
Installation Instructions for Retrofit Kit

Part Number 33120-90021
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HP 33120A/Option 001
Phase-Lock Assembly

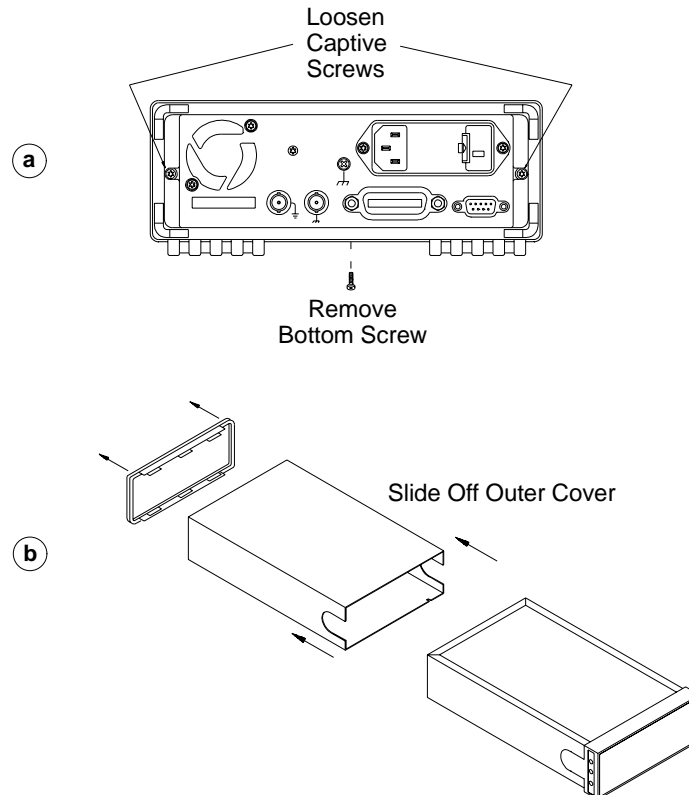
HP 33120A/Option 001 Phase-Lock Assembly

Installation Instructions for 33120-80001 Retrofit Kit

This guide contains information to install the Phase-Lock assembly into the HP 33120A. This assembly can be installed only in instruments shipped after August 1994 with serial numbers US34004078 and above. Refer to the *HP 33120A / Option 001 User's and Service Guide* (included with the retrofit kit) for complete details on using the assembly.

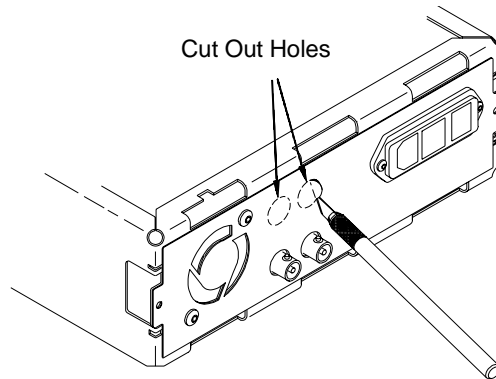
Installing the Phase-Lock Assembly

1 Remove the outer cover from the HP 33120A.



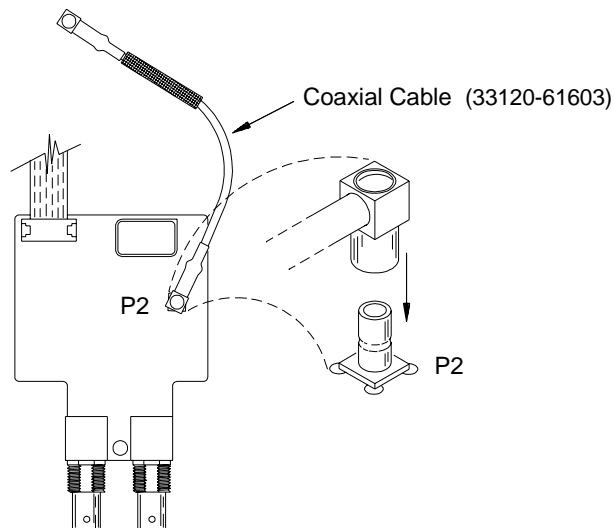
2 Carefully cut two holes in the rear-panel label.

The *Ref Out* and *Ext Ref In* terminals on the Phase-Lock assembly will extend through these holes in the HP 33120A rear-panel.



3 Connect the coaxial cable to the Phase-Lock circuit board.

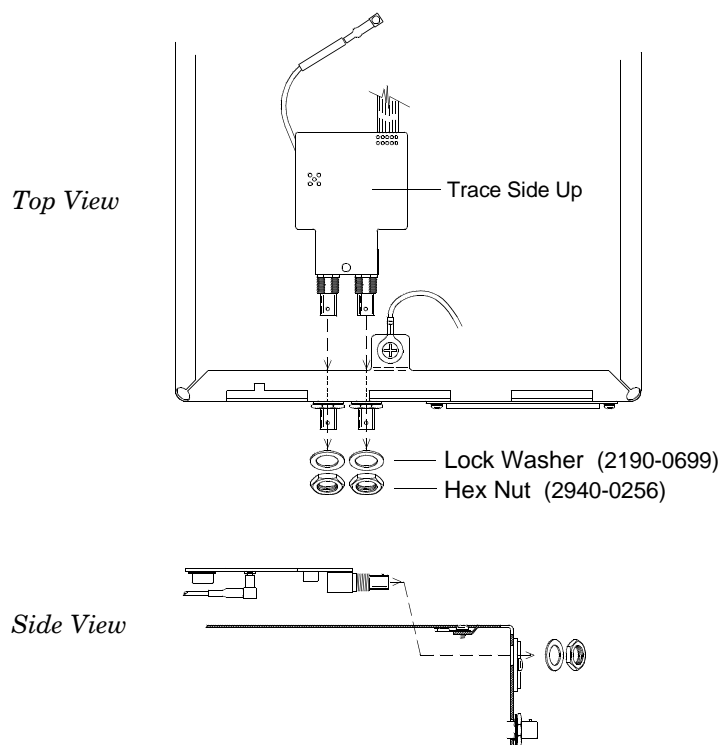
Connect one end of the coaxial cable (included with the retrofit kit) to the connector labeled **P2** on the Phase-Lock circuit board. Position the cable as shown.



4 Install the Phase-Lock assembly in the HP 33120A chassis.

Before installing the Phase-Lock assembly, make sure that the red and black wires for the instrument fan are clear of the rear-panel holes.

With the Phase-Lock assembly positioned *trace side up*, insert the two BNC connectors through the holes previously cut in the rear-panel label.

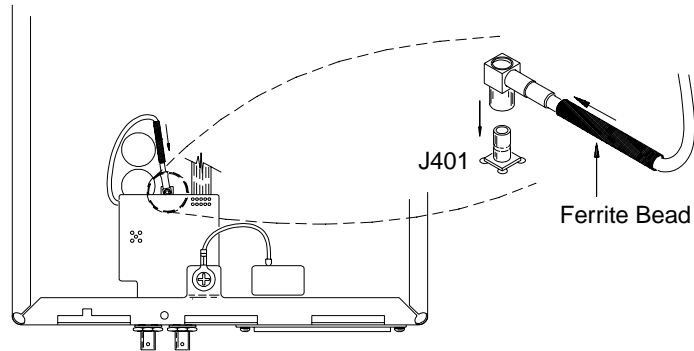


5 Secure the Phase-Lock assembly in place.

As shown above, place one lock washer and one hex nut (included with the retrofit kit) on each of the two BNC connectors. *To prevent cross-threading, be sure to hand-tighten the hex nuts at least one turn before using a tool.*

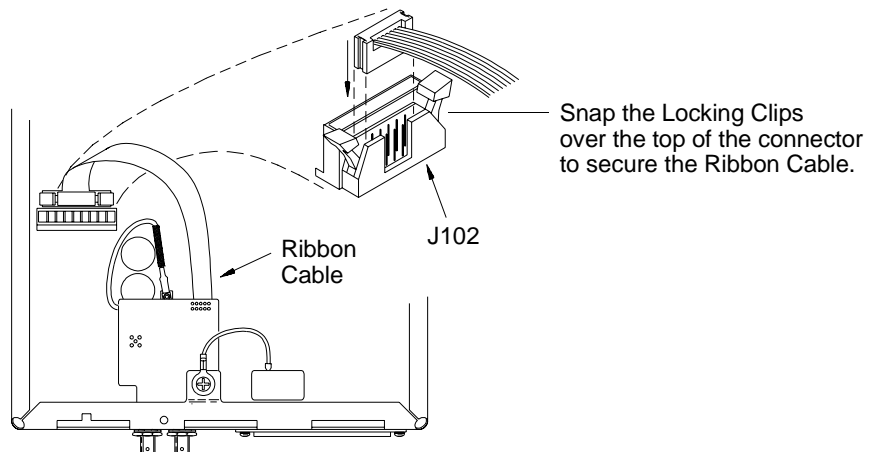
6 Connect the coaxial cable to HP 33120A circuit board.

First, slide the black ferrite bead to the end of the coaxial cable as shown. Then, connect the coaxial cable to connector **J401** on the HP 33120A circuit board. Be sure to position the cable away from the heatsinks on the circuit board.



7 Connect the ribbon cable to the HP 33120A circuit board.

Connect the loose end of the grey ribbon cable to connector **J102** on the HP 33120A circuit board. Press down firmly on the ribbon cable connector and secure the cable in place with the locking clips.



Calibration/Adjustment Procedure

After installing the Phase-Lock assembly, perform the frequency adjustment procedure (CAL:SETup 0) on page 67 in the *HP 33120A Service Guide*. Be sure to make the 1 kHz frequency measurement with an accuracy of at least 8 digits (0.01 ppm). You may be required to perform up to **three iterations** of the frequency adjustment following initial installation of the Phase-Lock assembly.

For complete details on performing a calibration, see chapter 4 in the HP 33120A Service Guide.