2015

DR System Maintenance

Checklist and Guide

This document will provide detailed instructions on how to effectively and properly maintain and backup your system for prolonged lifespan and reduced down time.

Customer DR System Checklist

You will not be required to disassemble the table or PC for maintenance in any way unless instructed to by one of our technical support representatives. Secondly, while performing this checklist if you require any assistance please speak with technical support 1-855-726-9995

1. Introduction

The purpose of this maintenance guide and checklist is to assure continued safe performance of the X-ray generator, Table and PC workstation, to increase the lifespan, reduce down time and repairs and to assure personal safety. Following these checks and procedures along with the suggested intervals are the manufacturer's recommendation for the most effective periodic maintenance schedule.

1.1. General Cautions

BEFORE ATTEMPTING ANY MAINTENANCE OR CHECKING CONNECTIONS ENSURE THAT ALL DEVICES ARE POWERED OFF.

FOR CONTINUED SAFE USE OF THIS EQUIPMENT FOLLOW THE INSTRUCTIONS IN THIS MAINTENACE GUIDE. STUDY THIS GUIDE CAREFULLY BEFORE ATTEMPTING ANY MAINTENANCE AND KEEP IT AT HAND FOR QUICK REFERENCE.

DO NOT REMOVE ANY COVER, DISASSEMBLE OR MANIPULATE INTERNAL COMPONENTS IN THE TABLE OR PC, THESE ACTIONS COULD CAUSE SERIOUS PERONAL INJURIES AND / OR EQUIPMENT DAMAGE.

2. Checking Power Supplies and Device Connections (Check monthly to make sure all connections are still seated properly and check first if system is not working properly)

Your system has multiple devices that are used together to give you X-ray images, determining if they are all receiving power and if their connections are seated properly is the first step in making sure that your system is running efficiently. If your system is not functioning properly checking the connections for each device will determine whether or not that device has failed or if there is simply a poor connection. Below you will find a list of each device with where the power supply is coming from and which device it is connected to.

2.1.   Power Supply Connections
2.1.1. Monitor – Power is plugged into UPS below PC,
2.1.2. Computer – Plugged into UPS below PC
2.1.3. UPS – Plugged into wall outlet
2.1.4. Toshiba Panel – Check Blue cable at the back of the panel and the connection coming from Silver Power supply mounted on wall, make sure the silver panel is plugged into either the UPS or another wall outlet with surge protector.
DR Tech Panel – Check cable behind large power supply, black cable should be going to UPS or surge protector. And check the connection going to the panel under the table from the power supply box.
2.1.5.   Power to the table comes from the Circuit Breaker on the wall, make sure it is in the on position and there is no damage to the cable that runs to the table.

2.2.   Device Connections
a. Monitor – Cable should be screwed secure into monitor and to the back of pc via COMM1 connector.
b. Computer – Keyboard and Mouse are plugged in via USB, Top Ethernet cable (Blue cable) should be plugged into wall outlet for Internet and bottom cable goes to plate under table. For sites with generator control, a serial cable is connected to the back of the computer; this cable comes from the ON/OFF box that is mounted on the wall. A Silver Dongle (USB key) will be plugged into a USB port at the back of the PC, make sure this is always plugged in and secured.
c. Toshiba Panel – There is an Ethernet cable going from panel to the acquisition PC and a serial cable coming from the generator, make sure this connection is always seated properly.
DR Tech- From the large power supply box there is a serial cable going to the plate; ensure this connection is seated properly.

3. General Cleaning (Weekly)

3.1.   PC and Monitor

Items you need to properly clean your system:

- Rags
- Microfiber cloth
- Vacuum (optional)
- Toothpicks
- Cotton swabs
- Distilled water
- Compressed air
- Anhydrous ethyl alcohol

To begin, **turn the computer and monitor off,** and unplug their cords from the wall sockets UPS. Moisten a rag with distilled water, and use the rag to wipe down the entire computer tower.

For additional cleaning, if you have a vacuum use it to suck dust out of the computer's vents. Unplug the keyboard from the computer. Use compressed air to dislodge dust under the keys, and then use a toothpick to pry grime out of the small seams between sections of the keyboard. Use a damp rag to wipe excess grime away before continuing. Clean between the keys using damp cotton swabs. You may need to add a little rubbing alcohol to the water in order to remove the darkest stains, but avoid the letters on the keys as much as possible. If this process brings more excess grime to the surface of the keys, remove it with a damp rag. Unplug the mouse from the computer. Use a toothpick to pry grime out of the plastic seams, and then clean away the excess with a damp rag.

Use a damp rag to clean dust on the plastic casing of your computer screen, but avoid the screen itself. To clean the screen, moisten a microfiber cloth with distilled water, then rub gently to remove dust and stains.

3.2.   X-Ray Table

NEVER ATTEMPT TO CLEAN OR HANDLE ANY PART OF THE X-RAY TABLE WHEN IT IS TURNED ON. SWITCH OFF THE GENERATOR BEFORE CLEANING

Clean external covers and surfaces frequently, particularly if corroding chemicals are present and especially parts in contact with the animal, with a cloth moistened in warm water with mild soap solution. Rinse wipe with a cloth moistened in clean water. Do not use cleaners or solvents of any kind.
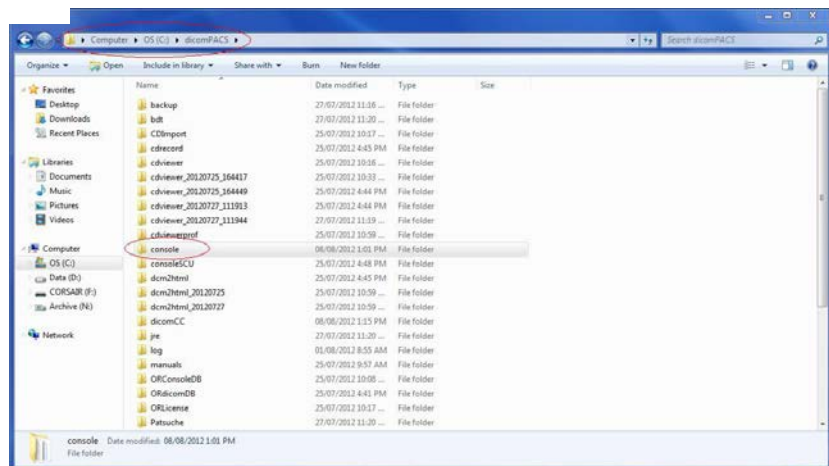
4. Performing Weekly Backups

4.1. What to Backup

The most important information to be saved is of course your images. All of the images that you take are stored on the D: (Data) drive. Therefore if you would like the simply backup your information at your own leisure, copy the information on the drive to either a network attached storage device or an external hard drive. You can also backup your program settings by copying the console folder located in C:\Dicompacs. Once completed you can use the DR System Weekly Backup form located at the end of this document, using this form will make certain your data is in fact being backed up.
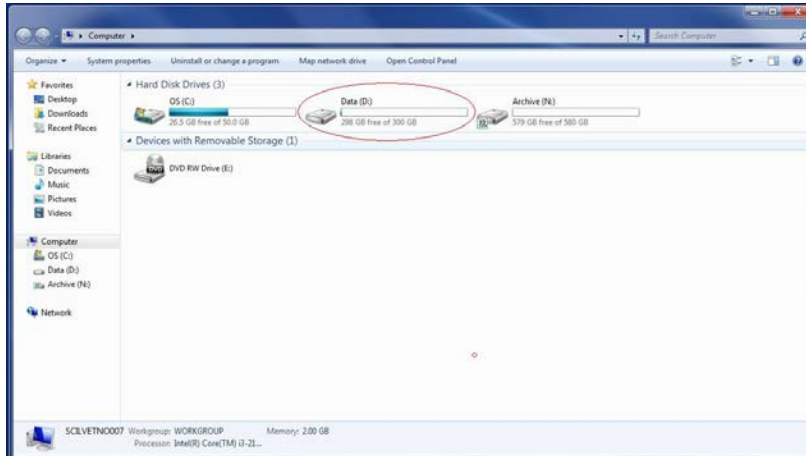

Backup D: Drive

Backup console folder

4.2.**Optional** Setting up Weekly Backups

4.2.1. For Windows 7

To check if a scheduled backup is being performed you need to open the Backup and Restore program, you can find this by typing Backup into the search field or go to Start → Control Panel → System and Security → Backup and Restore. Once you open the program you will see any scheduled job that has been created. At the top you will see the network path of where the backup is being stored, the date of the next backup, the last backup performed and at the bottom is the schedule you have set up. To keep
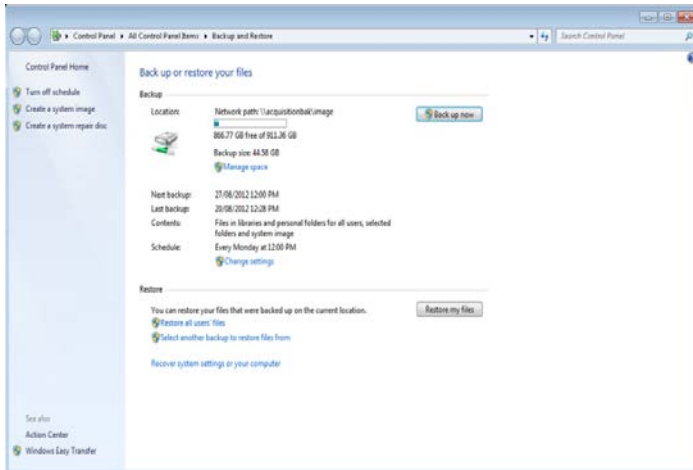
track of the backups being performed you can use the backup checklist located at the end of this document. Use this checklist to verify that backups are being done.

If a backup is not already setup, follows these steps to perform a weekly backup schedule:

- Type Backup into the search field or go to Start → Control Panel → System and Security → Backup and Restore. Next click on "Set up backup".
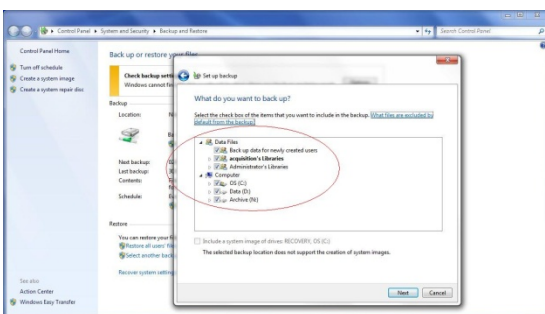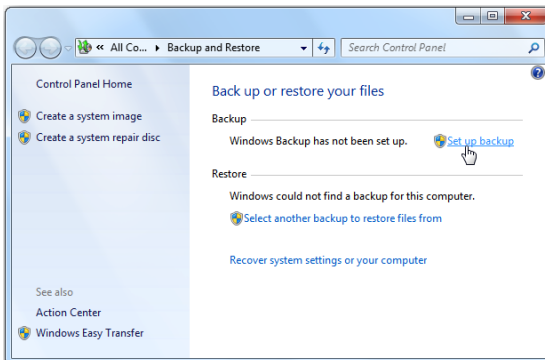
- On the next screen you will be asked what you would like to backup. In this case you would select the Data (D:) drive, you can also select any other files or folders here that you would like to save as well. We would also recommend selecting the C:\dicomPACS\console folder which contains all of your program settings to be able to restore them should something happen to the pc or software.

- Once you have selected which files or folders you would like to backup, you will be brought to the "Review your backup settings. This screen will show you what you selected on the previous screens. At the bottom of this screen will be the "Change schedule" link, clicking this will allow you to select the frequency, date and time you would like the schedule your backup.
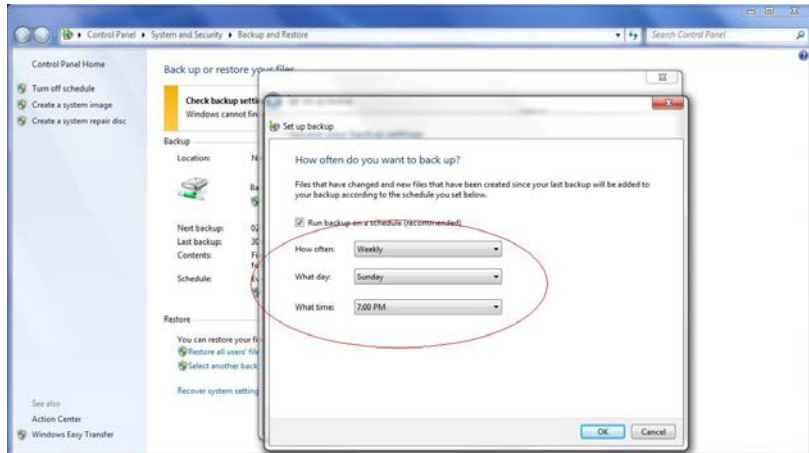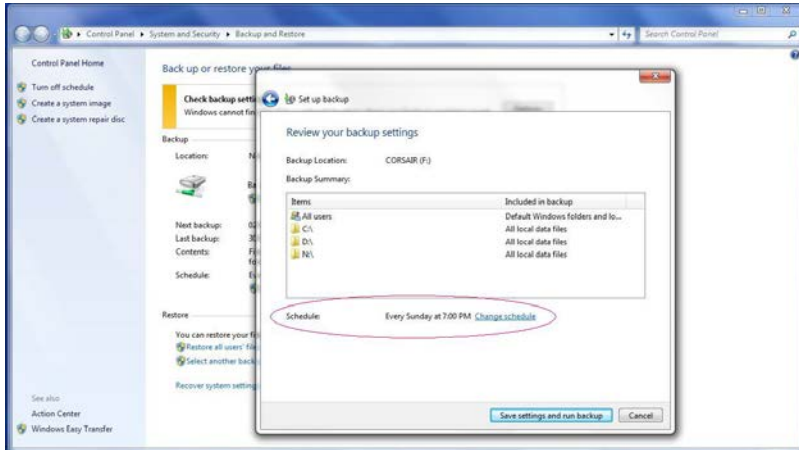
4.2.2. For Windows XP

If you have a backup set up using the Windows Backup tool, checking that the backups are being performed properly can my done by reading the log file. To access this log file go to Start → My Computer → C:\ →Documents and Settings → user → Local Settings → Application Data → Microsoft → Windows NT → NTBackup →data, in the data folder you will find the backup log, open the file and at the bottom it will confirm whether or not the backup was successful.

If a backup is not already setup, to perform a weekly backup schedule you can follows these steps:

- Open Backup (Start → All Programs →Accessories → System Tools → Backup)
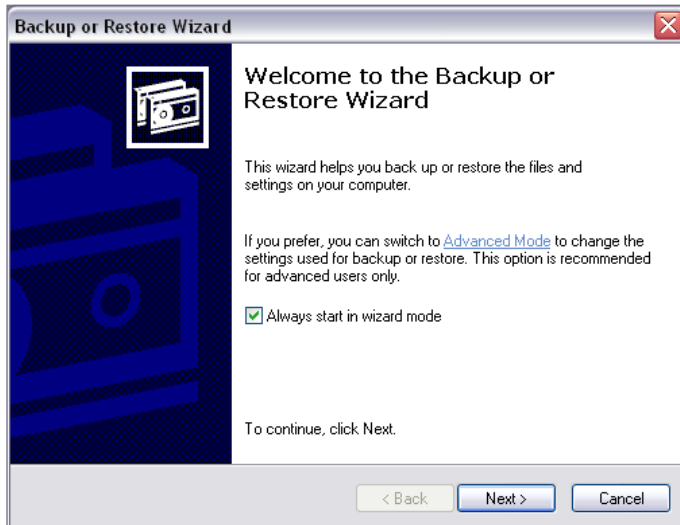
To begin click Advanced Mode, here you can backup immediately or schedule weekly backups. To backup immediately go to the Backup tab and select what drives, files or folders you want to backup. The highest priority is backing up your images. These images are all stored on the D: (Data) drive, to select this open the "My Computer" tab and then check the box next to the D: drive. Any other data you would like to backup can be selected here as well, keep in mind the sizes of the files and folders you are backing up to make sure you have sufficient space to store the backup file.
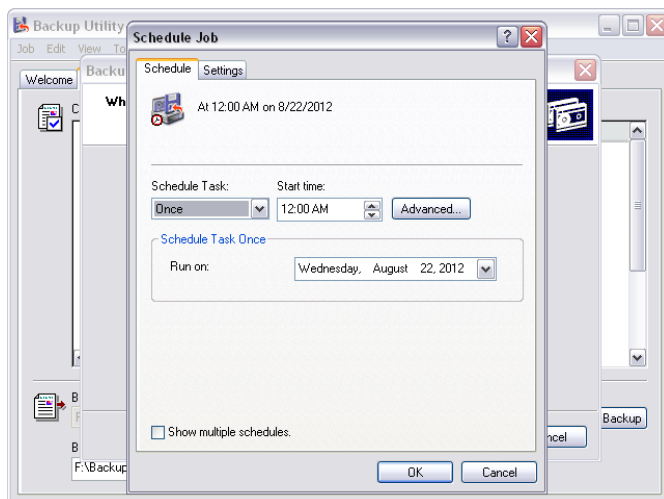
To set up a weekly backup go to the Schedule Jobs tab, next you will click on Add Job at the bottom right corner. Select the destination of the backup and specify a name for the backup file as well. Click Next, for "Type of Backup" leave it as normal and click Next, "How to Backup" click Next to skip this as well, for "Backup Options" click next to skip, next you will select when you would like the backup to run. You have multiple options to choose from for when you would like   to have your system backup, we strongly recommend you have your data backed up weekly.

DR System Backup Record Sheet

For keeping record of any backups performed

Month	Name	Month	Name
January	1	*July*	1
	2		2
	3		3
	4		4
February	1	*August*	1
	2		2
	3		3
	4		4
March	1	*September*	1
	2		2
	3		3
	4		4
April	1	October	1
	2		2
	3		3
	4		4
May	1	*November*	1
	2		2
	3		3
	4		4
June	1	*December*	1
	2		2
	3		3
	4		4