

**MMIE SOP-14 Image Enhancement Equipment QC & Maintenance**

*Approved by Director: Dr. Guy Vallaro*

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Page 1 of 6

**A. Purpose:**

In order to provide and maintain the quality of the work expected in the Multimedia and Image Enhancement Section, 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 calibration/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, Section 5.4.5.4 and 5.5.2.

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

**B. Responsibility:**

Forensic Science Examiners

**C. Documentation**

Documentation of quality control will be made on the designated worksheet. A logbook has been maintained for the quality control of all designated equipment prior to 2014. . Documentation may include date of maintenance or repair, other relevant observations and examiner's initials.

**D. Procedure**

1. Computers

This section utilizes several computers to run various editing and enhancement software programs and hardware to generate working copies of audio, video and data files for each case.

**MMIE SOP-14 Image Enhancement Equipment QC & Maintenance**

Document ID: 1237  
Revision: 1  
Effective Date: 8/18/2014  
Status: Published  
Page 2 of 6

*Approved by Director: Dr. Guy Vallaro*

01. Quality Control Procedure

It is the responsibility of employees to report any malfunction to the Supervisor and the Information Technology Department or the Computer Crimes Electronic Evidence Laboratory.

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 section utilizes the video cameras to playback and create a digital storage file of video information. This camera is 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

Monthly, this equipment shall be cleaned and inspected; any issues or malfunctions will be included in the QC/Maintenance Log Book.

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. Maintenance logs must be kept regarding repairs and/or corrective actions.

3. VCR/DVD Players and Recorders

**MMIE SOP-14 Image Enhancement Equipment QC & Maintenance**

Document ID: 1237  
Revision: 1  
Effective Date: 8/18/2014  
Status: Published  
Page 3 of 6

*Approved by Director: Dr. Guy Vallaro*

The section 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

Monthly, this equipment shall be cleaned and inspected; a record of any issues will be included in the QC/Maintenance Log Book.

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 section 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

**MMIE SOP-14 Image Enhancement Equipment QC & Maintenance**

Document ID: 1237  
Revision: 1  
Effective Date: 8/18/2014  
Status: Published  
Page 4 of 6

*Approved by Director: Dr. Guy Vallaro*

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

Monthly, this equipment shall be cleaned and inspected; a record any issues will be included in the QC/Maintenance Log Book.

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

**MMIE SOP-14 Image Enhancement Equipment QC & Maintenance**

Document ID: 1237  
Revision: 1  
Effective Date: 8/18/2014  
Status: Published  
Page 5 of 6

*Approved by Director: Dr. Guy Vallaro*

The Multimedia Section utilizes the Sony M2000 Microcassette-Transcriber 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.

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

Monthly, this equipment shall be cleaned and inspected; a record of any issues will be included in the QC/Maintenance Log Book.

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)

The Multimedia Section utilizes the Tableau Forensic USB Bridge to protect (write-block) any evidentiary flash media which includes, but is not limited to: thumb drives, SD cards, miniSD cards, MS, SM (smart media), microSD, camera flash media 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 USB Bridge to the Supervisor.

It is the responsibility of employees to ensure that the Tableau Forensic USB Bridge is

**MMIE SOP-14 Image Enhancement Equipment QC & Maintenance**

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Effective Date: 8/18/2014

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Page 6 of 6

working properly and that any malfunctions are repaired or replaced in a timely manner.

**02. Maintenance Procedure**

If the Tableau Forensic USB Bridge0 is not functioning properly, a qualified service technician shall repair this unit. Maintenance logs must be kept regarding repairs and/or corrective action.

**8. Software**

The Multimedia and Image Enhancement Section utilizes various types of software to capture, edit and enhance video/images/audio. The Section 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.

**E. Sources of Error:**

**F. References:**

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