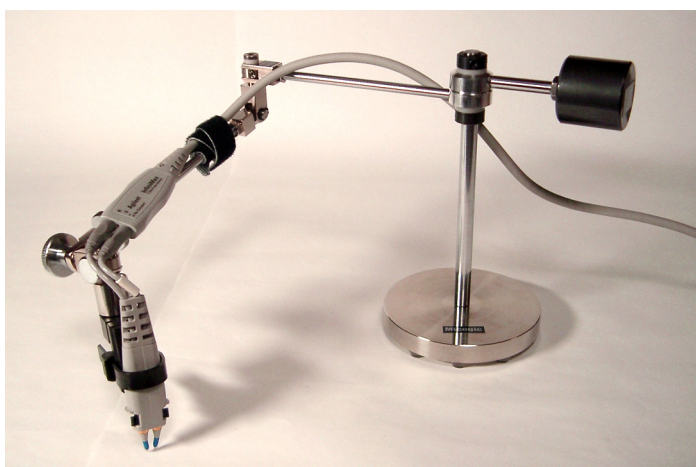


# Keysight N2784/5A Probe Positioner

User's  
Guide



# Notices

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## Safety Notices

### CAUTION

A **CAUTION** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a **CAUTION** notice until the indicated conditions are fully understood and met.

### WARNING

A **WARNING** notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a **WARNING** notice until the indicated conditions are fully understood and met.

### DANGER

A **DANGER** notice that incorrect operation presents extreme danger of accident resulting in death or serious injury to the user.

## Contents

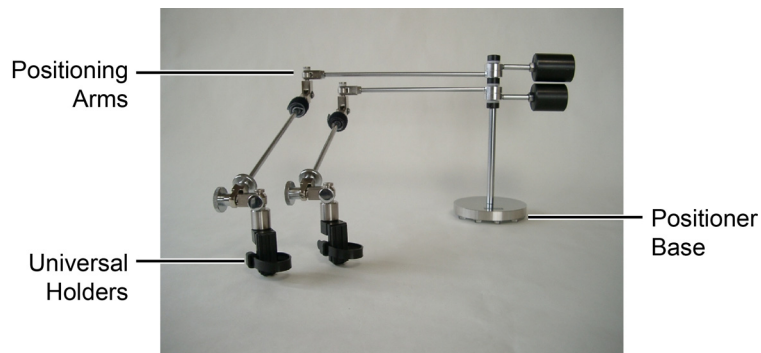
Introduction	/ 5
To Attach a Probe to the Positioner	/ 7
Probe Angle Adjustment	/ 9
Replacing the Probe Ties	/ 11
Accessories	/ 12
Contacting Keysight	/ 14



## Introduction

The N2784/5A probe positioners provide quick and stable X-Y positioning with only a “lift and drop” motion to put the probe in place for PC boards and devices that require hands-free probing. The N2784A has one articulated arm. The N2785A has two articulated arms.

These probe holders also employ a weight stabilization technique to keep constant pressure at the probing point so that the probe tip stays in position even when the target board is shaken. The N2784/5A are compatible with most Keysight scope probes including InfiniiMax single-ended or differential browser probes, as well as the scope probes from other vendors.



**Figure 1** N2784A and N2785A Probe Positioners

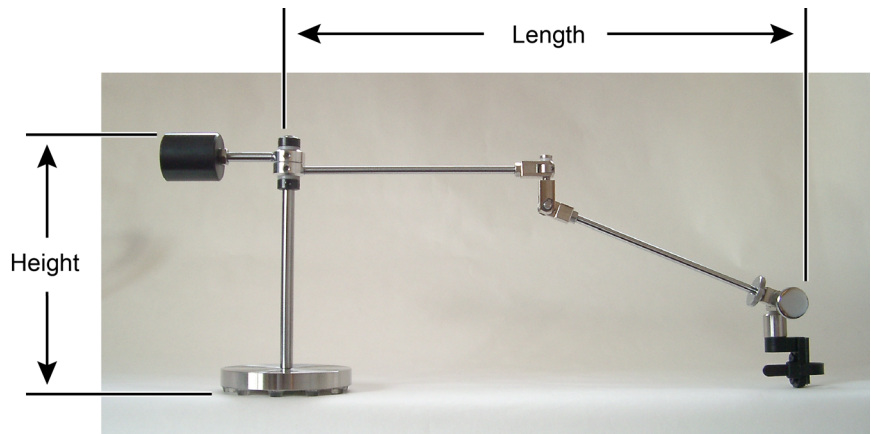
## Compatible Probes

The probe positioners are compatible with the following Keysight probes:

- 1130B/1131B/1132B/1134B and 1168B/1169B InfiniiMax active probes with single-ended or differential browser
- N2795A/96A/97A single-ended active probes
- N2750A/51A/52A InfiniiMode differential active probes with differential browser tip
- N2870-6A passive probes
- 1007x passive probes
- N2840A-43A, N2853A, N2862B/63B/89A/90A, N7007A, N2140A/42A passive probes

In addition to these specific probes, the probe positioners will work with most other Keysight probes as well as probes from other vendors.

Dimensions



**Figure 2** Height and length definitions

**Table 1** Dimensions and Weights

Item	Dimension
Arm Length	320 mm
Arm Height	158 mm
Weight	N2784A - 850g N2785A - 1.25 kg

## To Attach a Probe to the Positioner

- 1 Place your probe/probe head against one of the universal holders. Align the probe with the rubber ribs.



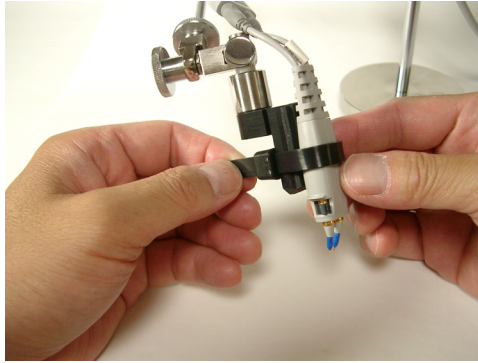
**Figure 3** Probe aligned with rubber ribs

- 2 Wrap the releasable probe tie around the probe head.



**Figure 4** Probe tie wrapped around the probe

- 3 Once the probe tie is in place, tighten the probe down to secure the universal holder to the probe head as seen in [Figure 5](#) on page 8.



**Figure 5** Tightening the probe tie around the probe

**CAUTION**

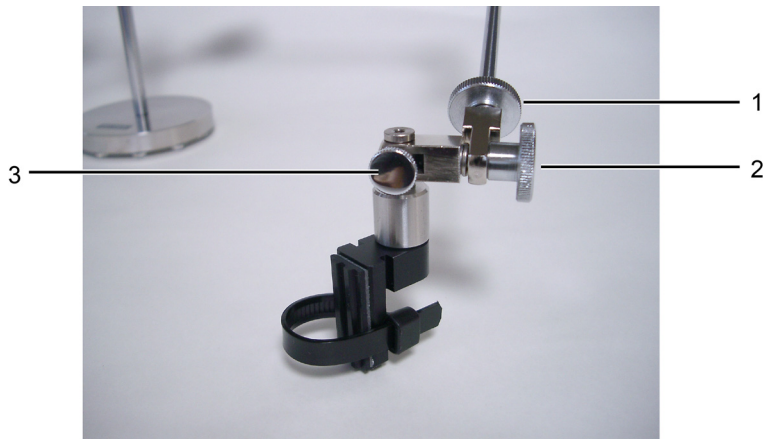
Do not over tighten the probe tie or you could damage the probe.

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## Probe Angle Adjustment

The angle of your probe can be adjusted by loosening and then tightening three knobs on the positioner arm/universal holder. **Figure 6** shows the location of these three knobs. If knobs (1) and (2) are loose, there is a possibility that your probe may fall over. Make sure these knobs are securely fastened during any measurements. Knob (3) may be left loose when the probe is used vertically. If the probe is to be used with some slope against the board then it must be tightened as well.

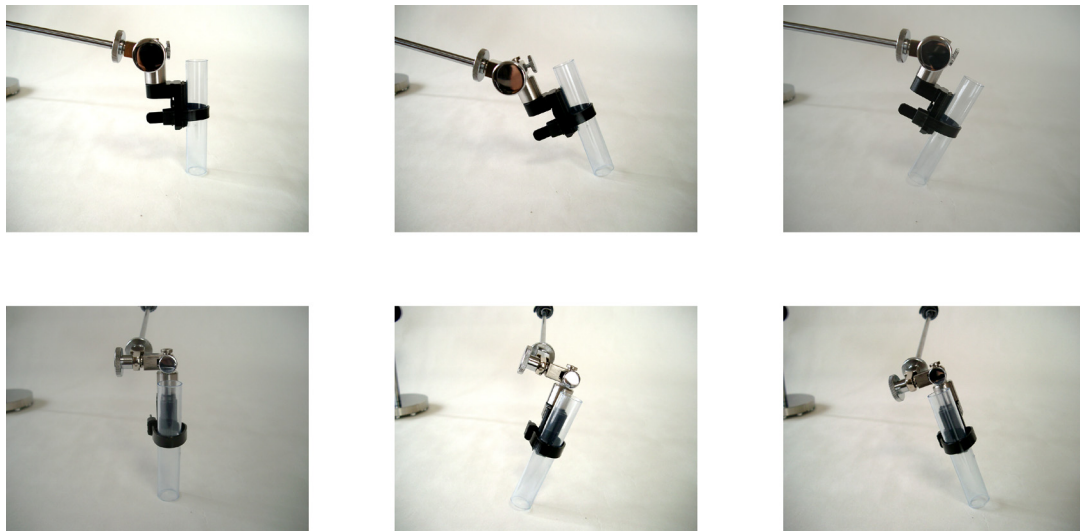


**Figure 6** Location of the three angle-adjustment knobs

### CAUTION

During any measurements, always securely tighten knobs (1) and (2) to avoid the possibility that the probe may fall over.

**Figure 7** on page 10 shows a series of pictures displaying some of the axes that can be rotated about by loosening and tightening the three knobs shown in **Figure 6**.

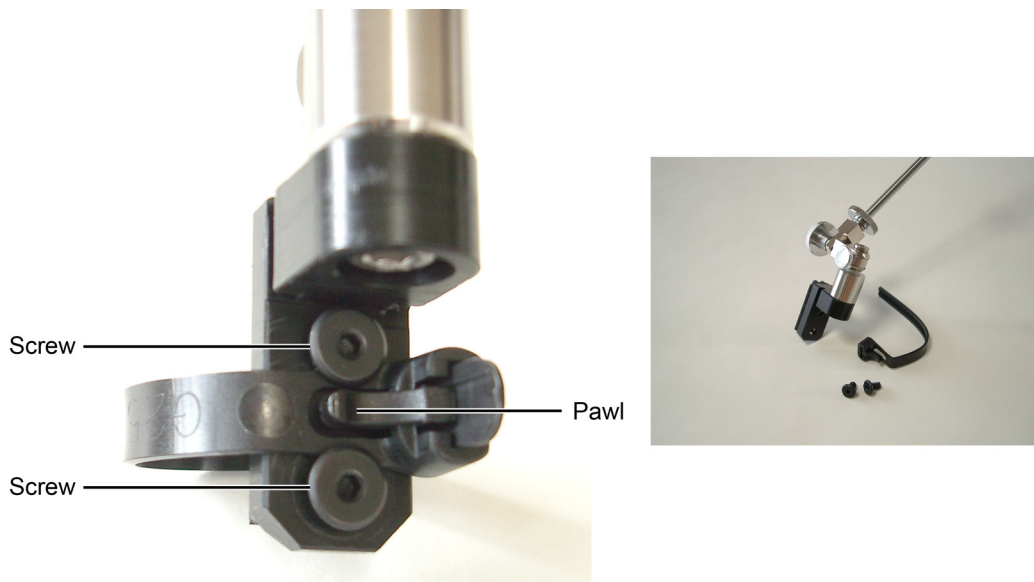


**Figure 7** Series of pictures showing various rotation axes

## Replacing the Probe Ties

The probe ties are highly durable, but in case of wear, replace them with the supplied probe ties. To replace a probe tie, loosen the screws labeled B in [Figure 8](#) to unfasten the worn probe tie. You can then replace the probe tie with a new one by reversing these steps.

You can push the pawl labelled A ([Figure 8](#)) to release the probe or probe head from the universal adapter.



**Figure 8** Unfastening the releasable probe tie

### Accessories

Your N2784/5A probe positioner comes with several accessories. These include:

- Arm strap
- 5x magnifying glass
- Probe rest

You can use the arm strap to fix your probe cables or to secure the positioning arms and universal holders to the probe positioner's body during storage as shown in [Figure 9](#).



**Figure 9** Using the arm strap to secure the positioning arms and universal holders

The magnifying glass can be attached to the probe positioner as shown in [Figure 10](#).



**Figure 10** Attaching the magnifying glass

#### CAUTION

Do not place the magnifying glass in a location where the sun directly may strike it.

The probe rest is a piece of anti-static polyurethane that can be used to rest your probe or universal holder on when not in use ([Figure 11](#)).



**Figure 11** The universal holder placed on the probe rest

## Ordering Replacement Accessories

To replace missing accessories, order the N2785-68701 support kit. The accessories included in this kit are:

- Probe rest
- Magnifying glass
- Probe tie
- Arm strap
- Screws for retention of probe tie

## Contacting Keysight

The instructions in this section show you how to contact Keysight Technologies and how to properly package the instrument for return to a Keysight Technologies service office.

For technical assistance, contact your local Keysight Call Center.

- In the Americas, call 1 (800) 829-4444
- In other regions, visit <http://www.keysight.com/find/assist>

Before returning an instrument for service, you must first call the Call Center at 1 (800) 829-4444

## Returning the probe positioner for service

If the positioner is still under warranty or is covered by an maintenance contract, it will be repaired under the terms of the warranty or contract. If the positioner is no longer under warranty or is not covered by an maintenance plan, Keysight will notify you of the cost of the repair after examining the unit.

When an positioner is returned to an service office for servicing, it must be adequately packaged and have a complete description of the failure symptoms attached. When describing the failure, please be as specific as possible about the nature of the problem.

Please notify the service office before returning your positioner for service. Any special arrangements for the positioner can be discussed at this time. This will help the service office repair and return your instrument as quickly as possible.

## Preparing the instrument for shipping

- 1 Pack the positioner. Use original packaging or comparable. Original materials are available through any Keysight office. Or, use the following guidelines:
  - Wrap the positioner in anti-static plastic to reduce the possibility of damage caused by electrostatic discharge.
  - Use a double-walled, corrugated cardboard carton of 159 kg (350 lb) test strength.
  - The carton must be large enough to allow approximately 7 cm (3 inches) on all sides of the positioner for packing material, and strong enough to accommodate the weight of the positioner.
  - Surround the equipment with approximately 7 cm (3 inches) of packing material, to protect the instrument and prevent it from moving in the carton. If packing foam is not available, the best alternative is S.D-240 Air Cap™ from Sealed Air Corporation (Commerce, California 90001). Air Cap looks like a plastic sheet filled with air bubbles. Use the pink (anti-static) Air Cap™ to reduce static electricity. Wrapping the instrument several times in this material will protect the instrument and prevent it from moving in the carton.
- 2 Seal the carton with strong nylon adhesive tape.
- 3 Mark the carton "FRAGILE, HANDLE WITH CARE".
- 4 Retain copies of all shipping papers.



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