

Application Note

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Semi-Automatic Testing Using Memories



The 2030/40 series Signal Generators' extensive memory facilities can be used to semi-automate a repetitive test sequence

Introduction

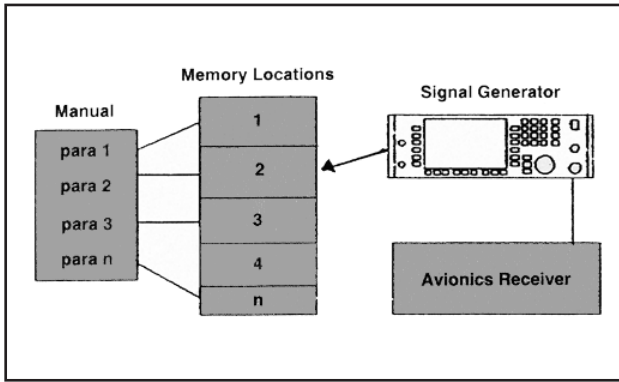
Many of the tests performed on avionics airborne and ground systems are based on scheduled servicing documents that are conducted at periodic intervals. These tests are performed to verify that system performance is

within pre-defined limits.

It would be a major benefit to the test engineer to be able to quickly set the signal generator to the parameters demanded by each paragraph of the servicing document. This will speed up the tests considerably and ensure

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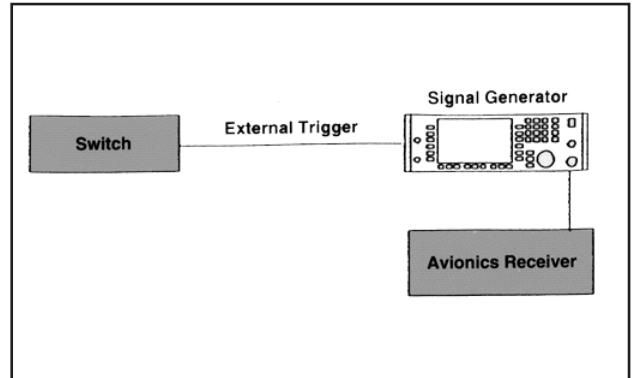
repeatability between operators. To do this it is necessary for the test generator to store away the desired configurations and parameters detailed in the servicing document ready for immediate recall.



2030 Signal Generator

The 2030/40 series of signal generators have comprehensive memory facilities to store full or partial instrument configurations and settings. These memories can be used to semi-automate a test procedure by storing a sequence of configurations and settings as demanded by the maintenance manual. Instrument settings are stored according to the chapter and paragraph of the manual and the memories can then be sequenced in line with the test procedure.

Software versions 4.001 and upwards have the ability for the memories to be sequenced by the external trigger with a suitable switch, without need to go back into the memory menu. In this way, it is possible to view the complete instrument settings on the display as the sequence progresses, and enable parameter adjustment with the increment controls if required. This has great benefits in the speed of operation, standardization and repeatability of the tests.



Setting up the 2030

To use the memory facilities, set up the signal generator as follows:

1. Set the instrument in the desired mode of operation.
2. Enter the required parameter settings as stated in the first paragraph of the test procedure in the maintenance schedule.
3. Store the settings in stores 1 to 48 or 50 to 99.
4. Repeat steps 2 and 3 for each maintenance manual paragraph until the complete test sequence has been entered in memory.
5. In the Utilities menu, select External Trigger to enable operation of the memory increment facility.
6. Return to the memory menu and RECALL the first memory location of the test sequence. Return to Sig Gen mode.
7. Connect a suitable switch to the external trigger input at the rear of the 2030/40.
8. A single switch press will now RECALL the next memory location as the operator proceeds through the test sequence.
9. To repeat the sequence select the Memory menu and RECALL the first memory location of the test procedure.

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