

## Additional Notes for Lab 5

### Scheduling

Lab 5 will be held in SW1-3585.

Since this lab is in use until 10:30, we will have a lecture from 9:30 to 10:20 in SW1-3555 followed by the lab from 10:30 to 12:20 in SW1-3585.

If necessary, we can repeat this the following week (on April 15).

We should have enough equipment for four sets of students (two groups of two and two groups of three), although not all groups will be able to do the cascade IP3 measurements at the same time.

Each group should bring two pairs of alligator clips to the lab to connect power to the amplifiers.

### Equipment Settings

There should be one group for each adjacent pair of workstations since each group will need to use two HP 8920 test sets for the IP3 measurements. Each group should be able to use an Anritsu MS2717B spectrum analyzer.

The 8920 communications test set should be set to RF GEN mode with the following settings: Atten Hold: Off, Output Port: Dupl, AFGen{1,2} To: Off, Mod In To: Off.

The 8920 output level is reasonably accurate up to about +10dBm (verify with Spectrum Analyzer or power meter).

You may find it useful to set markers on each of the frequencies of interest. The display will show the frequencies and power levels.

To measure the third-order components you may want to reduce the resolution bandwidth to lower the noise floor. Reduce the video bandwidth (and/or scan rate) to reduce the variance (noisiness) of the noise floor.

You can save a screen shot to a USB flash drive if you want.