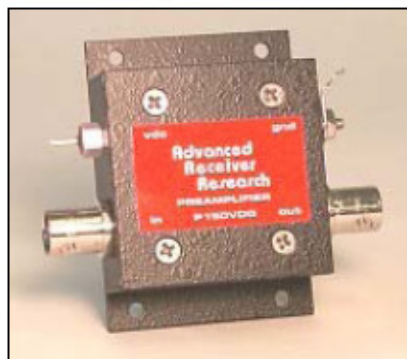


Attachment 11

Advanced Receiver Research (AR2 model P93VDG) Gallium Arsenide FET low-noise pre-amplifier



High Performance Receive Only Commercial Preamplifiers



Features:

- Low noise figure
- High immunity to overload
- Completely shielded
- Suitable for mast/tower mounting
- Small size
- Rugged low profile custom enclosure

Series PXXXVD, PXXXVDA and PXXXVDG preamplifiers have been designed for the most demanding commercial and military applications. Each model has been optimized for the lowest noise figure consistent with excellent strong signal handling capability. These preamplifiers are suitable for use in any receiver or converter/receiver system. Each preamplifier is housed in a rugged low profile custom aluminum enclosure finished with military grade black urethane enamel. Female BNC coaxial fittings are provided for the input and output connections. Other connectors or connector combinations are available. Complete rf shielding is maintained with a feedthrough capacitor for the dc power connection. Mounting holes, suitable for #4 hardware, are located at each corner of the bottom plate.

Several models of preamplifiers are available for most frequency ranges. Selection of the most suitable model for a particular application will depend primarily on the noise figure and overload characteristics required. Preamplifier models using dual-gate MOSFET and bipolar transistor devices (part numbers with suffix VD or VDA) are suitable for most fixed location and mobile applications. Gallium-arsenide FET (GaAsFET) preamplifiers (part numbers with the suffix VDG) provide the lowest noise figures and highest immunity to overload of any preamplifier types. These preamplifiers would be well suited for those systems where absolute best coverage is desired, or in areas where strong signal levels are normally a problem.

Extensive testing of these preamplifiers on existing communications systems indicate that a signal-to-noise improvement of 6 - 14 dB can be expected. For example, a 10 dB improvement in receiver signal-to-noise performance would give a users 5-watt handheld the same range as a 50 watt unit! Each and every preamplifier is precision aligned on our noise figure measuring equipment and should provide long trouble free operation.

All preamplifiers are designed to be powered by a 10 - 16 volt dc source with a current consumption of 25 mA. Low power consumption along with the small size make these preamplifiers ideal for installation within existing equipment or systems, or for remote mounting at the antenna. Mounting the preamplifier at the antenna will provide the best system noise figure.
