NO. 2D ANNOUNCEMENT SYSTEM

EQUIPMENT DESIGN REQUIREMENTS

COMMON SYSTEMS

1. GENERAL

Scope

1.01 This specification, together with the supplementary information listed herein, covers the equipment design requirements for the framework, equipment, and circuits to be used in manufacture of No. 2D announcement system. The Audichron Company equipment units described in this specification are leased from the Audichron Company.

Capacity

1.02 No. 2D announcement system is available as a single- or dual-channel arrangement. The capacity of the single channel is 30 line circuits, and the capacity of the dual channel is 100 line circuits.

Description

1.03 No. 2D announcement system is a recorded announcement system designed to give customers a predetermined number of brief announcements such as time of day through regular telephone facilities. This system is available as a single-channel or a dual-channel arrangement. With either system the reproducing machines, associated amplifiers, and records containing the announcement are furnished by the Audichron Company. The sound output of these machines is transmitted over line circuits to subscriber lines terminating in a telephone central office. With the dual system, distributing relays are available so that a maximum number of lines may be served without overloading the relay contacts on the announcement machines.

1.04 The line circuits, together with alarm, make busy, line registers, distributing relay, and emergency announcement circuits, are Bell System equipment. This equipment is arranged on 2- by 23-inch mounting plates and, together with the Audichron equipment, are located on bulb-angle or sheet-metal relay rack bays as covered herein. The single-channel arrangement consists of one 11-foot 6-inch relay rack bay and the dual channel consists of two such bays. When located in a No. 5 crossbar office, sheet-metal relay rack may be used. In all other locations, bulb-angle relay rack will be used.

1.05 In case of voice failure, the dual system is arranged to automatically cut in the standby announcement machine. On the single-channel system, oral announcement may be made by plugging a headset into jacks on the announcement machine or having available an emergency announcement trunk which permits oral announcements by an operator at a regular switchboard position. This trunk terminates in the switchboard multiple. An alarm lamp and a bell are also provided at the switchboard. The oral announcements are made through the operator telephone set over a regular cord using the switchboard clock or calculagraph for time.

1.06 Power for this system consists of both 115-volt ac and 48-volt dc. Commercial ac is used to operate the announcement machines and associated amplifiers and is connected as shown on SD-95831-01. The 48-volt source is the standard central office battery supply. The ac supply is fused at the nearest fuse distributing panel. The 48 volts may be fused on existing central office fuse bays or fuse panels may be provided in this bay to house the necessary fuses as covered herein.

1.07 To guard against failure of commercial ac power, the Audichron Company has available a converter unit which operates from 48-volt central office battery through an inductor. This converter is always furnished with the dual system but is optional with the single-channel system. The 48-volt supply for the converter is obtained at the power distributing fuse panel. It is run through a 30-ampere fusetron using No. 6

"AWG" or larger wire in order not to exceed a total lead resistance of 0.1 ohm. If, the battery source is too far from the announcement bay that an unreasonable size of supply wire is required, the converter and inductor may then be located nearer the battery source.

1.08 An Audichron rotary counter consisting of a panel-mounted rotary-type register, which automatically registers calls of the line announcement units, is available on an optional basis.

1.09 The Audichron mechanism reproduces an announcement that has been previously magnetically recorded on a synthetic rubber band that is molded in combination with a finely ground magnetizeable metal. This record band is then stretched over a cylinder made of a non-magnetic material. The cylinder together with the synthetic rubber band is referred to as a record. For audible pronouncement of time in increments of hours, minutes, and seconds, the Audichron mechanism is equipped with three records (recorded by the Audichron Company). Two of these records are mounted upon concentric shafts in a compartment on the left side of the machine. The third record is mounted on the right side of the machine. By suitable gearing within the mechanism housing, the three records are revolved at a continuous speed, driven by a 115-volt ac.

2. SUPPLEMENTARY INFORMATION

800-600-000 — List of General Equipment Requirement Sections
801-000-000 — Equipment Design and General Equipment Requirements and Engineering Information — Common Systems
Floor Plan Data — Section 9.2, Sheets 6 and 7

3. DRAWINGS

WECo J drawings listed should be ordered by referring to the prefix and base number and requesting the highest suffix dash (—) number.

Circuits

SD-95831-01 — Application Schematic for 115-volt 60-cycle Power Supply
SD-96496-01 — Announcement Line and Alarm Circuit — Single or Dual Channel
SD-96498-01 — Emergency Announcement Trunk Circuit

Framework

ED-92928-( ) — Typical Bay Layout and Miscellaneous Details — Single- and Dual-channel Announcement Machine Equipment

Equipment

ED-26485-01 — AC Power Fittings—Sheet Metal Frames
ED-91309-01 — AC Power Fittings — Angle Frames
ED-92930-( ) — Miscellaneous Equipment for Single and Dual Channels and Fuse Panel Equipment
J95418A-( ) — Announcement Line Circuit Unit
J95418B-( ) — Power Voice Failure — Fuse Alarms Dual Channel
J95418C-( ) — Alarm Unit Power Voice Failure — Fuse Alarms — Single Channel
J95418D-( ) — Emergency Announcement Trunk Unit

4. EQUIPMENT

ED-92930-( ) — Miscellaneous Equipment for Single- and Dual-channel No. 2D Announcement Systems

Group 1 — Assembly of one mounting plate arranged for 14 line registers equipped with one circuit per SD-96496-01, Fig. 2.
Group 2 — Wiring and equipment required in addition to group one for one additional line register per SD-96496-01, Fig. 2.
Group 3 — Assembly of one mounting plate arranged for 6 make-busy relays equipped with one circuit per SD-96496-01, Fig. 7 required in crossbar and step-by-step offices.
Group 4 — Wiring and equipment required in addition to group 3 for one additional make-busy relay per SD-96496-01, Fig. 7.
Group 5 — Fuse panel assembly for use on bulb-angle relay rack.

Group 6 — Fuse panel assembly for use in No. 5 crossbar sheet-metal relay rack.

Group 7 — Assembly, wiring, and equipment per SD-96496-01, Fig. 9 required for distributing relays.

J95418A — AT&TCo Std — Line Circuit Unit

Equipment — J95418A-( )

List 1 — Assembly, wiring, and equipment for one line circuit unit per SD-96496-01, Fig. 1, less all options, with provisions for one additional circuit.

List 2 — Wiring and equipment required in addition to list 1 for one additional line circuit per SD-96496-01, Fig. 1, less all options.

List 3 — Wiring and equipment per SD-96496-01, Fig. 1, "N" option, required in addition to list 1 or 2 for ground cutoff panel office first or intermediate line.

List 4 — Wiring and equipment per SD-96496-01, Fig. 1, "M" option, required in addition to list 1 or 2 for ground cutoff panel office last line.

List 5 — Wiring and equipment per SD-96496-01, Fig. 1, "K" option, required in addition to list 1 or 2 for battery cutoff panel office first or intermediate line.

List 6 — Wiring and equipment per SD-96496-01, Fig. 1, "J" option, required in addition to list 1 or 2 for battery cutoff panel office last line.

Note

A. Provide optional wiring as required.

J95418B — AT&TCo Std — Alarm Unit — Dual Channel — Power Voice Failure — Fuse Alarms

Equipment — J95418B-( )

List 1 — Assembly, wiring, and common equipment per SD-96496-01, Figs. 4, 5, and 8 equipped with SD-96496-01, Figs. 4 and 5, less all options. (See Note A.)

List 2 — Wiring and equipment per SD-96496-01, Figs. 4 and 5, "Y" option, required in addition to list 1 for connection to No. 5 crossbar office.

List 3 — Wiring and equipment per SD-96496-01, Fig. 8 required in addition to list 1 for auxiliary fuse alarm circuit to provide central office alarm tie-in for auxiliary fuse panel arrangement.

Notes

A. The AFA lamp is located on auxiliary fuse panel assemblies.

B. Provide optional wiring as required.

C. The No. 243A inductor location is covered under miscellaneous equipment.

J95418C — AT&TCo Std — Alarm Unit — Single Channel — Power Voice Failure — Fuse Alarms

Equipment — J95418C-( )

List 1 — Assembly, wiring, and common equipment for one alarm unit per SD-96496-01, Figs. 3, 5, and 8 equipped with SD-96496-01, Fig. 3, less all options.

List 2 — Wiring and equipment per SD-96496-01, Fig. 3, "Y" option, required in addition to list 1 for connection to a No. 5 crossbar office.

List 3 — Wiring and equipment per SD-96496-01, Fig. 5 required in addition to list 1 when power alarm circuit is specified.

List 4 — Wiring and equipment per SD-96496-01, Fig. 5, "Y" option only, required in addition to list 3 for No. 5 crossbar office.

J95418D — AT&TCo Std — Emergency Announcement Trunk Circuit

Equipment — J95418D-( )

List 1 — Assembly, wiring, and equipment per SD-96498-01, Fig. 1.

List 2 — Wiring and equipment per SD-96498-01, Fig. A required in addition to list 1 for No. 3, 3C, or 3CL switchboard.

List 3 — Wiring and equipment per SD-96498-01, Fig. B required in addition to list 1 for No. 1 toll switchboard.

List 4 — Wiring and equipment per SD-96498-01, Fig. C required in addition to list 1 for DSA or local manual switchboard.

Notes

A. Optional wiring shall be furnished as required.

B. The ringing supply for this circuit shall be fused on existing fuse bays in the office.

Miscellaneous Equipment

4.01 ***SD-96496-01, Fig. 6 — Voice Failure Alarm:*** This VA lamp is generally located in the multiple space of an existing switchboard in the same building. Mountings for either 8-1/2- or 10-1/4-inch panel boards shall be provided per ED-92928-01. The 24-volt battery for the lamp shall be obtained from the same source that supplies other lamps in the board.

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4.02 ***SD-96498-01, Fig. 2 — Call Bell for Emergency Announcement Trunk:*** When the emergency announcement trunk for the single-channel system is used, the call bell may be located on the roof of the switchboard section in which the lamp per 4.01 and the emergency trunk jacks are located. It will be satisfactory to use locations specified by the customer.

4.03 ***SD-96496-01, Fig. 5 — Auxiliary Power Supply:*** The No. 243A inductor associated with the Audichron converter for the single-channel system may be mounted at the top of the frame if space is available or in an existing relay rack bay nearby. For the dual-channel system a location for the coil is shown on the typical bay layout.