



G7 XT

Ricetrasmittitore bi-banda

Dual band transceiver



Cte international
The World in Communication

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Cod.603860

G7

TECHNICAL DESCRIPTION

A). GENERAL DESCRIPTION

The G7 PMR446 radio is a self-contained transceiver unit with integral antenna intended for use as a general communication tool. It is designed to operate on all 8 channels allocated by the CE. This model also features user selectable sub-audible tones for channel quieting. The useable range, while dependent upon terrain and other radio propagation principles, is typically two miles. The G7 uses the maximum transmit power allowed to help ensure the maximum communication range.

Features include: 38 CTCSS Channels, Channel Monitor, Page and LCD Display. The unit is equipped with an external Headset option connector. Four AA alkaline batteries that are readily available in retail outlets supply operating power. An automatic power savings feature allows the typical standby battery life to extend to more than 10 days.

B). FREQUENCY DETERMINING CIRCUITS

The fundamental frequency for both the transmitter and the receiver local oscillators are controlled by a phase lock loop (PLL) circuit IC201 (Toshiba TB31202, or equivalent). The frequency of operation of the FRS voltage controlled oscillator (VCO), composed of Q301 and Q302 operating in cascade is phase locked to a voltage controlled crystal reference (VCXO) operating at 20.95MHz (X202).

The VCO is locked to the fundamental of the transmit signal in the transmit mode and is locked to the receive 1st LO (Fundamental channel frequency minus 21.4MHz) in the receive mode. The crystal reference frequency is shared with the 2nd LO of 20.95MHz.

C). TRANSMITTER CIRCUITS

The transmitter amplifies the 0 dBm signal from the VCO to approximately 27dBm that is fed to the antenna. The transmitter is a three stage amplifier composed of Q1,3,4 and Q11. The first two stages are operated class A and the final is operated class B in full saturation to help prevent unwanted amplitude modulation. The fundamental transmit signal is fed through an elliptical low pass filter (5-pole, 2 zero) in order to suppress the harmonics to below -50 dBc. The desired frequency modulation of the carrier is accomplished by modulating the current in the VCO directly with the microphone audio signal. The microphone audio is conditioned with a three-pole high pass filter at 300 Hz (IC5C,D), a hard clipper circuit (IC5B) to limit maximum deviation to +/- 2.5 kHz and a three-pole low pass or splatter filter at

G7

TECHNICAL DESCRIPTION

2.8 kHz (IC5A). The low pass filter insures that the occupied bandwidth of the FM modulated signal meets FCC requirements under all input conditions.

D). RECEIVER CIRCUITS

The received signal from the antenna is band limited to 600 Mhz by the transmitter harmonic filter. The desired signal is fed to a low noise amplifier (LNA – Q6) centered 446MHz that provides approximately 10 dB of gain. The output of the LNA is filtered with a Band Pass filter (SF1) with pass-band of 446MHz and stopband attenuation of 50 dB. The filtered receive signal is one input to the 1st mixer (Q8), the other mixer input (1st LO) is the output of the VCO at the desired channel frequency minus 21.4MHz. The output of the mixer is tuned to the 1st IF of 21.4 MHz.

The 1st IF is transformer coupled for impedance matching to a X-tal filter centered at 21.4MHz with a bandwidth of +/-3.75Hz. The filtered 1st IF is then amplified by Q9 and fed to the 2nd mixer input of the multi-function receiver IC (IC1). The 2nd LO (20.95 MHz) is generated by VCXO that is the reference frequency for the PLL. The 2nd mixer output of 450 kHz is filtered through a 4 section ceramic filter that in combination with the 21.4MHz X-tal filter provides approximately 50 dB of adjacent channel attenuation. The 450 kHz 2nd IF is then amplified, limited and fed to a quadrature detector for FM demodulation. The resulting audio output signal is bandpass filtered from 300 to 3 kHz (Q22) and amplified to provide 150mW of audio power (IC2). A squelch circuit is provided (IC1 pins 10 through 11) to mute the receiver noise under low signal conditions. The squelch circuit amplifies and detects noise in a narrow bandwidth at approximately 5 kHz. When the detected noise exceeds a threshold set to trigger at approximately 9 dB SINAD receive signal strength, the audio output is muted.

E). TRANSMIT/RECEIVE SWITCH

When the radio is in the transmit mode, pin diode switches D13 and D1 are both turned on (representing less than 0.7 ohms). D13 allows the transmit signal to pass to the antenna and D1 shorts one leg of a T matching network (L3, L15 and C4) to ground in the receive path. This results in a parallel tuned circuit high impedance being presented to the transmit signal so that the receive path does not load the transmit signal. In the receive mode, both D13 and D1 are off, resulting in the antenna signal being coupled into the receive LNA through the 50 ohm T matching network and the unwanted load of the transmit final amplifier is reduced to less than 1 pF by D1.

F). RADIO CONTROL CIRCUIT

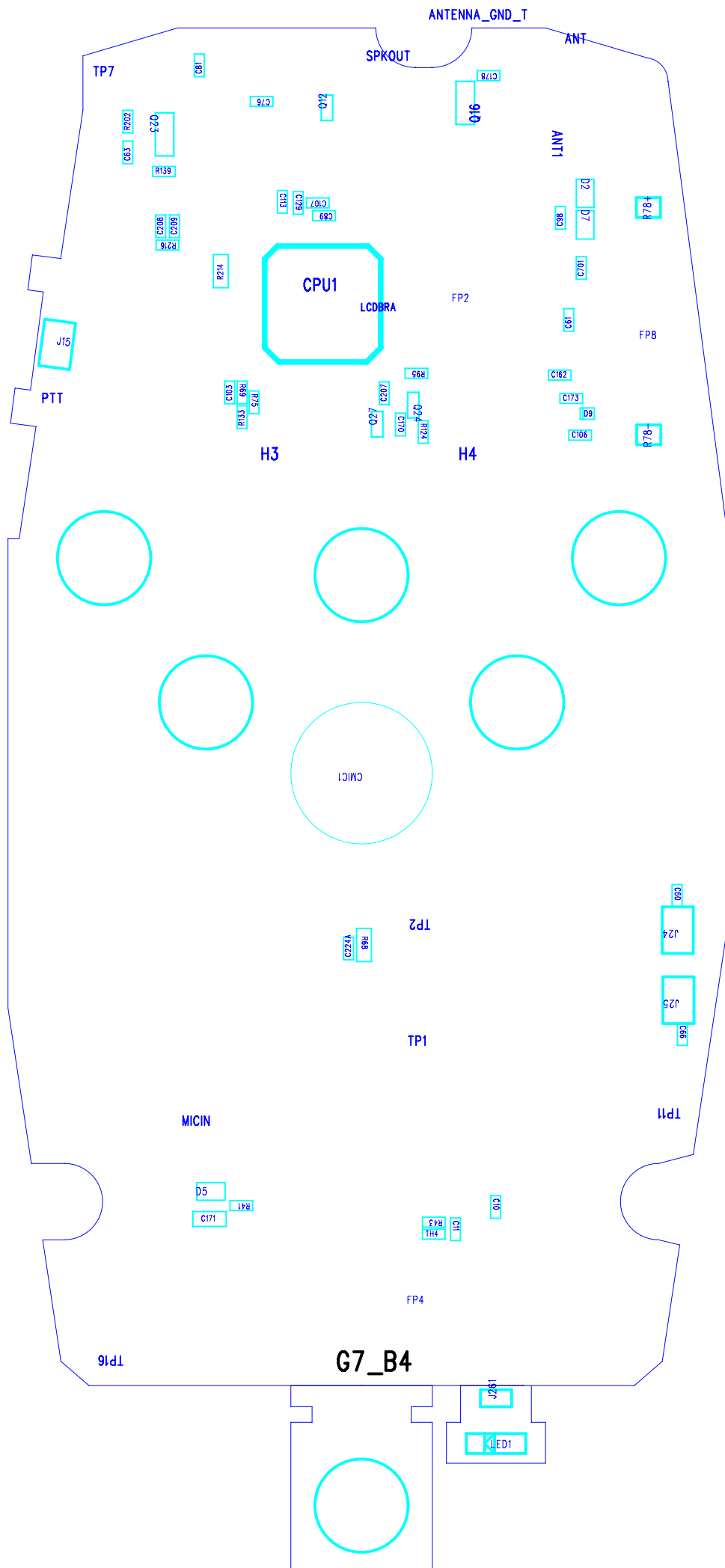
A microprocessor (CPU1) is used to control the transceiver. User stimuli is provided through a tack switch for PTT (push to talk), along with the keypad for channel selection, channel monitor, receive volume, and page. Pressing the PTT switch instructs CPU1 to switch to the transmit mode. This is

G7

TECHNICAL DESCRIPTION

accomplished by loading the proper channel counter information through a 3-wire serial link to the PLL IC (IC201), turning on power to the PLL and VCO, microphone and transmit audio circuits and the transmit RF amplifiers. Pressing the call switch causes the microcontroller to transmit a warbling tone for approximately 3 seconds on the current channel selected that is used to notify another person with FRS radio that you wish to communicate. Pressing the channel Up/Down buttons (active in receive mode only) instructs CPU1 to increment or decrement respectively the channel frequency by one channel from the channel previously selected.

In receive mode the microcontroller periodically switches on the VCO and receiver power and checks for a valid received signal by monitoring the squelch circuit output. If a valid signal is present, the audio output is turned on and receive power is maintained for the duration of the valid signal. If the valid signal is removed or no valid signal was present, the microcontroller removes power from the VCO and receiver, waits for approximately 100 ms and then checks again. This periodic cycling of the power to the receiver circuits results in a much longer battery life vs. leaving power on continuously. The total period of the cycling is selected such that the worst case delay in 'seeing' a valid receive signal is not disruptive to normal two-way voice communications.



G7 XT - PART LIST				
0,1	500-68560-000002	G7 PACKING FINAL BK		1
..2	347-02608-000362	BATTERY FOR G7XT 6V 800MAH GLOBAL LINK	BATT	2
..2	184-68560-000002	G7 Desk Top Charger Philconic		1
..2	433-68560-150002	CARD BLISTER MAIN GL07A XXX BK01		1
..2	433-68560-150102	CARD BLISTER TOP GL07A XXX BK01		1
..2	441-68565-046012	GIFT BOX GL07A XXX BK01		1
..2	480-68560-000002	MANUAL (PMR/LPD) GL07A XXX		1
..2	481-68561-060002	SHEET WARRANTY ITA GLO7A XXX		2
..2	481-68561-050002	SHEET WARRANTY SPA GLO7A XXX		1
..2	481-68561-000002	SHEET WARRANTY UK GLO7A XXX		1
..2	480-68560-001002	MANUAL NEW RTTE BOOKLET GL07A XXX		1
..2	432-68564-050002	LABEL POP GL07A XXX	RADIO	2
..2	432-68565-000002	LABEL PRODUCT SN GL07A XXX	RADIO	2
..2	432-68560-010202	LABEL SN GL07A XXX	CARTON&GB	4
..2	442-68565-270012	EX. CARTON GL07A XXX BK01		1
..2	472-65005-710002	TAPE OPP BLUE P285C 50MMX41M/ROLL	CARTON	750
..2	352-00930-90736	ADAPTOR FOR G7XT 9V 300MA EU GL	ADT	1
..2	446-68560-320002	BLISTER GL07A XXX BK01		1
..2	491-40011-300012	POLYBAG 400X300(0) BK SOLID RECY 0.05 PE	GB	1
..2	446-68560-321002	BLISTER(BOX)GL07A XXX BK01		1
0,1	501-68561-000002	G7 UNIT FINAL BK		1
..2	503-68561-000002	G7 RADIO FINAL BK		2
...3	521-68560-000002	G7 RADIO ASSY BK		2
....4	541-68560-000002	G7 RADIO COMMON-MECH ASSY		2
.....5	463-00010-021002	Zebra 3.6X14.7X1.0T		2
.....5	157-23763-083032	G7 Antenna Coil		2
.....5	157-23775-000002	D-spring		2
.....5	151-07540-150032	Charge Terminal SUS304 0.15T		4
.....5	150-03660-300002	LCD bracket SPTE 0.3T		2
.....5	150-03670-200002	RF SHIELD PLATE SPTE 0.2T		2
.....5	156-00530-203022	Shaft (Pin) for belt Clip SPCC Ni		2
.....5	157-23783-103032	Spring for belt clip		2
.....5	151-07550-200032	Terminal-A SUS304 0.2T		2
.....5	151-07560-203032	Terminal-B SUS304 0.2T		2
.....5	151-07570-200032	Terminal-C SUS304 0.2T		2
.....5	151-07580-200032	Terminal-D (Dual) SUS304 0.2T		2

.....5	157-23793-080032	Terminal-E SUS304 Dia0.8			2
.....5	150-03690-200002	VCO can SPTE 0.2T			2
.....5	472-00315-011002	TAPE Charge terminal			4
.....5	470-81015-010202	CUSHION SPEAKET BK SPONGE ROHS2			2
.....5	420-68565-001002	Insulation Fiber 4X8X0.2T W/Adhesive			2
.....5	470-21007-020002	GT60A USA battey cushion 20x4x0.7 ROHS			2
.....5	420-68566-011002	Reflective Sheet 21.9X18.2X0.1T W/Adhesi			2
.....5	472-00010-020002	Double Side Tape for window			2
.....5	470-01040-010702	EVA SPONGE ON VCD CAN W ADHENSIVE 8X8X4T			2
.....5	420-68561-001002	Soft PVC 10X10X0.5T			2
.....5	420-68561-001102	Soft PVC 25X6X0.2T			2
.....5	150-02371-020002	GT60A USA Shield Plate ROHS			2
.....5	101-10026-080802	SCREW PAN TXPE B2.6X8 ZN BK PHILIPS ROHS			10
.....5	420-73986-001002	DOME SWITHC SHEET 8X8MM			2
.....5	150-00000-013502	METAL DOME IDA5MM WITH LEG 4 POINT			2
.....5	112-01505-010002	RING(E) D=1.5 ROHS			2
.....5	420-68565-060002	FIBER 11.5X5X0.3mm			2
.....5	461-23330-000202	SPEAKER FELT FOR LXT420 REV.2			2
.....5	420-68560-001112	MATAL DOME 5 POINT FOR GL07A VER.1			2
....4	404487600-685602	G7 Back Cover			2
....4	406487700-685602	G7 Battery Cover			2
....4	407487800-685602	G7 Battery Holder			2
....4	406487900-685602	G7 Belt Clip			2
....4	406488000-685602	G7 Hinge for belt clip			2
....4	409488100-685652	G7 Back Light Lens			2
....4	409488200-685652	G7 LCD window			2
....4	170-06856-000002	G7 Antenna Housing			2
....4	463-00000-004002	G7 JACK CAP			2
....4	410-68560-020002	G7 Key Pad			2
....4	410-68560-000002	G7 PTT button			2
....4	413487510-685602	G7 FRONT COVER BK WITH GRAY PAINT rev.1			2
....4	408488310-685602	G7 VOLUME KNOB REV.1			2
...3	576-68561-000002	G7 RADIO MAIN PCBA ASSY			2
....4	140-00550-002002	WIRE 0055mm BLACK UL AWG22	BATT WIRE		2
....4	203-00671-100212	TR BFQ67W SOT-323 Vishay	Q11 Q3 Q4		6
....4	203-03042-500062	TR KRA304E PNP ESM KEC	Q10 Q27		4
....4	203-03061-800062	TR KRA306E-RTK/P PNP ESM KEC	Q14 Q29		4
....4	203-04012-500062	TR KRC401E-RTK/P NPN ESM KEC	Q19		2
....4	203-04042-500062	TR KRC404E NPN ESM KEC	Q12 Q18 Q5		6

....4	203-04052-500062	TR KRC405E NPN ESM KEC	Q17 Q2 Q26		6
....4	203-20142-500062	TR KTA2014E HFE=120-240 ESM KEC	Q7		2
....4	203-40752-512062	TR KTC4075E (Y) NPN ESM KEC	Q24		2
....4	203-40831-114192	TR 2SC4083P NPN (SOT323)	Q9		2
....4	203-42261-800042	TR 2SC4226(R25) NPN REEL NEC	Q301 Q302 Q6 Q8		8
....4	203-82804-300382	TR STJ828EF SOT-523F DAYTRONICS	Q13 Q15 Q30		6
....4	214-01140-100222	DIODE KDS114E-RTK/PA SMD (ESC) KEC	D1 D13 D301 D4 D6 D8		12
....4	214-01150-100222	DIODE KDS115 SMD USM KEC	D3 D5		4
....4	214-01200-100222	DIODE KDS120 SMD USM KEC	D2 D7		4
....4	221-10603-616162	E-CAP 10UF 10V 3X5mm 20% KOSHIN	C127 C133 C69		6
....4	221-10703-640162	E-CAP 100uF 10V 20% 5X7mm KOSHIN	C131		2
....4	221-22702-640162	E-CAP 220uF 6.3V 20% 5X11mm KOSHIN	C43 C70		4
....4	236-00000-452003	R BSD SMD 0 OHM 5% 0402	R206 R31 TH3 R57A JS6 JS8		12
....4	236-10000-452003	R ROHS3 100 OHM 5% 0402 CF	R202 R224 R300		6
....4	236-10010-452003	R BSD SMD 1K 5% 0402	R25 R72 R56 R52 R34		10
....4	236-10020-452003	R BSD SMD 10K 5% 0402	R120 R121 R124 R139 R16 R160 R38	R311 R46 R59 R66 R82	24
....4	236-10030-452003	R BSD SMD 100K 5% 0402	R101 R103 R108 R116 R117 R118 R119	R126 R127 R128 R19 R204 R22 R35 R36	30
....4	236-10030-452003	R BSD SMD 100K 5% 0402	R40 R48 R50 R93 R4 R32		12
....4	236-10040-452003	R BSD SMD 1M OHM 5% 0402 CF	R20 R207 R21 R216 R41 R67 R89		14
....4	236-10090-452003	R BSD SMD 10 OHM 5% 0402	R301 R77		4
....4	236-12030-452003	R BSD SMD 120K 5% 0402	R12 R90		4
....4	236-15010-452003	R BSD SMD 1.5K OHM 5% 0402	R302		2
....4	236-15020-452003	R BSD SMD 15K 5% 0402	R112 R28 R57 R62 R75		10
....4	236-15030-452003	R BSD SMD 150K OHM 5% 0402 CF	R81		2
....4	236-18000-452003	R BSD SMD 180 OHM 5% 0402 CF	R306 R55 R135		6
....4	236-18030-452003	R BSD SMD 180K 5% 0402	R73 R80		4
....4	236-18040-452003	R BSD SMD 1.8M OHM 5% 0402 CF	R17 R39 R47		6
....4	236-22000-452003	R ROHS3 SMD 220 OHM 5% 0402	R8		2
....4	236-22010-452003	ROHS3 SMD 2.2K OHM 5% 0402 CF	R10 R131 R23 R3 R64 R70		12
....4	236-22020-452003	R BSD SMD 22K 5% 0402	R54		2
....4	236-22030-452003	R BSD SMD 220K OHM 5% 0402 CF	R111 R49 R61 R88 R97		10
....4	236-24040-450003	R SMD 2.4M OHM 1% 0402 CF	R102		2
....4	236-22080-452003	RES SMD 0402 2.2R 5% 1/16W	R29		2
....4	236-22090-452003	R BSD SMD 22 OHM 5% 0402	R226 R95		4
....4	236-27010-252003	R ROHS3 2.7K OHM 5% 0603 CF	R24		2
....4	236-27010-452003	R BSD SMD 2.7K OHM 5% 0402	R13 R37 R84		6
....4	236-33010-452003	R BSD SMD 3.3K OHM 5% 0402	R303 R5 R6 R69 R53		10
....4	236-33020-452003	R BSD SMD 33K OHM +-5% 0402	R133 R26 R27		6
....4	236-33090-452003	R BSD SMD 33 OHM 5% 0402	R307		2

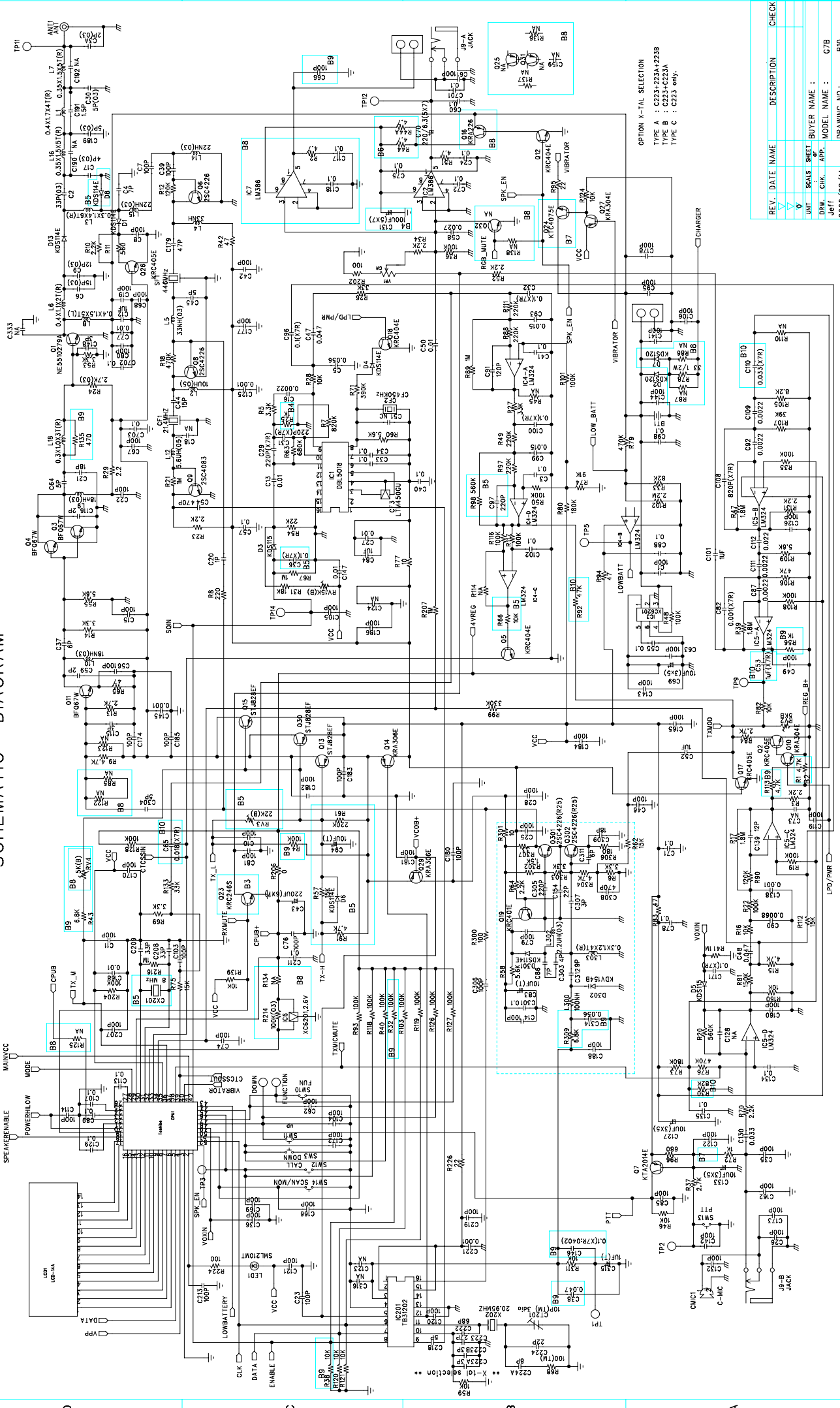
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....4	236-47010-452003	R BSD SMD 4.7K 5% 0402	R1 R15 R304 R9 R91 R113		12
....4	236-47020-452003	R BSD SMD 47K 5% 0402	R106		2
....4	236-47030-452003	R BSD SMD 470K OHM 5% 0402 CF	R18 R76 R71		6
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....4	236-56030-452003	R SMD 560K OHM 5% 0402 CF	R98		2
....4	236-68000-452003	R ROHS3 680 OHM 5% 0402 CF	R96 R14		4
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....4	236-75010-452003	R SMD 7.5K OHM 5% 0402 CF	R43		2
....4	236-82010-452003	R ROHS3 8.2K OHM 5% 0402 CF	R105		2
....4	236-82020-452003	R BSD SMD 82K OHM 5% 0402 CF	R30		2
....4	236-82030-452003	R ROHS3 SMD 820K OHM 5% 0402	R7		2
....4	236-91020-452003	R ROHS3 SMD 91K OHM 5% 0402 CF	R74		2
....4	237-22020-539172	VR SMD 22K TMC3K-B22K_TR 3DIA NOBLE	RV3		2
....4	237-50010-539172	VR SMD 5K TMC3K-B5K_TR 3DIA NOBLE	RV2 RV4		4
....4	237-50020-531172	VR SMD ROHS2 TMC3KB50KTR 50K 0.1W NOBLE	RV1		2
....4	238-10005-000092	THERMISTOR NSM3101J280J3Z 100 0603 HDK	R68		2
....4	240-01009-020023	C CER SMD 1pF +-0.25pF NPO 50V 0402 MURA	C20		2
....4	240-02009-015023	C CER SMD 2PF +-0.25PF NPO 50V 0603 MUR	C3A		2
....4	240-03009-020023	C CER SMD 3PF +-0.25PF NPO 50V 0402 MUR	C115 C148 C307		6
....4	240-04009-015023	C CER ROHS2 4PF +-0.25PF NPO 50V 0603 MU	C17		2
....4	240-04009-020023	C CER SMD 4PF +/-0.25PF NPO 50V 0402 MUR	C303		2
....4	240-05009-015023	C CER ROHS 5PF +-0.25PF NPO 50V 0603 MUR	C189 C30		4
....4	240-05009-020023	C CER SMD 5pF +-0.25pF NPO 50V 0402 MURA	C218 C223A C223B C304 C45 C64		12
....4	240-06009-020023	C CER SMD 6pF +-0.25pF NPO 50V 0402 MUR\$	C311 C37		4
....4	240-07009-020023	C CER 7pF +-0.25pF 50V 0402 NPO MURATA	C4 C86		4
....4	240-08009-020023	C CER SMD 8PF +-0.25PF NPO 50V 0402 MUR	C224A		2
....4	240-09009-020023	C CER SMD 9PF +-0.25PF NPO 50V 0402 MUR\$	C312		2
....4	240-10109-420023	C CER SMD 100pF 5% NPO 50V 0402 MURATA	C1 C10 C103 C104 C105 C106 C11 C114 C115 C120 C121 C122 C126 C132 C136 C14 C141		34
....4	240-10209-521023	C CER BSD SMD 1NF 10% X7R 0402 MURATA	C125 C138 C145 C221 C82		10
....4	240-10306-521023	C BSD CER 10NF 10% X7R 16V 0402 MUR	C13 C147 C168 C27 C50 C77		12
....4	240-10406-516023	C CER ROHS SMD 100NF 10% X7R 16V 0603	C100 C171 C32 C36 C96		10
....4	240-10406-817023	C CER SMD 0.1uF +80%-20% Y5V 16V 0603MUR	C702 C703		4
....4	240-10406-822023	C CER SMD 0.1UF +80-20% Y5V 0402 16V MUR	C102 C107 C113 C129 C134 C135 C211 C24 C3 C301 C33 C34 C40 C41 C55 C57 C60 C70		36

....4	240-10406-822023	C CER SMD 0.1UF +80-20% Y5V 0402 16V MUR	C71 C72 C75 C78 C88 C89 C98 C117 C118		18
....4	240-10109-420023	C CER SMD 100pF 5% NPO 50V 0402 MURATA	C142 C143 C144 C15 C160 C162 C165 C166	C169 C170 C172 C173 C174 C177 C178 C180	32
....4	240-10109-420023	C CER SMD 100pF 5% NPO 50V 0402 MURATA	C181 C182 C183 C184 C185 C186 C188 C19	C207 C213 C219 C22 C23 C25 C26 C28 C306	34
....4	240-10109-420023	C CER SMD 100pF 5% NPO 50V 0402 MURATA	C35 C39 C42 C46 C49 C56 C61 C62 C63	C67 C68 C7 C74 C76 C79 C8 C80 C81 C85	38
....4	240-10109-420023	C CER SMD 100pF 5% NPO 50V 0402 MURATA	C95 C66		4
....4	240-10506-817023	C CER SMD 1uF +80-20% 16V Y5V 0603 MUR	C101 C12 C52 C84		8
....4	240-12109-420023	C CER SMD 120PF 5% NPO 50V 0402	C91		2
....4	240-15009-415023	C CER ROHS 15PF 5% NPO 50V 0603 MUR	C6		2
....4	240-15306-521023	C CER SMD BSD 15nF 10% X7R 16V 0402 MURA	C93 C99		4
....4	240-15909-020023	C CER SMD 1.5pF +-0.25pF 50V 0402 MURA	C191		2
....4	240-18009-420023	C CER SMD 18PF 5% NPO 50V 0402 MUR	C21 C309		4
....4	240-22009-420023	C CER BSD 22PF 5% SMD 50V 0402 MURATA	C154 C224		4
....4	240-22109-521023	C CER 220PF 10% X7R 50V 0402 MURATA	C305 C29 C31 C97		8
....4	240-22209-521023	C CER SMD 2200pF 10% 50V X7R 0402 MUR	C109 C111 C16 C87 C92		10
....4	240-22306-521023	C CER SMD 0.022uF X7R 16V 0402 MURATA	C112		2
....4	240-27009-420023	C CER SMD 27PF +-5% NPO 50V 0402 MUR	C223		2
....4	240-27306-521023	C ROHS2 27nF 10% X7R 16V 0402 MUR	C58		2
....4	240-33009-415023	C CER ROHS 33PF 5% NPO 50V 0603 MURATA	C2		2
....4	240-33009-420023	C CER BSD SMD 33PF 5% 50V 0402 MURATA	C208 C209		4
....4	240-33306-521023	C CER SMD BSD 33nF 10% X7R 16V 0402 MURA	C130 C110		4
....4	240-47009-420023	C ROHS3 SMD 47PF 5% 50V 0402 MUR	C179		2
....4	240-47109-521023	C CER SMD 470PF 10% X7R 50V 0402 MURATA	C308 C54		4
....4	240-47306-521023	C CER SMD 47nF 10% X7R 16V 0402	C47 C48 C38		6
....4	240-56306-521023	C ROHS3 0.056uF 10% X7R 16V 0402 MUR	C5 C314		4
....4	240-68009-420023	C CER SMD 68pF +-5% COG 50V 0402 MURATA	C222		2
....4	240-68209-521023	C CER 6800PF 10% X7R 50V 0402 MURATA	C90		2
....4	240-82109-521023	C CER BSD SMD 820PF X7R 10% 0402 50V MUR	C108		2
....4	253-02017-500072	COIL 1.1mm 2TURN WIRE DIA=0.4mm R FINE	L6		2
....4	253-03016-700072	COIL 1.0mm 3TURN WIRE DIA=0.3mm R FINE	L18		2
....4	253-04008-501072	COIL 1.7mm 4TURN WIRE DIA=0.4mm R FINE	L1		2
....4	253-04014-700072	SPRING COIL 0.3X1.2X4T(R) FINE	L303		2
....4	253-05015-500072	COIL 1.5mm 5TURN WIRE DIA=0.4mm L FINE	L8		2
....4	253-05015-800072	SPRING COIL 0.35X1.5X5T(R) FINE	L16 L7		4
....4	253-06013-700072	COIL 1.4mm 6TURN WIRE DIA=0.3mm R FINE	L3		2
....4	260-20950-100552	XTAL R49SDA-020950-F1-16C YOKETAN	X202		2
....4	261-00450-600132	CERAMIC DISCRIMINATOR CDB450C3 SHOULDER	CF2		2
....4	264-00450-000462	Ceramic filter LTM450GU Shoulder	CF3		2
....4	265-00440-506462	SAW FILTER HDF-440DS F-11 SMD SHOULDER	SF1		2
....4	271-00324-090142	IC S324 ROHS2 SOP-14 GLOBAL LINK	IC4 IC5		4

....4	271-06201-460492	VOL REG XC6201P402MR 4V SOT-25 TOREX	IC3		2
....4	273-68563-140122	CPU G7XT JT5BU8-6VP0(Z) DIE TOSHIBA	CPU1		2
....4	274-05018-270222	IC CHMC D5018 IF 16SOIC RICHCREATIVE	IC1		2
....4	280-10009-100122	VC ROHS2 STC3M10-T1 10PF SMD STD	CT201		2
....4	303-36223-000132	DUAL JACK LT2510C-02110 LEAD CENTURY	JACK1		2
....4	334-68560-000142	LCD GL07A SDT-DM3363-HP-0 SMART GOOD	LCD1		2
....4	360-68561-100002	PCB GL07A H/S MAIN BOARD REV:X0	PCB		2
....4	252-10903-209262	INDUCTOR 10UH 10% 0805 CERATEC	L2		2
....4	252-18703-219262	INDUCTOR 18NH 10% 0603 CERATEC	L10 L9		4
....4	252-22703-219262	INDUCTOR 22NH 10% 0603 CERATEC	L14 L15		4
....4	252-33703-219262	INDUCTOR 33NH 10% 0603 CERATEC	L5		2
....4	252-56803-209262	INDUCTOR 5.6UH 10% 0805 CERATEC	L12		2
....4	202-55104-300042	FET PA NE5510279A 79A NEC	Q1		2
....4	260-00008-100552	XTAL 8MHz R49SDA-008000-FA-16-30A YOKETA	X201		2
....4	335-15103-100362	LED 12-21VGC-T5/TR8 GREEN SMD HUALIGHT	LED1		2
....4	240-12009-420023	C CER BSD SMD 12PF 5% NPO 50V 0402 MUR	C139		2
....4	240-15009-420023	C CER SMD 15PF +-5% NPO 50V 0402 MURATA	C44		2
....4	252-22903-219262	INDUCTOR 2.2UH 10% 0603 CERATEC	L302		2
....4	333-34097-004132	MIC F9745AP342-98 -34dB Innovation	CMIC1		2
....4	240-02009-020023	C CER SMD 2pF +-0.25pF NPO 50V 0402 MURA	C116		2
....4	203-02260-900062	TR KRA226S-RTK/P SOT23 KEC	Q16		2
....4	203-02460-900062	TR KRC246S SOT-23 KEC	Q23		2
....4	236-10030-252003	R BSD SMD 100K 5% 0603	R214		2
....4	231-33090-918002	RESISTOR METAL FILM 33 OHM 1/2W 5%	R78		2
....4	244-10506-513152	TANT CAP 1UF TAJA105K016R 3216 16V AVX	C315		2
....4	240-10406-521023	C CER 0.1uF 10% X7R 16V 0402 MURATA	C146		2
....4	236-68010-452003	R BSD SMD 6.8K OHM 5% 0402	R309		2
....4	371-66212-700182	MOTOR 6SL-62-12WB 62mm 3V PHILCONIC	V1		2
....4	240-18306-521023	C CER 18nF 10% X7R 16V 0402 MURATA	C65		2
....4	244-10603-513152	TANT CAP 10UF TAJA106K010R 3216 10% AVX	C83 C94		4
....4	240-10506-516023	CHIP CAP 1UF 10% X7R 16V 0603 MUR	C53		2
....4	274-00214-210402	IC Rohs2 PLL GP214D TSSOP GAINTECH	IC201		2
....4	252-10802-223232	L 100nH LQG15HNR10J02D 5% 0402 MURATA	L300		2
....4	252-33702-223232	L ROHS2 LQG15HN33NJ02D 5% MUR	L4		2
....4	271-00386-270202	AUDIO AMP IL386D SOIC IK SEMICOM	IC2 IC7		4
....4	263-21400-500622	CRY FIL RUM5D3-021400-F1-F08AA YOKETAN	CF1		2
....4	319-03060-060002	JUMPER 3mm 6mm DIA=0.6mm	J-POWER1 J-POWER2 J-POWER3		6
....4	271-02402-280492	IC DETECTOR XC61CN2402MR 2.4V TOREX	IC6		2
....4	331-36121-100372	SPK M3675-12-7L26R 0.5W 12 OHM ASAHI OEM	SPK1		2

....4	240-09009-115023	CER CAP 9P +-0.5PF NPO 50V 0603 MURATA	C9		2
....4	140-00500-007002	WIRE 0050mm BLACK UL AWG32	SPK-		2
....4	140-00502-007002	WIRE 0050mm RED UL AWG32	SPK+		2
....4	236-82020-450003	R CHIP 82K 1% 0402 CF	R33		2
....4	236-47030-450003	R SMD 470K OHM 1% 0402 CF	R79		2
....4	213-02140-100062	VD 1SV214 SMD TOSHIBA	D302		2
....4	232-10020-912222	VOLUME SWITCH F-09115S-15 10K POLYSHINE	VR1		2

SCHEMATIC DIAGRAM



REV.	DATE	NAME	DESCRIPTION	CHECK
0				
1				
2				
3				
4				
5				
6				

OPTION X-TAL SELECTION
 TYPE A : C224+223A+223B
 TYPE B : C223+C223A
 TYPE C : C223 ONLY.

UNIT	SEALS	SHEET	BUYER NAME :	C7/B
DRW.	CHK.	APP.	MODEL NAME :	B10
2006/08/14				DRAWING NO.:

1

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