

BUZZ 2 Click



PID: MIKROE-2720

BUZZ 2 click carries the [CMT-8540S-SMT](#) magnetic buzzer transducer. The buzzer's resonant frequency is 4kHz. The click is designed to run on either 3.3V or 5V power supply.

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How the click works

The CMT-8540S-SMT magnetic buzzer is controlled by the PWM pin on the mikroBUS™ line.

You can create different sound patterns using the Sound library supported in our compilers, or utilize the microcontroller internal PWM module to create the signal for the buzzer. Signal frequency determines the sound pitch, and the duty cycle determines the amplitude (sound volume).

Power supply selection

Onboard VCCIO SEL zero-ohm resistor (SMD jumper) is used to determine whether 5V or 3.3V power supply is used. This resistor is placed in 5V position by default.

Specifications

Type	Speakers
Applications	The click is ideal for adding audio signalization

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ISO 27001: 2013 certification of informational security management system.
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ISO 9001: 2015 certification of quality management system (QMS).

	feature to your prototype device
On-board modules	CMT-8540S-SMT magnetic buzzer transducer
Key Features	4kHz resonant frequency
Interface	PWM
Feature	No ClickID
Compatibility	mikroBUS™
Click board size	M (42.9 x 25.4 mm)
Input Voltage	3.3V or 5V

Pinout diagram

This table shows how the pinout on **BUZZ 2 click** corresponds to the pinout on the mikroBUS™ socket (the latter shown in the two middle columns).

Notes	Pin					Pin	Notes
	NC	1	AN	PWM	16	PWM	PWM input
	NC	2	RST	INT	15	NC	
	NC	3	CS	TX	14	NC	
	NC	4	SCK	RX	13	NC	
	NC	5	MISO	SCL	12	NC	
	NC	6	MOSI	SDA	11	NC	
Power supply	+3.3V	7	3.3V	5V	10	+5V	Power supply
Ground	GND	8	GND	GND	9	GND	Ground

Programming

Code examples for BUZZ 2 click, written for MikroElektronika hardware and compilers are available on Libstock.

Code snippet

The following code snippet defines the notes and initializes the Sound library.

```
01 // notes
02 #define cS 261
03 #define dS 294
04 #define e 329
05 #define fS 349
06 #define g 391
07 #define gS 415
08 #define aHa 440
09 #define aS 455
10 #define b 466
11 #define cH 523
12 #define cSH 554
13 #define dH 587
14 #define dSH 622
```

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```

15 #define eH 659
16 #define fH 698
17 #define fSH 740
18 #define gH 784
19 #define gSH 830
20 #define aH 880
21 void systemInit()
22 {
23     AD1PCFG = 0xFFFF;
24     TRISD = 0;
25 }
26 void Buzz_2_Init()
27 {
28     Sound_Init(&LATD, 0);
29 }
30 void Buzz_2_Task()
31 {
32     Sound_Play(aHa, 500);
33     Sound_Play(aHa, 500);
34     Sound_Play(aHa, 500);
35     Sound_Play(fS, 350);
36     Sound_Play(cH, 150);
37     Sound_Play(aHa, 500);
38     Sound_Play(fS, 350);
39     Sound_Play(cH, 150);
40     Sound_Play(aHa, 650);
41     delay_ms(500);
42     Sound_Play(eH, 500);
43     Sound_Play(eH, 500);
44     Sound_Play(eH, 500);
45     Sound_Play(fH, 350);
46     Sound_Play(cH, 150);
47     Sound_Play(gS, 500);
48     Sound_Play(fS, 350);
49     Sound_Play(cH, 150);
50     Sound_Play(aHa, 650);
51 }
52 void main()
53 {
54     systemInit();
55     Buzz_2_Init();
56     while( 1 )
57     {
58         Buzz_2_Task();
59     }
60 }

```

Resources

[mikroBUS™](#)

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[Click board™ Catalog](#)

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Downloads

[Buzz 2 click schematic](#)

[CMT-8540S-SMT datasheet](#)

[Buzz 2 click example on Libstock](#)

[Buzz 2 click 2D and 3D files](#)

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