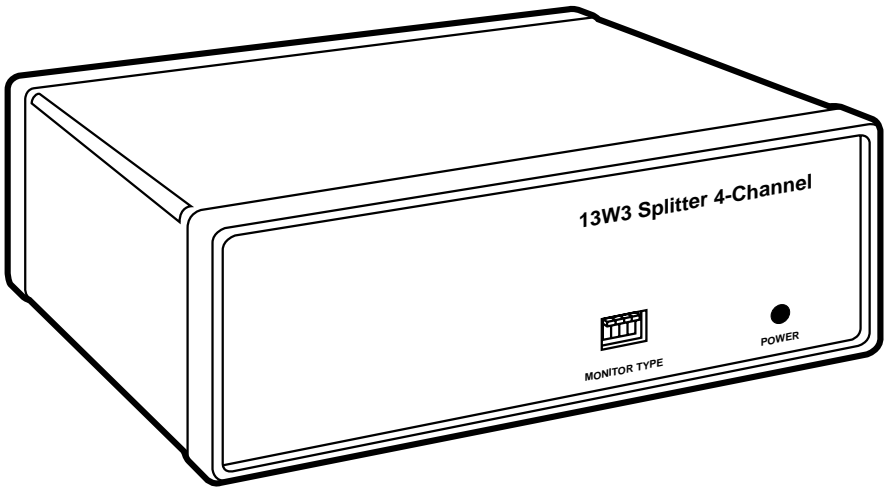




# 13W3 Splitter 2-Channel 13W3 Splitter 4-Channel



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**CUSTOMER  
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INFORMATION**

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## FEDERAL COMMUNICATIONS COMMISSION AND INDUSTRY CANADA 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 J 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 his 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 Industry Canada.*

*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 Industrie Canada.*

### TRADEMARKS USED IN THIS MANUAL

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NeXT is a registered trademark of NeXT, Inc.

Silicon Graphics is a registered trademark of Silicon Graphics, Inc.

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

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## 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 bloquear 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.
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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. Specifications

**Connectors** — Input and Output: 13W3 female;  
Power: 5-pin mini-DIN female

**Sync Outputs** — Can drive TTL loads or be terminated in 75 ohms

**Signal Format** — RGBS

**Switches** — (1) MONITOR TYPE: Sets the monitor ID bits for the graphics card

**Operating Temperature** — 32° to 158°F (0° to 70°C)

**Storage Temperature** — -85° to 257°F (-65° to 125°C)

**Bandwidth** — 300 MHz (-3dB)

**Rise Time** — 1 nanosecond

**Power** — AC088A-R2, AC089A-R2: 115V wallmount power supply;  
AC088AE-R2, AC089AE-R2: 230V inline power supply

**Size** — AC088A-R2, AC088AE-R2: 2.5"H x 5.5"W x 3.3"D (6.4 x 14 x 8.4 cm);  
AC089A-R2, AC089AE-R2: 2.5"H x 7.3"W x 3.3"D (6.4 x 18.6 x 8.4 cm)

**Weight** — 0.9 lb. (0.4 kg)

## 2. Introduction

### 2.1 Overview

The 13W3 Splitter is a distribution amplifier (or splitter) for 13W3-based computers. These Splitters allow the output of the 13W3 computer video to be viewed on up to four monitors simultaneously, depending on the Splitter purchased. Each monitor can be located up to 250 feet away from the Splitter.

### 2.2 What's Included

Your Splitter should come with the following items. If any of these items are missing or damaged, contact Black Box.

- (1) 13W3 Splitter, 2- or 4- Channel,
  - (1) 115V or 230V power supply (depending which unit you purchased),
  - (1) 10-foot (3-m) input cable (our code EVMVDT02-0010),
- This manual.

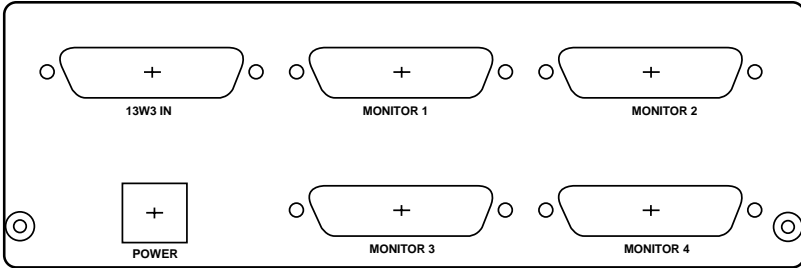
### 2.3 Features

Listed below are the special features your Splitter offers.

- 300-MHz bandwidth.
- 1-nanosecond rise time for clear images at any resolution.
- Compatible with Sun®, NeXT®, and Silicon Graphics® workstations.
- Compact, all-metal packaging suitable for rackmounting.
- Input and output connectors are conveniently located on the rear of the unit.
- Supports composite sync, sync-on-green, sync-on-RGB, and 75-ohm sync loads.

## 3. Installation

Use the following guidelines and refer to **Figure 1** when installing your Splitter.



**Figure 1. The Rear Panel.**

1. Connect the supplied 10-foot (3-m) 13W3 cable from the monitor output of the computer to the connector on the rear of the splitter marked 13W3 IN.
2. Connect your primary monitor (the one that was already connected to the computer) to the connector on the rear of the splitter marked MONITOR 1.
3. Connect the additional monitor(s) to the remaining monitor outputs on the rear of the splitter. Monitor extension cables may be used to extend the distance up to 250 feet (76 m). See **Chapter 4** for more information.
4. Plug the power supply (included) into the POWER jack on the rear of the splitter.
5. Plug the power supply into a 110- or 120-VAC wall outlet, as appropriate. The front-panel LED should glow red indicating the unit is properly powered.



## 13W3 SPLITTERS, 2- AND 4-CHANNEL

6. Turn on the computer and the monitor(s). The monitor(s) will display the computer's output.
7. If you're using a Sun workstation, make sure all MONITOR TYPE DIP switches are in the UP (≠) position. This will ensure that the monitor ID bits are read from the monitor plugged into MONITOR 1. If you are using a Sun but no monitor is plugged into the MONITOR 1 output, or the monitor plugged into MONITOR 1 is connected through an extension cable that does not convey the monitor ID bits, go to step 8.
8. If you are using a Power PC or SGI workstation, or you are using a Sun workstation under conditions described in step 7, then you must set the DIP switches as indicated in the chart below.

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>Sun Monitor Resolution</u>
↓	↑	↑	↑	640 x 480
↑	↓	↑	↑	1024 x 768
↓	↓	↑	↑	1152 x 870
↑	↑	↓	↑	1152 x 900 @ 66 Hz
↑	↓	↓	↑	1152 x 900 @ 76 Hz
↓	↑	↓	↑	1280 x 1024
↑	↑	↑	↑	Sun flow-through
↑	↓	↑	↓	SGI (all types)
↓	↓	↑	↓	Power PC (all types)

### NOTE

Other monitor and workstation manufacturers may have different switch settings for different display resolutions. Contact your supplier for help, if necessary.

## 4. Cable Length

The maximum distance a monitor can be placed from the Splitter output will depend on the quality of the extension cable being used and the pixel resolution of the image coming from the computer. *Never use twisted-pair cable for monitor extension cable, as this will cause "ghosting" on the monitor.* We suggest using 13C3 cable for 13W3 workstations and video splitters. (The EVMVDT02 is available in 6-, 10-, 25-, and 50-foot lengths and custom lengths. Call your supplier for more information.) Use the table below as a guide for maximum cable-length support at various computer resolutions.

<b><u>Pixel Format</u></b>	<b><u>Maximum Cable Length</u></b>
640 x 480 @ 60 Hz .....	250 ft. (76 m)
1152 x 900 @ 86 Hz .....	125 ft. (38 m)
1152 x 870 @ 76 Hz .....	150 ft. (46 m)
1152 x 900 @ 66 Hz .....	175 ft. (53 m)
1024 x 900 @ 85 Hz .....	150 ft. (46 m)
1024 x 1000 @ 76 Hz .....	125 ft. (38 m)
1024 x 768 @ 75 Hz .....	125 ft. (38 m)
1280 x 1024 @ 75 Hz .....	100 ft. (30 m)

## 5. Troubleshooting

### 5.1 If You're Having Problems

If one or two colors are missing on one of the 13W3 monitors, make sure all connections to the Splitter are secure. Make sure the monitor connectors are tightened. If this doesn't solve the problem, call your supplier.

### 5.2 Calling Black Box

If you determine that your Splitter is malfunctioning, *do not attempt to alter or repair* the unit. It contains no user-serviceable parts. Contact Black Box Technical Support at 724-746-5500.

Before you do, make a record of the history of the problem. We will be able to provide more efficient and accurate assistance if you have a complete description, including:

- the nature and duration of the problem.
- when the problem occurs.
- the components involved in the problem.
- any particular application that, when used, appears to create the problem or make it worse.

### 5.3 Shipping and Packaging

If you need to transport or ship your Splitter:

- Package it carefully. We recommend that you use the original container.
- If you are shipping the Splitter for repair, make sure you include everything you received in the original package. Before you ship, contact Black Box to get a Return Materials Authorization (RMA) number.



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