

CDR Wireless / SDX Utility

The CDR Wireless / SDX Utility (wstools.exe), accessible from the Windows Start menu and listed in the CDR DICOM for Windows program group, identifies, diagnoses, and resolves configuration and communication issues in or between the Sensor and the CDR Wireless Base Station. (For brevity, CDR Wireless / SDX Utility is shortened to SDX Utility in the following text.)

The SDX Utility can be used to perform the following tasks:

- Select the Sensor and Receiver RF channel
- Perform firmware upgrades
- Read version information
- Perform diagnostic tests
- Register Wireless Sensors

The first three tasks are immediately accessible from the SDX Utility screen (**Figure 1**). The remaining items — diagnostic tests and Wireless Sensor registration — open separate, Wireless Sensor-related tools, so click on the appropriate button (RF environment, Sensor Monitor, or Register Sensors) to display them.

The RF environment test and Wireless Sensor registration are especially useful during the initial installation of the CDR Wireless System, so you will find more information about these tools in the CDR Wireless / SDX Software Installation Guide. For more information on Sensor Monitor settings, including Wireless Sensor locking, continue with the next paragraph.

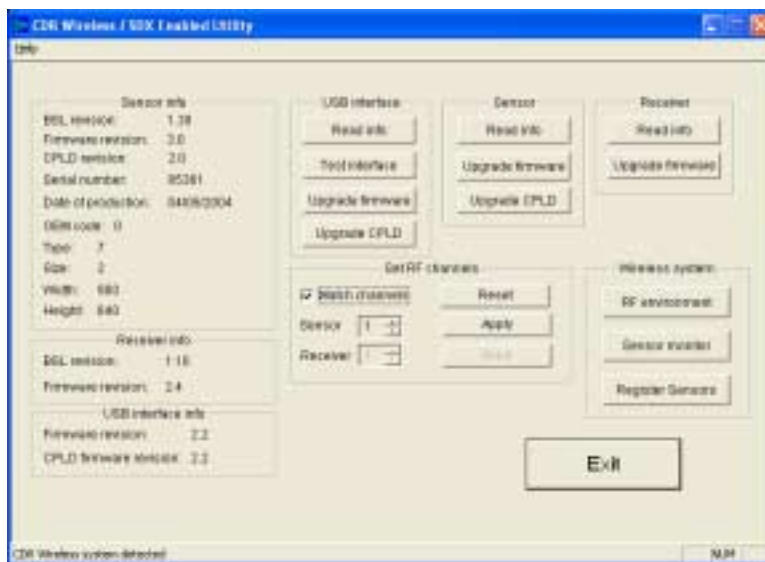


Figure 1. SDX Utility (CDR Wireless Sensor Detected)

Sensor Monitoring

The Sensor Monitor (**Figure 2**) provides real-time reporting of the CDR Wireless Sensor, shows the current status of several elements required for proper operation, and enables registered Wireless Sensors to be locked to the current workstation (useful when multiple Wireless Sensors are active at the same time). Under certain conditions the Sensor Monitor will be displayed automatically, or it can be started from the SDX Utility.

- The Sensor Monitor will be displayed automatically when CDR DICOM is started and the CDR Wireless hardware type is selected. The Sensor Monitor can be minimized, but it will remain active in the System Tray until the CDR DICOM application is closed.
- The Sensor Monitor can also be displayed using the SDX Utility. In Windows XP, click the Windows Start menu > Programs or All Programs > CDR DICOM for Windows > SDX Utility. At the SDX Utility Screen, click Sensor Monitor. The Sensor Monitor can be minimized, but it will be removed from the System Tray if you click on any other button in the Information Screen. To display the Sensor Monitor again, click on the Sensor Monitor button.

Status information displayed on the Sensor Monitor will vary with usage and environment — there are no perfect measurements, but customers should try to obtain and maintain the highest levels attainable. In the event of partial image corruption due to RF interference, CDR software will identify those areas on the displayed image so that dental professionals can evaluate whether another exposure is required.

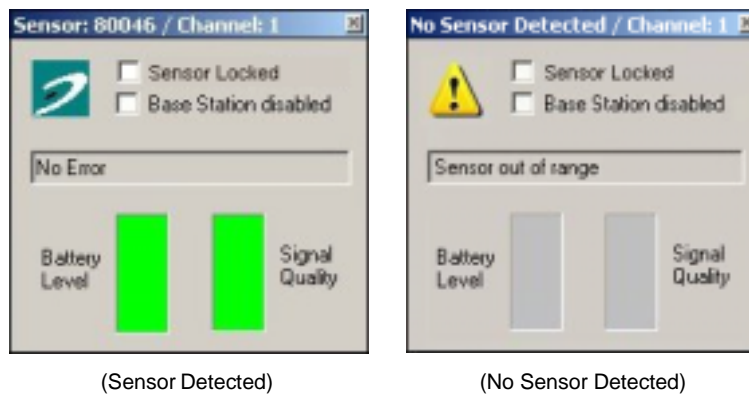


Figure 2. Sensor Monitor

Checkboxes on the Sensor Monitor provide important selections for customers with the following setups: when multiple CDR Wireless Sensors share the same RF channel, and when CDR Wireless Sensors are used with more than one CDR Wireless Base Station. For information on why these checkboxes are important, refer to the following paragraph.

Sensor Monitor Checkbox: Sensor Locked

In practices where multiple CDR Wireless Sensors are operating, the “Sensor Locked” checkbox helps customers manage the Wireless Sensors used with workstations. As there are only three RF channels to choose from, the operation of more than three CDR Wireless Sensors in practices will mean that some CDR Wireless Sensors, if active at the same time, will be transmitting images to their Base Stations using the same RF channel.

While this is a normal and expected use of the CDR Wireless system (particularly in larger practices), the Sensor Locked checkbox enables customers to select a specific, CDR Wireless Sensor from a list of registered Sensors for a particular Base Station. *(The currently detected Sensor will always appear at the top of the list, even if it has not been registered.)*

In effect, the Base Station ignores all images except those sent by the CDR Wireless Sensor that is “locked” with it and identified by serial number in the Sensor Monitor. This selection helps ensure that an image sent by a CDR Wireless Sensor is received by the Base Station expecting it.

To summarize, there are three points to keep in mind when marking this checkbox:

1. This checkbox is intended primarily for practices where multiple CDR Wireless Sensors share the same RF channel.
2. Any registered Wireless Sensor can be locked, selected, and unlocked using the Sensor locked checkbox.
3. In practices where several CDR Wireless Sensors are active, noisy RF conditions could result in the display of the “Another Sensor is on the same channel” message in CDR. Marking the Sensor locked checkbox and selecting the Wireless Sensor you wish to use with the workstation will resolve this situation. If you have already locked the Wireless Sensor, this message will appear to alert you that other Wireless Sensors are active on the same channel.

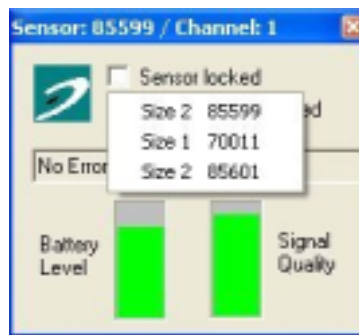


Figure 3. Selecting Registered Wireless Sensors

Sensor Monitor Checkbox: Base Station Disabled

When using CDR Wireless Sensors with more than one Base Station, leave the “Base Station disabled” checkbox blank in the Sensor Monitor of the Base Station receiving the images and the checkbox filled in the Sensor Monitor of the other Base Station(s). When disabled, the Base Station ignores all images sent by any CDR Wireless Sensor — the Base Station without the checkmark is then clearly designated to receive images.

To summarize, there are two points to keep in mind when marking this checkbox:

1. To receive images from any CDR Wireless Sensor, leave the Base Station Disabled checkbox blank.
2. To ignore images from all CDR Wireless Sensors, mark the Base Station Disabled checkbox. In the case where several Base Stations are sharing the same CDR Wireless Sensor, the “Base Station disabled” box should be checked for all Base Stations except the one with which the CDR Wireless Sensor will communicate.

Registering Wireless Sensors

Registering a Wireless Sensor is the first step in a two-step process that enables Wireless Sensors to be locked to particular workstations. Only registered Wireless Sensors can be locked, so we recommend that you register them as soon as you can, if you use multiple Wireless Sensors at the same time in your practice. The second step in the process is to select a particular Wireless Sensor from a list of Registered Wireless Sensors and lock it to the current workstation, using the Sensor Monitor.

Please Note: Registering and locking Sensors applies only to CDR Wireless Sensors, and not to CDR2000 Sensors.

As we have said in the Introduction to this section, locking Wireless Sensors to specific workstations provides more customer control in practices where several Wireless Sensors can be in use, possibly on the same RF channel, at the same time.

Registration Procedure

Wireless Sensor registration is performed entirely within one single dialog box (shown in **Figure 4**) and consists of moving Wireless Sensors, identified by serial number and size, from the left window (Unregistered) to the right window (Registered).

1. At the SDX Utility screen, click Register Sensors.
2. When the dialog box opens, a list of all Sensor calibration files found on the workstation (including those for CDR2000 Sensors, if any) are displayed on the left side.
3. Check the serial number of the Wireless Sensor(s) you wish to register on this workstation. If a battery pack is attached, remove it to read the serial number.
4. Select each Wireless Sensor and press the (→) button to move it to the right side.
5. Click OK.

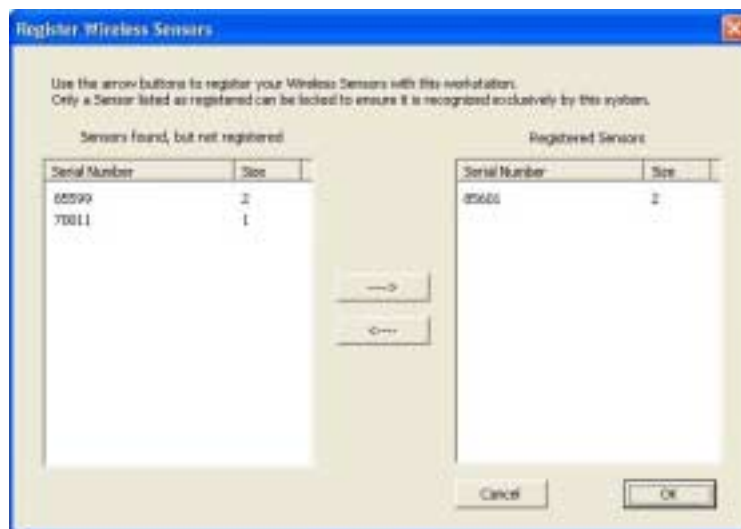


Figure 4. Wireless Sensor Registration Dialog Box