

SECOND EDITION

PILOT RADIO & TUBE CORP.

PARTS FOR SET BUILDERS AND SERVICE MEN

Short Wave  Headquarters

LAWRENCE

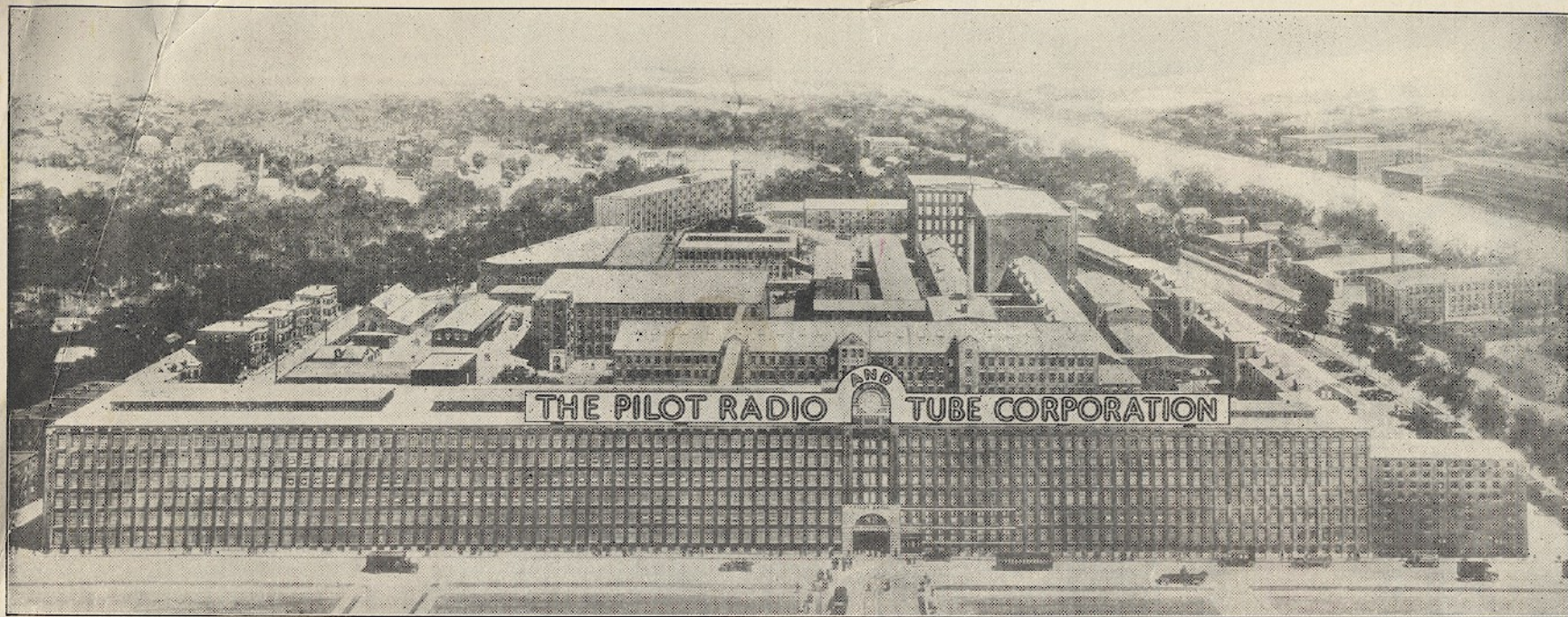
MASSACHUSETTS

*... preferred by
radio experts*



VAETH ELECTRIC CO.
ELECTRICAL APPLIANCES & RADIO
701 VARICK ST., UTICA, N. Y.

PILOT RADIO RECEIVER



PILOT'S RADIO CITY located at Lawrence, Massachusetts

The story of PILOT's growth from a tiny shop, equipped with two drill presses and a bench made from packing cases, into the largest self-contained radio plant in the world, would make fascinating reading, and would record one of the most interesting chapters in the history of the radio industry.

Thru twenty-three successful years, the affairs of PILOT RADIO have been guided by a policy of conservative but constant development. In all this time, no piece of PILOT merchandise has ever been dumped in a cut-price market.

The sale of PILOT sets and parts is world-wide. They are available in Mexico and South American countries, just as they are in Europe, Asia and

Africa. PILOT equipment safe-guarded the lives of the men in the Dickey Expedition on the Orinoco, with the same certainty that it serves the pleasure of the King of Siam in far-off Bangkok.

The PILOT factory is located at Lawrence, Massachusetts, a city known for the high skill of its factory workers, and the low cost of water power for the generation of electricity.

In PILOT's Radio City there are fourteen buildings, totalling 1,500,000 square feet. Two and one-half miles of railroad track convey freight cars to the various buildings on the property. Power for driving the manufacturing machinery is supplied by a 10,000 k.w. hydro-electric plant.

Catalog No. 38

SPRING—1932

PILOT RADIO PRODUCTS

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Sales Policy and Warranty

Pilot radio products are sold by reliable radio dealers throughout the world. They are not sold directly from the factory to individuals. If you can not obtain them locally, we suggest that you deal with the nationally-known mail order houses. If in doubt, write to our nearest office and we will be glad to help you.

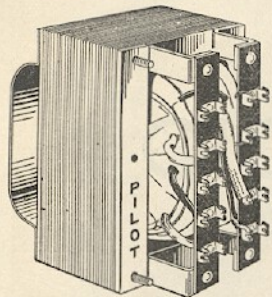
The Pilot Radio & Tube Corporation warrants each new radio product manufactured by it to be free from defective material and workmanship, and agrees to remedy any such defect or to furnish a new part in exchange for any part of any unit of its manufacture which, under normal installation, use and service, discloses such defect; provided the unit is delivered intact by the owner to us only through our authorized dealer or jobber from whom it was originally purchased, for our examination, with all transportation charges prepaid to our factory, within sixty (60) days from the date of sale to purchaser; and provided that such examination discloses in our judgment that it is thus defective.

This warranty does not extend to any of our radio products which have been submitted to misuse, neglect, accident, incorrect wiring not our own, improper installation, or to use in violation of instructions furnished by us, nor extend to units which have been repaired or altered outside of our factory, nor to cases where the serial number thereof has been removed, defaced or changed.

PILOT RADIO & TUBE CORPORATION
LAWRENCE, MASS., U. S. A.

Representatives in the principal cities of the world

REPLACEMENT POWER TRANSFORMERS AND FILTER CHOKES



No. 454

Pilot transformers and filter chokes, with brackets for universal mounting are suitable for all kinds of replacement use, because their extra iron and copper, providing splendid voltage regulation characteristics, make them adapted to a wide load variation. Further, they are designed to meet extreme temperatures and humidities.

Transformers for 110 to 125 volts have a primary tap to be used on a 125-volt line. Transformers for 220 to 240 volts have a primary tap to be used for 240-volt line.

These transformers have excellent voltage regulation characteristics, so that there is no over-load when the minimum number of tubes is used, and the full voltage is delivered to the maximum number of tubes.

THREE to FOUR-TUBE transformers have secondary coils as follows: 200 v. plate supply at 25 m.a. each side of the center tap; 2½ v. filament supply for 3 or 4 tubes; 5 v. for one 280 filament. Laminations 3¼ by 2¼, by 3 ins. thickness of coil.

FIVE to SIX-TUBE transformers have secondary coils as follows: 340 v. plate supply at 60 m.a. each side of the center tap; 2½ v. filament supply for 4 or 5 tubes; 5 v. for one 280 filament. Laminations 3¾ by 2¾, by 3¼ ins. thickness of coil.

SEVEN or EIGHT-TUBE transformers have secondary coils as follows: 320 v. plate supply at 70 m.a. each side of center tap; 2½ v. filament supply for 6 or 7 tubes; 5 v. for one 280 filament. Laminations 4¾ by 4, by 3¾ ins. thickness of coil.

NINE to ELEVEN-TUBE transformers have secondary coils as follows: 340 v. plate supply

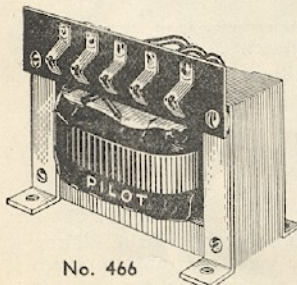
at 100 m.a. each side of center tap; 2½ v. filament supply for 8 to 10 tubes; 5 v. for one 280 filament. Laminations 4¾ by 4, by 3¾ ins. thickness of coil.

- 3 to 4-tube type, 110-125 v., 50-60 cy. No. 488—Code YAADT
- 3 to 4-tube type, 220-240 v., 50-60 cy. No. 449—Code YAAMD
- 3 to 4-tube type, 110-125 v., 25 cy. No. 450—Code YABIT
- 5 to 6-tube type, 110-125 v., 50-60 cy. No. 451—Code YABSE
- 5 to 6-tube type, 220-240 v., 50-60 cy. No. 452—Code YACET
- 5 to 6-tube type, 110-125 v., 25 cy. No. 453—Code YACSA
- 7 to 8-tube type, 110-125 v., 50-60 cy. No. 454—Code YACUX
- 7 to 8-tube type, 220-240 v., 50-60 cy. No. 455—Code YACZY
- 7 to 8-tube type, 110-125 v., 25 cy. No. 456—Code YADEV
- 9 to 11-tube type, 110-125 v., 50-60 cy. No. 457—Code YADTA
- 9 to 11-tube type, 220-240 v., 50-60 cy. No. 458—Code YADVE
- 9 to 11-tube type, 110-125 v., 25 cy. No. 459—Code YAEGY

FILTER CHOKES for B supply replacements are made in three types, all of 30 henries when used at their rated current. The D, C. resistance in ohms is also given. No. 460, Laminations 2¾ by 1¾, by 1¾ ins. thickness of coil. No. 465, Laminations 3¾ by 2¾, by 2¾ ins. thickness of coil. No. 461, Laminations 3¾ by 2¾, by 2½ ins. thickness of coil.

- 30 h. at 25 m.a., 100 ohms No. 460—Code YAEMF
- 30 h. at 70 m.a., 250 ohms No. 465—Code YAGYE
- 30 h. at 100 m.a., 250 ohms No. 461—Code YAERK

REPLACEMENT AUDIO AND PUSH-PULL TRANSFORMERS



No. 466

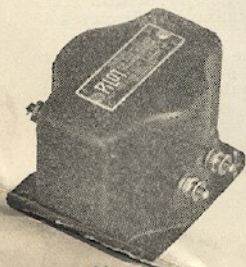
Nos. 462 and 463 are push-pull input replacement transformers, the former to work from a 227 into two 247's and the latter from a 237 into two 238's. No. 464 is a push-pull out-put to work with the No. 463. The output-transformer to work with the No. 462 in-put is mounted on the No. 8011 speaker, listed on

page 11. Output transformers for other power tube combinations are also mounted on their

respective speakers. The No. 466 A.F. transformer can be used for interstage coupling between all standard types of tubes. This is an exceptionally fine flat-characteristic design, and is recommended for all high-quality circuits. All four of these units have Laminations 3¾ by 2¾, by 2½ ins. thickness of coil.

- Push-pull input to 247's, 1¼:1 No. 462—Code YAFIX
- Push-pull input to 238's, 3/2:1 No. 463—Code YAFUB
- Push-pull output, for above, into 2-ohm coil No. 464—Code YAGIZ
- A. F. Transformer, flat-characteristic type No. 466—Code YAHOC

AMPLIFYING AND HEAD-PHONE TRANSFORMERS



No. 413

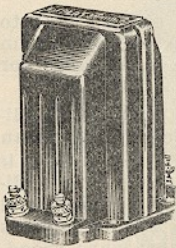
Here is a group of transformers specially designed for short-wave receivers. The adjustable-ratio head-phone transformer is needed on all sets to match the out-put tube with the phones, and to keep the D. C. plate current out of the telephone magnets. Reception is not only improved, but the phones are protected from demagnetization. Connect the primary in

place of the head-set and connect the head-set to the secondary.

The two types of amplifying transformers are for high amplification, with excellent reproduction of speech and code signals. All types are similar in appearance, 2¾ ins. square by 2½ ins. high.

- Head-phone matching transformer No. 416—Code ZOELN
- 3/2:1 amplifying transformer No. 413—Code ZWAWK
- 5:1 amplifying transformer No. 413Y—Code ZOALM

AMPLIFYING TRANSFORMERS



No. 391

The Bakelite cases of these Pilot transformers and chokes are molded in one piece, so that the instruments can be kept immersed in water for a month without affecting the coils. The three units listed below use the same size of case.

For a straight two stage amplifier, a good combination is a No. 391 in the first stage and second stages, with a 171A output tube. A better combination would use a No. 391 in the first stage, with a No. 399 feeding two 171A's in push-pull, and the tubes feeding the loud speaker through a No. 401 output impedance. These transformers cannot be

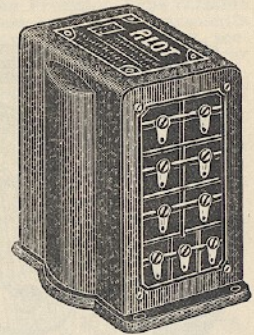
used with 245 tubes. The bakelite case is 1 13/32 inches high and approximately 2 3/4 inches square.

Transformer, 3 1/2-1 ratio. No. 391 Code YEFBA
 Push-pull input. No. 399 Code YIOCH
 Push-pull output. No. 401 Code YIRUX

construction as well as laboratory circuits. Of the four windings, the first supplies 2 1/2 volts for 3 to 5 tubes; the second, 2 1/2 volts for 1 to 2 tubes; the third, 5 volts for a 280 rectifier; and the fourth, 330 volts plate supply on each side of the center tap, at a current drain of 90 m.a. Thus the 432 can be used in sets of 4 to 9 tubes, using 245 or 247 output tubes singly or in push-pull.

For a voltage divider, the 900 resistor in combination with a Resistorgrad are recommended. In addition, Dricon filter condensers and one of the PILOT filter chokes are needed, or the speaker field can be used for the choke.

This transformer is designed to work from 110-120 volts, 50-60 cycles. For data on the filament and plate circuit requirements, see the table of Tube Characteristics on the inside cover of this catalog.



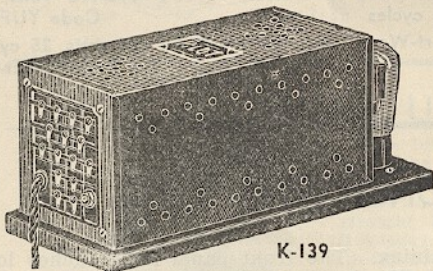
No. 432

Jumbo power transformer, A, B, C supply
 No. 432—Code ZWOWN

JUMBO POWER TRANSFORMER

Set builders, experimenters and engineers find the 432 Jumbo power transformer ideal for set

HEAVY-DUTY POWER PACK FOR A, B, C SUPPLY



K-139

The K-139 is a new heavy-duty power pack that will take care of practically any modern

A. C. receiver. It has a formed steel base 14 1/2 inches long, 6 1/4 inches wide, the whole unit standing 6 inches high.

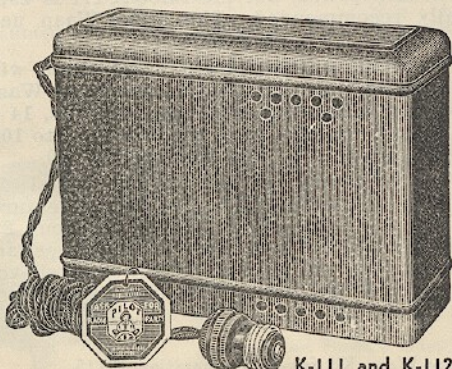
The maximum D. C. output is 125 milliamperes at 300 volts with taps for lower voltages. The filament windings are: 4 volts at 6 amperes; 2 1/2 volts at 12 amperes; 2 1/2 volts at 3.5 amperes; 5 volts at 2 amperes.

The transformer, choke, condensers, and resistors in this power pack are designed to the same specifications as those used in the most expensive PILOT radio receivers.

Pack K-139-110 or 125 volts Code YADAT
 Pack K-139-G 210 or 230 volts Code YAFOZ
 Pack K-139-H 230 or 250 volts Code YEELJ

All types are designed for 50-60 cycles.

STANDARD POWER PACK FOR A, B, C SUPPLY



K-111 and K-112

The K-111 and K-112 power packs, which are factory assembled and wired, use the same steel case, 10 inches long, 7 inches high and 3 3/4 inches wide.

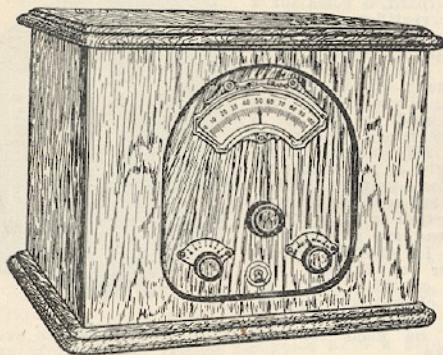
The K-111 has a maximum direct current output of 60 milliamperes at 220 volts, with taps at 180, 135, 90 and 45 volts. There are three low voltage windings for the heating of A. C. tubes; 5 volts at 1 ampere, 2 1/2 volts at 8 amperes, and 1 1/2 volts at 4 amperes, supplying sufficient power for 2-171's, 4-224's or 227's and 4-228's.

The K-112 will deliver 90 milliamperes at 300 volts, 180, 135, 90 and 45. A variable resistance provides control of these latter four values. There are three filament windings: 5 volts at 2 amperes, 2 1/2 volts at 12 amperes, 2 1/2 volts at 3.6 amperes, supplying sufficient power for 2-245's, 6 or 7-224's or 227's and 1-280.

No. K-111 110-115 Volts Code ZYPYP
 No. K-111-F 125 volts Code ZUENV
 No. K-111-A 220 volts Code ZYROP
 No. K-111-B 240 volts Code ZYUVT
 No. K-112 110-115 Volts Code ZYZHT
 No. K-112-F 125 volts Code ZOZID
 No. K-112-A 220 volts Code ZYTPPE
 No. K-112-B 240 volts Code YAREK

All types are designed for 50-60 cycles.

SHORT WAVE CONVERTER WITH NEW WASP CONTROL



No. V-191

Run two wires from the V-191 Short Wave Converter to your present radio set, put your antenna and ground on the Converter, and you will be able to bring in the short wave broadcasting stations almost as easily as you can tune in the local broadcasters.

The new Wasp Control on the PILOT Converter provides greatly increased efficiency, reduces back-ground noise, facilitates tuning, and eliminates roars, squeals, and howls.

Five short wave bands are selected by a single switch, covering 10 to 19 meters, 19 to 35 meters, 35 to 65 meters, 65 to 110 meters, and 110 to 200 meters. In this way,

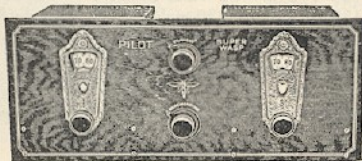
the stations are spread out on the dial to make tuning less critical. A sixth position of the switch cuts out the converter, for regular broadcast reception.

Except during unfavorable weather conditions, skillful operators can pick up European and South American stations. Australia is readily picked up in most locations. In addition, there are amateur and commercial phones, airplanes, and police alarms always on the air. Frequently the short wave broadcast stations can be brought in at full volume when the corresponding broadcast wave cannot be heard at all.

The V-191 Converter has a self-contained power pack, so that it can be used with any T. R. F. or super-heterodyne receiver, regardless of types. It is not necessary to change tubes or wiring at all, for the Converter simply connects to the antenna and ground posts on the set.

- | | | |
|--------------------------------|---------------------------------|------------|
| Short-Wave Converter, V-191 | 110-115 volts, 50-60 cycles | Code YOSEB |
| Short-Wave Converter, V-191-F | 125 volts, 50-60 cycles | Code YUDPA |
| Short-Wave Converter, V-191-C | 220 and 240 volts, 50-60 cycles | Code YUEWK |
| Short-Wave Converter, V-191-J | 110-115 volts, 25 cycles | Code YUFWY |
| Short-Wave Converter, V-191-FJ | 125 volts, 25 cycles | Code ZEMUJ |

PILOT SHORT WAVE CONSTRUCTION KIT



No. K-110

The original Pilot Super-Wasp is probably the best known short-wave receiver in the world, its name being synonymous with short waves in the minds of radio fans everywhere.

Supplied in kit form, with all the parts fully prepared, the Super-Wasp can be assembled and wired even by people without previous experience in work of this kind. Licensed amateurs have adopted it very widely, as it is flexible in both construction and operation.

Electrically, the A. C. Super-Wasp consists of one stage of tuned radio-frequency amplification with a screen-grid tube, followed by a regenerative detector, one stage of resistance coupled audio and one stage of transformer coupled.

The front panel and sub-panel are of metal, the former being finished to resemble walnut

graining. The front panel is 18 inches long and 7½ inches high, the whole set, when assembled, being 9½ inches deep.

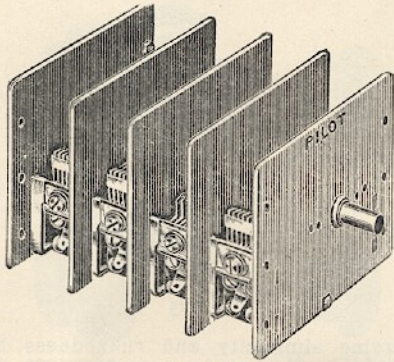
The Super-Wasp kit contains everything necessary for the assembly of the set, including all screws, nuts, washers, special hardware, wire and ten plug-in coils. No power pack is supplied, but the Pilot K-111 is especially recommended. The Super-Wasp uses one P-224 and three P-227's.

The famous Pilot plug-in coils, fitted with colored handles, are used in the Super-Wasp, the wavelength ranges being, red coils, 14 to 27 meters; orange, 26 to 50; yellow, 50 to 100; green, 100 to 200; and blue, 200 to 500.

There is also a Super-Wasp model for battery operation. This has all the features of the A. C. set except that it uses one 222 screen-grid tube and three P-201A tubes, and requires as the source of power a six-volt storage "A" battery, and at least three 45-volt "B" batteries.

- | | | |
|------------------------------------|-------|------------|
| Super-Wasp Kit for A.C. operation | K-115 | Code YUGIT |
| Super-Wasp Kit for Batt. operation | K-110 | Code ZWAGS |

PRECISION TYPE SHIELDED CONDENSERS



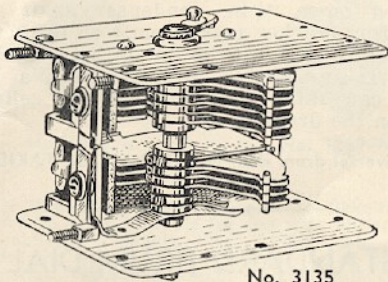
No. 3160

PILOT has developed the Precision Type variable condensers to meet the most exacting requirements of balanced super-heterodyne circuits. Each section has an adjustable compensator to allow for balancing in accordance with the distributed capacities of the circuit to which the sections are connected.

These condensers, of .00032 mfd. max. per section, are made with one, two, three, and four sections. The shields measure $4\frac{1}{2}$ by $3\frac{3}{4}$ ins. The four types are $1\frac{1}{2}$, 3, $4\frac{1}{2}$, and 6 ins., in length, respectively, with a $\frac{1}{4}$ -in. shaft.

The rugged construction of the Precision Type condensers makes them particularly suited for calibrated circuits, test oscillators, and laboratory set-ups.

Precision type, 1 section.	No. 3115	Code YIGIK
Precision type, 2 sections.	No. 3130	Code YIHAJ
Precision type, 3 sections.	No. 3145	Code YIJKA
Precision type, 4 sections.	No. 3160	Code YIKOP



No. 3135

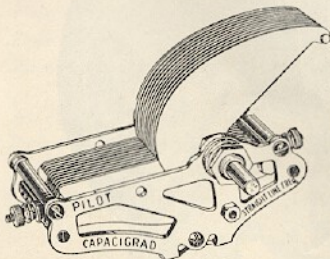
SHORT WAVE CONDENSER

Years of experience with short wave equipment are designed into these condensers, the type used in PILOT'S Converter, similar in design to the precision series. Each section has .00014 mfd. max.

The plates are extra-spaced to assure accuracy of calibration at the low settings. The shields measure $4\frac{1}{2}$ by $3\frac{3}{4}$ ins., and the over-all length is 3 ins.

Short-Wave Condenser.	No. 3135	Code WYNNA
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CENTRAL LINE CONDENSERS



No. 1623

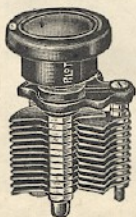
mounted on either clockwise or counterclock-

The 1600 Centraline series is for modified straight line frequency. Condensers supplied with mounting feet and removable shafts. Because of their reversible feature, they can be

wise dials. They mount in a single hole and can be secured against turning by additional panel screws. Two or more can be ganged together by means of a long $\frac{1}{4}$ -inch shaft, or by No. 12A couplings. Connection to the rotor plates is made by a brass pigtail which insures noiseless contact. The No. 1611 condenser is recommended for short wave receivers as it has extra spacing between the plates.

Centraline, .00016 mfd.	No. 1611	Code ZYGAZ
Centraline, .00025 mfd.	No. 1613	Code SELRE
Centraline, .00035 mfd.	No. 1617	Code SELSI
Centraline, .00050 mfd.	No. 1623	Code SELVO

MIDGET CONDENSER AND COUPLING

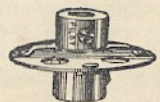


No. 1-23

This Midget variable condenser, designed for easy mounting has a Bakelite frame and rigid brass plates. There are types for neutralizing R. F. amplifiers, antenna coupling, tuning verniers, regeneration control, and short wave tuning circuits. The depth behind the panel ranges from 1 in. to $1\frac{3}{4}$ ins., depending upon the capacity, with a $\frac{1}{4}$ -in. shaft.

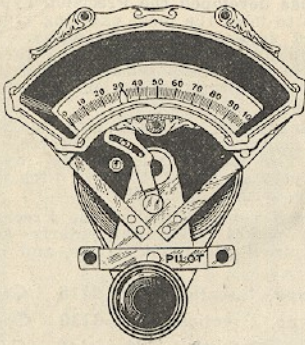
Insulated Flexible Coupling.	No. 12-A	Code YITIX
Midget, .000015 mfd.	No. J-5	Plate Code YIAST
Midget, .000025 mfd.	No. J-7	Plate Code GET
Midget, .000050 mfd.	No. J-13	Plate Code GOR
Midget, .000100 mfd.	No. J-23	Plate Code WYILN

The 12A insulated flexible coupling is made for a $\frac{1}{4}$ -in. shaft. Three brackets are also supplied for fastening together the 1600 series variable condensers. This coupling is very rugged, and can carry a heavy mechanical load.



No. 12-A

PERFECT VISION DIAL

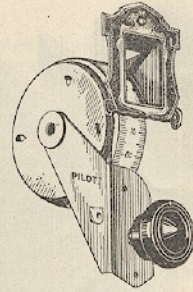


No. 1267

The attractive appearance of the perfect-vision PILOT dial has made it extremely popular among all classes of set builders, to whom the dependable and simple mechanism also has a strong appeal. An easy-action cam device reduces the 180-degree rotation of the condenser to a 90-degree movement of the pointer. A dial light can be mounted behind the dial for illumination, although a socket for this purpose is not provided. The dial can be mounted on the condenser itself. The coupling is for a $\frac{1}{4}$ -in. condenser shaft.

Perfect-vision dial, No. 1267. Code WYOZ.

UNIVERSAL DRUM DIAL

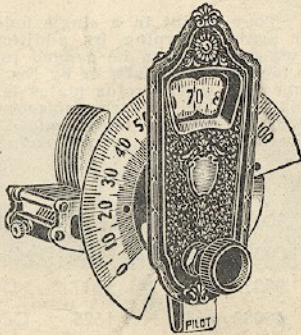


No. 1273

Extreme simplicity and ruggedness have been combined to produce the No. 1273 drum dial at a very low price, although in operation and appearance it is equal to the most expensive types. The drum is intended to be carried on a $\frac{1}{4}$ -in. condenser shaft. The mounting bracket goes directly on the rear of the front panel. At the top of the escutcheon there is an opening through which a Pilot light can shine to illuminate the celluloid dial on the drum.

Universal drum dial, No. 1273. Code YAKID.

PRECISION TYPE DIAL



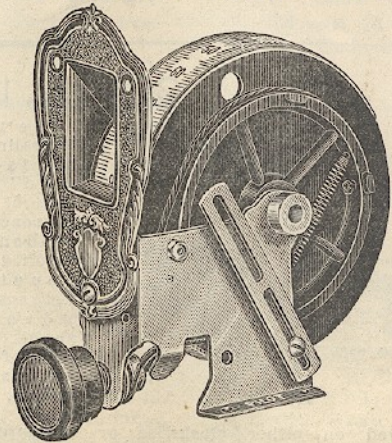
No. 1282

In the No. 1282 dial the adjusting knob is centered on the bronze panel plate below the window through which the scale is viewed. The scale is illuminated, and has large figures which are easily read. The vernier action is smooth and accurate, and the framework is strong enough to support large multiple condensers. The scale is parallel to the panel, the condenser or other instrument being mounted at right angles to the latter. This dial is very popular because it is easy to mount, works smoothly, and presents a handsome appearance.

Precision dial, without bulb, No. 1282. Code YUBEN.

Precision dial, with bulb, No. 1282L. Code ZIRAN.

STANDARD DRUM DIAL



No. 1285

The No. 1285 is the finest Pilot single illuminated drum dial. The plate is of bronze, beautifully decorated with scroll work. The control knob is centered below the plate, and does not touch the latter.

The solid molded bakelite drum carrying the condensers is driven by a specially treated cord which is wound around the drum and connects with a small pulley on the shaft turned by the control knob. The dial turns easily and smoothly yet there is absolutely no backlash, even with the largest and heaviest "Bathtub" condensers.

Drum dial, without lamp, No. 1285. Code ZYGGY.

Drum dial, with lamp, No. 1285L. Code ZYICY.

BAKELITE CONTROL KNOBS



No. 1252-W



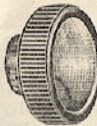
No. 1263-W



No. 1258-W



No. 1262-W



No. 1256-W

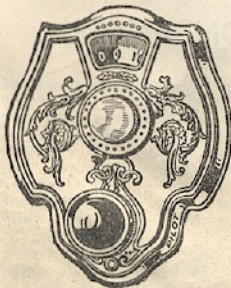


No. 1269-W

All PILOT knobs are of genuine Bakelite, dark brown in color, suitable for use with either walnut or mahogany panels. No. 1258W has a white indicating spot, while No. 1259 is of the same size, but without the spot. No. 1263 is the same as 1262 except that it has a pointer. Plain knobs have brass bushing and set screw for 1/4-in. shaft. The fancy knobs are of the push-on type, for 1/4-in. shaft with flat. The retaining spring is secured to the knob, and cannot fall out when knob is removed.

Plain knob, 1 in. diam. No. 1252W Code YEYX
 Plain knob, 1 1/4 in. diam. No. 1256W Code ZILLO
 Plain knob, with spot, 1 5/16 in. diam. No. 1258W Code ZYBEE
 As above, without spot. No. 1259W Code ZYCUB
 Fancy knob, 1 in. diam. No. 1262W Code ZASYL
 As above with pointer. No. 1263W Code ZATIJ
 Fancy knob, 1 5/16 in. diam. No. 1269W Code ZAUCS

PILOT ART DIAL



No. 1278

This ornamental vernier dial is made of solid bakelite, and lends an air of distinction to any set. It is available in either black or walnut color. A positive friction drive prevents slipping or backlash, even with heavy triple condensers. Mounts with a single machine screw. The scale is calibrated for both clockwise and counterclockwise condensers. The dial is 4 inches high and 3 3/16 inches wide.

Black Bakelite. No. 1278
 Walnut Bakelite. No. 1279

Code VEISI
 Code VEGOL

MIDGET MICA CONDENSERS



No. 82 Series

The PILOT midget mica condensers, sealed in molded bakelite were originally developed for PILOT broadcast and short wave receivers. Now they are being made

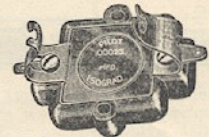
available to service men for replacements, and to set builders. These tiny condensers are formed in a solid block 1 1/4 ins. long, 3/4 in. wide, by 1/4 in. thick. The capacities are as follows:

.0002 mfd. No. 83	Code ZAGYX
.00004 mfd. No. 84	Code ZAMYA
.0001 mfd. No. 85	Code ZANEB
.00025 mfd. No. 88	Code ZAPAB
.0005 mfd. No. 89	Code ZAPCE
.001 mfd. No. 90	Code ZAPUG
.002 mfd. No. 91	Code ZARIG
.006 mfd. No. 95	Code ZAVAH

STANDARD MICA CONDENSERS



No. 50 Series

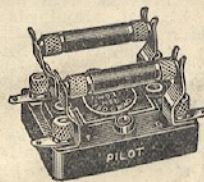


Model 51-M

This series of fixed condensers is for special mountings where threaded bushings, moulded into the condensers, are required. They are also recommended for permanent laboratory set-ups, as well as for repeated, temporary connections, for which the threaded terminals are particularly convenient. In size they are 1 1/2 ins. long, 1 19/32 ins. wide, and 11/32 in. thick. No. 51-M is fitted with grid leak slips. The capacities are:

.0002 mfd. No. 50E	Code WYMUR
.00004 mfd. No. 50A	Code WYJJA
.0001 mfd. No. 50B	Code WYJMO
.00025 mfd. No. 51	Code FIX
.00025 mfd. No. 51M	Code YOAGM
with grid leak clips	
.0005 mfd. No. 52	Code FAN
.001 mfd. No. 53	Code FAD
.002 mfd. No. 54	Code FED
.006 mfd. No. 58	Code FOG
.01 mfd. No. 59	Code FUL

RESISTANCE COUPLING UNIT

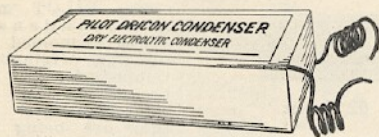


No. 500

The Pilot Resistoblock is suitable for any circuit employing resistance coupling. The Bakelite base has a depression to fit any 50 series fixed condenser. Any combination of capacity and resistance can be used. Dimensions 2 1/4 ins. long, 1 25/32 ins. wide and 1 1/2 ins. high.

Without leaks or condenser. No. 501 Code BLUKI
 With .01 mf. condenser. No. 500 Code BLOKE

DRICON ELECTROLYTICS



No. 810

PILOT has organized an entirely new manufacturing division, equipped with the most modern facilities, for the production of PILOT Dricon dry electrolytic condensers in 4 mfd. and 8 mfd. sections. Life tests and overload tests which have been conducted in preparation for the announcement of these capacity units show that the PILOT method of construction, and the PILOT process for forming, create new standards of ex-

cellence, reducing the hazard of breakdown to an absolute minimum under all conditions to be met in broadcast receivers.

The 4 mfd. unit measures 1 5/8 by 1 by 4 1/4 ins. long, and the 8 mfd. unit, 1 5/8 by 1 1/4 by 4 1/4 ins. long. These can be assembled into a very small can to contain the total capacities needed for power supply circuits.

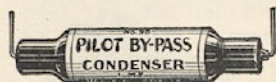
It is becoming general practice to replace paper filter condensers when repairing power supply circuits with Dricons, because the latter are practically self-healing, and preclude further trouble from that source.

Both sizes are designed for D.C. working voltages up to 450, with peak voltages at 600 volt D.C.

4 mfd. Dricon Condenser. No. 810 Code ZIVSE

8 mfd. Dricon Condenser. No. 811 Code ZIWIW

NON-INDUCTIVE CARTRIDGE TYPE CONDENSERS



No. 96

Latest design practice eliminates the block-type by-pass condensers, substituting instead individual, roll condensers of non-inductive construction. This simplifies replacement, and permits the

repair of a single section rather than replacing an entire block. These condensers are very light in weight, so that they are supported amply by their heavy terminal leads. All four sizes are 2 1/2 ins. long, overall. No. 96 is 9/16 in. in diameter; No. 96A, 3/4 in.; No. 97, 13/16 in.; No. 97A, 1 1/16 in. in diameter.

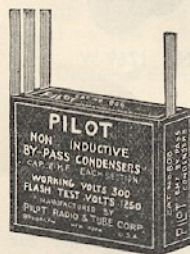
.1 mfd., 300 V. D.C. working, 1250 V. flash. No. 96
Code ZAVIK

.1 mfd., 400 V. D.C. working, 1600 V. flash. No. 96A
Code ZEJAZ

.25 mfd., 300 V. D.C. working, 1250 V. flash. No. 97
Code ZAVNY

.25 mfd., 400 V. D.C. working, 1600 V. flash. No. 97A
Code ZEJDO

NON-INDUCTIVE CONDENSER



No. 806

Conventional types of condensers are practically useless for by-passing purposes in short-wave receivers, for on the very low wavelengths they act more as inductances than as capacities. For this reason, Pilot has developed three special non-inductive by-pass condensers, designed particularly for short-wave circuits.

The No. 804 consists of three condensers in one case, with one common terminal and three separate ones for the individual sections. The No. 807 is a single .5 mf. condenser. These condensers are 1 3/4 ins. long and 1 3/4 ins.

high, and 5/8 ins. thick. They are fitted with wire leads. They are rated at 300 volts working voltage, 1250 volts flash test.

Three section condenser, .1 mf. per section. No. 804
Code YUBNE

Single .5 mf. size. No. 807 Code YADUZ

Single .1 mf. size. No. 808 Code YUERF

FILTER CONDENSER



No. 9302

For all heavy-duty work, these filter condensers are specially recommended, for in these types the art of filter condenser manufacture has been developed to the highest standards. No. 9501 is rated at 500 volts D.C., with a flash test at 2400 volts. No. 9551 is rated at 650 volts D.C., with a flash test at 3600 volts. Both units are of 1 mfd. capacity. No. 9302, of 2 mfd., is rated at 300 volts, with a flash test at 1200 volts.

The condensers are permanently sealed in pressed steel cases 2 ins. by 3/8 in. by 5 ins. high.

1 mfd., 650 V. No. 9651

1 mfd., 500 V. No. 9501

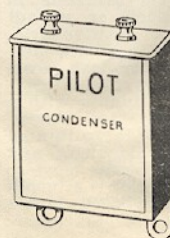
2 mfd., 300 V. No. 9302

Code ZYDIZ

Code ZAYHZ

Code PCUKI

BY-PASS CONDENSER



No. 801

The 801 by-pass condenser, of 1 mfd. capacity, is used for replacement purposes and for all kinds of test circuits and laboratory set-ups. It is built for a working voltage of 150, and is given a flash test at 750 volts. The case measures 2 1/2 ins. high, by 2 ins. wide and 3/8 in. thick, made of pressed steel, finished in black enamel. Many of these condensers have been in daily use in the PILOT engineering laboratories for more than five years.

1 mfd. by-pass condenser. No. 801 Code YETUV

PILOT CARBON RESISTORS

Here is another product—Pilot carbon resistors, developed for Pilot receivers, which is now offered to service men. Newly devised methods of manufacture have brought the values to a new degree of accuracy, and have reduced the variation in resistance at high temperatures. The ratings are conservative for the different sizes. An improved type of terminal lead connection assures positive and noiseless contacts.

COLOR CODE: The color code is the R. M. A. standard. The first color is the body color, the second is the end color, and the third is the color spot.

1/2 WATT SIZE, 1 IN. BY 1/4 IN. DIAMETER

Ohms	Body	End	Spot	No.	Code	WYUVB
100	Bro.	Bla.		No. 1170	Code	WYUVB
150	Bro.	Gre.		No. 1171	Code	WYVIX
250	Red	Gre.	Bro.	No. 1172	Code	WYVVA
500	Gre.	Bla.	Bro.	No. 1173	Code	WYWOB
750	Vio.	Gre.	Bro.	No. 1174	Code	WYWUC
800	Gra.	Bla.	Bro.	No. 1175	Code	WYZDO
1000	Bro.	Bla.	Red	No. 1176	Code	WYZIC
1500	Bro.	Gre.	Red	No. 1177	Code	WYZUF
2000	Red	Bla.		No. 1178	Code	YAIFY
4000	Yel.	Bla.	Red	No. 1179	Code	YAILF
6000	Blu.	Bla.	Red	No. 1180	Code	YAJAZ
8000	Gra.	Bla.	Red	No. 1181	Code	YAJDO
10,000	Bro.	Bla.	Or.	No. 1182	Code	YAJOD
18,000	Bro.	Gra.	Or.	No. 1183	Code	YAJYG
20,000	Red	Bla.	Or.	No. 1184	Code	YAKCE
40,000	Yel.	Bla.	Or.	No. 1185	Code	YAKFO
50,000	Gre.	Bla.	Or.	No. 1186	Code	YAKYH

100,000	Bro.	Bla.	Yel.	No. 1187	Code	YALCA
250,000	Red	Gre.	Yel.	No. 1188	Code	YALED
500,000	Gre.	Bla.	Yel.	No. 1189	Code	YALIF

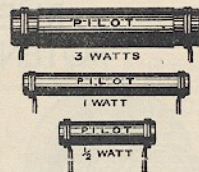
1 WATT SIZE, 1 3/4 INS. BY 1/4 IN. DIAMETER

300	Or.	Bla.	Bro.	No. 1200	Code	YALYJ
800	Gra.	Bla.	Bro.	No. 1201	Code	YAMDA
1500	Bro.	Gre.	Red	No. 1202	Code	YAMFE
2000	Red	Bla.		No. 1203	Code	YAMIG
5000	Gre.	Bla.	Red	No. 1204	Code	YAMUJ
8000	Gra.	Bla.	Red	No. 1205	Code	YANAF
9000	Whi.	Bla.	Red	No. 1206	Code	YANFA
20,000	Red	Bla.	Or.	No. 1207	Code	YANJO
100,000	Bro.	Bla.	Yel.	No. 1208	Code	YANUK

3 WATT SIZE, 2 INS. BY 3/8 IN. DIAMETER

250	Red	Gre.	Bro.	No. 1220	Code	YAOLG
1300	Bro.	Or.	Red	No. 1221	Code	YAORM
5500	Gre.	Gre.	Red	No. 1222	Code	YAOZI
14,000	Bro.	Yel.	Or.	No. 1223	Code	YAPGA

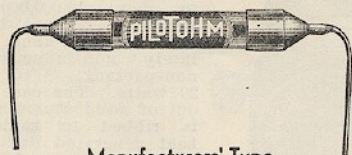
(SOLD IN BOXES OF 10)



PILOT GRID LEAKS



Standard Type



Manufacturers' Type

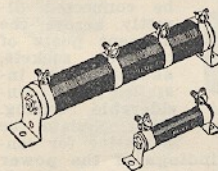
The Pilotohm metal grid leaks are dependable resistances that will not change in value. Sealed airtight as protection against moisture.

In some receivers it is desirable to connect grid leaks by means of wires rather than by spring clips. For this purpose, the manufacturers' type leaks are recommended. They are exactly the same as the ones described above, except that they have one-inch lengths of No. 20 tinned copper wire soldered to the end caps.

All these grid leaks are 1 13/16 ins. long and 1/4 in. in diameter. Packed in boxes of 10. Not less than 10 of one value sold to the trade.

Resistance	Mfrs' Type.	Standard Type.
.03 meg.	No. 868, Code ZEFZO	No. 768, Code ZAJVE
.1 meg.	No. 850, Code ZAETH	No. 750, Code YIDL Y
.25 meg.	No. 851, Code ZAGO V	No. 751, Code YIERT
.5 meg.	No. 852, Code ZAHIV	No. 752, Code YIFIJ
1. meg.	No. 854, Code ZAJO Y	No. 754, Code YIHIL
2. meg.	No. 856, Code ZAMCO	No. 756, Code YIKYR
3. meg.	No. 858, Code ZAPID	No. 758, Code YIMUS
5. meg.	No. 860, Code ZATAG	No. 760, Code YIOPT
10. meg.	No. 861, Code ZAUDT	No. 761, Code YIPER

WIRE WOUND RESISTORS



All Pilot wire resistors are wound with Nichrome wire on porcelain tubes, end are impregnated with a black elastic coating that protects them against dampness and corrosion. The resistors are equipped with removable feet, and can be mounted either vertically or horizontally.

The No. 961 is a special filament resistor for 222 type tubes, being supplied with a tap for "C" bias. The next eleven sizes are intended for use as "C" bias resistors. The No. 960 is a "B" power-pack output resistor, for use with any unit that supplies 180-200 volts to it. Taps to give lower voltage are fitted to the resistor. The first twelve resistors are 5/8 in. in diameter and 1 3/4 ins. long; the No. 953 is 3/8 in. by 2 ins. long, and the No. 960, 3/4 in. in diameter and 4 1/2 ins. long.

Resistor, 15 ohms, tapped (for 222 tubes) No. 961

Code YIBIF

Resistor, 225 ohms

No. 967, Code YERAN

Resistor, 450 ohms

No. 966, Code YABRA

Resistor, 900 ohms

No. 959, Code YOMUX

center-tapped

Resistor, 650 ohms

No. 954, Code YAEB S

Resistor, 750 ohms

No. 965, Code YAPOK

Resistor, 850 ohms

No. 955, Code YAFAV

Resistor, 1,000 ohms

No. 962, Code ZUNTA

Resistor, 1,500 ohms

No. 963, Code ZUOJS

Resistor, 1,200 ohms

No. 956, Code YAGBO

Resistor, 2,000 ohms

No. 958, Code YISOY

Resistor, 2,250 ohms

No. 951, Code YABYX

Resistor, 3,000 ohms

No. 964, Code ZUPCY

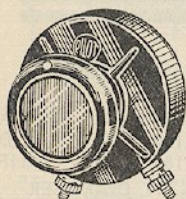
Resistor, 10,000 ohms

No. 953, Code YADOY

"B" Power pack resistor, 12,700 ohms No. 960

Code YOZAG

RHEOSTATS, POTENTIOMETERS

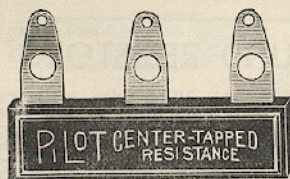


No. 906

Pilot rheostats and potentiometers are wire-wound on a non-shrinking strip which withstands a high degree of heat. The Bakelite base is of heavy one-piece construction, 2 ins. in diameter by 9/16 in. deep over all, behind the panel. Single-hole mounting is provided. The control knob is of two-tone brown Bakelite.

Rheostat, 6 ohms.	No. 906	Code RAF
Rheostat, 20 ohms.	No. 920	Code RAGE
Rheostat, 30 ohms.	No. 930	Code RIDE
Potentiometer, 200 ohms.	No. 200	Code PAF
Potentiometer, 400 ohms.	No. 400	Code PAGE
Potentiometer, 1000 ohms.	No. 931-P	Code ZADAP
Potentiometer, 2000 ohms.	No. 932-P	Code ZIJGE
Potentiometer, 3000 ohms.	No. 3000	Code WYMAM

CENTER-TAP RESISTORS



No. 352

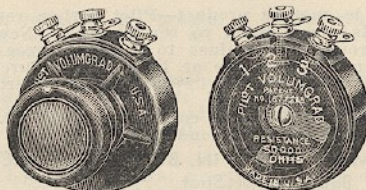
The Pilot center-tapped resistances, being only 1 1/4 inches long, can be connected directly across the filament posts of the tube sockets, and when so installed save considerable wiring.

They obviate the necessity for center taps on the filament windings of the power transformer, and keep the hum in an A. C. receiver at a minimum.

Variable center-tap resistor, 20 ohms, not illustrated.
No. 355—Code ZOYED

Resistor, 10 ohms.	No. 352	Code ZWEGT
Resistor, 20 ohms.	No. 354	Code ZWEWL
Resistor, 50 ohms.	No. 356	Code ZWIFF
Resistor, 75 ohms.	No. 358	Code ZWUCT

PILOT VOLUMGRAD

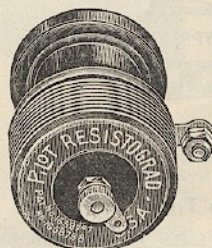


No. 940

The Volumgrad is a smooth action variable resistor designed especially for volume and oscillation control purposes. It is made in the four resistance ranges listed below, the four models being exactly alike in size and appearance. The volume can be adjusted from zero to maximum with one turn of the knob. The case is of molded bakelite, 2" in diameter. A special arrangement of the contact arm prevents the resistance strip from wearing out. The arm is insulated from the shaft, so the Volumgrad can be mounted directly on a metal panel. The maximum power dissipation is 1/2 watt. The maximum voltage across the terminals is 140, 200, 280, and 450 for the four types listed below.

0 - 50,000 ohms.	No. 940	Code ZUJUT
0 - 100,000 ohms.	No. 941	Code ZUKRE
0 - 200,000 ohms.	No. 942	Code ZULYX
0 - 500,000 ohms.	No. 945	Code ZUMIV

PILOT RESISTOGRAD

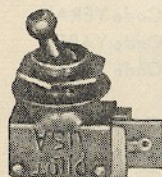


No. 350

The Resistograd is a variable resistance having a "jumpless" range from 40 to about 10,000,000 ohms, which is covered by four turns of the knob. Absolutely non-inductive and non-packing. Will handle 20 watts. The case is cast out of solid aluminum, and is ribbed to radiate the heat generated during normal operation. 2 7/16" long overall and 1 7/16" in diameter. Mounts in a single hole. Bakelite adjusting knob furnished.

Resistograd.	No. 350	Code RESGD
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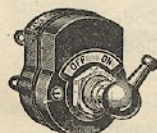
TOGGLE AND ROTARY SWITCHES



No. 47

Three different types of PILOT switches cover all designs and circuit requirements. Nos. 47 and 47A toggle switches are of the "on-and-off" types, the former bearing a threaded neck to take panels up to 1/4 in. thick, and the latter up to 1/2 in.

Nos. 48 and 48A toggle switches are two-way switches, closing either one of two circuits, but having no open position. No. 48 is for panels up to 1/4 in., and 48A for panels up to 1/2 in.



No. 46

Toggle Switch, on and off.	No. 47
Toggle Switch, on and off.	No. 47-A
Toggle Switch, two-way.	No. 48
Toggle Switch, two-way.	No. 48-A
Knob Switch, on and off.	No. 44
Lever Switch, on and off.	No. 46

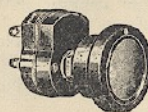
Both 44 and 46 are of the plain "on-and-off" type, housed in similar cases of molded Bakelite, but with knob and lever control, respectively.

In all these switches the heavy, long-wearing contacts are designed for current up to 3 amperes at 220 volts, with a quick break and positive action. They are suitable for either battery or house-current circuits.



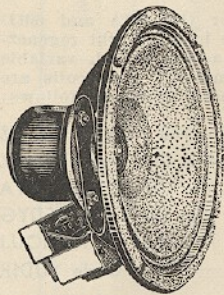
No. 48

Code WYRSE
Code ZECSA
Code WYSAS
Code ZECUX
Code ZYAHB
Code ZYEDY



No. 44

LOUDSPEAKERS, A. C. AND D. C. TYPES



No. 8006

Six types of dynamic speakers have been developed for PILOT receivers, and are offered because their high quality has made them exceedingly popular among those who are more than ordinarily particular. Further, the price advantage of PILOT'S huge production is being passed on to set builders and service men. Complete specifications are given to facilitate the selection of the correct speaker for the circuit in which it is to be used.

5 and 7-tube A.C. sets—8 in. speaker, transformer and bucking coil, for one 247 pentode; 1400-ohm field, 2-ohm voice coil, 70 M.A. field current. No. 8006
Code ZYLOJ

7-tube 110 V., D.C. sets—8 in. speaker, shunt resistor and transformer, for two 238's push-pull; 530-ohm field, 2-ohm voice coil, 129 M.A. field current. No. 8007
Code ZYMGA

5-tube, 110 V., D.C. sets—8 in. speaker, shunt resistor and transformer, for one 247 pentode or two 238's in parallel; 530-ohm field, 2-ohm voice coil, 129 M.A. field current. No. 8008
Code ZYMKO

7-tube, 220 V., D.C. sets—8 in. speaker, shunt-series resistor and transformer, for two 238's in push-pull, 1400-ohm field, 2-ohm voice coil, 73 M.A. field current. No. 8009
Code ZYNHA

5-tube, 220 V., D.C. sets—8 in. speaker, shunt-series resistor and transformer, for 247 pentode or two 238's in parallel; 1400-ohm field, 2-ohm voice coil, 73 M.A. field current. No. 8010
Code ZYNOL

10-tube A.C. sets—10 in. speaker and transformer, for two 247's in push-pull, 1000-ohm field, 2-ohm voice coil, 100 M.A. field current. No. 8011
Code ZYOGD

PLUG AND JACK

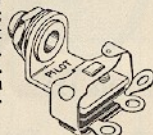


No. 275

A simple sturdy plug, to which phones and loud speaker cord tips can be connected in an instant without tools. Will work in all standard jacks. The handle is of Bakelite. The insulation between the contacts will withstand 500 volts.

A small, convenient telephone jack for general use in connection with phone plugs. It is of the single closed circuit type.

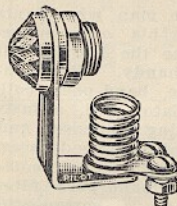
Phone Plug No. 275
Phone Jack No. 1165



No. 1165

Code PLEB
Code COJAC

PILOT LIGHT



No. 40

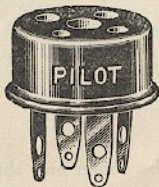
The No. 40 Pilot Light lends an attractive touch to a set not equipped with illuminated dials. The red jewel glows as long as the set is turned on, and acts as a reminder. No bulb is supplied, but any miniature base lamp can be used.

Jeweled Pilot Light. No. 40
Code PLITE

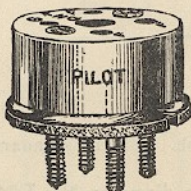
PILOT TUBE SOCKETS



Manufacturers'



Set Builders'



Screw Type

Pilot tube sockets are standard the world over. The types listed below cover all possible requirements for U. S. and European tubes. Smooth action, positive contacts, and perfect insulation are characteristics which recommend PILOT sockets wherever tubes are used.

Manufacturers' type, UX-UV tubes, 4 prongs, for metal chassis. No. 218
Code YIDGE

Manufacturers' type, UY tubes, 5 prongs, for metal chassis. No. 219
Code YIEWZ

Manufacturers' type, European tubes, 4 prongs, for metal chassis. No. 220
Code YUKOZ

Manufacturers' type, European tubes, 5 prongs, for metal chassis. No. 221
Code YULBO

Set builders' type, 4 prongs. No. 205.
Code UNSIL

Set builders' type, 5 prongs. No. 211
Code YETOP

Screw type, 4 prongs. No. 214
Code ZIGGO

Screw type, 5 prongs. No. 215
Code YAALC

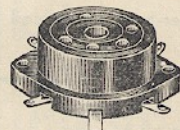
Universal type, 4 prongs. No. 216
Code YALCD

Universal type, 5 prongs. No. 217
Code YAFWE

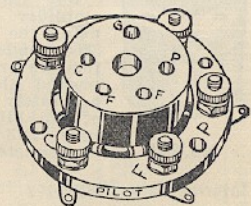
Base type, 4 prongs. No. 213
Code YUPYH

Base type, 5 prongs. No. 212
Code YIZHY

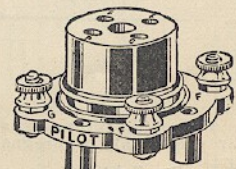
Shock-proof type, 4 prongs. No. 206
Code UNSHK



Universal

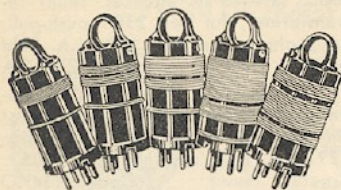


Base Type



Shock-Proof

SUPER WASP COILS AND COIL FRAMES



17 to 485 Meters

These are the coils supplied with the K-110 and K-115 kits. The No. 601-A are the antenna coils, which contain a single winding piece. The No. 601-D are the detector coils, each of which has a grid and a tickler winding. There are five coils to each set, fitted with handles of different colors. These coils were designed especially for the Super-Wasp, and will work satisfactorily in other receivers only if their circuits and constants match those of the Super-Wasp. These coils also use the No. 185 forms.

Super-Wasp antenna coils. No. 601A Code YUBMA
 Super-Wasp detector coils. No. 601D Code YUCYT

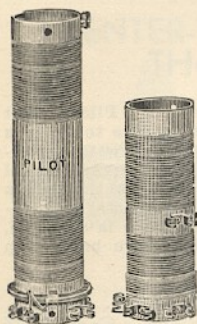
The same forms used for the 601A and 601D coils are also wound for use in a straight regenerative circuit for use with a .00016 mfd. variable condenser turning the secondary. Five coils are used to cover the 17-485 meter range as follows:

Red handle, 17-30 meters. No. 180 Code YAYOS
 Orange handle, 30-52 meters. No. 181 Code YEANK
 Yellow handle, 48-105 meters. No. 182 Code YECYA
 Green handle, 93-202 meters. No. 183 Code YEDYG
 Blue handle, 230-485 meters. No. 184 Code YICUJ
 Set of 5 coils. No. 180-4 Code YUDIR

The Bakelite forms on which these coils are wound are available for those who prefer to wind their own coils. The five contact pins fit any standard UX socket. Length 2½ inches, diameter 1⅞ inches.

Coil form, with pins and handle. No. 185 Code YIDYL

SUPER-HET COILS



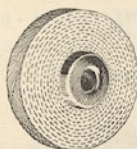
No. 242

Coils 1½ in. diameter by 5¾ in. and 4 in. long.

Super-heterodyne coil kit. No. 242 Code YIGHA

For the man who wants to make his own super-heterodyne the No. 242 kit is very handy. This contains one band-pass coil, one oscillator coil, adjustable padding condenser, and two special fixed condensers. Designed for a circuit comprising a band-pass filter coupled to a screen-grid R.F. stage, ahead of the first detector. Should be used with the four-gang No. 3160 variable condenser.

R. F. CHOKES



No. 132

The No. 132 R.F. choke is a universal wound, 18 millihenry, uncased R.F. choke, designed for use in the plate circuit of the second detector in 175 K.C. super-heterodyne circuits, 1½ ins. in diameter, ¼ inch deep.

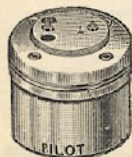
R. F. choke. No. 132 Code WYPUT



No. 131 R. F. choke coil. No. 131 Code YEMIL

The No. 131 is a 30-millihenry radio-frequency choke coil for general use in short wave and regular broadcast receivers. Its choking effect extends from about 15 meters up to 600, its distributed capacity being very low. Dimensions: 1½ in. high, 1 in. diameter.

I. F. TRANSFORMERS

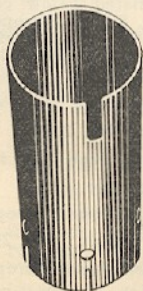


No. 241

Intermediate frequency transformers (kit of three). No. 241 Code YIFGA

For the intermediate frequency amplifier of a super-heterodyne using the No. 24 coils and the No. 3160 condenser, the No. 241 transformers are recommended. They are packed three to a box, and are accurately matched to a frequency of 175 kilocycles. In strong steel cans, 2 13/16 in. high and 2¾ in. in diameter.

TUBE SHIELD



No. 223



Tube shield and shield base. No. 223 Code WYORV

A very handy tube shield for screen-grid circuits. The base is attached to the sub-panel and the shield snaps over it. It is tall enough to completely shield the tube, with an open top for adequate ventilation.

BAKELITE TUBING

Formalite tubing is a hard, strong tube, made of thoroughly impregnated paper. It has a polished natural light brown finish. Sold in standard lengths of 42 inches.

Formalite Tubing 1 in. outside diameter. No. T-545 Code ZYRLA

Formalite Tubing 1¼ in. outside diameter. No. T-549 Code YOGIP

PILOT PRECISION VACUUM TUBES

Incorporating exclusive PILOT features for Short Wave reception

Pilotron Type Number	P-112A	P-171A	P-201A	P-224-A	P-226	P-227	P-235 or P 551	P-236	P-237	P-238	P-239	P-245	P-247	P-280
Filament Voltage	5 D.C.	D.C. 5 or A.C.	5 D.C.	2.5 A.C.	1.5 A.C.	2.5 A.C.	2.5 A.C.	6.3 D.C.	6.3 D.C.	6.3 D.C.	6.3 D.C.	2.5 A.C.	2.5 A.C.	5 A.C.
Filament Current in Amperes	.25 D.C.	D.C. .25 or A.C.	.25 D.C.	1.75 A.C.	1.05 A.C.	1.75 A.C.	1.75 A.C.	.3 D.C.	.3 D.C.	.3 D.C.	.3	1.5 A.C.	1.75 A.C.	2 A.C.
Electron Emitter	oxide coated filament; burns cherry red	oxide coated filament; burns cherry red	thoriated tungsten filament; burns yellow	heated cathode	oxide coated filament; burns cherry red	heated cathode	heated cathode	heated cathode	heated cathode	heated cathode	heated cathode	oxide coated filament; burns cherry red	oxide coated filament; burns cherry red	oxide coated filament; burns cherry red
Plate Voltage	90 135 180	135 157 180	67.5 90 135	180	90 135 180	90 135 180	180; screen voltage 75	90-135; screen voltage, 55-75	90 135	135; screen voltage, 135	135; screen voltage 90 180; screen voltage 90	180-250	250; screen voltage, 250	350 per plate
Corresponding Negative Grid Bias	4.5 9 13.5	27 33 40.5	3 4.5 9	control grid -1.5 screen, +75	6 9 13.5	6 9 13.5	-1.5	-1.5 -1.5	-6 -9	-13.5	-3 -3	34.5-50	16.5	
Corresponding Plate Current in milliamperes	5.2 6.2 7.6	16 18 20	1.7 2.5 3	4	3.8 6.3 7.4	2.7 4.5 5	5.8	1.8 3.5	2.7 4.5	8	4.6 4.65	25-34	32; screen, 7.5 ma.	125 maximum
Corresponding Plate Resistance, in ohms	5600 5300 5000	2200 2150 1850	14,000 11,000 10,000	400,000	8600 7200 7000	10,000 9000 9000	350,000	200,000 300,000	11,500 10,000	110,000	450,000 680,000	1900-1750	38,000	
Corresponding Mutual Conductance, in microhms	1500 1600 1700	1360 1400 1620	570 725 800	1050	955 1135 1170	820 1000 1000	1100	850 1100	780 900	900	1000 1050	1850-2000	2,500	
Amplification Factor	8.5	3	8	420	8.2	9	385	170 275	9 9	100	450 700	3.5	95	
Overall Height	4 $\frac{1}{16}$ "	4 $\frac{1}{16}$ "	4 $\frac{1}{16}$ "	5 $\frac{1}{16}$ "	4 $\frac{1}{16}$ "	4 $\frac{1}{16}$ "	4 $\frac{1}{16}$ "	4 $\frac{1}{16}$ "	4 $\frac{1}{8}$ "	4 $\frac{1}{8}$ "	4 $\frac{1}{8}$ "	5 $\frac{3}{8}$ "	5 $\frac{3}{8}$ "	5 $\frac{3}{8}$ "
Overall Diameter	1 $\frac{3}{16}$ "	1 $\frac{3}{16}$ "	1 $\frac{3}{16}$ "	1 $\frac{3}{16}$ "	1 $\frac{3}{16}$ "	1 $\frac{3}{16}$ "	1 $\frac{3}{16}$ "	1 $\frac{3}{16}$ "	1 $\frac{3}{16}$ "	1 $\frac{3}{16}$ "	1 $\frac{3}{16}$ "	2 $\frac{1}{8}$ "	2 $\frac{1}{8}$ "	2 $\frac{1}{8}$ "
Base	Four-prong	Four-prong	Four-prong	Five-prong	Four-prong	Five-prong	Five-prong	Five-prong	Five-prong	Five-prong	Five-prong	Four-prong	Five-prong	Four-prong
Applications	All-purpose battery operated tube. Excellent R. F. amplifier. Sensitive detector; Semi-power audio tube	Audio output tube. Filament works on D.C. Maximum output at 180 volts is 750 milliwatts	General purpose battery-operated R. F. and A. F. amplifier and detector	High-gain, low-capacity A. C. R. F. amplifier for all wave lengths. Good detector and A. F. amplifier	A. C. operated R. F. and A. F. amplifier only; cannot be used as detector	General purpose A. C. amplifier and detector. Particularly suited for short-wave detection	Variable-mu screen-grid amplifier. For R. F. and I. F. stages	First list of voltage values best for auto sets; second list for 110 volt D.C. operation	First list of voltage values best for auto sets; second list for 110 volt D.C. operation	Power output pentode capable of delivering 375 milliwatts maximum undistorted power	Super-control Pentode for R. F. and I. F. amplifier in Auto and D.C. Receivers	Audio output pentode in milliwatts; 750 at 180 volts; 1600 at 250 volts	Power output pentode capable of delivering 2.5 watts maximum undistorted power	Full-wave rectifier for "B" power packs
Code	List \$1.50	List \$0.90	List \$0.75	List \$1.60	List \$0.80	List \$1.00	List \$1.60	List \$2.75	List \$1.75	List \$2.75	List \$2.75	List \$1.10	List \$1.55	List \$1.00

NEW PRECISION TYPE

SPIDER

SHORT-WAVE CONVERTER KIT

K-528
BATTERY TYPE SPIDER

K-527
A.C.-OPERATED SPIDER

Designed By **G. H. Browning**



FOR EXTREME DX RECEPTION

FURNISHED WITH PILOT'S NEW SHORT-WAVE TYPE TUBES

If you want an inexpensive converter that will produce every last bit of signal that can be brought in, the SPIDER is your answer. It was designed by G. H. Browning, in co-operation with PILOT'S short-wave experts, and represents the latest refinements of high efficiency.

You will notice first of all the volume control built into the converter. In operation, the volume control in the broadcast set is kept at maximum, and the input to the set regulated by the converter volume control. This is the scientifically correct method.

The coils are another new development. Fitted with five-prong bases and ring handles, the heavy-wire windings are on a new kind of low-loss, threaded tubing. Weeks of experimenting were spent to find out the exact values of inductance and coupling to produce smooth operation and freedom from unwanted oscillation.

The new short-wave type tubes are furnished with the SPIDER kits. PILOT'S engineers have found that tubes which pass all tests for use in broadcast receivers may be totally unsuited for S. W. reception. That is why the construction of PILOT tubes has been changed, and new production tests added to catch defects which would not show up in broadcast receivers, but make tremendous differences at the high frequencies.

Broadband interference is eliminated by setting the receiver at 550 k.c., rather than at higher frequencies.

The coils are designed to cover the following bands:

No. 1 20 to 32 meters
No. 2 32 to 54 meters

No. 3 54 to 100 meters
No. 4 100 to 200 meters

Standard commercial design practice has been carried out in the SPIDER. The heavy steel chassis, with all holes stamped out, also provides the necessary shielding. Either a Bakelite or wood front panel can be used, depending upon the cabinet you use for the SPIDER. Every part and accessory is furnished, as well as complete assembly instructions. No skill is required to assemble the parts, and when you put it on the air you'll say, "I didn't imagine I could get such results from a converter!"

BATTERY TYPE SPIDER K-528

Many expert S. W. operators insist upon battery operation, principally because there is a little less noise on weak signals. The K-528 has two 6-volt tubes, a P-236 and a P-237, combining extreme sensitivity and stability. Any boy can assemble the converter in an hour's time. The A supply should be a small 6-volt

storage battery or four 1½-volt dry cells, with two 45-volt B batteries. A battery cable is supplied instead of binding posts. Complete battery type SPIDER kit with tubes and instructions:

No. K-528

Code ZODYL

A.C.-OPERATED SPIDER K-527

When you have assembled the K-527, just plug it into the light socket, make the connections to the antenna, ground, and to the broadcast receiver, and it will be ready to operate. This kit is supplied for various A.C. voltages and for 50 to 60 and 25 cycles, as shown in the list below. It has three tubes: A P-280 rectifier, P-227 oscillator, and P-224-A detector. A self-contained power supply, with Dricon electrolytic filter condensers, is included in the A.C. SPIDER, eliminating any connections to the power circuits of the broadcast set.

K-527	110-115 volts, 50-60 cycles	ZOPUV
K-527-F	125 volts, 50-60 cycles	ZORAS
K-527-A	220 volts, 50-60 cycles	ZORET
K-527-B	240 volts, 50-60 cycles	ZORIV
K-527-J	110-115 volts, 25 cycles	ZORZY
K-527-FJ	125 volts, 25 cycles	ZOSAT



PILOT

RADIO & TUBE CORPORATION

Factory and General Offices - Lawrence, Mass.

Dealer's Price List for Catalog 38

VAETH ELECTRIC CO.
ELECTRICAL APPLIANCES & RADIO
701 VARICK ST., UTICA, N. Y.

Dealer		List		Dealer		List		Dealer		List		
Page 2				1258W	.10	.15	1201	.20	.35	44	.35	.60
488	3.15	5.25	1259W	.10	.15	1202	.20	.35	46	.30	.50	
449	3.15	5.25	1262W	.10	.15	1203	.20	.35	940	.75	1.25	
450	4.25	7.00	1263W	.15	.25	1204	.20	.35	941	.75	1.25	
451	4.05	6.75	1269W	.15	.25	1205	.20	.35	942	.75	1.25	
452	4.05	6.75	1278	.50	.85	1206	.20	.35	945	.75	1.25	
453	5.25	8.75	1279	.50	.85	1207	.20	.35	350	.50	.85	
454	5.25	8.75	83	.12	.20	1208	.20	.35	Page 11			
455	5.25	8.75	84	.12	.20	1220	.35	.60	8006	6.50	10.85	
456	6.75	11.25	85	.12	.20	1221	.35	.60	8007	6.50	10.85	
457	5.70	9.50	88	.12	.20	1222	.35	.60	8008	6.50	10.85	
458	5.70	9.50	89	.12	.20	1223	.35	.60	8009	6.50	10.85	
459	7.20	12.00	90	.15	.25	868	.15	.25	8010	6.50	10.85	
460	2.05	3.40	91	.20	.30	850	.15	.25	8011	10.00	16.65	
465	2.10	3.50	95	.25	.40	851	.15	.25	275	.25	.40	
461	2.25	3.80	50E	.25	.40	852	.15	.25	1165	.25	.40	
462	2.45	4.10	50A	.25	.40	854	.15	.25	40	.25	.40	
463	2.50	4.20	50B	.25	.40	856	.15	.25	218			
464	2.25	3.75	51	.25	.40	858	.15	.25	219	.10	.16	
466	2.65	4.40	51M	.30	.50	860	.15	.25	220	.10	.16	
416	1.40	2.35	52	.25	.40	861	.15	.25	221	.10	.16	
413	1.25	2.10	53	.25	.40	768	.15	.25	205	.10	.16	
413Y	1.40	2.35	54	.25	.40	750	.15	.25	211	.10	.16	
Page 3				58	.30	.50	751	.15	.25	214	.15	.25
391	1.35	2.25	59	.45	.75	752	.15	.25	215	.15	.25	
399	1.80	3.00	501	.25	.45	754	.15	.25	216	.15	.25	
401	1.80	3.00	500	.70	1.10	756	.15	.25	217	.15	.25	
432	5.25	8.55	Page 8				758	.15	.25	213	.25	.40
K-139	24.00	40.00	810	1.00	1.65	760	.15	.25	212	.25	.40	
K-139G	24.00	40.00	811	1.50	2.50	761	.15	.25	206	.25	.40	
K-139H	24.00	40.00	96	.25	.40	961	.25	.40	Page 12			
K-111	16.35	27.25	96A	.30	.50	967	.25	.40	601A	4.25	7.10	
K-112	18.95	31.60	97	.30	.50	966	.25	.40	601D	4.25	7.10	
Page 4				97A	.40	.65	959	.25	.40	180	.90	1.50
V-191	.....	39.50	804	1.00	1.60	954	.25	.40	181	.90	1.50
V-191J	.....	42.50	807	.75	1.25	965	.25	.40	182	.90	1.50
K-115	33.75	50.00	808	.35	.60	955	.25	.40	183	.90	1.50	
K-110	29.25	44.00	801	.50	.85	962	.25	.40	184	.90	1.50	
Page 5				9651	1.00	1.65	963	.25	.40	180-4	4.45	7.40
3115	1.05	1.75	9501	.75	1.25	956	.25	.40	185	.35	.60	
3130	2.00	3.25	9302	.75	1.25	958	.25	.40	242	2.25	3.75	
3145	3.00	5.00	Page 9				951	.25	.40	241	3.75	6.25
3160	4.00	6.60	1170	.20	.35	964	.25	.40	132	.30	.50	
3135	3.00	5.00	1171	.20	.35	953	.25	.40	131	.75	1.25	
1611	1.05	1.75	1172	.20	.35	960	.75	1.25	223	.15	.25	
1613	1.05	1.75	1173	.20	.35	Page 10						
1617	1.10	1.85	1174	.20	.35	906	.50	.85	T-545	2.00	3.30	
1623	1.25	2.10	1175	.20	.35	920	.50	.85	T-549	2.25	3.75	
12A	.25	.40	1176	.20	.35	930	.50	.85	Inside B. C.			
J-5	.50	.85	1177	.20	.35	200	.50	.85	P-112A		1.50	
J-7	.50	.85	1178	.20	.35	400	.50	.85	P-171A		.90	
J-13	.55	.90	1179	.20	.35	931P	.50	.85	P-201A		.75	
J-23	.60	1.00	1180	.20	.35	932P	.50	.85	P-224A		1.60	
Page 6				1181	.20	.35	3000	.50	.85	P-226		.80
1287	1.25	2.10	1182	.20	.35	355	.25	.40	P-227		1.00	
1273	1.25	2.10	1183	.20	.35	352	.15	.25	P-235 or P-551		1.60	
1282	1.00	1.65	1184	.20	.35	354	.15	.25	P-236		2.75	
1282L	1.10	1.85	1185	.20	.35	356	.15	.25	P-238		2.75	
1285	1.50	2.50	1186	.20	.35	358	.15	.25	P-239		2.75	
1285L	1.75	2.90	1187	.20	.35	47	.25	.40	P-245		1.10	
Page 7				1188	.20	.35	47A	.25	.40	P-247		1.55
1252W	.10	.15	1189	.20	.35	48	.30	.50	P-280		1.00	
1256W	.10	.15	1200	.20	.35	48A	.30	.50				