Kramer Electronics, Ltd.

USER MANUAL

Model:

SV-552/SV-552 ALC

SummitView™ Processor/Switcher

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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 groups[1] that are clearly defined by function.

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

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

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

PART III: Detailed installation instructions for installing the wall plates and connecting the **SV-552 SummitView**™ *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
- Review the contents of this user manual[2]

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

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

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. SummitView™ is as easy to use as it is to specify and install. The components that make up the SummitView™ system are also available as standalone products. With a SummitView™ kit, 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 **SV-552 ALC** version is aimed at installers who prefer to design their own SummitView installations. The **SV-552 ALC** kit differs from the standard **SV-552** only in regards to the contents of the box (see Section 15).

The SummitView™ 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 Basic SummitView™ SV-552 Installation

The usual **SummitView™ SV-552** installation includes the following:

- **SV-552 ALC SummitView™** *Processor/Switcher*
- **SV-301xl**, **SV-302** and **SV-306** *Wall Plates*
- **RC-63DL** *Room Controller*
- **SPK-CC444** *Speakers*
- Power adapter (12V DC output)
- Required cables (for details see Section 11)
- Check list (see Table 20)

The following additional products are available for purchase:

- **SV-301xl**, **SV-302, SV-306** and **SV-307** *Wall Plates*[1] and compatible cables
- Kramer **Pico TOOLS™ FC-200** *EDID Copier*
- **RC-63D** series (**RC-63D**, **RC-63DL**), **RC-53D** series, and **RC-63A** series (**RC-63A**, **RC-63AL**) Room Controllers[2]
- A range of ceiling and wall mounted speakers

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

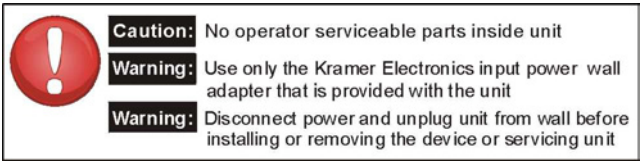
- MT-P9P 9” and MT-P6P 6” center pole sections for the SV-1 Mounting Box which can be attached to any 1.5NFS projector mounting system
- SV-1 Pole Mounting Box which can be attached to any 1.5NFS projector mounting system
- Additional TP cables (see Section 11)

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 **SummitView™**, 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™** system externally, that is, install the **SV-552** in a rack (see Section 5.2) using the **RK-551** rack mount kit
- Connect only good quality connection cables and avoid interference from neighboring electrical appliances and position your SummitView™ 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.

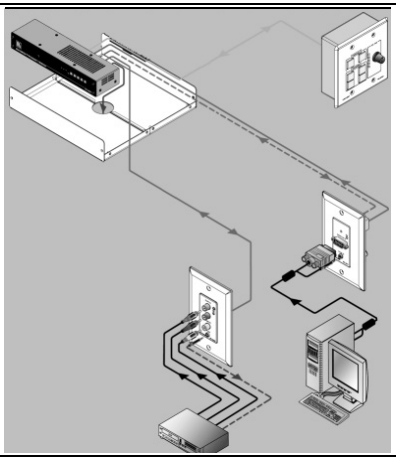
However, since the use of UTP cable might not conform to electromagnetic standards, Kramer does not commit to meeting the standard with UTP cable.

3.3 8-Step SummitView™ Basic System Quick Installation Guide

The following guide summarizes how to install a **SV-552 SummitView**™ basic system (similar principles apply if you are installing other SummitView™ configurations).

Table 1: Quick Installation Guide for the SummitView™ Basic System

	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. STP[1], 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*™: XXP-XXX (plenum-rated for the SummitView™ US) or XX-XXX (non-plenum for the SummitView™ 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 SummitView**™ *Processor/Switcher* is designed specifically for the SummitView™ 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-Net**™ 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-4** *IR Remote Controller* or similar device

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

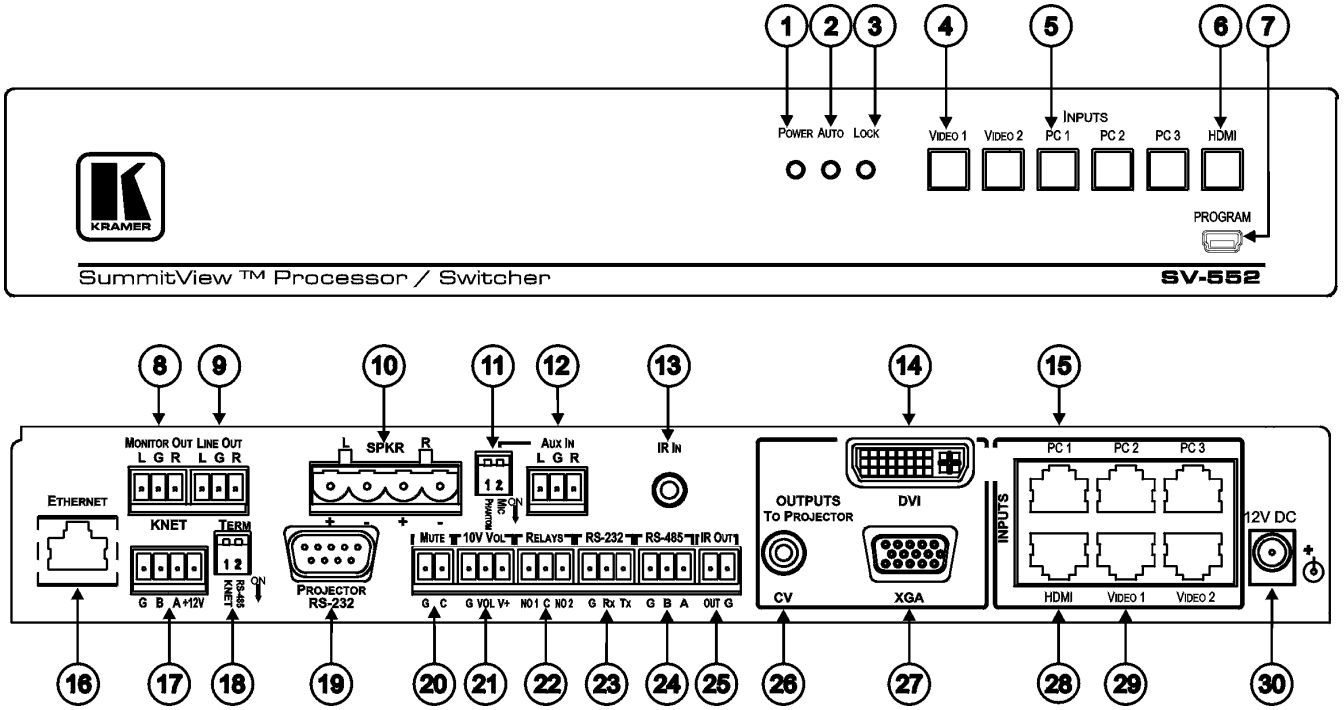


Figure 1: SV-552 SummitView™ Processor / Switcher Front and Rear Panels

Table 2: SV-552 SummitView™ 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*	*INPUTS* Buttons (used for testing)	Press to select the video 1 source
	VIDEO 2		Press to select the video 2 source
5	*PC 1*		Press to select the PC 1 source
	PC 2		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* USB Connector		Program software - for service use only
8	*MONITOR OUT* Terminal Block		Connect to an external audio amplifier. This is the same as the audio Line Out but lacks level control
9	*LINE OUT* Terminal Block		Connect to an external audio amplifier. This is the same as the Monitor Out but with level control
10	*SPKR* Terminal Block		Connect to the left and right speakers
11	*PHANTOM* DIP-switch 1	*AUX IN*	Configures Aux In for use with a microphone
	MIC DIP-switch 2		Turns on Phantom Power 9V on the Aux In connector
12	*L, G, R* Terminal Block		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		Connect to an IR receiver
14	*OUTPUTS TO PROJECTOR DVI* Connector		Connect to the DVI/HDMI input of the projector
15	*PC 1*	*INPUTS* RJ-45 Connectors	Connect to the PC 1 source
	PC 2		Connect to the PC 2 source
	PC 3		Connect to the PC 3 source
16	*ETHERNET* RJ-45 Connector		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-switches		DIP-switches for line termination of the unit (DIP-switch 1 is for K-Net, DIP-switch 2 is for RS-485)
19	*PROJECTOR RS-232* 9-pin D-sub Connector		Connect to the projector for projector control
20	*MUTE* Terminal Block		Mutes the audio outputs
21	*10V VOL* Terminal Block		Connect to an external potentiometer on a wall plate[2] to adjust the volume of the speakers
22	*RELAYS* Terminal Block		Connect to a room item (such as lighting, screen settings, blinds, and so on)
23	*RS-232* Terminal Block		Connect to the RS-232 connector on any serial controlled device

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 TO PROJECTOR*	Connect to the composite video input of the projector
27	*XGA* 15-pin HD Connector		Connect to the computer graphics or other display device input of the projector
28	*HDMI/DVI*	*INPUTS* RJ-45 Connectors	Connect to the HDMI/DVI acceptor[1]
29	*VIDEO 1*		Connect to the video 1 source
	VIDEO 2		Connect to the video 2 source
30	*12V DC*		+12V DC connector for powering the unit

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

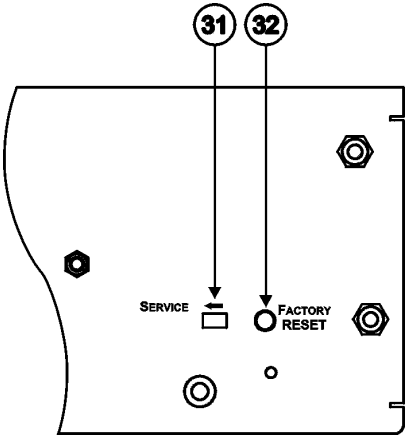


Figure 2: SV-552 SummitView™ Processor / Switcher Underside

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™ 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.

When used in conjunction with the **SV-301** and the **SV-306**, the **SV-552** Processor/Switcher provides EDID PassThru. When used in conjunction with the **SV-306**, the **SV-552** Processor/Switcher also provides HDCP support.

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)
- Operating the **SV-552** Remotely (see Section 5.2)
- Installing the **SV-552** in a 19" rack (see Section 5.2)

5.1 Connecting the SV-552 Processor/Switcher

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

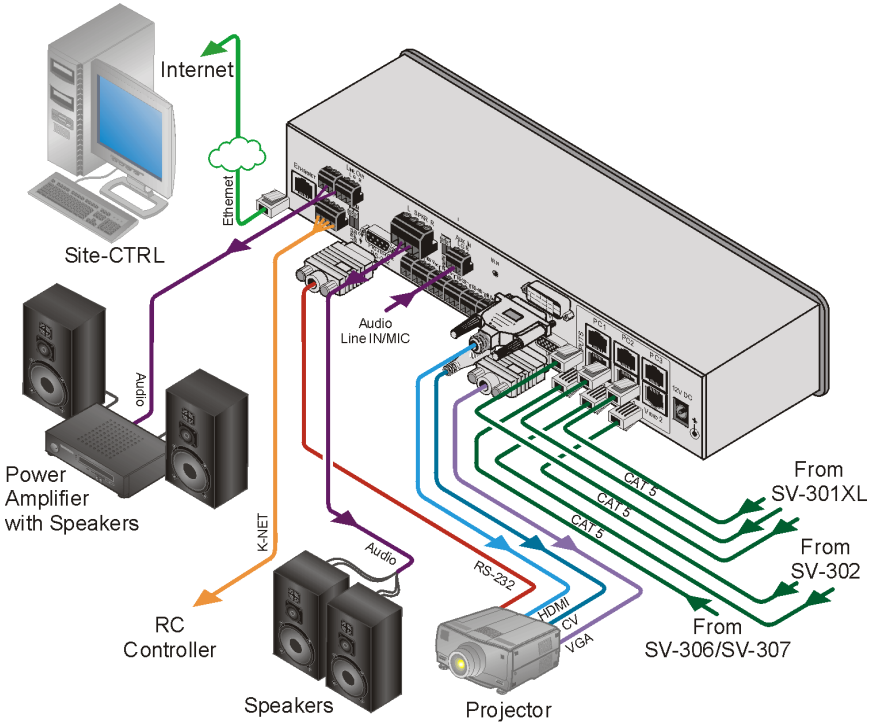


Figure 3: Connecting the SV-552

For instructions on wiring the **K-Net** connector, see Section 8.

5.2 Operating the SV-552 Processor/Switcher Remotely

The **SV-552 Processor/Switcher** can be operated remotely via Ethernet over a LAN using the Kramer **Site-CTRL**™ software. For details see the *Site-CTRL and Web Access Online User Guide*[1].

1 Available from http://www.kramerelectronics.com

5.3 Installing the SV-552 in a 19” Rack (Optional)

This section describes how to mount the **SV-552** in a 19” rack using the (optional) **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

CAUTION!!

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

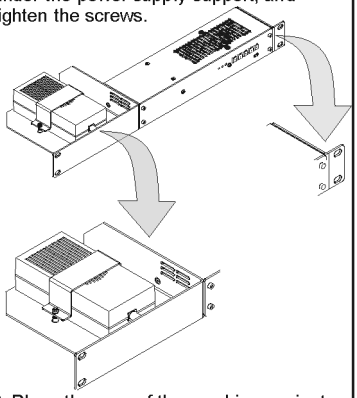
1. It is located within the recommended environmental conditions, as the operating ambient temperature of a closed or multi unit rack assembly may exceed the room ambient temperature.
2. Once rack mounted, enough air will still flow around the machine.
3. The machine is placed straight in the correct 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.

2. 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.



3. 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 Controller[1] for control of A/V equipment in any room.

RC-63DL is the recommended room controller for an **SV-552 SummitView™** basic installation 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

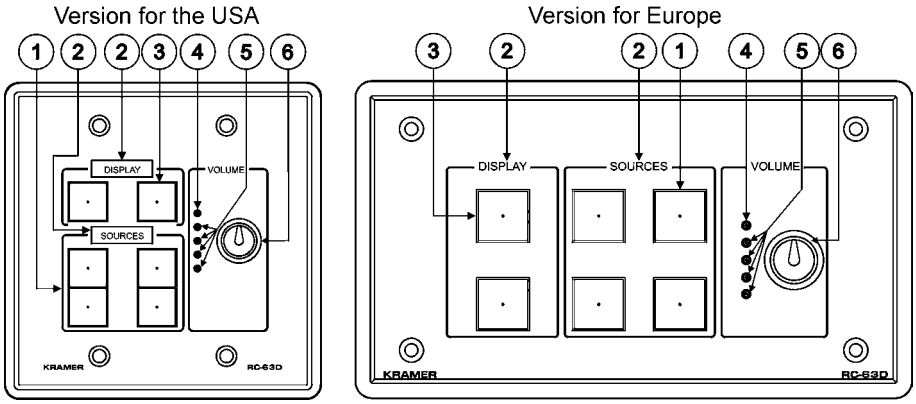


Figure 4: RC-63DL Room Controller Front Panel

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

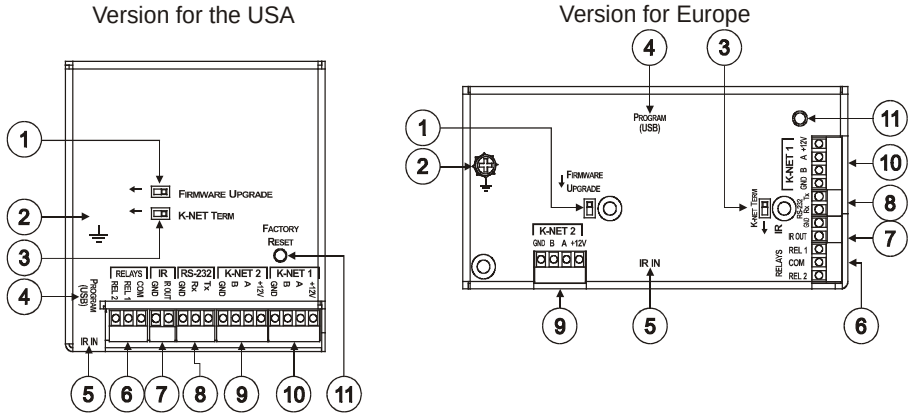


Figure 5: RC-63DL Room Controller Rear Panel

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 connection[1]; PIN B (-) and PIN A (+) are for RS-485, and PIN +12V is for powering the unit
10	*K-NET 1* Connections	
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 Figure 6):

- It requires only a **K-Net** connection to the Master Room controller
- A power supply unit is **not** required[2]
- The room controller can be programmed only via the **SV-552** *Processor/Switcher* Master Room controller

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

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

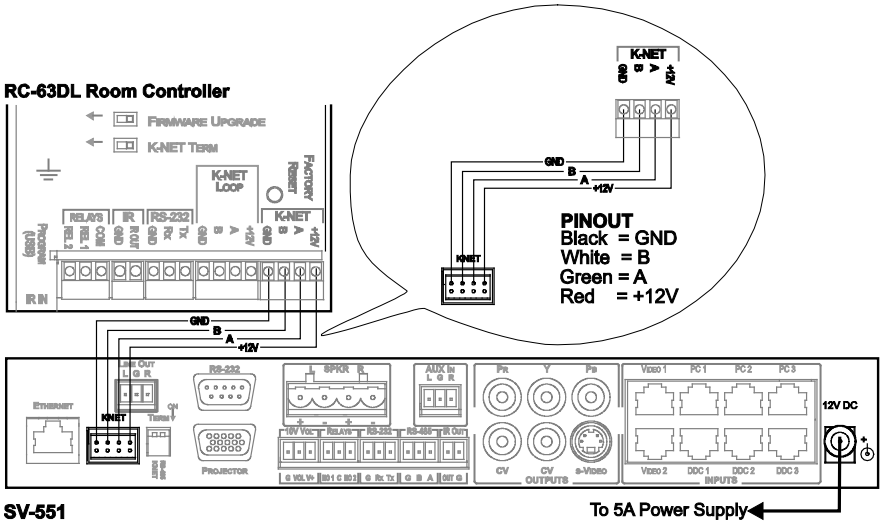


Figure 6: Connecting the RC-63DL to the SV-552 SummitView™ Processor/Switcher

7 Defining and Connecting the Wall Plates

The **SV-301xl** and **SV-302** *Wall Plates* are recommended as a part of a **SV-552 SummitView™** basic installation.

The **SV-306** and **SV-307** *Wall Plates*[1] are also 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.

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

STP cabling of 15.24m (50ft) in length is available[2] which is suitable for the **SV-301xl/302** (see Section 11). 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 Section 8.

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

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

Advanced User Tip

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 (for example, 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:

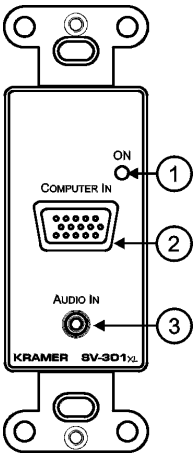
- **SV-301xl** (Section 7.1.1)
- **SV-302** (Section 7.1.2)
- **SV-306** (Section 7.1.3)
- **SV-307** (Section 7.1.4)

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

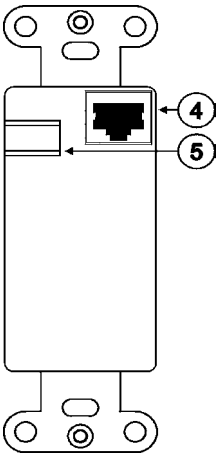
The **SV-301xl** is a single-gang wall plate insert. Table 6 defines the front and rear views of the **SV-301xl.**

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

SV-301xl Front View



SV-301xl Rear View

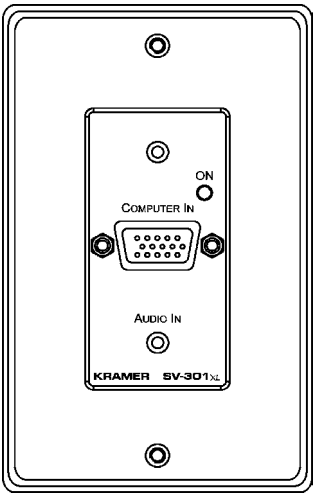


#	Feature	Function
1	*ON* LED	Lights red when receiving power (when no signal is detected); lights green when receiving a signal
2	*COMPUTER IN* 15-pin HD Connector	Connect to the computer graphics source
3	*AUDIO IN* 3.5mm Mini Connector	Connect to the unbalanced stereo audio source
4	RJ-45 connector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

EDID information can be stored in the wall plate by using the **FC-200** *XGA EDID Copier* Kramer Tool (see the **FC-200** *XGA EDID Copier* User Manual).

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

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



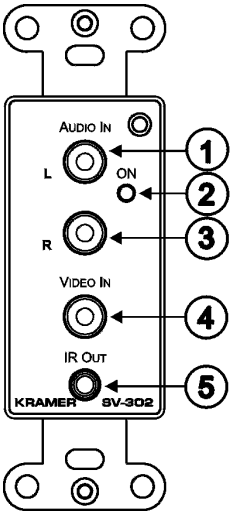
1 Each model that is designed specifically for the U.S. market can be fitted inside a plastic frame

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

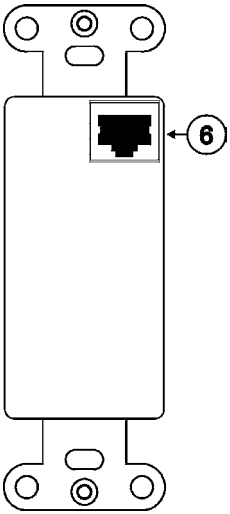
The **SV-302** is a single-gang wall plate insert. Table 8 defines the front and rear views of the **SV-302.**

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

SV-302 Front View



SV-302 Rear View

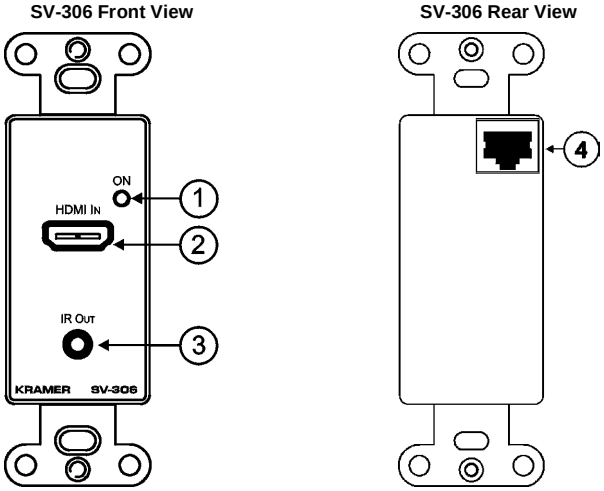


#	Feature	Function
1	*L AUDIO IN* RCA Connector	Connect to the left analog audio source
2	*ON* LED	Lights red when receiving power (when no signal is detected); lights green when receiving a signal
3	*R AUDIO IN* RCA Connector	Connect to the right analog audio source
4	*VIDEO IN* RCA Connector	Connect 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. Table 9 defines the front and rear views of the **SV-306**.

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



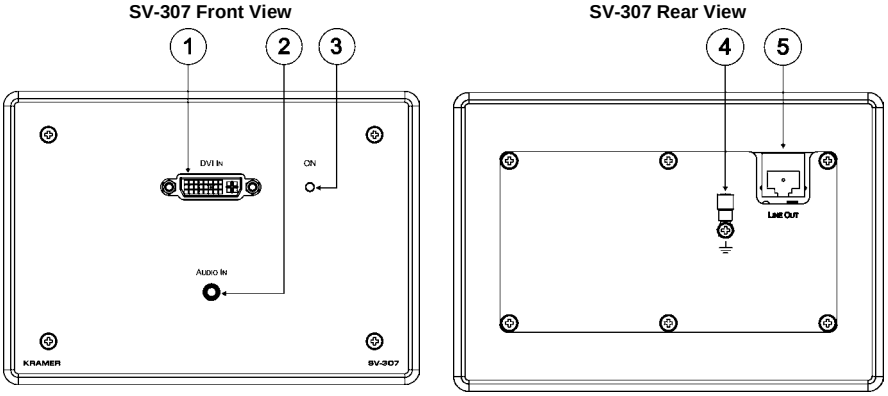
#	Feature	Function
1	*ON* LED	Lights red when receiving power (when no signal is detected); lights green when receiving a signal
2	*HDMI IN* Connector	Connect to the HDMI digital source
3	*IR OUT* 3.5mm Mini Connector	Connect to a machine via an IR Emitter
4	RJ-45 connector	Connect to the **SV-552**.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

The **SV-306** provides EDID PassThru (passes EDID signals from source to display) and HDCP support.

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

The **SV307** is a triple-gang wall plate. 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 Section 8.3)

7.2 Defining the Wall Plates (England and Europe[1])

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

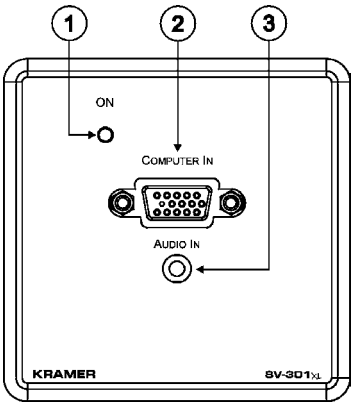
- **SV-301xl** (Section 7.2.1)
- **SV-302** (Section 7.2.2)
- **SV-306** (Section 7.2.3)

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

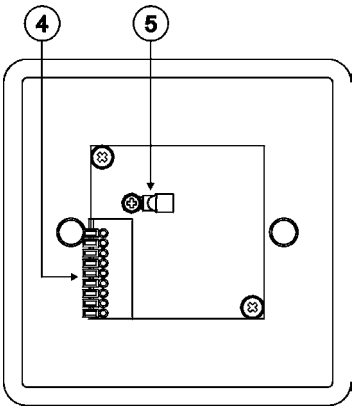
The **SV-301xl** is a single-gang wall plate. The **SV-301xl** has a terminal block at the rear. Table 11 defines the front and rear views of the **SV-301xl**.

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

SV-301xl Front View



SV-301xl Rear View[3]



#	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

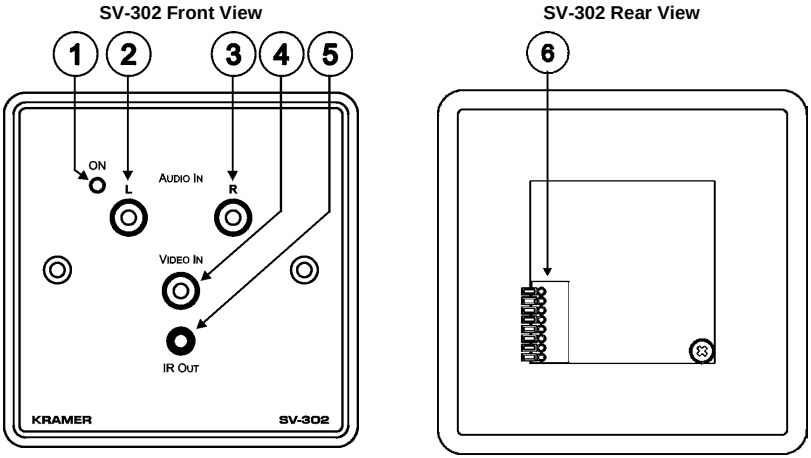
3 Some models may have a DC IN connector for connecting to a 12V DC power supply

EDID information can be stored in the wall plate by using the **FC-200** *XGA EDID Copier* Kramer Tool (see the **FC-200** *XGA EDID Copier* User Manual).

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	*ON* LED	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)

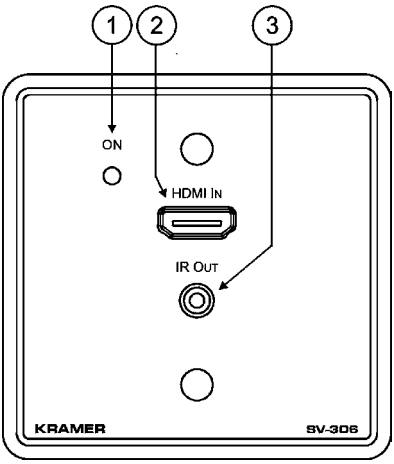
1 When mounting in Belgium and Germany, use the standard WP Adapter

7.2.3 Defining the SV-306 (England and Europe)

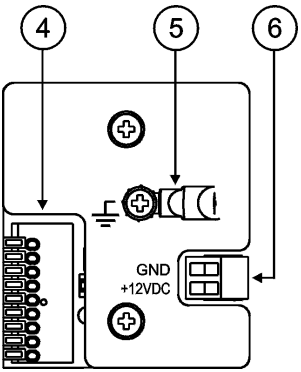
The **SV-306** is a single-gang wall plate and has a terminal block at the rear. Table 13 defines the front and rear views of the **SV-306**.

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

SV-306 Front View



SV-306 Rear View



#	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

The **SV-306** provides EDID PassThru (passes EDID signals from source to display) and HDCP support.

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[1] 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 Figure 7 illustrates (see also the separate color illustration in Section 5.1):

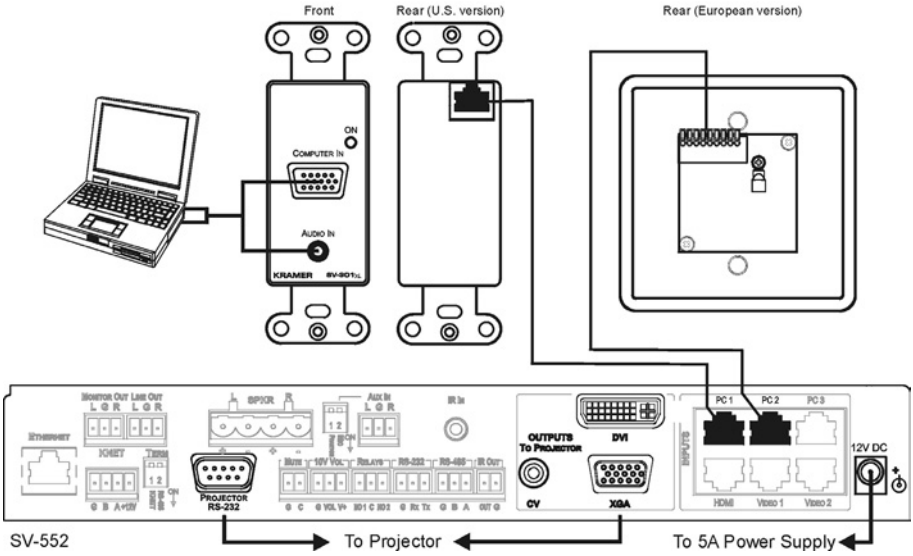


Figure 7: Connecting the SV-301xl to the SV-552

1. 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

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 Figure 8 illustrates (see also the separate color illustration in Section 5.1):

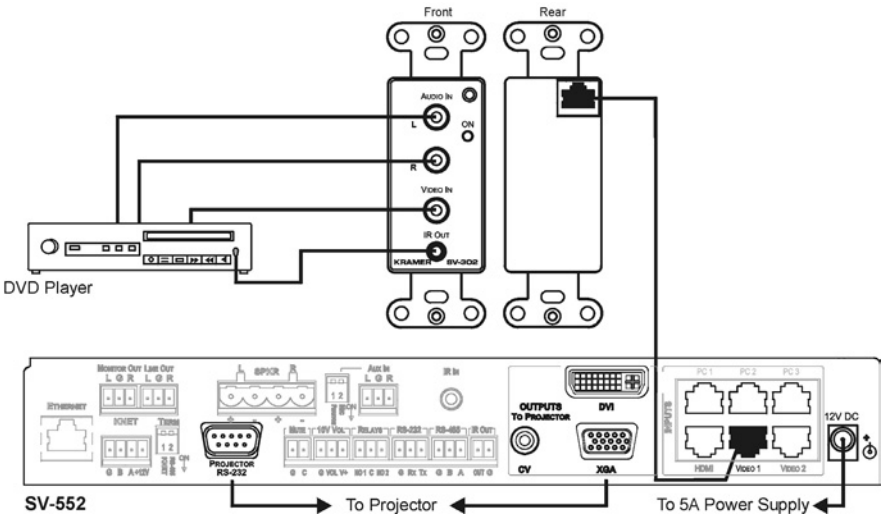


Figure 8: Connecting the SV-302 to the SV-552

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 Emitter[2] 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**.

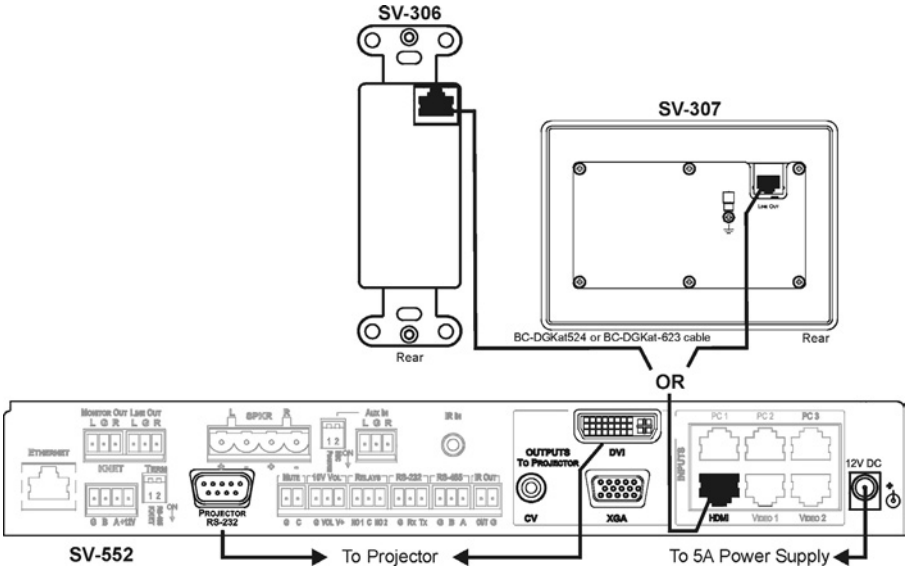


Figure 9: Connecting the SV-306/307 to the SV-552

8 Wiring the TP Line In/Line Out Connectors

STP cabling[1] with a length of 15.2m (50ft) in length is available for use with the Kramer A/V **SummitView™** systems for connecting to 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)

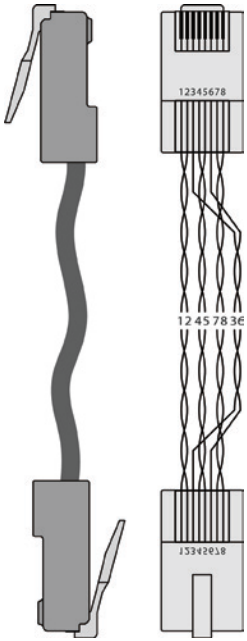
8.1 Wiring the Twisted Pair RJ-45 Terminals (U.S.)

The U.S. versions of the wall plates are equipped with RJ-45 terminals. Table 14 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.

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

Table 14: UTP Pinout (U.S.)

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

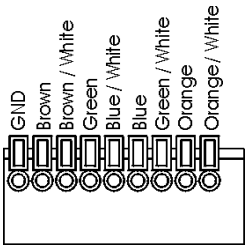


8.2 Wiring the Terminal Block (England and Europe)

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.

Table 15 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 to 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.

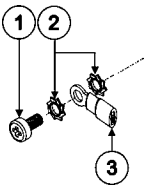
Note that the STP cable Ground shield must be connected/soldered to the connector shield.

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.

Table 15 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-Net™ Connector:

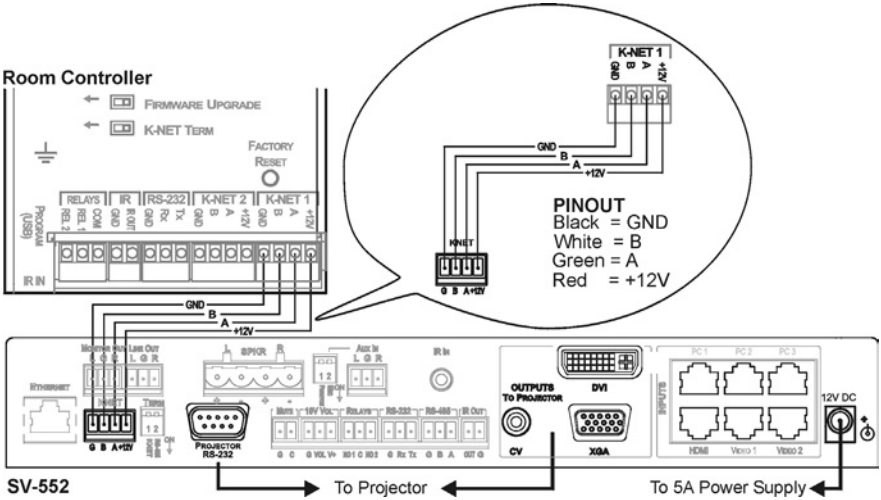


Figure 10: Wiring the K-Net Connector

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 buttons[1] 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.

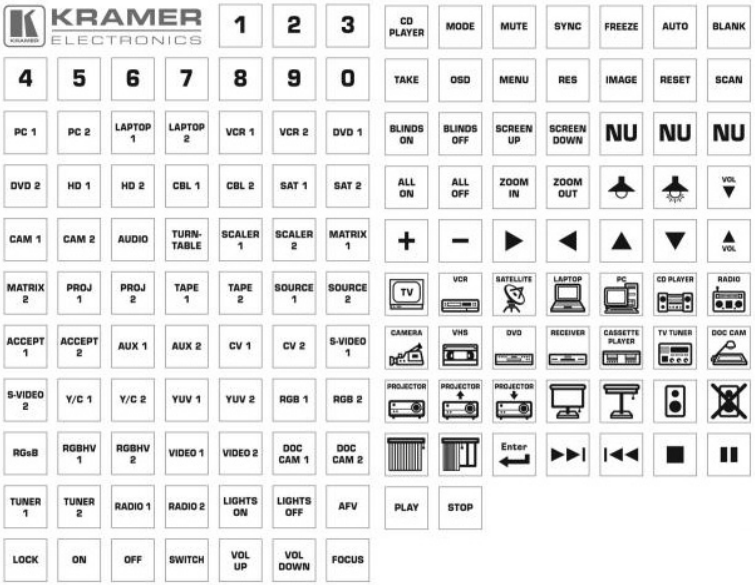


Figure 11: Sample Button Labels Sheet

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

11 SummitView™ System Cables

Table 17 defines the recommended cables for a **SummitView™** installation.

Table 17: Recommended Cables for use with SummitView™ Systems

Item	Description	Supplied with the SV552 ALC
Cable for use with the SV-301xl		
CP-STP-50/C-STP-50 (1 cable[1])[2]	STP cable 15.2m (50ft) from SV-301 to **SV-552**	-
Cable for use with the SV-302		
CP-STP-50/C-STP-50 (1 cable[1])[2]	STP cable 15.2m (50ft) from SV-302 to **SV-552**	-
Cables for use with the SV-552		
P.S 12V/5A DESKTOP with DC plug (1 cable)		1
POWER CORD 110V (1 cable)		1
C-MGM/MGM-3 (1 cable)[3]	Molded Micro VGA to VGA cable 0.91m (3ft), from **SV-552** to the display device	1
C-RVM/RVM-3 (1 cable)[3]	Molded RCA RG-59 video cable 0.91m (3ft), from **SV-552** to the display device	1
C-HM/DM-3	HDMI to DVI cable 0,91m (3ft), from the **SV-552** to the display device	1
C-D9M/D9F-3 (1 cable)	RS-232 cable 0.91m (3ft), from the **SV-552** to the display device	1
C-D9M/D9F-3	RS-232 Gender changer	1
BCP-2S-25 (2 cables)	Speaker cables, from the **SV-552** to the speakers	-
C-UA/MUB-3 (1 cable)	USBA to Mini USB cable 0.91m (3ft), for configuring the **SV-552** or the **RC-63DL**	1
Cable for use with the RC-63DL or other controller		
BCP-KNET-50 (1 cable)	Balanced Stereo Audio/Control cable 15.2m (50ft), from the RC-63DL to the **SV-552**	1

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™ Europe)

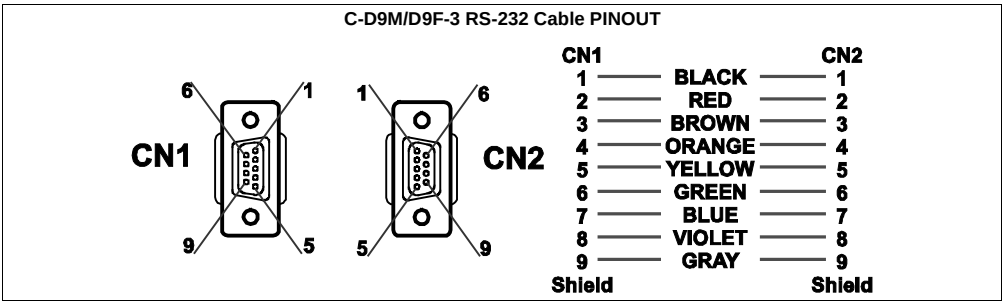
2 Connect the wall plate to the SV-552

3 Connects the SV-552 to the projector

12 SummitView™ Cable Termination

Table 18 defines the **SummitView**™ cable termination (connector-to-cable).

Table 18: SummitView™ Cable Termination



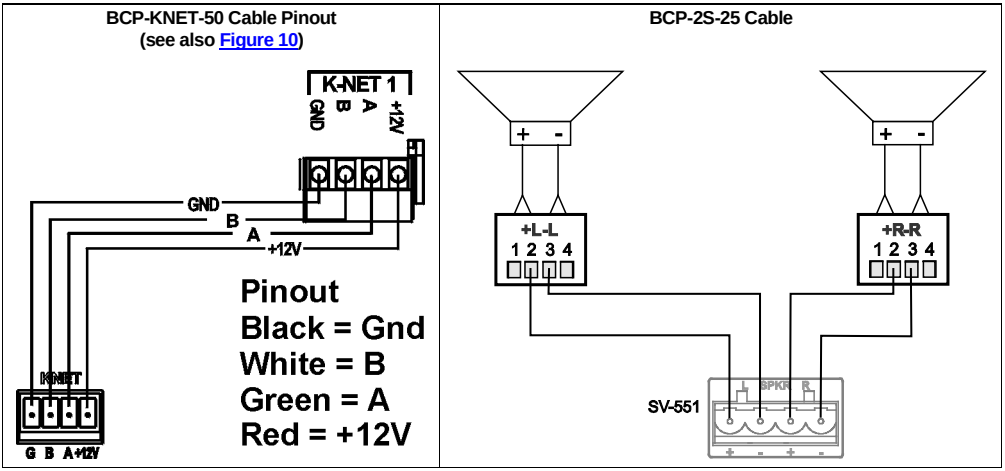


Figure 12 defines the stickers affixed to the **SummitView**™ cables.

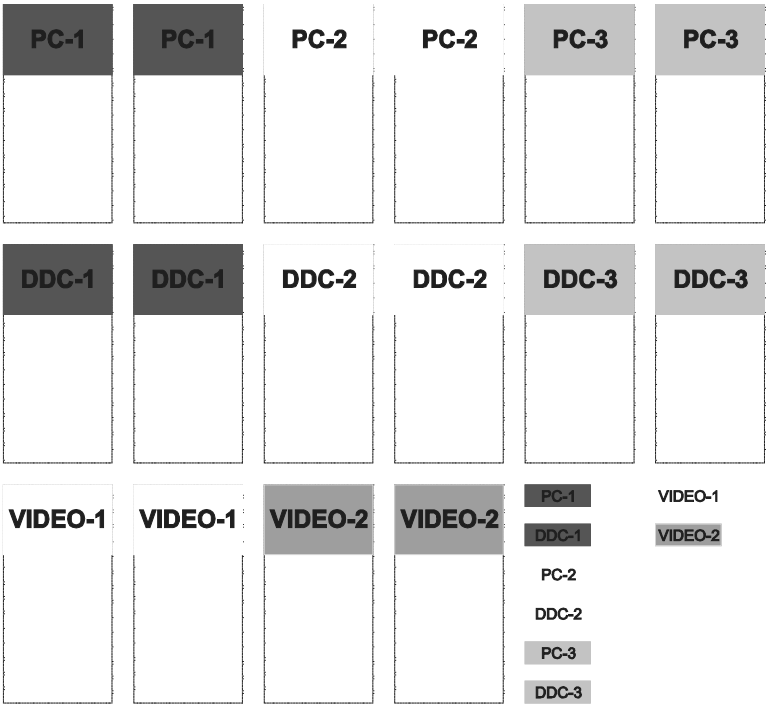


Figure 12: Stickers Affixed to Cables

13 Technical Specifications

Technical specifications of the **SV-552 SummitView™** Processor/Switcher are shown in Table 19.

Table 19: Technical Specifications[1] of the SV-552 Processor/Switcher

Item	Description	
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 blocks; 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	
OPERATING TEMPERATURE:	0° to +55°C (32° to 131°F)	
STORAGE TEMPERATURE:	–45° to +72°C (–49° to 162°F)	
HUMIDITY:	10% to 90%, RHL non-condensing	
POWER CONSUMPTION:	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 detachable rack ears and shelf, RC-4 Infrared Remote Controller, RK-551 (for installing in a 19" rack)	

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":

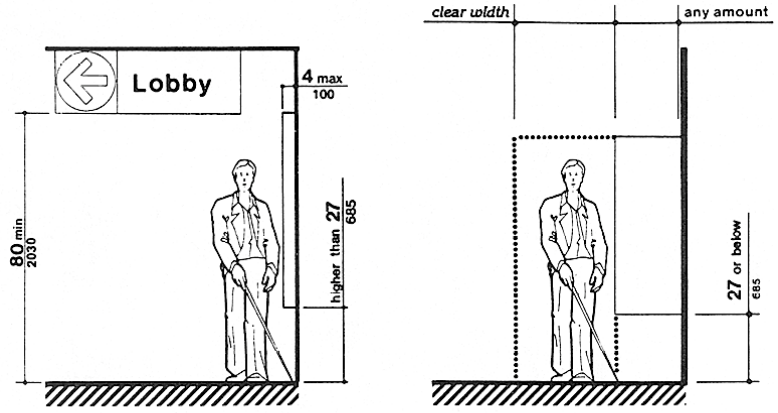
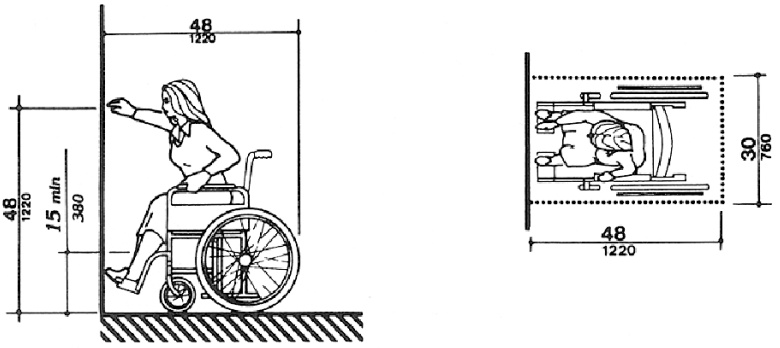


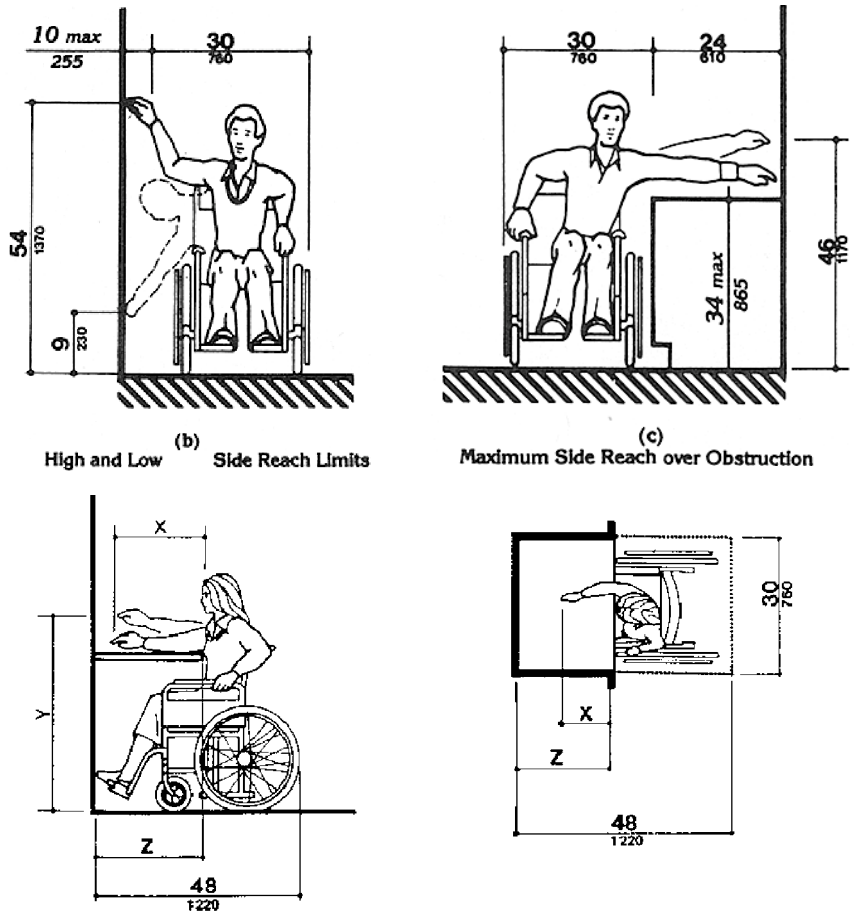
Fig. 8 (a)
Walking Parallel to a Wall

Figure 13: Overhead and Side Clearance Requirements



(a)
High Forward Reach Limit

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



NOTE: x shall be ≤ 25 in (635 mm); z shall be ≥ x. When x < 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 SV-552 SummitView™ Essentials Basic System Check List

Remove this list from the user manual and use it to check that all components are present.

Table 20: SV-552 SummitView™ Basic System Check List

PART	DESCRIPTION	#	☑
SV-552	**SummitView™ Processor/Switcher**	1	
C-D9M/D9F-3	**RS-232 cable 0.91** (3ft)	1	
BCP-2S-25	**Speaker cable**	2	
BCP-KNET-50	**Balanced Audio/Control cable 15.2m** (50ft)	1	
C-UA/MUB-3	**USB A to mini USB B cable 0.91m** (3ft)	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 0.91m** (3ft)	1	
CD-ROM	**RC Configuration software**	1	
SV-301xl	**Wall Plate** (Computer Graphics Video + Audio)	1	
C(P)-STP-50[1]	**STP cable 15.2m** (50ft)	1	
C-MGM/MGM-3	**Molded Micro VGA to VGA cable 0.91m** (3ft)	1	
SV-302	**Wall Plate** (Composite Video + Audio)	1	
C(P)-STP-50[1]	**STP cable** 15.2m (50ft)	1	
C-RVM/RVM-3	**Molded RCA RG-59 video cable** 0.91m (3ft)	1	

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

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The warranty obligations of Kramer Electronics for this product are limited to the terms set forth below:

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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.

P/N: 2900-000603 Rev: 3

Kramer Electronics, Ltd.
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P/N: 2900-000603 REV 3