Kramer Electronics, Ltd.



USER MANUAL

Model:

SV-552 Processor / Switcher

SummitViewTM Essentials Kit II

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1 Introduction

Welcome to Kramer Electronics! Since 1981, Kramer Electronics has been providing a world of unique, creative, and affordable solutions to the vast range of problems that confront the video, audio, presentation, and broadcasting professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 1,000-plus different models now appear in 11 groups¹ that are clearly defined by function.

Congratulations on purchasing your Kramer **SummitView**TM system! This user manual is comprised of four parts:

PART I: A description of the **SummitView**TM system, its devices and a quick start section

PART II: A definition of the SV-552 SummitViewTM *Processor/Switcher*

PART III: Detailed installation instructions for installing the wall plates and connecting the **SV-552 SummitView**TM *Processor/Switcher*

PART IV: Further information

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original boxes and packaging materials for possible future shipment
- Check that your SummitViewTM Essentials Kit II is complete using the check List in <u>Table 20</u> to verify the contents of the kit
- Review the contents of this user manual²

² Download up-to-date Kramer user manuals from http://www.kramerelectronics.com



¹ GROUP 1: Distribution Amplifiers; GROUP 2: Switchers and Matrix Switchers; GROUP 3: Control Systems; GROUP 4: Format/Standards Converters; GROUP 5: Range Extenders and Repeaters; GROUP 6: Specialty AV Products; GROUP 7: Scan Converters and Scalers; GROUP 8: Cables and Connectors; GROUP 9: Room Connectivity; GROUP 10: Accessories and Rack Adapters; GROUP 11: Sierra Products

PART I Your SummitView™ System

PART I describes the SummitView™ system and its devices

3 Overview

We have designed a complete and simple solution for the integration of media and control in classrooms, training rooms and presentation rooms. SummitViewTM is as easy to use as it is to specify and install. The components that make up the SummitViewTM system are available as either standalone products or as a kit that contains a processor, two wall plates, and a room controller. With SummitViewTM you get everything you need for a high end integrated media system – just add the mounting hardware, displays, and sources. All the signals are transmitted over economical TP cable and switched using the SV-552 Switcher/Processor.

The SummitViewTM System controlled via the network is everything you need from the company you can count on for quality products and the ultimate in customer support – Kramer Electronics.

3.1 Your SV-552 SummitView™ Essentials Kit II

The SV-552 SummitViewTM Essentials Kit II includes the following:

- SV-552 SummitViewTM Processor/Switcher
- SV-301xl and SV-302 Wall Plates
- **RC-63DL** Room Controller
- SPK-CC444 Speakers
- Power adapter (12V DC output)
- Required cables (see <u>Table 17</u>)
- Check list (see <u>Table 20</u>)

The following additional products are available for purchase:

- SV-306 and SV-307 Wall Plates¹ and compatible cables
- Kramer **Pico TOOLS** $^{\text{TM}}$ **FC-200** EDID Copier
- RC-63D series (RC-63D, RC-63DL), RC-53D series, and RC-63A series (RC-63A, RC-63AL) Room Controllers²
- A range of ceiling and wall mounted speakers
- Various columns and other projector mounting accessories

¹ Download the user manual: SV-301/301xl/302/303/304/305/306/307 from http://www.kramerelectronics.com

² Download the RC-53D user manual from http://www.kramerelectronics.com

The following items are not provided by Kramer:

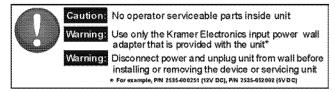
- Projector (or display device)
- Screen (and mounting hardware)
- Source devices, such as, DVD/VCR player, scanner, or computer
- Installation hardware (where needed), such as, bolts for concrete structural ceilings, toggles (used for screen mounting on dry wall), and so on

To achieve the best performance:

Consider the condition of the room—its size, the way it is arranged, whether the
walls and ceiling are drywall or cement—that may limit where and how you can
install the SummitViewTM, where required, refer to the ADA requirements (see
Section 14)

Where an internal installation is impractical (for example, if the walls and ceiling are constructed of cement and you do not want to drill inside them), you can install the **SummitView**TM *Essentials Kit II* externally, that is, install the **SV-552** in a rack (see <u>Section 5.2</u>) using the **RK-551** rack mount kit

 Connect only good quality connection cables and avoid interference from neighboring electrical appliances and position your SummitViewTM away from moisture, and excessive sunlight



3.2 Shielded Twisted Pair and Unshielded Twisted Pair

We recommend that you use Shielded Twisted Pair (STP) cable. There are different grades of STP cable available, and we advise you to use the best quality STP cable that you can afford. Our non-skew-free cable, Kramer **BC-STP** is intended for digital signals and for analog signals where skewing is not an issue. For cases where skewing occurs, our UTP skew-free cable, Kramer **BC-XTP**, should be used. Bear in mind, though, that we advise using STP cables where possible, since the compliance to electromagnetic interference has been tested using STP cables.

Although Unshielded Twisted Pair (UTP) cable might be preferred for long range applications, UTP cable should be installed as far as possible from electric cables, motors, and so on, as these devices tend to create electromagnetic interference. However, since the use of UTP cable might not conform to electromagnetic standards, Kramer does not commit to meeting the standard with UTP cable.



3.3 Quick Start Configuration Setup

Refer to the color configuration page included with your SV-552 SummitViewTM Essentials Kit II.

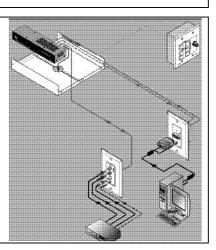
3.4 8-Step SummitView™ Essentials Kit II Quick Installation Guide

The following guide summarizes how to install your **SV-552 SummitView**TM *Essentials Kit II* (similar principles apply if you are installing other SummitViewTM configurations).

Table 1: Quick Installation Guide for the SummitView™ Essentials Kit II

Description

- 1 Prepare the openings for the wall plates and the room controller.
- 2 Route the wiring from the proposed location of the SV-552 via:
 - 1. STP¹, BC-DGKat524 or BC-DGKat-623 (SV-306/307) cable to the intended wall plate locations.
 - 2. K-Net cabling to the intended RC-63DL location.
 - 3. Speaker cabling to the intended location of the speakers.
 - 4. If the SV-552 and/or the RC-63DL are to be used as room controllers, route the appropriate control cables to their intended locations.



- 3 Install the wall plates by connecting the:
 - 1. STP, BC-DGKat524 or BC-DGKat-623 cables to the wall plates and installing the wall plate.
 - 2. BCP-KNET-50 cable to the RC-63DL and installing the RC-63DL (see Section 10).
- 4 Install the ceiling speakers.

¹ There are two types of STP cable recommended with $SummitView^{TM}$: XXP-XXX (plenum-rated for the SummitView^TM US) or XXXXX (non-plenum for the SummitView^TM Europe)

Description

- 5 Connect the appropriate wiring—STP, BC-DGKat524 or BC-DGKat-623, and BCP-2S-25—from the wall plates and the room controller, and from the SV-552 to the speakers.
- 6 Install the projector and the screen. Connect the projector to the SV-552 video outputs using the supplied video cables. Connect the RS-232 cable between the SV-552 and the projector.
- 7 Turn on the SV-552 and the projector. By choosing the input channels on the SV-552 (from the front panel buttons) and on the projector you should be able to switch between inputs connected to the different wall plates.
- 8 Load the control program on to the SV-552 via its PROGRAM port. For additional information regarding how to program the SV-552, refer to the separate online "K-Config Software Guide" at http://www.kramerelectronics.com. You should now be able to control the SV-552 programmed functions from the RC-63DL.



PART II The SV-552 SummitView™ Processor/Switcher

PART II defines the SV-552 SummitView™ Processor/Switcher

4 Defining the SV-552 Processor/Switcher

The Kramer SV-552 SummitViewTM *Processor/Switcher* is designed specifically for the SummitViewTM system and is an integral part of it. The SV-552 fits inside the SV-1 housing (optional) and can only be controlled via the default RC-63DL or via one of the other (optional) Kramer K-NetTM compatible controllers. The SV-552 features Twisted Pair video and audio inputs. It also has an IR output for video sources and features a Master controller, as well as a power amplifier and audio line out. The SV-552 front panel controls include six input selector buttons, three LEDs and a USB port. It receives input signals via the RJ-45 connectors from the SV-301xl, SV-302, SV-306 and the SV-307 wall plate devices.

The SV-552 RJ-45 TP inputs include:

- Two for video
- Three for computers
- One for HDMI

The SV-552 projector outputs include:

- VGA output on a 15-pin HD connector
- Composite video on an RCA connector
- HDMI with embedded audio on a DVI-D connector

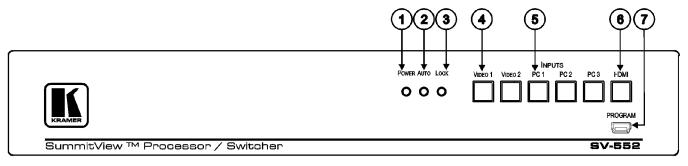
In addition, the SV-552 features:

- Terminal blocks for unbalanced stereo audio speaker output
- Terminal blocks for Monitor and Line audio out
- Terminal blocks for an AUX input (Line or Mic level)
- 10V volume control
- Control relays
- RS-232 and RS-485

The SV-552 can be controlled by any of the following:

- One of Kramer's remote controllers (for example, RC-63DL) via the proprietary communication K-Net channel
- Over a network connection via the Ethernet port
- Front panel input selector buttons
- The **RC-4IR** IR Remote Controller or similar device

<u>Figure 1</u> and <u>Table 2</u> define the front and rear panels of the **SV-552 SummitView**TM *Processor/ Switcher*.



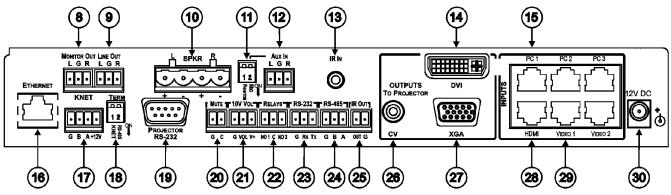


Figure 1: SV-552 SummitViewTM Processor / Switcher Front and Rear Panels



Table 2: SV-552 SummitViewTM Processor/Switcher Underside Features

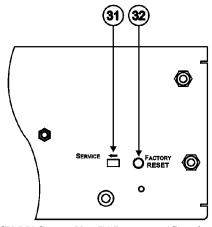
#	Feature			Function
1	POWER LED			Lights when the unit receives power
2	AUTO LED			Lights when the unit is configured to automatically identify and select an input according to a preconfigured priority
3	LOCK LED			Lights when the front panel buttons are locked
4	VIDEO 1			Press to select the video 1 source
	VIDEO 2			Press to select the video 2 source
5	PC 1	INPUTS B	uttons	Press to select the PC 1 source
	PC 2	(used for to	esting)	Press to select the PC 2 source
	PC 3			Press to select the PC 3 source
6	HDMI			Press to select the HDMI source
7	PROGRAM U	SB Connec	tor	Program software - for service use only
8	MONITOR OL	/T Terminal	Block	Connect to an external audio amplifier. This is the same as the audio Line Out but lacks level control
9	LINE OUT Ter	minal Block		Connect to an external audio amplifier. This is the same as the Monitor Out but with level control
10	SPKR Termin	al Block		Connect to the left and right speakers
11	<i>PHANTOM</i> DI	P-switch 1		Configures Aux In for use with a microphone
	MIC DIP-swite	:h 2	AUXIN	Turns on Phantom Power 12V on the Aux In connector
12	L, G, R Termin			Connect to an additional audio source or microphone for mixing with the audio line level input (talk over)
13	IR IN 3.5mm Mini Connector		or	Connect to an IR receiver
14	OUTPUTS TO PROJECTOR DVI Connector		OR DVI	Connect to the DVI/HDMI input of the projector
15	PC 1	INDUTO		Connect to the PC 1 source
	PC 2	INPUTS RJ-45 Cor	nectors	Connect to the PC 2 source
	PC 3	110 10 001	modicio	Connect to the PC 3 source
16	ETHERNET R	J-45 Conne	ctor	Connect to a PC running the Site-CNTL software via the network or Internet for control and configuration of the unit. Default IP settings: Address 192.168.1.39, port 50000, subnet mask 255.255.255.0
17	K-NET ¹ Terminal Block			Connect pin G to the Ground connection; Connect pin B and pin A to the RS-485, and pin +12V to the power adapter. For details on
				connecting K-Net, see Figure 10
18	TERM DIP-sv	vitches		connecting K-Net, see <u>Figure 10</u> DIP-switches for line termination of the unit (DIP-switch 1 is for K-Net, DIP-switch 2 is for RS-485)
18	TERM DIP-sv PROJECTOR Connector		oin D-sub	DIP-switches for line termination of the unit (DIP-switch 1 is for
	PROJECTOR	RS-232 9- _F	oin D-sub	DIP-switches for line termination of the unit (DIP-switch 1 is for K-Net, DIP-switch 2 is for RS-485) Connect to the projector for projector control Mutes the audio outputs
19	PROJECTOR Connector	<i>RS-</i> 232 9- _F al Block	oin D-sub	DIP-switches for line termination of the unit (DIP-switch 1 is for K-Net, DIP-switch 2 is for RS-485) Connect to the projector for projector control
19	PROJECTOR Connector MUTE Termin	RS-232 9- _F al Block ninal Block	oin D-sub	DIP-switches for line termination of the unit (DIP-switch 1 is for K-Net, DIP-switch 2 is for RS-485) Connect to the projector for projector control Mutes the audio outputs Connect to an external potentiometer on a wall plate ² to adjust the

¹ K-Net is a proprietary Kramer protocol for interconnecting Kramer units

² For example, the RC-63DL

#	Feature		Function
24	RS-485 Terminal Block		Connect to the RS-485 detachable terminal block on a RS-485 controlled device
25	IR OUT Terminal	Block	Control a machine via an IR Emitter
26	CV RCA Connector	OUTPUTS	Connect to the composite video input of the projector
27	XGA 15-pin HD Connector	TO PROJECTOR	Connect to the computer graphics or other display device input of the projector
28	HDMI/DVI	INPUTS	Connect to the HDMI/DVI acceptor ¹
29	VIDEO 1	RJ-45	Connect to the video 1 source
	VIDEO 2	Connectors	Connect to the video 2 source
30	12V DC		+12V DC connector for powering the unit

<u>Figure 2</u> and <u>Table 3</u> define the underside panel of the **SV-552 SummitView**TM *Processor/Switcher*.



 $\textit{Figure 2: SV-552 SummitView} \textbf{^{TM}} \textit{Processor} / \textit{Switcher Underside}$

Table 3: SV-552 SummitView™ Processor/Switcher Underside Features

#	Feature	Function
31	SERVICE Switch	For technical support use only
32	FACTORY RESET Button	Press and hold while powering up the unit to reset the audio, switching and Ethernet settings to their factory default values

4.1 DDC Support

When establishing a VGA connection between a PC or laptop and a display device, a set of parameters known as EDID which is carried over the DDC channel is exchanged between them. With some PC graphic cards and laptops

¹ Using a DVI/HDMI adapter or the Kramer C-HDMI/DVI HDMI to DVI Single Link (18 +1 pin) cable



-

this information exchange is essential for proper VGA OUT operation. Using the Kramer **Pico TOOLS**TM **FC-200** *EDID Copier*, you can copy the EDID information from your display and upload it to the **SV-301xl** wall plate, ensuring trouble-free operation of the system with any PC or Laptop.

PART III Detailed Installation Instructions

PART III covers connecting the SV-552, installing the Wall Plates and the Room Controller

We recommend that after deciding where you want to install the screen and the projector, you install in this order, the:

- 1. Cables and wires (see Section 5.1).
- 2. Room controller (see Section 5) and wall plates (see Section 7).

5 Connecting the SV-552 SummitView™ Processor/ Switcher

This section describes:

- Connecting the SV-552 (see Section 5.1)
- Installing the SV-552 in a 19" rack (see Section 5.2)

5.1 Connecting the SV-552

The example in Figure 3 shows how to connect the SV-552.

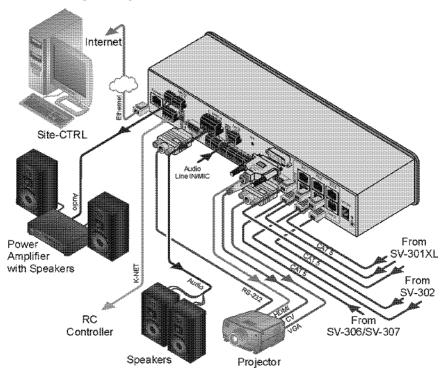


Figure 3: Connecting the SV-552

For instructions on wiring the K-Net connector, see <u>Section 8</u>.



5.2 Installing the SV-552 in a 19" Rack (Optional)

This section describes how to mount the SV-552 in a 19" rack using the RK-551 *Rack Adapter*.

Before Installing in a Rack

Before installing on a rack, be sure that the environment is within the recommended range:		
Operating temperature range	+5 to +45 Deg. Centigrade	
Operating humidity range	10 to 90% RHL, non-condensing	
Storage temperature range	-20 to +70 Deg. Centigrade	
Storage humidity range	5 to 95% RHL, non-condensing	



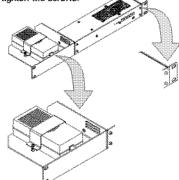
When installing in a 19" rack, avoid hazards by taking care

- 1 It is located within the recommended environmental conditions, as the operating ambient temperature of a closed or multi unit rack assembly may exceed the room ambient temperature.
- Once rack mounted, enough air will still flow around the machine.
- 3 The machine is placed straight in the correct horizontal position.
- 4 You do not overload the circuit(s). When connecting the machine to the supply circuit, overloading the circuits might have a detrimental effect on overcurrent protection and supply wiring. Refer to the appropriate nameplate ratings for information. For example, for fuse replacement, see the value printed on the product label.
- 5 The machine is earthed (grounded) in a reliable way and is connected only to an electricity socket with grounding. Pay particular attention to situations where electricity is supplied indirectly (when the power cord is not plugged directly into the socket in the wall), for example, when using an extension cable or a power strip, and that you use only the power cord that is supplied with the machine.

How to Rack Mount

To rack-mount a machine (RK-551):

- 1. Attach the short ear bracket to the right side of the SV-552. To do so:
- (i). Remove the screws from the right side of the SV-552.
- (ii). Replace those screws through the short ear bracket.
- Attach the long ear bracket with the power supply to the left side of the SV-552. To do so:
- (i). Remove the screws from the left side of the SV-552.
- (ii). Replace those screws through the long ear bracket.
- (iii). Release the two screws of the power supply support, and slide the power supply under the power supply support, and tighten the screws.



Place the ears of the machine against the rack rails, and insert the proper screws (not provided) through each of the four holes in the rack ears.

Note that:

- Detachable rack ears can be removed for desktop use or when installing in the SV-1
- Always mount the machine in the rack before you attach any cables or connect the machine to the power

6 The RC-63DL Room Controller

The **RC-63DL** is a room control panel that can be used independently or as a user interface when connected to a Master Room Controller¹ for control of A/V equipment in any room.

RC-63DL is the default room controller included as part of the **SV-552 SummitView**TM *Essentials Kit II* and is described in that user manual. The **RC-63DL** has an LCD screen, letting you program the required group labels.

The Kramer **RC-63DL** is available as a 2 gang wall plate for either the USA or Europe. It features 6 front panel buttons designed in two groups; one group of 2 buttons, and another group of 4 buttons. Each group is user programmable.

The RC-63DL also includes:

- A digital volume control adjustment knob with five LEDs
- Two relays for the simplified and centralized control of room functions (such as lighting, closing blinds, screen settings, and so on)
- An IR output, a bi-directional RS-232 port, and two K-Net ports
- An IR-learner for the customized control of external sources, memorizing the IR commands from different remote transmitters

A USB port is included for programming the **RC-63DL** via a computer.

6.1 Defining the RC-63DL

Figure 4, Table 4, Figure 5 and Table 5 define the RC-63DL.

¹ Such as the Kramer SummitView System or the SL-1 Master Room Controller



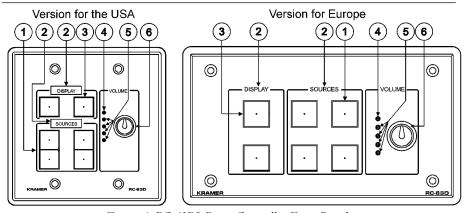


Figure 4: RC-63DL Room Controller Front Panel
Table 4: RC-63DL Room Controller Front Panel Features

#	Feature	Function
1	SOURCE Buttons	4 configurable backlit buttons for any supported command ¹
2	"DISPLAY" and "SOURCE" Labels	LCD on a blue background that displays up to 8 characters at a time (programmed via the USB port) and includes rolling text
3	DISPLAY Buttons	2 configurable backlit buttons for any supported command
4	VOLUME LED	Lights red, indicating maximum volume
5	VOLUME LEDs	Lights green, indicating volume level
6	VOLUME Knob	Rotate clockwise to increase the level

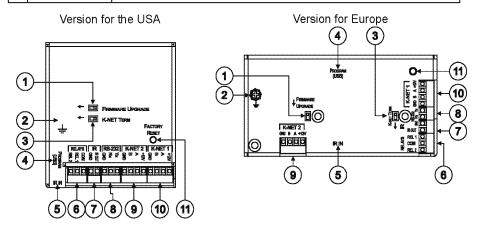


Figure 5: RC-63DL Room Controller Rear Panel

¹ By the system integrator only

Table 5: RC-63DL Room Controller Rear Panel Features

#	Feature	Function
1	FIRMWARE UPGRADE Switch	For technical support use only
2	Grounding Screw	Connect to grounding wire
3	K-NET TERM Switch	For line termination
4	PROGRAM USB Connector	Connect to a computer for unit configuration
5	IR IN Receiver	Receives IR remote commands
6	RELAY Connections	Connect to room items (such as lighting, screen settings, and so on)
7	IR Connections	Control a machine via an IR Emitter
8	RS-232 Connections	Connect to the RS-232 connector on the A/V equipment or a PC or other Serial Controller
9	K-NET 2 Connections	On K-NET 1 and K-NET 2, PIN GND is for the Ground
10	K-NET 1 Connections	connection ¹ ; PIN B (-) and PIN A (+) are for RS-485, and PIN +12V is for powering the unit
11	FACTORY RESET Button	Press and hold while powering up the unit to reset the audio, switching and Ethernet settings to their factory default values

6.2 Connecting the Room Controller

Since the room controller is used as a slave system controller for Master Room Controllers via the proprietary communication channel **K-Net** (as illustrated in <u>Figure 6</u>):

- It requires only a K-Net connection to the Master Room controller
- A power supply unit is **not** required²
- The room controller can be programmed only via the SV-552 *Processor/Switcher* Master Room controller

² Power supplies are sold separately. Consult your Kramer dealer for details



¹ The ground connection is sometimes connected to the shield of the RS-485 cable (in most applications, it is not connected)

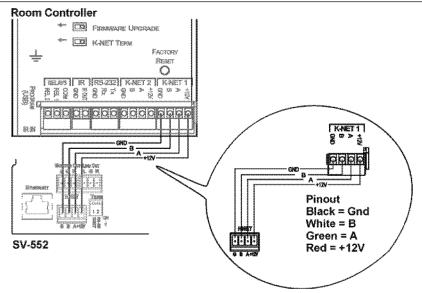


Figure 6: Connecting the RC-63DL to the SV-552 SummitView™ Processor/Switcher

7 Defining and Connecting the Wall Plates

The SV-301xl and SV-302 *Wall Plates* are included as part of the SV-552 SummitViewTM *Essentials Kit II*. Note that each kit comes with the appropriate set of cables included. For full details, see <u>Table 17</u>.

The SV-306 and SV-307 *Wall Plates*¹ are available for additional purchase (optional) and require dedicated **BC-DGKat524** or **BC-DGKat-623** cable.

Section 7.1 defines the SV-301xl, SV-302, SV-306 and SV-307 for the United States.

<u>Section 7.2</u> defines the **SV-301xl**, **SV-302** and **SV-306** for England and Europe.

STP cabling of 50' $(15.24\text{m})^2$ in length is provided which is suitable for the **SV-301xl/302** (see <u>Table 17</u>). When required, longer STP cabling can be used but we recommend a maximum transmission range of 30m (100ft). Exceeding the recommended distance may result in reduced image quality. For the TP pinout see <u>Section 8</u>.



The SV-302 and SV-306 IR OUT port enables remote IR control (this requires the appropriate programming of the SV-552) over the source connected to it (a DVD player, a VHS player, and so on).

7.1 Defining the Wall Plates (U.S.)

This section defines the U.S. version of the following wall plates:

- SV-301xl (Section 7.1.1)
- **SV-302** (Section 7.1.2)
- SV-306 (Section 7.1.3)
- SV-306 (Section 7.1.4)

7.1.1 Defining the SV-301xI (U.S.)

The SV-301xl is a single-gang wall plate insert. <u>Table 6</u> defines the front and rear views of the SV-301xl.

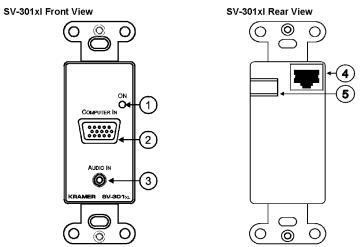
² Plenum-rated for the SummitView™ US version; non-plenum for the SummitView™ Europe



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¹ Download the user manuals for the SV-306 and SV-307 from http://www.kramerelectronics.com

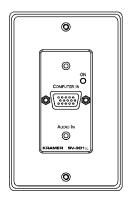
Table 6: Defining the SV-301xl (U.S.)



#	Feature	Function
1	ON LED	Lights red when receiving power (when no signal is detected); lights green when receiving a signal
2	COMPUTER IN 15-pin HD Connector	Connect to the computer graphics source
3	AUDIO IN 3.5mm Mini Connector	Connect to the unbalanced stereo audio source
4	RJ-45 connector	Connect to the SV-552 Processor/Switcher
5	DC IN Power Connector	Connect to a 12V power supply

<u>Table 7</u> defines the **SV-301xl**, as an example, in its plastic frame.

Table 7: Enclosing a Wall Plate (U.S.) in its Plastic Frame 1

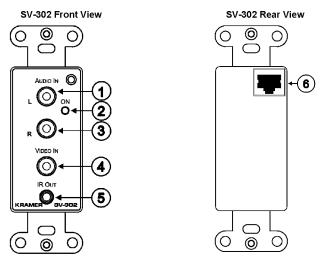


¹ Each model that is designed specifically for the U.S. market can be fitted inside a plastic frame

7.1.2 Defining the SV-302 (U.S.)

The SV-302 is a single-gang wall plate insert. Table 8 defines the front and rear views of the SV-302.

Table 8: Defining the SV-302 (U.S.)



#	Feature	Function
1	L AUDIO IN RCA Connector	Connect to the left analog audio source
2	ON LED	Lights red when receiving power (when no signal is detected); lights green when receiving a signal
3	R AUDIO IN RCA Connector	Connect to the right analog audio source
4	VIDEO IN RCA Connector	Connect to the composite video source
5	IR OUT 3.5mm Mini Connector	Connect to a machine via an IR Emitter
6	RJ-45 connector	Connect to the SV-552 Processor/Switcher



7.1.3 Defining the SV-306 (U.S.)

The SV-306 is a single-gang wall plate insert. $\underline{\text{Table 9}}$ defines the front and rear views of the SV-306.

SV-306 Front View

SV-306 Rear View

OOO

OO

IR OUT

OR

RAMER SV-308

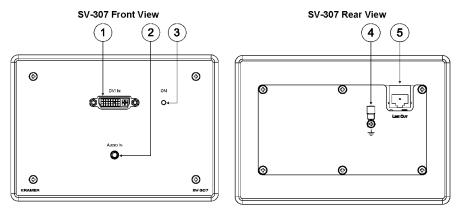
Table 9: Defining the SV-306 (U.S.)

#	Feature	Function
1	ON LED	Lights red when receiving power (when no signal is detected); lights green when receiving a signal
2	HDMI IN Connector	Connect to the HDMI digital source
3	IR OUT 3.5mm Mini Connector	Connect to a machine via an IR Emitter
4	RJ-45 connector	Connect to the SV-552. Note that the SV-306 requires BC-DGKat524 or BC-DGKat-623 cable for connection (see Section 8.3)

7.1.4 Defining the SV-307 (U.S.)

The SV307 is a triple-gang wall plate. $\underline{\text{Table }10}$ defines the front and rear views of the SV-307.

Table 10: Defining the SV-307 (U.S.)



#	Feature	Function
1	DVI IN Connector	Connect to the DVI source
2	AUDIO IN 3.5mm Mini Connector	Connect to the unbalanced stereo audio source
3	ON LED	Lights red when receiving power (when no signal is detected); lights green when receiving a signal
4	Ground Connection	Ring tongue terminal and grounding screw
5	LINE OUT RJ-45 Connector	Connect to the SV-552. Note that the SV-307 requires BC-DGKat524 or BC-DGKat-623 cable for connection (see <u>Section 8.3</u>)



7.2 Defining the Wall Plates (England and Europe¹)

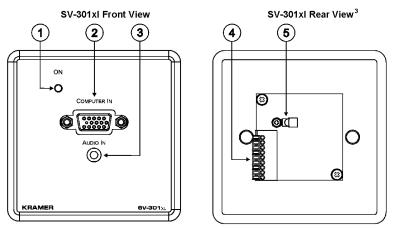
This section defines the England and European version of the following wall plates:

- SV-301xl (Section 7.2.1)
- **SV-302** (Section 7.2.2)
- **SV-306** (Section 7.2.3)

7.2.1 Defining the SV-301xl (England and Europe)

The SV-301xl is a single-gang wall plate. The SV-301xl has a terminal block at the rear. Table 11 defines the front and rear views of the SV-301xl.

Table 11: Defining the SV-301xl (England and Europe)²



#	Feature	Function
1	ON LED	Lights red when receiving power (when no signal is detected); lights green when receiving a signal
2	COMPUTER IN 15-pin HD Connector	Connect to the computer graphics source
3	AUDIO IN 3.5mm Mini Connector	Connect to the unbalanced stereo audio source
4	Terminal Block	Connect to SV-552 using STP cabling (see Section 8.1)
5	GROUND Connection	Ring tongue terminal and grounding screw

¹ The European versions are equipped with easy terminals, see Section 8.2

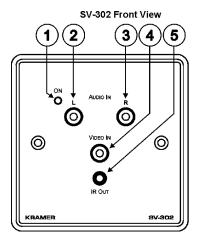
² When mounting in Belgium and Germany, use the standard WP Adapter

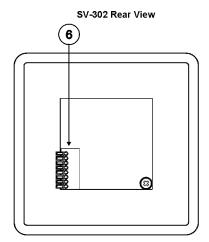
³ Some models may have a DC IN connector for connecting to a 12V DC power supply

7.2.2 Defining the SV-302 (England and Europe)

The SV-302 is a single-gang wall plate and has a terminal block at the rear. Table 12 defines the front and rear views of the SV-302.

Table 12: Defining the SV-302 (England and Europe)¹





#	Feature	Function
1	ONLED	Lights red when receiving power (when no signal is detected); lights green when receiving a signal
2	L AUDIO IN RCA Connector	Connect to the left analog audio source
3	R AUDIO IN RCA Connector	Connect to the right analog audio source
4	VIDEO IN RCA Connector	Connect to the composite video source
5	IR OUT 3.5mm Mini Connector	Connect to a machine via an IR Emitter
6	Terminal Block	Connect to SV-552 using STP cabling (see Section 8.1)

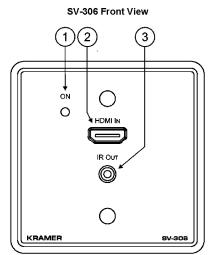
¹ When mounting in Belgium and Germany, use the standard WP Adapter

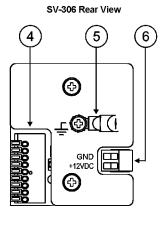


7.2.3 Defining the SV-306 (England and Europe)

The SV-306 is a single-gang wall plate and has a terminal block at the rear. $\underline{\text{Table } 13}$ defines the front and rear views of the SV-306.

Table 13: Defining the SV-306 (England and Europe)¹





#	Feature	Function
1	ON LED	Lights red when receiving power (when no signal is detected); lights green when receiving a signal
2	HDMI IN Connector	Connect to the HDMI digital source
3	IR OUT 3.5mm Mini Connector	Connect to a machine via an IR Emitter
4	Terminal Block	Connect to SV-552. Note that the SV-306 requires BC-DGKat524 or BC-DGKat-623 cable for connection
5	GROUND Connection	Ring tongue terminal and grounding screw
6	GND +12V Terminal Block	Connect to an optional 12V power supply

¹ When mounting in Belgium and Germany, use the standard WP Adapter

7.3 Connecting the Wall Plates to the SV-552

The wall plates are connected to the corresponding inputs on the SV-552 using the supplied STP or optional BC-DGKat524 or BC-DGKat-623 cables (SV-306/307, see Section 8.3). The SV-301xl and the SV-302 U.S. versions have RJ-45 CAT 5 connectors on the rear, as defined in Table 14. The SV-301xl and the SV-302 European versions have terminal blocks on the rear, as defined in Table 11 and Table 12 respectively.

The diagrams below show both U.S. and European versions for illustration purposes only.

7.3.1 Connecting the SV-301xl Wall Plate to the SV-552

To connect the **SV-301xl** as the example in <u>Figure 7</u> illustrates (see also the separate color illustration in <u>Section 3.3</u>):

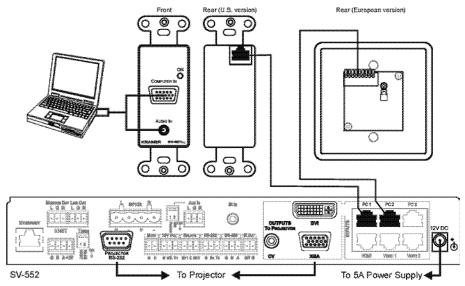


Figure 7: Connecting the SV-301xl to the SV-552

 Connect the computer graphics source (for example, a laptop) to the Computer In 15-pin HD connector and to the unbalanced stereo Audio In 3.5mm mini jack on the front of the SV-301xl, for example, using a

¹ There are two types of STP cable provided with SummitView™: CP-STP-50 (plenum-rated for the SummitView™ US) or C-STP-50 (non-plenum for the SummitView™ Europe). Other STP cables can also be used. However, when using longer STP cables, image quality may be impaired



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- Kramer C-GMA/GMA cable (VGA HD15M +Audio connector to VGA HD15M +Audio connector)¹.
- 2. On the rear of the **SV-301xl**, connect the RJ-45 CAT 5 connector using either the RJ-45 connector (U.S. version) or terminal block (European version) to either of the PC 1, PC 2, or PC 3 inputs.

7.3.2 Connecting the SV-302 Wall Plate to the SV-552

To connect the **SV-302** as the example in <u>Figure 8</u> illustrates (see also the separate color illustration in <u>Section 3.3</u>):

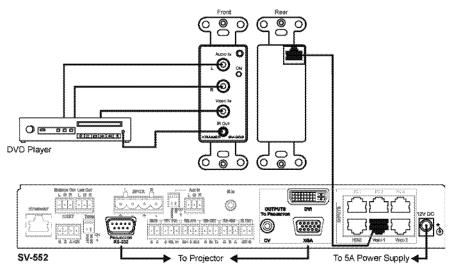


Figure 8: Connecting the SV-302 to the SV-552

- 1. On the front of the SV-302, connect the:
 - Composite video source (for example, a DVD player) to the yellow RCA connector, and to the unbalanced stereo audio RCA connectors
 - IR OUT 3.5mm mini connector via an IR Emitter²
 Control cable directly onto the IR sensor window of the controlled device (for example, a DVD player)

¹ Not supplied. The complete list of Kramer cables is available from http://www.kramerelectronics.com

² The Emitter contains a small infrared LED housed in a miniature, mouse shaped, black plastic shell. It emits visible red light in addition to IR (infrared) control signals when activated by IR commands sent to it by IR receivers or other controllers. The Emitter Control Cable comes with a clear adhesive film included on the emitter housing for attachment to the IR window of the controlled component and pieces of double-sided clear adhesive tape included for replacement purposes

2. On the rear of the **SV-302**, connect the RJ-45 CAT 5 connector to either input VIDEO 1 or VIDEO 2 input on the **SV-552**.

7.3.3 Connecting the SV-306 Wall Plate to the SV-552 (Optional)

In addition, using **BC-DGKat524** or **BC-DGKat-623** cable as shown in Figure 9, you can connect the:

- SV-306 which accepts an HDMI source and connects to the HDMI input on the rear of the SV-552. The input signals are converted via an RJ-45 CAT 5 connector at the rear, and transmitted to the SV-552. The SV-306 also has an IR out 3.5mm mini connector (connection to the SV-552 is similar to the SV-302)
- SV-307 which accepts a DVI component video source on three RCA connectors, as well as a digital audio (S/PDIF) input on an RCA connector, and connects to the HDMI input on the rear of the SV-552. The input signals are converted via an RJ-45 CAT 5 connector at the rear and transmitted to the SV-552.

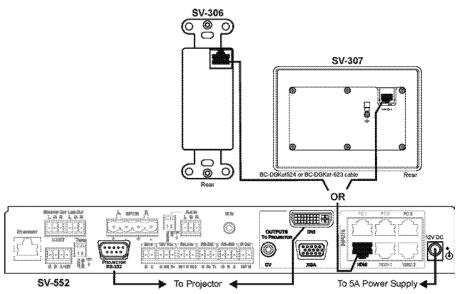


Figure 9: Connecting the SV-306/307 to the SV-552



8 Wiring the TP LINE IN/LINE OUT Connectors

STP cabling of 50' (15.24m)¹ in length is provided with the Kramer A/V **SummitView**TM *Essentials Kit II*² for connecting the **SV-301xl/302** *Wall Plates*. When required, longer STP cabling can be used when purchased for standalone wall plates but we recommend a maximum transmission range of 30m (100ft). Exceeding the recommended distance may result in reduced image quality.

Connecting the SV-306/307 requires BC-DGKat524 or BC-DGKat-623 cable (see Section 8.3).

This section describes how to connect the rear panel for the:

- US wall plate versions (see Section 8.1)
- European wall plate versions (see Section 8.2)

8.1 Wiring the Twisted Pair RJ-45 Terminals (U.S.)

The U.S. versions of the wall plates are equipped with RJ-45 terminals. <u>Table 14</u> defines the TP pinout, using a straight pin to pin cable with RJ-45 connectors. When using STP cable, connect/solder the cable shield to the RJ-45 connector shield.

EIA /TIA 568B Wire Color PIN Orange/White 2 Orange 3 Green/White 4 Blue 5 Blue/White 6 Green Brown/White 8 Brown Pair 1 4 and 5 Pair 2 1 and 2 3 and 6 Pair 3 7 and 8 Pair 4

Table 14: UTP Pinout (U.S.)

¹ Plenum-rated for the SummitView™ US version; non-plenum for the SummitView™ Europe

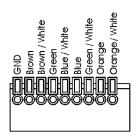
² Or should be purchased separately for a standalone machine, see Table 17 for reference

8.2 Wiring the Terminal Block (England and Europe)

The European versions of the wall plates are equipped with an easy plug-in terminal block for the STP cables. Use the color coded sticker on these terminals for proper connection of the STP cable.

<u>Table 15</u> defines the pinout for the terminal block.

Table 15: Terminal Block Pinout (England and Europe)



Notes:

- Use the connector clips when removing the wires, not when inserting them
- Each wire protrudes 9mm in length from the plastic insulation so that it can be easily connected. To prevent the wires crossing, be sure that each wire is completely inserted
- With STP cable, the GND pin is used for shielding. Shielding is not needed, but if desired, connect the GND pin of the PC

8.3 Cabling for the SV-306 and SV-307

Kramer engineers have developed special twisted pair cables to best match our digital twisted pair products; the Kramer **BCP-DGKat524** (CAT 5 24 AWG), and the Kramer **BCP-DGKat623** (CAT 6 23 AWG cable). These specially built cables significantly outperform regular CAT 5/CAT 6 cables.

A system range of up to 90m (295ft) at 1080i/SXGA, or up to 30m (98ft) at 1080p/UXGA on shielded **BCP-DGKat524** cable; 90m (295ft) at 1080i, or up to 70m (230ft) at 1080p/UXGA on shielded **BCP-DGKat623** cable.

Note that the STP cable Ground shield must be connected/soldered to the connector shield.

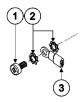


9 Grounding the Wall Plate

The grounding screw is used to earth the chassis of the unit to the ground of the building, thus preventing static electricity from interfering with the product's performance.

<u>Table 15</u> defines the grounding screw components.

Table 16: Grounding Screw, Lock Washers and Ring Tongue Terminal



#	Item
1	M3X6 screw
2	1/8" Toothed Lock Washer
3	M3 Ring Tongue Terminal

To ground a wall plate:

- 1. Connect the Ring Tongue terminal to the building grounding point wire (it is recommended to use a green-yellow AWG#18 wire, crimped with a proper hand-tool).
- 2. Insert the M3x6 screw through the toothed lock washers and the tongue terminal in the order shown above.
- 3. Insert the M3x6 screw (with the two toothed lock washers and ring tongue terminal) into the grounding screw hole and tighten the screw. Wiring the K-NetTM Connector

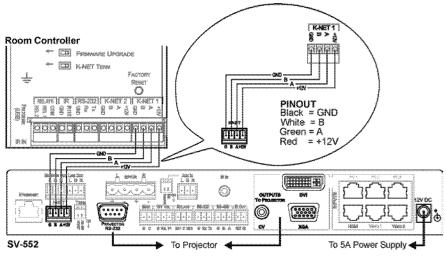


Figure 10: Wiring the K-Net Connector

PART IV Further information

PART IV includes further information

10 Customizing the Controllers' Buttons and Labels

This section describes the backlit buttons and the button labels sheet.

10.1 Backlit Buttons

The **RC-63DL** backlit buttons¹ have plastic caps. To insert a label on a button—we recommend doing this before installing the controller, as it involves removing the front plate—unscrew the front plate attachment screws using a screwdriver, gently remove the transparent button cap with your fingers, and insert the label under the button cap. Replace the button cap with the label onto the button base.

10.2 Button Label Sheet

Figure 11 illustrates the sample Button Label sheet.

¹ You can program the color of the button with flexible RGB values



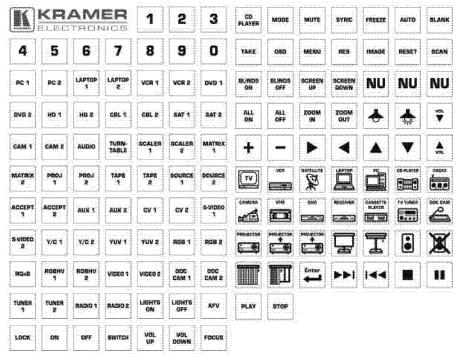


Figure 11: Sample Button Labels Sheet

11 SummitView™ System Cables

<u>Table 17</u> defines the cables included as part of the **SummitView**TM *Essentials Kit II.*

Table 17: Cables included with the SummitView™ Essentials Kit II

Item	Description
Cables to be used with the SV-301xl	
CP-STP-50/C-STP-50 (1 cable 1)2	STP cable 50' (15.24m) from SV-301 to SV-552
Cables to be used with the SV-302	
CP-STP-50/C-STP-50 (1 cable ¹) ²	STP cable 50' (15.24m) from SV-302 to SV-552
Cables to be used with the SV-552	
P.S 12V/5A DESKTOP with DC plug (1 cable)	
POWER CORD 110V (1 cable)	

¹ There are two types of STP cable provided with SummitView™: CP-STP-50 (plenum-rated for the SummitView™ U.S.) or C-STP-50 (non-plenum for the SummitView™ Burope)

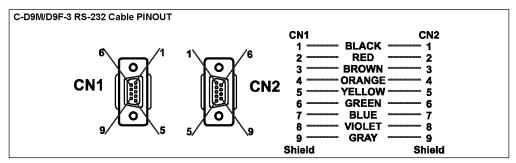
² Connect the wall plate to the SV-552

Item	Description
C-MGM/MGM-3 (1 cable) ¹	Molded Micro VGA to VGA cable 3' (0.91m), from SV-552 to the display device
C-RVM/RVM-3 (1 cable) ¹	Molded RCA RG-59 video cable 3' (0.91m), from SV-552 to the display device
C-D9M/D9F-3 (1 cable)	RS-232 cable 3' (0.91m), from the SV-552 to the display device
BCP-2S-25 (2 cables)	Speakers' cables, from the SV-552 to the speakers
C-UA/MUB-3 (1 cable)	USBA to Mini USBB cable 3' (0.91m), for configuring the SV-552 or the RC-63DL
Cables to be used with the RC-63DL of	or another controller
BCP-KNET-50 (1 cable)	Balanced Stereo Audio/Control cable 50' (15.24m), from the RC-63DL to the SV-552

12 SummitView™ Cable Termination

<u>Table 17</u> defines the **SummitView**TM cable termination (connector-to-cable).

Table 18: SummitView $^{\text{TM}}$ Cable Termination



¹ Connects the SV-552 to the projector



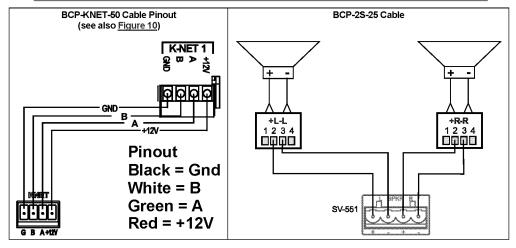


Figure 12 defines the stickers affixed to the **SummitView**TM cables.

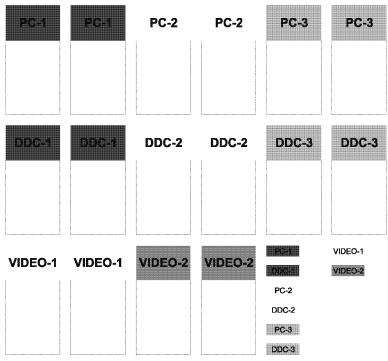


Figure 12: Stickers Affixed to Cables

13 Technical Specifications

Technical specifications of the SV-552 SummitViewTM Essentials Kit II are shown in Table 19.

Table 19: Technical Specifications of the SV-552 Processor/Switcher

tem	Description		
INPUTS:	Description	I blooks 1 HDML 2 BC (VCA and V. Bt	
INPUTS:	1 AUX stereo on a 3-PIN terminal block; 1 HDMI, 3 PC (XGA and Y, Pb, Pr), 1 Composite Video on RJ-45 connectors		
OUTPUTS:	1 SPKR (speaker) stereo on a 4-PIN terminal block; 1 Projector (XGA) on a 15-pin HD computer graphics video connector; 1 composite video on RCA connector; 1 DVI, 3 DDC (bi-directional, inputs/outputs, as required) on RJ-45 connectors 10V Volume, 2 relays on terminal block connectors (36VAC or DC, 2A, 60VAC maximum on non-inductive load), RS-232, and RS-485 3-PIN terminal block; IR OUT 2-PIN terminal block		
MAX. OUTPUT LEVEL:	VIDEO: CV 2.6Vpp; XGA 2.2Vpp	AUDIO: 7W per channel into 4Ω LINEOUT: 5.8Vpp @max volume, tone controls zeroed	
BANDWIDTH (-3dB):	VIDEO: CV 68MHz; XGA and Y, Pb, Pr 130MHz	AUDIO: 20Hz to 20kHz	
DIFF. GAIN:	0.35%		
DIFF. PHASE:	0.01Deg.		
K-FACTOR:	<0.05%		
S/N RATIO:	VIDEO: 59dB unweighted, 66dB @5MHz weighted	AUDIO: 55dB @1KHz, LINEOUT: 85dB @1KHz	
CONTROLS:	IR, RS-232, RS-485, Ethernet, K-Net		
COUPLING:	VIDEO: DC	AUDIO/LINEOUT: Input: AC; Output: DC	
AUDIO THD + NOISE:	AUDIO: 1.1% @1KHz, 12.8Vpp, LINEOUT: 0.063% @1KHz 2.4Vpp		
AUDIO 2nd HARMONIC:	AUDIO: 0.4% @1KHz, 8Vpp, LINEOUT: 0.02% @1KHZ, 2.4Vpp		
AUDIO INPUT SENSITIVITY:	140mVpp		
AUDIO VOLTAGE GAIN:	97 x 39.7dB		
POWER SOURCE:	12V 4.3A		
DIMENSIONS:	27.78cm x 7.65cm x 4.36cm (10.94" x 3.01" 1.72") W, D, H		
WEIGHT:	0.65kg (1.43lbs) approx.		
ACCESSORIES:	See Table 17		
OPTIONS:	Power supply, a pair of detachab installing in a 19" rack)	Power supply, a pair of detachable rack ears and shelf, RK-551 (for	

¹ Specifications are subject to change without notice



14 ADA Requirements

When not mounting the **SV-552** in a rack, attention must be paid to overhead clearances. Refer to the ADA Standards for Accessible Design (courtesy of the U.S. Department of Justice)¹, and in particular, section 4-4", "Head Room":

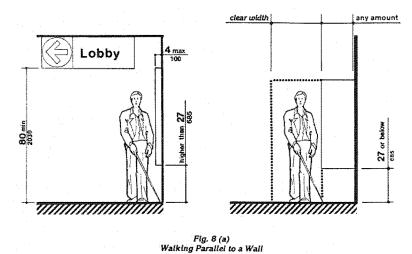
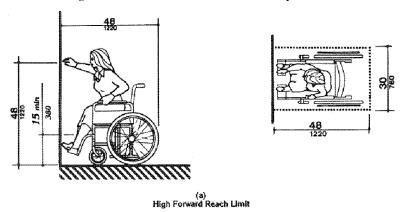
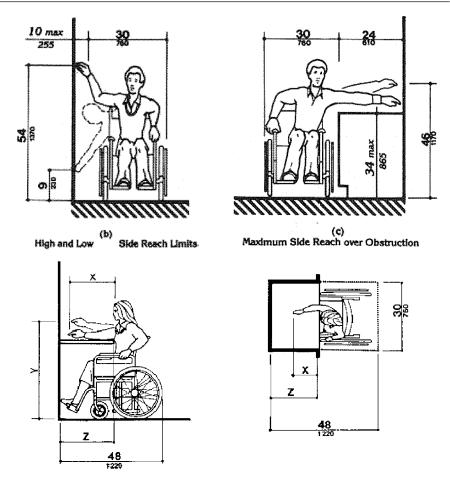


Figure 13: Overhead and Side Clearance Requirements



¹ You can download the file from their Web site at http://www.ada.gov/stdspdf.htm



NOTE: x shall be \leq 25 in (635 mm); z shall be \geq x. When x \leq 20 in (510 mm), then y shall be 48 in (1220 mm) maximum. When x is 20 to 25 in (510 to 635 mm), then y shall be 44 in (1120 mm) maximum.

(b) Maximum Forward Reach over an Obstruction

Figure 14: High/Low Forward, Side and Over Obstruction Reach Limit Requirements



15 Detachable SV-552 SummitView™ Essentials Kit II Check List

Table 20: SV-552 SummitView™ Essentials Kit II Check List

PART	DESCRIPTION	#	Ø
SV-552	SummitView™ Processor/Switcher	1	
C-D9M/D9F-3	RS-232 cable 3' (0.91m)	1	
BCP-2S-25	Speakers cable	2	
BCP-KNET-50	Balanced Audio/Control cable 50' (15.24m)	1	
C-UA/MUB-3	USB A to mini USB B cable 3' (0.91m)	1	
P.S 12V/5A	US and EU models	1	
POWER CORD	According to country	1	
CD-ROM	K-Config Configuration software	1	
SCREWDRIVER	For installation	1	
RC-63DL	Room Controller	1	
C-UA/MUB-3	USB A to mini USB B cable 3' (0.91m)	1	
CD-ROM	RC Configuration software	1	
SV-301xI	Wall Plate (Computer Graphics Video + Audio)	1	
C(P)-STP-50 ¹	STP cable 50' (15.24m)	1	
C-MGM/MGM-3	Molded Micro VGA to VGA cable 3' (0.91m)	1	
SV-302	Wall Plate (Composite Video + Audio)	1	
C(P)-STP-50 ¹	STP cable 50' (15.24m)	1	
C-RVM/RVM-3	Molded RCA RG-59 video cable 3' (0.91m)	1	

¹ CP-STP-50 is plenum-rated for the SummitView™ U.S.; C-STP-50 is non-plenum for the SummitView™ Europe

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 seven 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, or on which the WARRANTY VOID IF TAMPERED sticker has been torn, reattached, removed or otherwise interfered with
- 3. Damage, deterioration or malfunction resulting from:

 - Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
 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.
- 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).
- 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.

EXCLUSIONOFDAMAGES

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.
 - * FCC and CE approved using STP cable (for twisted pair products)





For the latest information on our products and a list of Kramer distributors, visit our Web site www.kramerelectronics.com where updates to this user manual may be found. We welcome your questions, comments and feedback.



Caution

Safety Warning:

Disconnect the unit from the power supply before opening/servicing.





Kramer Electronics, Ltd.

Web site: www.kramerelectronics.com
E-mail: info@kramerel.com

P/N: 2900-000603 REV 1