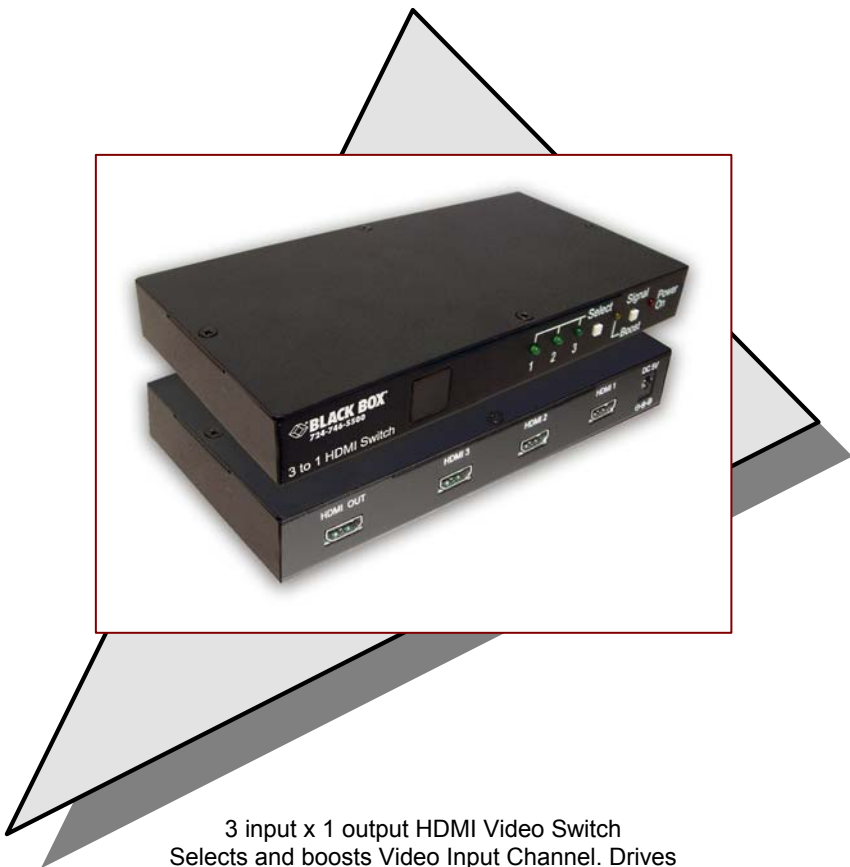




CUSTOMER SUPPORT INFORMATION

Order **toll-free** in the U.S. 24 hours, 7 A.M. Monday to midnight Friday: **877-877-BBOX**
 FREE technical support, 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**
 Mail order: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018
 Web site: **www.blackbox.com** • E-mail: **info@blackbox.com**

Trademarks Used in this Manual

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Any other trademarks mentioned in this manual are acknowledged to be the property of the trademark owners.

FCC and Canadian Dept of Communications Radio Frequency interference statements

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at their own expense will be required to take whatever measures may be necessary to correct the interference. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par le ministère des Communications du Canada.

European Union Declaration of Conformity

This product complies with the requirements of the European EMC directive 89/336/EEC



Normas Oficiales Mexicanas (NOM)

Electrical Safety Statement

INSTRUCCIONES DE SEGURIDAD

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc.
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico debe ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
 - A: El cable de poder o el contacto ha sido dañado; u
 - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
 - C: El aparato ha sido expuesto a la lluvia; o
 - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
 - E: El aparato ha sido tirado o su cubierta ha sido dañada.

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1. Introduction

1.1 General

Thank you for purchasing Black Box, Model SW214A, 3 input x 1 output HDMI Video Switch. This device is used to select (and boost) one of 3 HDMI Video-plus-Audio inputs.

The selection can be made via the front panel or using an included IR remote control. Since HDMI (and DVI) digital signals have cable distance limitations, the SW214A provides a front panel button to boost the output signal to drive long HDMI cables to about 50 feet. Furthermore, the unit has built in automatic equalizers on the inputs so that it can handle long input video cables (to 65 feet).

1.2 Features

- Perfect solution for high-end home-theatre setups
- Use only one connection to your HDMI compatible HDTV
- Equalizes the inputs for losses in the cable to 65 feet
- Can boost the output for driving cables to 50 feet.
- Front panel LED indicators for status monitoring
- Supports PC resolutions to UXGA (1600x1200) and HD to 1080p
- Includes a simple to use Remote Control
- Plug and play installation – takes minutes to setup
- Bandwidth of 1.65 Gbps (Giga bits / second) for sharp digital image
- HDMI1.1, HDCP 1.1, and DVI1.0 Compliant

2. Installation



Front Panel



Rear Panel

Input Video Channel Indicator LEDs and Select Button

Press the Select button to sequentially select one of the 3 inputs

Signal Boost Button and LED indicator

If you have a cable longer than about 15 feet connected to the output press this button once to boost the output signal strength. In general leave this in off mode unless you are observing digital artifacts that indicate signal loss such as pixilation, freezing, or loss of image.

Input Power Indicator

The unit does not have an on-off button. This light comes on as soon as you plug in the power adapter.

DC Input Power Jack

Plug the included power supply to this jack. The red LED should come on indicating power is on. **NEVER SUBSTITUTE ANY OTHER POWER SUPPLY AS THIS MAY (and probably will) DESTROY THE UNIT.**

HDMI Input and Output Connector

Using a high quality HDMI cable, connect the output (left most) connector to your display. Connect your inputs starting with HDMI #1 (right most) - cable not supplied - Contact Black Box Corporation if you cables.

3. Troubleshooting

There are no field serviceable parts or circuits in the device. If you think that the device is malfunctioning, please contact Black Box.

Contacting Black Box

If you determine that your extender is malfunctioning, do not attempt to repair the unit. Contact Black Box at 724-746-5500. Before you do, make a record of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description.

Shipping and Packaging

If you need to transport or ship your Switch:

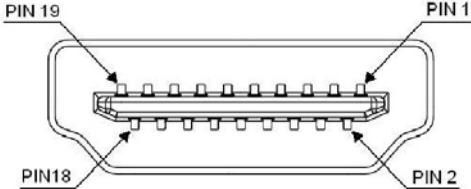
- Package it carefully. Use the original container if possible.
- Before you shipping the unit, contact us to get a Return Authorization (RA) number.

4. Specifications

Resolutions	Output resolution is the same as input resolution. <u>Supported PC Resolutions</u> VGA - SVGA – XGA – SXGA – UXGA (1600x1200) <u>Supported Component (YPbPr) Resolutions</u> 480i - 576i - 480p – 576p - 720p - 1080i - 1080p
HDMI Data	1.65 Gbps (single link) - HDMI 1.1 compliant
Max. Distance	65 feet (20 m) on the input with automatic equalization, 50 feet (15 m) maximum on the output. If output cable length is more than 15 feet, then the signal boost must be enabled.
Compliance	CE; FCC Part 15 Subpart B Class A, IC Class
Max. Altitude	10,000 ft. (3048 m)
Temperature	Operating: 32 to 122°F (0 to 50°C); Storage: -40 to +185°F (-40 to +85°C)
Humidity	Up to 95% non-condensing
Enclosure	Metal
MTBF	85,000 hours (calculated estimate)
Power	From utility-power (mains) outlet, through the included external power supply. Voltage: 5 V DC Center-Positive 2.6 A
Dimensions	1.0" High x 7.9" Wide x 4.1" Deep
Weight	1.3 lbs (20 Ounces)

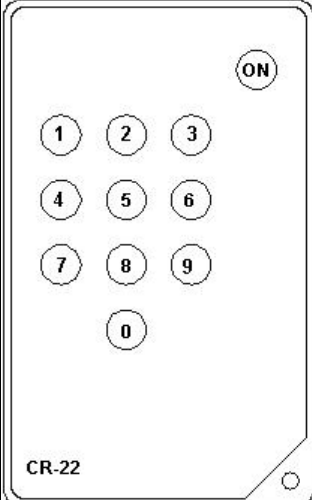
5. Appendix

HDMI Connector Pin Assignment



Pin #	Signal	Pin #	Signal
1	TMDS Data 2+	11	TMDS Clock Shield
2	TMDS Data 2 Shield	12	TMDS Clock -
3	TMDS Data 2-	13	CEC
4	TMDS Data 1+	14	Reserved (N.C. on device)
5	TMDS Data 1 Shield	15	SCL
6	TMDS Data 1-	16	SDA
7	TMDS Data 0+	17	DDC/CEC Ground
8	TMDS Data 0 Shield	18	+5 Power
9	TMDS Data 0-	19	Hot Plug Detect
10	TMDS Clock+		

HDMI Connector Pin Assignment



Custom Code: 0x866B

ON: 0x12
01: 0x01
02: 0x02
03: 0x03
04: 0x04
05: 0x05
06: 0x06
07: 0x07
08: 0x08
09: 0x09
00: 0x00

NEC EXTENDED FORMAT

CR-22

Remote Control Codes



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