



**P R E V E N T I V E
M A I N T E N A N C E
G U I D E**

Rev. 2



 **TIMS Medical Video Platform® | Record • Edit • Archive • Collaborate**

060000-95 Rev. 2

TIMS MVP® Maintenance Guide

Rev. 2 March 2022

Copyright © 2022 by Foresight Imaging, LLC. All rights reserved.

About TIMS Medical & Foresight Imaging LLC

TIMS Medical is a division of Foresight Imaging LLC focused on finished medical devices for the recording, editing, archiving, and real-time collaboration on medical imaging studies. Applications include modified barium swallow studies, FEES, endoscopy, interventional radiology, ultrasound, surgery, DICOM & PACS/VNA connectivity, and much more. Over 5000 systems are installed in hospitals, imaging centers, and medical schools worldwide. For further information, visit www.tims.com or email info@tims.com.

Foresight Imaging LLC is a world leader in the design of high accuracy, high-performance video streamers, frame grabbers, & medical imaging hardware and software. Foresight Imaging video acquisition boards are the imaging engines of many finished medical devices and military imaging systems in use throughout the world. The company is certified to the ISO 13485 quality standard.

Auto-SYNC, IDEA, AccuStream, AccuStream Express, TDRS, and the PACS Connectivity Solution are trademarks of Foresight Imaging, LLC. Foresight Imaging, TIMS Connect, TIMS Medical, TIMS MVP, TIMS Review, TIMS Medical Video Platform, TIMS DICOM, TIMS Mobile, TIMS Mobile DICOM, TIMS Mobile Consultant, and TIMS Consultant are registered trademarks of Foresight Imaging, LLC. All other products and brand names are trademarks or registered trademarks of their respective holders. All specifications are subject to change.

The information in this document has been carefully checked and is believed to be accurate. However, Foresight Imaging assumes no responsibility for inaccuracies. All specifications are subject to change without notice.

Table of Contents

TIMS MVP & TIMS Review Preventive Maintenance	1
Scope	1
Notes	2
Maintenance Requirements	3
Why Study Storage Maintenance is Required	3
Recommendation	3
How to Delete Studies in TIMS MVP	3
Verify Disk Space	7
Run a Check Disk on the Hard Drive	8
Verify TIMS MVP Disk Study Space Limit.....	11
Calibrate Image Quality	12
Clean TIMS Computer Air Grills.....	13
Clean the TIMS Computer, LCD Display and the TIMS Mobile Cart.....	13
Cleaning Instructions for TIMS Computer, Mobile Cart and Accessories	14
Cleaning Instructions for Touchscreen Monitor.....	15
Cleaning Tips for the Touchscreen Monitor	16
Cleaning Instructions for Standard LCD Monitor.....	16
Cleaning Instructions for the Keyboard and Mouse	16
Performing No Preventive Maintenance	17
Revision History.....	17
TIMS MVP & TIMS Review Preventive Maintenance Checklist Log.....	18

TIMS MVP & TIMS Review Preventive Maintenance

Scope

This guide describes the required preventive maintenance to ensure TIMS MVP systems and TIMS Review stations run as smoothly as possible.

Since TIMS MVP and TIMS Review computers are Windows 10-based computers, preventive maintenance is typical of Windows 10 systems.

Maintenance consists of:

- Check the hard drive.
- Verify disk space.
- Delete older TIMS MVP studies.
- Clean system airflow grills.
- Verify all cable connections are secure.
- Inspect for loose or damaged cables.
- Check for the latest software updates at <https://tims.com>.
- Calibrate image quality.
- Verify worklist(s) and PACS DICOM access.
- Clean computer surfaces.
- Clean LCD display surface.
- Clean keyboard and mouse surfaces.
- Clean the mobile cart.
- Verify proper trigger operations (if applicable).
- Clean cables and connectors.

Notes

About the TIMS MVP Software

TIMS MVP is the software installed on the TIMS system connected to the medical modality (i.e. fluoroscope or endoscope). TIMS Review is the software license installed on a site-supplied computer, typically located in the speech pathology or other medical imaging office area.

About This Guide

This guide is for TIMS MVP software and systems.

Maintenance Requirements

What You Need

You will need a canister of compressed air, a label, and familiarity with Windows 10 system administration.

Time Required

Maintenance can take from 30 minutes to several hours depending on the amount of disk fragmentation and amount of space used on the hard drive.

Maintenance Frequency

Maintenance is required once every four months.

Why Study Storage Maintenance is Required

TIMS MVP and TIMS Review application performance will degrade when the system hard drive is nearing capacity.

In addition, TIMS MVP and TIMS Review stations are designed for temporary, short-term study storage ONLY. Long-term study storage is performed on PACS or VNA.

PACS systems contain standard disk backup and redundancy mechanisms for long-term data storage.

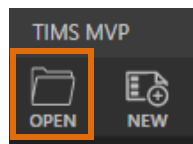
Recommendation

To preserve TIMS MVP and TIMS Review disk space, it is recommended that you delete any TIMS MVP studies over six (6) months old.

How to Delete Studies in TIMS MVP

To delete studies:

1. First, verify that all TIMS MVP studies to be deleted are on PACS and are backed up.
2. In TIMS MVP or TIMS Review, click the **OPEN** icon to open the study list. When the study list opens, note the current study list sort selection.





- Click on the Study Date column. If it is not in descending order, where the oldest studies are listed at the bottom, click again.

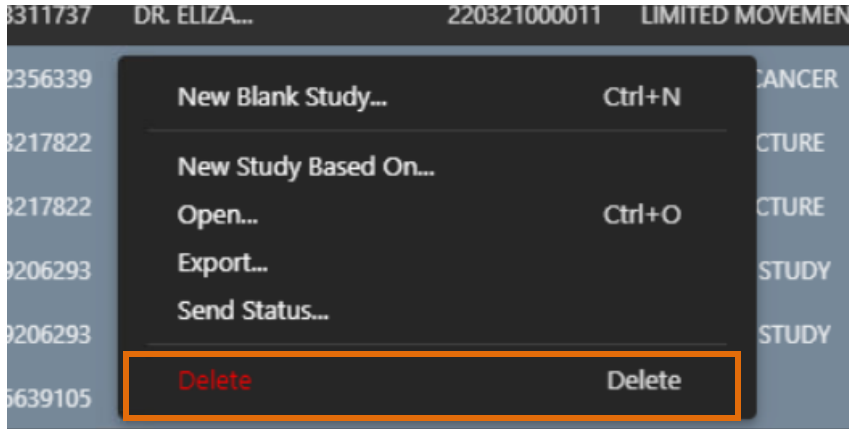
Study Dashboard

NEW BLANK STUDY... SEND... filter list

STUDIES WORKLIST QUERY/RETRIEVE

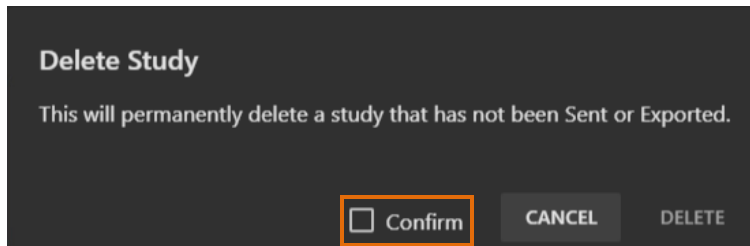
	Last	First	DOB	G	Study Date	Patient ID	Referring	Performing
	ROSSI	MARK	5/20/1954	M	3/21/2022	90363183	DR. HOW...	
	ROSSI	MARK	5/20/1954	M	3/21/2022	90363183	DR. HOW...	
	MARTIN	CHLOE	10/14/1973	F	3/21/2022	57321947	DR.JOSEP...	
	MARTIN	CHLOE	10/14/1973	F	3/21/2022	57321947	DR.JOSEP...	
	NGUYEN	LIAM	7/12/1962	M	3/21/2022	78344015	DR. RICHA...	
	NGUYEN	LIAM	7/12/1962	M	3/21/2022	78344015	DR. RICHA...	

4. After verifying all the studies are on PACS:
 - a. Click on the oldest study located at the bottom of the list.
 - b. Hold down the  key and then use the Up Arrow  key to highlight older studies.
 - c. Right-click on the list and select **Delete**.

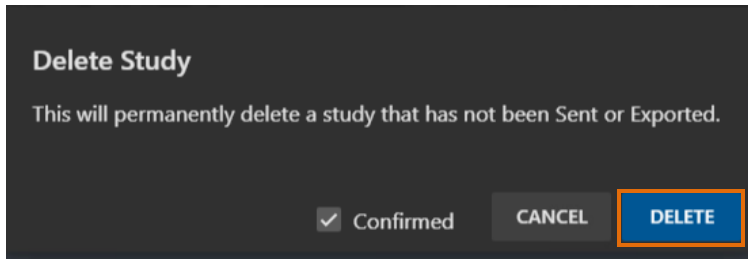


5. Click **Cancel** to stop the study deletions or click the **Confirm** checkbox to confirm the selected studies' deletion.

IMPORTANT: This is a destructive delete. This means you will not be able to recover the studies in TIMS MVP or TIMS Review. However, you will be able to access studies that have been backed up in PACS or some other system.



6. Click **Delete** to permanently delete the selected studies.

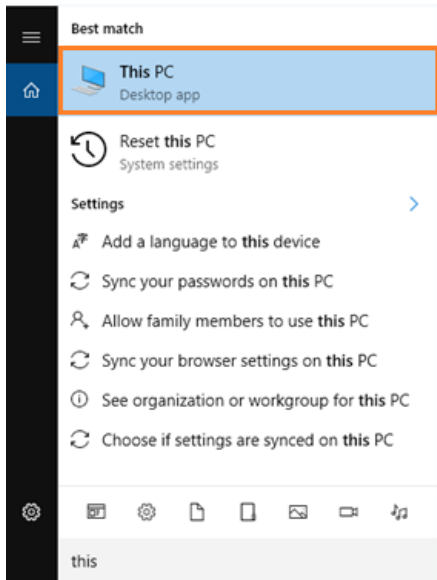


7. Return the **Study Date** column sort to the original setting.
8. Reboot and restart the TIMS MVP or TIMS Review system.

Verify Disk Space

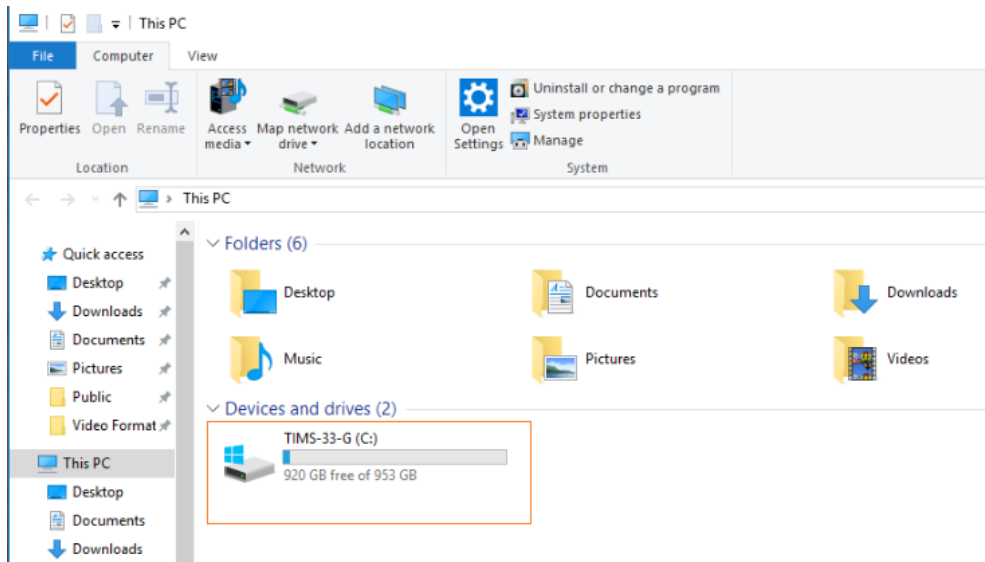
To verify the disk space:

1. Click the Windows Search bar in the bottom left-hand corner of the screen and select **This PC**.



2. Select the **(C:)** drive and note the amount of free disk space.

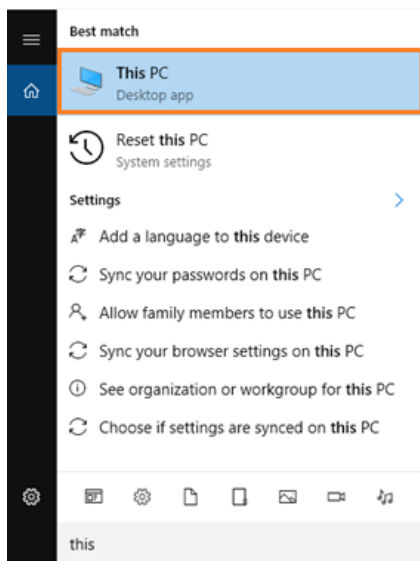
It is recommended that if there is less than 30% free disk space, then you need to consider deleting files to keep the system running optimally.



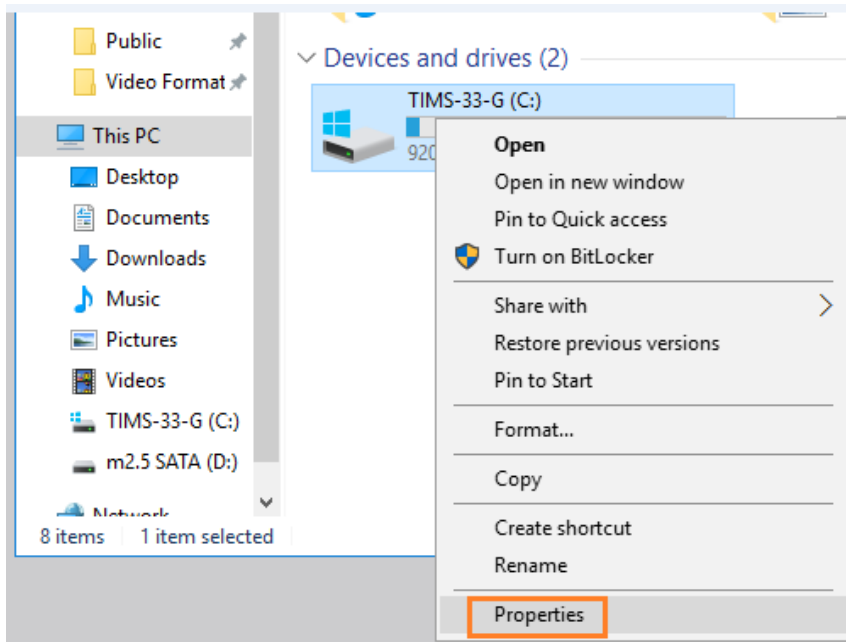
Run a Check Disk on the Hard Drive

To run a check disk on the hard drive:

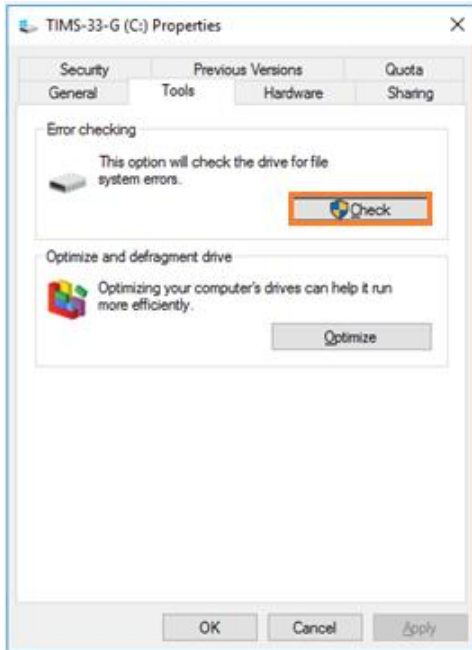
1. Click the Windows Search bar in the bottom left-hand corner of the screen and select **This PC**.



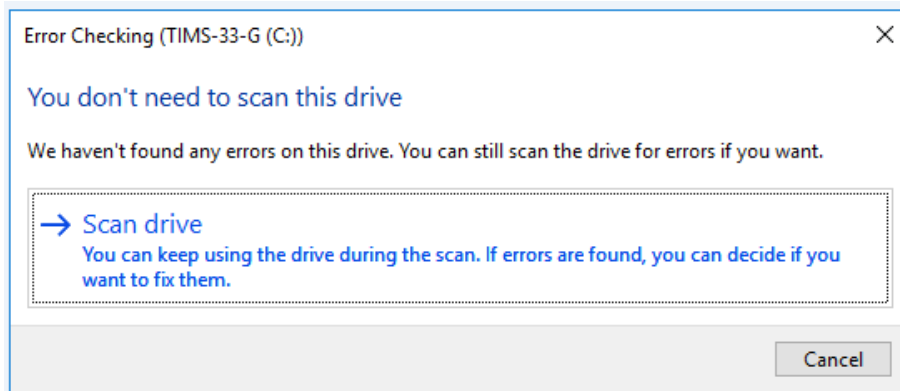
2. Right-click on the **C: Drive** and select **Properties** from the menu.



3. Click the **Tools** tab and under **Error-checking** click the **Check** button.



4. Select **Scan drive**.

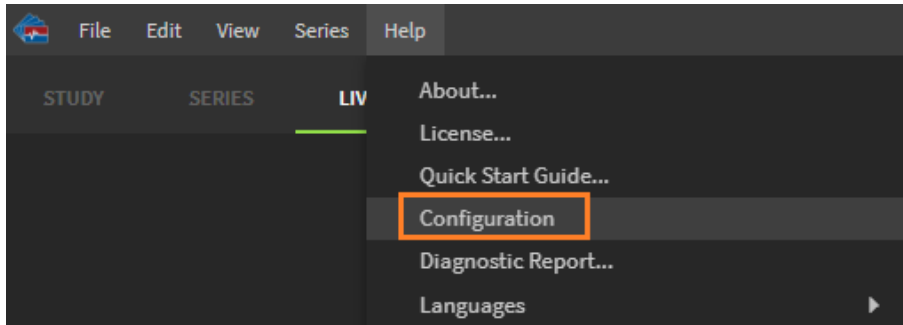


5. When the scan is completed, click **Close**.
6. Reboot the TIMS MVP or TIMS Review system.

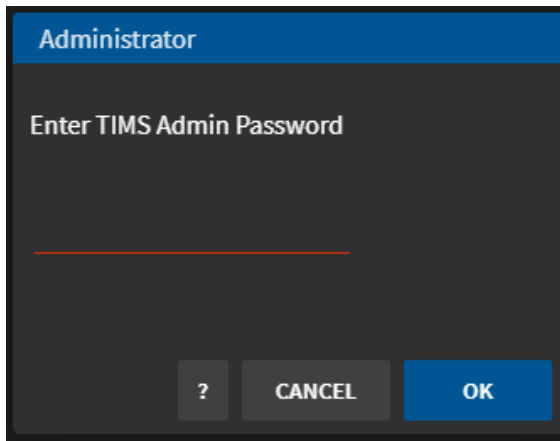
Verify TIMS MVP Disk Study Space Limit

To verify the TIMS MVP disk study space limit:

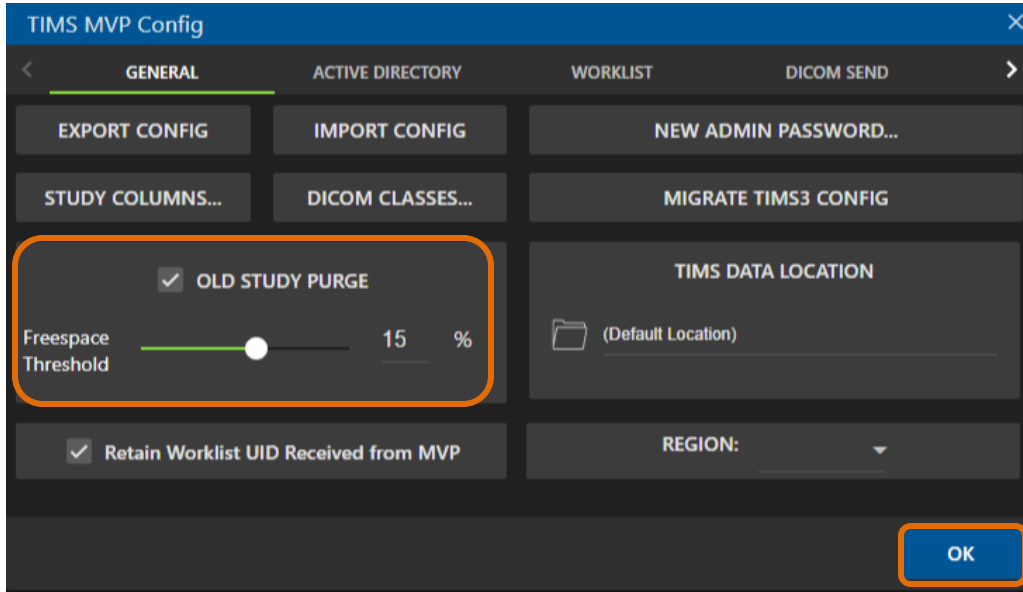
1. In TIMS MVP or TIMS Review, click **Help** and select **Configuration**.



2. Type in the administrator password and click **OK**.



3. On the **TIMS MVP Config** page, enable **OLD STUDY PURGE** and set it to **15%**. Click **OK**.



Calibrate Image Quality

To verify image quality:

1. If possible, open a calibration image on the medical device.
2. Create a test study on TIMS MVP and capture an image.
3. Send the calibration image to PACS.
4. On PACS, review the following:
 - Grayscale levels
 - Aspect ratios
 - Image quality
5. If image quality is not optimized, contact technical support for assistance.

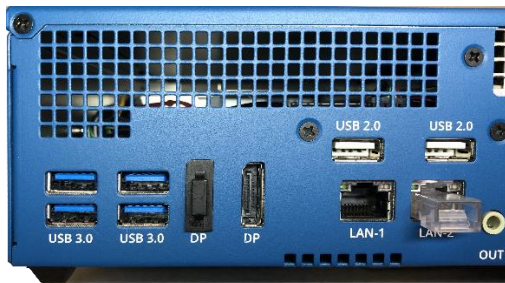
Clean TIMS Computer Air Grills

To clean the TIMS computer air grills:

IMPORTANT: Perform this step in three (3) intervals.

1. Ensure that the grill of the TIMS computer system is not blocked.
2. Shut down the TIMS computer system and then direct the compressed air (from the canister) towards the grill to remove dust particles.

NOTE: TIMS computer shown. For TIMS Review computer, clean as per manufacturer's recommendations.



TIMS rear panel vents



TIMS side panel vent



Upon completion of Preventive Maintenance, affix a label to the TIMS computer indicating date of preventive maintenance.

Clean the TIMS Computer, LCD Display and the TIMS Mobile Cart

Most common disinfectant wipes and diluted cleaning solutions that are safe to use in patient care environments are also acceptable to use for cleaning the TIMS mobile cart system. This includes the following:

- TIMS mobile cart
- TIMS system
- Accessories
- Touchscreen monitor

Please view the touchscreen monitor requirements for disinfection agents, as they may differ from what is used for the TIMS computer, mobile cart and accessories.

Cleaning Instructions for TIMS Computer, Mobile Cart and Accessories

Be sure to follow manufacturers' suggested guidelines for the specific wipes or solutions being used. Use a soft cloth or wipe to clean the product. Avoid excess dampness and do not allow liquids to spill inside Capsa Healthcare products. Do not use steel wool or other abrasive materials.

The following are lists of acceptable cleaning agents for the TIMS cart and TIMS system:

Alcohol and Bleach-based

- Bleach dilution (10%)
- Clorox Dispatch

Peroxide-based

- Hydrogen peroxide
- Virox 5
- Steriplex SD
- Accel TB

Quaternary Ammonium Compound (e.g. Benzalkonium Chloride)

- Metrex CaviWipes and CaviCide
- PDI Sani Wipes, Sani Cloth AF, Sani Cloth Plus, Super Sani Cloth
- Enverros SaniMaster 4
- Virex 256
- DisCide
- SaniZide
- Envirocide

Unacceptable Cleaning Methods and Chemicals

The following are unacceptable cleaning methods and chemicals:

Non-diluted bleach or chemicals

- Acetone

- Mineral Spirits
- Abrasive cleaners
- Baking soda
- Paint thinners or solvents
- Any flammable or toxic chemicals
- Do not use industrial washing machines

Cleaning Instructions for Touchscreen Monitor

The following list are approved chemicals for use on touchscreen monitors for both the housing and the touch glass. We do not recommend using any chemicals that are not on the approved list. Although these chemicals may be sprayed directly on the unit and the touch glass, it is recommended to spray the cleaning chemical onto a cleaning cloth and then cleaning the unit and the touch glass.

Approved Cleaning Chemicals

- Isopropyl
- Sani-Cloth
- CaviWipes (or similar)
- Clorox Disinfecting Wipes
- Windex (or similar)

Chemicals That Cause Damage

- Nitric Acid
- Turpentine
- Toluene
- Bleach (Sodium Hypochlorite, NaOCl)
- Hydrogen peroxide
- Ammonia

IMPORTANT: Never use abrasive cloths, paper towels, or tissue paper, which can scratch the touchscreen.

Cleaning Tips for the Touchscreen Monitor

The following tips help keep your touchscreen functioning at an optimal level:

- Disconnect the AC power cable before cleaning.
- To clean the display unit cabinet, use a clean cloth lightly dampened with a mild detergent.
- It is important that your unit remains dry. Do not get liquids on or inside the unit. If liquid does get inside, turn the unit off and have a qualified service technician check it before you power it on again.
- Do not wipe the screen with a cloth or sponge that could scratch the surface.
- To clean the touchscreen, use window or glass cleaner applied to a clean cloth or sponge. Never apply the cleaner directly to the touchscreen. Do not use alcohol (methyl or ethyl), thinner, benzene, or other abrasive cleaners.
- Ensure the environmental temperature and humidity are maintained within specification, and do not block the ventilation slots.
- Monitors are not designed for outdoor use.

Cleaning Instructions for Standard LCD Monitor

The following instructions are for the care and cleaning of the standard LCS monitor:

- Before you lift or reposition the monitor, it is better to disconnect the cables and power cord. Follow the correct lifting techniques when positioning the monitor. When lifting and carrying the monitor, grasp the edges or the monitor. Do not lift the display by the stand or the cord.
- **Cleaning:** Turn the monitor off and unplug the power cord. Clean the monitor surface with a lint-free, non-abrasive cloth. Stubborn stains may be removed with a cloth dampened with mild cleaner.
- Avoid using a cleaner containing alcohol or acetone. Use a cleaner intended for use with the monitor. Never spray cleaner directly on the screen, as it may drip inside the monitor and cause an electric shock.

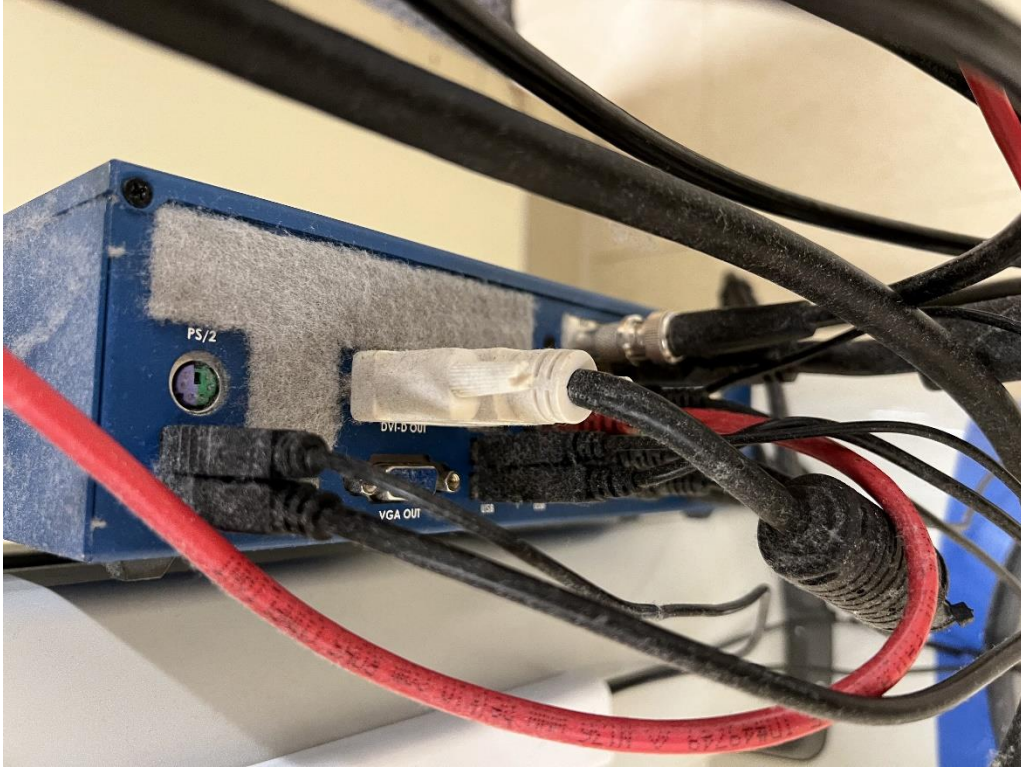
Cleaning Instructions for the Keyboard and Mouse

The following instructions help keep your keyboard and mouse clean:

- Use compressed air to blow off any residual dust.
- Clean surfaces with a non-abrasive cloth dampened with water.

Performing No Preventive Maintenance

This is an example of a TIMS system that did NOT follow the required preventive maintenance. Dusty and dirty computers, vents, cables, and connectors can cause system malfunction or cease operation without notice.



Revision History

Revision:	Date:	Comments:
1	06/01/20	Release
2	03/23/22	Add cleaning instructions

For additional information & assistance, contact: Support@tims.com, +978-458-4624 x204.

TIMS MVP & TIMS Review Preventive Maintenance Checklist Log

TIMS MVP & TIMS REVIEW Maintenance Checklist / Log	
SITE:	
ADDRESS:	
TIMS MVP/TIMS Review S/N:	
TIMS MVP/TIMS Review Rev:	
Checklist:	Comments:
<input type="checkbox"/> Delete old TIMS MVP studies	
<input type="checkbox"/> Defragment hard drive	
<input type="checkbox"/> Verify hard drive space	
<input type="checkbox"/> Perform check disk	
<input type="checkbox"/> Verify / Set TIMS MVP drive space limit	
<input type="checkbox"/> Clean air grills, cables, connectors	
<input type="checkbox"/> Inspect and verify all cables and connections	
<input type="checkbox"/> Clean mobile cart, monitor and computer surface	
Clean keyboard and mouse	
Performed Service:	
<input type="checkbox"/> Check for latest software updates	
<input type="checkbox"/> Verify worklist(s) and PACS access	
<input type="checkbox"/> Verify trigger operation	
<input type="checkbox"/> Review image quality	
Performed Service:	
<input type="checkbox"/> Name:	
<input type="checkbox"/> Date:	
Performed Service:	
<input type="checkbox"/> Name:	
<input type="checkbox"/> Date:	



Three easy ways to get support:

- Remote conference
- Email
- Phone/Fax

TIMS Medical

a division of Foresight Imaging, LLC

1 Executive Drive

Suite 202

Chelmsford, MA 01824

Tel: (001) 978-458-4624 x204

Fax: (001) 978-458-5488

Email: support@tims.com

Web: www.tims.com