

PiPc

Color Picture in a Picture



Operation Manual





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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FEATURES

- PiP insert in full NTSC Color
- No genlock cameras required
- Fully digitized picture in a picture
- 2 inset picture sizes 1/9 or 1/16
- Positionable anywhere on-screen
- Selectable border around picture: white, green, black, blue, red or off
- Front Panel Controls
 - Freeze
 - Inset picture on/off
 - Swap pictures
- Two Alarm Inputs
 - Insert picture On / Off
 - Swap Pictures
- Easy Screw terminals for alarm wiring with easy disconnect feature
- 12VDC Power
- Low Power Design
- Battery backup for all setups
- Parent and inset picture are color
- Vertical Interval swapping
- Compact size

More Information

To obtain the most update information on the Color PiPc or to obtain a copy of this manual go to the DigiSpec Inc. web site and follow the links to Technical Support.

www.digispecvideomotion.com

Introduction

The DigiSpec 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.



1/9th Inset



1/16th Inset

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.

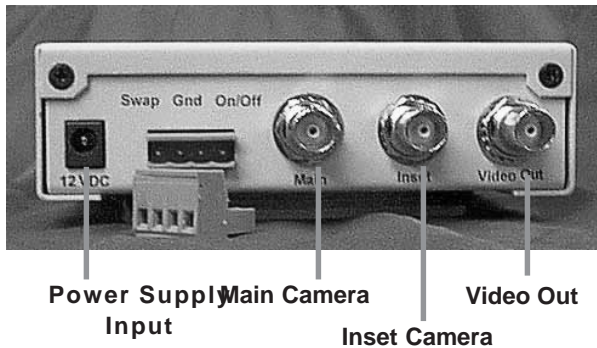
Connecting the Color PiPC

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.

Powering up the Color PiPc for the first time

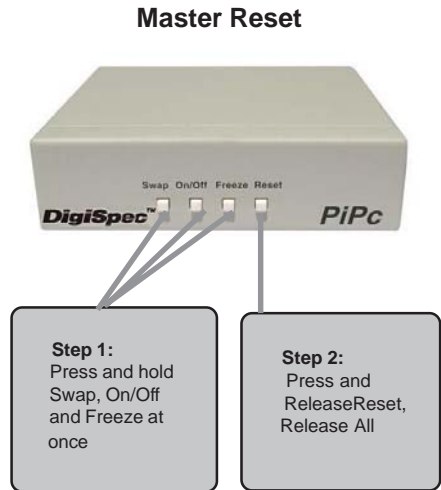
The Color PiPc has an internal rechargeable NiCad battery that can hold your programming setups for up to 90 days after the unit has been plugged in for 24 hours which completely charges the battery. If the battery becomes depleted for any reason the on-screen PIP may not be visible and/or the saved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

PiPc Connections



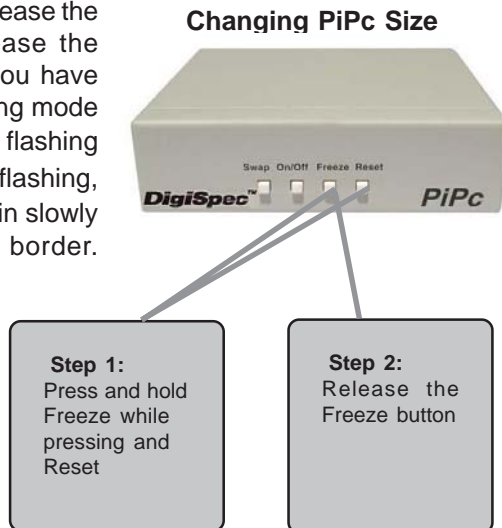
**If the PiPc is not visible,
issue a master reset to the unit**

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.



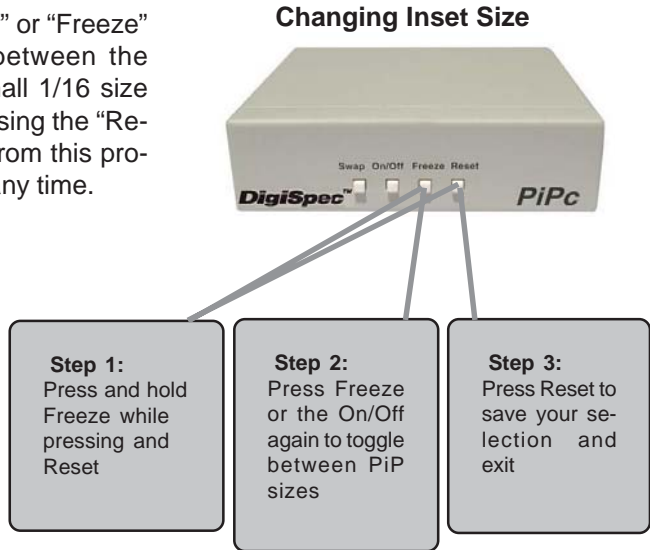
To Change the PiPc Size

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.



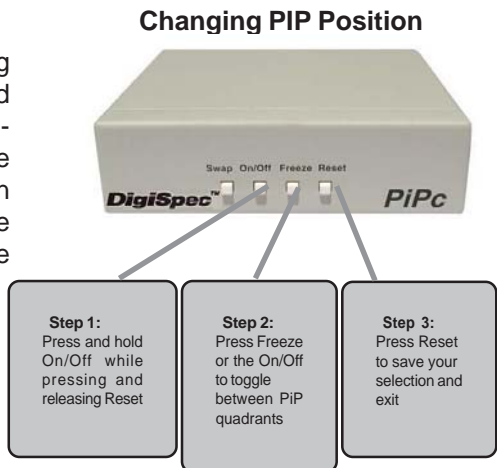
To Change the Inset Size

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.



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. Adjust the inset size, border and position different from one swap mode to the other.



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

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

The PIP Border

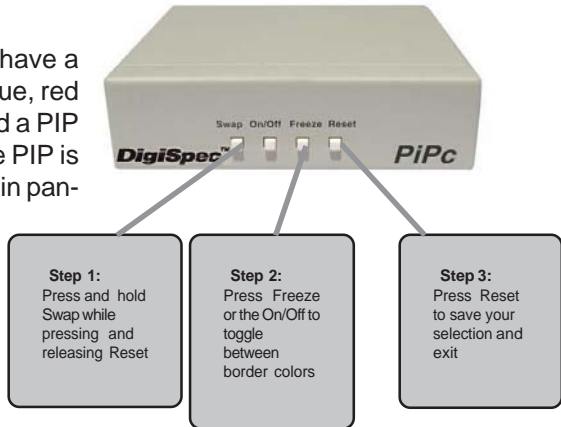
The PIP can be selected to have a bright white, black, green, blue, red or no border. A border around a PIP is useful to identify where the PIP is quickly upon alarm call up or in panning or tilting operations of the parent picture.

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



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

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

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 terminated
Video Output1V P-P terminated 75 ohms or unterminated
Power Supply 12VDC @ 240mA
included UL/CSA wall transformer 12VDC @ 300mA
Swap Alarm In.....contact closure to ground
PiP On Alarm Incontact closure to ground
PiP Borderwhite, black, green,blue,red or off
PiP sizes1/9, 1/16 approx. size of full screen
Battery BackupNiCad 90 days after 24hr charge
Resolution.....212 x 88 pixels
Inset A/D5 bit scale

Connectors:

Video In/Out.....BNC
Power Input.....DC Coax 2.1mm x 5.5mm
Alarm InputsScrew 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)

LIMITED WARRANTY

(Terms and Conditions)

For **2 Years** from the date of shipment, Seller warrants to Buyer that the Product is free from defects in material or workmanship **under normal use and service**. Equipment manufactured by other than Seller but furnished by Seller carries the same warranty to Buyer as Seller receives from the other manufacturer, notwithstanding any provision to the contrary. If Buyer has specified a particular manufacturer's product which is not the brand standardly supplied by Seller, Buyer shall look only to the other manufacturer's warranty and Seller shall not warrant such item.

EXCLUSIONS. Seller's warranty does not cover the following:

- (1) in-transit damage claims, improper handling by carrier or post office (Note: only the consignee of the shipment can file a claim with the common carrier)
- (2) damages caused by incorrect use, modification, carelessness, improper storage, hostile operating conditions, or unauthorized service, installation or repairs without proper training from the Seller
- (3) damages caused by fire, flood, lightning, collision, acts of God or other events beyond the control of Seller
- (4) products or parts thereof that have had serial numbers removed, altered or defaced
- (5) products returned without an RMA number and sales or delivery receipt showing the date of original purchase
- (7) use of components that do not meet Seller's specifications
- (9) external parts such as cabinets or keypads
- (10) periodic maintenance and adjustments resulting from normal use

WARRANTIES EXCLUDED. SELLER EXPRESSLY DISCLAIMS AND EXCLUDES ANY EXPRESS OR IMPLIED WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEEDS OR IS INCONSISTENT WITH THE WARRANTY HEREIN EXPRESSLY SET FORTH.

NON-WARRANTY CLAIMS. In the event Buyer makes a warranty claim and Seller's warranty does not apply, Buyer shall reimburse Seller for all reasonable expenses incurred by Seller in diagnosing the installation/repair problem.

BUYER'S EXCLUSIVE REMEDIES. If the Product supplied shall fail to conform to the contract or any applicable warranty, Buyer shall immediately notify Seller of such condition and afford Seller a reasonable opportunity to inspect said Product. Seller shall, at its option, either repair or replace such nonconforming Product. Seller shall not be responsible for labor charges for removal or installation of such equipment or material or charges for transportation, handling and shipping except as provided in Seller's written service policy. No Product shall be returned without Seller's prior written consent.

SELLER SHALL NOT BE LIABLE FOR ANY SPECIAL, DIRECT INCIDENTAL OR CONSEQUENTIAL DAMAGES OF A COMMERCIAL NATURE ARISING OUT THE USE OF OR INABILITY TO USE SELLER'S PRODUCT BY REASON OF THE FACT THAT SUCH PRODUCT DOES NOT CONFORM TO THE CONTRACT OR TO ANY EXPRESS OR IMPLIED WARRANTY. SELLER'S MAXIMUM LIABILITY SHALL BE LIMITED TO THE COST OF REPAIR AND/OR REPLACEMENT OF THE PRODUCT CLAIMED TO BE DEFECTIVE OR NONCONFORMING, SUBJECT TO SELLER'S RIGHT OF REMOVAL AND RETURN OF PRODUCT.

All of the foregoing constitute Buyer's sole and exclusive remedy and Seller's sole and exclusive liability for supplying nonconforming or defective Product.

RETURNS. DigiSpec products are fully inspected and carefully packed to ensure you are delivered a quality product in good condition. If you are not fully satisfied with our product, returns of standard stocking items with no restocking fee can be made within thirty (30) days of invoice to Buyer. All such returns must have prior consent of Seller by obtaining an RMA number and must include the sales or delivery receipt showing the date of original purchase and be in an unused condition contained in its original packaging. Any other returns must have prior written consent of Seller and are subject to a restocking fee of fifteen percent (15%) and freight charges.

RMA NUMBER. The RMA (Return Material Authorization) number must be obtained by contacting Seller prior to the shipment of the the product for return. The RMA number is valid only for 15 days from the date of issue. The RMA number must be clearly displayed on all shipping labels.

NOTES



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