

Chapter 18

CONTROL PANEL, TYPE 34

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LEADING PARTICULARS

Control panel, Type 34	Stores Ref. 5UC/5820
Incorporating voltage regulator, Type 93	Stores Ref. 5UC/6006
Ballast resistances (3)	600 ohms., 30W each
Voltage trimming resistance	100 ohms., 7.5W
Frequency trimming resistance	12.5 ohms., 7.5W
Stabilizing transformer	
Ratio	1,000 to 800
Resistance	15.6 to 17 ohms
Primary/series resistance	35 ohms., 20W
Overall dimensions	
Length	8.125 in.
Width	8 in.
Depth (without resilient mountings)	4.375 in.
Weight	5.75 lb.

Introduction

1. The control panel, Type 34 (*fig. 1*) controls the Type 102A inverter described in Book 3, Sect. 16 of this publication, and is designed for installation remote from the inverter.

DESCRIPTION

2. Two wire-wound resistances are attached to the front panel (*fig. 2*), one for providing limited adjustment of the frequency of the inverter a.c. output, and the other for providing limited adjustment of the voltage level of the voltage regulator. Two studs protruding through the front of the panel are used for adjusting these resistances.

3. An automatic voltage regulator, Type 93, is used for controlling the output voltage

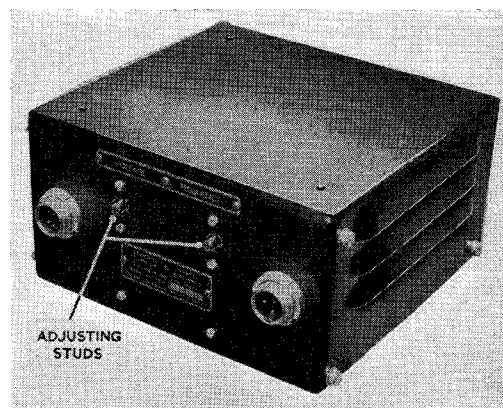


Fig. 1. Control panel, Type 34

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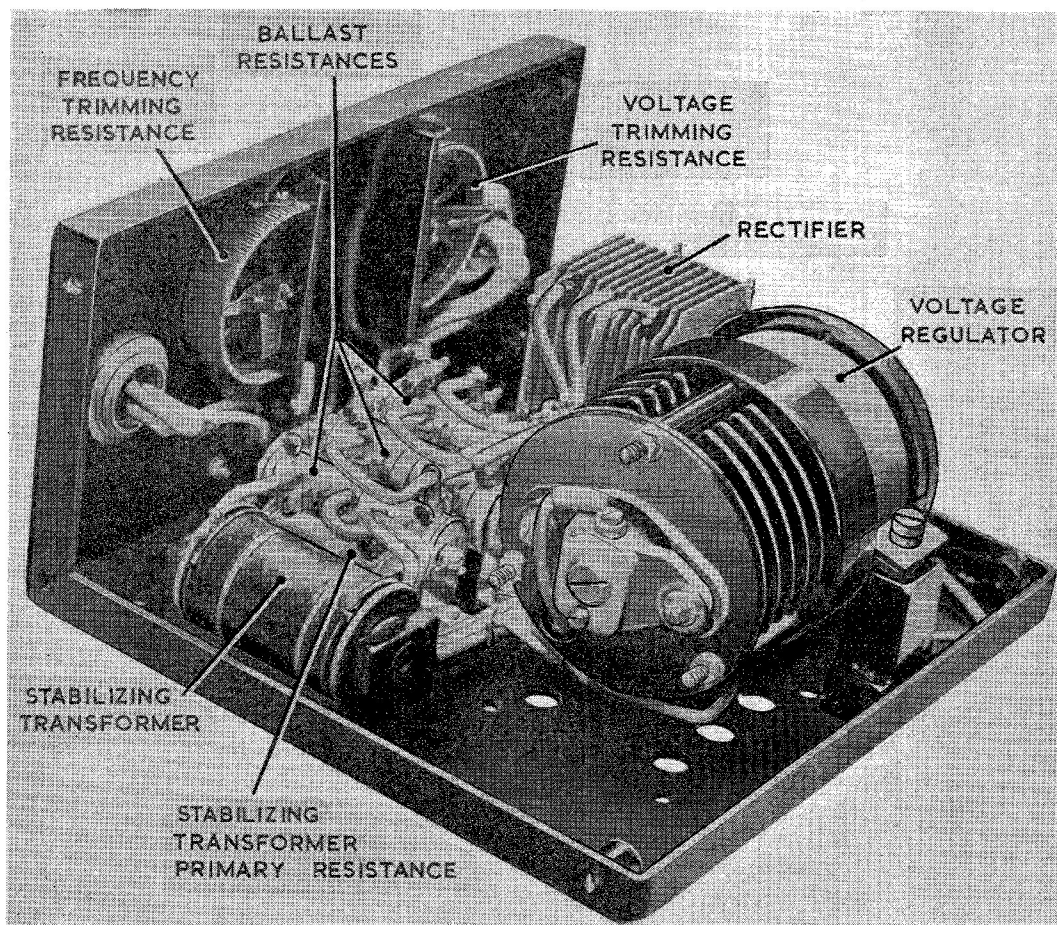


Fig. 2. Control panel with cover removed

of the inverter within ± 5 per cent of its nominal 115V. Information on the regulator will be found in Book 1, Sect. 1 of this publication. A rectifier is connected to the 3-phase input of the control panel and its function is to supply direct current for energizing the electro-magnet of the automatic voltage regulator.

4. A stabilizing transformer is used to ensure stability of the circuit under all conditions of sudden load and speed fluctuations.

5. Three ballast resistances are connected in the circuit and these are pre-set during manufacture of the control panel to give the correct operating current for the regulator coil.

6. The internal circuit of the control panel is illustrated in fig. 3, and the wiring terminates at 2 Breeze plugs on the front panel. Connection of the control panel to the Type 102A inverter is made at these two plugs. Four screws on the top of the panel cover are used for securing anti-vibration mountings.

OPERATION

7. When the inverter is operating under fairly steady conditions the 3-phase supply from the inverter to the control panel passes through the ballast resistances to the rectifier. The rectified current then passes to the voltage regulator which regulates the voltage of the current to a pre-set level before it passes to the field of the a.c. generator.

8. To provide a damping effect under conditions of sudden load or speed changes,

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