



# DL-1 Dummy Load

## instruction sheet

Collins Radio Company | Cedar Rapids, Iowa

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### 1. Description.

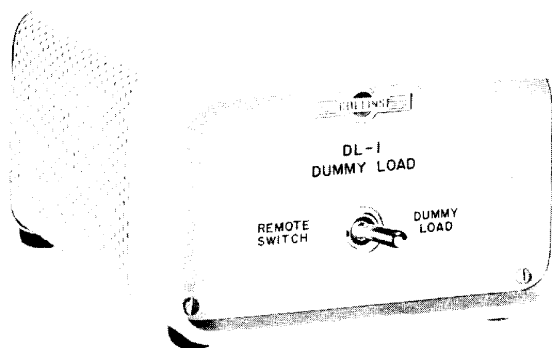
The DL-1 is a 100-watt resistor load for use with any 100-watt transmitter or transceiver such as the 32S-1, 32S-3, or KWM-2. Refer to figure 1. Use of this dummy load allows alignment or adjustment of transmitter circuits without sustained radiation of an interfering carrier. The DL-1 consists of four 50-ohm Globar resistors in a series-parallel arrangement to provide a 50-ohm resistive load. The DL-1 may be switched locally or remotely to select antenna or dummy load for connection to transmitter output. Jacks are provided for 6.3-volt ac 50- to 60-Hz relay coil supply, remote switching, and transmitter and antenna connections. The unit can be set on a table or desk or mounted on any chassis or rack frame by means of the two tapped holes on the bottom. As an alternate mounting, the four rubber feet can be removed and the unit mounted on a flat plate with four 6-32 screws.

### 2. Installation.

No installation procedures are required if the unit is to be used on the operating desk or table. If the DL-1 is to be mounted on a rack frame or chassis, use two 8-32 screws and spacers, and mount to the two holes in the middle of the front and rear trim rings, or remove the four rubber feet, and mount with four 6-32 screws. Refer to figure 2. Ground the case of the unit with the screw shown in figure 2. Make connections to transmitter, station control unit, and antenna as shown in figure 4.

### 3. Operation.

If the DL-1 is to be operated by remote switching, set the REMOTE SWITCH-DUMMY LOAD control to REMOTE SWITCH. If the DL-1 is to be operated within reach using local control, the REMOTE SWITCH-DUMMY LOAD control and the relay will transfer the transmitter output from the antenna to the resistive load.



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Figure 1. DL-1 Dummy Load

### 4. Circuit Description.

When S1, or the remote switch in parallel with it, is open, the relay coil is not energized, and the normally closed contacts 4 and 5 of relay K1 connect the transmitter output to the antenna. When S1 or the remote switch is closed, the coil of K1 is energized from the 6.3-volt ac heater voltage source of the transmitter, and the antenna is connected to ground through contacts 2 and 3. With K1 energized, the transmitter output is connected through contacts 5 and 6 to the resistive load. This load consists of four Globar 50-ohm resistors in the series-parallel arrangement shown in figure 4. The DL-1 will dissipate considerably more power than 100 watts without burning out the resistors, but it is recommended that higher loading be confined to very short periods of time.

**CAUTION**

If the DL-1 is used as a dummy load for higher power transmitters such as the 30S-1, switch the transmitter to TUNE position, and do not apply power to the DL-1 for more than 30 seconds at a time.

**5. Specifications.**

Relay coil input voltage . . . . .	.6.3 volts ac, 50 to 60 Hz
Rf power dissipation rating . . . . .	.100 watts
Weight . . . . .	.2 pounds, 14 ounces
Dimensions . . . . .	.3-1/2 x 5-11/16 x 7-5/16 inches

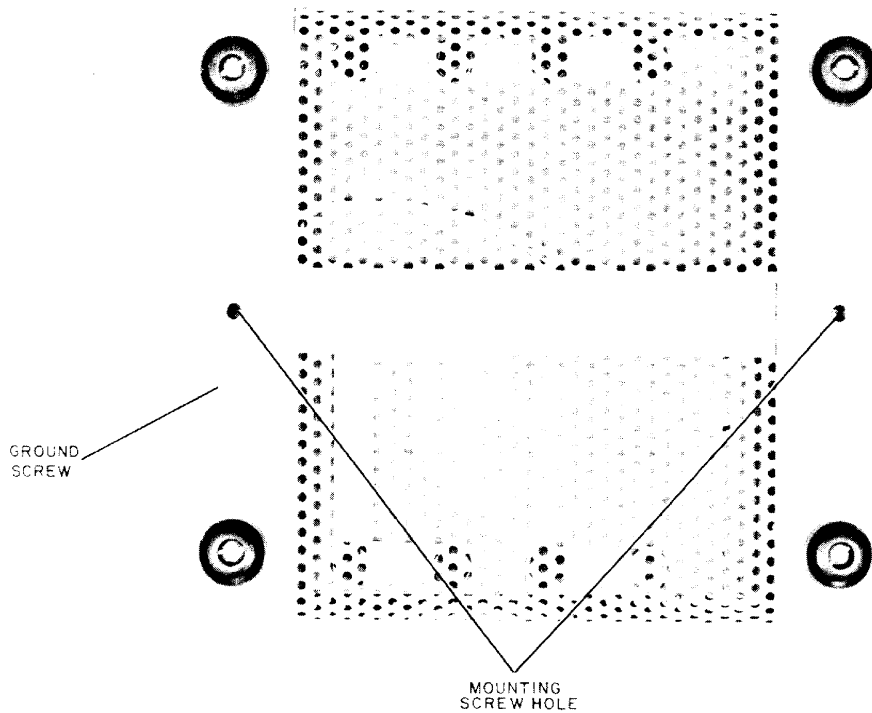


Figure 2. DL-1, Bottom View

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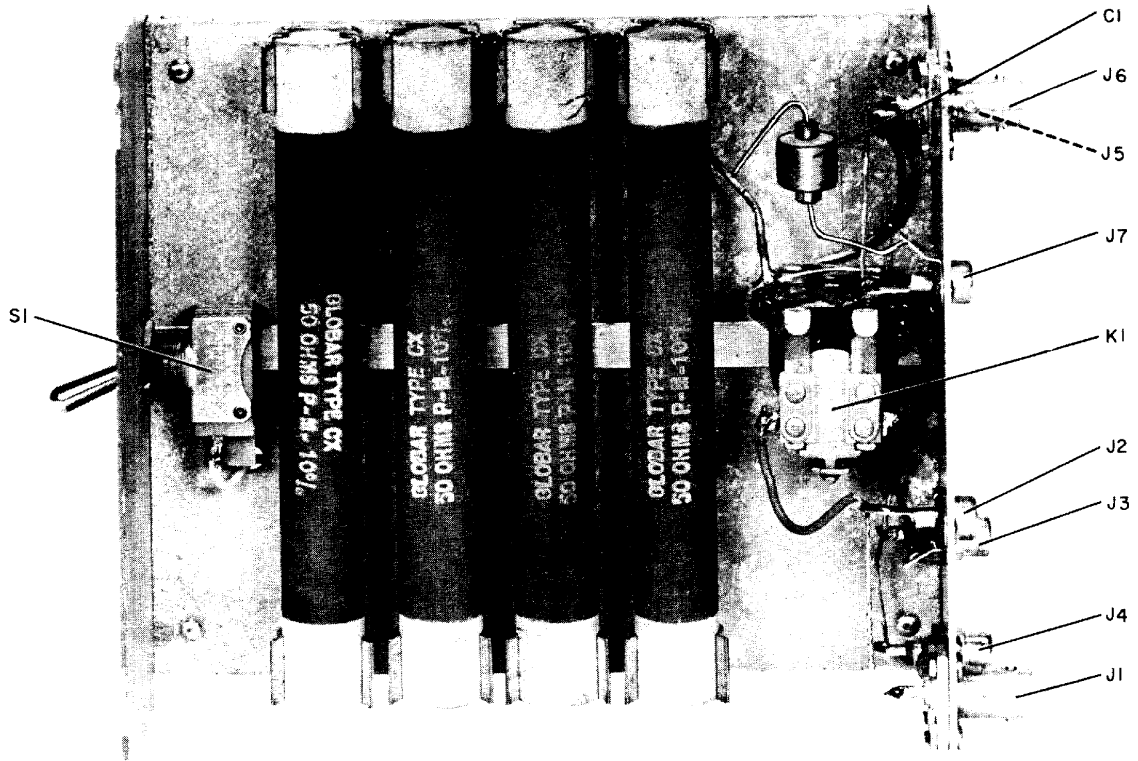


Figure 3. DL-1, Top Chassis View, Parts Location

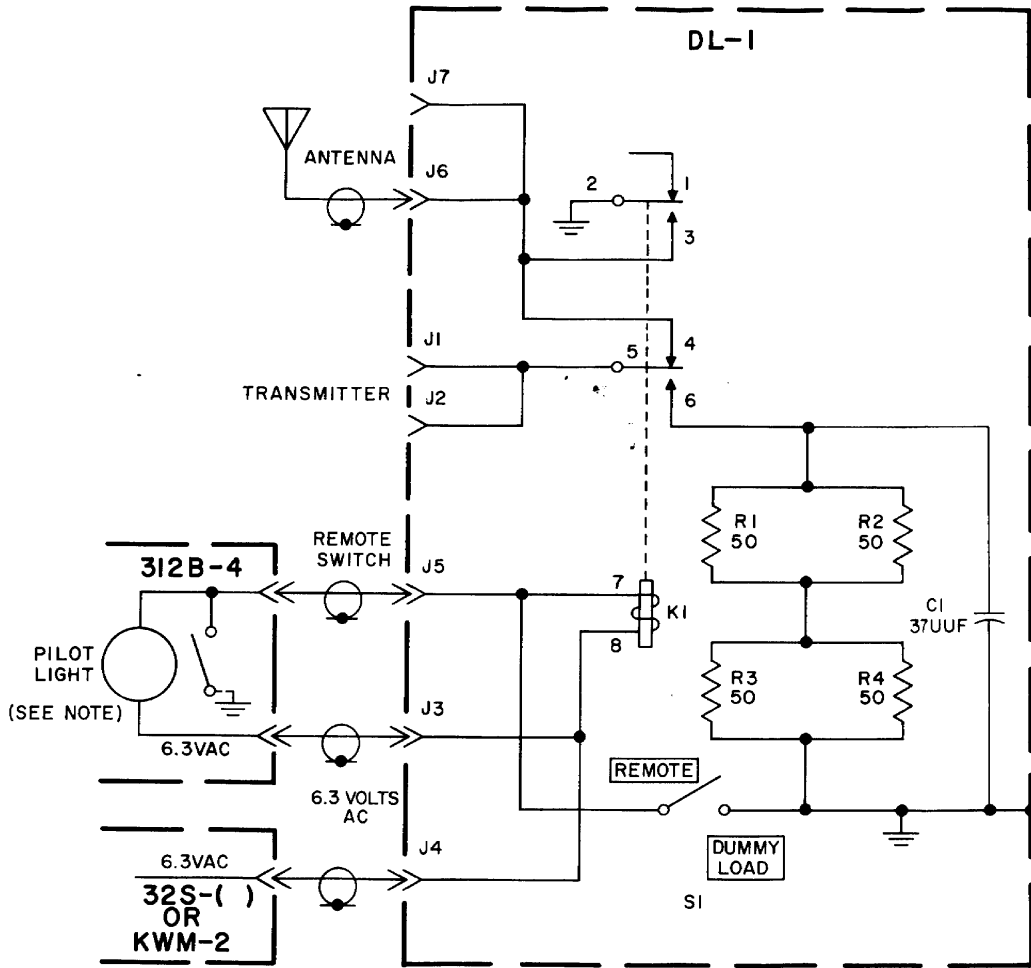
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## 6. Parts List.

Figure 3 shows parts location.

ITEM	DESCRIPTION	COLLINS PART NUMBER
DL-1		522-2771-00
C1	CAPACITOR, FIXED, CERAMIC: 37 uuf ±5%, 5000 vdc; Centralab Division of Globe Union part no. 8508-37Z	913-0825-00
J1,J6	JACK: Coaxial panel mounted, N type UG-58A/U	357-9003-00
J2,J7	JACK: Phono type with ceramic insulation	360-0088-00

ITEM	DESCRIPTION	COLLINS PART NUMBER
J3,J4	JACK: Phono type with plastic insulation	360-0148-00
J5		
K1	RELAY: Dpdt, 6 volts ac, 50-60 Hz coil, Potter and Brumfield KT11A	970-2147-00
R1	RESISTOR: 50 ohms ±10%, 22 watts, Globar type CX	712-4200-00
R4		
S1	SWITCH: Toggle, spst, 3A-250V, Arrow-Hart & Hegeman type 20994-NV	266-5075-00



NOTE: PILOT LAMP, ITS SOCKET, AND THE SPST SWITCH SHOWN IN 312B-4 ARE NOT STOCKED BY COLLINS RADIO, BUT MAY BE PROCURED LOCALLY IN MOST AREAS. THE LAMP SOCKET MUST BE THE UNGROUNDED TYPE. THESE PARTS MUST BE ADDED TO 312B-4, ALONG WITH A JACK (SAME TYPE AS J3). THE 6.3VAC JACKS ARE ALREADY INSTALLED.

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Figure 4. DL-1 Dummy Load, Schematic Diagram