



# Radio and Television Products

of the world's leading maker  
of radio accessories

RADIO—New and advanced specialties.

TELEVISION—Complete apparatus and accessories for the professional and amateur.

INSULATION—Our insulation department specializes in insulating materials for radio and electrical trades. Plain material, or fabricated to any specifications.

INSULINE CORP. OF AMERICA  
NEW YORK, N. Y., U. S. A.



Catalog No. 142  
Discount Sheet on Request

*All cuts shown in this Catalog are available in various sizes for Newspaper, Catalog or other Advertising uses.*



## I. C. A. NEW TELEVISION RECEIVER



Catalog No. 51

The I. C. A. New Television Receiver Model No. 51 is a simplified complete equipment and can be operated outside a cabinet or inserted into most any console.

It provides satisfactory results to both novice and experimenter. It is supplied with a speed control which provides synchronization and framing of the television picture and signals.

All the controls of the receiver are mounted on a front panel which makes it readily accessible for operation of the television receiver.

The Television Receiver will work with most any Short Wave Receiver capable of tuning in television signals. (The I. C. A. Short Wave Conqueror Receiver is especially adaptable for Short Wave Reception.)

This Television Receiver is supplied with a special 5" lens and visor through which the pictures are greatly magnified and will also permit a number of people to view the pictures at one time. It is complete with 48 hole scanning disc (24 or 36 hole disc supplied if preferred). The Model No. 51 is supplied in knock-down form ready for assembly which takes but a few minutes.

**List Price \$75.00**

Packed 1 to a carton

Shipping Weight 25 lb.

**No. 51** Television Receiver complete with No. 115 Television Amplifier and I. C. A. No. 114 Television Lamp (less amplifier tubes).

**List Price \$100.00**

Packed 1 to a carton

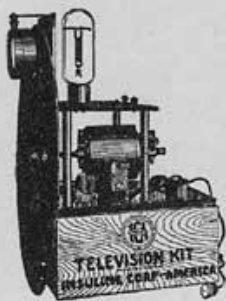
Shipping Weight 30 lbs.

## I. C. A. EXPERIMENTAL TELEVISION EQUIPMENT

Experimenters are welcoming I. C. A. television receiving sets and kits. Developed to use with any standard radio set or short wave radio receivers.

Catalog No. 102—Model 65

Catalog No. 101—Model 52



Aluminum Disc, 48 holes  
(24 or 36 holes if preferred)  
Universal Motor (A.C. or D.C.)  
Speed Control  
Motor Chuck  
Telescope with two lenses  
2 Bakelite Sub-bases for Motor and Lamp  
Receptacle Cord and Plug for attachment  
Picture Frame Shield  
Bakelite Pillars  
Brackets, Screws, Hardware  
Four-Stage Television Amplifier  
Television Tube  
Shipping Weight 15 lbs.

Same as Cat. No. 102, without Television Tube. Shipping Weight 14 lbs.

**List Price \$52.50**

Catalog No. 104—Model 45

Same as Cat. No. 102, without Television Tube and Amplifier. Shipping Weight 14 lbs.

**List Price \$65.00**

**List Price \$45.00**

## I. C. A. TELEVISION PARTS AND ACCESSORIES

I. C. A. Aluminum Scanning Discs are made with the utmost precision, special machinery and tools being required to construct them. The holes are laid out mathematically correct to insure perfect reception of television signals and pictures. The discs are supplied as follows:

	Scanning Lines	Size of Discs	Shipping Weight	List Price
Catalog No. 105N	24	12"	3 lbs.	\$10.00
Catalog No. 106N	45	12"	3 lbs.	10.00
Catalog No. 107N	48	12"	3 lbs.	10.00
Catalog No. 108N	60	12"	3 lbs.	15.00







## I. C. A. Television, Telescope and Vision Magnifier

The I. C. A. Television Visors are made up of a special imported magnifying glass and are enclosed in special telescopes.

They magnify the picture considerably and are made in two models: 2 1/2" diameter lens, which permits only one person to view the picture and a 5" diameter lens which permits three to 4 people to view an enlarged picture approximately 5" in diameter.

Both models magnify the television pictures considerably. With the larger magnifier a number of persons can view television pictures comfortably at one time.

Catalog No. 111 2 1/2" Diameter Lens Catalog No. 53 5" Diameter Lens

List Price \$5.00

List Price \$10.00

## I. C. A. TELEVISION AMPLIFIER



Catalog No. 115

## I. C. A. UNIVERSAL MOTOR

Synchronization of the receiving scanning disc and the broadcasting scanning disc is the essential factor for satisfactory pictures. A smooth running motor, such as the I. C. A. Universal Motor, Non-Sparking

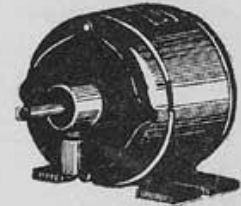
Type, has been found the best to use for Television.

Universal Motor (A.C. or D.C.).

Shipping Weight 5 lbs. each.

List Price \$29.50

Cat. No. 113—Speed Control. Shipping Weight 1 lb. List Price \$3.50



Catalog No. 109

## I. C. A. Synchronous Motor

The I. C. A. Television Synchronous Motor is especially adaptable for television receivers where the television broadcasting apparatus and the receiving set are operated on power supplied by the same power company. This synchronous motor eliminates the necessity of using a speed control on a television receiver for synchronization of television pictures.

This motor is for use for 110 A.C. 50-60 cycles and will operate with a definite speed of 1800 R.P.M.

Catalog No. 54  
Standard Package 1

List Price \$39.50

Gross Shipping Weight 15 lbs.

## I. C. A. Motor Chuck

I. C. A. Television Motor Chuck is made of two special plates and a bushing to fasten the television disc to the motor. The diameter of the chuck is 6" which insures positive alignment of disc to motor. They are supplied to fit 1/4", 1/8" or 3/8" motor shaft. Specify size of shaft.

Catalog No. 55

List Price \$5.00

Standard Package 6

Shipping Weight 8 lbs.

## I. C. A. TELEVISION LAMP

Catalog No. 114

The I. C. A. lamps are designed to operate with an output tube in series. Will give excellent illumination with a current of 20 milliamperes or less. Where extremely bright illumination is required for maximum results, the tube may be loaded up to 80 milliamperes, by means of suitable output tubes singly or in parallel.

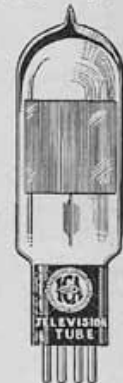
### FEATURES

Striking Voltage 100.  
Minimum Current to cover plate 5 Mils.  
Maximum Current 80 Mils.  
Internal Resistance 1000 Ohms.  
UX Four Prong Bakelite Base.  
Plate Area 1 1/2" square.

List Price \$10.00

Standard Package 3

Shipping Weight 4 lbs.



## I. C. A. PHOTO-ELECTRIC CELL



For the advanced experimenters who desire to experiment with television transmission, the I. C. A. Photo-electric cell opens up a new field. This sensitive cell, ruggedly designed, can be used in experimenting not only with the art of television transmission but with talking movies, circuit control devices, relays, etc.

It is of the gas-filled, potassium magnesium type, employing a special set-back anode to increase its output. Individually tested during and after construction for sensitivity and uniform frequency response. Its fairly low ionization point reduces bat-

tery noises to a minimum. With a single step of amplification, a deflection of 30 milliamperes has been obtained with a 100 Watt lamp as a light source. The bases are of Bakelite UX 4 Prong Type.

Catalog No. 114A

1 3/4" Bulb Diameter

Shipping Weight 2 lbs.

List Price \$20.00

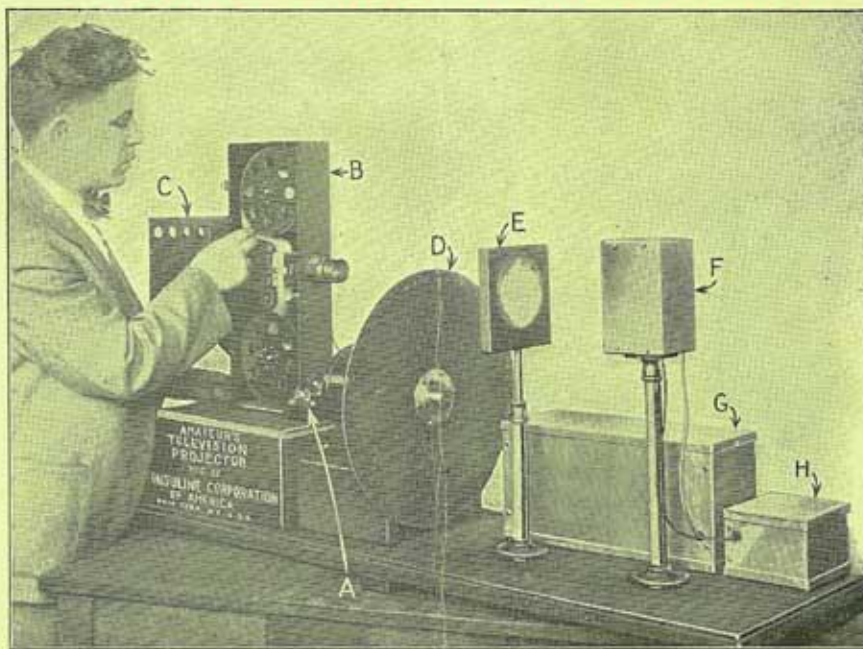
Catalog No. 114B

3" Bulb Diameter

Shipping Weight 2 lbs.

List Price \$37.50

## I. C. A. TELEVISION TRANSMITTER



Front view of transmitter: A, reduction gear driven from rear end of motor shaft; B, reel housing; C, exciter lamp; D, circle-scanner; E, lens (without mesh); F, photoelectric cell; G, television-frequency amplifier; H, phase reverser.

### FOR BROADCAST STATIONS, COLLEGES, SCHOOLS, SHORT WAVE and TELEVISION EXPERIMENTERS and for Demonstration Purposes

**T**HE I. C. A. Television Transmitter is designed to project television (between two points connected by wire) as transmitted by a simple adaptation of a motion-picture projector incorporating standard 35 mm. safety film.

The I. C. A. Television transmitter may also be operated in conjunction with a radio transmitter, the picture modulated energy output being used to modulate the carrier wave in the usual manner.

The method of scanning employed in the transmitter is worthy of special mention. The 16-in. aluminum scanning disc has the holes arranged in a circle for film-picture projection; horizontal scanning, from left to right, is thus accomplished, while the vertical scanning is obtained by the continuous motion of the film in the projector.

The speed of the film downward through the projector must therefore bear a definite relation to the speed of the scanning disc. Each "frame" must be scanned from left to right 48 times. Instead of having 48 holes in

the disc and revolving it once for each frame, we have a 24 hole disc and revolve it twice as fast. For a given size of projected picture, this permits the use of a much smaller disc than would be necessary if 48 holes were employed. Silhouettes reproduce much easier than halftones.

The I. C. A. photo-electric cell used in conjunction with the transmitter is of the potassium-magnesium, gas-filled type. This type of cell is of a sufficient sensitivity to permit its use with a minimum amount of amplification, thus assuring uniform frequency response and a low level of tube and battery noises. Light to actuate the I. C. A. potassium-magnesium, gas-filled photo-electric cell is obtained from a 500-watt, special ribbon filament mazda stereopticon lamp. A special optical system of lenses and concave mirrors concentrates the light with but slight loss, onto the film. A condensing lens focuses the scanned diverging rays, coming through the scanning disc, into the photo-electric cell.

Rotation of the transmitting scanner is

obtained by mounting it directly on the shaft of a 1/10 H.P. synchronous motor rotating at 1800 R.P.M. The film is also driven by this motor, being connected to it by an eight-to-one reduction gear; thus moving the film at the rate of 15 frames per second.

The energy picked up by the photo-electric cell is boosted to a sufficiently high value to give good contrast at the neon lamp by a 4 stage resistance-capacity coupled amplifier. This amplifier is shielded to prevent the pick-up of stray disturbances and is filtered in a manner which absolutely prevents interstage coupling. 3 240 tubes and 1 171A tube are used. The amplifier is most economical in operation, requiring but one set of B batteries for amplifier, photo-electric cell and neon lamp.

There is also provided a unique device in the shape of a shielded "phase shifter," the purpose of which is to enable positive or negative film to be televised. In this manner, the use of either kind of film is permitted without necessitating the addition or removal of a step of amplification.

#### NET PRICE

for Transmitter—complete with Photo Electric Cell, 500 watt special lamp and amplifier (but less amplifier tubes). Catalog No. 49. Shipping Weight 125 lbs.

**\$300 net**

#### Television Receiver

using synchronous motor to operate in conjunction with the I. C. A. Television Transmitter—and which will also operate to receive from any station broadcasting television—completely assembled. Catalog No. 52. Shipping Weight 35 lbs.

**Net price \$75**