

TAC-COM 2001 Tactical Repeater active device function list:

Exciter (1/2W Driver) Board

<u>Ref. Des.</u>	<u>Manuf. P/N</u>	<u>Functional description</u>
U1	ICL7621	IC, Op-Amp, Audio Pre-amp, Low Pass Filter
U2	N/A	
U3	MAX2620	IC, VCO, Buffer
U4	RF2361	IC, RF Driver
U5	LMX2306	IC, Synthesizer
U6	T-1050-180	9.6 MHz Reference TCXO
U7	LM339	IC, Channel Line Buffers
U8	PIC16LF84A	IC, Microcontroller
U9	MAX6315	IC, Low battery reset
U10	MAX6315	IC, Tx Inhibit
U11	LT1086CM	IC, 8 VDC Linear Regulator
U12	LT1086CM	IC, 5 VDC Linear Regulator
D1	SMV1236	Varactor diode, VCO FM modulator
D2	BZX84C3V6ZX	Zener Diode, Serial Data Protection
D3	BAV99	Diode, Power Rectifier
D4	BZX84C18	Schottky Diode, Gate Clamp
Q1	TRF7003A	N-Channel Mosfet, RF Power Amplifier
Q2	VN605T	N-Channel Mosfet, TX-On control switch
Q3	2N3906	NPN Bipolar Switch, TX-on gate
Q4	VN605T	N-Channel Mosfet, TX-on control switch
Q5	VN605T	N-Channel Mosfet, PA-on control switch

RF Power Amplifier Board

<u>Ref. Des.</u>	<u>Manuf. P/N</u>	<u>Functional description</u>
Q1	MRF227	2 Watt RF Power Amplifier
Q2	SI9953DY	P-Channel Mosfet Power Switch
Q3	2N3904	TX KEY Switch Driver
Q4	2N3904	TX KEY Switch Driver

Repeater Controller Board

<u>Ref. Des.</u>	<u>Manuf. P/N</u>	<u>Functional description</u>
U601	LP2950CP	5 VDC Regulator
U602	74C11	Carrier Detect Inverter
U603	N/A	
U604	4025	Carrier Detect Latch
U605	4025	Time-Out-Timer Latch

Repeater Controller Board cont:

U606	ICL7621	RX Audio LPF
U607	4020	Time-Out-Timer Duration Counter
U608	SC 20-400	Scrambler Module (option)
Q601	2N3904	45.5 Hz Clock
Q602	2N3904	45.5 Hz Clock
Q603	2N3904	TX KEY Switch
D1	MMBD914	TX Key B Rectifier
D2	MMBD914	Carrier Det. Clamp
D3	MMBD914	Audio Inhibit Rectifier
D4	MMBD914	TX Key Rectifier

Receiver Board

<u>Ref.</u>	<u>Manuf.</u>	<u>Functional description</u>
<u>Des.</u>	<u>P/N</u>	
U1	SA606	IC, IF AMP/LIMITER/DEMOD
U2	MAX383	IC, Narrowband/wideband IF Filter Switch
U3	MAX2620	IC, Local Oscillator
U4	RF2361	IC, LO Buffer
U5	LMX2306	IC, RX Synthesizer
U6	T-150-1B0	9.6 MHz Reference TCXO
U7	LM339	IC, Channel selector buffer
U8	MAX6315	IC, LO-Battery reset
U9	PIC16LF84A	IC, Microprocessor
U10	ICL7621	IC, Squelch System
U11	LT1086CM	IC, 5VDC Regulator
Z1	TUF-3	Mixer, High Level Diode
Q1	BPF193	Transistor, LNA
Q2	BFR92A	Transistor, IF Pre-Amp
Q3	VNO605T	N-Channel FET, Narrow/Wide Discriminator Switch
Q4	VN0605T	N-Channel FET, Carrier Detect Switch
D1	SMV-1236-011	Diode, Varactor, LO PLL Tune
D2	BZX84C3V6ZX	Zener diode, serial data protection
D3, D4	BAV99	Diode, Squelch Detector