

# MPP- i User Manual

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## WELCOME AND INTRODUCTION

Thank you for purchasing the Vivitar Motion Picture Phone, i Model. Vivitar brings exciting new advancements in digital imaging and communications technologies into your home or office. With your new Vivitar Motion Picture Phone - I model, you can utilize many of the new and exciting Internet Videoconferencing Software packages which are on the market today.

The MPP - i is a digital color parallel port camera for your PC with Video for Windows drivers which will allow you to use your camera with those applications which support Video for Windows. In the past months there have been a number of software applications which have been developed which will allow you to communicate over the Internet. Several of these applications allow you to use a digital camera so that you can transmit and receive video in real time over the Internet. Your MPP - i digital color parallel port camera has the required Video for Windows drivers to works with most of these applications in most of their video modes. As the world of Internet video conferencing is so new and evolving so fast it is virtually impossible to definitively state that the MPP - i will work with every application in every mode. At the time of release, however, MPP - i was tested to compatible with a number of the most popular current Internet video conferencing applications which use Video for Windows as their Application Program Interface (API).

As an additional feature, you may use your MPP - i Model as a desktop digital camera for both video and still imagery. MPP - i comes with Video Control software by Stefra with allows you to enjoy your MPP - i color camera as a local video capture device. Video Control allows you to record both video and audio together in the popular AVI file format. These AVI files can be stored, replayed, e-mailed, or even embedded into another computer application, such as a word processing document. As an example, as the introduction to this MPP - i manual was written, I was able to operate the MPP - i digital color camera in a small window inside of my word processing document. As I wrote the introduction, I had a live video window running. I then closed the

live camera operation and I have included a still image as follows. This manual includes additional detail regarding how you can do this, as well.

Hello, from your author! I hope you enjoy the many features of your new MPP - i digital color camera for both Internet video conferencing as well as local video applications.

The Vivitar Motion Picture Phone i Model can also be connected to a laptop or notebook portable computer to take digital images or digital video/audio clips while away from your home or office. Still images can be saved as common bitmaps which can be pasted into many common computer applications, such as a word processing document. Video clips can be embedded into documents. Either still images or video clips can then be e-mailed as files, back to your home or office.

Explore the features and utility of the Vivitar Motion Picture Phone i Model and discover for yourself countless applications and utilities!

With additional software, your Vivitar Motion Picture Phone i Model may also be used over common telephone lines (POTS lines) for private point-to-point video conferencing. VideoLink and AudioVision are two excellent communications software packages which will allow you to turn your Motion Picture Phone i Model into an Motion Picture Phone -2i Model. The end result is a parallel port camera with the combined feature set of both the Motion Picture Phone i Model and the popular telephone-based Motion Picture Phone -2 Model.

Watch for future product upgrades as further developments in telecommunications and video conferencing technologies enable new features and capabilities. We at Vivitar truly hope you enjoy your new Motion Picture Phone i Model.

## **CONTENTS :**

1. Vivitar camera head unit -1A (with parallel port adapter-1B & shielded interconnecting cable-1C)
2. Microphone
3. Microphone adapter plug
4. Power cable and DIN5/mini-DIN6 adapter
5. This User Manual
6. One 3.5" software installation and driver diskette
7. Video Control User Registration card
8. Promotional Materials which vary from time to time

## **SYSTEM REQUIREMENTS :**

The system requirements for the Motion Picture Phone i Model depend upon the manner in which you intend to use your camera. Your new Motion Picture Phone i Model can be used as either:

1. A stand alone desktop Video camera (using Video Control, for instance)
2. An Internet video conferencing camera using any one of number of third party Internet video conferencing software application packages (not included within the basic MPP - i package)
3. An Motion Picture Phone 2i. This assumes you plan to upgrade/install additional software such as VideoLink or AudioVision for use over POTS lines

All three cases are discussed below:

### **1. As a stand-alone Desktop Video Camera (Capture device) -**

When used solely as a desktop Video capture device (using Video Control) your system need only meet the minimum standards required by Video Control. These requirements are similar to those for Windows for Windows by Microsoft. These requirements are approximately:

- PC or Compatible with386 SX processor
- 4 MB RAM
- 2.5 MB available hard disk space
- 8 bit sound card with .WAV drivers, and speakers (for audio)
- MS-DOS 3.1 or later
- Windows® 3.1x or higher
- VGA or SVGA video card capable of 256 colors, minimum
- Mouse

- An available parallel port for connecting the MPP camera

## **2. As An Internet video conferencing camera using a third party Internet video conferencing software application package -**

When used with third-party video conferencing software you must meet the system requirements imposed, or suggested, by the application you intend to use. Do consult with the supplier of your selected video conferencing or video application for exact requirements. In general (as a guideline only) the following requirements will usually apply:

- 486 DX-2 66 MHz processor (Pentium 75 or faster recommended)
- 8 MB RAM (16 MB recommended)
- 5 to 10 MB available hard disk space
- 16 bit sound card with .WAV drivers, speakers for audio
- Windows® 3.1x or higher (often Windows 95)
- 28.8 Kbps modem
- VGA or SVGA video card capable of 256 colors minimum
- Internet service connection (for use on the Internet)
- An available parallel port which is preferably ECP compliant

## **3. As a Motion Picture Phone 2i. This assumes you eventually plan to upgrade (install additional software such as VideoLink or AudioVision) for use over POTS lines -**

If you plan to eventually add VideoLink or AudioVision to make your digital camera into an MPP-21 then the system requirements are the same as those for the MPP-2 camera with VideoLink, which are:

- Pentium / 586 75 MHz processor
- 8 MB RAM,
- 28.8 Kbps modem
- 5 MB available hard disk space,
- 16 bit sound card with .WAV drivers, SoundBlaster compatible
- Amplified Speakers
- Windows® 3.1x, or Windows® 95.
- VGA or SVGA video card capable of 256 colors minimum
- Parallel port which is preferably ECP compliant

Note: The performance of your PC, modem and phone line will affect the video frame rate.

## **INSTALLATION**

The installation is easy and involves connecting the camera to your computer, connecting the microphone to your computer and installing the Video for Windows camera drivers and software. **The hardware must be installed before installing the software.**

### **HARDWARE INSTALLATION**

#### **○ MAKE SURE THAT YOUR COMPUTER IS TURNED OFF**

- Unplug the keyboard cable from the back of your PC, and note the size of this connector. A power cable is supplied with the camera which has both large (DIN5) and small (Mini-DIN6) ends.
- Plug the appropriate sized end of the power cable into your PC.
- Locate the DIN5/DIN6 adapter which is also supplied with your camera.
- Plug the appropriate end of this adapter into the end of the power cable.
- Now, plug your keyboard cable into the open end of the adapter. Note how we have essentially created a “splice” arrangement. (Refer to diagram)
- Plug the small power connector lead of the power cable into the power socket on the camera parallel port interface unit (Refer to diagram).
- Plug the parallel port adapter into the parallel or printer port on the back of your computer. If you have a printer or other devices already installed on the parallel port you have the following options:
  - ◆ Unplug the printer from the parallel port and plug in your camera when needed.
  - ◆ Purchase an A/B parallel port switch box from an electronics or computer store. (Note, however, if you do so, ensure that purchased switch is compatible with your printer. Some laser printers are sensitive to the type of switch you use and can react adversely if you use a simple mechanical type). When using your printer, shut down your camera and/or video conferencing application.
  - ◆ Consider the addition of a second parallel port. High speed parallel port cards are available from a number of third party suppliers at a very reasonable cost. Often these parallel port cards are less expensive than a switch box. You will need to open your computer, however, and install and configure such a card. If you do so, it is suggested that you put your camera on the original parallel port (usually called LPT1) and install your printer on the new port (typically identified as LPT2).
- Position the camera module on top of your computer monitor, or another flat surface, ready for use. The Camera can be swiveled right and left and up and down as desired.
- Plug the microphone plug into the “MIC” jack on your sound card on the back of your computer (see diagram). Test the installation and operation of your microphone by using Sound Recorder, which is a Windows accessory. We have found that some sound cards (a small percentage) require a slightly different type of microphone connector. If the included microphone does not work with your sound card, try using the microphone adapter which is supplied with the camera.
- Position the microphone on the front edge of the monitor away from the picture tube, using the adhesive mount. The included microphone is quite sensitive and works best when it is positioned approximately 18 inches away from you. Speaking directly into the mic will cause distortion and hence garbled audio.

- If you have a computer with an integral microphone (perhaps mounted in the monitor chassis) you may wish to try the included microphone as an alternative. We have experienced interference noise with some types of integral monitor microphones which may cause poor performance in video conferencing. Experiment with various setups to find the best combination for your particular installation.

## **SOFTWARE INSTALLATION**

- Power on your computer and start Windows.
- Insert the Video for Windows drivers and installation diskette into the floppy drive.
- From the Program Manager in Windows 3.1x, pull down **FILE** and choose **RUN**.  
For Windows 95 press the Start button and select **Run**.
- In the Command Line field, type **A:\SETUP**. (If the diskette is in the B:drive, type **B:\SETUP**). Press **[Enter]** or click **OK**.
- The main installation dialog box appears on screen with instructions which will guide you through the installation process.
- Remove the installation disk from the drive and store it in a safe place, away from heat, dust, and magnetic fields (i.e. speakers).

Your installation is now complete.

## **ADJUSTING & TESTING AUDIO FOR BEST RESULTS**

The most important aspect of using the audio features of the Motion Picture Phone is to ensure that you have everything set up correctly. No audio, distorted audio, or low audio level is commonly remedied by adjusting your sound settings. As mentioned, sitting too close to the microphone will also cause distorted sound. The microphone should be located at least 18 inches (45cm) away. Set up and test the audio system and microphone prior to using your application software.

**The Line-in, CD-audio, Synthesizer and Aux. B controls on this panel are not used with the Motion Picture Phone.**

Next access the Recording Control panel from the Volume Control screen by selecting **Options, Properties**, select the **Recording** box and press **OK**. You will see a Recording Control panel which should be set like this one for video phone use:

The Line-in, CD-audio, Synthesizer and Aux. B controls on this panel are not used with the Motion Picture Phone.

The audio system is now set up and ready to test.

## **AUDIO TESTING**

In Windows 95 access the Sound Recorder by selecting **Program, Accessories, Multimedia, Sound Recorder**. You will see a Sound Recorder panel like this. It works just like an audio tape recorder and if you pause the mouse pointer on each control button it will tell you its function.

Make a recording of your voice with yourself and the microphone positioned as you intend to do while making video calls. Press the right (Record) button to record about ten seconds of audio.

Press the left (Seek to Start) button to rewind and then press the center (Play) button to play back your recording. If your recordings sound distorted, try reducing the Recording volume level on the Recording Control panel. If this doesn't solve the problem then try reducing the Microphone level on the Recording Control panel. If the sound is too faint or too loud on playback, adjust the volume preferably on your powered speakers if you have them, or use the Wave volume control on the Volume Control panel. If you still get distorted results or no audio see Troubleshooting.

## **ADJUSTING VIDEO FOR BEST RESULTS**

### **NO PICTURE FROM YOUR CAMERA**

Whenever you start your camera it should show a local video image. If it does not, then there could be a problem with your parallel settings. You must connect the camera to the parallel port or switch your parallel port A/B switch to the camera before you start your application.

If the video conferencing software reports an Error on parallel port camera or No parallel port camera found then you should check that:

1. Your camera is correctly plugged into the back of your PC, both the parallel port adapter and to the small power lead which branches from the keyboard cable.
2. Check to see that your parallel port is communicating in either the standard bi-directional mode or, preferably, ECP mode. (See Help file for further details.)

If you have ensured that the camera is properly connected (both to your parallel port and to your keyboard port) and that the port is in the correct mode and you still don't get any video then try restarting Windows, or possibly powering down your PC completely and restarting. If you still have problems refer to the section on Troubleshooting or the Help files which accompany the software. Finally, ensure that the mechanical cover over the camera lens is raised to the open position.

## **LIGHTING**

**As with any camera, GOOD LIGHTING IS CRITICAL to achieving a good quality picture and the highest possible frame rate.** We find that many computer users work with relatively low levels of light in their computing environment. Many computer rooms have inadequate lighting for optimal camera imaging. For best results add a lamp which shines from above and behind the computer to illuminate your face. Avoid lights, windows, or reflective surfaces which directly shine into the camera. This will cause overexposure and blooming into adjacent areas of the image.

## **ADJUSTING PICTURE SIZE**

The size of the video image shown on your display will be relatively small if your video display is set for high resolution (such as 800 x 600 or more). By decreasing your display to 640 x 480 you will increase the portion of the screen which is filled by the video window. A display resolution setting of 640 x 480 will give an acceptable picture size.

## **ACHIEVING THE HIGHEST POSSIBLE FRAME RATE**

The camera alone is capable of producing better images and higher local frame rates than your modem and phone line can support. Future improvements in communication technology will allow the MPP -i to perform up to it's full potential. The following suggestions will permit the best use of the current limited modem and phone line bandwidth.

- Ensure that you have good lighting.
- Select an appropriate image size. A smaller image will allow a higher frame rate.
- A 28.8 Kbps modem is required at each end of the video conference for best results and higher frame rate.
- The quality of the phone connection is a major variable which affects the quality of picture and frame rate. Check your data transmission rate during a video conference by using features included in your video conferencing application. It is common to be able to review the actual data transmission rate. If it is low and you are using 28.8 Kbps modems then you may want to hang up and try for a better connection.
- Make sure that your video conferencing application is the only application running to achieve optimum performance.
- Minimize the transmission of unnecessary audio. If you are using automatic voice activation, make sure that the sensitivity is not so high that unwanted background noise is being transmitted. Better yet, use the manual push to talk setting, which will eliminate this problem and provide better audio results.
- Your camera communicates to your PC through the parallel port. The type of parallel port you have and the way that it is configured effects the rate at which the camera can feed image data into your PC. In turn, this has a direct effect on the frame rate. Where possible, ensure your parallel port is configured as ECP compliant which is the fastest configuration. (See Help.)
- These settings should be made at both ends of the video conference.

## **OPERATING LIMITATIONS**

- Any modem phone connection may possibly be disrupted if a phone is picked up on the same line on which the modem is operating due to adding audio noise to the line.

- Call waiting can be disabled at both ends. This can be done in Windows 95 by going to **Programs, Accessories, Phone Dialer, Tools and Dialing Properties**. You will find common disabling codes (X70, 70# or 1170). Alternatively, call your phone company for the correct disabling code for your area. Call waiting is automatically re-engaged at the termination of the modem phone call.

## USING THE MOTION PICTURE PHONE

### BEFORE CALLING

### AUDIO COMMUNICATION

### CAPTURING IMAGES

### FURTHER INFORMATION

Further information on all aspects of the camera is available in the on-line help which can be accessed from the HELP menu.

## TROUBLE SHOOTING

### GENERAL

Video conferencing challenges all subsystems of your computer, the modem, the sound card and the parallel port to operate at their full capability. It does this to a greater extent than nearly all other applications. In 98% of the cases where the video phone system is not operating properly it is due to the fact that the sound card, modem or parallel port are not configured properly, or not adjusted correctly. In some cases there may be a compatibility problem. We have not at this time established compatibility of MPP with the MWAVE combination modem and sound card. If you have this type system you may wish to try an external modem to do video conferencing.

### AUDIO

If you have already set up the audio system and conducted the audio test with **Windows Sound Recorder** and the microphone doesn't work then it may be that your sound card won't work with the "electret type" microphone provided with MPP2. Some sound cards require that a jumper on the board be changed (see your sound card instruction book). Another alternate is to try a different type microphone. Use the supplied microphone adapter if required.

### MODEMS

In Windows 95 assistance for modem setup is found by selecting **My Computer, Control Panel, Modems, Modem Properties, Diagnostic** tab and **Help** or see your modem manual.

### VIDEO

If you are not receiving video from the camera and you have installed it properly, have followed the instructions for adjusting the video and have opened the cover over the camera lens, then the problem is with the

parallel port or the camera. Test the camera on another computer. If the camera works then the problem may be with an incompatible parallel port. Call Technical Support.

### **TECHNICAL SPECIFICATIONS**

Video Sensor.....Color CMOS sensor  
Resolution..... 160 x 120 pixels in video mode, and 320 x 240 in still mode  
Sensitivity..... Down to 25 lux  
Exposure Control..... Automatic, 22,000:1  
Color Balance..... Automatic  
Frame Rate..... 10.5 frames/second (maximum)  
Video Format..... Compliant with Video for Windows formats  
Lens..... f1.8, fixed focus (300 mm to infinity), 60° horizontal field-of-view  
Mounting..... Monitor-top mounting  
Power.....150 mA, drawn from the keyboard cable  
Port Compatibility..... Requires a free parallel port which is preferably ECP compliant

## **WARRANTY**

### **LIMITED ONE YEAR WARRANTY (PARTS & LABOR)**

Vivitar Corporation warrants this quality product to be free of defects in material and workmanship for the period of one year from original date of purchase. During the warranty period, Vivitar Corporation will repair or replace the product at no charge for parts and labor.

### **TIME PERIOD OF THIS WARRANTY**

The time period of this warranty starts from the date of original purchase and expires on the first anniversary date of purchase.

### **WHAT IS COVERED BY THIS WARRANTY**

Any part which, because of manufacturing defects or workmanship, fails to function properly, under normal use, will be repaired at NO CHARGE for the parts and labor or, at the option of Vivitar, the product will be replaced.

### **WHAT IS NOT COVERED BY THIS WARRANTY**

No express or implied warranty is made for any defects in this product which result from accident, abuse, misuse, failure to operate the product in accordance with relevant instructions, neglect, immersion in or exposure to chemicals or liquids, extremes of climate, fungus, excessive wear and tear and defects resulting from other extraneous causes such as unauthorized disassembly, repair or modification.

This warranty shall not extend to any incidental or consequential damages arising from the purchase, use or inability to use this product, even if Vivitar Corporation has been advised of the possibility of such damages. The laws of some countries and the laws of some States thereof do not allow the limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

### **LIMITATION ON IMPLIED WARRANTIES**

All implied warranties for this product, including merchantability and fitness for a particular purpose are excluded to the fullest extent permitted by law and where not capable of exclusion are limited to one year from the date of original purchase. The laws of some countries and the laws of some States thereof do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

### **TECHNICAL SUPPORT**

Technical support for the Motion Picture Phone camera itself is available on the Vivitar Web site at <http://www.vivitarcorp.com>. Look for Frequently asked questions (FAQs under product support). For questions which are not addressed on the web support pages call Vivitar Service Department at (805)-498-7008. A 24 hour fax back service is scheduled to be in place in the fall of 1996. If calling after hours you may transfer to the fax back service from the main switchboard as directed by the messaging center. Questions and issues concerning video conferencing should be directed to the author or distributor of the application software.

### **WHAT TO DO IF SERVICE IS NEEDED**

Vivitar Corporation warrants the physical elements of the motion picture phone (camera head, parallel port adapter, T-pass cable, and microphone). If any of these components need service please refer to the following:

STEP 1 Package the product and relevant accessories carefully, using ample padding materials and a sturdy mailing container to prevent damage in transit.

STEP 2 Include in the package: a) Evidence of date and place of original purchase (for example, a copy of your sales receipt, and b) a detailed description of the problem

STEP 3 In the United States, Canada, and Australia, please enclose a check or money order for \$6.50 to cover processing and handling. Do not enclose cash.

STEP 4 Return the item, freight prepaid and insured, to the nearest authorized service center which handles the specific product. When service is complete, the product will be returned to you prepaid.

### **WHAT TO DO IF YOU HAVE ANY QUESTIONS**

Camera service questions can best be handled by the Customer Service Department at your nearest service center. Include records of purchase and other information pertinent to the service.

If you have any problems which have not been resolved to your satisfaction, please contact the manager of the service center nearest you or write to Vivitar.

This warranty gives you specific legal rights. You may also have other rights which vary from country to country and from state to state thereof.

## **FCC STATEMENT**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the

instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

#### **CAUTION**

To comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules, this device must only be installed on computer equipment certified to comply with the Class B limits. In addition, only the supplied power cables should be used with the product. Operation with non-certified computers, use of a cable other than that supplied or modification of the device by the user may result in interference to radio or television reception and could void the user's authority to operate the device.

#### **TRADEMARK ACKNOWLEDGEMENTS - MICROSOFT WINDOWS®, WINDOWS 95®, PENTIUM®, VIDEOLINK™.**

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## **VIVITAR SERVICE CENTERS**

### **VIVITAR USA SERVICE**

Central Parts and Service  
1280 Rancho Conejo Boulevard  
Newbury Park, California 91320  
USA  
☎ 805/498-7008

### **VIVITAR FRANCE SERVICE**

18, Rue Ampere  
BP 91  
95505 - Gonesse Cedex  
France  
☎ 01/3985-9633

### **VIVITAR HONG KONG SERVICE**

Suite 1004, 10th Floor  
Conic Investment Building  
13 Hok Yuen Street  
Hung Hom, Kowloon  
Hong Kong  
☎ 852/2 363-6313

### **VIVITAR AUSTRALIA SERVICE**

108 Old Pittwater Road  
Brookvale, NSW 2100  
Australia  
☎ 02/9938-0400

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