Chapter 4

Emergency and Non-Emergency Shutdown

This chapter explains how to power down the CM-5 and Scale 3 and their peripherals, both in an emergency — when you do not have time for a conventional shutdown procedure — and in a normal situation.

- Section 4.1 describes how to shut down a CM-5 other than a Scale 3.
- Section 4.2 describes how to shut down a Scale 3.

A quick-reference chart is provided at the end of each section.

4.1 Shutting Down a CM-5 Other than a Scale 3

4.1.1 Shutting Down the CM-5 in an Emergency

1. If the system includes a DataVault, shut it down first:

    a. Switch off the main circuit breaker on each DataVault first. Down is the off position. See Figure 16.

    b. Switch off the DataVault's secondary circuit breakers in any order. These circuit breakers are to the right of the cable bulkhead.

    c. Go to the front of the DataVault's middle section (convex side) and switch off the MicroVAX and external disk drive. See Figure 16 for the location of these switches. Repeat steps 1a–1c for each DataVault.

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2. Shut down the CM-5 (this procedure also automatically shuts down the SDA, if there is one):

    a. Go to the louvered side of the CM-5 device cabinet and swing open the right corner door (see Figure 17).

    b. Switch off the main circuit breaker (CB1) by pushing the breaker handle down. CB1 is in the lower right corner (Figure 17). Then switch off all other circuit breakers in any order — down is the off position for all. Repeat for each device cabinet in the system.

    c. Slide open the panel that covers the network cabinet circuit breakers. See Figure 18. Switch off the main circuit breaker and then all other circuit breakers in any order — down is the off position for all.

3. Switch off main circuit breakers on all external control processors and I/O devices. Figure 19 shows the main circuit breaker locations on the CM-IOPG and CM-HIPPI cabinets. The location of main power switches varies for different external control processors, depending on which Sun computer model is used.

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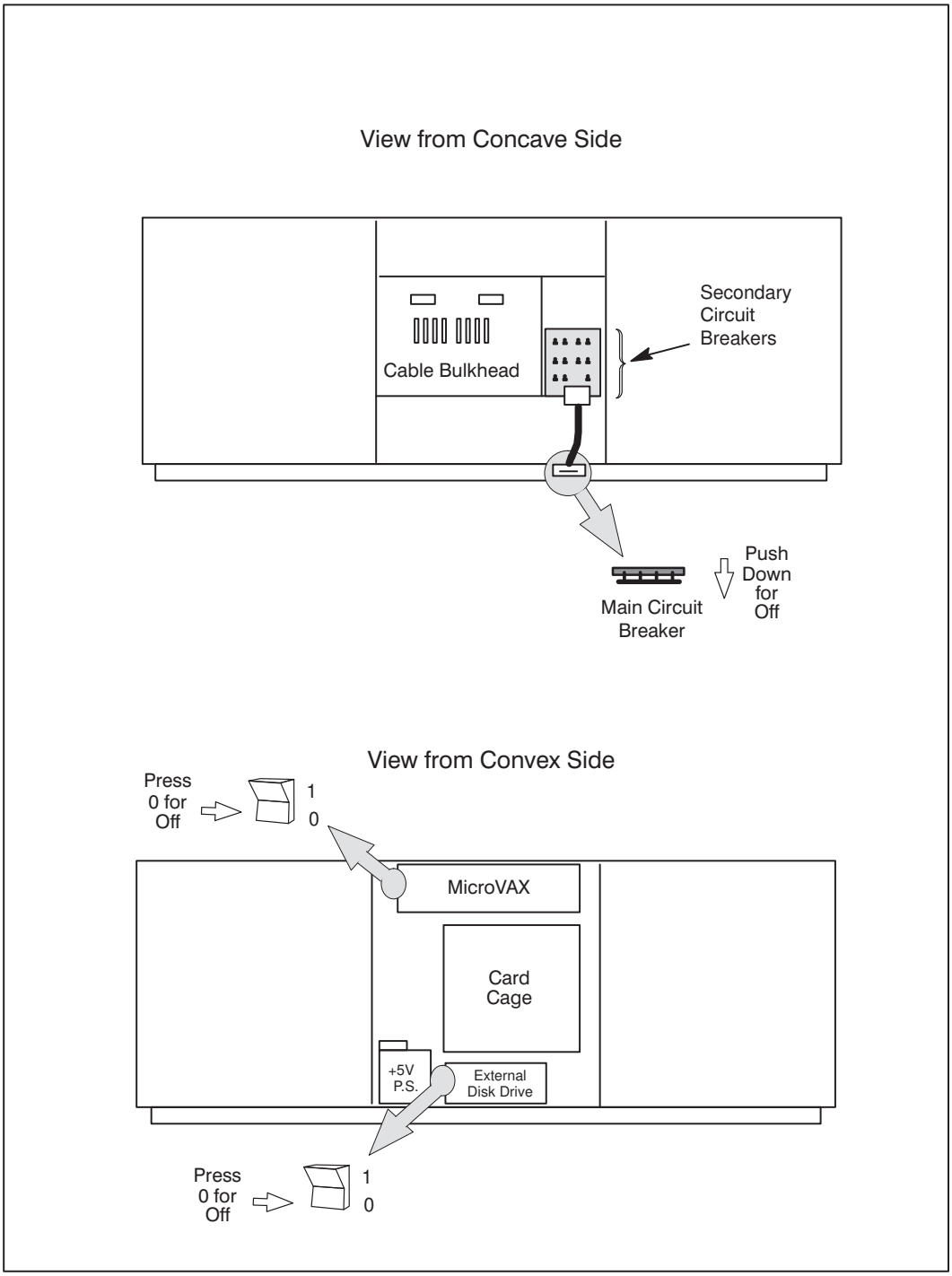

Figure 16. DataVault circuit breaker access.

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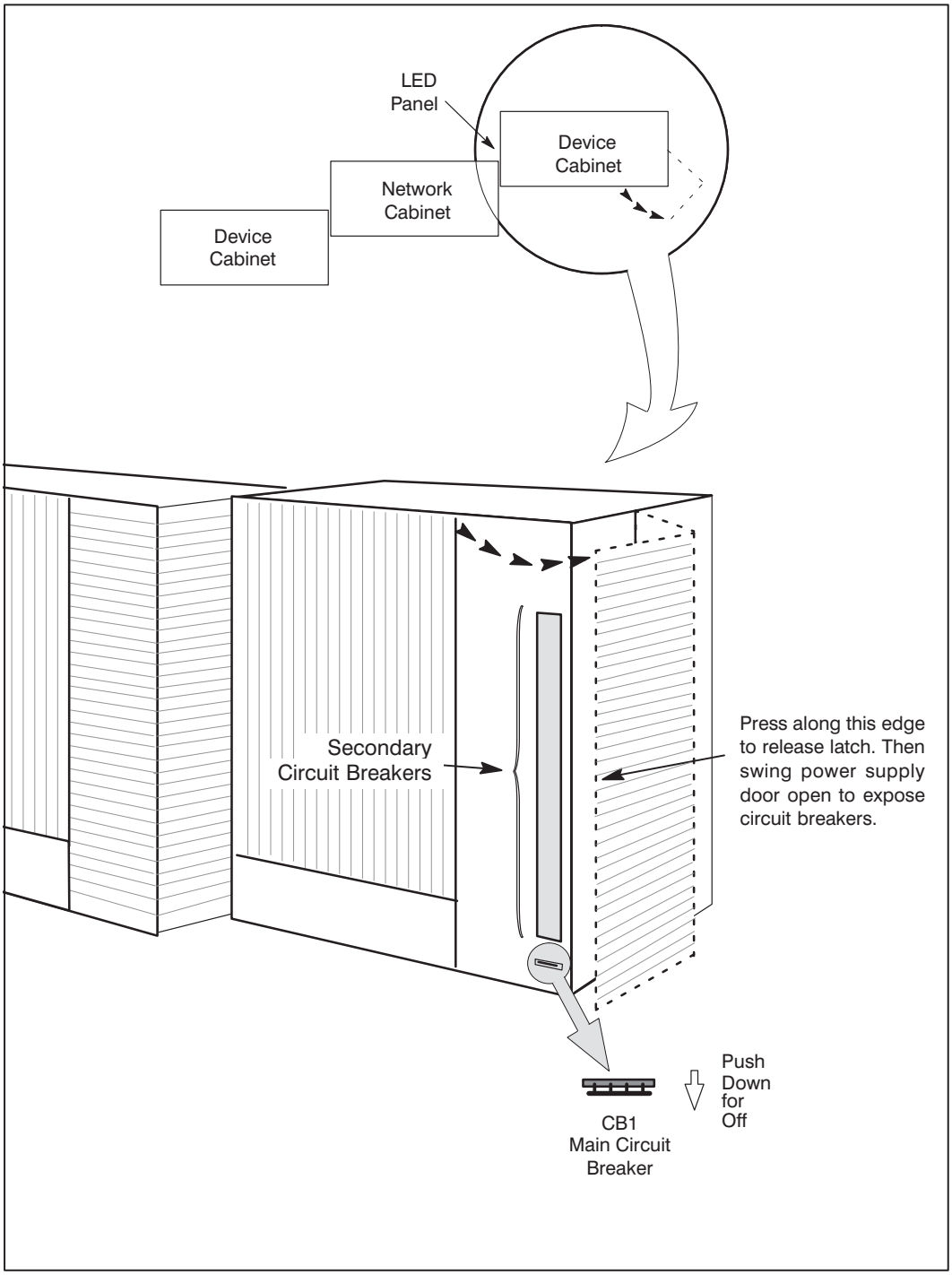

Figure 17. CM-5 circuit breaker access.

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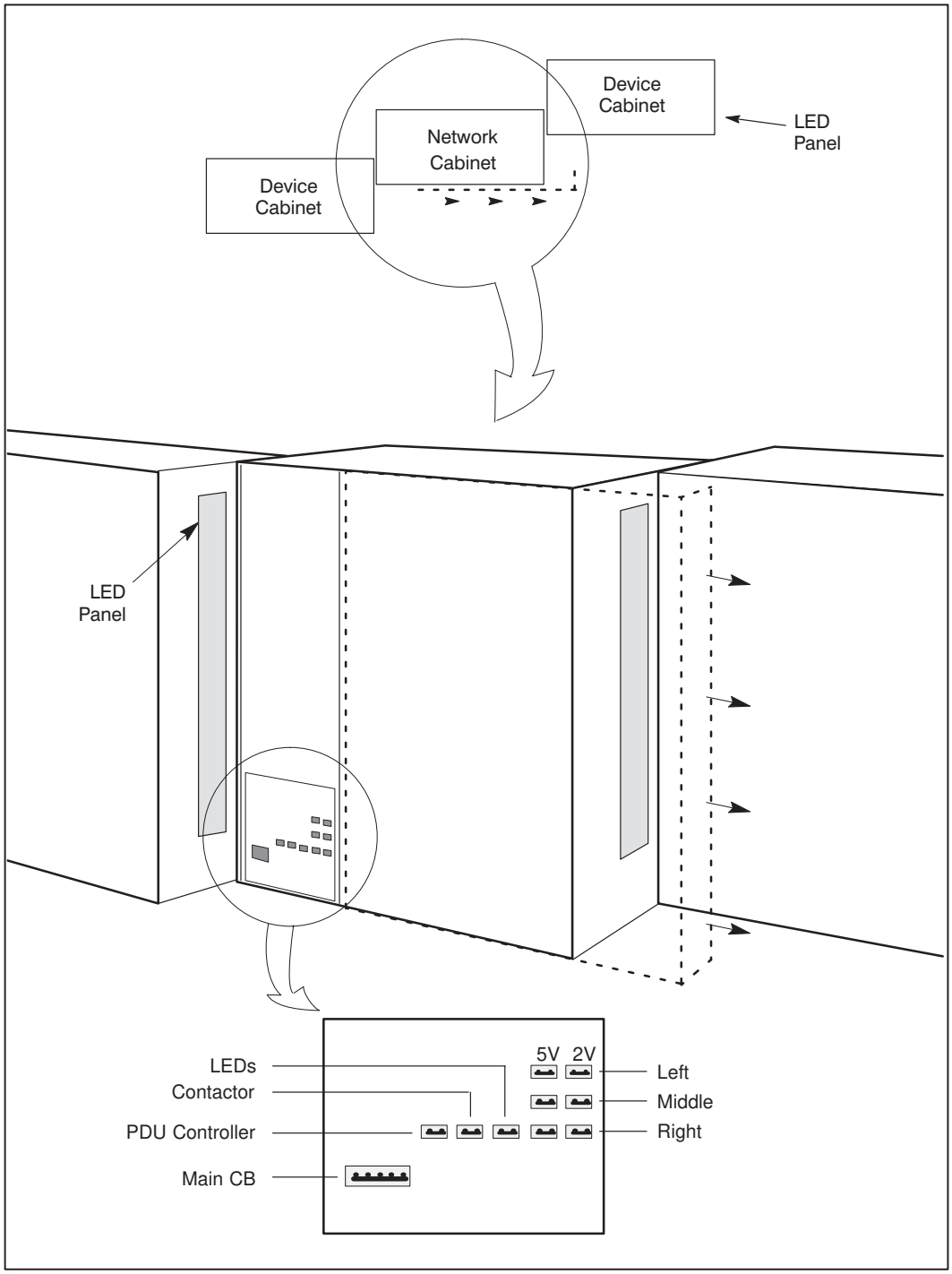

Figure 18. CM-5 circuit breaker access.

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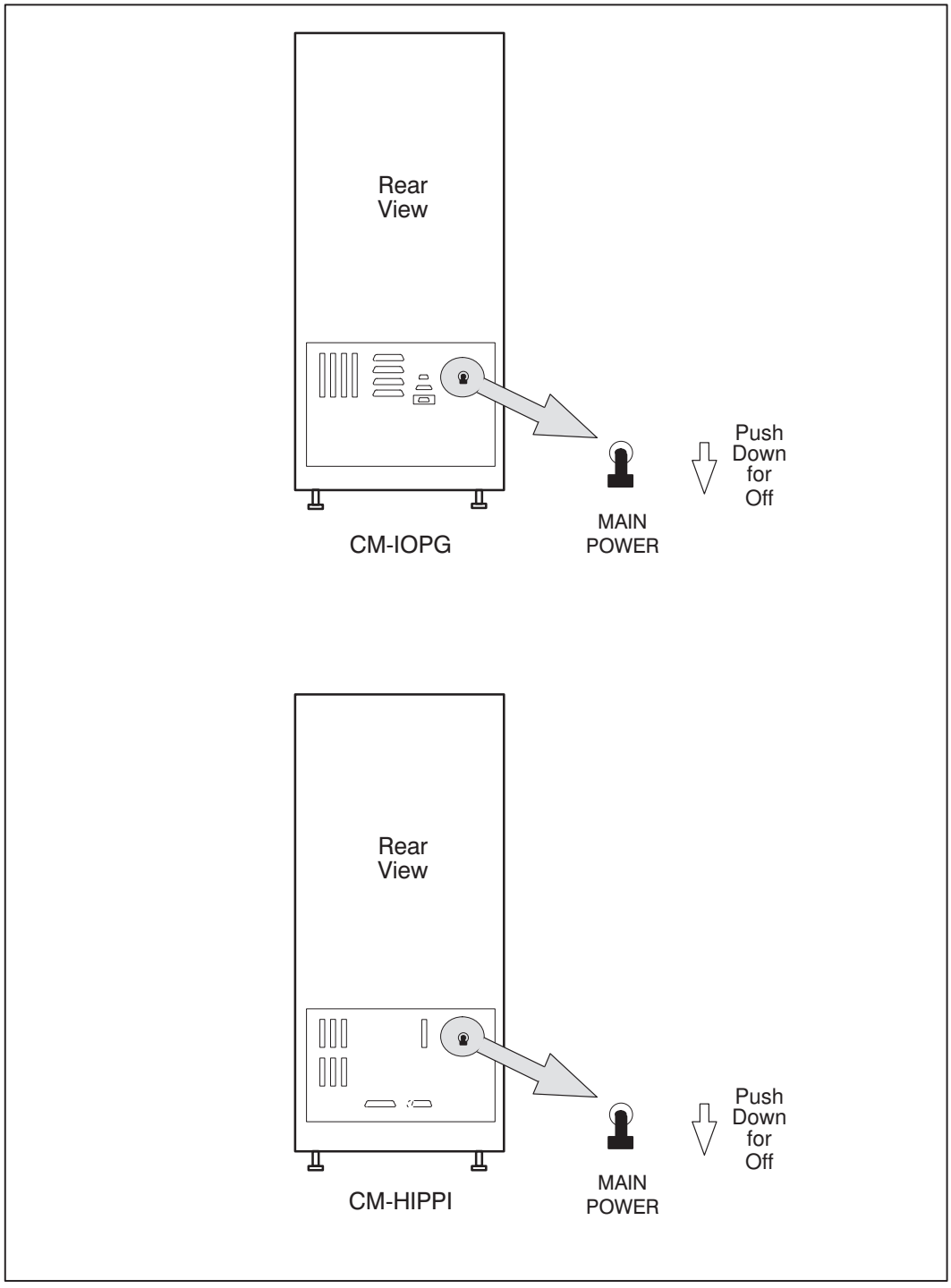

Figure 19. CM-IOPG and CM-HIPPI main power switch location.

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4.1.2 Shutting Down the CM-5 in Situation Normal

The shutdown procedure includes the following six steps. These steps are summarized in Figure 20 for quick reference. Background details for the various steps are presented in the balance of this section.

1. Stop all timesharing daemons.

   Execute **`cmpartition stop`** on each partition to halt the timesharing daemon and put the partition into inactive (**`ALLOCATED`**) status. The **`cmpartition stop`** command must be executed separately on each partition manager for every partition you wish to deactivate.

2. Delete all partitions.

   This step is optional. After stopping a partition, you may deallocate that partition (free its resources) with the command **`cmpartition delete`**. If you do not do this, the partition is automatically reallocated upon restart of the system.

3. Unmount the SDA file system(s), using the **`unmount`** command.

4. Shut down any external control processors.

   Halt and then power down any external control processors. The location of the power switch depends on which Sun model is used to implement the control processor. If you have any questions about this step, refer to the appropriate Sun documentation.

5. Power down the CM-5. Note that this step automatically shuts down the SDA, since it resides within the CM-5 cabinetry.

   a. Turn off all network cabinet circuit breakers in the following sequence (see Figure 18):

      (1) +2 V supplies

      (2) +5 V supplies

      (3) LEDs

      (4) contactor

      (5) PDU controller

      (6) main circuit breaker

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b. Turn off all device cabinet power supplies in the following sequence (see Figure 17):

   (1) +2 V supplies — CB6, CB8, CB10, CB12, CB14, CB16, CB18, and CB20

   (2) AC and DR/CN — CB3 and CB4

   (3) +5 V supplies — CB5, CB7, CB9, CB11, CB13, CB15, CB17, and CB19

   (4) LEDs — CB21 and CB22

   (5) main circuit breaker — CB1

6. Shut down all peripherals

   If the system includes CMIO bus devices such as a DataVault, CM-IOPG, or CM-HIPPI, halt the station manager of each I/O device and then power down the device. See Figure 16 and Figure 19.

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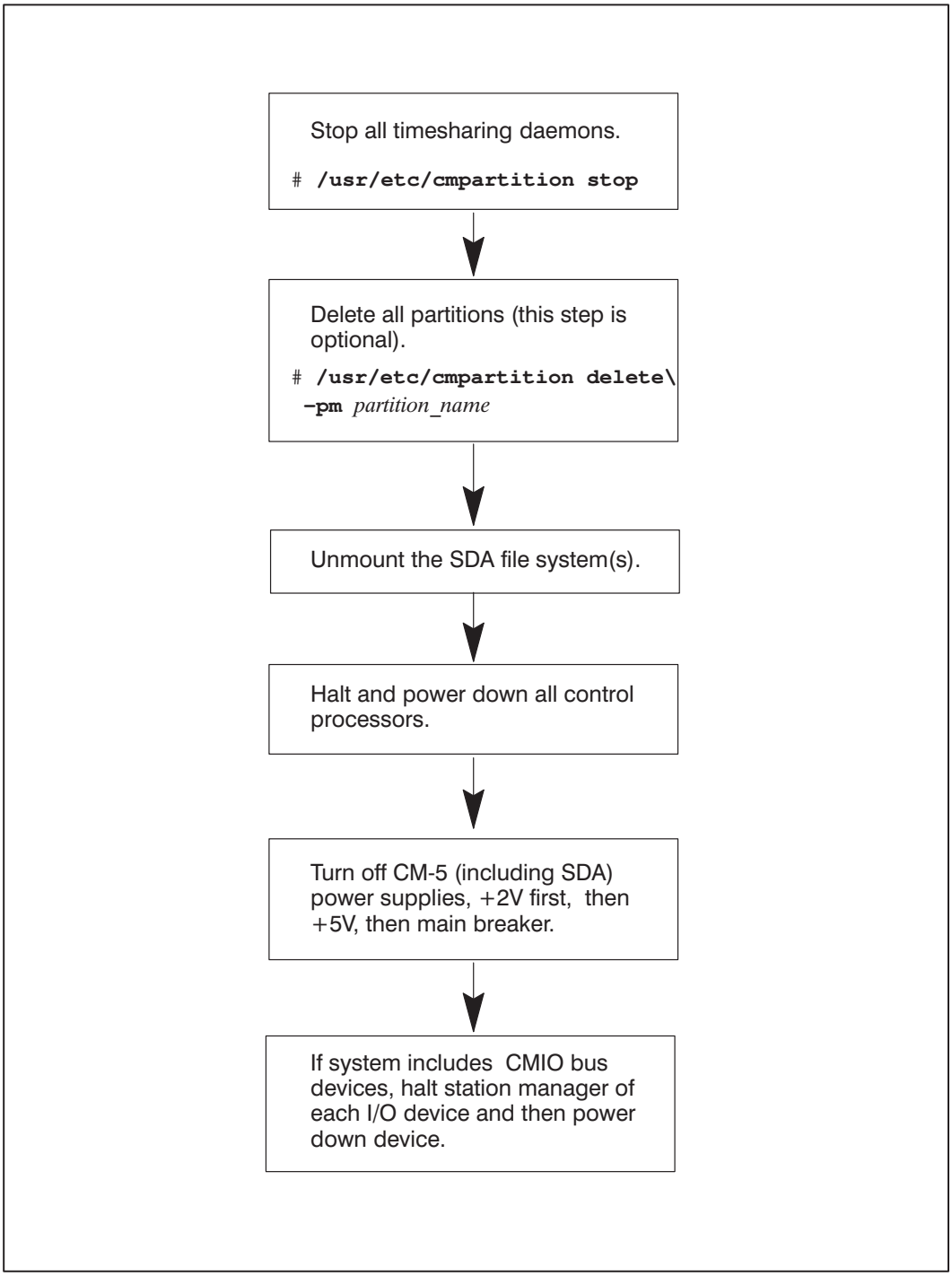

Figure 20. CM-5 (other than Scale 3) shutdown procedure.

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4.2 Shutting Down the Scale 3

4.2.1 Shutting Down the Scale 3 in an Emergency

To shut down the Scale 3 as quickly as possible, first open the Scale 3's louvered panels by pressing the release handle at the top of the panels and pushing the panels apart. Then push down on the breaker switch's handle, which is located at the bottom of the Scale 3 cabinet (see Figure 21).

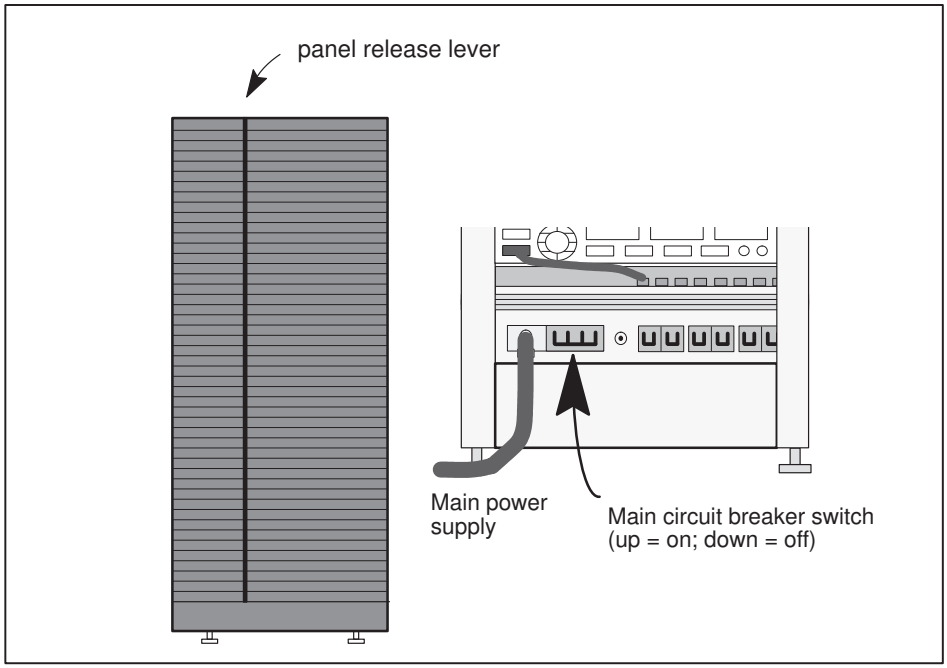

Figure 21. Scale 3, back view, detailing location of main circuit break switch.

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4.2.2 Shutting Down the Scale 3 in Situation Normal

The shutdown procedure includes the following five steps. These steps are summarized in Figure 24 for quick reference. Background details for the various steps are presented in the balance of this section.

1. Stop all timesharing daemons.

   Execute **`cmpartition stop`** on each partition to halt the timesharing daemon and put the partition into inactive (**`ALLOCATED`**) status. The **`cmpartition stop`** command must be executed separately on each partition manager for every partition you wish to deactivate.

2. Delete all partitions.

   This step is optional. After stopping a partition, you may deallocate that partition (free its resources) with the command **`cmpartition delete`**. If you do not do this, the partition is automatically reallocated upon restart of the system.

3. Unmount the SDA file system(s), using the **`unmount`** command.

4. Shut down external control processors.

   Halt and then power down any external control processors. The location of the power switch depends on which Sun model is used to implement the control processor. If you have any questions about this step, refer to the appropriate Sun documentation.

5. Power down the Scale 3. Note that this step automatically shuts down the SDA, since it resides within the Scale 3 cabinetry.

   Switch off the main circuit breaker by pushing down its handle. The Scale 3's main circuit breaker is located behind the louvered panels at the back of the machine. To open the panels, press the release lever at the top of the panels, causing the panels to slide apart a few inches. See Figure 22. Slide the panels further apart by pushing them outward sufficiently to gain access to the circuit breaker panel (located near the bottom of the machine, at the lower left corner of the power distribution unit, as detailed in Figure 23).

   It is not necessary to switch off the lesser circuit breakers, which are located to the right of the main circuit breaker; if you choose to shut them off, you can do so before or after shutting off the main circuit breaker, in any order.

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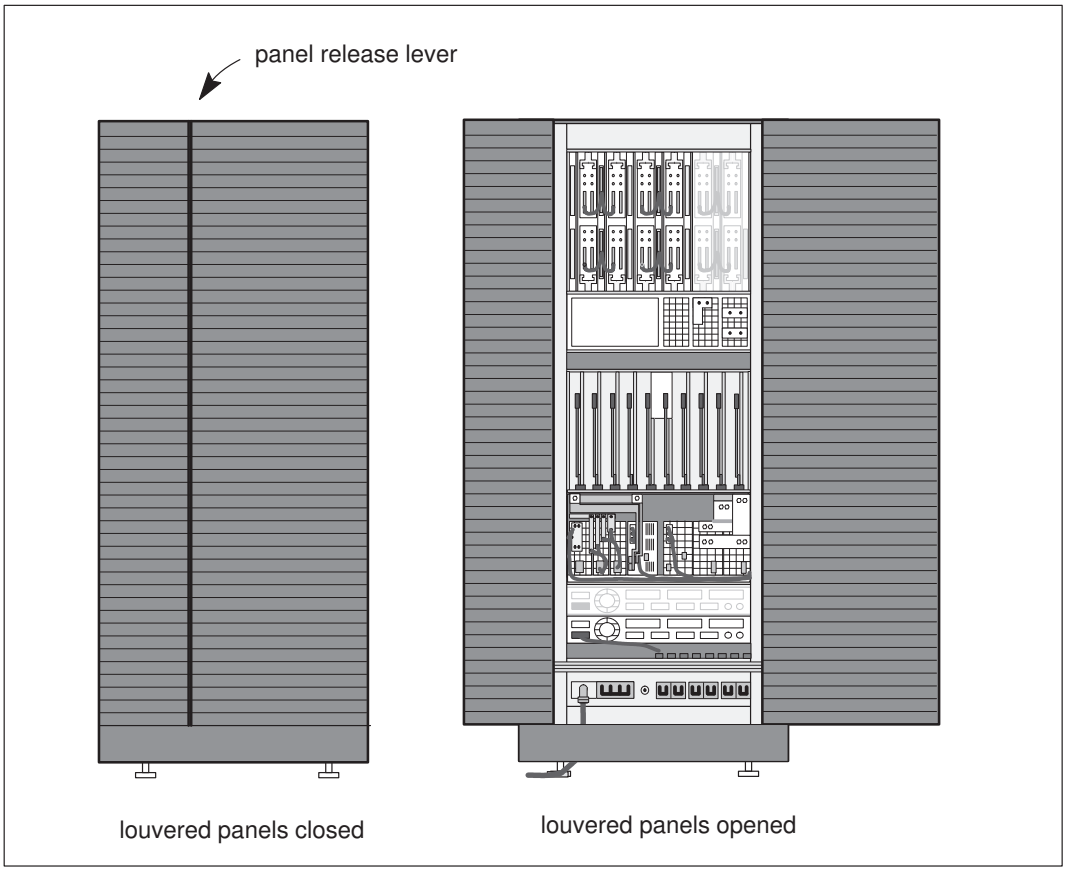

Figure 22. CM-5 Scale 3, back view. To open the back panels, press the panel release lever and manually push apart the two panels.

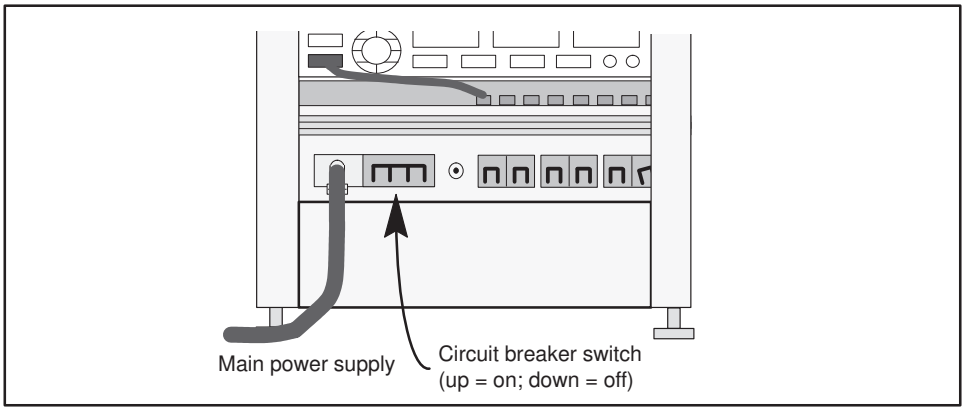

Figure 23. CM-5 Scale 3, back view (partial, with louvered panels removed), showing detail of circuit breaker switches.

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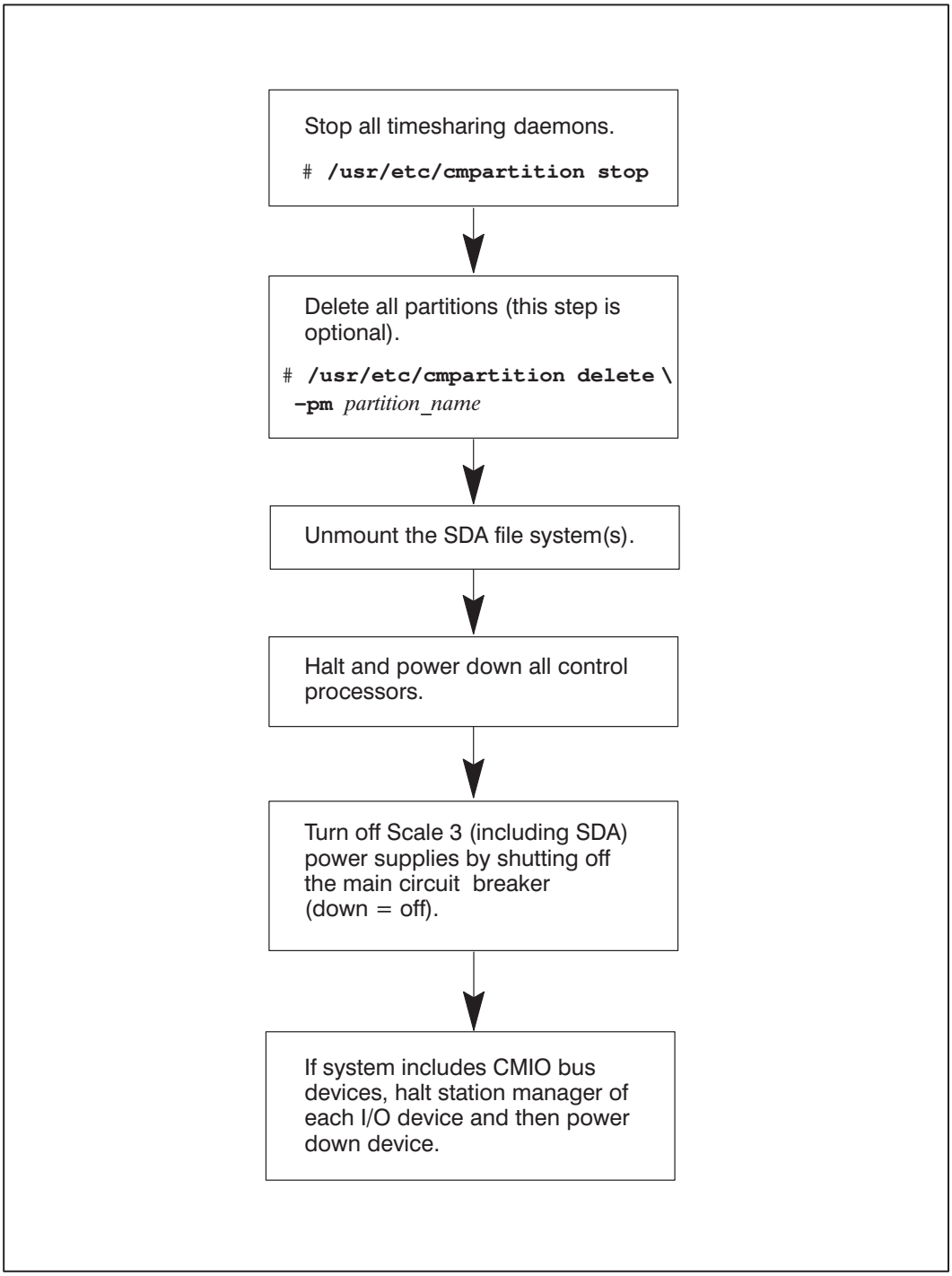

Figure 24. Scale 3 shutdown procedure.

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4.2.3 Powering Off Only Part of the Scale 3

Note that some procedures — for example, swapping out a backplane board — do not require shutting down the entire Scale 3 system. Rather, you can simply remove power from a specific part(s) of the machine by turning off the appropriate individual breaker switch(es); see Figure 25. For more information, see the *CM-5 Scale 3 Field Service Guide*.

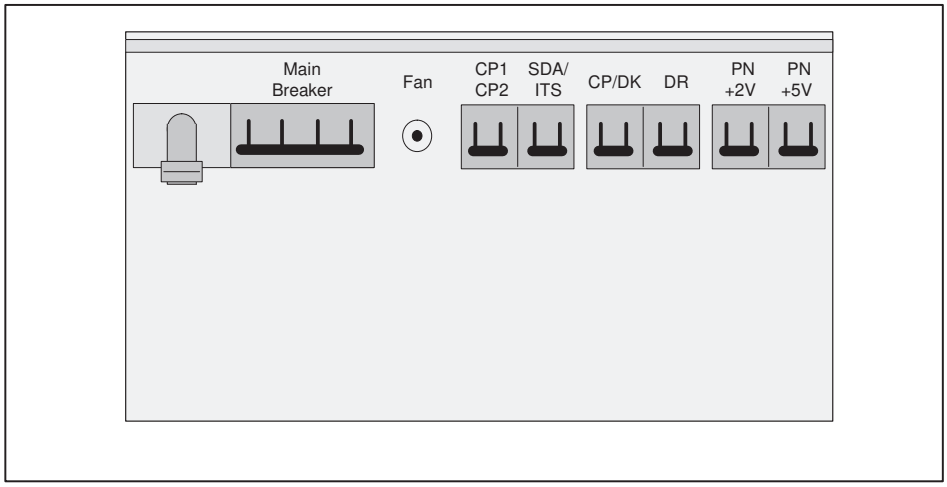

Figure 25. Individual circuit breakers on the CM-5 Scale 3.

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