## Thank You!

When writing for additional information or when ordering from sources of supply listed in this book, please mention

## RADIO'S MASTER

## The DIAL LIGHT COMPANY of AMERICA

Foremost Manufacturer of Pilot Lights


## Makes everything <br> FROM A SMALL SOCKET



## TO ALARGEASSEMBLY

## For all of these lamps



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Foremost Manufacturer of Pilot Lights


CAPS
SCREW, BAYONET or FRICTION

The typical assemblies shown, mount in a $1^{\prime \prime}$ clearance hole.

The first three are complete with the three types of caps, all with faceted glass lenses.

## TERMINALS

BINDING SCREWS

## SOLDERING LUGS

Two choices are illustrated for lamps with candelabra screw base and three choices for lamps with double contact bayonet bases.

See the following pages for catalogue numbers of assemblies for all types of lamps.

All illustrations are approximately actual size.


All of these assemblies are listed by Under. writers' Laboratories, Ine.

FOR SCREW BASE LAMPS


SCREW
FIG. 7



BAYONET FIG. 8


SOLDERING LUGS

FOR BAYONET BASE LAMPS


FIG. 10

BINDING SCREWS (Two types)


FIG. 11

FIG. 12
SOLDERING
LUGS


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FIG. 17


FIG. 21 (Dimmer)

## ENCLOSED ASSEMBLIES FOR T-31/4 MINIATURE LAMPS AND NE-51 NEON GLOW LAMP

Smaller assemblies as illustrated in Figs. 15, 16, 17, 20 and 21 mount in $11 / 16^{\prime \prime}$ clearance hole. Figs. 18 and 19 require $1^{\prime \prime}$ clearance hole.

## CATALOGUE NUMBERS

FOR T-31/4 Miniature Bayonet Base Low voltage incandescent lamps
521310-991 Multivue cap, Screw terminals (Fig. 15) 52410-991 Multivue cap, Soldering terminals


91410-931 Long clear cap, Soldering terminals (Fig. 16)
811310-111 Screw-in cap, Convex lens, Screw terminals (Fig. 17)
80410-831 Screw cap, Dome plastic lens, Soldering terminals (Fig. 18)
801310-831 Screw cap, Dome plastic lens, Screw terminals
51410-111 Screw cap, Convex lens, Soldering terminals (Fig. 19)
511310-111 Screw cap, Convex lens, Screw terminals
21410 Light shield cap Screw terminals (Fig. 20)
93410-111 Polaroid dimmer cap, Convex lens, Soldering terminals (Fig. 21)
COLOR-The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

## FOR NE-51 Neon Glow Lamp

NOTE: The assemblies listed below for the NE-51 Neon Glow Lamp contain built in resistors, a patented DIALCO feature. For choice of resistor value to suit conditions, specify circuit voltage and service, continuous or intermittent.

## 521308-991 Multivue cap, Screw terminals (Fig. 15) <br> 52408-991 Multivue cap, Soldering terminals



91408-931 Long clear cap, Soldering terminals (Fig. 16)
811308-111 Screw-in cap, Convex lens, Screw terminals (Fig. 17)
80408-831 Screw cap, Dome plastic lens, Soldering terminals (Fig. 18)
801308-831 Screw cap, Dome plastic lens, Screw terminals
51408-111 Screw cap, Convex lens, Soldering terminals (Fig. 19)
511308-111 Screw cap, Convex lens, Screw terminals


All of these assemblies are listed by Underwriters' Laboratories, Inc.

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# OPEN PILOT LIGHT ASSEMBLIES <br> For Candelabra Screw Base Lamps 



S-6


FIG. 22


FIG. 23


FIG. 24

For S-6 Incandescent Lamps, candelabra screw base
No. 10-18-14-431 Faceted $1 / 2^{\prime \prime}$ Lens (for $7 / 10^{\prime \prime}$ mounting hole) (Fig. 22)
No. 25-18-15-431 Faceted $5 / 8^{\prime \prime}$ Lens (for $11 / 6^{\prime \prime}$ mounting hole) (Fig. 23)
No. 31-18-16-431 Faceted $1^{\prime \prime}$ Lens (for $1^{\prime \prime}$ mounting hole) (Fig. 24)
All of the above assemblies are listed by Underwriters' Laboratories, Inc.


FIG. 25
For G-6 Low voltage lamps, candelabra screw base
No. 610-12l Convex $1 / 2^{\prime \prime}$ lens (for $7 / 10$ mounting hole)
COLOR-The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, clange final figure to one from table below:
Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

Octagon lock nut and bracket on these two units welded into one-piece construction.


F1G. 26


FIG. 27

## For NE-45 Neon Glow Lamps, candelabra screw base

No. $67 \mathrm{BN}-831$ Dome Plastic Lens ( $3 / \mathrm{h}^{\prime \prime}$ diam.) No. 66N-131 Convex Glass Lens ( $3 / 4^{\prime \prime}$ diam.)
(Both mount in $13 / 16^{\prime \prime}$ hole. Cap removable)

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## Foremost Manufacturer of Pilot Lights <br> NEW YORK 3, N. Y.

## OPEN PILOT LIGHT ASSEMBLIES

## For T-31/4 Low voltage Incandescent Lamps



T-31/4
Miniature Bayonet Base


FIG. 29


T-31/4
Miniature Screw Base

Typical assembly for bayonet base lamp. Available also for screw type, see listing below.

Assemblies for T-31/4 miniature bayonet base lamps
No. 810B-431 Faceted $1 / 2^{\prime \prime}$ lens. For ${ }^{11} / 16^{\prime \prime \prime}$ mounting hole. Fig. 29
No. 755-621 Convex ${ }^{11 / 32^{\prime \prime}}$ lens. For $9 / 32^{\prime \prime}$ mounting hole. Fig. 30
No. 710-121 Convex $1 / 2^{\prime \prime}$ lens. For $7 / 16^{\prime \prime}$ mounting hole. Fig. 31
No. 857B-431 Faceted $1 / 2^{\prime \prime}$ lens. For $11 / 16^{\prime \prime}$ mounting hole. Fig. 32
No. 67B-111 Convex $3 / 4^{\prime \prime}$ lens. For $13 / 16^{\prime \prime}$ mounting hole. Fig. 33
Assemblies for T-3 $1 / 4$ miniature screw base lamps
No. 810M-431 Faceted $1 / 2^{\prime \prime}$, lens. For $11 / 6^{\prime \prime}$, mounting hole. Similar to Fig. 29
No. 555-621 Convex ${ }^{11 / 32^{\prime \prime}}$ lens. For $1 / 32^{\prime \prime}$ mounting hole. Similar to Fig. 30
No. 510-121 Convex $1 / 2^{\prime \prime}$ lens. For $7 / 16^{\prime \prime}$ mounting hole. Similar to Fig. 31
No. 855-431 Faceted $1 / 2^{\prime \prime}$ lens. For $11 / 16^{\prime \prime}$ mounting hole. Similar to Fig. 32
No. 66M-111 Convex $3 / 4^{\prime \prime}$ lens. For $13 / 16^{\prime \prime}$ mounting hole. Similar to Fig. 33
COLOR-The final figure 1 in the listed numbers indiates RED LENS COLOR. If other color is desired, change nnal figure to one from table below:
Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7


FIG. 30


FIG. 31


FIG. 32


FIG. 33

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## LAMP SOCKETS

Four series with choice of mounting bracket (Add suffix number for bracket desired)


No. 604
600 SERIES
Candelabra screw


No. 508
500 SERIES
Miniature screw


No. 706
700 SERIES Miniature bayonet

Socket suffix
No.
Bracket Description
-01............Plain clip, upturned
-02 $\ldots$ Plain clip, downturned
-03 .........Clip with ears, upturned
-04 $\quad$ Cli...... Clip with ears, downturned
-05 ........Right angle, upturned, slotted. Slot $7 / 8^{\prime \prime} \times 3 / 6^{\prime \prime}$
$-06 \ldots \ldots . . .$. Right angle, downturned, slotted. Slot $7 / s^{\prime \prime} \times 3 / 16^{\prime \prime}$
-07............ Plain socket, no bracket
-08..........Right angle, downturned, short. Hole Size ${ }^{5 / 6} / 2^{\prime \prime}$
-09...........Right angle, upturned, short. Hole Size...."/32"
-11........... Square U-shaped. Hole Size 5 . $\mathbf{夕 2}_{2 \prime \prime}^{\prime \prime}$
-12 Horizontal (no bend), short. Hole Size $\% / 3 z^{\prime \prime}$
-13 Horizontal (no bend), slotted. Slot $7 / 8^{\prime \prime \prime} \times 3 / 16^{\prime \prime}$
-19 Right angle, upturned, long. Hole Size $\% f^{\prime \prime}$
-20...........Right angle, downturned, long. Hole Size $\% 6^{\prime \prime}$


No. 312
300 SERIES
Miniature bayonet Bakelite insulated-wire leads

Heavy Bakelite Sockets NAVY SPECIFICATIONS


Miniature bayonet-No. 9S4931 (illustrated)
Double Contact bayonet 9S4634
Candelabra screw 9S5038
Candelabra screw 9S2036
(side spring lock)

## Candelabra Screw Sockets

Underwriters' Listed Rated 75 W . 125 V .


No. 18-73 Upturned bracket (illustrated)
No. 18-74 Downturned bracket
No. 18-75 Horizontal bracket
No. 18-76 Downturned and slotted bracket (illustrated)

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## Lens Holders with Lenses for Panel Mounting

 Screw Types Are Complete With Nut for Shank

The above two groups mount in $1^{\prime \prime}$ clearance hole. The upper series lock to the panel and are tamper proof. The lower series permit lamp replacement from the front of the panel.
LENS COLOR-The final figure 1 in the listed numbers indicates RED LENS COLOR. If other color is desired, change final figure to one from table below:

Green-2, Amber-3, Blue-4, White-5, Yellow-6, Clear-7

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# CONNECTORS FOR STANDARD SINGLE CONDUCTOR SHILLDED CABLE—FOR MICROPHONES, SPEAKERS, PICK-UPS, JACKS 



No. 100 CABLE CONNECTOR (Female)


No. 101 CABLE CONNECTOR (Male)


No. 51 CIRCUIT GROUNDING MALE CHASSIS CONNECTOR


No. 50 CHASSIS CONNECTOR
No. 50P Similar but drive fit into hole in chassis.


No. 103 CAP AND CHAIN


No. 102 PLUG WITH MALE THREAD
Fits standard jacks

## LAMP INSTALLER



For most lamps - L-73 (illustrated) For T41/2 lamps - L-45 <br> \title{
JEWEL LIGHT ASSEMBLIES
} <br> \title{
JEWEL LIGHT ASSEMBLIES
}

11/32" Jewel... Vertical Mounting<br>No. 5 TYPE



The No. 5 type is unique in its field because it can be adapted to the focal lengths of any miniature screw or bayonet lamp. The opening in the shank of this jewel is so small, it is necessary to have the filament of the Iamp directly behind the jewel. The slotted jewel mounting on the No. 5 makes this feature possible. This is an inexpensive unit, and it presents a neat appearance on small instrument panels.

STANDARD TYPES

| Type Numbor | Style Socket |
| :---: | :---: |
| 5 | Miniature Screw <br> MB |

## SPECIFICATIONS

MOUNTING: Mounts in $9 / 32^{\prime \prime}$ diameter hole on panels up to 1/4" thick.
RATING: Tested on 110 volts. Can be supplied to withstand 1000 volts AC for a period of one minute.
LAMPS: Designed to house any filament type miniature screw or miniature bayonet lamp.
COLORS: Amber, blue, colorless, green, ruby, white or yellow.
FINISHES OF GLASS: Standard unit is equipped with faceted glass. Smooth glass may be obtained upon request.
PLATING: Panel hardware is bright nickel, other parts cadmium.
SPECIAL PLATING: Panel hardware can be supplied with statuary bronze or chrome plating for small extra charge. PACKING: Packed in bulk unassembled.

## PARTS

| Part No. | Description |
| :--- | :--- |
| 14 | Jewel Assembly with Nut |
| 15 | Nut |
| 123 H | Socket Assembly for No. 5 |
| 223 H | Socket Assembly for No. 5B |

## 1/2" Jewel . . . Vertical Mounting No. 10 TYPE

NOTE:
Dimension $A$ to $B$ is from center of socket to outside of bracket. C to D from center of jewel to bottom of bracket. The No. 10B and 10 H have brackets with oblong hole permitting adjustment to obtain best position for lamp filament back of jewel.


STANDARD TYPES

| Type Number | Style Socket | A to B | C to D |
| :---: | :---: | :---: | :---: |
| 10 | Min. Screw | $1 / 2^{\prime \prime}$ | 11/4" |
| 10B | Min. Bayonet | $3 / 4^{\prime \prime}$ ) |  |
| 10 H | SC Cand. Bay. | 3/4* 6 | Adj. from $1 i_{6}$ "to $15 / 8^{\prime \prime}$ |
| 10G | Min. Bayonet | 1/2" | 11/4" |

## SPECIFICATIONS

LAMPS REQUIRED: For No. 10 and 10B, miniature screw or bayonet base of any voltage (tubular preferred). For No. 10G, miniature bayonet, type G31/2 bulb. For No. 10 H any SC candelabra bayonet base lamp may be used. Mounts in $7 / 16^{\prime \prime}$ hole on panels up to $1 / 4^{\prime \prime}$ thick. - JEWEL: Diamond cut (faceted); Amber, Blue, Crystal, Green, Ruby, White (Milk White), and Yellow. - SPECIAL FINISHES: Chrome, Black Nickel, Statuary Bronze. - PACKED in bulk with jewels and nuts in bags. - SPECIAL JEWELS: SP—Smooth, plain; SFA-Smooth, frosted all over; SFB -Smooth, frosted on back.

PARTS

| Part No. | Description |
| :--- | :--- |
| 115 | Socket Assembly for No. 10 |
| $215 B C$ | Socket Assembly for No. 10B |
| 215 | Socket Assembly for No. 10G |
| $615 B C$ | Socket Assembly for No. 10H |
| 16 | Jewel and Nut |
| 17 | Nut |


$1 / 22^{\prime \prime}$ Jewel . . . Vertical Mounting No. 10C TYPE UNDERWRITERS' APPROVED


The No. 10 C is an inexpensive candelabra screw base jownl light assembly that is Underwriters' Approved for 75 watt-125 volt service. It is particularly suited to applications where there is a minimum of depth behind the panel, and lamp replacement from the front of the panel is not necessary. The mounting bracket has a slotted hole to facilitate adjustment for placing the lamp filament directly behind the jewel giving maximum illumination of the jewel.

## SPECIFICATIONS

MOUNTING: Mounts in $7 / 16^{\prime \prime}$ hole on panele up to $1 / 4^{\prime \prime}$ thick. For panels between $1 / 4^{4}$ and $3 / 8^{\prime \prime}$ specify No. 16L jewel. RATING: 75 watts, 125 volts.
LAMPS: Will house any candelabra screw base lamp. COLORS: Amber, blue, colorless, green, ruby, white and yellow.
FINISHES OF GLASS

SYMBOL
Faceted (Diamond Cut)
Smooth Plain (Smooth face no frosting) Smooth, Frosted All Over Smooth, Frosted on Back Only
PLATING: Jewel assembly is burnished nickel. All other parts are cadmium. Statuary bronze, chrome, and black nickel plating can be applied to jewels for a small extra charge.
PACKED: Packed in bulk unassembled.

## PARTS

| $=$ Part No. | Description |
| :--- | :--- |
| 16 | Jewel Assembly and Nut |
| 17 | Nut |
| $415 B C$ | Socket Assembly |

## 1/2" Jewel... Horizontal Mounting No. 20 TYPE

The original Drake Horizontal Mounting Lamp Assembly, and still a fast seller. When ordering, please be sure to select the be sure to select he for the thickness for the thickness o panel on which to be installed; otherwise lamp may not extend far enough forward for easy removal, or if too far, prevent bezel screwing all the way on collar.


STANDARD TYPES

| Type <br> Number | Style <br> Socket | Length <br> $A$ to $B$ | Panel <br> Thickness |
| :---: | :--- | :---: | :---: |
| 20 | Min. Bayonet | $1-13 / 32^{\prime \prime}$ | $0^{\prime \prime}$ to $7 / 64^{\prime \prime}$ |
| 30 | Min. Bayonet | $1-7 / 32^{\prime \prime}$ | $1 / 4^{\prime \prime}$ |
| 40 | Min. Bayonet | $1-11 / 32^{\prime \prime}$ | $1 / 8$ to $15 / 64^{\prime \prime}$ |
| $20 S$ | Min. Screw | $1-1 / 16^{\prime \prime}$ | $0^{\prime \prime}$ to $15 / 64^{\prime \prime}$ |
| $30 S$ | Min. Screw | $15 / 16^{\prime \prime}$ | $1 / 4^{\prime \prime}$ |

NOTE: Dimension $A$ to $B$ is overall length of socket assembly with lamp installed. Can be furnished with same plastic caps as No. 51 and 51 N . Specify by using Nos. 31C or 31SC.

## SPECIFICATIONS

LAMPS REQUIRED: Miniature T31/4 tubular, G3 $1 / 2$ globular or other lamps of same over-all length. Lamp removable from front of panel. * Mounts in $11 / 16^{\prime \prime}$ hole. • JEWEL: Diamond cut (faceted); Amber, Blue, Crystal, Green, Ruby, White (Milk White) and Yellow. - SPECIAL FINISHES: Chrome, Black Nickel, Statuary Bronze. - PACKED in bulk with jewel, collar and nuts in bag. - SPECIAL JEWELS: SP-Smooth, plain; SFA-Smooth, frosted all over; SFBSmooth, frosted back.

## PARTS

| Part No. | Description |
| :--- | :--- |
| 220 A | Socket Assembly for No. 20 <br> 221 F <br> 221 V <br> 122 V |
| Socket Assembly for No. 30 |  |
| 122 G | Socket Assembly for No. 40 |
| 25 | Socket Assembly for No. 20-S |
| 27 | Socket Assembly for No. 30-S |
| 28 | Jewel |
| 30 | Nut |
|  | Collar for $0^{\prime \prime}-1 / 4^{\prime \prime}$ panels, $3 / 8^{\prime \prime}$ long |
|  | Collar for $3 / 8^{\prime \prime}$ panel, $1 / 2^{\prime \prime}$ long |



## JEWEL LIGHT

## 1/2" Jewel... Horizontal Mounting No. 50 TYPE

A
B


Net Wt. 0.056 lb .
PATENT NO. 2220516
This patented Drake Assembly is ideal for various applications, Specially designed for use on more than one thickness of panel. Supplied with two fibre washers which compensate for panel thicknesses. It is of sturdy construction, easy to mount, and
requires little space. requires little space.

## STANDARD TYPES

| Type Number | Style Socket | Length A to B | Panel Thickness |
| :---: | :---: | :---: | :---: |
| 50 | Min. Bayonet | 1-9/16" | 0" to $1 / 4{ }^{\prime \prime}$ |
| 50.5 | Min. Bayonet | $11 / 2^{\prime \prime}$ | $17 / 64^{\prime \prime}$ to $3 / 8^{\prime \prime}$ |
| 50 S | Min. Screw | $1^{1 / 8^{\prime \prime}}$ | $0^{\prime \prime}$ to $1 / 4{ }^{\prime \prime}$ |
| 50.5 S | Min. Screw | $11 / 8{ }^{\prime \prime}$ to $11 / 4{ }^{\prime \prime}$ | $17 / 64^{\prime \prime}$ to $3 / 8^{\prime \prime}$ |

NOTE: Dimension $A$ to $B$ is overall length from front of panel with lamp installed.
No spacing washers are furnished with part No. 50.5 S .

## SPECIFICATIONS

LAMPS RECUIRED: Miniature T3 $1 / 4$ tubular, $G 31 / 2$ globular or other lamps of same over-all length. - Lamp removable from front of panel. - Mounts in 11/16" hole. - JEWEL: (Diamond cut faceted); Amber, Blue, Crystal, Green, Ruby, White, (Milk White) and Yellow. - SPECIAL FINISHES: Chrome, Black Nickel, Statuary Bronze. - PACKED in individual boxes for jobbing trade; in bulk and fully assembled for manufacturing trade. - SPECIAL JEWELS: SP-Smooth, plain: SFA-Smoath, frosted all over: SFB-Smooth, frosted on back.

## PARTS

| Part No. | Description |
| :---: | :---: |
| 25 | Jewel |
| 28 | Collar 3/8"' long for No. $50 \& 50 \mathrm{~S}$ |
| 30 | Collar $1 / 2^{\prime \prime}$ long for No. $50.5 \& 50.5 \mathrm{~S}$ |
| 50A | Round Nut |
| 50B | Fibre Washer, $11 / 16^{\prime \prime}$ I.D. x $15 / 16^{\prime \prime}$ O.D. x $1 / 16^{\prime \prime}$ thick |
| 225A | Min. Bay. Socket Assembly for No. 50 |
| $225 \mathrm{C}$ | Min. Bay. Socket Assembly for No. 50.5 |
| 125B | Min. Screw Socket Assembly for Nos. 50S \& 50.5S |

## ASSEMBLIES

## Plastic Dome . . . Horizontal Mounting Lamp Replaceable from Front of Panel

 No. 51 TYPE

NET WEIGHT 0.045 lbs .
PATENT NO. 2220516
The No. 51 is a patented Drake assembly featuring a plastic dome indicator which fosters wide angle observation. The whole dome is illuminated, therefore it can be easily seen from the side. It is a good eye-catcher because of its brilliant glow, and for this reason, it makes $\alpha$ wonderful warning light. The unit is supplied with three $1 / 16^{\prime \prime}$ thick fibre spacing washers, so that when the unit is mounted on a thick panel, these washers can be removed making the lamps as accessible for replacement as when mounted on a thin panel.

| $\begin{aligned} & \text { Part } \\ & \text { No. } \\ & \hline \end{aligned}$ | Length |  | Style Socket | Number of Spacing Washers Required |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \text { A to } \\ B \end{gathered}$ | C to |  |  |  |  |  |
| 51 | 11/8" | $1{ }^{1 / 8}{ }^{\text {a }}$ | Min. Bcy. | Panel thickness | ${ }_{88}{ }^{\prime \prime}$ | 1/8"\| $\mathbf{R}^{\text {Pr }}$ | $1 / 4^{\prime \prime}$ |
|  |  |  |  | Washers |  | 211 | 0 |
| 51.5 | $1^{\prime \prime}$ | 1790" | Min. Bay. | Panel thickness | $1 / 4^{\prime \prime}$ | $8^{8 \prime}$ | $3 / 8^{\prime \prime}$ |
|  |  |  |  | Washers |  | 1 | 0 |
| 515 | 7/8" | $1{ }^{16}{ }^{\prime \prime}$ | Min. Screw | Panel thickness | +191 | $1 / 8^{\circ \prime} \left\lvert\, \frac{1}{8 \prime \prime}\right.$ | $1 / 4^{\prime \prime}$ |
|  |  |  |  | Washers | 2 | $1{ }^{1} 0$ | 0 |

Lenath $A$ to $B$ is overall length of socket assembly with lamp Installed.

## SPECIFICATIONS

MOUNTING: Mounts in 11/16" diameter hole. RATING: Tested on 110 volts. Can be supplied to withstand 1,000 volts $A C$ for a period of one minute. LAMPS: Designed to house the miniature bayonet or miniature screw base T3 $1 / 4$ lamp. Will also house G31/2 bulb, but lamp is not quite as accessible for replacement. COLORS: Amber, colorless, green and red. PLATING: Regularly supplied with nickel plated panel hardware, all other parts cadmium plated. SPECIAL PLATING: Panel hardware can be supplied with chromium, statuary bronze, or black nickel plating. Extra charge for these finishes. PACKING: The units are packed in bulk and fully assembled.

## PARTS

| Part No. | Description |
| :--- | :--- |
| $25 P$ | Plastic Dome |
| 28 | Collar $3 / 8^{\prime \prime}$ long for 51 and 51S |
| 30 | Collar 1/2" long for 51.5 |
| 50 A | Round Nut |
| 50 B | Fibre Spacing Washer. |
| $125 B$ | Socket Assembly for 51S |
| 225 C | Socket Assembly for 51 |
| $225 B$ | Socket Assembly for 51.5 |



# Sial and Jowed PILOT LIGHT ASSEMBLIES 

## MECHANICALLY SECURE TERMINALS USED ON 110 VOLT CANDELABRA ASSEMBLIES

## 3/4" Jewel . . . Horizontal Mounting No. 60 TYPE



PATENT NO. 2220516
Net Wt. 0.068 lb.
This patented item is similar to the No. 50, but has a $3 / 4^{\prime \prime}$ jewel in a polished chrome "slip-fit" bezel. Supplied with three fibre washers which compensate for panel thickness. Its sturdy con truction hase of mounting, and small size make it an ideal assembly.

| $\begin{aligned} & \text { Part } \\ & \text { Number } \end{aligned}$ | Style Socket | Length A to B |
| :---: | :---: | :---: |
| 60 <br> 60N <br> 60S <br> 60 | Min. Bayonet <br> Cand. Screw for NE45 lamp <br> Min. Screw <br> Cand. Serew for $115 \mathrm{v}, 6 \mathrm{~W}$, T4 $1 / 2$ lamp | $\begin{aligned} & 1-9 / 16^{\prime \prime} \\ & 1-13 / 6^{\prime \prime} \\ & 1-5 / 16^{\prime \prime} \\ & 2^{\prime \prime} \end{aligned}$ |

NOTE: Dimension $A$ to $B$ is overall length from front of panel with lamp installed.

## SPECIFICATIONS

MOUNTING: Mounts in $13 / 16^{\prime \prime}$ diameter hole on panels $0^{\prime \prime}$ to $1 / 4$ thick. For panels $17 / 64^{\prime \prime}$ to $5 / 8^{\prime \prime}$ thick use parts $60.75,60.75 \mathrm{~N}$, 60.75 S , or 60.75 T .

RATING: Miniature bayonet and screw types are tested on 110 volts. Candelabra screw types will withstand a voltage breakdown of 1,000 volts.
COLORED DISCS: The No. 60 types are regularly supplied with colorless, smooth glass frosted on back behind which is placed a colored disc. The advantage of this method is that the glass appears white until the lamp is lighted.
COLORS: Amber, blue, colorless, green, red, white, or yellow.

| OTHER FINISHES OF GLASS | SYMBOL |
| :--- | :---: |
| Faceted (Diamond Cut) <br> Smooth Plain (Smooth face and no frosting) <br> Smooth, frosted on back (Smooth face frosted on <br> back only) | SAC |
| SFB |  |
| Colored glass is furnished when any ot the above types are <br> specified. We recommend smooth plain glass for use with neon |  | specified. We recommend smooth plain glass for use with neon glow lamps.

PARTS

| $\begin{aligned} & \text { Part } \\ & \text { Number } \end{aligned}$ | Description |
| :---: | :---: |
| 60 A | Jewel |
| 60B | Collar 25/32"', long for Nos. 60.75, N, S, and T |
| 60 C | Collar 13/32'' long for Nos. 60, N, S, and T |
| 60D | Round Nut |
| 60 E | Color Disc |
| ${ }^{60 \mathrm{G}}$ |  |
| 601 | Fibre Washers, $13 / 16^{\prime \prime}$ I.D. $\times \mathrm{I}_{16}^{16^{\prime \prime}}$ O.D. $\mathrm{x} 1 / 16^{\prime \prime}$ thick |
| 128 V | Min. Screw Socket Assembly for Nos. 60S \& 60.75S |
| 228 U | Min. Bay. Socket Assembly for No. 60 |
| 228 V | Min. Bay. Socket Assembly for No. 60.75 |
| 428 U | Cand. Screw Socket Assembly for No. 60.75N |
| 428 W | Cand. Screw Socket Assembly for Nos. 60N and 60.75 T |
| 437P | Cand. Screw Socket Assembly for No. 60T |

## 1" Jewel . . . Horizontal Mounting No. 75 TYPE

A


PATENT NO. 2192345
Net Wt. 0.107 lb .
The patented No. 75 type has $\alpha$ 'slip-fit" bezel. It is exceedingly neat in appearance. Very substantial and easy to install. All nearts are burnished cadmium plated except the bezel which has a highly polished chrome finish.

| Type Number | Style Socket | Length A to B |
| :---: | :---: | :---: |
| 75 | Candelabra | $21 /{ }^{1 / \prime}$ |
| 175 | Min. Screw | 13/4", |
| 275 | Min. Bayonet | 17/8', |
| 375 | S.C. Cand. Bayonet | 2-1/32" |

NOTE: Dimension $A$ to $B$ is over-all length. Overall diameter of mounting nut $13 / a^{\prime \prime}$.

## SPECIFICATIONS

MOUNTING: Mounts in $1^{\prime \prime}$ diameter hole on panels up to $1 / 2^{\prime \prime}$ thick. RATING: Nos. 175 and 275 are tested on 110 volts.
Nos. 75 and 375 will withstand a voltage breakdown of 1,000 volts LAMPS: The No. 75 is designed to house Mazda 115 volt 6 watt, S6 or $C 7$ candelabra screw base lamps. Will house any other candelabra screw base lamp up to $17 / 8^{\prime \prime}$ long and $7 / 8^{\prime \prime}$ diameter. The Nos. 175 and 275 are designed to house any miniature lamp up to $1-3 / 16^{\prime \prime}$ long and $7 / \mathbf{a}^{\prime \prime}$ diameter.
The No. 375 is designed to house any single contact candelabra bayonet base lamp up to $11 / 2^{\prime \prime}$ long and $7 / 6^{\prime \prime}$ diameter.
COLORS: Amber, Blue, Colorless, Green, Red, White, or Yellow. COLORED DISCS: The No. 75 types are regularly supplied with colorless, smooth glass frosted on back behind which is placed a colored disc. The advantage of this method is that the glass appears white until the lamp is lighted.
OTHER FINISHES OF GLASS

Faceted (Diamond Cut)
SYMBOL
FAC
Smooth Plain (Smooth face and no frosting)
SP
Smooth, frosted on back (Smooth face frosted on
SFB back only)
Colored glass is furnished when any of the above types are specified. We recommend smooth plain glass for use with neon glow lamps.

PARTS

| Part <br> Number | Description |
| :---: | :--- |
| 419 V | Socket Assembly for No. 75 |
| 224 H | Socket Assembly for No. 275 |
| 124 I | Socket Assembly for No. 175 |
| 624 J | Socket Assembly for No. 375 |
| 75 A | Jewel |
| 75 B | Tube |
| 75 C | Nut |
| 75 E | Color Disc |
| 75 F | Retaining ring for Color Disc |
| 75 G | Fibre washer-1 $1 / 4$ O. O.D. |
| 75 L | Lock washer |
| 75 N | Spring clip to lock socket in place |

## PILOT LIGHT ASSEMBLIES

## 1" JEWEL LIGHT ASSEMBLIES LAMPS REPLACEABLE FROM FRONT OF PANEL

## No. 75AP TYPE UNDERWRITERS' APPROVED



Net Weight 0.110 lbs .
The No. 75Ap is a heavy duty candelabra screw base assembly designed to be used on rugged equipment. The panel hardware (jewel holder) is attractively finished with a highly polished chrome plate. All other parts are cadmium plated. The No. 75AP is Underwriters' approved for 125 volt, 75 watt service. The socket assembly and mounting tube are one piece and so constructed that they need never be replaced. Electrical connections are made to solder terminals. No danger of vibration loosening the connections as with screw terminals.

## SPECIFICATIONS

MOUNTING: Mounts in $1^{\prime \prime}$ diameter holes on panels up to $1 / 2^{\prime \prime}$,
thick.
RATING: 125 volts, 75 watts. Can be operated on 220 wolt circuits if connected in series with a $2000 \mathrm{ohm}, 10$ watt wire wound resistor. In this case a 115 volt, 6 watt lamp must be used.
LAMPS: Designed to house the Mazda 115 volt, 6 watt, S6, candelabra screw base lamp.
Will house any other candelabra screw base lamp which has an overall length of less than $17 / 8^{\prime \prime}$ and a diameter of less than $7 / 8^{\prime \prime}$. NOTE: Will not house a C7 bulb.
COLORS: Amber, blue, colorless, green, ruby, white or yellow.

| FINISHES OF GLASS |  |
| :--- | :---: |
| Faceted (Diamond Cut) | FABOL |
| Smooth Plain (Smooth face and no frosting) <br> Smooth, frosted on back (Smooth face frosted on <br> back only) | SP |

For Mazda lamps we recommend faceted or smooth glass frosted on back. For neon glow lamps, we recommend smooth plain glass.
NOTE: If no other finish is specified, faceted glass will be furnished.

PACKING: The units are packed in individual boxes for the jobbing trade; in bulk, and fully assembled for the manufacturing trade.

PARTS

| Part No. |  |
| :---: | :--- |
| 475M | Socket Assembly |
| 75A | Jewel \& Jewel Holder |
| 75 C | Nut |
| 75L | Lock Washer |



The No. 975 is a heavy duty double contact, candelabra, bayonet base assembly designed to be used in rugged equipment. The panel hardware (jewel holder) is attractively finished with $\alpha$ panel hardware (jewel holder) is attractively finished with $\alpha$
highly polished chrome plate. All other parts are cadmium plated. The No. 975 is Underwriters approved for 125 volt, 75 watt service. The mounting tube and socket are detachable; therefore the wire leads of the socket assembly can be connected to the terminal block before the socket assembly is clipped into the mounting tube which is already installed in the panel. This feature facilitates quicker assembly of panels. The built in lead wires can be attached directly to screw or solder terminal blocks; thereby eliminating two soldering operations. Units are carried in stock with both 10 inch and 20 inch leads. On orders of 500 or more units the wires can be cut to your specifications. See wire table.

| Part Numbers | Length of Leads |
| :---: | :---: |
| $975-10$ <br> $975-20$ | 10 inches <br> 20 <br> inches |

## SPECIFICATIONS

MOUNTING: Mounts in 1" diameter holes on panels up to $1 / 2^{\prime \prime}$ thick. 125 volts, 75 watts.
LAMPS: Designed to house the double contact, candelabra, bayonet base, C7, S6 or T6 $1 / 2,110$ volt lamp. Will house any other D C, candelabra based lamp which is no larger than $7 / 8^{\prime \prime}$ in diameter and no longer than $21 / 8^{\prime \prime}$. Lamps can be purchased from Drake Manufacturing Co.
LEADS: No. 18 gauge (16 strands No. 30) with $1 / 32^{\prime \prime}$ of black Synthinol plastic insulation.
COLORS: Amber, blue, coloriess, green, red, white or yellow.
COLORED DISCS: The No. 975 is regularly supplied with colorless, smooth glass frosted on back behind which is placed a colored disc. The advantage of this method is that the glass appears white until the lamp is lighted.

OTHER FINISHES OF GLASS
Faceted (Diamond Cut)


Smooth, frosted on back (Smooth frosting)
Smooth, frosted on back (Smooth face
frosted on
frosted on back only)
when any of the above types is specihed. We recommend smooth plain glass for use with neon PACKING: Packed in bulk fully assembled.

## PARTS

| Part Numbers | Description |
| :---: | :--- |
| 75 A | Jewel |
| 75 B | Tube |
| 75 C | Nut |
| 75 E | Color Disc |
| 75 F | Retaining ring for Color Disc |
| 75 G | Fiber washer 1/16"' thick |
| 95 L | Lock Washer |
| $950 \mathrm{E}-10$ | Socket Assembly for No. 975-10 |
| $950 \mathrm{E}-20$ | Socket Assembly for No. 975-20 |

Dial and Jewel

## PILOT LIGHT ASSEMBLIES

totally enclosed, miniature bayonet

## PILOT LIGHT ASSEMBLIES

## BUILT-IN RESISTORS FOR NEON GLOW-LAMPS OPTIONAL

These totally enclosed pilot lights meet Underwriters' Specifications. They are very rugged and particularly adapted to use in equipment subjected to extreme vibration and atmospheric conditions. The 100 N and 101 N assemblies are designed specifically for use with the NE51 neon glow lamp. With proper current limiting resistors (built into the socket of either the 100 N or 101 N ), the neon glow lamps can be operated on any voltage over 65 volts AC and 90 volts DC. You merely specify the operation voltage and we furnish the correct unit. Stock units have 100,000 ohm resistors for 115 volt operation. The primary advantages of the glow lamp are its long life ( 3000 hrs .), resistance to vibration (unaffected), low initial cost, low operating cost ( $1 / 25$ watt), and small size.

## WITH 1/2" JEWEL 110. 11



PATENT NO. 2220515
No. 100N


HAS BUILT-IN RESISTOR FOR NEON LAMP
The jewel or bull's-eye indicators are recommended for use with incandescent lamps of over one watt; in temperature ambients of over $200^{\circ} \mathrm{F}$; or, in the case of neon, where a concentration of light is required directly in front of the observer.

## SPECIFICATIONS

MOUNTING: Mounts in $11 / 16^{\prime \prime}$ dia. hole on panels up to $3 / 8^{\prime \prime}$ thick.
thick. Breakdown voltage 2000 volts AC
LAMPS: No. 100 is designed to house any miniature bayonet T31/4 lamp.
COLORS: Amber, Blue, Colorless, Green, Ruby, White, and Yellow NOTE: Blue, Green, and White not recommended for use with neon lamp.

## FINISHES OF GLASS

Faceted (Diamond Cut)
Smooth Plain (Smooth face, no frosting)
Smooth, Frosted All Over
Smooth, Erosied on Back Only $\qquad$
NOTE: SFA and SFB finishes not recommended for neon lamps.
PLATING: Regularly supplied with burnished nickel plated panel hardware.
SPECIAL PLATING: Extra charge for chromium, statuary bronze, etc.
PACKING: To jobbers: individually packed in boxes, 25 boxes to a unit package. To manufacturers: packed in bulk, fully as. sembled. Net wt. 0.057 lbs .

PARTS

| Part No. |
| :--- |
| 25 |
| 27 |
| 36 L |
| 50B |
| 2100 A |
| 2100 AN |

SYMBOL
FAC Standard Fin ish on No. 100 SP Standard Finish on No. 100 N SFA
SFB

## Dial and Jewel. PILOT LIGHT ASSEMBLIES

## DOUBLE CONTACT CANDELABRA BAYONET <br> Underwriters' Approved for General Purpose

## No. A900 SERIES

UL File No. E17786


Fig. 1

This socket assembly is a 110 volt unit designed specifically for use in Underwriters' approved equipment. It has built in lead wires and is sturdily constructed befitting 110 volt application. In spite of its ruggedness it requires less space with lamp installed than does the candelabra screw type. In addition the bayonet type lamps will not loosen from vibration.

This socket can be supplied mounted to any one of the brackets shown on this page and the next. If they do not meet your requirements, we have the facilities to build them to your specifications.

The A900 type assembly is equipped with No. 18 (16 strands No. 30) tinned copper wire insulated with $1 / 32^{\prime \prime}$ of plastic insulation. See wire table. Units can be wired in series.
The Underwriter's Laboratories have approved the use of this socket with No. 22 gauge wire leads for application in radio only. With the lighter gauge wire the assembly is designated as the No. 900 Series. It can be wired in series or parallel.
See wire table. See wire table.

NOTE: On orders for less than 500 assemblies, no choice of leads is given. Assemblies will be supplied with $10^{\prime \prime}$ of black wire stripped $1 / 2^{\prime \prime}$.
L.AMPS: 110 volt, 10 watt can be purchased from Drake Manufacturing Co.

## FORMULATION OF PART NUMBERS

The part number is composed of three parts, the series number, the bracket number, and the bracket position. The series number is expressed in hundreds plus the letter prefix if there is one. For example: The part number of an A900 Series Socket (fig. 1) with a No. 50 H bracket (fig. 4) in the " $A$ " position (fig. 2) would be No. A950H-A. Similarly a unit with No. 22 wire ( 900 series) and a No. 50J bracket (fig. 5) in the "C" position (fig. 3) would be 950J-C. Part numbers of sockets without brackets are designated as 917. A917, and 1017 respectively.
NOTE: Please do not fail to specify length of lead wire and stripping when ordering more than 500 units.

MOUNTING BRACKETS FOR 900, A900, 1000 SERIES ASSEMBLIES


Fig. 2
"C" BRACKET POSITION


Fig. 3


No. 50J


Fig. 5

Clip Bracket Types With FLANGE Brackets


103 CE

103 CH

Clip Bracket Types With FLAT Brackets



104 CH

Bayonet Type Socket Assemblies



204 CH


203 CH


204 AH

Miscellaneous Types . . . Special Sizes


## MINIATURE BAYONET LICHT SOCKET ASSEMBLIES No. 500 SERIES

## For Underwriters' Approved AC-DC Radio Receivers

## For Underwriters' Approved AC Radio Receivers

In this socket assembly the bayonet shell is protected from outside contact by a sturdy fishpaper insulating shield. The lead wires are an integral part of the unit and both are secured within the socket so that they will withsocket so that they will with-
stand $a$ tension over 25 stand
pounds.
Rounded edges on the opening at the base prevent cut and frayed lead wire insulation.


The a minimbly will withstand age of 1000 breakdown voltage of 1000 volts between contacts and to ground.
All parts are fitted so that there can be no rotation of one part with respect to an. one part with respect to an-
other. This means that there other. This means that there is absolute ridgidity from the onet shell which supports the lamp. The center contact cannot protrude from the socket when the lamp is removed.
The standard assembly is equipped with No, 22 gauge wire, however No. 20 wire can be used.


In this socket assembly the bayonet shell is electrically connected to the mounting bracket. It is secured in such a way that it cannot rotate. The lead wire is an integral part of the unit and is secured tightly enough to withstand a tension of over 25 pounds. The center contact cannot pro. trude when the lamp is removed.

The assembly will with. stand a minimum breakdown voltage of 1.000 volts between the center contact and ground.

The assembly is customarily built with No. 22 gauge wire; however any other gauge up to and including No. 16 wire can be used.


## No. 800 Series

In this socket assembly the bayonet shell is insulated from the bracket. The shell is bridged to provide a good solder connection for one lead wire. The center lead wire is builtin, and the center contact cannot protrude when the lamp is removed. Upon request the assembly can be furnished with two lead wires or no lead wires.

## COMMENTS ON ALL ASSEMBLIES ILLUSTRATED HERE

The 500 and 700 types can be wired in series or parallel, but the 800 type can only be wired in series. See wire table for various lengths, color and insulation of lead wires.

NOTE: On orders for less than 500 assemblies, no choice of leads is given. All assemblies will be supplied with 10 " of No. 22 plastic insulated wire stripped $1 / 2^{\prime \prime}$ long.

The assemblies can be attached to any of the mounting brackets shown in the listing of dial light assemblies. We also have approximately 900 other mounting brackets that are not listed. If you will submit your lighting problem to us, we are certain that we can offer you a satisfactory solution.

## SOCKET ASSEMBLIES AND JEWELS

## No. 300 SERIES

## Candelabra Screw Base

 Underwriters' Approved for GeneralUse

The No. 300 socket assembly is a candelabra screw socket, Underwriters'approved for 75 watt, 125 volt service. It can be attached to any of the brackets shown in the listing of dial light assemblies. We also have approximately 900 other mounting brackets that are not listed. If you will submit your lighting problem to us, we are certain that we can offer you a satisfactory solution.

## No. 1000 Series

Single Contact Candelabra Bayonet Automotive Type


This unit is an inexpensive assembly suitably adapted for use in 6 to 115 volt circuits. It has a built in center lead wire and the socket and bracket form the ground connection. The unit is sturdily constructed and designed so that the center contact cannot protrude when the lamp is removed.

This socket can be supplied mounted to any one of the brackets illustrated with the 900 and A900 socket assemblies. If they do not meet your requirements, we have the facilities to build them to your specifications.
The standard Number 1000 type Assembly is equipped with 10 inches of No. 18 ( 16 strands No. 30) tinned copper wire insulated with $1 / 32^{\prime \prime}$ of plastic insulation. See wire table. Assemblies can be wired in parallel.

On orders of more than 500 units No. 22 to No. 16 gauge wire is available.

NOTE: Can be sold knocked down into extruded shell, spring, and pigtail with center contact and washer attached.
$1 / 2$ " Jewels


THREADED TYPE


SLOTTED TYPE

## THREAD TYPE WITH NUTS

16 CSP
$161 / 2 \mathrm{CSP}$

Shank $3 / 8^{\prime \prime}$ long, ${ }^{7}{ }^{7} 0^{\prime \prime}$ O.D.
Shank $1 / 2^{\prime \prime}$ long, $\frac{7}{16}{ }^{\prime \prime}$ O.D.

## SLOTTED TYPES

22CSP
23CSP
Shank 1/8" long, 3/8" O.D.
Shank $\frac{3}{16} "$ long, $3 / 8^{\prime \prime}$ O.D.
Shank .085" long, 3/8" O.D.

JEWELS: Diamond cut (faceted), Amber, Blue, Crystal, Green, Ruby, White (Milk White) and Yellow.
SPECIAL JEWELS: SP-Smooth, plain; SFA-Smooth, frosted all over: SFB--Smooth, frosted back

SPECIAL FINISHES: Chrome, Black Nickel, Statuary Bronze.

## 11/32" Jewels . . . Slotted Types Only

JEWELS: Diamond cut (faceted), Amber, Crystal, Green, Ruby, White (Milk White). Also supplied with smooth plain glass (specify "SP") at same price.
FINISHES: Regular finish Statuary Bronze. Also supplied in nickel finish if so ordered, at same price.
2lCSP, slotted type, Shank $\frac{3}{16}{ }^{\prime \prime}$ long, $3^{9} 2^{\prime \prime}$ O.D.
24CSP, slotted type, Shank $1 / 4^{\prime \prime}$ long, ${ }^{92}$ " O.D.

## 1" Threaded Jewel Assembly

No. 75A3


Mounts in $1^{\prime \prime}$ diameter hole on panels up to $1 / 4^{\prime \prime}$ thick by removing washers. The assembly is supplied complete with fibre washer, lock washer, and hex nut. The unit is water tight when mounted to the panel with a rubber gasket.

# （i） 2．F．JOFiNSON Company mystor 



JOHNSON Indicator Light Assemblies are oustanding examples of sound engineering design，excellent material and careful workmanship．Their use is your assurance of complete satis－ warkmo

| Cat． <br> No． | List Price | Illus． | Monnting Hole Size | length Behind Panel ${ }^{7}$ | Bulb Stape | Lamp <br> Base | Jewels |  |  | Termirals |  | Insulation | Under－ writer A pprowed | Color |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Type | Size | Holder | No． | T＇spe |  |  |  |
| 147－800 | \＄1．05 | B | $1 "$ | $2^{3 / 8}{ }^{\prime \prime}$ | G31／2，T31／4 | Min．Screw | Faceted | $1 "$ | Frictior | 2 | Solder | Fiber |  |  |
| 147－801 | 1.05 | B | ］＂ | $23 / 8$＂ | $\mathrm{G} 3 \frac{1}{2}, \mathrm{~T} 3 \frac{1}{4}$ | Min．Screw | Smooth | $1^{\prime \prime}$ | Friction | 2 | Solder | Fiber |  |  |
| 147－802 | 1.10 | B | $1 "$ | $28.1{ }^{\prime \prime}$ | S6 | Cand．Screw | Faceted | 1 ＂ | Friction | 2 | Solder | Fiber |  |  |
| 147－803 | 1.10 | B | $1^{\prime \prime}$ | $23 / 3$＂ | S6 | Cand．Screw | Smooth | $1 "$ | Friction | 2 | Solder | Fiber |  | $\underline{4}$ |
| 147－804 | 1.10 | B | $1 "$ | 28／8＂ | G31／2．T31／4 | Min．Bay． | Faceted | $1 "$ | Friction | 2 | Solder | Fiber |  | $\stackrel{4}{0}$ |
| 147－805 | 1.10 | B | $1 "$ | 23／8＂ | G31／2，T31／4 | Min．Bay． | Smooth | $1 "$ | Friction | 2 | Solder | Fiber |  |  |
| 147－1000 | 1.40 | A | $1^{\prime \prime}$ | 29610 | S6 | Cand．Screw | Faceted | $1 "$ | Friction | 2 | Solder | Porcelain | Yes | z＇ |
| 147－1001 | 1.40 | A | $1^{\prime \prime}$ | 296＂ | S6 | Cand．Screw | Smooth | I＂ | Friction | 2 | Solder | Porcelain | Yes | 㟧 |
| 147－1002 | 1.50 | A | $1^{\prime \prime}$ | 29 价＂ | S6 | Cand．Screw | Colored Disc ${ }^{*}$ | $1^{\prime \prime}$ | Friction | 2 | Solder | Porcelain | Yes | $\stackrel{\sim}{\square}$ |
| 147－1003 | 1.40 | A | $1^{\prime \prime}$ | 2佦＂ | T41／2，NE45 | Cand．Screw | Faceted | 1 ＂ | Friction | 2 | Solder | Porcelain | Yes |  |
| 147－1004 | 1.40 | A | $1^{\prime \prime}$ | $2^{9}$ 后＂ | T41／2，NE45 | Cand．Screw | Smooth | $1^{\prime \prime}$ | Friction | 2 | Solder | Porcelain | Yes | 岂 |
| 147－1005 | 1.50 | A | $1^{\prime \prime}$ | 29 价＂ | T41／2，NE45 | Cand．Screw | Colored Disc ${ }^{6}$ | $1 "$ | Friction | 2 | Solder | Porcelain | Yes | $\underset{\square}{\text { ¢ }}$ |
| 147－1032 | 1.65 | A | $1^{\prime \prime}$ | 234＂ | S6 | Cand．Screw | Faceted | 1 ＂ | Friction | 2 | Screw | Phenolic | Yes |  |
| 147－1033 | 1.65 | A | $1^{\prime \prime}$ | 23／4＂ | S6 | Cand．Screw | Smooth | $1 "$ | Friction | 2 | Screw | Phenolic | Yes | 世 |
| 147－1034 | 1.75 | A | $1 "$ | 28／4＂ | S6 | Cand．Screw | Colored Disc ${ }^{\text {B }}$ | ］＂ | Friction | 2 | Screw | Phenolic | Yes |  |
| 147－1035 | 1.65 | A | $1^{\prime \prime}$ | 27／6＂ | T41／2，NE45 | Cand．Screw | Faceted | $1^{\prime \prime}$ | Friction | 2 | Screw | Phenolic | Yes | $\bigcirc$ |
| 147－1036 | 1.65 | A | $1 "$ | 27 \％${ }^{\prime \prime}$ | T41／2，NE45 | Cand．Screw | Smooth | I＂ | Friction | 2 | Screw | Phenolic | Yes | $z$ |
| 147－1037 | 1.75 | A | $1 "$ | 2716＂ | T41／2，NE45 | Cand．Screw | Colored Disc ${ }^{\circ}$ | $1 "$ | Friction | 2 | Screw | Phenolic | Yes | O |
| 147－1050 | 1.75 | A | $1^{\prime \prime}$ | $21 /{ }^{\prime \prime}$ | G6 | S．C．Cand．Bay． | Faceted | I＂ | Friction | 1 | Screw | H．Rubber |  | 0 |
| 147－1051 | 1.75 | A | 1 ＂ | 21／2＂ | G6 | S．C．Cand．Bay． | Smooth | $1 "$ | Friction | － | Screw | H．Rubber |  | 2 |
| 147－1052 | 1.85 | A | $1{ }^{\prime \prime}$ | $21 /{ }^{\prime \prime}$ | G6 | S．C．Cand．Bay． | Colored Disc ${ }^{0}$ | $1^{\prime \prime}$ | Friction | 1 | Screw | H．Rubber |  | ＋ |
| 147－1053 | 1.75 | A | $1^{\prime \prime}$ | $21 /{ }^{\prime \prime}$ | G6 | D．C．Cand．Bay． | Faceted | $1^{\prime \prime}$ | Friction | 2 | Screw | H．Rubber | Yes |  |
| 147－1054 | 1.75 | A | 1 ＂ | $21 /{ }^{\prime \prime}$ | G6 | D．C．Cand Bay | Smooth | $1^{\prime \prime}$ | Friction | 2 | Screw | H．Rubber | Yes | $\stackrel{\text { ® }}{\sim}$ |
| 147－1055 | 1.85 | A | $1^{\prime \prime}$ | 21／2＂ | G6 | D．C．Cand．Bay． | Colored Disc | I＂ | Friction | 2 | Screw | H．Rubber | Yes | 안 |
| 147－1056 | 1.75 | A | $1{ }^{\prime \prime}$ | 25／8＂ | G6，NE48 | D．C．Cand．Bay＇ | Faceted | $1^{\prime \prime}$ | Friction | 2 | Screw | H．Rubber | Yes |  |
| 147－1057 | 1.75 | $\wedge$ | $1^{\prime \prime}$ | $25 /{ }^{\prime \prime}$ | G6．NE48 | D．C．Cand．Bay | Smooth | $1^{\prime \prime}$ | Friction | 2 | Screw | H．Rubber | Yes | $\stackrel{\sim}{0}$ |
| 147－1058 | 1.85 | A | $1^{\prime \prime}$ | $25 / 8^{\prime \prime}$ | G6，NE48 | D．C．Cand．Bay．${ }^{1}$ | Colored Disc ${ }^{6}$ | 1＂ | Friction | 2 | Screw | H．Rubber | Yes | ＜ |
| 147－1076 | 2.00 | A | $1^{\prime \prime}$ | 25／8＂ | G6，NE48 | D．C．Cand．Bay ${ }^{2}$ | Faceted | 1 ＂ | Friction | 2 | Screw | H．Rubber | Yes | $\underset{\sim}{3}$ |
| 147－1077 | 2.00 | A | 1 ＂ | 25／8＂ | G6，NE48 | D．C．Cand．Bay．${ }^{2}$ | Smooth | $1^{\prime \prime}$ | Friction | 2 | Screw | H．Rubber | Yes | 5 |
| 147－1078 | 2.10 | A | $1^{\prime \prime}$ | 25／${ }^{\prime \prime}$ | G6，NE48 | D．C．Cand．Bay．${ }^{2}$ | Colored Disc ${ }^{6}$ | $1^{\prime \prime}$ | Friction | 2 | Screw | H．Rubher | Yes | 2 |
| 147－1110 | 1.15 | E | 11／6＂ | 15／8＂ | T31／4 | Min．Bay． | Faceted | $1 / 2^{\prime \prime}$ | Threaded | 2 | Solder | Phenolic |  | 0 |
| 147－1111 | 1.15 | E | 11／60＂ | 15／8＂ | T31／4 | Min．Bay， | Smooth | 1／2＂ | Threaded | 2 | Solder | Phenolic |  |  |
| 147－1112 | 1.15 | E | 11／6＂ | $17 \%$ \％ | G31／2 | Min．Bay． | Faceled | $1 / 2$＂ | Threaded | 2 | Solder | Phenolic |  | 世 |
| 147－1113 | 1.15 | E | 11 石＂ | 17\％＂ | G31／2 | Min．Bay． | Smooth | 1／2＂ | Threaded | 2 | Solder | Phenolic |  | $\underset{\sim}{3}$ |
| 147－1142 | 1.10 | F | $11 / 80$ | $176{ }^{\prime \prime}$ | T314 | Min．Bay． | Lucite | $5 / 8{ }^{\prime \prime}$ | Threaded | 2 | Solder | Phenolic | Yes |  |
| 147－1143 | 1.25 | F | 11／8＂ | 176＂ | T31／4，NE51 | Min．Bay．${ }^{\text {3 }}$ | Lucite | 5\％＂ | Threaded | 2 | Solder | Phenolic | Yes | $\underset{\sim}{\sim}$ |
| 147－1144 | 1.25 | F | 11／6＂ | 176＂ | T31／4，NF5 1 | Min．Bay．${ }^{4}$ | Lucite | $5 / 8 \prime$ | Threaded | 2 | Solder | Phenolic | Yes | \％ |
| 147－1200 | 1.65 | C | $1^{\prime \prime}$ | $2^{9} 961$ | S6 | Cand．Screw | Faceted | $1^{\prime \prime}$ | Threaded | 2 | Solder | Porcelain | Yes | \＆ |
| 147－1201 | 1.65 | C | $1^{\prime \prime}$ | $2961{ }^{16}$ | S6 | Cand．Screw | Smooth | $1 "$ | Threaded | 2 | Solder | Porcelain | Yes |  |
| 147－1202 | 1.75 | C | $1 "$ | $29 \% 6$ | S6 | Cand．Screw | Colored Discn | $1^{\prime \prime}$ | Threaded | 2 | Solder | Porcelain | Yes | $z$ |
| 147－1209 | 1.90 | C | $1^{\prime \prime}$ | 2\％4＂ | 56 | Cand．Screw | Faceted | $1^{\prime \prime}$ | Threaded | 2 | Screw | Phenolic | Yes | $\underset{\sim}{\text { W }}$ |
| 147－1210 | 1.90 | C | $1^{\prime \prime}$ | 28／4＂ | S6 | Cand．Screw | Smooth | $1^{\prime \prime}$ | Threaded | 2 | Screw | Phenolic | Yes | $\xrightarrow[4]{4}$ |
| 147－1211 | 2.00 | C | $1 "$ | 23／4＂ | S6 | Cand．Screw | Colored Disc ${ }^{6}$ | $1 "$ | Threaded | 2 | Screw | Phenolic | Yes |  |
| 147－1212 | 1.90 | C | $1 "$ | $2^{7}{ }_{16}$＂ | T41／2，NE45 | Cand．Screw | Faceted | $1^{\prime \prime}$ | Threaded | 2 | Screw | Phenolic | Yes | 完 |
| 147－1213 | 1.90 | C | I＂ | 270＂ | T4\％2，NE45 | Cand．Screw | Smooth | $1^{\prime \prime}$ | Threaded | 2 | Screw | Phenolic | Yes | $\pm$ |
| 147－1214 | 2.00 | C | $1 "$ | $2^{7}$ 伯＂ | T41／2，NE45 | Cand．Screw | Colored Disc＊ | $1^{\prime \prime}$ | Threaded | 2 | Screw | Phenolic | Yes | $\ddot{0}$ |
| 147－1217 | 1.90 | G | $1 "$ | 115／6＂ | T41／2，NE45 | Cand Screw | Lucite | 1 ＂ | Threaded | 2 | Screw | Phenolic | Yes | 응 |
| 147－1218 | 1.60 | G | 1 ＂ | 11／2＂ | T31／4，NES1 | Min．Bay．${ }^{5}$ | Lucite | $1^{\prime \prime}$ | Threaded | 2 | Solder | Phenolic | Yes | O |
| 147－1219 | 2.10 | G | 1＂ | 2166 | $\begin{gathered} \mathrm{T} 4 \frac{1}{2} \\ \mathrm{G} 6, \mathrm{NE} 48 \end{gathered}$ | D．C．Cand．Bay．${ }^{1}$ | Lucite | $1 "$ | Threaded | 2 | Screw | H．Rubber | Yes | \％ |
| 147－1220 | 2.25 | G | $1 "$ | $216{ }^{1 /}$ | $\begin{gathered} \mathrm{T} 41 / 2 \\ \mathrm{G} 6, \mathrm{NE} 48 \end{gathered}$ | D．C．Cand．Bay．${ }^{2}$ | Lucite | $1 "$ | Threaded | 2 | Screw | H．Rubber | Yes | － |
| 147－1600 | 2.00 | D | $1^{\prime \prime}$ | $21 /{ }^{\prime \prime}$ | S6 | Cand．Screw | Glass | 11／8＂ | Threaded | 2 | Screw | Phenolic | Yes | 号 |
| 147－1604 | 2.00 | D | $1^{\prime \prime}$ | 113 伯＂ | G6 | S．C．Cand．Bay． | Glass | 11／8＂ | Threaded | 1 | Screw | H．Rubber |  |  |
| 147－1605 | 2.00 | D | $1^{\prime \prime}$ | $1{ }^{13} / \mathrm{Kc}^{\prime \prime}$ | G6 | D．C．Cand．Bay． | Glass | $118^{\prime \prime}$ | Threaded | 2 | Screw | H．Rubber | Yes |  |

（1）Requires 30.000 ohm external resistor with N 48.
（2）Has built fit 30.000 ohm resistor for NE48．
（4）Has huilt in 100,000 ohm resistor for NEill bighter glow but
（5）decreased life 1 Repures 200000 ohm external resistor for NE51．
（6）See colorel Dise explanation at r
（7）Max．lengil from front．of panel．
＊COLORED DISCS－Where this designation（＊）appears，a colored plastic disc is placed behind a clear sandhasted（frosted）smonth jewel．to conceat bulb being lighted

In adrlition，lettcring，numerals，or insignia may be printed on a plastic dise back of tie jewel，and arranged to be visible ellfer contimutisty or only after lamp is lighted．

# (d) <br> E. F. JOLiNSON Company <br> WASECA <br> minnesota 

BRACKET TYPE PILOT LIGHTS AND JEWEL ASSEMBLIES


| Cat. No. | Mounting Lgth. |  |  |  | Bulb (1) |  | Jewel |  | Color |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Price | tratio | Size | Panel | Shape | Base | Type | Size |  |
| 147-100 | \$0.80 | H | $1^{\prime \prime}$ | $11 / 2^{\prime \prime}$ | G31/2, T31/4 | Min. Scr. | Faceted (4) | $1{ }^{\prime \prime}$ | S |
| 147-101 | . 80 | H | 1 " | 11/2' | G31/2, T31/4 | Min. Scr. | Smooth (4) | $1^{\prime \prime}$ | P |
| 147-103 | . 85 | H | 1 ' | $21_{15}{ }^{\prime \prime}$ | S6 | Cand. Scr. | Faceted (4) | $1^{\prime \prime}$ | E |
| 147-104 | . 85 | H | $1^{\prime \prime}$ | $21^{1 / 6}{ }^{\prime \prime}$ | S6 | Cand. Scr. | Smooth (4) | $1^{\prime \prime}$ | C |
| 147-106 | . 85 | H | $1^{\prime \prime}$ | $11 / 2^{\prime \prime}$ | G31/2, T31/4 | Min. Bay | Faceted (4) | 1' | I |
| 147-107 | . 85 | H | $1^{\prime \prime}$ | 11/2' ${ }^{\prime \prime}$ | G31/2. T31/4 | Min. Bay | Smooth (4) | $1^{\prime \prime}$ | $\boldsymbol{F}$ |
| 147-200 | . 60 | I | $11^{\prime \prime}$ | $11 / 4^{\prime \prime}$ | G31/2 | Min. Scr. | Faceted | 5/8' | Y |
| 147-201 | . 60 | I | +1" | $11 / 4^{\prime \prime}$ | G31/2 | Min. Scr. | Smooth | 5/8' |  |
| 147-203 | . 65 | I | $1{ }^{1 y^{\prime \prime}}$ | 11/4" | S6 | Cand. Scr. | Faceted | $5 / 8^{\prime \prime}$ | C |
| 147-204 | . 65 | I | 18" | 11/4" | S6 | Cand. Scr. | Smooth | 5/8' | $\bigcirc$ |
| 147-206 | . 65 | I | $\mathrm{l}^{1}{ }^{\prime \prime}$ | 1" | G31/2 | Min. Bay. | Faceted | $5 / 8^{\prime \prime}$ | I |
| 147-207 | . 65 | I | $1{ }^{\prime \prime}$ | $1^{\prime \prime}$ | G31/2 | Min. Bay. | Smooth | $5 / 8^{\prime \prime}$ | 0 |
| 147-300 | . 40 | I | ${ }^{7}{ }^{\prime \prime}$ | 11/4" | G31/2 | Min. Scr. | Faceted | $1 / 2^{\prime \prime}$ | R |
| 147-301 | . 40 | I | $7^{7}{ }^{\prime \prime}$ | 11/4" | G31/2 | Min. Scr. | Smooth | 1/2' ${ }^{\prime \prime}$ |  |
| 147-303 | . 45 | I | $18^{\prime \prime}$ | $11 / 4^{\prime \prime}$ | S6 | Cand. Scr. | Faceted | $1 / 2^{\prime \prime}$ | Clear |
| 147-304 | . 45 | I | $7{ }^{7}{ }^{\prime \prime}$ | 11/4" | S6 | Cand. Scr. | Smooth | $1 / 2^{\prime \prime}$ | Red |
| 147-306 | . 45 | I | $1^{7} 6^{\prime \prime}$ | $1^{\prime \prime}$ | G31/2 | Min. Bay. | Faceted | $1 / 2^{\prime \prime}$ | Green |
| 147-307 | . 45 | I | ${ }^{761}{ }^{\prime \prime}$ | $1^{\prime \prime}$ | G31/2 | Min. Bay. | Smooth | $1 / 2^{\prime \prime}$ | Amber |
| 147-400 | . 55 | J | 16" | $11 / 4^{\prime \prime}$ | G31/2, T31/4 | Min. Scr. | Faceted (4) | $1 / 2^{\prime \prime}$ | Blue |
| $147-401$ | . 55 | J | 1t' ${ }^{\prime \prime}$ | 11/4' ${ }^{\prime \prime}$ | G31/2, T31/4 | Min. Scr. | Smooth (4) | $1 / 2^{\prime \prime}$ | Opal |
| 147-403 | . 60 | J | 118' | 11/2" | G31/2, T31/4 | Min. Bay. | Faceted (4) | $1 / 2^{\prime \prime}$ |  |
| 147-404 | . 60 | J | ${ }^{\frac{1}{1} 1^{\prime \prime}}$ | 11/2" | G31/2, T31/4 | Min. Bay. | Smooth (4) | 1/2' ${ }^{\prime \prime}$ |  |
| 147-406 | . 55 | K | $11^{\prime \prime}$ | $11 / 4^{\prime \prime}$ | T31/4 | Min. Bay. | Lucite (4) | $5 / 8^{\prime \prime}$ | For |
| 147-407 | . 70 | K | 118' | $11 / 4^{\prime \prime}$ | T31/4, NE51 | Min. Bay. (2) | Lucite (4) | 5/8' ${ }^{\prime \prime}$ | Neon |
| 147-408 | . 70 | K | 柏" | $11 / 4^{\prime \prime}$ | T31/4, NE51 | Min. Bay. (3) | Lucite (4) | $5 / 8{ }^{\prime \prime}$ | DO NOT |
| 147.700 | . 60 | H | 柘" | $11 / 4{ }^{\prime \prime}$ | G-31/2 | Min. Scr. | Faceted | 5/8" | Use: |
| 147.701 | . 60 | H | 18' ${ }^{\prime \prime}$ | $11 / 4^{\prime \prime}$ | G-31/2 | Min. Scr. | Smooth | 5/8" | Blue |
| 147.703 | . 65 | H | 17" | $11 / 2^{\prime \prime}$ | G-31/2 | Min. Bay. | Faceted | 5/8' ${ }^{\prime \prime}$ | Green |
| 147.704 | . 65 | H | \$17" | $11 / 2^{\prime \prime}$ | G-31/2 | Min. Bay. | Smooth | 5/8' ${ }^{\prime \prime}$ | Opal |

(1) See bulb and base illustrations below
(2) With $200,000-\mathrm{hm}$ built-in resistor for NES1.
(3) With 100,000 -ohm resistor. Brighter glow reduced lamp life.
(4) Bulb removable from front of panel.
*See page G-21 for explanation.

## BULB SPECIFICATIONS

Bulbs used on all pilot lights may be identified from these illustrations, but are not included in prices.

${ }_{\text {Min. }}^{\mathrm{T}} \mathrm{B} \frac{1 / 4}{4}$ (NE.51)

G6 S.C.
G6 D.C. 7 $\underset{\substack{\text { Screw }}}{\text { S Cand }}$ 56


G $31 / 2$ G $31 / 2 \mathrm{~T}$ T $31 / 4$
Min. Min. Min. Bay, T 4t/2 D.C. T $41 / 2$ Cand. Screw Bay, or Screw Cand. Bay. $\begin{aligned} & \text { (NE-49) } \\ & \text { Screw }\end{aligned}$

(NE.45)

## PANEL LIGHT

For front panel illumination. Has polished nickel hood, easily re.
 placement; can be ro
tated to any position. Fits $1 / 2^{\prime \prime}$ mounting hole. Made for miniature bayonet or screw base, T $31 / 4$ or G $31 / 2$, bulbs.
Cat. No. 147-330-Miniature Screw Base........... $\$ 0.80$ 147-329-Miniature Bayonet Base............ . . 90

## VARIABLE LIGHT INTENSITY

Pilot lights similar to $147-400,-800,-1110$, -1200 can be furnished with either polarized or shutter type variable light intensity jewel holders. Information on request.

DO NOT FAIL TO SPECIFY COLOR OF JEWELS. PRICES DO NOT INCLUDE BULBS.

# GENERAL (86) ELECTRIC <br> RADIO DIAL LAMPS 

## Designed and engineered for the iob

BECAUSE of the vibration conditions under which G-E radio dial lights must operate, General Electric devotes special care to their design and manufacture. Filaments are designed to vibrate without damage and are secured by a shake-proof joint.

General Electric research is constantly at work to assure the quality and serviceability of G-E radio dial lamps. Shock tests, vibration tests and base torsion tests are used in the laboratory to make certain your customers will get good service from the G-E bulbs you install.

Features like these make it worthwbile for you to sell and install G-E miniature lamps:

1. Dependable, trouble-free performance.
2. High level of maintained light output.
3. Low current consumption.
4. Long life.
5. Profitable to bandle.
6. Preferred by both dealers and customers.


T-31/4 Miniature Bayonet


T-31/4 Miniature Screw




SPECIFICATIONS AND PRICES

| Lamp Number | 40 | 41 | 42 | 43 | *44 | 45 | *46 | *47 | 48 | 49 | 51 | 55 | *1490 | $10 C 7$ | 10C7DC |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Volts | 6-8 | 2.5 | 3.2 | 2.5 | 6-8 | 3.2 | 6-8 | 6-8 | 2 | 2 | 7.5 | 7.0 | 3.2 | 115-25 | 115-25 |
| Amps | 0.15 | 0.50 | 0.35 | 0.50 | 0.25 | 0.35 | 0.25 | 0.15 | 0.06 | 0.06 | Max.0.25 | Max.0.45 | 0.16 | 10 watts | 10 watts |
| \#Bulb | T-31/4 | T-31/4 | T-31/4 | T-31/4 | T-31/4 | T-31/4 | T-31/4 | T-31/4 | T-31/4 | T-31/4 | G-31/2 | G-41/2 | T-31/4 | C-7 | C-7 |
| Base | Min. <br> Screw | Min. <br> Scrow | Min. Scrow | Min. <br> Bay. | Min. Bay. | Min. Bay. | $\underset{\text { Screw }}{\text { Min. }}$ | Min. Bay. | Min. Screw | Min. Bay. | Min. Bay. | Min. Bay. | Min. Bay. | Cand. Screw | $\begin{aligned} & \text { D.c. } \\ & \text { Bay. } \end{aligned}$ |
| Bead Color | Brown | White |  | White | Blue |  | Blue | Brown | Pink |  |  |  |  | - | - |
| Price | \$0.10T \$0.10T \$0.12T \$0.10T |  |  |  | \$0.10T | \$0.12T | \$0.10T | \$0.10T | \$0.15T \$0.15T |  | \$0.09V | \$0.09V | \$0.11T | \$0.15T | \$0.22T |

\# Bulbs are designated by a letter to indicate shope and a figure to indicate the approximate diameter in eighths of an inch.

* Most popular types.

T After price indicates Federal Excise Tax will be billed as a separate item at $6.3 \%$ of list price.
$\checkmark$ After price indicates Federal Excise Tax will be billed as a separate item af $1.6 \%$ of list price.

## GENERAL ELECTRIC

## LAMP DEPARTMENT DISTRICT OFFICES

Atlanta 3, Ga. Boston 10, Mass. Buffalo 2, N. Y. Charlotte 2, N. C. Chicago 4, llinois Cincinnati 2, Ohio Cleveland 14, Ohio Dallas 2, Texas Denver 2, Colorado Detroit 26, Michigan

187 Spring St., N. W. 50 High St. 1 West Genesee St. 516 Johnston Bldg. 230 So. Clark St. 738-9 Union Trust Bldg. 1320 Williamson Bldg. 1801 N. Lamar St. 1863 Wazee St. 1400 Book Tower

WAlnut 9767 HANcock 1680
Cleveland 3400 4-8614
DEArborn 2-4712
DUnbar 2460 CHerry 1010 CEntral 7711 MAin 6141 WOodward 3-6910
N. Kansas City 16, Mo. Los Angeles 13, Cal. Minneapolis 13, Minn. New York 22, N. Y. Oakland 7, Cal. Philadelphia 2, Pa. Pittsburgh 22, Pa. Portland 9. Oregon St. Louis I, Mo.

200-210 E. 16th Ave. 601 W. Fifth St. 500 Stinson Blvd. 570 Lexington Ave. 1614 Campbet St. 1405 Locust Street 535 Smithfleld St . 1238 N.W. Gilsan St. 710 N. Twelfth Blvd. General Office: Nela Pork, Cleveland 12, Ohic. GLenvill 660

## FAST ACTING FUSES for PROTECTION OF INSTRUMENTS, Etc.



Formerly called 8AG.
Dimension $1 / 4 \times 1$ inch, Glass tube.
Provide high speed action necessary to protect sensitive instruments.
Test specification-carry $100 \%$, open at $200 \%$ in 5 seconds.
Listed as approved by Underwriters' Laboratories.

| Voltage | Symbol | Amperes | List Price |
| :---: | :---: | :--- | :---: |
| 250 or less | MJB | $1 / 100$ | $\$ 0.70$ |
| " | MJB | 1200 | .30 |
| " | MJB | $1 / 100$ or $1 / 32$ | .20 |
| " | MJB | 116 | .15 |



Formerly called 8AG
Dimension $1 / 4 \times 1$ inch, Glass tube.
Provide high speed action necessary to protect instruments.
Test specification-carry $\mathbf{1 0 0 \%}$, open at $\mathbf{2 0 0 \%}$ in 5 seconds:
Listed as approved by Underwriters' Laboratories

| Voltage | Symbol | Amperes | List Price |
| :---: | :---: | :--- | ---: |
| 250 or less | AGX | $1 / 8$ | $\$ 0.15$ |
| " | AGX | $1 / 4,3 / 8$ or $1 / 2$ | .12 |
| 125 or less | AGX | $3 / 4$ | .12 |
| " | AGX | $1,11 / 2$ or 2 | .10 |

## BUSS FUSES - SFE STANDARD

All cuts actual size. Fuses of different amperages are of different lengths - to make it impossible to insert too large a size - thereby preventing over-fuseing.


SFE 4


SFE 6


SFE 9


SFE 14


SFE 20


SFE 30

Glass tube - diameter $\frac{1}{4}$ inch. Length as per table below. Test specification-carry $100 \%$, open at $125 \%$ in $1 / 4$ hour. Listed as approved by Underwriters' Laboratories.
Made according to specifications of Society of Automotive Engineers.

| Voltage |  <br> Amperes | Length <br> Inches | Pounds <br> per 100 | List <br> Price |
| :---: | :---: | :---: | :---: | :---: |
| 32 or less | SFE4 | $5 / 8$ | .70 | $\$ 0.05$ |
| "، | SFE6 | $3 / 4$ | .71 | .05 |
| " | SFE9 | 78 | .72 | .04 |
| " | SFE14 | 11116 | .77 | .04 |
| " | SFE20 | 114 | .83 | .035 |
| " | SFE30 | $17 / 16$ | 1.05 | .06 |

## BUSS GLASS TUBE FUSES, $1 / 4 \times 11 / 4$ inch



AGC and MTH 4, 5 and 6
Formerly called 3 AG
Test specification-carry $110 \%$, open at $135 \%$ in 1 hour.
Listed as approved by Underwriters' Laboratories. Shipping weight 0.8 lbs . per 100.

| Volrage | Symbol | Amperes | List Price |
| :---: | :---: | :--- | ---: |
| 250 or less | AGC | $1 / 8,1 / 4,3 / 8,1 / 2$ or $3 / 4$ | $\$ 0.15$ |
| ". | AGC | $1,11,2,2$ or 3 | .07 |
| ". | MTH | 4,5 or 6 | .10 |
| " | MTH | 8 | .15 |



Test specification-carry $110 \%$, open at $135 \%$ in 1 hour. Shipping weight 0.8 lbs . per 100 .

| Voltage | Symbol | A inperes | List Price |
| :---: | :---: | :--- | ---: |
| 32 or less | AGC | 5,6 or $71 \%$, | $\$ 0.05$ |
| : | AGC | 10 or 15, | .04 |
| " | AGC | 25 or 30 | .05 |

Sizes larger than 30 ampere are 20 ampere siended as holders would not permit fuse to carry such high currents. If surges or starting currents make heavier fuse necessary, use MDL Fuseor starting current fusese heavier fuse necessary, use MDL Fuse

## BUSS BAKELITE TUBE FUSES, $1 / 4 \times 11 / 4$ inch



Formerly called 3AB
Test specification-carry $110 \%$, open at $135 \%$ in 1 hour. Shipping weight 1 lb . per 100 .

| Voltage | Symbol | Armperes | List Price |
| :---: | :---: | :--- | ---: |
| 250 or less | ABC | 10,12 or 15 | $\$ 0.15$ |

FUSETRON FUSES, $1 / 4 \times 11 / 4$ inch
Glass tube - Dual-Element type


## A FUSE WITH A LONG TIME-LAG

These fuses avoid needless blows from starting currents or surges. They have a fuse link which operates only on very high overloads or short-circuits - they have a thermal cutout which functions on low overloads - the thermal cutout cannot operate quickly at any load, hence long time-lag is obtained. Yet protection is afforded against short-circuits or continued overloads.
Test specification-carry $110 \%$, open at $135 \%$ in 1 hour.
Approximate blowing time: at $200 \%$ load 25 seconds $\begin{array}{lll}\text { at } 300 \% & \text { i. } & 8 \\ \text { at } 500 \% & \text { ". } & 3\end{array}$
125 and 250 volt sizes listed as approved by Underwriters' Laboratories.
Shipping weight 0.9 lbs. per 100.
Voltage $\mid$ Symbol Amperes List Price
250 or less MDL $\quad 1 / 100,1 / 32,1 / 16,110,15 / 100,2 / 10$,
$310,410,1 / 2,610,810$ or 1
$\$ 0.25$
125 or less $\operatorname{MDL} 114,1610,2,21 / 2$
.20
32 or less MDL $3210,4,5,61 / 4,8,10,15$,
20,25 or 30
.20

## BUSS Fuses FUSETRON nuabivi Fuses and Fuse Holders

## for Protection of Radios, Instruments and Electronic Equipment

## BUSS FUSE CLIPS for $1 / 4$ inch Fuses

(SFE 4, 6, 9, 14, 20, AGX, AGC, ABC, MDL, MJB, MTH fuses)


Spring bronze clips are made of Herculoy a bronze of distinctly superior quality for spring clips. This metal gives clips great gripping strength and ability to retain spring under adverse conditions.
Beryllium copper clips combine low electrical resistance with great gripping strength. This means maximum electrical conductivity and results in cooler operation of clips and fuse.

Size of mounting hole; .130 to .135 inch.
Center of hole to back-stop; . 125 to .135 inch.
Min. length of contact surface; $8 / 32$ inch
Maximum height; ${ }^{14 / 3} 2$ inch
Maximum width; ${ }^{11 / 32}$ inch
Shipping weight; 3 lbs. per 100
List Price
4548 Spring bronze clip, Nickel plated.
$\$ 0.02$ 4592 Beryllium copper clip, Silver plated.
. 05

## BUSS CLIP ASSEMBLIES for $1 / 4$ inch Fuses

(SFE 4, 6, 9, 14, 20, AGX, AGC, ABC, MDL, MJB, MTH fuses)


Clips as described above. Brass terminal. $3 / 16$ inch 6.32 washer head terminal screw. $1 / 4$ inch 4-40 flat head iron mounting screw. Shipping weight; 1 lb . per 100
4431 includes No. 4548 spring bronze clip, terminal screw, terminal and mounting screw.

List Price $\$ 0.40$
4432 includes No. 4592 berylliuin copper clip, terminal screw, terminal and mounting screw. List Price $\$ 0.40$

## BUSS FUSE BLOCKS

Bakelite hase blocks $3 / 16$ inch thick. Countersunk mounting holes for No. 6 flat head screws. Brass No. 6 terminal screws. No. 4548 spring bronze clips.


Full base, Screw terminal Blacks

|  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| For Fuses | $\begin{aligned} & \text { One } \\ & \text { Tole } \end{aligned}$ | $\underset{\substack{\text { List } \\ \text { I'tice }}}{\text { Len }}$ | Two | List | Three | $\begin{gathered} \substack{\text { List } \\ \text { Price }} \end{gathered}$ |
| SFE4 | 4511 | \$0.35 | 4521 | \$0.70 | 4531 | \$1.00 |
| SFE6 | 4516 | . 35 | 4526 | . 70 | 4536 | 1.00 |
| SFE9 | 4517 | . 35 | 4527 | . 70 | 4537 | 1.00 |
| SFE14, AGX, MJB | 4514 | . 35 | 4524 | . 70 | 4534 | 1.00 |
| SFE20, ABC, AGC MDL, MTH | 4512 | . 35 | 4522 | . 70 | 4532 | 1.00 |
|  |  |  | ll ba mina | Sol |  |  |
| For Fuses | One Fole |  | $\begin{gathered} \text { Two } \\ \text { Tole } \end{gathered}$ | $\underset{\substack{\text { List } \\ \text { Price }}}{\text { nen }}$ | Three | ${ }_{\text {List }}^{\substack{\text { List } \\ \text { Price }}}$ |
| SFE14, AGX, MJB | 4520 | \$0.15 | 4485 | \$0.30 | 4403 | \$0.45 |
| SFE20, ABC, AGC, | 4405 | . 15 | 4408 | . 30 | 4411 | . 45 |

## Other standard fuse blocks and special fuse blocks

If blocks shown do not fit your requirements ask for information ors other standard types and sizes.

If special fuse olock is required, send description or sketch, showing type of fuse to be used, number of circuits, type of terminals, etc. We welcome such inquiries.

## BUSS FUSE HOLDERS

Make it convenient to mount fuse on any equipment.
Changing or inspection of fuse is easy and quick.
Holder has removable knob. Fuse projects beyond body of holder and is not held tight on other end when knob is removed.

Fuse and contacts are protected from dirt and fumes.
Good contact on fuse is made certain by strong coil spring pressure. Poor contact heating that often causes fuse to blow needlessly is eliminated.

Holder bodies are made of black bakelite. All current carrying parts are of brass or copper. Terminals and all contact parts are bright alloy plated.


## Panel Mounted Holders <br> for $1 / 4$ inch Fuses

Holders are inserted through hole in panel and are locked in place by nut on holder. They can be used on panels up up to $5 / 16$ inch thick.
Bayonet type knob requires only quarter turn to remove fuse. No screw
 driver is needed.
Side terminal is held mechanically as well as by solder. Heat of soldering wire to it will not cause it to loosen or come off.
Vibration will not cause failure of terminals as they are designed to stand severe service.
Neoprene washer and steel locking nut (zinc plated, chromate dipped) furnished with each holder.
Wire hole in terminals; .115 inch.
Normal current carrying capacity; 15 amperes.
Listed as Approved by Underwriters' Laboratories.
Shipping weight; 4 lbs. per 100 HJM for $1 / \pm \times 1$ inch fuses (AGX, MJB, SFE 14) $\$ 0.40$ HKP for $1 / 4 \times 11 / 4$ inch fuses (ABC, AGC, SFE20, MDL, MTH)
.40


## IN-THE-LINE HOLDERS for $1 / 4$ inch fuses

These holders are for mounting fuse in wire. Holders consist of body and bayonet type knob - two terminal contacts ready to be crimped on ends of wire - a pressure spring that is used under contact in base of holder.

Holders can also be mounted in panel up to $5 / 16$ inch thick by means of a No. C-1437-018-27 Tinnerman nut (Nut not furnished). Flat spot on holder permits it to be locked against rotation.
Normal current carrying capacity: 15 amperes. Shipring weight, holders: 4 lbs . per 100 . Takes No. 18 or smaller wires.
HDJ-A for $1 / 4 \times 11 / 4$ inch fuses (ABC, AGC, MDL, 20
MTH, SFE 20)
Takes No. 18 or smaller wires.
HDJ-B for $1 / 4 \times 11 / 4$ inch fuses (as above)
Takes No. 14 or 16 wires.

## LITTELFUSE

## 8AG INSTRUMENT high speed LITTELFUSES

Locked Cap Assembly and other exclusive Littelfuse feature for protection of delicate test equipment, galvanometers, micr:ammeters, milliamineters, voltmeters, etc. Glass-enclosed: $1 \times 3 / 4$ dia., accurately rated, high speed action, short time lag. Voltage ratings up to 250 V ., AC or DC. For higher voltagce use fuses
 Tr in in series.

## UNDERWRITERS" APPROVED 3 AG "LITTELFUSES"250 Volts


"SLO-BLO"-thru $1 /$ Amp

Littelfuse is the first manufacturer to receive Underwriters' approval of 3 AG fuses ( $11 / 4^{\prime \prime}$ x $1 / /^{\prime \prime}$ dia) in current ratings over 3 amips. at ${ }_{250}$ volts. Following list gives standard approved ratings carried in stock. However, the Uroved ratings carried in stock. Littlefuse is a blanket approval from $1 / 8$ to 6 amps. Intermediate ratings can be furnished withmediate ratings can be furnished what sittelfuse name the amperage and

| Cat. <br> No. | Former <br> No. | Amp. <br> Rating | Ohms <br> Res. | List Price, <br> Each |
| :---: | :---: | :---: | :---: | :---: |
| $313.010^{*}$ | 1259 | $1 / 100$ | 33.50 | $\$ 0.25$ |
| $313.032^{*}$ | 1261 | $1 / 20$ | 3.90 | .25 |
| 313.062 | 1262 | $1 / 1$ | 90 | .25 |
| 313.125 | 1263 | 18 | 29 | .25 |
| 313.187 | $1263-\mathrm{A}$ | $1 / 6$ | 20 | .25 |
| 313.250 | 1264 | 14 | 9.6 | .25 |


| Cat. <br> No. | Former <br> No. | Amp. <br> Rating | Ohms <br> Res. | List Price, <br> Each |
| :---: | :---: | :---: | :---: | :---: |
| 312.500 | 1046 | $3 / 2$ | 3.1 | $\$ 0.15$ |
| 312.750 | 1047 | $8 / 4$ | 1.9 | .15 |
| 312001. | 1040 | 1 | .24 | .07 |
| 31201.5 | 1041 | $11 / 2$ | .15 | .07 |
| 312002. | 1042 | 2 | .10 | .07 |
| 3120013. | 1043 | 3 | .06 | .07 |


| Cat. <br> No. | Former <br> No. | Amp. <br> Rating | Ohms <br> Res. | List Price, <br> Each |
| :---: | :---: | :---: | :---: | :---: |
| 312004. | 1357 | 4 | .046 | $\$ 0.10$ |
| 312005. | 1358 | 5 | .034 | .10 |
| 312006. | 1359 | 6 | .030 | .10 |

Std. Pkg. 100, wt., $13 / 2$ lbs.

3 AB '"LITTELFUSES"- 250 Volts

Smallest, highest rated Underwriters' Laboratory approved fuses made. Bakelite-enclosed, arc-quenching, powder-filled fuses. Medium time lag.
voltage rating must appear on the fuse caps of approved-fuses. Many new fields are opened up by the extension of approval from 3 to 6 amps., where formerly bulky cartridges or plug fuses and their mountings were used. This applies specially to electrical appliances, heavy duty power supplies, amplifiers, radios, communication equipment, electronic devices, motors, etc.

Ratings thru $1 / 4$ Ampere- $\mathbf{2 5 0}$ Volts
"Slo-Blo" fuses with high tine lag-for circuits with equipment having high inductive or capacitative surges, heavy starting currents and intermittent-duty circuits. Anti-fatigue con-struction-compound element with spring and resistor.

## Ratings $1 / 2$ thru 3 Amp.- $\mathbf{2 5 0}$ Volts

Quick-acting Standard Littelfuses with low time lag. Protective-coated elernents prevent oxidation, promote clean fusion break. Diagonal element for accurate alignment, calibration.

Ratings 4 thru 6 Amp.-250 Volts
Standard, quick-acting Littelfuses with diagona! elements. Low time lag-quick-acting. Std. Pkg. 100—wt., $1 \frac{1}{2}$ lbs. *Not Und. Approved.

| Catalog <br> No. | Former <br> No. | Amp. <br> Riting | List Price, <br> Each |
| :---: | :---: | :---: | :---: |
| 314008 | 32155 | 8 | $\$ 0.15$ |
| 314010 | 32155 | 10 | .15 |
| 314012 | 32156 | 12 | .15 |
| 314015 | 32159 | 15 | .15 |
| 314020 | 32160 | 20 | .15 |

METER BACK MOUNTING

Cat. No. 383002 (1059)-



Mounts directly on meter binding post. Will not touch other posts on smallest standard meter. Linen bakelite base, $1^{\prime \prime} \times 11 / 8^{\prime \prime}$. Length over screw terminal, $11 / 2^{\prime \prime}$. Std. Pkg. 20.
Wgt. $1 / 2 \mathrm{lb}$. List Price Each. $\$ 0.20$

# FUSE MOUNTINGS (3AG) <br> Hinged Cover Type 

(Meets Underwriters' Requirements)
Cover fibre-lined. Metal shielded cover hinged to hakelite base. Terminal mounting extends through insulated base. Nut lightly staked to cover to prevent loss. Requires $15 / 8^{\prime \prime} \times 11 / 8^{\prime \prime}$
 knockout hole in panel. Two 6-32" $\times 5 / 16^{\prime \prime}$ bounting studs at $23 / 8^{\prime \prime}$ centers. Base $21 / 2^{\prime \prime} \times 11 / 4^{\prime \prime}$. $84^{\prime \prime}$ high above panel. Std. I'kg. 20.
Cat. No.
List Price Each
351009 (1237A) -Double l'ole
.$\$ 0.75$
351005 (1379) -Single Pole

## NEON TESTERS

Low Voltage tester (illustrated) for 5 to 50 V AC or DC. For eutomotive, heating and vent., telephone, aircraft, battery eervice, radio service (low volt. filament circuits, "A" batteries), for testing polarity. Teninch leads with alligator clips. Full directions.
No. 202002 Low Volt. Tattelite tester (5420).
ist Price, Each $\$ 1.50$

|l
High Voltage "Tattelite" tester (not shown) $60-500 \mathrm{~V}$ AC, $90-500 \mathrm{~V}$ DC. Molded casings, insulated test prods-unuswally sensitive. For teating live lines, polarity, for detecting blown fuses, open circuits, grounded wires, approximate voltage ${ }^{-110,220,440, ~ e t c .) . ~ D e t a i l e d ~}$ instructions.
No. 201002 High Volt. Tattelite tester (5076)

List Price, Each $\$ 1.00$

## "POST-LITE"

Neon indicating light for radio, television, radar control panels and other electrical equipment. For 65-130V AC, 90-130V DC. For $230 \mathrm{~V}, 100,000 \mathrm{Ohm}$ resistor may be added. Molded, clear plastic-head, $5 / 8^{\prime \prime}$ square, overall length $21 / 4^{\prime \prime}$. Under panel length $11 / 2^{\prime \prime}-1 / 2^{\prime \prime}$ clearance hole. $W \mathrm{t} .11 \mathrm{gms}$.
Std. pkg. -100 .
No. 201005 Post-Lite-
List Price, Each $\mathbf{\$ 0 . 8 0}$


4 AG Aircraft Fuse showing reinforced twisted element


Bakelite-enclosed 4 AB Fuse

## AIRCRAFT LITTELFUSES—ANTI-VIBRATION TYPE

Especially designed for Aircraft Service. Characteristics: High Mechanical Strength— Resistance to Fatigue-Long Vibration Life

CONSTRUCTION: Glass-enclosed. Littelfuse Jooked Cap Assembly (no cements) prevents loosening of caps. High visibility transparent label for amperage. Elements mechanically depolarized hy twisting at $90^{\circ}$ (see illustrations) are braced against extreme vibration. "Gooseneck" non-crystallizing fuse element takes up expansion and coniraction. Katings 5 amps. or less use Spring and Link. Service life six times simple wire. The 4 AG and 5 AG sizes are supplied for Aircraft Services for their strength and greater carrying capacity than 3 AG fuses.

BAKELITE-ENCLOSED: 4 AB and 5 AB fuses recommended where severe overloads might shatter glass.

CURRENT RATING: Rated to NEC specifications to carry $10 \%$ overload indefinitely, to hlow on $35 \%$ overload within 1 hr., und $100 \%$ overload within 2 min.

VOLTAGE RATING: Voltage at which fuses will break without arcing over, or bursting under short circuit conditions.

VIBRATION FACTOR: Minimum hours these fuses endure our Magnetic Vibrator operating 120 cycles a second, while carrying the rated current. Acceleration is 10 times the worst field conditions.

| blbrat | 4AG "LITTELFUSES" 11/4" x 962" Dia. Unit Wt.-3.5 Gms. |  |  |  |  |  | 4AB 'LITTELFUSES' <br>  |  |  |  |  |  | 5AG "LITTELFUSES" <br> $11 / 2^{\prime \prime} \times 132^{\prime \prime}$ Dia. <br> Unit Wt.-8.5 Gms. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fsictor | Cat. No. | Former No. | Amp. Rating | Max. Volt, | Ohms Res. | Price, Each | Cat. No. | Former No. | Amp. Rating | Max. Volt. | $\begin{aligned} & \text { Ohms } \\ & \text { Res. } \end{aligned}$ | Price Each | Cat. No. | Former No. | Amp. Rating | Max. Yolt. | Ohms Res. | Price, Each |
| $\begin{aligned} & 100+ \\ & 100+ \end{aligned}$ | "Slo-Blo" 413001. | 1091C | 1 | 250 | 71 |  |  |  |  |  |  |  | "Slo-Blo" |  |  |  |  |  |
| $100+$ | 413002. | 1092 C | 2 | 250 | . 094 | $\begin{array}{r}8.25 \\ \hline .25\end{array}$ | 414002 . | 1091 B | 1 | 250 | . 39 | \$0.25 | 513001. | 1160 C | 1 | 250 | . 88 | \$0.25 |
| $500+$ | 413003. | 1003 C | 3 | 250 | . 059 | . 25 | 414003. | 1093 B | 3 | 250 | . 055 | . 25 | 513002. | 1161C | 2 | 250 | 24 | . 25 |
| $500-$ | 413005. | 1094C | 5 | 32 | . 023 | . 25 | 414005. | 1094 B | 5 | 115 | . 041 | . 25 | . | $116: C$ 1163 C | 3 5 | 250 | . 18 | .25 |
| $500+$ | Aircraft |  |  |  |  |  | 414010 . | 1095B | 10 | $115^{k}$ | . 016 | . 25 | Aircraft | 1163 C | 5 | 32 | . 05 | . 25 |
| $500+$ | 411010. | 1095 | 10 | 32 | . 016 | . 13 | 414015. | 1096B | 15 | $115{ }^{1}$ | . 01 ? | . 25 | 511010. | 1164 |  |  |  |  |
| $500+$ | 411015. | 1096 | 15 | 32 | . 010 | 13 | $414 t) 20$. | 1097B | 20 | 32 | . 008 | . 25 |  | 1165 | 15 | 32 32 | .039 .013 | .15 .15 |
| $500+$ | 411020. | 1097 | 20 | 32 | . 008 | . 13 | 414025. | 1098B | 25 | 32 | . 007 | . 25 | 511020. | 1168 | 150 | 32 32 | .013 .013 | . 15 |
| $500+$ | 411025. | 1098 | 25 | 32 | . 007 | .13 | 414030. | 1099B | 30 | 32 | . 007 | . 25 | 511025. | 1160 142 | 20 | 32 | . 013 | . 15 |
| $500+$ | 411030. | 1099 | 30 | 32 | . 007 | . 13 | 414035. | 1100B | 35 | 32 | . 006 | . 25 | 51103a. | 142 1167 | 25 30 | 32 32 | .030 .013 | . 15 |
| $500+$ | 411035. | 1100 | 35 | 32 | . 006 | . 18 | 414010. |  | 40 | 32 | . 003 | . 25 | 511035. | 1472 | 35 | 32 | . 013 | . 15 |
| $500+$ | 411040. | 1100 | 40 | 32 | . 004 | . 20 |  |  |  |  |  |  | 511040. | 1168 | 40 | 32 | . 010 | . 15 |
|  |  |  |  |  |  |  | * Good f | r power | supplies | to 25 | KVA | 15 V | 511050. | 1169 | 50 | 32 | . 009 | . 15 |
| * |  |  |  |  |  |  | 400 cyeles. | , | , |  |  |  | 511060. | 1222 | 60 | 32 | . 010 | . 18 |



## NEW FUSE MOUNTING PANELS

Open type fuse panels, stocked in 12 -pole units as shown-we cut them to $1,2,3,4$ or more poles as ordered, or you may cut them in your plant ( $1 / 8$ " allowance for saw cut).

| Fuse <br> Type | $\begin{aligned} & \text { Mtg. } \\ & \text { Type } \end{aligned}$ | Dim. "13" | Dim. "C" | Dim. "D" | Din. "E" |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8.19 | S |  |  |  |  |
| ${ }_{3}^{3.4 G}$ | ${ }_{\text {S }}$ | $15 /$ | 3160 |  | ${ }_{21}^{11 / 2}$ |
| ${ }_{4}{ }_{4 G}$ | $\mathrm{T}^{\mathrm{T}}$ | 23/8 | 7, | ${ }_{29}^{29} 5$ | 11.10 |
| 5 AG | T | $23 / 4$ | ? | 29\% | ${ }_{35}^{13}$ |

FOR 4AG FUSES-TYPE "T"

| Catalog No. | No. <br> Poles | ${ }_{" A} \mathrm{Di}^{\prime \prime}$ | List Price, Each |
| :---: | :---: | :---: | :---: |
| 456001 | 1 | 25/32 | \$ $\quad .40$ |
| 456002 | 2 | 11/16 | . 75 |
| 456003 | 3 | 2193 | 1.10 |
| 456004 | 4 | 31.2 | 1.45 |
| 456005 | 5 | +15/82 | 1.80 |
| 456006 | 6 | 5316 | 2.15 |
| 456007 | 7 | 67\% | 2.50 |
| 456008 | 8 | $71 / 8$ | 2.85 |
| 456009 | 9 | 81.6 | 3.20 |
| 456010 | 10 | $8{ }^{15} 9$ | 3.55 |
| 456011 | 11 | 927/32 | 3.90 |
| 456012 | 12 | $108 / 4$ | -. 25 |

FOR SAG FUSES-TYPE "T"

| 556001 | 1 | 27/6 | \$0.50 |
| :---: | :---: | :---: | :---: |
| 556002 | 2 | 13 \% | . 95 |
| 556003 | 3 | $2^{23}$ 的 | 1.40 |
| 556004 | 4 | 384 | 1.85 |
| 556005 | 5 | $4{ }^{23}$ | 2.30 |
| 556006 | 6 | 5116 | 2.75 |
| 556007 556008 | 8 | $6^{621 / 3}$ | 3.20 |
| 556009 | 8 | 71/8, | 3.65 |
| 556010 | 10 | $9{ }^{9}$ | 4.55 |
| 556011 | 11 | $10^{17} 7^{183}$ | 5.00 |
| 556012 | 12 | 111/2 | 5.45 |

FOR 3AG FUSES-TYPE "S"

| Catalog No. | No. Poles | Dim. | List Price, Each |
| :---: | :---: | :---: | :---: |
| 357001 | 1 | 1/2 | \$0.15 |
| 357002 | 2 | $11 / 8$ | . 30 |
| 357003 | 3 | $18 / 4$ | . 45 |
| 357004 | 4 | 23/8 | . 60 |
| 357005 | 5 | 3 | . 75 |
| 35700 f | 6 | 35/8 | . 90 |
| 357007 | 7 | $41 / 4$ | 1.05 |
| 357008 | 8 | $47 / 8$ | 1.20 |
| 357009 | 9 | $51 / 2$ | 1.35 |
| 357010 | 10 | $61 / 8$ | 1.50 |
| 357011 | 11 | 68\% | 1.65 |
| 357012 | 12 | $73 / 8$ | 1.80 |

FOR BAG FUSES-TYPE "S"

| 387001 | 1 | $1 / 2$ | $\$ 0.15$ |
| :--- | ---: | ---: | ---: |
| 387002 | 2 | $11 / 8$ | .30 |
| 387003 | 3 | $18 / 4$ | .45 |
| 387004 | 4 | $23 / 8$ | .60 |
| 387005 | 5 | 3 | .75 |
| 387006 | 6 | $35 / 8$ | .90 |
| 387007 | 7 | $41 / 4$ | 1.05 |
| 387008 | 8 | $47 / 8$ | 1.20 |
| 387009 | 9 | $51 / 2$ | 1.35 |
| 387010 | 10 | $61 / 8$ | 1.50 |
| 387011 | 11 | $68 / 4$ | 1.65 |
| 387012 | 12 | $73 / 8$ | 1.80 |

## L.JTTELFUSE

## LITTELFUSE BERYLLIUM COPPER AND PHOSPHOR BRONZE FUSE CLIPS



Littelfuse fuse clips are available in three standard styles: "X," with "ears" or fuse stops; "XX," earless; and "XXX," "LugClips," a new Littelfuse clip having a lug or solder terminal mavle as an integral part of the clip. All styles are furnished in either Phosphor-Bronze or Beryllium Copper.


BERYLLIUM COPPER CLIPS
SILVER PLATED-WITH FUSE STOP "EARS"

| 121001 | 1216B | SFE, 3AG \& 8AG Fuses. | X | ${ }^{29} 9$ | $3 / 4$ | $\frac{3}{136}$ | ${ }^{11} 195$ | 3/4.4 | ${ }^{3} / 36$ | .131 | 1.6 | 1 | \$0.05 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 123001 | 1217 B | 4 AG \& 4AB Fuses. | ${ }^{1}$ | ${ }^{9} 10$ | \%/81818 | 13 | . 38. | 13/3 | , | . 196 | 3.6 | 2 | . 15 |
| 125001 | 1218 B | 5AG, Hi-Voltage-Midget | X | ${ }^{10} 10$ | 92 | 196 | 5\% | 98 | $1 / 4$ | .203 | 5.5 | 2 | . 18 |
| 127001 129001 | 1219 1221 | N.E.C.-30 Fuses | X | 17\% | $18 \%$ | . 750 | 7/8 | $13 / 16$ | 5/16 | . 265 | 14.5 | 4 | . 40 |

SILVER PLATED-EARLESS TYPE

|  |  |  | XX | 29/4 | $1 / 4$ | 5/10 | 11/20 | 1/4 | 5 5 | . 131 | 1 | 1 | . 05 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 121002 | 1417 | SFE, 3AG \& AB, \& 8 AG | XX | 976 | 3/8 | 13/68 | . 385 | 9/1/20 | s, | . 171 | 1.6 | 1 | . 08 |
| 123002 |  | 5AG, ITi-Voltage-Midget. | XX | 88 | 1/2 | 716 | 15/fin | 13 湤 | ${ }^{1}$, 32 | 196 | 3 | 2 | . 15 |
| 127002 | 1475 | N.E.C. 30 Fuses | N | ${ }_{1}^{17} 16$ | 13/80 | ${ }^{19}$ | 5/8 | ${ }_{13}{ }^{9}$ | 1/5/10 | . 263 | 5.5 14.5 | ${ }_{4}$ | .18 |
| 129002 | 1476 | Standard Hi-Voltage. | AX | 1)20 |  |  |  |  |  |  |  |  |  |

SIIVER PLATED-"LUG-CLIP"-SOLDER TERMINAL ATTACHED

| $\begin{aligned} & 121004 \\ & 123004 \end{aligned}$ | New New New | SFE, 3AG, AB, \& 8AG | XXX | 23/64 | , $1 / 4$ | 37/44 | 11/38 | 1/4 | 56 | . 131 | 1.2 | 1 | . 08 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | SFE, 3AG, AB, \& 8AG | XXX | 9, 96 | 3/8 | 10\% | . 385 | 9\% | ${ }^{3}$ | . 171 | 1.7 | 1 | . 12 |
|  |  | ${ }_{5}$ AAG \& Midget Fuse | XXX | $8 / 4$ | 1/2 | 5/8 | 15/52 | 13\% | $7 / 2$ | . 196 | 3.5 | 2 | . 20 |

PHOSPHOR BRONZE CLIPS
BURNISHED NICKEL PLATE-WITH FUSE STOP "EARS"

| 101001 | 101113 | SFE, 3AG \& AB, \& 8AG | S | 需 | $1 / 4$ | ${ }_{15}^{58}$ | ${ }^{11}{ }_{3}^{1 / 45}$ |  | 5 5, | . 131 |  | 1 | . 024 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 103001 | 1319 | 4 AG \& 4AB..... | - | 96 | 1/8 | 13/30 | 1565 | 13/5 | ${ }^{16}$ | . 173 | 1.7 | $\stackrel{1}{2}$ | . 05 |
| 105001 | 2048 | $5 \mathrm{AG}, \mathrm{Hi}$ - oltage-Midget | X | 13 | $1 / 2$ | $1{ }^{19}$ | 5/8 | \% | 1/4 | . 203 | 5.8 | 2 | . 06 |
| 107001 | 5048 | N.E.C.-30 Fuses. | X | 136 | 181610 | . 750 | 78 | ${ }_{13} 16$ | 5/46 | . 265 | 15.6 | 4 | . 16 |

BURNISHED NICKEL PLATE-EARLESS TYPE


## BRIGHT-DIP PHOSPHOR BRONZE-'IUG CLIP'' SOLDER TERMINAL ATTACHED

| $\begin{aligned} & 101003 \\ & 103003 \\ & 105003 \end{aligned}$ | 1AG, 3AG \& AB, 7AG \& 8AG <br> 4 AG \& 4 AB <br> $5 \mathrm{AG}, \mathrm{Hi}$-Voltage-Midget | $\begin{aligned} & \mathrm{x} x \\ & \mathrm{xx} \\ & \mathrm{xx} \end{aligned}$ | $\begin{aligned} & 29,66 \\ & 8,16 \\ & 8,46 \end{aligned}$ | $1 / 4$ $3 / 8$ $1 / 8$ | 37/64 | 116 .385 385 | 1/4.480 |  | .131 .171 .196 | 1.2 1.7 3.5 | 1 1 2 | .03 <br> .05 <br> .08 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |



Finger Operated Kuob


## "LITTELFUSE"

## FUSE EXTRACTOR POSTS

Quicker, safer method for mounting and changing fuses. Held in end of removable knoh, fuse is easily replaced by unscrewing knob. Available with finger-operated knob, screw driver slot knob, and finger operated with keep chain.

| Catalog No. | Former No. | Descr.-Knob, How Operated | Mtg. Hole | Length Under Panel | Wt. <br> Grams | List Price Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 341001 | 1075 S |  | .495 ${ }^{\prime \prime}$ dia.* | $2{ }^{3}$, 6 | 15.0 | \$0.45 |
| $\begin{aligned} & 341001 \\ & 342001 \end{aligned}$ | 1075 | 3AG-Finger .... | .495" dia,* | 276 | 14.3 | . 45 |
| 371001 | 1087 S | 8AG-Screw Driver | $495^{\prime \prime}$ dia.** $495{ }^{\prime \prime}$ dia.* | 23 276 | 15.3 | . 45 |
| 372001 | 1087 F | 8AG-Finger - Pressurized | 5/8" dia.-Rd. | $27 \%$ | 14.3 45.3 | .45 3.00 |
| 442002 442001 | 1212D | 4AG-Finger, Pressurized 4 AG -Finger. . . . . . . . | ${ }_{.623 \mathrm{dia} .}{ }^{+}$R. | ${ }^{213} 10$ | 24 | . 70 |

*With flat .224 " from C.L.
$\dagger$ With flat $.250^{\prime \prime}$ from C.L.

## Conant

Instrument Rectifiers


## "STANDARD SINCE 1933"

| Type | Body | Internal Circuit | Mounting | Number of Terminals | Weight <br> (Grams) | Dimensions (Inches) |  |  |  |  | Net |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | A | B | C | D | E | Price |
| M | YELLOW | 1 | 6-32 STUD | 4 | 12.718 | . 890 | 500 | . 485 | . 800 | 315 | \$2.10 |
| SERIES TH | HROWN | 2 | 6-32 STUD | 4 | 11.833 | 890 | 500 | . 479 | . 800 | 321 | 1.86 |
| SERIES HS | HLACK | 3 | 6-32 STI'D | 3 | 10.631 | . 890 | 500 | . 445 | . 800 | 355 | 1.53 |
| 500 T | RED | 4 | $6-32$ STLD | 3 | 10.631 | . 890 | . 500 | . 445 | . 800 | . 355 | 1.53 |
| H | GREEEN | 5 | $6 \cdot 32$ STUH | 2 | 9.072 | . 890 | . 500 | . 400 | . 675 | . 275 | 1.20 |
| (13 | YELLOW | 1 | \#2 SCREW | 4 | 2.531 | . 690 | . 590 | . 375 | . 250 | . 250 | 2.10 |
| SERIES B'TII | HROWN | 2 | \#2 SCREW | 4 | 2.183 | . 690 | . 590 | . 375 | . 250 | . 250 | 1.86 |
| SERIES \{ BHS | 13LACK | 3 | \#2 sc'REW | 3 | 1.824 | . 690 | . 590 | . 375 | . 250 | . 250 | 1.53 |
| 160 HT | RFD | 4 | \#2 SClREw | 3 | 1.824 | . 690 | . 590 | . 375 | . 250 | . 250 | 1.53 |
| (13H | GRELEN | 5 | \# 2 SCREW | 2 | 1.477 | .. 690 | .590 | . 375 | . 250 | . 250 | 1.20 |
| 13-C | IVLLOW | 1 | FUSE CLIP | 4 | 1.743 | . 345 | .297 | . 310 | .220 | . 200 | 2.10 |
| SERIES BTHCC | BROUN | 2 | FUSE ('LIP | 4 | 1.650 | . 345 | . 297 | . 310 | . 220 | . 200 | 1.86 |
| SERIES HHS-C | BLAEK | 3 | FUSE CLIP | 3 | 1.385 | . 345 | . 297 | . 310 | . 220 | . 200 | 1.53 |
| 160.C ${ }^{\text {STC C }}$ | RED | 4 | FUSE CLII' | 3 | 1.385 | . 345 | . 297 | .310 | . 220 | .200 | 1.53 |
| ( $\mathrm{BH}-\mathrm{C}$ | GREEN | 5 | FUSE CLIP* | 2 | 1.293 | . 345 | . 297 | . 310 | .220 | . 200 | 1.20 |


gram showhir source and frequency of the infut voltage, rostance and sind of load, required load current and the

500 Dise diameter. 500 inch. Area each disc . 15 stuare melt. Furnished witlı $3^{\text {wo }}$ braited. timed copper cads. Finished in synthet ic lacquer-enamel.

SERIES 160 Jisc diameter . 1 fio inch. Area each disc . 02 symare inch. Furnished with $3^{\prime \prime}$ stranded, finned thermopastic cowmen copper leads. Molded phenolic case. Assembly sealed with specially developed moisture-proof compound.

SERIES 160-C Disc diameter . 160 inch. Disc area, lead wire and lengih ami moisture-proof seal are illentical with Series 1fio. Dimensions of the case have been rerluced to the most compact size. These units may he mounterl it a standard midget fuse clip.

20 Vesey St., New York 7, New York 1836 Euclid Ave., Cleveland 15, 0 hio 600 S. Michigan Ave., Chicago 5, III 518 City Bk. Bldy.. Kansas City 8, Mo. P. 0 . Box 201, Crosstwn. Sta., Memphis 4,Tenn. 1212 Camp St., Dallas 2, Texas 4018 Greer Ave., St. Louis 7, Mo. 711 Colorado Bldg., Denver 7, Colo Bendix Bldg., 1206 Maple Ave.,
Los Angeles 15, Calif.
Export Div., 75 West St., New York 6. N. Y. Canadian: 50 Yarmouth Rd., Toronto. Ont.

## BRADLEY

LINE

## SELENIUM RECTIFIERS



B

Above (A) Model RS-100. Designed for radio and low power applications. Rated at 115 volts A.C., 100 milliamperes D.C., but also made for higher voltages and current.

Above (B) SE-11 Series. Power rectifier stacks rated from 0.100 amperes up. Plate size from $1^{\prime \prime} \times 1^{\prime \prime}$ up to $5^{\prime \prime} \times 6^{\prime \prime}$.

Bradley selenium rectifiers for medium voltage applications are processed to allow good efficiency and stability at D. C. rating up to 24 volts per plate. For power applications, square plates allow a maximum of rating to space factor.

For high voltage applications, Bradley selenium rectifiers are rated up to 70 volts peak inverse per plate.

Bradley manufactures selenium rectifiers for operation from a few microamperes to many thousands of amperes and from fractions of a volt to thousands of volts. On any rectification problem, consult Bradley. With their long application experience, Bradley engineers can quickly specify the right rectifier for your requirements.

## COPPER OXIDE RECTIFIERS



In above Universal Instrument Rectifier, you have a single answer to a wide range of measurement rectifier requirements -- one rectifier for all circuits with A.C. voltages and D.C. currents within the unit's rating. Rated up to 12 volts A.C., 5 ma. D.C.
BRADLEY "COPROX" INSTRUMENT RECTIFIERS have vacuum processed pellets with goid contacts.

Exhaustive laboratory and field tests have proved our process produces rectifiers with maximum efficiency and minimum temperature errors. Even under severe condiditions of use, aging is practically eliminated.

Electrical instruments with better accuracy are being built with "Coprox" rectifiers.

BRADLEY "COPROX" POWER RECTIFIERS, designed for low voltage applications, are rugged, compact and conservatively rated. Long service life is combined with low operating cost.
Bradley manufactures copper oxide rectifiers for operation from a few microamperes up to one ampere, and from microvolts up to hundreds of volts. All "Coprox" rectifiers are matched and balanced over a wide temperature range.

# PHOTO ELECTRIC CELLS 



The pigtail contact model 3-1A shown above is only one of a series of standard mountings. Others include housed models with plug-in contacts, for tube socket and nut-and-bolt types. Shapes of Bradley Luxtron* photocells vary from circles to squares, with every in-between shape desired. In size they range from the diminutive to the largest sizes required. Dimensions of the standard model illustreted are $2-3 / 16^{\prime \prime} \times 2.5 / 16^{\prime \prime} \times 27 / 64^{\prime \prime}$.

LUXTRON PHOTOCELLS EFFICIENTLY CONVERT LIGHT INTO ELLCTRIC ENERGY WITHOUT ANY EXTERNAL POWER SOURCE. The energy developed is sufficient to operate meters and sensitive relays.

Light-weight, rugged and true to rating, these photocells give long life under the most strenuous operating conditions. As far as we have been able to determine, they are the finest on the market, although among the lowest in price.

For precision control of light with electric energy, specify Luxtron photocells. Write Bradley for samples and engineering assistance on any photocell problem you have in mind.
*T.M. Reg. U. S. Pat. Off

# BRADLEY LABORATORIES, INC. 82 meadow streit, new haven lo, conn. 

# - ELECTROX Low-Capacity RECTIFIER UNITS 

Used by most leading test set manufacturers as original components in their equipment.

Full and half wave, low-capacity copper oxide rectifiers for instruments, test sets and similar applications. Electrox Rectifiers are made by a pioneer manufacturer of highquality, dry disc rectifiers. Each type is specially adapted to meet the individual requirements of the user; each unit is individually inspected, tested, and guaranteed right. For dependability, get genuine Electrox Rectifiers!


| Max. Contınuous Rating |  |  | Circuit $\underset{\text { Fig }}{\text { Diagram }}$ Fig. | Element Diam. Inches | No. of Elements | Connections | Lead <br> Length Inches | Type | Cat. No. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\underset{\text { D. } \mathrm{C} .}{ }$ | $\underset{\text { Volts }}{\text { D.C. }}$ | $\underset{\text { Volts }}{\text { A.C. }}$ |  |  |  |  |  |  |  |
| 1 | 1 | 1.5 | 3 | 1/8 | 4 | 4 leads | 4 | A.A-4 | 5064 |
| 5 | 3 | 4 | 3 | 3/16 ${ }^{\text {+ }}$ | 4 | 4 leauls | 3 | A-4 | 5020 |
| 13 |  | 3 | 1 | 7/18 | 1 | 2 leads | 3 | B-1 | 50.8 |
| 13 |  | 4 | 4 | 7/16 | 2 | 3 leads | 3 | [3-2 | 5047 |
| 13 |  | 3* | 2 | 7/60 | 2 | 3 leatels | 3 | 13-2 | 5049 |
| 20 | 3 | 4 | 3 |  | 4 | 5 leads | 3 | 13-1 | 5016 |
| 32 |  | 3 | 1 | 3/4 | 1 | 2 lugs |  | C-1 | 5011 |
| 32 |  | 3* | 2 | 8/4 | 2 | 3 leads |  | C-2 | 5057 |
| 32 |  | 3* | 5 | $8 / 4$ | 2 | 4 lugs |  | C-2 | 5010 |
| 64 | 3 | 4.1 | 3 | 3/4 | 4 | 5 lugs |  | C-4 | 5014 |
| 64 | 3 | 4.1 | 3 | $3 / 4$ | 4 | 5 leads | 3 | C-4 | 5017 |

*3 volts A.C. per element.
$t^{3} /$ /' $^{\prime \prime}$ square.


## RECTIFIER DIVISION

THESCHAUER MACHINE CO. Cincinnati, Ohio Makers, since 1930, of high-quality, dry disc rectifiers.


## IStetronl-

## SELENIUM RECTIFIERS

Built on Aluminum

THE high standards of performance established by Seletron Selenium Rectifiers have won for them nationwide acceptance by electrical manufacturers, purchasing agents and electrical engineers in the power and radio fields.

In every type of $A C$ to $D C$ conversion, from the large power stacks to the small units applicable to the radio and television fields, Seletron Rectifiers assure dependable, trouble.free service and long life under severest operating conditions.

These precision-built rectifiers are engineered for compactness and maximum heat dissipation. Although light in weight they are strongly constructed.

Furnished in eight standard plate sizes in assemblies that provide cutputs ranging from a few milliamperes to thousands of amperes. Stacks to meet specific voltage and current requirements are available in an infinite number of combinations.

## UNBEATABLE

STOCK JOBBER SIZES

| D.C. Output | ${ }^{\prime} 13^{\prime} \mathrm{C}$ | Mox. Inpul | Soletron |
| :---: | :---: | :---: | :---: |
| Mox. Amps | Approx. Volts | R.M.S. Volts | Code Number |
| 0.9 | 17 | 24 | QIBISIB |
| 1.6 | 18 | 24 | DIBISIB |
| 3.1 | 17 | 24 | EIBISIB |
| 5.2 | 17 | 24 | FIBISIB |
| 10.0 | 17 | 24 | HIBISIB |
| 16.0 | 18 | 24 | HIB2518 |
| 24.0 | 18 | 24 | H183518 |
| 1.2 | 36 | 48 | D2B1518 |
| 3.1 | 35 | 48 | WE2BISIB |
| 5.2 | 34 | 48 | WF2B1SIB |
| 10.0 | 34 | 48 | WH2BISIB |
| 16.0 | 35 | 48 | H282S18 |
| 24.0 | 35 | 48 | H2B3S18 |
| 0.9 | 105 | 144 | W0681518 |
| 1.2 | 108 | 144 | D681518 |
| 2.4 | 106 | 144 | E6B1518 |
| 5.2 | 103 | 144 | WF6BISIB |
| 0.9 | 122 | 168 | WQ7BISIB |
| 1.2 | 126 | 168 | D781518 |
| 2.4 | 123 | 188 | E7B1518 |
| 5.2 | 120 | 168 | WF7BISIB |

According to our Audit Deportment, replacement under warranty is anly $0.2 \%$.


## SPECIFY SELETRON

MINIATURE SELENIUM RECTIFIERS FOR RADIO AND TELEVISION APPLICATIONS

Code Number 5M4 5M1 5PI 5R1 5Q1 5S1 1M1 Current Rating 75 ma .100 ma .150 ma .200 ma .250 ma .500 ma .100 ma. Plate length $1^{\prime \prime} \quad 1^{\prime \prime} 1.3 / 16^{\prime \prime} 1.1 / 2^{\prime \prime} 1.1 / 2^{\prime \prime} \quad 2^{\prime \prime} \quad 1^{\prime \prime}$ Plote Width $1^{\prime \prime} 1^{\prime \prime} 1.3 / 16^{\prime \prime} 1.1 / 4^{\prime \prime} 1.1 / 2^{\prime \prime} \quad 2^{\prime \prime} \quad 1^{\prime \prime}$ Stack Thickness $11 / 16^{\prime \prime} 7 / 8^{\prime \prime} \quad 7 / 8^{\prime \prime} \quad 7 / 8^{\prime \prime} \quad 1-1 / 8^{\prime \prime} \quad 1-1 / 8^{\prime \prime} \quad 3 / 8^{\prime \prime}$ $A C$ Volts 130 V 130 V 130 V 130 V 130 V 130 V 25 V

Our Engineering Depariment will be glad to aid you in the solution of your RECTIFIER problems. without obligation. Write for booklet on SELETRON RECTIFIERS. Address Department: US2.

## Selenium Rectifiers by Federale

THE REVOLUTIONARY RECTIFIER WITH UNLIMITED USES IN RADIO AND ELECTRONICS


402 D 3150 A


403D2625A


404D2795A


438D3428A


403D 3240 A

| FTR Number | Output MA-DC | Input (RMS) |  | Inverse Volts | Peak MA | Application | Sugg'd Retail Price, Each | FTR Number | Output <br> MA-DC | Inyut (RMS) |  | Inverse Volts | Peak MA | Application | Sugg'd <br> Retail Price, Each |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Volts | MA |  |  |  |  |  |  | Volts | MA |  |  |  |  |
| 402D3452A | 65 | 130 | 160 | 380 | 750 | $13+A C-D C$ | \$ 85 | 403D2889A | 100 | 160 | 325 | 440 | 1200 | Vibrator | \$2.25 |
|  |  |  |  |  |  | (5 tube) |  | 402D3239A* | 75 | 160 | 220 | 440 | 900 | Vibrator Doubler | 2.55 |
| 402D3150A | 75 | 130 | 220 | 380 | 900 | $13+3$-way $\mathbb{R}$ adios | 1.04 | 403D3240A* | 100 | 160 | 325 | 440 | 1200 | Vibrator Doubler | 3.45 |
| 403D2625A | 100 | 130 | 325 | 380 | 1200 | B + Radios, | 1.30 | 404D3241A* | 200 | 160 | 550 | 440 | 2000 | Vibrator Doubler | 5.10 |
|  |  |  |  |  |  | Television |  | 4D2814AS $\dagger$ | 1000 | 8 |  |  |  | Battery Charger | . 70 |
| 403D2787A | 150 | 130 | 425 | 380 | 1200 | B+ Radio- | 1.50 | 104D2943S | 2000 | 15 |  |  |  | Battery Charger | 2.55 |
|  |  |  |  |  |  | Television |  | 402 D 3550 | 150 | 25 | 270 | 35 | 1804 | Bridge Rectitier | 1.40 |
| 404D2795A | 200 | 130 | 550 | 380 | 2000 | B + Television | 1.80 | 403 D 3551 | 300 | 25 | 540 | 35 | 2400 | Bridge Rectifier | 1.70 |
| 404D3450A | 250 | 130 | 625 | 380 | 2000 | B + Television | 2.00 | 40403552 | 600 | 25 | 1080 | 35 | 4000 | Bridge Rectifier | 2.10 |
| 438D3427A | 410 | 130 | 1000 | 380 | 3.500 | B+Television | 3.50 | 402 D 3151 | is | 20 | 220 | 55 | 900 | Bias Rectifier | . 50 |
| 438D3428A | 500 | 130 | 1250 | 280 | 3500 | $\mathrm{B}+$ Telavision | 3.65 |  |  | 2 | 2 | 5 | 100 | Mas Rrctifer | 50 |

* These rectifiers have two sections-characteristics given apply to oue section only; if both sections are used half-wave, voltage input is 320 volts
$\dagger$ The characteristics given for this rectifier are based on its use in a half-waye rectifier circuit with a 3 cell battery load
$\ddagger$ The characteristics given for this rectifier are lased on its use in a full-wave rectifier cireuit with a 3 cell hattery load.


## पhatairy HF Cables by Federale

QUALITY CABLES AND TRANSMISSION LINES BY AMERICA'S LARGEST MANUFACTURER OF SOLID DIELECTRIC COAXIAL CABLES

|  | K-111 |  | TV-59 |  | K-109 TV. 300 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FTR Type Number | Nominal Impedance | Nominal <br> MMF/Ft | Attenuation DB/ 100 ft | Nomitral <br> Jacket OD <br> in inches | APPLICATION | Sugg'd <br> Retail <br> Price, <br> Per Foot |
| K-111 | 300 |  | 2.4 at 50 Mc 3.4 at 100 Mc 4.6 at 200 Mc | $\begin{aligned} & 0.480 \times \\ & 0.290 \end{aligned}$ | Television lead-in where 300 ohm shielded cable is atvantagenus. | \$ . 125 |
| TV-59 | 72 | 22.04 at 1 kc | 2.6 at 50 Mc 3.9 at 100 Mc 5.8 at 200 Mc | 0.230 | FM and Television where 72 otum lead-in is required. | . 05 |
| K-109 | 160 | 8.3 at 1 kc | 2.6 at 3.85 Mc <br> 3.7 at 11.8 Mc <br> 4.8 at 19.5 yc | 0.2-5 | Automotrile antenua lead-in. | . 073 |
| TV-300 | 300 |  | 1.15 at 50 Nc <br> 2.00 at 100 Mc <br> 3.01 at 200 Mc | 0.340 x <br> 0.070 <br> no jacket | PY and Television antenna lead-in. | . 0295 |



