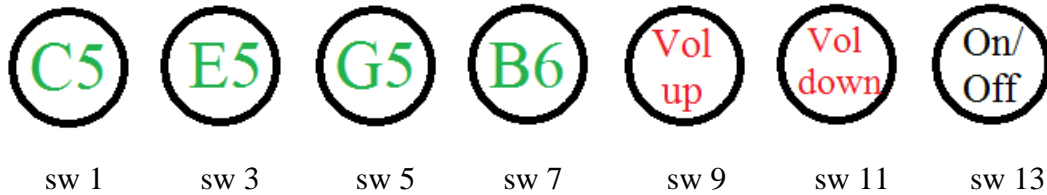


User Manual for the STM32 MIDI Piano

Thank you for your purchase of the STM32 MIDI Piano. Your STM32 MIDI Piano features 7 buttons and a light up display. Your button layout can be seen in the figure below.



The bottom row of buttons on your STM32 MIDI Piano are not required to play. This is for consumer convenience, as playing keys on multiple rows can lead to hand strain.

To begin playing your STM32 MIDI Piano please ensure your STM32F Discovery microcontroller is attached to the custom board, and connected to power via USB. To load the program, first flash the CS43L22 TIM7 DAC1 DMA1.hex file to address 0x08001000 in the microcontroller's memory using the ST Link utility available on the ST web page. Once this supplemental software has been flashed into your device's memory, load the JukeBox project into the board using Keil. Upon upload, press the button labeled SW B on the front face of your board. You are now ready to make music!

Turn the piano on by pressing S13. You can turn it back off at any time by pressing this button again. To play any one of the STM32 MIDI Piano's 4 notes (C5, E5, G5, or B6), press the button S1, S3, S5, or S7 to begin playing the note. You will see that note's name on the left two digits of your 7-segment display, or simply '00' if no note is being played. To stop playing that note, press that note's button again or press a different button to play another note.

Your STM32 MIDI Piano also features volume control. To lower the volume, press S9. To increase the volume, press S11. Your MIDI Piano features 12 volume control levels to play at your convenience. You can see the current volume on the right two digits on your 7-segment display.

Thank you again for your purchase of the STM32 MIDI Piano, and remember – I'm extremely grateful to be done with this project.