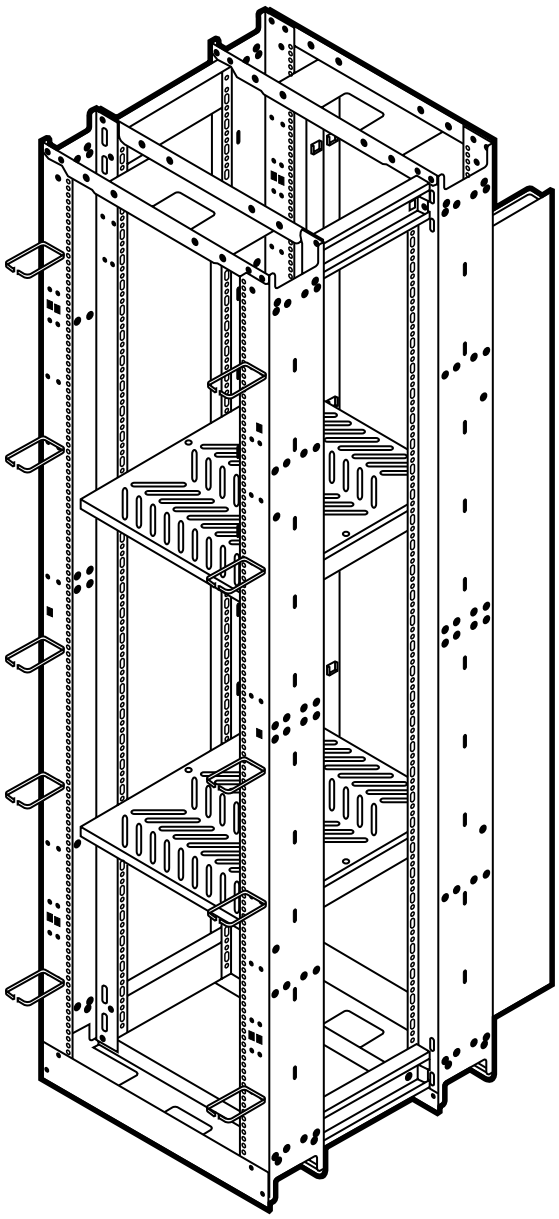
BLACK BOX®
NETWORK SERVICES

OCTOBER 2005

RM920A RM926
RM921 RM927
RM922 RM928A
RM923 RM929
RM924 RM930A
RM925

Action Organizer



CUSTOMER SUPPORT INFORMATION

Order **toll-free** in the U.S.: Call **877-877-BBOX** (outside U.S. call **724-746-5500**)
FREE technical support 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**
Mailing address: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018
Web site: **www.blackbox.com** • E-mail: **info@blackbox.com**

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TRADEMARKS

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1. Specifications

Action Organizer (RM920A, RM928A, RM930A)

Exterior Width: 24" (61 cm)

Exterior Depth: RM920A: 24" (61 cm); RM928A: 30" (76.2 cm); RM930A: 36" (91.4 cm)

Exterior Height: 84" (213.4 cm)

Rack Spaces: 45U

Frame: 14 AWG steel

Corner Posts: 14 AWG steel

Mounting Rails: 12 AWG steel

Finish: Black powder coat

Weight: RM920A: 110 lb. (49.9 kg); RM928A: 118 lb. (53.5 kg); RM930A: 120 lb. (54.4 kg)

Vented Quick-Release Shelf, 22"D (RM921)

Size: 1"H x 19"W x 22"D (2.5 x 48.3 x 55.9 cm)

Weight Capacity: 100 lb. (45.4 kg)

Vented Quick-Release Shelf, 28"D (RM929)

Size: 1"H x 19"W x 28"D (2.5 x 48.3 x 71.1 cm)

Weight Capacity: 100 lb. (45.4 kg)

Vented Quick-Release Shelf, 34"D (RM922)

Size: 1"H x 19"W x 34"D (2.5 x 48.3 x 86.4 cm)

Weight Capacity: 100 lb. (45.4 kg)

Cable Channel (RM925) or Cable Management Channel (RM926)

Size: 71"H x 2"W x 6"D (180.3 x 5.1 x 15.2 cm)

2. Introduction

2.1 Overview

The Action Organizer is an equipment bay and a cable management unit in one. The heavy-duty steel frame protects and supports large equipment and advanced cable management. The rack, which measures 84" high and 24" wide, is available in either 24", 30", or 36" depths. 50 M6 cage nuts and 50 M6 mounting screws are included for securing your equipment in the rack.

The unique quick-release shelving system allows the Vented Quick-Release Shelves (RM921, RM922, or RM929) to be mounted independently from the rack's EIA mounting holes and lets you easily change the shelf location without the use of any tools or screws.

Optional Cable Management Kits (RM923 or RM924) hold your cables securely in the rack. The RM923 comes with 4" D-rings, and the RM924 comes with 6" D-rings.

The Cable Management Channel (RM926) has six built-in 6" x 2" D-rings for use with additional cable runs.

Power strips can be mounted directly to the back of the rack or the optional cable channel. The Cable Channel (RM925) includes six 2" x 2" D-rings and holds two 20-amp power strips.

The Action Organizer Joining Kit (RM927) lets you connect multiple Action Organizers together.

2.2 Features

- Constructed of heavy-duty steel.
- Durable, black, smooth, semi-gloss powder-coat finish.
- Overall height of 84" with 45 rack units.
- Open-style frame has no airflow restrictions.
- 24", 30", or 36"-deep footprint provides superior stability and greater protection for equipment.
- Conforms to EIA standard for mounting 19" EIA components.

2.3 Typical Applications

- Organize your equipment and cable in a single rack.
- Mount 19" EIA components in the rack.
- Join multiple racks with the optional joining kit (RM927).

2.4 Available Models

The Action Organizers are available in 24"D, 30"D, or 36"D models.

- Action Organizer, 84"H (45U) x 24"W x 24"D (RM920A)
- Action Organizer, 84"H (45U) x 24"W x 30"D (RM928A)

- Action Organizer, 84"H (45U) x 24"W x 36"D (RM930A)

For storing equipment that can't be rackmounted:

- Vented Quick-Release Shelf, 22"D for RM920A (RM921)
- Vented Quick-Release Shelf, 28"D for RM928A (RM929)
- Vented Quick-Release Shelf, 34"D for RM930A (RM922)

For your additional cable-management needs:

- Cable Management Kit, 4" D-Ring (RM923)
- Cable Management Kit, 6" D-Ring (RM924)
- Cable Channel ([6] 2" x 2" D-Rings) (RM925)
- Cable Management Channel ([6] 6" x 2" D-Rings) (RM926)

To connect multiple Action Organizer racks:

- Action Organizer Joining Kit (RM927)

2.5 What the Package Includes

Your RM920A, RM928A, or RM930A package is shipped fully assembled. It includes the following items:

- (1) Action Organizer
- (4) Vertical rails
- (2) Top angles
- (2) Bottom angles
- (4) Brackets to join the front and back sections
- (40) Hex-head bolts and nuts
- (50) Cage nuts and screws
- This users' manual

Your RM921 package should include the following items:

- (1) Vented Quick-Release Shelf, 22"D
- (1) Right bracket
- (1) Left bracket

Your RM929 package should include the following items:

- (1) Vented Quick-Release Shelf, 28"D
- (1) Right bracket

- (1) Left bracket

Your RM922 package should include the following items:

- (1) Vented Quick-Release Shelf, 34"D
- (1) Right bracket
- (1) Left bracket

Your RM923 package should include the following items:

- (10) 4" D-rings
- (20) 18" VELCRO® straps
- (25) 12" VELCRO straps
- (25) 8" VELCRO straps

Your RM924 package should include the following items:

- (10) 6" D-rings
- (20) 18" VELCRO straps
- (25) 12" VELCRO straps
- (25) 8" VELCRO straps

Your RM925 package should include the following items:

- (1) Cable Channel
- (6) 2" x 2" D-rings
- (4) 10-32 ⅜" screws

Your RM926 package should include the following items:

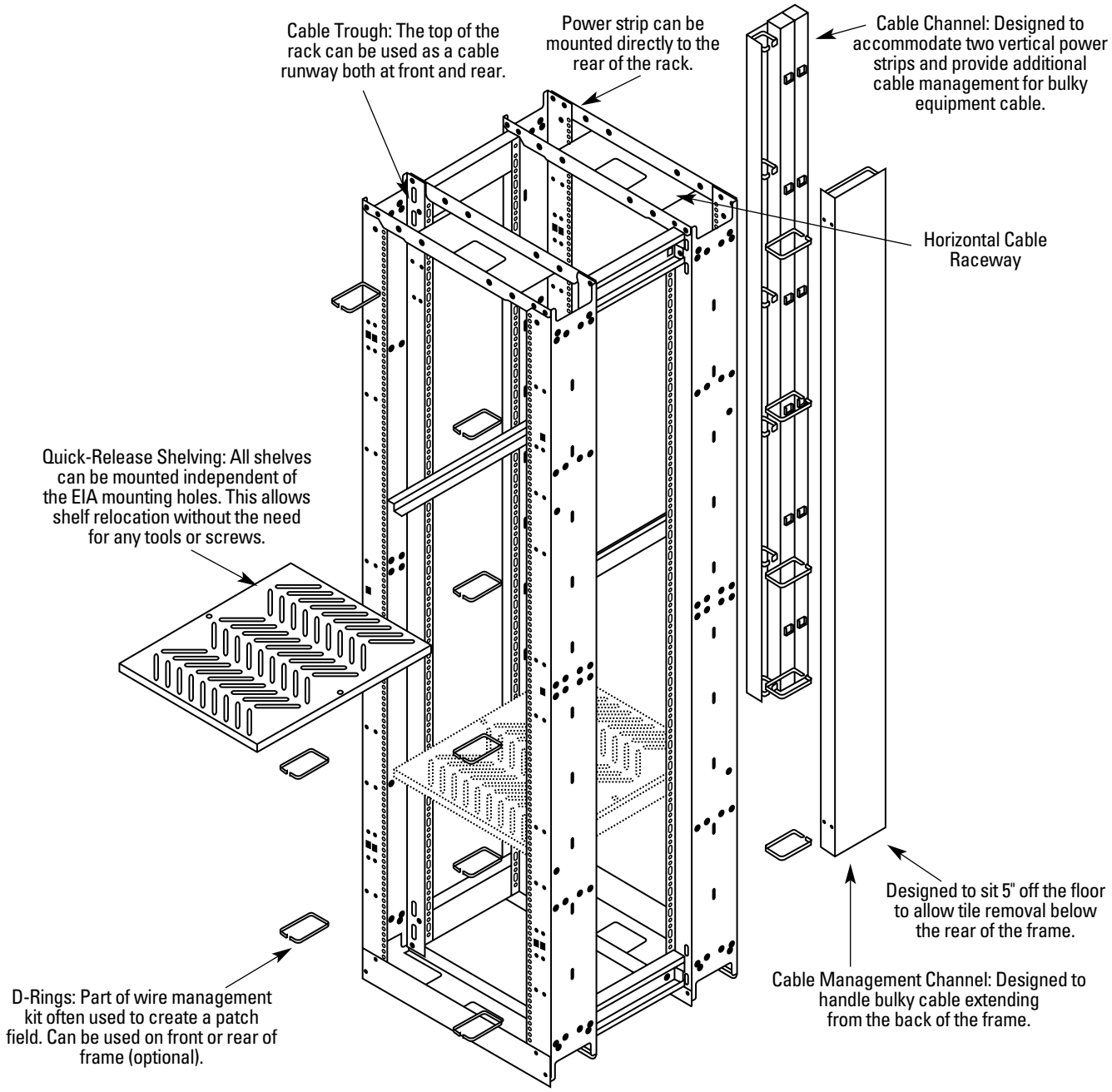
- (1) Cable Management Channel
- (6) 6" x 2" D-rings
- (4) 10-32 ⅜" screws

Your RM927 package should include the following items:

- (6) sets of ⅜" bolts, hex nuts, washers, and flat washers

If anything is missing or damaged, please contact Black Box at 724-746-5500.

2.6 The Action Organizer Illustrated



Open frame style construction.

3. Installation

Your Action Organizer package is shipped fully assembled. When you are deciding what equipment to install in the Action Organizer, consider these typical applications:

- Organize your equipment and cable in a single rack.
- Mount 19" EIA components in the rack. 50 cage nuts and screws are included to adapt the M6 mounting holes for standard equipment (patch panels, hubs, etc.).
- Join multiple racks with the optional joining kit (RM927).

3.1 Equipment Spacing

Maintain minimum spacing between the accessories and components for safe operation of the equipment when installed in accordance with the National Electric Code, ANSI/NFPA 70-1999.

3.2 Room Layout

Consider the following guidelines when planning the layout of a data center/computer room.

3.2.1 Evolving Technology

With new technologies constantly evolving, consider future growth and space requirements. Allocate ample space to accommodate diverse and changing equipment requirements in a safe working environment.

3.2.2 Aisle Space

Provide adequate space to allow unobstructed access to racks, front and back. Groups of racks joined together should be kept to small groups to avoid obstruction of movement from aisle to aisle and quick access from front to back of equipment.

3.2.3 Ambient Temperature of Rack Location

Install this rack in a controlled environment with a maximum ambient temperature of less than 104°F (40°C).

3.2.4 Load Rating

When planning a data center, make sure that the load capacity of the structural floor and (if applicable) the access floor is determined and not exceeded (see **Section 3.4**).

3.3 Installing Equipment in the Rack

3.3.1 Mount 19" EIA Components in the Rack

The Action Organizer was designed for easy rackmounting of 19" EIA components (see Figure 3-1). Each rack comes with 50 cage nuts and screws for mounting equipment.

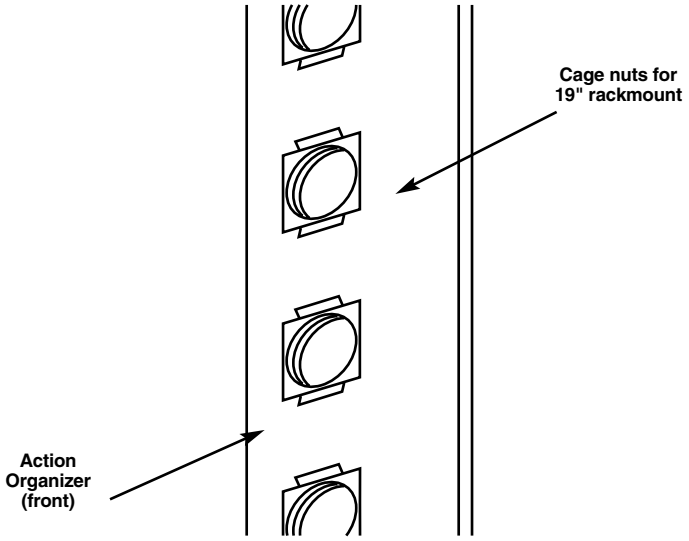


Figure 3-1. Rackmounting 19" EIA components.

3.3.2 Hardware/Equipment Installation

For optimal performance, consult the manufacturer's installation instructions for the equipment being installed.

Consider the airflow patterns of the equipment you're installing. Avoid directly venting the exhaust of one unit into the intake of another.

3.3.3 Installing the Vented Quick-Release Shelf (RM921, RM922, or RM929)

Follow these instructions for installing either the 22"D Vented Quick-Release Shelf for RM920A, the 28"D shelf for RM928A, or the 34"D shelf for RM930A into your Action Organizer. Refer to Figure 3-2.

1. Facing the front of the rack, place the right and left bracket at the desired level on the inner frame. Make sure the brackets are parallel to one another.
2. Snap the brackets into place by pressing downward. The bracket and spring-release plungers will "lock" onto the frame.
3. Place the Vented Quick-Release Shelf above the brackets. Bring the shelf down so that it rests on the brackets, then push the shelf toward the rear of the rack to lock it into place.

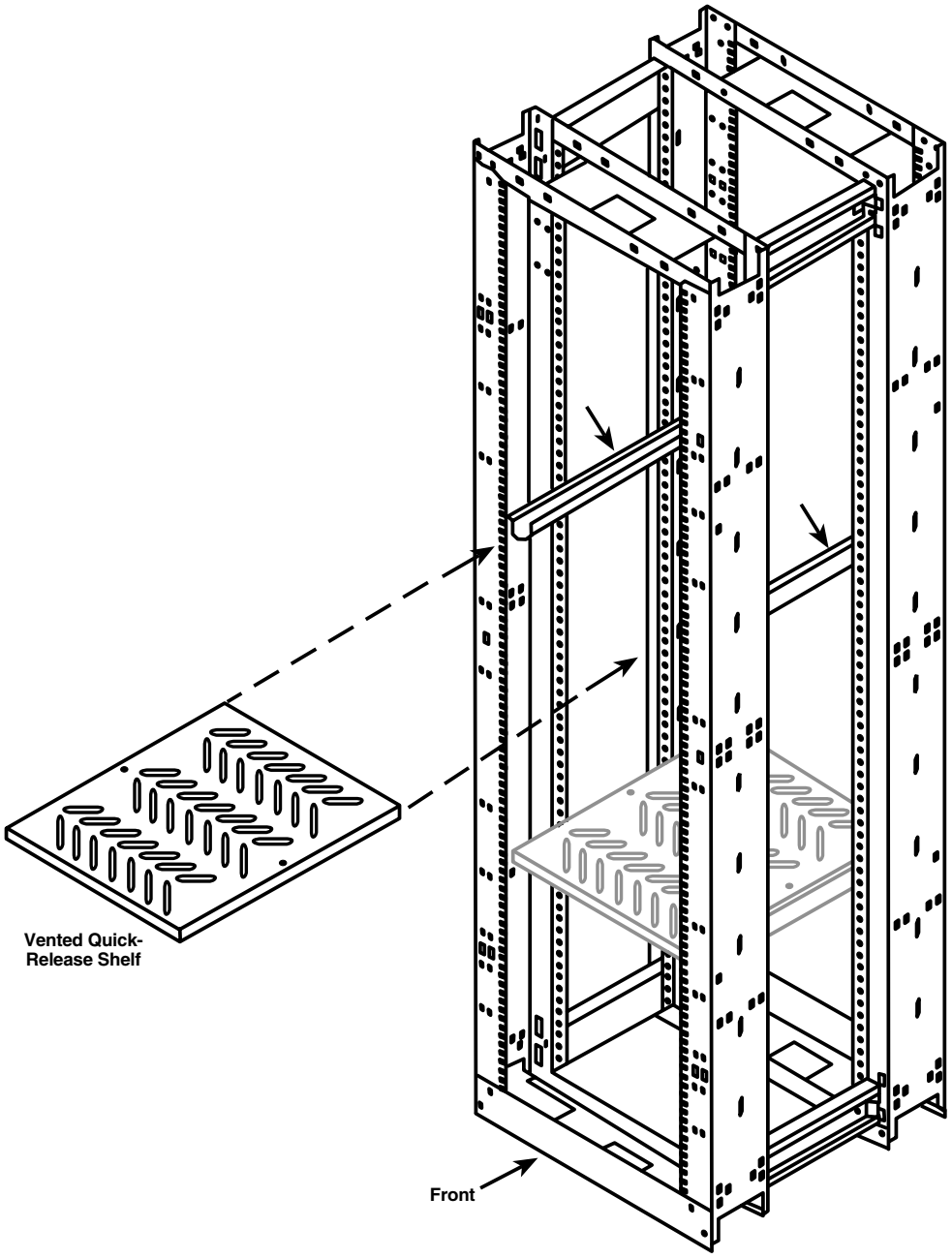


Figure 3-2. Installing the Vented Quick-Release Shelf.

4. To relocate the shelf, simultaneously release the two spring-release plungers located on the bottom of the shelf. With the plungers extended, pull the shelf forward (toward the front of the rack) and lift up to remove it. Repeat steps 1 through 3.

3.3.4 Power Strip Installation

When using a power strip on the Action Organizer, do not exceed amperage ratings. Refer to the power strip to identify the maximum amperage that can be safely provided by that strip.

NOTE

We recommend that you consult with a qualified electrician for all of your electrical requirements.

3.3.5 Joining Multiple Racks with the Optional Joining Kit (RM927)

The Action Organizer Joining Kit has all of the hardware necessary to join two Action Organizer frames together.

Each kit includes (6) sets of ⅜" bolts, hex nuts, washers, and flat washers. Simply join the frames by installing the hardware in the pre-drilled holes on the Action Organizer. For maximum stability, make sure the hardware is installed equally, and secure it tightly.

3.3.6 Safety Precautions for Products Installed in Racks

To maximize stability and reduce the risk of personal injury or damage to the installed equipment, make sure that:

- The weight of the installed equipment is evenly distributed throughout the rack. Do not exceed the recommended weight capacity for individual shelves or maximum weight capacity for the entire rack.
- The rack is located on a level surface.
- Only one component is extended at a time. A rack may become unstable if more than one component is extended for any reason.

CAUTION

Do not attempt to move the rack without adequate assistance.

WARNING

This rack is not a fireproof enclosure. All assemblies installed in this rack should include their own sheet metal or other suitable casing or enclosure to avoid the risk of injury via fire, shock, etc.

3.4 Safe Installation on Raised/Access Floors

Before designing and installing data racks, consider the weight and strength specifications provided by the manufacturer of the access floor (including the weight of the equipment added to the rack). We recommend consulting with a qualified professional structural engineer before making any tile cuts and when specifying and installing any racks in a raised floor environment.

WARNING: FIRE RATING

Raised floor systems in the United States should comply with the NFPA "Protection of Electronic/Data Processing Equipment." Systems outside of the U.S. should conform to applicable local fire safety codes and standards.

Appendix. Troubleshooting

A.1 Calling Black Box

If you determine that your Action Organizer is malfunctioning, do not attempt to alter or repair the unit. It contains no user-serviceable parts. Contact Black Box 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.

A.2 Shipping and Packaging

If you need to transport or ship your Action Organizer:

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

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