

**LNA Control Board Parts List**

Part 1 of 6

**Schematic: v1.1 Mod 4/7/2010****Board: v1.1 2/22/08****Resistors**

<b>Part</b>	<b>Value</b>	<b>*Tol</b>	<b>Note</b>	<b>Package</b>	<b>Part Number</b>	<b>Vendor</b>
R1	300	10%	may be thick-film	0805		
R2	300	10%	may be thick-film	0805		
R3	300	10%	may be thick-film	0805		
R4	300	10%	may be thick-film	0805		
R5	300	10%	may be thick-film	0805		
R6	100k	10%	may be thick-film	0805		
R7	100k	10%	may be thick-film	0805		
R8	300	10%	may be thick-film	0805		
R9	30.0k	0.5%	thin-film (metal-film)	0805		
R10	270k	0.5%	thin-film (metal-film)	0805		
R11	10k	10%	may be thick-film	0805		
R12	4.7M	10%	may be thick-film	0805		
R13	100k	10%	may be thick-film	0805		
R14	1.0M	10%	may be thick-film	0805		
R15	10k	10%	may be thick-film	0805		
R16	300	10%	may be thick-film	1206		
R17	470	10%	may be thick-film	0805		
R18	150	10%	may be thick-film	0805		
R19	10k	10%	may be thick-film	0805		
R20	100k	10%	may be thick-film	0805		
R21	10k	10%	may be thick-film	0805		
R22	30.0k	0.5%	thin-film (metal-film)	0805		
R23	270k	0.5%	thin-film (metal-film)	0805		
R24	270k	0.5%	thin-film (metal-film)	0805		
R25	30.0k	0.5%	thin-film (metal-film)	0805		
R26	100k	10%	may be thick-film	0805		
R27	150k	5%	1/4W axial lead			

\* If Tol = 10%, then any standard 5% or 1% value within 10% of the value shown may be substituted

**Summary**

<b>Quan</b>	<b>Value</b>	<b>*Tol</b>	<b>Note</b>	<b>Package</b>	<b>Part Number</b>	<b>Vendor</b>
1	150	10%	may be thick-film	0805		
7	300	10%	may be thick-film	1206		
1	470	10%	may be thick-film	0805		
4	10k	10%	may be thick-film	0805		
5	100k	10%	may be thick-film	0805		
1	1.0M	10%	may be thick-film	0805		
1	4.7M	10%	may be thick-film	0805		
3	30.0k	0.5%	thin-film (metal-film)	0805		
3	270k	0.5%	thin-film (metal-film)	0805		

**LNA Control Board Parts List**

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**Schematic: v1.1 Mod 4/7/2010****Board: v1.1 2/22/08****Capacitors**

<b>Part</b>	<b>Value</b>	<b>Type</b>	<b>Tol</b>	<b>Volt (min)</b>	<b>Package</b>	<b>Part Number</b>	<b>Vendor</b>
C1	0.01	X7R	20%	10	0805		
C2	0.01	X7R	20%	10	0805		
C3	0.01	X7R	20%	10	0805		
C4	0.1	X7R	20%	10	0805		
C5	0.1	X7R	20%	10	0805		
C6	0.1	X7R	20%	10	0805		
C7	0.1	X7R	20%	10	0805		
C8	0.1	X7R	20%	10	0805		
C9	0.1	X7R	20%	10	0805		
C10	22u	X5R	20%	10	1210/1206		
C11	0.1	X7R	20%	10	0805		
C12	22u	X5R	20%	10	1210/1206		

**Summary**

<b>Quan</b>	<b>Value</b>	<b>Type</b>	<b>Tol</b>	<b>Volt (min)</b>	<b>Package</b>	<b>Part Number</b>	<b>Vendor</b>
7	0.1	X7R	20%	10	0805		
2	22u	X5R	20%	10	1210/1206		

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**Board: v1.1 2/22/08**

**Diodes and Transistors**

<b>Part</b>	<b>Type</b>	<b>Description</b>	<b>Package</b>	<b>Part Number</b>	<b>Vendor</b>
D1	LED Red	CML 5310F1	T1 Vert PC	L20261-ND	DigiKey
D2	LED Red	CML 5310F1	T1 Vert PC	L20261-ND	DigiKey
D3	LED Red	CML 5310F1	T1 Vert PC	L20261-ND	DigiKey
D4	LED Red	CML 5310F1	T1 Vert PC	L20261-ND	DigiKey
D5	LED Red	CML 5310F1	T1 Vert PC	L20261-ND	DigiKey
D6	LED Red	CML 5310F1	T1 Vert PC	L20261-ND	DigiKey
D7	LED Red	CML 5310F1	T1 Vert PC	L20261-ND	DigiKey
D8	1N4148W	Small signal	SOD-323	1N4148WXTTPMSCT-ND	DigiKey
D9	1N4148W	Small signal	SOD-323	1N4148WXTTPMSCT-ND	DigiKey
D10	1N4148W	Small signal	SOD-323	1N4148WXTTPMSCT-ND	DigiKey
D11	1N4148W	Small signal	SOD-323	1N4148WXTTPMSCT-ND	DigiKey
D12	1N4148W	Small signal	SOD-323	1N4148WXTTPMSCT-ND	DigiKey
D13	1N4148	Small signal	Any DO-35 (axial lead) small signal silicon		
Q1	PZT2222A	NPN Switching	SOT-223	PZT2222ACT-ND	DigiKey

**Summary**

<b>Quan</b>	<b>Type</b>	<b>Description</b>	<b>Package</b>	<b>Part Number</b>	<b>Vendor</b>
5	1N4148W	Small signal	SOD-323	1N4148WXTTPMSCT-ND	DigiKey
7	LED Red	CML 5310F1	T1 Vert PC	L20261-ND	DigiKey
1	PZT2222A	NPN Switching	SOT-223	PZT2222ACT-ND	DigiKey

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**Board: v1.1 2/22/08**

**Integrated Circuits**

<b>Part</b>	<b>Type</b>	<b>Description</b>	<b>Package</b>	<b>Part Number</b>	<b>Vendor</b>
U1	74AC112	Dual JK Flip-flop	SOIC-16	296-4224-5-ND	DigiKey
U2	74AC00	Quad 2-input Nand	SOIC-14	74AC00SC-ND	DigiKey
U3	74AC157	Quad 2:1 Multiplexer	SOIC-16	74AC157SC-ND	DigiKey
U4	74AC157	Quad 2:1 Multiplexer	SOIC-16	74AC157SC-ND	DigiKey
U5	74AC139	Dual 1-of-4 Decoder/Demultiplexer	SOIC-16	74AC139SCXCT-ND	DigiKey
U6	MAX6817	Dual CMOS Switch Debouncer	SOT23-6	MAX6817EUT+TCT-ND	DigiKey
U7	74AC11	Triple 3-input And	SOIC-14	74AC11SC-ND	DigiKey
U8	74AC112	Dual JK Flip-flop	SOIC-16	296-4224-5-ND	DigiKey
U9	TLC555	CMOS Timer	SOIC-8	296-10341-1-ND	DigiKey
U10	LS7184	Quadrature Clock Converter	SOIC-8	LS7184-SOIC	US Digital
U11	MAX6817	Dual CMOS Switch Debouncer	SOT23-6	MAX6817EUT+TCT-ND	DigiKey
U12	MAX4649	SPDT Analog Switch	SOT23-8	MAX4649EKA+TCT-ND	DigiKey

**Summary**

<b>Quan</b>	<b>Type</b>	<b>Description</b>	<b>Package</b>	<b>Part Number</b>	<b>Vendor</b>
1	74AC00	Quad 2-input Nand	SOIC-14	74AC00SC-ND	DigiKey
1	74AC11	Triple 3-input And	SOIC-14	74AC11SC-ND	DigiKey
2	74AC112	Dual JK Flip-flop	SOIC-16	296-4224-5-ND	DigiKey
1	74AC139	Dual 1-of-4 Decoder/Demultiplexer	SOIC-16	74AC139SCXCT-ND	DigiKey
2	74AC157	Quad 2:1 Multiplexer	SOIC-16	74AC157SC-ND	DigiKey
1	LS7184	Quadrature Clock Converter	SOIC-8	LS7184-SOIC	US Digital
1	MAX4649	SPDT Analog Switch	SOT23-8	MAX4649EKA+TCT-ND	DigiKey
2	MAX6817	Dual CMOS Switch Debouncer	SOT23-6	MAX6817EUT+TCT-ND	DigiKey
1	TLC555	CMOS Timer	SOIC-8	296-10341-1-ND	DigiKey

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**Board: v1.1 2/22/08**

**Connectors**

<b>Part</b>	<b>Manufacturer Description</b>	<b>Manufacturer</b>	<b>Part Number</b>	<b>Vendor</b>
J1	2x8 Male Hdr, Vert Thru, 0.1", 0.230"-0.240" contact len			
J2	Included as part of connector used for J1			
J3	Fem Thru-hole, 2 pos, Low profile, P/N 44812-0020	Molex/Waldom	WM18601-ND	DigiKey
J4	Fem Thru-hole, 10 pos, Low profile, P/N 44812-0028	Molex/Waldom	WM18609-ND	DigiKey
J5	Fem Thru-hole, 4 pos, Low profile, P/N 44812-0022	Molex/Waldom	WM18603-ND	DigiKey
J6	Fem Thru-hole, 2 pos, Low profile, P/N 44812-0020	Molex/Waldom	WM18601-ND	DigiKey
J7	Fem Thru-hole, 10 pos, Low profile, P/N 44812-0028	Molex/Waldom	WM18609-ND	DigiKey
J8	Fem Thru-hole, 4 pos, Low profile, P/N 44812-0022	Molex/Waldom	WM18603-ND	DigiKey
J9	1x3 Male Hdr, R/A Thru, 0.1", 0.230"-0.244" contact len			
J10	1x10 Male Hdr, Vert Thru, 0.1", 0.230"-0.240" contact len			
J11	1x2 Male Hdr, Vert Thru, 0.1", 0.230"-0.240" contact len			

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**Board: v1.1 2/22/08**

**Switches**

<b>Part</b>	<b>Type</b>	<b>Description</b>	<b>Package</b>	<b>Part Number</b>	<b>Vendor</b>
SW1	C&K 7101K2CQE	Locking SPDT, On-On, PC Pin	Mini Panel	CKN1216-ND	DigiKey
SW2	C&K 7105SYCQE	SPDT, Mom-Off-Mom, PC Pin	Mini Panel	CKN1007-ND	DigiKey
SW3	Grayhill 62P22-L6	Opt Encoder w/button		GH7296-ND	DigiKey
SW4	C&K 8125SDCBE	PB SPDT, PC Pin	Mini Panel	CKN1632-ND	DigiKey
SW5	C&K 8125SDCBE	PB SPDT, PC Pin	Mini Panel	CKN1632-ND	DigiKey