

engineered and manufactured by

BLONDER-TONGUE

9 Alling St., Newark, N. J.

MODEL

PVM

PROJECTION VIDEO
MONITOR

INSTRUCTION MANUAL

DESCRIPTION

This Blonder-Tongue Projection Video Monitor will project a large, high quality TV picture onto a screen. (The unit is supplied with optics intended for a $4\frac{1}{2}' \times 6'$ picture. Optics for $6' \times 8'$ or $9' \times 12'$ picture are available on special order.)

The PVM is built to accept a video signal. It comes to you completely ready for operation - no optical alignment is necessary. Since it is designed for dolly or ceiling mounting, the PVM is equipped for remote operation. All operating controls are connected to the PVM through a 15 foot cable. For maximum brightness and tube life, the projection tube is cooled by a quiet, efficient blower. The entire unit is safely interlocked and all high voltage points are enclosed. The optical system is sealed in a dustproof enclosure, minimizing cleaning problems.

OTHER FEATURES INCLUDE:

* Automatic instantaneous picture tube protection in case of sweep failure. * Automatic picture tube current limiter. * Accessible for service - chassis tilts to expose both sides with unit in operation. * Electrical beam centering. * Precise optical focusing - no backlash. * Snow can be minimized on weak signal by Definition Control. * Standard, easily available components. * Extra long tube life-regulated filament supply. * Regulated supplies for high voltage and focus. * Regulated B+ supply - less than 3% supply voltage variation for line fluctuations from 100 to 130 volts - for long tube and component life. * Anti-corona construction - for high humidity ambients and long component life. * Carrying handles - for ease of handling. * Reusable packing material - to insure safety in transporting.

AUXILIARY EQUIPMENT

This unit is completely self contained for direct video operation. It can be connected directly to the output of a Blonder-Tongue camera (such as transistor model TTVC-1) for closed circuit applications. To produce channels received off the air, the PVM can be used in conjunction with a unit that provides a tuner, IF amplifier and video detector. A quality audio amplifier can be attached to the audio output of the tuner to provide sound. At your request, Blonder-Tongue can recommend suitable units.

SCREEN

A $4\frac{1}{2}' \times 6'$ screen is recommended. The choice of screen material depends on the application for which it is intended. Flat screen material allows a wide viewing angle while beaded material provides a brighter picture at angles less than 30° . For rear projection, use translucent screen material. Rear projection is not recommended, since translucent material absorbs some of the light.

PREPARING FOR OPERATION

Carefully remove the PVM from its shipping crate. Save all packing material for re-use anytime the unit must be shipped. Proper packing minimizes the possibility of shipping damage or misalignment.

Installation

1. Place the PVM on a table or dolly. Position the unit 11' 1" from the screen to the port hole plate for the $4\frac{1}{2}' \times 6'$ optics. (Throw distance must be increased for special order optics as indicated under SPECIFICATIONS). The center of the port-hole should be in line with the center of the screen, with the screen parallel to the port-hole plate.
2. Adjust the screw-in feet at the bottom of the PVM for proper centering and tilt.
3. Use the two screws near the blower housing to mount the Remote Control Box to the rear of the unit.
4. Shield all direct light away from screen.

CAUTION: Be sure to allow free air circulation for the PVM. DO NOT block the ventilating grill. Do not place the unit near anything hot, such as a radiator or a hot water pipe.

For permanent installation the PVM can be mounted on a platform suspended from the ceiling by metal rods. Use as low a platform as possible. To insure uniform focus, tilt the screen so it is parallel to the porthole glass. Leave the remote box loose or mount it permanently in a convenient spot (use the mounting holes provided). Be careful not to damage the vinyl outer jacket if the cable is clamped.



SPECIFICATIONS

Power Requirements:	100-130 volts, 60 cycles, 2.8 amps
Operating Temperature:	-10° to $+50^\circ$ Centigrade
Video Input:	0.5 to 5 volts peak to peak of composite video signal. Provision for separate sync and video inputs.
System Standards:	15,750 cps horizontal scan; 60 cps vertical scan. Black negative.
Resolution:	Video input. 500 television lines at the center of an EIA test pattern when operated at correct throw distance.
Optical*:	The unit is supplied with a 20.4X Schmidt optical system which gives a $4\frac{1}{2}' \times 6'$ picture at a throw distance of 11' 1"
Weight:	Shipping - 208 pounds Net - 138 pounds
Dimensions:	27" x 17" x 28"
Finish:	Light gray and brushed aluminum

*Note:

Other optics are available on special order as follows:

28X System - $6' \times 8'$ picture - 15' 11 $\frac{1}{2}"$ throw distance

43X System - $9' \times 12'$ picture - 24' 4 $\frac{1}{2}"$ throw distance

Variations in throw distance of approximately $\pm 15\%$ will result in little deterioration of picture quality. Large variations from the nominal will cause a loss of contrast and picture quality.

OPERATION

1. Open the left access door by pulling it out and swinging it down.
2. Plug the power cord into any convenient 100-130 volt 60 cycle AC receptacle.
3. Attach the cable with the incoming video signal to the connector marked Video Input. (use "UHF" type SO-239 connectors).
4. Put the Bridging Switch in the "ON" position. The connection marked Sync Input should be terminated with the plug supplied with this unit. The Sync Input connector can also be used to feed another video monitor, (providing the line is properly terminated).

NOTE: Where sync and video are separate, connect the sync signal into the Sync Input and put the Bridging Switch in the "OFF" position (both sync and video lines must be properly terminated).

5. Turn the PVM on with the power switch on the Remote Control Box.
6. Adjust the following controls:
 - (a) Brightness and Contrast - Turning the brightness control clockwise increases the background brightness of the picture. Turning the contrast control clockwise makes the dark areas darker and the light areas lighter. These controls work together. Set them for a pleasing picture.
 - (b) Focus - There are two focus controls:
 - (1) A large thumb screw at the front directly under the porthole acts as an optical focus control. Once the optical focus is set, it never needs to be touched unless either the PVM or the screen is moved.
 - (2) The knob on the remote control box labelled "FOCUS" is the electrical focus control. First adjust the thumb screw for the best focus you can get and then sharpen the picture with the electrical focus knob. Readjust the optical focus.
 - (c) Definition - Normally, this knob should be set fully clockwise. If the picture is "snowy", however, the definition control can be moved counter clockwise to make the snow less noticeable. Turning the definition control counter clockwise decreases the amount of detail that can be seen in the picture.
7. To use this unit for rear projection, throw the reverse scan switch. This switch is located in the optical enclosure. To gain access to it, loosen all the fasteners on the optical enclosure door and open the door. DO NOT DEFEAT THE INTERLOCK.

NON-OPERATING CONTROLS

These controls are located under the right access door. They will seldom need to be touched.

VERTICAL HOLD - If the picture rolls up or down, use this control to stop it.

HORIZONTAL FREQUENCY - If the picture breaks up into black and white diagonal lines, use this control to straighten it out.

CAUTION:

ALL OTHER CONTROLS ARE TO BE ADJUSTED ONLY BY A QUALIFIED TECHNICIAN.

WARRANTY

This Projection Video Monitor is produced under rigid quality control standards. This unit is fully guaranteed to be free from defects in workmanship and components (except picture tube*) for a period of 90 days after purchase. If it needs service during the 90 day warranty period, pack the PVM carefully in the original shipping carton and send it prepaid to:

Blonder-Tongue Service Dept.
9 Alling Street
Newark 2, New Jersey

Enclose a packing slip telling what is wrong with the unit. It will be returned to you pre-paid, with no charge for either parts or labor. This warranty does not apply to trouble caused by mishandling or misuse of this equipment.

*The 5AZP4 picture tube is manufactured by RCA, therefore, the standard RCA guarantee applies.