



Kramer Electronics, Ltd.

USER MANUAL

19-inch Rack Adapters

IMPORTANT: Before proceeding, please read paragraph entitled
"Unpacking and Contents"



Table Of Contents

Section	Name	Page
1	INTRODUCTION	2
2.	HOW DO I GET STARTED?	2
3.	UNPACKING AND CONTENTS	2
4.	INSTALLATION	2
4.1	MOUNTING YOUR MACHINE IN THE RACK ADAPTER	2
5.	THE ADAPTERS TABLE	3
6.	The RK-10 Adapter Installation	5
7.	The RK-MED Adapter Installation	6
8.	The RK-MEDN Adapter Installation	7
9.	The RK-50R Adapter Installation	8
10.	The RK-50RN Adapter Installation	9
11.	The RK-SM Adapter Installation	10
12.	The RK-4E/S Adapter Installation	11
13.	The RK-MED80 Adapter Installation	12
14.	The RK-80 Adapter Installation	13
15.	The RK-T1 Adapter Installation	15
16.	The RK-T3 Adapter Installation	16
17.	The RK-81 Adapter Installation	17
18.	The RK-81X Adapter Installation	19
19.	The RK-40 Adapter Installation	20
20.	The RK-4X Adapter Installation	21
	Limited Warranty	22



1 INTRODUCTION

Congratulations on your purchase of this Kramer Electronics Rack Adapter. Since 1981, Kramer has been dedicated to the development and manufacture of high quality video/audio equipment. The Kramer line has become an integral part of many of the best production and presentation facilities around the world. In recent years, Kramer has redesigned and upgraded most of the line, making the best even better. Kramer's 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 the Kramer product you have just purchased, Kramer also offers a full line of high quality distribution amplifiers, switchers, processors, interfaces, controllers and computer-related products. This manual includes instructions for mounting your desktop machine in this 19-inch rack adapter.

2 HOW DO I GET STARTED?

The fastest way to get started is to take your time and do everything right the first time. Taking 15 minutes to read the manual may save you a few hours later. You don't even have to read the whole manual. If a section doesn't apply to you, you don't have to spend your time reading it.

3 UNPACKING AND CONTENTS

The items contained in your Kramer rack adapter package are listed below. Please save the original box and packaging materials for possible future shipment.

19-inch Adapter

Additional mechanical parts (screws, nuts etc.)

User Manual

Kramer Concise Product Catalog

4 INSTALLATION

4.1 Mounting your machine in the rack adapter

The rack adapter you have purchased is designed to help you install one of the Kramer's desktop machines into a standard 19" rack.

In this booklet, there are installation descriptions of all standard rack adapters of Kramer.

Before installing, you should do the following:

- ⊗ Unpack the rack adapter kit.
- ⊗ Have handy a Philips and an Allen screwdrivers.
- ⊗ Read carefully the following instructions.
- ⊗ **Disconnect the mains voltage and all cables connected to the machine that is being mounted in the rack adapter before proceeding with the installation.**

5 THE ADAPTERS TABLE

Adapter Kramer Name	US Name	For Products	Units per adapter	Kramer catalog No.
VM-10	RK-10	VM-10AN, VS-6EII	1	60-100000
VPS-2U	RK-MED	OP-1R, OP-1T, OP-2, SG-8,	1	60-200000
VPS-1U	RK-MEDN	SG-9, SG-11, VA-15, VM-5AD, VM-9S, VM-40, VM-42, VP-3, VP-31, VP-102, VS-16A, VS-16N, VS-421, (VP-4, VS-24N)*		60-200050 (new)
50-55 2U	RK-50R	FC-10, FC-10D, OC-1N, SG-6,	2	60-500000
50-55 1U	RK-50RN	TP-1N, TP-2N, TP-11N, TP-12N, VA-11, VA-12, VA-50P, VM-2N, VM-50A, VM-50H, VM-50YC, VM-50V, VP-2xl, VM-101, VS-55, VS-55A, VS-55V, VS-55YC		60-500050 (new)
TP	RK-SM	TP-4, TP-5N, TP-6, VM-3AB, VM-3C, VM-3D, VM-3L, VM-3M, VM-3S, VM-3V, VS-33V	3	60-300000
VS-4E/S	RK-4E/S	VS-4E, VS-4YC	2	60-400000
SP-40	RK-40	SP-40	1	60-400050
80A/80V	RK-MED80	SP-4200, VM-80A, VM-80V, VM-9YC, VM-5S, VP-32xl	2	60-800000
80A/80V (new)	RK-80	(VP-4, VS-24N)**		60-800050 (new)

The adapters table (Cont.)

Adapter Kramer Name	US Name	For Products	Units per adapter	Kramer catalog No.
TOOLS 1U	RK-T1	All Kramer Tools (103YC, 104L)***	3	60-900000
TOOLS 3U	RK-T3		8	60-900050
VS-81A/V/YC	RK-81	VS-81A, VS-81V, VS-81YC	2	60-810000
VS-81X	RK-81X	VS-81X	1	60-810050
VS-4X	RK-4X	VS-4X	2	60-650000

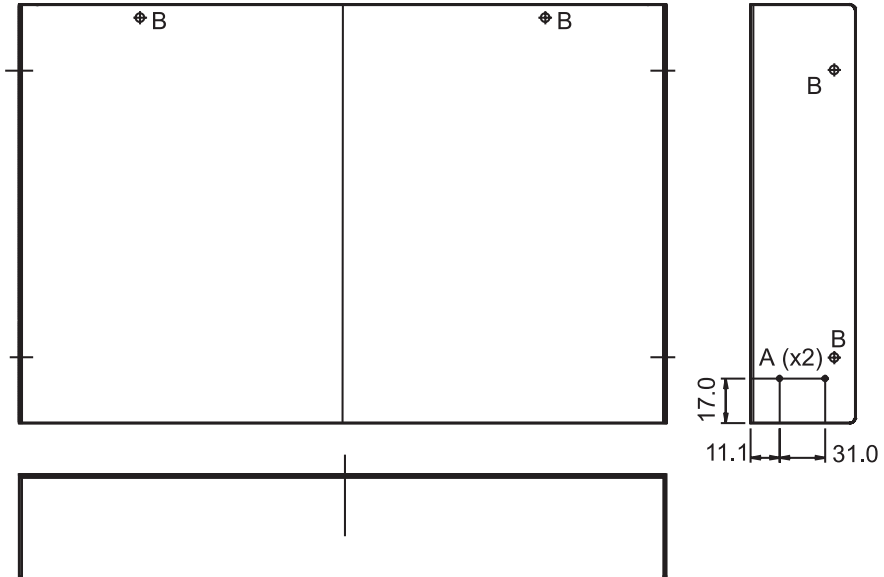
* = Old box – 24.5x18x4.5 cm (9.6"x7"x1.77")

** = New box – 22x18x4.5 cm (8.66"x7"x1.77")

*** = Suitable only for the 1U adapter.

6 THE RK-10 ADAPTER INSTALLATION

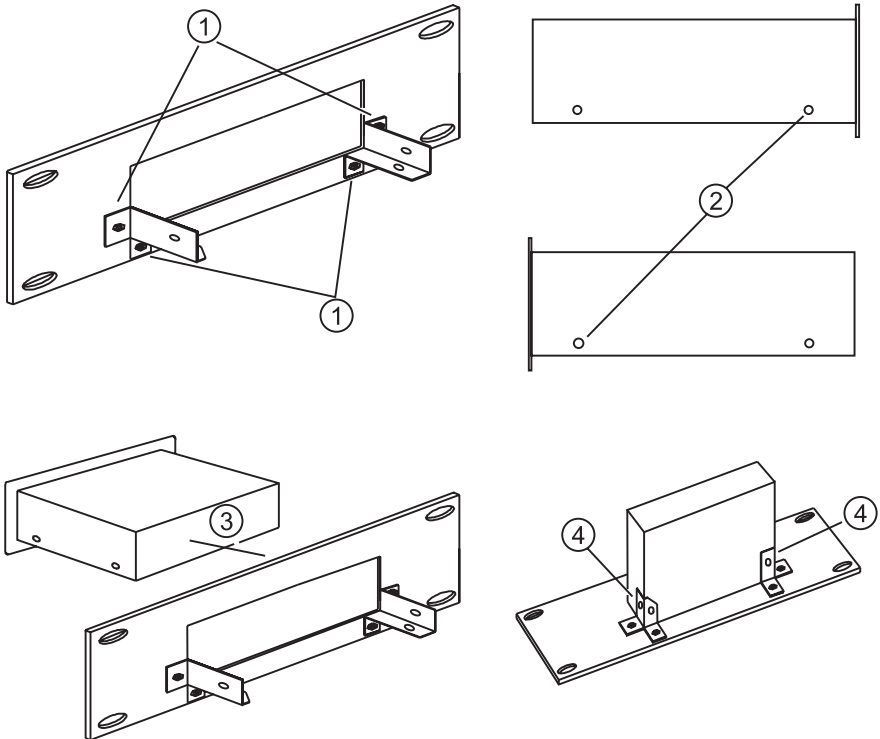
This adapter is suitable for mounting the Kramer VM-10AN and VS-6EII into a 2U rack space.



1. Remove the four rubber feet.
2. Remove the cover (screws B).
3. Drill 4 holes "A" $\phi 2.2\text{mm}$ in the cover (2 on each side).
4. Insert the opened machine into the adapter.
5. Replace the cover onto the machine and secure using the four screws "B".
6. Fasten the adapter to the machine using four screws (into the newly drilled holes "A").

7 THE RK-MED ADAPTER INSTALLATION

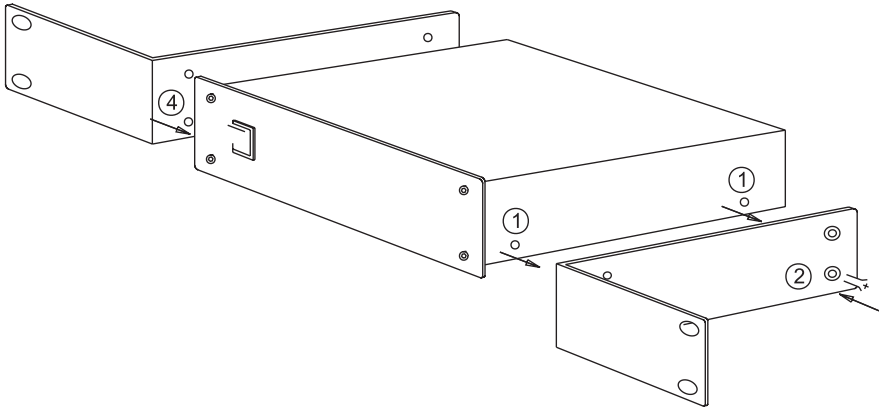
This adapter is suitable for mounting the following Kramer machines into a 2U rack space: **OP-1R, OP-1T, OP-2, SG-8, SG-9, SG-11, VA-15, VM-5AD, VM-9S, VM-40, VM-42, VP-3, VP-31, VP-102, VS-16A, VS-16N, VS-421, (VP-4, VS-24N, see note at table above)***



1. Tighten holders using 4 black Allen M3x8.0 screws.
2. Remove Philips black M3x4.0 screws.
3. Insert machine into the adapter.
4. Tighten machine using 2 Philips black M3x4.0 screws.

8 THE RK-MEDN ADAPTER INSTALLATION

This adapter is suitable for mounting the following Kramer machines into a 1U rack space: **OP-1R, OP-1T, OP-2, SG-8, SG-9, SG-11, VA-15, VM-5AD, VM-9S, VM-40, VM-42, VP-3, VP-31, VP-102, VS-16A, VS-16N, VS-421, (VP-4, VS-24N, see note at table above)***



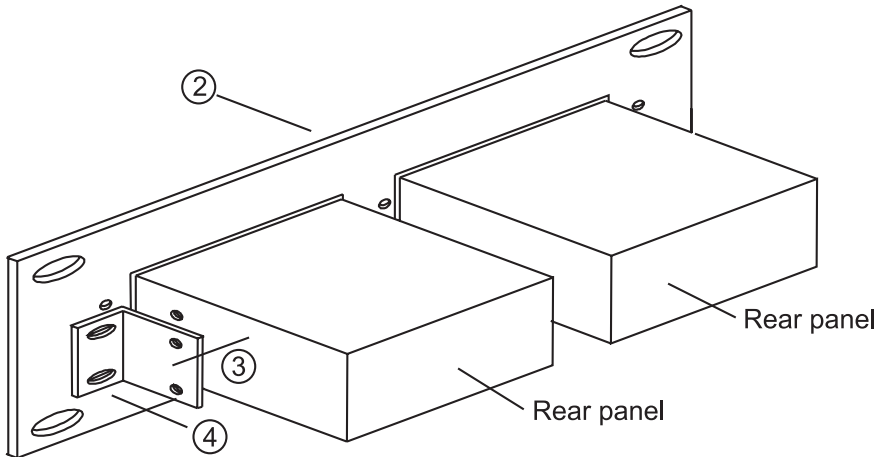
- ① REMOVE THE 2 SCREWS FROM THE RIGHT-HAND SIDE OF THE MACHINE.
- ② TIGHTEN THE BRACKET USING 2 M3x6 BLACK CONE SCREWS.
- ③ REMOVE THE 2 SCREWS FROM THE LEFT-HAND SIDE OF MACHINE.
- ④ TIGHTEN THE SECOND BRACKET USING 2 M3x6 BLACK CONE SCREWS.

* BLACK CONE SCREWS SUPPLIED WITH BRACKETS.

9 THE RK-50R ADAPTER INSTALLATION

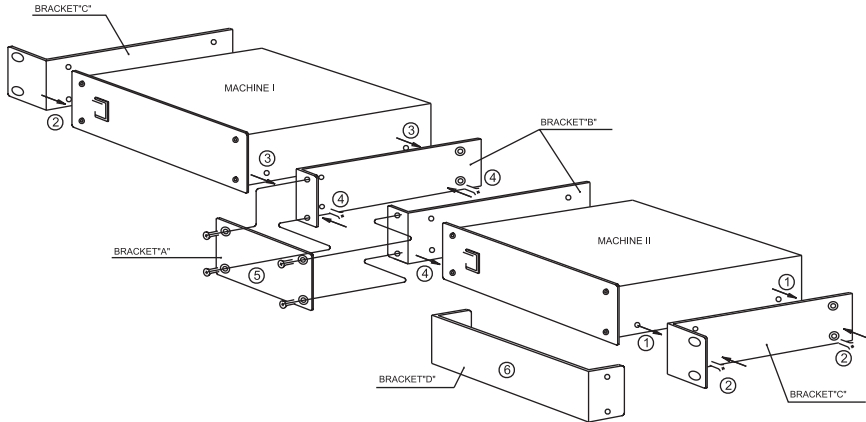
This adapter is suitable for mounting the following Kramer machines into a 2U rack space: **FC-10, FC-10D, OC-1N, SG-6, TP-1N, TP-2N, TP-11N, TP-12N, VA-11, VA-12, VA-50P, VM-2N, VM-50A, VM-50H, VM-50YC, VM-50V, VP-2xl, VM-101, VS-55, VS-55A, VS-55V, VS-55YC.**

1. Remove the rubber feet from the bottom of the machine.
2. Insert the machine into the adapter.
3. Using the plastic nuts, attach the brackets to the machine.
4. Using the metal screws, attach the brackets to the body of the adapter.



10 THE RK-50RN ADAPTER INSTALLATION

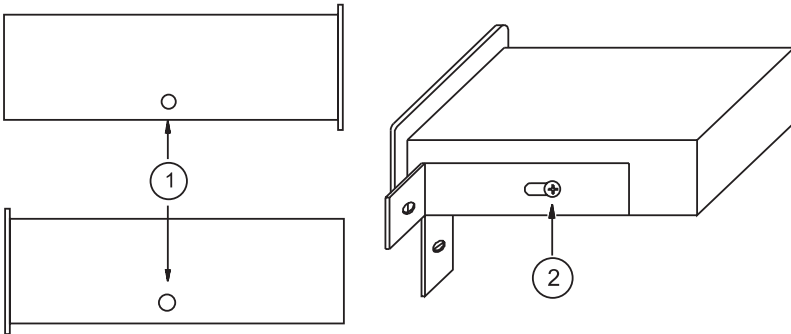
This adapter is suitable for mounting the following Kramer machines into a 1U rack space: **FC-10, FC-10D, OC-1N, SG-6, TP-1N, TP-2N, TP-11N, TP-12N, VA-11, VA-12, VA-50P, VM-2N, VM-50A, VM-50H, VM-50YC, VM-50V, VP-2xl, VM-101, VS-55, VS-55A, VS-55V, VS-55YC.**



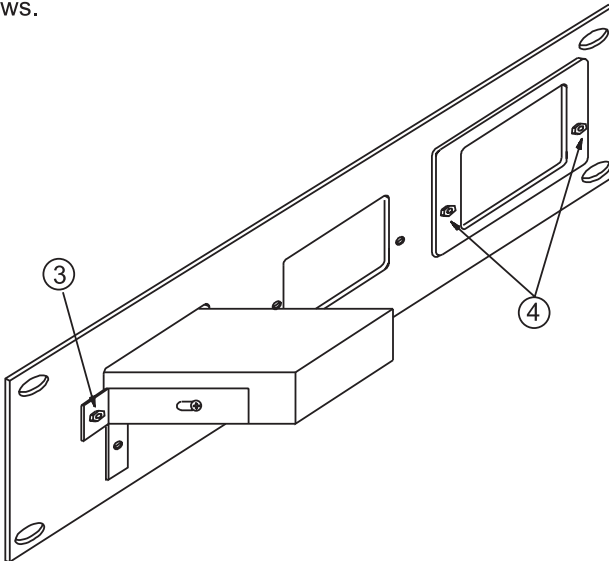
- ① REMOVE THE 2 SCREWS FROM THE LEFT- HAND SIDE OF MACHINE I, AND FROM THE RIGHT-HAND SIDE OF MACHINE II.
- ② TIGHTEN THE 2 BRACKETS "C" USING 4 M3x6 BLACK CONE SCREWS (SUPPLIED WITH BRACKETS).
- ③ TAKE OUT 2 SCREWS FROM THE OTHER SIDE OF EACH MACHINE.
- ④ TIGHTEN THE 2 BRACKETS "B" USING 4 M3x6 BLACK CONE SCREWS.
- ⑤ TIGHTEN BRACKET "A" USING 4 M3x6 BLACK CONE SCREWS.
- ⑥ BRACKET "D" IS PROVIDED TO COVER ONE OF THE OPENINGS IF THE ADAPTER IS USED WITH ONLY ONE MACHINE.

11 THE RK-SM ADAPTER INSTALLATION

This adapter is suitable for mounting the following Kramer machines into a 2U rack space: **TP-4, TP-5N, TP-6, VM-3AB, VM-3C, VM-3D, VM-3L, VM-3M, VM-3S, VM-3V, VM-3Sxl, VM-3Vxl, VS-33V.**

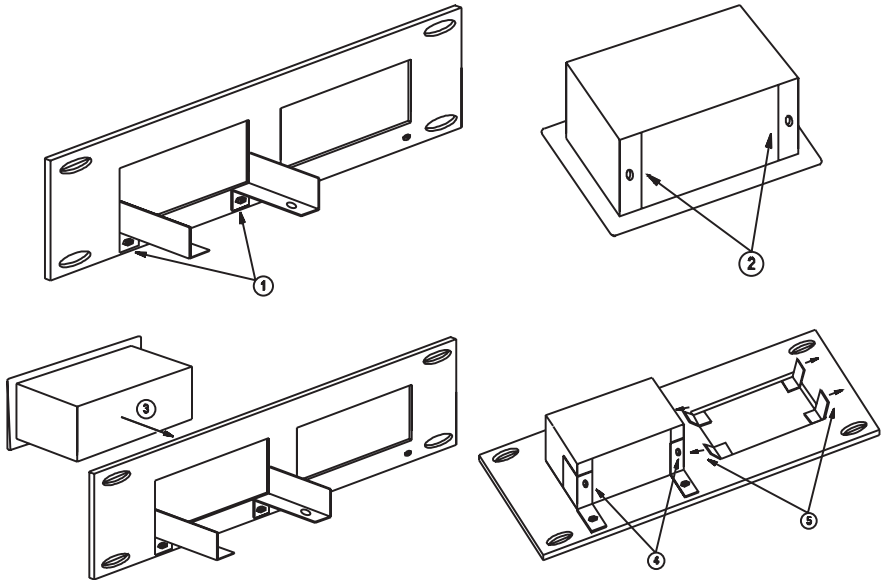


1. Remove 2 Philips black M3x4.0 screws.
2. Tighten "holders" using 2 Philips black M3x4.0 screws as drawn.
3. Tighten machine to panel using 2 black Allen M3x8.0 screws.
4. If necessary, insert cover and tighten using 2 black Allen M3x8.0 screws.



12 THE RK-4E/S ADAPTER INSTALLATION

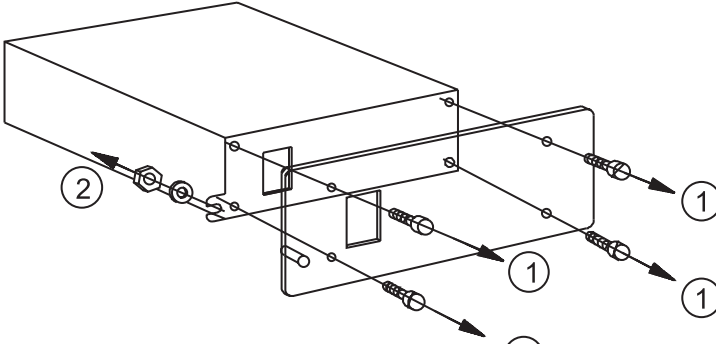
This adapter is suitable for mounting the following Kramer machines into a 2U rack space: VS-4E, VS-4YC.



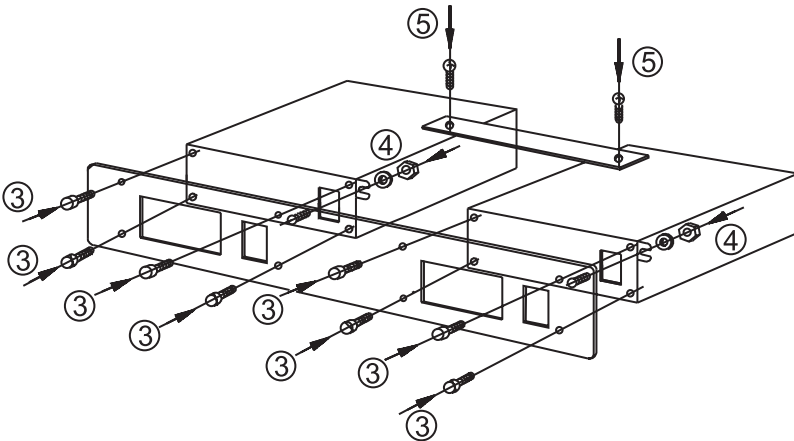
1. Tighten holders using 2 black Allen M3x8.0 screws.
2. Remove 2 Philips 4x1/4" screws.
3. Insert machine into adapter.
4. Tighten the machine using 2 Philips 4x1/4" screws.
5. If necessary, insert the cover and bend the "ears".

13 THE RK-MED80 ADAPTER INSTALLATION

This adapter is suitable for mounting the following Kramer machines into a 1U rack space: SP-4200, VM-80A, VM-80V, VM-9YC, VM-5S, VP-32xl (VP-4, VS-24N, see note above)**.



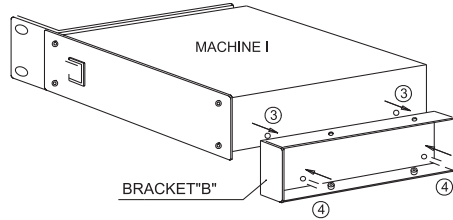
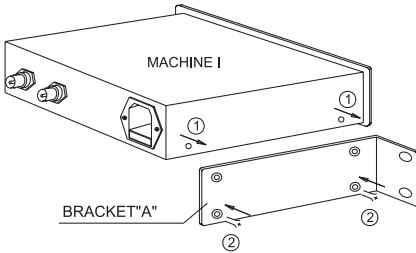
1. Remove the 4 M3x8.0 allen screws. 1
2. Remove the nut and lock washer



3. Tighten the machines using M3x8.0 black Allen screws.
4. Tighten nut and lock washer.
5. Tighten bracket using 2 M3x4.0 black Philips screws.

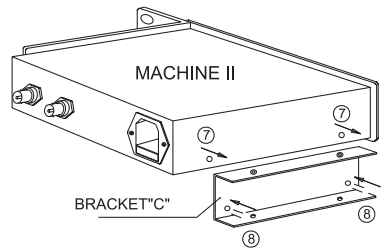
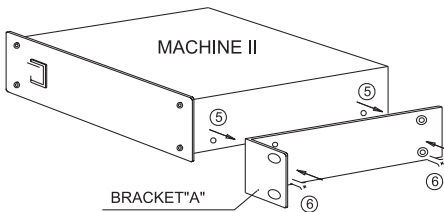
14 THE RK-80 ADAPTER INSTALLATION

This adapter is suitable for mounting the following Kramer machines into a 1U rack space: **SP-4200, VM-80A, VM-80V, VM-9YC, VM-5S, VP-32xl (VP-4, VS-24N, see note above)**.**

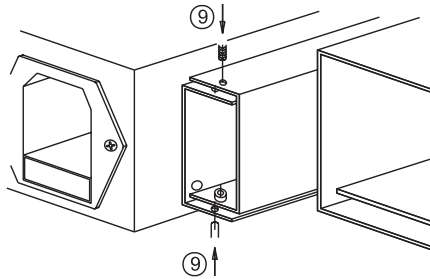


- ① REMOVE THE 2 SCREWS FROM THE LEFT-HAND SIDE OF MACHINE I.
- ② TIGHTEN THE BRACKET "A" USING 2 M3x6 BLACK CONE SCREWS.*
- ③ TAKE OUT 2 M3x4 BLACK PHILLIPS SCREWS FROM OTHER SIDE OF MACHINE I.
- ④ TIGHTEN THE BRACKET "B" USING 2 M3x4 BLACK PHILLIPS SCREWS.

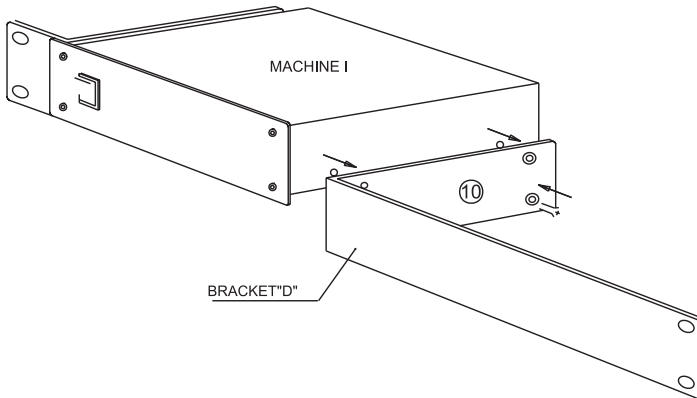
* BLACK CONE SCREWS SUPPLIED WITH BRACKETS.



- ⑤ REMOVE THE 2 SCREWS FROM THE RIGHT-HAND SIDE OF MACHINE II .
- ⑥ TIGHTEN THE BRACKET "A" USING 2 M3x6 BLACK CONE SCREWS.
- ⑦ TAKE OUT 2 M3x4 BLACK PHILLIPS SCREWS FROM OTHER SIDE OF MACHINE II.
- ⑧ TIGHTEN THE BRACKET "C" USING 2 M3x4 BLACK PHILLIPS SCREWS.



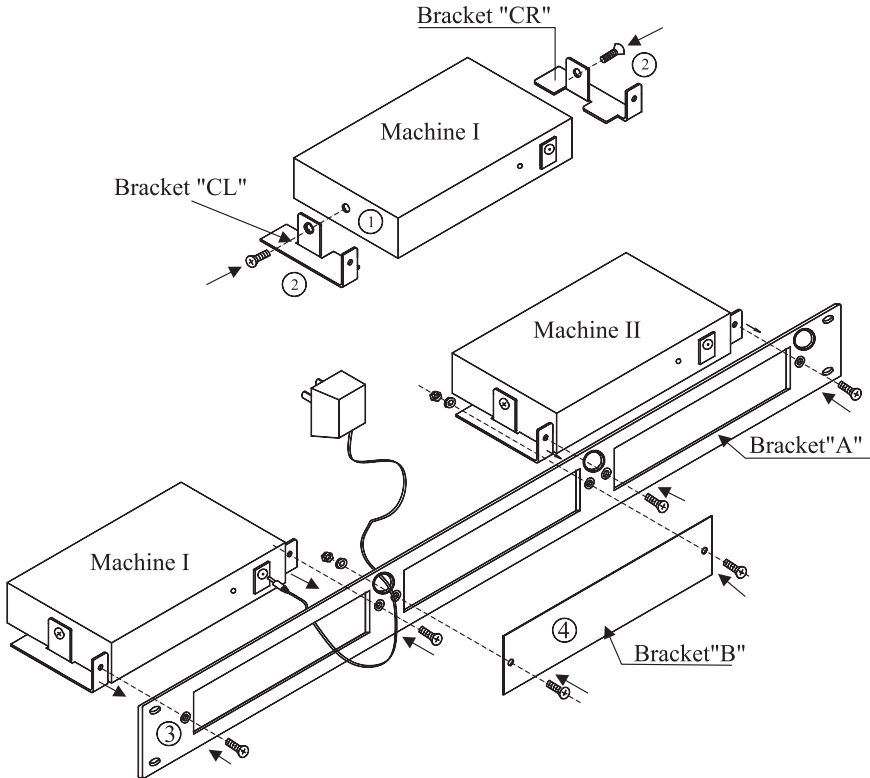
- ⑨ CONNECT BOTH MACHINES, AS SHOWN AND TIGHTEN USING 4 M3x4 BLACK PHILIPS SCREWS.



- ⑩ A BRACKET "D" IS PROVIDED TO COVER ONE OF THE OPENINGS IF THE ADAPTER IS TO BE USED FOR ONLY ONE MACHINE.
REMOVE THE 2 SCREWS FROM THE RIGHT- HAND SIDE OF MACHINE I (OR FROM THE LEFT-HAND SIDE OF MACHINE II) AND TIGHTEN BRACKET "D" USING 2 M3x6 BLACK CONE SCREWS.

15 THE RK-T1 ADAPTER INSTALLATION

This adapter is suitable for mounting all the **Kramer Tools** machines into a 1U rack space.

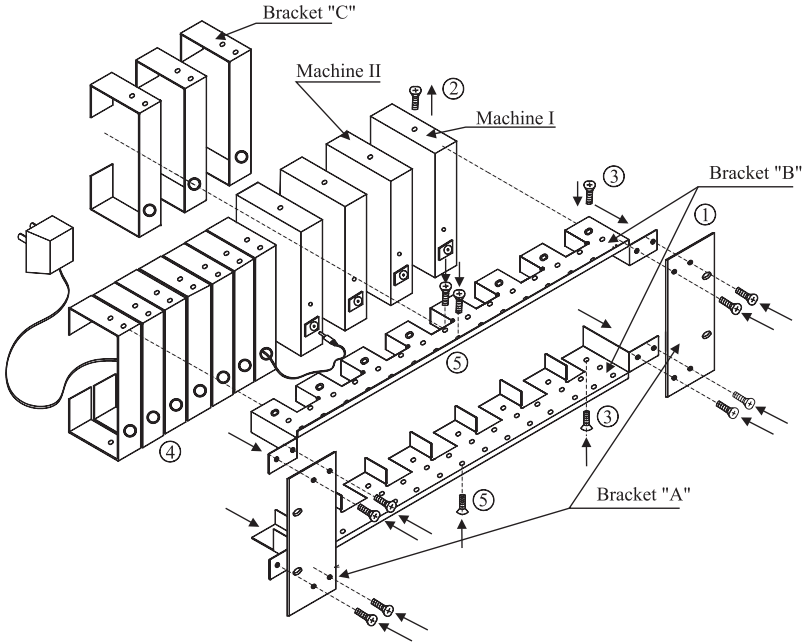


METHOD OF ASSEMBLY

- ① Remove the screw from the left hand side and from the right hand side of Machine I
- ② Tighten the Brackets "CL" and "CR" using M3x6 black cone screws
- ③ Tighten Bracket "A" using M3x8 black Phillips screws (supplied with the bracket)
- ④ An additional BRACKET "B" is provided to cover one of the openings when only two machines are installed in the adapter.

16 THE RK-T3 ADAPTER INSTALLATION

This adapter is suitable for mounting all the **Kramer Tools** machines (besides the **103YC** and **104L**) into a 3U rack space.

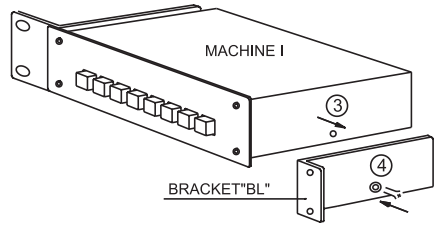
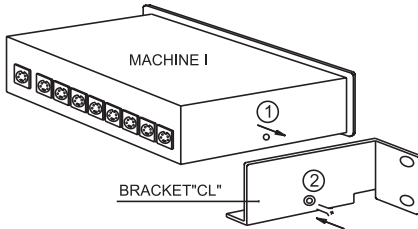


METHOD OF ASSEMBLY

- ① Tighten the 2 brackets "B" and the 2 brackets "A" using 8 M3x6 black Phillips screws (supplied with the brackets)
- ② Remove the screw from the left-hand side and from the right hand side of each machine (Kramer "TOOL")
- ③ Tighten the machines and brackets "B" using 2 M3x6 black cone screws
- ④ Tighten the brackets "C" and brackets "B" using 3 M3x8 black Phillips screws
- ⑤ To fill up empty unused spaces use brackets "C"

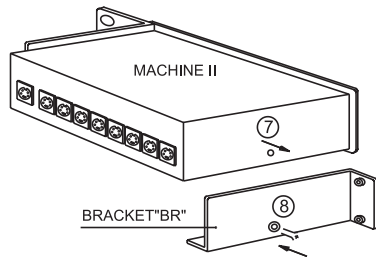
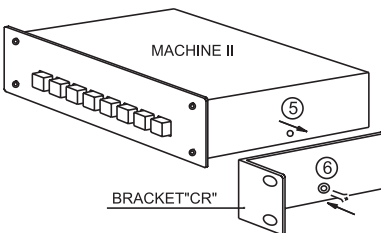
17 THE RK-81 ADAPTER INSTALLATION

This adapter is suitable for mounting the following Kramer machines into a 1U rack space: **VS-81A, VS-81V, VS-81YC.**

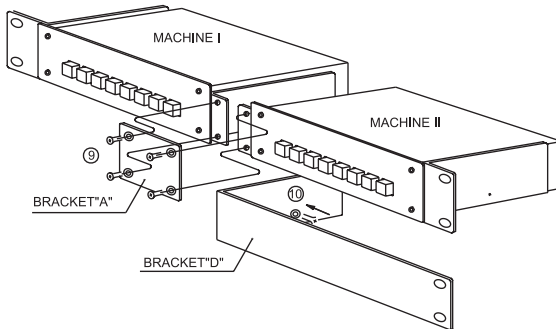


- ① REMOVE THE SCREW FROM THE LEFT- HAND SIDE OF MACHINE I.
- ② TIGHTEN THE BRACKET "CL" USING A M3x6.0 BLACK CONE SCREW. *
- ③ TAKE OUT THE SCREW FROM OTHER SIDE OF MACHINE I.
- ④ TIGHTEN THE BRACKET "BL" USING A M3x6.0 BLACK CONE SCREW.

* BLACK CONE SCREWS SUPPLIED WITH BRACKETS.



- ⑤ REMOVE THE SCREW FROM THE RIGHT- HAND SIDE OF MACHINE II.
- ⑥ TIGHTEN THE BRACKET "CR" USING A M3x6.0 BLACK CONE SCREW.
- ⑦ REMOVE THE SCREW FROM OTHER SIDE OF MACHINE II.
- ⑧ TIGHTEN THE BRACKET "BR" USING A M3x6.0 BLACK CONE SCREW.

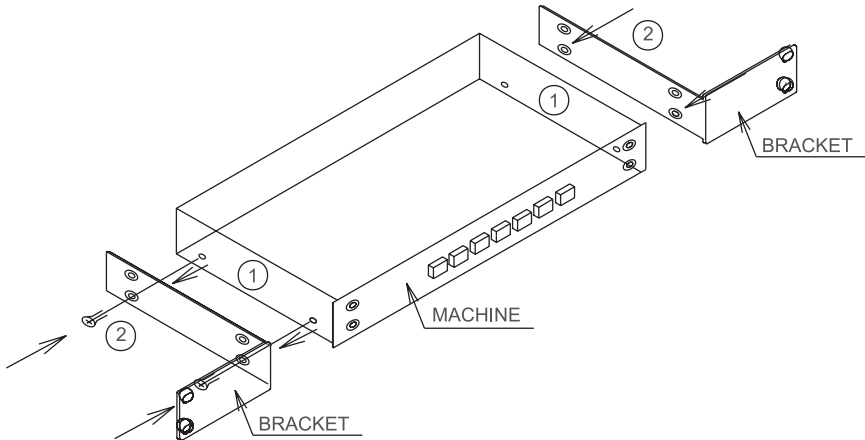


⑨ TIGHTEN BRACKET "A" USING 4 M3x6 BLACK CONE SCREWS.

⑩ A BRACKET "D" IS PROVIDED TO COVER ONE OF THE OPENINGS IF THE ADAPTER IS USED FOR ONLY ONE MACHINE.
TIGHTEN BRACKET "D" TO THE RIGHT-HAND SIDE OF MACHINE I USING M3x6 BLACK CONE SCREW.

18 THE RK-81X ADAPTER INSTALLATION

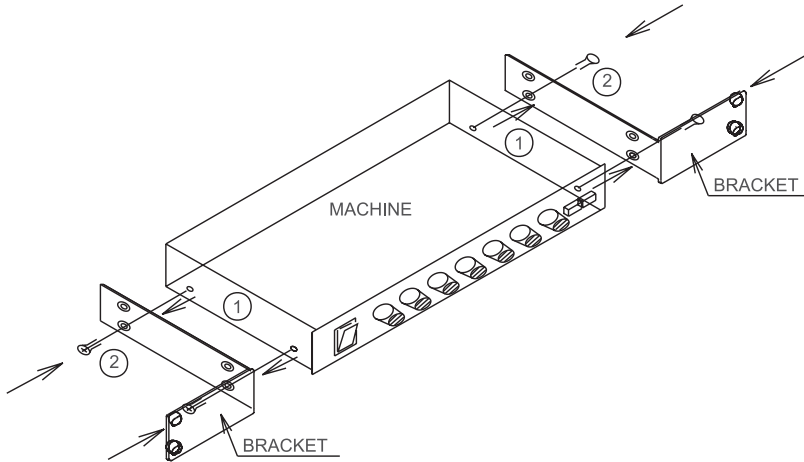
This adapter is suitable for mounting the following Kramer machine into a 1U rack space: **VS-81X**.



- ① REMOVE THE 2 SCREWS FROM THE LEFT AND RIGHT-HAND SIDES OF COVER.
- ② TIGHTEN THE BRACKETS USING FOUR M3x6 BLACK CONE SCREWS AS DRAWING.
(BLACK CONE SCREWS SUPPLIED WITH BRACKETS.)

19 THE RK-40 ADAPTER INSTALLATION

This adapter is suitable for mounting the following Kramer machine into a 1U rack space: **SP-40**.

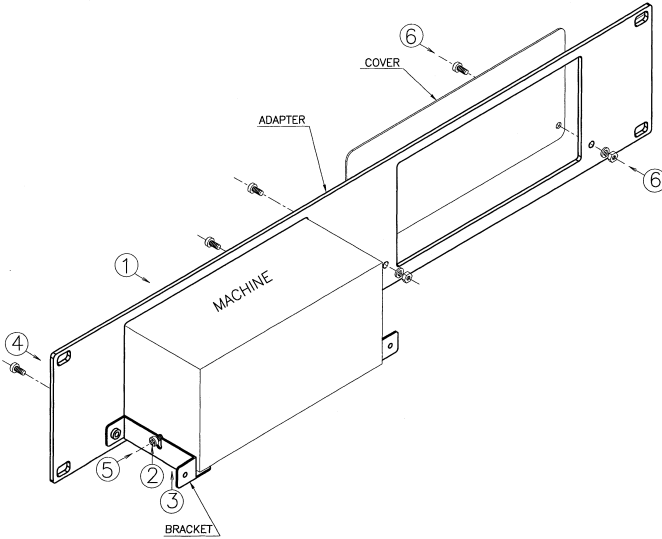


- ① REMOVE THE 2 SCREWS FROM THE LEFT AND RIGHT-HAND SIDES OF COVER.
- ② TIGHTEN THE BRACKETS USING FOUR M3x6 BLACK CONE SCREWS AS DRAWING.

(BLACK CONE SCREWS SUPPLIED WITH BRACKETS.)

20 THE RK-4X ADAPTER INSTALLATION

This adapter is suitable for mounting the following Kramer machine into a 1U rack space: VS-4X.



ASSEMBLY PROCEDURE

- ① INSERT THE MACHINE INTO THE ADAPTER.
- ② LOOSEN THE 2 SCREWS ON EACH SIDE OF THE MACHINE.
- ③ INSERT 2 BRACKETS SO THAT THE SLOT OF EACH BRACKET, WILL BE BETWEEN THE MACHINE AND THE HEAD OF THE SCREWS.
- ④ TIGHTEN THE 2 BRACKETS TO THE ADAPTER USING M3x8 SCREW PHILIPS BLACK.
- ⑤ TIGHTEN THE 2 SIDE SCREWS WITH FLEXIBLE SCREWDRIVER (IF NECESSARY).
- ⑥ IF NO MACHINE IS USED IN OTHER LOCATION TIGHTEN THE PROVIDED COVER TO THE ADAPTER USING 2 M3x8 SCREWS PHILIPS BLACK, 2 NUTS AND 2 LOCK WASHER.

* M3x8 SCREWS PHILIPS BLACK, NUTS M3 AND LOCK WASHER M3 ARE SUPPLIED WITH THE ADAPTER.



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:
 - a) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature.
 - b) Product modification, or failure to follow instructions supplied with the product.
 - c) Repair or attempted repair by anyone not authorized by Kramer.
 - d) Any shipment of the product (claims must be presented to the carrier).
 - e) Removal or installation of the product.
 - f) Any other cause, which does not relate to a product defect.
 - g) 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

Kramer's liability for any defective 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.



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.



Kramer Electronics, Ltd.

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E-mail: info@kramerelectronics.com

P/N: 2900-006010 REV 2