

1. What is HexeGUI?

The HexeGUI is a GUI to the hexapod RS-232 serial port. It communicates with the hexed (Hexe Daemon), which multiplexes network connections to the digiport. The digiport is connected to the HEXAPOD's RS-232 interface.

Any number of hexeGUI can be running, as hexegui dynamically opens and closes network port on each command exchanges.

HexeGUI is an X Windows application written in GTK+. It is available on all IRTF suns.

2. Starting and Stopping the HexeD

To start the HexeGUI, type `hexegui` at your shell prompt. For example:

```
% hexegui
```

Figure 1 shows an example hexegui window. The major GUI widgets are labeled, and the output of the "stat n20" command is display in the feedback text area.

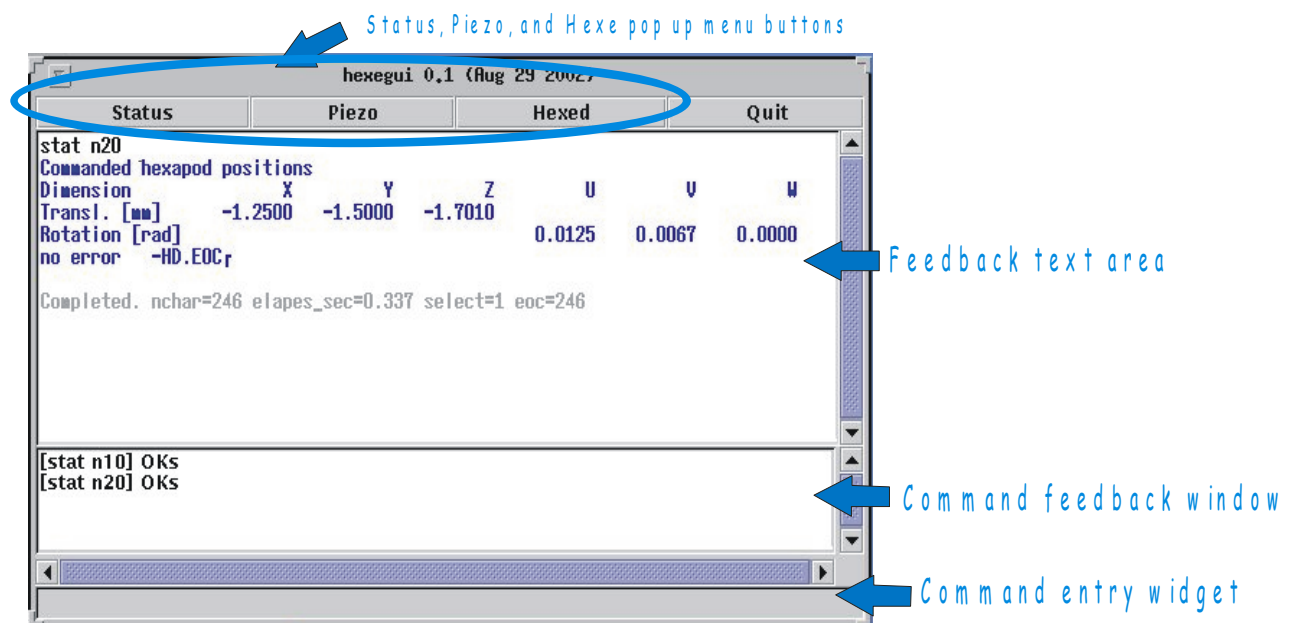


Figure 1 – HexeGUI

3. How do I used HexeD?

Type commands in the command entry widget. Command should be legal HEXAPOD command or Hexed commands.

The feedback window will display the result of the command:

- Text in black show what was sent to hexed
- Text in blue, is what was returned by hexed.
- Gray text is information printed by hexegui.

The command feedback window will log the command issued and print any application messages in blue.

Clicking on the status, piezo, and hexed button, brings up various pop up menu. Select a menu entry will issues the associated command to the hexed.

- The status menu contains HEXEAPOD “stat” commands.
- The piezo menu contains other HEXEAPOD query commands.
- The hexed menu contains some internal hexed commands.

```

stat n0 - MPIC system status
stat n1 - HEXC system status
stat n2 - Voltage of the power supplies and amplifier outputs
stat n10 - HEXC system values
stat n20 - Commanded HEXAPOD position
stat n21 - Commanded pivot point
stat n22 - Computed leg position
stat n23 - Computed leg velocity
stat n24 - Commanded HEXAPOD velocity
stat n30 - All motor controller status
stat n31 - Real position of all axis
stat n32 - Reference readout of all axis
stat n33 - Current velocity of all axis
stat n34 - Current acceleration of all axis
stat n35 - Status flags of all axis

```

Figure 2 – The status menu.

```

setf - MPIC System Control Flags
mpos - Report Piezo mirror positions (rad)
mssr - Mirror Slew Rate [rad/s]
mpid - Mirror PID Filter Parameters
mcmp - Mirror Compensation Values
mchp - Mirror Chop Angles and Timing
msin - Mirror Sine Amplitude and Frequency

```

```

getfocus - hexed getfocus value (z)
version - show hexed version
show.gv - show internal hexed variables

```

Figure 2 and 3 – The piezo and hexe menu.

To quit the application, click the quit button.

4. How do I initialize the HEXAPOD?

Type 'init' in the command entry widget. The hexegui will read the `init_default` files and initialize the hexapod to some default positions.

The `init` command basically executes the file: `/home/tcs3/src/tcs1/hexegui/init_defaults`. If you need to adjust the default parameters you can edit the `init_defaults` file. To edit:

```
> su - tcs3
> cd /home/tcs3/src/tcs1/hexegui
> vi init_defaults
    (or use your favorite editor).
```

Then type 'init' in the command entry widget.

5. HexeGUI built-in commands

Normally the HexeGUI just passes commands the `hexed`. There are a few internal `hexegui` commands. These commands are described here:

do – execute a command file.

```
Syntax    do filename
Range     filename - a text file of
           hexegui commands.
```

echo – Prints text to the command feedback window.

```
Syntax    echo text
Range     text - any text
```

Feedback.clear – When On, the feedback text area is cleared on each `hexe` command. When Off, new text is appended to the feedback text area.

```
Syntax    Feedback.clear { off | on }
Range     off – Append new text.
           On – clear & insert new text.
```

hexe – passes a string to the `hexed`.

```
Syntax    Hexe string
Range     string – Any legal Hexapod Command.
```

init – execute the command in the `init_defaults` file. The `init` file is `/home/tcs3/src/tcs1/hexegui/init_defaults`.

```
Syntax    init
```

quit – Exits the application.

```
Syntax    quit
```

wait – Pauses execute for `n` seconds.

```
Syntax    wait n
Range     n – Time in seconds. 1 to 300. .
```