OPERATING INSTRUCTIONS FOR AMECO PREAMPLIFIERS MODELS PV AND PH

The Ameco PV and PH Preamplifiers are units which can be added to existing receivers and converters to improve their gain, noise figure, spurious signal rejection and image rejection.

They require 6.3 volts at 130 ma. for filament heating and 100 to 250 volts at 8 ma. B+. The power required is small enough to be taken from the receiver or converter power supply. When a separate power supply is desired to avoid making connections inside other equipment, the Ameco Model PS-1 Power Supply is very convenient and inexpensive. The PS-1 can be used for most makes of converters and the preamplifier at the same time.

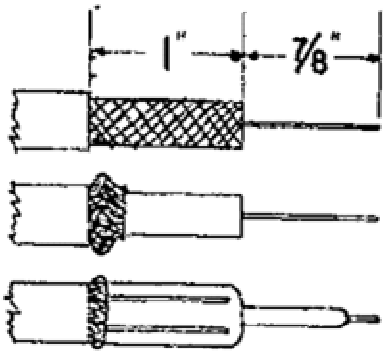
The Model PV is made for any one of three Amateur Bands - 50 to 54 Mc., 144 to 148 Mc. and 220 to 225 Mc. It uses an RCA Nuvistor tube, type 6CW4, in a neutralized circuit. Both grid and plate circuits are tuned and all tuning adjustments are readily accessible from the top of the chassis.

The Model PH is made for any one Amateur Band, Citizen's Band, or any police, fire or commercial frequency between 2 and 49 Mc. It is especially effective when used with the older or simpler receivers on the 10, 15 and 20 meter bands as these receivers' normal sensitivity, signal to noise ratio and image rejection are usually poor in this frequency range. Model PH uses a high gain pentode type 6CB6 tube.

INSTALLATION

To install either the PH or PV, the antenna is connected with a "Motorola" auto radio plug to the antenna jack of the Preamplifier. A short length of coaxial cable and another Motorola plug is used to carry the signal from the preamplifier to the receiver or converter antenna terminals. The coaxial cable is connected to a Motorola plug in the following manner:

Remove outer vinyl covering for 1-7/8".
Strip braid and inner insulation off center conductor for 7/8".
Push braid back to form a bead all around.
Insert center conductor through pin until braid is against end of plug.
Bend center conductor to hold plug in place.
Roll braid between fingers to roll it over the end of the plug for about 1/16".
Solder the braid to the four tabs of the plug.
Solder the center conductor to the pin and cut off excess wire.



Power is fed to the Preamplifier through a three conductor cable. The shield goes to the chassis (B- and grounded filament) of the receiver or converter, the brown wire goes to a 6.3 volt source and the blue wire to a B+ point, 100 to 300 volts. MEASURE the voltage with a voltmeter before connecting the Preamplifier as voltages vary considerably in existing equipment. (In installing the PV, make some provision for turning off the plate voltage to simplify neutralization in the event re-neutralization is necessary). The following table gives the values of resistors that must be added inside the Preamplifier if the B+ voltage exceeds 115 volts. To add the resistor, clip out the yellow wire and solder the correct resistor in its place. See Figures 1 and 2 or 3 and 4.

B+ Volts up to 115	PV 0	PH 0
115 - 135	2.2K, 1/2 watt	2.7K, 1/2 watt
135 - 150	4.7K, 1 watt	3.9K, 1 watt
150 - 180	8.2K, 2 watt	6.8K, 2 watt
180 - 200	10K, 2 watt	8.2K, 2 watt
200 - 250	18K, 2 watt	2--27K, 2 watt, in parallel
250 - 300	22K, 2 watt	2--39K, 2 watt, in parallel

FILAMENT: When either the PV or PH Preamplifiers are used on higher than a 6.3 volt filament supply, additional resistance must be added in series with the brown wire in the cable, preferably at the source.

The PV uses a 6CW4 tube which draws 130 ma. at 6.3 volts. To use it on 12.6 volts, add a 47 ohm, 2 watt resistor between the brown wire and the 12.6 volt source. For use in an automobile, 56 ohms(2 watt) is preferable as the voltage is usually higher than 12.6.