

Note: Components listed for use in the analog section of the pc board are merely one possible configuration. Different op amps, capacitors, and resistor values may be used.

IRVC2 Parts List	Two channel version	R. Grieb	2/13/08		
Ref Des	Qty	Description	DK Part #	Mouser Part #	
U1	1	Microcontroller, PIC18F2321, DIP28	---		
U2	1	Voltage regulator, LM78L05 TO-92	LM78L05ACZNS		
U3	1	Dual op amp, TL072A, or equivalent	296-7190-5		
U4	1	PGA IC, TI PGA2310 DIP16 or	---	595-PGA2310PA	
U9	-	PGA IC, TI PGA2310, SOL-16 package	---	595-PGA2310UA	
S1	1	IR receiver module, Vishay TSOP34838	---		
D1	1	LED, Red LTL-307E	160-1705		
R1	1	Resistor, 1/4W 5%, 100 Ohm	100Q		
R2	1	Resistor, 1/4W 5%, 240 Ohm	240Q		
R3,R14	2	Resistor, 1/4W 5%, 10K Ohm	10KQ		
R4	1	Resistor, 1/4W 5%, 20K Ohm	20KQ		
R5	1	Resistor, 1/4W 5%, 470K Ohm	470KQ		
R7	1	Resistor, 1/4W size, 0 Ohm	0.0Q		
R8,R9,R11,R12	4	Resistor, 1/4W 1%, 20K Metal Film	20K		
R10,R13	2	Resistor, 1/4W 1%, 10K Metal Film	10K		
R27	1	Resistor, 1/4W 5%, 100K Ohm	100KQ		
C1,C3,C4,C5,C6, C9,C10,C12	8	Capacitor, ceramic, 0.1 uF, 50V 0.1" lead spacing	BC1148CT		
C2	1	Capacitor, electrolytic, 4.7 uF, 50V	P5177		
C7,C8	2	Capacitor, polyester film, 1.0 uF, 50V	P4675		
C11,C13	2	Capacitor, electrolytic, 10 uF, 25V	P5148		
C32	1	Capacitor, tantalum, 10 uF, 10V 3216	399-3684-1		
J1	-	Not populated			
J2	1	14-pin dual-row unshrouded header	P/O S2011E-36		
J3	1	10-pin dual-row unshrouded header	P/O S2011E-36		
PB1	1	Switch, pushbutton momentary	SW400		
Female mate for J2	1	Connector IDC Socket, 14 position	ASC14H		
Female mate for J3	1	Connector IDC Socket, 10 position	ASC10H		

IRVC2 Parts List Four channel version R. Grieb 2/13/08

Ref Des	Qty	Description	DK Part #	Mouser Part #
U1	1	Microcontroller, PIC18F2321, DIP28	---	
U2	1	Voltage regulator, LM78L05 TO-92	LM78L05ACZNS	
U3,U5	2	Dual op amp, TL072A, or equivalent	296-7190-5	
U4,U6	2	PGA IC, TI PGA2310 DIP16 or	---	595-PGA2310PA
U9,U10	-	PGA IC, TI PGA2310, SOL-16 package	---	595-PGA2310UA
S1	1	IR receiver module, Vishay TSOP34838	---	
D1	1	LED, Red LTL-307E	160-1705	
R1	1	Resistor, 1/4W 5%, 100 Ohm	100Q	
R2	1	Resistor, 1/4W 5%, 240 Ohm	240Q	
R3,R14	2	Resistor, 1/4W 5%, 10K Ohm	10KQ	
R4	1	Resistor, 1/4W 5%, 20K Ohm	20KQ	
R5	1	Resistor, 1/4W 5%, 470K Ohm	470KQ	
R7	1	Resistor, 1/4W size, 0 Ohm	0.0Q	
R8,R9,R11,R12	8	Resistor, 1/4W 1%, 20K Metal Film	20K	
R15,R16,R18,R19				
R10,R13,R17,R20	4	Resistor, 1/4W 1%, 10K Metal Film	10K	
R27,R28	2	Resistor, 1/4W 5%, 100K Ohm	100KQ	
C1,C3,C4,C5,C6, C9,C10,C12,C14, C15,C18,C19,C21	13	Capacitor, ceramic, 0.1 uF, 50V 0.1" lead spacing	BC1148CT	
C2	1	Capacitor, electrolytic, 4.7 uF, 50V	P5177	
C7,C8,C16,C17	4	Capacitor, polyester film, 1.0 uF, 50V	P4675	
C11,C13,C20,C22	4	Capacitor, electrolytic, 10 uF, 25V	P5148	
C32	1	Capacitor, tantalum, 10 uF, 10V 3216	399-3684-1	
J1	-	Not populated		
J2	1	14-pin dual-row unshrouded header	P/O S2011E-36	
J3	1	10-pin dual-row unshrouded header	P/O S2011E-36	
PB1	1	Switch, pushbutton momentary	SW400	
Female mate for J2	1	Connector IDC Socket, 14 position	ASC14H	
Female mate for J3	1	Connector IDC Socket, 10 position	ASC10H	

IRVC2 Parts List Six channel version R. Grieb 2/13/08

Ref Des	Qty	Description	DK Part #	Mouser Part #
U1	1	Microcontroller, PIC18F2321, DIP28	---	
U2	1	Voltage regulator, LM78L05 TO-92	LM78L05ACZNS	
U3,U5,U7	3	Dual op amp, TL072A, or equivalent	296-7190-5	
U4,U6,U8	3	PGA IC, TI PGA2310 DIP16 or	---	595-PGA2310PA
U9,U10,U11	-	PGA IC, TI PGA2310, SOL-16 package	---	595-PGA2310UA
S1	1	IR receiver module, Vishay TSOP34838	---	
D1	1	LED, Red LTL-307E	160-1705	
R1	1	Resistor, 1/4W 5%, 100 Ohm	100Q	
R2	1	Resistor, 1/4W 5%, 240 Ohm	240Q	
R3,R14	2	Resistor, 1/4W 5%, 10K Ohm	10KQ	
R4	1	Resistor, 1/4W 5%, 20K Ohm	20KQ	
R5	1	Resistor, 1/4W 5%, 470K Ohm	470KQ	
R7	1	Resistor, 1/4W size, 0 Ohm	0.0Q	
R8,R9,R11,R12, R15,R16,R18,R19, R21,R22,R24,R25	12	Resistor, 1/4W 1%, 20K Metal Film	20K	
R10,R13,R17,R20, R23,R26	6	Resistor, 1/4W 1%, 10K Metal Film	10K	
R27,R28,R29	3	Resistor, 1/4W 5%, 100K Ohm	100KQ	
C1,C3,C4,C5,C6, C9,C10,C12,C14, C15,C18,C19,C21, C23,C24,C27,C28, C30	18	Capacitor, ceramic, 0.1 uF, 50V 0.1" lead spacing	BC1148CT	
C2	1	Capacitor, electrolytic, 4.7 uF, 50V	P5177	
C7,C8,C16,C17, C25,C26	6	Capacitor, polyester film, 1.0 uF, 50V	P4675	
C11,C13,C20,C22 C29,C31	6	Capacitor, electrolytic, 10 uF, 25V	P5148	
C32	1	Capacitor, tantalum, 10 uF, 10V 3216	399-3684-1	
J1,J3	2	10-pin dual-row unshrouded header	P/O S2011E-36	

J2	1	14-pin dual-row unshrouded header	P/O S2011E-36
PB1	1	Switch, pushbutton momentary	SW400
Female mate for J1,J3	2	Connector IDC Socket, 10 position	ASC10H
Female mate for J2	1	Connector IDC Socket,	