



TYPE 872

HALF-WAVE MERCURY RECTIFIER ENGINEERING INFORMATION

GENERAL RATINGS

Number of Electrodes	2
Filament:	
Voltage	5.0 volts
Current	10.0 amperes
Type	Coated
Heating time	30 seconds
Condensed Mercury Temperature Range 0°-65° C:	
Maximum Peak Inverse Voltage	7500 volts
Maximum Peak Plate Current	5.0 amperes
Supply Frequency up to	150 cycles
Maximum Average Plate Current	
(Averaged over period of 15 seconds)	1.25 amperes
Approximate Tube Voltage Drop	15 volts
Maximum Overall Dimensions:	
Length	8 1/2 inches
Diameter	2 5/16 inches
Bulb	T-18
Cap	Medium Metal
Base*	Jumbo 4-Large Pin
Type of Cooling	Air
Net Weight	7 oz.

* Base shell not connected to any element of the tube.

INSTALLATION

The base of the UNITED 872 is designed for mounting in a standard "50 watt" socket of the four pin, bayonet type. The tube should always be mounted vertically with ample air space provided for ventilation. The condensed mercury temperature should not be less than 15°C. (59°F.) and not more than 65°C. (149°F.) for the given maximum peak inverse voltage rating. When the maximum condensed mercury temperature exceeds these limits, forced ventilation should be used.

The filament of the 872 should be operated on alternating current at the rated value of 5.0 volts. The socket should make good contact to the tube pins and adequate current-carrying capacity leads to the secondary winding of the power transformer should be used. Operation of the filament at less than the rated voltage may result in a high internal voltage drop with subsequent loss of emission. A filament voltmeter should be connected permanently across the filament circuit at the socket terminals in order that the filament voltage can be maintained at 5.0 volts. **Caution—The filament winding is at high potential.**

Because the mercury may be splashed on the tube elements due to shipment or handling, the filament of the 872 should be operated at rated voltage for approximately 15 minutes without plate voltage in order to distribute the mercury properly when the tube is first placed in service. The above procedure need not be repeated unless the tube is removed from the socket and during handling the mercury becomes splashed on the tube elements.

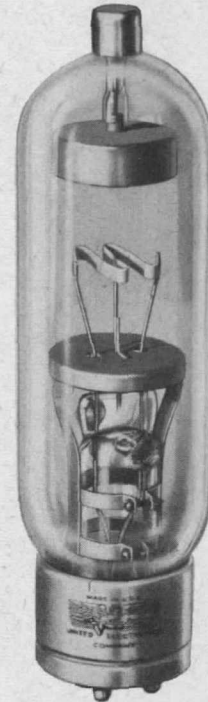
The condensed mercury should be at operating temperature before the plate voltage is applied. This may be ordinarily accomplished by introducing a time lag of at least 30 seconds between the application of the filament and the plate voltages. During "standby" periods, the filament should be kept at rated voltage.

When the 872 is subjected during operation to external high voltage or high frequency fields, shielding and r-f filter circuits should be provided.

DESIGN AND CHARACTERISTIC FEATURES

The UNITED type 872 is a tube of exceptional physical ruggedness. This design not only takes into account important electrical and thermal considerations, but end use conditions involving vibration and shock such as encountered in industrial electronic equipment.

All ratings given are for continuous service. Higher ratings are permissible for intermittent operation. Additional data will be furnished upon request.



REPLACES UNITED TYPE 972

Measured Mercury Content
Rapid Starting—Cold Climates
Heavy Duty Tube—50 Watt Filament

