

Instructions



040-1492-04

**Option 2 Upgrade (Serial Digital Test Signals)
SPG422 Component Digital Sync Generator**

063-2345-03

Warning

The servicing instructions are for use by qualified personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety summaries prior to performing service.

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Service Safety Summary

Only qualified personnel should perform service procedures. Read this *Service Safety Summary* and the *General Safety Summary* in the product service manual or the instruction manual.

Do Not Service Alone. Do not perform internal service or adjustments of this product unless another person capable of rendering first aid and resuscitation is present.

Disconnect Power. To avoid electric shock, switch off the instrument power, then disconnect the power cord from the mains power.

Use Care When Servicing With Power On. Dangerous voltages or currents may exist in this product. Disconnect power, remove battery (if applicable), and disconnect test leads before removing protective panels, soldering, or replacing components.

To avoid electric shock, do not touch exposed connections.

Kit Description

Option 2 for the SPG422 Component Digital Sync Generator provides a serial digital test signal generator, which includes test signals chosen to facilitate operations and first line maintenance. The test signal complement includes color bars, full field pluge, crosshatch, bowtie, active picture markers, multiburst, pulse and bar, ramp, and the SDI check field signals. Test signals may be selected from the front panel or via RS-232 remote control. Two BNC outputs are provided.

This document is supported by Tektronix modifications: 82098, 83115, 84409, 88207, and 89465.

Products

SPG422 V1.2.0 or above firmware

NOTE. *If the firmware version in your instrument is older than V1.2.0, you must upgrade the instrument firmware before the functions provided by Option 2 will operate. Use the field upgrade kit, Tektronix part number 050-3116-XX, to upgrade the instrument firmware.*

Kit Parts List

Circuit/figure number	Quantity	Part number	Description
A6	1 EA	671-3126-XX	CKT BD ASSY: TEST SIGNAL OPT 2
-----	1 EA	174-1495-XX	CA ASSY, SP, ELEC: 20, 28 AWG, 3.0 L, RIBBON
-----	2 EA	174-2576-XX	CA, ASSY RF: COAXIAL, RFD, 75 OHM, 18.25 L, 9-2, BNC, FRONT MT, JACK X RTANG, 50 OHM SMB
-----	1 EA	343-0549-XX	STRAP, TIEDOWN, E: 0.098 W X 4.0 L, ZYTE
-----	5 EA	211-0008-00	SCREW, MACHINE: 4-40 X 0.25, PNH, STL CD PL, POZ
-----	1 EA	NS	MARKER, IDENT: MARKED 040-1492-04 OPT 2
-----	1 EA	063-2345-03	Kit Instructions (this document)

NS - Not Saleable

Installation Instructions

These instructions are for personnel who are familiar with servicing the product. If you need further details for disassembling or reassembling the product, refer to the appropriate product manual. Contact your nearest Tektronix, Inc., Service Center or Tektronix Factory Service for installation assistance.



CAUTION. *To prevent static discharge damage, service the product only in a static-free environment. Observe standard handling precautions for static-sensitive devices while installing this kit. Always wear a grounded wrist strap, grounded foot strap, and static resistant apparel while installing this kit.*

Installation

Perform the following steps to install the Option 2 Test Signal Generator board:

1. Remove the top cover and set it aside.
2. Install the Option 2 Test Signal Generator board using the attaching screws provided with this kit.
3. Install the multiconductor ribbon cable between J5 on the Digital board and J1 on the Option 2 Test Signal Generator board.
4. Press out the two button-plugs from the rear panel. The holes are labeled **SERIAL SIGNALS**.
5. Separate the BNC connectors from the two cable assemblies to allow mounting the BNC connectors to the instrument rear panel.

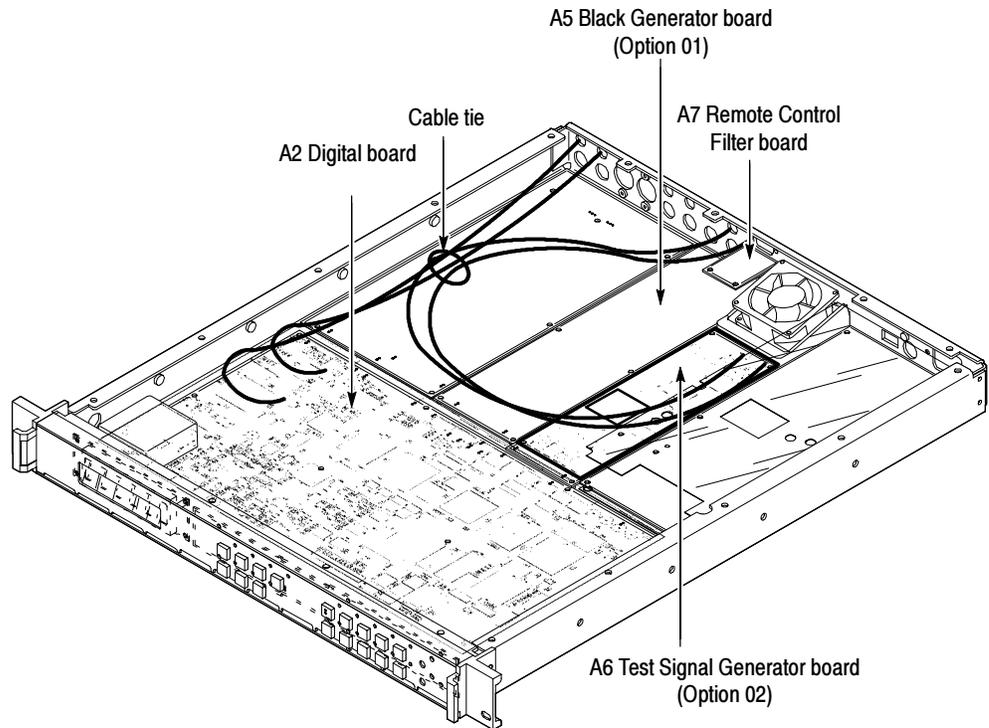


Figure 1: Circuit board locations

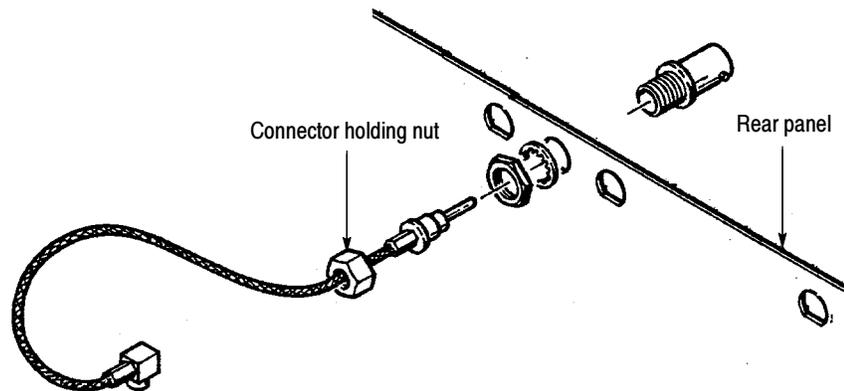


Figure 2: BNC connector/cable assembly configuration

6. Install the two BNC connectors in the rear panel (the holes are labeled **SERIAL SIGNALS**). Install the BNC hardware as shown in Figure 2.
7. Reconnect the cables to the BNC connectors.
8. Plug in the other end of each of the coaxial cables to the connectors labeled J5 and J6 on the Test Signal Generator board.
9. Install the cable tie around the two coaxial cables and around the coaxial cables located near the left side of the instrument. The cable tie will restrain the cables in a position away from the Power Supply. Figure 1 shows the location to install the cable tie.

Reassemble

Perform the following steps to reassemble the instrument:

1. Install the top cover.
2. Install the label marked 040-1492-XX OPT 2 to the right frame rail.

Verify Operation

Verify instrument operation by performing the Performance Verification procedure in the *TSG422 Component Digital Sync Generator Service Manual* (Tektronix part number 071-0596-XX).

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