Bill of Material		
Number	**Reference**	**Designation**
Chrono		
1		RaspberryPi 3B+
1	MB-MC32GA	SD Card 32GB
1		Arduino nano
1		Waveshare display 3.5 LCD ©
1		BLUEWAY High power wifi dongle
1		PCB custom
1	1883715	Pcb Female connector 2*20
1	1580891	PCB Male connector 2*40
6		Resistor 10K 1/4W
1		Resistor 5K6 1/4W
2		Resistor 1K 1/4W
2		Ressitor 0K33 1/4W
2		BC547B
2		Buzzer 5V
1		Mpx 6 pins female
1		XT 60 female
2	2109227	Jack 6.35
1	738619	Jack 3.5 female
1	491751	cable jack male
1	701281	push button
1		Switch Bec 3A - 5/6V - Hobbywing
1		heat-shrinkable sleeve
1		set of screws
1	3Dprinter	case side
1	3Dprinter	case top
1	3Dprinter	case
1	3Dprinter	display support 1
1	3Dprinter	display support 2
1	3Dprinter	light cover
1	3Dprinter	adaptor for photo stand
1	3Dprinter	multiplex plug holder
Wire for button		
4	1569183	Jack 6.35 male
2		2 Wires 50m
Wired button		
2	2109227	Jack 6.35
2	701281	push button
1		set of screws
2	3Dprinter	btn base case - part1
2	3Dprinter	btn base case - part2

		Battery case	
1		Cell 3S 3000mA 18650	
1		XT 60 Male	
1		set of screws	
1	3Dprinter	BatteryCase part1	
1	3Dprinter	BatteryCase part2	
1	3Dprinter	BatteryCase part3 Flex	
1	3Dprinter	Hex_cell	
1		heat-shrinkable sleeve	
		Buzzer Case	
2	1566911	buzzer 110db 12V	
2		BC547B	
1		P16NF06	
2		Resistor 10K 1/4w	
2		Resistor 1K 1/4w	
1		Resistor 4K 1/4w	
1		Cable 3 wires *1m	
1		heat-shrinkable sleeve	
1		set of screws	
1	3Dprinter	Side buzzer case	
1	3Dprinter	bottom buzzer case	

Display 3.5" Pinout		
PIN NO.	SYMBOL	Designation
1, 17	3.3V	Power positive (3.3V power input)
2, 4	5V	Power positive (5V power input)
3, 5, 7, 8, 10, 12, 13, 15, 16	NC	NC
6, 9, 14, 20, 25	GND	Ground
11	TP_IRQ	Touch Panel interrupt, low level while the Touch Panel detects touching
18	LCD_RS	Instruction/Data Register selection
19	LCD_SI / TP_SI	SPI data input of LCD/Touch Panel
21	TP_SO	SPI data output of Touch Panel
22	RST	Reset
23	LCD_SCK / TP_SCK	SPI clock of LCD/Touch Panel
24	LCD_CS	LCD chip selection, low active
26	TP_CS	Touch Panel chip selection, low active
Raspberry Pi External		
29	GPIO05	Base A button
31	GPIO06	Base B button
32	GPIO12	Next Button
33	GPIO13	free
35	GPIO19	buzzer output
37	GPIO26	free
38	GPIO20	free
40	GPIO21	Buzzer next output
	+5V	
	GND	
Raspberry pi vers chrono		
8	GPIO14	TX
10	GPIO15	RX
	GND	
Chrono Arduino vers ext		
	+5V	+VIN 6-20VDC
	GND	GND
32	D2/INT0	Base A button
1	D3/INT1	Base B button
13	A0/PCO	Buzzer output
24	ADC1	Cell pack voltage 3S Max
31	TXD	TX
30	RXD	RX

Raspberry Pi B+ J8 Header

Pin#	NAME			NAME	Pin#
01	3.3v DC Power			DC Power 5v	02
03	GPIO02 (SDA1 , I2C)			DC Power 5v	04
05	GPIO03 (SCL1 , I2C)			Ground	06
07	GPIO04 (GPIO_GCLK)			(TXD0) GPIO14	08
09	Ground			(RXD0) GPIO15	10
11	GPIO17 (GPIO_GEN0)			(GPIO_GEN1) GPIO18	12
13	GPIO27 (GPIO_GEN2)			Ground	14
15	GPIO22 (GPIO_GEN3)			(GPIO_GEN4) GPIO23	16
17	3.3v DC Power			(GPIO_GEN5) GPIO24	18
19	GPIO10 (SPI_MOSI)			Ground	20
21	GPIO09 (SPI_MISO)			(GPIO_GEN6) GPIO25	22
23	GPIO11 (SPI_CLK)			(SPI_CE0_N) GPIO08	24
25	Ground			(SPI_CE1_N) GPIO07	26
27	ID_SD (I2C ID EEPROM)			(I2C ID EEPROM) ID_SC	28
29	GPIO05			Ground	30
31	GPIO06			GPIO12	32
33	GPIO13			Ground	34
35	GPIO19			GPIO16	36
37	GPIO26			GPIO20	38
39	Ground			GPIO21	40

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