## Compensation:

Any cables or fixtures used to interface the DUT to the IAI2 will introduce measurement errors because of the stray impedances. At low frequencies the stray effects can usually be ignored except when measuring at the extremes of the impedance range or when exceptionally high accuracy is needed. At higher frequencies it is almost always necessary to compensate for stray effects unless using the HF component fixture connected to the front of the IAI2
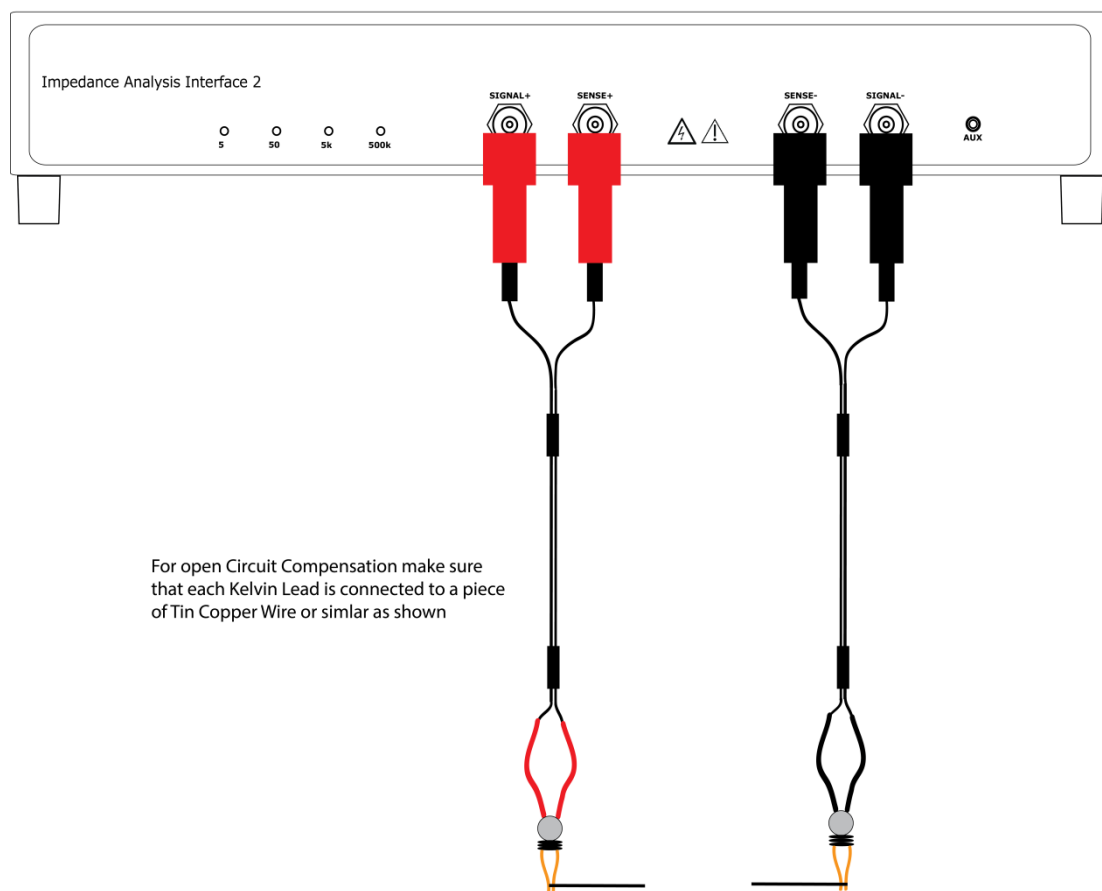
There are 2 forms of compensation:

1. Short Circuit – For measuring Low Impedances
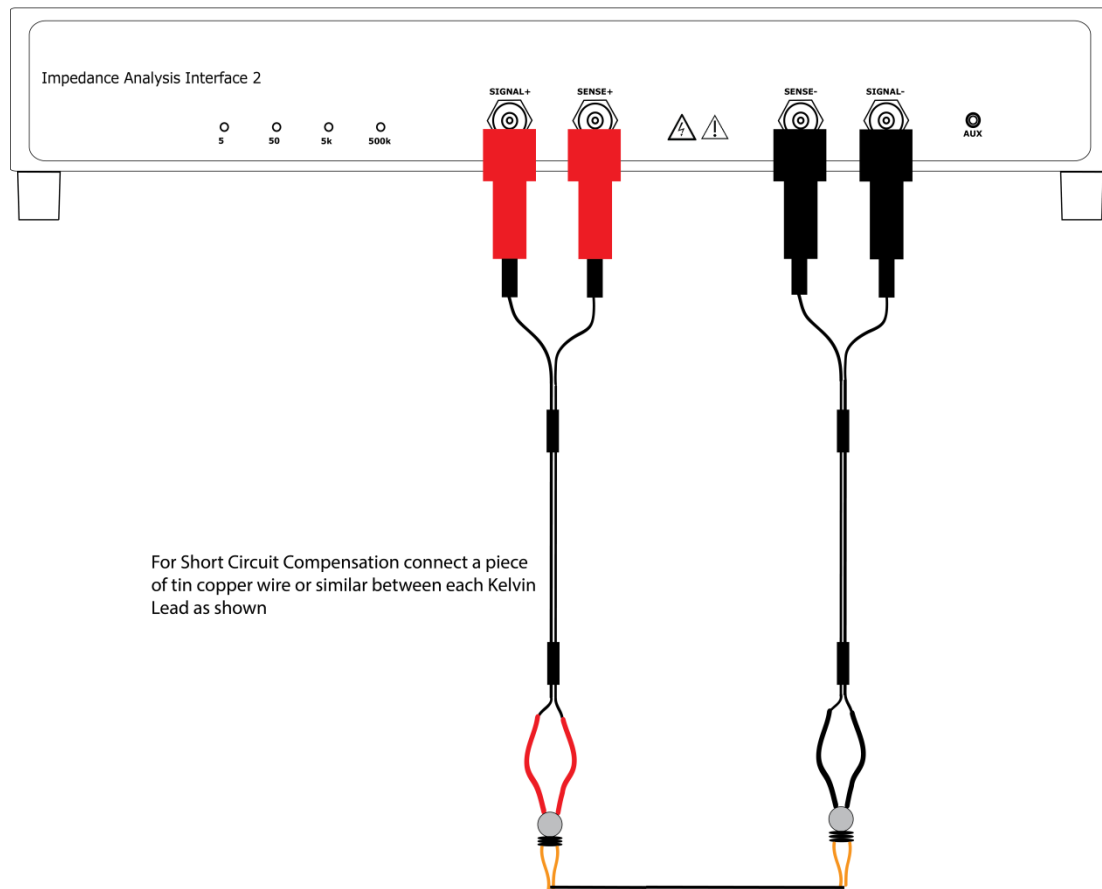2. Open Circuit – For measuring High Impedances

It is only necessary to perform one of the two forms of compensation but both can be performed. For best results, if more than one test is to be performed they should be performed in the sequence given above
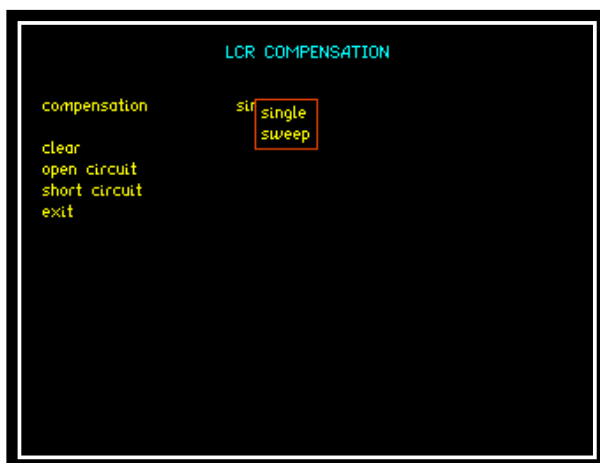
## Compensation Connections:

OPEN CIRCUIT CONNECTION



For open Circuit Compensation make sure that each Kelvin Lead is connected to a piece of Tin Copper Wire or simlar as shown

## SHORT CIRCUIT CONNECTION



Impedance Analysis Interface 2

5   50   5k   500k

SIGNAL+   SENSE+   SENSE-   SIGNAL-

AUX

For Short Circuit Compensation connect a piece of tin copper wire or similar between each Kelvin Lead as shown

## Compensation Settings

With the PSM3750 set in LCR mode, press the "ZERO" button to display the LCR compensation screen as shown below



LCR COMPENSATION

compensation        si  single
                        sweep
clear
open circuit
short circuit
exit

Select compensation parameter to correspond with test to be undertaken on DUT

Single Compensation:



Selecting single compensation will conduct a zero compensation, short or open circuit at the same desired frequency that the test will be carried out at

Sweep Compensation:



Sweep compensation needs to be configured exactly the same as the sweep details for the DUT to be tested. Frequency start, frequency end and steps all need to be replicated

Note: When undertaking open compensation it is advisable to use a solid piece of wire to connect to each Kelvin Lead or on each side of the Kelvin Fixture.

For short circuit compensation it is advisable to use a solid piece of wire to connect the two Kelvin Leads together or connect between the two sides of the Kelvin Fixture