CDRPan®
FOR PANORAMIC SYSTEMS

Installation

Instructions for Siemens /  Sirona Orthophos 3

Schick Technologies, Inc.
31-00 47th Avenue
Long Island City, New York
11101

(718) 937-5765  
(718) 937-5962 (FAX)

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Safety Issues

**Electrical Concerns**

CDRPan conforms to national (U.S.) and international standards for electromagnetic compatibility and electrical safety. A complete list of specifications can be found in the CDRPan User’s Guide.

**Mechanical Considerations**

The sensor package, the remote module, and the cables of the CDRPan system are mounted outside of the patient area to ensure patient safety and reliable equipment operation.

**Radiation Concerns**

No adjustments or alterations are made to the X-ray source of the panoramic equipment.
1. Introduction

1.1 Welcome

The CDR Panoramic X-ray System (“CDRPan”) is an electronic imaging system that integrates with panoramic machines to acquire, display, store and print digital X-rays. Because of its digital format, the X-ray can be enhanced for more detail using CDR tools, and it can be archived for patient histories and retrieved for comparisons.

1.2 CDRPan System

The CDRPan system hardware consists of the following components (unless otherwise indicated, all part numbers (P/Ns) refer to Schick Technologies numbers):

- CDRPan kit for Siemens/Sirona Orthophos 3 (P/N B4786050), which includes the sensor, codestrip, other attaching parts, and accessories
- Remote module (P/N B4750100)
- Power supply (P/N A3302300)
- PCI board (P/N B3301100) and cable (B2211001).

The CDRPan system requires the following software:

- CDR software (version 2.1 or higher)
- CDRPan software, which includes the PCI board device driver and the series set to be used with panoramic exams

1.3 Overview for Installing CDRPan

This Installation Manual is one of two documents you will need to install the CDRPan system completely. After performing the installation procedure in this document, you should refer to the CDRPan User’s Guide (P/N B1051008) to install the software for the CDRPan system. Procedures for installing CDRPan system hardware and software can be found in the following documents.

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1.4 Before You Start Installing CDRPan

Prior to installing CDRPan on your panoramic system, please perform the following checks.

A. Make sure your panoramic system is operating properly.

B. Familiarize yourself with the installation steps before performing them.

C. Determine the location of your computer. This will be useful when you install the Remote Module and need to run cables between it and your computer.
2. What You Will Need For Installation

2.1 CDRPan System

To perform the installation procedures in this manual, you will need the following CDRPan parts and assemblies.

A. Sensor Assembly

B. Cassette Codestrip Assembly
C. Remote Module

D. Cable Holders and Clamps

E. Power Supply
F. PCI Board

G. Data Cable for PCI Board

H. X-ray Filter and Allen Key
2.2 Tools and Materials

To install the sensor and codestrip, you will need the following tools and materials.

A. Phillips screwdriver to remove and replace cassette transport cover.

B. Allen wrench (hex key, 0.050 in.) to adjust sensor assembly set screws.

C. Allen wrench (hex key) to remove and replace aperture faceplate screws.
3. Sensor and Codestrip

3.1 Prepare to Remove Cassette Transport Cover

A. Using Phillips screwdriver, remove one screw from the top of the cassette transport cover and either one of two screws from the bottom.
B. While holding the transport cover, remove the second bottom screw. Carefully remove the cover, noting the flex cable connection between it and the circuit board on the panoramic machine.
3.2 Remove Cassette Transport Cover

A. De-energize the panoramic machine by unplugging it from its power source. If the machine is hardwired and cannot be unplugged, turn off the master switch on the machine.

B. Carefully remove the flex connector from the circuit board by pulling it to away from the circuit board and disconnect it from the right-angle pins.

C. Remove the cover.

NOTE: Some models of Orthophos will not exactly match the pin assembly shown in the following picture, but they will have a similarly wired connector system.
3.3 Remove Aperture Faceplate

A. Using allen wrench (hex key), remove either one of two screws from the cassette transport mechanism located above the circuit board.

B. While holding the faceplate, remove the second bottom screw. Remove the aperture faceplate.
3.4 Install Sensor Assembly

A. Slide the sensor assembly along the faceplate aperture, from the bottom of the aperture slit to the top.

B. Make a preliminary adjustment of the gap between the sensor assembly and the codestrip.
C. Slide the sensor clip up or down (bottom arrow) to adjust the clearance between the sensor assembly and codestrip.

D. Using allen wrench, turn the screws to set a gap of approximately 1 mm (top arrow). The final adjustment will be made later in this procedure.
3.5 Install Cassette Codestrip Assembly

Carefully slide the cassette into the film carriage. Ensure the interlock lever on the cassette is turned upwards (normal position).

NOTE: After every image exposure, rotate the interlock lever and return it to its normal upright position. This motion simulates the removal and replacement of the film cassette.
3.6 Reinstall Aperture Faceplate

A. Reinstall the aperture faceplate, with the sensor assembly attached, by replacing the top and bottom screws removed previously from the cassette transport mechanism.

B. Make a final adjustment to the gap between the codestrip and the sensor assembly. Also verify that the sensor assembly is centered in the aperture slit.
3.7 Reinstall Cassette Transport Cover

A. Carefully replace the flex connector to the circuit board by pushing it towards the circuit board and connecting it to the right-angle pins.

B. Reinstall the cassette transport cover, replacing top and bottom screws on the cover.
3.8 Route Sensor Cable

Use cable holders and clamps to route sensor cable to the top of the panoramic machine. Leave a small loop in the cable at the top of the cassette transport. This will allow the cassette transport to pivot open and expedite patient positioning.
3.9 Check Sensor Cable Run

A. Rotate the panoramic machine to verify that cable does not kink, bind, or pull out of holders when rotating arm is in motion.

B. Proceed to Chapter 4 to continue with CDRPan system installation.
4. Remote Module, Power Supply, and PCI Board

4.1 Install Remote Module

4.1.1 Tools and Materials

To install the remote module, you will need velcro patches to secure the module to the top of the panoramic machine, and a screwdriver to secure the sensor cable connector to the remote module.

4.1.2 Step-by-Step Instructions

NOTE: Before applying velcro patches, clean the surface area to ensure good adhesion.

A. Apply velcro to the top of the panoramic machine, along the top edge of the rotational arm. This will make it easy to see the status lights on the module.

B. Apply velcro to the bottom of the remote module also, and mount the remote module to the panoramic machine.

C. Connect the sensor cable to the remote module. Then, use a small screwdriver to tighten the screws on the 37-pin connector.
D. The cables on the opposite side of the remote module (power supply and PCI data cable) will be connected after the power supply and the PCI board installation procedures are performed.

### 4.2 Install Power Supply

#### 4.2.1 Tools and Materials

To install the power supply, you will need cable holders and clamps (P/N B4700140) to secure the cable along the side of the panoramic machine and up to the remote module.

#### 4.2.2 Step-by-Step Instructions

- **NOTE:** Verify that the power supply voltage selector is set correctly for the power requirements in your area.

A. Position power supply at base of panoramic machine.

B. Route connector cable to the remote module at the top of the panoramic machine.

C. Connect the connector cable to the remote module.

D. Plug the power supply cable into a wall outlet.
4.3 Install PCI Board

4.3.1 Tools and Materials

To install the PCI board you will need a small screwdriver to do the following: to remove the cover from your computer, to secure the PCI board in its slot, and to secure one end of the data cable to the remote module and the other end to the PCI board.

4.3.2 Step-by-Step Instructions

A. Ensure the computer is turned off and not plugged into an outlet.

B. Follow the instructions supplied with your computer to remove the cover. Locate an empty PCI slot in the motherboard and install the PCI board.

C. Replace the computer cover.

D. Connect either end of the data cable to the PCI board. Then, use a small screwdriver to tighten the screws on the connector.
E. Connect the other end of the data cable to the remote module. Then, use a small screwdriver to tighten the screws on the connector.

F. Refer to the CDRPan User’s Guide (P/N B1051008) to continue with CDRPan system installation.
Sensor Assembly
(Mounted to faceplate aperture)
Connects to Remote Module

Codestrip Assembly
(Installed inside cassette)

Remote Module
(Secured to top of host machine)
Connects to Sensor Assembly, CDRPan PCI card, and Power Supply

Power Supply
(Placed at base of host machine)
Connects to Remote Module and wall power source

Also Supplied
Cable holders and clamps
X-ray filter
Allen key(s)
Other items as needed

CDRPan Board
(Installed in computer PCI slot)
Connects to Remote Module

Figure 2. Installing CDRPan on Cassette-Type Machine