Limited 90 Day Warranty

The *InVision 48* is warranted by Firmware Systems, Inc. against defects in materials and workmanship for 90 days from the date of original purchase. During the warranty period, we will repair or, at our option, replace at no charge a unit that proves to be defective, provided you return the unit, shipping prepaid, to Firmware Systems, Inc.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state, province to province, or country to country.

Limits and Exclusions

This warranty does not apply if the product has been damaged by accident or misuse or as the result of service or modification by other than Firmware Systems, Inc. Note that the glass LCD is not covered by our warranty.

No other express warranty is given. The repair or replacement of a product is your exclusive remedy. ANY OTHER IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS IS LIMITED TO THE 90 DAY DURATION OF THIS WRITTEN WARRANTY. IN NO EVENT SHALL FIRMWARE SYSTEMS, INC. BE LIABLE FOR CONSEQUENTIAL DAMAGES. Some states, provinces or countries do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

Products are sold on the basis of the specifications applicable at the time of manufacture. Firmware Systems, Inc. shall have no obligation to modify or update products once sold.

Service Information

The *InVision 48* is manufactured by:

Firmware Systems, Inc.
919 NW Grant Avenue
Corvallis, OR 97330 USA
Vox: (503) 753-3617
Fax: (503) 753-9250

Firmware Systems, Inc. provides all service, including warranty. In case of difficulty, contact:

Vern Lindsay
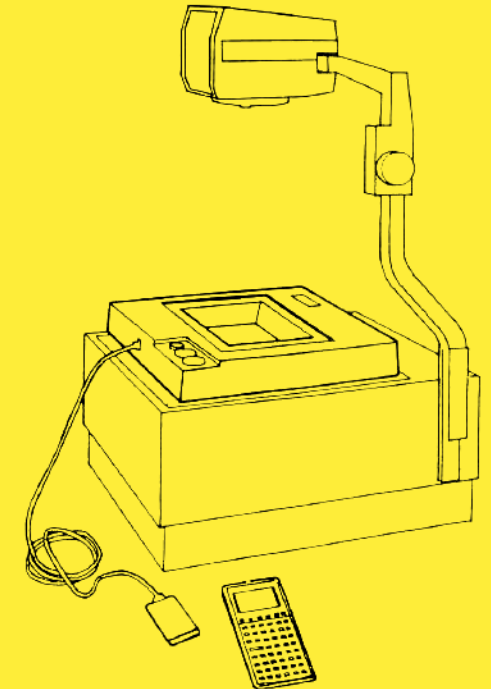vlindsay@oneworld.com

Ning Zhang
CompuServe: 72613,3227

InVision 48

Overhead Display for the Hewlett-Packard

HP48SX/GX

with a special adapter cable for the

HP38

Firmware Systems, Inc.
Corvallis, Oregon USA

General cautions

● Always turn off the HP calculator before connecting or disconnecting the *InVision 48*.

● Do not insert the interface card into port 2 of the HP48GX.

● Do not pull on the Interface cable while removing the Interface from the HP48SX/GX.

● The LCD of the *InVision 48* is rated for use in temperatures up to 70 degrees Celsius. Some overhead projectors with a 650 watt light bulb can produce an excessive amount of heat which may darken the LCD and reduce the clarity of the projected image.

Setting Up the *InVision 48*

Place the *InVision 48* on top of an overhead projector with the modular jack facing the screen.

Connecting the HP38

The HP38 adapter cable has a 10-pin connector on one end and a modular plug on the other end. Insert the modular plug into the modular jack on the *InVision 48*. Insert the 10-pin connector into the port at the top of the HP38.
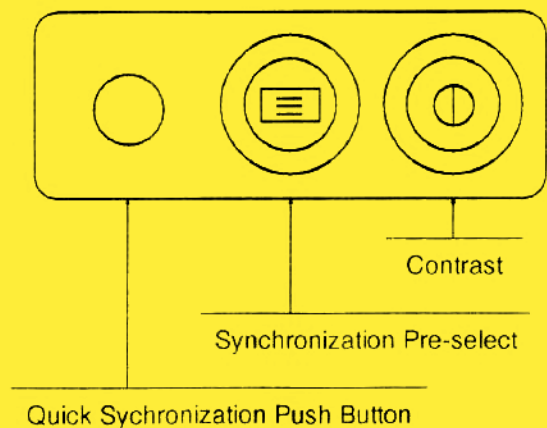
Connecting the HP48SX/GX

The HP48SX/GX cable has an interface connector shaped like a memory card on one end and a modular plug on the other end. Insert the modular

plug into the modular jack on the *InVision 48*. Insert the interface card into your HP48SX/GX with the metallic surface toward the keyboard.

The interface card works only in port 1 of the HP48GX, while it can be used in either port of the HP48SX.

Control Knobs

Contrast and sychronization knobs are in the lower right corner of the *InVision 48*.

Contrast

Synchronization Pre-select

Quick Sychronization Push Button

● Contrast

Turn clockwise to increase contrast and counter-clockwise to decrease contrast. As the overhead projector heats up, the LCD may gradually darken. Turn the dial counter-clockwise to reduce the darkening effect.

● Synchronization Pre-select

If the projected image does not synchronize with the calculator screen, first turn the calculator OFF and ON. If the display still does not lock into proper synchronization, then you can adjust it with the Synchronization Pre-select knob. Turn the knob clockwise to roll the display downward. Turn the knob counter-clockwise to roll the display upward. The display moves one dot row per click. The calculator must be turned OFF and ON after each change in the position of the knob. Once the display image has been adjusted, it will almost always turn on in synchronization.

A Low Battery condition can cause synchronization problems. If adjusting the Sychronization Pre-select knob does not correct the synchronization problem, you may have to install new batteries even though the calculator does not yet display the low battery warning.

● Quick Sychronization Push Button

Even after adjustment the *InVision 48* will occasionally turn on out of synchronization. When this happens, you can quickly adjust the screen by pressing the Quick Sychronization Push Button. Each time you press this button the display will roll down one dot row. Continue to press this button until the display is in synchronization. This provides a quick, but temporary, correction that is lost each time you turn the calculator off. If the *InVision 48* continues to turn on out of synchronization, you should use the Synchronization Pre-select knob for a permanent correction.