3 Installation

To achieve optimum performance the computer must be 80286, 80386 or 80486 based and must contain:

2Mb (or greater) of RAM
A 1.44Mb 3.5″ diskette drive
A 40Mb hard drive; an 80Mb hard drive (or larger) is recommended
A VGA (Video Graphics Adapter) or analog multisynchronous color monitor must be used.

> ### Warning
>
> Before setting up your *SNAPplus Desktop Video Adapter* , you should always touch an unpainted metal surface on the unit. This will prevent electrostatic discharges from destroying components.

3.1 Switches and Jumpers

Jumper P11 ▮ (shown in the default position; see Figure 1 and Figure 2) controls the zero wait state option. When the zero wait state option is enabled bus operations are completed faster than under normal conditions, which will result in faster graphics speeds. Zero wait states are not supported on all motherboards; if your motherboard falls into this category leave the jumper in the disabled position (**default**); for location see Figure 1.

Jumper P12 ▮ (shown in the default position; see Figure 1 and Figure 2) is used to configure interrupts **IRQ11 (default)**, IRQ12 or no interrupt. Most software does not utilize the interrupt capabilities of the *SNAPplus Desktop Video Adapter*; however, if you use the SNAPplus AVI drivers you should set jumper 12 (see page 91.) If your software requires a specific interrupt, move the jumper to the correct position.
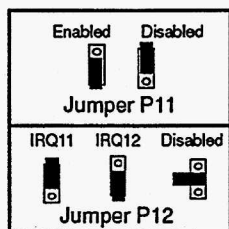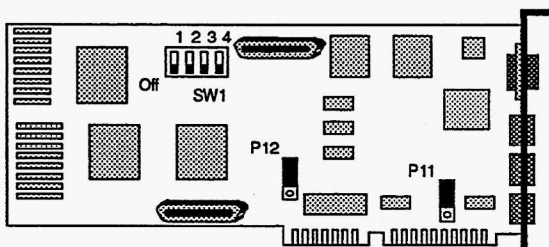

Figure 2

Figure 1 – Switch and Jumper Locations

Switch module SW1 contains four separate switches which control the physical number of installed cards. Since more than one *SNAPplus Desktop Video Adapter* card can be installed, the system has to be informed; provided that your software supports multiple cards. The switches can be set from 0 to 15, corresponding to the number of installed cards. If only one card is installed the number 0 has to be assigned; see Table 1

Card	ID	Pos4	Pos3	Pos2	Pos1
1	0	OFF	OFF	OFF	OFF
2	1	OFF	OFF	OFF	ON
3	2	OFF	OFF	ON	OFF
4	3	OFF	OFF	ON	ON
5	4	OFF	ON	OFF	OFF
6	5	OFF	ON	OFF	ON
7	6	OFF	ON	ON	OFF
8	7	OFF	ON	ON	ON
9	8	ON	OFF	OFF	OFF
10	9	ON	OFF	OFF	ON
11	10	ON	OFF	ON	OFF
12	11	ON	OFF	ON	ON
13	12	ON	ON	OFF	OFF
14	13	ON	ON	OFF	ON
15	14	ON	ON	ON	OFF
16	15	ON	ON	ON	ON

Table 1 – Switch SW1 Settings

1 2 3 4
Off SW1

Sw1 is shown in the default position

Warning

The SNAPplus Desktop Video Adapter card comes packed in a protective anti-static foam tray. DO NOT REMOVE THE CARD FROM THE TRAY UNTIL YOU ARE READY TO CONFIGURE AND INSTALL IT. *Electrostatic discharge can cause damage to the card. Handle the card only by its edges and mounting bracket.* DO NOT TOUCH *the edge connector or any of the integrated circuits.*

3.2 Installation Procedure

1. Turn off the computer and disconnect it from the power source.

   If a graphics card has already been installed in the computer, it must be removed.

2. If the computer's motherboard has a built-in graphics controller, it must be disabled, please refer to the computer's user manual.

3. Select an empty expansion slot for the *SNAPplus Desktop Video Adapter* card. It is best to locate it as far as possible from any other cards, disk drives or power supplies to reduce electrical noise and interference. Rearrange existing cards if necessary. A 16–bit slot, one with two card edge sockets, **must** be selected.

4. Remove the retaining screw in the selected slot's rear panel cover, and remove the cover.

5. Remove the *SNAPplus Desktop Video Adapter* from its antistatic packing box.

6. Carefully pick up the *SNAPplus Desktop Video Adapter* card by its top edge. Line up the card with the card guide and the expansion slot opening. Firmly slide the card into the slot and make sure that the card is completely seated in the socket. If the card will not slide in smoothly, do not force it. Make sure that the card is lined up properly and try again.

7. Use the retaining screw that was removed to secure the card bracket.

8. Refer to the computer's user manual for configuration information. Some computers require that switch settings on the motherboard be changed when a new graphics card is installed. If the computer must be configured, use the setting for Video Graphics Adapter (VGA) or Enhanced Graphics Adapter (EGA.)
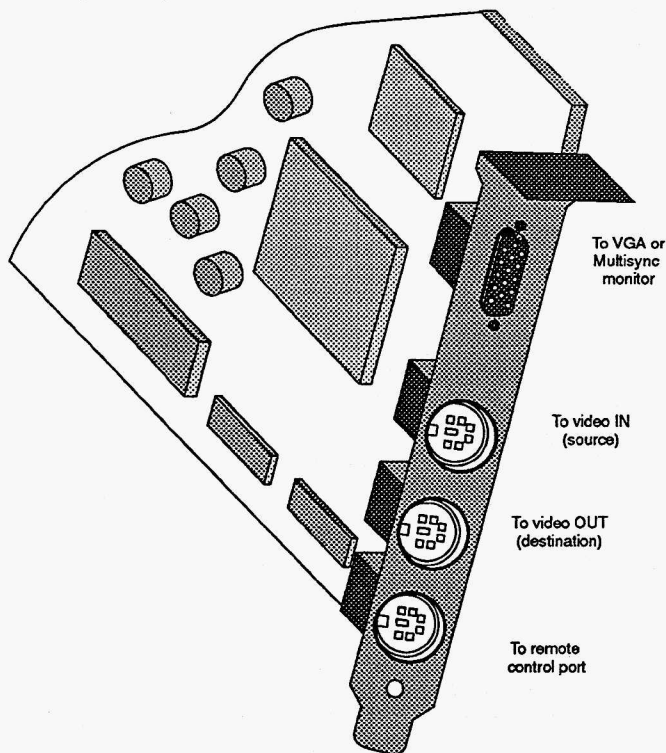
Once the card has been installed and configured, the various cables must be connected.

- The 15 pin **VGA Monitor** socket, gets connected to the VGA or multisynchronous monitor.
- The **In** socket, gets connected to the video source. Select the appropriate cable.
- The **Out** socket, gets connected to a video display or recording device.
- The **Control** socket, can be connected to a player/recorder, if the software supports this option.

    A monitor must always be attached to the 15 pin socket. Other sockets may not be used (depending on the application.)

    NOTE:

    Every cable (except the monitor cable) is terminated on one end with an 8 pin connector. The other end is terminated with the proper combination of connectors. When these connectors are attached to the SNAPplus bracket be especially careful that the arrow on the connector body lines up with the arrow on the bracket.

To VGA or
Multisync
monitor

To video IN
(source)

To video OUT
(destination)

To remote
control port

4 Setup and Testing

An on–board test program can be used to quickly verify system operation. Before running the test program please make certain that:
- All required cables and auxiliary video equipment are attached.
- Verify that all systems power up normally. Make certain that the computer is in the DOS environment; not in Windows or OS/2.

4.1 Testing Video Input

1. Provide a video signal to the *SNAPplus Desktop Video Adapter*
2. Insert the diskette labeled **SNAPshot/SNAPtest** into the drive; the assumption is that drive A will be used.
3. Type:
   a:snaptest –in   press ENTER
4. If the video input selection (shown at the bottom of the VGA screen) is not correct, press the *SPACE* bar until the proper video input is selected, i.e. composite–video, S–Video or RGB–video.
   The monitor will display a digitized replica of the image provided by the external device.
5. To exit press any key
   If you desire to save the image in a file on the hard disk drive for later use, begin step 1 above with:
   a:snaptest –in <filename>; filename is a name you choose.
   Please do not type the < symbols.
   The generated file will be in 16–bit Targa format (a true color file format, widely used by graphics developers) and will be given a .tga suffix.
6. To get out of Test: hit ESC

4.2 Testing Video Output

1. Type:
   a:snaptest –out   press ENTER
2. The monitor and the auxiliary video output device will display a standard color bar pattern. Verify that this pattern matches on both monitors.
3. To exit press any key
   If you have a 640x480, 16–bit Targa file, you can display it on the VGA monitor and on the auxiliary video output device by typing:
   a:snaptest –out <filename>; filename is the name, minus the .tga suffix, of the 16–bit Targa file.

4.3 Using the SNAPplus Desktop Video Adapter

Upon power–up the *SNAPplus Desktop Video Adapter* operates just like any other standard VGA graphics card. All of the graphics functions that any standard application software calls for can be performed by the *SNAPplus Desktop Video Adapter*. No special commands or software are required. To take advantage of the more sophisticated capabilities of the *SNAPplus Desktop Video Adapter* additional software is required. The supplied Desktop Video Software was specifically designed for that purpose.