

SETTING UP REMOTE OPERATION OF THE TEKTRONIX 492BP

Installation:

Install Agilent IO libraries. Use the default settings.

Connect the 82357B USB/GPIB converter to the PC and wait for the installation routine to complete (it installs 2 separate drivers one after the other but appears to be doing the same thing twice – just let it finish both). Reboot the PC if requested to do so.

Install KE5FX GPIB Toolkit (latest version is 1.8 (Beta) which works well). Use the default settings.

Start the Agilent IO libraries:

Click on ‘USB/GPIB (GPIB0)’ in the ‘Instrument I/O on this PC’ window

Click on ‘Agilent 488 Properties’ in the right hand window. The Agilent 488 properties window opens:

Click on ‘Enable Agilent 488...’ The Agilent Connection Expert Options window opens:

Check the ‘Enable Agilent GPIB card for 488 options’ box in pop-up window and click ‘OK’

Click OK in the Agilent 488 properties window.

Start Prologix GPIB configurator:

In the Select Device window click on ‘National Instruments adapter (GPIB0)’

Click on Update CONNECT.INI

Exit program

On rear of 492BP set the following DIP switches (take care, they are known to be delicate!)

Listen only	0	
Talk only	0	
LF OR EOI	1	
Address	xx	(as required, 20 is what I’ve been using)

Switch on 492BP.

Right-click ‘USB/GPIB (GPIB0)’ on Agilent IO libraries, click on ‘Refresh This Interface’ and the 492BP should become visible as GPIB0::xx::INSTR (if it has not already been detected). It will have a warning mark but this does not prevent it from communicating with the toolkit applications.

(For initial testing connect the 492BP RF input to Cal Out to provide a dependable signal.)

HP7470A Plotter Emulator application:

In menu GPIB click on 'No assigned plotter address (listen only)'

In menu Acquire click on 'Request plot from supported device at address xx'

A red comment indicates 'Reading data from instrument' and shows the bytes received. The plot takes approximately 10sec to be displayed.

Phase Noise application:

In menu Acquire click on 'Tektronix 490P- or 2750P-series...'

Provide a caption

Set Carrier frequency and level (eg 100MHz, -20dBm for Cal Out). (Level is optional but apparently speeds up the measurement time.)

Set Measurement Offset Range (eg 1kHz to 1MHz)

Set Instrument GPIB Address to xx

Click on 'Start Measurement'

The measurement can take a while (over 1min) but the 492BP display will show multiple traces as the values are calculated. Read the PN help file for useful hints and tips!

Spectrum Surveillance application:

Set up the 492BP to display the required information

In menu Acquire click on 'Acquire data from supported device at address xx'

The lower half of the display shows the screen shots while the upper half displays a history using different colours for varying amplitudes.