AMM768 Audio Multi-Channel Monitor Declassification and Security Instructions

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071-2173-00

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Preface

This document helps customers with data security concerns to sanitize or remove memory devices from the AMM768 Audio Multi-Channel Monitor.

These products have data storage (memory) devices and data output devices (USB ports). These instructions tell how to clear or sanitize the memory devices and disable the data output devices. The instructions also tell how to declassify an instrument that is not functioning.

Products

The following Tektronix products are covered by this document:

- AMM768 (Options DS, AD, DD, DDE, SDI)

Related Documents

AMM768 Audio Multi-Channel Service Manual

Terms

The following terms may be used in this document:

- **Clear.** This removes data on media/memory before reusing it in a secured area. All reusable memory is cleared to deny access to previously stored information by standard means of access.
- **Erase.** This is equivalent to clear.
- **Media storage/data export device.** Any of several devices that can be used to store or export data from the instrument, such as a USB port.
- **Nonvolatile memory.** Data is retained when the instrument is powered off.
- **Power off.** Some instruments have a “Standby” mode, in which power is still supplied to the instrument. For the purpose of clearing data, putting the instrument in Standby mode does not qualify as powering off. For these products, you will need to either press a rear-panel OFF switch or remove the power source from the instrument.
- **Remove.** This is a physical means to clear the data by removing the memory device from the instrument. Instructions are available in the product Service Manual.
- **Sanitize.** This eradicates the data from media/memory so that the data cannot be recovered by other means or technology. This is typically used when the device will be moved (temporarily or permanently) from a secured area to a non-secured area.
- **Scrub.** This is equivalent to sanitize.
- **User-modifiable.** The user can write to the memory device during normal instrument operation, using the instrument interface or remote control.
- **Volatile memory.** Data is lost when the instrument is powered off.

Clear and Sanitize Procedures

Memory Devices

The following tables list the volatile and nonvolatile memory devices in the standard instrument and listed options. Detailed procedures to clear or sanitize these devices, if any, are shown following each table.

Table 1: Volatile Memory Devices

Type and minimum size	Function	User modifiable [1]	Data input method	Location	To clear	To sanitize
FPGA 1.3 K	Audio measurement	No	Programmed by onboard flash memory	Plugs into optional Digital Audio board, IC8 on Dolby Audio board	None	Remove the power source from the instrument for at least 20 seconds
FPGA 920 Kb	Audio measurement	No	Programmed by onboard serial EEPROM	U521 on Audio board	None	Remove the power source from the instrument for at least 20 seconds
FPGA 1.9 Mb	Mapper#1	No	Programmed by onboard flash memory	U652 on Main board	None	Remove the power source from the instrument for at least 20 seconds
SRAM 512 K X 18	Mapper#1 RAM	No	Static memory for mapper FPGA	U742, U751 on Main board	None	Remove the power source from the instrument for at least 20 seconds
SDRAM 16 M X 16	Mapper#1 RAM	Yes	Dynamic memory for mapper FPGA	U752 on Main board	None	Remove the power source from the instrument for at least 20 seconds
FPGA 1.9 Mb	Mapper#2	No	Programmed by onboard flash memory	U631 on Main board	None	Remove the power source from the instrument for at least 20 seconds
SRAM 512 K X 18	Mapper#2 RAM	No	Static memory for mapper FPGA	U723, U743 on Main board	None	Remove the power source from the instrument for at least 20 seconds
SDRAM 16 M X 16	Mapper#2 RAM	Yes	Dynamic memory for mapper FPGA	U731 on Main board	None	Remove the power source from the instrument for at least 20 seconds
FPGA 1.9 Mb	Rasterizer	No	Programmed by onboard flash memory	U641 on Main board	None	Remove the power source from the instrument for at least 20 seconds
SDRAM 16 M X 16	Rasterizer SDRAM	Yes	Dynamic memory for mapper FPGA	U651, U661 on Main board	None	Remove the power source from the instrument for at least 20 seconds

Table 1: Volatile Memory Devices, (cont.)

Type and minimum size	Function	User modifiable[1]	Data input method	Location	To clear	To sanitize
SDRAM 16 M X 16	CPU RAM	No	CPU access	U422, U423, U521, U522 on Main board	None	Remove the power source from the instrument for at least 20 seconds
SRAM 256 K X 16	PLD RAM	No	PLD access	U511, U513, U512, U514 on Main board	None	Remove the power source from the instrument for at least 20 seconds

1 During normal instrument operation.

Table 2: Nonvolatile Memory Devices

Type and minimum size	Function	User modifiable[1]	Data input method	Location	To clear	To sanitize
Flash Memory 4 Mb	Audio measurement	No	Programmed by software during software upgrade	Plugs into optional Digital Audio board, IC9 on Dolby Audio board	None	None
Serial EEPROM 256 X 8	Stores audio calibration coefficients	No	Programmed during calibration	U421 on Analog Audio board	Recalibrate Audio	None
Flash Memory 512 M X 16	Loads FPGAs on power up Contains instrument software diagnostic logs and presets	Yes	Programmed by software during software upgrade	U311, U313 on Main board	See *Clear Presets Procedure* and *Clear IP and SNMP Address Fields Procedure*	None
PLD 8 Kb	Loads SRAM for display	No	Programmed by flash memory during power up	U413 on Main board	None	None
Real Time Clock	Stores time set by user	Yes	UI	U933 on Main board	Set to GMT	Set to GMT
Serial EPROM	Diagnostic logs, Main board Pix mon calibration, and factory only Looping diagnostic mode control	No	Factory set	U445 on Main board	See *Clear Diagnostic Log Procedure*. Recalibrate Pix mon to overwrite existing values.	None

Table 2: Nonvolatile Memory Devices, (cont.)

Type and minimum size	Function	User modifiable[1]	Data input method	Location	To clear	To sanitize
Serial Flash	Future expansion	No	Tested on power up Not used	U432 on Main board	None	None
Serial EEPROM	MAC address	No	Set at factory	U221 on Main board	None	None

[1] During normal instrument operation.

Clear Presets Procedure

1. Press the **PRESETS** button. Then select **Settings** > **Recall Preset** from the soft keys. Select **Factory** from the pop-up menu to restore the instrument to the factory state.
2. Press the **PRESETS** button. Then select **Settings** > **Save Preset** from the soft keys. Press any preset that is not "Empty" to overwrite that preset with the factory settings. If the name has been customized, overwrite it with the label "Default".
3. Repeat step 2 for all non-empty presets.

Clear Diagnostic Log Procedure

1. Press the **MAIN** button. Then press **Config** > **Diagnostics** > **Diagnostics Log** from the soft keys.
2. Press the **Reset** soft key to remove all entries in the diagnostic log.

Clear IP and SNMP Address Fields Procedure

1. Press the **MAIN** button. Then press **Config** > **Utilities** > **Communications** from the soft keys.
2. Press **Config Mode** > **Manual** > **Close Config Mode** from the soft keys.
3. Press the **Network Setup** soft key.
4. Select **IP ADDRESS** and then press the **Keyboard** soft key. From the keyboard display, press **Clear All**, then **Set2**, and then enter "0.0.0.0" to input a default IP address.
5. Repeat Step 4 for the Subnet Mask and Gateway Address.
6. Press the **MAIN** button. Then press **Config** > **Utilities** > **Communications** > **SNMP Setup** from the soft keys.
7. Select **Trap Destination 1Address** then press the **Keyboard** soft key. From the keyboard display, press **Clear All**, then **Set2**, and then enter "0.0.0.0" to input a trap address.
8. Repeat Step 7 for the other Trap Addresses.

Data Export Devices

The following table lists the data export devices in the standard instrument and listed options. Detailed procedures to disable these devices, if any, are shown following the table.

Table 3: Data Export Devices

Type and minimum size	Function	User modifiable [1]	Data input method	Location	To disable
Ethernet	Communications	Yes	Standard Ethernet protocol	Rear of instrument	See *Disable Ethernet Access Procedure*
USB	Data storage	Yes	Standard USB protocol	Front of instrument	None

[1] During normal instrument operation.

Disable Ethernet Access Procedure

1. Press the **MAIN** button. Then select **Config** > **Utilities** > **Communications** > **Network Setup** from the soft keys.
2. In the Network Setup dialog screen, select **Disabled** for the Remote Web Interface.

Disable SNMP Access Procedure

1. Press the **MAIN** button. Then select **Config** > **Utilities** > **Communications** > **SNMP Setup** from the soft keys.
2. In the SNMP Setup dialog screen, select **Disabled** for the Remote SNMP Mode.

Enable Ethernet and SNMP Access Procedure

To enable Ethernet and SNMP access, use the same procedures you would use to disable these devices, but select **Enabled** for each device in the dialog screen.

Troubleshooting

How to Clear or Sanitize a Non-Functional Instrument

To sanitize a non-functional instrument, remove the Main board and return the instrument to Tektronix for installation of a new Main board.

How to Recover from Clearing or Removing the Instrument's Memory

Reload the system software per the loading instructions.