

TRAFFIC SUPERVISORY CABINET EQUIPMENT DESIGN REQUIREMENTS CROSSBAR TANDEM SYSTEM

1. GENERAL

SCOPE

1.01 This specification, together with the supplementary information listed herein, covers the equipment design requirements for the cabinet, framework, equipment, and circuits to be used in the engineering, manufacture, and installation of a traffic supervisory cabinet and its associated miscellaneous equipment for use in crossbar tandem offices.

1.02 This specification is reissued to incorporate the J22653AB unit, add Note A, J22653A, List 4 and 5. Issue 2 Addendum Issues 1, 2, and 3 are also included in this change.

CAPACITY

1.03 The traffic supervisory cabinet is arranged to accommodate the traffic indicating and control facilities for one marker group in toll tandem offices of Class 4 or higher.

DESCRIPTION

1.04 The traffic supervisory cabinet has facilities for connecting any one or more of eight announcement trunk groups to any one of six recorded announcement channels of the standard 5A announcement machine. Eight rotary selector switches provided for this purpose are arranged so that the announcement channels are connected to positions 1 to 6 as required. Each switch represents a particular announcement connecting trunk group and bears the designation of that group. Any or all may be set to the same channel. The eight switches are designated as follows:

DESIGNATION

MEANING

EMG	Emergency
FRA	Final Recorder Announcement

MCA	Misrouted NON-CAMA Announcement
NCA	No Circuit Announcement
ROA	Reorder Announcement
SOA	Sender Overload Announcement
UCA	Unauthorized Code Announcement
VCA	Vacant Code Announcement

Setting the switches in the seventh position, results in making all trunks in the trunk group busy in the case of MCA, VCA, or UCA groups, or in the transmission of tone to all other groups.

1.05 Within each MCA, VCA, UCA, and ROA trunk group, one appearance is used for furnishing voice announcements by an operator at a switchboard. Any one or two of these four appearances can be connected to one or two switchboard trunks allocated for this service. Four 3-position keys are provided in the traffic supervisory cabinet to perform this function.

1.06 Alternate routing of traffic can be controlled at the office supervisory cabinet by means of 50 locking keys, each of which controls the operation of a maximum of three route transfer relays in the markers. A lamp per key is provided to indicate the condition of the key. Operation of a route transfer relay determines final and alternate routing schemes.

1.07 Twenty 3-position keys associated with 40 route relays in the markers are provided to permit final route advance to either a NCA or EMG announcement trunk depending on the position of the operated key. Each NCA or EMG key may be associated with a maximum of three RT relays in the marker. When any of these keys is in its unoperated position, the normal final route advance

to "No Circuit" tone trunks will occur. Lamps associated with each operated condition are provided.

1.08 Operation of the sender attachment delay recorder is controlled at the traffic supervisory cabinet. This is accomplished by use of two keys and three lamps. One key is designated (3S-7S) which enables the selection of a 3-second or 7-second delay interval in the recorder. After the delay interval is chosen, the recorder can be started by the operation of the SAD key. If the number of sender attachment delays exceeds a preset amount, an indicating lamp representing one type of sender will light. Two such lamps (0-GD and 1-GD) are provided. A lamp designated SAD indicates the off-normal condition of the recorder.

1.09 Directional reservation control of 2-way intertoll trunks is provided at the traffic supervisory cabinet. One key, two lamps, and one rotary selector switch per trunk group are required to perform this function. The setting of the switch to any position 1 to 5 determines the point at which reservation would take effect providing the ON key is in the operated position. When reservation is specified and the number of idle trunks in the particular trunk group is equal to or less than the setting of the associated rotary switch, the remaining idle trunks are reserved for use in only the incoming direction; and from the higher class office to the lower. When this condition exists, the RSV lamp lights. As traffic eases and the idle trunks exceed the switch setting, the RSV lamp goes dark and all trunks are available for both outgoing and incoming traffic. Each trunk group is associated with a directional reservation equipment unit which is located in the switching office.

1.10 Lamps providing the traffic department with a number of possible circuit busy indications are located in the traffic supervisory cabinet. These lamps are listed as follows:

TYPE	DESIGNATION	QUANTITY
Sender Load Register	LR	5
Busy Sender Group	BSG	5
Short Time Out	STO	5
All Markers Busy	AMB	1
All Transverters Busy	ATVB	1
Register Group Busy	RGB	15
Trunk Group Busy	GB	100

When a predetermined number of either PCI, RP, DP, or MF senders become busy, its associated LR lamp lights. When all senders of one type in a sender link become busy due to traffic overload, the associated BSG lamp lights under control of the intersender timing circuit which then causes the sender timing interval to be reduced and lights the corresponding STO lamps. One of each lamp is required for each intersender timing control circuit associated with each type of sender. When all 10-digit registers in a group (those on a register link frame) are busy the corresponding RGB lamp lights.

1.11 The traffic supervisory cabinet is a sheet-metal, floor-mounted console approximately 50 inches high, 21-1/16 inches wide, and 22 inches deep having a sloping front control panel, containing keys, switches, and lamps, located approximately 29 inches from the floor. The panel slopes 19 degrees from the vertical providing convenient access and display of all facilities. The lower portion of the cabinet contains a miscellaneous mounting plate, and two rows of wire-wrapped type terminal strips for terminating switchboard and local cabling. A cross-connection field is provided to permit flexibility in assigning route transfer relays in the marker to the RT and EMG-NCA keys. The mounting plate contains eight potentiometers and capacitors for adjusting the tone level of each announcement amplifier. Access to the lower front portion of the cabinet is made through a hinged door. The rear of the cabinet contains a removable panel fastened by screws. The top panel of the cabinet is a hinged snap-lift door which provides easy access to the wiring of the control panel. The bottom of the cabinet is arranged to accept the switchboard cabling through a sleeve in the floor. The local cable is run down the right side of the cabinet and fastened to standard cable brackets.

1.12 The cabinet is arranged to be placed against a column or partition and shall be located as specified in the traffic area. Sufficient cable slack shall be provided and stored in the cabinet to permit moving the cabinet away from the wall if necessary.

1.13 A directional reservation equipment unit is required for each group of intertoll trunks specifying directional reservation control. This surface-wired unit consists of two 23-inch mounting plates and shall be mounted on miscellaneous relay

racks. Included in the apparatus required for the unit are: two diodes mounted on individual heat sinks to reduce operational temperatures; two transistors; three general-purpose and two dry-reed relays; a unit test key; and a unit terminal strip for terminating switchboard cabling.

2. SUPPLEMENTARY INFORMATION

817-000-000—Tandem Crossbar System Index
 J29253—817-010-100—General Outline—Tandem Crossbar System

3. DRAWINGS

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

ED-27127-01—Wire Gauges and Type of Insulation
 ED-92744-01—Frame Assembly
 J22653A-()—Traffic Supervisory Cabinet
 J22653AA-()—Directional Reservation Unit
 J22653AB-()—Engineering and Administrative Data Acquisition System/Network Management Unit
 SD-25435-01—Keysheet—Crossbar Tandem Office
 SD-27136-01—Traffic Supervisory Circuit
 SD-27138-01—Directional Reservation Circuit
 SD-27076-01—OGT and 2-Way Trunk Group Busy Circuit

4. EQUIPMENT

J22653A—AT&T Co Std—Traffic Supervisory Cabinet

Equipment—J22653A-()

List 1—Cabinet framework, assembly, wiring, and equipment for one traffic supervisory cabinet.

	WIRE	EQUIP	NOTES
Traffic Supervisory Ckt, SD-27136-01:			
Announcement Selector, Route Transfer, All Marker and Transverter Busy Indicator Ckt, Fig. 1	1	1	
Intersender Timing Control, Fig. 2	5	5	
Directional Reservation, Fig. 3	4	4	
Register Group Busy, Fig. 4	15	15	
Sender Attachment Delay Recorder, Fig. 5	2	1	
Sender Load Register, Fig. 6	5	5	
Trunk Group Busy, Fig. 7	1	1	
Dynamic Overload Exclusion Control	1	0	

List 2—Equipment required per SD-27136-01, Fig. 8 when office is arranged to function with traffic control circuit.

List 3—Equipment per SD-27136-01, Fig. 9 required in addition to list 1 to arrange traffic supervisory cabinet with dynamic overload exclusion control.

List 4—Assembly and equipment per SD-27136-01, Fig. 5, G option only required in addition to list 1 to provide for second sender delay attachment recorder.

List 5—Wiring and equipment per SD-27136-01, Fig. 15 required in addition to list 1 when Engineering and Administrative Data Acquisition System/Network Management is specified.

J22653AA—AT&T Co Std—Directional Reservation Unit

Equipment—J22653AA-()

List 1—Framework, assembly, wiring, and equipment per SD-27138-01, Fig. 1 for one directional reservation unit required for each group of 2-way intertoll trunks (maximum four).

Note

- A. Control facilities for directional reservation, required with this unit, are located in the traffic supervisory cabinet.

J22653AB—AT&T Co Std—Engineering and Administrative Data Acquisition System/Network Management Unit

Equipment—J22653AB()

List 1—Assembly, wiring, and equipment per SD-27136-01, Fig. 10, 12, 13, arranged to provide Engineering and Administrative Data Acquisition System/Network Management feature.

List 2—Assembly, wiring, and equipment per SD-27136-01, Fig. 11 required in addition to list 1 when directional reservation control is provided.

List 3—Assembly, wiring, and equipment per

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SD-27136-01, Fig. 14 required in addition to list 1 when dynamic overload control is provided.

Note

- A. The unit local cable shall contain all standard optional wiring for the circuit figures specified. This wiring shall be connected in accordance with job requirements. When AB unit is installed on existing equipment the cable will be supplied with the unit.

5. GENERAL NOTES

- 5.01** Standard commercial colors for the traffic supervisory cabinet are:

Light Gray
Dark Gray

- 5.02** Codes J22653B through J22653Y are unassigned.