PBC INTERFACE AND CONTROL CABINET EQUIPMENT DESIGN REQUIREMENTS NO. 4 TYPE TOLL SWITCHING SYSTEM

1. GENERAL

SCOPE

1.01 This specification, together with supplementary information listed herein, covers the equipment design requirements for the cabinet, equipment, and circuits to be used in the engineering, manufacturing, and installation of the Peripheral Bus Computer interface cabinet.

1.02 This specification is reissued to provide features for an improved maintenance package.

DESCRIPTION

1.03 Equipment for the interface and control cabinet (see Fig. 1) is arranged in a single cabinet 27 inches wide by 25-1/2 inches deep and 67-1/2 inches in height. There are 63 inches of vertical mounting space for 25 inch wide mounting plates. The rear door has mounting rails, which will accommodate 19 inch wide mounting plates. Of the 63 inches of vertical space, 59 inches are actually used for mounting units while 4 inches are used for cable buildup.

1.04 The cabinet has front and rear hinged doors and one side removable panel. The open side is bolted to the J67507A cabinet complex. This complex is raised 2-1/4 inches from the floor by leveling feet and bolted to the floor. The AC power is supplied from a floor mounted duct, which is located underneath the cabinet complex. The AC power is fed to this duct through the J67506A interface and control cabinet via an entrance fitting at the top of the cabinet through flexible conduit to a junction box and then through flexible conduit feeders to the floor duct. A −48 volt feeder and ground also enters the top rear of the cabinet.

1.05 Commercial power supplies are used for the 5-volt and 24-volt logic circuitry and are located near the bottom on the rear door. A power control unit mounted near the top of the rear door distributes AC power to the fans and power supplies. This unit also contains a thermal sensor which will remove AC power from the entire cabinet, with the exception of the fans, if the temperature exceeds 128°F inside the cabinet. Two fans, with wire mesh filters, are equipped in the top of the cabinet for forced cooling, with the air exiting at the bottom of the cabinet.

1.06 Switchboard cabling enters the top of the cabinet via a cable support bracket which is insulated from the cabinet. This support secures a cross aisle rack from the ETS portion of the office to the PBC cabinets. The cable rack is electrically common with the ETS ground and must therefore not touch the electromechanical or earth ground potential, which is connected to the PBC cabinets.

1.07 The PBC Power Unit, J67506AB, 4 inches high, contains a 70-type fuse block, relays, component assemblies, and a control panel. This unit provides +5 Vdc, +24 Vdc, and −48 Vdc distribution to the PBC interface and control cabinet units. A display of power status is also indicated by LED lamps.

1.08 The Bus to Bus Access Unit J67506AC, consists of a 4-inch and a 7-inch mounting plate. The 4-inch plate contains KS bus connectors, transformers, and ESS No. 1 circuit packs mounted in 36A apparatus mountings. The 7-inch plate contains AR type circuit packs which mount in 58 type apparatus mountings and a H803 connector block, which connects the bus to bus access unit to the J67507A PDP11/45 computer via a Unibus* cable. The bus to bus access unit contains the necessary control logic and registers to perform data transfers between ETS and the PDP11/45.

1.09 The TDC access unit consists of a 6.20-inch high by 8-inch long mounting plate and con-

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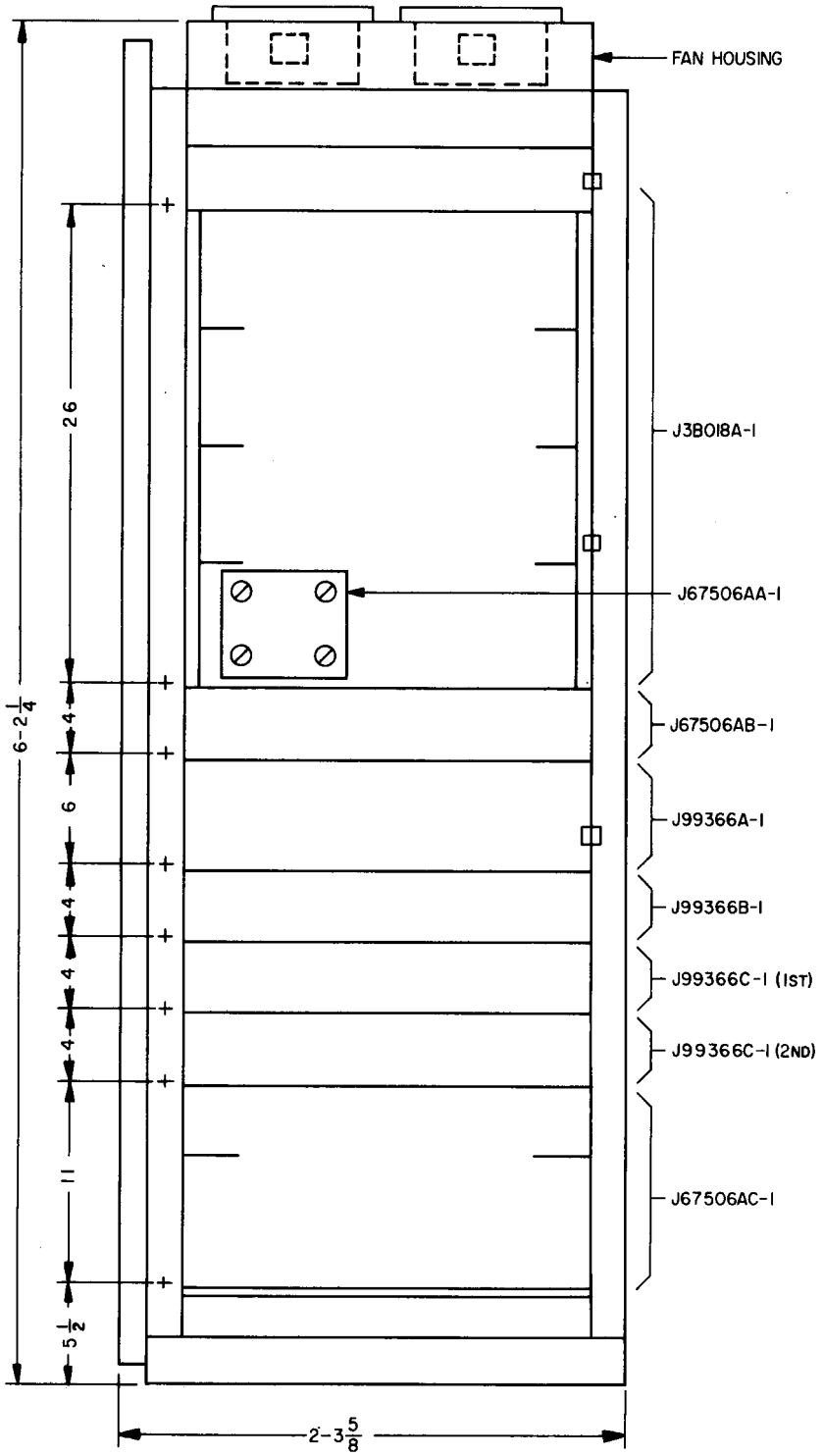

Fig. 1—Interface and Control Cabinet

tains an H803 connector block and a 61B apparatus mounting. This unit mounts on the TDC unit and contains the necessary circuitry to transfer scored addresses from the TDC to the peripheral bus computer via a Unibus cable.

Floor Plan Arrangement

1.10 The PBC complex consisting of J67506A and J67507A shall be located in the ETS maintenance center facing the CD-PT-TTY frame. Space for one cabinet on each side of the PBC complex must be reserved for future growth.

2. SUPPLEMENTARY INFORMATION

818-031-150—Limiting Conductor Lengths
801-100-151—Scanner and Distribution Units for Minicomputer Application—Traffic Converter Circuit
Floor Plan Data—Section 10.8, Sheet 10.

3. DRAWINGS

WE J drawings should be ordered by referring to the prefix and base number and requesting the current dash (-) number.

Circuits

SD-3B213-01—Traffic Data Converter Circuit
SD-68745-01—Traffic Register Circuit
SD-68746-01—Minicomputer Application Schematic
SD-94837-01—Unified Bus Converter Circuit
SD-94838-01—16 Row by 16 Bit Scanner Matrix Circuit
SD-94839-01—4 Row by 16 Bit Signal Distributer Matrix Circuit

Framework

ED-1A184-71—Line Up Cable Rack Assembly
ED-1A197-71—Cross Aisle Cable Racks
ED-1A210-14—Method of Installing Line-Up Cable Racks
ED-1A210-15—Method of Installing Cross Aisle Cable Racks
ED-68942-30—Method of Installing Computer Cabinets

Wiring and Cabling

ED-1A159-10—Method of Terminating Battery and Ground Feeders
ED-1C110-10—Switchboard Cabling Details
ED-54034-10—Switchboard Cabling Plan and Details for PBC

4. EQUIPMENT

J67506A—Peripheral Bus Computer Interface and Control Cabinet

List 1—Framework, assembly, wiring, and equipment for one peripheral bus interface and control cabinet. (See Note A.)

	WIRE	EQUIP	NOTES
Bus to Bus Access Circuit, SD-68740-01:			
Fig. 1	1	0	
PBC Power Circuit, SD-68742-01:			
Fig. 1. 2, 3, 4	1	0	
Fig. 5	2	0	
TDC Access Unit, J67506AA,L1	0	1	
PBC Power Unit, J67506AB,L1	0	1	
Bus to Bus Access Unit, J67506AC,L1	0	1	
Terminal Block Unit, J67506AD,L1	0	1	
+24V Power Supply Unit, J67506AE,L1	0	1	
Traffic Data Converter Unit, J3B018A	0	1	B
Bus Converter Unit, J99366A,L1	0	1	C
Scan Unit, J99366B,L1	0	1	C
Distributor Unit, J99366C,L1	0	2	C

List 2—Wiring and equipment per SD-68742-01, Fig. 6 option W and J67506AG-1 required in addition to list 1 when a -48 volt power plant is not available. (Stand alone STP office.)

List 3—Wiring and equipment per SD-68740-01, Fig. 1 option Z, SD-68743-01, Fig. 1 option Z, J67506AC,L2 and J67506AA,L2 required for switch or strap selectable DMA table addresses.

List 4—Wiring and equipment per SD-68740-01, Fig. 1 option Y, SD-68743-01, Fig. 1 option Y, J67506AC,L3 and J67506AA,L3 for software programmable data table addresses.

List 5—Wiring and equipment per SD-68772-01, Fig. 1, SD-68742-01 option V, and J67506AH,L1 required in addition to list 1 for the PBC alarm and status indicator panel.

List 6—Wiring and equipment per SD-68746-01, Fig. 13, required in addition to list 1 for the improved maintenance package in a CCIS office.

List 7—Wiring and equipment per SD-68746-01, Fig. 11, 13 required in addition to list 1 for the improved maintenance package in a non-CCIS office.

Notes

A. Two cables, ED-68941-30,G1 and G2 must be ordered to connect between the AC Bus Repeater Circuit, SD-68739-01 and the Bus to Bus Access Circuit, SD-68740-01. These cables contain the PUB, SCAB, and WRMI buses which originate from the processor frame. The total length of these buses must not exceed 350 cable feet. In computing the length of the ED-68941-30,G1 and G2 cables, the cable length from the processor frame to the AC Bus Repeater (which is mounted on the miscellaneous frame) must be included in the total 350 cable foot maximum length.

B. Provide lists in accordance with J3B018A for:

(1) A capacity of 1024 inputs.

(2) Unscaled input cards. (See Note 105B on SD-68745-01.)

(3) A home unit in minicomputer applications.

C. Provide address strapping in accordance with CAD 15 on SD-68746-01.

D. Order ED-54063-30 PBC TTY switchbox of channel 10TTY is to be used as an I/O terminal for DEC use in maintaining PDP 11/45. (See Note 110 on SD-68746-01). Issue 2B for alternatives.

J67506AA—AT&TCo Std—TDC Access Unit

List 1—Framework, assembly, surface wiring, and equipment for one TDC access unit per SD-68743-01, Fig. 1.

J67506AB—AT&TCo Std—Power Unit

List 1—Framework, assembly, surface wiring, and equipment for one power unit per SD-68742-01, Fig. 1, 2, 3, 4, and two Fig. 5.

J67506AC—AT&TCo Std—Bus to Bus Access Unit

List 1—Framework, assembly, surface wiring, and equipment for one bus to bus access unit per SD-68740-01, Fig. 1.

J67506AG—AT&TCo Std —PBC I/O Terminal Transfer Unit

List 1—Framework, assembly, wiring, and equipment for one PBC I/O terminal transfer unit per SD-68770-01, Fig. 1.

List 2—Framework, assembly, wiring, and equipment for one PBC I/O terminal transfer unit per SD-68770-01, Fig.2 when more than six I/O channels are required.

J67506AH—AT&TCo Std — Alarm and Status Panel Unit

List 1—Framework, assembly, wiring, and equipment for one alarm and status panel unit per SD-68772-01, Fig. 1.

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