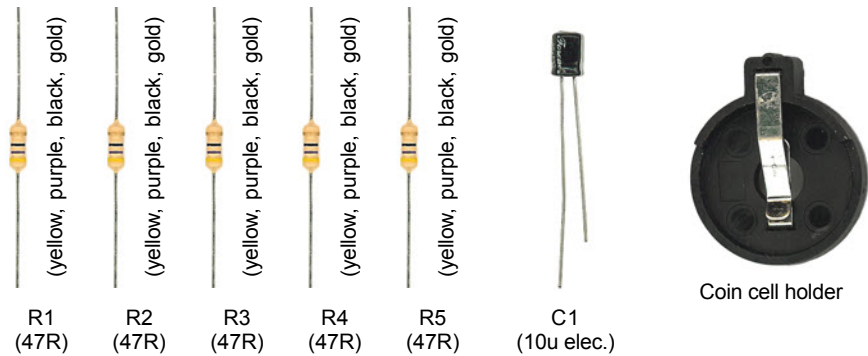


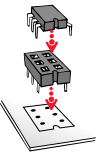


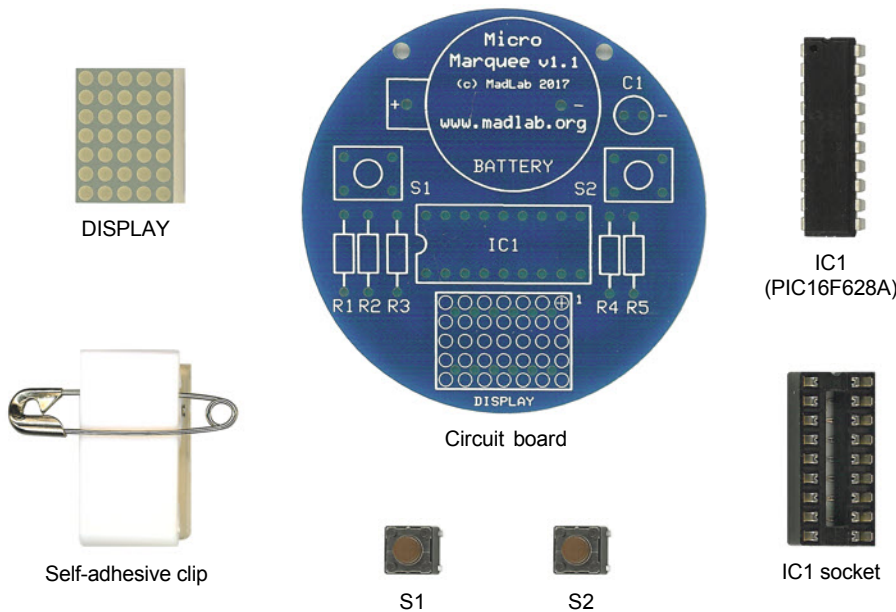
# MICRO MARQUEE

a scrolling message badge



Coin cell holder

- 1 Identify the different components using the spotter chart.
- 2 Fit and solder the resistors (R1 to R5) to the circuit board. They can be fitted either way around. 
- 3 Solder the chip socket (IC1) matching the notch in the socket to the notch on the board. **Do not solder the chip directly to the board.**
- 4 Solder the capacitor (C1) to the board putting the shorter leg into the hole with the - sign. The shorter leg also has a stripe on the side of the body. 
- 5 Solder the display (DISPLAY) to the board matching the small digit 1 on one side of the display to 1 on the board (top right corner). Double check this before soldering.
- 6 Solder the coin cell holder (BATTERY) matching the shape of the holder to the shape on the board.
- 7 Solder the pushbuttons (S1 and S2) either way around.
- 8 Carefully bend the legs of the chip inwards a little with your fingers. Fit the chip into its socket matching the small notch in the chip to the notch in the socket. 
- 9 Fit a coin cell **(3V CR2032)** into the coin cell holder making sure the plus sign (+) on the coin cell is uppermost. If *Micro Marquee* is working properly all the lights of the display should flash twice.
- 10 Attach the self-adhesive clip to the back of the circuit board, or use the two holes to thread *Micro Marquee* on a cord to wear around your neck.



## HOW TO USE MICRO MARQUEE

*Micro Marquee* is a wearable electronic badge that displays a moving message. It can store 3 messages each of 56 characters, has 3 scroll speeds, and 3 message repeat delays. The display can be inverted, and scrolling can be turned off.

Press either pushbutton to display the default message ("MICRO MARQUEE FROM MADLAB").

To start a new message, press both pushbuttons together then release them, then immediately press and release them together again (i.e. a double press). This clears out any existing message (the display flashes twice to acknowledge this). You can also retain and edit an existing message by pressing and releasing both pushbuttons just once.

You can use the letters A to Z (uppercase) and the space character in your messages, as well as the digits 0 to 9 and some punctuation characters ( ` ' ( ) \* + - , . ? @ ♥ ).

You enter your message using the two pushbuttons to select the individual characters that make up the message. The idea is to go through the letters in the alphabet until you reach the one you want. Pressing the right pushbutton moves you forward one position in the alphabet (for example from B to C). Pressing the left pushbutton moves you back one position in the alphabet (from F to E for example). You start from the space character, which is followed by the letter A (and preceded by the punctuation characters). In other words, pressing the right pushbutton once gives you an A, pressing it twice gives you a B, and so forth.

Once you have reached the letter you want, press both pushbuttons together to fix the character in memory and step on to the next character in the message. Enter the next character in the same way, then step on again. Continue in this way until the whole message is entered (up to 56 characters). Just step over any characters you want left as spaces in your message.

A small indicator dot flashes briefly in the bottom left corner of the display so you can be sure you've stepped on to the next character.

When you have finished entering your message, press both pushbuttons together and hold them down for 2 seconds. Your complete message will then be displayed, scrolling across the display, and will be repeated (after a short delay) until either pushbutton is pressed.

### Options

Press and hold both pushbuttons for about 2 seconds to set the options. The display will then cycle through the option settings while the pushbuttons are held down. Release the pushbuttons to set a particular option.

The options are:

- message selection (M1, M2, M3)
- scroll speed (S1 = slow, S2 = medium, S3 = fast)
- repeat delay (D1 = short, D2 = medium, D3 = long)
- inverted or non-inverted display (down arrow, up arrow)
- scrolling or non-scrolling message (left arrow, cross)

Use the left and right pushbuttons to step through a particular option's settings. Press both pushbuttons together to set the option.

The inverted display option allows you to wear *Micro Marquee* either way up, as is most convenient.

There are three settings for the delay between message repeats (D1, D2 and D3). For a longer delay between messages, pad the end of your message with extra space characters.

Your messages and option settings will be retained permanently in *Micro Marquee*, even when the coin cell is removed.