

MMIE SOP-14 Image Enhancement Equipment QC & Maintenance

Approved by Director: Dr. Guy Vallaro

Document ID: 1237
Revision: 2
Effective Date: 1/4/2016
Status: Published
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A. Purpose:

In order to provide and maintain the quality of the work expected in the Multimedia and Image Enhancement Unit, it is necessary to ensure that the equipment is in good working condition. Routine quality control measures and equipment maintenance are used to accomplish this. Any quality control measures listed below are generally considered to be the minimum appropriate in each case, providing that the equipment is of good quality and of proven stability and the laboratory has both the equipment capability and expertise to perform adequate internal checks. More frequent checks are not discouraged.

If there is any question concerning the reliability of an instrument or piece of equipment, a maintenance check should be performed immediately. If the instrument or piece of equipment is deemed unreliable, this instrument or piece of equipment will be taken off-line until repairs or other appropriate measures are taken. Refer to SOP-GL-1, Unit 5.5.

If the malfunctioning equipment was used to produce a product for the submitting agency/customer, the customer will be notified. Refer to Units 4.4.2 and 5.5.7 of the GL-1 SOP.

B. Responsibility:

Forensic Science Examiners assigned to the Multimedia and Image Enhancement Unit or conducting casework in the Unit.

C. Documentation

Documentation of quality control will be made on the designated worksheet (MMIE: General). A logbook (Equipment Logbook) was maintained for the quality control of all designated equipment prior to 2014. This logbook is now used to cite documentation of date of maintenance or repair, other relevant observations or date taken out of service. This logbook contains the equipment list being used in the Unit.

D. Procedure

1. Computers

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This Unit utilizes several computers to perform casework and these computers contain various editing and enhancement software programs and hardware to generate working copies of audio, video and data files for each case.

01. Quality Control Procedure

It is the responsibility of employees to report any malfunction to the Supervisor and the Information Technology Department.

It is the responsibility of employees to ensure that the computers are operating properly and appropriate updates and virus checks are performed in a timely manner.

02. Maintenance Procedure

If the computers are not functioning properly, a qualified service technician shall repair the equipment or the computer shall be replaced with a comparable model.

2. Video Cameras

The Unit utilizes the video cameras to playback and create a digital storage file of video information. This camera may be used to import digital video/audio files by fire-wire (IEEE) into video/audio editing and enhancement software.

01. Quality Control Procedure

On days of use, the camera shall be inspected to ensure that all controls are functioning. A record of this inspection shall be maintained on the MMIE General Worksheet

It is the responsibility of employees to report any malfunctioning of these video cameras to the Supervisor.

It is the responsibility of employees to ensure that the video cameras are working properly and that any malfunctions will be repaired or replaced in a timely manner.

02. Maintenance Procedure

If the video cameras are not functioning properly, a qualified service technician shall repair the instrument or this camera shall be replaced with a similar working model. Information on any maintenance will be noted in the Equipment Logbook. Records must be kept regarding repairs and/or corrective actions.

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3. VCR/DVD Players and Recorders

The Unit uses the various VCR/DVD players/recorders for the playback or recording of DVD, SVCD, VCD, VHS and audio CDs. These pieces of equipment may also be used to playback compact disks containing JPEG and MP3 files. This equipment is used primarily as the player in duplication procedures.

01. Quality Control Procedure

On days of use, these units shall be inspected to ensure that all controls are functioning. A record of this inspection will be maintained on the MMIE General Worksheet. All copies made by this equipment will be verified.

It is the responsibility of employees to report any malfunction of this player to the Supervisor.

It is the responsibility of employees to ensure that the player is working properly prior to beginning casework and that any malfunction will be repaired or replaced in a timely manner.

02. Maintenance Procedure

If the player is not functioning properly, a qualified service technician shall repair the instrument. Maintenance logs must be kept regarding repairs and/or corrective actions.

03. Safety

Visible and invisible laser radiation is used in some of these instruments. There is a danger of eye injury. Only qualified service personnel shall remove the cover or attempt repairs.

4. Televisions and Monitors

This Unit utilizes the televisions and monitors for viewing/monitoring video evidence when being placed through various recorders. This unit allows input through Video/Audio, S-Video and Component CMY lines.

01. Quality Control Procedure

It is the responsibility of employees to report any malfunctions occurring with the television

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to the Supervisor.

It is the responsibility of employees to ensure that the television is working properly prior to starting casework and that any malfunctions are repaired or replaced in a timely manner.

02. Maintenance Procedure

If the television is not functioning properly, a qualified service technician shall repair the instrument. Maintenance logs must be kept regarding repairs and/or corrective actions.

5. MiniDV and Hi-8mm Players/Recorders

The Multimedia Unit utilizes the MiniDV and Hi-8mm players/recorders to capture, record and play-back digital video images and audio for video/audio enhancement and duplications. The digitized video is imported into the appropriate editing/enhancing software using a fire-wire (IEEE) port.

01. Quality Control Procedure

On days of use, this unit shall be inspected to ensure that all controls are functioning. A record of this inspection will be maintained on the MMIE General Worksheet. It is the responsibility of employees to report any malfunctioning of these units to the Supervisor.

It is the responsibility of employees to ensure that the MiniDV/Hi-8mm player/recorders are working properly and that any malfunctions are repaired or replaced in a timely manner.

02. Maintenance Procedure

If this equipment is not functioning properly, a qualified service technician shall repair this unit. Maintenance logs must be kept regarding repairs and/or corrective action.

6. Standard Audio and Microcassette-Transcriber Player/Recorders

The Multimedia Unit utilizes the microcassette player/recorder to record and play-back microcassette tapes for audio enhancement and duplications. The audio signal from this equipment is imported into the appropriate editing/enhancement software using the headphone (line-out) and microphone (line-in) pathway.

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01. Quality Control Procedure

On days of use, these units shall be inspected to ensure that all controls are functioning. A record of this inspection will be maintained on the MMIE General Worksheet

It is the responsibility of employees to report any malfunctioning of this equipment to the Supervisor.

It is the responsibility of employees to ensure that the equipment is working properly and that any malfunctions are repaired or replaced in a timely manner.

02. Maintenance Procedure

If this equipment is not functioning properly, a qualified service technician shall repair this unit. Maintenance logs must be kept regarding repairs and/or corrective action.

7. Tableau Forensic USB Bridge (Ultrablock) / Forensic SATA/IDE Bridge (Tableau Ultrablock 2)

The Multimedia Unit utilizes the Tableau Forensic Ultrablocks to protect (write-block) any evidentiary media which includes, but is not limited to: thumb drives, SD cards, miniSD cards, MS, SM (smart media), microSD, camera flash media, hard drives and any memory media/data storage devices connected with a USB port.

01. Quality Control Procedure

On days of use, this unit shall be inspected to ensure that all controls are functioning. A record of this inspection will be maintained on the MMIE General Worksheet

It is the responsibility of employees to report any malfunctioning Tableau Forensic Ultrablock to the Supervisor.

It is the responsibility of employees to ensure that the Tableau Forensic Ultrablock is working properly and that any malfunctions are repaired or replaced in a timely manner.

02. Maintenance Procedure

If the Tableau Forensic Ultrablock is not functioning properly, a qualified service technician shall repair this unit. Maintenance logs must be kept regarding repairs and/or corrective action.

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8. Software

The Multimedia and Image Enhancement Unit utilizes various types of software to capture, edit and enhance video/images/audio. The Unit will verify that this software is working properly according to the manufacturers specifications and that the computer in which it was installed has the minimum system requirements.

Any upgrades in versions may have a performance check conducted depending on the magnitude of the changes made with the upgrade if they affect filters and other features used for casework.

E. Sources of Error:

F. References:

Refer to instruction/operation manuals for each piece of equipment/software located in the Multimedia and Image Enhancement Unit or in the Quality Section Folder.