

**TI-89  
Titanium**

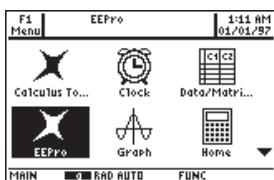
**Voyage™ 200**

This App by da Vinci Technologies Group, Inc., is an all-inclusive App for electrical engineering students, which helps them study concepts for EE coursework. The App is organized into analysis, equations, and references.

## Calculate Transfer Function

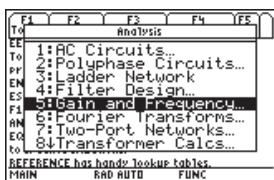
**1**

To start EE\* Pro App, press [APPS]. Select 1: FlashApps and then "EE\*Pro."



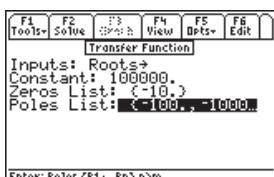
**2**

Press [F2]: Analysis and select 5: Gain and Frequency.



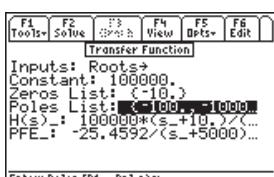
**3**

Select 1: Transfer Function and choose Roots for Inputs.



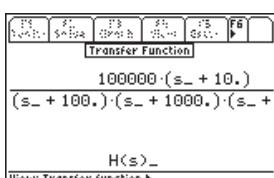
**4**

Enter 100000 for Constant, {-10} for Zeros, and {-100, -1000, -5000} for Poles.



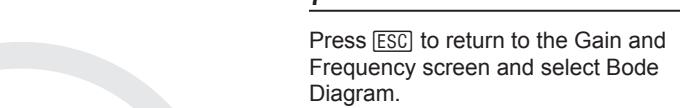
**5**

Press [F2] to calculate H(s)\_ and PFE\_.



**6**

To view H(s)\_ in Pretty Print format, highlight H(s)\_ and press [F4]. Press [ESC].



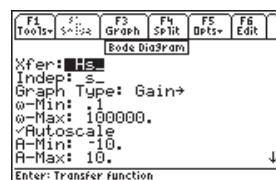
**7**

Press [ESC] to return to the Gain and Frequency screen and select Bode Diagram.

## Graph the Gain Plot for the Transfer Function

**1**

In the Bode Diagram screen, the Xfer field contains the Transfer Function H(s)\_ calculated in the previous example. Choose s\_ for Indep.

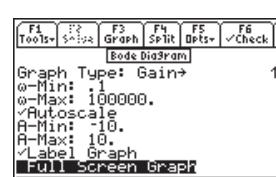


**2**

Choose Gain.

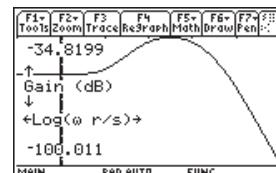
**3**

Enter 0.1 for ω-Min as the start of the radian frequency plot. Enter 100000 for ω-Max as the endpoint of the radian frequency plot.



**4**

Put a check mark in the Autoscale and Label Graph fields.



**5**

Put a check mark on Full Screen graphing mode. If this field is not checked, the graph will default to the right half of the screen. Press [F3] to graph the transfer function.

**6**

Press [2nd] followed by [APPS] to toggle between the input screen and the graph window when split-mode is active.