

# Reference Manual

Generated by Doxygen 1.8.13

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## 1 Class Index

### 1.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

<a href="#">Microwave</a>	3
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## 2 File Index

### 2.1 File List

Here is a list of all files with brief descriptions:

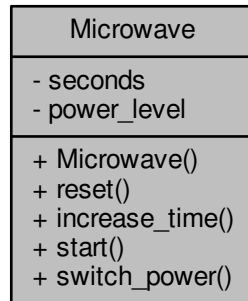
<a href="#">lab9h.cpp</a>	22
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## 3 Class Documentation

### 3.1 Microwave Class Reference

```
#include <Microwave.h>
```

Collaboration diagram for Microwave:



## Public Member Functions

- [Microwave](#) ()
- void [reset](#) ()
- void [increase\\_time](#) ()
- void [start](#) ()
- void [switch\\_power](#) ()

#### Private Attributes

- int [seconds](#)
- int [power\\_level](#)

### 3.1.1 Detailed Description

used to access fl\_choice function

Definition at line 12 of file Microwave.h.

### 3.1.2 Constructor & Destructor Documentation

#### 3.1.2.1 Microwave()

```
Microwave::Microwave ( )
```

Constructs [Microwave](#) with seconds initialized to 0 and power\_level to 1



Figure 1 Starting Image

Definition at line 10 of file Microwave.cxx.



```
10           :seconds(0),power_level(1) {  
11 }
```

### 3.1.3 Member Function Documentation

#### 3.1.3.1 increase\_time()

```
void Microwave::increase_time ( )
```

Increases the time on the timer by 30 seconds.

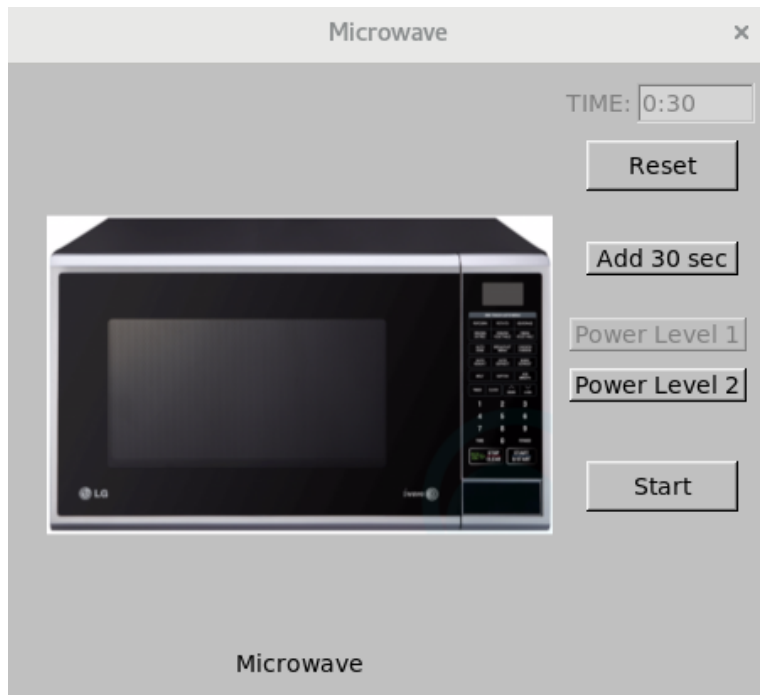


Figure 2 adding 30sec 1



Figure 3 adding 30sec 2

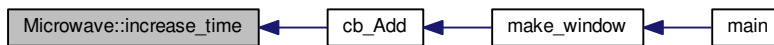


Figure 4 adding 30sec 3

Definition at line 29 of file Microwave.cxx.

```
29                                     {  
30     seconds += 30;  
31 }
```

Here is the caller graph for this function:



### 3.1.3.2 reset()

```
void Microwave::reset ( )
```

Resets the microwave to its initial state.

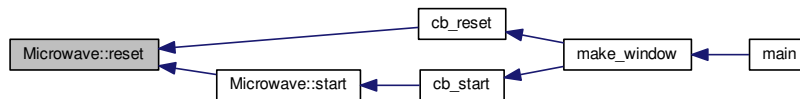


Figure 5 After Reset Image

Definition at line 17 of file Microwave.cxx.

```
17                                     {  
18     seconds = 0;  
19     power_level = 1;  
20 }
```

Here is the caller graph for this function:



### 3.1.3.3 start()

```
void Microwave::start ( )
```

Starts the machine, displaying information about its cooking state.



**Figure 6 Message During**





Figure 7 After start

Definition at line 39 of file Microwave.cxx.

```
39         {
40     std::string sec = std::to_string(seconds);
41     std::string level = std::to_string(power_level);
42     std::string combine = "Cooking for " + sec
43     + " seconds at level " + level;
44     fl_choice(combine.c_str(), "Ok", 0, 0);
```

```
45  
46     reset();  
47 }
```

Here is the call graph for this function:



Here is the caller graph for this function:



#### 3.1.3.4 switch\_power()

```
void Microwave::switch_power ( )
```

Switches the power level from low to high, or vice versa.

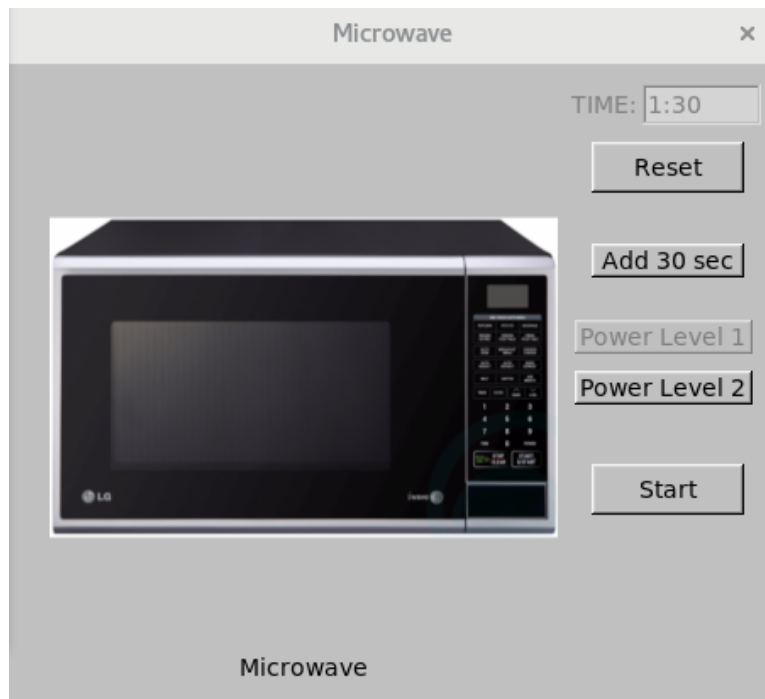


Figure 8 after pressing button1

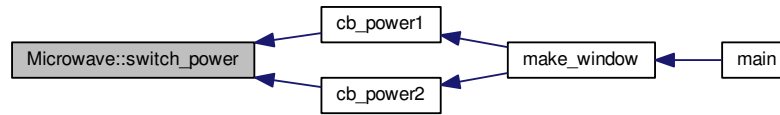


Figure 9 after pressing button2

Definition at line 54 of file Microwave.cxx.

```
54         {  
55     power_level = (power_level == 1)?2:1;  
56 }
```

Here is the caller graph for this function:



### 3.1.4 Member Data Documentation

#### 3.1.4.1 power\_level

```
int Microwave::power_level [private]
```

Definition at line 21 of file Microwave.h.

#### 3.1.4.2 seconds

```
int Microwave::seconds [private]
```

Definition at line 20 of file Microwave.h.

The documentation for this class was generated from the following files:

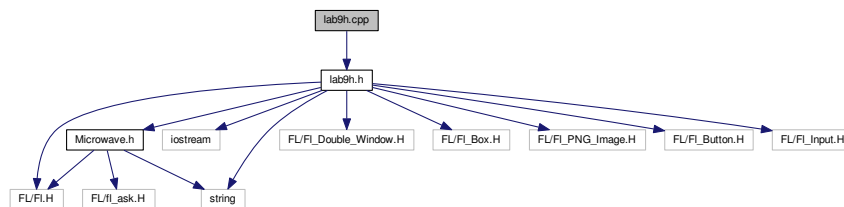
- [Microwave.h](#)
- [Microwave.cxx](#)

## 4 File Documentation

### 4.1 lab9h.cpp File Reference

```
#include "lab9h.h"
```

Include dependency graph for lab9h.cpp:



## Functions

- int `main` ()



### 4.1.1 Function Documentation

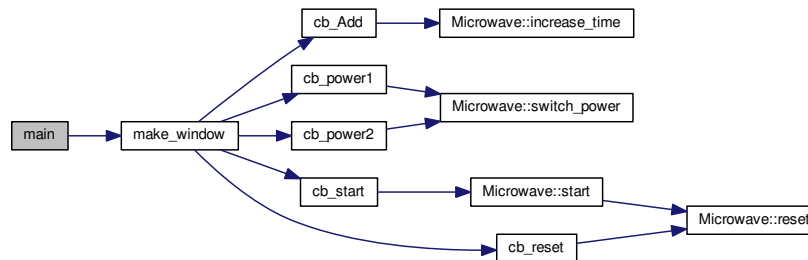
#### 4.1.1.1 main()

```
int main ( )
```

Definition at line 2 of file lab9h.cpp.

```
3 {  
4     w = make_window();  
5     w->show();  
6     return Fl::run();  
7 }
```

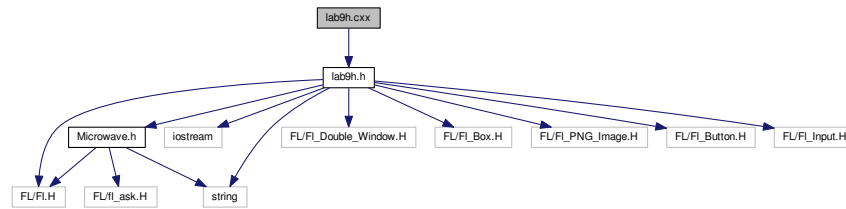
Here is the call graph for this function:



## 4.2 lab9h.cxx File Reference

```
#include "lab9h.h"
```

Include dependency graph for lab9h.cxx:



## Functions

- static void [cb\\_Add](#) (FI\_Button \*, void \*)
- static void [cb\\_power1](#) (FI\_Button \*, void \*)
- static void [cb\\_power2](#) (FI\_Button \*, void \*)
- static void [cb\\_start](#) (FI\_Button \*, void \*)
- static void [cb\\_reset](#) (FI\_Button \*, void \*)
- FI\_Double\_Window \* [make\\_window](#) ()

## Variables

- Microwave mic
- int sec
- Fl\_Double\_Window \* w =(Fl\_Double\_Window \*)0
- Fl\_Box \* b =(Fl\_Box \*)0
- Fl\_Button \* power1 =(Fl\_Button \*)0
- Fl\_Button \* power2 =(Fl\_Button \*)0
- Fl\_Button \* start =(Fl\_Button \*)0
- Fl\_Button \* reset =(Fl\_Button \*)0
- Fl\_Input \* text\_sec =(Fl\_Input \*)0

## 4.2.1 Function Documentation

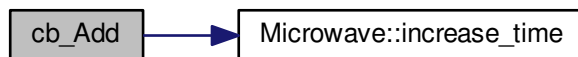
### 4.2.1.1 cb\_Add()

```
static void cb_Add (  
    Fl_Button * ,  
    void * ) [static]
```

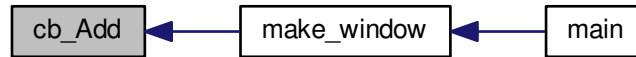
Definition at line 19 of file lab9h.cxx.

```
19                                     {  
20     start->activate();  
21     mic.increase_time();  
22     sec += 30;  
23     std::string secStr = std::to_string(sec / 60)  
24 + ":" + std::to_string(sec % 60);  
25     if (sec % 60 == 0)  
26         secStr += "0";  
27     text_sec->value(secStr.c_str());  
28 }
```

Here is the call graph for this function:



Here is the caller graph for this function:



#### 4.2.1.2 cb\_power1()

```
static void cb_power1 (  
    Fl_Button * ,  
    void * ) [static]
```

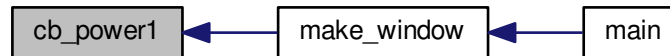
Definition at line 32 of file lab9h.cxx.

```
32                                     {  
33     mic.switch_power();  
34     power1->deactivate();  
35     power2->activate();  
36 }
```

Here is the call graph for this function:



Here is the caller graph for this function:



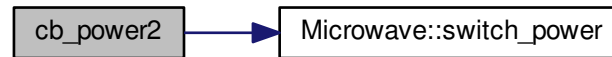
#### 4.2.1.3 `cb_power2()`

```
static void cb_power2 (  
    Fl_Button * ,  
    void * ) [static]
```

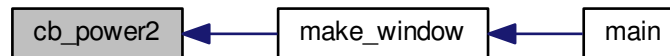
Definition at line 40 of file `lab9h.cxx`.

```
40                                     {  
41     mic.switch_power();  
42     power1->activate();  
43     power2->deactivate();  
44 }
```

Here is the call graph for this function:



Here is the caller graph for this function:





#### 4.2.1.4 cb\_reset()

```
static void cb_reset (  
    Fl_Button * ,  
    void * ) [static]
```

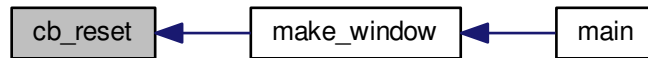
Definition at line 59 of file lab9h.cxx.

```
59                                     {  
60     mic.reset();  
61     text_sec->value("");  
62     sec = 0;  
63     power1->deactivate();  
64     power2->activate();  
65     start->deactivate();  
66 }
```

Here is the call graph for this function:



Here is the caller graph for this function:



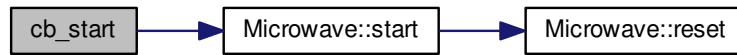
#### 4.2.1.5 `cb_start()`

```
static void cb_start (  
    Fl_Button * ,  
    void * ) [static]
```

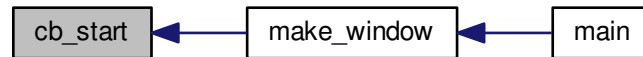
Definition at line 48 of file lab9h.cxx.

```
48                                     {  
49     mic.start();  
50     text_sec->value("");  
51     sec = 0;  
52     power1->deactivate();  
53     power2->activate();  
54     start->deactivate();  
55 }
```

Here is the call graph for this function:



Here is the caller graph for this function:



#### 4.2.1.6 make\_window()

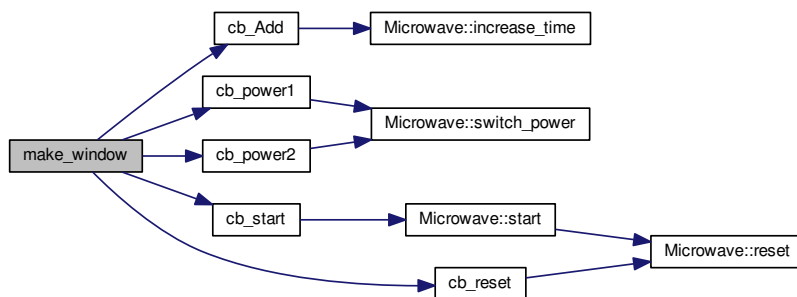
```
Fl_Double_Window* make_window ( )
```

This is a program which simulates a microwave

Definition at line 73 of file lab9h.cxx.

```
73         {
74     { w = new Fl_Double_Window(455, 375, "Microwave");
75     { // Dynamically allocates the memory
76         b = new Fl_Box(25, 29, 300, 326, "Microwave");
77         b->image(new Fl_PNG_Image("microwave2.png"));
78     } // Fl_Box* b
79     { Fl_Button* o = new Fl_Button(345, 105, 90, 20, "Add 30 sec");
80     o->callback((Fl_Callback*)cb_Add);
81     } // Fl_Button* o
82     { power1 = new Fl_Button(335, 150, 105, 20, "Power Level 1");
83     power1->callback((Fl_Callback*)cb_power1);
84     power1->deactivate();
85     } // Fl_Button* power1
86     { power2 = new Fl_Button(335, 180, 105, 20, "Power Level 2");
87     power2->callback((Fl_Callback*)cb_power2);
88     } // Fl_Button* power2
89     { start = new Fl_Button(345, 235, 90, 30, "Start");
90     start->callback((Fl_Callback*)cb_start);
91     start->deactivate();
92     } // Fl_Button* start
93     { reset = new Fl_Button(345, 45, 90, 30, "Reset");
94     reset->callback((Fl_Callback*)cb_reset);
95     } // Fl_Button* reset
96     { text_sec = new Fl_Input(375, 11, 70, 24, "TIME:");
97     text_sec->deactivate();
98     } // Fl_Input* text_sec
99     w->end();
100 } // Fl_Double_Window* w
101 return w;
102 }
```

Here is the call graph for this function:



Here is the caller graph for this function:



## 4.2.2 Variable Documentation

### 4.2.2.1 b

```
Fl_Box* b =(Fl_Box *)0
```

Definition at line 17 of file lab9h.cxx.

### 4.2.2.2 mic

```
Microwave mic
```

This is global [Microwave](#) so the window and buttons can access the member functions

Definition at line 8 of file lab9h.cxx.

### 4.2.2.3 power1

```
Fl_Button* power1 =(Fl_Button *)0
```

Definition at line 30 of file lab9h.cxx.

### 4.2.2.4 power2

```
Fl_Button* power2 =(Fl_Button *)0
```

Definition at line 38 of file lab9h.cxx.

#### 4.2.2.5 reset

```
Fl_Button* reset = (Fl_Button *)0
```

Definition at line 57 of file lab9h.cxx.

#### 4.2.2.6 sec

```
int sec
```

this global variable holds the time of the microwave

Definition at line 13 of file lab9h.cxx.

#### 4.2.2.7 start

```
Fl_Button* start = (Fl_Button *)0
```

Definition at line 46 of file lab9h.cxx.

#### 4.2.2.8 text\_sec

```
Fl_Input* text_sec = (Fl_Input *)0
```

Definition at line 68 of file lab9h.cxx.

## 4.2.2.9 w

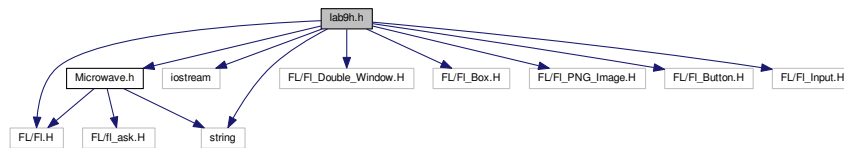
```
Fl_Double_Window* w =(Fl_Double_Window *)0
```

Definition at line 15 of file lab9h.cxx.

## 4.3 lab9h.h File Reference

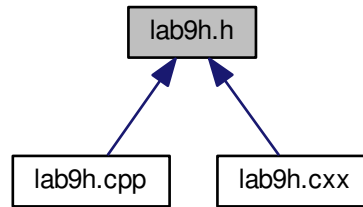
```
#include <FL/Fl.H>
#include <string>
#include <iostream>
#include "Microwave.h"
#include <FL/Fl_Double_Window.H>
#include <FL/Fl_Box.H>
#include <FL/Fl_PNG_Image.H>
#include <FL/Fl_Button.H>
#include <FL/Fl_Input.H>
```

Include dependency graph for lab9h.h:





This graph shows which files directly or indirectly include this file:



## Functions

- `Fl_Double_Window * make\_window ()`

## Variables

- Microwave mic
- int sec
- Fl\_Double\_Window \* w
- Fl\_Box \* b
- Fl\_Button \* power1
- Fl\_Button \* power2
- Fl\_Button \* start
- Fl\_Button \* reset
- Fl\_Input \* text\_sec

### 4.3.1 Function Documentation

#### 4.3.1.1 make\_window()

```
Fl_Double_Window* make_window ( )
```

This is a program which simulates a microwave

Definition at line 73 of file lab9h.cxx.

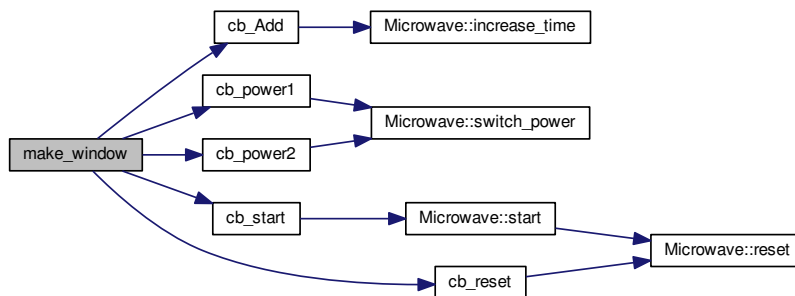
```
73         {
74     { w = new Fl_Double_Window(455, 375, "Microwave");
75     { // Dynamically allocates the memory
76         b = new Fl_Box(25, 29, 300, 326, "Microwave");
77         b->image(new Fl_PNG_Image("microwave2.png"));
78     } // Fl_Box* b
79     { Fl_Button* o = new Fl_Button(345, 105, 90, 20, "Add 30 sec");
80     o->callback((Fl_Callback*)cb_Add);
81     } // Fl_Button* o
82     { power1 = new Fl_Button(335, 150, 105, 20, "Power Level 1");
83     power1->callback((Fl_Callback*)cb_power1);
84     power1->deactivate();
85     } // Fl_Button* power1
86     { power2 = new Fl_Button(335, 180, 105, 20, "Power Level 2");
87     power2->callback((Fl_Callback*)cb_power2);
88     } // Fl_Button* power2
89     { start = new Fl_Button(345, 235, 90, 30, "Start");
90     start->callback((Fl_Callback*)cb_start);
91     start->deactivate();
```

```

92     } // Fl_Button* start
93     { reset = new Fl_Button(345, 45, 90, 30, "Reset");
94       reset->callback((Fl_Callback*)cb_reset);
95     } // Fl_Button* reset
96     { text_sec = new Fl_Input(375, 11, 70, 24, "TIME:");
97       text_sec->deactivate();
98     } // Fl_Input* text_sec
99     w->end();
100 } // Fl_Double_Window* w
101 return w;
102 }

```

Here is the call graph for this function:



Here is the caller graph for this function:



### 4.3.2 Variable Documentation

#### 4.3.2.1 b

`Fl_Box* b`

Definition at line 17 of file lab9h.cxx.

#### 4.3.2.2 mic

`Microwave mic`

This is global `Microwave` so the window and buttons can access the member functions

Definition at line 8 of file lab9h.cxx.

#### 4.3.2.3 power1

`Fl_Button* power1`

Definition at line 30 of file lab9h.cxx.

#### 4.3.2.4 power2

`Fl_Button* power2`

Definition at line 38 of file lab9h.cxx.

#### 4.3.2.5 reset

```
Fl_Button* reset
```

Definition at line 57 of file lab9h.cxx.

#### 4.3.2.6 sec

```
int sec
```

this global variable holds the time of the microwave

Definition at line 13 of file lab9h.cxx.

#### 4.3.2.7 start

```
Fl_Button* start
```

Definition at line 46 of file lab9h.cxx.

#### 4.3.2.8 text\_sec

```
Fl_Input* text_sec
```

Definition at line 68 of file lab9h.cxx.



#### 4.3.2.9 w

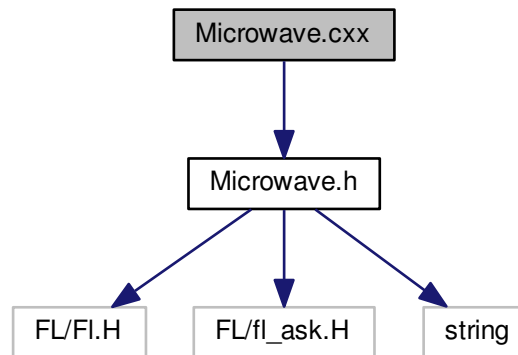
```
Fl_Double_Window* w
```

Definition at line 15 of file lab9h.cxx.

## 4.4 Microwave.cxx File Reference

```
#include "Microwave.h"
```

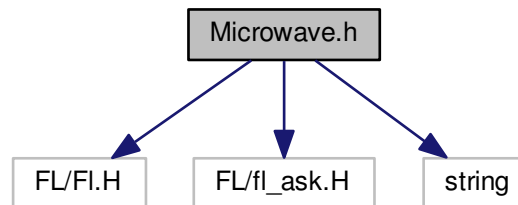
Include dependency graph for Microwave.cxx:



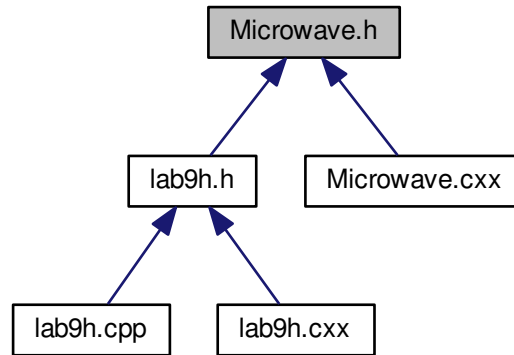
## 4.5 Microwave.h File Reference

```
#include <FL/Fl.H>  
#include <FL/fl_ask.H>  
#include <string>
```

Include dependency graph for Microwave.h:



This graph shows which files directly or indirectly include this file:



## Classes

- class [Microwave](#)



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