



GVM-1 Board Applications

This board has many other uses, with only slight modification, besides video modulating a Gunnplexer.

FM ATV Receive Video Amp - Boost the low video output to 1V peak to peak from an analog satellite TV receiver by clipping out the input pre-emphasis 20 Ohm resistor (marked with an X) and replacing the 270 Ohm with a jumper on this board. Analog satellite TV runs 11 MHz deviation and ATV uses 4 MHz deviation on the 900 and 1200 MHz ham bands. So a gain of almost 3 is required to properly drive a video monitor for ATV. Some receivers have a video gain pot inside but still dont quite make it. This board has an adjustable gain of up to 5.

Video Distribution Amp - You can drive a 2nd monitor, VCR, transmitter, etc., by tapping into a video line without loading it down with this board. Clip out the input pre-emphasis 20 Ohm resistor, * 82 Ohm input termination resistor, 270 Ohm resistor and add the jumper. In fact, you can add 2 or 3 modified GVM-1 boards in the DA configuration.

Add Sound Subcarrier - There are two inputs that can mix FM sound subcarriers to any video line going to an ATV transmitter that does not have sound. The FMA5-G sound subcarrier board(s) output can be connected to the solder pads on the GVM-1 board to be mixed in with the video.

Pre-emphasis and De-emphasis - FM satellite receivers have de-emphasis built in to the video output. However, most all FM video receivers made for wireless security camera systems do not. Pre-emphasis in the transmitter and corresponding de-emphasis in the receiver running 4 MHz deviation can gain twice the distance by lowering the noise floor. The stock GVM-1 can be used as is with the transmitter and another GVM-1 with the 5 pre-emphasis parts replaced with the de-emphasis parts and one removed as shown at the top side of the board on the right.

When not used to also bias a Gunnplexer diode, the 5K varicap bias pot should first be set to give 2.0 Vdc at the VC video output when connected to a 75 Ohm resistive load. Also, to limit the current if accidentally grounded, the 75 Ohm 1 Watt resistor is run from the VC solder pad to the video out jack or video out cable. The 5K Deviation pot becomes the video gain pot for setting the output to 1 Vp-p into the resistive 75 Ohm termination in your monitor, VCR or transmitter.

The GVM-1 board is available from P. C. Electronics for \$29 each or \$25 each in quantity.

