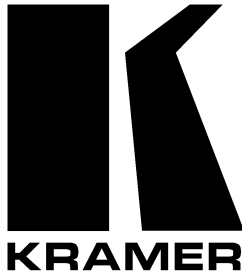


Kramer Electronics, Ltd.



USER MANUAL

Model:

SP-11

Video Processor

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1 Introduction

Dedication by Kramer Electronics since 1981, to the development and manufacture of high quality video/audio equipment, makes the Kramer line an integral part of the finest production and presentation facilities in the world. In recent years, Kramer has redesigned and upgraded most of the line, making the best even better! The Kramer line of professional video/audio electronics is one of the most versatile and complete available, and is a true leader in terms of quality, workmanship, price/performance ratio and innovation. In addition to our high quality video audio processors, we also offer excellent distribution amplifiers, remote controllers, switchers and matrices, interfaces and computer-related products. Congratulations on purchasing your Kramer **SP-11 Video Processor**. This product is ideal for:

- Video control and correction in duplication and production studios
- Camera control, luminance and white balance correction
- Medical, industrial and military image enhancement
- Composite to YC switching and bi-directional transcoding

The package includes the following items:

- **SP-11** Video Processor
- Power cord
- This user manual
- Kramer concise product catalog/CD

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual

3 Overview

Your unique **SP-11 Video Processor** is a studio quality video audio processor that combines switching, distributing, and transcoding capabilities. The **SP-11 Video Processor** includes:

- 4 front panel INPUT SELECTOR buttons to select the desired input (which is processed and simultaneously routed to all 4 outputs via internal composite/s-Video transcoding)
- 4 video inputs (2 composite video and 2 s-Video) and 4 video outputs (2 composite video and 2 s-Video) with audio inputs that switch with their respective video inputs (audio-follow-video)
- A screen SPLITTER that provides simultaneous "before and after" image comparison on one monitor

The **SP-11 Video Processor** lets you control:

- Separate red, green and blue signal levels¹
- Black level
- Color
- Contrast² and Definition³ - also via the LOG buttons
- Video Gain
- Splitter
- RGB

Achieving the best performance means:

- Connecting only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoiding interference from neighboring electrical appliances that may adversely influence signal quality and positioning your **SP-11 Video Processor** away from moisture excessive sunlight and dust

¹ For chroma correction and white balance control

² Ideal for video and data projectors

³ For enhancing images and eliminating fine detail loss

4 Your Video Processor

Figure 1, Table 1 and Table 2 define the front and rear panels of the **SP-11 Video Processor**:

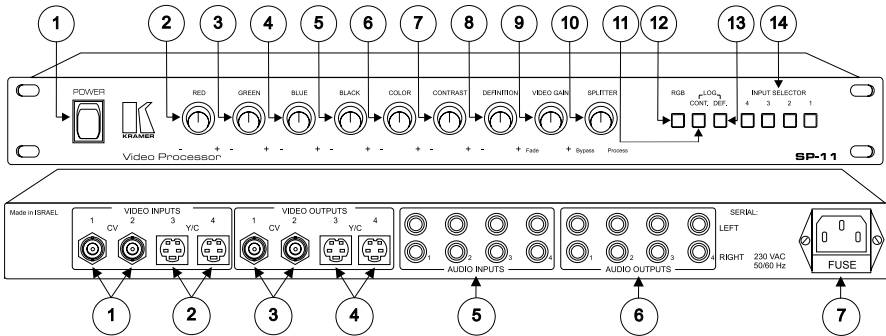


Figure 1: SP-11 Video Processor

Table 1: Front Panel SP-11 Video Processor Features

#	Feature	Function
1	Power Switch	Illuminated switch supplying power to the unit
2	RED Knob	Adjusts the RED
3	GREEN Knob	Adjusts the GREEN
4	BLUE Knob	Adjusts the BLUE
5	BLACK Knob	Adjusts the BLACK level (luminance level and the fade to white effect)
6	COLOR Knob	Adjusts the COLOR ¹
7	CONTRAST Knob	Adjusts the CONTRAST ²
8	DEFINITION Knob	Adjusts the DEFINITION ³
9	VIDEO GAIN Knob	Adjusts the VIDEO GAIN ⁴
10	SPLITTER Knob	Displays the edited image with the original image, jointly in a split screen ⁵
11	LOG (CON.) Button	Programs the CONTRAST control to operate in linear or logarithmic mode
12	RGB Button	Activates adjustments made via the RED, GREEN and BLUE control knobs
13	LOG (DEF.) Button	Programs the DEFINITION control to operate in linear or logarithmic mode
14	INPUT SELECTOR Buttons	Select the video / audio source (from 1 to 4)

1 Rotating clockwise enhances dull colors. Rotating counterclockwise reduces distortion (snow)

2 To achieve optimal results, use the LOG (CON.) button

3 Sharpens images and removes snow. To achieve optimal results, use the LOG (DEF.) button

4 Rotating clockwise (to +) adds brightness. Rotating counterclockwise (to Fade) fades the picture in and out. Adjust both the BLACK level and the Video Gain controls to achieve fade-to-gray or white effect

5 Rotating counterclockwise to the Bypass position disengages the Splitter activity, displaying only the original image. Rotating clockwise from the Bypass position will display an edited image on the left side of the screen with a hairline dividing the edited image (left) and the original image (right). Rotating further clockwise from the Bypass position increases the portion of the edited image. Rotating clockwise to the Process position displays only the e dited image

Table 2: Rear Panel SP-11 Video Processor Features

#	Feature	Function
1	CV VIDEO INPUTS	Connects to composite video BNC connectors (from 1 to 2)
2	Y/C VIDEO INPUTS	Connects to s-Video 4p connectors (from 1 to 2)
3	CV VIDEO OUTPUTS	Connects to composite video BNC connectors (from 1 to 2)
4	Y/C VIDEO OUTPUTS	Connects to s-Video 4p connectors (from 1 to 2)
5	AUDIO INPUTS	Connects to audio RCA connectors (from 1 to 4)
6	AUDIO OUTPUTS	Connects to audio RCA connectors (from 1 to 4)
7	Power Connector with Fuse	230 VAC, 50/60 Hz, (115 VAC, U.S.A.) 13.8 VA max power inlet

4.1 Connecting Your Video Processor

To use the **SP-11 Video Processor**, connect the following¹ to the rear panel:

1. The composite video and s-Video sources and acceptors as well as the appropriate audio sources and acceptors.
2. The power cord.

Note: Set all the front panel control level knobs to their mid position and set the RGB, the LOG (CONT.) and the LOG (DEF.) buttons off.

5 Operating Your Video Processor

To switch, distribute and convert a CV video and audio source:

- Press the INPUT SELECTOR button # 1 or² 2

The INPUT SELECTOR button illuminates, indicating selection and outputting of that CV video and audio source to the 2 CV video outputs (1 and 2) and conversion to the 2 Y/C video outputs (3 and 4)

To switch, distribute and convert a Y/C video and audio source:

- Press the INPUT SELECTOR button # 3 or² 4

The INPUT SELECTOR button illuminates, indicating selection and outputting of that Y/C video and audio source to the 2 Y/C video outputs (3 and 4) and conversion to the 2 CV video outputs (1 and 2)

¹ Switch OFF the power on each device before connecting it to your SP-11. After connecting your SP-11, switch on its power and then switch on the power on each device

² You cannot press more than one INPUT SELECTOR button at a time

6 Technical Specifications

Table 3 includes the technical specifications:

Table 3: Technical Specifications of the SP-11 Video Processor

Inputs:	2 composite video, 1Vpp / 75Ω on BNCs, 2 Y/C - 1Vpp/75Ω (Y), 0.3V / 75Ω (C), on 4P connectors 4 audio stereo, 1Vpp / 50kΩ on RCAs
Outputs:	2 composite video, 1Vpp / 75Ω on BNCs, 2 Y/C - 1Vpp/75Ω (Y), 0.3V / 75Ω (C), on 4P connectors 4 audio stereo, 1Vpp / 100Ω on RCAs
Diff. Gain:	1.15%
Diff. Phase:	0.24 Deg.
K-Factor:	1.7%
Video S/N:	73 dB
Coupling:	DC (video), AC (audio)
Input Selector:	Vertical interval
Audio Bandwidth:	20 kHz -3dB
Audio Thd:	0.019%
Audio S/N Ratio:	86 dB
Control:	Video gain (fade to +6 dB), black Level, contrast, definition, color saturation (-3 dB to +6 dB) red, green, blue controls (-40 dB to +6 dB), screen splitter (process to bypass)
Dimensions:	19 inch (W), 7 inch (D), 1 U (H) rack mountable
Power Source:	230 VAC, 50/60 Hz, (115 VAC, U.S.A.) 13.8 VA
Weight:	2.9 kg. (6.4 lbs.) approx.
Accessories:	Power cord

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for three years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
 - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
 - ii) Product modification, or failure to follow instructions supplied with the product
 - iii) Repair or attempted repair by anyone not authorized by Kramer
 - iv) Any shipment of the product (claims must be presented to the carrier)
 - v) Removal or installation of the product
 - vi) Any other cause, which does not relate to a product defect
 - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.

NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.

This equipment has been tested to determine compliance with the requirements of:

- EN-50081: "Electromagnetic compatibility (EMC);
generic emission standard.
Part 1: Residential, commercial and light industry"
- EN-50082: "Electromagnetic compatibility (EMC) generic immunity standard.
Part 1: Residential, commercial and light industry environment".
- CFR-47: FCC Rules and Regulations:
Part 15: "Radio frequency devices
Subpart B – Unintentional radiators"

CAUTION!

- Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- Use the supplied DC power supply to feed power to the machine.
- Please use recommended interconnection cables to connect the machine to other components.



**The list of Kramer distributors appears on our web site:
www.kramerelectronics.com**

We welcome your questions, comments and feedback.

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