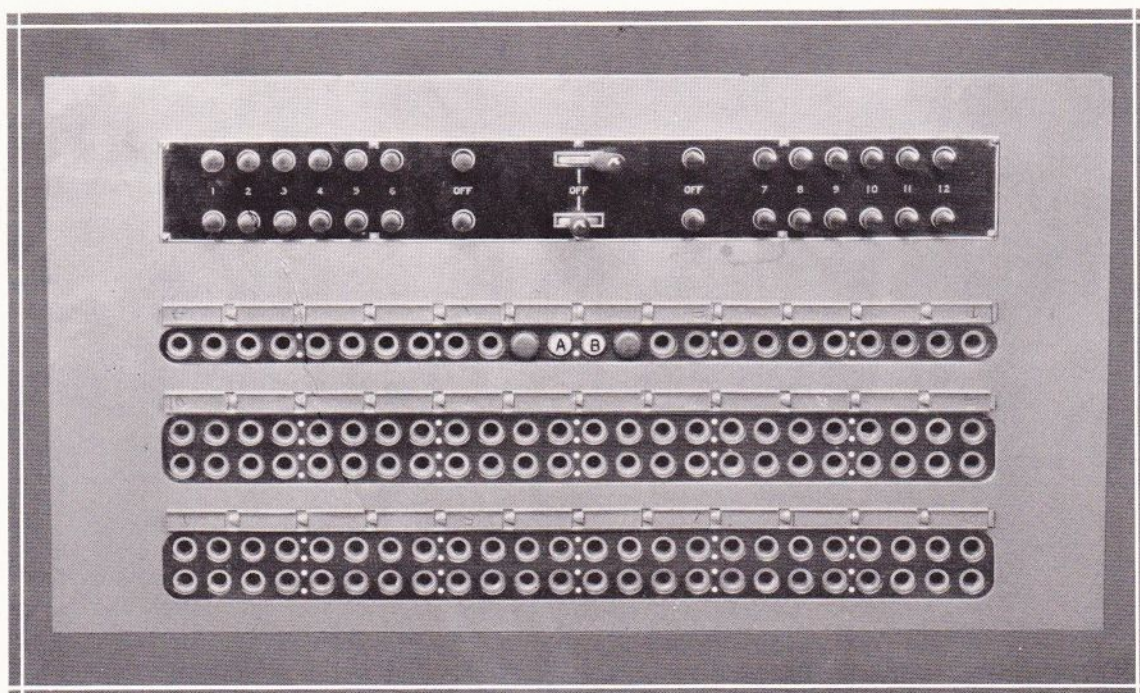


Western Electric
PROGRAM LINE PANEL

272A

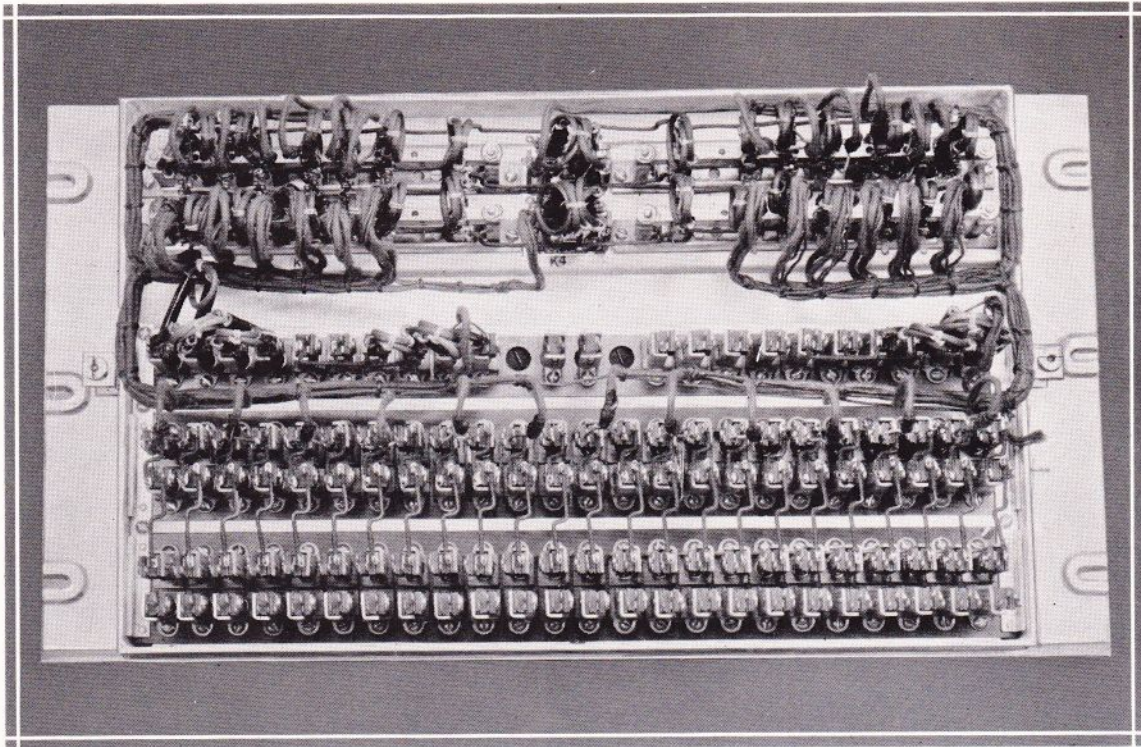


FOR RADIO TELEPHONE BROADCASTING SYSTEMS

A development of Bell Telephone Laboratories, the research laboratories of the American Telephone and Telegraph Company and the Western Electric Company

THE Western Electric 272A Program Line Panel provides facilities for selecting incoming programs from outside sources. It may be used at the main studio location or other suitably equipped switching points of a radio broadcasting system.

This panel accommodates twelve incoming program circuits which are connected to jacks for testing, cross connection or interchange of program circuits and order wire lines in emergencies. High impedance monitoring (bridging) connections are provided for each program circuit for headset monitoring, testing, or other purposes as may be required.



REAR VIEW

Circuit Operation

Any one of the twelve incoming program circuits may be selected and assigned to either of two output circuits which connect to an amplifier channel such as the Western Electric 701A Speech Input Bay. Or, if two such amplifier channels are available, one incoming program circuit may be assigned to either of the two amplifier channels or two incoming programs may be assigned to separate amplifier channels, amplified and dispatched independently.

The program circuit selector keys are mechanically interlocked which ordinarily prevents the assignment of more than one incoming program circuit to a single output circuit. However, two program circuits may be combined or assigned to one output circuit by means of mixing potentiometers such as those provided in the Western Electric 267 Type Control Panel which is usually associated with the studio amplifier channel.

The selector keys in duplicate also make possible pre-setting for one outside program while another is in progress.

Indicating lamps associated with each lo-

cal circuit inform the operator when selected program circuits are in service through the local amplifier channels.

Circuit jacks at the necessary points in the electrical paths throughout the panel provide access to any part of the circuit for testing purposes. However, normal operation is accomplished without the use of patching cords and plugs, the circuits being continuous through the jacks.

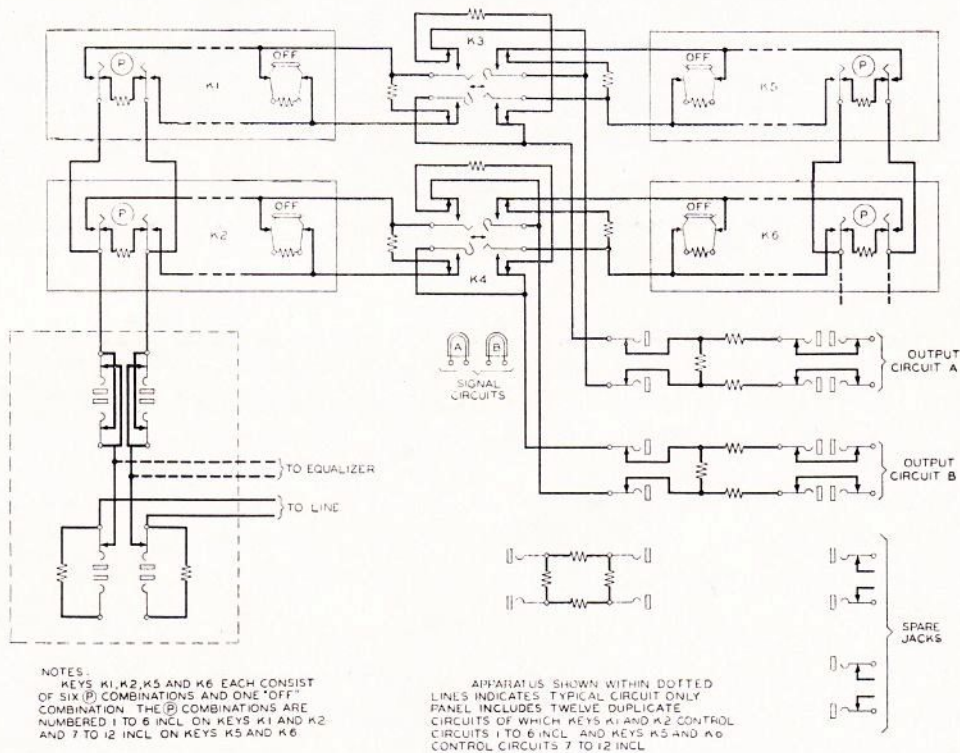
The No. 272A Program Line Panel is intended for operation from incoming program circuits of 150 ohms nominal impedance. The two outgoing circuits contain transducer networks which effect an output impedance of 600 ohms for each circuit. The transmission loss from any selected incoming program circuit to either of the two available output circuits is approximately 11 db exclusive of the loss introduced by the associated program circuit equalizer if one is employed. A 600-ohm artificial line with an attenuation or loss of 10 db is provided in the panel for further attenuating the program energy of either output circuit, should this be required. The terminals of this pad are connected to jacks which appear at the front of the panel.

Provision is made for connecting program circuit equalizers such as the Western Electric 23A Equalizers, and the two output circuits are designed to be connected to attenuators such as those provided in the Western Electric 269A Attenuator Panel in which the program energy may be attenuated 70 db in controlled steps of 10, 20 and 40 db or passed through the attenuator panel without further attenuation, if desired.

Mechanical Description

The component parts of this unit are assembled on a mat covered metal panel which occupies a space 19 $\frac{1}{4}$ " wide and 10 $\frac{1}{2}$ " high in a standard relay rack or an equipment cabinet. The top section of the panel includes four circuit selector switches two of which are associated with each group of six incoming circuits so that the two selector keys for any incoming line are located one above the other, one in each selector switch group. The operation of any line key or of the release key in any one of the four selector switches releases any previously operated key in that

switch. Two master switches for the ultimate connections to the panel output circuits are located at the center of the selector switch assembly. Operating either of these keys to the left connects the associated output circuit to the output of the associated selector switch for lines 1 to 6 and similar operation of either of the keys to the right connects the associated output circuit to the associated selector switch for lines 7 to 12. A designation plate with chromium finished border lines and designations against a black background is provided at the top of the panel for the designations of the selector switches and the master switches. The remaining front surface of the panel is occupied by three mounting spaces for the circuit jacks. Two indicating lamps are provided in the center mounting space to inform the operator when the output circuits are in service. With the interlocking keys and lever type master switches the possibilities of false operation in making instantaneous changes in remote program connections are reduced to a minimum.



SCHEMATIC CIRCUIT

SPECIFICATIONS

- General:** Provides facilities for terminating and switching twelve incoming program lines.
- Input:** Operates from 150 ohms nominal impedance.
- Output:** 600 ohms for each of two output circuits.
- Weight:** Approximately 12 lbs.
- Dimensions:** 19 $\frac{1}{4}$ " long by 10 $\frac{1}{2}$ " high.
- Finish:** 272A-15—Standard—Dark Gray Mat
272A-3 —Black Mat

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TWENTY-THREE BRANCHES FROM COAST TO COAST