

# Input/Output Ports at NS5 Front Panel



- Nanoscope-5 controller has 3 low frequency analog inputs/outputs and 2 high frequency analog inputs/outputs
- 2 high frequency analog inputs/outputs connects to high speed lock-in amplifiers
- #3 low speed input/output connects to low speed lock-in amplifier

# Setup Input Channels



The screenshot shows the Bruker software interface for setting up input channels. The 'Detector' menu is open, and 'Input1' is selected. The 'Input1 Sens.' field is highlighted in yellow and set to '10.00 °/V'. The 'Scale' field is set to '24.58 V' and the 'Center' field is set to '0 V'. The 'RT Plane Fit' and 'OL Plane Fit' dropdowns are set to 'None'.

Sensor Type	Value
MFM Amplitude Sens.	1.000
MFM Phase Sens.	1.000
dC/dV Amplitude Sens.	1.000
dC/dV Amplitude Error Sens.	1.000
dC/dV I Sens.	1.000
dC/dV Q Sens.	1.000
dC/dV Phase Sens.	1.000
Feedback Bias Sens.	1.000
Log(Resistance) Sens.	1.000
Input1 Sens.	10.00 °/V
Input2 Sens.	1.000
Input3 Sens.	1.000

- Input data can be displayed and saved as any other AFM data channel
- Set input sensitivity with units to convert input voltage signal to meaningful physical units
- Use BNC cable to send external signal to NS5 controller