

SYSTEM SWITCHING CENTER

1.0 GENERAL DESCRIPTION

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1.1.1 The System Switching Center (SSC) is a central processing unit for radio automation systems. It contains power supplies, logic circuits, digital displays for SOURCE PRESET (next to run) and PROGRAM OUTPUT (source on air), system function controls (START, STOP, RUN, HOLD) and an AUDITION SELECTOR. Each source (numbered 1 thru 0) is served by its own plug-in Channel Module.

1.1.2 When more than ten sources are required in an automation system, a companion Nine Source Extender may be connected to the System Switching Center. This Extender (SSCX) accommodates up to nine additional Channel Modules (sources are then numbered 01 thru 10 in the SSC, and 11 thru 19 in the SSCX).

1.1.3 The SSC may be equipped with either or both of two accessories.

1.1.3.1 A 12-button Keypad may be mounted in an opening provided in the top center of the front panel. This Keypad permits manual selection of the SOURCE PRESET (to run next). In automation system operation, this provides added flexibility in handling abnormal situations, such as inserting Weather Bulletins into the program sequence.

1.1.3.2 An ALARM circuit card may be plugged into the printed circuit card enclosure area. This card monitors the circuit which starts each new source. If a source is not ready when the start pulse is delivered, an Alarm condition exists. Provision is made for automatic correction of this condition by generation of an advance pulse to the associated system programmer, which causes a new SOURCE PRESET selection. This action may be delayed by a period adjustable between 1 and 10 seconds.

1.2 APPLICATION

1.2.1 The System Switching Center may be operated manually to provide a Semi-Automatic program switcher. Since provision is made for remote control and display of operating functions, the SSC need not be located at the operating position.

1.2.2 SOURCE PRESET selection may be provided by program sequence memory devices such as the KSP-10 System Programmer. In this application, the SSC causes the KSP-10 to advance to a new event each time a source is started, thus providing the SSC with fresh SOURCE PRESET selection data for up to ten sources (numbers 1-0).

1.2.3 A digital Clock and Time Selector (such as the TS-4) may be added to the above combination to permit clock controlled functions, such as system start in the morning, semi-hourly format adjustment to permit station I.D. announcements within the required intervals, etc. In this application the TS-4 is time programmed by the KSP-10 and generates output commands which are implemented by the SSC.

- 1.2.4 A Random Access Sub-Programmer, such as the RA-10 may be used with the SSC and as many as ten multiple cartridge playback units, such as the Gates G-24 Carousels.

NOTE: *If the total number of sources to be controlled is between 11 and 19 (inclusive) the SSCX will be necessary.*

In this application, one of the source numbers (usually 0) is a "call" for the Sub-Programmer, which then supplies the number of the SOURCE PRESET.

The RA-10 may be used with the KSP-10 to provide a flexible but straight-forward dual memory program sequence control group. The KSP-10 provides the basic format sequence and the RA-10 provides the variable traffic events. The RA-10 may be used without a system programmer to provide programmed traffic events in a Semi-Automatic system (see 1.2.1).

1.3 PHYSICAL DESCRIPTION

- 1.3.1 The System Switching Center is a single unit intended for rack mounting. It occupies six increments vertically (10½ inches). The Nine Source Extender occupies four increments (7 inches) and usually mounts just below the SSC.
- 1.3.2 Connecting cables from the program sources (one each) terminate on printed circuit edge connectors at the rear of the unit.
- 1.3.3 Connections to other system components (such as the Audio Control Center and Program Logging System) are made via rear mounted plug and socket connectors.
- 1.3.4 Provision is made in the printed circuit card enclosure area for three interface cards. These cards serve as logic and signal level translators for such units as the KSP-10 System Programmer, the TS-4 Time Selector, and RA-10 Sub-Programmer. Each of these requires a unique interface card.
- 1.3.5 Connections between the KSP-10, the TS-4, the RA-10, and the SSC are made with multiple, controlled impedance, twisted pair cable, which is required for proper transmission of the high speed digital signals passing between these units.

1.4 SPECIFICATIONS

Input Power:	117/234 ±10% VAC, 50/60 Hz
Operating Temperature:	+10° C to +55° C (+50° F to +131° F)
Gain:	Unity
Response:	±1 dB, 30 to 15 kHz
Crosstalk (Between Input Channels):	70 dB below program
Noise:	-70 dBm
Input/Source Z:	600 ohm resistive, unbalanced
Load Z:	600/150 ohms, floating
Output Level:	+10 dBm max. at less than 1% THD, 30 Hz to 15 kHz

Source Units:

(Ten maximum, nineteen with Nine Source Extender —)

Gates Criterion 80, Compact Criterion, 855 Multiple Cartridge Handler, Reel-to-Reel Machines with Gates DCU-3 Detector Control Unit, G-24 Multiple Cartridge Handler.

Dimensions:

Height — 10.47 inches

Panel — EIA notch pattern

Width —

Panel — 19 inches

Enclosure — 17¼ inches (over hardware)

Depth —

(Behind Panel) — 12½ inches over cable connectors