



## P-405, P-408 Receiver Preamplifier



The **Palomar P-405** receiver preamplifier improves weak signal reception for the shortwave listener. Frequency coverage is 1.8 to 54 MHz in four ranges: 1.8-4, 4-10, 10-21 and 21-54 MHz. It provides up to 20 dB of gain and reduces image and spurious response. This preamp also features a two position antenna switch and -20 dB attenuator. Input and output is SO-239 jacks. 8.5 x 3 x 5 inches 1 lb. (210x70x130mm 0.5 kg). Requires a 9 volt battery which is accessible from the [rear panel](#).

The **Palomar P-408** is identical to the P-405 but, operates from 115 VAC 50/60 Hz instead of a 9 volt battery.



Rear Panel Layout

1555

# Preamplifier

Model P-408  
&  
Model P-405

OPERATOR'S  
MANUAL

**PALOMAR  
ENGINEERS**

#### DESCRIPTION

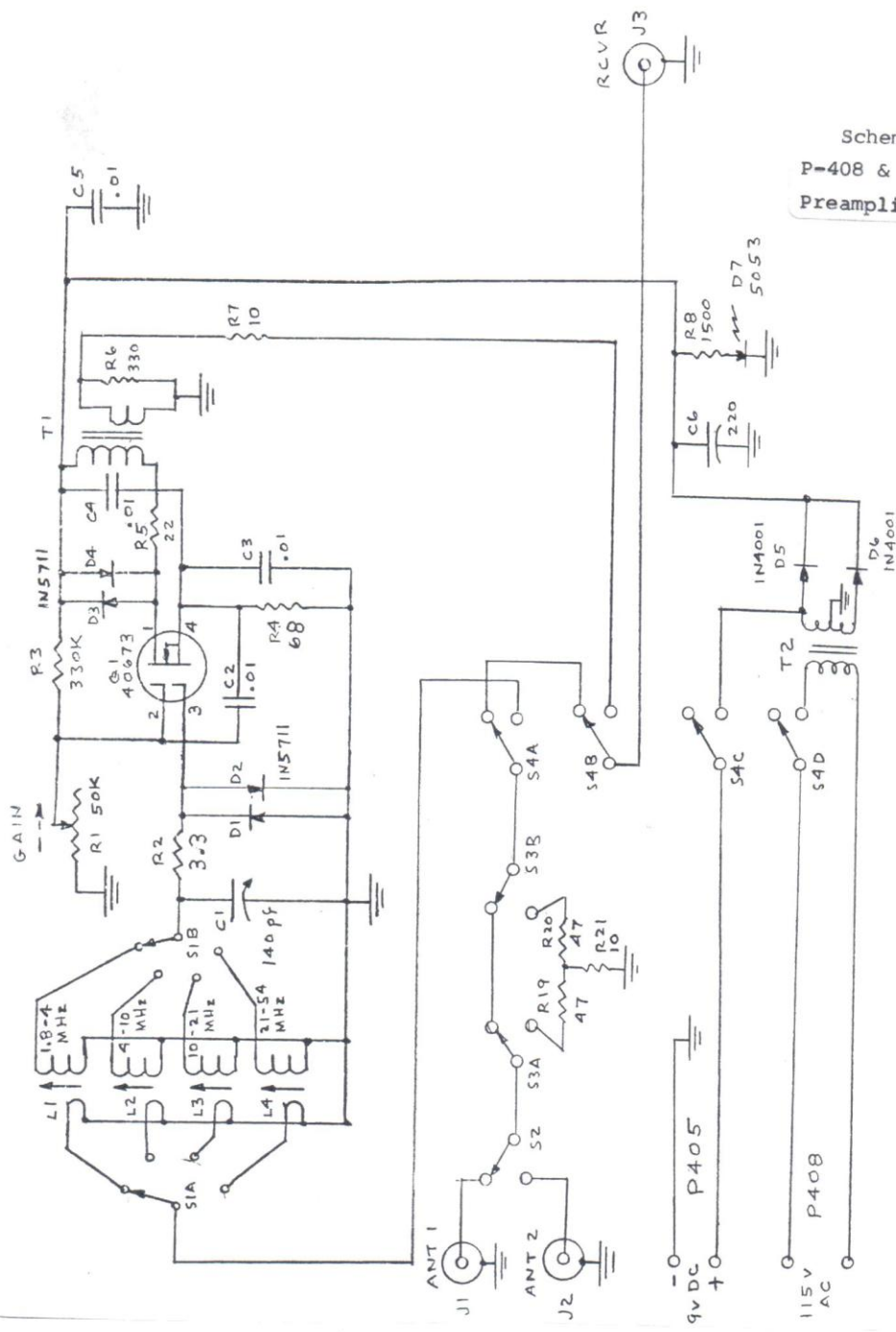
The Palomar Engineers preamplifier may be added to most receivers in the frequency range 1.8 to 54 MHz. It improves the gain, noise figure, spurious signal and image rejection of the receiver. The preamplifier uses a tuned RF amplifier covering all the amateur bands from 160 through 6 meters and all foreign broadcasts as well as other services in this frequency range. It employs a low noise dual gate FET transistor providing a noise figure of 1.5 to 3.5 db over the frequency range 1.8 to 54 MHz. There is also a 20-db attenuator to prevent overload on strong signals. Model P-408 operates from 115-v AC. Model P-405 operates from 9-v DC.

#### INSTALLATION

1. Connect a shielded cable from the RECEIVER jack on the preamplifier rear panel to the receiver antenna connector.
2. Connect an antenna to the ANT 1 connector and, if available, another antenna to the ANT 2 connector.
3. Model P-405: Connect a 9-v transistor radio battery to the connector. Model P-408: Plug the line cord into a 115-v AC socket.

#### OPERATION

1. Set power and attenuator switches OFF. Set the antenna switch to the desired antenna.
2. Tune in a signal on the receiver.
3. Set the band switch to the frequency band to which you are listening.
4. Turn the power switch to ON. The red lamp should light. Peak the signal with the tuning control. Set the gain control as desired (clockwise for full gain).
5. If the signal level is too high move the attenuator switch to ON. This inserts 20 db of attenuation. Note: The attenuator is in the circuit whether the preamplifier is ON or OFF.
6. Moving the power switch to OFF removes the preamplifier from the circuit and connects the antenna directly to the antenna (if the attenuator switch is OFF).



Schematic  
P-408 & P-405  
Preamplifiers

# Palomar Engineers

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