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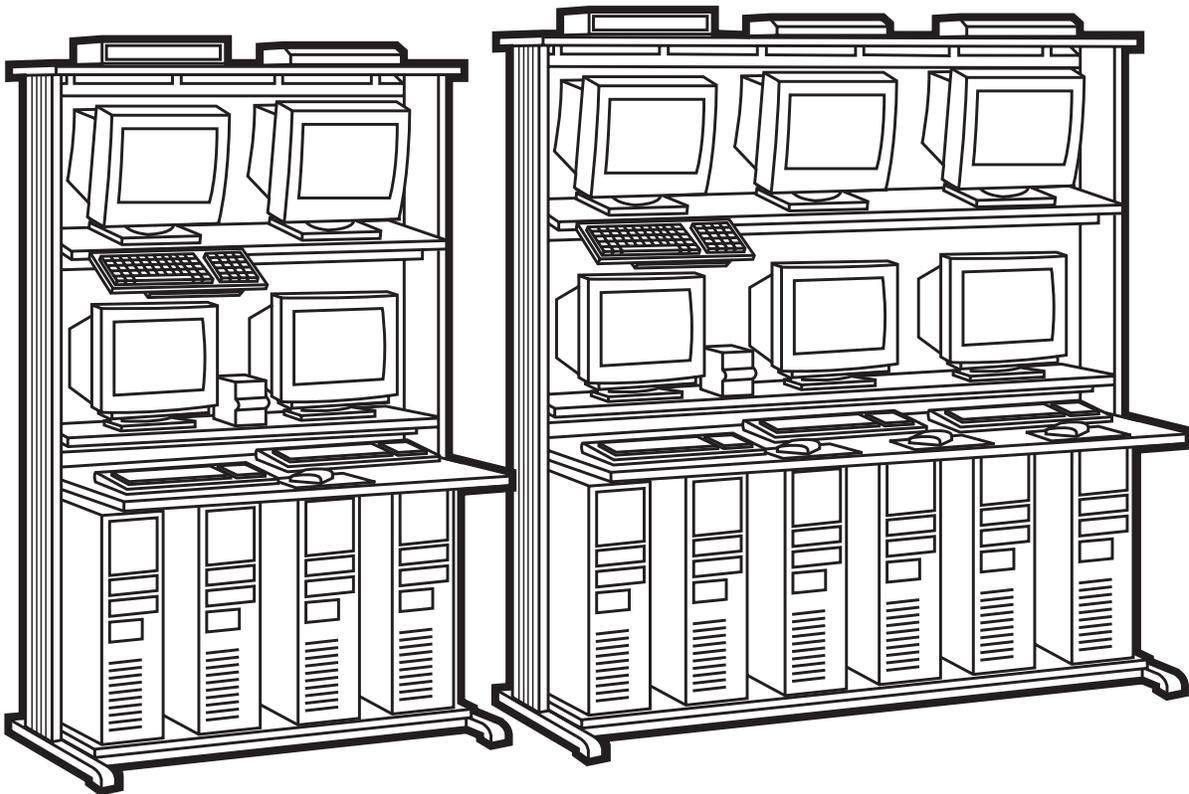


**BLACK BOX**<sup>®</sup>  
NETWORK SERVICES



MAY 2000  
RF400A  
RF410A  
RF411

## Express LS



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**TRADEMARKS USED IN THIS MANUAL**

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# Specifications

**Color** — RF400A, RF410A: Black frame, gray work surfaces; RF411: Gray

**Size** — RF400A: 74"H x 48"W x 30"D (188 x 121.9 x 76.2 cm); RF410A: 74"H x 72"W x 30"D (188 x 182.9 x 76.2 cm); RF411: 0.75"H x 9.75"W x 9.25"D (1.9 x 24.8 x 23.5 cm)

**Weight** — RF400A: 163 lb. (73.9 kg); RF410A: 220 lb. (99.8 kg); RF411: 1.5 lb. (0.7 kg)

# Overview

Thanks for purchasing the Express LS workstation. With its sturdy construction and durable components, it's one of the best LAN workstations available today.

Here's what your Express LS offers:

***Solid construction and durable components.*** The heavy-duty frame is built of 16-gauge oval steel tubing that holds a total of 900 pounds (408 kg). The frame is finished with a chip-resistant powder-baked enamel finish. Seven steel crossbars provide ample strength to hold any networking hardware you can fit on the shelves. Work surfaces feature a non-glare, high-density melamine covering with thick safety-edge banding.

***Easy assembly.*** Pre-drilled surfaces ensure proper alignment, and a 4-mm Allen drill bit and Allen wrench are provided for your convenience.

***Room to work.*** With 5 large work surfaces, you have room for your hardware, keyboards, mice, and documents. Shelves include a main work surface for keyboards and mice, a bottom shelf for servers or other large equipment, two monitor shelves (one can be tilted), and a top shelf for storing extra equipment, parts, and documents. An optional wire keyboard shelf (part number RF411) is available.

The main work surface is 30"D (76.2 cm) and 1" (2.5 cm) thick. The bottom shelf is 18.5"D (47 cm) and has a clearance of 24" (60.9 cm). The monitor panels and top equipment panel are 13.5"D (34.3 cm) and  $\frac{7}{8}$ " (2.2 cm) thick.

***Cable management.*** Snap-on cable management makes moves, adds, and changes easy.

***Comfort.*** The Express LS was designed with ergonomics in mind. The main work surface is adjustable to 10 pre-set heights (1-inch increments). Both monitor platforms are adjustable to 6 pre-set heights (1-inch increments). The top monitor platform also tilts downward to reduce eye and neck strain and is pre-drilled for the optional Wire Keyboard Shelf (RF411).

# Assembling the Express LS

Before you begin assembling your Express LS, make sure you have all of the necessary components:

- (1) Server shelf (18.5"D)
- (1) Main surface (1" thick, 30"D)
- (1) Lower monitor/accessory shelf (13.5"D) [Install flush to the back edge of the main surface]
- (1) Tiltable monitor shelf (13.5"D) [Pre-drilled front under side for optional Wire Keyboard Shelf, RF411]
- (1) Top shelf (13.5"D) [Pre-drilled on the bottom]
- (2) Leg/upright assemblies and (2) plastic cable management side covers
- (2) Larger cross bars [Used on the bottom to support the server shelf]
- (5) Cross bars [Used to support all shelves as follows: (1) Cross bar for the main shelf attached to the front leg/upright support, (1) cross bar for the lower monitor/accessory shelf attached to the back leg/upright support, (2) cross bars for the tiltable monitor shelf (offset by one hole in front and back leg/upright), (1) cross bar for the top shelf attached to the back leg/upright]
- (6) Squares of Velcro® [Used to secure the server shelf to the bottom cross bars]
- (16) Small black top supports [Used for the three middle shelves]
- (4) Large black top supports [Used for the top shelf]
- (32) Double-sided tape squares to attach the small and large black top supports
- (14) L-shaped connectors [Used to connect the cross bars to the legs/uprights]
- (4) Foot levelers [Attached to the feet to level the unit]
- (28) Machine bolts [Used to connect the cross bars via the L connectors to the legs/uprights]
- (4) Small wood screws [Used to attach the top shelf to the legs/uprights]
- (8) Black plastic caps [Used to cover the four bolts attaching the cross bars to the feet]
- (1) 4-mm Allen drill bit and (1) Allen wrench

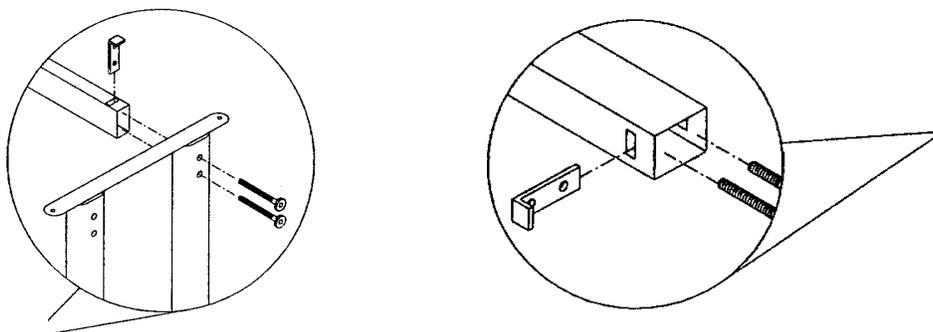
## NOTE

**You will also need a Phillips head screwdriver for some of the installation steps. This screwdriver is NOT included with your Express LS; you will need to provide one.**

**IMPORTANT!**

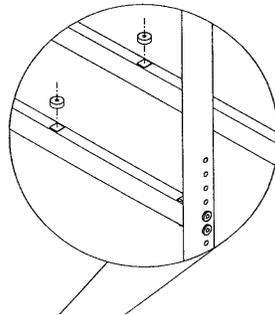
When you assemble the shelves, tighten one side completely. Leave the other side a little loose when attaching cross bars and surfaces. When you get to step 9, you'll tighten all bolts completely.

Also, position all L connectors so that the foot of the "L" faces out (see the illustration below). Hold the foot of the L connectors tight to all the cross bars.

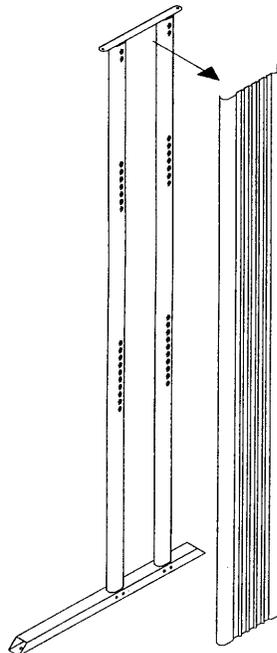


To assemble the Express LS, follow these steps. Refer to the illustration on page 8 as well:

- Step 1:** Attach the (4) foot levelers to the feet of the legs/uprights. (They screw on.)
- Step 2:** Attach the "larger cross bars" to the feet using (4) L connectors and (8) machine bolts. Face the L connectors so that the foot of the "L" faces the outside.
- Step 3:** Measure the clearance height required for the servers. Position and attach the main surface cross bar to the front support leg/upright using (2) L connectors and (4) machine bolts. Face the L connectors so that the foot of the "L" faces the outside.
- Step 4:** Measure the clearance height required for the keyboard and accessories to be used on the main surface. Remember to choose a position that will give you a comfortable viewing height of the monitors. Position and attach the lower monitor surface cross bar to the rear support leg/upright using (2) L connectors and (4) machine bolts. Face the L connectors so that the foot of the "L" faces the outside.
- Step 5:** Measure the clearance height required between the monitors used on the lower monitor/accessory shelf and bottom edge of the front cross bar on the tiltable shelf. Allow at least 2 inches of clearance between top of the monitors and the bottom of the cross bar. Attach the front cross bar for the tiltable surface. Position the rear cross bar one hole higher than the front cross bar. Attach it to the leg/upright using (4) L connectors and (8) machine bolts. Face the L connectors so that the foot of the "L" faces the outside.
- Step 6:** Install the top cross bar into the top pre-drilled slot. Use (2) L connectors and (4) machine bolts.
- Step 7:** Place the double-sided tape on the black top support and evenly position the top supports (16 are included) with at least three per shelf (see the illustration at the top of the next page). The (4) large black top supports go on the top cross bar. Use the double-backed tape to secure them in place.

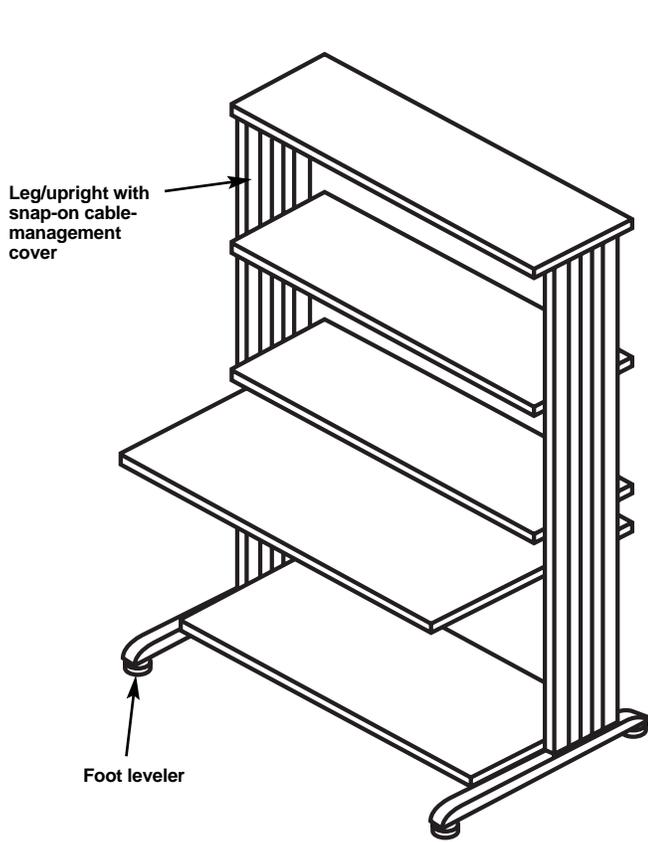


- Step 8:** Check to make sure all cross bars are in place.
- Step 9:** Insert the main surface first and work up to the tiltable surface. **Tighten all bolts completely.**
- Step 10:** Place the top shelf on the uprights and secure it with the (4) wood screws. (You'll need the Phillips screwdriver to do this.)
- Step 11:** Evenly position the Velcro on the bottom cross bars. Position the server shelf and attach it with the Velcro.
- Step 12:** Snap the (8) black plastic caps onto the exposed bolts on the feet.
- Step 13:** Run all cable down in between the surfaces and the plastic cable management side covers. Snap on the (2) side covers (see the illustration below).

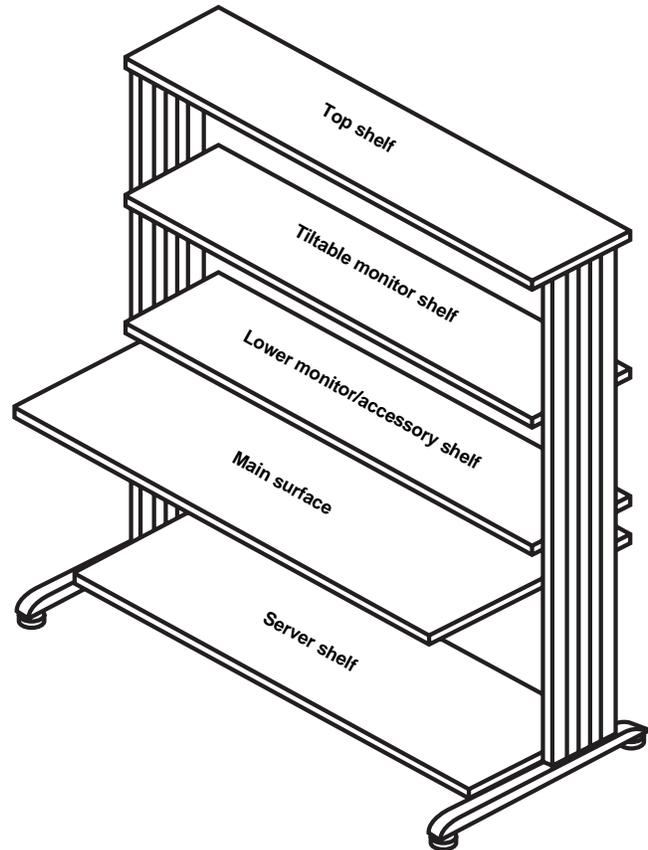


# EXPRESS LS

Once the Express LS is assembled, it should look like this:



Express LS 48" (RF400A)



Express LS 72" (RF410A)

If you ordered the Wire Keyboard Shelf (RF411), you can install it after the Express LS is completely assembled. There are pre-drilled holes for attaching the Shelf to the Express LS; these are located on the under side of the tiltable monitor shelf (see the illustration below). The Wire Keyboard Shelf comes with all of the hardware necessary to attach it.

