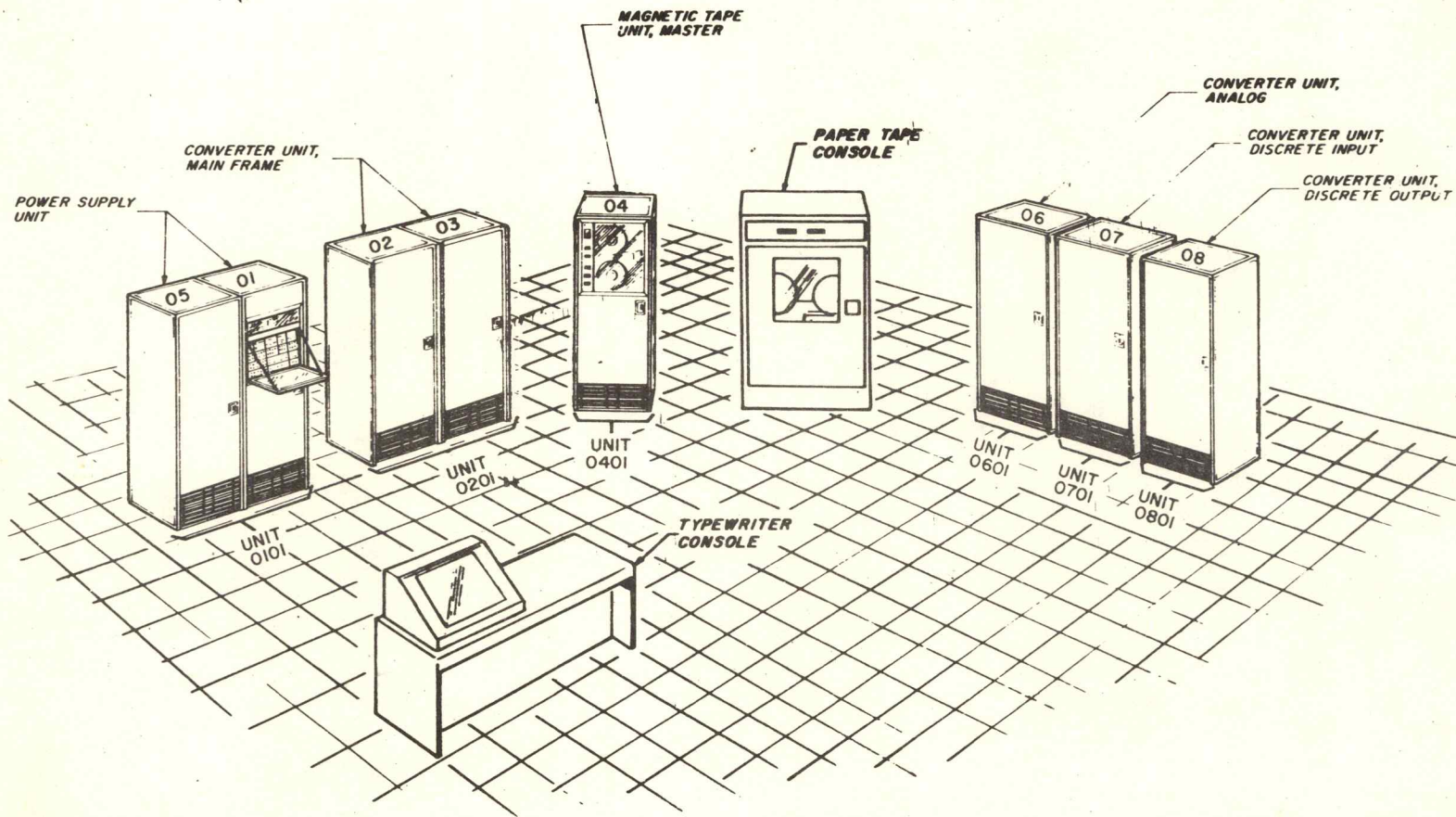
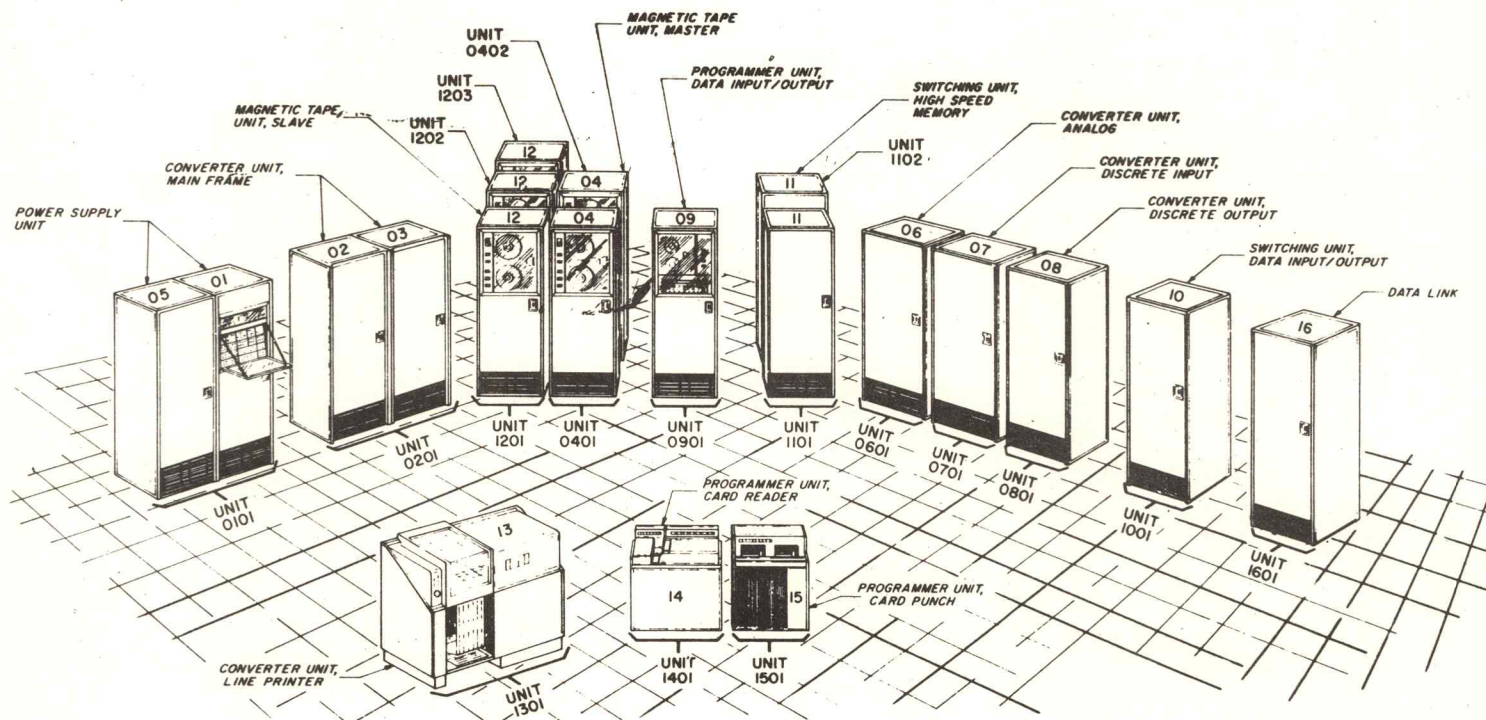
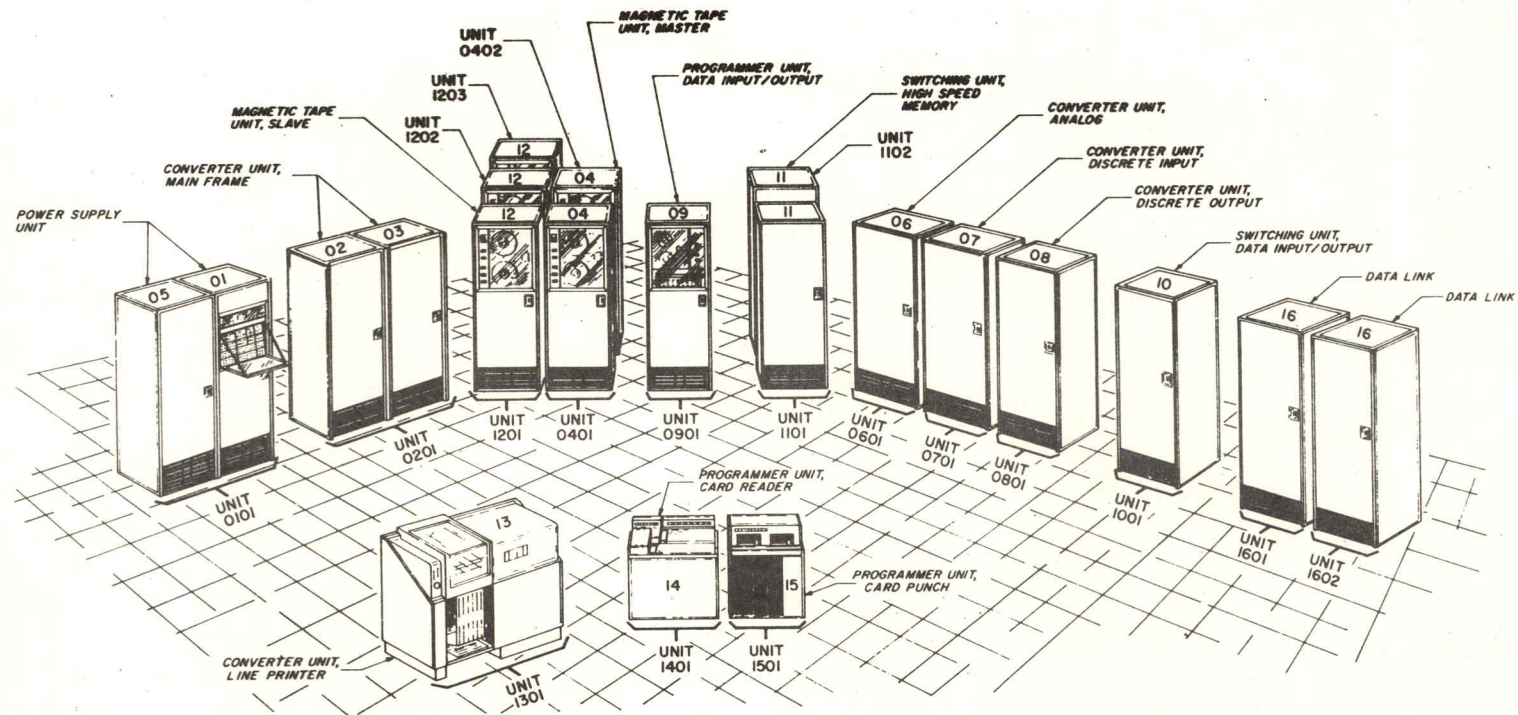




Saturn I Ground Computer System

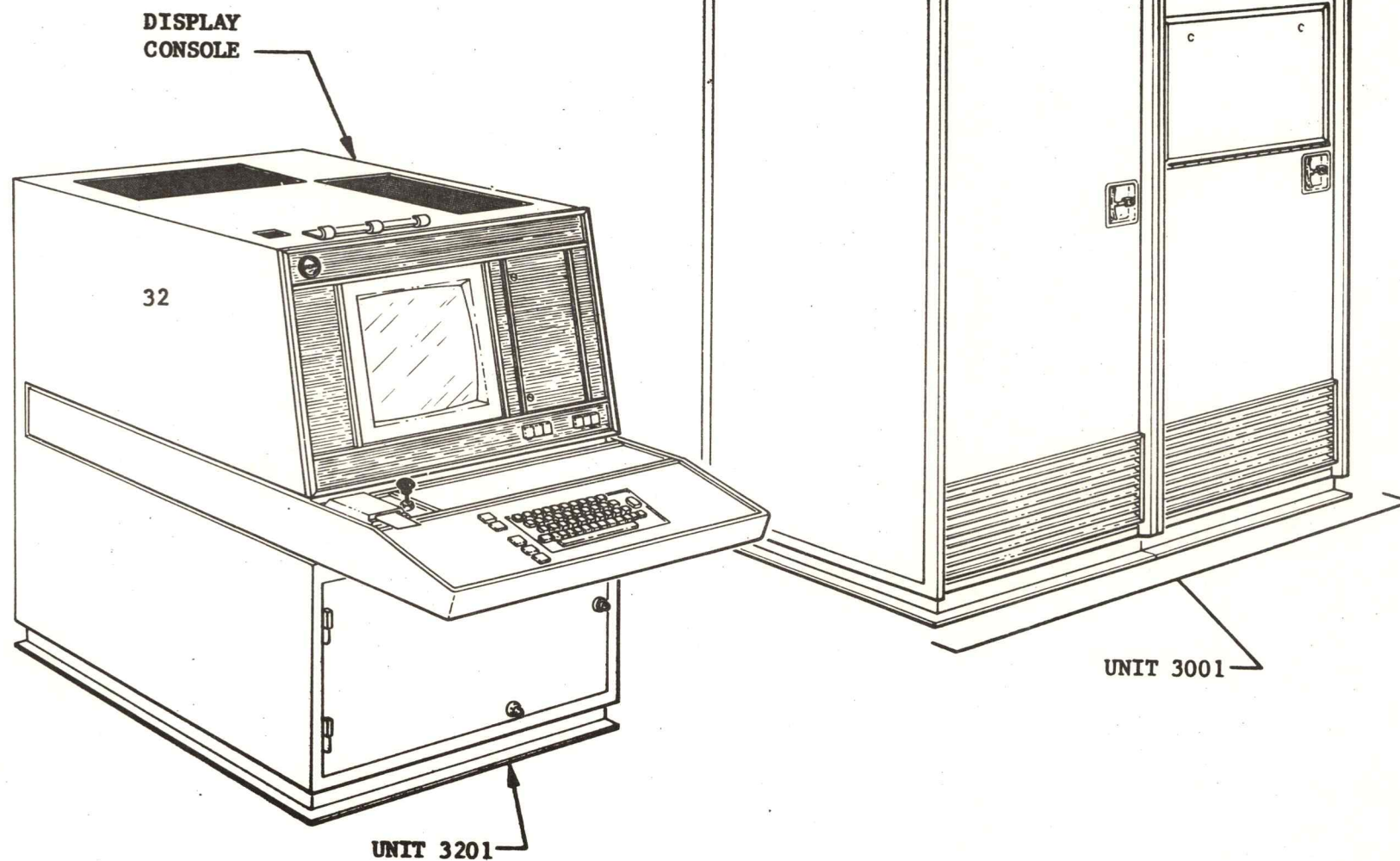


Saturn IB Ground Computer System

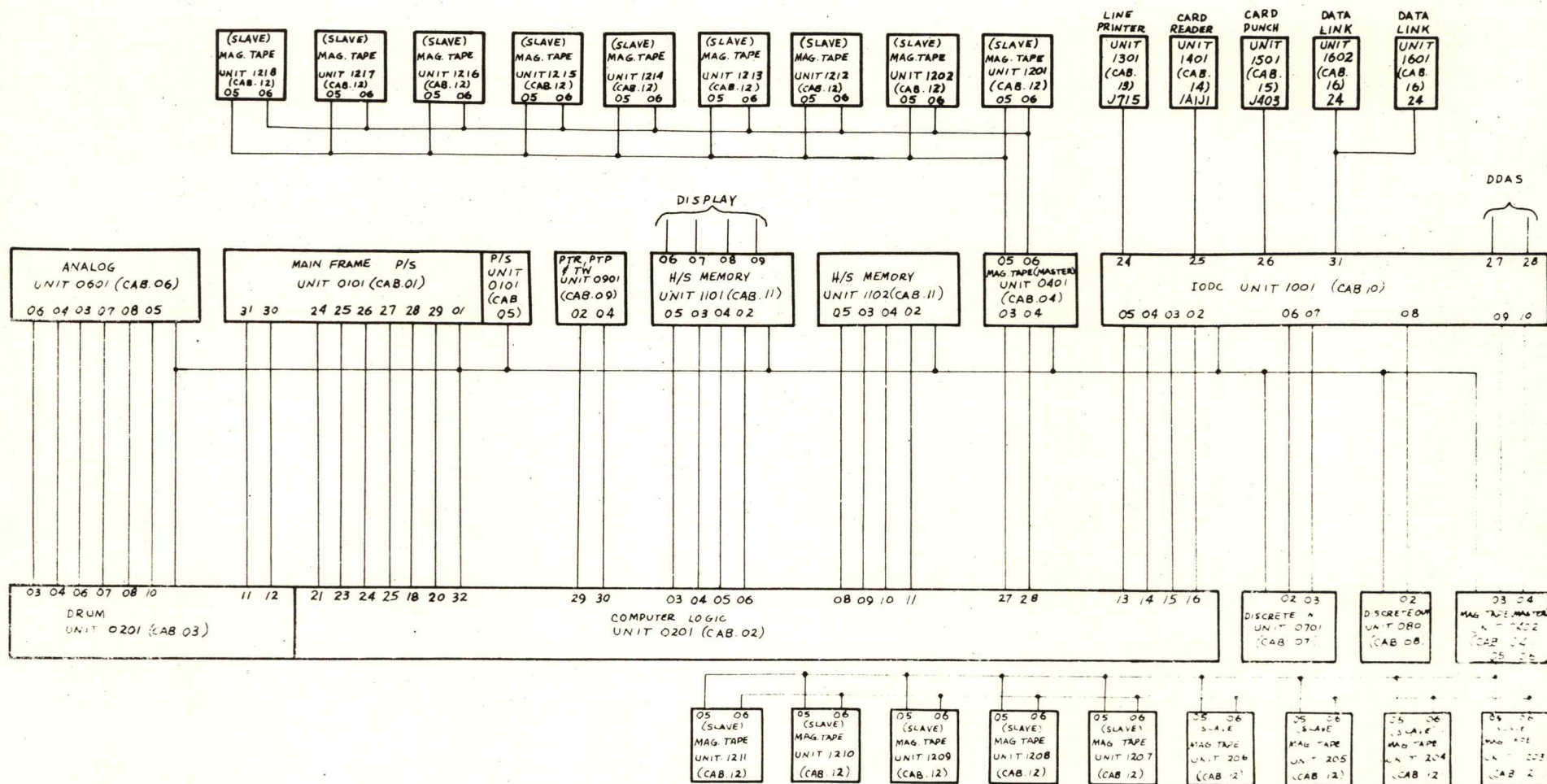


Saturn V Ground Computer System

COMMON LOGIC AND SIMULATOR UNIT DISPLAY



Saturn IB Data Display and Control Console



SYSTEM CABLE DISTRIBUTION

Fig. 7-1

NOTE: ALL INFORMATION IN
BRACKETS () INDICATES CABLE
BAND DATA.

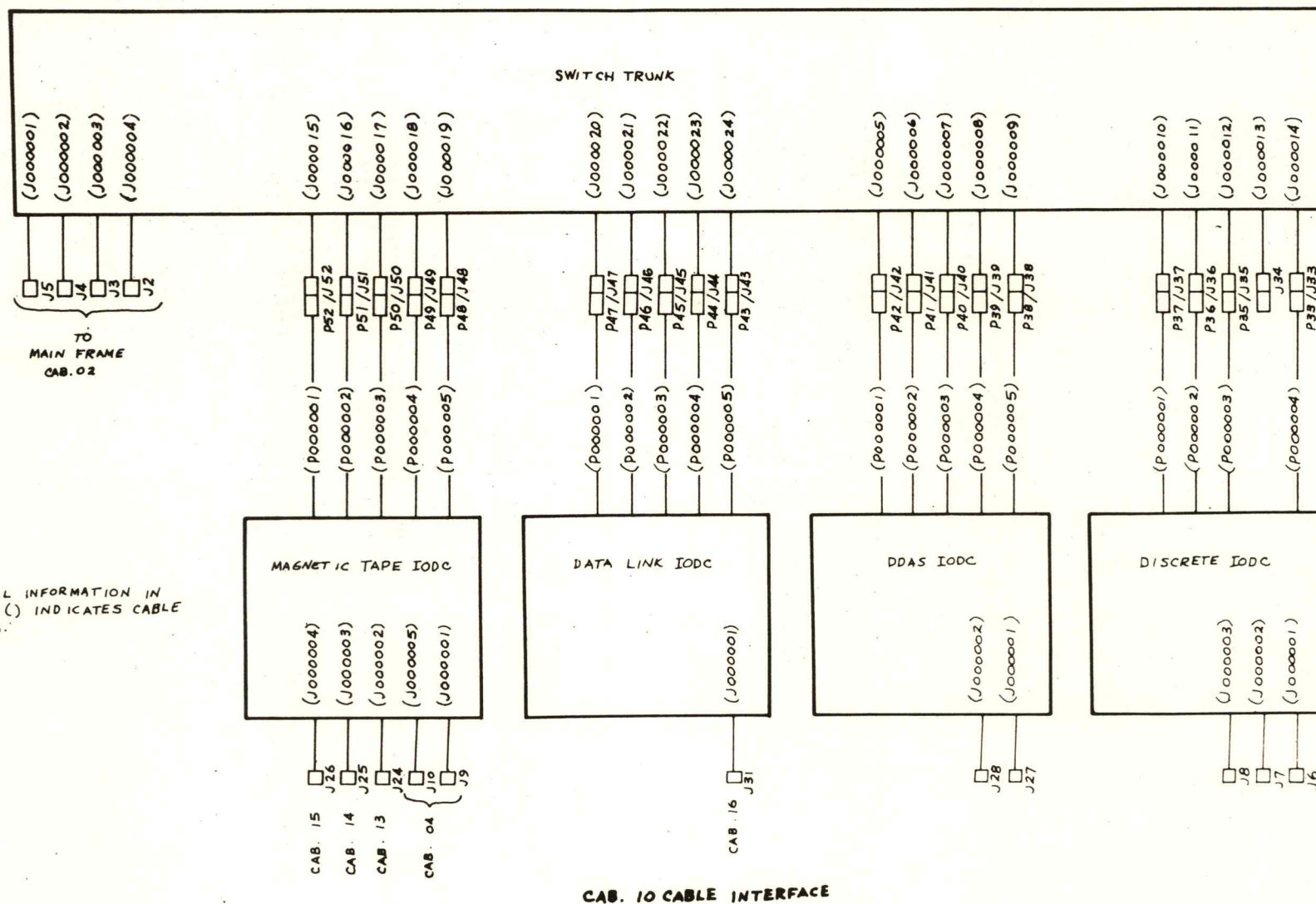
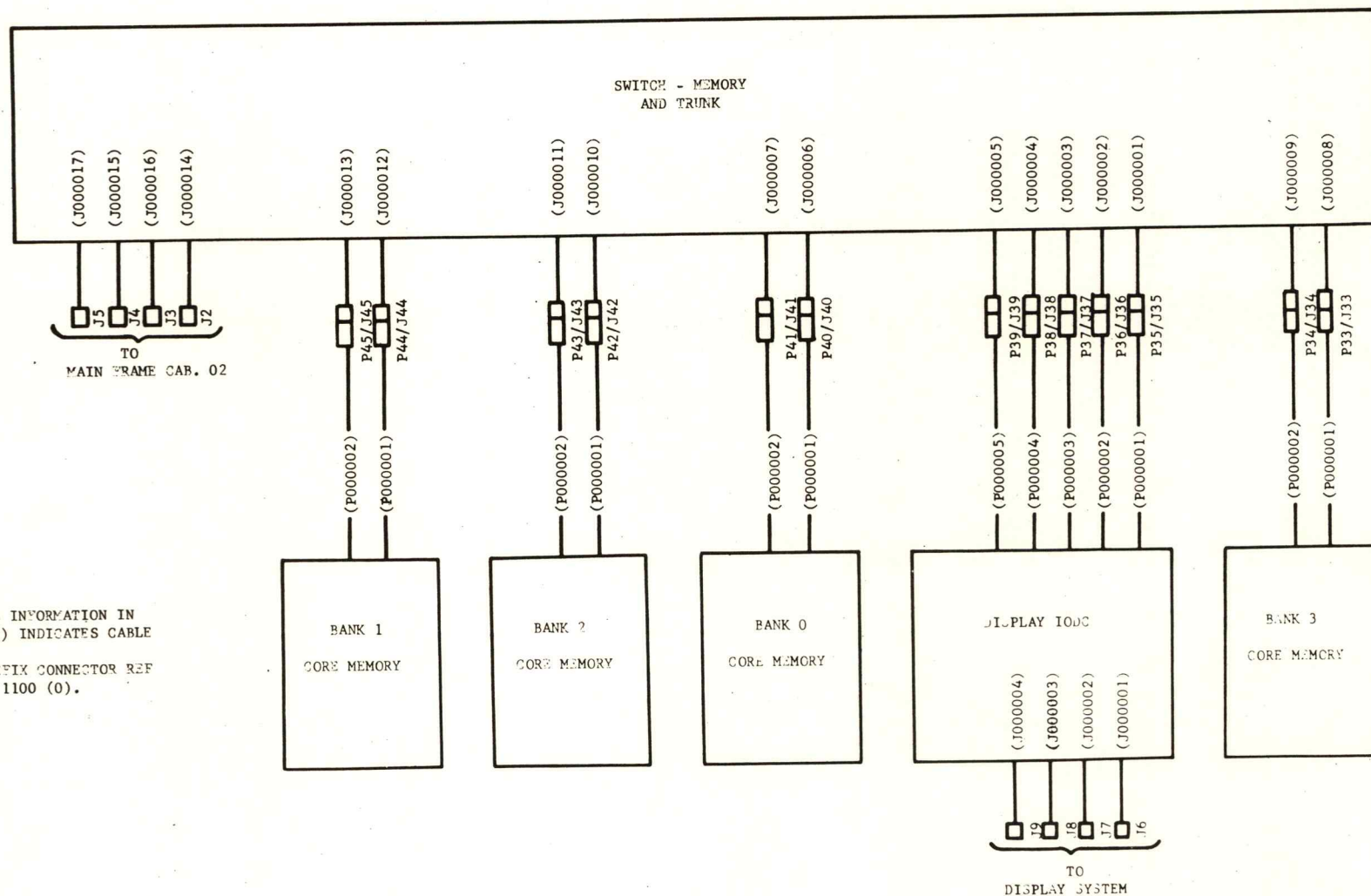


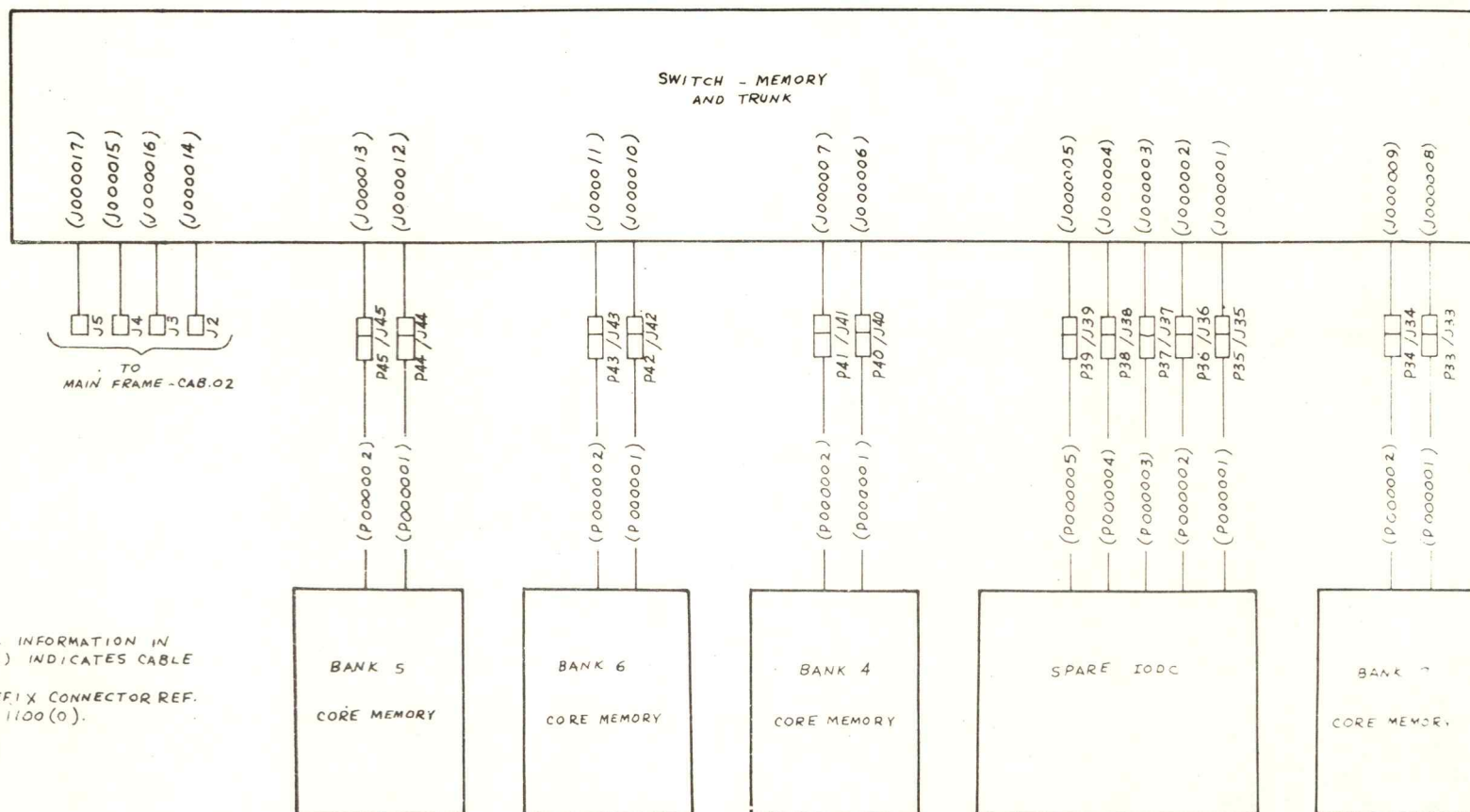
Fig 7-2

NOTE: ALL INFORMATION IN
BRACKETS () INDICATES CABLE
BAND DATA
PREFIX CONNECTOR REF
DES. WITH 1100 (0).

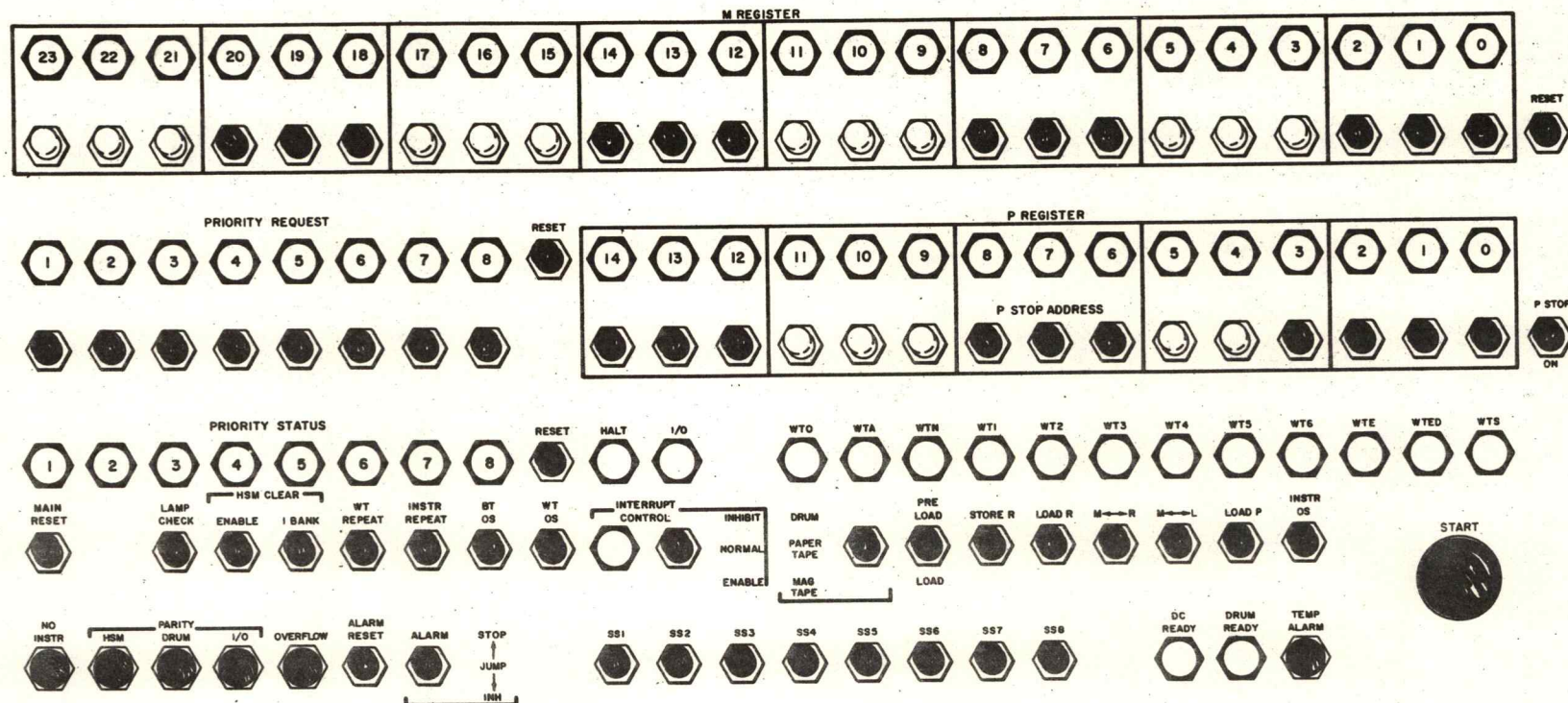


CAB. 11 CABLE INTERFACE (UNIT 1101)

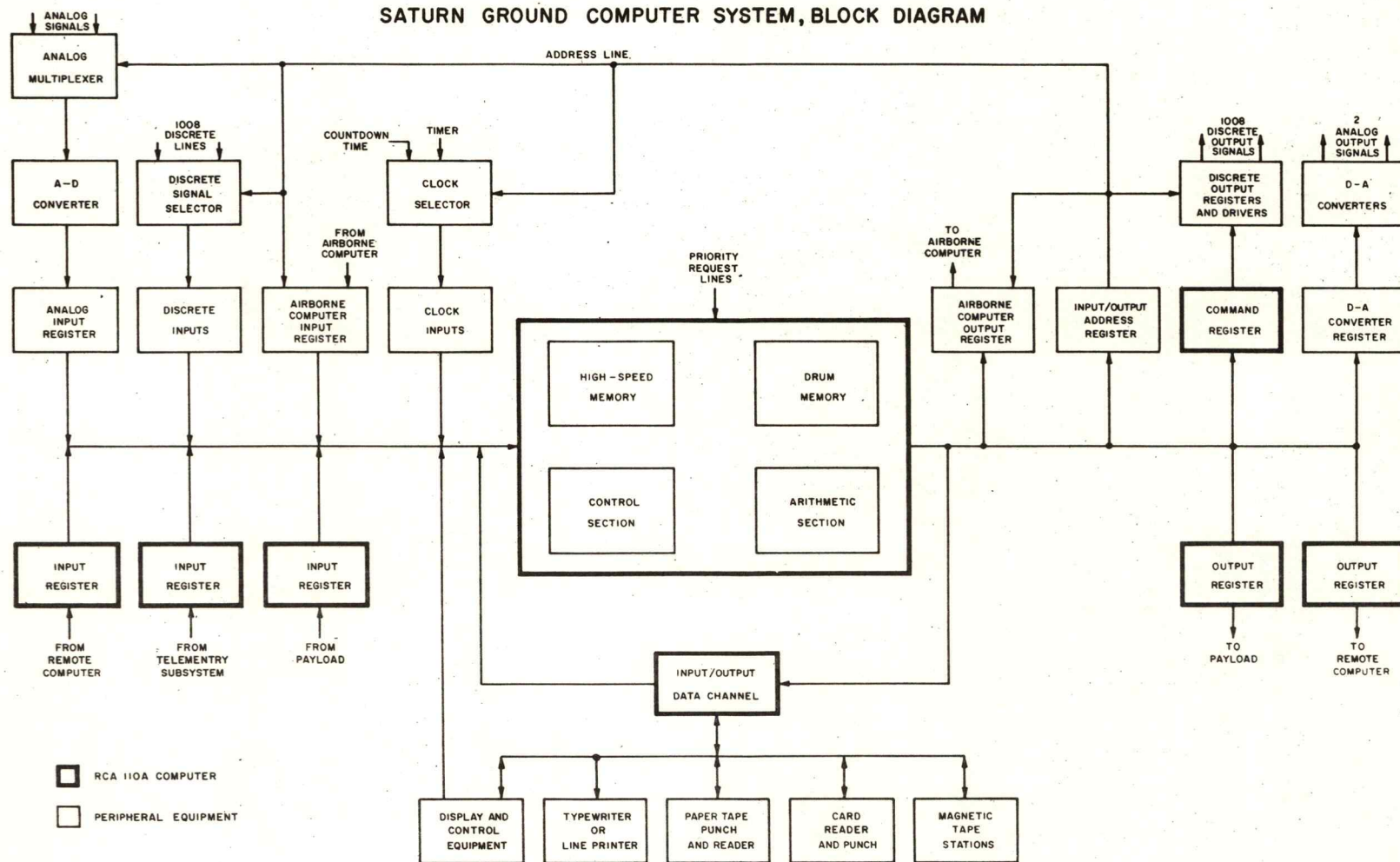
NOTE: ALL INFORMATION IN
BRACKETS () INDICATES CABLE
BAND DATA.
PREFIX CONNECTOR REF.
DES. WITH 1100(0).



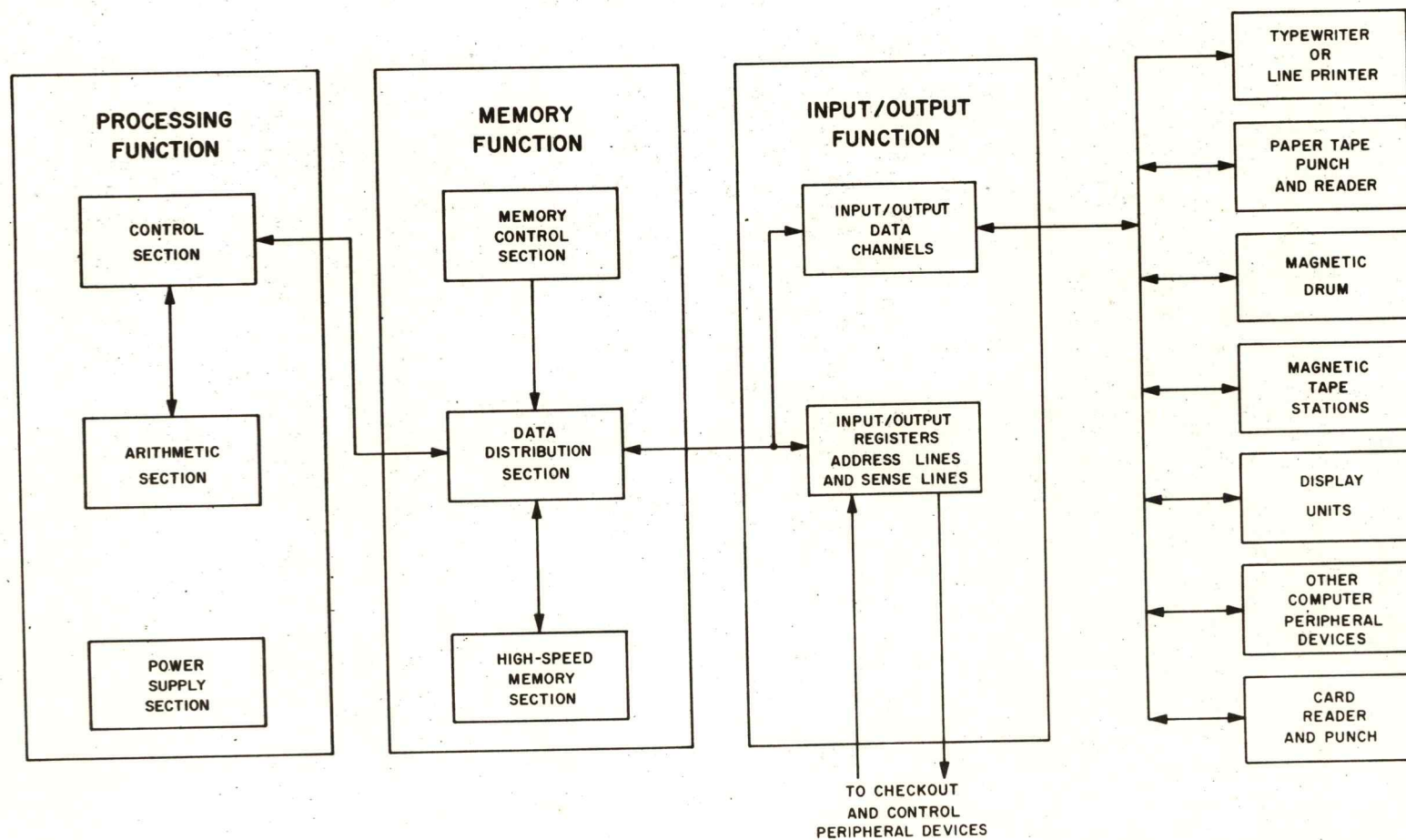
CAB. 11 CABLE INTERFACE (UNIT 1102)



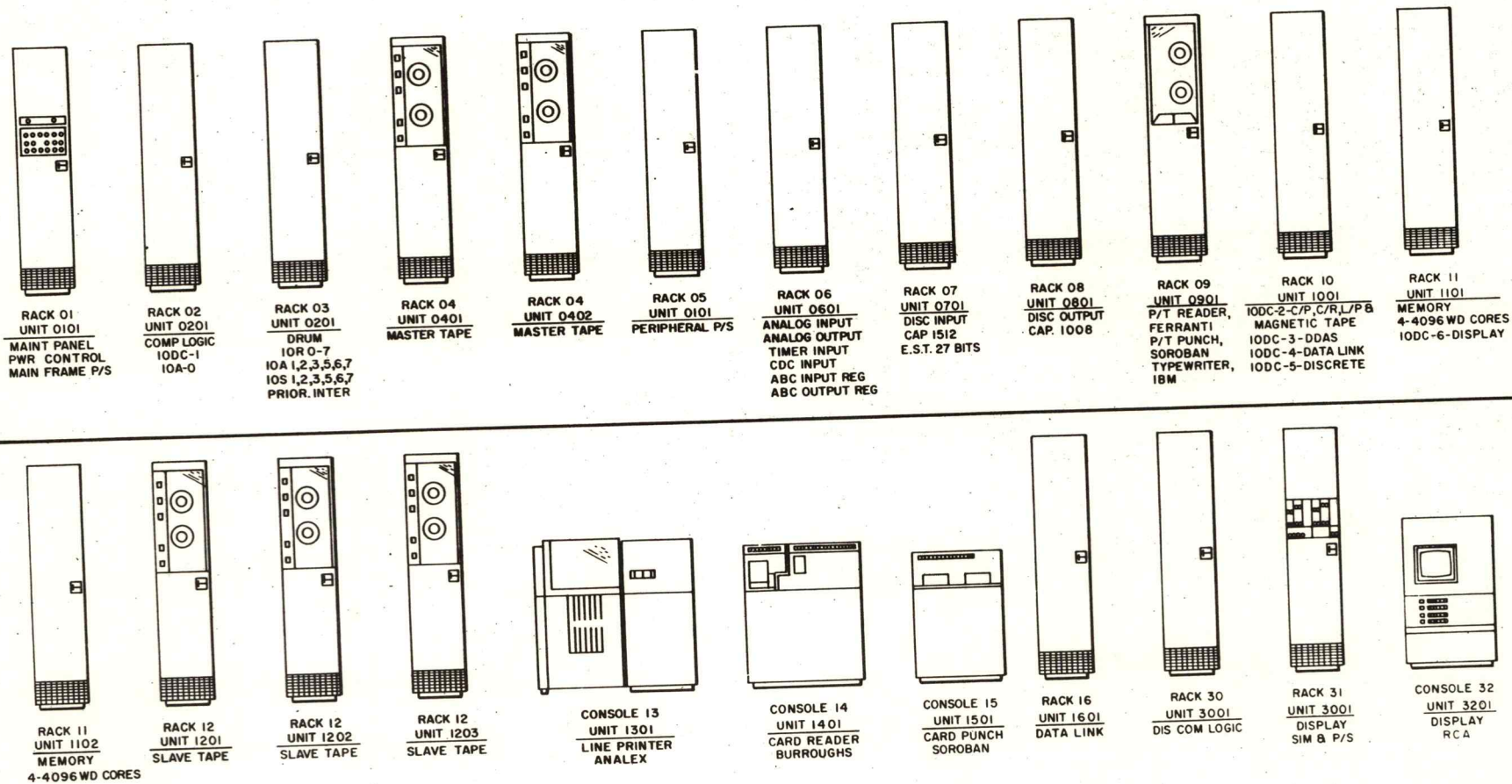
SATURN GROUND COMPUTER SYSTEM, BLOCK DIAGRAM



RCA 110A COMPUTER, SIMPLIFIED BLOCK DIAGRAM

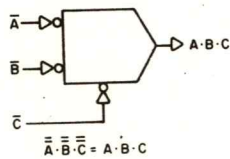


EQUIPMENT LOCATION OF RCA 110A SATURN GROUND COMPUTER SYSTEM



LOGIC SYMBOLS

NAND GATE

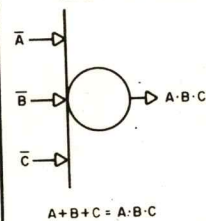


ALL LOGICAL 0 INPUTS PROVIDES
A LOGICAL 1 OUTPUT.

ANY LOGICAL 1 INPUT PROVIDES
A LOGICAL 0 OUTPUT

$$\bar{A} \cdot \bar{B} \cdot \bar{C} = A \cdot B \cdot C$$

NOR GATE

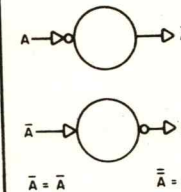


ANY LOGICAL 1 INPUT PROVIDES
A LOGICAL 0 OUTPUT.

ALL LOGICAL 0 INPUTS PROVIDES
A LOGICAL 1 OUTPUT.

$$A + B + C = A \cdot B \cdot C$$

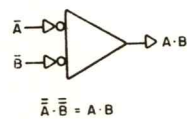
INVERTER



A LOGICAL 1 INPUT PROVIDES
A LOGICAL 0 OUTPUT.

A LOGICAL 0 INPUT PROVIDES
A LOGICAL 1 OUTPUT.

NAND POWER GATE

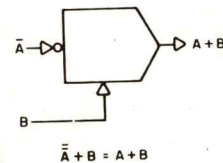


ALL LOGICAL 0 INPUTS PROVIDE
A LOGICAL 1 OUTPUT.

ANY LOGICAL 1 INPUT PROVIDES
A LOGICAL 0 OUTPUT.

$$\bar{A} \cdot \bar{B} = A \cdot B$$

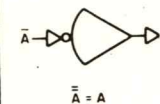
LAMP DRIVER



A LOGICAL 0 AT $\bar{A}$ OR GROUND
VOLTAGE AT B PROVIDES A
LOGICAL 1 AT THE OUTPUT
TO ENERGIZE THE LAMP.

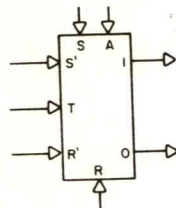
$$\bar{A} + B = A + B$$

RELAY DRIVER



A LOGICAL 0 AT INPUT $\bar{A}$ PROVIDES
A LOGICAL 1 AT THE OUTPUT TO
ENERGIZE THE RELAY.

MULTIPURPOSE F/F



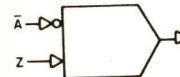
A LOGICAL 1 AT THE S INPUT PROVIDES
A LOGICAL 1 AT THE 1 OUTPUT.

A LOGICAL 1 AT THE R INPUT PROVIDES
A LOGICAL 1 AT THE 0 OUTPUT.

A LOGICAL 1 AT THE S' INPUT PROVIDES
A LOGICAL 1 AT THE 1 OUTPUT WHEN
A OR T INPUTS GO TO A LOGICAL 1.

A LOGICAL 1 AT THE R' INPUT PROVIDES
A LOGICAL 1 AT THE 0 OUTPUT WHEN
A OR T INPUTS GO TO A LOGICAL 1.

VOLTAGE LEVEL CONVERTER



A + 28 VOLT LEVEL AT THE Z INPUT PROVIDES
A LOGICAL 1 OUTPUT WHEN THE $\bar{A}$ INPUT IS A
LOGICAL 0.

A + 28 VOLT LEVEL AT THE Z INPUT PROVIDES
A LOGICAL 0 OUTPUT WHEN THE $\bar{A}$ INPUT IS A
LOGICAL 1.

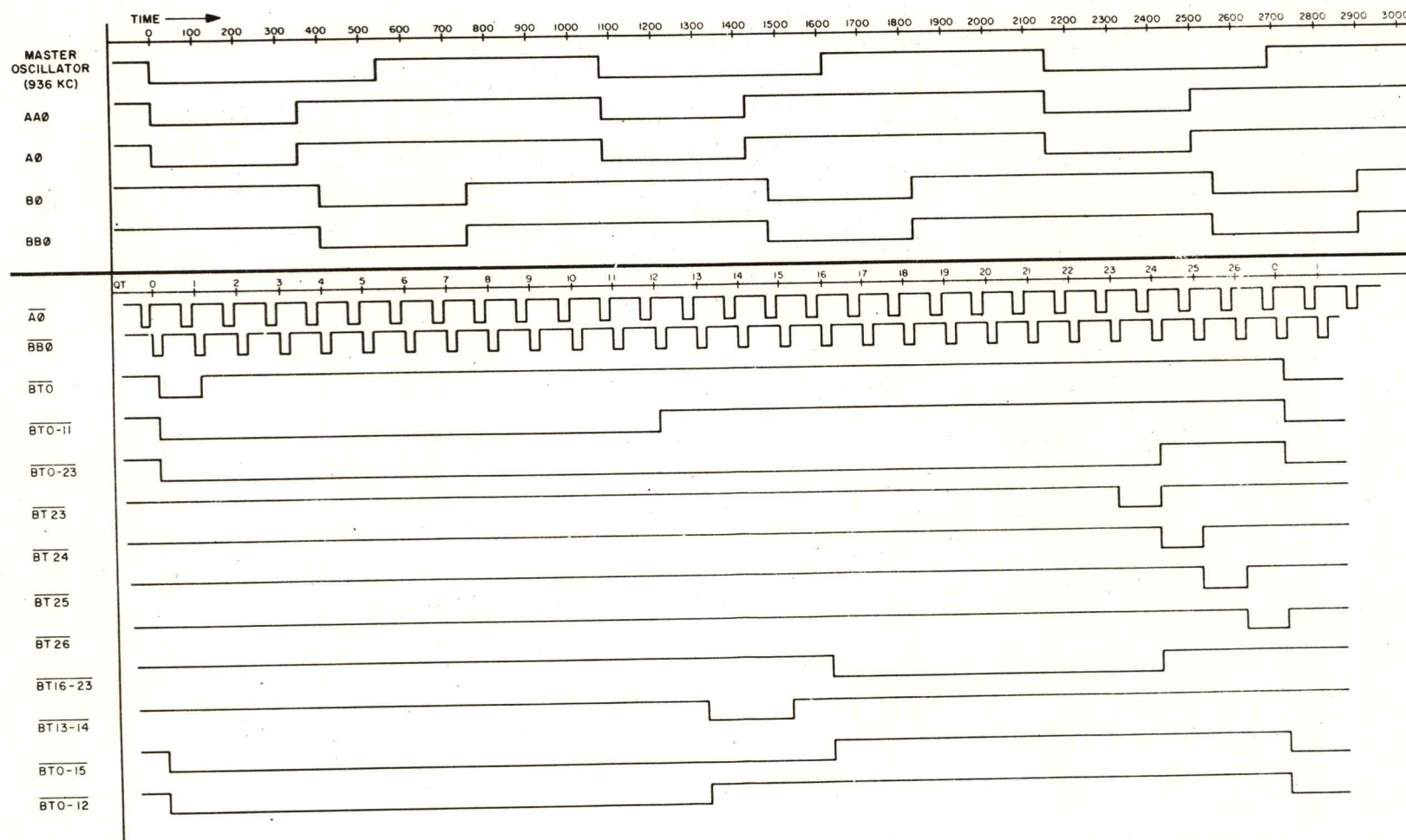
A ZERO-VOLT LEVEL AT THE Z INPUT PROVIDES
A LOGICAL 0 OUTPUT.

NOTE:

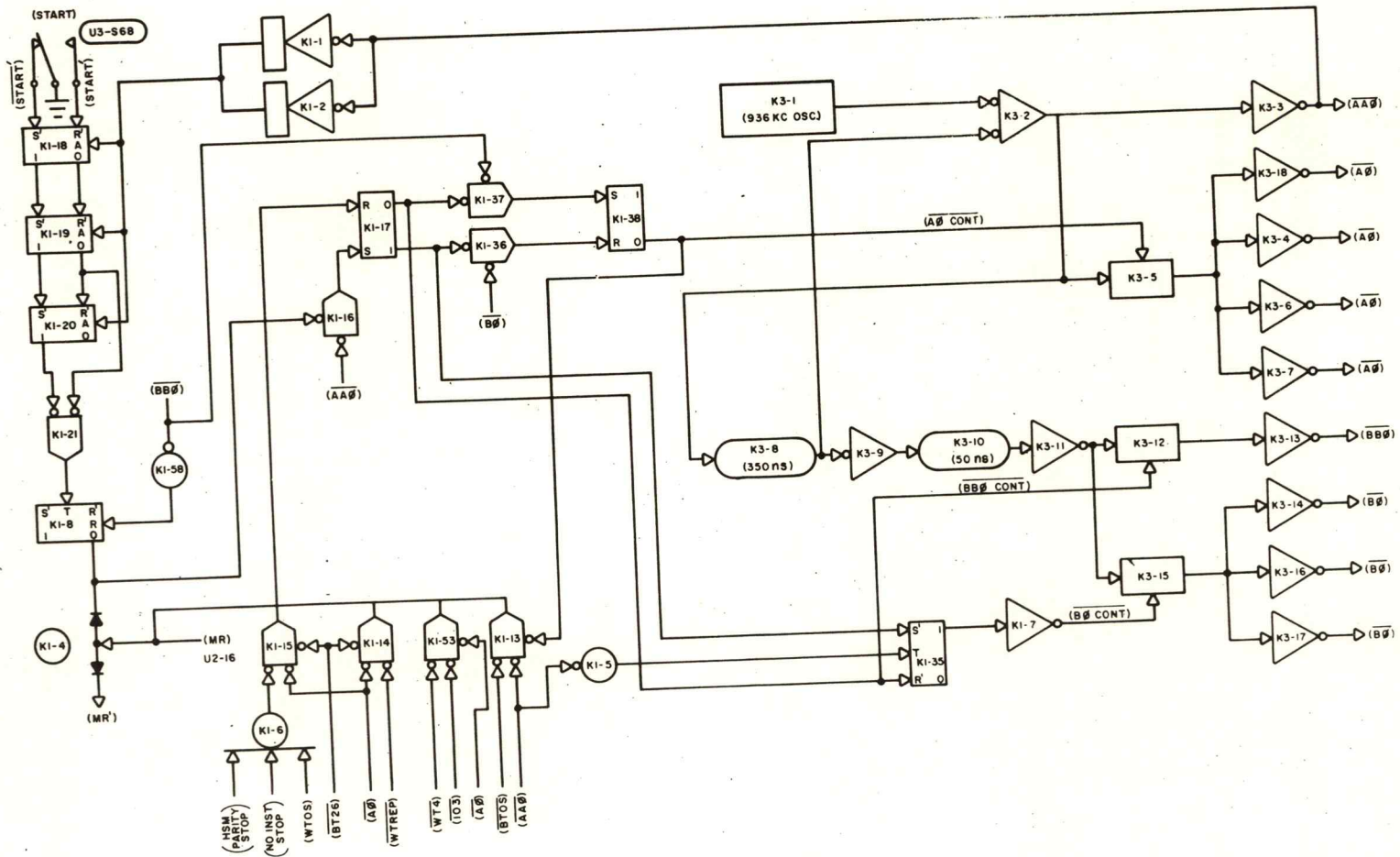
LOGICAL 1 = 0 VOLTS

LOGICAL 0 = -6.5 VOLTS

CLOCK PULSES AND BIT TIME LEVELS



CLOCK PULSE AND CLOCK CONTROL LOGIC DIAGRAM



LOGIC DIAGRAM OF BIT TIME GENERATORS

