



QUANTUM3D®
Delivering Affordable Reality

Independence® IDX 4000 Image Generator

Operation and Maintenance Manual



Quantum3D, Inc.
6330 San Ignacio Avenue
San Jose, CA 95119-1209 USA

Telephone (408) 361-9999
Facsimile (408) 361-9980

General <http://www.quantum3d.com>
Support <http://www.quantum3d.com/support>

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5.10 Cabinet to Cabinet Connections

Rear Patch Panels

Primary and auxiliary cabinets include patch panels located at the lower rear of each cabinet. The panels contain numerous ports and connectors for interconnecting the primary cabinet to any present auxiliary cabinets and for connecting video monitors, interface control devices, and so on. Figure 5-20 and Figure 5-21 below show the functional layouts of the primary and auxiliary patch panels, respectively.

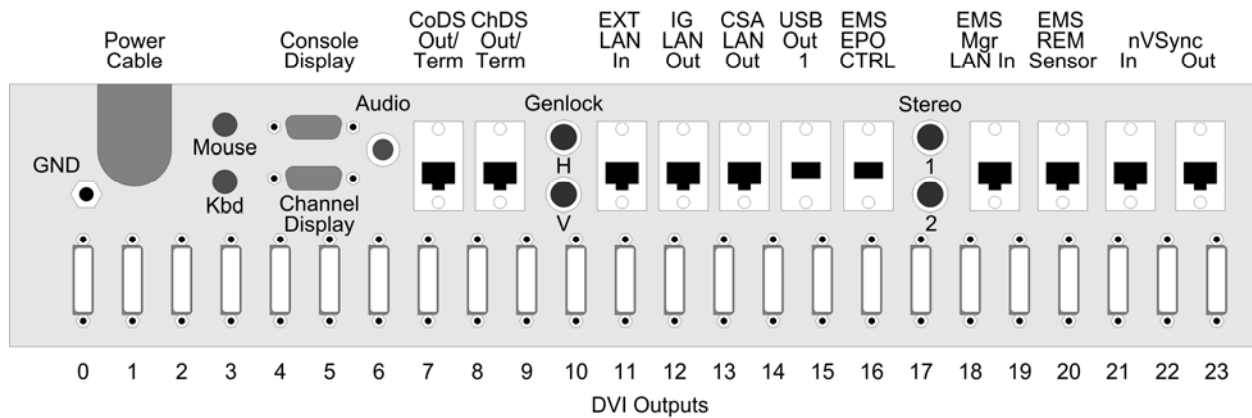


Figure 5-20 Primary cabinet patch panel

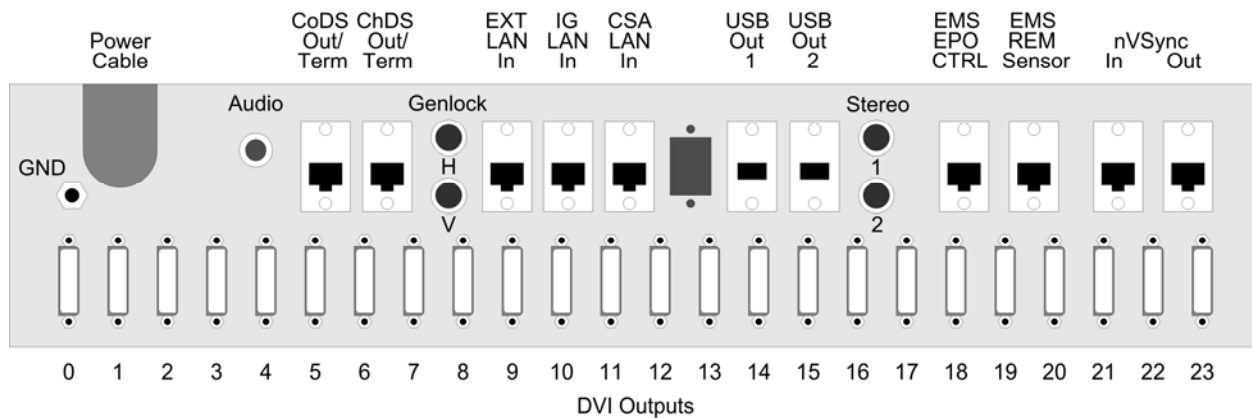


Figure 5-21 Auxiliary cabinet patch panel

Cabinet Interconnection Diagram

Figure 5-22 below shows the schematic connections between the primary cabinet and an auxiliary cabinet, along with I/O device connections. The schematic connection colors represent the colors of the wires actually used in your IDX 4000 system as shipped.

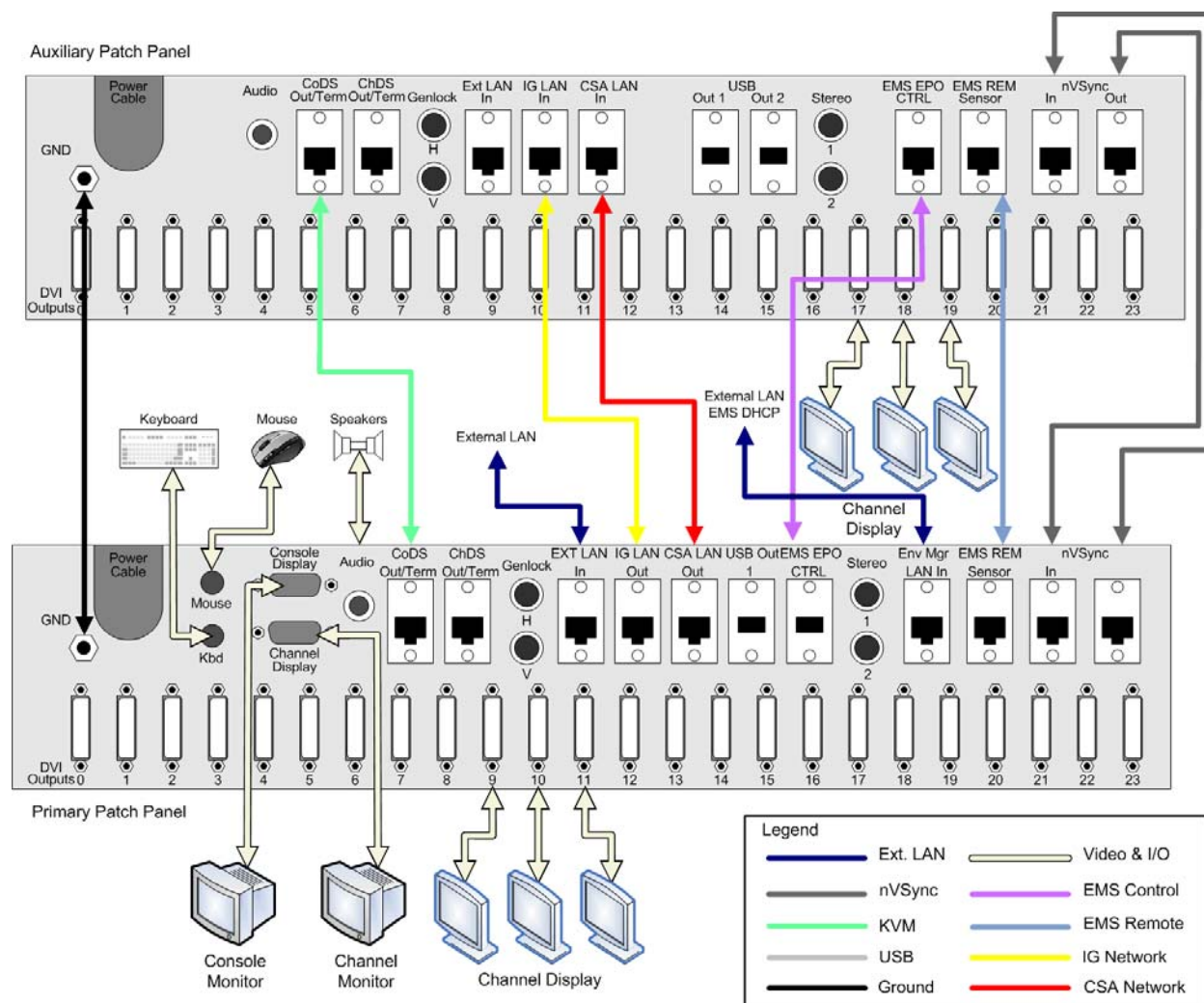


Figure 5-22 Cabinet interconnection diagram

Chapter 8

Sub-System Replacement Guidelines



Remove AC power from the system before replacing any components.

8.1 Replacing the Main Power Control Switch

The main power control is replaced as an integrated unit consisting of the 1U panel, power switch, and cable. To replace the assembly:

1. Remove the four screws (two on each side) that secure the panel to the lower front of the cabinet.



Figure 8-1 Screws securing the On/Off switch panel

2. Note where the cable is connected to the PDU, and then disconnect the cable from the PDU.

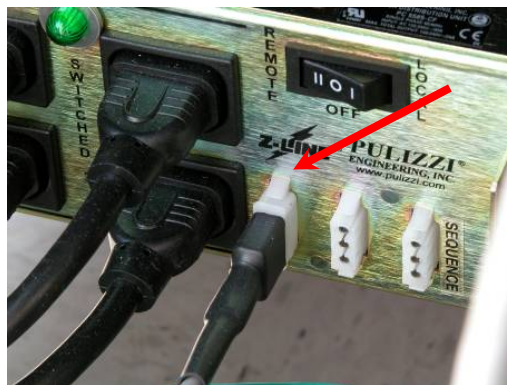


Figure 8-2 Power switch to PDU connection

3. Connect the new switch cable to the PDU, and then reinstall the 1U panel by using the four screws that were previously removed.

8.2 Replacing the Uninterruptible Power Supply

The only maintenance service required for the uninterruptible power supply is battery replacement. See the UPS documentation for instructions about performing this function. If the UPS requires replacement, you must disconnect the main power cord, the output cord to the PDU, and the network connection. Perform installation in the reverse order.

8.3 Replacing the Power Distribution Unit (PDU)

After disconnecting all the cables, remove the PDU from the lower rear of the cabinet.

1. Note the position of all cables.
It is *critical* that the AC cords be plugged into the outlets as originally configured.
2. Release the main AC supply cable from the back panel strain relief.

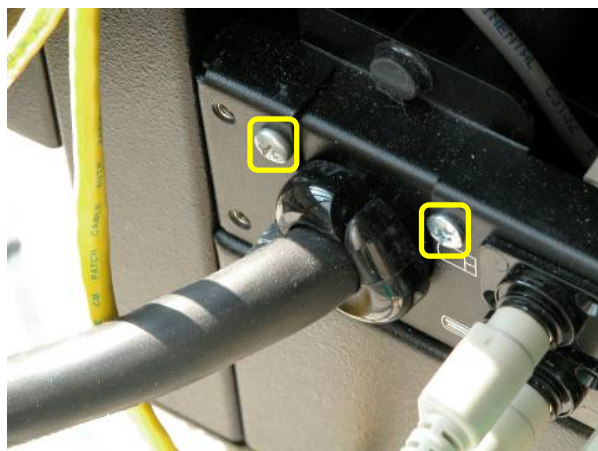


Figure 8-3 AC supply cable screws

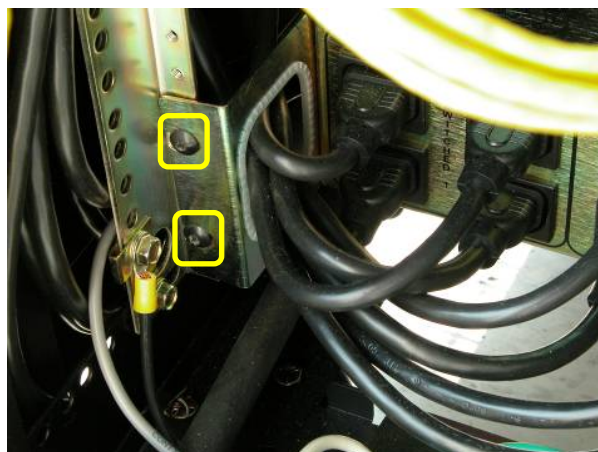


Figure 8-4 PDU Mounting screws

3. Remove the PDU by removing the four mounting screws, two on each side.
4. Install the replacement PDU performing the above steps in reverse order.

8.4 Replacing the Console or Channel Display Switch

The Console Display Switch (CoDS) and Channel Display Switch (ChDS) are each mounted on a 1U shelf that is installed from the lower front of the cabinet just above the main power switch.

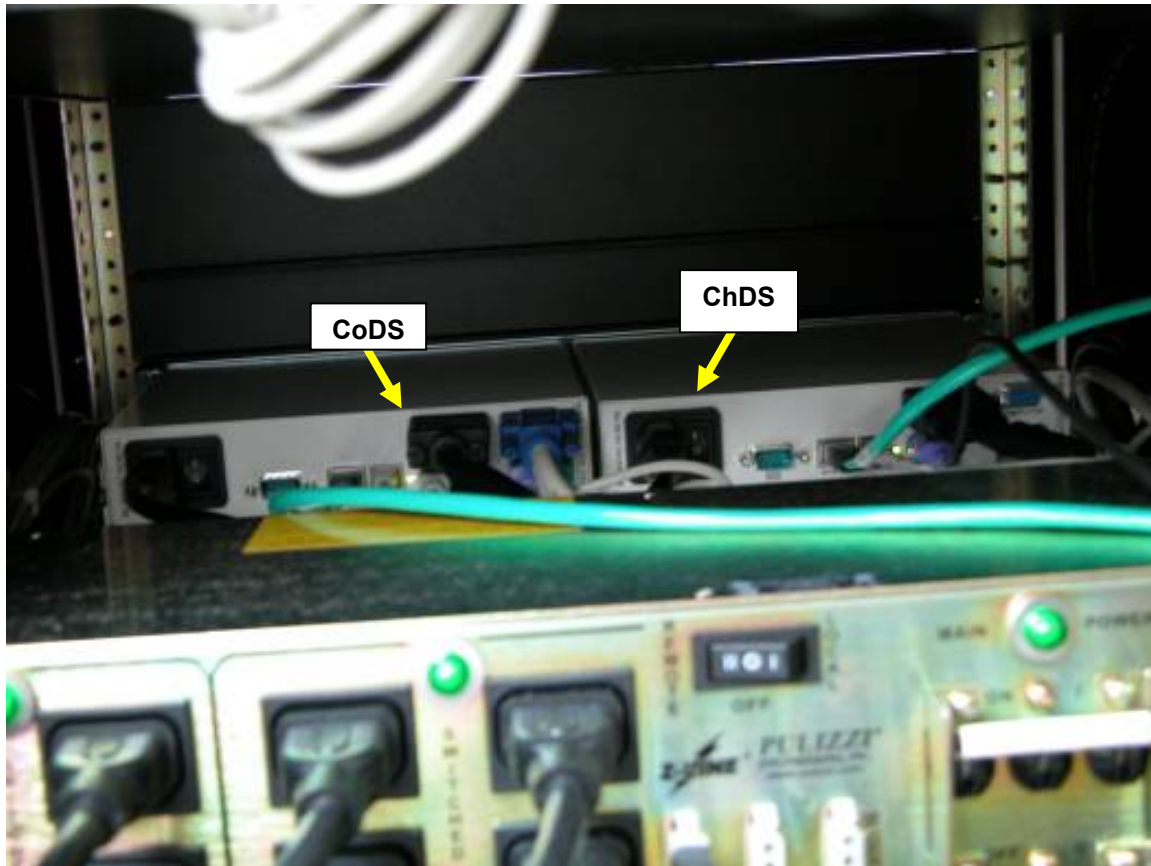


Figure 8-5 Console and channel display switches

To replace the CoDS or ChDS:

1. Remove the side panels. This is not strictly required, but the remainder of the process is much easier if the cabinet side panels have been removed.
 - a. Remove the four screws (two in front, two in back) securing the side panels. The screws are located inside the front and back cabinet approximately in the middle of the cabinet. Be careful not to drop the screws down into the chassis.
 - b. Lift the side panel from the bottom straight up to clear the side panel cabinet hangers.
2. Remove the unit mounting shelf, and then disconnect the power, keyboard, video, mouse (CoDS only), keyboard extension cable (ChDS only), and all other signal cables from the rear of the cabinet.
3. Remove the display switch shelf:
 - a. Remove the four screws on the 1U panel just above the main power control switch on the front of the rack.
 - b. Slide it out the front of the cabinet.

4. To replace the display switch, remove the screws that secure it to the display switch shelf. Use the same screws to secure the new unit onto the display switch shelf.

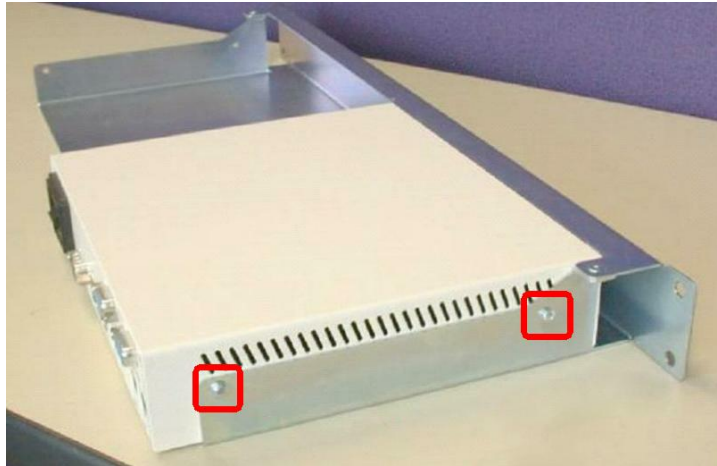


Figure 8-6 Display switch securing screws

5. Reconnect the previously disconnected cables.
6. Reinstall the side panels (if removed).
7. Any time a display switch is replaced, the display switch and client chain must be reinitialized by using the *Display Switch/Display Switch Client Utility*. Quantum3D Support supplies this utility.

8.5 Replacing the Console Display Switch Remote Specters

The Console Remote Specters are mounted in a daisy chain arrangement on each inner cabinet side rail at the back of the IG cabinet. If the IGC Remote Specter requires replacement, the Console Display Switch must be replaced also. The Remote Specter for the IGC is contained within the Console Display Switch.

The IGR Remote Specters are connected to the keyboard, video, and mouse connectors on the rear of each IGR. They are also cabled into the chain via *In* and *Out* connectors.

Figure 8-7 below shows the location of the *Channel* Remote Specter modules on the cabinet right side (facing from the front to the back of the cabinet.) The *Console* Remote Specter modules are located on the cabinet left side.

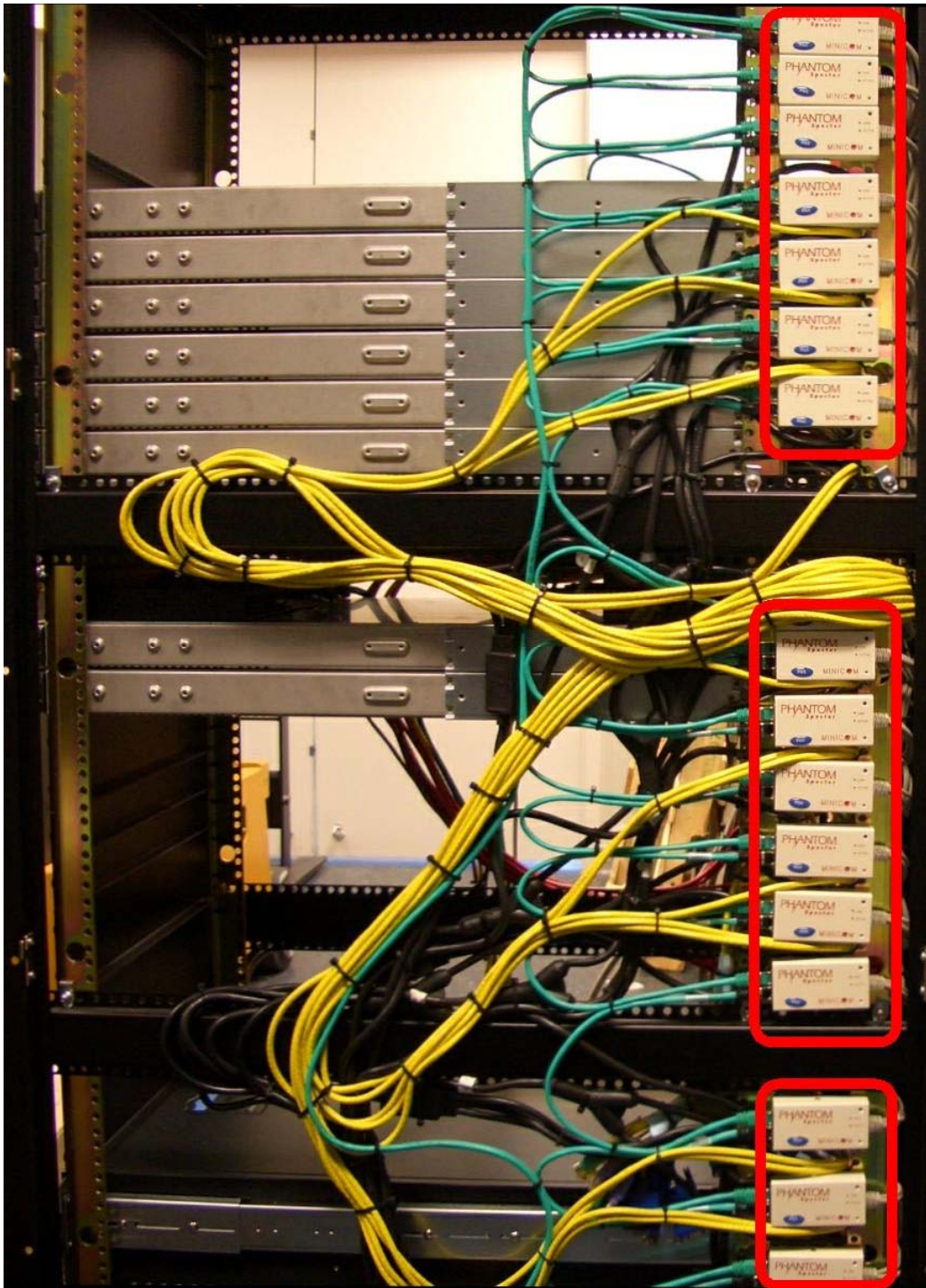


Figure 8-7 Console Remote Specter modules

To replace a Console Display Switch Remote Specter:

1. Remove the cabinet side panels to gain access to the remote specter modules.
 - a. Remove the four screws (two in front, two in back) securing the side panels. The screws are located inside the front and back cabinet approximately in the middle of the cabinet. Be careful not to drop the screws down into the chassis.
 - b. Lift the side panel from the bottom straight up to clear the side panel cabinet hangers.
2. Disconnect the input and output green KVM cables, and then remove the Phillips head screw and knurled thumb screw that mount the Remote Specter bracket to the cabinet side rails. Be careful not to drop the screws down into the cabinet.

Mounting screws are located behind the cabinet rail.



Figure 8-8 Mounting screws located behind the rail

3. Move the mounting bracket from the old Remote Specter to the new Remote Specter and replace all screws in both.
4. Reinstall the replacement Remote Specter by performing the reverse operations of step 2 and step 1 on page 42.
5. Run the renumber utility to complete the Specter replacement:
 - a. Press the CTRL key on the operator's keyboard twice in rapid succession to access the KVM console screen.
 - b. For **Password** type **ADMIN**
 - c. Press **Renumber** (F12).
The number appears after approximately five seconds.
 - d. When the process completes, press ESC.