

Bill Of Materials **January 9,2004** **9:17:15**
Partlist: **93-113892**

Reference	Value	Description
C1001	1n	
C1003	10u	
C1005	1n	
C1007	15p	
C1009	100n	
C1011	1n	
C1013	18p	
C1014	22p	
C1016	not_used	
C1017	1n	
C1101	100p	
C1102	10n	
C1103	100n	
C1106	3p3	
C1112	100p	
C1115	1n	
C1116	100n	
C1117	1n	
C1118	10n	
C1119	10n	
C1121	10p	
C1122	4p7	
C1123	4p7	
C1124	10n	
C1201	1n	
C1202	470n	
C1203	100n	
C1204	1n	
C1205	10u	
C1206	100n	
C1207	1n	
C1208	47p	
C1209	100n	
C1210	1n	
C1211	1n	
C1212	100n	
C1213	47p	
C1215	100n	
C1216	2u2	
C1217	470n	
C1218	2u2	
C1219	470n	
C1220	100n	
C1221	1n	
C1222	470n	
C1223	2u2	
C1224	470n	
C1225	100p	
C1301	100n	
C1305	10n	
C1306	100n	

C1309	10n
C1313	100n
C1314	100n
C1315	100n
C1316	1n
C1317	10n
C1318	100n
C1319	100n
C1320	100n
C1321	100n
C1322	100u
C1323	100u
C1401	10n
C1402	1n5
C1403	10n
C1404	100n
C1405	1n
C1406	1n
C1407	3p3
C1408	100n
C1409	100n
C1410	10n
C1411	10n
C1412	Not used
C1413	Not used
C1414	Not used
C1415	100n
C1416	82p
C1417	8p2
C1418	100n
C1419	1n
C1420	2n2
C1421	100n
C1422	100n
C1501	1n
C1502	10n
C1503	10n
C1504	10u
C1505	1n
C1506	100n
C1507	100n
C1508	100p
C1509	100u
C1510	100n
C1511	100p
C1512	100p
C1513	6n8
C1514	470p
C1515	68n
C1517	100p
C1519	10n
C1520	100p
C1521	100p
C1522	22p
C1523	22p
C1524	22p

C1525	100p
C1526	10n
C1528	100p
C1529	22p
C1530	22p
C1531	10n
C1532	100p
C1533	100p
C1534	22p
C1535	22p
C1536	22p
C1601	1n
C1602	100n
C1603	100n
C1604	100p
C1605	1n5
C1606	100u
C1607	100n
C1608	1n
C1609	1n
C1610	10n
C1611	1n
C1612	100n
C1613	100p
C1614	470p
C1615	22p
C1618	100p
C1619	1n5
C1626	470p
C1627	22p
C1628	22p
C1629	1n
C1630	6p8
C1631	6p8
C1632	1n
C1633	22p
C1634	4p7
C1635	39p
C1636	1p0
C1638	1n
C1639	1n
C1640	1n
C1641	1n
C1701	100p
C1702	100p
C1703	100p
C1704	10n
C1705	100p
C1706	22p
C1707	22p
C1708	10n
C1709	100p
C1710	100p
C1711	10n
C1712	100p
C1713	100p

C1715	1n
C1716	100p
C1718	100p
C1719	100p
C1720	100p
C1721	100p
C1722	0p8
C1801	100n
C1802	100n
C1803	1n
C1804	100p
C1805	10n
C1806	100p
C1807	100n
C1808	1n
C1809	100n
C1810	22p
C1812	1uF
C1813	100n
C1814	100p
C1816	100n
C1817	100n
C1901	100n
C1902	100n
C1903	100n
C1904	100n
C1905	100n
C1906	100n
C1907	Not_used
C1908	100n
C1909	100n
C2001	470n
C2002	100n
C2003	100u
C2004	100u
C2005	100n
C2006	100n
C2007	100u
C2008	100n
C2009	100u
C2010	10n
C2011	100u
C2012	100n
C2013	100n
C2014	100u
C2015	100n
C2016	100u
C2017	10n
C2022	100n
C2023	100u
C2040	100u
C2041	22n
C2042	22n
C206	100p
C207	10n
C208	100n

C216	3p9
C219	5p6
C223	8n2H
C225	1n
C226	100n
C227	1n
C228	10n
C229	10n
C231	10p
C232	4p7
C233	5p6
C234	10n
C2401	100n
C2402	100n
C2403	100n
C2404	100n
C2405	100n
C2406	100n
C2501	100n
C2502	100n
C2503	100n
C2504	100n
C2505	100n
C2506	10u
C2507	100n
C2508	10n
C2509	10n
C2510	100n
C2511	10u
C2512	100n
C2513	100n
C2601	100n
C2602	100n
C2603	100n
C2604	100n
C2701	100n
C2702	100n
C2703	100n
C2704	100n
C2705	100n
C2706	10u
C2707	100n
C2708	10n
C2709	10n
C2710	100n
C2711	10u
C2712	100n
C2713	100n
C2801	100n
C2802	100n
C2803	100n
C2804	100n
C301	1n
C302	470n
C303	100n
C304	1n

C305	10u
C307	100n
C309	1n
C310	47p
C311	100n
C312	1n
C313	1n
C314	100n
C315	47p
C316	100n
C317	2u2
C318	470n
C319	2u2
C320	470n
C321	100n
C322	1n
C323	470n
C324	2u2
C325	470n
C326	Not Used
C327	1n
C328	18p
C329	33p
C330	1n
C401	100n
C405	10n
C406	100n
C409	10n
C414	100n
C415	100n
C416	100n
C417	1n
C418	10n
C419	100n
C420	100n
C421	1n
C422	100n
C423	100n
C424	100u
C425	100u
C426	22p
C501	10n
C502	1n5
C503	10n
C504	100n
C505	1n
C506	1n
C507	5p6
C508	100n
C509	100n
C510	10n
C511	10n
C512	Not used
C513	Not used
C515	100n
C516	82p

C517	8p2
C518	1n
C519	Not used
C520	2n2
C601	1n
C602	10n
C603	10n
C604	10u
C605	1n
C606	100n
C607	100n
C608	100p
C609	100u
C610	100n
C611	100p
C612	100p
C613	6n8
C614	470p
C615	68n
C617	100p
C619	100p
C620	10n
C621	100p
C622	100p
C623	22p
C624	22p
C625	22p
C626	10n
C628	100p
C629	22p
C630	22p
C631	10n
C632	100p
C633	100p
C634	22p
C635	22p
C636	22p
C701	1n
C702	100n
C703	100n
C704	100p
C705	1n5
C706	100u
C707	100n
C708	1n
C709	1n
C710	10n
C711	1n
C712	100n
C713	100p
C714	470p
C715	22p
C718	100p
C719	1n5
C726	470p
C727	22p

C728	22p	
C729	1n	
C730	6p8	
C731	6p8	
C732	1n	
C733	22p	
C734	4p7	
C735	39p	
C736	1p2	
C738	1n	
C739	1n	
C740	1n	
C741	1n	
C802	100p	
C803	100p	
C804	100p	
C805	10n	
C806	100p	
C807	22p	
C808	22p	
C809	10n	
C810	100p	
C811	100p	
C812	10n	
C813	100p	
C814	100p	
C815	1n	
C816	100p	
C818	100p	
C819	100p	
C820	100p	
C821	100p	
C822	0p8	
C901	100n	
C902	100n	
C903	1n	
C904	100p	
C905	10n	
C906	100p	
C907	100n	
C908	1n	
C909	100n	
C910	22p	
C912	1uF	
C913	100n	
C914	100p	
C916	100n	
C917	100n	
CR141	BAS28	Mixer
CR151	BAS16	Part Of Power On Circuit
CR152	BAT54S	Power Supply Protection
CR181	HSMS2825	Part Of ALC Detector
CR182	Not used	
CR201	BAS16	Part Of Power On Circuit
CR202	BAS16	Part Of Power On Circuit
CR203	BAS16	Power Supply Protection

CR204	BAS28	Protection Curcuit
CR2401	BAT54S	Voltage Limiter
CR2402	BAT54S	Voltage Limiter
CR401	BAT54S	Spare
CR51	BAS28	Mixer
CR601	BAS16	Part Of Power On Circuit
CR602	BAT54S	Power Supply Protection
CR91	HSMS2825	Part Of ALC Detector
CS111	100pF	
CS131	22nF	
CS132	Not Used	
CS133	22nF	
CS151	22nF	
CS152	100pF	
CS153	100pF	
CS154	100pF	
CS155	100pF	
CS161	100pF	
CS162	100pF	
CS163	100pF	
CS171	100pF	
CS172	100pF	
CS181	100pF	
CS182	100pF	
CS183	100pF	
CS184	100pF	
CS185	100pF	
CS186	100pF	
CS187	4x100p	
CS188	4x100p	
CS21	100pF	
CS31	100pF	
CS41	22nF	
CS42	Not Used	
CS43	22nF	
CS601	22nF	
CS602	100pF	
CS603	100pF	
CS604	100pF	
CS605	100pF	
CS71	100pF	
CS72	100pF	
CS73	100pF	
CS81	100pF	
CS82	100pF	
CS91	100pF	
CS92	100pF	
CS93	100pF	
CS94	100pF	
CS95	100pF	
CS96	100pF	
CS97	4x100p	
CS98	4x100p	
DS151	RED	Out Of Lock LED
DS2501	Red	Programmable LED
DS2502	Red	Programmable LED

DS2503	Red	Programmable LED
DS2601	Red	Tx LED
DS2602	Red	Sync LED
DS2603	Red	Tx LED
DS2604	Red	Sync LED
DS2701	Red	Tx LED
DS2702	Red	Sync LED
DS2703	Red	Tx LED
DS2801	Red	Tx LED
DS2802	Red	Sync LED
DS2803	Red	Tx LED
DS2804	Red	Sync LED
DS61	RED	Out Of Lock LED
F1101	KFF6449A	
F1102	SAFC83.160MA40X	
F1201	CFWM455CY	
F1301	SFSH4.5MEB2	
F1302	SFSH4.5MEB2	
F1401	D16920AQ1	
F1402	D16920AQ1	
F1701	KFF6450A	
F201	KFF6449A	
F202	SAFC83.160MA40X	
F301	CFWM455CY	
F401	SFSH4.5MEB2	
F402	SFSH4.5MEB2	
F501	D16920AQ1	
F502	D16920AQ1	
F801	KFF6450A	
HY181	SI-7L-1643GP	
HY91	SI-7L-1643GP	
L1001	100nH	
L1003	39nH	
L1102	5n6H	
L1103	Not Used	
L1106	470nH	
L1107	470nH	
L1108	Not Used	
L1109	5n6H	
L1110	8n2H	
L1401	220uH	
L1402	220uH	
L1403	10uH	
L1404	1uH	
L1405	1u8H	
L1406	10uH	
L1407	4u7H	
L1501	1uH	
L1502	6n8H	
L1601	10uH	
L1603	56nH	
L1604	56nH	
L1701	33nH	
L1703	4n7H	
L1704	3n9H	
L1801	6n8H	

L2001	10uH	
L2002	10uH	
L205	4n7H	
L208	Not Used	
L210	470nH	
L211	390nH	
L212	4n7H	
L213	8n2H	
L301	220nH	
L501	220uH	
L502	220uH	
L503	10uH	
L504	1uH	
L505	1u8H	
L506	10uH	
L507	4u7H	
L601	1uH	
L602	6n8H	
L702	10uH	
L704	56nH	
L705	56nH	
L801	33nH	
L803	4n7H	
L804	3n9H	
L901	6n8H	
L902	6n8H	
Q1001	BFR92A	RF Amplifier
Q1101	BFG520	RF Amplifier
Q1301	BC848B	Amplifier
Q1401	BFS20	RF Amplifier
Q1501	BC860B	Buffer/ Driver
Q2001	Si9426DY	Power Supply Switch
Q2002	BSR17A	Power Supply Switch
Q2003	Si9426DY	Power Supply Switch
Q2004	BSR17A	Power Supply Switch
Q201	BFG520	RF Amplifier
Q301	BF747	RF Amplifier
Q401	BC848B	Amplifier
Q501	BFS20	RF Amplifier
Q601	BC860B	Buffer/ Driver
R1001	33R	
R1003	2K2	
R1005	560R	
R1008	68R	
R1009	1K	
R1011	100R	
R1012	1K20	
R1013	120R	
R1016	49R9	
R1019	100R	
R1026	68R	
R1102	470R	
R1103	1K	
R1104	49R9	
R1105	10R	
R1106	49R9	

R1108	180R
R1109	1K
R1110	3K9
R1111	470R
R1112	1K
R1113	22R0
R1201	49R9
R1202	10R
R1203	2k2
R1204	10R
R1205	10k
R1206	30k
R1207	1k5
R1208	750R
R1209	6K2
R1210	49R9
R1211	2K7
R1212	10k
R1213	1K30
R1214	1k5
R1215	180R
R1216	3k3
R1217	6K8
R1218	1K5
R1301	10R
R1302	330R
R1303	1K
R1304	3K9
R1305	10R
R1306	1M
R1307	33K
R1308	1K8
R1309	10K
R1310	470R
R1311	680R
R1312	10R
R1313	470R
R1314	1K
R1315	10R
R1401	270R
R1402	470R
R1403	470R
R1404	470R
R1405	470R
R1406	270R
R1407	470R
R1408	27K
R1409	1K5
R1410	10K
R1411	470R
R1412	56R
R1413	8K2
R1414	1M
R1415	270R
R1416	2K2
R1417	1K5

R1501	2R2
R1502	100K
R1503	33K
R1504	820R
R1505	10R
R1506	3K3
R1507	10R
R1508	10K
R1509	470R
R1510	820R
R1511	330R
R1512	1K
R1513	36R
R1514	49R9
R1515	49R9
R1516	1K
R1518	49R9
R1519	330R
R1520	100R
R1523	36R
R1524	Not used
R1525	150R
R1527	16R2
R1528	16R2
R1529	16R2
R1530	1K8
R1531	4K7
R1601	1K
R1602	1K8
R1603	1K
R1604	Not used
R1605	2R2
R1606	68K0
R1607	22K0
R1608	2K0
R1611	332R
R1613	332R
R1615	68K0
R1616	22K0
R1617	2K0
R1618	56R
R1619	120R
R1620	120R
R1621	220R
R1622	56R
R1701	2R2
R1702	2R2
R1703	100R
R1704	100R
R1709	1K20
R1710	100R
R1711	100R
R1712	1K20
R1713	49R9
R1714	4K7
R1715	4k7

R1716	470R
R1801	49R9
R1802	2R2
R1803	1K
R1804	49R9
R1805	100K
R1806	1K5
R1807	47K
R1808	33K
R1809	470R
R1811	10K
R1812	1K
R1813	1K5
R1814	0R
R1815	Not used
R1816	Not used
R1817	0R
R1901	10R
R1902	10R
R1903	10R
R1904	0R
R1905	470R
R1906	470R
R1922	1K
R1923	1K8
R1924	10K
R1925	10K
R2001	3K9
R2002	47K
R2003	47K
R2004	10K
R2005	100K
R2006	10K
R2007	10K
R2008	47K
R2009	3K9
R2010	47K
R2011	10K
R2012	100K
R2013	10K
R2014	10K
R2022	0R
R2023	Not used
R2024	470R
R2025	2K2
R208	470R
R209	1K
R210	49R9
R211	10R
R213	180R
R214	3K9
R215	470R
R216	1K
R217	1K
R218	49R9
R219	22R0

R220	10R
R221	470R
R222	470R
R2401	10R
R2402	10R
R2403	10K
R2404	10K
R2405	0R
R2501	10K
R2502	10R
R2503	10R
R2506	47K
R2507	47K
R2508	10K
R2605	10K
R2608	10K
R2701	10K
R2702	10R
R2703	10R
R2705	47K
R2706	47K
R2708	10K
R2805	10K
R2808	10K
R301	49R9
R302	10R
R303	2k2
R304	10R
R306	10k
R307	30k
R308	1k5
R309	6K2
R310	49R9
R311	2K7
R312	10k
R313	1K30
R314	1k5
R315	180R
R316	3k3
R317	6K8
R318	750R
R319	10R
R320	49R9
R321	10k
R322	680R
R323	16R2
R324	16R2
R325	16R2
R326	33R
R327	150R
R328	3k3
R329	1K5
R401	330R
R402	10R
R403	1K
R404	3K9

R405	10R
R406	1M
R407	33K
R408	1K8
R409	10K
R410	470R
R411	680R
R412	1M
R413	10R
R414	470R
R415	1K
R416	10R
R417	470R
R501	270R
R502	470R
R503	470R
R504	470R
R505	180R
R506	270R
R507	470R
R508	27K
R509	1K5
R510	10K
R511	470R
R512	56R
R513	3K9
R514	1M
R515	270R
R516	2K2
R517	1K5
R601	2R2
R602	100K
R603	33K
R604	10R
R605	820R
R606	3K3
R607	10R
R608	10K
R609	470R
R610	820R
R611	330R
R612	36R
R613	1K
R614	49R9
R615	1K
R616	49R9
R617	16R2
R618	16R2
R619	16R2
R620	49R9
R621	330R
R622	100R
R623	36R
R624	Not used
R625	150R
R627	1K8

R628	4K7
R701	1K
R702	1K8
R703	1K
R704	Not used
R705	2R2
R706	68K0
R707	22K0
R708	2K0
R711	332R
R713	332R
R715	68K0
R716	22K0
R717	2K0
R718	56R
R719	120R
R720	120R
R721	220R
R722	56R
R802	2R2
R803	100R
R804	2R2
R805	100R
R809	1K20
R810	100R
R811	100R
R812	1K20
R813	49R9
R814	4K7
R815	4k7
R816	470R
R901	49R9
R902	2R2
R903	1K
R904	49R9
R905	100K
R906	1K5
R907	47K
R908	33K
R909	470R
R911	10K
R912	1K
RS181	4x10k
RS182	4x10k
RS183	4x10k
RS184	4x1k0
RS2401	4x10k
RS2402	4x220R
RS2501	4x10k
RS2502	4x1k
RS2503	4x10k
RS2601	4x10k
RS2602	4x1k
RS2701	4x10k
RS2702	4x1k
RS2703	4x10k

RS2801	4x10k	
RS2802	4x1k	
RS91	4x10k	
RS92	4x10k	
RS93	4x10k	
RS94	4x1k0	
T1502	PD15-73	
T201	PD15-73	
T602	PD15-73	
T901	PD15-73	
U1102	MD54-0006	Mixer
U1201	AD607	MF Receiver
U1202	AD8051	Amplifier
U1301	AD9832	DDS
U1302	TC7S04F	Pulse Shaper
U1303	74VHC04	Inverter
U1304	74HCT40103	Divider
U1305	74VHC74	D Type Flip Flop
U1401	TC7S04F	Pulse Shaper
U1501	ADF4113BRU	PLL
U1502	BGA420	RF Amplifier
U1503	UPC2709T	RF Amplifier
U1504	BGA420	RF Amplifier
U1601	TLE2142CD	Op Amp
U1602	MC33202D	Active Filter
U1603	U2793B	Quadrature Modulator
U1701	UPC8106TB	Up Converter
U1702	BGA420	RF Amplifier
U1703	MA4P274CK	Level Regulation
U1704	MA4P274CK	Level Regulation
U1705	BGA420	RF Amplifier
U1801	MC74HC4053	Multiplexer
U1802	MC74HC4053	Multiplexer
U1803	AD210-25	Digital Attenuator
U1804	CMM2306	RF Amplifier
U1805	MC33204D	Op Amp
U1806	MC74HC4053	Multiplexer
U1807	ZR431	Voltage Reference
U1901	74VHC08	AND Gate
U1902	AHC1G32	OR Gate
U1903	74LV163A	Divider
U1904	74LV163A	Divider
U1905	TC7S04F	Pulse Shaper
U1906	AHCT1G08	AND Gate
U1907	TC7S04F	Pulse Shaper
U2001	L79L05AB	Voltage Regulator
U2002	SI4953DY	Power Supply Switch
U2003	7101	Power Supply Switch
U2004	7101	Power Supply Switch
U2006	MIC5209	Voltage Regulator
U203	MD54-0006	Mixer
U2401	IDT74FCT162374	16 Bit A/D Converter
U2402	74LVCH162374	17 Bit A/D Converter
U2403	X25057	Serial EEPROM
U2404	AD7829	8-Channel 8 bit A/D Converter
U2405	MAX824-R	Reset Generator

U2406	XC9536XL	PLD
U2407	AHC1G32	OR Gate
U2501	ADSP2189M-bga	DSP
U2502	AD7805	D/A Converter 10 bit 4 Ch.
U2503	74VHCT08	AND Gate
U2504	AD7896	A/D Conv. 12-Bit AD7896
U2505	74VHCT08	AND Gate
U2506	74VHC00	NAND Gate
U2507	AHC1G125	Not Used
U2601	ADSP2189M-bga	DSP
U2607	AHC1G125	Not Used
U2701	ADSP2189M-bga	DSP
U2702	AD7805	D/A Converter 10 bit 4 Ch.
U2703	74VHCT08	AND Gate
U2704	AD7896	A/D Conv. 12-Bit AD7897
U2705	74VHCT08	AND Gate
U2707	AHC1G125	Not Used
U2801	ADSP2189M-bga	DSP
U2807	AHC1G125	Not Used
U301	AD607	MF Receiver
U302	AD8051	Amplifier
U401	AD9832	DDS
U402	TC7S04F	Pulse Shaper
U403	74HCT40103	Divider
U404	74VHC74	D Type Flip Flop
U501	74VHC04	Inverter
U502	TC7S04F	Pulse Shaper
U601	ADF4113BRU	PLL
U602	BGA420	RF Amplifier
U603	UPC2709T	RF Amplifier
U604	BGA420	RF Amplifier
U701	TLE2142CD	Op Amp
U702	MC33202D	Active Filter
U703	U2793B	Quadrature Modulator
U801	UPC8106TB	Up Converter
U802	BGA420	RF Amplifier
U803	MA4P274CK	Level Regulation
U804	MA4P274CK	Level Regulation
U805	BGA420	RF Amplifier
U901	MC74HC4053	Multiplexer
U902	MC74HC4053	Multiplexer
U903	AD210-25	Digital Attenuator
U904	CMM2306	RF Amplifier
U905	MC33204D	Op Amp
U906	MC74HC4053	Multiplexer
Y1501	ROS-1476	VCO
Y601	ROS-1476	VCO