

The constants of this transformer are as follows:

Turns ratio 1: 3-7  
Voltage test 300

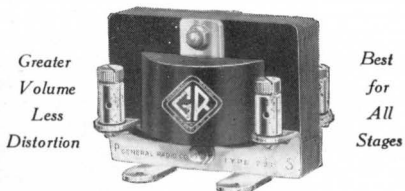
	Prim-ary	Second-ary
Direct current resistance, ohms .....	1,100	5,500
A. C. resistance at 1000 cycles, ohms .....	11,000	130,000
Reactance at 1000 cycles, ohms .....	50,000	700,000

### GUARANTEE

*This transformer was tested before leaving our factory, and it should be received by you in good condition. It is guaranteed against mechanical and electrical defects.*

*In its design particular care has been taken to secure quality of amplification throughout the range of voice frequencies. The impedance is suitable for use with UV 199, UV 201, UV 201A, WD 11, WD 12 and tubes of similar impedance.*

*"Products of*  *Proven Merit"*



**Type 231-A AUDIO TRANSFORMER**

**PRICE mounted \$5.00**

Made by the

**GENERAL RADIO Co**

Mfgs. of  
**RADIO and ELECTRICAL LABORATORY  
APPARATUS**

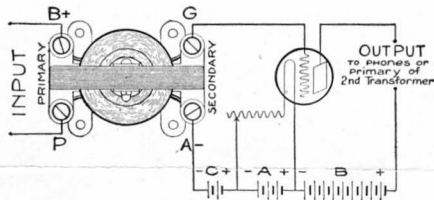
MASSACHUSETTS AVE. - - WINDSOR ST.  
**CAMBRIDGE - - MASS.**

## AUDIO FREQUENCY AMPLIFICATION

An audio frequency amplifying transformer of proper design may be used in both the first and second stages of an amplifier. It is only where pronounced resonance points occur in the audio frequency range that it is necessary to use the cumbersome method of different ratios, in the first and second stages. The Type 231-A Transformer has been so designed that it has a high, but flat amplification curve and accordingly gives the maximum amplification possible without distortion in both the first and second stages.

It is impossible to give the best arrangement of connections to cover all cases. The diagram shows the usual method of connecting the transformer in an amplifying circuit and the usual method of connecting the transformer terminals. It is, however, strongly recommended that the input terminals be tried in the reverse position to those shown in the illustration, because often times reactions in the circuit are such that best results are obtained with the reverse connection. The output connec-

tions should always be made as shown. The letters P and S on the front of the transformer indicate the Primary and Secondary (input and output) winding terminals, respectively.



It will be noted in the diagram that a "C" battery is used for biasing the grid. When voltages over 45 are used on the plate, the grid is maintained more effectively negative by using a "C" or biasing battery of from 2 to 10 volts according to the voltage used on the plate. Where plate voltages below 45 are used no biasing battery is necessary. The "C" battery also limits the plate current thereby prolonging the life of the B or plate battery.