

Instructions



AWG5UP 10 AWG520 Arbitrary Waveform Generator

075-0890-00

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 user 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, disconnect the mains power by means of the power cord or, if provided, the power switch.

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

This kit provides parts and instructions to upgrade the standard AWG520 to the AWG520 Option-10.

- **AWG5UP 10:** Upgrade the standard AWG520 to AWG520 Option-10.

This document supports Tektronix modification: ECR 30229

Products

AWG520 serial numbers: - - -

Minimum Tool and Equipment List

Required tools and equipment	Description
Screwdriver handle	Accept Phillips-driver bits
#2 Phillips tip	Phillips-driver bit for #2 size screw heads

Kit Parts List

Circuit/figure number	Quantity	Part number	Description
-----	1 ea	119-B072-00	SOLID STATE DRIVE, 128MB
-----	4 ea	211-0871-00	SCREW, MACHINE: M3X6mm
-----	1 ea	174-B687-00	CABLE, ASSY
-----	1 ea	131-A018-00	BUS, CONDUCTOR
-----	2 ea	334-4565-00	MARKER, IDENT, Labeled "671496550" and "671496650"
-----	1 ea	334-1377-50	MARKER, IDENT, Labeled "OP-10"
-----	1 ea	075-0890-00	MANUAL, TECH: INSTRUCTIONS, AWG5UP 10 UPGRADE

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 *AWG510 and AWG520 Arbitrary Waveform Generator Service Manual* (Tektronix, Inc. part number 071-0101-xx).



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.*

These installation instruction consist of four main processes:

- Removing the CPU unit
- Replacing the Hard Disk drive with the Solid State drive and modifying the A30 GPIB board
- Installing the CPU unit and modifying the A11 Connector board
- Verifying instrument performance

Removing the CPU unit

Perform the following procedure to remove the CPU unit.

Removing the Cabinet

1. Disconnect all external cables and the power cord from the generator.
2. Orient the generator so the front cover is on the work surface and the bottom side is facing you.
3. Use a screw driver with a #2 Phillips tip to remove the six screws securing the two feet to the rear of the cabinet.
4. Grasp the left and right edges at the rear of the cabinet.
5. Pull upward to slide the cabinet off the generator. Take care not to bind or snag the cabinet on the internal cabling as you remove it.

Removing the CPU Unit

1. Unplug the GPIB interconnect cable at J110 on the GPIB board and the LAN interconnect cable at the LAN board.
2. Unplug the FDD flat cable, the VGA and COM1 interconnect cable, and the MISC flat cable at the CPU board.

3. Unplug the flat cable from the A50 AWG board and the flat cable from the A10 Connector board at the A30 GPIB board.
4. Use a screw driver with a #2 Phillips tip to remove the four screws securing the CPU unit to the bottom and right side of the main chassis. See Figure 1.
5. Lift the CPU unit up and out from the main chassis. See Figure 1.

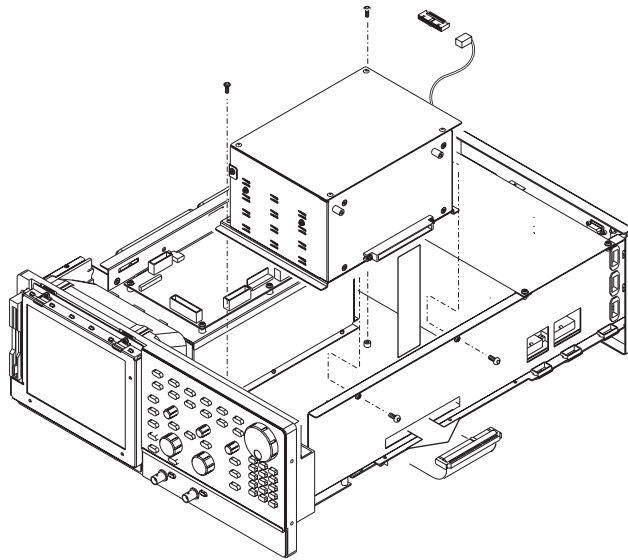


Figure 1: Removing the CPU unit

Replacing the Hard Disk drive and modifying the A30 GPIB board

After you have removed the CPU unit, you need to replace the Hard Disk drive with the Solid State drive and modify the connection of the A30 GPIB board. Perform the following procedures to modify these components:

Removing the Hard Disk drive

1. Use a screwdriver with a size #2 Phillips tip to remove the two screws securing the hard disk and solid state disk bracket to the frame on the right side of the CPU Unit. See Figure 2.
2. Remove the screw on the left side of the bracket.
3. Grasp the bracket and slide it out.
4. Remove the three screws securing the hard disk to the bracket. See Figure 3.

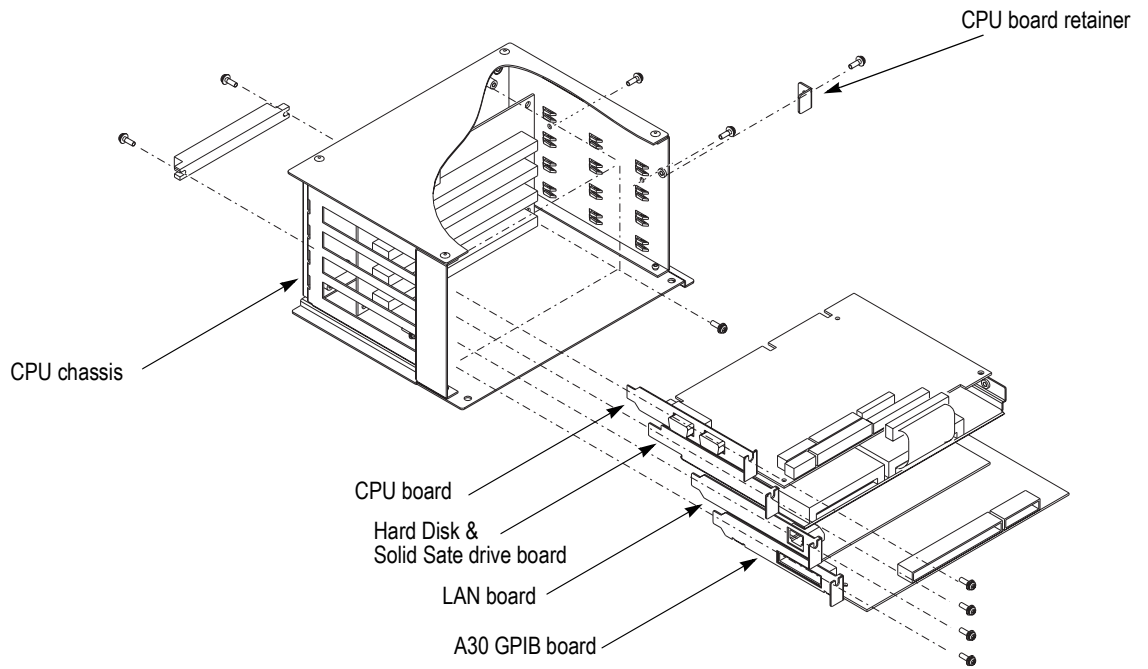


Figure 2: HDD/Solid State disk board removal

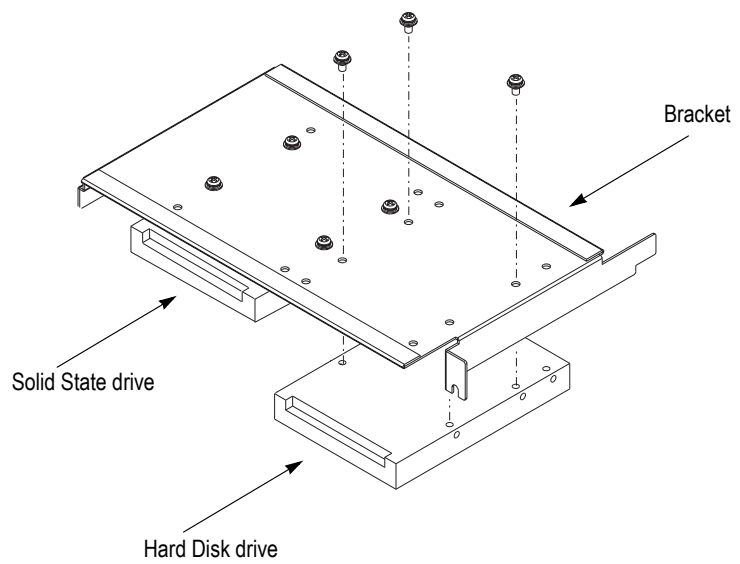


Figure 3: Hard disk removal

Installing the Solid State drive

1. Remove the Bus Conductor from the original Hard disk, then attach it to the left side pins of the SSD.
2. With the four M3x6 screws which are included in this kit, install the SDD to the bracket.

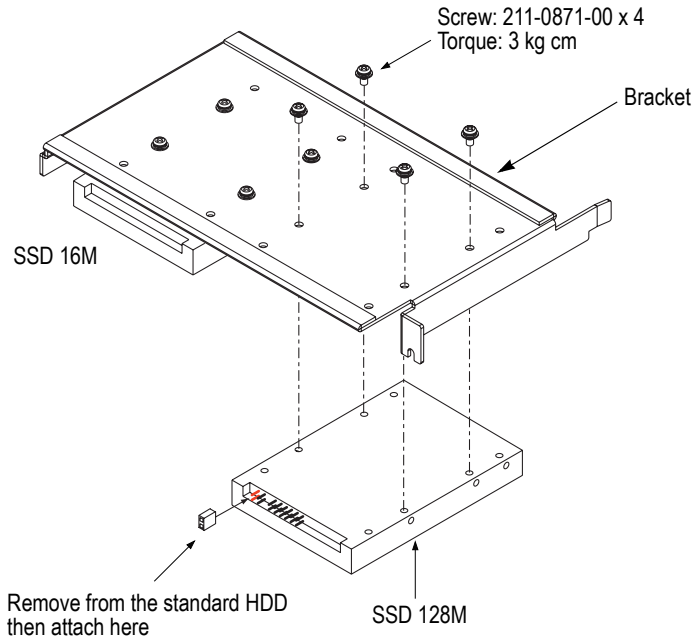


Figure 4: Installing the SSD

3. Slide the SSD bracket into the CPU frame then install the screw to attach the SSD bracket to the CPU frame.
4. Insert the SSD board into the board slot. Then push the board in until the connector of the board is firmly engaged with the Back Plane board.
5. Install the screw securing the board to the left side of the CPU chassis.

Modifying the A30 GPIB board

1. Change the position of the bus conductor from right side to left side. See Figure 5.
2. Connect the cable (174-B687-00; included in this kit) to J135 on the A30 GPIB board.
3. Remove the protective backing from the label marked 671-4965-50 and place it on the A30 GPIB board.

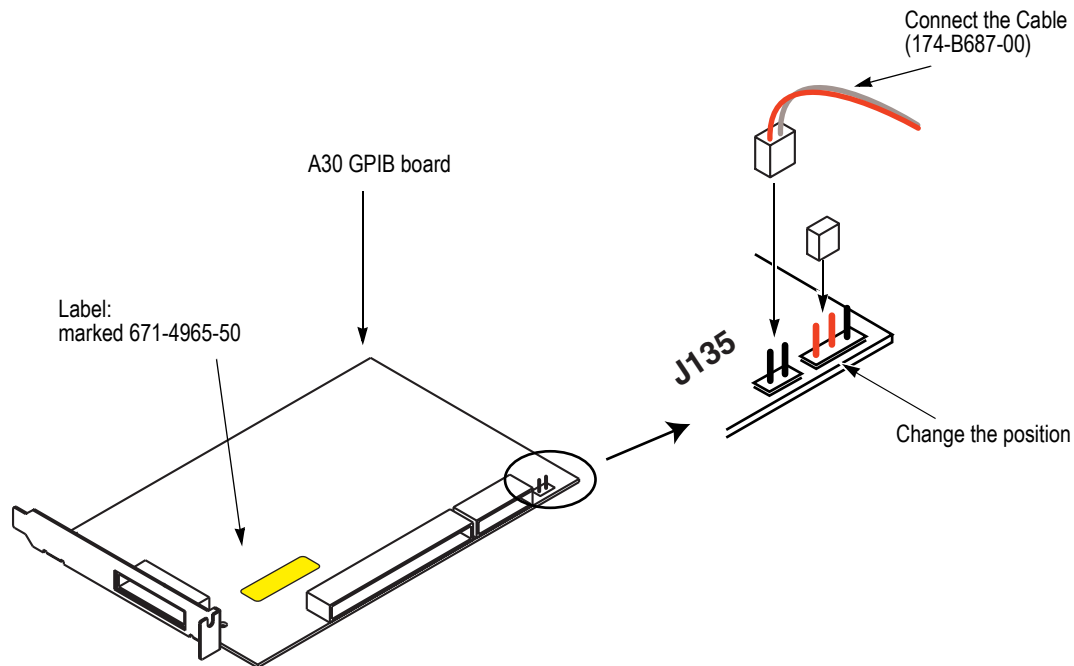


Figure 5: Modifying the A30 GPIB board

Installing the CPU unit and modifying the A11 board

After you have modified the components in the CPU unit, you need to install the CPU unit and modify the connection of the A11 Connector board. Perform the following procedures to modify these components:

Installing the CPU unit

1. Use a screw driver with a #2 Phillips tip to install the four screws securing the CPU unit to the bottom and the right side of the main chassis. See Figure 1 on page 4.
2. Reconnect the GPIB interconnect cable at J110 on the GPIB board and the LAN interconnect cable at the LAN board.
3. Reconnect the FDD flat cable, the VGA and COM1 interconnect cable, and the MISC flat cable at the CPU board.
4. Reconnect the flat cable from the A50 AWG board and the flat cable from the A10 Connector board at the A30 GPIB board.

Modifying the A11 Connector board

1. Install the bus conductor included in this kit to J520 on the A11 Connector board. See Figure 6.
2. Connect the cable (174-B687-00; included in this kit) from the A30 GPIB board to J500 on the A11 Connector board.
3. Remove the protective backing from the label marked 671-4966-50 and place it on the A11 Connector board.

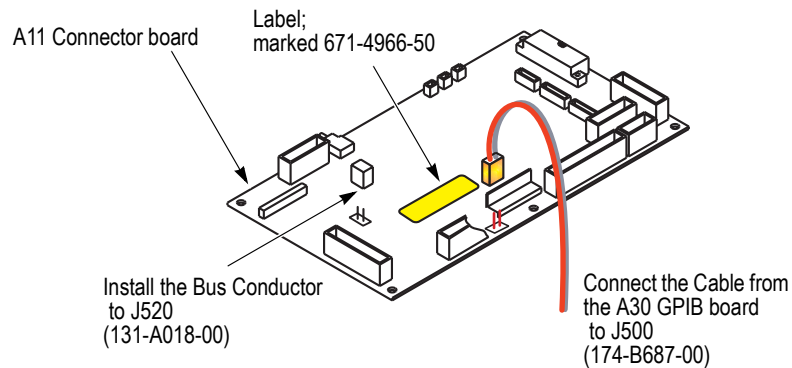


Figure 6: Modifying the A11 Connector board

Installing the Cabinet

1. Slide the generator into the cabinet. Take care not to bind or snag the cabinet on internal cabling; redress cables as necessary.
2. Use a screw driver with a #2 Phillips tip to install the six screws securing the two feet to the rear of the cabinet.
3. Install the power cord into the power receptacle on the rear panel of the generator.
4. Remove the protective backing from the label marked OP-10 and place it on the rear panel of the AWG520.

Verifying Instrument Performance

After you have installed the components in this kit, perform the functional operation of the Option 10.

1. Turn the **PRINCIPAL POWER SWITCH** on the rear panel to **ON**, then push the **ON/STB** switch on the front panel.
2. The instrument automatically runs power-on self tests. During the tests, the instrument displays the process status one by one.
3. Check that the instrument displays “Loading Operating system...”, .., “Loading Program...”, then “**AWG520 option: 10**”, .., “pass”.
4. Check that all the diagnostic tests are completed without fail and the instrument displays the SETUP menu screen.
5. Power off the instrument by turning the **PRINCIPAL POWER SWITCH** to **OFF** (not by toggling the ON/STBY switch).
6. Turn the **PRINCIPAL POWER SWITCH** on the rear panel to **ON** again.
7. Check that the instrument automatically runs power-on self tests and displays the SETUP menu screen.
8. Power off the instrument by turning the **PRINCIPAL POWER SWITCH** to **OFF**.

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