

USING PCS, PCP & PCVR INTERFACES ON THE PC

PCS is for serial RS232 ports only. PCP is for parallel ports only. When running REND386, the Segaport bit masks must be 3 3 1 0 0 for the PCS, and c ce ca 0 0 for the PCP and PCVR, for a stereo image (otherwise a pseudoscopic image results with the right eye getting the left eye image, and v.v.). This must be done at the Segaport address in the DEVICES.CFG configuration file without the # sign in front of it. Put on the glasses and look through the left lens, of the glasses with the program running to see the “L”, and through the right lens to see the “R”. If these are reversed, you are seeing pseudoscopic. If you want to connect the 25 pin PCS or PCVR to a 9 pin serial port, be sure to use a fully populated 9 to 25 pin serial port adapter, or one available from 3DTV Corp.

PCVR comes with the internal dip switches configured for the parallel port. If you wish to use it on the PC serial port or the Macintosh or other serial ports, remove the 4 silver screws on the side panels and reconfigure the dip switches as indicated on the board. Plug in the power adapter to the back of the PCVR and the red led will light. Plug in the glasses on the front panel. Use the supplied D25 extension cord to connect the PCVR to the parallel port - you will need to use the supplied gender changer also. The other D25 on the back of the unit can be used for printer or other serial or parallel devices which will only operate when the front switch is in the “A Printer” position (the glasses will not function though the yellow sync light may flicker erratically). When running the stereo program with the switch in the “B 3D” position, the steady on yellow sync light shows that the glasses are receiving sync and both lenses should flicker when they are held up to the light. If the sync light flickers, there is a problem.

Polarity switch on the front panel should be in “Normal” position for Rend386. The V SYNC input on the rear panel is for input of vertical sync from the VGA card with use of the 3D Cable (optional). This permits polling a pin for changing timing of glasses etc.

Power Glove should be used with supplied Power Cable and plugged into the “B/3D” position, when PCVR is connected to the parallel port, when command line g has been activated and when the segaport addresses the correct parallel port. If glove does not work exit from REND386, unplug PCVR power jack, plug it back in and reenter REND386.

The black plastic shields can be removed from the glasses for greater brightness, as described below. Occasionally, one or both lenses may not flicker due to abuse of glasses causing displacement of the LCD. Pushing gently with your thumb on the center front of the glasses will often correct this. Multiple glasses can be connected by using standard stereo headphone splitters. Glasses cables can be extended with stereo headphone extension cords.

REMOVAL OF BLACK PLASTIC FROM LCD GLASSES

Model D, N, and G have a black plastic layer which reduces flicker when operating at standard frequencies (e.g., 60Hz). If turning up your TV or monitor brightness is insufficient, you flicker unless you are running at high frequency. In Models N and D, a knife inserted from the front under the edge of the plastic will easily remove it intact if you are careful. It is somewhat more difficult to reinsert it. With model G, pull up and down simultaneously on the gray edges to pop out the right temple.

Push up on the black plastic from the right front and pull out to the right on the gray plastic until the right catch releases. Pull up and down on the right gray plastic simultaneously while pushing up on the black plastic from the front to release the top and bottom catches. Remove the right black plastic piece. Pull up and down on the left gray plastic while pushing up from the front on the left black plastic until the left top and bottom catches release. Remove the left black plastic piece and snap all the catches back in place. Replace the right temple piece. You will replace the black plastic piece with clear ones if you wish.

OTEHR MODIFICATIONS

For model N, the black elastic band can be removed and washed or dipped in alcohol for cleaning. If you want a softer or easier to clean contact with your forehead, purchase adhesive backed foam padding or weather-stripping at your local hardware or camping store. If model G or S eyeglasses style rests too heavily on your nose, purchase some of the little nose pads used for eyeglasses.

ADAPTING YOUR VISUAL SYSTEM TO LCD SHUTTERING GLASSES

If using these glasses with standard computer or video systems with a frequency of less than 100Hz, there will be some flicker which should be minimized or eliminated by reducing room illumination and adjusting the TV or monitor brightness with the glasses on and the program running. Individual sensitivity to flicker varies widely. If you are one of the minority who have difficulty adjusting, reduce your viewing time per session. As with the body's systems, the visual system can adjust with time and you should be able to overcome any fatigue by building up your stereoscopic muscles slowly.

USING THE POWER GLOVE

Various glove parameters can be adjusted in software. To move objects make a fist and point your index finger out until you see "POINT" appear in the upper right hand corner of the screen. Then move forward with the joystick or cursor until you contact the object. The object outlines in white. Close your index finger until you see "FIST" appear on the screen. You have now grasped the object and it will move when you move the glove or use the joystick to navigate while maintaining the fist. Opening your hand releases the object. You may then telemanipulate the object without touching it with the glove icon by making a fist and moving your hand or navigating with the joystick. To rotate objects after outlining, put index finger and thumb together with other 3 fingers out (the OK sign) and observe the word "PINCH" in the upper right hand corner. Rotating your hand will then rotate the object.

The position tracking accuracy may be increased by mounting the receiving antenna on a piece of anethoic foam off to the side of the monitor. David Ray, working on the Mac, found that a 4 foot by 4 foot square of foam increased the accuracy to about 1/4 inch at 5 feet. This foam is readily available at modest cost from several companies under brand names such as Sonex and Technifoam.