

GL Board Game: 3-D Game Support

Version 8.3

November 6, 2021

```
(require games/gl-board-game)      package: games

gl-board% : class?
  superclass: canvas%

(new gl-board%
  [min-x min-x]
  [max-x max-x]
  [min-y min-y]
  [max-y max-y]
  [lift lift]
  [[move move]
  [who who]]
  ...superclass-args...) → (is-a?/c gl-board%)
min-x : real?
max-x : real?
min-y : real?
max-y : real?
lift : real?
move : (any/c gl-vector? . -> . any) = void
who : string? = "this game"
```

The *min-x*, *max-x*, *min-y*, and *max-y* arguments specify the dimensions of the board plane to be visible in the window by default.

The *lift* argument specifies how many units a piece moves vertically when the user clicks on it.

The *move* function is called when a piece is moved to a space (possibly it's current space), when a space is clicked on, and when a space is dragged to another space. The *move* function is given the information of the piece or space selected and the coordinates to which it is moved.

The *who* argument is used for reporting an error to the user when GL is unavailable at run time.

```
(send a-gl-board add-space draw info) → void?  
draw : (-> any)  
info : any/c
```

Adds a space to the board. The *draw* thunk should draw the space (using GL commands) when called. The *info* value is given to the *move* function (supplied to the constructor) when the space is selected.

```
(send a-gl-board add-piece x y z draw info) → void?  
x : real?  
y : real?  
z : real?  
draw : ([shadow? boolean?] . -> . any)  
info : any/c
```

Adds a piece to the board. The *draw* thunk should draw the piece (using GL commands) when called. The *info* argument is given to the *move* function (supplied to the constructor) when the piece is moved. The piece is translated by *x*, *y*, and *z* before drawing.

```
(send a-gl-board remove-piece info) → void?  
info : any/c
```

Removes all pieces previously added with representative *info*.

```
(send a-gl-board add-heads-up w h draw info) → void?  
w : real?  
h : real?  
draw : (-> any)  
info : any/c
```

Add a “heads-up” display element whose size is *w* by *h* units with the given *draw* thunk and *info* representative.

```
(send a-gl-board remove-heads-up info) → void?  
info : any/c
```

Removes all “heads-up” displays elements previous added with representative *info*.

```
(send a-gl-board set-space-draw info draw) → void?  
info : any/c  
draw : (-> any)
```

Sets the drawing function of all spaces added with representative *info*.

```
(send a-gl-board set-piece-draw info draw) → void?  
info : any/c  
draw : ([shadow? boolean?] . -> . any)
```

Sets the drawing function of all pieces added with representative *info*.

```
(send a-gl-board enable-piece info  
can-move?) → void?  
info : any/c  
can-move? : any/c
```

Enables or disables moving of all pieces added with representative *info*.

```
(send a-gl-board enabled? info) → boolean?  
info : any/c
```

reports whether the first piece with representative *info* is enabled.

```
(send a-gl-board get-pieces) → list?  
(send a-gl-board get-spaces) → list?  
(send a-gl-board get-heads-up) → list?
```

Returns values for various kinds of content currently on the board. The result corresponds to *info* values given to `add-piece`, etc.