

BUZZER

GREEN

BLUE

BUTTONS

GREEN
BLUE
RED
YELLOW

VOLUME

YELLOW

RED

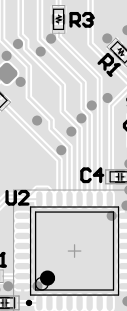
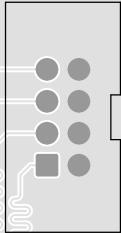
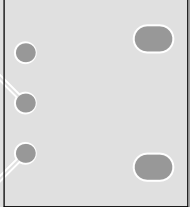
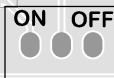
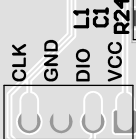
BATTERY

BLACK

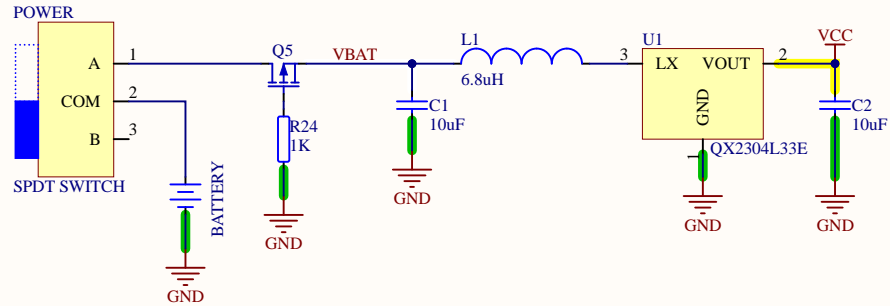
RED

POWER

DEBUG



A

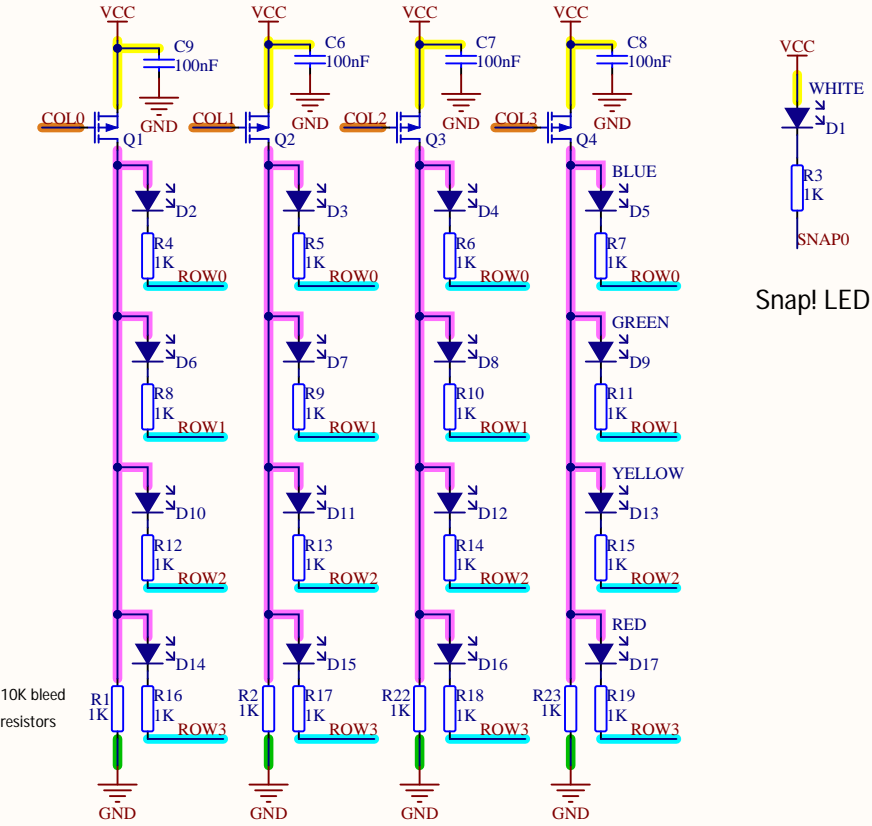


Boost regulator 3.6v

B

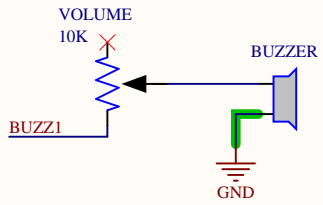
4 x P-FETs
Vgs < 1.2v ideally
200mW at least

Score LEDs



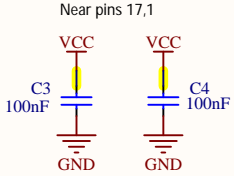
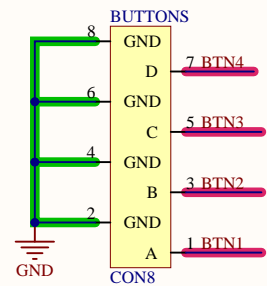
D

10K bleed resistors

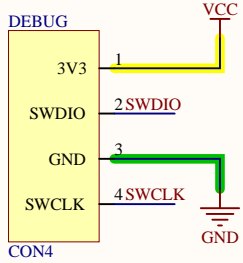


Buzzer

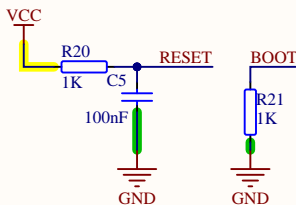
Buttons header



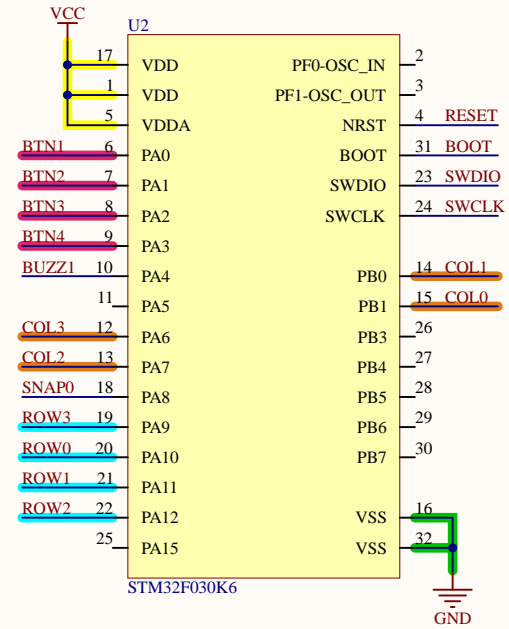
MCU decoupling



Debug header



Reset/boot



MCU

Title		
Size	Number	Revision
A4		
Date:	3/18/2021	Sheet of
File:	C:\dev\react4\pcb\react4\react4.SchDoc	Drawn By:

Comment	Description	Designator	Footprint	Quantity
CON8	2 x 4 2.54mm IDC board connector	BUTTONS	CON8	1
BUZZER	3V 12mm piezo buzzer	BUZZER	PIEZO_BUZZER	1
Capacitor	Capacitor	C1, C2	CAPC_1206_3216X16L	2
CAPACITOR	Capacitor	C3, C4, C5, C6, C7, C8, C9	CAPC_0603_1608X08L	7
WHITE	5mm through hole LED	D1	LED WHITE	1
BLUE	5mm through hole LED	D2, D3, D4, D5	LED BLUE	4
GREEN	5mm through hole LED	D6, D7, D8, D9	LED GREEN	4
YELLOW	5mm through hole LED	D10, D11, D12, D13	LED YELLOW	4
RED	5mm through hole LED	D14, D15, D16, D17	LED RED	4
INDUCTOR	200mA 1206 SMD Inductor	L1	INDC3216X09L	1
SPDT SWITCH	DIP, 9.1x3.5x3.5mm Toggle Switch	POWER	MK-12D18	1
MOSFET-P	P-MOSFET -20V -2A 400mW NX2301P or equivalent	Q1, Q2, Q3, Q4, Q5	SOT95P237X110-3L	5
Resistor	125mW 0603 SMD resistor	R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15, R16, R17, R18, R19, R20, R21, R22, R23, R24	RESC_0603_1608X08L	24
QX2304L33E	3.3v boost regulator 1A 0.5W	U1	SOT89-150P350X160-3L	1
STM32F030K6	STM32F030K6 QFP32 48MHz	U2	TQFP80P900X900X160-32L	1
POTENTIOMETER	10K audio pot 16x2mm thumbwheel	VOLUME	POTENTIOMETER	1

Design Rules Verification Report

Filename : C:\dev\react4\pcb\react4\react4.PcbDoc

Warnings 0
Rule Violations 0

Warnings	
Total	0

Rule Violations	
Clearance Constraint (Gap=0.152mm) (All),(All)	0
Short-Circuit Constraint (Allowed=No) (All),(All)	0
Un-Routed Net Constraint (All)	0
Modified Polygon (Allow modified: No), (Allow shelved: No)	0
Width Constraint (Min=0.152mm) (Max=2.54mm) (Preferred=0.152mm) (All)	0
Power Plane Connect Rule(Relief Connect)(Expansion=0.508mm) (Conductor Width=0.254mm) (Air Gap=0.254mm)	0
Hole Size Constraint (Min=0.025mm) (Max=7.62mm) (All)	0
Hole To Hole Clearance (Gap=0.254mm) (All),(All)	0
Minimum Solder Mask Sliver (Gap=0.127mm) (All),(All)	0
Silk To Solder Mask (Clearance=0mm) (IsPad),(All)	0
Silk to Silk (Clearance=0mm) (All),(All)	0
Net Antennae (Tolerance=0mm) (All)	0
Height Constraint (Min=0mm) (Max=25.4mm) (Preferred=12.7mm) (All)	0
Total	0