Kramer Electronics, Ltd.

USER MANUAL

Model:

FC-15

RGBS to Component Video Converter

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1   Introduction

Welcome to Kramer Electronics (since 1981): a world of unique, creative and affordable solutions to the infinite range of problems that confront the video, audio and presentation professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 350-plus different models now appear in 8 Groups[1], which are clearly defined by function. Congratulations on purchasing your Kramer **FC-15** *RGBS to Component Video Converter*. This product is ideal for:

*   Any 50Hz/60Hz interlaced display system requiring conversion between RGBS and YUV
*   Multimedia, home theater and presentation applications

The package includes the following items:

*   **FC-15** *RGBS to Component Video Converter*
*   Power adapter (12V DC Input)
*   This user manual[2]

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
*   Use Kramer high performance high resolution cables[3]

3   Overview

The Kramer **FC-15** *RGBS to Component Video Converter* is a high quality converter for converting RGBS (separate composite sync / video on the 21-pin RGB - SCART connector[4]) to component video (Y, B-Y, R-Y, or YUV).

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1 GROUP 1: Distribution Amplifiers; GROUP 2: Video and Audio Switchers, Matrix Switchers and Controllers; GROUP 3: Video, Audio, VGA/XGA Processors; GROUP 4: Interfaces and Sync Processors; GROUP 5: Twisted Pair Interfaces; GROUP 6: Accessories and Rack Adapters; GROUP 7: Scan Converters and Scalers; and GROUP 8: Cables and Connectors

2 Download up-to-date Kramer user manuals from the Internet at this URL: http://www.kramerelectronics.com/manuals.html

3 The complete list of Kramer cables is on our Web site at http://www.kramerelectronics.com (click "Cables and Connectors" in the Products section)

4 The Scart connector has 21 pins (the 21st pin is actually not a pin but a ground shield contact), carrying two audio channels: in and out, video channels: in and out, RGB signals, ground and some additional control pins

In particular, the high performance **FC-15**:

- Lets you display RGB video on plasma monitors and on other display devices equipped with component video inputs
- Includes buffered stereo audio outputs
- Includes a looping input (with termination switch) for expanded outputs
- Is rugged and dependable, can be rack-mounted using the **RK-80** 19" rack kit, and is 12VDC fed[1]

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 and positioning your **FC-15** away from moisture, excessive sunlight and dust

4 Your FC-15 RGBS to Component Video Converter

Figure 1, Table 1 and Table 2 define the **FC-15**:
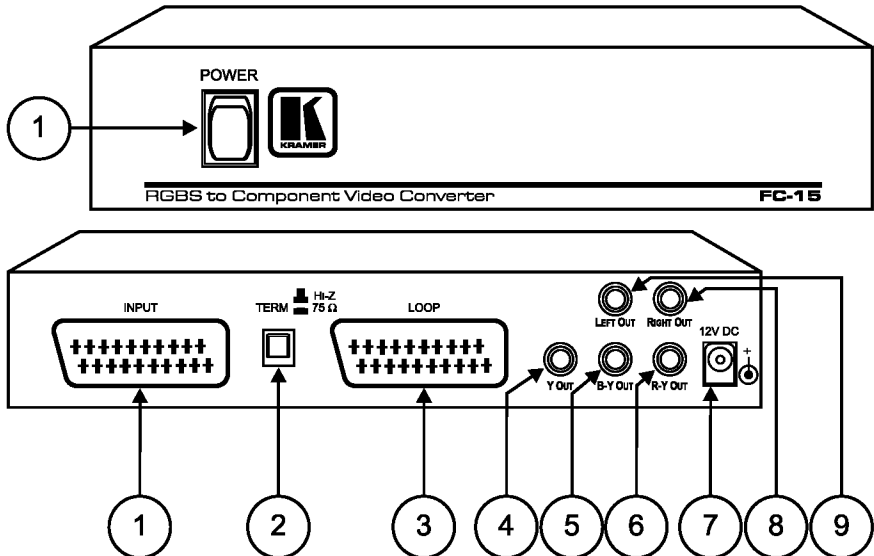

Figure 1: FC-15 RGBS to Component Video Converter

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1 As an option, you can purchase the Kramer VA-50P 6 Port Universal 12-Volt Power Supply, enabling you to supply power to up to 6 Kramer devices that require 12VDC

Table 1: Front Panel FC-15 RGBS to Component Video Converter Features

#	Feature	Function
1	*POWER* Switch	Illuminated switch for turning the unit ON or OFF

Table 2: Rear Panel FC-15 RGBS to Component Video Converter Features

#	Feature	Function
1	*INPUT* Scart Connector	Connects to the external video source
2	*TERM Hi-Z / 75Ω* Switch	Pushing in selects *75Ω*, releasing selects *Hi-Z*[1]
3	*LOOP* Scart Connector	Connects to the Scart video loop
4	*Y OUT* RCA Connector	
5	*B-Y OUT* RCA Connector	Connects to the YUV acceptor
6	*R-Y OUT* RCA Connector	
7	*12V DC*	+12V DC connector for powering the unit
8	*RIGHT OUT* RCA Connector	Right audio output
9	*LEFT OUT* RCA Connector	Left audio output

5 Connecting the FC-15 RGBS to Component Video Converter

To connect your **FC-15** *RGBS to Component Video Converter*, as the example in Figure 2 illustrates, do the following[2]:

1. Connect a video source (for example, a set top box) to the Scart input connector.

2. Connect the LOOP Scart connector (optional) to an RGB CRT monitor, and release the Hi-Z/75Ω button to Hi-Z.
   When the input is not looped, the Hi-Z/75Ω button should be pushed in.

3. Connect the Y OUT, B-Y OUT, and the R-Y OUT RCA connectors of the **FC-15** to the Y/R, Pb/Cb/G, and the Pr/Cr/B INPUT RCA connectors of the **VP-740**, respectively[3]. Connect the LEFT and RIGHT OUT audio RCA connectors to the power amplifier and speakers.

4. Connect the 12V DC power OUT socket of the **VP-740** to the 12V DC power (IN) socket of the **FC-15**[4]. On the **VP-740**, connect the AC power cord[5] to the power connector.

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1 For looping select Hi-Z

2 Switch OFF the power on each device before connecting it to your FC-15. After powering up your FC-15, switch on the power on each device

3 Alternatively, connect the Y OUT, B-Y OUT, and the R-Y OUT RCA connectors of the FC-15 to a YUV acceptor, for example, a plasma monitor (not shown in Figure 2)

4 Alternatively, connect (not illustrated in Figure 2) the 12V DC power adapter (wall transformer) to the 12V DC socket of the FC-15 and connect the transformer to the mains electricity

5 We recommend that you use only the power cord that is supplied with the VP-740
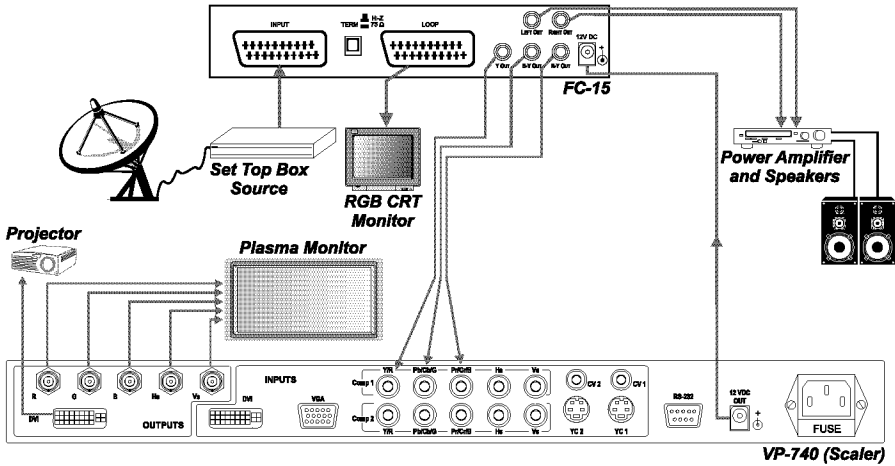
Figure 2: Connecting the FC-15 RGBS to Component Video Converter

6 Technical Specifications

Table 3 includes the technical specifications:

Table 3: Technical Specifications[1] of the FC-15 RGBS to Component Video

INPUTS:	1 RGBS on a Scart type connector, with video / audio pass through 1 RGBS loop on a Scart type connector	
OUTPUTS:	1 component video - (Y, B-Y, R-Y) 1V, 0.7V, 0.7Vpp / 75Ω on RCA connectors 1 audio unbalanced stereo 1Vpp / 50Ω nom. on RCA connectors	
MAX. OUTPUT LEVEL:	VIDEO: 2.1Vpp	AUDIO: 6Vpp
BANDWIDTH (-3dB):	VIDEO: 66.5MHz, Fully Loaded	AUDIO: 3Hz to >40kHz
K-FACTOR:	0.6%	
S/N RATIO:	VIDEO: 75dB (Y)	AUDIO: 71.08dB
COUPLING:	VIDEO: AC	AUDIO: AC
AUDIO THD + NOISE:	0.08%	
POWER SOURCE:	12 VDC 200mA	
DIMENSIONS:	22cm x 18cm x 4.5cm (8.7" x 7" x 1.8") W, D, H.	
WEIGHT:	1.1 kg (2.4lbs.) approx.	
ACCESSORIES:	Power supply (12V, 500mA)	
OPTIONS:	VA-50P 6 Port Universal 12-Volt Power Supply 19" rack adapter RK-80	

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1 Specifications are subject to change without notice

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.

For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com. Updates to this user manual may be found at http://www.kramerelectronics.com/manuals.html. We welcome your questions, comments and feedback.