

0x5780000 0x5fa0000 J1

Dexter Development Environment 2.4.3

Editor

```
//Add whatever javascript  
//To change DDE colors,  
// 1. Uncomment the below  
// 2. Select the first ar  
// 3. Choose the "Insert"  
// 4. After inserting the  
// 5. To get the default  
// set_window_frame_backg  
// set_pane_header_backgr  
// set_menu_background_co  
// set_button_background  
  
persistent_set("ROS_URL",  
persistent_set("default_d  
persistent_set("default_d  
new Dexter({name: "dexter
```

Output

```
Now attempting to connect to Dexter: d  
Succeeded connection to Dexter: de  
Now attempting to connect to Dexter: dexter0 at ip_address: 192.168.0.100 port: 50000 ...  
Succeeded connection to Dexter: dexter0 at ip_address: 192.168.0.100 port: 50000  
Now attempting to connect to Dexter: dexter0 at ip_address: 192.168.0.100 port: 50000 ...  
Succeeded connection to Dexter: dexter0 at ip_address: 192.168.0.100 port: 50000
```

Calibrate your Dexter(s)

1. Choose a Dexter to calibrate: dexter0  
2. Rotate right potentiometer clockwise.

Start J1: -187 -156.10° 187  
Start J2: -92 83.3244° 92  
Start J3: -153 70.8111° 153  
Start J4: -103 -102.02° 103  
Start J5: -189 130.75° 189

Left potentiometer: Clockwise pot rotation ↑  
Right potentiometer: Clockwise pot rotation →

3. Calibrate optical encoders 4. Start FindHome (Experimental)

Doc

Step 2

Calibrate optical sensors by calibrating each of the five joints. When you click the start button for a joint, this begins a Job that draws thousands of points in the large white square plot area on the right of the dialog. If you don't see points drawn, you probably have your robot set to *simulate* i.e. `new Dexter({simulate: true})` or have that *simulate* init param set to `null` which causes it to look at the Jobs menu/Simulate? radio buttons for a value, or there is a discontinuity in your wiring. If the robot has its *simulate* init parameter set to `null` (the default and the case for dexter0), choose Jobs menu/Simulate? of false.

2:48 PM 10/14/2018

0x5820000 0x51e0000 J2

Dexter Development Environment 2.4.3

Editor

```
//Add whatever javascript  
//To change DDE colors,  
// 1. Uncomment the below  
// 2. Select the first ar  
// 3. Choose the "Insert"  
// 4. After inserting the  
// 5. To get the default  
// set_window_frame_backg  
// set_pane_header_backgr  
// set_menu_background_co  
// set_button_background  
  
persistent_set("ROS_URL",  
persistent_set("default_d  
persistent_set("default_d  
new Dexter({name: "dexter
```

Output

```
0x50a0000 0x6e00000  
0x5780000 0x5fa0000  
Now attempting to connect to Dexter: dexter0 at ip_address: 192.168.0.100 port: 50000 ...  
Succeeded connection to Dexter: dexter0 at ip_address: 192.168.0.100 port: 50000  
Now attempting to connect to Dexter: dexter0 at ip_address: 192.168.0.100 port: 50000 ...  
Succeeded connection to Dexter: dexter0 at ip_address: 192.168.0.100 port: 50000
```

Calibrate your Dexter(s)

1. Choose a Dexter to calibrate: dexter0  
2. Eye is acceptable. Wait for completion.

Start J1: -187 125.531° 187  
Start J2: -92 49.2802° 92  
Start J3: -153 0.000° 153  
Start J4: -103 0.000° 103  
Start J5: -189 0.000° 189

Left potentiometer: Clockwise pot rotation ↑  
Right potentiometer: Clockwise pot rotation →

3. Calibrate optical encoders 4. Start FindHome (Experimental)

Doc

Calibrate Dexter

When

To obtain optimal precision, Dexter must be calibrated after it is built.

Environmental effects of heat, humidity, movement, and orientation towards gravity, all conspire to make minor changes that affect Dexter's accuracy. **Calibrate optical sensors** will most likely only need to be done once. If you received a fully assembled Dexter, this initial calibration has been done. If you are building a kit, you must calibrate it when the building is complete. **Calibrate optical encoders** needs to be done every time Dexter is turned on. If Dexter is having sporadic movement or is not smooth in FollowMe mode, try going through a full calibration.

2:31 PM 10/14/2018

0x7ee0000 0x8480000 J3

Dexter Development Environment 2.4.3

```

2 //Add whatever javascript
3
4 //To change DDE colors,
5 // 1. Uncomment the below
6 // 2. Select the first ar
7 // 3. Choose the "Insert"
8 // 4. After inserting the
9 // 5. To get the default
10 // set_window_frame_backg
11 // set_pane_header_backgr
12 // set_menu_background_co
13 // set_button_background_
14
15 persistent_set("ROS_URL",
16 persistent_set("default_d
17 persistent_set("default_d
18 new Dexter({name: "dexter
19

```

### Calibrate your Dexter(s)

1. Choose a Dexter to calibrate: dexter0
2. Eye is acceptable. Wait for completion.

Start J1	-187	125.531°	187
Start J2	-92	83.3244°	92
Start J3	-153	-71.551°	153
Start J4	-103	0.000°	103
Start J5	-189	0.000°	189

Left potentiometer: Clockwise pot rotation ↑

Right potentiometer: Clockwise pot rotation →

X Axis

Doc <> search string Find ?

▼ Calibrate Dexter

**When**

To obtain optimal precision, Dexter must be calibrated after it is built.

Environmental effects of heat, humidity, movement, and orientation towards gravity, all conspire to make minor changes that affect Dexter's accuracy. **Calibrate optical sensors** will most likely only need to be done once. If you received a fully assembled Dexter, this initial calibration has been done. If you are building a kit, you must calibrate it when the building is complete. **Calibrate optical encoders** needs to be done every time Dexter is turned on. If Dexter is having sporadic movement or is not smooth in FollowMe mode, you may need to go through a full calibration.

Sim All Demo Pause Go

Output Eval Step Save Clear JS ROS

Eval&Start Start Job Stop Undef Jobs:

Succeeded connection to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000 ...

0x5820000 0x51e0000

Now attempting to connect to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000 ...

Succeeded connection to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000

Now attempting to connect to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000 ...

Succeeded connection to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000

Dexter Development Environment 2.4.3

```

2 //Add whatever javascript
3
4 //To change DDE colors,
5 // 1. Uncomment the below
6 // 2. Select the first ar
7 // 3. Choose the "Insert"
8 // 4. After inserting the
9 // 5. To get the default
10 // set_window_frame_backg
11 // set_pane_header_backgr
12 // set_menu_background_co
13 // set_button_background_
14
15 persistent_set("ROS_URL",
16 persistent_set("default_d
17 persistent_set("default_d
18 new Dexter({name: "dexter
19

```

### Calibrate your Dexter(s)

1. Choose a Dexter to calibrate: dexter0
2. Eye is acceptable. Wait for completion.

Start J1	-187	125.531°	187
Start J2	-92	83.3244°	92
Start J3	-153	43.9883°	153
Start J4	-103	0.000°	103
Start J5	-189	0.000°	189

Left potentiometer: Clockwise pot rotation ↑

Right potentiometer: Clockwise pot rotation →

X Axis

Doc <> search string Find ?

Step 2

**Calibrate optical sensors** by calibrating each of the five joints. When you click the start button for a joint, this begins a Job that draws thousands of points in the large white square plot area on the right of the dialog. If you don't see points drawn, you probably have your robot set to *simulate* i.e. `new Dexter({simulate: true})` or have that `simulate` init param set to `null` which causes it to look at the Jobs menu/Simulate? radio buttons for a value, or there is a discontinuity in your wiring. If the robot has its `simulate` init parameter set to `null` (the default and the case for `dexter0`), choose Jobs menu/Simulate? of `false`.

Sim All Demo Pause Go

Output Eval Step Save Clear JS ROS

Eval&Start Start Job Stop Undef Jobs:

0x5820000 0x51e0000

Now attempting to connect to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000 ...

Succeeded connection to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000

Now attempting to connect to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000 ...

Succeeded connection to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000

0x7da0000 0x80c0000

No Center J4

Dexter Development Environment 2.4.3

```

2 //Add whatever javascript
3
4 //To change DDE colors,
5 // 1. Uncomment the below
6 // 2. Select the first ar
7 // 3. Choose the "Insert!"
8 // 4. After inserting the
9 // 5. To get the default
10 // set_window_frame_backg
11 // set_pane_header_backgr
12 // set_menu_background_co
13 // set_button_background_
14
15 persistent_set("ROS_URL",
16 persistent_set("default_d
17 persistent_set("default_d
18 new Dexter({name: "dexter
19

```

### Calibrate your Dexter(s)

1. Choose a Dexter to calibrate: dexter0
2. Click in the center of the dot\_pattern circle.

Start J1	-187 125.531° 187
Start J2	-92 83.3244° 92
Start J3	-153 70.8111° 153
Start J4	-103 102.24° 103
Start J5	-189 130.75° 189

Reset Ranges  
Clear  
Save

Left potentiometer: Clockwise pot rotation ↑  
Right potentiometer: Clockwise pot rotation →

3. Calibrate optical encoders
4. Start FindHome (Experimental)

Doc <> search string Find ?

**Step 2**

**Calibrate optical sensors** by calibrating each of the five joints. When you click the start button for a joint, this begins a Job that draws thousands of points in the large white square plot area on the right of the dialog. If you don't see points drawn, you probably have your robot set to *simulate* i.e. `new Dexter({simulate: true})` or have that *simulate* init param set to null which causes it to look at the Jobs menu/Simulate? radio buttons for a value, or there is a discontinuity in your wiring. If the robot has its *simulate* init parameter set to null (the default and the case for dexter0), choose Jobs menu/Simulate? of false.

Sim All Demo Pause Go

Output

Succeeded connection to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000  
0x6c20000 0x8ac0000

Now attempting to connect to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000 ...

Succeeded connection to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000

0x6c20000 0x8ac0000 J5

Dexter Development Environment 2.4.3

```

2 //Add whatever javascript
3
4 //To change DDE colors,
5 // 1. Uncomment the below
6 // 2. Select the first ar
7 // 3. Choose the "Insert!"
8 // 4. After inserting the
9 // 5. To get the default
10 // set_window_frame_backg
11 // set_pane_header_backgr
12 // set_menu_background_co
13 // set_button_background_
14
15 persistent_set("ROS_URL",
16 persistent_set("default_d
17 persistent_set("default_d
18 new Dexter({name: "dexter
19

```

### Calibrate your Dexter(s)

1. Choose a Dexter to calibrate: dexter0
2. Move optical block closer to code disk.

Start J1	-187 125.531° 187
Start J2	-92 83.3244° 92
Start J3	-153 70.8111° 153
Start J4	-103 4.23° 103
Start J5	-189 71.95° 189

Reset Ranges  
Clear  
Save

Left potentiometer: Clockwise pot rotation ↑  
Right potentiometer: Clockwise pot rotation →

3. Calibrate optical encoders
4. Start FindHome (Experimental)

Doc <> search string Find ?

**Step 2**

**Calibrate optical sensors** by calibrating each of the five joints. When you click the start button for a joint, this begins a Job that draws thousands of points in the large white square plot area on the right of the dialog. If you don't see points drawn, you probably have your robot set to *simulate* i.e. `new Dexter({simulate: true})` or have that *simulate* init param set to null which causes it to look at the Jobs menu/Simulate? radio buttons for a value, or there is a discontinuity in your wiring. If the robot has its *simulate* init parameter set to null (the default and the case for dexter0), choose Jobs menu/Simulate? of false.

Sim All Demo Pause Go

Output

0x7da0000 0x80c0000  
0x7ee0000 0x8480000

Now attempting to connect to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000 ...

Succeeded connection to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000

Now attempting to connect to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000 ...

Succeeded connection to Dexter: dexter0 at ip\_address: 192.168.0.100 port: 50000