

UNIT INSTRUCTIONS

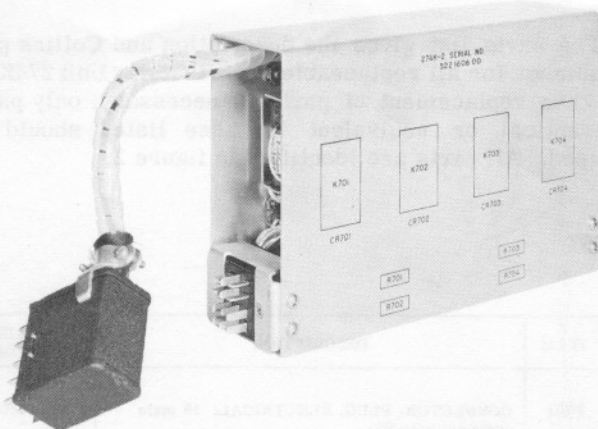
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RELAY UNIT 274K-2

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C583-13-P

Figure 1. Relay Unit 274K-2

1.1 PURPOSE OF EQUIPMENT.

Relay Unit 274K-2 controls application of audio power to station speakers and a-c power to studio warning lights when used with broadcast studio equipment, such as Collins Broadcast Console 212G-1. It may be used in AM, FM, and TV broadcast service or program control in audio systems.

1.2 PHYSICAL DESCRIPTION.

Relay Unit 274K-2 (figure 1) is a plug-in module containing four 12-volt d-c relays and their associated circuitry. The 274K-2 is provided with a cover to protect relay contacts from dust and damage while handling. The 274K-2 is 5-1/2 inches high, 2-1/2 inches wide, and 9-1/2 inches long and weighs approximately 2.5 pounds.

1.3 ELECTRICAL CHARACTERISTICS.

a. **CONNECTORS.** One 12-pin connector, P702, (Howard Jones Type P-312-AB) mounted on the front end of the chassis and one 15-pin connector, P701, (Howard Jones Type P-315-CCE) on a 5-1/2-inch pendant cable.

b. **POWER REQUIREMENTS.** Power requirements for Relay Unit 275K-2 are 12 volts d-c at 560 milliamperes.

c. **NOISE.** The four relays of the 274K-2 are mounted on rubber to minimize noise.

2.1 CIRCUIT DESCRIPTION.

Figure 3 is a schematic diagram of Relay Unit 274K-2. The relays are normally de-energized. When 12 volts d-c is applied, the relays are energized. All connections to the relay coils and contacts are made at P701 and P702. CR701 through CR704 are connected as transient suppressors across the relay coils to minimize radio interference and contact wear. Power necessary for operation of the relays must be supplied from an external source, such as Collins Power Supply 409X-2.

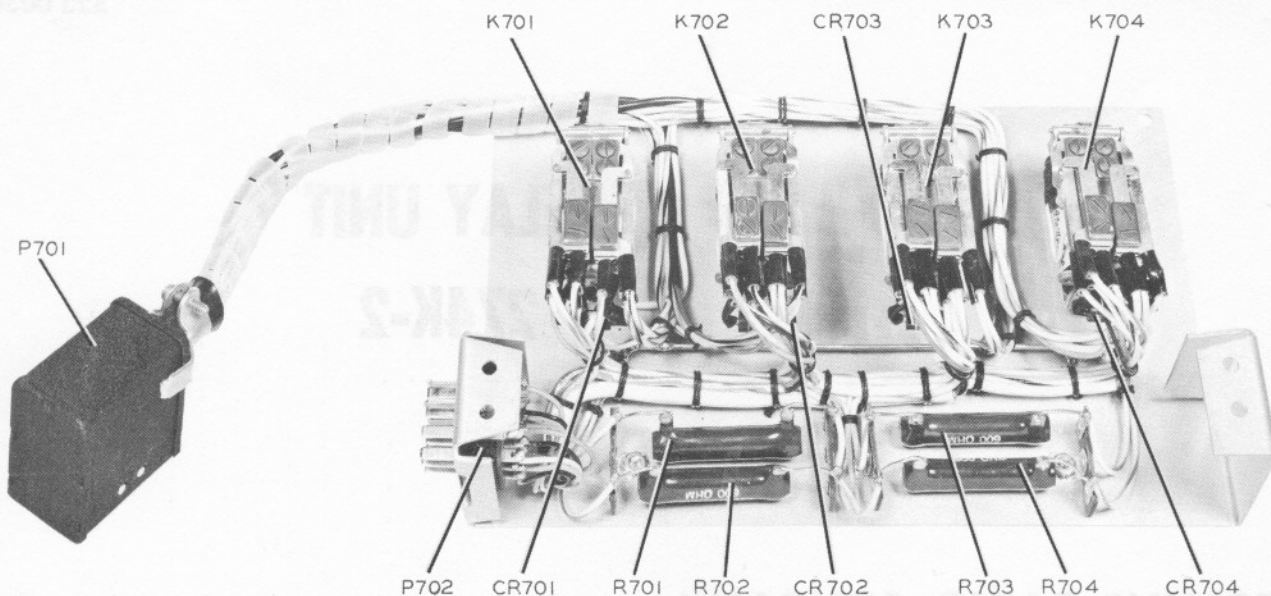


Figure 2. Relay Unit 274K-2, Cover Removed

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3.1 MAINTENANCE.

Relay Unit 274K-2 requires very little maintenance other than periodic inspections. Keep the relay contacts clean and bright. Refer to figure 3, if necessary, to perform continuity checks.

4.1 REPLACEABLE PARTS.

The parts list gives the description and Collins part number for all replaceable parts in Relay Unit 274K-2. When replacement of parts is necessary, only parts identical or equivalent to those listed should be used. All parts are identified in figure 2.

PARTS LIST

ITEM	DESCRIPTION	COLLINS PART NUMBER
RELAY UNIT 274K-2		522 1606 00
CR701	SEMICONDUCTOR DEVICE, DIODE: germanium type 1N48; C.B.S. Hytron	353 0027 00
CR702 thru CR704 K701	SEMICONDUCTOR DEVICE, DIODE: same as CR701	353 0027 00
K702 thru K704	RELAY, ARMATURE: contact arrangement, right 1C, left 2C; 12 v, 3 amps, 150 w RELAY, ARMATURE: same as K701	970 1139 00 970 1139 00

ITEM	DESCRIPTION	COLLINS PART NUMBER
P701	CONNECTOR, PLUG, ELECTRICAL: 15 male contacts; type 300	365 9150 00
P702	CONNECTOR, RECEPTACLE, ELECTRICAL: 12 male contacts, 10 amps, 730 v ac	365 2120 00
R701	RESISTOR, FIXED, WIRE WOUND: 600 ohms, $\pm 10\%$, 7 w at 25°C derated linearly to 3.5 w at +105°C	710 9017 00
R702 thru R704	RESISTOR, FIXED, WIRE WOUND: same as R701	710 9017 00

