

1.0 Parts List:

Description of Devices:

TABLE 1: FUNCTION OF ACTIVE ELEMENTS

DESIGNATOR	FUNCTION
CR701	DETECTOR DIODE, HSMS 2800
D1, D402, D403	DIODE, MBRA120LT3
D101	DIODE, CMD17
D301	DIODE, HSMS 2800
D401, D404, D801	DUAL DIODES, BAV-74
D601	VARACTOR DIODE, MMBV3102LT1
Q1, Q110	FET, REGULATOR, FDC658P
Q402	FET, SWITCH, FDC658P
Q101, Q106, Q705	BIAS, MMBT3904
Q401, Q403, Q404, Q405, Q704	XSTR SWITCH, MMBT3904
Q102	XSTR LIMITER, BFT92
Q103	RF OSC, PBR941
Q104	RF AMP, PBR941
Q107	RF POWER AMP, PBR941
Q108, Q701	CURRENT MIRROR, BCV62
Q105, Q801, Q802	FET, SWITCH, 2N7002
Q109, Q702	DIF AMP, XN1501
Q601	VCO, BFT93
Q703	FET, REGULATOR, FDD5614P
Q706	RF AMP, NE85633
U1	DC/DC CONVERTER, LM3485
U201	GPS RECEIVER, GH-80D
U202	VOLT REG, LP2951CM-3.3

U203	AND, 74HCT1G08
U301	MICROPROCESSOR, PIC18F252
U601	OVENIZED OSCILLATOR, OCXO-50
U602, U607	AND, NC7S08
U603, U608	DUAL D FLIP-FLOP, 74HC74PW
U604	XOR, NC7SZ86
U605A,B,C,D	NAND GATE, 74HC00PW
U606	PRESCALER, MB504L
U609	RF AMP, MSA2111
U701	VOLT REFERENCE, LM431
U702	RF POWER AMP, RA07M4047M
U801	VOLT REGULATOR, MAX1615
U802	MICROPROCESSOR, PIC12LC508A

2.0 Tune-up Procedures:

There is no tuning required for the 406 MHz 5 watt signal. There is no tuning required for the 121.5 MHz 0.050 watt signal. The antenna-matching network is tuned at 406 MHz by adjusting C501 and L501 and measuring the return loss into the antenna coupler network. The antenna matching network is tuned at 121.5 MHz by adjusting L504 and L506 and measuring the return loss into the antenna coupler network.