

2400 / 2500 Series Microwave Signal Generators (Model 2400B/2400C/2500A/2500B Series) Instrument Security and Memory Sanitization Procedure

Letter of Volatility



The Giga-tronics Model 2400 and 2500 Series Microwave Signal Generators are designed with several types of memory. The user-accessible memory is used to store various parameters pertaining to the synthesizer configuration, which include frequency, level parameters set by the user. There are 10 user-accessible memory locations for storing instrument states and 1 additional location reserved for recovering the last instrument state automatically stored when the synthesizer is powered down.

All user-programmable memory is located in the A11, Main Processor PCA. These memory types include NVRAM (Non-Volatile Random Access) and Flash memory. All instrument state data is stored in NVRAM and is maintained within the chip memory via a battery included in the synthesizer. Flash memory stores instrument specific information such as Contrast setting, Reference ADC (Timebase), FM Mid DAC, FM High DAC and YigCap Delay, etc.

Memory Clearing Procedure

All user-programmable memory in NVRAM including all saved instrument states and the power-down states, can be cleared by performing the Power-Up Preset.

The following procedure describes the correct process for clearing all user accessible memory and resetting the instrument to factory defaults.

1. If the unit is powered, press the power switch on the front panel
2. With the unit power down, press the power switch on the front panel power up the unit.
3. Press and hold the PRESET button while the unit displays "INITIALIZING GT2400" (or GT2500).
4. After "Resetting Memory..." is displayed, release the PRESET button. All user information will be cleared.

Verification of Clear Procedure

- Press the Recall button
- Using the numeric keypad, enter "0" and any units button to recall Instrument State "0"
- Verify that the synthesizer instrument state is set to the factory default settings. See operations manual for default state configuration
- Repeat verification procedure for Instrument States "1" through "9"

Memory Device List:

All user accessible memory is located on the A11 Main Processor PCA.

Volatile RAM

Board Designation	Giga-tronics Part Designation	Manufacturer	Manufacturer Part Number	Description	Function
U106, U107, U108, U109	UMDO-84002	Cypress	CY7C1049-20VC	KM684002 512K x 8 SRAM	Running F/W
U503, U504	UMDO-43256	NEC	UPD43256BGU-70L	UPD43256BGU-70L 32K SRAM	Video SRAM

Non-Volatile devices

Board Designation	Giga-tronics Part Designation	Manufacturer	Manufacturer Part Number	Description	Function
U207, U208	UMDO-84000	Hitachi	HM628512CLFP-5	KM684002 512K x 8 SRAM	User Data *
U210, U211	UMDO-28800	Intel	E28F800B5-B90	E28F800B5-B90 512K Flash	F/W Storage

* AMD unit configuration – battery backed

Memory Clearing Procedure with Option 44, Blank Front Panel:

Send the Synthesizer the *RST command, which sets the start-up settings to factory defaults. To complete the Sanitization, enter 10 new stored instrument set-ups to clear any trace of the frequency and power levels that might have been previously saved. For example, enter an arbitrary frequency and power level (CW, 2 GHz, 0 dBm) for all 10 memory locations and then save them with the *SAV command.

Verify by sending the *RCL command.