Cunningham
RADIO TUBES

Standard Since 1915

When you lift the cover of your radio!

RADIO TUBES are probably the most fascinating single unit of the four constituent parts that are the major factors responsible for quality radio reception. It is their sensitive function to take the merest whispering of the radio messages, or waves, from a broadcasting station, select the right ones to retain and then amplify these waves thousands, even millions of times to a point where they come clearly and vividly through your speaker.

Leading engineers in the field of radio are agreed that radio performance depends upon the efficiency of four important factors. Failure of any one of these will lessen tonal quality, no matter how perfect is the performance of the other three.

They consist of:

1. Fidelity and efficiency of the loud speaker;
2. Circuit design of the receiver, which requires proper tone frequency characteristics of the radio circuits, and correct circuit constants for the particular tubes for which the receiver was designed;
3. Correct tubes for which the circuit was designed;
4. The use of correct voltages for most efficient operation of the tubes and circuit.

Intelligent selection of tubes is very important, as the use of tubes not adapted to the set is frequently the cause of poor radio reception. There is a Cunningham tube for every radio use and you not only enhance your radio enjoyment by their selection, but you actually protect your radio investment. You cannot guard a fortress that is betrayed from within and that is just what you do when you use inferior or improper tubes in the nerve center of your radio receiver.

C-11: 1.1 volt, .25 Ampere Dry Cell Detector and Amplifier

This dry cell tube has a special base designed for use in sets having special sockets. It is an excellent detector and audio frequency amplifier.

CX-12: Similar to C-11 but with the Standard CX Base

This tube is identical with C-11 in operating characteristics but is mounted on the standard CX base to allow the use of a dry cell tube in sets equipped with standard sockets.

CX-299, C-299: 3.3 volt, .063 Ampere Dry Cell Detector and Amplifier

Highly efficient in operation. A sensitive detector as well as an excellent radio and audio frequency amplifier.

CX-220: 3.3 volt, .132 Ampere Dry Cell Power Amplifier

This dry cell amplifier tube will provide increased loud speaker volume and improved quality of reproduction from dry battery operated sets. It is suitable for use only in the last stage of audio frequency amplification.

CX-322: 3.3 volt, .132 Ampere Screen Grid Amplifier

The unusual performance obtainable from this tube is made possible by the introduction of a second grid. This second grid is placed between the usual grid and plate.

The tube requires special circuit design and cannot be adapted to receivers already in service.

CX-300A: 5 volt, .25 Ampere Super-Sensitive Detector

Designed for use only in the detector socket, will give a receiver clearer and sweeter tone on distant signals, increase volume on far away stations.

CX-301A: 5 volt, .25 Ampere Detector and Amplifier

With storage batteries, this tube will give extreme amplification at either audio or radio frequency.

CX-340: 5 volt, .25 Ampere Detector and Amplifier Tube for Resistance or Impedance Coupled Amplifiers

The CX-340 may also be used to advantage as a detector.

It is very important that the proper value of grid bias voltages and plate and grid resistors be used with this tube.

CX-326: 1.5 volt, 1.05 Ampere, A.C. Filament General Purpose Amplifier

This tube is designed to fill the requirements of receivers to be operated direct from the A. C. lighting mains. It is designed for use only in radio and audio frequency amplifier circuits.

C-327: 2.5 volt, (Max.) 1.75 Ampere, A. C. Heater Type

This tube has the new type heater element which gives humless operation as a detector on A. C. current. The cathode is indirectly heated by the filament. It is primarily intended for use as a detector on an A. C. source in a receiver using the CX-326 tubes as amplifiers, but it can be used to good advantage as an amplifier.

Quick Reference Log

CALL LETTERS	LOCATION	WAVE LENGTH	KILOCYCLES	POWER (WATTS)	DIAL SETTINGS

Public Endorsement Cunningham RADIO TUBES Since 1915

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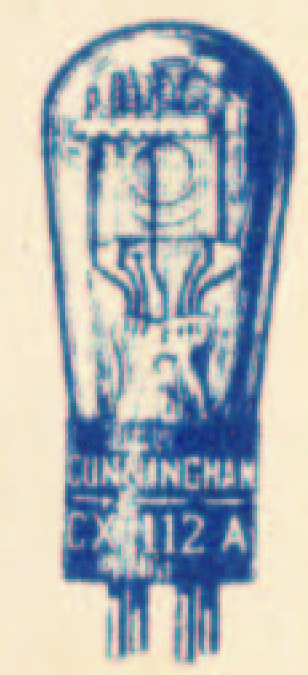
C-324: 2.5 volt, 1.75 Ampere A. C. Heater Type Screen Grid Amplifier

This tube combines the unusual performance obtainable from a screen grid radio frequency amplifier with AC heater type alternating current operation. It is recommended for use as a radio frequency amplifier and as a detector.



CX-112A: 5 volt, .25 Ampere Detector and Amplifier

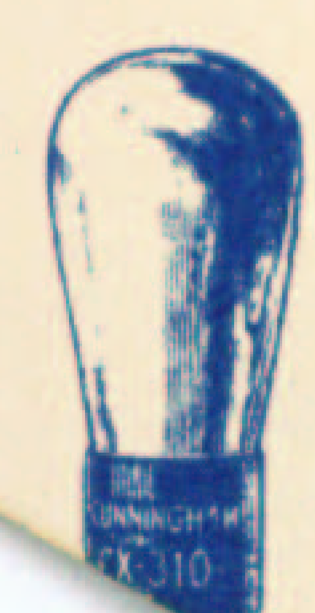
May be used as a power amplifier, first stage audio amplifier or detector. It may be used in place of CX-301A tube in the last audio stage without change in voltages.

CX-371A: 5 volt, .25 Ampere Power Amplifier

A power amplifier tube for the last audio stage that practically eliminates all possibility of signal distortion at this point and improves the operation of any reproducer. This tube supplies ample power for loud speaker operation without the necessity of high plate voltages.

CX-345: 2.5 volt, 1.5 Ampere Power Amplifier

A power amplifier tube for last audio stage capable of supplying 1.6 watts loudspeaker energy at maximum plate voltage of 250 volts. Made with a rugged coated filament and operates at 2.5 volts usually supplied by a 2.5 volt filament winding on power transformer of set. Mounted on large standard CX base.



CX-310: 6.0 to 7.5 volt, 1.25 Ampere (Max.) Heavy Duty Power Amplifier

This tube is a heavy duty power amplifying tube designed especially to operate large loud speakers, and is capable of producing exceptional volume with highest tone quality.

CX-350: 7.5 volt, 1.25 Ampere Heavy Duty Power Amplifier

The exceptional performance obtainable from the CX-310 has developed a demand for a tube capable of furnishing still greater undistorted power output. This demand is met by the CX-350 which is capable of furnishing a power output three times greater without increase in plate voltage, 250 to 450 volts being required by this tube.

CX-380: 5 volt, 2 Ampere Full Wave Rectifier

This full wave rectifier is of the heavy duty type, being capable of giving an output of 125 milliamperes with a maximum plate voltage per anode of 300 volts (R. M. S.). The large CX four prong base is provided.

CX-381: 7.5 volt, 1.25 Ampere Half Wave Rectifier

This heavy duty half wave rectifier is particularly suited for use in rectifier units which are designed to supply considerable power at high voltages.

CX-374: Glow Lamp for Plate Voltage Regulation

Develops 90 volts across terminals on any current up to 50 milliamperes. When placed in parallel with plate voltage supplied to receiving set, and with proper regulating resistance in series, voltage on amplifier tubes cannot exceed 90 volts, regardless of number of tubes in use or of fluctuations in line voltage.

C-376: Ballast Lamp

Designed for use in series with primary of transformer supplying "B" battery eliminators, and will maintain output voltage constant despite line voltage variations.

C-386: Ballast Lamp

Similar to type C-376 but designed for heavier currents; generally used in place of C-376 where current supply is 40 cycles and equipment is designed for 60 cycle supply.

The Nerve Center of Your Radio

RADIO TUBES are rightly called the nerve center of your radio, because they supply your receiver with vital or natural power from the radio-laden air.

One of the six heads under which the component parts of the major factors are classed in radio construction, is a cord-like structure composed of delicate filaments which help to transmit radio waves into audible sound.

Outside appearances may be similar or even identical between various makes of radio tubes. Ac-

tual operation, however, proves what exhaustive scientific research and absolute adherence to in-built manufacturing integrity mean in tube reliability.

Radio tubes should not only be chosen with intelligent care but they should also be tested at regular intervals to be sure that each one is alert and wide-awake and successfully carrying its individual part of the "load." One inferior or worn out tube may mar the over-all performance of your set.

Let your dealer select the proper Cunningham tubes for which your set is designed and they will serve a double purpose—determine the quality of your reception and protect your radio investment.

Cunningham Radio Tubes do both. Make every tube a Cunningham.

Name of Purchaser

TOTAL AMOUNT _____

Name of Dealer

DOWN PAYMENT _____

BALANCE _____

PAYMENTS

DATE	AMOUNT PAID	TOTAL TO DATE

Electrical Appliance Co., Inc.
ALBEMARLE, N. CAR.

STANDARD SINCE 1915

Form No. 842-A LITHO. IN U. S. A.