PERMANENT SIGNAL HOLDING AND CONCENTRATING ARRANGEMENTS ENGINEERING INFORMATION NO. 1 AND NO. 5 CROSSBAR AND PANEL SYSTEMS

1. GENERAL

1.01 This section contains equipment information and data for permanent signal holding and concentrating arrangements for the panel system and No. 1 and No. 5 crossbar systems. The general description of these arrangements is covered in BSP Section 951-820-100.

1.02 This specification is being reissued to add a new BSP division number 815-031-170, and to bring it into conformity with the general Plant Series plan.

1.03 These permanent signal holding and concentrating arrangements permit the answering of permanent signals at a DSA board in the same or in a distant building. The office in which the permanent signal occurs is referred to as the originating office and the office in which the DSA board is located is referred to as the centralized point. The concentration is accomplished by use of rotary-type switches with associated timing and alarm circuits at the local office. Each concentrating switch handles up to 21 permanent signal holding trunks. At the centralized point there is one incoming permanent signal trunk with associated signaling equipment for each concentrating unit. Fig. 1 is a block diagram of the arrangement.

1.04 Permanent signal trunks appear on the master test frame in No. 5 crossbar offices and on sender make-busy frames in panel and No. 1 crossbar offices. These trunks are also connected to a test trunk and selector circuit so they can be tested directly from the local test desk.

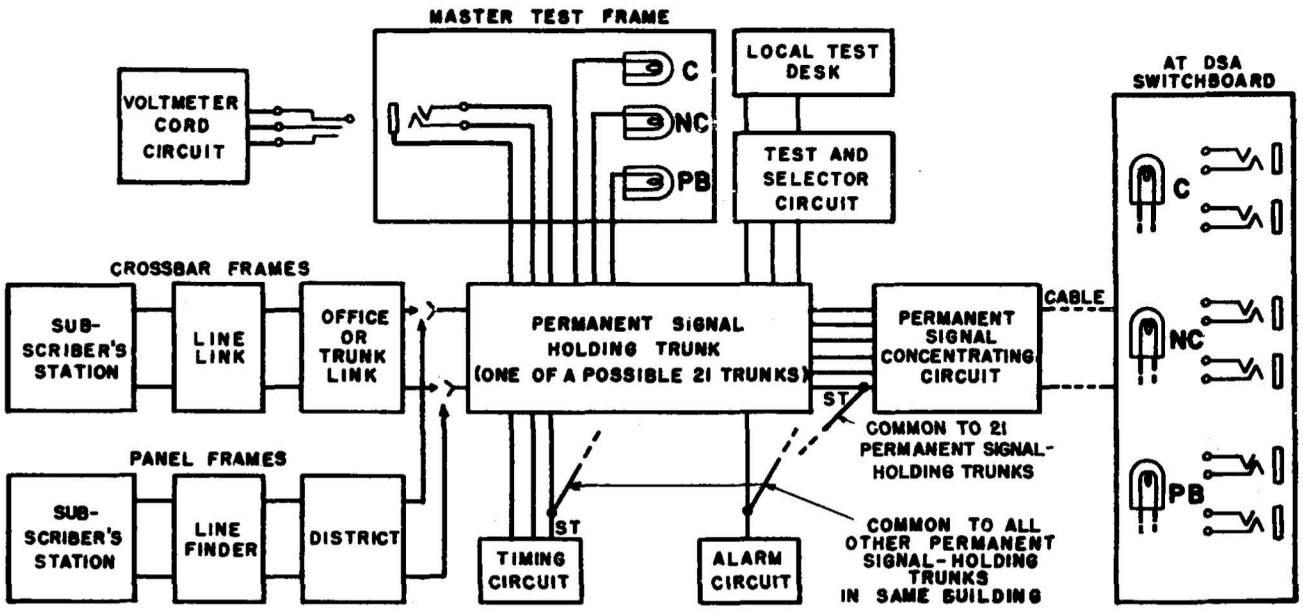

Fig. 1 – Block Diagram of Components

2. EQUIPMENT AT ORIGINATING OFFICE

General

2.01 The equipment in the originating office is mounted on relay bays 11 feet 6 inches by 2 feet 5/8 inch. The usual equipment on one bay consists of two concentrating units, 19 permanent signal holding trunks, one howler unit, and one timing, tone control, and AMA trunk number unit. Since the permanent signal trunks are furnished as individual units, additional trunks, as required, may be mounted on neighboring bays.

Concentrating Unit

2.02 The concentrating unit consists of one concentrating switch using a 206-type selector, in addition to timing, signaling, and control circuits. Each unit can serve a maximum of 21 permanent signal holding trunks. For service reasons, the concentrating units are generally furnished in pairs. Each unit occupies the space required by eight 2-inch by 23-inch mounting plates.

Trunks

2.03 Each permanent signal holding trunk requires the space of two 2-inch by 23-inch mounting plates. These trunks may be multipled between concentrating units to provide multiple access to the DSA board for individual trunks. Even if permanent signal holding trunks in the originating office have been segregated according to classes such as coin, PBX, and noncoin-non-PBX, these groups of trunks may be served by the same concentrating unit. When the number of permanent signal holding trunks is 21 or less, straps are used to multiple equipped to unequipped bank terminals. When the number of trunks exceeds 21, making it necessary to furnish a second pair or group of concentrating units, the trunks can either be assigned in order to the first group up to its capacity and the remainder assigned to the second group, or they can be divided approximately evenly over both groups. The purpose of doing this is to equalize the load on the trunks to the DSA board. Except when job conditions indicate otherwise, the first plan is followed when the number of trunks is 31 or more; the second plan, when the number is 22 to 30 inclusive.

Timing, Tone Control, and AMA Trunk Number Unit

2.04 The timing, tone control, and AMA trunk number unit serves a maximum of 80 permanent signal holding trunks. These trunks must all be in one originating or dial tone marker group in No. 1 or No. 5 crossbar offices or one decoder group in panel offices. The mounting plate space required by this unit is four 2-inch by 23-inch mounting plates.

3. EQUIPMENT AT CENTRALIZED POINT

General

3.01 The equipment is arranged to be used in conjunction with Nos. 1, 3, 3C, 3CL, 13C, 13D, 15C, and 15D switchboards at the centralized point. The equipment at this point consists of trunk and signaling circuits associated with lamps and jacks in the DSA board.

Trunks

3.02 At the centralized point, one permanent signal holding trunk is provided for each concentrating unit in the local office. The apparatus is mounted on 1-3/4-inch mounting plates and occupies relay rack space as shown in the following table.

BOARD	NO. UNITS	NO. PLATES	RELAY RACK WIDTH (INCHES)
No. 1	2	11	19
Nos. 3, 3C, 3CL	2	8	23
Nos. 13C, 13D	1	4	23
Nos. 15C, 15D	1	4	23

Jacks and Lamps

3.03 Six jacks and three lamps are provided at the DSA board for each permanent signal holding trunk at the centralized point. These lamps and jacks will be designated in accordance with the class of lines served by the local permanent signal holding trunk. Provision is made for one multiple appearance of these jacks and lamps.

4. REFERENCES

4.01 The following is a list of sections to which reference can be made.

951-820-100 — Permanent Signal Holding and Concentrating Arrangements

819-753-150 (J23060) — Alarm and Timing Permanent Signal and Test Selection Equipment — No. 5 Crossbar System

815-075-152 (J91104) — Relay Rack Equipment
816-028-150
819-080-150
For Switchboards Nos. 13C, 13D, 15C, and 15D — No. 1 and No. 5 Crossbar, Panel, Step-By-Step, and No. 4 Type Toll Switching Systems

AA261.022 (J61533) — Relay Rack Mounted Units — Toll Switchboards

AA388.032 (J99206) — Equipment Units — Relay Rack Mounted — Common Systems

AA388.067 (J91107) — Switchboard No. 3CL — Positional Lower Unit Equipment — Toll and Dial Systems "A" Switchboards

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