK key is pressed again, making the alphabetic lowercase available.

BS Pressing the BS (Backspace) key (indicated in the upper left of the H key) and the CTL key simultaneously causes the print head to backspace one position for each depression.

VT Pressing the VT (Vertical Hold) key (indicated in the upper left of the K key) and the CTL key simultaneously advances the paper until the next vertical tab is found. Up to 10 vertical tabs can be set.

HT Pressing the HT (Horizontal Tab) key (indicated in the upper left of the I key) and the CTL key simultaneously advances the print head to the next horizontal tab or the end of the line, whichever is found first. Up to 16 horizontal tabs can be set; the first tab set becomes the lefthand margin.

FF Pressing the FF (Form Feed) key (indicated in the upper left of the L key) and the CTL key simultaneously automatically skips the paper to the first selected line on the next form if continuous forms are being used. If input is being performed on single sheets, the single sheet is unloaded when the FORM FEED key pressed (refer to CLR key description).

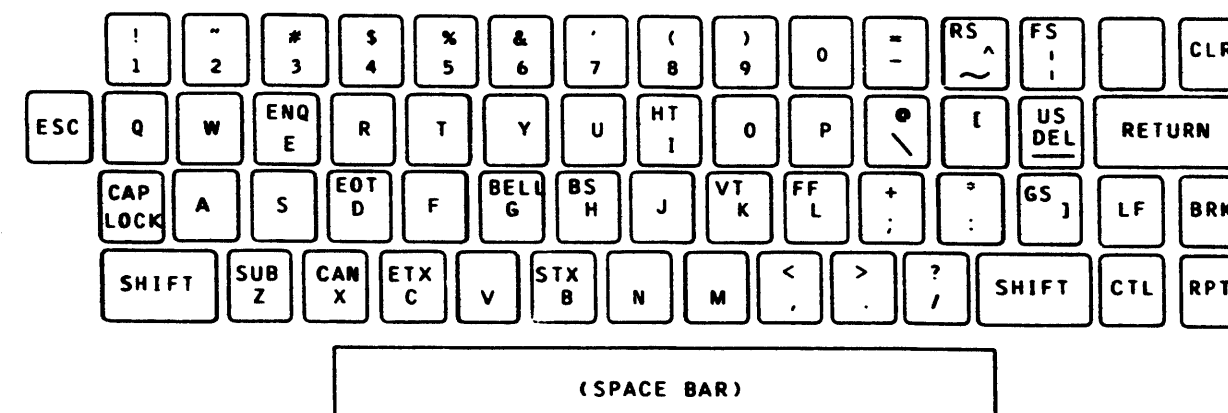


FIGURE 3-21. ROSY 26/26.1 KEYBOARD CHARACTER LAYOUT

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LARGE SCREEN MONITOR 58056588-015 (OPTIONAL)

The optional large screen monitor consists of a 23-inch CRT mounted in a cabinet which may be hung from a wall or ceiling or mounted on any suitable flat surface. This option displays the activity of the local or remote console (see Figure 3-22). The large screen monitor specifications consist of the following:

NOTE: For large screen monitors 58056588-030 (60 Hz)/58056588-036 (50 Hz) or 58081386-001 (60 Hz)/58081385-001 (50 Hz), see the manual supplied with the monitor.

ELECTRICAL

Video Amplifier
 Input Impedance 10K Ω Hi-Z; 75 Ω Low Z. Rear panel switch for Hi-Z or 75 Ω termination.
 Input Connector UHF-looping
 Input Level .30 to 2.0V p-p composite
 Low Frequency Tilt 5 percent or less with window input signal
 DC Restorer Keyed backporch clamp
 Gray Scale Linear response to staircase signal
 Bandwidth 17.5MHz at -3db
 Rise & Fall Time Less than 20 nanoseconds

SYNCHRONIZATION

Internal Composite video only
 Vertical Retrace Yes
 Blank Rate/Line Rate/Field Rate 525/60Hz or 625/50Hz (with 50Hz AC)

RETRACE TIME

Horizontal 8 microseconds
 Vertical 600 microseconds

DISPLAY

Picture Tube 23-inch rectangular
 Resolution 800 TV lines minimum (P4 at 30 FT-L no panel)
 Geometric Distortion Less than 2 percent of active raster height

POWER SUPPLY

Input voltage 100 to 240 AC, 50/60Hz
 Input Power 46W nominal
 Output Voltage +57VDC short circuit protected
 +18KV nominal (w/o high voltage regulation)

ENVIRONMENTAL

Temperature Operating range: 5 C to 55 C ambient
 Storage range: -40 C to 65 C ambient
 Humidity 5 to 80 percent (noncondensing)
 Altitude Operating range: up to 10,000 ft.
 Storage range: up to 14,000 ft.

MECHANICAL

Front Panel OFF/ON, Brightness and Contrast controls
 Controls
 Remaining Controls Internal

Dimensions (Nominal):

MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT (LBS)
Similar to TD23M	18"	23-1/16"	18-1/2"	65

HUMAN FACTORS

X-Radiation Complies with DHEW Radiation specification requirements
 Designed to meet UL Requirements
 UL Standard 796
 Printed Wiring Board
 UL Standard 478
 Standard for Electronic Data Processing Units
 UL Standard 114
 Standard for Office Appliances

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INITIAL TURN-ON PROCEDURE

The monitor was tested and aligned before shipment, and should not require further adjustment after installation. The following procedure is recommended for turning on the monitor for the first time:

1. Connect the monitor to a 120VAC, 60Hz power source.
2. Connect a video cable to video input connector at rear of chassis.
3. Set the video termination and differential input switches to the desired position.
4. Place power switch in ON position. Adjust Brightness and Contrast controls for desired effect.

VERTICAL CIRCUIT ADJUSTMENT

1. Apply a crosshatch video signal to the unit via J1 or J2.
2. Adjust the Vertical Hold control R154 to the center of its range.
3. Adjust the Vertical Height control R158 for a full raster from top to bottom.
4. Adjust the Vertical Linearity control R160 and Vertical Height control R158 for equal spacing between the horizontal lines of the crosshatch signal.

HORIZONTAL CIRCUIT ADJUSTMENT

1. Apply a crosshatch video signal to the monitor through J1 or J2.
2. Adjust the Horizontal Hold control R187 to lock in the signal.
3. Adjust the Width Coil L103 for a full raster from left to right.
4. Adjust the linearity sleeve on the CRT neck for equal spacing between the vertical lines of the input signal.

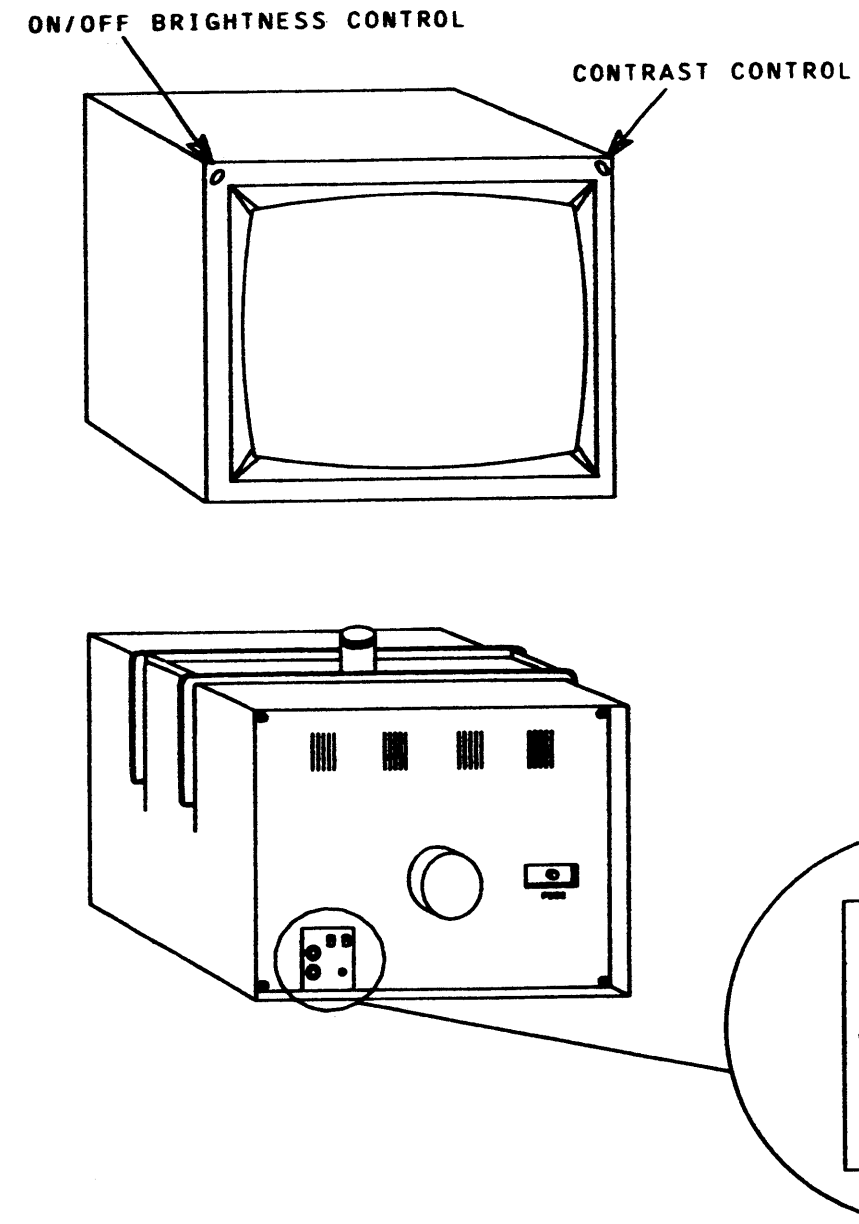


FIGURE 3-22. LARGE SCREEN MONITOR 58056588-015

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PROCESSOR ACTIVITY DISPLAY (POD)

The Processor Activity Display (POD) contains the following controls and indicators (see Figure 3-24):

NOTE: Figure 3-23 was deleted.

1. Initialize and Bootload Controls.
2. Emergency Power Off Switch.
3. CPU Activity Indicators: Six CPU activity indicators (LEDs) are provided to indicate the relative activity of the CPUs on a system.
4. CPU DIS Indicators: Six DIS indicators are provided to indicate the idle state of the CPUs on a system.

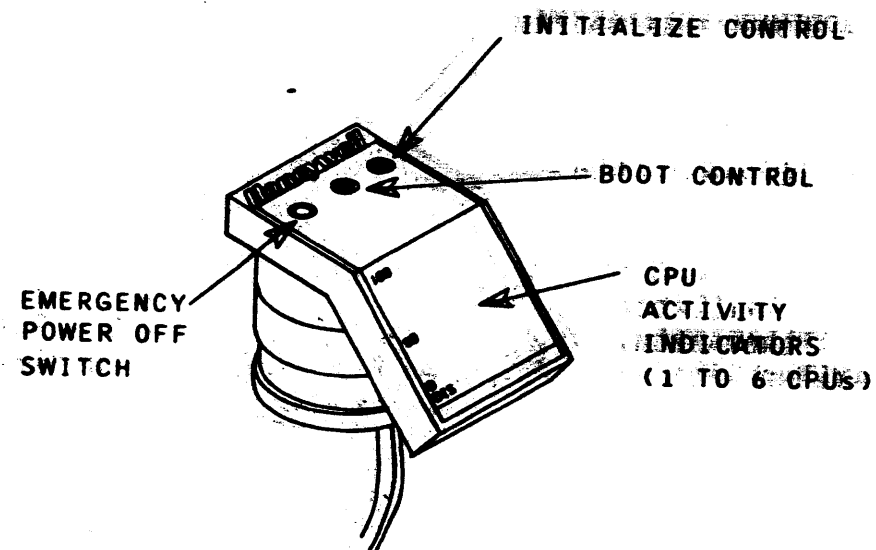


FIGURE 3-24. PROCESSOR ACTIVITY DISPLAY (POD)

CSU BAR GRAPH CALIBRATION

The following steps are required to calibrate the CSU bar graph:

1. Ensure that the firmware is loaded.
2. With the console in the maintenance mode, insert the following program into the main memory using the following format:

```

<MAINT>*W/M/0-                               Write Memory Starting at Zero
000000; 000 000 235 003
000001; 000 201 560 000                       LDA
000002; 000 000 531 011                       RPD
000003; 000 000 531 011                       NEG
000004; 000 000 011 000                       NOP
000005; 000 000 011 000                       NOP
000006; 000 000 710 000                       TRA
    
```

3. Enter the following command sequence:

```

<MAINT>* I                                     Initialize
<MAINT>* W/R/RMDC/540                          Turn cache on
<MAINT>* E/I/000000710000                      Transfer to Zero
    
```

4. Adjustment: A signal driver board for each LED bar graph is located on the processor backpanel. Rotate the trimpot adjustment screw on the driver board clockwise until the LED on the board is illuminated. Then rotate the screw counterclockwise until the LED just extinguishes. All nine LEDs (on the Console Pod for this CPU) should now be illuminated while the DIS LED is extinguished. Halt the processor and ensure that the DIS LED is illuminated and that the bar graph LEDs are extinguished.

LEVEL 6 AND DPS 8 SERIES BAR GRAPH CALIBRATION

The following steps are required to calibrate this bar graph. (Firmware is not a consideration.)

1. With the console in the maintenance mode, insert the following program into store:

ADDR	CONTENTS	MNEMONIC	INSTRUCTION
00	000 000 235 003	LDA	Load A Register
01	000 201 560 000	RPD	Repeat Double
02	000 000 531 011	NEG	Negate A
03	000 000 531 011	NEG	Negate A
04	000 000 011 000	NOP	No Op
05	000 000 011 000	NOP	No Op
06	000 000 710 000	*-6	Jump back to zero

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2. Insert the following into the processor DATA switches:
000 000 710 000
3. Depress INITIALIZE CLEAR.
4. Set the following switches:
 - a. EXECUTE SWITCHES/EXECUTE FAULT to SWITCHES position
 - b. TEST/NORMAL to TEST position
 - c. STEP CONTROL to OFF position
 - d. All Cache Control Board switches to the ON position
5. Depress EXECUTE.
6. Adjustment: The meter calibration adjustment is performed in the same manner as the CSU meter adjustment.

SWITCH PANEL OPTION

The Switch Panel Option (Figure 3-25) allows the capability to switch to a remote console (not remote maintenance) and back to a local console. Care must be exercised to prevent loosening the console connection during the switching process.

- o One rotary switch labeled PRINTER. This switch has two settings: PORT 1 and PORT 2.
- o One rotary switch labeled MODEM. This switch has two settings: MODEM and TERMINAL.
- o Seven Berg Connectors: Three connectors are associated with the printer switch and are labeled TERMINAL, SLAVE PORT 1, and SLAVE PORT 2. The remaining four connectors are associated with the modem switch and are labeled TERMINAL, MODEM, LOCAL PORT, and SLAVE PORT.
- o One common cable, 58052563, connecting the Berg connectors to the two rotary switches.
- o Modem and dataset cables, 58051916 and 43C144536.

The switches, connectors, and the common harness are mounted to a switch panel which in turn mounts to the pedestal (see Figure 3-25).

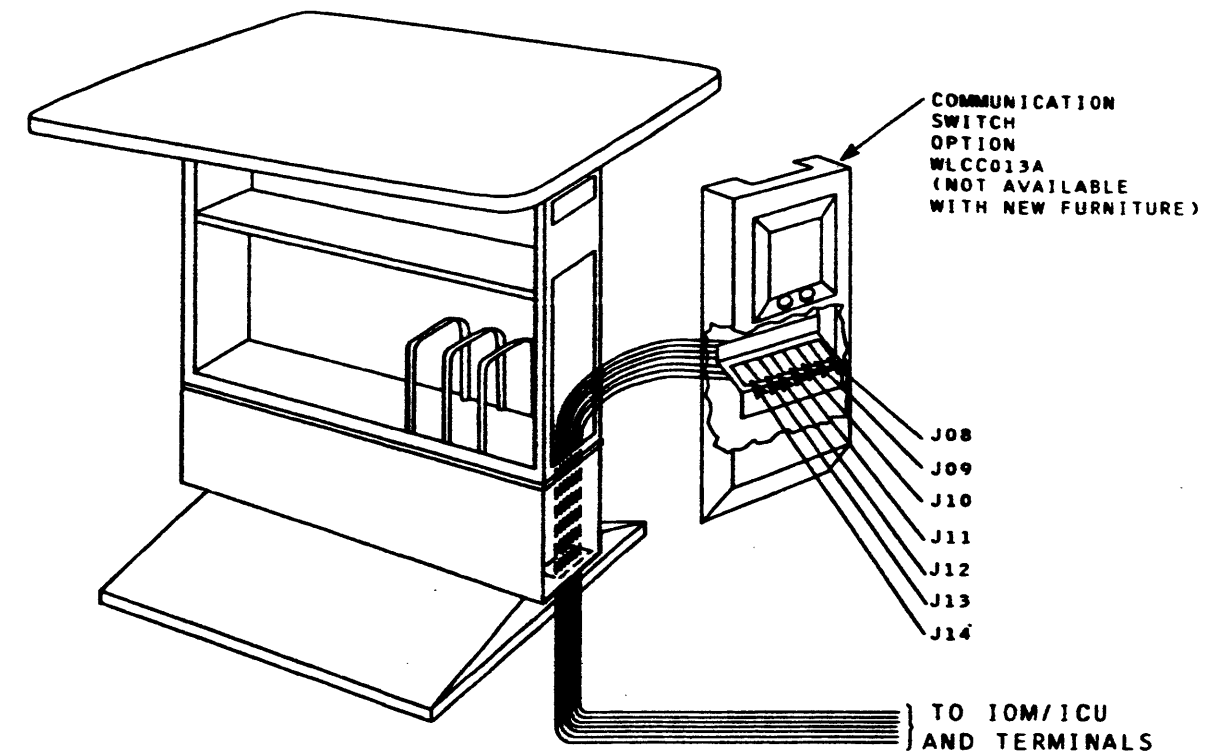


FIGURE 3-25. STAND-UP VERSION OF THE PEDESTAL WITH SWITCH PANEL OPTION

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SWITCHING PROCEDURE: The following steps must be followed when using the remote switch panel to switch the local console to remote or the remote to local console, when the system is in an operational environment:

1. The active (local or remote) terminal operator must depress the return key to place the channel in read mode. When the three question marks (???) appear on the terminal, the remote switch panel can be switched to the desired mode. The System Console microprocessor will automatically reset the active terminal to read mode.
2. The operator on the active terminal must depress the return key to establish the baud rate for the active terminal. The switch to the terminal is now operational.

PRINTER SWITCH: The PRINTER switch allows the user to switch a single slave printer between the primary local terminal (PORT 1 switch position) and an additional terminal (PORT 2 switch setting) (see Figure 3-26).

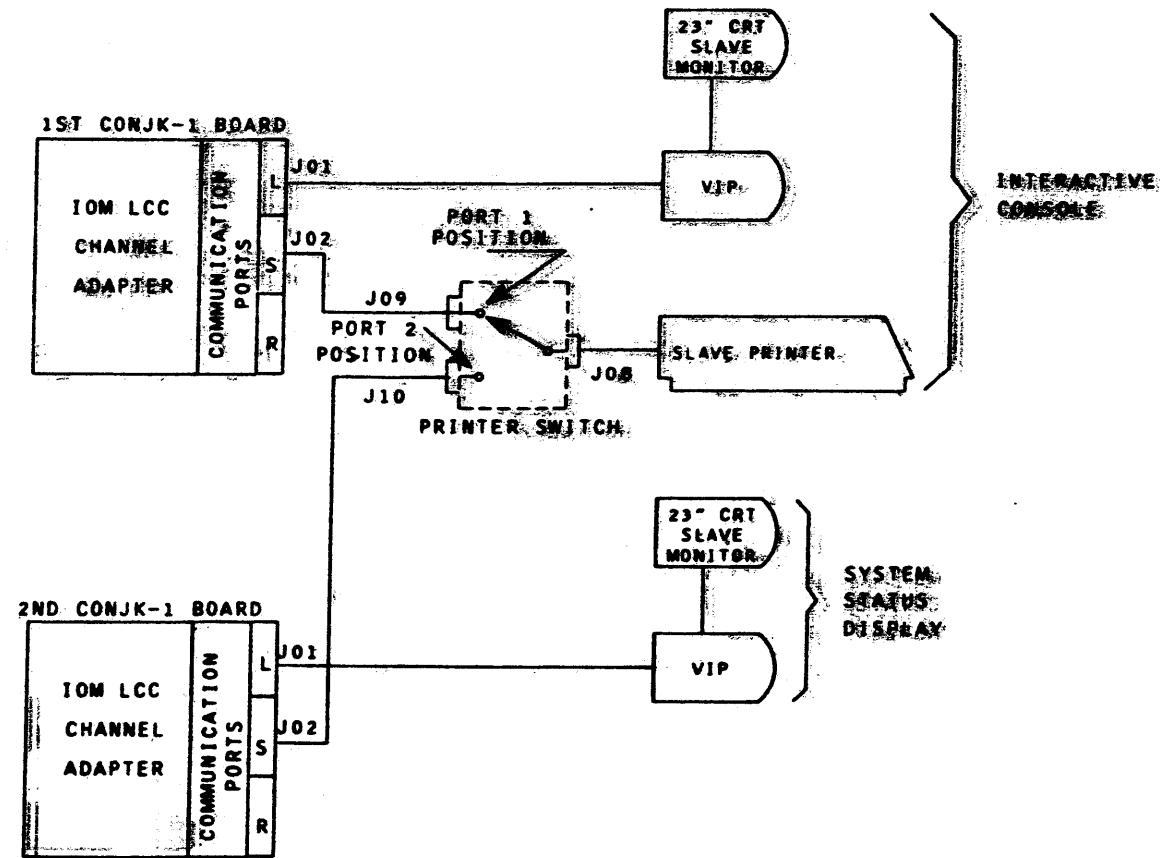


FIGURE 3-26. SWITCH PANEL OPTION SHOWING PRINTER SWITCH IN PORT 1 POSITION

MODEM SWITCH: The MODEM switch allows the user to physically switch the system operation to a remote terminal device (off-site), and maintain local console monitoring with the slave printer (see Figure 3-27).

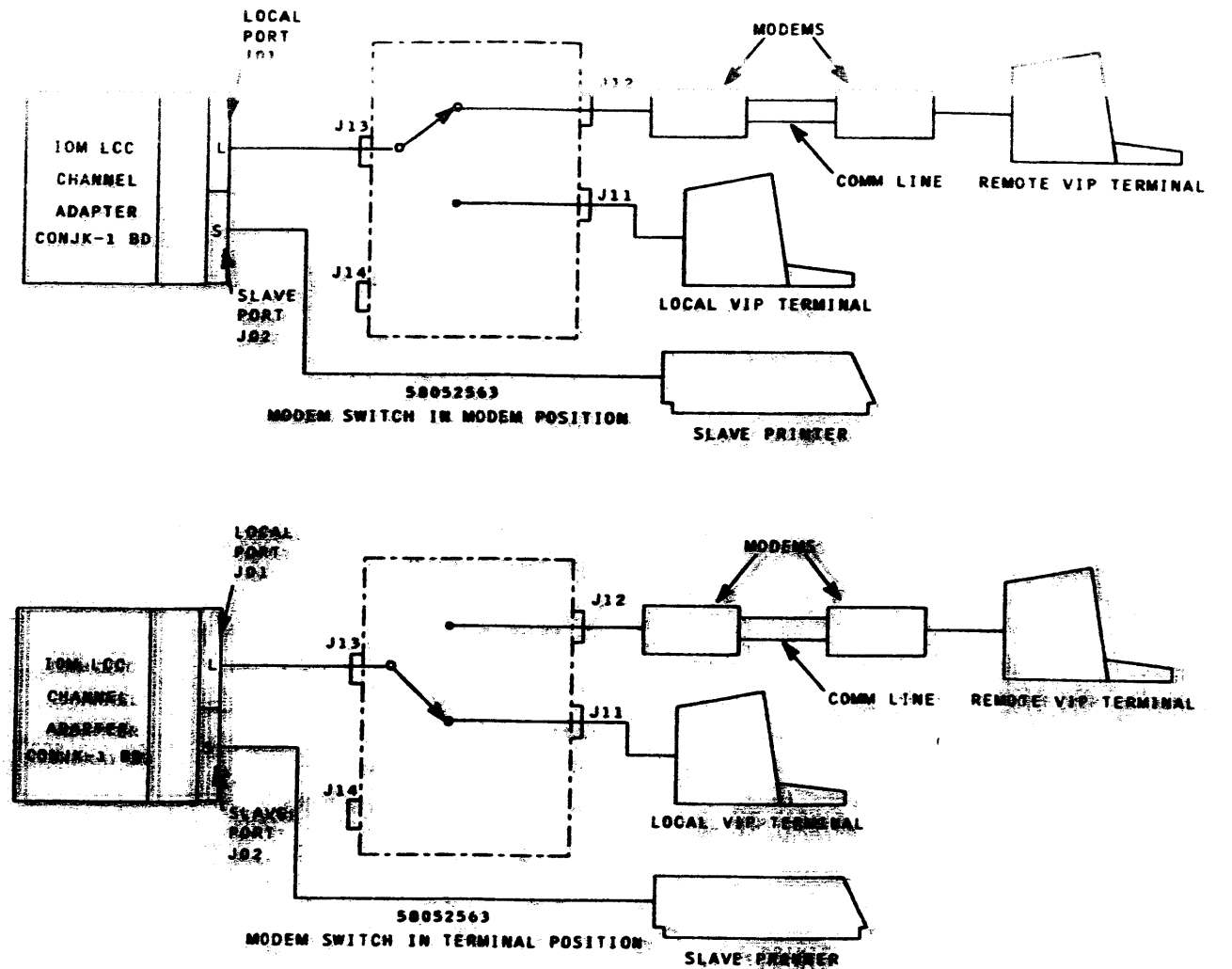


FIGURE 3-27. SWITCH PANEL OPTION SHOWING MODEM SWITCH

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TABLE 3-4. 6- TO 7-BIT CODE CONVERSION

SPECIAL CHARACTERS

As noted in Table 3-4, the system internal 6-bit code contains three special characters. The channel adapter detects and interprets the occurrence of these characters. The special characters and sequences to be interpreted by the channel are described below:

ESCAPE CHARACTER: The escape character is an octal 77. The escape character requires the interpretation of one or more following characters. If three escape characters are received, not separated by a normal character, an exclamation point will be transmitted to the console.

If one escape character is received followed by a character with a "0" in the high-order bit position, a line feed and carriage return will be transmitted to the console.

If one escape character is received followed by a character with a "1" in the high-order bit position and a "0" in the next bit position, the horizontal tabulate function will be executed.

IGNORE CHARACTER: The ignore character is a question mark, octal 17. If an ignore character is preceded by two escape characters, a question mark will be transmitted to the console. If two escape characters do not precede the ignore character, then the ignore character is simply ignored and nothing happens.

SPACE CHARACTER: If a space character is received with no preceding escape characters, the channel transmits a space to the console. If the space character is preceded by two escape characters, the channel will transmit an END OF MESSAGE character (---) to the console.

A summary of the special character sequences follows:

- 77 followed by 77 followed by 17 = ?
- 77 followed by 77 followed by 20 = (End of Message Character)
- 77 followed by 0xxxxx = Carriage Return and Line Feed
- 77 followed by 10xxxx = Horizontal Tab

interpreted, but will be converted to the respective 6-bit code as shown in Table 3-5.

6-BIT OCTAL CODE	CHARACTER		7-BIT OCTAL CODE	6-BIT OCTAL CODE	CHARACTER		7-BIT OCTAL CODE
	6-BIT	7-BIT			6-BIT	7-BIT	
00	0		60	60	+	53	
01	1		61	61		57	
02	2		62	62	S	123	
03	3		63	63	T	124	
04	4		64	64	U	125	
05	5		65	65	V	126	
06	6		66	66	W	127	
07	7		67	67	X	130	
10	8		70	70	Y	131	
11	9		71	71	Z	132	
12	[		133	72	<	137
13	#		43	73	.	54	
14			100	74	%	45	
15	:		72	75	"	75	
16	>		76	76	'	42	
17	?		77	77	!	41	
20	SP	SP	40				
21	A		101				
22	B		102				
23	C		103				
24	D		104				
25	E		105				
26	F		106				
27	G		107				
30	H		110				
31	I		111				
32	&		46				
33	.		56				
34			135				
35	(		50			
36	<		74				
37	\		134				
40	△		136				
41	J		112				
42	K		113				
43	L		114				
44	M		115				
45	N		116				
46	O		117				
47	P		120				
50	Q		121				
51	R		122				
52	-		55				
53	\$		44				
54	.		52				
55	)		51			
56	:		73				
57	'		47				

TABLE 3-5. 7- TO 6-BIT CODE CONVERSION

7-BIT OCTAL CODE	CHARACTER		6-BIT OCTAL CODE	7-BIT OCTAL CODE	CHARACTER	6-BIT OCTAL CODE
	6-BIT	7-BIT				
000	NULL			060	0	00
001				061	1	01
002				062	2	02
003				063	3	03
004				064	4	04
005				065	5	05
006				066	6	06
007	BELL			067	7	07
010	BS			070	8	10
011	HT			071	9	11
012	LF			072	:	15
013			NO 6-BIT EQUIVALENT	073	;	56
014	FF			074	<	36
015	CR			075	=	75
016				076	>	16
017				077	?	17
020	NONE			100	@	14
021				101 or 141	A	21
022				102 or 142	B	22
023				103 or 143	C	23
024				104 or 144	D	24
025				105 or 145	E	25
026				106 or 146	F	26
027				107 or 147	G	27
030				110 or 150	H	30
031				111 or 151	I	31
032				112 or 152	J	41
033	ESC			113 or 153	K	42
034				114 or 154	L	43
035				115 or 155	M	44
036				116 or 156	N	45
037	US SPACE	SPACE	20	117 or 157	O	46
040	!	!	77	120 or 160	P	47
041	"	"	76	121 or 161	Q	50
042	#	#	13	122 or 162	R	51
043	\$	\$	53	123 or 163	S	62
044	%	%	74	124 or 164	T	63
046	&	&	32	125 or 165	U	64
047	'	'	57	126 or 166	V	65
050	(	(	35	127 or 167	W	66
051	)	)	55	130 or 170	X	67
052			54	131 or 171	Y	70
053	+	+	60	132 or 172	Z	71
054	.	.	73	133	[	12
055	-	-	52	134	+	37
056	/	/	61	135	]	34
				136	^	40
				137	←	72
				173-177		NO 6-BIT EQUIVALENT

ILLEGAL FORMATS

The following 6-bit character escape sequences are illegal, and upon detection will be terminated with Data Alert, Major Status, or Illegal Format Substatus.

77 followed by 77 followed by any character other than 20, 17 or 77

77 followed by 11xxxx unless xxxx = 1111

ASCII CODE

When receiving data from the local or remote terminal in response to a Read command, the channel adapter converts the ASCII code to the 6-bit equivalent as shown in Table 3-4. The ASCII codes from 000 through octal 037 have no 6-bit equivalent; and if transmitted from the terminal device, it will be disregarded by the channel adapter and will not be transferred to system memory. The ASCII codes octal 141 through octal 172 will be interpreted as octal 101 through octal 132, respectively.

The software may transfer ASCII code to or from a terminal device directly (no code conversion in the channel adapter) by specifying an ASCII Write or Read. In this case, the functions assigned to the 7-bit codes in the range from 000 to octal 037 are listed in Table 3-5.

HORIZONTAL TAB

The channel adapter interprets the ASCII horizontal tab set and tab initialize character sequences as well as the horizontal tab character. The codes for the horizontal tab functions for the ROSY printer and VIP displays are shown below:

	HORIZONTAL TAB	TAB SET	TAB INITIALIZE
ROSY	011 (OCTAL)	ESC 1	ESC 2
VIP	013 (OCTAL)	ESC P	ESC M

The software uses the ESC 1 and ESC 2 sequences to set and initialize tabs. In order to maintain compatibility between the ROSY printer, VIP displays, and the software, the channel adapter provides the horizontal tab functions.

When the tab character is received, the channel adapter transmits the appropriate number of space characters to the terminal device to simulate the horizontal tab. All other ASCII escape sequences received from the system are transmitted to the terminal device(s). When the channel adapter is configured for two channels, both channels may have different horizontal tab settings.

OPERATOR INPUTS

In addition to the data input from the terminal devices in response to a read command, the channel adapter recognizes unsolicited commands from the operator. The operator commands may be control sequences, special characters, or command verbs.

CONTROL SEQUENCES AND SPECIAL CHARACTER COMMANDS

The control sequences, special character commands, and associated channel functions are as follows:

OPERATOR REQUEST

In order to input a message to the system, the operator must depress the carriage return key to activate the read mode. This function is inhibited if the channel is already in the read mode.

OPERATOR INPUT ERROR

When the channel is in the read mode, depressing the Control X key voids the previous operator input, causing an "ERR" message to be sent to the console and reinstates the read command.

END OF MESSAGE

When the channel is in the read mode, the carriage return is interpreted as End of Message. The channel adapter stores any data remaining in the data registers and terminates the read command.

CHANNEL ADAPTER BAUD RATE

When the ready line on the local terminal changes state from OFF to ON, the operator must press the carriage return key to establish the baud rate.

NOTE: The VIP7201 has an internal self-test that takes about five seconds. After the self-test is completed the operator has about ten seconds to establish the baud rate with the carriage return key.

SYSTEM INITIALIZE

The system initialize function is activated by the channel adapter upon receipt of the ESC;CNT"1" sequence. This function is acceptable through the local port or through the remote port when the local port sends #ENable INItialize permission.

SYSTEM BOOTLOAD

The System Bootload function is activated by the channel adapter on receipt of the ESC;CNT"B" sequence. This function is acceptable via the local port or through the remote port when the local port sends #ENable INItialize permission.

LOAD FIRMWARE (CSU ONLY)

In the CSU configuration, an ESC,CNT-F sequence (033,006) notifies the DPU to boot the CPU firmware. The logical connection between the DPU and console remains until a CNT-E character is received from the DPU. The CNT-E is not transmitted to the console. The local port (master) must enter #ALLOW MAIntenance before the ESC,CNT-F can be entered at the remote port.

DPU INITIALIZE (CSU ONLY)

The DPU is initialized by the channel adapter upon receipt of the ESC,CNT-R (033, 022) sequence. The initialize signal is sent to the DPU only and does not alter the state of the channel adapter. The local port must enter #ALLOW MAIntenance before the ESC,CNTR-R can be entered at the remote port.

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REMOTE MAINTENANCE INTERFACE

The Remote Maintenance Interface (RMI) is a terminal device, located at a remote (off-site) location, capable of performing all the maintenance tasks normally conducted through maintenance, test, diagnostic and operator panels or system and maintenance consoles (see Figure 3-28).

REMOTE MAINTENANCE MODE CONDITIONS

The following conditions apply to the Remote Maintenance mode:

- o It is not possible to enter the text mode if either channel is in the maintenance mode.
- o Only one channel at a time can be in the maintenance mode.
- o In the dual channel configuration, either channel can be in the maintenance mode, while the other channel runs GCOS, T&D, etc.
- o In the single-channel configuration, if the remote terminal is in maintenance mode, the local terminal can run GCOS, T&D, etc. However, the reverse is not true; if the local terminal is in the maintenance mode, the remote terminal is not able to communicate with the system. The user, however, can observe the local terminal operate in the maintenance mode. The user receives a copy of the local keyboard input, and if monitor is enabled, also sees the output.
- o When a terminal is in maintenance mode, the user does not receive a copy of either input or output for the other channel.
- o Type-ahead works in most cases when operating as a console, but must not be used in the maintenance mode.
- o Users must remember to use the escape character before the "#" character when inputting command verbs if the channel is in the Read mode (such as in the T&D options state).

RELINQUISH MODE CONDITIONS

The following conditions apply to the Relinquish mode:

- o Only one Peripheral Control Word (PCW) is processed at a time.
- o If monitor is enabled, a Write PCW directed to either IOM channel will be printed on both terminals, but the terminate status will be sent to the IOM channel which received the Write PCW. If monitor is disabled, the local terminal will not copy data directed to the remote.

- o A read PCW directed to either IOM channel must be satisfied by the console whose keyboard is active. The BREAK and Control X functions apply here. For example, either the remote or local keyboard can supply data in response to a read command to the local channel. The Control X can be used to transfer control at any time - even in the middle of an input. However, the terminate status will be returned to the IOM channel which received the read PCW, regardless of which console supplied the input data.
- o An Operator Input Request (Level 7 Interrupt) will be sent to the IOM channel associated with the terminal that generates the request (the active keyboard). A request generated at the remote terminal will go in on the remote channel IOM port, and vice-versa. A terminal may not initiate a request to the other terminal's IOM channel.

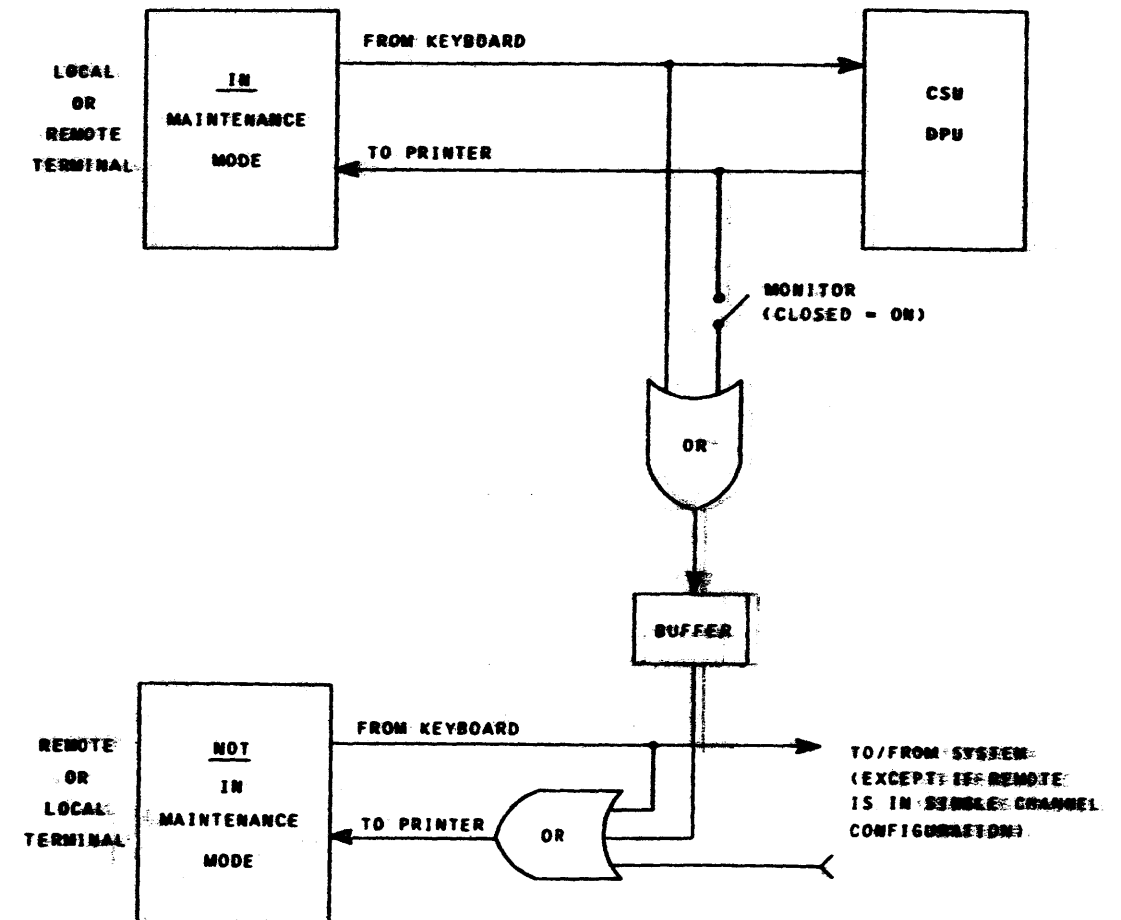


FIGURE 3-28. MAINTENANCE MODE DATA FLOW

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REMOTE MAINTENANCE COMMANDS (VERBS)

The RMI commands provide operator control and dialog with the remote terminal and the DPU (see Table 3-6). These commands are not valid when the channel is in the read mode, i.e., the channel adapter is waiting for operator input to satisfy a read command, except when preceded by the escape character followed by the # sign (ESC #).

All commands are preceded by a # symbol. Upon receipt of the # symbol, the channel adapter transmits a carriage return and line feed to both the local and remote terminals. Commands transmitted from the remote terminal start in column one. All messages generated by the channel adapter are bracketed by pound symbols (i.e., #Remote Request#) and start in column one.

If the command is more than one word, the words must be separated by one space. The channel adapter interprets the first three characters of each word, allowing a short form input from the keyboard. After a command input has started, receipt of a # symbol results in the previous input being discarded and the command input restarted. Operator input completion is indicated by a carriage return character. If a system command execution is being delayed for operator command input and 10 seconds elapses without console input, the channel adapter transmits a carriage return to the terminal, aborts the operator input, and executes the system command.

TABLE 3-6. RMI COMMANDS (VERBS)

COMMAND	SINGLE CHANNEL	DUAL CHANNEL	COMMAND ACCEPTABLE VIA	
			LOCAL	REMOTE
#ENABLE REMote	YES	YES	YES	NO
#DISable REMote	YES	YES	YES	YES
#ENABLE MAIntenance	YES	YES	YES	YES
#ALLow MAIntenance	YES	YES	YES	NO
#ENABLE TEXT	YES	YES	YES	YES
#ENABLE CONsole	YES	YES	YES	YES
#ENABLE MONitor	NO	YES	YES	NO
#DISable MONitor	NO	YES	YES	NO
#ENABLE INITialize	YES	YES	YES	NO
#DISable ITInitialize	YES	YES	YES	NO
#RELinquish	NO	YES	YES	NO
#ENABLE CHAnnel	NO	YES	YES	YES
#STATus	YES	YES	YES	YES
#HELP	YES	YES	YES	YES

The commands are as follows:

- o **#ENABLE REMote:** This command is accepted from the local (master) port only. Upon receipt of this command, if the remote (slave) port is ready, the channel adapter sends a "#REMOTE CONNECTED#" message to both the local and remote ports. After the "#REMOTE CONNECTED#" message is sent, the remote port is enabled to allow operator input. If the remote port becomes non-operational after it has been enabled, the channel adapter sends a "#REMOTE DISCONNECTED#" message via the local port and the channel adapter returns to the remote disabled mode. This command is illegal if the remote carrier detect is off. The message "#RELINQUISH MODE REQUESTED# -- OK? (Y/N)" requiring an operator response of Y or N is displayed when remote permission is granted, and the console is in the single channel mode.

During the time that the remote port is enabled, the channel adapter maintains a line count of console traffic to the local port. When the line count is equal to 24, the channel adapter, upon receipt of the next system write command, sends a "#REMOTE ACTIVE#" message to the local port before executing the command. If relinquish mode is enabled, the "#RELINQUISH ACTIVE#" message is also displayed. When the remote port is a DPU, an ESCAPE-N sequence disables echo mode from the local port to the remote port. An ESCAPE-E sequence enables echo mode from the local port to the remote port.

The "#REMOTE REQUEST#" message is generated each time a carriage return is sent from the remote port, until the remote port is enabled by the local port.

- o **#DISable REMote:** This command may be received via the local or remote port after the "#ENABLE REMote" command is executed. Upon receipt of this command, the channel adapter aborts any transaction that is in progress on the remote port. It sends a "#REMOTE DISCONNECTED#" message to both ports and disables the remote port.
- o **#ENABLE MAIntenance:** This command may be received via the local port or the remote port when enabled. Upon receipt of this command, the channel adapter sends a Control D (004) character to the DPU and enables dialog between the DPU port and the port over which the command is received. The channel remains in the maintenance mode until an "#ENABLE CONsole" command is received from the local port or a Control E character is received from the DPU. If the DPU interface is not operational, the channel adapter sends an "#ILLEGAL COMMAND#" message to the port over which the command was received. This command is rejected if entered at the remote port and "#ALLOW MAIntenance" permission has not been granted at the local port.

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o #ENABle MAIntenance (cont.)

In the maintenance mode, the channel adapter recognizes an ETX (003) character from the DPU to determine when the DPU interface is in a logical idle state (in between input and/or output messages). In the idle state, the channel adapter sends any console-level messages that are waiting, i.e., "#REMOTE REQUEST#", "#REMOTE CONNECTED#", etc.

The "#ENABle MONitor" and "#DISABle MONitor" commands when entered from the local port are valid in the single channel configuration if either port is in maintenance mode. When monitor is enabled, the port that is not in maintenance mode receives a copy of the DPU output from the port that is in maintenance mode. The default mode is MONITOR ENABLED. A copy of the keyboard input from the port in maintenance mode always goes to the port that is not in the maintenance mode.

In a single channel configuration the local port may continue system operation while the remote port is in maintenance mode. If the local port is in maintenance mode, the remote port cannot communicate with the system. In a two channel configuration either port can be in maintenance mode while the other port continues system operation. In both one and two channel configurations a port in maintenance mode cannot monitor system operation on the other port. The text mode is not valid when the maintenance mode is active.

- o #ALLOW MAIntenance: This command is received via the local port only and is required to permit remote maintenance to the DPU. An "#ILLEGAL COMMAND#" is sent if the DPU interface is not operational. Commands (#ENABle MAIntenance, ESC,CNT-F, and ESC,CNT-R) entered at the remote port are not permitted until "#Allow MAIntenance" is entered at the local port. An "#ILLEGAL COMMAND#" message is sent to the remote port when any command above is attempted at the remote port and "#ALLOW MAIntenance" has not been granted at the local port. "#Allow MAIntenance" remains in effect until "#DISABle REMote" is entered at either port, or the telephone is disconnected.

- o #ENABle TEXT: This command may be received via the local port or the remote port when enabled. Upon receipt of this command, the channel adapter enables communication between the local and remote ports. If the channel adapter has a system I/O outstanding, the text mode is delayed until the system I/O is completed. When the text mode is enabled and the channel adapter receives a system command, the system command is delayed until current input or output is complete and then interrupted for execution of the system command. For operator input with a system command waiting, the 10 second time-out applies.

o #ENABle TEXT (cont.)

The channel adapter inserts a right parenthesis ")" at the beginning of each line of input between ports. After the channel adapter has entered the text mode, a ")" is inserted in front of the first character received. When a carriage return is received, the channel adapter adds a line feed and inserts a ")" in front of the next character received. The port over which "#ENABle TEXT" is received has the first input capability. The input capability is switched upon receipt of BREAK from the inactive keyboard. In both cases the channel adapter sends a carriage return and line feed via both ports to signal that the switch has been made.

The remote port may be placed in the text mode by command from the local port without first being enabled.

- o #ENABle CONsole: This command may be received via the local port or the remote port when enabled. This command is valid only when the maintenance or text modes have been enabled. Receipt of this command disables the maintenance and text modes and returns the channel to the operational state that existed before the maintenance or text mode was entered.
- o #ENABle MONitor: This command is received via the local port only. It is valid only for dual channel operation and when #DISABle MONitor has been executed. This command returns the channel adapter to the mode of transmitting all traffic to/from the remote port to the local port.
- o #DISABle MONitor: This command is received via the local port and is valid only in dual channel operation. Upon receipt of this command, the channel adapter disables the sending of output traffic to the local port that is addressed to the remote port. Input from the remote port continues to be sent to the local port.
- o #ENABle INItialize: This command is entered from the local port only and permits system initialize (ESC,CNT-I) and boot (ESC,CNT-B) commands from the remote port. This command is valid only if the console is in relinquish mode and is denied with an "#ILLEGAL COMMAND#" when entered and relinquish mode is not active. Any attempt to enter an ESC,CNT-I or ESC,CNT-B from the remote port without the "#ENABle INItialize" command is denied with a "#CMD REJECTED#" message.
- o #DISABle INItialize: This command is entered from the local port only and disables the ability to initialize (ESC,CNT-I) and boot (ESC,CNT-B) from the remote port.

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- o **#RElinquish:** This command is received via the the local port only when the channel adapter is configured for two channels. Receipt of this command results in a logical override of the two-channel configuration switch. All console traffic is sent to both ports. In this mode of operation (single channel), the data rate is governed by the slowest device configured. A connect to the remote port results in a device attention status when in relinquish mode.
- o **#ENable CHAnnel:** This command is received via the local or remote port and is valid only when the channel adapter is configured for two channels and the "#RElinquish" command has been executed. Receipt of this command returns the channel adapter to two-channel operation and disables the "#ENable INitialize" state if enabled
- o **#STatus:** This command is received via the local port or the remote port when enabled. In response to this command, the channel adapter sends the current command status to the requesting device, i.e., Remote Active, Monitor Disabled, Text Enabled, Maintenance Enabled, or Console Enabled.
- o **#HELP:** This command is received via the local port or the remote port when enabled. In response to this command, the channel adapter sends #CONSOLE VER C.0# and a list of all the available console verbs in short form (example: #ENA REM).

TABLE 3-7. CHARACTERS RECEIVED FROM ACTIVE KEYBOARD - SINGLE CHANNEL OR EITHER KEYBOARD - DUAL CHANNEL

KEYBOARD CHARACTERS	MODE	ACTIVE KEYBOARD - SINGLE CHANNEL - OR - ACTIVE OR INACTIVE KEYBOARD - DUAL CHANNEL
CARRIAGE RETURN	READ	END OF MESSAGE
	WRITE	CAUSES LEVEL 7 INTERRUPT (OPERATOR INPUT REQUEST)
	IDLE	CAUSES LEVEL 7 INTERRUPT (OPERATOR INPUT REQUEST)
CONTROL X	READ	CAUSES "ERR" TO BE PRINTED ON LOCAL TERMINAL. OPERATOR INPUT ERROR STATUS IS STORED.
	WRITE	NO ACTION
	IDLE	NO ACTION
BREAK	READ	PERFORM NO FUNCTION, BUT WILL RESULT IN "??" TO LOCAL TERMINAL WHEN CHANNEL IS IN, OR GOES TO, IDLE.
	WRITE	
	IDLE	
#	READ	SEND TO SYSTEM AS DATA (MUST BE PRECEDED BY AN ESCAPE CHARACTER TO ENTER VERBS WHILE IN READ MODE).
	WRITE	BEGIN COMMAND VERB INPUT AT END OF WRITE
	IDLE	BEGIN COMMAND VERB INPUT
ESC	READ	BEGIN ESCAPE SEQUENCE INPUT. RETURN TO READ MODE AFTER ESCAPE SEQUENCE UNLESS ESCAPE SEQUENCE CAUSED AN INITIALIZE (E.G., ESCAPE, CONTROL I).
	WRITE	AT THE END OF WRITE, BEGIN ESCAPE SEQUENCE INPUT
	IDLE	BEGIN ESCAPE SEQUENCE INPUT
ALL CHARACTERS	READ	SEND TO SYSTEM AS DATA
	WRITE	IGNORED
	IDLE	IGNORED

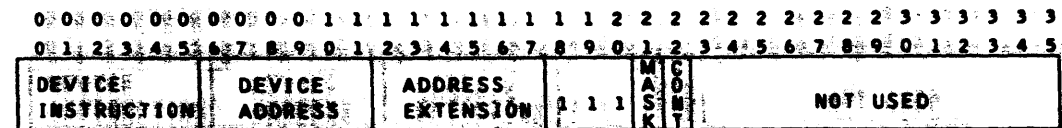
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TABLE 3-8. CHARACTERS RECEIVED FROM INACTIVE KEYBOARD - SINGLE CHANNEL OR EITHER KEYBOARD - DUAL CHANNEL

KEYBOARD CHANNEL	MODE	CHARACTERS RECEIVED FROM INACTIVE KEYBOARD - SINGLE CHANNEL OR EITHER KEYBOARD - DUAL CHANNEL
CONTROL X	ALL	CAUSES THE KEYBOARD FROM WHICH IT WAS RECEIVED TO IMMEDIATELY BECOME ACTIVE.
BREAK	ALL	CAUSES THE KEYBOARD FROM WHICH IT WAS LAST RECEIVED TO BECOME ACTIVE. IF A PERIPHERAL CONTROL WORD (PCW) COMMAND IS IN PROCESS, THIS ACTION IS TAKEN AT THE END OF THE COMMAND. THE CHANNEL ADAPTER ANSWERS THE BREAK WITH A PROMPT "???" WHEN THE CHANNEL ADAPTER IS IN THE IDLE MODE.
ALL OTHER CHARACTERS	ALL	ALL OTHER CHARACTERS ARE IGNORED AND ARE NOT ECHOPLEXED.

PERIPHERAL CONTROL WORD FORMAT

The Peripheral Control Word (PCW) and the Instruction Data Control Word (IDCW) use the same format. The PCW is distinguished by being obtained as the end result of a connect. The IDCW has been designed to allow the software and unrestricted user programs to place instructions for peripheral devices at appropriate places in a DCW list accessed only by list services. Any distinction in interpretation of the fields is given in the description of that field.



The interpretation of these fields is as follows:

DEVICE INSTRUCTION (Bits 0-5): This instruction field is interpreted by the channel to determine what transaction is to be executed. The acceptable instructions that may be contained in this field are defined later.

DEVICE ADDRESS (Bits 6-11): This software visibility is a single console device per channel; therefore, the device address field will be ignored by the Channel Adapter.

ADDRESS EXTENSION (Bits 12-17): This 6-bit field must be retained by the channel and included in service request to the IOM central.

MASK (Bit 21): When set to zero in a PCW, the channel responds normally. When set to one in a PCW, the channel will abort current channel operation, and will cease all communication with IOM central until a PCW with bit = 0 is received. In an IDCW, bit 21 specifies the disposition of the Address Extension.

CONTINUE (Bit 22): This bit, when set, will specify that list service is to continue following successful completion of an IOTD-type DCW or successful execution of a nondata transfer PCW.

Upon successfully satisfying an IOTD-type DCW, with the continue bit set in the PCW, the channel will request another list service for an IDCW without requesting a status or interrupt service. The IDCW could also specify a list continuation, if the preceding PCW specified list continuation.

NOT USED (Bits 23-35): This field is not used and will not be checked by the console channel.

PERIPHERAL CONTROL WORD (PCW)

Since a PCW directed to a channel may occur at any time, the channel must always be able to respond to this input. If the mask bit (bit 21) in the PCW is not set, and if the channel is not currently busy, the channel will accept and retain the PCW, whose format is described below, and initiate the action, called for.

If the channel receives a PCW during a data transfer operation, the command will be terminated with an illegal PCW status report. If a PCW is received while the channel is performing a status or interrupt service, then that operation will be completed immediately followed by a second status report of illegal PCW. However, if the mask bit in the PCW is set (bit 21), then any existing operation is aborted, and operator request is allowed until another PCW is received in which bit 21 is zero.

The channel will verify that: (1) no fault condition exists, (2) the console is ready, and (3) a legitimate device instruction is encoded in the PCW. If any of these conditions fail, the channel terminates the command with the appropriate status report. If these conditions are satisfied, the channel will execute the device instruction. If the device instruction specifies a data transfer operation, and the console is ready, the channel will request of IOM central a list service to obtain a Data Control Word (DCW). Any faults detected during the transaction, will cause the channel to conclude all operations and request a status and interrupt service. If the channel instruction is a non-data transfer operation, no data DCW is required, and a list service request will be made only if the CONTINUE bit is set.

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Program Interrupt Service

The console channel is restricted to two of the eight interrupt levels available in the IOM Central. These levels are specified as part of the interrupt service request and are:

- (1) Level 7: Special Interrupt
- (2) Level 3: Terminate Interrupt

The channel will request an interrupt service by placing the following information on the IOM data bus.

0	12 13	15 16	20 21	26 27	29 30	35
NOT USED	PROG. INTER. LEVEL	NOT USED	CHANNEL NUMBER	SERVICE REQUEST CODE	NOT USED	

NOT USED(bits 0-12, 16-20, 30-35)--These fields are not used for a interrupt service request and must be set to zero by the channel.

PROGRAM INTERRUPT LEVEL(bits 13-15)--This field identifies the type of interrupt to be serviced. The valid codes in this field will be an octal 7 for a Special Interrupt or an octal 3 for a Terminate interrupt.

CHANNEL NUMBER(bits 21-26)--This field will contain the 6-bit channel identification code.

SERVICE REQUEST CODE(bits 27-29)--This field will specify the service being requested. In this case the code will be octal 3, specifying a program interrupt.

Terminate interrupts always follow the respective status storage service following the termination of a command.

The special interrupt is initiated by the operator requesting input permission. There is no associated status storage with a special interrupt request. The channel shall request a special interrupt service when an operator request is received.

USER FAULTS

User faults are defined as faults caused by user or slave programs. Because of their nature or timing relationship, certain hardware malfunctions also must be reported as user faults.

The console channel must recognize the user fault indications from the IOM and those detected by the channel, and on their occurrence must conclude any operation in progress leaving the channel unmasked. The channel must go through its normal termination procedure; i.e., stored status with the appropriate user fault code and a terminate interrupt request. Thus, user faults will be indicated in the status queue that is normally used by the console command.

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IOM Central Detected User Faults

When the IOM Central detects a user fault, it will indicate a fault and the fault type to the channel at the end of the service. The IOM detected user faults are reported in bits 21-23 of the status word. The faults and their codes are as follows:

CODE 21,22,23	FAULT
000	None
001	LPW tally run-out
010	2 TDCW's in succession
011	Boundary error
100	None
101	IDCW in restricted mode
110	Character Position/Size discrepancy, list service (detected by the console channel adapter)
111	Parity error, I/O bus, data from channel

All of the IOM Central detected faults are defined in the IOM Central EPS-1 43A239854. The console channel, being a word channel to the IOM Central, must detect a character position code of 110 as being a fault. If no other IOM Central detected fault is indicated, the channel will encode 110 into the central detected fault field, bits 21-23.

Channel Detected User Faults

Channel detected user faults are as follows: (Code is in status word bits 18-20)

CODE 18,19,20	FAULT
000	None
001	Unexpected PCW (received while channel busy)
010	None
011	Incorrect DCW, list service (such as no data DCW following an IDCW for Read or Write)
100	None
101	None
110	Console Parity Error (from console to channel)
111	Parity error, I/O bus, data to channel from IOM Central

SYSTEM FAULTS

A system fault is an improper operation caused either by the hardware or by system software not by user programs.

The channel does not report on system faults. When IOM Central detects a system fault, an indication is sent to the involved channel. The channels will go into a masked condition on this indication, concluding any current operation and disallowing any communication with IOM Central until a new PCW is received. In the meantime, the faults are reported by the fault channel in IOM Central in a separate queue used only for such faults. The system faults listed below are described in the IOM Central EPS-1.

The system faults are:

- Illegal Channel Number
- Illegal Service Request
- Parity error, scratchpad read
- 256K Overflow
- LPW Tally runout, connect channel
- Control word not PCW, connect channel
- Character Position all ones, data service
- Character Position/Size discrepancy, data service
- No System Controller Response
- Parity error, Core Store Read
- Tally Control Error

INSTRUCTIONS

This section defines the functional requirements of the instructions that will be executed by the console channel. The instruction code will be communicated to the channel in bits 0-5 of the PCW or IDCW. Any code not defined in this section will result in a termination status of Command Reject, invalid operation code. The instructions and their execution are defined in the following paragraphs.

Read (03)

If the PCW/IDCW is acceptable, the channel will verify that the console device is ready. If the console device is ready, the channel adapter will request a list service, accept data from the device and perform the required echoplexing and slave transmission. As the channel receives data, checks parity and converts the character code to the L66/68 internal 6-bit code the data must be assembled into 36 bit words. As a 36-bit word is assembled the channel will request an indirect data store to the IOM. If the command is terminated before a 36-bit word is assembled, the word will be zero filled and transmitted to the IOM and the character position +1 of the last valid character in the word will be indicated in bits 0-2 of the request for status service word.

During the reading process the channel will not process any of the ignore characters. That is, only those characters that have a respective 6-bit code will be processed and packed into a 36-bit word for transmittal to the IOM. If the channel does not receive a character for a period of thirty seconds, the Read command is to be terminated with a Data Alert, Operator Distracted status.

The read process will be continued until the channel receives an End-of-Message (EOM) from the console, a tally run-out is received from the IOM, or an exception condition is detected. If the continue bit is set to the PCW or IDCW and the Read instruction is terminated due to an EOM from the console, the channel will terminate the Read operation with the console and continue list service without requesting status and interrupt service. If the continue bit is not set or the Read operation is terminated due to an exception condition, the channel will terminate the operation with the console, map the appropriate status and request a status service and level 3 interrupt service. The subsystem status that will be reported at termination of the Read instruction will be one of the following:

<u>STATUS</u>	<u>REASON</u>
Channel Ready (0000) No Substatus (000000)	Normal termination, no exception condition detected.
Device Attention (0010) No Substatus (000000)	Console Ready Line, is not activated, manual intervention required.
Data Alert (0011) Transfer Timing Error (000001)	Data store request not granted before another character was received from the console.
Operator Input Error (000100)	Previous data input contains an error, disregard previous data.
Message Length Alert	Tally run-out instead of expected EOM.
Operator Distracted (0001000)	Thirty second elapse without input from console.
Command Reject (0101)	
Invalid Operation Code (000001)	Console instruction is not recognizable

Write (13)

If the PCW/IDCW is acceptable, the channel will verify that the console device is ready. If the device is ready, the channel will request a list service. If the control word is acceptable, the channel will request an indirect data load service. The channel adapter will perform the required code conversion and transfer the ASCII data via the device port. The data transfer to the console device will continue until the channel program is completed or a fault condition is detected.

If the continue bit is set in the PCW or IDCW and the write operation is terminated due to a tally run-out, the channel will continue list service without requesting status and interrupt service. If the continue bit is not set or the write operation is terminated due to an exception condition, the channel will terminate the operation with the console, map the appropriate status and request a status service and level 3 interrupt service. The subsystem status will be reported at termination of the write instruction will be one of the following:

<u>STATUS</u>	<u>REASON</u>
Channel Ready (0000) No substatus (000000)	Normal termination, no exception condition detected.
Device Attention (0010) No substatus (000000)	Console Ready Line, is not activated, manual intervention required.
Data Alert (0011) Transmission Parity Alert (0X0010)	Console detected parity error in last transmission.
Incorrect Format (010000)	Illegal sequence of characters in data.
Command Reject(0101) Invalid Op Code(000001)	Console instruction is not recognizable.

Write Alert (51)

The Write Alert instruction shall result in the channel adapter sending a bell character to the console device once every second until reset by the operator. The instruction shall be terminated immediately with the appropriate status. Transmission of the bell

characters shall continue until a keyboard character is received from the console device. Transmission of the bell characters shall not prevent any other system instruction from being executed. The subsystem status reported as a result of a Write Alert termination shall be one of the following:

<u>STATUS</u>	<u>REASON</u>
Channel Ready (0000) No substatus (000000)	Normal termination, no exception condition detected.
Device Attention (0010) No substatus (000000)	Console Ready Line, is not activated, manual intervention required.
Command Reject(0101) Invalid Op Code(000001)	Console instruction is not recognizable.

Request Status (00)

When the channel receives a PCW with a Request Status command, the channel will not request list service for a DCW. If the PCW is acceptable, and the console is ready the channel will request a status service and a level 3 interrupt service. If the console is not ready the channel will set the Device Attention status and then request status and interrupt service.

The status reported in response to a Request Status command will be termination status of the previous command execution. The subsystem status reported as a result of a Request Status instruction will be one of the following:

<u>STATUS</u>	<u>REASON</u>
Channel Ready (0000) No substatus (000000)	Normal termination, no exception condition detected.
Device Attention (0010) No substatus (000000)	Console Ready Line, is not activated, manual intervention required.
Command Reject(0101) Invalid Op Code(000001)	Console instruction is not recognizable.

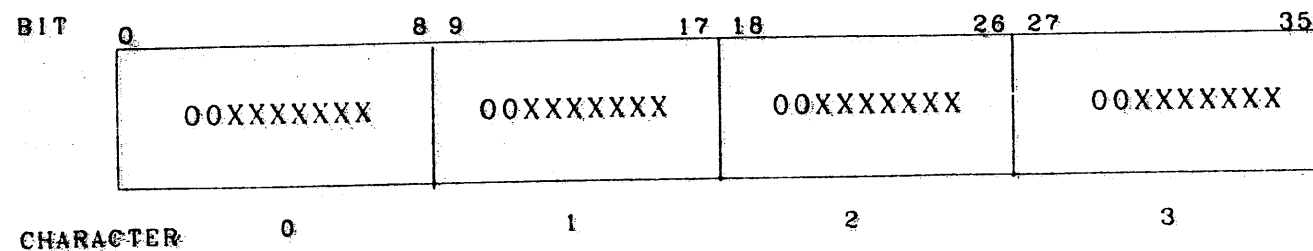
Reset Status (40)

When the channel receives a PCW with a Reset Status instruction, the channel will not request a list service for a DCW. If the PCW is acceptable, the channel will verify that the console is ready. If the console is ready the channel will reset all Data Alert status contained in the subsystem status field of the channel status word and request a status and interrupt service. If the console is not ready the channel will map the Device Attention status and request a status and level 3 interrupt service. The subsystem status reported as a result of a Reset Status instruction will be one of the following:

STATUS	REASON
Channel Ready (0000) No substatus (000000)	Normal termination, no exception condition detected.
Device Attention (0010) No substatus (000000)	Console Ready Line, is not activated, manual intervention required.
Command Reject(0101) Invalid Op Code(000001)	Console instruction is not recognizable.

ASCII Write (33)

The ASCII Write instruction will permit the software to transfer data to the console in the 7-bit ASCII code without the normal data conversion processing. The execution and termination of this instruction will be the same as the normal Write instruction except the 6-bit to 7-bit code conversion will not take place. This also means there will be no special characters or escape sequences recognized by the channel adapter when executing the ASCII Write instruction. The data format for the ASCII Write is shown below:



Bits 8, 17, 26 and 35 are the least-significant bits

The two most-significant bits of each 9-bit character field are ignored by the channel adapter. Parity will be generated by the channel adapter for each character prior to transmitting to the console device.

It should be noted that this instruction provides access to all device functional control, i.e., tab clear, tab set, page clear, etc., and should be restricted for privileged software user.

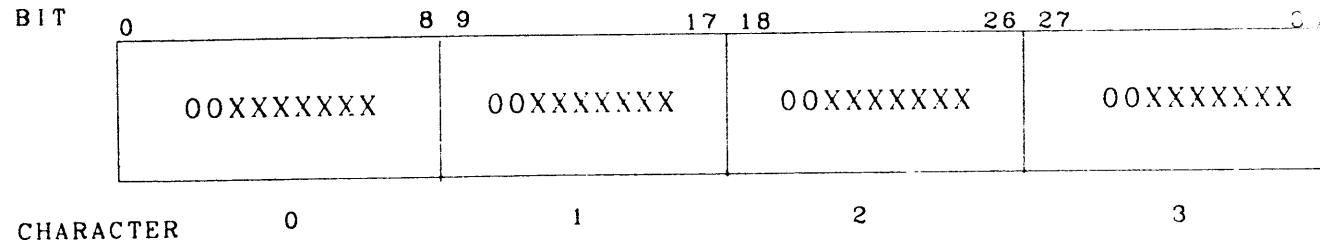
The subsystem status reported as a result of the ASCII Write instruction will be one of the following:

STATUS	REASON
Channel Ready (0000) No substatus (000000)	Normal termination, no exception condition detected.
Device Attention (0010) No substatus (000000)	Console Ready Line, is not activated, manual intervention required.
Command Reject(0101) Invalid Op Code(000001)	Console instruction is not recognizable.

Read ASCII (23)

If the software desires to receive the console input as ASCII character code the Read instruction must be specified by an octal 23. The execution and termination of the Read ASCII instruction will be the same as the Read instruction except the code conversion function will be inhibited. Each word will contain four 9-bit characters. Should the Read ASCII instruction be terminated before a 36-bit word is assembled, a 36-bit word will be transmitted to the IOM Central and the character position +1 of the last valid character in the word will be indicated in bits 0-2 of the request for status service word.

The data format for the Read ASCII instruction is shown below:



Bits 8, 17, 26 and 35 are the least-significant bits of each character. XXXXXXXX indicates a 7-bit ASCII character.

T&D Read (07)

The T&D Read instruction will be provided to enable software to isolate a channel malfunction from the external subsystem.

During a Write operation, the data output is looped back and returned to the IOM interface buffer. This will make available to software the last 36-bit word of the Write Data as it was received by the control firmware.

Alphanumeric data following a normal Write instruction will appear in its original format and code. It is to be noted that only one word (last 36-bits of previous write) will be transferred to the operating system in response to a T&D Read instruction.

No communications with the console device will take place for a T&D Read instruction. The channel will request a data store service and transmit the contents of the IOM interface buffer. The channel will simulate an EOM signal from the console, and terminate the T&D Read instruction following the 36-bit word transfer. The subsystem status reported at termination of the T&D Read instruction will be one of the following:

STATUS	REASON
Channel Ready (0000) No substatus (000000)	Normal termination, no exception condition detected.
Device Attention (0010) No substatus (000000)	Console Ready Line, is not activated, manual intervention required.
Command Reject(0101) Invalid Op Code(000001)	Console instruction is not recognizable.

STATUS

The channel adapter will maintain the subsystem status in bits 2-11 of the channel status word. The status will be reported at the termination of each instruction. The status is retained by the channel following termination of an instruction, for the possible reception of a Request or Reset Status instruction.

The following paragraphs describe the major status and substatus to be reported in the subsystem status field of the channel status word.

Channel Ready (0000)

No Substatus (000000)

This status indicates that the console is on line and ready and no detectable exception conditions exist. When a command is terminated with this status it indicates that the command was successfully completed and the console is ready for another command execution.

Device Attention (0010)

No Substatus

This status report indicates that the console is not ready and manual intervention is necessary. The condition causing this report is an inactive ready line on the device interface.

Data Alert (0011)

Transfer Timing Error (000001)

The Transfer Timing Error status will be reported whenever the channel is receiving data from the console and a seventh character is received before the channel is granted a data store service for the preceding six characters.

Operator Input Error (000100)

The Operator Input Error is manually initiated by the operator depressing the control X keys on the keyboard. When the cancel code (control X) is received, the channel shall reset the data buffers, map the 01E status and request a status service. There will be no data store request made to the IOM following an operator input error. The Read command is the only console command that can be terminated with an 01E status.

Operator Distracted (001000)

The Read and Read ASCII commands are the only console commands that can be terminated with this status. The Read command is terminated with Operator Distracted if 30 seconds elapses before the first acceptable character is received following activation of the clear to send line, or 30 seconds elapses between characters during the data transfer. If a partial word has been assembled when the 30 second time has elapsed, the data buffer will be reset and the command terminated.

Incorrect Format (0100X0)

An Incorrect Format termination is caused by an unallowable sequence of control character(s) and regular characters. When a format error occurs the data transaction will be stopped and a status service request made of the IOM. The Incorrect Format status will occur only for a Write command.

Message Length Alert (100000)

The message length alert will occur only for Read instructions. The Message Length Alert status will occur when a Read instruction is terminated as a result of a tally run-out, instead of the expected End-of-Message termination.

Command Reject (0101)

Invalid Instruction Code (000001)

This status termination will occur whenever the channel is unable to recognize the console instruction code field in bits 0-5 of the PCW.

OPTIMUM REPLACEABLE UNIT(ORU)

The ORU for the channel adapter shall be the CONJK channel adapter logic board. The ORU for the console device shall be the device.

TEST AND DIAGNOSTIC PROGRAMS

Power up the IOM and perform channel adapter self test as noted.

1. DEPRESS SYSTEM INITIALIZE

The "red" LEDs on the CONJK board will come on and sequence through a few steps and go out. Then the "green" LED will come on and remain on. The "green" LED on signifies the successful completion of the self-test. If any "red" LEDs remain on and/or

the green LED does not come on a failure was detected by the self-test. Use the code shown in Table 3-1, as the dictionary value and look up the fault.

After verifying that the LCC Channel Adapter (CONJK board) is operating properly, perform the following steps:

2. VERIFYING TERMINAL CONFIGURATION

Set baud to 300 or 1200, full duplex. See Vendor's Terminal Installation Manual.

3. POWER UP AND PLACE THE CONSOLE CONTROL TERMINAL ON LINE

The LCC channel adapter (CONJK board) will again run its self-test. The "green" LED should be on.

4. PRESS THE CONTROL TERMINALS(CARRIAGE)RETURN

This sets the correct "baud" rate for the terminal. A "Console Ready" message should appear on the control terminal and also on the "logging" printer if so equipped.

5. LOAD THE OFF-LINE T&D(MONITOR 4)

After booting the T&D tape depress the carriage return on the console or the T&D will not find the console "ready."

6. CONFIG THE LCC AS "SCC ICC"

Use the primary channel if dual channel option is installed.

7. LOAD AND RUN TST306 ↑ (REV D or higher)

The output should appear on the control terminal and if so equipped the logging terminal.

8. TO TEST THE TERMINALS INPUT CAPABILITY

Use TST306 ↑ TEST 22. If necessary see T&D instructions for TST306.

FINAL CHECKOUT

1. LOAD CUSTOMERS OPERATING SYSTEM

After bootload, depress carriage return on the console terminal.

2. LOAD THE POLTS TEST PAGE FOR THE CONSOLE

This will verify the online operation of the console in the customer environment.

The status reported in response to a Request Status command will be termination status of the previous command execution. The subsystem status reported as a result of a Request Status instruction will be one of the following:

<u>STATUS</u>	<u>REASON</u>
Channel Ready (0000) No Substatus (000000)	Normal termination; no exception condition detected.
Device Attention (0010) No Substatus (000000)	Console Ready Line is not activated; manual intervention required.
Command Reject (0101)	Instruction is not recognizable.
Invalid Op Code (000001)	

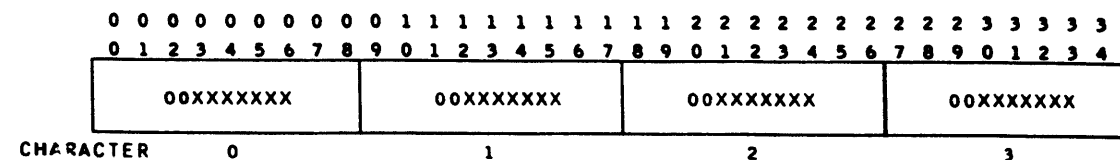
RESET STATUS (40)

When the channel receives a PCW with a Reset Status instruction, the channel will not request a list service for a DCW. If the PCW is acceptable, the channel will verify that the console is ready. If the console is ready, the channel will reset all Data Alert status contained in the subsystem status field of the channel status word and request a status and interrupt service. If the console is not ready, the channel will map the Device Attention status and request a status and level 3 interrupt service. The subsystem status reported as a result of a Reset Status instruction will be one of the following:

<u>STATUS</u>	<u>REASON</u>
Channel Ready (0000) No Substatus (000000)	Normal termination; no exception condition detected.
Device Attention (0010) No Substatus (000000)	Console Ready Line is not activated; manual intervention required.
Command Reject (0101)	Instruction is not recognizable.
Invalid Op Code (000001)	

ASCII WRITE (33)

The ASCII Write instruction will permit the software to transfer data to the console in the 7-bit ASCII code without the normal data conversion processing. The execution and termination of this instruction will be the same as the normal Write instruction except the 6-bit to 7-bit code conversion will not take place. This also means there will be no special characters or escape sequences recognized by the channel adapter when executing the ASCII Write instruction. The data format for the ASCII Write is shown below:



Bits 8, 17, 26, and 35 are the least significant bits of each character. XXXXXXX indicates a 7-bit ASCII character.

The two most significant bits of each 9-bit character field are ignored by the channel adapter. Parity will be generated by the channel adapter for each character prior to transmitting to the console device.

It should be noted that this instruction provides access to all device functional controls, i.e., tab clear, tab set, page clear, etc., and should be restricted for privileged software users.

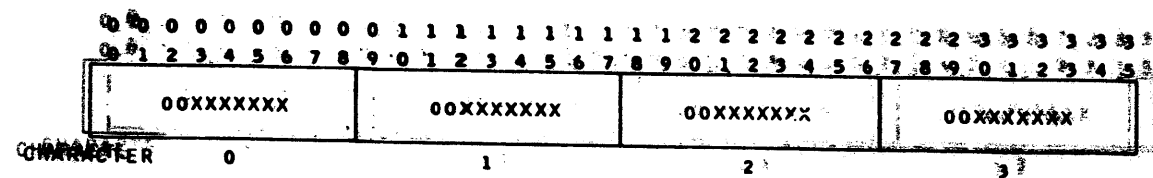
The subsystem status reported as a result of the ASCII Write instruction will be one of the following:

STATUS	REASON
Channel Ready (0000) No Substatus (000000)	Normal termination; no exception condition detected.
Device Attention (0010) No Substatus (000000)	Console Ready Line is not activated; manual intervention required.
Command Reject (0101)	Instruction is not recognizable.
Invalid Op Code (000001)	

READ ASCII (23)/READ UNECHOED ASCII (43)

If the software desires to receive the console input as ASCII character code, the Read instruction must be specified by an octal 23. The execution and termination of the Read ASCII instruction will be the same as the Read instruction except the code conversion function will be inhibited. Each word will contain four 9-bit characters. If the Read ASCII instruction is terminated before a 36-bit word is assembled, a 36-bit word will be transmitted to the IOM Central, and the character position +1 of the last valid character in the word will be indicated in bits 0-2 of the request for status service word.

The octal format for the Read ASCII instruction is shown below:



Bits 0, 1, 2, 26, and 35 are the least significant bits of each character. XXXXXX indicates a 7-bit ASCII character.

Note: The Read ASCII and Read Unechoed ASCII commands are identical except that with the Read Unechoed ASCII command none of the characters sent on the terminal is echoed to the terminal.

T&D READ (07)

The T&D Read instruction will be provided to enable software to isolate a channel malfunction from the external subsystem.

During a Write operation, the data output is looped back and returned to the IOM interface buffer. This will make available to software the last 36-bit word of the Write data as it was received by the control firmware.

Alphanumeric data following a normal Write instruction will appear in its original format and code. It is to be noted that only one word (last 36 bits of previous write) will be transferred to the operating system in response to a T&D Read instruction.

No communication with the console device will take place for a T&D Read instruction. The channel will request a data store service and transmit the contents of the IOM interface buffer. The channel will simulate an EDM signal from the console, and terminate the T&D Read instruction following the 36-bit word transfer. The subsystem status reported at termination of the T&D Read instruction will be one of the following:

STATUS	REASON
Channel Ready (0000) No Substatus (000000)	Normal termination; no exception condition detected.
Device Attention (0010) No Substatus (000000)	Console Ready Line is not activated; manual intervention required.
Command Reject (0101)	Instruction is not recognizable.
Invalid Op Code (000001)	

STATUS

The channel adapter will maintain the subsystem status in bits 2-11 of the channel status word. The status will be reported at the termination of each instruction. The status is retained by the channel following termination of an instruction, for the possible reception of a Request or Reset Status instruction.

MICROFILM INDEX

WIRE LIST(TAB)

	<u>IDENT. NO.</u>
Card Box	43A229674 AR
Tab(Low Cost Console)	58009846-900

<u>Header Strip</u>	<u>Description</u>	<u>Ident. No.</u>
White	EPS-2 Low Cost Console	Later
Yellow	CONJK-Eng. Wire List	58053005





PD 83/03/23 X 58053000 1/6 L

			005	105	205	405		
'	101 D	58046507-002	A COMMON ASM INST	1	1	1	1	EA
'	102 A	58053002-005	D CIL CONJK	X	X	X	X	
'	103 B	58053004	D LOGIC DIAGRAM CONJK	X	X	X	X	
'	104 A	58053005-008	D EWL CONJK	X				
'	104 A	58053005-007	D EWL CONJK		X			
'	104 A	58053005-005	D EWL CONJK			X		
'	104 A	58053005-004	D EWL CONJK				X	
'	105 X	58053006-004	A PWB ETCH CONJK	1				EA
'	105 X	58053006-003	A PWB ETCH CONJK		1			EA
'	105 X	58053006-002	A BD ETCH CONJK			1		EA
'	105 X	58053006-001	A BD ETCH CONJK				1	EA
'	106 A	58053007-001	D SEG DISP/FLT CONJK	X	X	X	X	
'	107 A	58053007-002	D BD TST DK CONJK	X	X	X	X	
'	108 A	58053007-003	D BD TST CASS CONJK	X	X	X	X	
'	109 B	58053008	D TST TRACE LST CONJK	X	X	X	X	
'	128 C	58054297-001	P LABEL	1	1	1	1	EA

HDUHC PWA CONJK

X 58053000 1/6 L

PD 83/03/23 X 58053000 2/6 L

				005	105	205	405	
'	129 A	58008275-001	V DIODE LITE EMIT	1	1	1	1	EA
'	130 A	58000073-002	V DIODE LITE EMIT	1	1	1	1	EA
'	131 A	58000073-002	V DIODE LITE EMIT	1	1	1	1	EA
'	132 A	58000073-002	V DIODE LITE EMIT	1	1	1	1	EA
'	133 A	58000073-002	V DIODE LITE EMIT	1	1	1	1	EA
'	134 A	58000073-002	V DIODE LITE EMIT	1	1	1	1	EA
'	143 A	58044825-001	D SILK MARK (IN HOUSE)	X	X	X	X	
'	150 A	58020349-001	V STATIC RAM	8	8	8	8	EA
'	150 A	58020351-002	V MOS STATIC RAM	INTCH	INTCH	INTCH	INTCH	EA
'	151 A	58002008-001	V LINE TRANSMITTR	3	3	3	3	EA
'	152 A	58002007-001	V LINE RECEIVER	4	4	4	4	EA
'	153 A	58002468-001	V IC INVERTER BUFFER	1	1	1	1	EA
'	154 A	58002047-001	V INTEGRATED CKT	1	1	1	1	EA
'	155 A	58002472-001	V IC QUAD AND GATE	8	8	8	8	EA
'	156 A	58002473-001	V IC QUAD OR GATE	6	6	6	6	EA
'	157 A	58002474-001	V IC QUAD NAND GATE	9	9	9	9	EA

HDUHC PWA CONJK

X 58053000 2/6 L

005 105 205 405

	005	105	205	405	
* 158 A 58002476-001	15	15	15	15	EA
V IC HEX INVERTER					
* 159 A 58002477-001	4	4	4	4	EA
V IC TRIPLE NAND GATE					
* 160 A 58002478-001	2	2	2	2	EA
V IC DUAL NAND GATE					
* 161 A 58002490-001	1	1	1	1	EA
V IC EXCLUSIVE OR GATE					
* 162 A 58002649-001	1	1	1	1	EA
V IC QUAD BUFFER, NAND					
* 163 A 58002648-001	4	4	4	4	EA
V IC, DECODR, 3-TO-8 LN					
* 164 A 58002491-001	16	16	16	16	EA
V IC, 8 TO 1 DATA SELECT					
* 165 A 58002492-001	13	13	13	13	EA
V IC, QUAD DATA SELECT					
* 166 A 58002489-001	18	18	18	18	EA
V IC, 4 TO 1 LINE DATA					
* 167 A 58002602-001	10	10	10	10	EA
V IC BUS DRIVER					
* 168 C 43C216416P1	1	1	1	1	EA
V DIGITAL INT CKT					
* 169 A 58002481-001	3	3	3	3	EA
V IC MAGNIT COMPARTOR					
* 170 C 43C216405P1	5	5	5	5	EA
V DIGITAL IC					
* 171 A 58002044-001	1	1	1	1	EA
V INT CIRCUIT					
* 172 A 58002488-001	5	5	5	5	EA
V IC "D" FLIP FLOP					
* 173 A 58002424-001	3	3	3	3	EA
V IC BISTBL LATCH					

H0UHC PWA CONJK

005 105 205 405

	005	105	205	405	
* 174 A 58002480-001	1	1	1	1	EA
V IC DUAL D FLIP FLOP					
* 175 A 58002483-001	12	12	12	12	EA
V IC DUAL J-K FLIP FLP					
* 176 A 58002485-001	24	24	24	24	EA
V IC HEX D FLIP FLOP					
* 178 A 58002776-001	2	2	2	2	EA
V IC, (USART)					
* 178 A 58002605-001	INTCH	INTCH	INTCH	INTCH	EA
V IC COMMUN INTERFACE					
* 179 A 58002574-001	1	1	1	1	EA
V IC INTERVAL TIMER					
* 180 A 58002613-001	1	1	1	1	EA
V IC 8 BIT MICROPROC					
* 181 C 43C216417P1	1	1	1	1	EA
V DIGITAL IC					
* 182 C 43C216422P1	10	10	10	10	EA
V DIGITAL IC					
* 183 C 43C216408P1	1	1	1	1	EA
V DIGITAL IC					
* 184 C 43C216410P1	3	3	3	3	EA
V DIGITAL IC					
* 185 B 43B216593P10	1	1	1	1	EA
V PUR SPEC DLDC					
* 186 A 70928001-013	1	1	1	1	EA
V RESISTOR, 1/4 W					
* 187 A 70928100-065	1	1	1	1	EA
V RESISTOR 2% 1/4W .7K					
* 188 A 70928100-085	1	1	1	1	EA
V RESISTOR 2% 1/4W33K					
* 189 C 43C212092P1043	86	86	86	86	EA
V CAPACITOR CERAM					

H0UHC PWA CONJK

PD 83/03/23 X 58053000 5/6 L

			005	105	205	405	
* 190 C	43C212092P3913	V CAPACITOR,CERAMIC	1	1	1	1	EA
* 191 C	43C212092P4733	V CAPACITOR CERAM	7	7	7	7	EA
* 192 A	43A114748P9	V CAPACITOR TANT	39	39	39	39	EA
* 193 B	43B216592P40	V RN1H RESISTOR MODULE	1	1	1	1	EA
* 194 B	43B216592P12	V RN3C RESISTOR MODULE	1	1	1	1	EA
* 195 B	43B216592P19	V PUR SPEC RN3E	2	2	2	2	EA
* 196 B	43B216591P1	V PUR SPEC RY0A	2	2	2	2	EA
* 197 A	58020295-006	V SW.ROCKER,DIP,SPST	1	1	1	1	EA
* 198 A	58020400-001	V CRYSTAL, MICROPROCSR	1	1	1	1	EA
* 199 A	58034809-085	V LABEL	1	1	1	1	EA
* 199 A	58034809-059	P LABEL	INTCH	INTCH	INTCH	INTCH	EA
* 200 A	58020384-006	V SOCKET SEMICOND DIP	9	9	9	9	EA
* 201 A	58020384-007	V SOCKET SEMICOND DIP	2	2	2	2	EA
* 202 A	58020384-008	V SOCKET SEMICOND DIP	1	1	1	1	EA
* 203 A	58054299-002	D PART PLACEMENT INST	X	X	X	X	
* 204 B	58059606-001	V LABEL	1	1	1	1	EA

H0UHC PWA CONJK

X 58053000 5/6 L

PD 83/03/23 X 58053000 6/F L

			005	105	205	405	
* 205 B	58059606-002	V LABEL	1	1	1	1	EA
* 206 C	676C213P509	V CAPACITOR	1	1	1	1	EA
* 206 C	43C212092P1043	V CAPACITOR CERAM	INTCH	INTCH	INTCH	INTCH	EA

H0UHC PWA CONJK

X 58053000 6/F L





HONEYWELL INFORMATION SYSTEMS
LOC PHOENIX, ARIZONA, U.S.A.

58053002
2

1/10

COMP INSTL LIST - CONJK

TAB-005

STANDARD LOCATION CODE PATTERN
X-POS & Y-POS PER 58046507-002
UNLESS OTHERWISE SHOWN, ROTATION IS NORTH

LOC	TYPE	IDENT	X-POS	Y-POS	ROTATION
00A	1H3602	58002602-001			
00B	1H3602	58002602-001			
00C	1H3602	58002602-001			
00D	1H3602	58002602-001			
00E	RN1H	43B216592P40			
00F	1Q-485	58002485-001			
00G	1B-473	58002473-001			
00H	1B-477	58002477-001			
00J	RN3E	43B216592P19			
00K	1B-472	58002472-001			
00L	1B-473	58002473-001			
00M	1A5008	58002008-001			
00N	1A5008	58002008-001			
00P	1AA007	58002007-001			
00QA	P065	70928100-065			
00QB	P4733	43C212092P4733			
00QC	P4733	43C212092P4733			
00QD	P4733	43C212092P4733			
00R	1A5008	58002008-001			
00S	1AA007	58002007-001			
00T	1AA007	58002007-001			
00U	1AA007	58002007-001			
00VA	P4733	43C212092P4733			
00VB	P4733	43C212092P4733			
00VC	P4733	43C212092P4733			
00VD	P4733	43C212092P4733			
00W	1H3602	58002602-001			
00X	1H3602	58002602-001			
00E	1H3602	58002602-001			
00EE	P1043	43C212092P1043			
00G	614410	43C216410P1			
00GE	P9	43A114748P9			

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83-03-04 REV. G

58053002
2

1/10

COMP INSTL LIST - CONJK

TAB-005

LOC	TYPE	IDENT	X-POS	Y-POS	ROTATION
08H	1B-474	58002474-001			
08HE	P1043	43C212092P1043			
08J	1Q-483	58002483-001			
08JE	P1043	43C212092P1043			
08K	1C-848	58002648-001			
08KE	P9	43A114748P9			
08L	1B-473	58002473-001			
08LE	P1043	43C212092P1043			
08M	1B-474	58002474-001			
08ME	P1043	43C212092P1043			
08N	1Q-485	58002485-001			
08NE	P9	43A114748P9			
08P	1D3492	58002492-001			
08PE	P1043	43C212092P1043			
08Q	1D3492	58002492-001			
08QE	P1043	43C212092P1043			
08R	1B3468	58002468-001			
08RE	P9	43A114748P9			
08S	1D3492	58002492-001			
08SE	P1043	43C212092P1043			
08T	1D3492	58002492-001			
08TE	P1043	43C212092P1043			
08U	1B-473	58002473-001			
08UE	P9	43A114748P9			
08V	1B-472	58002472-001			
08VE	P1043	43C212092P1043			
09A	1Q3488	58002488-001			
09AE	P9	43A114748P9			
09B	1B-476	58002476-001			
09BE	P1043	43C212092P1043			
09C	1Q-483	58002483-001			
09CE	P1043	43C212092P1043			
09D	1H3602	58002602-001			
09DE	P9	43A114748P9			
09F	1Q3488	58002488-001			
09FE	P1043	43C212092P1043			
09W	614410	43C216410P1			
09WE	P1043	43C212092P1043			

COMP INSTL LIST - CONJK

TAB-005

LOC	TYPE	IDENT	X-POS	Y-POS	ROTATION
09X	4G4408	43C216408P1			
17T	2V3776	58002776-001			
17UE	P1043	43C212092P1043			
17V	1B-472	58002472-001			
17VE	P1043	43C212092P1043			
17W	1B-476	58002476-001			
17WE	P9	43A114748P9			
17X	1Q-483	58002483-001			
19N	1A0349	58020349-001			
19NE	P9	43A114748P9			
20A	1Q3488	58002488-001			
20AE	P1043	43C212092P1043			
20B	2R3646	*-----*			
20CE	P9	43A114748P9			
20D	2R3646	*-----*			
20EE	P1043	43C212092P1043			
20F	2R3646	*-----*			
20GE	P1043	43C212092P1043			
20H	2R3646	*-----*			
20JE	P9	43A114748P9			
20K	1A0349	58020349-001			
20KE	P1043	43C212092P1043			
20L	1A0349	58020349-001			
20LE	P1043	43C212092P1043			
20M	1A0349	58020349-001			
20R	2V3776	58002776-001			
20SE	P1043	43C212092P1043			
25V	1B-473	58002473-001			
25VE	P1043	43C212092P1043			
26W	1B-472	58002472-001			
26WE	P1043	43C212092P1043			
26X	1Q-480	58002480-001			
28PB	XTAL2	58020400-001			
29N	1H3602	58002602-001			
29NE	P1043	43C212092P1043			
29P	2V-613	58002613-001			
29QE	P9	43A114748P9			
30K	1A0349	58020349-001			

COMP INSTL LIST - CONJK

TAB-005

LOC	TYPE	IDENT	X-POS	Y-POS	ROTATION
30KE	P1043	43C212092P1043			
30L	1A0349	58020349-001			
30LE	P1043	43C212092P1043			
30M	1H3602	58002602-001			
30ME	P9	43A114748P9			
31A	1C-648	58002648-001			
31AE	P1043	43C212092P1043			
32SE	P085	70028100-085			
32T	1M3416	43C216416P1			
32TE	P9913	43C212092P9913			
32UE	P1043	43C212092P1043			
33B	2R3646	*-----*			
33CE	P1043	43C212092P1043			
33D	2R3646	*-----*			
33EE	P9	43A114748P9			
33F	2R3646	*-----*			
33H	2R3646	*-----*			
33JE	P9	43A114748P9			
35R	2V-574	58002574-001			
35X	1Q-483	58002483-001			
38N	1Q3488	58002488-001			
38NE	P1043	43C212092P1043			
39M	1Q3488	58002488-001			
39ME	P1043	43C212092P1043			
39V	1Q-483	58002483-001			
39VE	P1043	43C212092P1043			
39W	1Q-483	58002483-001			
39WE	P1043	43C212092P1043			
40A	1B-477	58002477-001			
40AE	P9	43A114748P9			
40K	1A0349	58020349-001			
40L	1A0349	58020349-001			
40LE	P1043	43C212092P1043			
40T	1B-474	58002474-001			
40TE	P1043	43C212092P1043			
40U	1B-473	58002473-001			
45X	1B-477	58002477-001			
48A	1B-476	58002476-001			

HONEYWELL INFORMATION SYSTEMS
LOC PHOENIX, ARIZONA, U.S.A.

58053002
6

5

COMP INSTL LIST - CONJK

TAB-005

LOC	TYPE	IDENT	X-POS	Y-POS	ROTATION
48AE	P1043	43C212092P1043			
48B	1D3491	58002491-001			
48BE	P9	43A114748P9			
48C	1D3491	58002491-001			
48CE	P1043	43C212092P1043			
48D	1D3491	58002491-001			
48DE	P1043	43C212092P1043			
48E	1D3491	58002491-001			
48EE	P9	43A114748P9			
48F	1D3491	58002491-001			
48FE	P1043	43C212092P1043			
48G	1B-474	58002474-001			
48GE	P1043	43C212092P1043			
48H	1Q-483	58002483-001			
48S	1D3491	58002491-001			
48SE	P1043	43C212092P1043			
48T	1D3491	58002491-001			
48U	1D3491	58002491-001			
48V	1D3491	58002491-001			
48W	1D3491	58002491-001			
49J	RN3E	43B216592P19			
49JE	P1043	43C212092P1043			
49N	1B-477	58002477-001			
49R	1B-478	58002478-001			
50NE	P013	70928001-013			
50PE	P509	676C213P509			
50Q	3G4417	43C216417P1			
50QE	P1043	43C212092P1043			
51K	1B-474	58002474-001			
51P	1P-044	58002044-001			
53L	1B-472	58002472-001			
53M	1B-472	58002472-001			
53X	1B-474	58002474-001			
57A	1Q-424	58002424-001			
57AE	P1043	43C212092P1043			
57B	1D3492	58002492-001			
57BE	P1043	43C212092P1043			
57C	1D3491	58002491-001			

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83-03-04 REV. 0

58053002
6

5

COMP INSTL LIST - CONJK

TAB-005

LOC	TYPE	IDENT	X-POS	Y-POS	ROTATION
57CE	P9	43A114748P9			
57D	1D3491	58002491-001			
57DE	P1043	43C212092P1043			
57E	1D3491	58002491-001			
57EE	P1043	43C212092P1043			
57F	1D3492	58002492-001			
57FE	P9	43A114748P9			
57G	1C-648	58002648-001			
57GE	P1043	43C212092P1043			
57H	1C-648	58002648-001			
57HE	P1043	43C212092P1043			
57J	1Q-483	58002483-001			
57JE	P9	43A114748P9			
57N	1P3405	43C216405P1			
57NE	P1043	43C212092P1043			
57P	1Q-485	58002485-001			
57PE	P1043	43C212092P1043			
57R	1Q-485	58002485-001			
57RE	P1043	43C212092P1043			
57S	1D3491	58002491-001			
57SE	P1043	43C212092P1043			
57T	1D3491	58002491-001			
57TE	P9	43A114748P9			
57U	1D3492	58002492-001			
57UE	P1043	43C212092P1043			
57V	1Q-485	58002485-001			
57VE	P1043	43C212092P1043			
57W	1D3491	58002491-001			
57WE	P9	43A114748P9			
58Q	1Q-483	58002483-001			
58QE	P9	43A114748P9			
58K	1B-476	58002476-001			
58KE	P1043	43C212092P1043			
61L	1B-472	58002472-001			
61LE	P1043	43C212092P1043			
61M	1B-478	58002478-001			
61ME	P9	43A114748P9			
61X	1B-476	58002476-001			

HONEYWELL INFORMATION SYSTEMS
LOC PHOENIX, ARIZONA, U.S.A.

58053002

7

COMP INSTL LIST - CONJK

TAB-005

LOC	TYPE	IDENT	X-POS	Y-POS	ROTATION
66A	1Q-485	58002485-001			
66B	1D3492	58002492-001			
66C	1Q-485	58002485-001			
66D	1D3492	58002492-001			
66E	1Q-485	58002485-001			
66F	1D3492	58002492-001			
66G	1Q-485	58002485-001			
66H	1B-474	58002474-001			
66J	1Q-483	58002483-001			
66N	1P3405	43C216405P1			
66P	1Q-424	58002424-001			
66R	1Q-485	58002485-001			
66S	1D3492	58002492-001			
66T	1Q-485	58002485-001			
66U	1D3492	58002492-001			
66V	1Q-424	58002424-001			
66W	1D3492	58002492-001			
67K	1B-474	58002474-001			
67Q	1Q-483	58002483-001			
69L	1B-476	58002476-001			
69M	1B-472	58002472-001			
69X	1B-490	58002490-001			
74H	1Q-485	58002485-001			
74HE	P1043	43C212092P1043			
75A	1D-489	58002489-001			
75AE	P9	43A114748P9			
75B	1Q-485	58002485-001			
75BE	P1043	43C212092P1043			
75C	1D-489	58002489-001			
75CE	P1043	43C212092P1043			
75D	1Q-485	58002485-001			
75DE	P9	43A114748P9			
75E	1D-489	58002489-001			
75EE	P1043	43C212092P1043			
75F	1Q-485	58002485-001			
75FE	P1043	43C212092P1043			
75G	1D-489	58002489-001			
75GE	P9	43A114748P9			

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83-03-04 REV. G

58053002

7

COMP INSTL LIST - CONJK

TAB-005

LOC	TYPE	IDENT	X-POS	Y-POS	ROTATION
75J	1D-489	58002489-001			
75JE	P1043	43C212092P1043			
75K	1N3481	58002481-001			
75KE	P9	43A114748P9			
75N	1P3405	43C216405P1			
75NE	P9	43A114748P9			
75P	1D-489	58002489-001			
75PE	P1043	43C212092P1043			
75R	1D-489	58002489-001			
75RE	P9	43A114748P9			
75S	1Q-485	58002485-001			
75SE	P1043	43C212092P1043			
75T	1D-489	58002489-001			
75TE	P1043	43C212092P1043			
75U	1Q-485	58002485-001			
75UE	P9	43A114748P9			
75V	1D-489	58002489-001			
75VE	P1043	43C212092P1043			
75W	1Q-485	58002485-001			
75WE	P1043	43C212092P1043			
76Q	1P3405	43C216405P1			
76QE	P1043	43C212092P1043			
77L	DL0C	43B216593P10			
77LE	P1043	43C212092P1043			
77M	RY0A	43B216591P1			
77ME	P1043	43C212092P1043			
77X	1B-476	58002476-001			
83H	1Q-483	58002483-001			
84A	1D-489	58002489-001			
84B	1Q-485	58002485-001			
84C	1D-489	58002489-001			
84D	1Q-485	58002485-001			
84E	1D-489	58002489-001			
84F	1Q-485	58002485-001			
84G	1D-489	58002489-001			
84J	1D-489	58002489-001			
84K	1B-474	58002474-001			
84N	1P3405	43C216405P1			

HONEYWELL INFORMATION SYSTEMS
LOC PHOENIX, ARIZONA, U.S.A.

58053002
10

9

COMP INSTL LIST - CONJK

TAB-005

LOC	TYPE	IDENT	X-POS	Y-POS	ROTATION
84P	1D-489	58002489-001			
84R	1D-489	58002489-001			
84S	1Q-485	58002485-001			
84T	1D-489	58002489-001			
84U	1Q-485	58002485-001			
84V	1D-489	58002489-001			
84W	1Q-485	58002485-001			
85L	614410	43C216410P1			
85M	RYOA	43B216591P1			
85Q	1B-476	58002476-001			
85X	RN3C	43B216592P12			
92H	1N3481	58002481-001			
92HE	P1043	43C212092P1043			
92K	1N3481	58002481-001			
92KE	P9	43A114748P9			
93A	4G3422	43C216422P1			
93AE	P9	43A114748P9			
93B	1B-476	58002476-001			
93BE	P1043	43C212092P1043			
93C	4G3422	43C216422P1			
93CE	P1043	43C212092P1043			
93D	1B-476	58002476-001			
93DE	P9	43A114748P9			
93E	4G3422	43C216422P1			
93EE	P1043	43C212092P1043			
93F	1B-476	58002476-001			
93FE	P1043	43C212092P1043			
93G	4G3422	43C216422P1			
93GE	P9	43A114748P9			
93J	4G3422	43C216422P1			
93JE	P1043	43C212092P1043			
93L	1B-649	58002649-001			
93LE	P1043	43C212092P1043			
93M	1B-476	58002476-001			
93ME	P1043	43C212092P1043			
93N	4G3422	43C216422P1			
93NE	P9	43A114748P9			
93P	4G3422	43C216422P1			

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83-03-04 REV. 9

58053002
10

9

HONEYWELL INFORMATION SYSTEMS
LOC PHOENIX, ARIZONA, U.S.A.

58053002
FINAL 10

COMP INSTL LIST - CONJK

TAB-005

LOC	TYPE	IDENT	X-POS	Y-POS	ROTATION
93PE	P1043	43C212092P1043			
93Q	1B-047	58002047-001			
93QE	P1043	43C212092P1043			
93R	403422	43C216422P1			
93RE	P9	43A114748P9			
93S	1B-476	58002476-001			
93SE	P1043	43C212092P1043			
93T	403422	43C216422P1			
93TE	P1043	43C212092P1043			
93U	1B-476	58002476-001			
93UE	P9	43A114748P9			
93V	403422	43C216422P1			
93VE	P1043	43C212092P1043			
93W	1B-476	58002476-001			
93WE	P1043	43C212092P1043			
93X	SWOF	58020295-006			

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83-03-04 REV. 6

58053002
FINAL 10

REV	AUTHORITY	DATE
G	PHAKJ099	83MAR30

SIGNAL NAME	PAGE	SIGNAL NAME	PAGE	SIGNAL NAME	PAGE	SIGNAL NAME	PAGE
\$CHNL-REQ-000	20.0	ABUS-04-010	20.0	ADS-100	23.0	BT-ABUS-05-OUT-100	31.0
\$CHNL-REQ-110	20.0	ABUS-04-100	31.0	ADS-100	22.0	BT-ABUS-06-IN-100	31.0
\$DOR0-000	20.0	ABUS-04-100	23.0	ADS-100	29.0	BT-ABUS-06-OUT-100	31.0
\$DOR0-110	20.0	ABUS-05-100	23.0	ADS-100	22.0	BT-ABUS-07-IN-100	31.0
\$DOR1-000	20.0	ABUS-05-100	31.0	ADS-100	29.0	BT-ABUS-07-OUT-100	31.0
\$DOR1-110	20.0	ABUS-06-100	31.0	ADS-100	22.0	BT-ABUS-05-IN-100	31.0
\$DOR2-000	20.0	ABUS-06-100	23.0	ADS-100	30.0	BT-AD-IN-000	30.0
\$DOR2-110	20.0	ABUS-07-010	20.0	AD6-100	22.0	BT-AD0-IN-100	30.0
\$DOR3-000	20.0	ABUS-07-100	23.0	AD6-100	29.0	BT-AD0-OUT-100	30.0
\$DOR3-110	20.0	ABUS-07-100	31.0	AD6-100	22.0	BT-AD1-IN-100	30.0
\$DOR4-000	20.0	ABUS-08-100	23.0	AD6-100	23.0	BT-AD1-OUT-100	30.0
\$DOR5-000	20.0	ABUS-09-100	23.0	AD6-100	34.0	BT-AD2-IN-100	30.0
\$END-CYCLE-110	19.0	ABUS-10-100	23.0	AD6-100	30.0	BT-AD2-OUT-100	30.0
\$END-CYCLE-100	18.0	ABUS-11-100	23.0	AD6-100	22.0	BT-AD3-IN-100	30.0
\$PCW-100	17.0	ABUS-12-100	23.0	AD6-100	29.0	BT-AD3-OUT-100	30.0
\$PCW-L-000	17.0	ABUS-13-100	23.0	AD7-100	29.0	BT-AD4-IN-100	30.0
\$PCW-L-100	17.0	ABUS-14-000	29.0	AD7-100	22.0	BT-AD4-OUT-100	30.0
\$PCW-R-000	17.0	ABUS-14-100	23.0	AD7-100	29.0	BT-AD5-IN-100	30.0
\$PCW-R-100	17.0	ABUS-14-CONTROL-000	34.0	AD7-100	30.0	BT-AD5-OUT-100	30.0
\$SCAN-000	17.0	ABUS-14-CONTROL-100	34.0	AD7-100	22.0	BT-AD6-IN-100	30.0
\$SCAN-110	17.0	ABUS-15-000	29.0	AD7-100	34.0	BT-AD6-OUT-100	30.0
\$SYS-FAULT-000	21.0	ABUS-15-010	24.0	AD7-100	23.0	BT-AD7-IN-100	30.0
\$SYS-FAULT-100	21.0	ABUS-15-100	23.0	ALE-000	30.0	BT-AD7-OUT-100	30.0
\$SYS-FAULT-110	21.0	ACTIVE-000	18.0	ALE-100	22.0	BT-ADR-IN-000	31.0
\$TCR0-000	20.0	ACTIVE-100	18.0	ASYN-L-100	32.0	BT-ENAB-AD-000	30.0
\$TCR1-000	20.0	AD0-100	22.0	ASYN-R-100	32.0	BT-ENAB-STEP-000	31.0
\$TCR2-000	20.0	AD0-100	33.0	BINARY-000	19.0	BT-ENAB-STEP-100	31.0
\$TCR3-000	20.0	AD0-100	29.0	BIT-CLK-L-100	22.0	BT-ENAB-STEP-SW-000	31.0
\$TCR3-110	20.0	AD0-100	23.0	BIT-CLK-R-100	22.0	BT-ENAB-STEP-SW-100	31.0
+5V-100	28.0	AD0-100	30.0	BOOT-001	21.0	BT-HOLD-000	30.0
+5V-101	28.0	AD0-100	34.0	BOOT-100	21.0	BT-HOLD-100	30.0
+5V-102	28.0	AD0-100	22.0	BOOT-FF-100	21.0	BT-INIT-000	31.0
+5V-103	28.0	AD0-100	29.0	BOOT-INIT-RESET-000	21.0	BT-INIT-100	31.0
+5V-104	27.0	AD0-100	22.0	BSP-IN-0-000	18.0	BT-INIT-SW-000	31.0
+5V-105	27.0	AD1-100	29.0	BSP-IN-1-000	18.0	BT-INIT-SW-100	31.0
+5V-106	27.0	AD1-100	22.0	BSP-IN-2-000	18.0	BT-IO-100	30.0
+5V-107	27.0	AD1-100	30.0	BSP-IN-3-000	18.0	BT-RD-000	30.0
+5V-108	21.0	AD1-100	29.0	BSP-OUT-000	18.0	BT-STEP-RDY-000	31.0
+5V-109	32.0	AD1-100	34.0	BSP-OUT-100	18.0	BT-STEP-RDY-100	31.0
A08-100	22.0	AD1-100	23.0	BT-A08-IN-100	31.0	BT-STEP-SW-RDY-000	31.0
A08-100	31.0	AD1-100	22.0	BT-A08-OUT-100	31.0	BT-STEP-SW-RDY-100	31.0
A09-100	31.0	AD1-100	33.0	BT-A09-IN-100	31.0	BT-WR-000	30.0
A09-100	22.0	AD1-100	22.0	BT-A09-OUT-100	31.0	CDI-R-010	33.0
A10-100	31.0	AD2-100	22.0	BT-A10-IN-100	31.0	CDI-R-020	33.0
A10-100	22.0	AD2-100	23.0	BT-A10-OUT-100	31.0	CDI-R-100	33.0
A11-100	31.0	AD2-100	29.0	BT-A11-IN-100	31.0	CH-05-100	16.0
A11-100	22.0	AD2-100	34.0	BT-A11-OUT-100	31.0	CH-DECODE-000	17.0
A12-100	31.0	AD2-100	30.0	BT-A12-IN-100	31.0	CH-DECODE-100	17.0
A12-100	22.0	AD2-100	29.0	BT-A12-OUT-100	31.0	CH-DECODE-LOCAL-100	16.0
A13-100	31.0	AD3-100	22.0	BT-A13-IN-100	31.0	CH-DECODE-REMOTE-100	16.0
A13-100	22.0	AD3-100	29.0	BT-A13-OUT-100	31.0	CH-DECODE-REMOTE-101	17.0
A14-100	31.0	AD3-100	34.0	BT-A14-IN-100	31.0	CH-NO-00-000	16.0
A14-100	22.0	AD3-100	22.0	BT-A14-OUT-100	31.0	CH-NO-01-000	16.0
A15-100	31.0	AD3-100	23.0	BT-A15-IN-100	31.0	CH-NO-02-000	16.0
A15-100	22.0	AD3-100	29.0	BT-A15-OUT-100	31.0	CH-NO-03-000	16.0
ABUS-00-100	31.0	AD3-100	30.0	BT-ABUS-00-IN-100	31.0	CH-NO-04-000	16.0
ABUS-00-100	23.0	AD4-100	30.0	BT-ABUS-00-OUT-100	31.0	CH-NO-05-000	16.0
ABUS-01-100	23.0	AD4-100	22.0	BT-ABUS-01-IN-100	31.0		
ABUS-01-100	31.0	AD4-100	23.0	BT-ABUS-01-OUT-100	31.0		
ABUS-02-100	23.0	AD4-100	22.0	BT-ABUS-02-IN-100	31.0		
ABUS-02-100	31.0	AD4-100	34.0	BT-ABUS-02-OUT-100	31.0		
ABUS-03-010	20.0	AD4-100	29.0	BT-ABUS-03-IN-100	31.0		
ABUS-03-100	23.0	AD4-100	22.0	BT-ABUS-03-OUT-100	31.0		
ABUS-03-100	31.0	AD4-100	29.0	BT-ABUS-04-IN-100	31.0		
ABUS-03-04-100	20.0	AD5-100	34.0	BT-ABUS-04-OUT-100	31.0		

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HONEYWELL			
HONEYWELL INFORMATION SYSTEMS LOC CED PHOENIX, ARIZONA U.S.A.			
TITLE LOGIC DIAGRAM- CONJK LOGIC - PAGE CROSS REFERENCE			
DATA BASE 166E/CONJKOCF	SIZE B	ENG NO 58053004	SN 1.0
DATE 83MAR30			REV G

58053004

REV	AUTHORITY	DATE
G	PHACKJ099	83MAR30

SIGNAL NAME	PAGE
CH-SW-00-000	16.0
CH-SW-00-100	16.0
CH-SW-01-000	16.0
CH-SW-01-100	16.0
CH-SW-02-000	16.0
CH-SW-02-100	16.0
CH-SW-03-000	16.0
CH-SW-03-100	16.0
CH-SW-04-000	16.0
CH-SW-04-100	16.0
CH-SW-05-000	16.0
CH-SW-LOCAL-05-000	16.0
CH-SW-LOCAL-0-100	16.0
CH-SW-REMOTE-05-000	16.0
CHAN-REQ-000	18.0
CLK-100	22.0
COMP-A-000	15.0
COMP-B-000	15.0
COMM-INT-100	32.0
COMP-A-100	16.0
COMP-B-100	16.0
COMP-C-100	16.0
CONNECT-FLAG-000	8.0
CTS-L-010	32.0
CTS-L-020	32.0
CTS-L-100	32.0
CTS-L-5-000	32.0
CTS-R-010	33.0
CTS-R-020	33.0
CTS-R-100	33.0
CTS-S-010	32.0
CTS-S-100	32.0
D-BUS-00-000	9.0
D-BUS-01-000	9.0
D-BUS-02-000	9.0
D-BUS-03-000	9.0
D-BUS-04-000	9.0
D-BUS-05-000	9.0
D-BUS-06-100	10.0
D-BUS-07-100	10.0
D-BUS-08-000	10.0
D-BUS-09-000	10.0
D-BUS-10-000	10.0
D-BUS-11-000	10.0
D-BUS-12-000	11.0
D-BUS-13-000	11.0
D-BUS-14-000	11.0
D-BUS-15-000	11.0
D-BUS-16-000	11.0
D-BUS-17-000	11.0
D-BUS-18-000	12.0
D-BUS-19-000	12.0
D-BUS-20-000	12.0
D-BUS-21-000	12.0
D-BUS-22-000	12.0
D-BUS-23-000	12.0
D-BUS-24-000	13.0
D-BUS-25-000	13.0
D-BUS-26-000	13.0
D-BUS-27-000	13.0
D-BUS-28-000	13.0
D-BUS-29-000	13.0
D-BUS-30-000	14.0
D-BUS-31-000	14.0
D-BUS-32-000	14.0

SIGNAL NAME	PAGE
D-BUS-33-000	14.0
D-BUS-34-000	14.0
D-BUS-35-000	14.0
D-BUS-PARITY-000	15.0
DATA-BUS-0-100	23.0
DATA-BUS-0-100	8.0
DATA-BUS-0-100	7.0
DATA-BUS-1-100	23.0
DATA-BUS-1-100	8.0
DATA-BUS-1-100	7.0
DATA-BUS-2-100	8.0
DATA-BUS-2-100	23.0
DATA-BUS-2-100	7.0
DATA-BUS-3-100	8.0
DATA-BUS-3-100	23.0
DATA-BUS-3-100	7.0
DATA-BUS-4-100	7.0
DATA-BUS-4-100	23.0
DATA-BUS-4-100	8.0
DATA-BUS-5-100	7.0
DATA-BUS-5-100	23.0
DATA-BUS-5-100	8.0
DATA-BUS-6-100	8.0
DATA-BUS-6-100	23.0
DATA-BUS-6-100	7.0
DATA-BUS-7-100	23.0
DATA-BUS-7-100	8.0
DATA-BUS-7-100	7.0
DATA-000-PARITY-000	15.0
DATA-000-PARITY-100	15.0
DBL-FLAG-000	18.0
DBL-FLAG-020	18.0
DBL-FLAG-110	18.0
DIREG-00-100	4.0
DIREG-00-101	4.0
DIREG-00-111	4.0
DIREG-01-100	4.0
DIREG-01-101	4.0
DIREG-01-111	4.0
DIREG-02-100	4.0
DIREG-02-101	4.0
DIREG-02-111	4.0
DIREG-03-100	4.0
DIREG-03-101	4.0
DIREG-03-111	4.0
DIREG-04-100	4.0
DIREG-04-101	4.0
DIREG-04-111	4.0
DIREG-05-100	4.0
DIREG-05-101	4.0
DIREG-05-111	4.0
DIREG-06-100	4.0
DIREG-06-101	4.0
DIREG-06-111	4.0
DIREG-07-100	4.0
DIREG-07-101	4.0
DIREG-07-111	4.0
DIREG-08-100	4.0
DIREG-08-101	4.0
DIREG-08-111	4.0
DIREG-09-100	4.0
DIREG-09-101	4.0
DIREG-09-111	4.0
DIREG-10-100	4.0
DIREG-10-101	4.0

SIGNAL NAME	PAGE
DIREG-10-111	4.0
DIREG-11-100	4.0
DIREG-11-101	4.0
DIREG-11-111	4.0
DIREG-12-100	5.0
DIREG-12-101	5.0
DIREG-12-111	5.0
DIREG-13-100	5.0
DIREG-13-101	5.0
DIREG-13-111	5.0
DIREG-14-100	5.0
DIREG-14-101	5.0
DIREG-14-111	5.0
DIREG-15-100	5.0
DIREG-15-101	5.0
DIREG-15-111	5.0
DIREG-16-100	5.0
DIREG-16-101	5.0
DIREG-16-111	5.0
DIREG-17-100	5.0
DIREG-17-101	5.0
DIREG-17-111	5.0
DIREG-18-100	5.0
DIREG-18-101	5.0
DIREG-18-111	5.0
DIREG-19-100	5.0
DIREG-19-101	5.0
DIREG-19-111	5.0
DIREG-20-100	5.0
DIREG-20-101	5.0
DIREG-20-111	5.0
DIREG-21-100	5.0
DIREG-21-101	5.0
DIREG-21-111	5.0
DIREG-22-100	5.0
DIREG-22-101	5.0
DIREG-22-111	5.0
DIREG-23-100	5.0
DIREG-23-101	5.0
DIREG-23-111	5.0
DIREG-24-100	6.0
DIREG-24-101	6.0
DIREG-24-111	6.0
DIREG-25-100	6.0
DIREG-25-101	6.0
DIREG-25-111	6.0
DIREG-26-100	6.0
DIREG-26-101	6.0
DIREG-26-111	6.0
DIREG-27-100	6.0
DIREG-27-101	6.0
DIREG-27-111	6.0
DIREG-28-100	6.0
DIREG-28-101	6.0
DIREG-28-111	6.0
DIREG-29-100	6.0
DIREG-29-101	6.0
DIREG-29-111	6.0
DIREG-30-100	6.0
DIREG-30-101	6.0
DIREG-30-111	6.0
DIREG-31-100	6.0
DIREG-31-101	6.0
DIREG-31-111	6.0
DIREG-32-100	6.0

SIGNAL NAME	PAGE
DIREG-32-101	6.0
DIREG-32-111	6.0
DIREG-33-100	6.0
DIREG-33-101	6.0
DIREG-33-111	6.0
DIREG-34-100	6.0
DIREG-34-101	6.0
DIREG-34-111	6.0
DIREG-35-100	6.0
DIREG-35-101	6.0
DIREG-35-111	6.0
DISAB-INIT-000	31.0
DISAB-INIT-100	31.0
DOR0-0-100	9.0
DOR0-1-100	9.0
DOR0-2-100	9.0
DOR0-3-100	9.0
DOR0-4-100	9.0
DOR0-5-100	9.0
DOR0-6-100	9.0
DOR0-7-100	9.0
DOR1-0-100	10.0
DOR1-1-100	10.0
DOR1-2-100	10.0
DOR1-3-100	10.0
DOR1-4-100	10.0
DOR1-5-100	10.0
DOR1-6-100	9.0
DOR1-7-100	9.0
DOR2-0-100	11.0
DOR2-1-100	11.0
DOR2-2-100	11.0
DOR2-3-100	11.0
DOR2-4-100	11.0
DOR2-5-100	11.0
DOR2-6-100	12.0
DOR2-7-100	12.0
DOR3-0-100	12.0
DOR3-1-100	12.0
DOR3-2-100	12.0
DOR3-3-100	12.0
DOR3-4-100	12.0
DOR3-5-100	12.0
DOR3-6-000	16.0
DOR3-6-100	12.0
DOR3-7-100	12.0
DOR4-0-100	13.0
DOR4-1-100	13.0
DOR4-2-100	13.0
DOR4-3-100	13.0
DOR4-4-100	13.0
DOR4-5-100	13.0
DOR5-0-100	14.0
DOR5-1-100	14.0
DOR5-2-100	14.0
DOR5-3-100	14.0
DOR5-4-100	14.0

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HONEYWELL
 HONEYWELL INFORMATION SYSTEMS
 LOC CED PHOENIX, ARIZONA U.S.A.
 TITLE LOGIC DIAGRAM- CONJK
 LOGIC
 PAGE CROSS REFERENCE
 DATA BASE 1667CON JKCF
 DATE 83MAR30
 58053004 1.1 G

58053004

REV	AUTHORITY	DATE
G	PHACKJ039	83MAR30

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SIGNAL NAME	PAGE
DORS-5*100	14.0
DOSW-00*100	9.0
DOSW-01*100	9.0
DOSW-02*100	9.0
DOSW-03*100	9.0
DOSW-04*100	9.0
DOSW-05*100	9.0
DOSW-06*100	10.0
DOSW-07*100	10.0
DOSW-08*100	10.0
DOSW-09*100	10.0
DOSW-10*100	10.0
DOSW-11*100	10.0
DOSW-12*100	11.0
DOSW-13*100	11.0
DOSW-14*100	11.0
DOSW-15*100	11.0
DOSW-16*100	11.0
DOSW-17*100	11.0
DOSW-18*100	12.0
DOSW-19*100	12.0
DOSW-20*100	12.0
DOSW-21*100	12.0
DOSW-22*100	12.0
DOSW-23*100	12.0
DOSW-24*100	13.0
DOSW-25*100	13.0
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DOSW-28*100	13.0
DOSW-29*100	13.0
DOSW-30*100	14.0
DOSW-31*100	14.0
DOSW-32*100	14.0
DOSW-33*100	14.0
DOSW-34*100	14.0
DOSW-35*100	14.0
DOSW-CNTL-1*100	19.0
DOSW-CNTL-2*000	19.0
DOSW-CNTL-2*100	19.0
DPU-BIT-0*100	34.0
DPU-BIT-1*100	34.0
DPU-BIT-2*100	34.0
DPU-BIT-3*100	34.0
DPU-BIT-4*100	34.0
DPU-BIT-5*100	34.0
DPU-BIT-6*100	34.0
DPU-BIT-7*100	34.0
DPU-CONNECTED*000	34.0
DPU-CONNECTED*100	34.0
DPU-INT*000	34.0
DPU-INT-FLAG*100	34.0
DPU-RD-WR-STROBE*000	34.0
DSR-L*010	32.0
DSR-L*020	32.0
DSR-L*100	32.0
DSR-R*010	33.0
DSR-R*020	33.0
DSR-R*100	33.0
DSR-RESET*000	32.0
DTR-L*000	22.0
DTR-L*010	32.0
DTR-L*120	32.0
DTR-R*000	22.0
DTR-R*010	33.0

SIGNAL NAME	PAGE
DTR-R*120	33.0
DTR-S*120	32.0
E-PROM-DATA-0*100	27.0
E-PROM-DATA-0*100	28.0
E-PROM-DATA-0*100	27.0
E-PROM-DATA-0*100	28.0
E-PROM-DATA-0*100	27.0
E-PROM-DATA-0*100	28.0
E-PROM-DATA-0*100	27.0
E-PROM-DATA-0*100	28.0
E-PROM-DATA-1*100	27.0
E-PROM-DATA-1*100	28.0
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E-PROM-DATA-1*100	27.0
E-PROM-DATA-1*100	27.0
E-PROM-DATA-2*100	27.0
E-PROM-DATA-2*100	28.0
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E-PROM-DATA-4*100	28.0
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E-PROM-DATA-6*100	27.0
E-PROM-DATA-7*100	28.0
E-PROM-DATA-7*100	27.0
E-PROM-DATA-7*100	28.0
E-PROM-DATA-7*100	27.0
E-PROM-DATA-7*100	28.0
EN-ACT*000	18.0
EN-ACT*100	18.0
EN-E-PROM-DATA*000	29.0
EN-RAM-DATA*000	29.0
ENA-MLDY*100	24.0
ENAB-D-BUS*100	18.0
ENAB-D-BUS*101	18.0
ENAB-DISW*0*000	7.0
ENAB-DISW-1*000	8.0
ENAB-EA*010	18.0
ENAB-EA*100	18.0
ENAB-GENERATOR*100	20.0
ENAB-GENERATOR*101	20.0
ENAB-SCRD*100	18.0
ENABLE-IND*000	24.0
ENABLE-IND*001	30.0
EXTCLK-L*100	32.0
EXTCLK-R*100	33.0

SIGNAL NAME	PAGE
EXTCLK-S*100	32.0
FLT-L*000	16.0
FLT-L*001	16.0
GAI*100	18.0
GND-08P08	32.0
GND-08Q08	32.0
GND-08S08	33.0
GND-08T08	33.0
GND-09C08	30.0
GND-17W-07	17.0
GND-17X08	21.0
GND-29P20	22.0
GND-35X08	21.0
GND-39M10	23.0
GND-39V08	21.0
GND-48E-08	8.0
GND-48H08	17.0
GND-48S08	7.0
GND-57B08	4.0
GND-57E-08	8.0
GND-57F08	5.0
GND-57J08	19.0
GND-57N07	15.0
GND-57S08	7.0
GND-57U08	6.0
GND-58Q08	19.0
GND-66B08	4.0
GND-66D08	4.0
GND-66F08	5.0
GND-66J08	18.0
GND-66N07	15.0
GND-66S08	5.0
GND-66U08	6.0
GND-66W08	6.0
GND-67Q08	19.0
GND-75A08	9.0
GND-75C08	10.0
GND-75E08	10.0
GND-75G08	11.0
GND-75J08	12.0
GND-75K08	16.0
GND-75N07	15.0
GND-75P08	12.0
GND-75R08	13.0
GND-75T08	14.0
GND-75V08	14.0
GND-76Q07	15.0
GND-77L10	17.0
GND-77M10	21.0
GND-83H08	17.0
GND-84A08	9.0
GND-84C08	9.0
GND-84E08	10.0
GND-84G08	11.0
GND-84J08	11.0
GND-84N07	15.0
GND-84P08	12.0
GND-84R08	13.0
GND-84T08	13.0
GND-84V08	14.0
GND-85M10	21.0
GND-92H08	16.0
GND-92K08	16.0
GND-93W07	16.0
GRP-ACTV-INH*000	18.0

SIGNAL NAME	PAGE
HI-PRIOR*000	18.0
IND-0*000	30.0
IND-0*001	30.0
IND-0*100	30.0
IND-1*000	30.0
IND-1*001	30.0
IND-1*100	30.0
IND-2*000	30.0
IND-2*001	30.0
IND-2*100	30.0
IND-3*000	30.0
IND-3*001	30.0
IND-3*100	30.0
IND-4*000	30.0
IND-4*001	30.0
IND-4*100	30.0
IND-5*000	30.0
IND-5*001	30.0
IND-5*100	30.0
INIT*001	21.0
INIT*100	21.0
INIT-DPU*000	20.0
INIT-DPU*100	34.0
INIT-FF*100	21.0
INT-DPU*000	20.0
INT-DPU*100	34.0
INT-ENA-L*100	32.0
INT-ENA-R*100	32.0
INT-L*010	32.0
INT-L*100	32.0
INT-R*010	32.0
INT-R*100	32.0
INZ*000	21.0
INZ*010	21.0
INZ*020	21.0
INZ*110	21.0
IO*010	24.0
IO*100	22.0
IO*100	30.0
IO*110	24.0
IOM-DATA*000	23.0
IOM-LOAD-REQ*100	15.0
IOM-LOAD-REQ-L*000	19.0
IOM-LOAD-REQ-L*100	19.0
IOM-LOAD-REQ-R*000	19.0
IOM-LOAD-REQ-R*100	19.0
IOM-PAR-A*100	15.0
IOM-PAR-B*100	15.0
IOM-PAR-C*100	15.0
IOM-PAR-D*100	15.0
IOM-REQ*100	19.0
IOM-STORE-REQ*000	19.0
IOM-STORE-REQ*100	19.0
LOAD-CNTL*000	19.0
LOAD-CNTL*100	19.0
LOAD-CNTL-L*000	19.0
LOAD-CNTL-R*000	19.0

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LOC CEO PHOENIX, ARIZONA U.S.A.

TITLE LOGIC DIAGRAM- CONJK
LOGIC -
PAGE CROSS REFERENCE

DATA BASE L66E/CONJKOCF
DATE 83MAR30

SIZE B 58053004
DWG NO 1.2
REV G

58053004

REV	AUTHORITY	DATE
G	PHAKJ099	83MAR30

SIGNAL NAME	PAGE	SIGNAL NAME	PAGE	SIGNAL NAME	PAGE	SIGNAL NAME	PAGE
LOAD-DIREG-L*000	4.0	RST-EA*000	18.0	SYS-FAULT-FLAG*100	21.0	U-BUS-11*000	4.0
LOAD-DIREG-R*000	4.0	RST-EAA*000	18.0	TALLY-BIT-0*000	19.0	U-BUS-11*100	4.0
LOAD-PAR-ERR*000	19.0	RST-EAB*000	18.0	TALLY-BIT-0*100	19.0	U-BUS-12*000	5.0
LOAD-PAR-ERR*100	15.0	RTS-L*000	22.0	TALLY-BIT-0-FLAG*100	19.0	U-BUS-12*100	5.0
LOCAL-MASK-FLAG*100	21.0	RTS-L*010	32.0	TALLY-BIT-1*000	19.0	U-BUS-13*000	5.0
MASK*000	21.0	RTS-L*120	32.0	TALLY-BIT-1*100	19.0	U-BUS-13*100	5.0
MASK*100	21.0	RTS-R*000	22.0	TALLY-BIT-1-FLAG*100	19.0	U-BUS-14*000	5.0
MDLY*100	24.0	RTS-R*010	33.0	TC*100	32.0	U-BUS-14*100	5.0
MP-RESET*000	22.0	RTS-R*120	33.0	TC*101	32.0	U-BUS-15*000	5.0
ONE-CH-COMF*000	16.0	RTS-S*120	32.0	TC*102	21.0	U-BUS-15*100	5.0
ONE-CH-COMF*100	16.0	RXC-L*000	32.0	TCR0-0*100	14.0	U-BUS-16*000	5.0
PAR-ERR-FLAG*100	19.0	RXC-R*000	33.0	TCR0-1*100	11.0	U-BUS-16*100	5.0
PCW-FAULT-L*100	17.0	RXD-L*000	32.0	TCR0-2*100	14.0	U-BUS-17*000	5.0
PCW-FAULT-R*100	17.0	RXD-L*120	32.0	TCR0-3*100	14.0	U-BUS-17*100	5.0
PCW-INT*100	17.0	RXD-R*000	33.0	TCR0-4*100	14.0	U-BUS-18*000	5.0
PCW-INT-L*000	17.0	RXD-R*110	33.0	TCR0-5*100	14.0	U-BUS-18*100	5.0
PCW-INT-L*100	17.0	RXD-R*120	33.0	TCR1-0*100	13.0	U-BUS-19*000	5.0
PCW-INT-R*000	17.0	RXR0Y-L*100	22.0	TCR1-1*100	13.0	U-BUS-19*100	5.0
PCW-INT-R*100	17.0	RXR0Y-R*100	22.0	TCR1-2*100	13.0	U-BUS-20*000	5.0
PCW-ION-LOAD-REQ*100	15.0	SCAN*000	17.0	TCR1-3*100	13.0	U-BUS-20*100	5.0
PLUSSV*100	16.0	SCAN*020	17.0	TCR1-4*100	13.0	U-BUS-21*000	5.0
PLUSSV*101	18.0	SCAN*030	17.0	TCR1-5*100	13.0	U-BUS-21*020	21.0
PLUSSV*102	19.0	SCAN*110	17.0	TCR2-0*000	9.0	U-BUS-21*100	5.0
PLUSSV*103	23.0	SCAN-100*100	17.0	TCR2-0*100	9.0	U-BUS-22*000	5.0
POWER-ON*000	21.0	SCAN-50*000	17.0	TCR2-2*100	9.0	U-BUS-22*100	5.0
POWER-ON*100	21.0	SCAN-50*001	17.0	TCR2-3*100	9.0	U-BUS-23*000	5.0
POWER-ON*101	21.0	SCAN-50*101	17.0	TCR2-4*100	9.0	U-BUS-23*100	5.0
POWER-ON-FLAG*100	21.0	SCAN-50*110	17.0	TCR2-5*100	9.0	U-BUS-24*000	6.0
PROM-RDY*100	24.0	SCR-L*010	32.0	TCR3-0*100	14.0	U-BUS-24*100	6.0
PROM-RDY*101	22.0	SCR-L*100	32.0	TCR3-1*100	14.0	U-BUS-25*000	6.0
RAM-DATA-0*100	25.0	SCR-R*010	33.0	TIME-OUT-CLK*100	22.0	U-BUS-25*100	6.0
RAM-DATA-1*100	25.0	SCR-R*100	33.0	TIMER-CLK*100	24.0	U-BUS-26*000	6.0
RAM-DATA-2*100	25.0	SCT-L*010	32.0	TXC-L*000	32.0	U-BUS-26*100	6.0
RAM-DATA-3*100	25.0	SCT-L*100	32.0	TXC-R*000	33.0	U-BUS-27*000	6.0
RAM-DATA-4*100	26.0	SCT-R*010	33.0	TXD-L*020	32.0	U-BUS-27*100	6.0
RAM-DATA-5*100	26.0	SCT-R*100	33.0	TXD-L*100	22.0	U-BUS-28*000	6.0
RAM-DATA-6*100	26.0	SEL-COMCFG*000	24.0	TXD-L*110	32.0	U-BUS-28*100	6.0
RAM-DATA-7*100	26.0	SEL-PROM-0*000	24.0	TXD-R*020	33.0	U-BUS-29*000	6.0
RD*000	30.0	SEL-PROM-1*000	24.0	TXD-R*100	22.0	U-BUS-29*100	6.0
RD*001	22.0	SEL-PROM-2*000	24.0	TXD-R*110	33.0	U-BUS-30*000	6.0
RD*010	24.0	SEL-PROM-3*000	24.0	TXD-S*020	32.0	U-BUS-30*100	6.0
RD*110	24.0	SEL-PROM-4*000	24.0	TXRDY-L*100	22.0	U-BUS-31*000	6.0
RD-BUS*100	23.0	SEL-PROM-5*000	24.0	TXRDY-R*100	22.0	U-BUS-31*100	6.0
RD-REMS*000	24.0	SEL-PROM-6*000	24.0	U-BUS-00*000	4.0	U-BUS-32*000	6.0
RD-WR*100	34.0	SEL-PROM-7*000	24.0	U-BUS-00*100	4.0	U-BUS-32*100	6.0
RDX-L*110	32.0	SEL-RAM*000	24.0	U-BUS-01*000	4.0	U-BUS-33*000	6.0
REMOTE-MASK-FLAG*100	21.0	SEL-TIMER*000	24.0	U-BUS-01*100	4.0	U-BUS-33*100	6.0
RES*100	32.0	SEL-USART-L*000	24.0	U-BUS-02*000	4.0	U-BUS-34*000	6.0
RES-PCW-L*000	24.0	SEL-USART-R*000	24.0	U-BUS-02*100	4.0	U-BUS-34*100	6.0
RES-PCW-L*001	24.0	SERV-REQ*000	18.0	U-BUS-03*000	4.0	U-BUS-35*000	6.0
RES-PCW-L*002	17.0	SERV-REQ*100	18.0	U-BUS-03*100	4.0	U-BUS-35*100	6.0
RES-PCW-R*000	24.0	SET-BOOT*000	20.0	U-BUS-04*000	4.0	U-BUS-PARITY*000	15.0
RES-PCW-R*001	24.0	SET-INIT*000	20.0	U-BUS-04*100	4.0	U-BUS-PARITY*001	15.0
RES-PCW-R*002	17.0	SET-L-FLT-MASK*000	16.0	U-BUS-05*000	4.0	U-BUS-PARITY*100	15.0
RES-PWR-ON-FLAG*000	24.0	SET-L-MASK-FLAG*000	21.0	U-BUS-05*100	4.0	USER-FLT-00*001	19.0
RES-PWR-ON-FLAG*001	24.0	SET-R-FLT-MASK*000	16.0	U-BUS-06*000	4.0	USER-FLT-00*100	19.0
RES-STEP-RDY*000	30.0	SET-R-MASK-FLAG*000	21.0	U-BUS-06*100	4.0	USER-FLT-01*001	19.0
RESET-BOOT-INIT*000	20.0	SET-REMOTE-FLAG*000	21.0	U-BUS-07*000	4.0		
RESETOUT*010	24.0	SSRO*000	18.0	U-BUS-07*100	4.0		
RESETOUT*100	22.0	STEP-RDY*101	30.0	U-BUS-08*000	4.0		
RIS*000	19.0	STEP-RDY*102	30.0	U-BUS-08*100	4.0		
RNG-R*010	33.0	SW-BINARY*100	19.0	U-BUS-09*000	4.0		
RNG-R*020	33.0	SYN-L*000	32.0	U-BUS-09*100	4.0		
RNG-R*100	33.0	SYNC-R*000	33.0	U-BUS-10*000	4.0		
RS-MDLY*000	24.0	SYS-FAULT*000	21.0	U-BUS-10*100	4.0		

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TITLE LOGIC DIAGRAM- CONJK	
PAGE CROSS REFERENCE	
DATA BASE	REV
166E7CONJKCF	G
FIG 83MAR30	
SIZE	REV
58053004	1.3

58053004

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REV	AUTHORITY
G	PHADKJ099

H	SIGNAL NAME	PAGE
	USER-FLT-01-100	19.0
	USER-FLT-02-001	19.0
	USER-FLT-02-100	19.0
	USER-FLT-FLAG-00-100	19.0
	USER-FLT-FLAG-01-100	19.0
	USER-FLT-FLAG-02-100	19.0
	WR-000	22.0
	WR-000	30.0
	WR-010	24.0
F	WR-COMCFG-000	24.0
	WRAP-DTR-000	33.0
	WRAP-L-100	32.0
	WRAP-R-000	33.0
	WRAP-R-100	32.0
	XTAL-000	22.0
	XTAL-100	22.0

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TITLE LOGIC DIAGRAM- CONJK			
LOGIC -			
PAGE CROSS REFERENCE			
DATA BASE	SIZE	DWG NO	SH
L66E/CONJKDF	B	58053004	1.4
DATE	REV		
DFIG 83MAR30	G		

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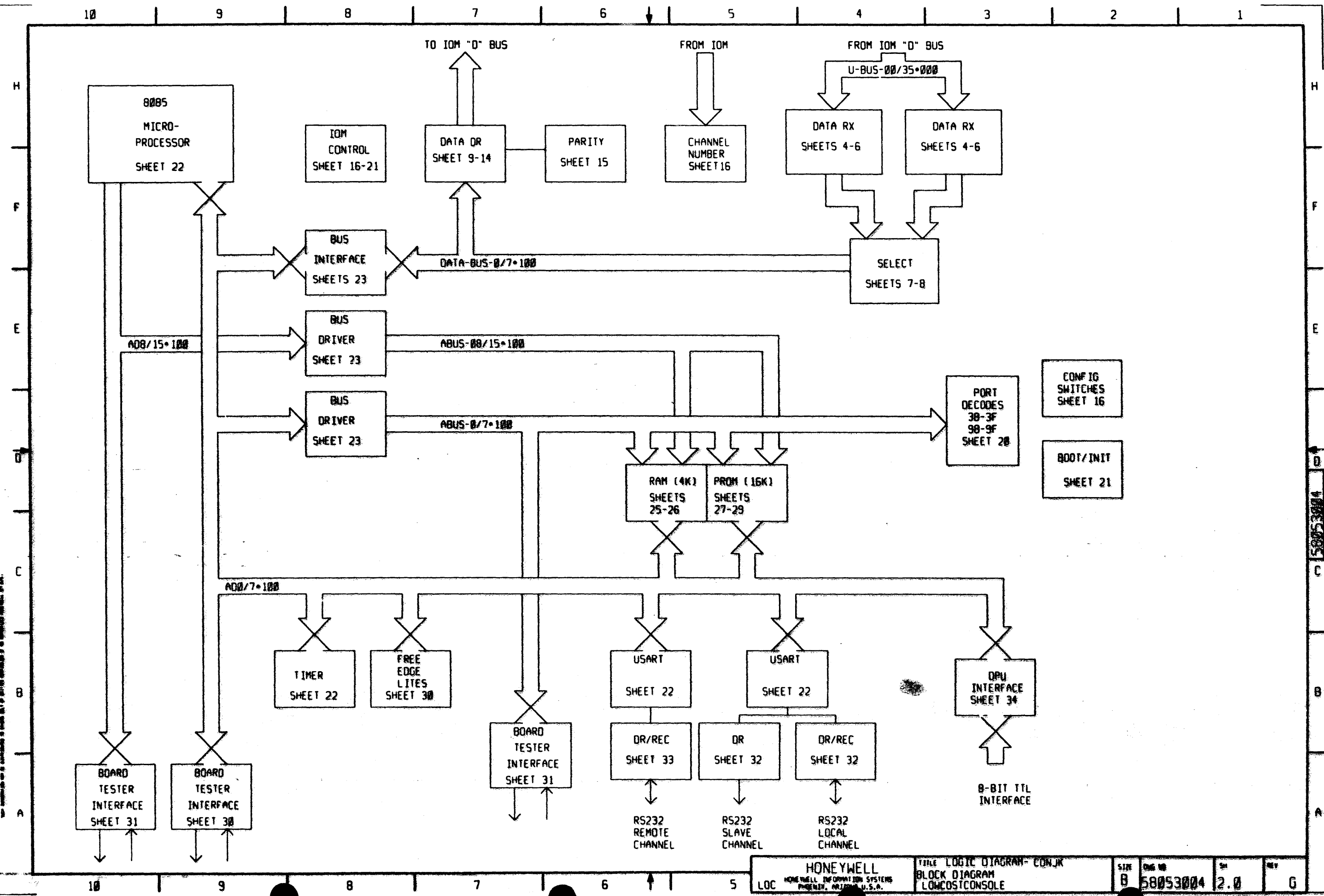
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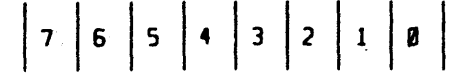


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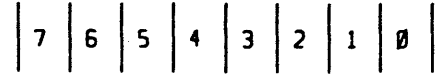
M.P. DATABUS



CMD/ADDR

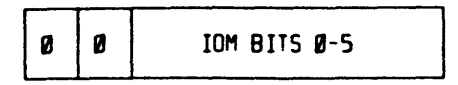
LOCAL PORT REMOTE PORT

M.P. DATABUS



CMD/ADDR

READ IOM BINARY OR PCW BYTE 0



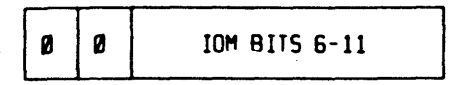
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WRITE IOM BINARY BYTE 0



OUT 10

READ IOM BINARY OR PCW BYTE 1



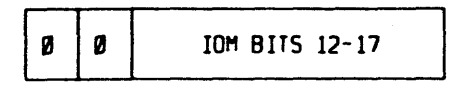
IN 51 IN 71

WRITE IOM BINARY BYTE 1



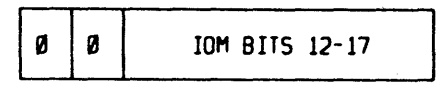
OUT 11

READ IOM BINARY OR PCW BYTE 2



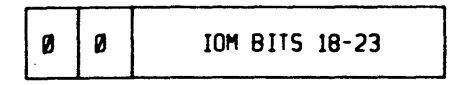
IN 52 IN 72

WRITE IOM BINARY BYTE 2



OUT 12

READ IOM BINARY OR PCW BYTE 3



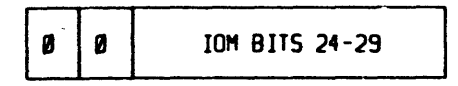
IN 53 IN 73

WRITE IOM BINARY BYTE 3



OUT 13

READ IOM BINARY OR PCW BYTE 44



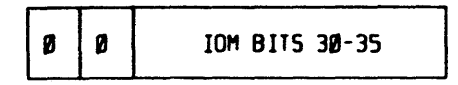
IN 54 IN 74

WRITE IOM BINARY BYTE 4



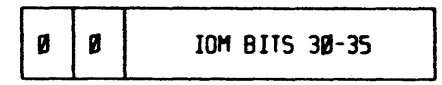
OUT 14

READ IOM BINARY OR PCW BYTE 5



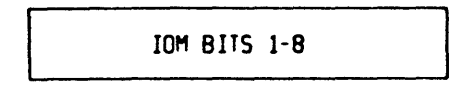
IN 55 IN 75

WRITE IOM BINARY BYTE 5



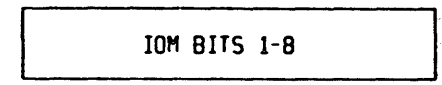
OUT 15

READ IOM ASCII BYTE 0



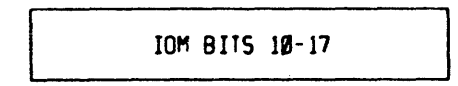
IN 48 IN 68

WRITE IOM ASCII BYTE 0



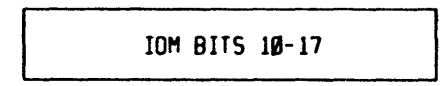
OUT 08

READ IOM ASCII BYTE 1



IN 49 IN 69

WRITE IOM ASCII BYTE 1



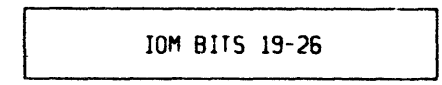
OUT 09

READ IOM ASCII BYTE 2



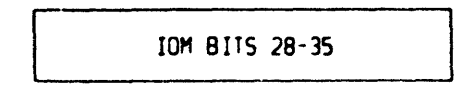
IN 4A IN 6A

WRITE IOM ASCII BYTE 2



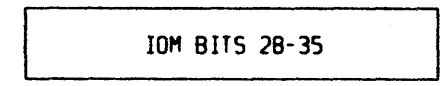
OUT 0A

READ IOM ASCII BYTE 3



IN 4B IN 6B

WRITE IOM ASCII BYTE 3



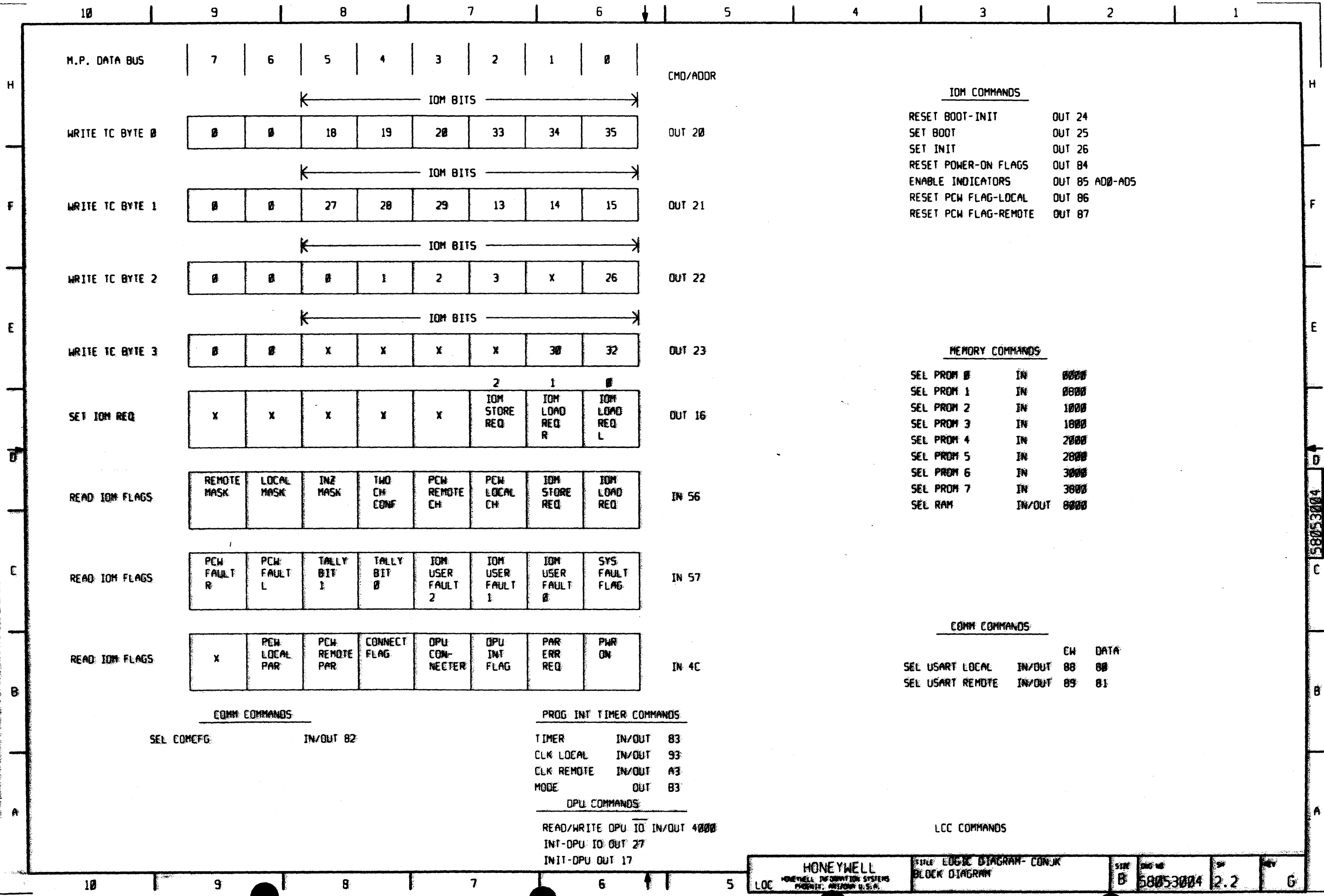
OUT 0B

LCC
IOM INTERFACE FORMAT
DATA TRANSFER

LOC	HONEYWELL	TITLE	LOGIC DIAGRAM- CONJK	SIZE	DWG NO	SN	REV
	HONEYWELL INFORMATION SYSTEMS PHOENIX, ARIZONA U.S.A.	BLOCK DIAGRAM	B	58053004	2.1	G	

This diagram is a logic diagram and is not intended to be used as a wiring diagram. It is intended to show the logic relationships between the components of the system.

58053004



IOM COMMANDS

RESET BOOT-INIT	OUT 24
SET BOOT	OUT 25
SET INIT	OUT 26
RESET POWER-ON FLAGS	OUT 84
ENABLE INDICATORS	OUT 85 AD0-ADS
RESET PCW FLAG-LOCAL	OUT 86
RESET PCW FLAG-REMOTE	OUT 87

MEMORY COMMANDS

SEL PROM 0	IN	0000
SEL PROM 1	IN	0000
SEL PROM 2	IN	1000
SEL PROM 3	IN	1000
SEL PROM 4	IN	2000
SEL PROM 5	IN	2000
SEL PROM 6	IN	3000
SEL PROM 7	IN	3000
SEL RAM	IN/OUT	0000

COMM COMMANDS

		CH	DATA
SEL USART LOCAL	IN/OUT	88	88
SEL USART REMOTE	IN/OUT	89	81

PROG INT TIMER COMMANDS

TIMER	IN/OUT	83
CLK LOCAL	IN/OUT	93
CLK REMOTE	IN/OUT	A3
MODE	OUT	B3

DPU COMMANDS

READ/WRITE DPU IO	IN/OUT	4000
INT-DPU IO	OUT	27
INIT-DPU	OUT	17

LCC COMMANDS

COMM COMMANDS

SEL COMEFG	IN/OUT	82
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I/O PIN	PAGE	SIGNAL NAME	I/O PIN	PAGE	SIGNAL NAME	I/O PIN	PAGE	SIGNAL NAME			
LA02	I	32.0	SCR-L-100	RB08	I	31.0	BT-ABUS-06-IN-100	WC14	O	11.0	D-BUS-12-000
LA04	I	32.0	RXD-L-000	RB09	I	31.0	BT-ABUS-07-IN-100	WC16	I	5.0	U-BUS-12-000
LA05	I	32.0	OSR-L-100	RB10	I	31.0	BT-STEP-SW-RDY-000	WC18	O	11.0	D-BUS-13-000
LA08	I	32.0	CTS-L-100	RB11	I	31.0	BT-STEP-SW-RDY-100	WC20	I	5.0	U-BUS-13-000
LA09	O	32.0	RTS-L-120	RB14	I	31.0	BT-INIT-SW-000	WD00	O	11.0	D-BUS-14-000
LA12	O	32.0	EXTCLK-L-100	RB15	I	31.0	BT-INIT-SW-100	WD02	I	5.0	U-BUS-14-000
LA16	O	32.0	TXD-L-020	RB18	I	30.0	BT-RD-000	WD04	O	11.0	D-BUS-15-000
LA17	O	32.0	DTR-L-120	RB19	I	30.0	BT-WR-000	WD06	I	5.0	U-BUS-15-000
LA18	I	32.0	SCT-L-100	RB20	I	30.0	BT-IO-100	WD08	O	11.0	D-BUS-16-000
LB08	I	32.0	CTS-S-100	RC00	O	30.0	BT-AD0-OUT-100	WD10	I	5.0	U-BUS-16-000
LB09	O	32.0	RTS-S-120	RC01	O	30.0	BT-AD1-OUT-100	WD12	O	11.0	D-BUS-17-000
LB12	O	32.0	EXTCLK-S-100	RC02	O	30.0	BT-AD2-OUT-100	WN14	I	5.0	U-BUS-17-000
LB16	O	32.0	TXD-S-020	RC03	O	30.0	BT-AD3-OUT-100	WD16	O	12.0	D-BUS-18-000
LB17	O	32.0	DTR-S-120	RC04	O	30.0	BT-AD4-OUT-100	WD18	I	5.0	U-BUS-18-000
LC02	I	33.0	SCR-R-100	RC05	O	30.0	BT-AD5-OUT-100	WD20	O	12.0	D-BUS-19-000
LC04	I	33.0	RXD-R-000	RC06	O	30.0	BT-AD6-OUT-100	WE00	I	5.0	U-BUS-19-000
LC05	I	33.0	OSR-R-100	RC07	O	30.0	BT-AD7-OUT-100	WE02	I	16.0	CH-NO-00-000
LC08	I	33.0	CTS-R-100	RC08	O	31.0	BT-ABUS-04-OUT-100	WE04	I	16.0	CH-NO-01-000
LC09	O	33.0	RTS-R-120	RC09	O	31.0	BT-ABUS-05-OUT-100	WE06	I	16.0	CH-NO-02-000
LC12	O	33.0	EXTCLK-R-100	RC10	O	31.0	BT-ABUS-06-OUT-100	WE08	I	16.0	CH-NO-03-000
LC16	O	33.0	TXD-R-020	RC11	O	31.0	BT-ABUS-07-OUT-100	WE10	I	16.0	CH-NO-04-000
LC17	O	33.0	DTR-R-120	RC12	O	31.0	BT-A08-OUT-100	WE12	I	16.0	CH-NO-05-000
LC18	I	33.0	SCT-R-100	RC13	O	31.0	BT-A09-OUT-100	WE14	I	21.0	SYS-FAULT-000
LC20	I	33.0	RNG-R-100	RC14	O	31.0	BT-A10-OUT-100	WE16	I	19.0	USER-FLT-00-001
LC21	I	33.0	COI-R-100	RC15	O	31.0	BT-A11-OUT-100	WE18	I	19.0	USER-FLT-01-001
LD00	O	34.0	DPU-BIT-0-100	RC16	O	31.0	BT-A12-OUT-100	WE20	I	19.0	USER-FLT-02-001
LD02	O	34.0	DPU-BIT-1-100	RC17	O	31.0	BT-A13-OUT-100	WF00	O	18.0	BSP-OUT-000
LD04	O	34.0	DPU-BIT-2-100	RC18	O	31.0	BT-A14-OUT-100	WF02	I	18.0	BSP-IN-0-000
LD06	O	34.0	DPU-BIT-3-100	RC19	O	31.0	BT-A15-OUT-100	WF04	I	18.0	BSP-IN-1-000
LD08	O	34.0	DPU-BIT-4-100	RD02	O	30.0	IND-0-000	WF06	I	18.0	BSP-IN-2-000
LD10	O	34.0	DPU-BIT-5-100	RD03	O	30.0	IND-1-000	WF08	I	18.0	BSP-IN-3-000
LD12	O	34.0	DPU-BIT-6-100	RD04	O	30.0	IND-2-000	WF10	I	18.0	GRP-ACTV-INH-000
LD14	O	34.0	DPU-BIT-7-100	RD05	O	30.0	IND-3-000	WF14	I	17.0	SCAN-000
LD15	O	34.0	INIT-DPU-100	RD06	O	30.0	IND-4-000	WF20	O	21.0	INIT-100
LD16	O	34.0	DPU-RD-WR-STROBE-000	RD07	O	30.0	IND-5-000	WG00	O	21.0	BOOT-100
LD18	I	34.0	DPU-INT-000	RD11	I	30.0	BT-ENAB-AD-000	WG02	I	18.0	DBL-FLAG-000
LD20	I	34.0	DPU-CONNECTED-000	RD13	I	31.0	DISAB-INIT-100	WG04	O	18.0	CHAN-REQ-000
LD21	O	34.0	INT-DPU-100	RD14	O	31.0	BT-ABUS-00-OUT-100	WG06	I	19.0	TALLY-BIT-0-000
RA00	I	30.0	BT-AD-IN-000	RD15	O	31.0	BT-ABUS-01-OUT-100	WG08	I	19.0	TALLY-BIT-1-000
RA02	I	30.0	BT-AD0-IN-100	RD16	O	31.0	BT-ABUS-02-OUT-100	WG10	O	12.0	D-BUS-20-000
RA03	I	30.0	BT-AD1-IN-100	RD17	O	31.0	BT-ABUS-03-OUT-100	WG12	I	5.0	U-BUS-20-000
RA04	I	30.0	BT-AD2-IN-100	WA10	O	9.0	D-BUS-00-000	WG14	O	12.0	D-BUS-21-000
RA05	I	30.0	BT-AD3-IN-100	WA12	I	4.0	U-BUS-00-000	WG16	I	5.0	U-BUS-21-000
RA06	I	30.0	BT-AD4-IN-100	WA14	O	9.0	D-BUS-01-000	WG18	O	12.0	D-BUS-22-000
RA07	I	30.0	BT-AD5-IN-100	WA16	I	4.0	U-BUS-01-000	WG20	I	5.0	U-BUS-22-000
RA08	I	30.0	BT-AD6-IN-100	WA18	O	9.0	D-BUS-02-000	WH00	O	12.0	D-BUS-23-000
RA09	I	30.0	BT-AD7-IN-100	WA20	I	4.0	U-BUS-02-000	WH02	I	5.0	U-BUS-23-000
RA10	I	31.0	BT-A08-IN-100	WB00	O	9.0	D-BUS-03-000	WH04	O	13.0	D-BUS-24-000
RA11	I	31.0	BT-A09-IN-100	WB02	I	4.0	U-BUS-03-000	WH06	I	6.0	U-BUS-24-000
RA12	I	31.0	BT-A10-IN-100	WB04	O	9.0	D-BUS-04-000	WH08	O	13.0	D-BUS-25-000
RA13	I	31.0	BT-A11-IN-100	WB06	I	4.0	U-BUS-04-000	WH10	I	6.0	U-BUS-25-000
RA14	I	31.0	BT-A12-IN-100	WB08	O	9.0	D-BUS-05-000	WH12	O	13.0	D-BUS-26-000
RA15	I	31.0	BT-A13-IN-100	WB10	I	4.0	U-BUS-05-000	WH14	I	6.0	U-BUS-26-000
RA16	I	31.0	BT-A14-IN-100	WB12	O	10.0	D-BUS-06-100	WH16	O	13.0	D-BUS-27-000
RA17	I	31.0	BT-A15-IN-100	WB14	I	4.0	U-BUS-06-000	WH18	I	6.0	U-BUS-27-000
RA19	I	30.0	BT-HOLD-000	WB16	O	10.0	D-BUS-07-100	WH20	O	13.0	D-BUS-28-000
RA21	I	31.0	BT-ADR-IN-000	WB18	I	4.0	U-BUS-07-000	WJ00	I	6.0	U-BUS-28-000
RB00	I	31.0	BT-ENAB-STEP-SW-000	WB20	O	10.0	D-BUS-08-000				
RB01	I	31.0	BT-ENAB-STEP-SW-100	WC00	I	4.0	U-BUS-08-000				
RB02	I	31.0	BT-ABUS-00-IN-100	WC02	O	10.0	D-BUS-09-000				
RB03	I	31.0	BT-ABUS-01-IN-100	WC04	I	4.0	U-BUS-09-000				
RB04	I	31.0	BT-ABUS-02-IN-100	WC06	O	10.0	D-BUS-10-000				
RB05	I	31.0	BT-ABUS-03-IN-100	WC08	I	4.0	U-BUS-10-000				
RB06	I	31.0	BT-ABUS-04-IN-100	WC10	O	10.0	D-BUS-11-000				
RB07	I	31.0	BT-ABUS-05-IN-100	WC12	I	4.0	U-BUS-11-000				

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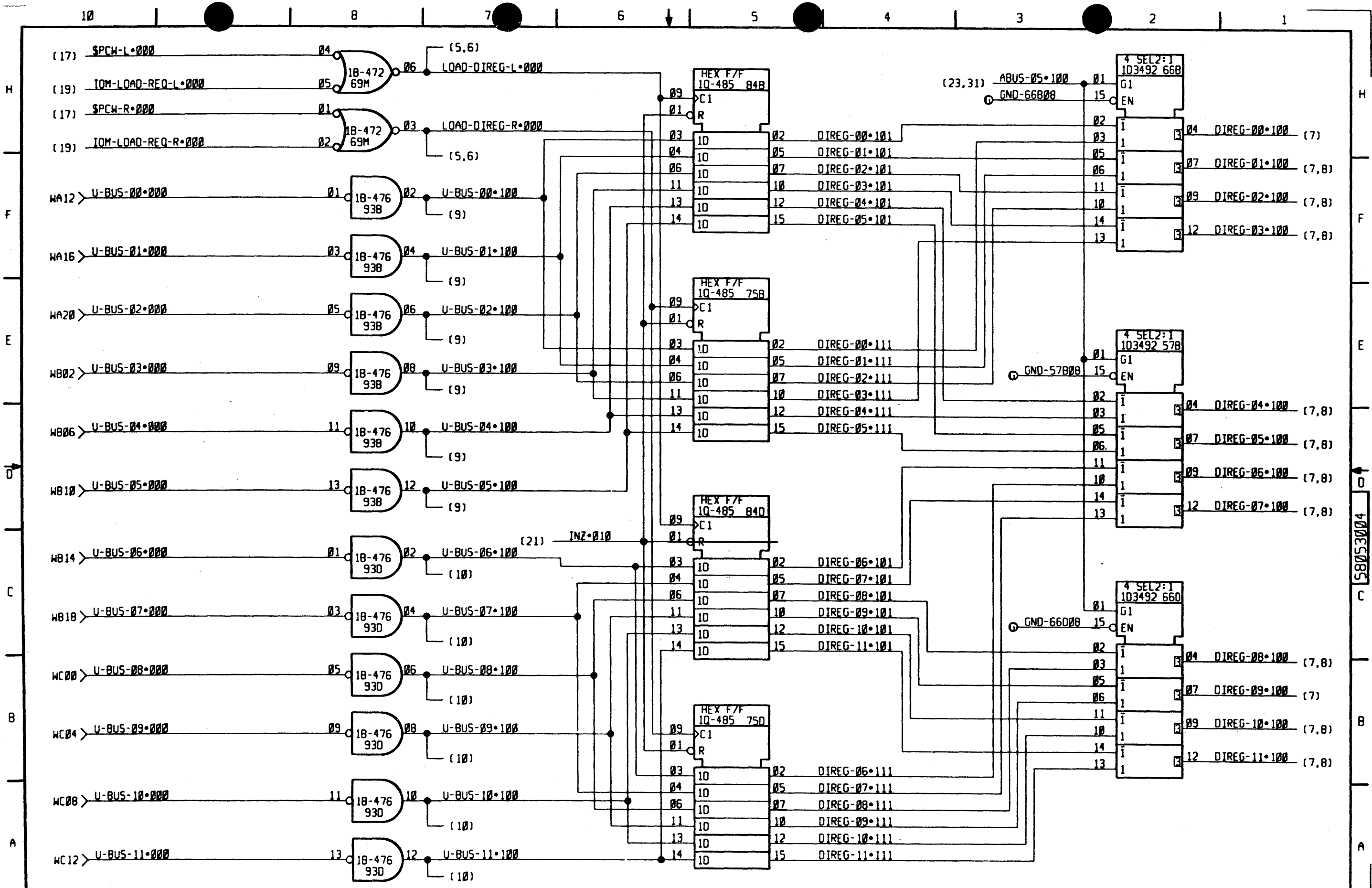
I/O PIN		PAGE	SIGNAL NAME
WJ02	O	13.0	D-BUS-29*000
WJ04	I	6.0	U-BUS-29*000
WJ06	O	14.0	D-BUS-30*000
WJ08	I	6.0	U-BUS-30*000
WJ10	O	14.0	D-BUS-31*000
WJ12	I	6.0	U-BUS-31*000
WJ14	O	14.0	D-BUS-32*000
WJ16	I	6.0	U-BUS-32*000
WJ17	I	8.0	CONNECT-FLAG*000
WJ18	O	14.0	D-BUS-33*000
WJ20	I	6.0	U-BUS-33*000
WK00	O	14.0	D-BUS-34*000
WK02	I	6.0	U-BUS-34*000
WK04	O	14.0	D-BUS-35*000
WK06	I	6.0	U-BUS-35*000
WK08	O	15.0	D-BUS-PARITY*000
WK10	I	15.0	U-BUS-PARITY*000
WZ00	I	21.0	INZ*000
YR01	O	30.0	IND-0*001
YR03	O	30.0	IND-1*001
YR05	O	30.0	IND-2*001
YR07	O	30.0	IND-3*001
YR09	O	30.0	IND-4*001
YR11	O	30.0	IND-5*001

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HONEYWELL <small>HONEYWELL INFORMATION SYSTEMS PHOENIX, ARIZONA U.S.A.</small>		TITLE LOGIC DIAGRAM- CONJK I/O PIN - PAGE CROSS REFERENCE	SIZE B ENG NO 58053004 SM 3.1 REV G
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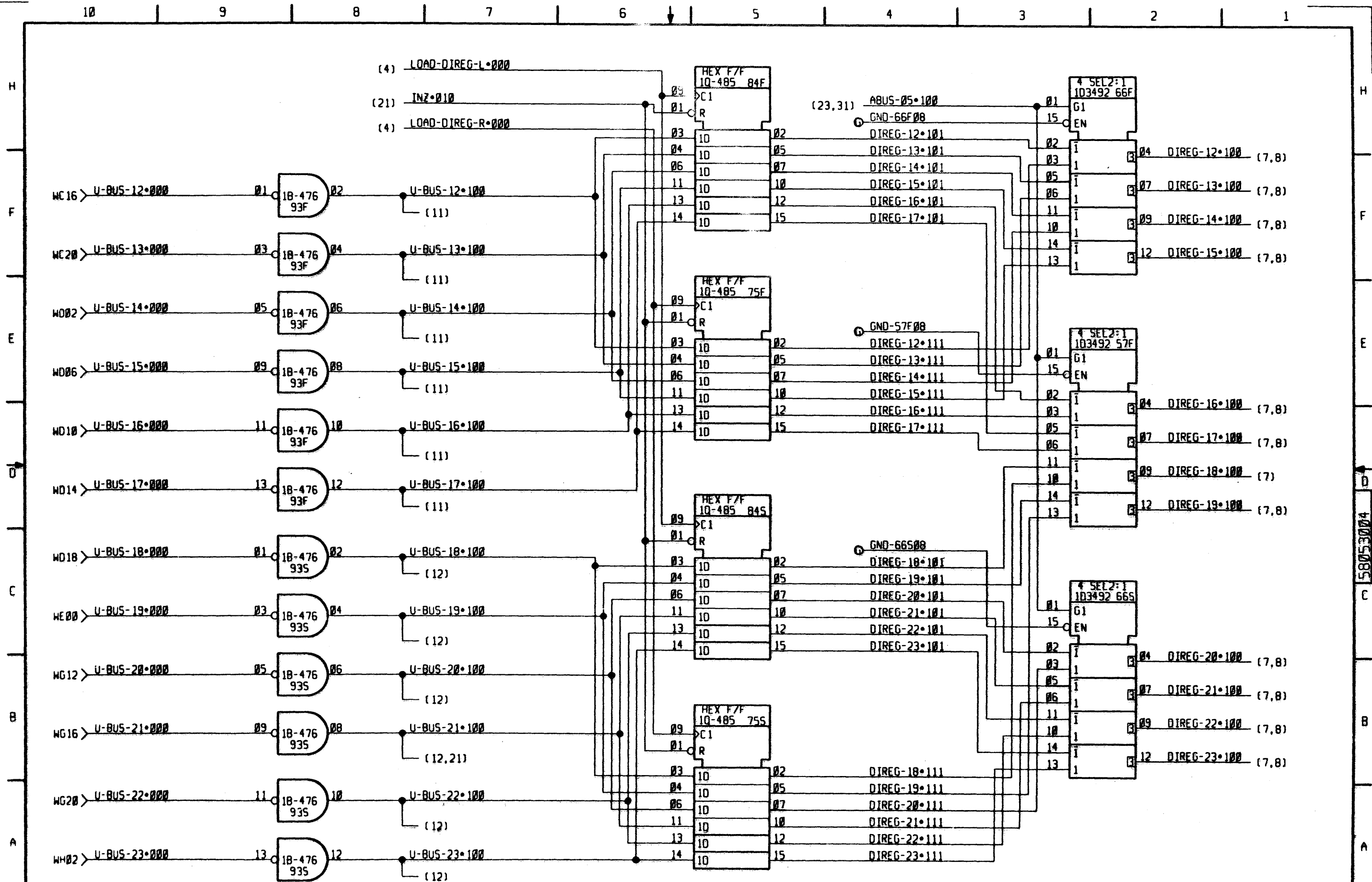
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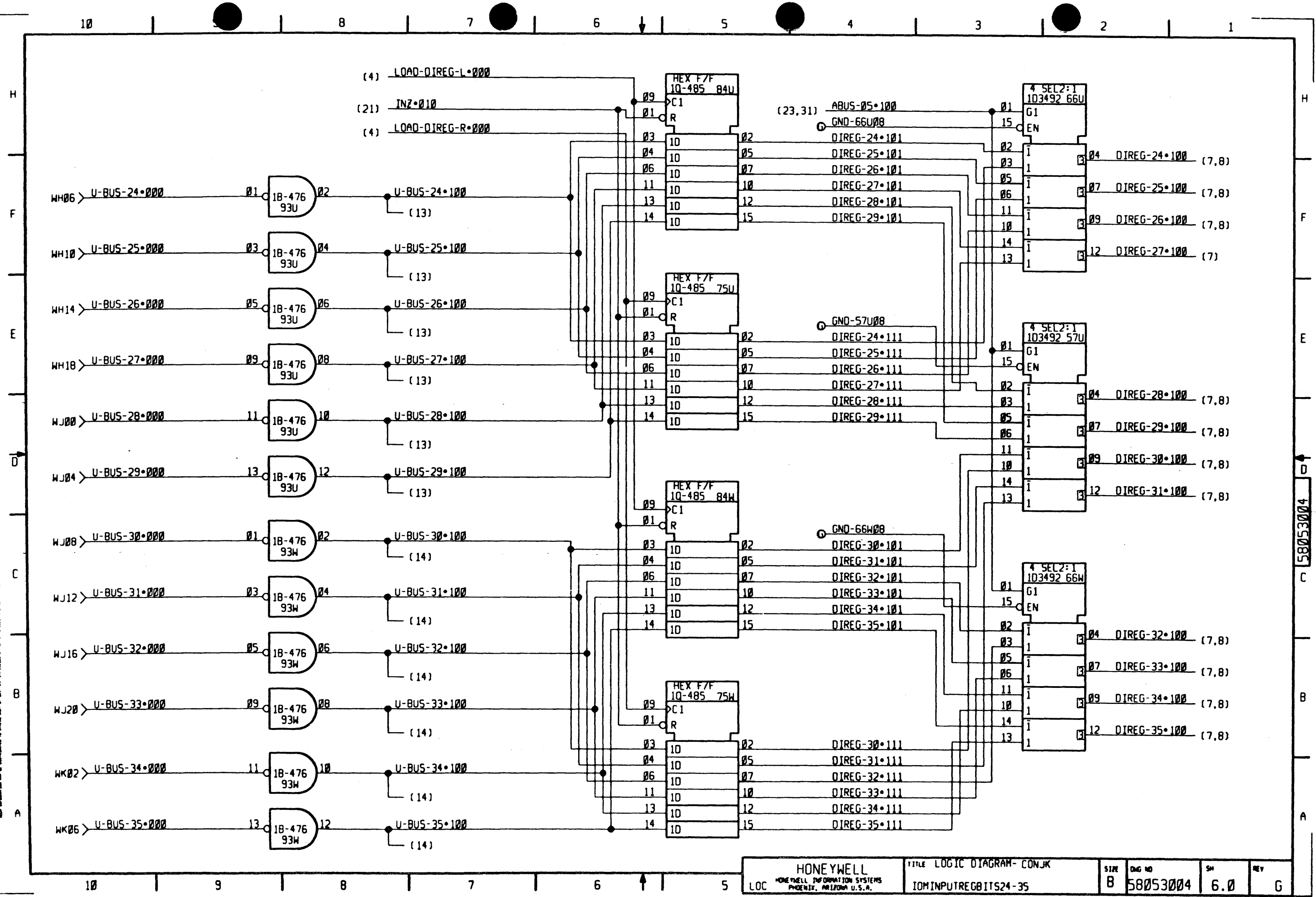
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All dimensions are in inches unless otherwise specified. All dimensions are to be maintained unless otherwise specified.

58053004

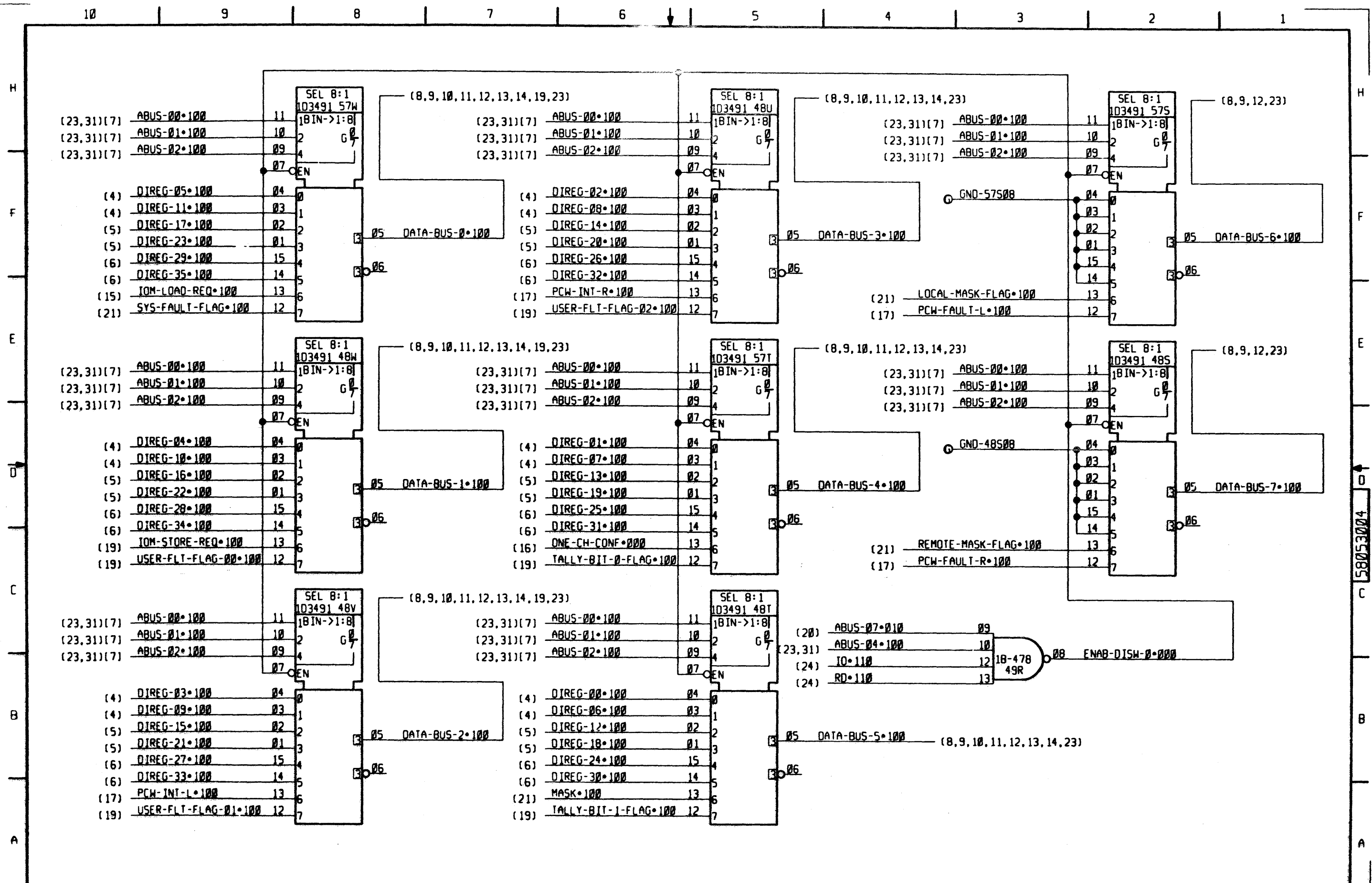


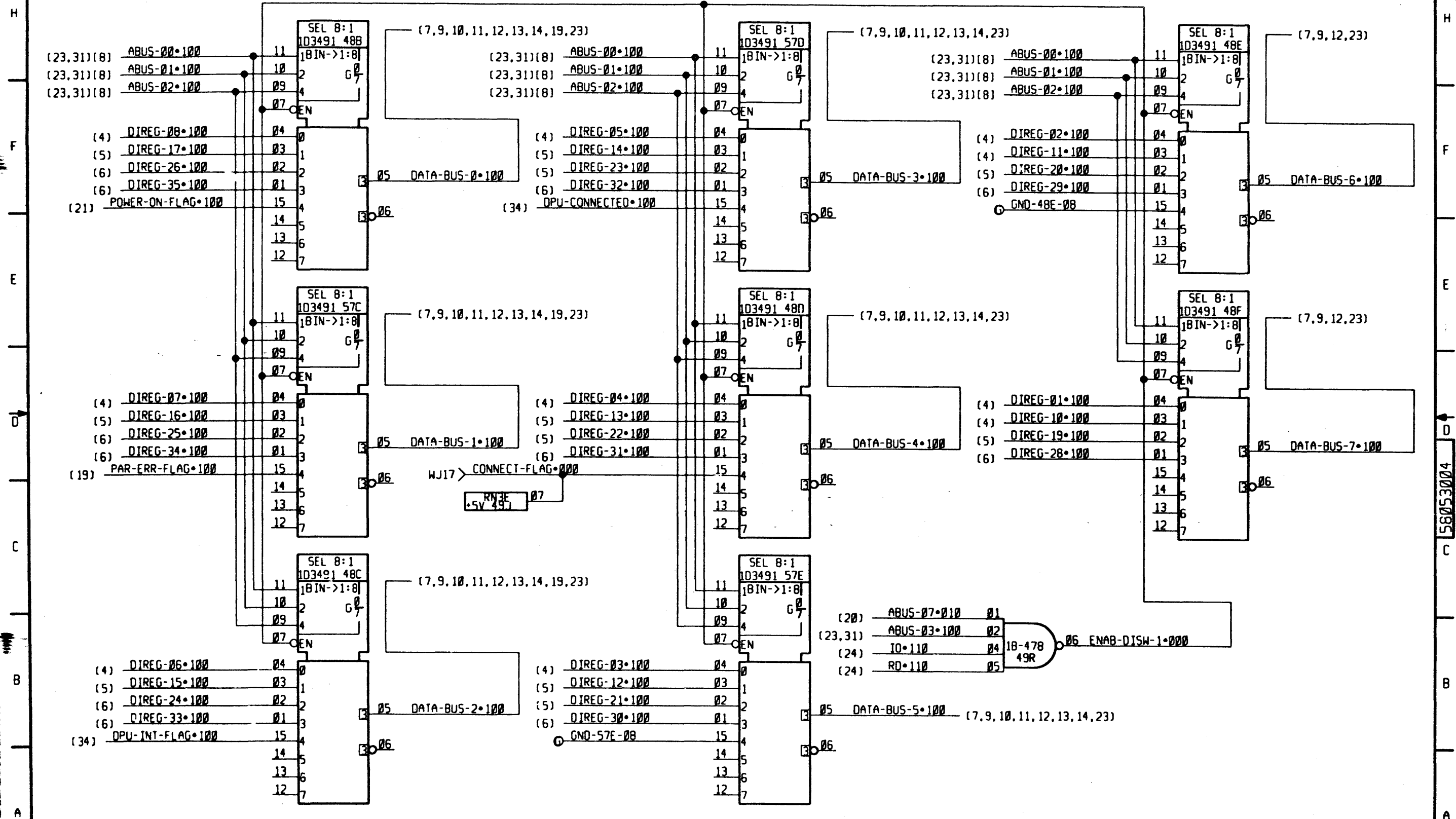
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HONEYWELL		TITLE LOGIC DIAGRAM- CONJK	SIZE B	DWG NO 58053004	SM 6.0	REV G
LOC	HONEYWELL INFORMATION SYSTEMS PHOENIX, ARIZONA U.S.A.	IOMINPUTREGBITS24-35				

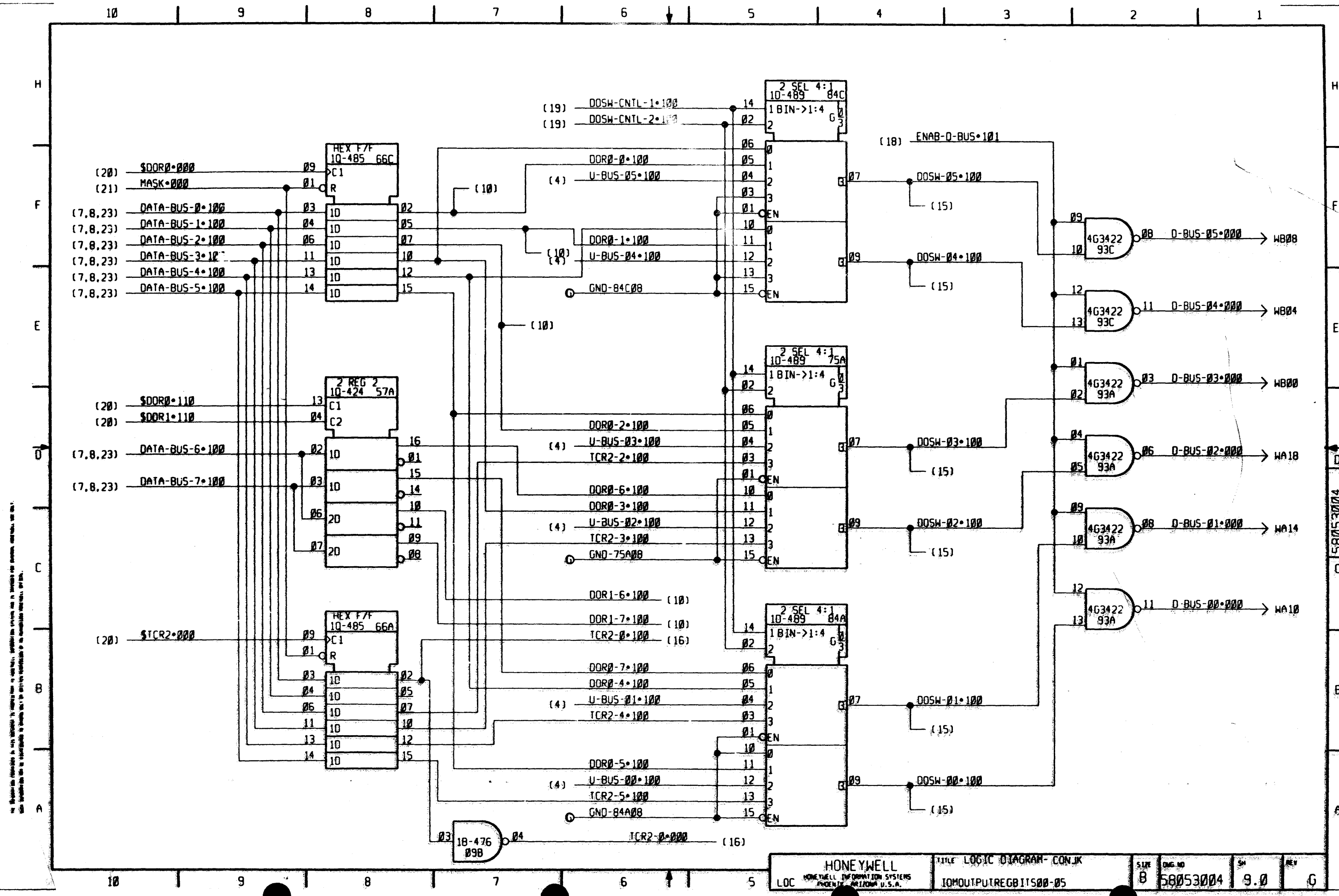
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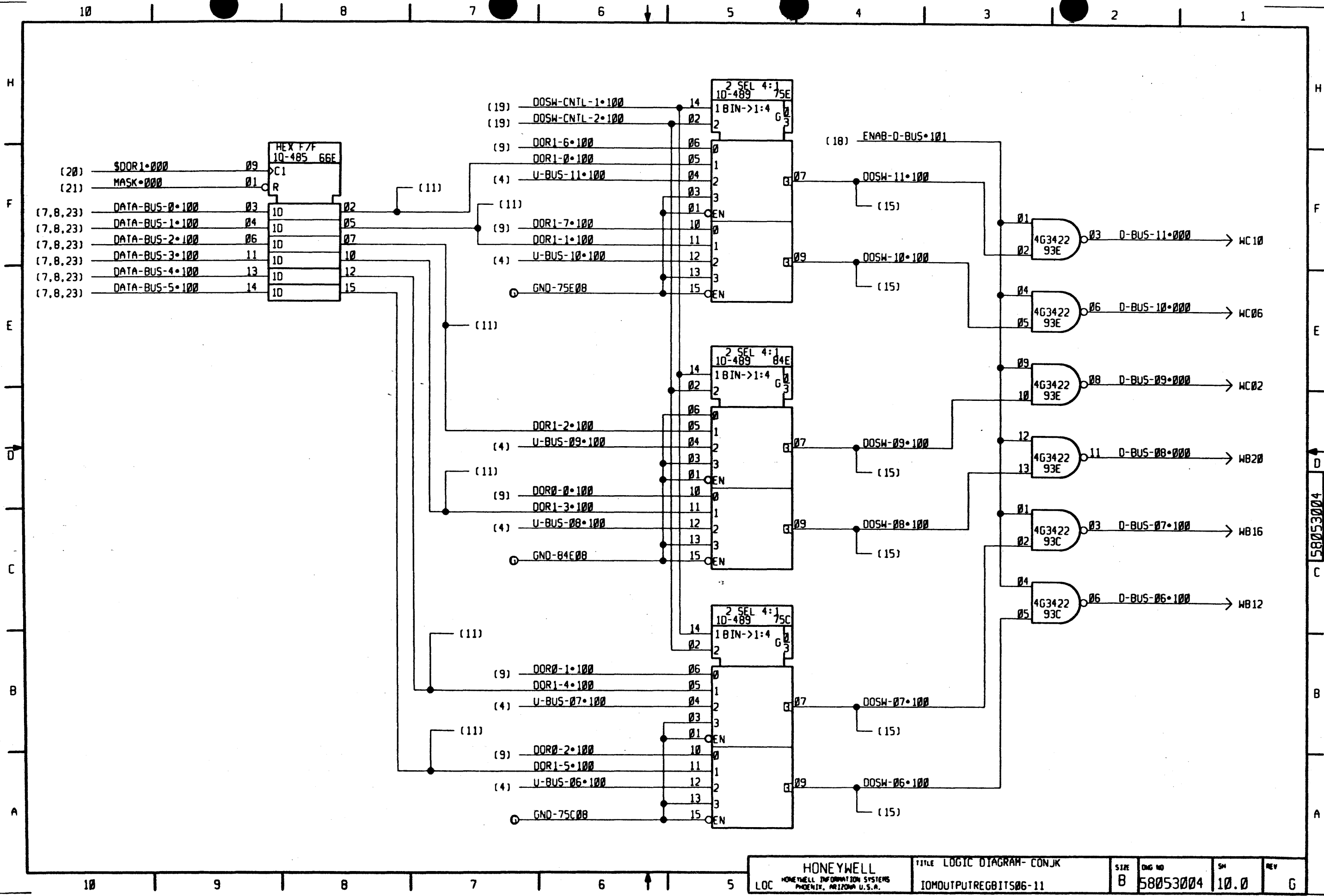
HONEYWELL INFORMATION SYSTEMS
 PHOENIX, ARIZONA U.S.A.

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All dimensions are in inches unless otherwise specified. All dimensions are to be maintained unless otherwise specified. All dimensions are to be maintained unless otherwise specified.

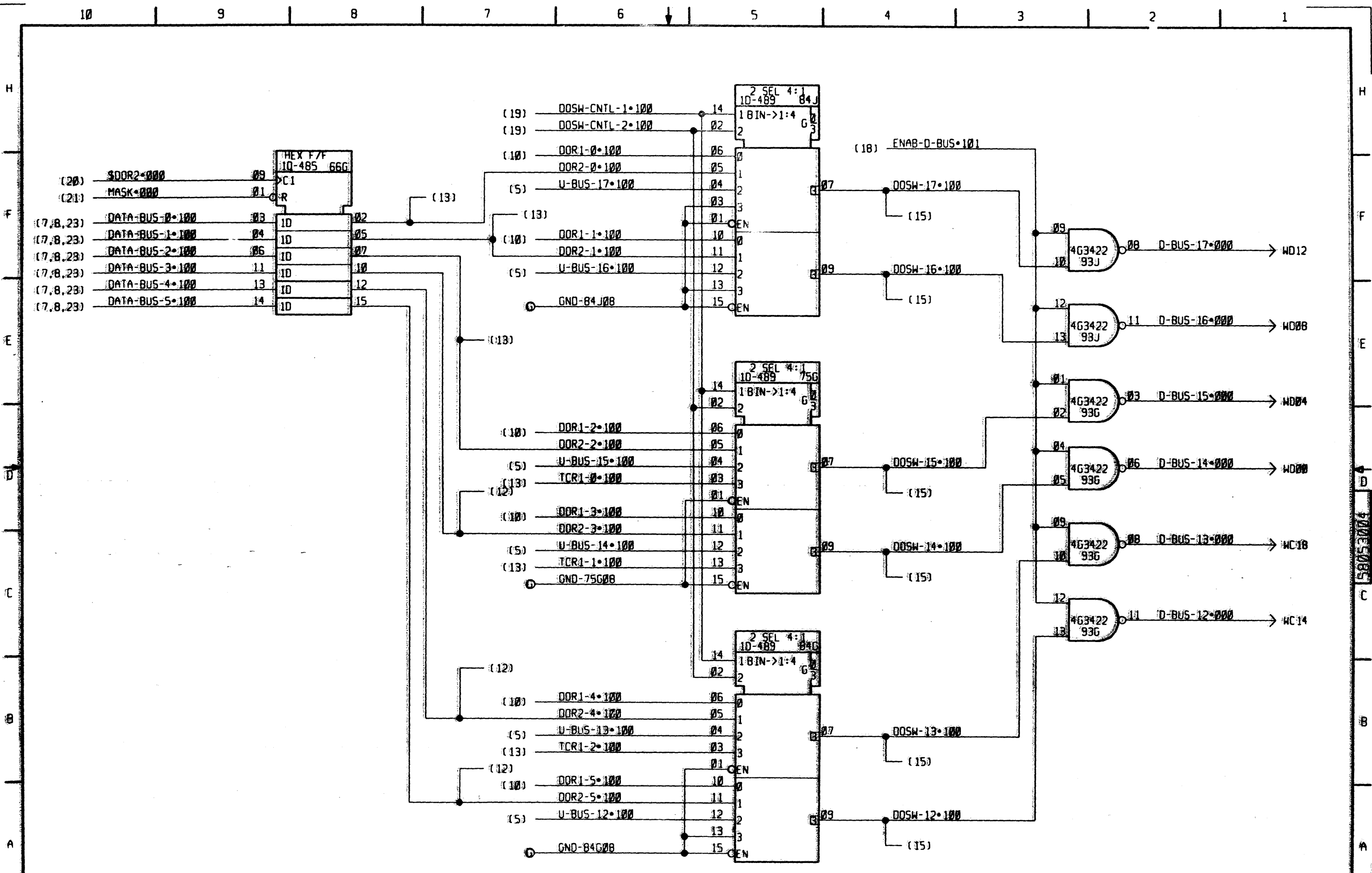
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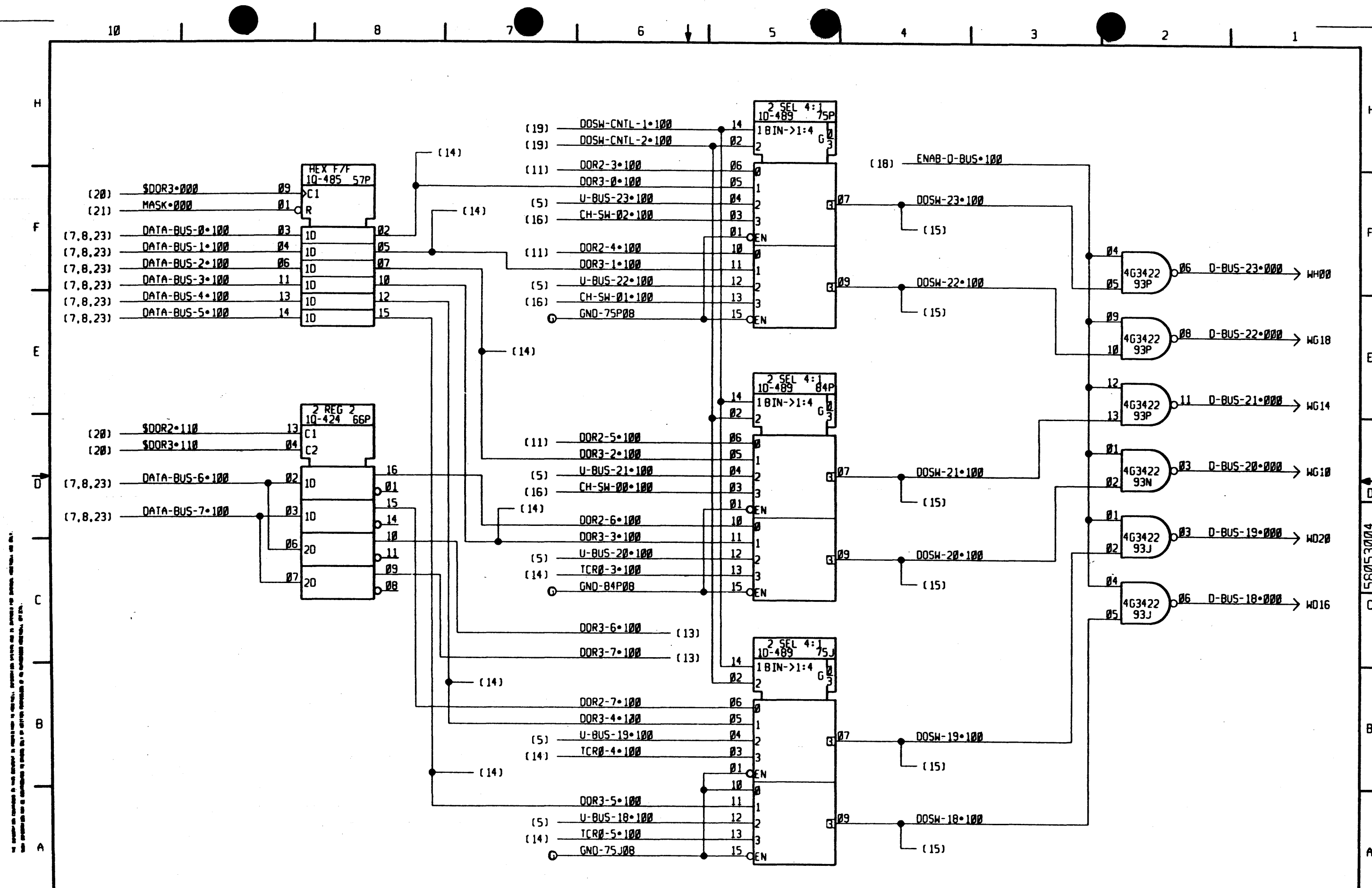
HONEYWELL LOC HONEYWELL INFORMATION SYSTEMS PHOENIX, ARIZONA U.S.A.		TITLE LOGIC DIAGRAM- CONJK IOMOUTPUTREGBITS06-11	SIZE B	ENG NO 58053004	SM 10.0	REV G
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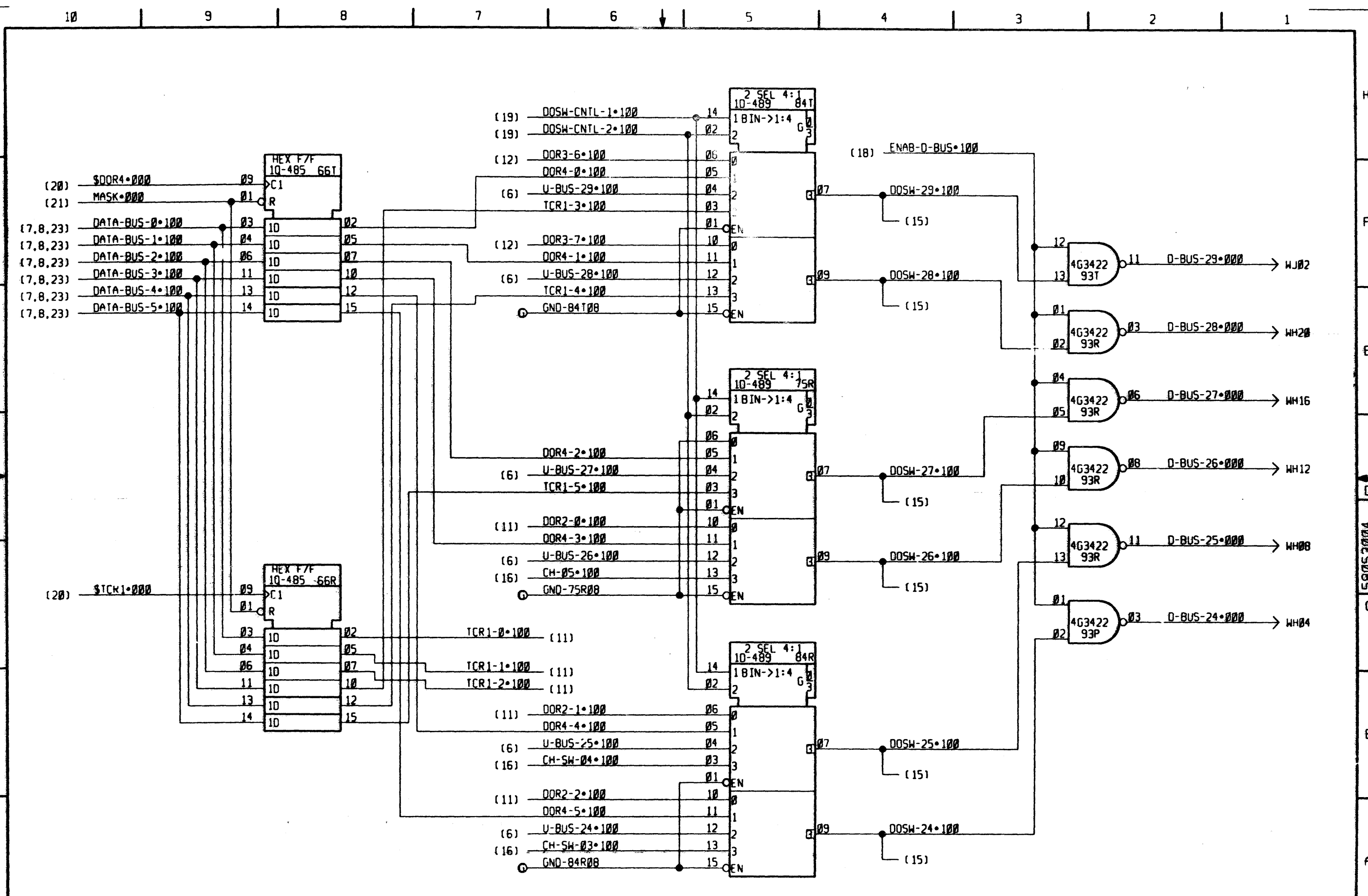


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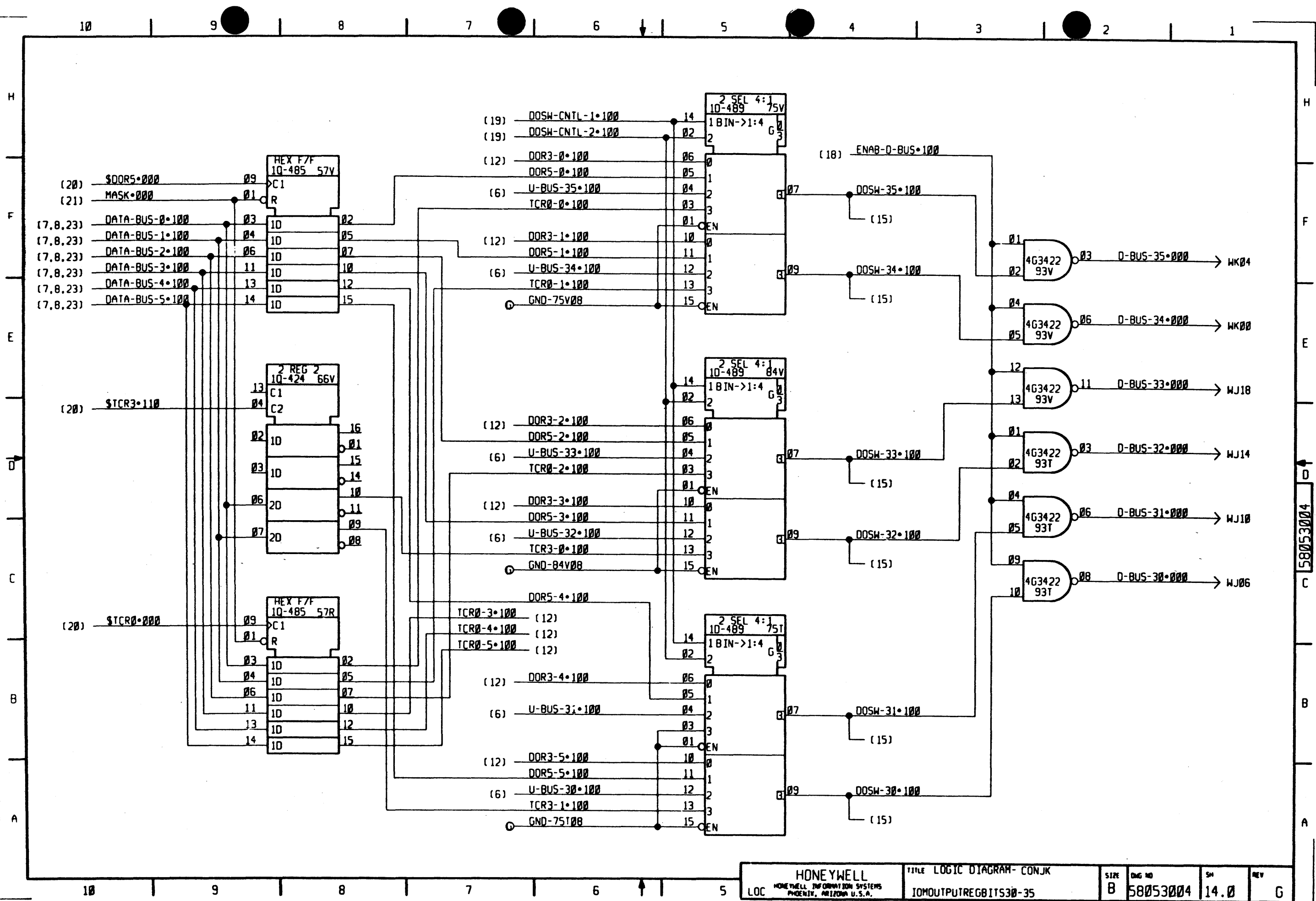


All components are to be replaced in accordance with the instructions in the component replacement manual. The instructions in the component replacement manual are the only authority for the correct replacement of any component.

58053004

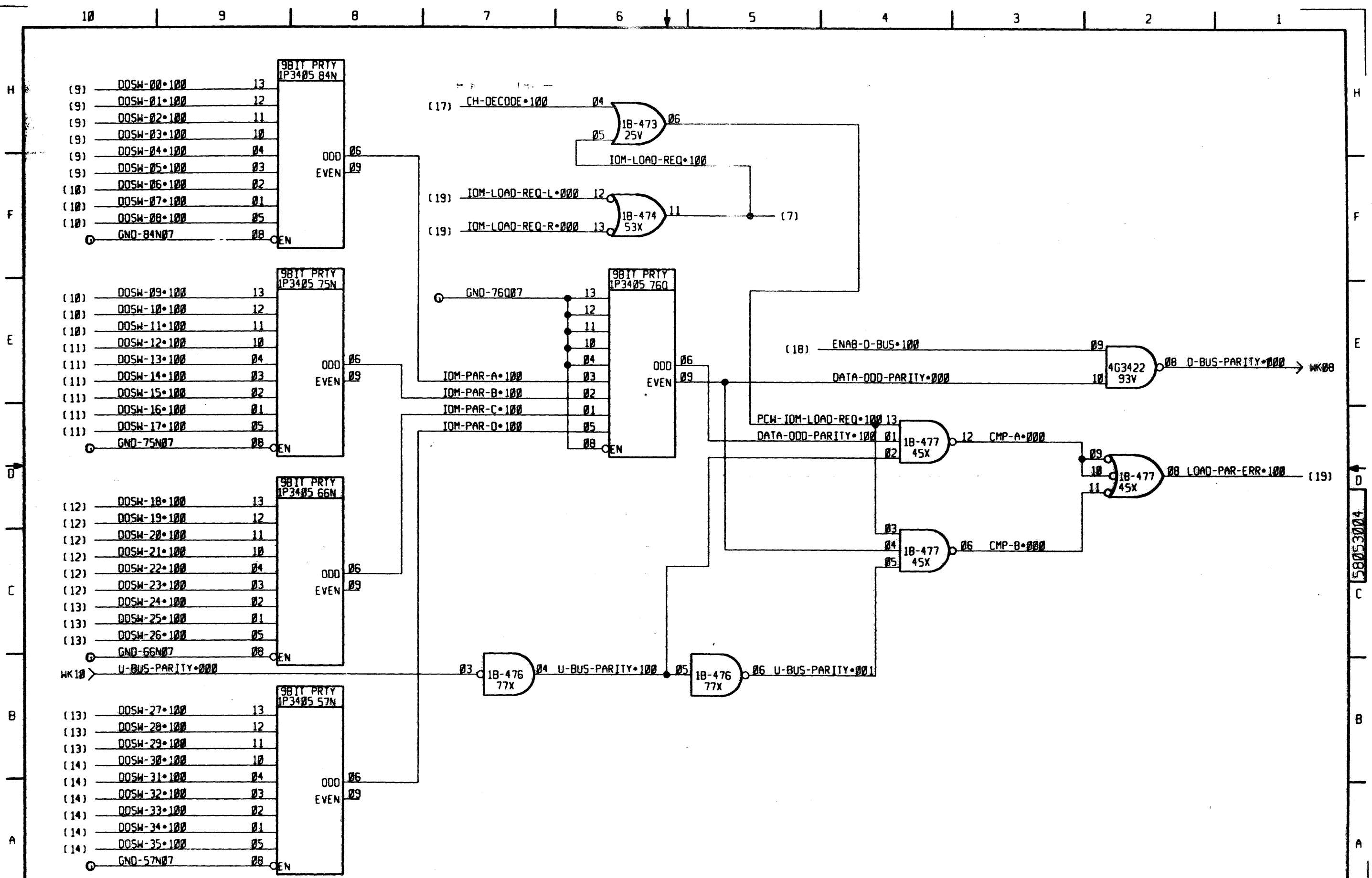


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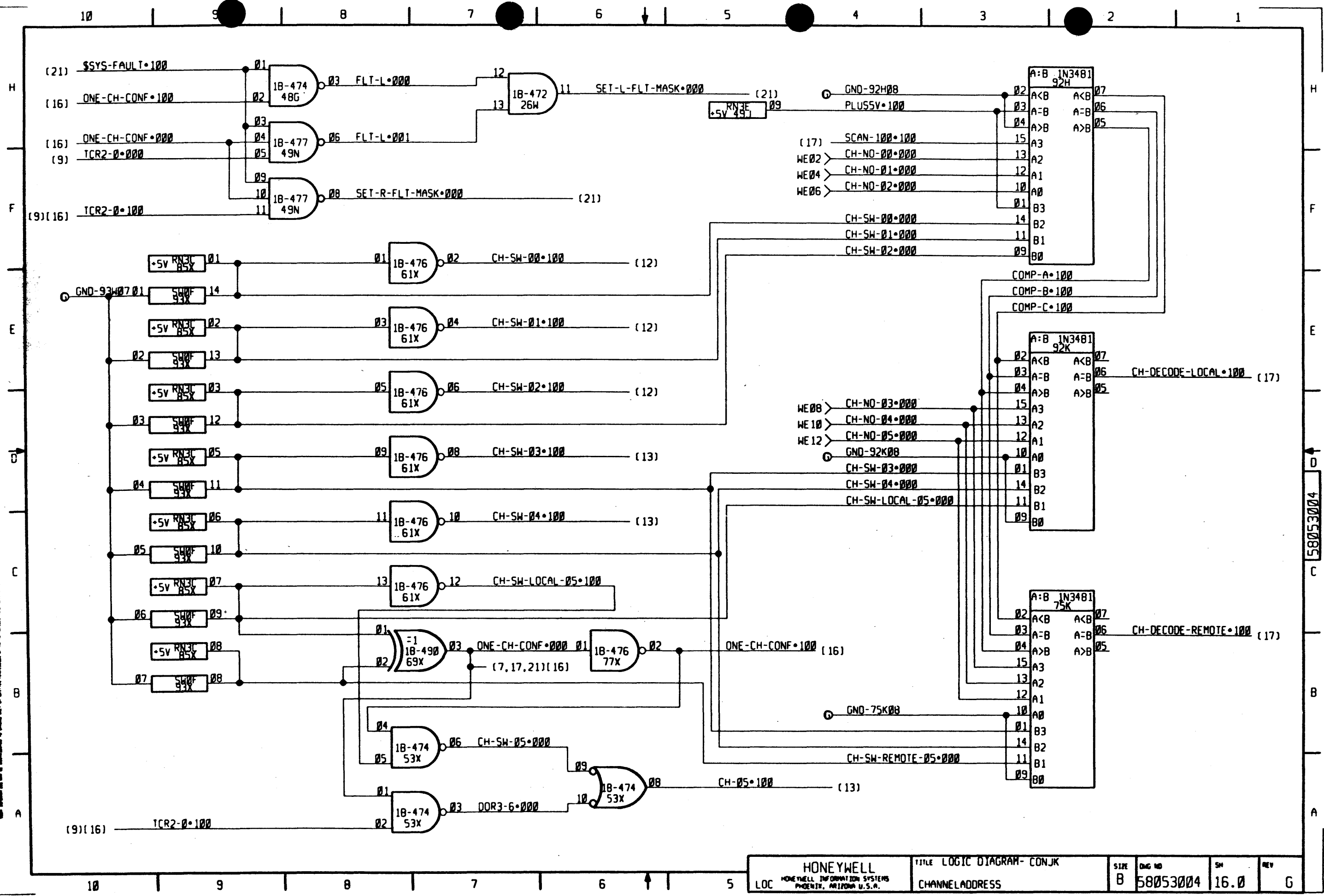


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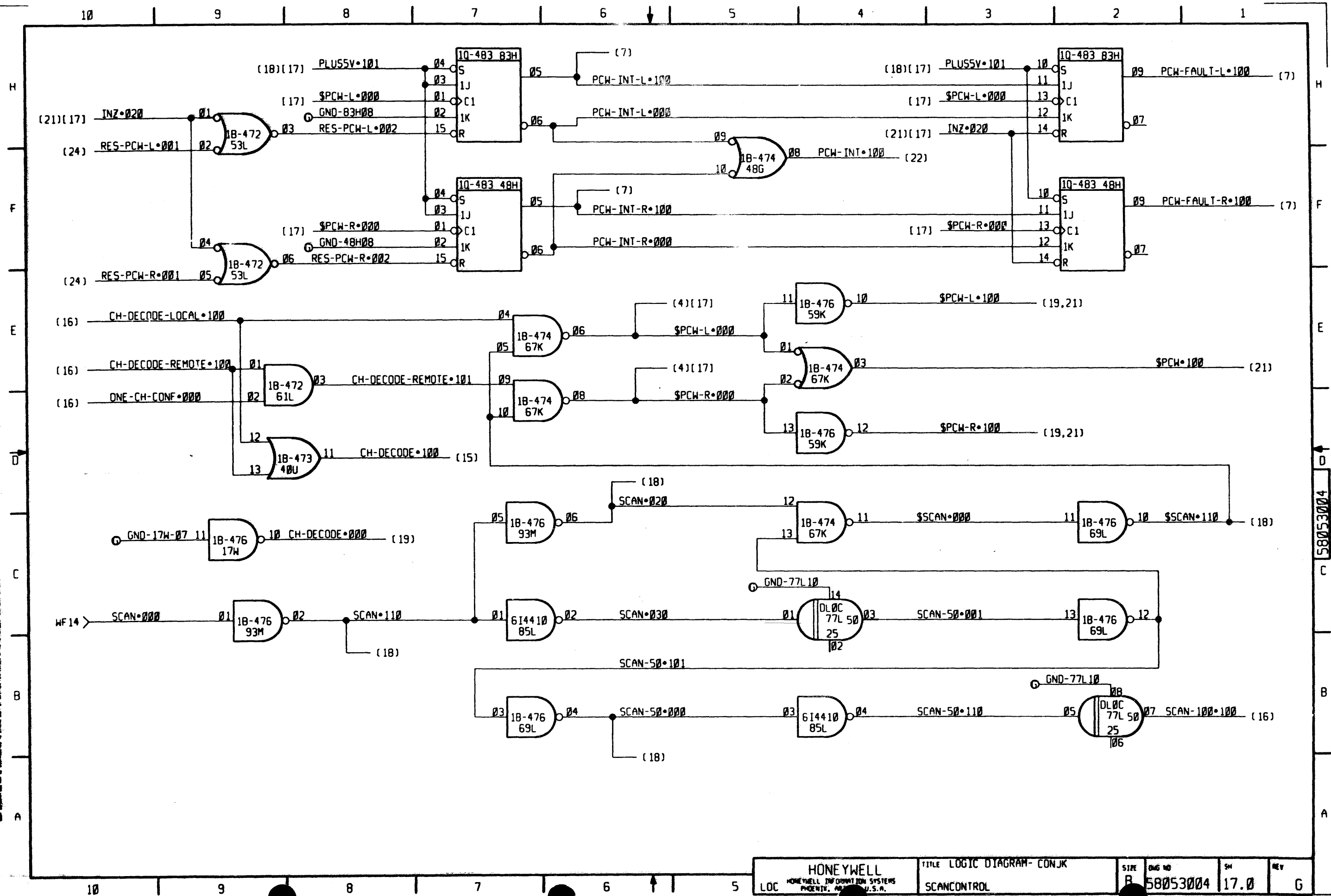
HONEYWELL INFORMATION SYSTEMS
 THE HONEYWELL COMPANY
 300 SOUTH ZEEB ROAD
 MILWAUKEE, WISCONSIN 53222
 U.S.A.



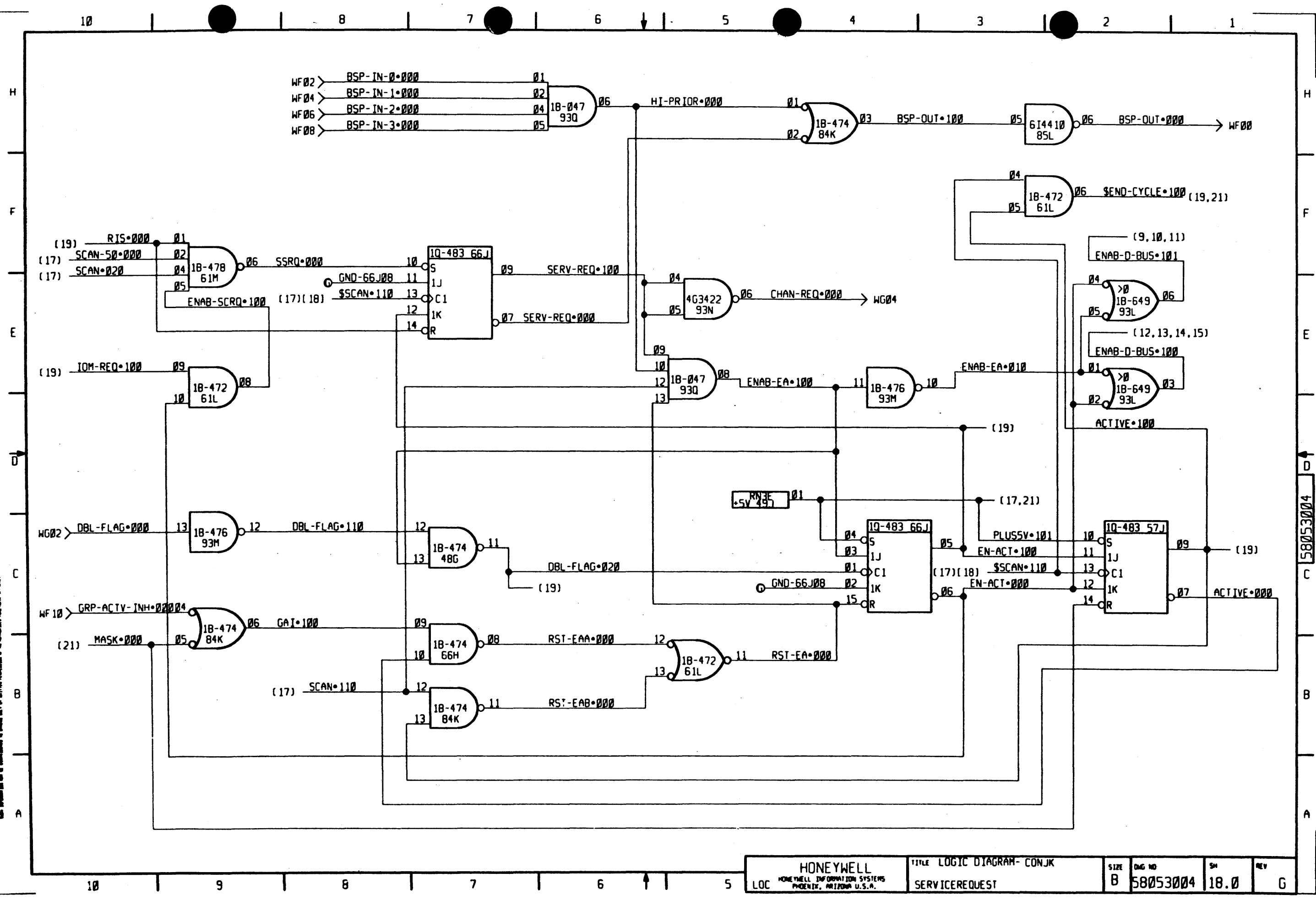
58053004



HONEYWELL LOC HONEYWELL INFORMATION SYSTEMS PHOENIX, ARIZONA U.S.A.		TITLE LOGIC DIAGRAM - CONJK CHANNEL ADDRESS	SIZE B	DWG NO 58053004	SW 16.0	REV G
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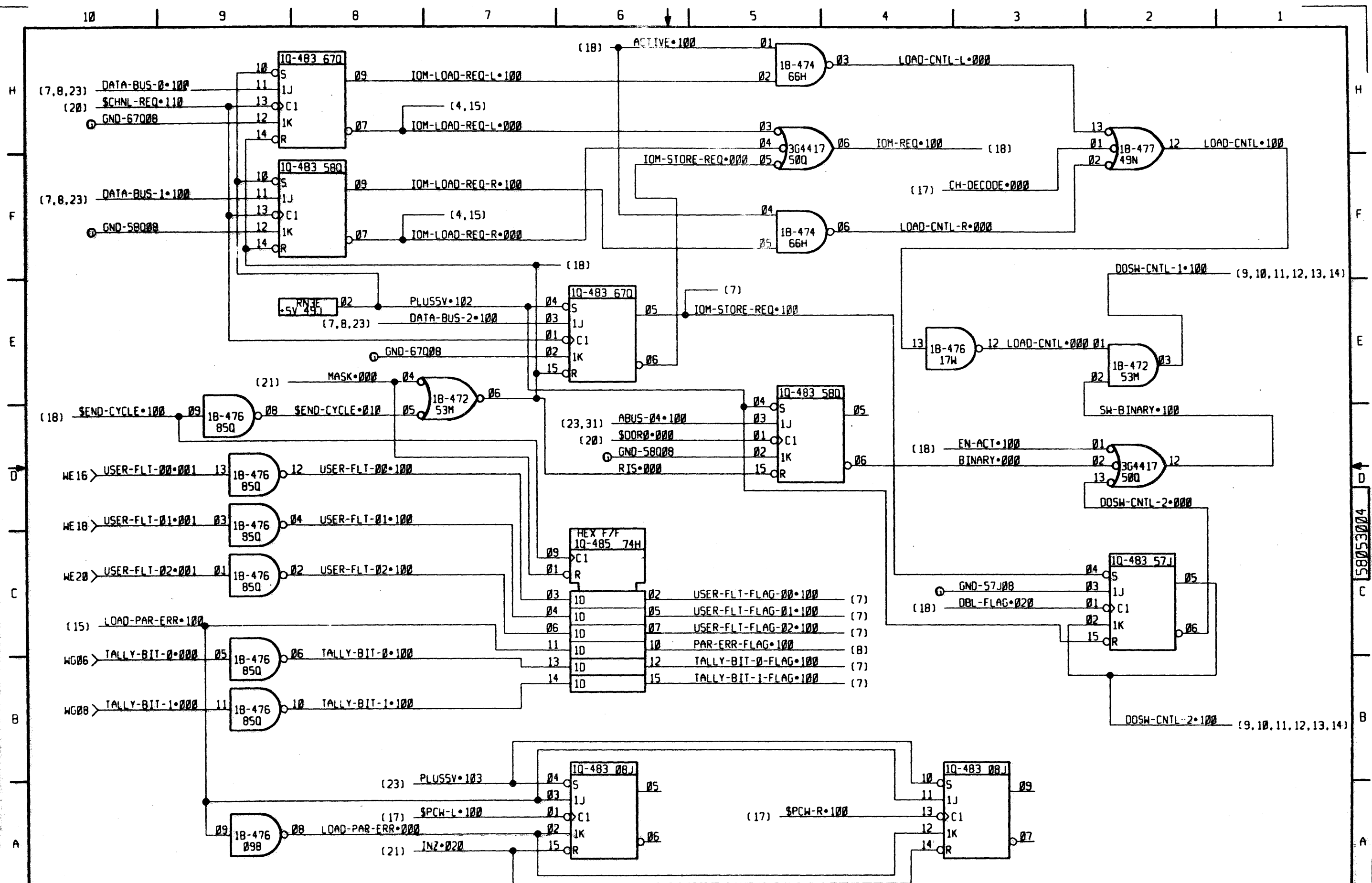
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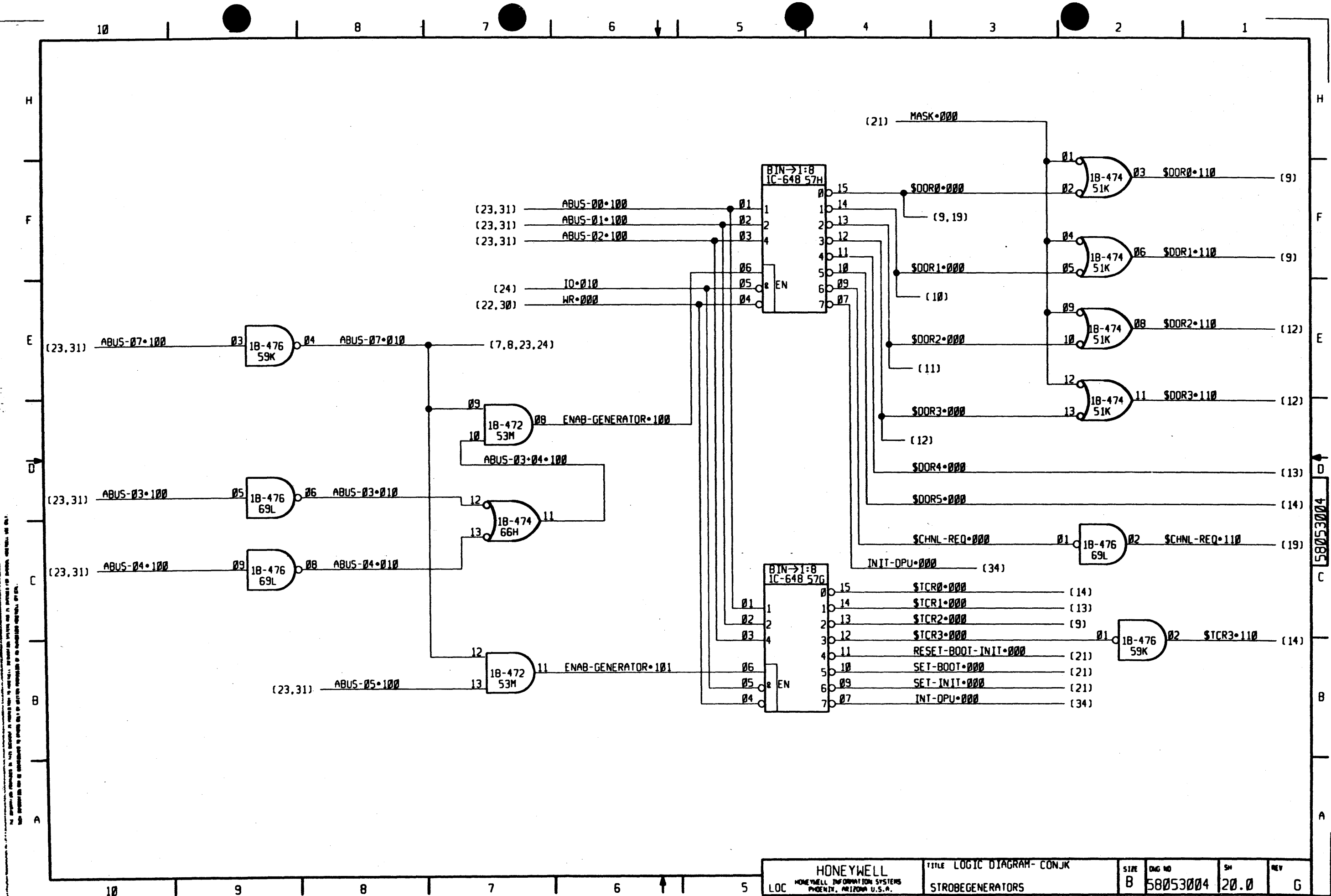
HONEYWELL HONEYWELL INFORMATION SYSTEMS PHOENIX, ARIZONA U.S.A.		TITLE LOGIC DIAGRAM- CONJK SERVICEREQUEST	SIZE B DWG NO 58053004	SM 18.0	REV G
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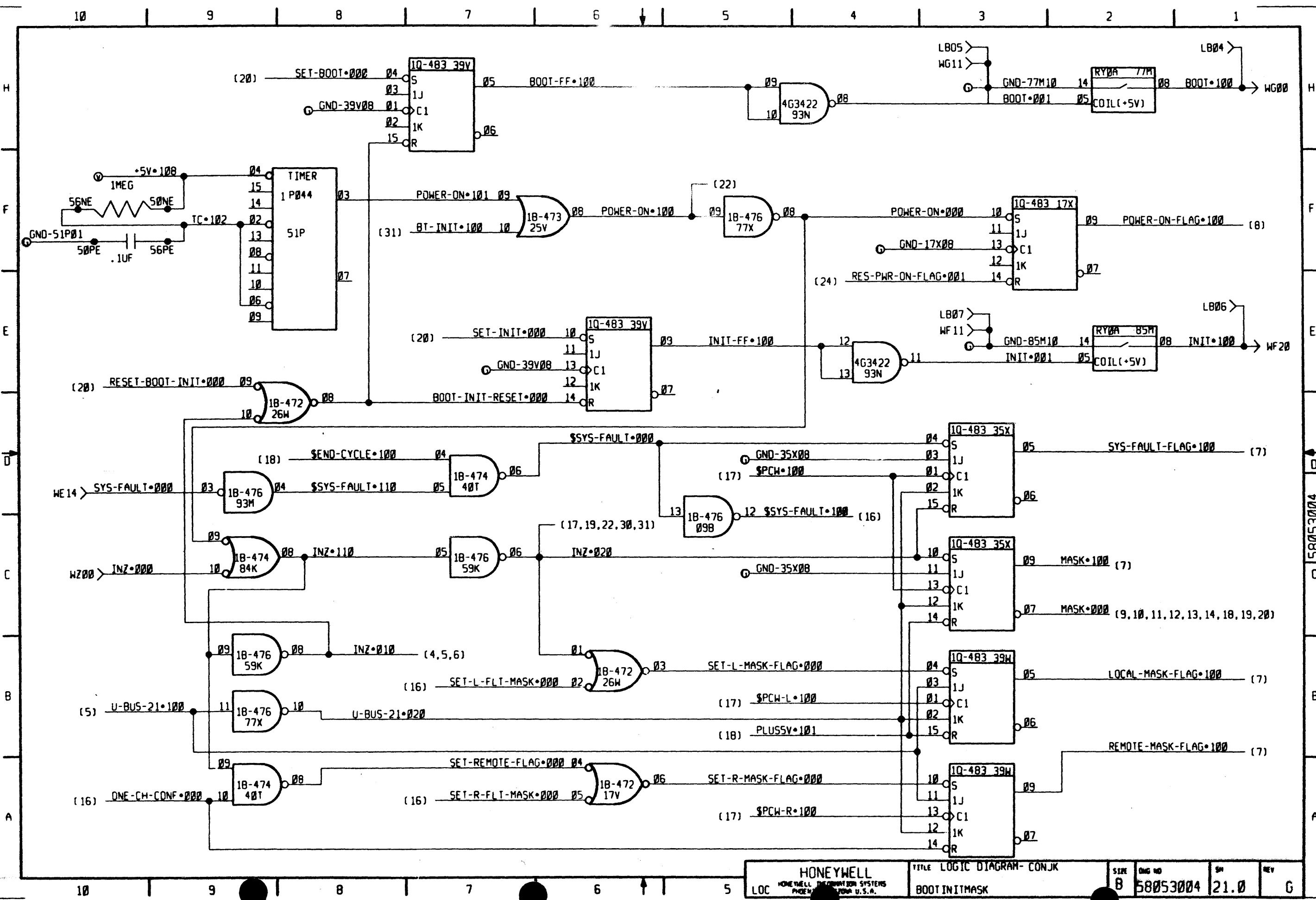
58053004



2. All components are to be installed in the rack in the order shown in the drawing. The rack is to be installed in the rack in the order shown in the drawing. The rack is to be installed in the rack in the order shown in the drawing.

58053004

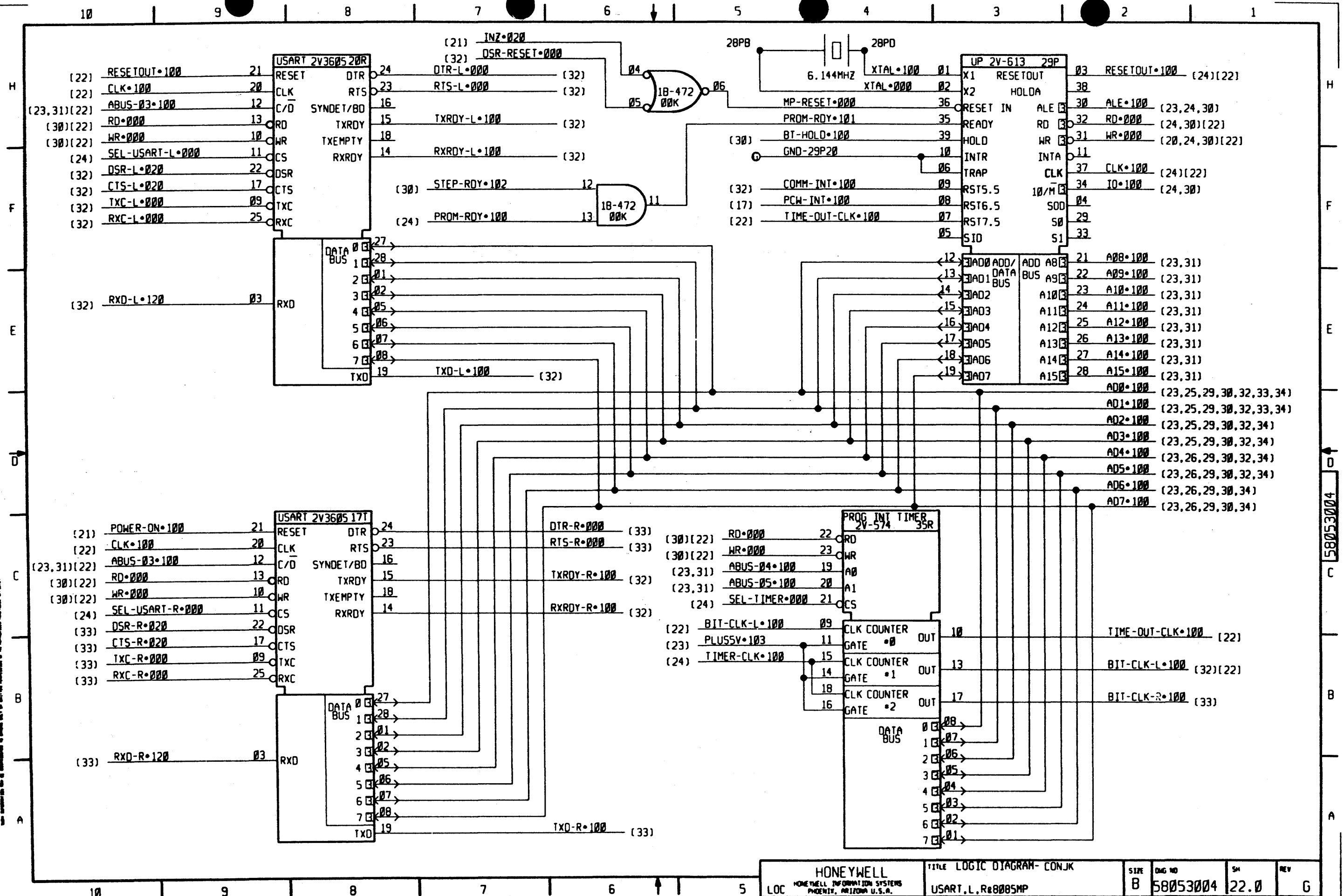
HONEYWELL HONEYWELL INFORMATION SYSTEMS PHOENIX, ARIZONA U.S.A.		TITLE LOGIC DIAGRAM- CONJK STROBEGENERATORS	SIZE B DWG NO 58053004	SW 20.0	REV G
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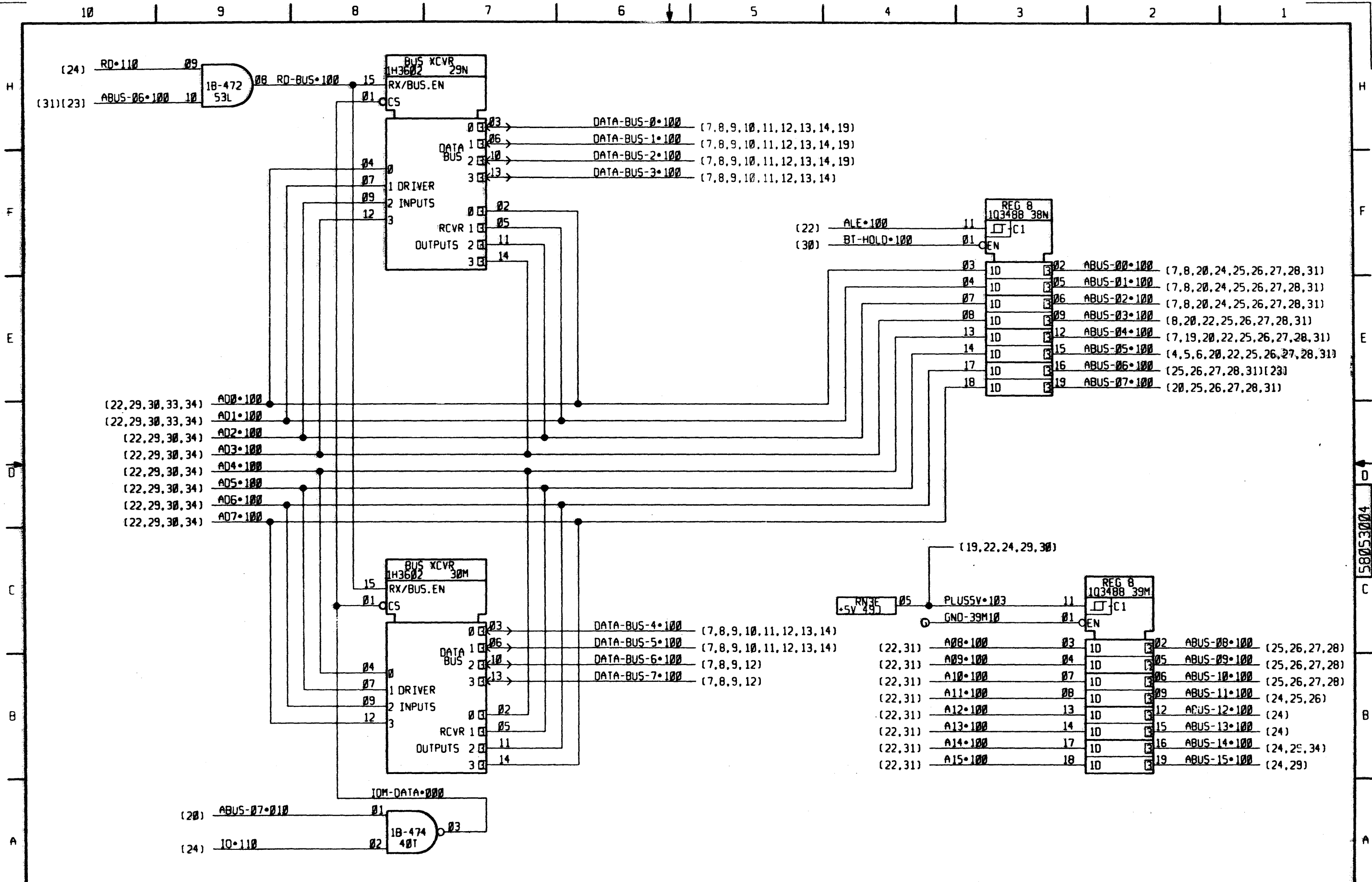
All components shown in this diagram are standard components unless otherwise specified. All components are to be purchased from the manufacturer listed. All components are to be purchased from the manufacturer listed. All components are to be purchased from the manufacturer listed.

58053004

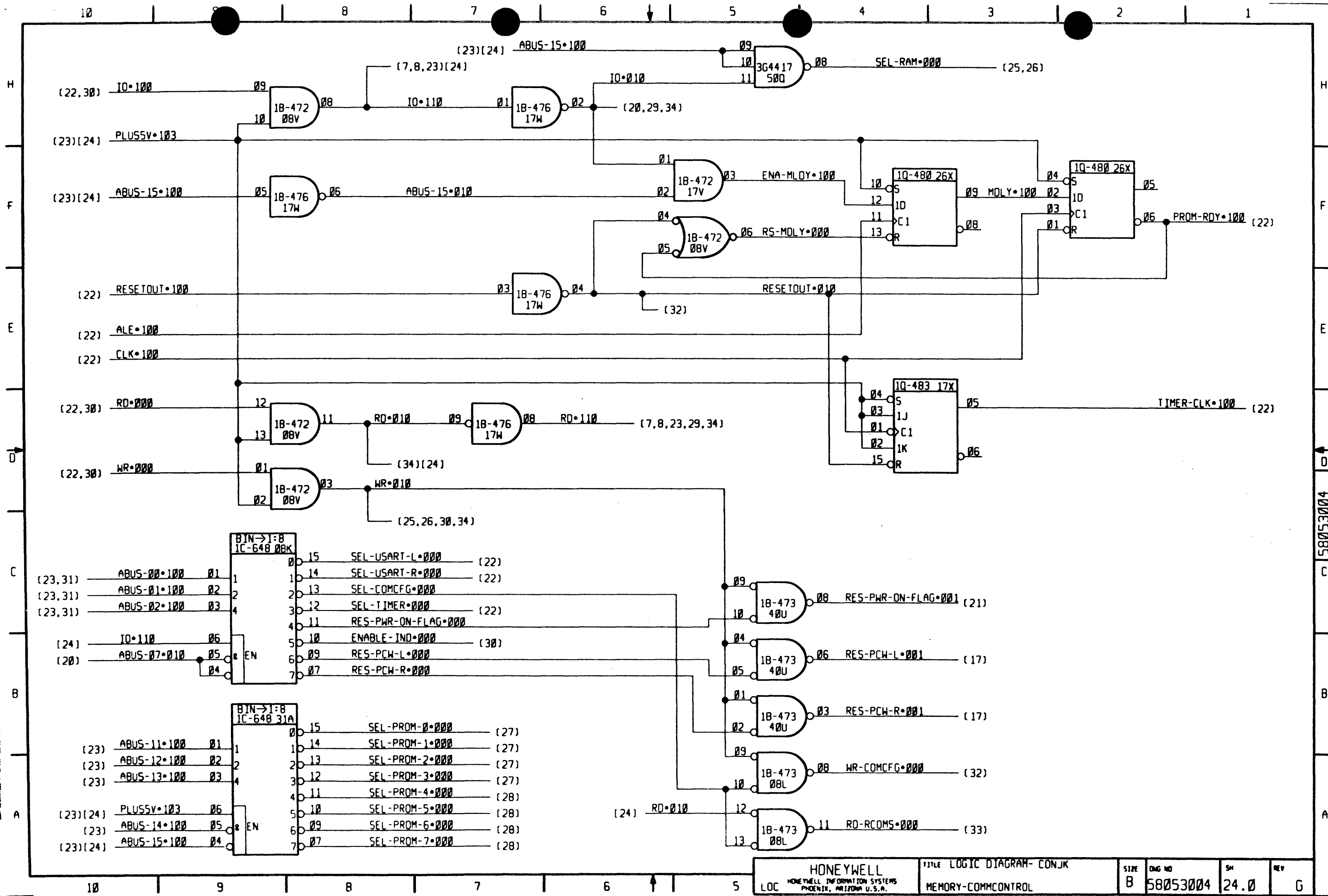
HONEYWELL		TITLE LOGIC DIAGRAM- CONJK		SIZE	ENG NO	SN	REV
LOC		BOOTINITMASK		B	58053004	21.0	G



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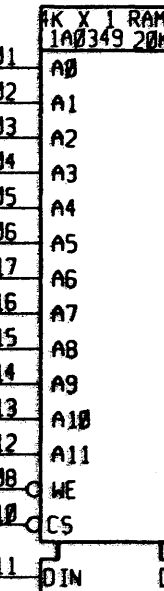
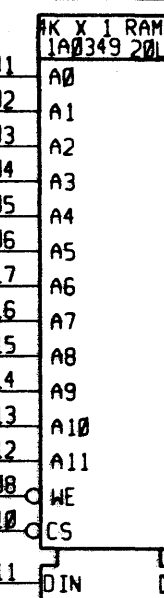
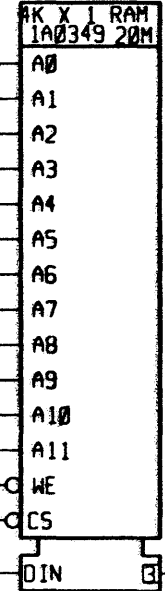
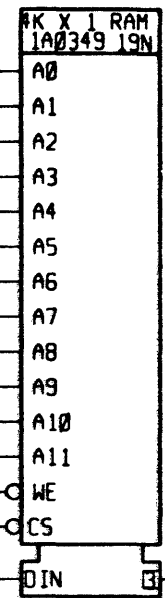
58053004

NOTE: INTERCHANGEABLE CHIP TYPES
1A0351 TO 1A0349.

(22,23,29,30,33,34) AD0-100

(22,23,29,30,33,34) AD1-100

- (23,31) ABUS-00-100
- (23,31) ABUS-01-100
- (23,31) ABUS-02-100
- (23,31) ABUS-03-100
- (23,31) ABUS-04-100
- (23,31) ABUS-05-100
- (23,31) ABUS-06-100
- (23,31) ABUS-07-100
- (23) ABUS-08-100
- (23) ABUS-09-100
- (23) ABUS-10-100
- (23) ABUS-11-100
- (24) WR-010
- (24) SEL-RAM-000



RAM-DATA-0-100 (29)

(22,23,29,30,34) AD2-100

RAM-DATA-1-100 (29)

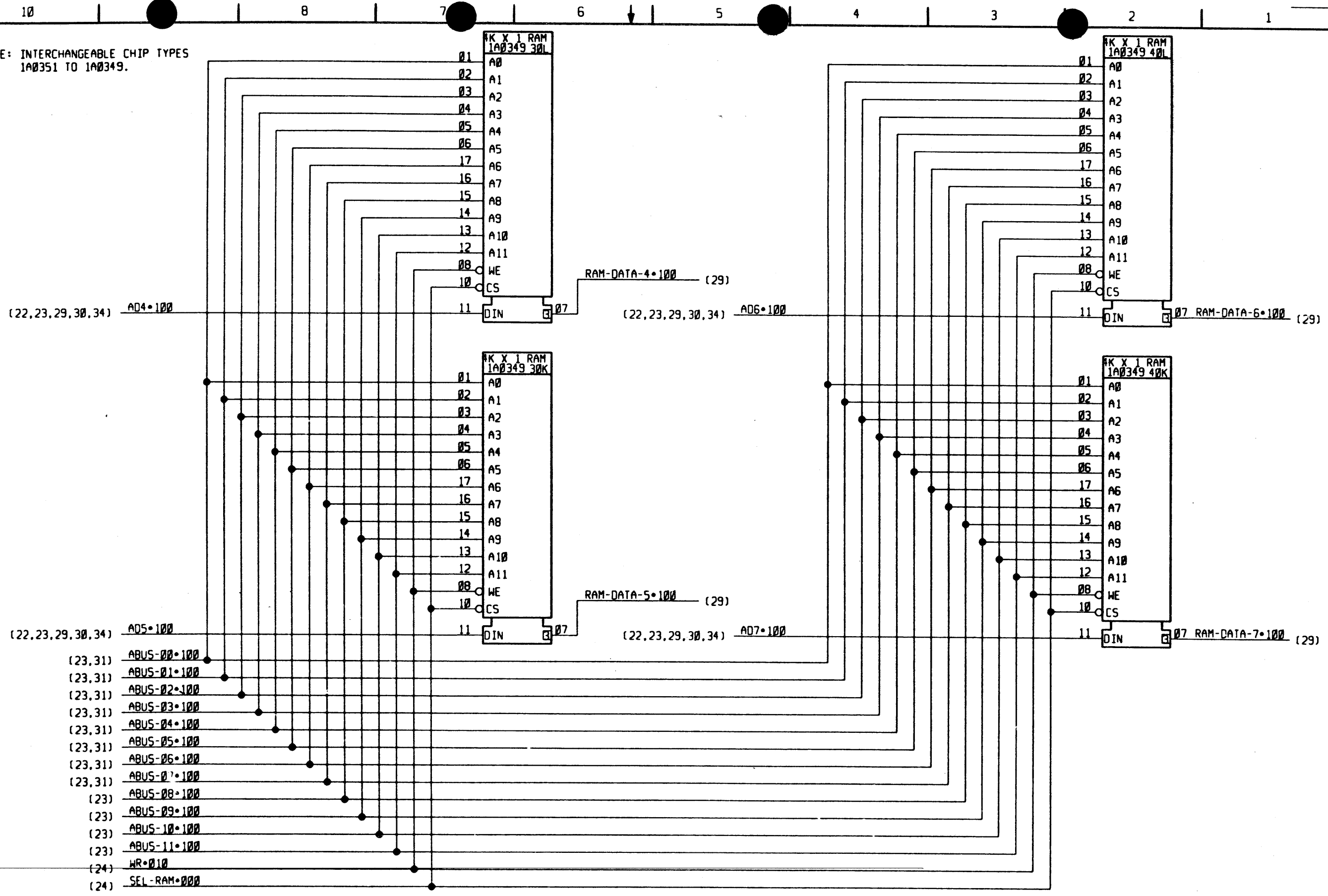
(22,23,29,30,34) AD3-100

RAM-DATA-2-100 (29)

RAM-DATA-3-100 (29)

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NOTE: INTERCHANGEABLE CHIP TYPES
1A0351 TO 1A0349.



(22, 23, 29, 30, 34) AD4 • 100

RAM-DATA-4 • 100 (29)

(22, 23, 29, 30, 34) AD6 • 100

(22, 23, 29, 30, 34) AD6 • 100 RAM-DATA-6 • 100 (29)

(22, 23, 29, 30, 34) AD5 • 100

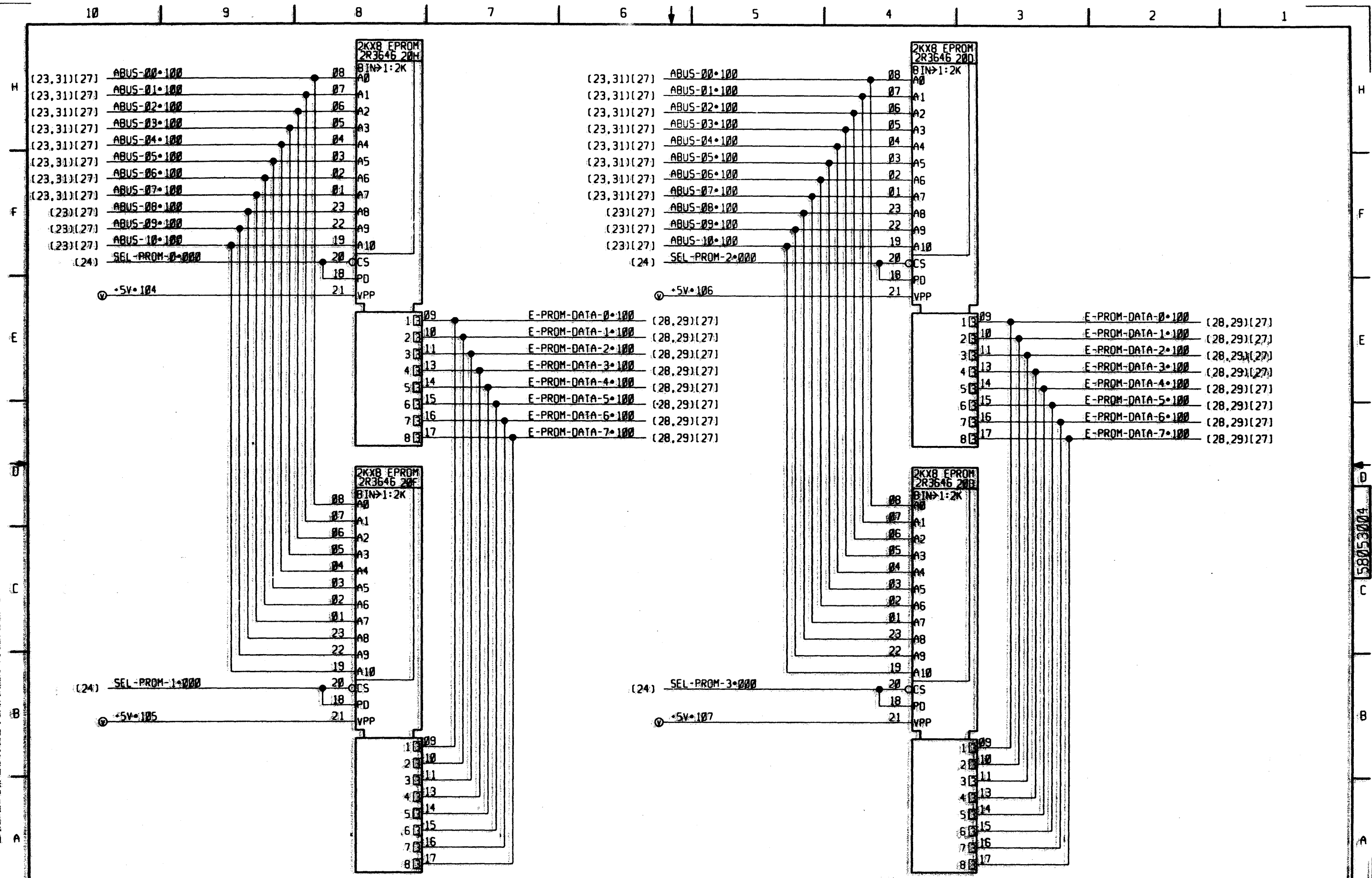
RAM-DATA-5 • 100 (29)

(22, 23, 29, 30, 34) AD7 • 100

(22, 23, 29, 30, 34) AD7 • 100 RAM-DATA-7 • 100 (29)

- (23, 31) ABUS-00 • 100
- (23, 31) ABUS-01 • 100
- (23, 31) ABUS-02 • 100
- (23, 31) ABUS-03 • 100
- (23, 31) ABUS-04 • 100
- (23, 31) ABUS-05 • 100
- (23, 31) ABUS-06 • 100
- (23, 31) ABUS-07 • 100
- (23) ABUS-08 • 100
- (23) ABUS-09 • 100
- (23) ABUS-10 • 100
- (23) ABUS-11 • 100
- (24) WR • 010
- (24) SEL-RAM • 000

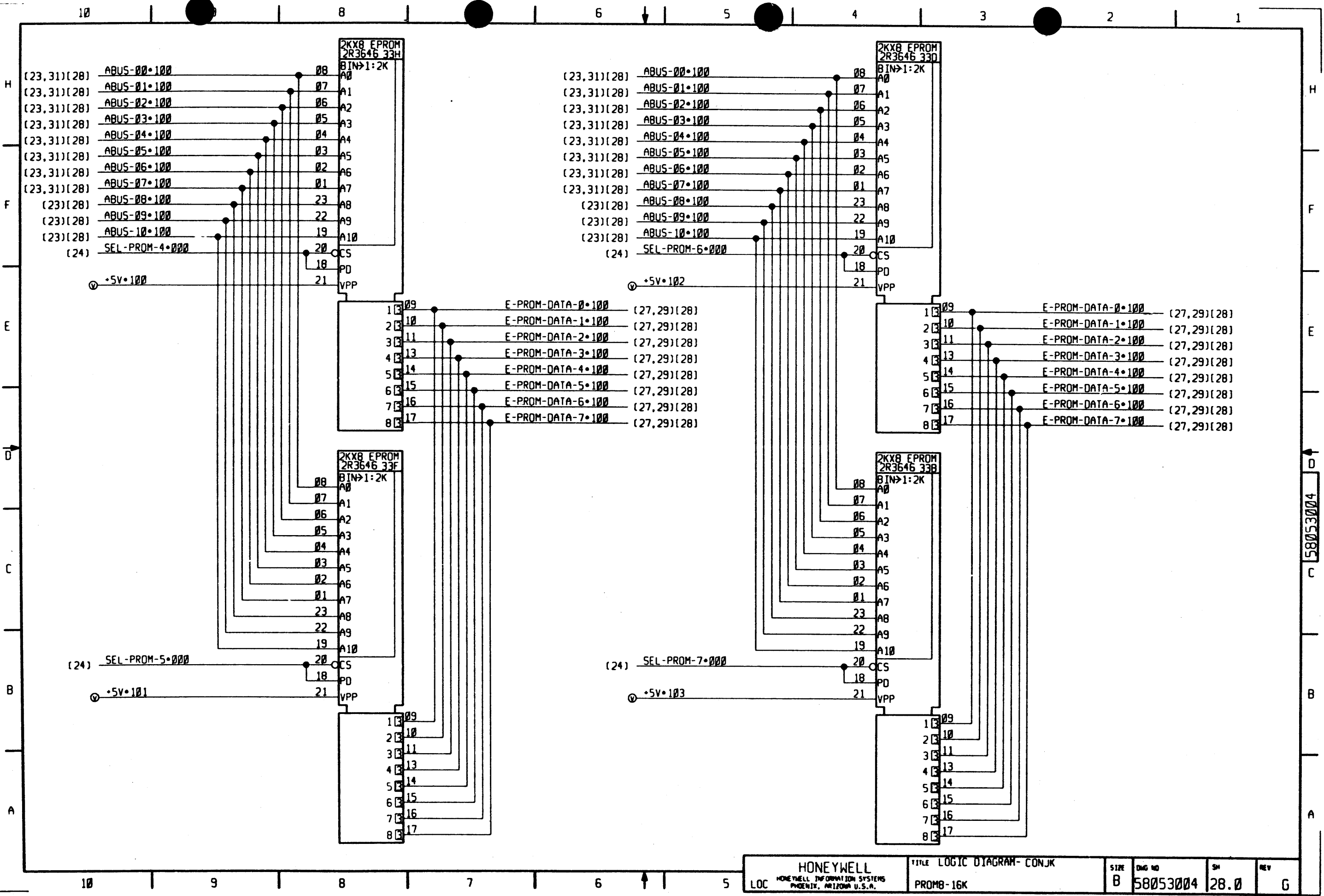
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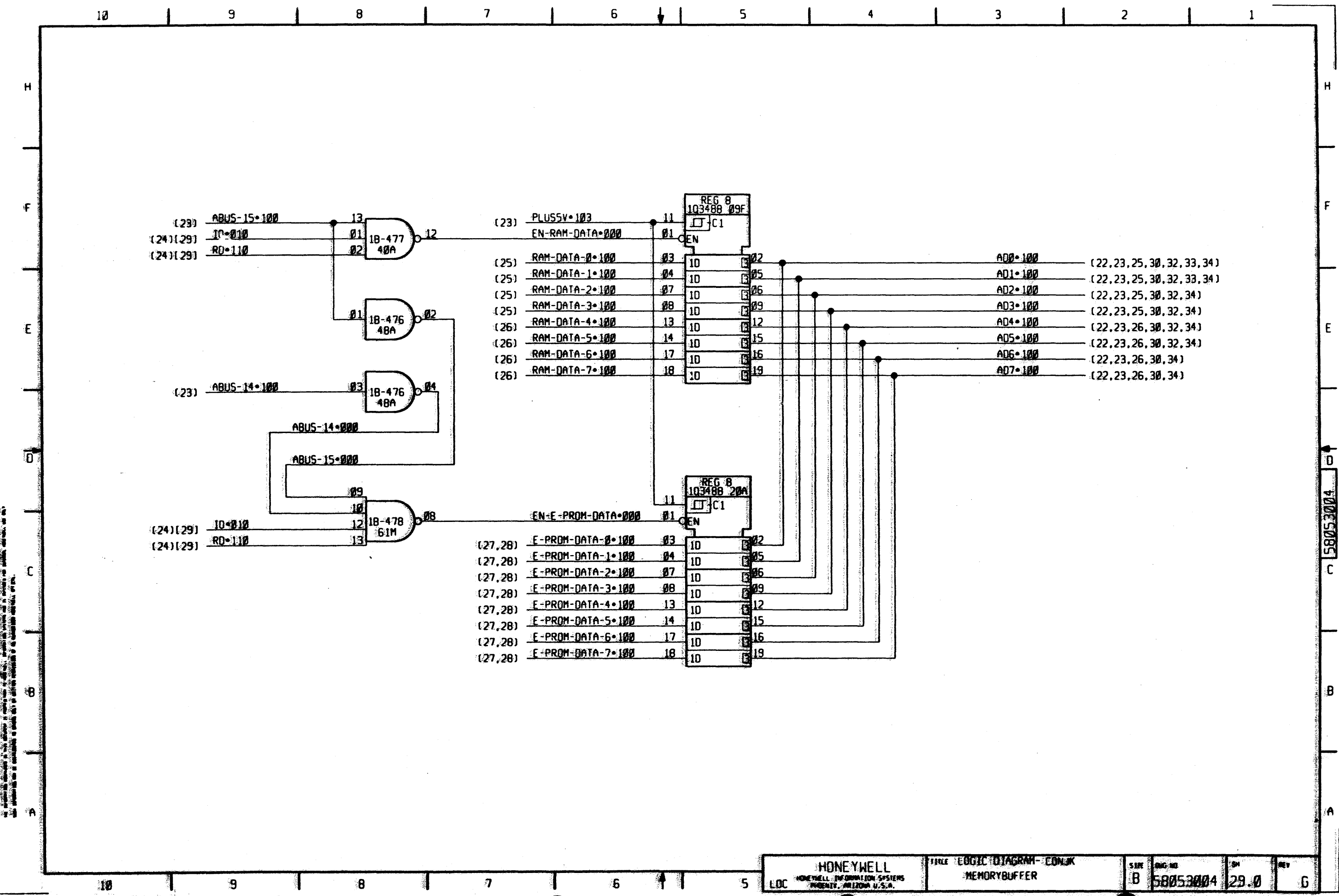
HONEYWELL INFORMATION SYSTEMS
 10000 BLOSSOM AVENUE
 CINCINNATI, OHIO 45242-1000
 U.S.A.

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All dimensions are in inches unless otherwise specified. All dimensions are to be maintained unless otherwise specified.

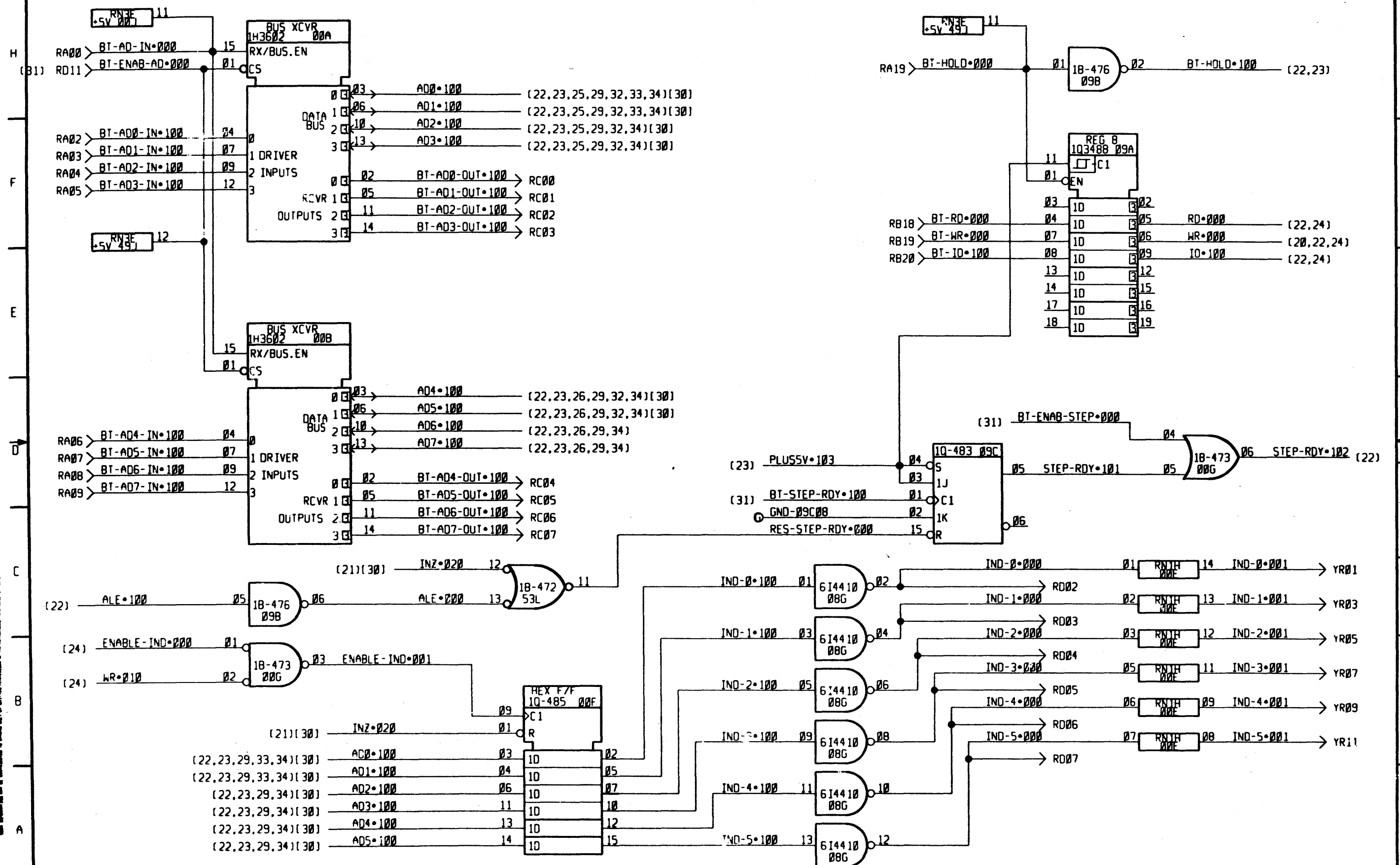


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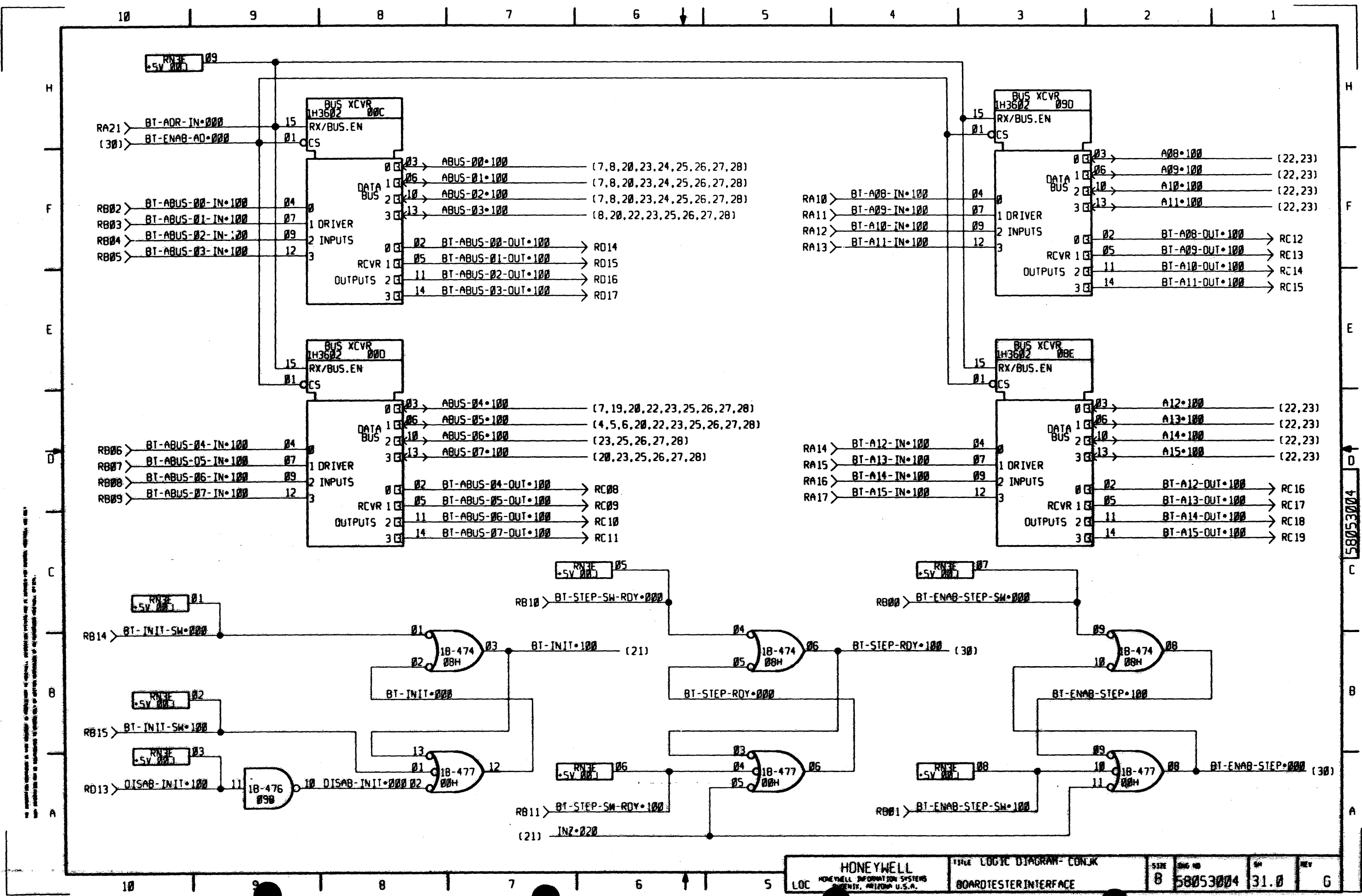
All information is available to the public under the provisions of the Freedom of Information Act, 5 U.S.C. 552.

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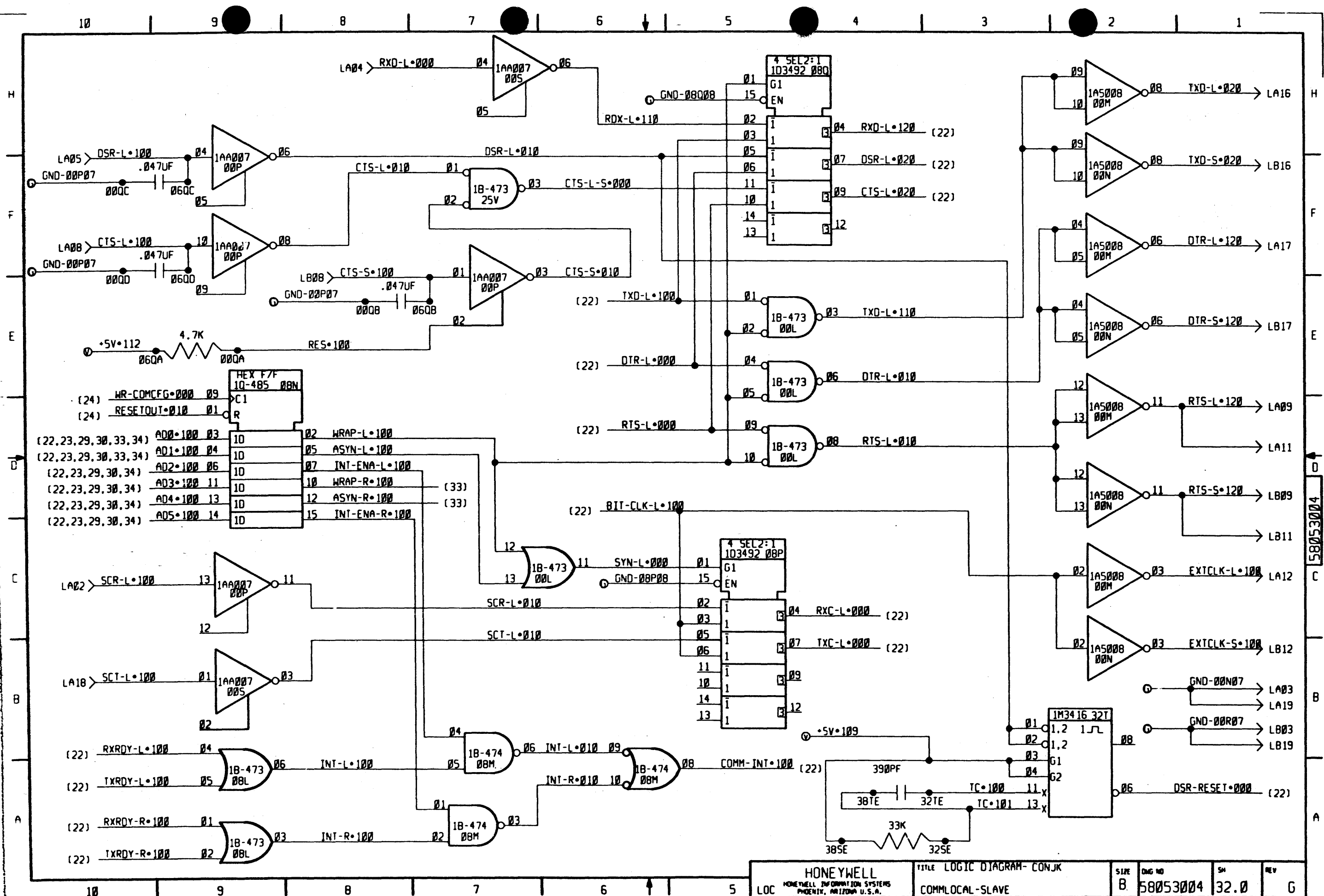


All components are to be replaced with the latest revision unless otherwise specified. All components are to be replaced with the latest revision unless otherwise specified. All components are to be replaced with the latest revision unless otherwise specified.

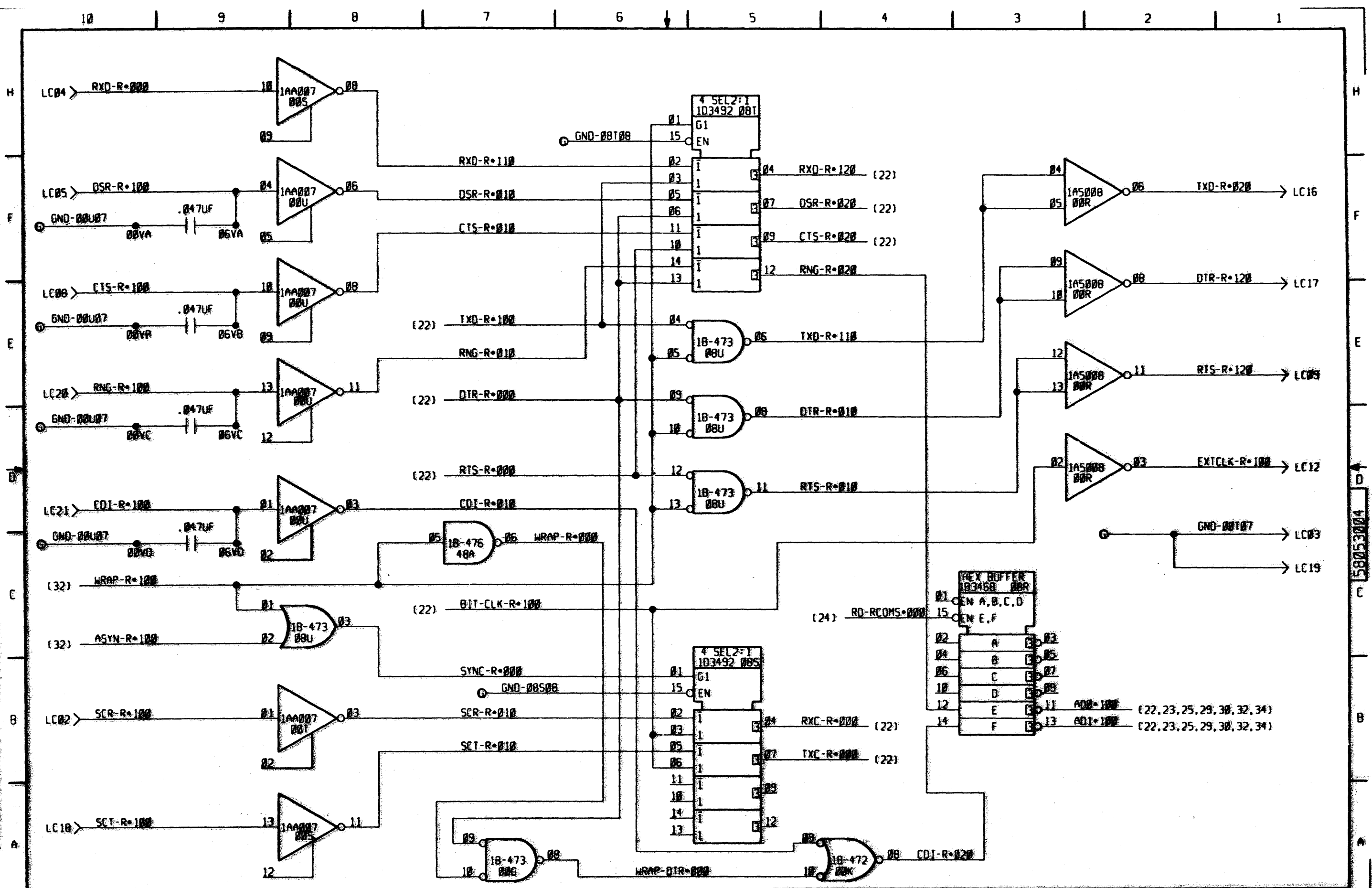
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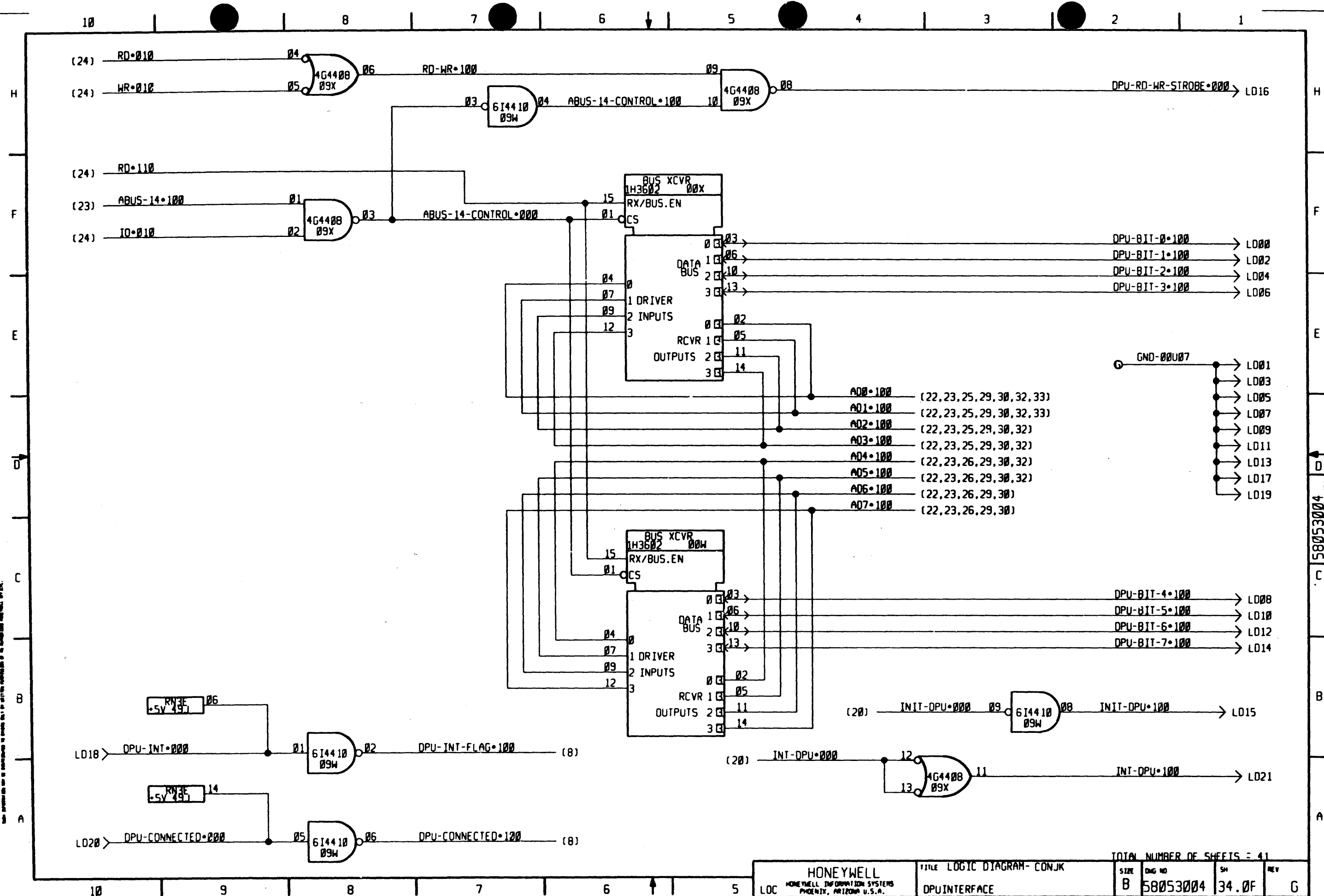
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58056803

REF SPEC NO

REVISION				
REV	AUTHORITY	DATE		SIGNATURE
		YR	MO/DAY	
A	LEVEL 3 ISSUE	30	02/11	<i>[Signature]</i>

0 10 20 30 40 50 60 70 80 MM
 0 1 2 3 IN

PURPOSE: TO IDENTIFY THE PRINTS REQUIRED FOR THE INSTALLATION OF E-PROM REMOTE MAINTENANCE "KEY" FOR OPTION WLCC003A.

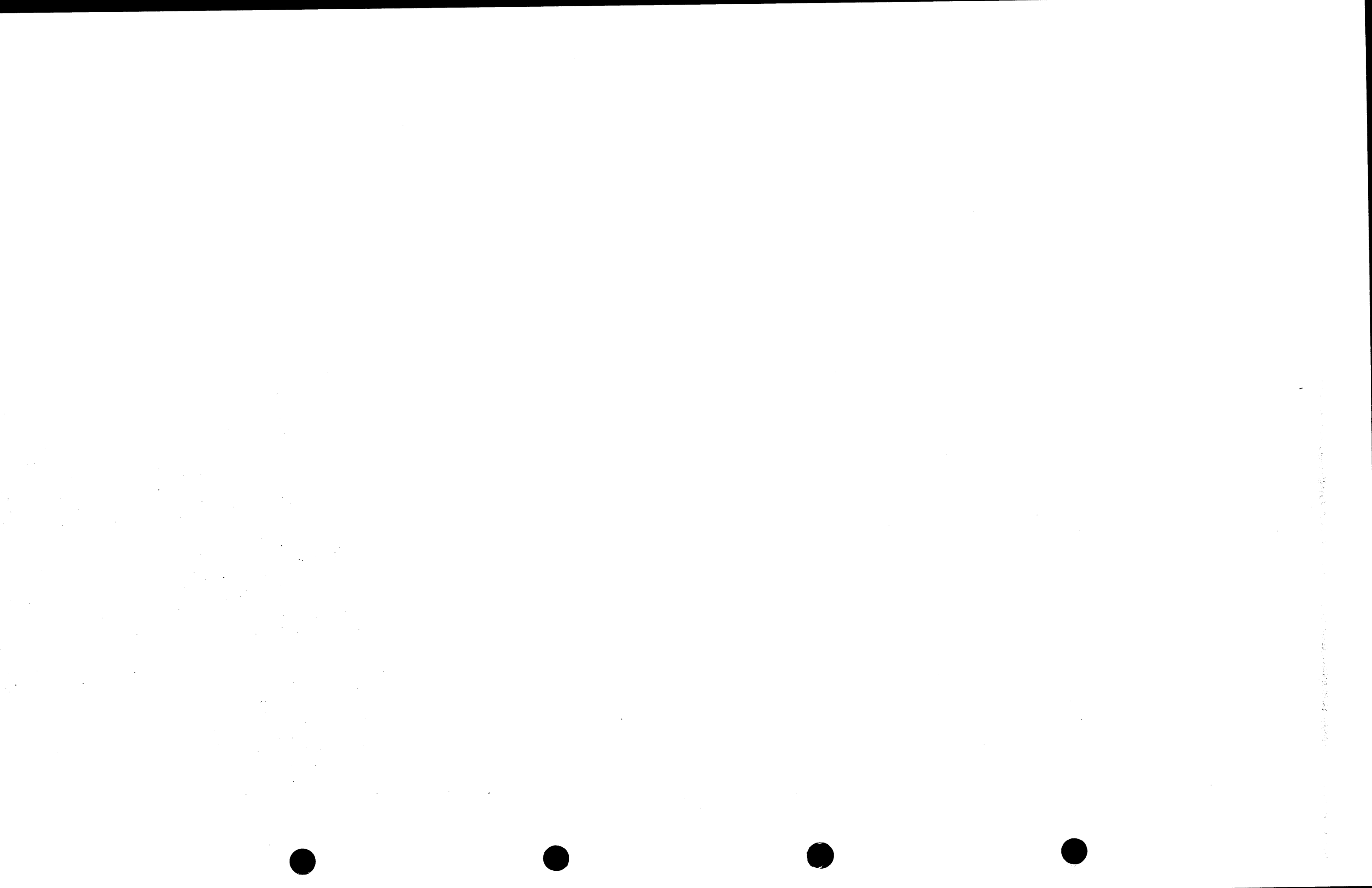
DOCUMENT LIST: PRINTS OF THE FOLLOWING DRAWINGS, AND THEIR RESPECTIVE PARTS LIST, WHEN APPLICABLE, ARE TO BE PACKAGED IN A SUITABLE ENVELOPE AND SHIPPED WITH EACH INSTALLATION KIT.

ITEM NUMBER	PRINT NUMBER	DRAWING TITLE	ASM. TAB-001 QTY
1	58056803	DOCUMENT LIST	1
2	58056802	INSTL. KIT	1
3	58056801	INSTL. INSTRUCTION	1

THE INFORMATION CONTAINED IN THIS DOCUMENT IS PROPRIETARY TO HONEYWELL INFORMATION SYSTEMS AND IS INTENDED FOR INTERNAL HONEYWELL USE ONLY. SUCH INFORMATION MAY BE DISTRIBUTED TO OTHERS ONLY BY WRITTEN PERMISSION OF AN AUTHORIZED HONEYWELL OFFICIAL. THIS RESTRICTION DOES NOT APPLY TO VENDOR PROPRIETARY PARTS THAT MAY BE DISCLOSED IN THIS DOCUMENT.

UNLESS OTHERWISE SPECIFIED DIMENSIONS = $\frac{\text{MILLIMETERS}}{\text{INCHES}}$		MATL	Honeywell HONEYWELL INFORMATION SYSTEMS LOC PHOENIX, ARIZONA U. S. A.	
TOLERANCE OF SIZE AND FORM PER INITIAL DESIGN		DES. CHK. <i>[Signature]</i>		
PROJECTION $\left[\begin{array}{c} \oplus \\ \triangleleft \end{array} \right]$		FIN.	TITLE DOCUMENT LIST E-PROM "KEY" 30	
SCALE	CODE	DR. <i>[Signature]</i>	SIZE DWG NO	SH REV
FCF: 58056802		APPD. <i>[Signature]</i>	A 58056803	1/1 A





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PD 80/03/04

SIZE	58056802	SHEET	REV.
X		1/1	B

* ITEM NO.	P C	IDENTIFICATION NO.	S C	DRAWING TITLE	ASSEMBLY / QUANTITY							U M	
					001								
2	A	58056801	D	INSTL INSTR	X								
3	A	58056803-001	D	DOCUMENT LIST	1								EA
* 4	A	58002646-007	V	IC, EPROM 16K	1								EA
* 4	A	58067400-001	P	DEVICE, PROGRAMMABLE	NOINT								EA
5	A	58056773-002	P	LABEL	1								EA

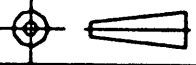
Honeywell HONEYWELL INFORMATION SYSTEMS LOC: PHOENIX, ARIZONA, U.S.A.	UM - UNIT OF MEASURE EA - EACH IN - INCHES CM - CENTIMETER OZ - OUNCE G - GRAMS		TITLE INSTALLATION KIT		
	* ITEMS REVISED SINCE PREVIOUS ISSUE		SIZE X	P.L. NO. 58056802	SHEET 1/1	REV. B

DOES A DOCUMENT REVISION STATUS SHEET EXIST? YES

32



file copy

Honeywell HONEYWELL INFORMATION SYSTEMS		DWG. NO. 58056801	SHEET 1/5	REV C
LOC. PHOENIX, ARIZONA	DISTR C108-7	PROJECTION 	CODE	
PREPARED BY <i>C.R. Nowland</i>	DATE 80JAN17	TITLE E-PROM INSTALLATION INSTRUCTION		
APPROVED BY C LANCASTER	DATE 80JAN17			

Honeywell HONEYWELL INFORMATION SYSTEMS		DWG. NO. 58056801	SHEET 2	REV C
INSTALLATION INSTRUCTION				

1. SCOPE:

THIS INSTRUCTION PROVIDES THE NECESSARY INFORMATION FOR THE INSTALLATION OF THE E-PROM REMOTE MAINTENANCE "KEY".

REVISION RECORD

REV.	AUTHORITY	DATE	SIGNATURE	SHEETS AFFECTED
A	LEVEL 3 ISSUE	80JAN17	SEE APERTURE CARD	RSS . 1 THRU 5F
B	PHAOKJ034	80FEB29	CR NOWLAND	ALL
C	PHAOKJ061	80NOV18	S. JAMESON	ALL

Honeywell HONEYWELL INFORMATION SYSTEMS	INSTALLATION INSTRUCTION	DWG. NO.	SHEET	REV
		58056801	3	C

II. INSTALLATION PROCEDURE

- REFER TO INSTALLATION KIT NUMBER 58056802-001 FOR ITEM NUMBERS REFERENCED IN THE FOLLOWING INSTRUCTIONS.
- REFER TO FIGURES FOR APPROXIMATE LOCATION AND IDENTITY OF ITEMS REFERRED TO WITHIN THE FOLLOWING INSTALLATION INSTRUCTIONS. NUMBERS CONTAINED WITHIN DELTAS REFER TO APPLICABLE INSTRUCTION.
- TURN POWER OFF ON CABINET HOUSING CONJK BOARD. LOCATE CONJK BOARD AND REMOVE CONNECTING HARNESS TO LEFT FREE EDGE. REMOVE CONJK BOARD.
- INSTALL PROGRAMMABLE DEVICE ON CIRCUIT BOARD CONJK (ASM 58053000) IN SOCKET PROVIDED ON CIRCUIT BOARD IN LOCATION AS SHOWN.

ITEM NO.	IC LOC	DEVICE MNEMONIC
4	33B	2R3646-007

- ON CONJK BOARD, SET ION CHANNEL ADDRESS SWITCH. IF REQUIRED, LOCATED AT 80X PER SYSTEM CONFIGURATION. FOR SINGLE ION CHANNEL OPERATION, BOTH LOCAL AND REMOTE CHANNEL ADDRESS'S MUST BE SET TO THE SAME ADDRESS. FOR DUAL ION CHANNEL OPERATION, LOCAL ADDRESS MUST BE EVEN AND REMOTE ADDRESS MUST BE ODD.
- INSTALL MARKER (ITEM 5) ON BOARD AS SHOWN IN FIG. 1.
- REINSERT CONJK BOARD IN SAME SLOT AS REMOVED. CONNECT HARNESS TO LEFT FREE EDGE.
- TURN POWER ON. CHECK THAT THE GREEN LED LAMP LOCATED AT THE RIGHT FREE EDGE IS ON TO VERIFY SELF TEST HAVE RUN CORRECTLY.

Honeywell HONEYWELL INFORMATION SYSTEMS	INSTALLATION INSTRUCTION	DWG. NO.	SHEET	REV
		58056801	4	C

IX. OPTION REMOVAL PROCEDURE:

- THE REMOVAL OF THIS OPTION REQUIRES ONLY THE REVERSE PROCEDURE OF THE INSTALLATION.

X. PARTS DISPOSITION:

- RETURN THE PARTS REMOVED IN THE ABOVE STEPS TO "LISD" MANUFACTURING.

RETURN TO:

HONEYWELL INFORMATION SYSTEMS
P.O. BOX 0000
PHOENIX, ARIZONA 85005

C/O MCR LISD WAREHOUSE
MAIL DROP J-2

33B

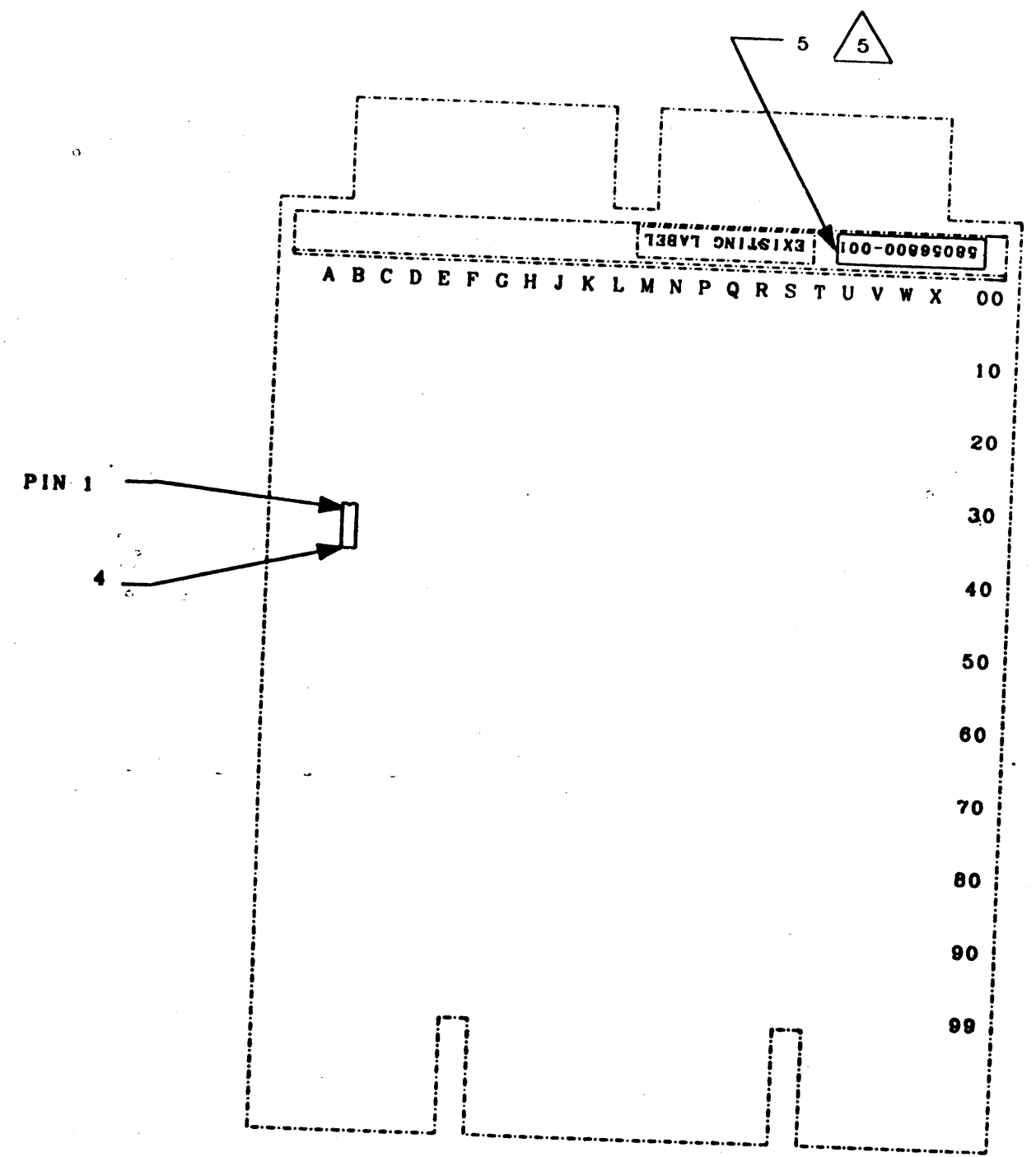


FIGURE 1

34

