

**050-3664-02 and 050-3665-02  
A70 CPU Board Replacement Kit  
AFG3021 and AFG3022**

**Instructions**

[www.tektronix.com](http://www.tektronix.com)



075-0944-02

**Tektronix**

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- Worldwide, visit [www.tektronix.com](http://www.tektronix.com) to find contacts in your area.

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# Service Safety Summary

Only qualified personnel should perform service procedures. Read this *Service Safety Summary* and the *General Safety Summary* before performing any service procedures.

**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.



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## Kit Description

Use these instructions to replace the A70 CPU board on the following products:

- AFG3021 (kit part number 050-3664-02)
- AFG3022 (kit part number 050-3665-02)

## Related Documents

- *AFG3000 Series Arbitrary/Function Generators Service Manual*, Tektronix part number 071-1640-XX, available on the Tektronix Web site at [www.tektronix.com/manuals](http://www.tektronix.com/manuals)
- *AFG3000 Series Arbitrary/Function Generators Quick Start User Manual*, Tektronix part number 071-1631-XX, available on the Tektronix Web site at [www.tektronix.com/manuals](http://www.tektronix.com/manuals)

## Minimum Tool and Equipment List

The following tools are required for removing and reassembling the modules:

- Torque-limiting screwdriver, long shank, 8 lb-in (0.85 N m) range with Torx T-15 tip
- 16 mm (5/8 inch) deep socket with wide center hole
- 7 mm (9/32 inch) socket
- Torque wrench to 30 in-lb (3.3 Nm)
- Screwdriver with 1/4 inch flat blade
- Phillips head screwdriver
- Pliers (all-purpose and needle-nose)
- Tweezers
- Hair drier
- AFG3000 Series Arbitrary/Function Generators Service Manual

## Kit Parts List

The following tables show the replacement kit configuration:

**Table 1: 050-3664-02 kit parts**

Quantity	Part number	Description
1 each	075-0944-02	MANUAL, KIT INSTRUCTIONS
2 each	210-0056-00	WASHER, LOCK; #10 SPLIT, 0.047 THK, SI BRZ NP
1 each	210-1544-00	WASHER, SPRING; 0.610 OD X 0.490 ID X 0.007 THK, WAVE SHAPE, STAINLESS STEEL
2 each	213-1061-00	JACKSCREW; 6-32 X 0.320 EXT THD, M3.5 X 0.6-6 INT THD X 0.215L, GPIB, BLACK OXIDE
1 each	220-0265-00	NUT, PLAIN, HEX; 0.5-28 X 0.625 HEX, BRS, NKL PL
1 each	335-1828-00	MARKER, IDENT; LABEL, REAR PANEL, 2.05 X 9.51, 0.010 PC FILM, LEXAN, W/ADHESIVE BACK
1 each	342-1135-00	INSULATOR, BSHG:NYLON, 0.509 X 0.470 D HOLE X 0.687 OD X 0.035 T
1 each	671-5815-XX	CIRCUIT BD ASSY; A72 CPU MAIN

**Table 2: 050-3665-02 kit parts**

Quantity	Part number	Description
1 each	075-0944-02	MANUAL, KIT INSTRUCTIONS
2 each	210-0056-00	WASHER, LOCK; #10 SPLIT, 0.047 THK, SI BRZ NP
1 each	210-1544-00	WASHER, SPRING; 0.610 OD X 0.490 ID X 0.007 THK, WAVE SHAPE, STAINLESS STEEL
2 each	213-1061-00	JACKSCREW; 6-32 X 0.320 EXT THD, M3.5 X 0.6-6 INT THD X 0.215L, GPIB, BLACK OXIDE
1 each	220-0265-00	NUT, PLAIN, HEX; 0.5-28 X 0.625 HEX, BRS, NKL PL
1 each	335-1829-00	MARKER, IDENT; LABEL, REAR PANEL, 2.05 X 9.51, 0.010 PC FILM, LEXAN, W/ADHESIVE BACK
1 each	342-1135-00	INSULATOR, BSHG:NYLON, 0.509 X 0.470 D HOLE X 0.687 OD X 0.035 T
1 each	671-5815-XX	CIRCUIT BD ASSY; A72 CPU MAIN

**NOTE.** Tektronix provides the A72 CPU board for the replacement of the A70 CPU board. When you install the A72 board, the GPIB and LAN connectors are present on the instrument rear panel.

# Installation Instructions

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**NOTE.** You will need to refer to the *AFG3000 Series Arbitrary/Function Generators Service Manual* while performing this procedure.

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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 if you need installation assistance.



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**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.

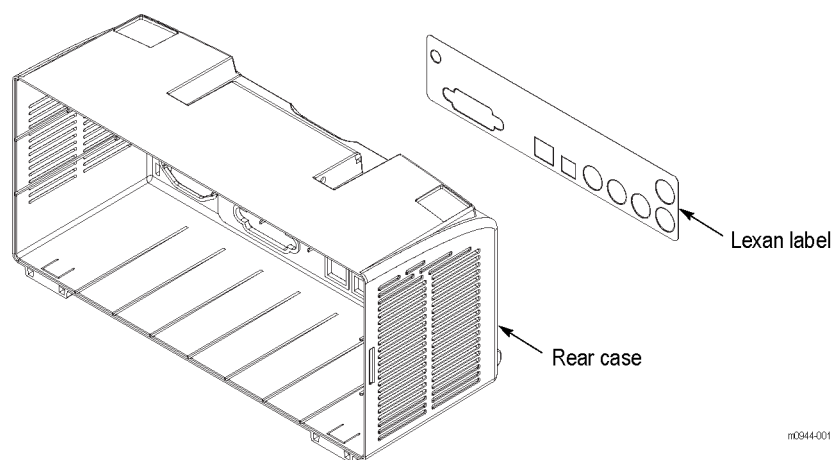
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## Remove

Power off the instrument and remove the A70 board, using the removal procedure provided in the *AFG3000 Series Arbitrary/Function Generators Service Manual*.

## Install

1. Use a hair drier to warm up the lexan label attached to your instrument rear case. Carefully remove the label from the rear case after the warm-up.



2. Remove any residual adhesive glue from the rear case.

3. Attach the new label to the rear case:  
Use part number 335-1828-00 for the AFG3021.  
Use part number 335-1829-00 for the AFG3022.
4. Install the A72 CPU board and reassemble the instrument, using the instructions provided in the *AFG3000 Series Arbitrary/Function Generators Service Manual*.

## Setting the Serial Number

When you replace the CPU board, you must set the serial number. Perform the following procedure to set the serial number:

1. Enable the service mode as instructed in the *AFG3000 Series Arbitrary/Function Generators Service Manual*.
2. Push the front-panel **Utility** button, and then push the **-more-** bezel button twice.
3. Push the **Service Menu > Factory Initialize > Serial Number** buttons.
4. Enter the serial number with numeric keys and Function buttons.

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**NOTE.** Use the Function buttons to enter alphabetical characters. The *Sine through More...* buttons correspond to letters A through F.

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## Adjustment after Board Replacement

When you replace the CPU board, you must perform the adjustment procedures described in the *AFG3000 Series Arbitrary/Function Generators Service Manual*.

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