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RADIO PARTS

for the

ELECTRONIC APPARATUS OF 1940

Built in the four corners of the earth Distributed in every large city

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AMERICAN PHENOLIC CORPORATION

SUPERIMIP DIMENSIONS



SUPER-MIP MOUNTING HOLES

D



Retainer Ring Mounting Steatite Dimensions



Mounting Holes for **Above Steatites**



The Steatite plug and all but the large SS-7 mount in the 1.172" hole which is punched with the Amphenol LD-1 Die. The 1.32" hole is for the 7-large and is punched with LD-2 Die.

Inverted View Of Replacement Typ



Illustration shows the bottom view of replacement type socket. Mounting plate may be removed and the socket mounted in the standard "SS" type

This mounting plate is preferred by amateurs and servicemen because the slotted holes fit any riveting centers from $1\frac{1}{2}$ " to $1\frac{7}{8}$ ".

Ultra-Low-Loss SUPER-MIP SOCKETS

No. 54-8 - 50c List

Individually Boxed with Instructions Standard Carton - 25

This is the finest socket in the world for high frequency appli-cations. Transparent body is molded from Amphenol "912", the new polystyrene-base insulating material that is astonishing engineers with its ability to handle high frequencies with almost perfect efficiency.

Breakdown voltage between contacts 12,000 volts D.C.; between contacts and mounting plate 9500 volts D.C.

Dielectric Constant	Power Factor	Loss Factor
I & 10 meg.	I meg. 10 meg.	1 meg. 10 meg.
2.6	.0002 .00089	.00053 .0023
	-	10

Volume Resistivity, Ohms per Cu. Cm.-1016 Non-hygroscopic, making it the perfect socket to use under all

adverse climatic conditions-entirely eliminates drift at the tube base.

Extra long contact soldering lugs are provided so that the dering iron does not come too close to the Amphenol "912" body. Should not be subjected to temperatures in excess of 186° Fahrenheit. However, normal temperatures inside the receiver cabinet never rise that high, making precautions necessary only at the time of soldering.

This is the perfect socket to use with the new single ended tubes where the control grid is fed through one of the tube prongs.

Available as an octal socket only.



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STEATITE SOCKETS AND PLUGS

Amphenol Steatite Sockets are recommended for high frequency work where high temperatures are encountered, for transmitter tubes and amplifiers which have an output in excess of 20 watts. Also used extensively as sockets for plug-in coils and crystals.

Power Factor

Loss Factor

Dielectric Constant i & 10 meg. 5.8

1 meg. 10 meg. .004 .005 1 meg. 10 meg. .0232 .0464 Volume Resistivity, Ohms per Cu. Cm.- 1012

Fired at very high temperatures, resulting in a hard material, then glazed — doubly guarding against moisture absorption.

Steatite is unexcelled for high voltage work be-cause carbonization caused by flash over can be wipe off and the socket used again.

Retainer Ring Type





For mounting holes and description of mounting assemblies see page 7 for ''S'' and ''RSS'' types; page 8 for 61 and ACS shell.

socket, plug, receptacle and connector listed on llowing pages is also available molded from

Power Factor

1 meg. 10 meg.

.036 .040 Volume Resistivity Ohms per Cu. Cm. 10¹²

Brown low-loss bakelite is recommended for those appli-cations where high voltages would cause corona. When ordering parts molded from brown bakelite add the letters "LL" to the part number and 13c to the list

"SS" Type

Every socket, plug, re the following pages Brown bakelite.

Dielectric Constant

1 & 10 meg. 5.4

	Retainer Ring Mounting Type Sockets and Plugs		In "61" Shell	In "ACS" Shell List
w	List SS4 —4-contact	RSS4 -4-contact \$40 RSS5 -5-contact .40 RSS6 -6-contact .40 RSS7-S 7-small .40 RSS7-I -7-large .50 RSS8 -octal .40	List 61-SS4 —4-contact\$.55 61-SS5 —5-contact55 61-SS6 —6-contact55 61-SS7S—7-small55 61-SS8 —octal55	AC-SS4 —4-contact\$.50 AC-SS5 —5-contact50 AC-SS6 —6-contact50 AC-SS75—7-small50 AC-SS7L—7-large60

LOW-LOSS SOCKETS AND PLUGS BROWN BAKELITE

Mica-Filled Bakelite Power Factor 1 meg. 10 meg. .018 .020 **Dielectric Constant** 1 & 10 meg. 5.2

Loss Factor 1 meg. 10 meg. .097 .11

PAGE 3

Volume Resistivity, Ohms per Cu. Cm.-1013 Every socket, plug, receptacle and connector listed on the following pages is also available molded from Mica-Filled bakelite.

This mica-filled bakelite is a compound of finely ground mica, bonded with the standard formulation of phenol formaldehyde resin, producing a superior insulating ma-terial that is excelled only by Amphenol "912" and Steatite. When c

STERTITE SOCKET

Car No.8354

ordering parts molded from mica-filled bakelite ne letter "T" to the part number and 13c to the add the list price.

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Loss Factor

1 meg. 10 meg. .19 .21



LOKTAL SOCKETS

Floating Contacts Minimize Strain on Tube Prongs

No. 88-8X.....17c List

EXTREMELY COMPACT

In keeping with the design of the new tubes, Amphenol Loktal sockets are ex-tremely compact, requiring less chassis area than the tubes they serve. Although distance between contacts and grounding plate is necessarily limited, the staggered spacing of contacts leaves the maximum insulation at all points.

Bottom of socket has raised bakelite barriers between contacts, increasing the leak-age path and preventing soldering flux from flowing from contact to contact.

From howing from contact to be based Fundamentally loktal tubes were designed to cut down losses at the tube base and to shorten the control grid lead. To retain the advantages gained, Amphenol No. 88-8X loktal sockets are molded from the best grade high dielectric black bakelite. (For low loss applications see No. 88-8XT Listed below.)

ULTRA-LOW-LOSS LOKTAL SOCKETS

No. RS-8LT—Replacement Type31c List



LT BELL

For all low-loss applica-tions, such as the antenna circuits of radio receivers. Molded from light tan color Amphenol Mica-filled insu-lation

lation. See description under Ultra-low-loss Bantam Jr. Sockets at bottom of page.

Supplied in three types—Molded-in-Plate construction (listed above), replacement type (listed to the right) or with retainer ring mounting (listed below).



RETAINER RING MOUNTING LOKTAL SOCKETS

For Hearing Aids, Police Pocket Radios, Remote Controls, Meteorological Instruments, Sensitive issuring Devices, and other compact radio and electronic apparatus which use the bantam junior tubes. Measuring Devi

For Hytron Nos. HY113, HY115, HL125 and Similar Tubes No. 78-6H-BANTAM JR. SOCKET 17c List

Accommodates both 5 and 6 prong bantam junior tubes. When wiring for 5-prong simply leave center contact unwired or center contact can be connected to ground to eliminate coup-ling between contacts. Extremely compact sockets, molded from high dielectric black bake-lite. Extend below chassis only $\frac{1}{4}$ " more than prongs of tubes; smaller in diameter than the tube itself. Contacts recessed in individually molded bakelite barriers on bottom of socket prevents the flow of soldering flux between contacts. contacts.

The contacts especially engineered for bantam junior tubes, maintain a low resistance path for the low voltages on which these tubes operate.

operate. Round contacts, only slightly larger in diameter than tube prongs, leave maximum insulation at all points, insuring the lowest possible capacity between contacts.

Ultra-Low Loss BANTAM JUNIOR SOCKETS No. 78-6HT—6-Contact Socket30c List

est possible leads.

Same sockets as above, but molded from Mica-Filled bakelite. This superior insulating material is a compound of finely ground mica, bonded with the standard formulation of natural color phenol formaldehyde resin, providing 33% better dielectric strength and a 50% better power factor. Color is light tan. Not to be confused with ordinary brown low-loss bakelite. For high-frequency use.

THAN THE TUBE IT SERVES



Loktal sockets have a new contact especially engineered for these radi-cally different tubes. Contacts actually float in any direction, relieving all strain on tube prongs. new contact

MOUNTING HOLES For All Molded-in-Plate LONTAL SOCKETS



Same mounting holes used for No. 88-8 Midget Octal described on next page, keeping chassis uniform when using both Loktal and Octal type tubes.

DIMENSIONS OF Retainer Ring Mounting LOKTAL SOCKETS



Mounts in the standard Amphenol "S" type mounting hole. For mounting in-structions see page 7. Use Amphenol LD-1 Die for punching hole.



Mount in 5%" plain round hole. Place No. 7 retainer ring on socket, concave side towards chassis or panel. Press retainer ring down with screw driver or similar tool.





ment and experimental work. Standard No. 78-8L retainer ring type set in a cadmium plated steel adapter plate, with slotted mounting holes that fit any riveting center from 11/2" to 17/8".

For all types of replace-

FOR FAST PRODUCTION

These small sockets have all the fea-tures of Amphenol MIP sockets described on the adjoining page.

1. Practically unbreakable. Breakage usually encountered when riveting laminated sockets is entirely eliminated because of the metal to metal riveting surfaces.

Surfaces.
 Center contact is a one piece formed lock spring sleeve punched from spring temper brass, cadmium plated to pre-vent corrosion. Soldering end of contact relatively stiff, permitting wiring with-out bending lug.
 Phosphor bronze contacts have the proper resiliency to grip the tiny lok-tal tube pins regardless of the number of times they are inserted and extracted.
 Hock type solder lug permits wrap-

4. Hook type solder lug permits wrap-

ping, fold back or straight lay wiring.

Used by servicemen to replace wafer type sockets, and for changing over receivers from Octal to Loktal.

No Screws or Rivets Necessary

panel, preventing socket from turning or vi-

brating loose. (See border for mounting instructions). Sockets can be mounted in any position to align contacts with wiring for short-

Mounts in 5/8" plain round hole and held securely in place by No. 7 retainer ring which is formed from tempered spring steel cadmium plated to prevent corrosion. Four corners of retainer ring imbed themselves in chassis or

REPLACEMENT LOKTAL SOCKETS

No. RS8-L-Black Bakelite18c List

No. 78-8L 17c List Price includes #4 Retainer Ring Molded Black Bakelite

(Other colors available at slightly higher prices.)

(Uther cotors available at slightly higher prices.) Similar in general construction to the Amphenol "S" type sockets but much shallower and has contacts to fit the tiny Loktal tube pins. Center contact is a one piece formed lock spring sleeve, punched from spring tempered brass, cadmium plated to prevent corresion. Soldering end of center contact is relatively stiff, permitting wiring without bending lug. Ingenuous design eliminates need of auxiliary clamping ring which may fall off. Mounts in standard "S" type mounting hole. For mounting hole dimensions and instructions see page 7. Socket can be rotated so that the proper contacts are in line with the wiring, keeping the leads short.



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CROSS SECTION VIEW OF MIP



A-Long wiping contacts. Wave in contact puts pressure on tube prong at four different places. B-Mounting plate is actually molded into solid bakelite. C-Manufacturers ordering in large quantities may specify that end hole of contact is to be left open.

MIP DIMENSIONS



CRIMP-ON



The heart of the circuit. Ample anchoring places for resistors and condensers. Nos. 1, 2, 5 and 8 contacts can be ground directly to the mounting plate.

CRIMP-ON & MIP MOUNTING HOLES



MIDGET OCTAL DIMENSIONS



Mounts in the same hole as the No. 33-8X Loktal sockets when both loktal and octal tubes are used.

World's Strongest Socket (MOLDED-IN-PLATE) MTP

Molded from High Dielectric Black Bakelite (Other colors available at slightly higher prices)

Strongest socket in the world, yet compact in size, modern and attractive in appearance. Sturdy steel mounting plate, molded directly into the solid bakelite body, cannot come loose or vibrate, reducing possibility of tube microphonics. Mounting plate punched from steel, plated to prevent corrosion. $1\frac{1}{2}$ " riveting centers. Amphenol molded from high dielectric black bakelite. Withstands breakdown voltage in excess of 6000 volts D. C. between contacts or contact to mounting plate. This is true also of the 11 contact socket. Moisture absorption extremely low.

MIP - 9 Actual Size

THE QUALITY SOCKET FOR ALL RADIO WORK

AMPHENOD

Sockets listed on this page were especially designed for RIVETING or SPOT WELDING to radio chassis. Consult an Amphenol sales engineer for complete details on the low cost spot welding method.

Of Importance to Manufacturers

Sturdy steel mounting plate cannot be damaged during riveting process. Breakage encountered when riveting laminated sockets entirely eliminated because of metal to metal riveting surfaces. Contacts spaced for easy wring. Two holes in contact for wiring and anchoring resistors or condensers.

Hidden Production Losses Also Eliminated

Contacts grip tube prongs firmly so that tubes will not pop out during shipment. Amphenol contacts retain their resiliency indefinitely, protecting the immense value of your good will.

As new tubes are announced, an Amphenol MIP socket goes into production and is often ready for delivery before the tube is on the market. Your chassis layout remains uniform throughout the years, keeping down tooling cost, permitting your production line to retain its speed because it is working with a socket it knows.

For High Speed Production Lines



Cat. No. 74-8 — List 12c each Accommodates All Octal Tubes

Especially designed for high production lines where labor savings are all important, and priced so they can be used economically.

1. Sharp nibs of riveting plate score chassis during riveting operation, breaking through any oxidization for a perfect ground. $1\frac{1}{2}$ " mounting centers.

2. "T" shaped grounding lug, actually part of steel rivet-ing plate, permits grounding No. 1, 2 and 8 contact and affords a firm anchorage for grounding small parts such as condensers, resistors, etc. "T" lug flexible so that solderer can easily press forward to any adjacent lug. 3. Shear in "T" lug permits easy removal of any unwanted section.

 ${\bf 4.}$ Short grounding lug provided for grounding No. 5 contact, or for grounding resistors or condensers.

5. Phosphor bronze contacts, cadmium plated for fast soldering. Supplied with two soldering holes.

Amphenol Molded from high dielectric black bakelite. Riveting plate firmly crimped around edges of bakelite so that there can be no vibration.

Manufacturer's standard cartons contain 500 of one style. Jobber's cartons contain 50 of one style.

	Standard R.M.A. Contact Spacings	
No.	MIP4 —4-contact10c	each
No.	MIP5	each
No.	MIP6 —6-contact10c	each
No.	MIP7S—7-small10c	each
No.	MIP7L-7-large12c	each
	Octal Style	
No.	MIP8 — 8-contact12c	each
No.	MIP9 — 9-contact15c	each
No.	MIP11-11-contact	each
	For Loktal style see page 4	
	ufacturer's standard cartons contain 500 of socket. Jobber's cartons contain 50 of one	

These low prices made possible by use of the most ndern, automatic machinery, which produces sockets at a very high rate per hour. A standing inventory of sev-eral million MIP sockets on hand at all times for imme-diate delivery.

NEW! For Compact Radios or **Companion** for Loktal Sockets

Midaet Octal Socket



No. 88-8 --- 12c List Accommodates All Octal Tubes

A new compact socket having all the features of Amphenol MIP sockets listed above, but smaller in diameter and having $l_{16}^{5''}$ mounting centers.

Interchangeable with Amphenol No. 88-8X Loktal style, so that chassis punching and riveting operations remain uniform on chassis which use both Loktal and Octal tubes. Very popular for small midget and auto radios where space is limited. The smaller mounting centers permit use of this socket in corners where the standard socket would not fit.

Used extensively for the new single ended octal tubes because of its compact size and low capacity between contacts.

Manufacturer's standard cartons contain 500 of one style. Jobber's cartons contain 50 of one style.

PAGE 5

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"CP"	Type	PLUGS
------	------	-------

Retainer Ring Mounting No Screws or Rivets Necessary

Plugs for mounting directly on chassis, panels, etc. Break-down voltage between prongs is exceptionally high. The 9 and 11 prong plugs will withstand 6,500 volts D.C.; all others including the 8-prong will handle 12,000 volts D.C.

Mount easily and quickly in the "S" type socket mounting hole with the Amphenol No. 4 retainer ring. See the adjoining page for mounting holes and instructions.

Plugs fit any standard radio tube socket. The 9 and 11 prong plugs follow the octal tube base style, having a bakelite pilot keyed to fit all Amphenol 9 and 11 contact sockets. Prongs are drawn brass, plated for fast soldering.

Amphenol molded from high dielectric black bakelite. Other colors such as red, green, walnut, etc., also avail-able at slightly higher prices.

POT DIP SOLDERING METHOD

The serviceman will have no difficulty soldering leads into the plug prongs with a soldering iron.

For high speed production, Amphenol "CP" plugs can be dipped into molten solder all prongs at one time. Capil-lary action draws solder up into more than 1/3 of the prong prong.

For laboratory work drill 1/8" hole, 3%" in depth in sol-dering iron tip. Mount soldering iron upright and fill hole with solder. Dip prong into pocket.

CABLE CONNECTORS

List Price

Compact and Sturdy-Electrically Safe

 No. CP-4
 4-prong plug
 11c List

 No. CP-5
 5-prong plug
 11c List

 No. CP-6
 6-prong plug
 11c List

 No. CP-7
 7-prong (small) plug
 11c List

 No. CP-8
 8-prong (octal) plug
 14c List

 No. CP-9
 9-prong (octal style)
 17c List

 No. CP-11-11-prong (style)
 24c List

 Price Includes #4 Retainer Ring

Above plugs or "S" type sockets encased in a black japanned drawn steel cap, fibre lined, making an unbreakable cable con-nector. Extensively used in all branches of radio, sound and electronic devices.

Cap snaps on and fits securely, but may be removed easily as illustrated in the border of this page. Rubber grommet protects the cable from abrasions.

Often used with shielded cable to prevent radiation or pick-up, the shield being fed through one prong, and in some cases, the shield is also soldered to inside of steel cap itself. Extensively used on micropane and speaker cables for connecting various units of amplifiers and transmitters, etc.



SIDE CABLE OUTLET

Same design as end cable outlet type, but cable enters at the side. For all type of work where a verticle line is plugged into a horizontal outlet, or a horizontal line is plugged into a verti-cal outlet, as for connections between transmitter racks, etc. Provides a neater job.

Socket	Plugs		List Price
PF4-7	PM4-7	4-contact	25c each
PF5-7	PM5-7	5-contact	25c each
PF6-7	PM6-7	6-contact	25c each
PF7-7	PM7-7	7-contact	25c each
PF8-7	PM8-7	8-octal	25c each
PF9-7	PM9-7	9-octal style	28c each
PF11-7	PM11-7	11-octal style	35c each

RUBBER PLUG HANDLE



"PF" or "PM" Connectors snap into this rubber handle and are held securely in place by an inner molded shoulder. For easy removal of Connectors plugged into recessed or hard to get at places. Molded from black color rubber.

No. RPH—Plug Handle 15c each Illustration is cut away to show how connector is gripped by plug handle.

PAGE 6



Socket	Plug		Price
PF4	PM4	4-contact	each
PF5	PMS	5-contact 25c	each
PF6	PM6	6-contact	each
PF7	PM7	7-contact	each
PF8	PM8	8-octal	each
PF9	PM9	9-octal style	each
	PM11	11-octal style35c	each

WITH CABLE CLAMP

Cable clamp accommodates cables up to 1/2'' in diameter. Riveted to cap to prevent turning. Grips cable securely, removing all pulling or twisting strain from soldered connections.

9		
Plug PM4-11	4-contaci	List Price 30c each
PM5-11	5-contact	. 30c each
PM6-11 PM7-11	7-contact	. 30c each
PM8-11	8-octal 9-octal style	. 30c each
PM9-11 PM11-11	11-octal style	40c each

CONNECTOR LOCKING COVERS Chassis Type



Male section is a thread-ed steel flange which is assembled between "S" type sockets or "CP" type Plugs and the mounting surface. Held firmly in place by the #4retainer ring without the use of screws or rivets. Supplied complete with a C-CAB female section which slips over the ca-ble connector.

No. C-CHA Chassis Connector Cover List 25c Per Set



The 1.172" hole, which is punched with Amphenol LD-1 Die, accommodates all "CP" type plugs and all "S" type sock-ets with exception of the 7-large and 7-combination. For these sockets use LD-2 which punches the 1.327" hole.

REPLACEMENT

SOCKETS & PLUGS



Slotted mounting holes fit any riveting centers from 11/2" to 17/8", making these sockets ideal for replacing wafer types.

"PF" & "PM" PLUG CAP







By mounting the base of the C-CHA connector cover under an "3" type sock-et or "CP" type plug, a connection can be made which cannot pull apart.



Other Style Plug Caps

Socket PF4-11 PF5-11

PF6-11 PF7-11 PF8-11

PF9-11

Cable Type

No. C-CAB Cable Connector Covers

List 25c Per Set

PF11-11



For fast production mount sockets or plugs with No. 51-1 Retainer Ring Hand Tool. Serviceman can mount sockets and plugs easily with a screw driver.

For punching holes use Amphenol No. LDI Die for all sockets but 7-large and 7-combination. For these sockets use

SOCKET DIMENSIONS FOR ALL BUT LARGE 7



Above dimensions are for all but 7-large and 7-combination. These sockets have an overall diameter of $1\frac{1}{3}\frac{2}{3}''$, and require a chassis hole $1\frac{2}{6}\frac{1}{3}$ '' in diameter.

VIBRATOR SOCKET REPLACEMENT CHART



"S" Type SOCKETS **Retainer Ring Mounting**

No Screws or Rivets Necessary

Extremely compact sockets, requiring less chassis area than the tubes they serve. Held firmly in place by the patented Amphenol #4 retainer ring. Socket can be rotated to line up contacts with wiring for shortest possible leads. Molded keyways in side of socket engage key in chassis hole, preventing socket from turning.

Preferred by most experimenters and laboratory men because it is possible to quickly change sockets without damaging the chassis or panel. Also used extensively on instruments, etc., where rivet heads or screws must not mar the appearance of the finished product.

Maximum insulation between contacts and ground enables the sockets to withstand an unusually high breakdown voltage. All D.C. breakdown voltages are in excess of:

	From Contact to Ground	Between Small Contacts	Between Large Contacts
-4	9500 Volts	8000 Volts	8000 Volts
	9000 Volts	6500 Volts	
-6	9000 Volts	7000 Volts	6500 Volts
-7S	10000 Volts	6000 Volts	5000 Volts
-7L	9500 Volts	6000 Volts	5500 Volts
-8	10000 Volts	8000 Volts	
.9	11000 Volts	7500 Volts	
11	12000 Volts	7000 Volts	

Because of the high breakdown voltage and long leakage path, "S" type sockets are used in many of the finest com-munication and home radio receivers. Also used in small midgets because there is no riveting plate to extend beyond circumference of socket.

Phosphor bronze contacts, cadmium-plated for easy soldering, recessed in individually molded chambers, protecting them from physical damage. Insulation is best grade high dielectric black bakelite. (Also available in other colors such as red, green, blue, walnut, gray, etc., at slightly higher prices).

Add Up These Production Savings

Extremely fast mounting with Amphenol Retainer Ring Hand. Tool (Cat. No. 51-1). Single hole mounting. No rivets or riveting machine required, cutting down on tool maintenance and floor space. Less wire used because sockets mount in any position, requiring shorter leads.

Manufacturer's standard cartons contains 500 of one style. Jobber's package 50 of one style.

Amphenol "S" used by 90% of the test instrument manufacturers, including the following:

CLOUGH-BRENGLE DACO PRODUCTS DAYCO RADIO BOCHAR JACKSON LEEDS & NORTHRUP JOHN MECK

READRITE SUPREME THAT TRIUMPH MILLION Monarch PRECISION Boonton Radio Corp.-Ferris Instrument Corp.-Radio City Products Co.-John F. Rider-Service Instruments, Inc.

Also used by most manufacturers of electronic and public address apparatus.

VIBRATOR SOCKETS

Used by most receiver manufacturers because vibrators re-quire a strong **molded** socket. The ideal replacement socket for servicemen. Also used extensively by builders of vibrator lest instruments test instruments.

There is an Amphenol socket for almost every vibrator made. Built on the same principle as the above "S" type sockets, but with contacts spaced to fit vibrator prongs. (See "S" type sockets for breakdown voltages).

Supplied to servicemen and dealers through their jobbers with the replacement type mounting plate as used on replace-ment type sockets described to the right.

It is impossible to list all type vibrators. Consult the chart in the border of this page for contact spacings. With rotainer

With retainer ring only	ring and mounting plate		List Price
No. 56-4-A	No. R56-4-A	4-contact	\$.20 eq.
*No. 56-4-B	*No. R56-4-B	4-contact	.11 ea.
No. 56-5-A	No. R56-5-A	5-contact	.20 eq.
No. 56-5-B	No. R56-5-B	5-contact	.20 eq.
No. 56-5-C	No. R56-5-C	5-contact	.20 ec.
†No. 56-5-D	No. R56-5-D	5-contact	.11 ea.
No. 56-6-A	No. R56-6-A	6-contact	.20 eq.
No. 56-6-B	No. R56-8-B	8-contact	.20 eq.
‡No. 56-6-C	‡No. R56-6-C	6-contact	.11 eq.
No. 56-7-A	No. R56-7-A	7-contact	.20 eq.
* ** ** ** * *	_		

No. 56-4-B is standard "S4"; No. R56-4-B is standard "RS4". * No. 56-5-D is standard "S5"; No. R56-5-D is standard "RS5". \$ No. 56-6-C is standard "S6"; No. R56-6-C is standard "RS6".



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	STANDARD RMA CONTACT SPACING
No S-4 S-5 S-6 S-7 S-7 S-7 S-7 S-7	4-contact 11c each 5-contact 11c each 6-contact 11c each 11c each 11c each 11
	OCTAL STYLE SOCKETS
S-9 S-1	9-contact 17c each 1 11-contact 24c each
	Price Includes #4 Retainer Ring
	For Loktal & Bantam Jr. see page 4

Unless otherwise specified, sockets will be supplied grooved to fit from 19 gauge (.044") to 16 gauge (.062") panels or chassis. Resiliency of tempered steel retainer ring take up variation in metal thickness.

Important! Manufacturers should specify exact thickness of panels or chassis in which the socket is used. Can be grooved to fit up to 13 gauge is used. (.093'').

REPLACEMENT SOCKETS



Regular "S" type sockets (described above) and "CP" type plugs (described on opposite page), but assembled with #4 retainer ring in a nickel plated steel mounting plate with slotted holes to fit rivet-ing centers from $1\frac{1}{2}$ " to $1\frac{7}{6}$ ".

Extensively used by servicemen to replace wafer or laminated type sockets. A sure cure for noise caused by leakage between contacts or contact to ground.

ocket No	.Plug No.	List P	ric
RS-4	RCP-4	4-contact	12
RS-5	RCP-5	5-contact	12
RS-6	RCP-6	6-contact	12
RS-7S	RCP-7	7-small	12
RS-7L		7-large	12
RS-7C		7-combination	15
RS-8	RCP-8	8-octal	15
RS-9	RCP-9	9-octal style	18
RS-11	RCP-11	11-octal style	25

PAGE 7

AMERICAN PHENOLIC CORPORATION



SHIELDED SOCKETS & PLUGS WITH "ACS" ALUMINUM SHELL

With "61-51" Shell

FOR BELOW SURFACE



Used for recessing plugs into which α live line is to be plugged and for recessing so ck ets carrying dangerous voltages. Impossible for the user to touch the male prongs until they are entirely disen-gaged from the live contacts.

Regular "S" type sockets or "CP" type plugs set in a drawn steel, burnished nickel-plated shell. Neat and com-pact. For below surface mounting on all types of apparatus, including public address amplifiers, trans-mitters, television receivers, electronic instruments, etc.

Overall diameter only 1%", yet there is ample room to insert "PF" or "PM" cable connectors.

to insert Pr or PM cable connectors. **Note:** There is sufficient room to insert metal or "G" type tubes, making this assembly ideal for use with AC/DC radios and high voltage tubes such as are used in transmitting and television, in accordance with Underwriters' requirements that the tube prongs must be fully shielded until they are disengaged from the socket contacts.

Plugs	Sockets		List Price
61-CP4	61-S4	4-contact	26c
61-CP5	61-S5	5-contact	26c
61-CP6	61-S6	\$ contact	26c
61-CP7	61-S7S	7-small	26c
61-CP8	61-58	8-contact	29c
61-CP9	61-59	9-contact	32c
61-CP11	61-S11	11-contact	40c
	61-8L	Loktal	32c

Above also available molded from mica-filled ultra-low-loss bakelite. When ordering add the suffix "T" to part number and 13c to list price.

Steatite Sockets Mounted in 61-61 Shell

Steatite Sockets and Plugs Mounted in 61-61 Shell For Steatite Sockets and Plugs mounted in above shells See Page 3.

TUBE SHIELD BASE

CAT. NO. TSBI List Price 31/2c Each



T

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Only the world's strongest socket could be so suspended without danger of breaking. The bakelite element cannot come loose or rattle because it is molded directly into the steel mounting plate.

PAGE 8

Mounts between "S" socket and Chassis. type Held socket and Chassis. Held firmly in place by shoulder of socket and cannot come loose or rattle. Overall diam-eter 112", fitting most stand-ard tube shields.

Projecting solder lug is bend-able down through one of the socket grooves, and prevents

tube shield base from turning. Solder lug protrudes below chassis approximately 1/2'', directly adjacent to contacts, and may be soldered to contact or direct to chassis.

Slot in side of tube shield base provides space for bringing up grid lead inside of tube shield.

Tube shield bases punched from .016" steel, cadmiumplated to prevent corrosion. Mounts between all "S" type sockets-steatite, black bakelite, mica-filled and colors



ABOVE OR BELOW SURFACE

Regular "S" type sockets or "CP" type plugs set in a flanged aluminum shell which extends the socket or plug 13/16" above or below the chassis. Four knockouts in side of shell permits wire entrances from any four sides, making this shell ideal for mount-ing plugs or sockets on test benches, bread board bases, blank panels, etc. Also used for recessing sockets or plugs carrying dangerous voltages. Ample space to insert "PF" and "PM" cable connectors encased in the "RPH" rubber plug handle. Recessed sockets will accommodate metal, "G" type and medium base tubes. Unless otherwise specified, socket will be supplied for above surface mounting, plugs for below surface mounting. To reverse simply remove the retainer ring, insert bakelite element from the opposite side and replace retainer ring.

Plugs	Sockets		List Price
ACP4	ACS4	4-contact	21c
ACP5	ACS5	5-contact	21c
ACP6	ACS6	6-contact	21c
ACP7S	ACS7S	7-small	21c
1101 / 0	ACS7L	7-large	21c
	ACS7C	7-combingtion	24c
ACP8	ACS8	8-octal	24c
ACP9	ACS9	9-octal style	27c
ACP11	ACS11	11-octal style	34c
101 11	ACS8-L	Loktal	27c

Also available molded from mica-filled bakelite for ultra-high frequency work. When ordering add the suffix ''T'' to part number and 13c to list price.

Steatite Sockets and Plugs Mounted in ACS Shell For Steatite Sockets and Plugs mounted in above shells See Page 3.

UNDERWRITERS' SHIELD CAT. NO. 58-90 List Price 3½c Each

Especially desirable for the new tubes with 110 volt filaments



Mounts between "S" type socket or "CP" type plug and chassis. Held firmly in place by shoulder of socket and cannot come loose or vibrate. Key in hole engages keyway in socket, preventing the shield from turning.

Primarily designed for AC/DC receivers, also used for television, transmitter and other tubes carrying dangerous voltage.

Also used on chassis plugs or sockets into which a high voltage cable is to be plugged. Impossible to touch the prongs of tubes or connectors until they are disengaged from the socket contacts.

aisengaged from the socket contacts. See border of page for illustration of Underwriters' shield mounted on a "PF" cable connector. Used in many countries where the Electrical Control Board de-mands a shield for Magic Eyes. Also used on "PM" male cable connectors when connection of two high voltage cables is to be made. Punched from steel and finished in black japan. 1%" O.D. x $\frac{1}{36}$ " high.

ANTI-MICROPHONIC SOCKET CUSHIONS CAT. NO. 11-3K

List Price 20c Each

To overcome tube microphonics cushioned sockets are sometimes necessary, especially for photo-cell work, ultra-sensitive circuits and for some battery tubes.

All the parts necessary for converting any Amphenol MIP socket to a floating socket are contained in an envelope on which is printed complete instruc-tions. Consists of 4 live gum rubber cushions, metal washers, mounting screws and nuts.

Note: Gum rubber cushions are molded from pure Para rubber and should not be confused with ordinary rubber grommets which have little or no lasting resiliency.



Mounts in a plain round hole $1\frac{1}{16}$ " in diameter. $1\frac{3}{4}$ " mounting centers.

DIMENSIONS "ACS" SHELL



For below chassis applications, mounts in plain round hole, 1-11/16" in diameter.

DIMENSIONS UNDERWRITERS' SHIELD



Illustration shows Underwriters' Shield mounted between socket and plug cap. Can also be used with "PM" male plugs.

INSTRUCTIONS FOR INSTALLING





Enlarge mounting holes in MIP socket with $\frac{1}{4}$ " drill or reamer. Insert a subber cushion in both socket and chassis

Most Versatile Line of Sockets and Plugs



ADAPTERS AND INSTRUMENT ACCESSORIES

COMBINATION SOCKET & BULB TESTER



Consists of standard 7-contact combination socket, having a large center contact for testing minia-ture bulbs such as are used in flashlights, Christmas tree strings,

dial lights, etc. Center contact has a pig tail to solder to either heater contact and a

tail to solder to either heater contact and a soldering lug for connecting to other heater contact or transformer lead. Fits in same panel hole as the standard 7-combination socket on 90% of test instru-ments and analyzers, making installation simple. Now a new feature on most tube checkers. Used by most laboratory men who build their own instruments. Supplied with retainer ring for mounting without screws or rivets, or with replace-ment type mounting plate having slotted holes to fit any riveting centers from $1\frac{1}{2}$ " to $1\frac{7}{6}$ ".

List Price

No. 78-7CD—With retainer ring. \$.44 ea. No. RS7-CD—With mounting plate .45 ea.

BULB TESTER SOCKET No. 78-1DL-List Price 30c ea.



Molded bakelite socket for testing miniature bulbs such as are in dial lights, Christmas tree strings, flashlights, etc. Mounts in a plain round $\frac{5}{2}$ " hole. Held firmly in place by the Amphenol #7 retainer ring ring.

In addition to mounting this socket on the tube checker, every radio, electrical and hardware store should have a miniature bulb tester. Such a tester can be easily constructed by hooking a resistor in series with 110 volt line, or by utilizing a step down transformer.

down transformer. Several of these sockets should be mounted in each tester for the various voltages re-quired to test all bulbs. Supplied in black, red, green, blue and brown so that correct socket can be selected immediately. Please specify color when ordering. Supplied com-plete with #7 retainer ring.

DUAL GRID CAP



No. 63-B—List Price 15c ea. A superior dual grid cap for test instruments. Per-mits making the grid con-nection to either glass tubes(11/32") stud or metal and "G" style tubes (14") stud. Insulation is molded bakelite and should ot be confused with grid cans molded

Insulation is molded bakelite and should not be confused with grid caps molded from casine which will melt if touched by a soldering iron or other hot object. Contact is cadmium-plated one piece phos-phor bronze and will retain its resiliency indefinitely.

phor bronze and with the second state of the solder and assemble. Solder wire to hole in contact. Feed wire through hole in bakelite and simultaneously pull on wire and feed contact into shell until contact snaps into bakelite groove. (A pattent of the second state is a second state of the second state of

Wired Dual Grid Cap

No. 63-BW--List Price 20c ea. Same as above but completely wired and assembled. Wire lead is 15" of #20 stranded wire, having a lacquered cotton braid. Manufacturers may specify length of wire lead. of wire leads.



Any Socket To Any Base

UNWIRED

ADAPTERS

Io Any Base A universal yet sim-ple way for the ser-viceman or experi-menter to make his own adapters. Fin-ished adapter resem-bles a factory wired job in all respects.

Required for modernizing tube checkers and analyzers; for adapting new tubes to old circuits; for bringing out leads to out-put meter, phono pick up, headphones; extra speaker, etc.

ADAPTER SOCKET TOPS List Price \$.20 Each

Socket tops supplied in various colors so that adapters can be identified which are physically the same but wired differently. Available in black, red, green, blue, gray, yellow and brown. Please state color de-sired. If no color is specified, black will be chined shipped.

FIT SMALL BASES ONLY

No. 44-4 — 4-contact No. 44-8—8-octal No. 44-5 — 5-contact No. 44-8—9-contact No. 44-6 — 6-contact No. 44-L—Loktal No. 44-75—small

FITS LARGE BASES ONLY

No. 44-7L—7-large No. 44-7C—7-combination

BASES

(Adapter Bottoms)

Bases are supplied in black only. Bases supplied in 2 styles—With $\frac{3}{2}$ " side hole for bringing out leads or with a side stud that accommodates a metal tube grid cap. Bases and socket tops drilled for self tapping screws for holding assembly to-gether. Screws supplied with bases.

With $\frac{5}{32}$ " Side Hole

	SMALL BASES	
50-4D	4-prong base	\$.20 ea.
50-5D	5-prong base	.20 ea.
50-6D	6-prong base	.20 ea.
50-7SD	7-small prong base	.20 ea.
50-8SD	8-octal base	.20 ea.
	LARGE BASES	
50-7LD	7-large prong base	.20 ea.
50-8LD	8-large prong base	.20 ea.
	With Side Stud	
	SMALL BASES	
50-4G	4-prong base	\$.30 ea.
50-5G	5-prong base	.30 ea.
50-6G	6-prong base	.30 ea.
50-7SG	7-small prong base	.30 ea.
50-8SG	8-small prong base	.30 ea.
	LARGE BASES	
50-7LG	7-large prong base	.30 ea.
50-8LG	8-large prong base	.30 ea.

FOR LATCHING TYPE PLUGS With Center Locking Stud



7-contact small socket with lock type center stud. Per-mits the serviceman to make his own adapters to fit the latching type an-alyzer plug used on some test instruments. Socket fits any small base listed above. Supplied in red or color.

black. Specify color. No. 44-7SS—Socket with center

stud 31c List

3-14 ADAPTER SHELL



Formed black-japanned brass tubing. Amphenol "S" type sockets or "CP" type plugs snap into either end and are held securely yet may be removed easily. Any combination possible from 4 prong or contact to 11 prong or contact to 11 prong contact

Sufficient room between socket and plug to insert a small resistor or con-denser. Ideal for special laboratory work where resistors are to be tied between various tube elements or for inserting resistors to cut down voltage

between various tube elements or for instruing residents to the second s No. 3-14D--Shell with side hole .20 ea.

LOKTAL TO OCTAL KIT

Completely Wired—Ready For Use Kit contains five adapters which will test any loktal tube in any tube checker, whether factory or custom built. Adapters convert loktals to exact counterparts in octal series.

Socket tops color coded black, green, gray, blue and yellow so that serviceman can im-mediately pick correct adapter from his kit. Supplied with complete, easily understood instructions

instructions. No. 44.11WK—5 wired adapters ... \$5.00 Supplied with wiring instructions. Same as above but adapters are unwired. No. 44.11K—5 unwired adapters ... \$2,50

Individual Loktal Adapters

Often only one adapter is required for testing loktal tubes in late model tube checkers. If your tube checker was manu-factured during the last few years, write direct to the manufacture of your instrument.

However, in most instances it is preferable to purchase the kit of five listed above which converts the loktal tubes to exact counterparts in the octal series.



LOKTAL ANALYZER PLUG

Completely Wired Adapter bottom is loktal type plug. Same pin size and pin spacing as loktal tubes. Fits on end of analyzer plugs.

No. 44-13-8-With Octal Top \$1.25 ea. No. 44-13-7-7-contact Top 1.25 ea. No. 44-13-6-6-contact Top 1.25 ea. With Center Locking Stud

Same as above but 7-contact top has center stud for lock-type analyzers plugs. No. 44-13-S7—Compl. with Stud \$1.35 ea.

FOR HYTRON BANTAM JR. TUBES

Unwired Adapters



List Price \$.36 ea. No. 44-12-8—Same as above but complete with octal plug bottom List Price

\$.50 ea.

OCTAL TO BANTAM JR. Unwired Analyzer Plug



For making adapters for the end of analyzer plugs. Pin spacing of Bantam Jr. Fin spacing of Dantam Jr. plug same as those on the Bantam Jr. tubes. Used for testing hearing aids and other apparatus using these miniature tubes. Top of adapter accommodifference accommod dates any Amphenol "S" type socket, making it pos-sible to use the adapters on analyzer cords having from 4 to 8

prongs. No. 44-15-Metal cap complete with

bantam jr. plug (no socket

PAGE 9

AMERICAN PHENOLIC CORPORATION

SPEAKER PLUG



unnune



No.	71-4-4-prong	plugs	
No.	71-5-prong	plugs	 .11 each
No.	71-6-prong	plugs	 .11 each
No.	71-7-7-prong	plugs	 .11 each
No.	71-8-prong	plugs	 .14 each
No.	71-9-9-prong	plugs	 .17 each

One piece molded black bakelite, extra heavy, practically unbreakable. Molded finger grip provides easy removal. Prongs molded directly into the bakelite so that they cannot work loose or get out of alignment.

Prongs are set deeply into individually molded pockets, preventing shorts due to insulation pulling back.

Prongs are drawn brass plated for fast soldering.

Underwriters' Laboratories require that the speaker plug must be so connected that it cannot be removed without the aid of a tool.

See border of page for illustration.

These plugs also widely used as an economical cable connector for plugging multi-wire cables into amplifiers, remote controls, test instruments, etc.

MINIATURE PLUGS

-AV



Extremely compact plugs, used extensively for speaker connections in compact midgets. Also ideal for all plug-in connections where space is limited.

Plated brass prongs are deeply recessed in individually molded pockets, preventing shorts due to insulation pulling back

Cable type has molded finger grip, permitting easy extraction of plug.

Chassis type mounts in a plain round hole, 5%'' in diameter. No screws or rivets required. Held firmly in place by the #7 tempered steel retainer ring. For the chassis type use No. MPF3 or MPF4 (described below) as the cable connector.

Note: 5 and 6-prong plugs have same prong spacings as Bantam Jr. tubes. Can be used on end of analyzer cable for point to point testing in apparatus using Bantam Jr. tubes.

Chassis Type	Cable Type		List Price
CP-3S	71-3	3-prong plug	13c ea.
CP-4S	71-4S	4-prong plug	13c ea.
CP-5S	71-5S	5-prong plug	17c ea.
CP-6S	71-6S	6-prong plug	17c ea.

Prices on Chassis Type include #7 retainer ring.

MINIATURE CABLE CONNECTORS



Molded bakelite connectors housed in cadmium-plated brass shells. Only $1\frac{1}{6}$ " long and $\frac{1}{24}$ " O.D. Same contact and prong spacings as on "MC" Microphone Connectors described on page 14. Bakelite element held in place by side set screw. Accommodates ca-bles up to $\frac{1}{4}$ ".

When used with shielded cables, shield can be sol-dered directly to the cadmium plated shell. Use Female cable connectors in conjunction with Chas-sis Plugs described above.

Male MPM3	Female MPF3	3-contact	List Price 30c ea.
MPM4	MPF4	4-contact	33c ec.
MPM5	MPF5	5-contact	37c ea.
MPM6	MPF6	6-contact	37c ea.

HEARING AID SOCKETS & PLUGS



PAGE 10

Especially suited for compact ap-paratus where plugs and sockets Plugs are often used as supports for self sustaining coil forms. Instruction for easy method of cut-ting chassis holes for sockets is described in border of page. Tint Dalas

No.	70-27-2-prong plug	. 100	ea.
No.	70-25-3-prong plug	13c	: ea.
No.	70-26-4-prong plug	150	ec.
No.	77-25-3-contact socket	. 22c	: eα.
No.	77-26-4-contact socket	. 25c	ea.



Small compact sockets which have many uses—For connect-ing speakers, carbon micro-phones, doublet antennas, etc. Used wherever space is at a premium.

Molded from black bakelite. Contacts are cadmium-plated phosphor bronze and will retain their resiliency regardless of the number of times the plug is inserted or extracted.

SOCKETS

Mounts in a plain round hole, 5%" in diameter. No screws or rivets required. Held firmly in place with the #7 cadmium-plated tempered steel retainer ring. (See illustration in border for mounting instructions). Use with cable connectors described to the left or with shielded cable connectors described below.

List Price

PEE WEE PHOTO CELL SOCKETS

Use S3S described above for RCA PEE WEE photo cells and Cetron No. CE- 5BB and No. CE-20.

MINIATURE SHIELDED PLUGS



For use where a shielded plug is desired for making connection to miniature sockets described above and microphone connectors. For microphones, speakers and doublet antennas

Identical to connectors described to the left, but has short shell so that prongs are exposed. Overall length 11/3''.

	MPM3S-3-prong																
No.	MPM4S-4-prong	plug		 						•		•					33c ea.
No.	MPM5S-5-prong	plug		 						•		•		 			37c ea.
No.	MPM6S-6-prong	plug	•	 		•	•	•	•	•	•	•	•	 			37c ea.

MINIATURE TUBE BASE

Molded black bakelite, plated brass prongs. Used in manufacturing special tubes such as photo-cells, etc. No. PEC—3-prong tube base 13c ea.

HEADPHONE SOCKET



Same as sockets described to left but have contacts adjusted to fit phone tips (.080"). Can be used to connect two pair of headphones in series or parallel.

See instructions in border for an easy method of cutting socket mounting hole.

List Price

Tiet Drice

No. 77-255-3-contact socket 22c ea. No. 77-26S-4-contact socket 25c ea.



All but octal and 9-prong plugs can be held in place by inserting a #8 self tapping screw in center as illustrated. All plugs can be supplied with #3 prong omitted so that screw will tap directly into socket contact.

Mounting Instructions

For Miniature

Sockets & Plugs



Mount in %" plain round hole. Place No. 7 retainer ring on socket, concave side towards chassis or panel. Press retainer ring down with screw driver or similar tool. For fast production a retainer ring tool can be made of tubing or pipe.





Illustration shows Miniature plugs and sockets mounted. This is an econom-ical and practical method for connect-ing cables in a limited space.

Mounting Instructions

For Hearing Aid

Sockets



AMATEURS: NOTE!

Drill 3 holes with a 3/8" drill. Place drilled chassis or panel in vise and cut away metal between holes with a cold chisel. Trim 4 corners with a file. Insert socket and using mounting plate as a template drill $\frac{5}{32}$ ".

Fast Mounting, Easy Wiring,

For Headphones, Speakers, Patch Cords, Meters, Microphones, etc.



A—Convenient solder lug of outer prong for conductor or cable shield. B—Solder lug of inner prong. C—Solder lug of center contact. D—Solder lug of outer contact.

SINGLE CONTACT SOCKET AND PLUG DIMENSIONS



To mount—insert socket in hole, place retainer ring on taper of socket and press retainer ring down with a screw driver. For fast production a retainer ring hand tool can be made from a piece of tubing with an inside diame-ter slightly in excess of 3%".



High voltage pin jack mounts in $\frac{1}{2}$ " hole, held with #2-8 retainer ring. High frequency pin jack mounts in $\frac{5}{8}$ " hole, held with #7 retainer ring.

HIGH FREQUENCY PIN JACKS AND BUSHING





VERULIE



No. 70-2 - 65c

Chassis type mounts in a plain round hole 1/2" in diameter and is held securely in place with the Amphenol #2-8 retainer ring.

Cable connector is very compact. Outer prong is phosphor bronze, inner prong is machined from brass.

Both wiring and assembly are exceptionally easy and adapt themselves to the high production line.

No. 78-2 - 50c

An entirely new principle in plug and jack. Concentric prongs and contacts make this unit extremely compact and neat appearing.

Used for plugging in headphones, speakers, meters, car-bon microphones, etc. Ideal for patch cords on transmit-ters, for bringing in a twisted pair or small co-axial cable.

Insulation is Amphenol molded from high dielectric black bakelite (colors are available at slightly higher prices). Contacts are phosphor bronze and will retain their re-siliency indefinitely.

SOCKETS

List Price 71/2c each

Mount in a plain round hole, 3%" in diameter. Held securely in place with the Amphenol #2-5 retainer ring.

No insulating washers or nuts required.

No. 78-1P -for .080 phone tip

Price includes #2-5 retainer ring

MINIATURE PLUGS

List Price 5c each

Smallest, yet most practical, plugs in the world. Already

used extensively in the radio industry for making con-

nections in limited spaces, such as auto radios, hearing

aids and for antenna connections. These are the ideal

No. 70-1L $-\frac{3}{32}$ " prong No. 70-1M $-\frac{1}{8}$ " prong No. 70-1S $-\frac{5}{32}$ " prong

plugs for the end of test instrument leads:

No. 78-1S —for $\frac{3}{32}$ " pin No. 78-1M—for $\frac{1}{8}$ " pin

No. 78-1L -for 5" pin



SINGLE CONTACT PLUGS AND SOCKETS

Supplied in 7 different colors and 3 different prong diameters so that circuits can be easily and quickly identified, and high voltage plugs kept out of low voltage sockets. Contacts formed from phosphor bronze identi-

cally to contacts which have made Amphenol tube sockets famous. Long wiping action and positive grip insure low resistance connection; cadmium-plated for easy soldering.

Amphenol contacts retain their resiliency indefinitely, regardless of how roughly they are handled.

Sure test for contact-Vigirously gyrate a prong in the contact, giving it the same rough treatment it will receive when in use. It should still have the same positive grip on the prong.

FAST, POSITIVE MOUNTING

Held securely in place by the Amphenol #2-5 retainer ring, which is formed from tempered spring steel, cadmium-plated to prevent corrosion. Four corners of retainer ring imbed themselves in panel or chassis, preventing the socket from turning or vibrating loose.

Socket shank is tapered to facilitate assembly. Place retainer ring on socket, then press down with a length of pipe of tubing having an inner diameter slightly in excess of 3/6". Servicemen or experimenters can press retainer ring down with screw driver.

COLORS FOR CODING

All sizes available in Black, Red, Green, Blue, Grey, Yellow and Walnut. Color code your panel so that the correct circuit can be quickly identified. When ordering state color desired. If no color is specified, black will be furnished.

HIGH VOLTAGE PIN JACK

List 10c - No. 78-80L

Similar to No. 78-1P described above but bakelite body is 1/2" in diameter for greater dielectric strength.

Used for all high voltage requirements such as are met in transmitters, television and television test equipment.

Mounts in a $\frac{1}{2}$ " hole, held in place with the #2-8 retainer ring.

AMERICAN PHENOLIC CORPORATION

HIGH FREQUENCY PIN JACK AND BUSHING

No. 54-1H - 40c List

Molded from ultra-low-loss Amphenol "912" polystyrene-base insulating material. (See page 23 for electrical characteristics.)

Contact accommodates .080 phone tip or test prod. Contact can be removed and the transparent Amphenol "912" body can be used as a high frequency bushing.

Mounts in a 5/8" hole, held in place with the #7 retainer ring.





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VERULAE



For Microphones, Phono Pick-ups, Speakers, Etc. No. MC1M-Male No. MCIF-Female With Coupling Threads With Coupling Ring List Price40c

Supplied Complete with Coil Spring Cord Protectors

Extremely compact connectors for use with single conductor microphone cable. Utilizes the cable shield as the return conductor. Recognized as standard by the public address industry for all single conductor microphone cable work.

Chrome-plated heavy drawn brass shell incapable of becoming damaged regardless of how roughly the connectors are used.

Female cable connector has a positive locking screw type coupling ring which engages threads of male cable or chassis connectors.

Cannot shake loose or disconnect. Dirt cannot enter to form a leakage path from center contact to shell.

Connectors supplied with a plated brass hood whch folds back over sol-dered connection, making a resilient brass to brass contact instead of solder to solder as formerly used.

New ingenuous method of grounding cable shield to the connector shell. Shield is folded back over cord protector and soldered. See instructions in border. Side set screw locks cord protector in place, relieving all strain on center conductor. Cable cannot pull out; ground connection cannot become noisy. Cord protector accommodates cables up to 1/4".

CHASSIS CONNECTOR

No. PC1M-List Price 30c

Widely used on most amplifiers. An integral part of most microphones using single conductor cable. Threaded shank which can be screwed into microphone housings or stands is 3/8-24—standard for single conductor microphones.

SINGLE HOLE MOUNTING

Mount in .385 hole (use Letter drill "W") when it is desired to ground shell directly to chassis or metal panels. Knurled portion of shank wedges into chassis when lock nut is tightened. Forms a perfect ground; prevents connector from turning. Mount is ugmened, rorms a perfect ground; prevents connector from turning. Mount in 1/2" hole when two circuits are desired independent of the chassis. Insulate connector from chassis with the two fibre washers supplied. One fibre washer has an extruded shoulder to hold connector shell away from the chasses. Supplied complete with shoulder fibre washer, flat fibre washer, flat metal washer and hex. lock nut.

CLOSED CIRCUIT INPUT

Eliminates Open Circuit Grid Howls

No. CL-PC1M-List Price 40c

A radically new type of chassis connector for feeding microphones or phono pick-ups into amplifier or transmitters. Also used for connecting various units in series, such as P. M. Speaker, Headphones, etc.

When cable connector is removed, circuit automatically closed by center metal contact being pressed forward by tempered heavy coil spring. Center contact shorts to outer shell. *Chassis connector circuit makes before cable circuit breaks*.

Open circuit grid howls, always a cause of embarrassment and annoyance in Public Address and Broadcasting, are entirely eliminated.

Mounts in same hole as No. PC1M described above. Supplied with shoulder fibre washer, flat fibre washer, flat metal washer and hex, lock nut.

P. M. Speakers

P. M. Speakers Or Headphones in Series Mount as many closed circuit connectors as you desire outlets. Using Amphenol No. MCIF (described at top of page) as the cord connector, headphones or speakers can be hooked in at any point. Remove the cord connector and the circuit is closed without interrupt-ing the other units in operation. Note: for speakers or phones connected directly to B positive, a rubber sleeve (made from live rubber tubing) should be slipped over connector to prevent shocks. shocks.



No. MC1F is standard for connecting cables to many amplifiers and micro-phones. Threads of coupling ring, which engage threads on chassis or microphone connectors, are 5%-27.

CABLE TYPE WIRING INSTRUCTIONS

and a second

Remove 1" of outer rubber covering. Spread shield and remove $\frac{1}{4}$ " of inner rubber covering.



Fan shield and fold back on coll spring protector. Solder, being caretul to avoid protector. Solder lumps of solder.



Insert assembled cable and spring cord protector into connector. Fasten side screw. Clip off protruding wiring. Solder.



ed.

Phono & Mike Into Same Tube

Two microphones or mike and phone



CAP & CHAIN

and nickel silver chain. For seal-ing chassis con-nectors ag a i n st dirt or tampering. Eyelet on chain f a st en s under screw in chassis. Use with PCIM and CL-PCIM described below.

No. CCC-1-List Price 50c

Chrome-plated heavy brass shell and nickel silver



Phonograph Into Radio Receiver

Simplifies the addition of a phono input on radio receivers or amplifiers. Simply take the Cathode wire from the detector and run it to the center contact of the CL-PCIM. Mount CL-PC1M in .385 hole so that shell is grounded to chassis. Use MC1F (described at top of page) as phono pick-up cable connector.



A high gain microphone and phono pick-up can be fed into any tube having two grids. This has never been the practice, however, be-cause one grid might accidentally be left open. With this closed circuit connector, either or both the micro-phone and phono pick-up can be disconnected without leaving an open grid. Either the microphone or phono pick-up can be connected while the amplifier is in operation.

All Amphenol Parts are Beautifully Styled



ASSEMBLY INSTRUCTIONS

For Single Conductor Double Shielded Cable

STATUS CONTRACTOR

Strip outer insulation back as illustrated about 1". Strip back insulation between shields about 5%". Strip final insula-tion 3%".



Insert stripped cable in spring cable protector. Fold outer shield over spring cable protector and solder. Fig tail in-ner shield, solder to longest contact.

For Double Conductor Single Shielded Cable



of split spaghetti over center conductor. Overall wrap friction or adhesive tape. For a perfect seal paint with Liquid "912". Solder as described above. Slip a piece

> Use as Described Above For Twisted Pairs





Remove about 1" of outer insulation. In-sert in spring cable protector. Fold shield back over spring cable protector and solder. Strip back insulation on center and solder to contact.



All wiring is done out in the open. Up-on completion of soldering slide assem-bled cable and element into shell from the back. Tighten side set screw, mak-ing an electrical connection to shield.



This series of connectors is ideal for concentric lines. Manufacturers may specify a cable clamp as illustrated instead of spring cable protector. Use these connectors for Amphenol No. 76-22 Co-Axial Cable.

MICROPHONE CONNECTORS

2 - Conductor

Utilizes Shell for 3rd Conductor





No. MC2F—Female\$1.00 each



CABLE CONNECTOR With Coupling Ring

						-			-			-						
Vo.	MC2M—Male	• •									 				•	\$1.00	each	1
٧o.	MC2F1-Femal	8									 					\$1.00	each	

An Entirely New Principle in Connectors

CHASSIS CONNECTOR

No. PC2F—Female\$1.00 List No. PC2M—Male\$1.00 List A rugged connector designed for mountelectronic apparatus.

Can be screwed directly into microphone housing. Male chassis connetor is rec-ommended for this application and the No. MC2F1 (described above) for the cable connector.

When female chassis connector is used for mounting on chassis or in micro-phone bodies or stands, use No. M2CM as the Cable Connector.

Bakelite element is completely encased in a cadmium-plated brass shell.

Price includes hex. nut and flat washer.

CONDUCTOR CONNECTOR SINGLE NEW **Utilizes Shell for 2nd Conductor**



No. 80-M-Male

CABLE CONNECTOR With Coupling Thread

No. 80-F-Female No. 80-M1-Male65c each

CHASSIS CONNECTOR

No. 80C-Female-65c each

A new connector for mounting on amplifiers and other electronic apparatus. May be screwed into microphone body. Highly recommended as the chassis unit for small concentric cables.

Shell is heavy brass, polished cadmiumplated. Element is Amphenol molded from high dielectric black bakelite.

Price includes hex. nut and flat washer.

Connectors for High Frequency Applications

Any connector on this page is also supplied with the element molded from mica-filled bakelite. This superior insulating material is a combination of finely ground mica bonded with the standard formulation of phenol formaldehyde resin.

When ordering connectors with the element molded from mica-filled bakelite, simply add the suffix "T" to the part number and 13c to the list price.



Unbreakable brass shell, finished in polished chrome. Element is Amphenol molded from high dielectric black bakelite. Female contact is phosphor bronze and will retain its resiliency regardless of how many times the male is inserted and extracted.

maie is inserted and extracted. New ingenuous method of grounding cable shield to the connector shell. Shield is folded back over cord protec-tor and soldered. See instructions in border. Side set screw locks cord protector in place, relieving all strain on center conductor. Cable cannot pull out; ground connection cannot become noisy. Cord protector accom-modates ables up to $\frac{5}{16}$. Labe and family and family the

CABLE CONNECTOR

With Coupling Ring

For small co-axial cables, microphone cables, etc. Con-tact and prong connection instead of squeeze type as on MCl series described on preceding page.

Screw type coupling ring locks male and female to-gether, preventing accidental pull aparts.



PAGE 13

50 VAN BUREN STREET . CHICAGO, U.S.

AMERICAN PHENOLIC CORPORATION

NEW MICROPHONE CONNECTORS

3 and 4 Conductor

AMPHENOD



CABLE TYPE With Coupling Ring No. 96-3M — 3-prong male...\$1.00 ea. No. 96-3FM— 3-contact female. 1.00 ea. No. 96-4M — 4-prong male... 1.10 ea. No. 96-4FM— 4-contact female. 1.10 ea.



CABLE TYPE With Coupling Thread

No. 96-3F —3-contact female.\$1.00 ea. No. 96-3MF—3-prong male... 1.00 ea. No. 96-4F —4-contact female. 1.10 ea. No. 96-4MF—4-prong male... 1.10 ea.

Above price includes spring cord protector. Cord protectors available in two sizes: .281" I.D. or .385" I.D. If no size is specified .281" I.D. spring will be shipped.

The Standard for the Radio and Sound Industries

Entirely new, yet interchangeable with the Amphenol connectors now out in the field. Designed after consultation with many engineers and users. Every feature the trade has desired is now incorporated in these connectors.

Compact and unbreakable, for broadcast and public address microphones. Also widely used for quality installations of speakers, for connecting electrical appliances in aircraft, etc.

Easily assembled for fast production. See border of page for assembly instructions. Any contact or any prong can be grounded to a conveniently located solder lug on the cable clamp.



Solder Lugs On Both Male and Female

Male prongs extend through bakelite and terminate in a soldering lug for easy soldering with an iron, or wires can be extended through the hollow prongs and pot dip soldered for high production.

NEW CABLE CLAMP

Cable clamp as illustrated in border of page grips cable securely, removing all pulling or twisting strain on soldered contacts. When shielded cable is used the clamp forms a perfect electrical connection from shield to shell. A solder lug on cable clamp permits grounding any contact or prong.

Molded black bakelite elements encased in chromeplated one piece machined brass shells. Phosphor bronze contacts grip brass male prongs evenly and securely, eliminating embarrassing noisy connections. Screw type coupling ring prevents accidental pull aparts. Male and female elements interchangeable so that male prongs can be kept at dead end of circuit.

Because of their attractiveness and practicability, it is a point of pride among engineers and advanced amateurs to insist on Amphenol Connectors.

The cable connectors listed above can be used with all connectors listed on this and the next page. Kept interchangeable because Amphenol realizes the necessity of keeping standards wherever it is humanly possible to do so.

RUBBER PLUG HANDLE

No. 96-50 --- List 20c each



For sealing cable connectors against moisture. Simply remove spring cord protector and snap this plug handle into place. Inner molded grooves grip shoulder of connector so that the plug handle cannot accidentally pull off. Resiliency of plug handle protects cable from sharp bends at the connector, taking the place of the spring cord protector.

Cable entrance of plug handle has sufficient resiliency to accept cables up to $\frac{5}{16}$ " in diameter, yet seals even the smallest microphone cable against dirt and moisture.



RIVETING PLATE Chassis Connector

A sturdy connector for quality amplifiers and other electronic apparatus. Will withstand the severe abuse of public address work.

Molded bakelite element is

encased in a polarized threaded brass shell, cadmium plated. The threaded steel mounting plate is locked in place with a knurled nut. Spacing of mounting plate is set for standard chassis. For heavier chassis or panels the mounting plate can be moved back the required distance.

For high speed rivet mounting, where the world's finest connector is required.

No.	96-3CF2 —3-contact	femo	ile	••		• •		• •	 •			.\$	1.00	List
No.	96-4CF2 —4-contact	femo	le	•••	••	• •		• •		• •	 •	. :	1.10	List
	96-3CM2-s prong													
No.	96-4CM2-4-prong	male			• •	• •	• •	• •	 •			. 1	1.10	List

ASSEMBLY INSTRUCTIONS FOR CABLE CONNECTOR



Feed cable through spring cord protector "I", metal shell "H", and ground clamp "C". Solder cable to element. Insert key on ground clamp ("B") in keyway of bakelite element. Tighten screw "C". Pull cable and guide assembly into shell. Insert screw "G" into tapped hole in shell.

FAST SOLDERING



A—Solder lugs in male prongs as well as on female contacts. B—Any prong or contact can be quickly soldered to lug in ground clamps. C—Combination solderless connection to shield and strain relief clamp.

RIVETING PLATE CHASSIS CONNECTOR



RETAINER RING MOUNTING CHASSIS CONNECTOR



For manufacturers a special retainer ring mounting connector is available. No nuts or rivets are required. Abackelite element; B-brass shell; C-ground lug; D-#7 retainer ring.

MOUNTING INSTRUCTIONS



Drill or punch a 5%" hole in chassis. With a file or hack saw cut a $\frac{1}{6}$ " shallow slot. Place retainer ring on bakelite element and press down with screw driver or hand tool. Hand tool described on page 30.





Standard for the Microphone And Public Address Industries

www.SteamPoweredRadio.Com

Amphenol Connectors listed on these 4 pages used by the following microphone manufacturers:

American Microphone Co. Amperite Co. Astatic Microphone Lab. Bruno Laboratories, Inc. Brush Development Co. Electro-Voice Shure Brothers Turner Co. Universal Microphone Co.

Also used by most manufacturers of public address amplifiers and electronic apparatus.

TYPICAL WIRING DIAGRAMS

CRYSTAL MICROPHONE ----



MICROPHO COMBINAT SHIELDED



DYNAMIC OR VELOCITY MICROPHONE HIGH IMPEDANCE SINGLE CONDUCTOR SHIELDED CABLES



DYNAMIC OR VELOCITY MICROPHONE LOW IMPEDANCE



SPECIAL CHASSIS CONNECTORS



The female special chassis connector can be used on panels or chassis up to 3/4" thick. Soldering lugs are complete-ly shielded by the brass shell. Accom-modates either MC or 96 cable connec-



The male special chassis connector fits panels up to 3%'' in thickness. Carries the coupling ring to accommodate the cable connectors of the 96 or MC series which have the coupling thread.



AMPHENOD





With Coupling Thread MC3F —3-contact female\$1.00 MC4F —4-contact female\$1.00 MC3M1-3-prong male1.00 MC4M1—4-prong male1.10

With Coupling Ring With Coupling ning MC3M —3-prong male\$1.00 MC4M —4-prong male 1.10 MC3F1—3-contact female 1.00 MC4F1—4-contact female 1.10

The standard connector for microphone housings. By removing the cap and spring cord protector these connectors can be screwed into microphone housings and stands having a $\frac{5}{27}$ thread, which is standard for the microphone industry.

The 96 series of microphone connectors described on the preceding page were designed to replace the above connectors for cable work. But because these connectors have long been used as cable connectors, they are still supplied with the cap and spring cord protector so that they can be used for that purpose.

Machined brass shell is polished chrome-plated. Screw type coupling ring prevents accidental disconnections. Shells are polarized, making incorrect insertions impossible. Bakelite elements are interchangeable.

Cable connectors Cable connectors listed to the left are standard for installing in mi-crophone housings. For cable end use MC series describ-

ed on this page or 96 series de-scribed on preceded or ing page.

Spring cord protectors are available in two sizes, 281" I.D. and .385" I.D.

Use either the MC series listed on this page or the 96 series listed in preceding page as the cable connector for the foldown chassis connectors.

SPECIAL CHASSIS CONNECTORS FEMALE



1

MC3F MC4F

For heavy panels up to 3⁄4" in thickness Housed in 11/4" threaded, cadmium-plated brass shell. Removable bakelite element held in place by side set screw. Contact solder lugs recessed

5%", protecting them from physical damage and elimi-nating danger of shock. Spec-ify cable connector with coupling ring for cable end.

MALE

Adjustable to panels or chassis up to $\frac{3}{6}$ " in thickness. Extends in front of panel $\frac{1}{2}$ ". Extends in front of panel /2. Brass shell is chrome-plated and carries the coupling ring. Specify cable connector with coupling threads for cable end.

No. SP-PC3M—3-prong male\$1.10 each No. SP-PC4M—4-prong male1.10 each

COMPACT CHASSIS CONNECTORS



Mounts in $\frac{13''}{16}$ hole in any panel or chassis up to $\frac{1}{6}$ " panel or chassis up to $\frac{1}{6}$ in thickness. Service and ac-commodates coupling ring on Cable Connector or Chain & Cap to seal input against tampering and dirt. Supplied with Chrome-plated knurled mounting ring, lock washer and hex. locking nut. Bake-lie element fixed permalite element fixed perma-nently in brass shell.

No. PC3F —3-contact female No. PC3M—3-prong male No. PC4F —4-contact female No. PC4M—4-prong male 50c each 55c each .55c each

WALL PLATES

For permanent installations in broadcasting studios, re-cording studios, and for mi-crophone inputs on the bet-ter sound jobs. Also used as speaker outlet where a neat connect or is demanded, which cannot accidentally disconnect. .040", struckup bevel edge, chrome-plated..

No. 84-MC3—Wall Plate only 75c List



No. SC4F-4-contact female, 1.10 each SIDE CABLE OUTLET Designed to be placed between a microphone

and stand having 5/8"-27 threads. Its purpose is to provide an outlet for the microphone cable where it is not desired to run it through the stand tubing. Efficient cable grip relieves strain. Heavy

metal castings, finished in polished chrome.

No. SCO3 \$0.75 each



chrome-plated heavy brass cap with nickel sil-ver bead chain. For sealing chassis connectors listed to the left against dirt and tampering when not in use. Eyelet on chain fastens under screw in chassis or under mounting screw of wall plate.



PAGE 15

Connectors on these two pages are called Microphone Connectors because they are most widely used for this purpose.

However, because of their light weight, neat appearance and compactness, they are also used extensively for oth-er purposes. For connecting electrical appliances on air-craft, speaker connectors, doublet antenna lead-ins, etc.

No. CCC3 \$.50 each Polished chrome-plated



Screws on to top of

any standard microphone stand. Female thread is 5/8-27. Finished in polished chrome.

No. SC3F-3-contact female.\$1.00 each housing.



microphone

SCO3 Side Cable Outlet permits running the cable from the side at the microphone, where it is not desired to run cable through the stand.





STAND CONNECTOR



Use SC3F or SC4F on any stand hav-ing regulation %-27 threads. Use MC3M or MC4M in





PHENOLIC CORPORATION AMERICAN 1250 VAN BUREN STREET . CHICAGO, U.S.

Heavy Duty 4 to 12 CONTACTS

AMPHENOD

RADIO CABLE CONNECTORS

For a More Positive Contact—Use Amphenol Connectors

Molded bakelite connectors encased in cadmium-plated, drawn brass shells, capable of withstanding the severe abuse of general radio and electronic use, yet compact in size and neat appearing. Used extensively for connecting various units of transmitters and testing apparatus; and as the power connector for mobile transceivers and receivers used in aircraft, police motorcycles, speed boats, automobiles, etc.

The standard connectors for intercommunicating systems. Chassis types can be mounted in standard electrical outlet boxes, to conceal wires behind walls.

Double Polarization

Double Polarization Bakelite element polarized according to R.M.A. standards for tube sockets; 8 and 12 contact follows the octal style, having a bakelite polarizing key. Elements can be assembled to the polarized shell in four positions so that four different connectors may have the same number of contacts, yet each will require its own corresponding plug.

As rugged as the Heavy Duty Power Plugs described on the next page.



CABLE CONNECTORS With Coupling Ring

Supplied with either male or fe-male elements. Screw type coup-ling ring engages threads of Chas-sis or Cable Connectors described to the right.

Male	Female	Li	st Price	Fem
04M	04F1	4-contact	\$1.25	04F
05M	05F1	5-contact	1.25	05F
06M	06F1	6-contact	1.25	06F
08M	08F1	8-contact	1.25	08F
012M	012F1	12-contact	2.00	0121



YOKE FOR USING CHASSIS TYPE IN OUTLET BOXES

No. 92-12 Yoke Only 15c Each

15c Each For flush surface work mount chassis type in Yoke. Punched from steel, cad-mium-plated to prevent cor-rosion, this yoke has self centering holes to fit any shallow or deep conduit or BX service, switch or handy box. Standard wall plate mounting holes. Supplied with mounting screws.

CAP & CHAIN

No. CCC8-List 50c

Polished chrome-plated heavy brass cap with nickel silver be a d chain. For sealing ch ass is connectors against dirt and tamagainst dirt and tam-pering when not in use. End ring on chain fastens under screw in chassis or under mounting screw of wall plate.

POLISHED CHROME WALL PLATE

No. 84-92C-List 75c Each Polished chrome-plated wall plate for use with chassis connectors when used with above Yoke. .040'' brass, beveled edge,

PAGE 16

standard mounting holes. This wall plate may also be used with No. 92-M2 and 92-F2 listed on next page.



CABLE CONNECTORS With Coupling Thread

Supplied with either male or female elements. Polarizing keyway in side of shell engages key in con-nectors listed to the left, making incorrect insertions impossible.

Female	Male	Li	st Price
04F	04M1	4-contact	\$1.25
05F	05M1	5-contact	1.25
06F	06M1	6-contact	1.25
08F	08M1	8-contact	1.25
012F	012M1	12-contact	2.00



CHASSIS CONNECTORS

Supplied with either male or fe-male element. Mounts in 11/4" hole in any panel up to 1/2" thick or blank outlet box cover. Ideal for mounting directly on chassis. Supplied with lock washer, flat washer and hex. nut. Specify the connector with coupling ring as the companion cable connector.

Female	Male	Lis	t Price
P04F	P04M1	4-contact	\$1.25
P05F	P05M1	5-contact	1.25
POGF	P06M1	6-contact	1.25
POSF	P08M1	8-contact	1.25
P012F	P012M1	12-contact	2.00

GENERAL SPECIFICATIONS

Insulation is best grade high dielectric molded black bakelite, permitting the connectors to be used on high frequencies and high voltages. Female contacts are phosphor bronze, cadmium plated, recessed in individually molded pockets, protecting them from physical damage and increasing the surface leakage path from contact to contact and contact to shell. Prongs of male are drawn brass, plated for fast soldering. Shell is heavy drawn brass, cadmium-plated to prevent corrosion.

ELEMENTS INTERCHANGEABLE

Male and female elements are interchangeable so that max prongs can be kept at dead end o. circuit.

WEATHERPROOF

Live rubber gasket washer backed by Paraffin fibre washer seals cable entrance of connector against dirt and moisture. To make connector humidity-proof pour sealing compound in cable end after connector is wired.

FULLY SHIELDED

Completely encased in a heavy drawn brass cadmium-plated shell, making the connector 100% shock proof and incapable of radiation.

NUMBERED CONTACTS

Contact and prong numbers are molded directly into the bakelite to facilitate easy wiring and tracing of circuits.

CABLE CLAMP

Cable clamp is riveted to brass shell to prevent turning. This clamp is very positive and relieves soldered connections of all pulling and twisting strain. Adjustable to cables up to $\frac{1}{2}$ ".

FLEXIBLE CONDUIT & BX

See next page for illustration of connector wired with flexible conduit or BX.

For High Frequency Applications

All connectors on this and the next page are available with the element molded from mica-filled bakelite. When ordering simply add the suffix "T" to the part number and 13c to the list price.



REMOTE CONTROL

Provides an outlet having from 4 to 12 contacts. Cable connector can be locked in place with coupling ring, making accidental disconnections immaking possible.

MOUNTING HOLE DIMENSIONS



ASSEMBLY INSTRUCTIONS



Push bakelite element "A" into keyed shell "B"; (Position polarizing of bake-lite element and keying of metal shells so that male and female connectors match); insert screws "C". Tighten ach clamp "D" which relieves strain on connections. Push live rubber gasket washer "E" and fibre washer "F" against shell (sealing connections) and screw on outer cap "G" overall.

ADJUSTABLE

CABLE CLAMP



Two piece cable clamp accommodates all cables up to $\frac{1}{2}$ " and effectively re-lieves soldered connectors of strain.

For a Perfect Electrical and Mechanical Connection Use Amphenol Plugs and Receptacles

www.SteamPoweredRadio.Com

UNBREAKABLE A five ton truck actually drove across assembled connector. Not did drove across assembled rither unbroken, only did drove across assembled element, the drawn bit as the alectrical circuit element, Definite proof the shell or was done to the rough usage of factory and gatage service.

WIRING DIAGRAMS



TO MOUNT ON ANY BLANK COVER OR PANEL



WIRED WITH FLEXIBLE CONDUIT

Heavy Duty CIRCUIT—BREAKING OWER PLUGS

Where the Power must not Fail — Use Amphenol Connectors

A rugged connector designed for modern high-speed, slap-bang usage. Extremely compact and feather-weight as compared to other heavy duty connectors. Screw type coupling ring absolutely eliminates accidental disconnections, even in overhead work and on trucks and vibrating machinery. LIFE TIME REPLACEMENT WARRANTY makes it the most economical connector on the market. Extensively used for: Connecting all types of electrical appliances and machinery----Coupling trucks and trailers-In movies, sound and radio for connecting multi-unit apparatus and outdoor microphones.

WHY 4 CONTACTS - From a manufacturing standpoint it is as economical to build a 4 contact connector as one having 2 or 3 contacts. Four contacts cover every possible need which might be unforseen when connector is purchased. Also, additional contacts permit doubling up by hooking contacts in parallel for extra current carrying capacity. Unwanted male prongs slip out easily by loosening binding screw, or they can be left in place and not wired.

See Page 16 for Wall Plates to fit Flush Receptacle

ELEMENTS INTERCHANGEABLE

Male and female elements are interchangeable so that male prongs can be kept at dead end of circuit.

WEATHERPROOF

Live rubber gasket washer backed by fibre washer seals connector against dirt and moist-ure. To make connector humidity-proof pour sealing compound in cable end after connector is wired.

EXTRA HEAVY PRONGS

Flat-blade brass prongs-phosphor bronze contacts, more than heavy enough to carry 15 amps. at 125 volts, 10 amps. at 250 volts. Listed by Underwriters' Laboratories.

EASY TO WIRE

Easier to connect than an ordinary light socket.

FULLY SHIELDED

Completely encased in heavy drawn-brass cad-mium-plated shell, eliminating radio inter-ference and making the connector 100% shockproof.

RECESSED CONTACTS

Female contacts in individually molded chambers to quench arc.

POLARIZED

Key in metal shell makes it impossible to insert male prongs except in proper contacts.

CABLE CLAMP

Positive gripping cable clamp to relieve strain on connectors. Adjustable to cables up to 1/".

NUMBERED CONTACTS

Contact numbers molded into bakelite opposite each binding screw on cable end, and opposite each contact on service end. A great con-venience for fast, accurate wiring.

GROUND SCREW

Ground screw in shell for safety circuit wire or for connecting to ground of circuit. Makes possible the use of the shell as a fifth con-ductor.

Warranty: Life Time Service

If at any time the prongs or contacts become pitted or oxidized from constant circuit break-ing or carrying heavy overloads, return the connector to the AMERICAN PHENOLIC COR-PORATION with fifty cents for each connector returned. New prongs or contacts will be inserted and the connector returned to you prepaid. prepaid.

List Prices CABLE CONNECTOR

HENOL

With Coupling Ring Supplied with either male or female element. Coupling Ring engages threads of following Connectors and Receptacles, absolutely preventing ac-cidental disconnections.

No. 92-M-Male\$2.50 each No. 92-FI-Female ... 2.50 each

CABLE CONNECTOR

With Coupling Thread

Supplied with either male or female element. Polarizing key fits keyway slot in above connector, making in-correct insertions impossible.

No. 92-F-Female \$2.50 each No. 92-MI-Male 2.50 each

PANEL RECEPTACLE

Supplied with either male or female element. Mounts in 1¼" hole in any panel or blank cover up to ½" in thickness. Ideal for mounting directly on appliances or machinery. Supplied with lock washer, spacer washer and here nut hex nut.

No. 92-C-Female \$2.50 each No. 92-CI-Male 2.50 each

FLUSH RECEPTACLE

Supplied with either male or female element. Mounted on punched steel yoke as illustrated. Self centering mounting holes to fit standard switch boxes. For use with Wall Plate listed on boxes. For use with Wall Plate listed on page 16. Service end protrudes through Wall Plate $\frac{1}{6}''$ to accommodate coup-ling ring on cable connector, or Chain & Cap to close outlet when not in use. No. 92-M2-MAIE \$2.60 each No. 92-F2-Female ... 2.60 each No. 92-I2-Yoke Only. .15 each

CAP & CHAIN WALL PLATES

Chrome-plated cap & chains are listed on preceding page. For sealing Flush Receptacle or Panel Receptacle against dirt and tampering. Wall plates to fit standard outlet boxes are also listed on preceding page.













AMERICAN PHENOLIC CORPORATION PAGE 17 1250 VAN BUREN STREET . CHICAGO, U. S. A.



PLUGS RECEPTACLE Standard No. 61-M Polarized No. 61-MP Fits Standard or Polarized Plugs. No. 61-F ... 25¢ each 25¢ each

Price Includes #4 Retainer Ring Unless otherwise specified, plugs and receptacles will be supplied grooved to fit panels from .040" to .062". Resiliency of tempered steel retainer ring sufficient to take up variation in metal thickness. *Important!* manufacturers should specify exact thickness of panels. Plugs and receptacles can be grooved to fit panels up to ½".

CABLE CONNECTORS



Above plugs or receptacles encased in a black japanned, drawn steel cap, making an unbreakable cable connector. Cap snaps on and fits securely, but may be removed easily as illustrated in the lower right hand corner of this page.

Often used with shielded cable to eliminate radio interference. Grounded cable shield can be soldered directly to connector cap.

Plugs and receptacles set in standard caps described in the following paragraphs:

END CABLE OUTLET

For replacing the conventional type plugs and receptacles. Rubber grommet protects cable from abrasions. Accom-modates cables up to 1/2" in diameter. Finger grip design permits easy extrac-tion of connector. Finished in black japan. No. 61-F4—Receptacle35c each No. 61-M4—Standard Plug ...35c each No. 61-MP4—Polarized Plug ...35c each



With Cable Clamp

With a cable clamp to accommodate cables up to ½" in diameter. Cable clamp grips cable securely, removing all pulling or twisting strain from con-nections. Cable clamp riveted to cap to prevent turning. Cap is black

japanned. No. 61-F11—Receptacle40c each No. 61-M11—Standard Plug ...40c each No. 61-MP11—Polarized Plug ..40c each

SIDE CABLE OUTLET

Same design as End Cable Outlet, but cable enters from the side. For all types of work where a vertical cable is plugged into a horizontal outlet, or a horizontal cable into a vertical outlet. Cap is black japanned.

No. 61-M7-Standard Plug 35c each No. 61-MP7-Polarized Plug...35c each



AMPHENOL

Molded from High Dielectric Black Bakelite (Other Colors at Slightly Higher Prices)

Held firmly in place by the patented Amphenol retainer ring. No screws or rivets necessary.

Designed primarily for mounting directly on radios, electrical appliances, electronic apparatus and sound equipment; immediately accepted by the entire electrical industry for all types of work because of its compactness and fast mounting feature.

Female receptacle has one elongated hole. Accommodates all standard plugs ($\frac{1}{4}''$ blades spaced $\frac{1}{2}''$) or polarized plugs with one $\frac{1}{4}$ " and one $\frac{5}{16}$ " blade. Both contacts phosphor bronze, one cadmium plated for polarization. Contacts grip plug blades more securely than conventional types.

Male plug supplied in two types: No. 61-M with standard 1/4" blades spaced 1/2"; No. 61-MP with one 1/4" and one 5/16" blade for polarization. Blades are brass. Molded from best grade high dielectric bakelite. Standard

color black. Other colors, such as red, green, ivory, etc., supplied to manufacturers at slightly higher prices.

WITH MOUNTING PLATE



FLUSH MOTOR PLUG

Plug or receptacle set in drawn steel, burnished nickel-plated shell. Neat and com-pact. For below surface mount-ing on all types of apparatus. Overall diameter of shell only 24% 1-36''. Ample room for the in-sertion of No. 61-4 or 61-11 receptacles or plugs.







Regular receptacles or plugs set in a heavy aluminum shell. Extends receptacle 13/16" above surface, or plug 13/16" below surface. Unless otherwise speci-fied, supplied with the receptacle for above surface mounting, plugs for below surface mounting. Ample room to accommodate the No. 61-4 plugs or recep-tacles after they are encased in the No. RPH Rubber Plug Handle. No. 61-R18—Receptacle (above surface)35c each No. 61-M19—Standard Plug (below surface)...35c each No. 61-M19—Polarized Plug (below surface) 35c each



For fast production mount plugs and receptacles with the No. 51-3 Retainer Ring Hand Tool. The electrician or serviceman can mount

plugs or receptacles easily with a screw driver. For punching holes use Amphenol LD-1 Die.





Electrical Connectors Built To the Exacting Requirements of Radio

www.SteamPoweredRadio.Com

No. MIP-61F 25c each

ENOL





Manufacturers ordering in quantities may specify any of the three above mounting positions. Receptacle molded into plate at an angle for close spacing. or for vertical mounting. These are in addition to the standard horizontal re-ceptacle illustrated in the upper right hand corner of this page hand corner of this page. ..

DOUBLET ANTENNA AND 110 VOLT OUTLET



When installing the No. 84 AC conven-ience outlet it is recommended that a piece of tubing or thin wall conduit be run into the outlet box from the rear so that it covers the small 3-contact socket, the reby isolating the antenna and ground leads from the 110-volt current.

EXTREMELY SHALLOW



Amphenol 61 receptocles mounted on wall plates or any outlet box cover are unexcelled for mounting on very shallow boxes or boxes which are crammed with wires. For use wher-ever the world's most compact receptacle is required.

20

A locked connection can be made by installing the threaded base of the C-CHA connector cover under the 61 re-ceptacle. C-CHA and C-CAB covers are listed on Para 6.

MOLDED-IN-PLATE 110-250 VOLT RECEPTACLES

Compact receptacles that are molded directly into the bakelite riveting plate. Designed for manufacturers of radio and electrical equipment so that receptacle could be riveted to apparatus on high speed production lines. Riveting plate is punched from steel, nickel-plated.

Contacts are phosphor bronze and will not lose their resiliency. Accommodates all standard plugs and polarized plugs which have one 1/4" and one 5" blade

Molded from high dielectric black radio bakelite. Other colors such as red, green, blue, etc., available at slightly higher prices.

CONVENIENCE OUTLETS for RADIO and **PUBLIC** ADDRESS

Practically every new building-residence, hotel, commercial, industrial, hospital — will be wired for radio and/or sound. Among the installations now demanded on both new and old work are multi-speaker systems for hotels and hospitals, intercall systems for factories, microphone outlets for broadcast studios and television outlets for hotels.

To meet this demand the Amphenol jobbers can supply custom made wall outlets consisting of any combination of Amphenol sockets or plugs mounted on chrome plated wall plates. (For prices see listing under "Blank Wall Plates").



Illustration shows a typical Amphenol assembly, complete with a chrome-plated cap to seal outlet against dirt and tampering when not in use.

The Amphenol engineers will assist you in making your selection of socket, plug or connector for any particular installation.



BLANK WALL PLATES No. 84-2CH - 75c List

Chrome-plated with struckup bevel edge. Connectors, receptacles and sockets mount directly on wall plate. Mounting holes of wall plate are spaced $3\frac{5}{16}$ " to fit directly on outlet boxes.

Punched without charge for any Amphenol product.

RUBBER PLUG HANDLE

No. RPH-Rubber Plug Handle only15c each

No. 61 Receptacles or Plugs snap into this rubber handle and are held securely in place by an inner molded shoulder.

For easy removal of plugs and receptacles plugged into recessed or hard to get at places; to protect connectors from damage due to banging; and as a shock absorber to protect panels, etc.. from damage when making quick plug-ins. Molded from black live rubber.

Illustration is cut away to show how connector is gripped by plug handle.

VAN BUREN STREET . CHICACO



DOUBLET ANTENNA and 110 VOLT OUTLET No. 84-AC - \$1.45 List

Wall plate as described to the left equipped with a 61-F 110 volt receptacle and S3S socket, having 3 contacts for doublet or "L" type antenna. A neat appearing combination which will harmonize with any surroundings.

Supplied complete with a No. MPM3S plug to be used as the antenna connector.

ADAPTER SHELL

No. 3-14-Adapter Shell only15c each

Black japanned, brass tubing, 1½" in height. Amphenol receptacles, or plugs snap into either end and are held securely in place, but can be re-moved easily with α screw driver.

For making adapters to connect two cables with plug ends or two cables with receptacle ends. Also as an adapter where it is desired to tap into the line. $\frac{1}{2}\omega''$ space between connect tors for the insertion of a condenser, or resistor which does not dissipate heat

Manufacturers ordering in quantities may specify height of adapter shell desired and price will be quoted on









CAL

Magic Eye Assembly





MODERNISTIC ESCUTCHEON

Escutcheon is finished in antique bronze and is styled to harmonize with the cabinet and controls of the receiver.

INSTALLATION INSTRUCTIONS

Working in front of the radio cabinet drill a 1/8'' hole. Press fibre light shield over front of tube. Insert tube in the 1/8'' hole from the back. If hole is proper size the tube will hold itself in place.

Using the escutcheon as a template, drill two $1/\!\!/_8''$ mounting holes. Through these holes insert the two art-head screws into the tapped assembly holder.

Insert the tube in the metal-clad socket. Snap the spring clip over the tube base. Slide the spring clip into the slot in assembly holder. Push tube up to the front of the cabinet and into the 1/6'' hole. Tighten in place with the wing screw.

Run cable down through any convenient hole in the chassis and wire as outlined in the adjoining column.

LOCATING MOVEMENT OF EYE

Although the spring clip grips the tube firmly, the tube can be rotated so that the eye movement can be cen-tered in the lower half of the escutcheon.



An easy method of adapting a Magic Eye or Electron Ray Tube to any radio receiver having a.v.c. Also used extensively for installing Magic Eyes in test

instruments. Easily understood directions

are outlined below.

No. MEA-6 For 6-prong base tubes. \$1.25 List

The metal encased socket is completely wired with a 5-wire color-coded

cable 22" in length. The necessary 1-megohm target-to-plate resistor

Assembly consists of all necessary parts with the exception of the tube. (See list of parts in blue border). The slotted bracket permits the Magic

Eye tube to be mounted flush with any thickness of panel. A fibre light shield protects the eye movement from light of dial bulbs and tubes.

is concealed and protected by the socket's metal shell.

Blue and green wires go to filament, preferably to the soldering lugs of the nearest tube socket. Red wire goes to "B" plus, from 200 to 250 volts after it has passed through the filter. This voltage can usual-ly be found on the "B" plus side of the output trans-former

former.

Black and Yellow wires should go to ground wherever possible. In a few cases where delayed a.v.c. is em-ployed or bias is obtained from a bleeder below ground, Eye may remain closed or show only slight action. In such cases change yellow wire to bleeder or low side of diode load. (See points "X" and "Y" in blue border). Where one plate of a diode is used as a detector and the other for a.v.c., the greater effect should be obtained from the detector though both should be tried. Should closing sections overlap a strong a.v.c. action is indicated. Proper focusing can be obtained by plac-ing the yellow wire on the diode load. This can be accomplished by moving the yellow wire to the grid return side of one of the I.F. or R.F. coils. If eye move-ment still overlaps, connect a resistor (from 100,000 to 500,000 ohms) in series with the yellow wire and ground.

FOR OCTAL MAGIC EYE TUBES

MEA-8— For Octal Tubes.....\$1.25 List

This assembly is not recommended for adapting a tuning indicator to radio receivers already constructed, but is intended for replacement work and for constructing new apparatus.

Similar to above Magic Eye Assembly but has an octal socket to accommodate 6A6F-G, 6A6DG and other electron tuning eyes having an octal base. The double eye movement of these tubes can be controlled separately, using one movement when tuning strong signals, the other for weak signals. Separate D.C. amplifiers are required such as 6K7 and 6J5 tubes.

CATHODE RAY ASSEMBLY

"L" bracket permits mounting on front panel or base. Spring clip holds tube firmly in place. Thumb screw fastening of clip gives easy adjustment to position of tube. Spring clip will expand sufficiently to permit insulation of tube with bakelite or fibre.

Cat. No. 913 Assembly for 913 Tube (Individually boxed) \$1.00 List Price

ro Wirod by



Cathode Ray Tubes are used for measure-ment of D.C. or A.C. voltage and current; peak A.C. and R.F. voltage; trouble shooting in receivers; adjustment of I.F., including bandpass; audio distortion, overload and gain; phase-inversion circuits; phase angle and phase distortion; harmonic content; dynamic tube characteristic curves; checking phone signals and percent modulation; making con-denser power factor tests; overall frequency response tests; etc.

For mounting the 913, 902 and similar cathode ray tubes. Adjustable bracket permits mounting the tube in any position at any angle. An ideal foundation for laboratory men, amateurs and servicemen who wish to construct an oscilloscope or modulation checker.

Assembly consists of molded bakelite socket mounted in a protective metal shell, com-pletely wired with a 22" 7-wire color coded cable.

Color Code of Cable

Black-No. 1 Contact; Yellow-No. 2 Contact; Brown--No. 3 Contact; Green -- No. 4 Contact; Red -No. 5 Contact; Blue -No. 6 Contact; Blue with yellow tracer-No. 7 Contact: Black with White Tracer-No. 8 Contact.



A-Art Head Screws; B-Escutcheon; C-Fibre Light Shield; D-Mounting Bracket; E-Magic Eye Tube (not included); F-Adjustable Spring Clip; G-Wing Screw; H-Molded Bakelite Socket; I-Black Japanned Metal Socket Cover; J-Color Coded Cable, 22" long.

Note: The 1-megohm target to plate resistor is already wired in and is concealed by the metal socket cover.

WIRING INSTRUCTIONS



Blue & Green wires to filament. Red Wire to "B" plus 200 to 250. Black wire to ground. Yellow wire to grid bias.

SPECIAL BRACKETS FOR MANUFACTURERS



Special brackets are available to man-ufacturers permitting the Magic Eye Assembly to be mounted on the chas-sis, tuning condensers, or other con-venient place.

Illustrations show Cathode Ray Assembly mounted in oscilloscopes. Repro-duced through the courtesy of the edi-tors of the Radio Handbook.



Amphanal Annually

PAGE 20



Supplied with escutcheon illustrated for Octal base Magic Eye tubes so that full 360 degree eye movement is visible.

SPEED

MOUNTED & WIRED IN SECONDS 5" HOLES

> STANDARD SOCKET HOLE

EXTENDS BEHIND SHELL ONLY 4"

LEADS FEED THROUGH BOTTOM

SOLDERED AFTER FINAL ASSEMBLY

Hook wire leads over cad-mium-plated lugs and solder from the outside as illustrated. Common return feeds through hollow center stud and is soldered at the top.



TRANSFORMER TAP CHANGE SWITCH

8-Position — Single Pole

Setting voltage taps on power transformers.

All electrically connected parts fully shielded. Side set screw locks switch-arm in position, preventing accidental tap changes. Tap designation or exact voltage visible through window in bevel of cap. Extremely compact-mounted height only 7/8", overall diameter 1-15/16". Extends behind panel or chassis 5/32".

The Mechanism



The Mechanism Black bakelite molded directly into punched steel mounting plate. Cadmium-plated brass lugs for quick soldering. Phosphor-bronze switch arm, nickel-plated. Unique design raises switch arm when passing room contact to contact with quick make-and-break action. Arm does not rub across bakelite between contacts leaving a metal deposit which later becomes a current carrying path. Supplied as an 8-position continuous switch. To make a 7-position stop switch, simply twist one contact at right angles to normal position.

to normal position.

Bar-Type Indicating Knob



Attractive black bakelite knob, designed to harmonize with sim-ilar parts of your apparatus. Bar type finger grip permits easy tap setting. Standard tap designations are white numerals from 1 to 8.

Manufacturers may specify the exact engraving in volts, ohms, decibels, impedance, etc. voltage groups are as follows: Typical

	onago	9.	oups c	aro	40 1011	0.					
-	0	-	2	-	8	-	16	-	250	-	500
	0	-	2	-	8	-	16	-	250	-	500
*	90	-	100	-	120		200	-	230	-	250
	110	-	125	-	145	-	200	-	225	-	250
	100	-	105	-	110	-	115	-	120		
*	160V	-	180V	-	200V	-	220V	-	240V		
*	85V	-	100V	-	115V	-	130V	-	145V		
	110	-	130	-	220	-	250				
	OFF	-	LO	-	MED.	-	HI	-			
	110	- 1	130	-	230						
*	For V	er	tical re	adi	ng.						
	All of	the	rs are	for	Horizo	nte	al readi	ng.			

No. 1 to 8 are available for either horizontal or ver-tical reading.

For special engravings there is a small partial die charge on the first order only.

POSITION CHANG TOR

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ENOL

Individually Boxed No. 36 - 75c list

Manufacturers' orders supplied unassembled in bulk. Bakelite knob supplied in red a slightly higher prices.

HIDDEN PRODUCTION COSTS

Every mounting and wiring operation is clearly out-lined in the border of this page. There is no assem-bly of separate parts or hidden costs which often occur outside of actual production.

In addition to production economy there is the assurance of less inspection rejects and satisfactory operation in the field.

For radio assembly—test and align on 110 volts and at the snap of the switch set to the highest voltage for shipping, guarding against accidental burn-outs.

Snap-on Steel Cover

Shap-on Sieel Cover Black-japanned, drawn steel cover snaps over bake-lite base, completely shielding mechanism from dirt —making the switch 100% shock proof. Complies with Underwriters' specification that taps must be unchangeable without the use of a tool. Set screw in side of cover, which must be loosened with a screw driver, prevents accidental tap changes. Only designation of contact actually engaged is visible through window in bevel of cover, guarding against incorrect tap settings.

When Ordering Transformers — Specify Amphenol Tap Switches

TAP CHANGE SWITCH

- · For Matching Speakers to output of amplifiers
- For Setting Impedance of auxiliary speakers
- For Selecting Circuits on test instruments
- And similar applications

Identical to above switch but has cadmium-plated brass solder lugs which protrude through the bottom permitting wiring of switch without removing cover.

For all amplifiers, speakers, test instruments and similar applications, this switch is recommended for easy soldering.

Standard tap designations are white numerals from 1 to 8. Manufacturers may specify exact engravings in volts, ohms, decibels, impedance, etc., as stipulated for the No. 36 Transformer Tap Change Switch.

AMERICAN PHENOLIC CORPORATION



Individually Boxed

No. 36-1 - 75c list

Supplied completely assembled, ready to mount and wire. Bakelite knob supplied in red at slightly higher prices.

PAGE 21

INSULATORS

Amphenol "912-B" Insulators will not break as will ceramics or glass when dropped or subjected to sharp blows

Beautiful and strong. The ideal insulator for all high frequency and high voltage applications. Formed from ultra-low-loss Amphenol "912-B" transparent insulating material. For indoor or outdoor use.

Twisted design forms an extremely long leakage path. Rain or moisture can-nol form a continuous film on surface. There are no pores or flat surfaces on which dust can gather.

Will not break when dropped or subjected to sharp blows. Elimination of breakage which always occurs when ceramic or glass insulators are installed makes Amphenol "912-B" insulators the most economical to use. Compare the following electrical characteristics of Amphenol "912-B" insula-tors with any other insulators on the market.

Dielectric Constant	Power Factor	Loss Factor
1 and 10 meg.	1 meg. 10 meg.	1 meg. 10 meg.
4.1	.0094 .011	.039 .045
		14

Volume Resistivity, Ohms per cu. cm., 1014

TWISTED STRAIN INSULATOR

For use wherever the electrical path of a conductor is to be broken. R.F. leakage through Insulator is nil; surface leakage has been reduced to the absolute minimum.

	 60c List
	 70c List 90c List
No. 66-92-3/8x 3/4x 8"	
NO. 00-93	 WINGO MIST

ROUND AND TWISTED STAND-OFF

Types "A" and "B" have insulation 1/2" in diameter. Wire is held in place by screw or solder lug. Types "C" and "D" have insulation 3/4" in diameter. Brass insert in top of insulator has "V" shaped slots so that wire can be securely clamped in place. Hex. shaped insert and hex. screw head permits the use of wrenches for binding wire in place. Type "E" similar to "C" and "D" in all respects, but body is twisted to form a long leakage path. Intended for installation where water would form a film on the round type.

on the round type.		
Type "A" and "B"	Type "C" and "D"	Type "E"
No. Length List Price 66-113/8" \$1.10	No. Length List Price 66-327/8" \$1.50	No. Length List Price 66-3127/8" \$2.00
66-227/8 ["] \$1.20	66-447/8" \$2.00 66-56" \$2.50	66-3247/8" \$2.50 66-336" \$3.00





FEED THROUGH INSULATORS

A new type of insulator for feeding high voltages or high frequencies through a metal panel or chassis. Base is molded from Amphenol "912"(polystyrene); stand-off is Amphenol "912-B".

Base alone can be used as a high frequency bushing or as a base for Amphenol single contact sockets. Other uses will immediately suggest themselves to the engineer and amateur.

End of stand-off has a brass insert which will accommodate a standard banana plug or screw. Supplied complete with screw and solder lug.

No. 66-60-Feed	through	insulator	complete	\$ 2.00 List
No. \$6-60B-Base	only			 .75 List

SPREADERS

An entirely new design in spreaders for open wire transmission lines. The insulators may also be used for strain insulators. Twisted design makes it almost impossible for water or dust to form a continuous film, making high efficiency possible even in rainy weather.

Supplied in two types. Type "A" permits the spreader to be inserted any place along the line after it has been installed. When installing type "B" wires must be fed through the insulator.

Lengths given below refer to the spacings between wire.

Type "A"	,	Type "B"				
No. 68-80-2-inch	50c List	No. 66-70-2-inch 40c List				
No. 66-81-4-inch	70c List	No. 66-71-4-inch 60c List				
No. \$6-82-6-inch	90c List	No. 66-72-6-inch 80c List				

SPECIAL INSULATORS

Manufacturers having special problems are invited to submit their specifications. Amphenol "912-B" insulators are being supplied for transformers, electrical fences, transmitter racks television equipment, etc. Wherever high voltages or high frequencies are encountered use Amphenol insulators. Will not break on the assembly line.

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D

Manufacturers Requiring Special Insulators







PLUG-IN COIL FORM



SMALL PLUG-IN COIL FORM

- <u>13</u> "	3"DIA.	7"	$\checkmark 1^{\underline{9}''} \rightarrow$
)		

PERMANENT MOUNTING COIL FORM



FOR " SELF-TAPPING SCREW

Electrical and Mechanical Characteristics of Amphenol "912"

MECHANICAL

Tensile strength, lb./sq. in.-5,500-7,000 Elongation, % 1 Impact strength (A.S.T.M. D-256-34T Izod noiched bar) ft. lb.: 25° C. 0.2-0.3

-70° C. 0.2-0.3

ELECTRICAL

Surface resistivity, ohms per cc...10 16 Volume resistivity, ohms per cc.. 10 17 Arc res.(A.S.T.M. D-495-38T), sec. 240-250 Dielectric strength, volts/mil:

Un	0.010-in.	section	2500
On	0.125-in.	section	500

Dielectric properties at various frequencies:

	1		
Mega-	Dielectric	Power	Loss
cycles	Constant	Factor	Factor
1	2.6	.00025	.00053
10	2.6	.00089	.0023

Ultra-Low-Loss, Polystyrene-Base

AMPHENOL "912" **INSULATING MATERIAL**

- Low Power Factor
 - High Dielectric Strength
 - Great Arc Resistance
 - Zero Water Absorption

Amphenol "912", a transparent thermoplastic solid, is formed by the polymerization of monomeric styrene. Unexcelled as a high frequency insulator. Has electrical properties equal to those of fused quartz. Moisture absorption is absolute zero for all practical purposes.

No other insulating material in the world which can be formed into radio parts can compare in even a slight degree with Amphenol "912". At the bottom of this page are the complete electrical and mechanical characterisics of this remarkable material.

Tensile Strength 5000 to 7000 lbs. per square inch. Only 1% elongation before breakage. Amphenol "912" is molded without the use of plasticizers, resulting in unusually rigid products without the yield characteristic of other thermoplastics.

Amphenol standard products molded from this superior insulating material are Super-Mip Sockets (page 3); High Frequency Pin Jack and Bushing (page 11); Coil Forms and Sockets (page 25); Insulating Beads and Co-Axial Cables (pages 24, 25, 26); Concentric Line Spacers (page 24); Liquid "912" Coil Dope (page 28).

Other products molded from Amphenol "912-B" (with plasticizers added for easy machining and greater elongation properties)antenna insulators (page 22); Sheet Stock, Strips, Rod, Tubing, Ribbon (page 27).

Special parts for manufacturers formed to specifications. Small quantities are machined, large quantities are molded to size.



PLUG-IN COIL FORM

The maximum in coil efficiency. For a high frequency apparatus such as a ceivers, low power transmitters, oscillator etc.

Molded from Amphenol "912", the lo characteristics are practically zero. Co wound on these forms wil have the sar "Q" as those wound on air, but are sup rior to air wound coils for this reaso The "Q" of coils which are not sealed diduction conductions and the same a dielectric gradually drops as dust gat ers on the surface.

Prong spacings of coil form base fit stan and tube sockets. Use Amphenol Steat: or Mica-Filled sockets as the receptac. No holes in side of coil form because it simple to drill them where they a wanted.

Impregnate wound coils with Liquid "91 (page 28) and seal coils between two la ers of Amphenol "912".

List Pri -4-prong coil form\$1.00 -5-prong coil form 1.00 -6-prong coil form 1.00 No. 24-4P-No. 24-5P-5-prong coil form No. 24-6P-6-prong coil form

FROM 10 METERS ON DOWN

Small coil forms for use on ultra-high frequencies. Used for R.F. and Antenna Coils by manufacturers of high quality communication receivers and high frequency oscillators.

FOR PERMANENT MOUNTING No. 24 -- 20c List

Identical to coil described to the right but has a raised hole in center of base to accept a self tapping screw.

For mounting directly on wave band switch, tuning condenser or chassis. No holes for windings be-cause it is simple to drill them exactly where they are needed.

It is recommended that ends of coil windings themselves be brought out as leads to next connection rather than use solder lug.

FORM FOR U.H.F. CHOKES

AMERICAN

No. 24-2 - 10c

Small round tube for R.F. chokes and ultra high frequency coils. May also be used for hermetically sealing small condensers, resistors, etc., which are used in sensitive

Dimensions: Length— $\frac{3}{4}$ "; Inside Diameter— $\frac{13}{2}$ "; Outside Diameter— Inside



(Pin spacings same as Bantam Jr. tubes.)

PHENOLIC CORPORATION

measuring instruments.

U.H.F. MINIATURE SOCKET

No. 54-5H --- 5-contact --- 50c List No. 54-6H --- 6-contact --- 50c List Molded from Amphenol "912" ultra-low-loss insulcting material. 5-con-tact socket may be used with 5-prong Bantam Jr. tubes; 6-contact with 6-prong Bantam Jr. tubes. Primarily this socket was designed to be used as the socket for the No. 24-5H coil form. The 6-contact socket may also be used and the center contact arounded to minimize coupcontact grounded to minimize coup-ling between contacts.

PLUG-IN TYPE

No. 24-5H - 60c List

For the first time—plug-in coil forms especially designed for the high frequencies.

Use the Amphenol "912" Miniature socket listed below as the recepta-cle. After coil is wound, seal with Amphenol "912".

Coils wound on Amphenol "912"

are superior to air wound coils be-cause dust cannot gather on the surface and drop "Q" of coil.





Packed 250 to the Box

No. 73 - \$2.50 list per box

5/16" in diameter, 7/16" long (Diameter of hole 1/16")





For co-axial cables—high frequency leads in television, transmitters, re-ceivers, sensitive measuring devices, photo-cell apparatus, etc. For the high voltage leads in television and diathermy apparatus.

nign voltage leads in television and diathermy apparatus. Molded from Amphenol "912" polystyrene-base insulating material. Ball and socket design permits flexing on a 1" radius without uncovering the wire. Easily and quickly strung on any size wire up to #12. For stringing cables with No. 73 beads figure 32 beads to the inch.

For Piping High Frequencies

Whether it be for only a few inches inside an apparatus, or from studio to control room in the broadcasting station, or underground to another building, use Amphenol "912" insulating beads as the spacers in transmission lines.

In the laboratories of most manufacturers and experimenters Amphenol "912" beads are used exclusively for bringing high frequencies or high voltages from source to outlet.

Following shows the comparison between steatite and Amphenol "912" beads. You are invited to confirm these figures in your own laboratory.

Comparison Between	n Amphenol	~912~	and C	Other Go	od I	nsulators
	•			Best	F	AMPHENOL
				Steatite		"912"
Power factor				04		.002
Dielectric Constant				. 5.8		2.60
Loss Factor				23		.00053
Dielectric Strength per	mil			. 200.		500.
All abo	ve tests ma	de at	1,000,00	00 cycles		

Moisture absorption is nil for Amphenol "912".

LOW LOSS MICA-FILLED BEADS AMPHENOL "912" BEADS 3/16" Packed 250 to the box Packed 500 to the box No. 73-1 — \$4.50 per box Overall diameter $\frac{3}{16}$ — 3/8" long No. 73-T - \$2.50 list per box

(Diameter of hole .040")

A small bead intended for use in small transmission lines to be used inside of electronic apparatus and as test instrument leads.

test instrument leads. Can be strung on wires up to #22 stranded. Bends easily without uncovering the wire on a 3/4'' radius. Often used as spaghetti to insulate high voltage and high frequency leads. For making a copper tubing transmission line with these beads use copper tubing with an inside diameter of at least $\frac{1}{4''}$.

least $\frac{7}{32}''$.

For capacities of cables using various sizes wires, see data on Page 26 under Amphenol No. 72-22S Co-Axial Cable.

Overall diameter 5/16" — 7/18" long

(Diameter of hole 1/16") — color: tan Similar to above beads but molded from Mica-Filled bakelite. For use where temperatures in excess of 200° are encountered, as for mounting transmission line over boilers on ships, etc.

Mica-Filled bakelite is a compound of finely ground mica, bonded with the standard formulation of standard phenol

formaldehyde resin. Mica-Filled beads are superior to steatite and are excelled in electrical characteristics only by Amphenol "912".

A mica-filled bead is recommended for the end of the flexible co-axial cable, described on the next pages, to facilitate soldering. Remove one Amphenol "912" bead and replace with a Mica-Filled bead.

COPPER TUBING TRANSMISSION LINES



No. 72-54—Copper Tubing.....25c per ft. Supplied in 50 ft. lengths only

For the amateur or laboratory man who wishes to con-struct his own transmission line. For use with the No. 73 or 73-T insulating beads described above.

A ± 12 center conductor strung with Amphenol beads and pulled into this tubing produces a transmission line hav-ing a surge impedance of 78 ohms. This will match a half-wave antenna by slight fanning of the open wires from the cable to the antenna.

All copper tubings are not good electrical conductors. This tubing was especially manufactured for use as a co-axial cable. I' is #24 soft drawn copper having an inside diameter of 3/4''.

May be used indoors or outdoors. Corrosion can be pre-vented by painting the finished transmission line with aluminum paint; or the tubing can be left unfinished to form its own protective oxidized coat.

Bends easily around corners

PAGE 24

END SEAL

No. 90-M-5 - \$2.00 List

A sweat type connector for the end of Amphenol No. 72-12-C Copper Tube Co-Axial Cable. May be used as an end seal at the point where open wires go to the antenna, or as a male connector for Amphenol No. 72-12 Co-Axial Cable.

No. 72-12C-Co-Axial Cable....60c per ft. Supplied in 50 ft. lengths only

An exceptionally efficient co-axial cable for transmitting high frequencies from one source to another. Surge impedance is 78 ohms.

Constructed of the copper tubing described to the left. Center conductor is #12 solid copper wire strung solid with No. 73 ultra-low-loss beads. Beads are not spaced. Spaced beads in small cables allow the center conductor to lose its concentric position, destroying the capacity and impedance of the line, and often actual shorts occur.

Please see next page for comparison between this cable and other concentric transmission lines and actual loss in watts from $2\frac{1}{2}$ to 160 meters.

One of the most popular types of installations for both low-power broadcasting stations and amateurs is to run copper tubing co-axial cable from the transmitter, up the outside of the building to the root, and then run No. 72-12W (listed on the next page) up to the actual radia-tor. This allows a free swing cable to sway with the wind without breaking.

END SEAL CAP



Molded from Amphenol "912" poly-styrene-base insulating material. Screws onto End Seal described to the left. Umbrella design makes it almost impossible for a layer of moisture or dirt to connect the cen-ter and outer conductors of the cable.

Cap has hole in center just large enough for a #12 solid wire. When installing paint both the threads and hole in center of the cap with Liquid "912" to make a humidity proof seal.

BUILD YOUR OWN COPPER TUBE TRANSMISSION LINE



Beads may be strung solid or spaced every two inches. Spaced beads are on-ly recommended when the copper tub-ing is installed first and the inner con-ductor pulled in taunt after installation.

COMBINATION END SEAL & CONNECTOR



First illustration shows No. 90-15 Cap on No. 90-M-5 End Seal Connector. Second illustration shows connector without cap so that Amphenol Co-Axial Cable can be connected with a No. 90-F Connector (described on next page.)

SPECIAL SPACERS FOR HIGH POWER LINES



Broadcasting stations, government services and manufacturers are invited to submit their specifications for special spacers for large transmission lines. Small quantities of spacers are machined from Amphenol "912" rod or cheet stock, large quantities are molded to size.

Amphenol "912" is the World's Finest Ultra-Low-Loss Insulator



From 1/2 to 10 Megacycles



From 10 to 100 Megacycles



Above chart shows a direct comparison between Amphenol Co-Axial cables and other transmission lines. Identification of various types of transmission lines is as follows:

-Shielded Ignition Cable -Best solid rubber co-axial cable -Best transmitting type twisted pair -Best rubber (low-loss) co-axial cable -Amphenol flexible co-axial cable -Amphenol copper tubing co-axial cable Ē

COUPLE TO ANY TYPE ANTENNA

- Center Fed
- End Fed
- Vertical 0
- "V" Type
- Beam
- Rhombic
- Collinear

You are invited to write for information on not are invited to write for information on matching any type antenna to your trans-mitter with Amphenol Co-Axial Cable. It is possible to use cable described on this page in conjunction with any variation of the above types of antennas.



When it is desired to firmly anchor Amphenol Co-Axial Cable to a panel or chassis, use the No. CC-4 Cable Clamp described on page 31 of this catalog.

Synthetic Resin Covered

www.SteamPoweredRadio.Com

72 Ohm Flexible Co-Axial Cable

(Concentric Transmission Line) No. 72-12W - List Price \$1.00 per foot

MATCHES A HALF WAVE ANTENNA

Improved Amphenol Co-Axial Cable, especially engineered for transmitting energy from Trans-mitter to Antenna. Handles 1000 watts on frequencies as high as 40 megacycles; 70 watts on mitter to Antenna. Handles 1000 watts on frequencies as high as 40 megacycles; 70 watts on frequencies to 100 megacycles. Recommended for broadcasting stations which operate within these power limits, also widely

used by many amateurs.

Drop the cable direct from antenna to transmitter, choosing the shortest path, regardless of metal gutters, pipes or other objects it may touch. No stand-off insulators required for insulating purposes, but recommended for anchoring and rounding sharp corners. Outer covering is AMPHENOL "920", a synthetic resin which is impervious to all weather conditions. Moisture absorption is nil. Will not deteriorate as will rubber when exposed to the sun's ultra-violet rays.

AMPHENOL "920" is one of the vinylite series of resins. Being a true thermoplastic this resin will soften at temperatures in excess of 185° F. and will stiffen at temperatures below freezing. Therefore, this cable is not recommended for crossing boilers in ships. Also, the cable should not be installed when the temperature is below freezing. However, once installed, the cable will not be affected by the lower temperatures if no attempt is made to make a sharp bend.

Put All the Watts on the Air

Following table gives direct comparisons between AMPHENOL Co-Axial Cable and other transmission lines.

LINE LOSS IN WATTS WHEN 1000 WATTS ARE FED INTO 100 FEET.



SPECIFICATIONS

A—#12 solid copper wire; B—Amphenol No. 73 ultra-low-loss insulating beads (see description on preceding page); C—Tightly braided shield composed of 24 strands of #36 tinned copper wire; $D - \frac{1}{32}$ " coating of Amphenol 920 synthetic resin.

Ball and socket design of beads permits flexing and bending on a one inch radius without uncovering the wire.

Surge impedance is 72 ohms. Capacity is 16 mmfd. per foot. See border of page for actual db. loss at all wave lengths from $2\frac{1}{2}$ to 160 meters. Net weight per foot only 13/4 oz.

IT IS ECONOMICAL TO USE THE BEST TRANSMISSION LINE

Replacing a high-loss transmission line or mismatched antenna system will often actually place more watts in the air than will revisions in the transmitter itself.

WHY USE AMPHENOL CO-AXIAL CABLE?

Amphenol Co-Axial Cable has this outstanding advantage: The electrical field lying entirely between the two conductors eliminates radia-tion which is not only a disturbing factor, but a loss of energy. Also, surrounding objects have no effect upon its electrical character-ietice

have no effect upon its electrical character-istics. Other flexible concentric transmission lines, when perfectly matched to the antenna, also are shielded against radiation; but their ad-vantages are more than offset by their greater internal losses from the center conductor to the shield through the dielectric. In Amphenol Co-Axial Cable this loss has been reduced to a negligible amount by the use of Amphenol "912", a polystyrene base insulating material.

material.

END SEAL A perfect end seal for hanging cables (where cable is coupled to antenna). See preceding page. Cable Connectors

For connecting two cables together or connect-ing the cable to a chassis, rack or panel, see cable connectors on next page.

This cable may be buried in the ground for installations where the antenna towers are located away from the transmitter building.

See Next Page for Data on Other Amphenol Cables

AMERICAN PHENOLIC CORPORATION

GENERAL ANTENNA DATA

No attempt is made to illustrate the method for coupling the transmitter to the various types of antenna because there are so many varia-tions that it is impossible to list them all in this limited space. The simplest manner is to couple the trans-mitter directly to the center of a half-wave

antenna.

Amateurs having special problems on Colli-Amateurs having special problems on Colli-near, Rhombic, bent antennas and other types made necessary because of limited space or special applications are invited to consult AMPHENOL engineers on how to correctly at-tach AMPHENOL Co-Axial Cable.

MATCHING BEAM ANTENNAS

Close-spaced, 3-element beams for 8 ohms im-pedance in the center of the radiator can be fed with a 600 ohm open wire line and the impedance matched by a quarter wave length section of 72-12-W cable. Cables having im-pedances less than 50 ohms for transmission lines are not recommended because their losses are excessive are excessive.





FOR AIRCRAFT

Its light weight in addition to its electrical efficiency has made Amphenol Co-Axial Cable popular for aircraft use.



FOR AUTO RADIO

Important as ultra-high frequency feeders as used in mobile police transmitters, television, or broadcast pick up.

Low capacitance and fully shielded, these cables are also ideal for broadcast band automobile receivers, bringing in maximum signal strength without pickup.



FOR MARINE USE

The #72-W synthetic resin covered cable will withstand the abuse of marine work. Moisture absorbtion of covering is 100% waterproof and not affected by salt water, oils or acids.

FOR TELEVISION RECEIVERS



Television waves resemble light in that they do not readily go around corners, making it necessary to in-stall antenna as high as posstall antenna as high as pos-sible away from all obstruc-tions. For installations where long leads are required, and for aerials long distances from the transmitter, the use of Amphenol Co-Axial Cable will make the difference be-tween a good picture and no picture at all.

FOR TEST EQUIPMENT

Used by many manufacturers for test instrument leads where high frequencies or high voltages are carried from the receiver under test to the instrument.

A—Center Conductor to specifications; B—Amphenol #73 Ultra-low-loss Insulating Beads (see description on page 24); C—Tightly braided shield composed of 24 strands of #36 tinned copper wire; D—Choice of cotton, rubber or synthetic resin cover.

No. 72 —Double cotton braided cable\$0.60 per ft. No. 72W-Synthetic resin covered cable 1.00 per ft. No. 72-R -Vulcanized rubber covered cable .. 1.00 per ft.

Note: Price is the same regardless of the size copper center conductors selected. There is a slight additional charge for special conductors such as phospor bronze.

Similar to cable described on preceding page, but available with three types of outer covering and center conductors to your specifications. your s No. 14

No. 14 solid center conductor is recommended for all long lengths where the installation is permanent. No. 18 stranded Wire is recommended for portable cables.

Capacities	of	Cable	with	Various	Center	Conductors
Center		Capad	rity	Cer	iter	Capacity
Conductor		per fo	ot	Cond	luctor	per foot
Size		mmf	d.	Si	ze	mmfd.
12	12 20			2	4	7.9
14		16		2	6	7.0
16		13.7	7	2	8	6.4
18		11.3	7	3	0	5.8
20 10			32		5.4	
22		8.8	3	3	4	5.0

OUTER COVERINGS

Double cotton lacquered braid - For indoor use, for wiring Double cotton lacquered braid — For indoor use, for wiring apparatus and for running through metal conduit. **Vulcanized rubber covering** — For use as a portable cable which is flexed a great deal, for installing in damp locations. **Synthetic resin covered** — $\frac{1}{32}$ " wall of Amphenol "920", a synthetic resin of the Vinylite type. For all permanent outdoor installations. May be buried under ground. Is imperious to oils gride and ultra violate rare oils, acids and ultra-violet rays

HIGH TEMPERATURE CABLES No. 72-T

Identical in construction to the above Co-Axial Cable, but the beads are molded from mica-filled bakelile. For use where high temperatures are encountered. Prices are the same as for above cable







CABLE TYPE With Coupling Ring No. 93-M — Male \$2.00 No. 93-F1—Female ... 2.00



Note: For Chassis Connectors use #93-F or #93-M1 as the cable connector.

A newly designed line of Connectors for the No. 72 Co-Axial Cable.



A B C D A—Center Conductor to specifications, the standard is #22stranded wire, No. 76—225; B—#73-1 Ultra-low-loss Insulating Beads (see description on page 24); C—Tightly braided tinned copper shield; D—Double cotion lacquered braid. Similar in construction to the No. 72 Co-Axial Cable but the "912" insulating beads are only $\frac{3}{16}$ " in diameter. Overall diameter $\frac{1}{4}$ ". Primarily designed for internal leads inside Use No. 80 series Single Conductor Connectors described on page 13.



Price is the same for all sizes of center conductors.

TO VIDEO AMPLIFIER

FROM ICONOSCOPE



Low capacitance cable is required for coupling units of television equipment where a wide band of video frequen-cies must be transmitted with minimum attention and phase shift.



COUPLING UNITS OF TRANSMITTERS



Used for cross connecting high fre-quencies on all types of short wave equipment.

CONTROL ROOM TO MONITOR



Wherever it is necessary to transmit high frequencies inches or miles with-out radiation or pick-up.

High Impedance Mike To Remote Amplifier



Used in theaters, churches and other public address installations where long high impedance microphone leads are required

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Ultra-Low-Loss

AMPHENOL "912-B" INSULATING MATERIAL

A water-clear transparent insulating material, similar to Amphenol "912", but has added plasticizers so that it can be easily machined on ordinary lathes, drill presses, etc.

Already widely used in the radio industry for every conceivable use, wherever high frequencies or high voltages are used.

Recommended for making every type of ultra-lowloss insulator-Trimmer bases, terminal strips, bushings, open wire transmission line spreaders, mountings for binding posts and pin jacks, stand off insulators, condensers, end plates, coil supports.

(

TERMINAL STRIPS

Sheet stock cut in convenient strips for the amateur and laboratory technician. Used for coil supports, open wire transmission line spreaders.

Supplied only in 12" strips in the width listed.

No.		Size	Lis	t Price
65TS1-250 65TS1-500 65TS1-750 65TS1-1000		1. "x1/4" 1. "x1/2" 1. "x3/2" 1. "x3/4" 1. "x 1"		\$.26 .35 .42 .52
65TS2-250 65TS2-500 65TS2-750 65TS2-1000	•••••	¹ /8''x ¹ /4'' ¹ /8''x ¹ /2'' ¹ /8''x ³ /4'' ¹ /8''x 1''	·····	.38 .57 .71 .90
65TS3-250 65TS3-500 65TS3-750 65TS3-1000	· · · · · · · · · · · · · · · · · · ·	³ / ₁₆ "x ¹ /4" ³ / ₁₆ "x ¹ /2" ³ / ₁₆ "x ³ /4" ³ / ₁₆ "x 1"		.57 .84 1.05 1.34
65TS4-250 65TS4-500 65TS4-750 65TS4-1000		$\frac{1}{4}$ "x1/4" $\frac{1}{4}$ "x1/2" $\frac{1}{4}$ "x3/4" $\frac{1}{4}$ "x 1"	••••••••••••••••••••••••••••••••••••••	.72 1.08 1.36 1.75
65TS6-250 65TS6-500 65TS6-750 65TS6-1000		³ /8''x ¹ /4'' ³ /8''x ¹ /2'' ³ /8''x ³ /4'' ³ /8''x 1''	·····	1.06 1.60 2.00 2.60
65TS8-250 65TS8-500 65TS8-750 65TS8-1000		1/2"x1/4" 1/2"x1/2" 1/2"x3/4" 1/2"x 1"		1.37 2.10 2.66 3.45

AMPRENOS

Ultra-Low-Loss "912-8 RIBBON"

oisture Absorption Nil

Dielectric Constant Her Factor oss Factor

> 65-001 65-005

Ultra-Low-Loss

"912-B RIBBON"

For the Amateur and Technician

Price \$.50 2.50

100' Rolls Individually Boxed Thickness Width

Thickness .001 .005

Electrical Characteristics of Amphenol "912-B" While not as electrically perfect as Amphenol 912 due to the added plasticizers to make material machineable this "B" stock is superior to ceramics, bakelite, etc. The following average figures have been confirmed by independent laboratories and manufacturers manufacturers.

15	Dielectric Constant 1 and 10 meg. 4.1 Power 1 meg. .0094		
	Resistivity Volume, Of Moisture Absorption Practically Nil	ums per c	u. cm., 10 ¹⁴ Vithstands temperatures of 200° F.
ce	912-B SHEET STOCK - 12x16		912-B TUBE STOCK
26	Supplied in sheets 12x16" Prices quoted on request for pieces cut to	No.	Outside Wall List Pric Diameter Thickness Per Foc
42	measurement.		$\begin{array}{c} \text{Diameter flickness Perfor} \\ \dots & 1^{1/2''} & \dots & 1^{1/8''} & \dots & \$2.4 \\ \dots & 1^{1/2''} & \dots & \frac{3}{16''} & \dots & 3.5 \end{array}$
	No. Thickness List Price $65-062$ \$ 4.00	65T1-187 65T1-250	$ \dots 1^{1/2''} \dots 3^{*''}_{*} \dots 3^{*}_{*} \dots$
38 57 71 90	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	65T2-125 65T2-187 65T2-250	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
57 84	65-500	65 T3-12 5 65 T3-187 65 T3-2 50	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
05 34	No. Diameter Price per it. 65R375 3/8" .45	65T4-125 65T4-187	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
72 08 36 75	65R500 1/2" .80 65R625 5/6" 1.25 65R750 3/4" 1.65 65R812 14" 1.95	65T5-125 65T5-187	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
06 60	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	65T6-187	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
00 60 37	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	65T7-187	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
10 66 45	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	65T8-125 65T8-187 65T8-250	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

Ultra-Low-Loss "912-B" Ribbon

A strong, water-clear, flexible insulating material to take the plac of papers, treated fabrics and other thin dielectrics used in wind ing condensers, transformers, etc. Used as a wrapped insulatio for wires, bars and cable terminals and splices. Standard core for all size rolls is 3". Other cores may be spec

fied when it is necessary to fit machine mandrels. Available i manufacturers from .001" to .010" in thickness, cut to specific tions, in widths up to 28".

Can be used on standard coil winding machines without danger of undue breakage. Tensile strength 9600 lbs. pe sq. inch for .001" thickness; folding endurance, number of folds, 2500 (M.I.T.-Olsen folding endurance tester.)

Moisture absorption is practically nil, being only .8% (90% humidity, 70° F., making this ribbon ideal for hig frequency applications. Following chart shows its superic electrical characteristics.

Manufacturers write for special "912-B" Bulletin No. 58-M showing complete technical data.







Supplied to Manufacturers In Metal Containers

List Price

AMPHENOL

No. 53-Q — Quart Can\$ 4.00 per qt. No. 53-G — Gallon Can 13.25 per gal. No. 53-5G — 5 Gallon Drum 12.26 per gal. No. 53-30G—30 Gallon Drum 11.31 per gal. Liquid "912" can be supplied in colors at slightly higher prices, in quantities of 5 gallons or more.

No. 53-GT—"916" Thinner 2.00 per gal.

Drums or Cans Non-Returnable

Net Weight per gallon 7.85 lbs. Gross Weights—30 gal. drum—265 lbs.; 5 gal. can—413/4 lbs.; 1 gal. can—83/4 lbs.

COIL IMPREGNATING

For ceramic coil forms follow the procedure outlined under ceramics in the border of this page, then wind the coil. Re-dip the finished coil in undiluted Liquid "912" and the wires will be sealed and firmly anchored in place between two films of pure "912".

Coils with forms made from fibre or paper tubing can be treated in the same manner, allowing the use of lower priced coil form materials.

of lower priced coil form indefinition. Lattice, layer and pie wound coils, such as R.F. chokes, are often coated during the winding process. Wire is fed through a bath of Liquid "912" and wound while wet. This method individually seals each turn and utilizes the adhesive qualities of Liquid "912" to anchor and maintain coil shapes. For some cases, as for operation under high humidity conditions, finished coil may be given a quick dip into Liquid "912" 24 hours after it is wound.

Polystyrene-Base

- Liquid ''912''
 - Non-Hygroscopic
 - Loss Factor Nil
 - Rapid Drying

A new synthetic resin product, used by many radio and coil manufacturers for impregnating coils, paper tubing, fibre, ceramics, fabrics and other moisture absorbent materials. Humidity proof and resistant to most oils and acids. Defi-nitely seals all porous materials and often improves the electrical quality by taking the place of moisture in the pores pores.

Essentially it is simply the liquid form of Amphenol "912", the world's finest insulator.

Caution: Not to be confused with other transparent adhesives made from cellulose acetate and similar materials which ac-tually absorb moisture.

Expensive parts used in the construction of radio apparatus should not be dipped into compounds which by their very nature absorb moisture. Will not harm coverings of silk, celanese, enamel or cotton covered wires.

Seal Coils Against Dirt.

Of equal importance to sealing coils against moisture, a coating of insulating material is very necessary to keep dust from coil windings.

Dust is filled with particles which are good electrical conductors, and a coil which is perfect when new will have a steady "Q" drop as dust gathers.

The above is of particular importance to users of self-sustaining coil forms and coils wound on good coil forms. Sustaining coil forms and coils wound on good coil forms. Keep tightly covered when not being used to prevent rapid evaporation of solvent which will thicken liquid. Standard formula has a gravity of 24° Beaume, suffi-ciently heavy for brushing or dipping. For heavier coats dip several times, allowing a few hours between each dipping. each dipping.

GENERAL INSTRUCTIONS

Because the loss factor of Liquid "912" is nil, heavy layers may be used without affecting the electrical characteristics of the coil. However, for most applications only a thin coaling is necessary, making this the most economical of all coil dones. coil dopes.

coil dopes. Remove all moisture from parts to be impregnated by heat-ing in an oven at temperatures in excess of 212° F., the ing in an oven at temperatures in excess of 212 boiling point of water. **Don't seal the moisture in.**

Dipping is recommended because the Liquid "912" pene-trates thoroughly. Place or hang parts in reverse position from dipping operation for a more uniform coat. When necessary, Liquid "912" can be applied with a brush.

necessary, Liquid "912" can be applied with a brush. No baking of the impregnated part is necessary. Liquid "912" dries by evaporation of solvent or thinner, leaving behind a coat of pure Amphenol "912" polystyrene-base material. Dries sufficiently for handling in from 4 to 8 minutes, depending upon the thickness of the coat and depth of penetration. Note: Liquid "912" is not recommended for use where tem-peratures in excess of 190° are encountered. The basic resin, being a true thermoplastic, will soften at 200° F., although it will immediately re-harden upon cooling wittout change in the electrical properties. This is no serious drawback, however, as temperatures below this would melt wax impregnated condensers, tar filled transformers, etc., before softening the Amphenol "912".

See Electrical Characteristics of Solvent at bottom of page.



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In Convenient Bottles

No. 53-2-2 oz. Bottle Liquid "912"50c List No. 53-4-4 oz. Bottle Liquid "912"65c List No. 53-2T-2 oz. Bottle "916-8" Thinner .. 25c List For the Laboratory man, amateur and serviceman, Liquid "912" is available at all Amphenol jobbers in 2 and 4 ounce bottles. A convenient brush is supplied for brushing coils, although dipping is recommended.

AMPHENOL "916-8" THINNER

Amphenol Thinner for Liquid "912" has a D.C. re-sistance of 430,000 megohms, superior even to poly-styrene-base Amphenol "912" solids.

Most coil dopes have solvents which are actually conductors of electricity, and since all the solvent never leaves an impregnated coil, there is left behind this liquid to drop the "Q" of the coil whenever the coil becomes warm.

Do not use any other thinner in Liquid "912" but Amphenol "916". Other thinners may have poor electrical characteristics and most of them will cause precipitation of the solid.



CHARACTERISTICS

ELECTRICAL

Chart shows that when all solvent has left Liquid "912" the coating left behind has the following electrical characteristics:

Dielectric Const	ant			2.39
Power Factor				.00073
Loss Factor				.00180
HIIMIDI	TV	TTC	PTC	

HUMIDITY TESTS An .015 film of Amphenol "912" will repell an abnormal atmosphere of 90% relative humidity for a continuous period of 14 days. When "Q" of coil drops after continued exposure it will return to normal "Q" immediately after drying. This is not true of most coil dopes.

SEALS CERAMICS



Impregnates a l small or irregula unglazed ceramics a 11 unglazed ceramics such as coil forms, trimmer condenser bases, etc. Will not pile up in grooves like clazing.

To impregnate ceramics, slowly heat at 300° F. to dry out accumulated moist-ure, then plunge immediately into Amphenol Liquid "912" diluted with 50% No. 916 Thinner. Immerse at least one hour. Upon removing, agitate parts in a wire basket or centrifugal to remove excess liquid.

SEALS FIBRE



Fibre or paper finished with Liquid "912" has a hard surface coat, transparent with a high lustre. To apply, first dehydrate by baking in an oven at 220° F., then plunge into Liquid "912". Fibres so treated have a very low loss factor.

CEMENTS "912" ROD - SHEET - TUBE



Use Liquid "912" to cement parts made of Amphenol "912". Actually fuses parts together instead of merely gluing them. Dries sufficiently for handling in from 3 to 5 minutes. CAUTION: This Liquid Will Not Cement Parts Made From Amphenol "912-B".

FOR CEMENTING "912-B" Use Amphenol Cement No. 901. Avail-able in small bottles or metal con-tainers as listed for Liquid Amphenol "912" at the same prices.

Invited to Consult our Chemiste

Manufacturers having Special Problems





LD-1 & LD-2 LABORATORY DIES

List Price \$10.00 ea.

Special dies for punching keyed chassis holes for Amphenol "S" & "SS" type sockets, "CP" type plugs and "61" power plugs and receptacles. Used by laboratory men, amateurs and radio parts jobbers.

Made of tool steel, properly hardened. Dies are capable of punching from several hundred to a thousand holes, depending upon the care used by the operator.

These dies are intended for laboratory work only. For regular production of chassis use the punch press dies listed below.

Hole Punched by LD-1 & PP-1

LD-1 DIE—Punches a 1-11/64" keyed hole for all standard "S" and "SS" tube sockets except 7-large, 7-combination and 7-combination dial light. Also used for punching holes for "61" series 110-250 volt receptacles and plugs.



In the chassis or panel drill a 1/2'' hole in center location of socket or plug. Place die on smooth hard surface (ordinary work bench). Insert the punch pilot through this drilled hole and align flat side of pilot with flat side of hole in die.

With a fairly heavy hammer deliver one or two light blows which will bring the punch and die together against the chassis ready for the piercing blow. To break through metal *hit the punch squarely on the top*. A glancing side blow may break the punch pilot. To facilitate removal of punched slug, a 1/3'' hole is provided in die alongside of pilot hole. Insert a steel rod or nail in this hole and push out slug.

Keep Dies Sharp

Dies or punches with a nicked or dull cutting edge will make a ragged hole and will require considerable more force for punching holes, endangering the life of the die.

Sharpen by holding die or punch square against an emery wheel.



Hole Punched by LD-2 & PP-2

LD-2 DIE—Punches a 1-21/64" keyed hole for the following:

Sockets-S-7L, S-7C, 78-7CD and SS-7



LD-3 LABORATORY DIE List Price \$3.00

Punches a plain round hole $\frac{14^{\circ}}{16}$ in diameter for Amphenol "PCSF" and similar microphone connectors. Also used for punching holes for "90-C" co-axial cable connector, or any part requiring a $\frac{14^{\circ}}{16}$ " hole.

Drill a $\frac{9}{9}$ " hole in panel or chassis. Follow instructions as for LD-1 and LD-2 Dies, except there is no need to locate punch in any particular position since it punches a plain round hole without a key.

Sharpen as instructed under LD-1 and LD-2 Dies.



PRODUCTION DIES For Punch Presses No. PP-1 & PP-2 List Price \$33.35 ea.

These oil hardened tool steel dies w render service indefinitely.

As illustrated, this is punch and die the most simple form. It is possible to the round die ring into a large bolster pla on the press and on this plate fast guides, stops, etc., to locate socket he punching positions.

Die ring accurate on outside diameter. T dowel holes and threaded screw holes the bottom make its inclusion into a block very simple and inexpensive.

Punch has 1" shank to fit small press When necessary to fit into larger press a split sleeve should be used.

Rubber stripper fitting over punch sat factorily strips chassis from punch af piercing operation. $\frac{5}{32}$ pilot pin is p vided in the punch and its use is option



RETAINER RING HAND TOOLS

For #7 and #2-5 Retainer Ring

The retainer ring hand tools for mounting miniature sockets and pin jacks are so simple that most users construct them themselves.

For #7 ring fasten a length of tubing or pipe, having a 5%" I.D., to a wooden handle. Length of tubing should be just long enough to clear surrounding mechanism in apparatus.

For #2.5 ring hand tool is constructed as for above but I.D. of tubing should be $\frac{5}{16}$ ".

For those who prefer to purchase the above tools, they will be made up on special order. For #4 Retainer Ring

As Used on "S" & "SS" Type Sockets, "CP" Plugs & "61" Plugs & Receptacles. These Retainer Ring Hand Tools operate on the principal of a spring collet. Place retainer ring on pilot of tool, place over socket and press down. Pushing down on handle of tool causes outer sleeve to pass over pilot and force the retainer ring into place on the socket. No experience is required to operate.

Many users fasten handle to ram or plunger of a small kick press. This arrangement leaves the hands of the operator free to place socket and ring into position, and to guide chassis being assembled.

All metal parts are cadmium-plated hardened steel. Handle is wood for comfort.

Used on "S" & "SS" Type Sockets & "CP" Plugs No. 51-1—For Small #4 Rings...\$5.55 List No. 51-2—For Large #4 Rings...\$5.55 List

Used on "61" Plugs & Receptacles No. 51-3—For Small #4 Rings...\$5.55 List Weight each ½ lb.



AMERICAN PHENOLIC CORPORATION 1250 VAN BUREN STREET + CHICAGO, U.S.A.

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HARDWARE

Primarily intended for use with Amphenol sockets and connectors, but extensively used by manufacturers, amateurs and laboratory men for many other purposes. Parts listed on this page are not usually carried in stock by the radio parts jobber, but he can obtain them for servicemen and amateurs.



four sides.

61-61 SHELL Drawn steel, bur-

nished nickel

shell for recessing

plugs or sockets below the chassis

ACS SHELL

A light weight alu-

minum shell which

permits extending

sockets or plugs

13" above or be-

low surface. Used

extensively for

surface.

No. 61-61-Shell only 15c ea.

mounting on workbenches. Knockouts in

side of shell provide wire entrances from

No. 23-15—Punched for small "S" sockets

No. 23-1L-Punched for large "S" sockets

No. 23-1 —Blank, without socket hole 10c List



Punched from steel, cadmium-plated. Permite mounting sockets or plugs above surface in a limitreceptacles to surface of wood cabinets

and yet keep mounting screws in interior. No. 3-19A—With Short Cap 20c List No. 3-30A—With Standard Cap.....20c List



Ground clamp for shielded cables $\frac{5}{16}$ " in diameter (o.d. of shield), such as Amphenol No. 72 Flexible Co-Axial Cable listed on pages 25 and 26.

No. 72-25 --- 10c List

CABLE CLAMP

A positive gripping cable clamp punched from steel and cadmium-plated. Ānchors cables to panels or chassis, relieving all strain on solder contacts. Fits into any shape hole from T' to 5%". One leg of clamp is pierced so that it may be screwed or riveted to chassis.

No. CC-4-Cable Clamp 10c List

ESCUTCHEONS



For magic eyes. Modernistically designed to match the other components of your apparatus. Finished in antique bronze.

No. 10-1-For 6-prong magic eye.25c List No. 10-2-For octal magic eye.30c List

LIVE RUBBER CUSHIONS



serting in chassis or panel riveting holes to lessen vibration of an assembled part such as a tube socket.

Live rubber cushions for in-

Molded from pure Para rubher

No. 22-6 -For 3/8" hole \$3.00 per C No. 22-10-For 1/4" hole \$1.50 per C



BLACK RUBBER GROMMETS

For protecting cables from abrasions when passing through a chassis or panel hole.

No. 22-1 For $\frac{9}{16}$ " hole, $\frac{7}{16}$ " I.D...\$1.25 per C No. 22-2 For $\frac{7}{16}$ " hole, $\frac{5}{16}$ " I.D...\$1.05 per C No. 22-3 For 5" hole, 3" I.D...\$.90 per C

FIBRE WASHERS



One flat and one extruded fibre washer. Used to insulate a metal part from chassis or panel. Fits into 1/2" hole. Insulated hole is .395", 5/8" O.D.

No. 75-20—Flat Washer\$.95 per C No. 75-21-Extruded Washer....\$1.40 per C





RUBBER SEAL WASHER



A live rubber washer for sealing cable entrances on cable connectors, etc. Used on Amphenol Heavy Duty Power Plugs (page 17) and Heavy Duty Radio Connectors (page 16).

132" O.D.; 7" I.D.; 1/8" thick. Resiliency of rubber sufficient to take cables up to 5/8".



PLUG CAP FOR SHIELDED CABLES

Plug cap for "S" type sockets, "CP" type plugs and "61" receptacles. Cable en-trances of cap is an extruded shoulder to which the shield of cable can be soldered.

Ideal for auto radio work, etc., where complete shielding must be carried through the connector. Cadmium-plated for easy soldering.





No. 44-13

2c List

IMPEDANCE MATCHING PLUG

A plug and socket arrangement for quick switching of a common lead to any 6 posi-tions; for switching 3 circuits in 2 positions; other combinations will suggest themselves to the array the user.

Widely used by public address amplifier manufacturers for impedance matching and similar applications.

Socket is similar to the standard "S" type tube socket. Mounts in the same type hole and is held firmly in place with the #4 re-tainer ring without the use of screws or rivets. Aluminum dial, which mounts between socket and chassis, has numerals from 1 to 6 etched on a black background.

Special plug has metal pointer for indicating position. For mechanical stability 6 prongs are provided.

Two types of plugs are available. 1—Blank Plug (without cable entrance) when assembly is to be used as an impedance matching switch; 2—Plug with rubber grommet hole for cable, permitting selection of six circuits by merely inserting plug in different positions.

No. IMS6-6-contact special socket.....20c ea.

No. IMP6-6-prong blank plug with pointer 50c eq.

No. IMP6C-Cable Type Plug with







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Published June, 1939

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radio industry.

Amphenol is housed in a modern building in the heart of the radio industry. Amphenol engineers are constantly in touch with the development laboratories of all branches of radio and electronics, making Amphenol products the parts used in apparatus for the succeeding year. Complete manufacturing facilities include modern high-production molding machinery and fabricating equipment. A well equipped tool room manned by a large staff of expert radio-parts tool makers enables Amphenol to make the rapid changes so necessary in the ever changing

More than 50,000,000 Amphenol radio parts in use today



In this catalog we have endeavored to show the most popular items in our line of Sockets, Connectors and Accessories for the Radio and Electrical Industries. It is our earnest desire to have our line forever referred to as "The World's Finest Sockets and Plugs," by supplying products of the highest standard which can be produced through research and proper raw materials. Modern manufacturing equipment makes it possible for us to produce highest quality parts most economically.

MANUFACTUREES OF RADIO AND ELECTRICAL EQUIPMENT—find in Amphenol a dependable source of supply with production facilities ample to take care of their heaviest requirements, and an engineering department which will intelligently co-operate with their problems and work out special adaptations to suit their particular needs. No obligation is entailed for consultation on your problems. Information given to any member of the Amphenol staff is ethically held in strictest confidence.

SERVICE—Located centrally in Chicago, close to transpor-tation and carrying several millions of Sockets and Connec-tors at all times, we do render prompt service. Approxi-mately 80% of all orders are shipped the same day (within 8 hours). More than 26,000 orders are handled annually.

DISTRIBUTING JOBBERS—Sales franchises are given only to well established responsible distributors who carry complete stocks and are able to render dependable service. With them we co-operate by supplying displays, literature, metal stock cabinets and other merchandising assistance. Most Amphenol products are attractively packaged in a crisp blue and white box — indicative of the quality within.

GUARANTEE—The Amphenol trade mark identifies our products and warrants that they are properly engineered and made of the best materials and workmanship. Any

article which proves defective as to workmanship or mate-rial is subject to prompt replacement. This is the full extent of our responsibility concerning defective material.

WORLD WIDE DISTRIBUTION—Farseeing manufacturers realize that in using Amphenol products, which are well known and distributed throughout the entire world, they maintain for their customers a local replacement service in every corner of the globe.

EXPORT—Amphenol products are speedily and intelli-gently handled direct from Chicago. This Export Depart-ment, in close touch with engineering and production, ren-ders to the overseas distributor and manufacturer the same service through the mails as is given to domestic customers by sales engineers.

Extensive experience in handling the documents and routing of shipments assures foreign customers of prompt shipments laid down in the proper port with a minimum expense and delay. There is no additional charge for export packing or handling.

Many other items not shown in this catalog are available for immediate delivery. For the radio manufacturer we carry many special items which are particularly adapted to high speed production. New items are constantly being added to the Amphenol line.

Please consult our representative or write direct to the Chicago office regarding your needs for Sockets, Connectors and Insulating Materials not listed here.

	AMERICAN PHER	VULIC COM UNATION	
New York City Office: American Phenolic Corporation	1250 Van Buren St. Phone: HAYmarket 3266	Chicago, U.S.A. Cable Address: AMPHENOL	~
53 Park Place Phone: Barclay 7-2790-1	Service is available to you	through these Representatives	
Atlanta Buffalo Cleveland Dallas Dervor Kansas City Los Angeles Momphis Pittsburgh Portland Richmond San Francisco St. Louis	Hollingsworth & Still Harry B. Segar Arthur H. Baier Robert M. Campion Ronald G. Bowen Harold E. Walton Herbert A. Roes D. N. Marshank J. M. Cartwright G. O. Tanner Don H. Burcham Fred G. Groves James P. Hermans Norman W. Kathrinus	239 Peachtree Street Elicott Square Building 1957 Temblethurst Road, South Euclid Box 4116—Station A 3848 King Street Francis Palms Building 2017 Grand Avenue 2022 West Eleventh Street 1288 Vinton Avenue 907 American Bank Building 917 S.W. Oak Street 2317 Third Avenue 235 Ninth Street 480 East Jackson Road, Webster Groves, Mo. 480 A	Main 5878 Cleveland 0715 Yellowstone 9555 9-3545 Grand 4734 Cherry 3442 Harrison 2400 Fitzroy 9913 2-0612 Court 0131 Broadway 3830 2-4193 Market 4166 Republic 5076
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CANADA

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187 Duchess Street 600 Grant Street

J. R. Longstaffe

AMEDICAN DHENOLIC CORPORATION

Toronto

Television

Many standard Amphenol parts are adaptable to television as described in this catalog; but special items intended for television only are not listed for several reasons:

Television reception is possible in only a few localities, and interest to the general public is confined to news stories reporting its progress;

This branch of the industry is still too new to have any standards by which the jobber can govern his stock;

Custom-built receivers are assembled from kits which contain all the necessary parts;

As yet there is no replacement parts market for the serviceman.

Manufacturers of television receivers and broadcasting equipment are constantly in touch with Amphenol sales engineers and are cognizant of the fact that Amphenol's entire factory is at their disposal to further this new important advancement in the electronics art.

Amphenol "912-A" and "912-B" ultra-low-loss insulating materials are playing an important part in handling the high frequencies at which television is broadcast.

Sockets, Connectors and other special parts are being molded from 6 different types of insulating material. Special coil forms, minute-capacity condenser housings, high voltage insulators, safety devices and cables are being constructed to manufacturers' specifications.

As soon as standards are agreed upon and there is a market for television parts, an entire line of parts will be placed in stock by the Amphenol distributor in your vicinity. But not until there is such a need will Amphenol attempt to sell television parts to the amateur and serviceman through their distributors.

Ever mindful of the moral responsibility entailed in supplying parts to be used in conjunction with high voltages, Amphenol will supply parts which servicemen and the builders of television apparatus can use with utmost safety.

Amphenol Co-Axial Cable

For antenna lead-ins, patch cords, cross connecting high frequencies, etc., Amphenol Co-Axial Cable is being used on all the difficult installations.

For receivers at a distance from the television broadcasting antenna and where a long lead-in is necessary, it is a known fact that Amphenol Co-Axial Cable will bring in a clear strong picture when ordinary twisted pairs and concentric transmission lines fail to bring in any signal at all.