

Applied Electronics Company

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February 6, 2008

RE : Active Devices List for MP Series Transmitter

Author : Darrell Downam

1. Linx Technologies TXM-900-HP3-PPO Transmitter Module
 - a. Listed as same on schematic
 - b. Converts data into RF Signal @ 921.3 Mhz.
 - c. 2.4KB/s Data Rate FSK Modulation
2. Microchip PIC16F877A Microprocessor (U1 on board)
 - a. Converts user keypad input into serial data.
 - b. Outputs serial data to Linx Tech. module.
3. Analog Devices ADP1073A DC-DC Converter (U2 on board)
 - a. Converts 3VDC battery voltage to 5VDC for circuitry.
 - b. Operates @ 19Khz.

MPH Series Transmitter B.O.M.

Part	Designator	Quantity	Part #	Distributor
Case	Case	1	A9408357	OKW
Label	Label	1	MP Series TX Label	ScreenTek
12 Button Keypad	Keypad	1	84S-AC1-000	Grayhill
LED Lens	Lens	1	LC10CL	Digikey
On/Off Switch	Switch	1	EG1509	Digikey
Batteries	Batteries	4	LR06	Energizer
PC Board	PC Board	1	MP12TX-3	Bare Board Group
Transmitter Module	TX1	1	TXM-900-HP3-PPO	Linx Technologies
Antenna Assembly	ANT1	1	ANT-315-HETH	Linx Technologies
44 pin PLCC Socket	U1/Y1	1	940-44-044-24-00000	Digikey
PIC16F877A Microcontoller	U1	1	PIC16F877A-I/P	Microchip
4.7K Resistor	R1	1	4.7KQBK	Digikey
10K Resistor	R2	1	10KQBK	Digikey
680 Ohm Resistor	R3	1	680QBK	Digikey
680 Ohm Resistor	R4	1	680QBK	Digikey
910K Resistor	R5	1	910KQBK	Digikey
100K Resistor	R6	1	100KQBK	Digikey
100K Resistor	R7	1	100KQBK	Digikey
10K Resistor SMT	R8	1	10K SMT 0806	Digikey
LED	LED1	1	LN11WP23	Digikey
20 Mhz Resonator	X1	1	490-1215	Digikey
Transistors	Q1	1	2N4403	Digikey
47uf/10V Capacitor	C1	1	PCS2476CT	Digikey
47uf/10V Capacitor	C2	1	PCS2476CT	Digikey
1uf Capacitors	C3	1	P4968	Digikey
1uf Capacitors	C4	1	P4968	Digikey
DC-DC Convertor Chip	U2	1	ADP1073N-5.0	Digikey
1N5158 Diode	D1	1	1N5158	Digikey
Coil 15nH SMT	L1	1	PCD1374CT	Digikey
Coil 68nH SMT	L2	1	PCD1355CT	Digikey
10K x 7 Resistor Pack	RP1	1	770-81-10K	Digikey
10K x 5 Resistor Pack	RP2	1	770-61-10K	Digikey
Header Pins		36	2663S	Digikey
Jumpers		12	A26244	Digikey

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RE : Tune-up Procedure for MP Series Transmitter
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1. Make sure unit has fresh batteries.
2. Make sure antenna assembly is properly oriented.
3. Verify the transmitter field strength in test jig.
4. If output is within limits and spurious emissions are within specifications then unit passes.
5. If the unit does not meet specifications then adjustments to antenna assembly may be required, before retest.
6. If units radiated power is too high then the Linx Tech module may be replaced as there is no adjustment to this unit.
7. An 50 ohm pad may be added to ensure radiated power does not exceed limits.