

Office Maintenance: Dark Room / X-ray Image Processors



In general - there are two types of X-ray Image Processors: Traditional Film Based Processors and Digital Phosphor Storage Plate Processors. Film processors, due to the chemicals involved, require more extensive regular maintenance and are more costly to keep up. Digital scanners on the other hand require very minimal maintenance and minimal time commitment.

When an image has been taken on a patient and you are waiting on the information from that image, it is very frustrating to find that the processor has gone down. With proper maintenance however, both processor types will provide years of trouble free service.

SCAN-X SCANNER - Maintenance Procedures

There are several phosphor storage plate systems on the market. Due to the overwhelming presence of the Scan-X system by Air Techniques, the maintenance procedure below is specific to this unit. Be sure to check your user manual for maintenance instructions for your model of scanner.

IMPORTANT: Do not spray solvents or liquid directly on the scanner.

Cleaning the ScanX

- Turn off the ScanX. Disconnect the power cord from the main wall outlet and disconnect the computer connection cable from the ScanX before cleaning.
- Wipe the outside surfaces with a soft paper towel dampened with a disinfectant solution or non-abrasive household cleaner. Be careful not to allow solvents TO RUN OR DRIP into the ScanX. This could cause damage to the ScanX.
- Allow to air dry before plugging in or turning back on.

Cleaning the Plate Transport

- Over time, small debris and dust may accumulate in the plate transport mechanism causing a loss in image quality and possible damage to the PSPs.
- To ensure optimal performance of the ScanX, the plate transport should be cleaned once per week using a new ScanX Cleaning Sheet each time.

Scheduled Service Requirement

- 2 years
 - Replace transport drive belts and springs – Kit number B7920
- 4 years
 - Replace complete transport belt drive belt assembly - Kit Number B7434

Film Processor Maintenance

The film processor is designed to run for years with very few problems. If properly maintained, many processors have lasted 15 - 20 years. With the rapid onset of digital imaging, traditional film processors and their thorough maintenance is diminishing. However, there are still a lot of processors out there. And with proper care, they will last a long time.

With processors, you have two different developing chemicals in an enclosed container along with water vapor, gears, motors etc. Because of this environment, the recommended cleanings for this machine are not optional. In order for the processor to continue running, processing films that are very diagnostic, and lasting for years, the cleanings have to be done and done correctly.

Most roller based processors require 3 types of cleanings: Weekly, Monthly and Quarterly. The weekly cleaning is the most simple. The monthly and quarterly cleanings can become involved and require that the staff member that is assigned this task have time built into their work schedule to accomplish this correctly. The detailed steps to these cleanings are too lengthy to publish in this article. Each processor varies slightly in the directions as well. If you need documentation on how to correctly clean your processor, your Nashville Dental account representative can help you obtain the correct manual for your machine.

Maintenance Considerations:

When cleaning, remember that contaminated "DEVELOPER" can cause a lot of film problems. Even a single drop of fixer in the developer solution can cause problems. This can happen by manually adding fixer, removing the fixer transport, running chairside endo films back through the processor for archiving. (the fixer from the chairside dip tanks can be enough to contaminate the developer.) Other sources are running cleaning films through more than one time, failing to rinse tank and rollers thoroughly after using cleaning chemicals, and using soap or other detergents to clean the rollers can cause contamination. In general, as long as you follow the manufacturer's instructions you should be able to avoid the following problems.

How To Diagnose Contaminated Developer - One or more of these symptoms indicates contamination:

- Ammonia smell
- Dark or black developer
- Black deposits on bottom of developer tank
- Gray stains on white gears on side of developer rack
- Black streaks or smudges on films
- Poor film density (blacks are only dark gray)
- Poor film clarity

Weekly:

1. Remove Rack Assemblies (all three – developer, fixer, wash/dry transport)
2. BE VERY CAREFUL NOT TO DRIP FIXER INTO THE DEVELOPER TANK!!! This can cause poor quality films.
3. Place rack assemblies in a large sink and wet thoroughly or spray with Spray 2000 or appropriate cleaner.
4. Scrub thoroughly with a soft bristle brush or with sponge that comes supplied with Air Techniques developer and fixer. (Note: use separate sponges or brushes on developer and fixer transports.)
5. Be sure to Rotate rollers while scrubbing
6. Rinse thoroughly
7. Return transports to Processor.
8. Always Process a Cleaning Film after cleaning.

Monthly & Quarterly Cleanings:

Review Manual for your Processor. This Monthly cleaning can take up to an hour and the Quarterly cleaning can take up to 1 1/2 hours to do. Schedule appropriate time for staff to do this or call Nashville Dental to schedule one of our techs to perform this service for you.

Cleaner options: Formula 2000, Dent-X Easy Clean Powder, Clear Image Cleaner

Cleaning films should be used routinely to remove deposits and build-up from the rollers.

<p>Roller Transpost Cleanup Film - Clean Image Carestream Health Consists of a 7 mil Estar Base with a non-silver gelatin coating on each side. 8" x 10". 100/pk 1039205172.89</p> 	<p>Clean-up Sheets - Southland Dist. A daily clean-up sheet is step 1 of a 3-part cleaning system. Used daily, it removes residue from transport rollers and webs that cause film to be grainy. 50 sheets/bx C1081061.79</p> 	<p>ScanX Cleaning Sheets - Air Techniques Cleaning Sheets for the ScanX are a handy and inexpensive preventive maintenance product that can be used to help keep scanners dust free. • Sheets are cut and specially sized for use in each scanner. • Easy to use. • Helps keep the scanner free of dust and hair. • Run through the scanner just like imaging plates.</p> <p>Scan-X - B2020 (25pk)\$225.00 Scan-X Duo - D1020 (25pk)\$100.00 Scan-X I/O - B3020 (25pk)\$175.00</p>
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See page 382-383 of your Nashville Dental catalog for a full listing of cleaning supplies for film based processors.

OFFICE MAINTENANCE - IMAGE PROCESSORS