Chapter 5

Operating the System

Communicator Overview

DOAR's Communicator is an easy-to-operate and portable evidence presentation system. This unit is equipped with a high-resolution CCD camera and features an 8-10X magnification zoom lens and a high accuracy auto focusing system. The Communicator presents all types of presentation materials to view or record through monitors, e.g. 3-D objects, paper documents, transparencies, x-rays, etc.

Presenting with the Communicator

Simple Steps For Presenting Materials

1) Turn 'ON' the power switch of your Communicator.
   - Connection to the monitor should be previously executed.
   - The initial settings are displayed by their respective indicators.

2) Place the object on the white stage. While you observe the image adjust the zoom to obtain the optimum size.

3) Press the auto focus button (or fine-tune the image using the manual focus).
   - Pay attention to depth of field with 3-Dimensional objects. You may need to focus again, or even to rotate the camera head and remove the close-up lens to focus from a distance (this is only for a very large object.)

Simple Steps for Viewing Transparencies or Slide Film

1) When you press the lamp button (BASE), the lighting switches from the "UPPER" lamps to the built-in base-light lamp.

2) For 35mm negatives, press and hold the column lock button (located in the middle of the camera arm), then set the camera head to its lowest position.

3) Press the nega/posi conversion button. The indicator will show (N) (negative) mode. You may want to adjust the Iris to over expose for a better color reproduction.

4) When turning off the baselight, press the lighting button (UPPER) again.

For Use as a Conventional Video Camera

1) The close-up lens should be removed when you are shooting the object at a distance.

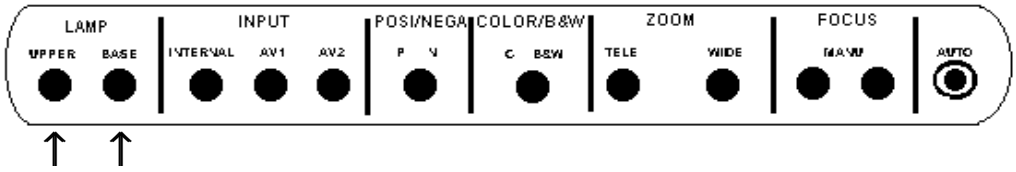
2) The camera head can be rotated to the horizontal position. This allowsyou to present images from far away.

Using a Microphone or Other Audio Source

You may connect an optional microphone into the mic. Jack on lower edge of the Communicator. A volume scale allows you to adjust the audio strength.

Various Communicator Functions

Lighting



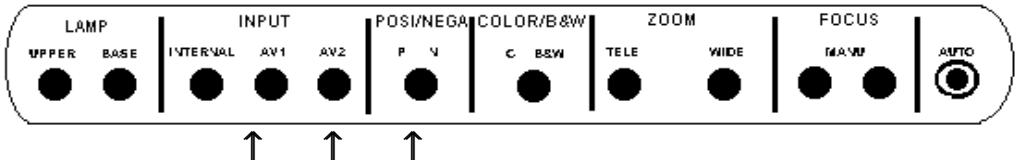
These buttons are used to turn on/off the lights. There are two lighting units. They are as follows:

Upper: The upper lighting unit is used for viewing materials such as printed matter and 3-D objects.

Base: The Base light unit is used for viewing slides, transparencies, X-rays etc.

When the lighting button is pressed, the indicator flashes, and after a few seconds, the upper fluorescent lamps turn on. To turn the lamps off, press the lighting button again. Select the (UPPER) or (BASE) mode. (It is not possible to use both the upper lighting unit and the baselight). It is advisable to use the upper lighting unit to obtain a clear image with better color rendering especially when the stage is not sufficiently lighted.

Input Selection

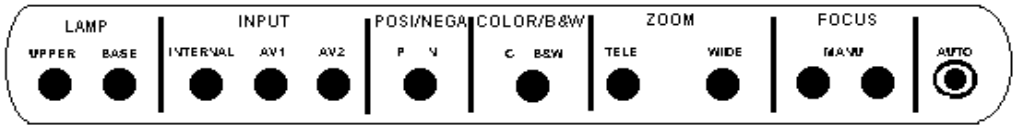


Input selection lets you select the input you would like to show on the monitors or to change input line. There are three input selector options. They are as follows:

Internal: Displays whatever is in the view of the Communicator.

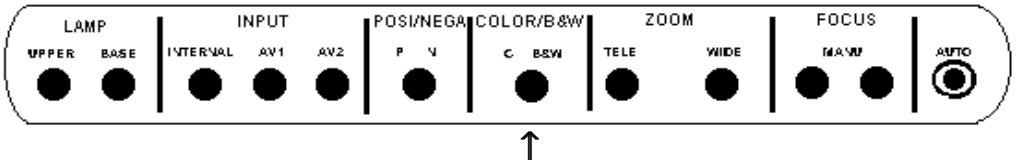
AV1 & AV2: Inputs from two separate AV sources are available to be projected on the monitors by pressing one of the input selection buttons.

Nega/Posi Conversion



This function is used to view negative film as a positive image. Press the Posi/Nega conversion button, and the indicator shows (N) (negative). If you press the button again, it changes to normal (P) (positive) mode. This is a very useful function for 35mm slides, x-rays, MRIs and auto-rads.

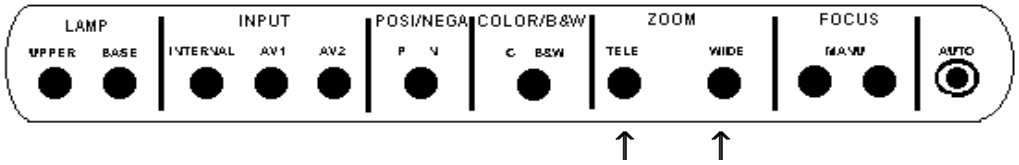
Color/B&W Selection



This button is used for viewing black and white material, such as documents. This function allows you to select color or black and white images on the monitors.

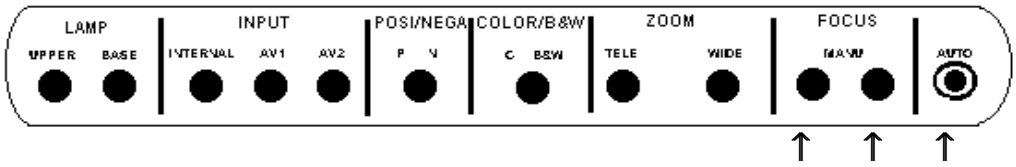
> *It is advisable to use this mode for viewing the B&W button so that materials such as documents have a clear image with no color blur. For normal use, set to (C) (Color) mode.*

Zoom



Zoom function lets you adjust the image size and zoom into a specific section. When (TELE) is pressed, the image gets larger (zoom in). When (WIDE) is pressed, the image gets smaller (zoom out).

Focus



Auto Focus:

This button is used for one-step auto focus. When you press the auto focus button, the indication light is turned ON and OFF during focusing. The Communicator features a one-step auto focus function. Once focusing is completed, the auto focus function is released. Even if the object is moved, the focus remains unchanged. For optimal focusing, set the zoom button at an extreme telephoto position.

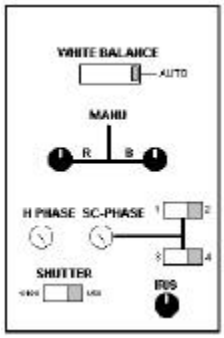
It is difficult to automatically focus on objects under the following conditions. You need to select manual focus in order to clearly view objects in these conditions.

- **Objects bearing little contrast.**
- **Objects with a fine repeated pattern such as lateral stripes, or a checkered pattern.**
- **Bright objects or ones reflecting strong light.**
- **The background of the object is bright.**
- **Picture itself is dark.**
- **Moving objects.**

Manual Focus:

When you press the manual focus during auto focusing, the auto focus function is canceled. Press the focus button (N) or (F) for manual focusing. This function is used to view 3-D objects of which any part can be focused.

Camera Head



White Balance:

This switch is used to select the mode for white balance adjustment. It should be set at [AUTO] for normal use.

Full Auto Mode:

When the white balance switch is at the AUTO position, the camera automatically adjusts to the color temperature and adjusts the white balance. The camera will then automatically follow the change in color temperature of the object.

> *It is advised to set the white balance switch to AUTO position for normal use.*

Manual Mode:

When the white balance switch is at MANU position, you can turn the R (red) and B (blue) knobs while observing the white object on the monitor screen.

> *It is advised you use the Manual Mode to color your X-rays.*

Iris:

This control knob is used to adjust the brightness of the image. Exposure is automatically compensated when the iris control knob is kept at middle position. Exposure can be manually adjusted by turning the iris control knob clockwise or counter clockwise. This is a useful feature to improve contrast on a x-ray or 35mm slide.

LCD Monitor Bracket

The LCD Monitor bracket, is located on the rear of the Communicator. This unit is specially built for DOAR's Communicator. It is a 3" monitor. The bracket included with the 3" monitor slips into this slot. You can look at this monitor to view changing the position of the document or do manual focusing without having to turn and look at the larger monitors.

Stowing Your Communicator

1) Turn the power switch 'OFF' before disconnecting the power cord and the video cable.

Be sure to hold the plug firmly when disconnecting. Do not pull the cord out carelessly.

2) Fold down the lighting unit arms.

The arm, which is folded down first, should be turned and then the other so the two arms are closely located to the stage.

3) Turn the camera head so the lens is pointed down the column. You will feel it click into it's locked position.

4) Press the column lock button, and shorten the sub column fully.

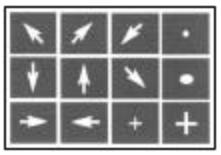
5) Press the lock release button on the base (UNLOCK), and fold down the main column.

DOAR's Illustrator

DOAR's Illustrator is used to draw, annotate or position pointers onto information that is represented on the monitor or screen. Each area of the tablet is described in the following sections.

Features & Functions

Input Sources: These icons or buttons are used to change video standards. DOAR sets this up when we configure your system and it usually does need to be changed. The exception to this is when you use the Communicator as a direct video input to be displayed on TV monitors. In this case, you must click on Y/C. To return to High-Resolution output, click on RGB.



Pointers: These icons will set the cursor to a 'pointer' type. When you click the desired pointer with the tablet pen the pointer will be 'set' on the screen. You can set the pointer as many times as you want. In order to turn off the pointer you should choose the pointer on/off icon.

To position an active pointer:

1. Position the pointer anywhere on the tablet to make your point. Lightly drag the*tip* across the screen until the active pointer is at the desired location

2. Reposition the same active pointer anywhere on the video image to make your second point, and continue as often as desired.

To anchor a pointer:

1. Once a pointer type and pointer color is selected and the active pointer has been positioned, you can anchor the active pointer in its current position. To do this, click the button on the pen while positioning it on your tablet. The pointer will be anchored, and a new active pointer will appear on screen identical to the first.

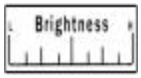
2. If desired, you can position multiple pointers and anchor them.

You can anchor as many pointers or drawing lines as desired. Also, each pointer may be changed to a different pointer type before anchoring, or the pointer may be changed to a different color before anchoring.

Switch: These two icons switch between the video or digital inputs and the Chalkboard. When Video icon is pressed the video input will show on screen. If Chalkboard is chosen, a blank screen will appear, allowing you to freely write on the screen. (You may preserve any markings with prints from the Visual Image Printer.)

Thickness: These icons are used to change the thickness of the lines created by the tablet pen. You may change the thickness while highlight by simply clicking on a different area in the bar.

Brightness: This icon controls the brightness of your annotations on the screen. The left of the bar is the darkest and the right is the brightest. Various degrees of brightness may be chosen between.



Pointer On/Off: This icon is used to turn the pointer on or off. If the pointer is turned on, you will see the pointer on the screen. If the pointer is not desired just click on the icon and it will disappear. To get the pointer back, click the Pointer On/Off icon again.

Clear: This icon clears the screen of all illustrations or text. The underlying video or chalkboard is not affected.

Undo: This icon deletes the last illustration or text from the screen.

Control: The control icon allows multiple tablets to take or release control. When you want to 'take control' of the Illustrator from the other pads, you click on Control and start to illustrate. This feature is usually not implemented. To take control, one person must stop using a tablet and the other begin to use one.

Color Pad: These seven colors may be used to set the color for freehand drawing. Clicking on the color pad will set the chosen color for pointers and freehand drawing. You may change the color while highlight by clicking on a different color on the Color Pad.

Features & Functions

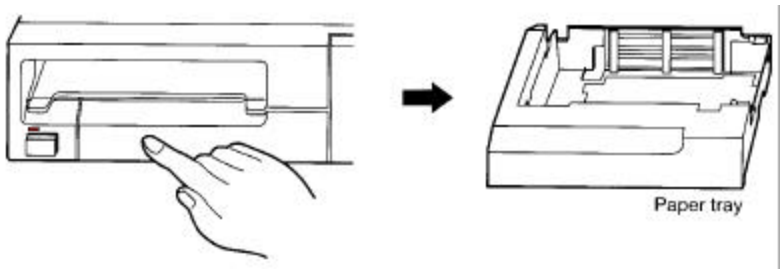
The DOAR Visual Image Printer (VIP) is an integrated component of the DEPS controlled though the Remote Control system. Under normal operation, you should utilize the quick "one-touch" operation on the remote to produce a hard œpy of the currently displayed image

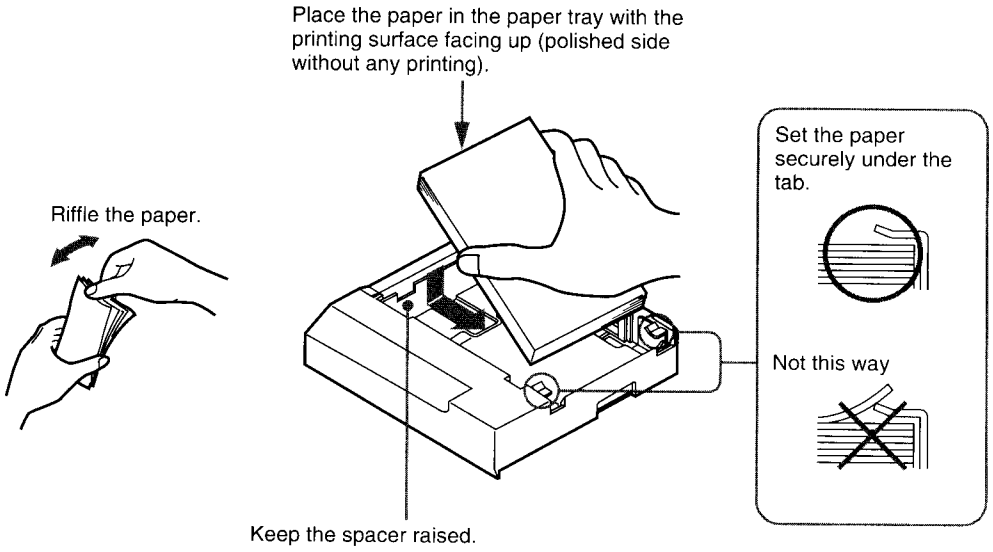
The DEPS VIP required paper and ink supplies to operate. Instructions for changing paper and installing new ink cartridges are included with the supplies, and your original DEPS manual.

Changing the Printer Paper

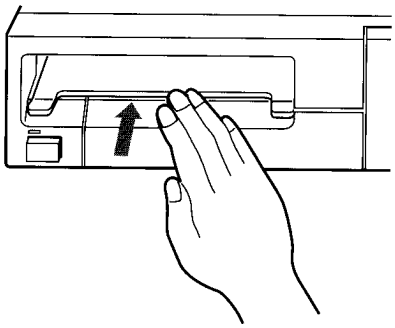
The VIP contains cartridge loaded printer paper. It has been designed for simple replacement, and can be quickly changed during courtroom operation.

1. Push in the paper tray and then release to eject.





2. Place the new paper into the tray. Be sure to load the paper so it lays flat in the tray. If the paper is somewhat curled reduce the number of sheets inserted to ensure proper loading.

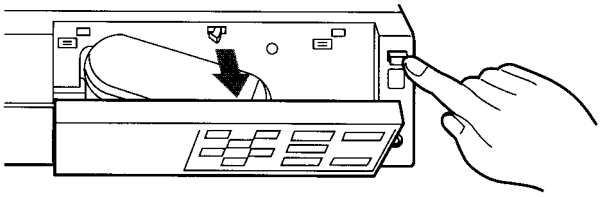


3. Slide the paper tray back into the printer and slowly push in, until it clicks in place.

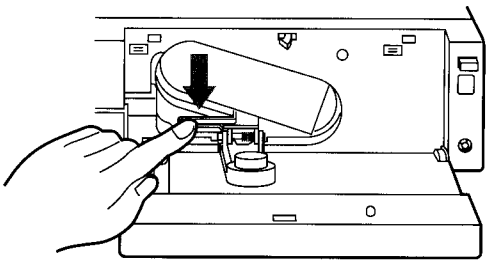
Changing the Ribbon Cassette

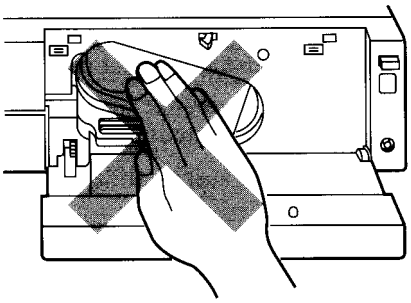
The VIP contains a cartridge loaded ribbon cassette, which has also been designed for simple replacement, and can be quickly changed during courtroom operation.

1. To open the front panel control door, thus revealing the ribbon cassette, simply press the top right hand button on the VIP.



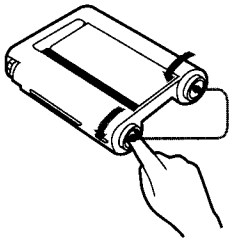
2. Remove the ink ribbon cassette by pulling down the eject lever.





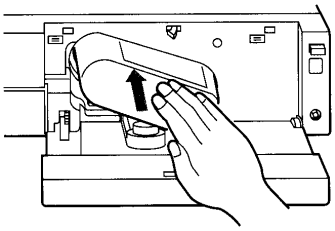
Never put your hand into the ink ribbon cassette dock. The thermal head becomes very hot, and can burn if touched.

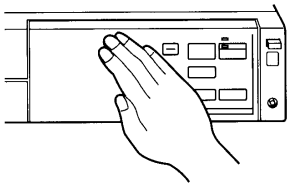
3. Take up any slack in the ink ribbon. This is critical, as any ribbon left slacked, may crumple and damage the VIP.



4. Insert the ink ribbon cassette firmly until it stops.

5. Close the front panel.





Be sure to only use genuine DOAR replacement paper and ribbons. Failure to do so may void users warranty. Please call DOAR at (800) 875-8705 for supplies.