Color Picture in a Picture (PiPC)

Operation Manual

STRENGTH IN THE BUSINESS

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

WARNING!

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a class A computing device pursuant to subpart J of part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment.

Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures

CAUTION!

RISK OF ELECTRICAL SHOCK
DO NOT OPEN CAUTION!
TO PREVENT ELECTRIC SHOCK
DO NOT REMOVE COVER.
NO USER SERVICEABLE COMPONENTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

The lightning flash with the arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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More Information

To obtain the most update information on the Color PiPC or to obtain a copy of this manual go to the AVE website and follow the links to Technical Support.

www.avethailand.com

Introduction

The AVE PiPC, is a state of the art picture in a picture device. This new unit is designed especially for the security industry. Automatic inset picture enabling or swapping the pictures full screen can be initiated by alarm input.

Overview

Simple front panel push buttons can turn the inset picture on or off, swap pictures and even freeze the picture. For clarity in viewing, a user selectable border can be enabled around the inset picture in white, black, green, blue, red or none.

The Color PiPC gives you two selectable inset picture sizes: 1/9th and 1/16th. These inset pictures can be positioned almost anywhere on the screen. The Color PiPC also allows the user to size and position the inset picture independently in both the swap modes. This means you can have a 1/9th picture in the top left portion of the screen with a white border and when you swap pictures the new inset might be 1/16 size in the bottom left of the picture with a red border. This feature makes maximum use of the viewable screen for each camera. All of these setup parameters are backed up for a minimum of 90 days by a rechargeable battery. When something of interest occurs and you want to freeze it, simply press the appropriate button and the picture is held until you press the button again.

How the PIPC Works

The Color PiPC is a picture in a picture (PIP) device. The parent channel of a PIP device is merely passed through the unit. That means the video is electronically routed from the input to the output. The inset picture is treated differently. This video signal is fed into an analog to digital (A/D) converter. The digital representation of the inset picture is then stored in an electronic memory. A digital to analog (D/A) converter then converts this memorized picture to an analog video signal synchronized to the parents' video signal. This is why no special cameras are needed for the Color PiPC to genlock the two input signals together in one. To freeze the inset picture on the screen, the input A/D is disabled so the memory is not updated with a new picture. The output D/A then just replays the memory over and over which gives the effect of a frozen picture.

Connecting the Color PiPC

Plug in the supplied 12 VDC power supply to the rear of the unit. Plug in one camera into the rear BNC connector labeled Main. Connect the other camera to the rear BNC connector labeled inset. Connect the Video Out connector to a monitor.

Power Supply Input   **Main Camera**   **Video Out**

Inset Camera

Powering up the Color PiPC for the first time.

The Color PiPC has an internal rechargeable NiCad battery that can hold your programming setups for up to 90 days after the unit has been plugged in for 24 hours which completely charges the battery. If the battery becomes depleted for any reason the on-screen PIP may not be visible and/or the saved setups will revert to the default conditions.

If the PiPC is not visible, issue a master reset to the unit.

To issue a master reset to the Color PiPC do the following:

Hold down the "**Swap**", "**On/Off**", and "**Freeze**" buttons at one time and simultaneously press and release the "**Reset**" button.Then release all other buttons. Wait a couple of seconds and the PIP will reappear. Leave the unit powered for at least 24 hours to fully charge the internal battery. This also reverts the unit to the factory defaults and erases all user programming.

Master Reset
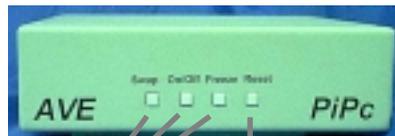
Step 1: Press and hold Swap, On/Off and Freeze at once

Step 2: Press and ReleaseReset, Release All
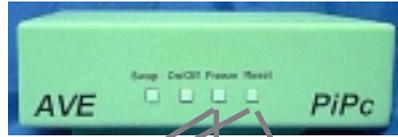
To change the PiPC size

To enter in the size programming mode do the following;

Hold down the "**Freeze**" button and simultaneously press and release the "**Reset**" button. Then release the "**Freeze**" button. To verify you have entered the size programming mode the border of the PiPC will be flashing rapidly. If the border is not flashing, try the above sequence again slowly until you get the flashing border.

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To Change the Inset Size

Pressing the "On/Off" or "Freeze" button will toggle between the large 1/9 size or small 1/16 size for each mode. Pressing the "Reset" button will exit from this programming mode at any time.

Changing Inset Size

Step 1:
Press and hold Freeze while pressing and Reset

Step 2:
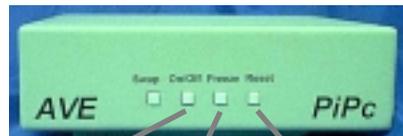Press Freeze or the On/Off again to toggle between PiP

Step 3:
Press Reset to save your selection and exit

To Change the PIPC Position

To enter in the position programming mode do the following: Press and hold the "**On/Off**" button. Then simultaneously press and release the "**Reset**" button. To verify you are in the position programming mode the border around the PIP will be flashing rapidly. If the border is not flashing, try the above sequence again slowly until you get the flashing border. Pressing the "**On/Off**" button will move maximum position is reached and then the PIP will wrap around to the left most position within the selected quadrant.

Changing PIP Position

Step 1:
Press and hold On/Off while pressing and releasing Reset

Step 2:
Press Freeze or the On/Off to toggle between PiP

Step 3:
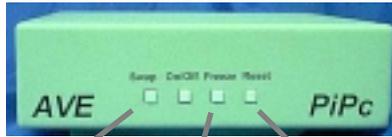Press Reset to save your selection and exit

Pressing the "**Freeze**" button will move the PIP finely in the downward direction and also wrap around when

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the maximum lower position is reached. Press "**Reset**" to exit this programming mode.

The PIP border

The PIP can be selected to have a bright white, black, green, blue, red or no border. A border around a PIP is useful to identify where the PIP is quickly upon alarm call up or in panning or tilting operations of the parent picture.

To change the PIP border

To enter the programming mode to change the border do the following:

Press and hold the "**Swap**" button down while simultaneously pressing and then release the "**Reset**" button. Then release the "**Swap**" button. To verify you are in the border programming mode, the border around the PiPC will be flashing rapidly. If the border is not flashing repeat the above steps slowly. Pressing the "**On/Off**" or "**Freeze**" button will toggle between the border colors and turn off the border. To exit the border programming mode, press and release the "**Reset**" button.
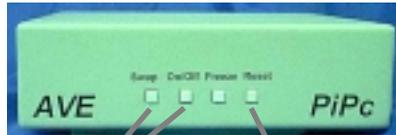
Changing PIP Border

Step 1:
Press and hold Swap while pressing and releasing Reset

Step 2:
Press Freeze or the On/Off to toggle between

Step 3:
Press Reset to save your selection and exit

Demo Mode

Step 1:
Press and hold both Swap and On/Off while pressing and releasing Reset

Step 2:
Press Reset to exit demo mode

Demo Mode

By holding down both the "**Swap**" and "**On/Off**" buttons simultaneously and pressing and releasing the "**Reset**" button, you will enter the demo mode. In this mode the inset automatically moves

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around the screen in the small picture mode and then in the large picture mode and then back again. By pressing the "**Reset**" button at any time will halt the movement and exit the demo mode.

Normal Operation
The front panel buttons are labeled according to their normal functions.

Freeze
The freeze button will hold or freeze the last picture until it is pressed again. A slowly flashing border signifies the picture is frozen. If the picture is swapped while the inset picture is frozen, the swapped inset picture will also be frozen. The Color PiPC samples the new picture once and then freezes it every time the swap is executed.

On/Off
The On/Off button toggles the inset picture off and on. If the PIP is selected off, it will remain off even if the picture is swapped. The inset must be selected off for the On/Off Alarm input to activate it on.

Swap
The swap button toggles the parent picture with the inset picture and vice versa. Each swap mode of the Color PiPC has an independent set of setup variables that are battery backed up. This means that you can adjust the inset size, border and position different from one swap mode to the other. This is useful in normal camera views since the same corner of the screen is not normally available for the inset picture.

Alarm Inputs
The Color PiPC has two hard-wired alarm inputs. The Swap and PiP On alarms can be activated independent of one another. A contact closure to ground on the alarm inputs makes the alarm active.

Swap Alarm
The swap alarm will cause the Color PiPC to swap the pictures to the opposite sense for as long as the alarm is true. When the alarm is released the pictures resume the normal sense. This swapping is vertical interval switched to provide for roll free switching for line locked cameras.

PiPC On Alarm
The PIP on alarm when asserted will turn on the inset picture. For this alarm to function the inset must have been in the off mode. If the inset is on when the alarm is asserted no change occurs. The PiPC on alarm turns the PiPC on regardless of which swap mode the unit is in.

Problems / Solutions

- The PIP insert is not symmetrical, skewed, or looks wavy or distorted.

1) Check the power supply and make sure the PIPC is supplied with 12VDC, low voltage or a 9VDC supply will cause this problem.

2) Check the video level of the camera and make sure it is 1.0VP-P +/-20%. Low or high video will cause this problem.

3) The internal potentiometer control can adjust for cameras that have sync signals that do not conform to the NTSC standard. Adjust this potentiometer slowly until the picture is stable.

WARNING: Only adjust this control as a last resort and mark the factory set point if no change results.

- No PiP insert at all

1) Check the camera source and make sure 1VP-P +/-20%. Check video cable for continuity and presence of video.

2) Do a master reset and let battery charge for 24 hours if had been unplugged for more than 90 days. See page 6.

- Dark Inset, Main picture or Monitor

Check video input levels and make sure you have not double terminated the video source. The PIPC is 75 ohm terminated on both video inputs and not selectable. Either unterminate your monitor or use the distribution amplifier if many devices are used on one camera signal.

Specifications

Video Inputs (Parent & Inset)......................1V P-P +/- 10% 75 ohm term
Video Output ……………………1V P-P term. 75 ohms or unterm
Power Supply .... 12VDC @ 240mA
                included UL/CSA wall transformer   12VDC @ 300mA
Swap Alarm In...contact closure to gnd
PiP On Alarm In ....contact closure to gnd
PiP Border ....white, black, green,blue,red or off
PiP sizes ....1/9, 1/16 approx. size of full screen
Battery Backup ....NiCad 90 days after 24hr charge
Resolution..212 x 88 pixels
Inset A/D ....5 bit scale

Connectors:

Video In/Out..BNC
Power Input......................................DC Coax 2.1mm x 5.5mm
Alarm Inputs ………………Screw terminal with quick disconnect

Mechanical:

Case .... Beige Metal 5.13" W x 4.90" L x 1.38" H
                (130mm W x 125mm L x 35mm H)
Weight...0.60kg.(1.32lbs.)
Box Size...8.0" W x 7.0" L x 2.5" H
                (240mm W x 178mm L x 64mm H)

WARRANTY

During the period of twelve months from the date of sale to the original end-user, the manufacturer will repair or replace (at manufacturers option) all necessary parts, except the outside cabinet trim, without charge for parts or labor required to make the repair of replacement

All specifications are subject to change