



# UDB Quick Reference

## Navigation

**continue** or shortcut **c**  
Forward to next break/watchpoint (if any)

**reverse-continue** or shortcut **rc**  
Backward to next break/watchpoint (if any)

**next** or shortcut **n**  
Forward one source line, stepping over functions

**reverse-next** or shortcut **rn**  
Backward one source line, stepping over functions

**step** or shortcut **s**  
Forward one source line, stepping into functions

**reverse-step** or shortcut **rs**  
Backward one source line, stepping into functions

**stepi** or shortcut **si**  
Forward one machine instruction

**reverse-stepi** or shortcut **rsi**  
Backward one machine instruction

**finish** or shortcut **fin**  
Forward until current function has returned

**reverse-finish** or shortcut **rf**  
Backward until just before function was called

## Start Working

**\$> udb /path/to/program**  
Start debugger, ready to record program

**\$> udb --args /path/to/program ARG1 ...**  
Start debugger, ready to record program with arguments

**start**  
(Re)start the program from the beginning and run until main()

**run** or shortcut **r**  
(Re)start the program from the beginning and run until interrupted

**\$> udb /path/to/recording**  
Start debugger and load a recording file for analysis

**\$> udb -p PID**  
Start debugger and attach to existing process

## Deferred Recording

**\$> udb --defer-recording**  
Use this flag to start without recording

**urecord**  
Use this interactive command to begin recording when needed

## Breakpoints

**break [LOC] [if COND]** or shortcut **b**

Stop each time LOC is reached [if COND true]

**watch VAR [if COND]**

Stop each time VAR changes [if COND true]

**delete N** or shortcut **d**

Delete break/watchpoint

**tbreak [LOC] [if COND]** or shortcut **tb**

Stop just next time LOC is reached [if COND true]

**disable N**

Temporarily disable break/watchpoint

**enable N** or shortcut **en**

Re-enable break/watchpoint

**dprintf [LOC,] FMT [,VALUES]**

Print FMT each time LOC is reached

## Inspecting State

**print EXPR** or shortcut **p**

Print the value of C expression EXPR

**display EXPR**

Print value of EXPR at each prompt

## Time Travel

**uinfo time**

Get the current debuggee time

**ugo time TIME**

Jump to specified time

**ugo start | end**

Jump to start / end of recorded history

**ubookmark NAME**

Create a bookmark at current debuggee time

**ugo bookmark NAME**

Jump to time corresponding to a named bookmark

**uinfo bookmarks [-a]**

List available bookmarks and their times

**ugo wallclock TIMESTAMP**

Jump to time corresponding to a wall clock time

## Recording Files

**uload RECORDING**

Load named recording for replay-mode debugging

**usave RECORDING**

Save recorded history to a file for later analysis