

Technical Note



2023 Series Memory Security



This document gives a full description of the types of memory devices contained in the 2023 series signal generator and information on how to clear memory stores for when the instrument is removed from a secured application.

There are occasions where instruments are required to be used in a secured environment. This means that no test instruments can leave the area e.g. for calibration, unless all memory settings are erased.

This technical note describes the methods available to erase the memory settings in the 2023 series signal generators and then goes on to describe the types of memory used.

A full description of each memory type is given indicating which sub-assembly the device(s) is located with its reference designator. A brief description of the contents of the device(s) is given. The statement of volatility indicates where memory is maintained or lost during power-down. The statement of accessibility indicates whether or not the memory can be accessed, either by a user or service personnel.

Clearing memory stores

Memory stores may be cleared by unlocking the instrument to level 2* and using UTIL 44 (Memory Initialize). It is then possible to erase a particular store, all carrier stores and/or all full stores. RAM stores are lost when the power is removed.

The stores may be erased remotely by sending the appropriate GPIB command:

ERASE

:CFRQ erase all Carrier Frequency stores (0-99)

:FULL erase all Full stores (100-199)

:RAM erase all RAM stores (200-299)

:ALL erase all stores (0-299)

* Please contact your nearest Aeroflex representative to obtain the level 2 password

Memory types

There are three types of memory used in 2023 series. All are located on the AB1/x control board.

Description	Qty. 1 EPROM, 27C4001, 512 kbytes x 8 (4 Mbits): IC5
Volatility	Non-volatile UV erasable memory.
Contents	This contains the operating firmware for the instrument.
Accessibility	Non-user accessible

Description	Qty. 1 RAM, HM628128, 128 kbytes x 8 (1 Mbit): IC6
Volatility	This is used during power-up. Content is lost on power-down.
Contents	to store instrument settings and other volatile information
Accessibility	User accessible

Description	Qty. 1 EARM, 28C256, 32 kbytes x 8 (256 kbit): IC7
Volatility	This electrically alterable non-volatile memory is retained at power-down but may be changed as required.
Contents	i) Calibration data ii) Memory store settings (see "Clearing Memory Stores" below) iii) Instrument configuration settings iv) Instrument ID (serial number, type number, option configuration etc.)
Accessibility	Calibration data is non-user accessible but may be accessed via a level 2 password or via GPIB commands published in the service manual. Memory stores and instrument configuration settings are user-accessible. Instrument ID information is protected by a super-user password which can only be obtained on request from Aeroflex UK operation in Stevenage.

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Part No. 46891/955, Issue 1, 08/06