

STALKER XX/PRESIDENT MADISON SERVICE MANUAL

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thanks Homer

for sharing this file

ALIGNMENT OF TRANSMITTER =====

Test Equipment Required

AF Oscillator (two required)	AF VTM	RF VTM
RF Power Meter	Frequency Counter	Oscilloscope
DC Power Supply	50 ohm Load	Spectrum analyzer
DC Current Meter		

Alignment Procedure

CH SW: 19
Mike Gain: Max

PA-CB SW: CB
CH9 SW: OFF

ON-OFF/Volume: ON
P.T.T.: TX

STEP	PRESET TO	ADJUSTMENT	REMARKS
1	Mode SW: USB S1 and S2: OFF	VR9	Disconnect TP8. Connect DC Current Meter. Adjust for 30mA on DC Current Meter.
2	as Step 1	VR8	Disconnect TP7. Connect DC Current Meter. Adjust for 40mA on DC Current Meter.
3	After Step 1 and 2, restore circuit at TP8 and TP7.		
4	as Step 1 except S1 and S2: ON OSC 1: 500Hz OSC 2: 2400Hz	L47 and L48	Set VR11 to full cw rotation. Keep AF ATT setting for approx. 20V reading on RF VTM. Then adjust coils for maximum reading.
5	as Step 4	L45 and L46	Set the core of L45 at the bottom. Adjust L46 for maximum reading on RF VTM. Then adjust L45 for maximum reading. Check the power difference between CH1 and CH40.
6	as Step 1 except OSC 1: 1kHz S1: ON	L38	Adjust level of OSC1 for 5mV reading on AF VTM, then adjust L38 for maximum reading on RF VTM.
7	as Step 1	VR4	Adjust for minimum carrier leakage for both USB and LSB on Spectrum Analyzer.
8	as Step 1 except S1 and S2: ON OSC1: 500Hz	VR11	Adjust OSC1 and OSC2 for 5mV reading on AF VTM, then adjust VR11 for 24.5V reading on RF VTM.

ALIGNMENT OF PLL AND CARRIER OSCILLATOR =====

Test Equipment Required

Oscilloscope (50MHz)
Frequency Counter

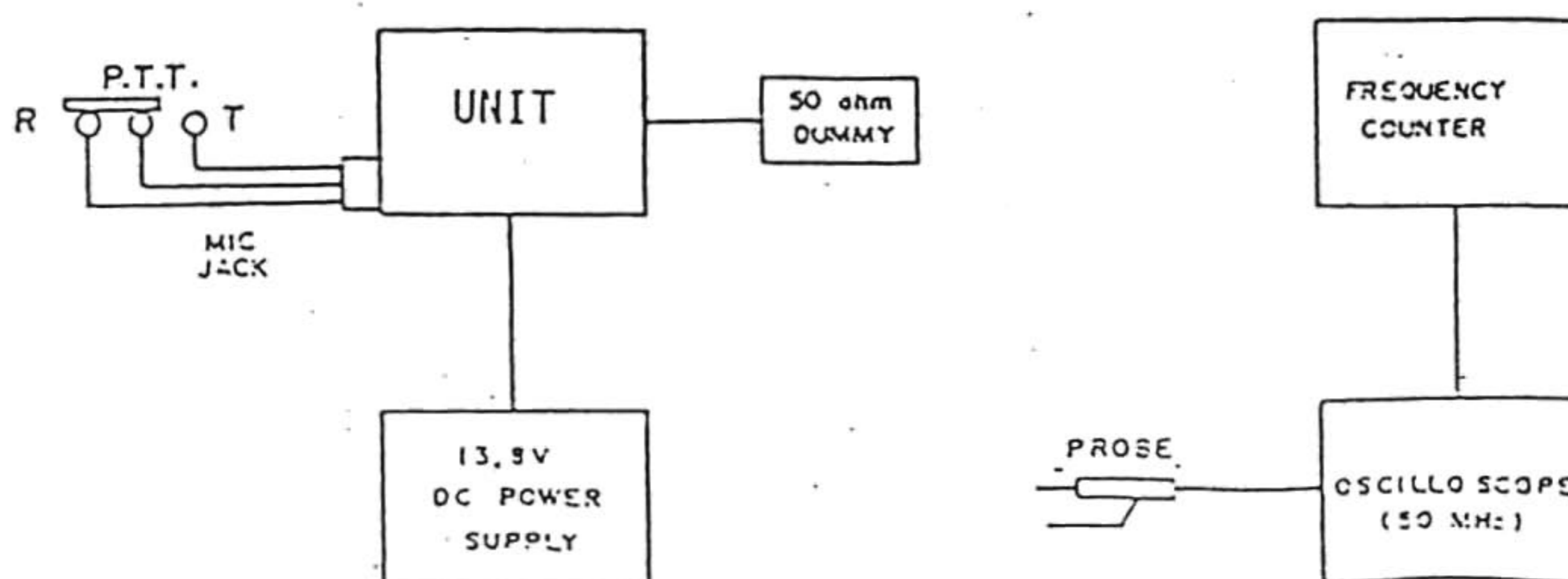
DC Power Supply
50 ohm Load

Alignment Procedure

VOLUME SW: ON PA-CB SW: CB CH 9: OFF
Clarifier: Center P.T.T.: RX

STEP	PRESET TO	ADJUSTMENT	REMARKS
1	CH SW : 40 Mode SW: USB	L19	Connect Oscilloscope to R207(+), L6(-). Adjust for 3.5V DC reading on Oscilloscope. (Oscilloscope in DC mode)
2	CH SW : 19 Mode SW: USB	L21	Connect Oscilloscope to R101. Adjust for Maximum reading on Oscilloscope.
3	as Step 2	L20	Connect Oscilloscope to R107. Adjust for Maximum reading on Oscilloscope.
4	as Step 2	CT1	Adjust for 34.986500MHz on Frequency Counter.
5	as Step 2 except Mode SW: AM	L23	Adjust L23 to obtain 34.98500MHz.
6	as Step 2 except Mode SW: LSB	L22	Adjust L22 to Obtain 34.983500MHz.
7	as Step 2	VR5	Set PTT SW to TX. Adjust VR5 to obtain 34.983500MHz.
8	as Step 2	CT2	Connect Oscilloscope to R86(+), L6(-). Adjust to obtain 7.801500MHz on Frequency Counter.
9	as Step 6	L30	Adjust L30 to obtain 7.798500MHz.
10	Mode SW: AM No Modulation PTT: TX	L31	Adjust L31 to obtain 27.18500MHz ±5Hz.

Test Equipment Connection



ALIGNMENT OF RECEIVER =====

Test Equipment Required

AF Signal Generator
DC Power Supply

AF VTVM
8 ohm Load

Oscilloscope

Alignment Procedure

CH SW: 19
CH 9 SW: OFF

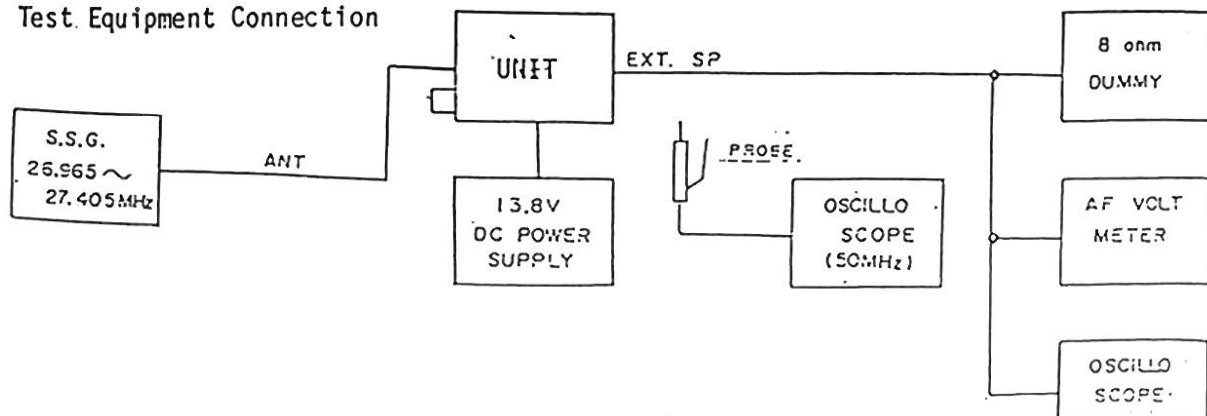
ON-OFF/Volume: MAX.
Clarifier: Center

PA-CB SW: CB
NB ANL SW: OFF

SQ: MAX.
RF GAIN: MAX.

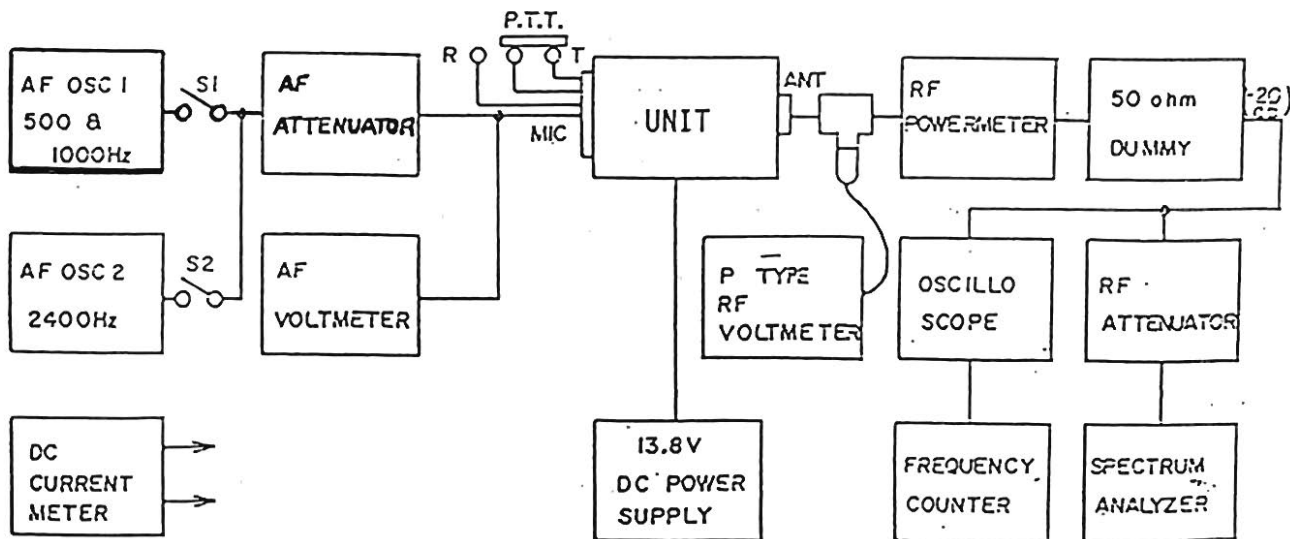
STEP	PRESET TO	ADJUSTMENT	REMARKS
1	Mode SW: LSB	L6	Turn the coar of L6 to the bottom end.
2	as Step 1	L4, 5, 7, 8, 9, 10, 12 and L14	Adjust level of SG to obtain 2V reading on AF VTVM. Then adjust coils for maximum reading on AF VTVM.
3	as Step 1	L6 and L5	Set the level of SG to 10uV. Turn the coar of L6 to the bottom end. Adjust L5 for maximum reading on AF VTVM. Set the level of SG to 1uV. Adjust L6 for maximum reading.
3	as Step 1	L3, 13 and L15	Set the level of SG to 1kHz, 30% modulation. Adjust level of SG to obtain 2V on AF VTVM. Adjust coils for maximum reading.
4	as Step 1	VR3	Set the level of SG to 1000uV. Adjust VR3 so that the audio signal will be just appeared.
5	as Step 1	VR1	Set the level of SG to 100uV, no modulation. Adjust for "S-9" reading of Transceiver's meter.
6	as Step 1 except Mode SW: USB	VR2	Shift SG signal +1kHz with no modulation. Adjust for "S-9" reading on Transceiver's meter.
7	as Step 1 except CH: 18(set) NB ANL SW: ON	L11 and L12	Set the level of SG to 19CH, 30uV. Connect Oscilloscope to R10(+), L6(-). Adjust coils for maximum reading on DC VTVM.
8	as Step 7	L1 and L2	Set the level of SG to 3uV. Adjust coils for maximum reading on DC VTVM.

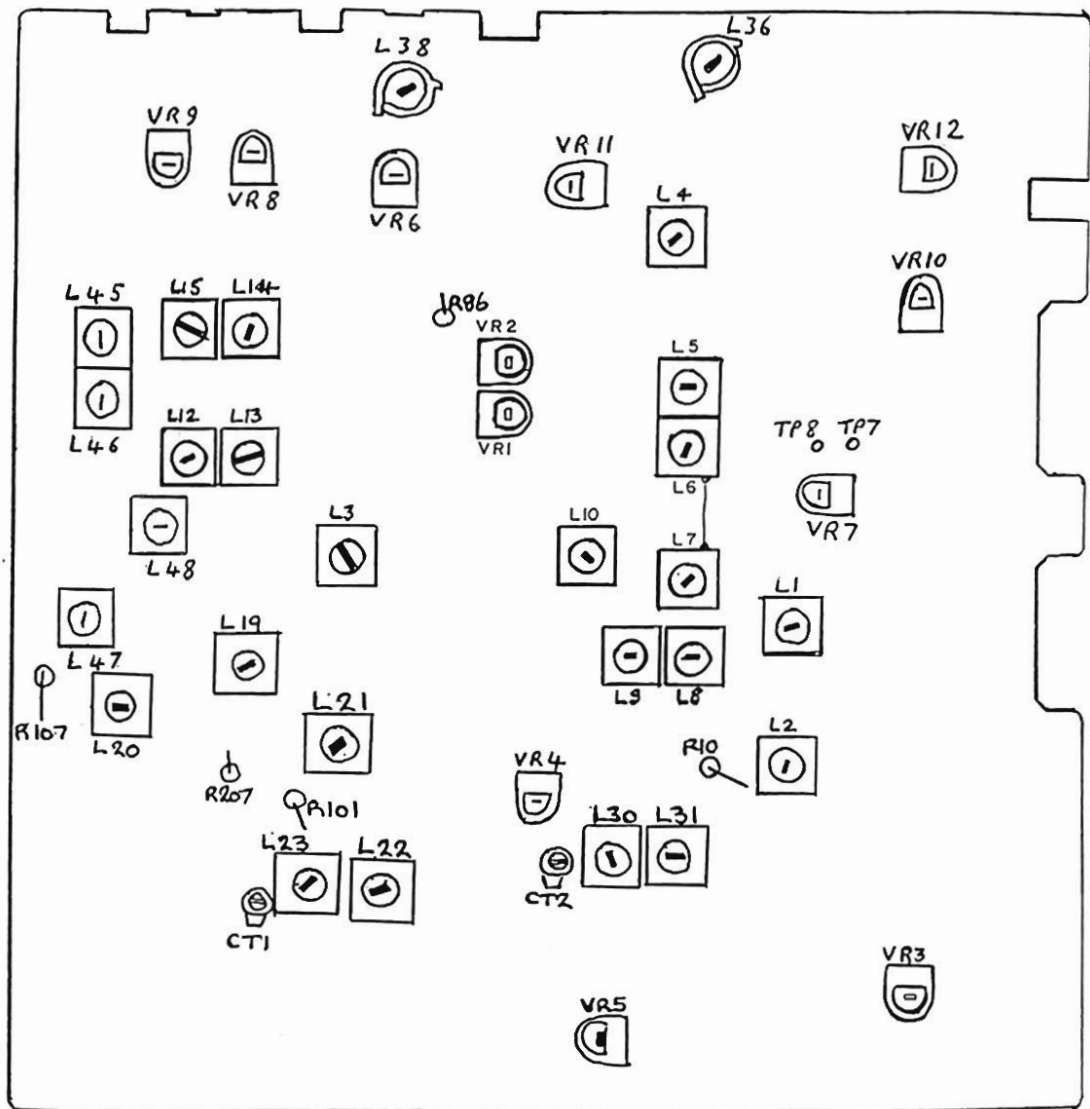
Test Equipment Connection



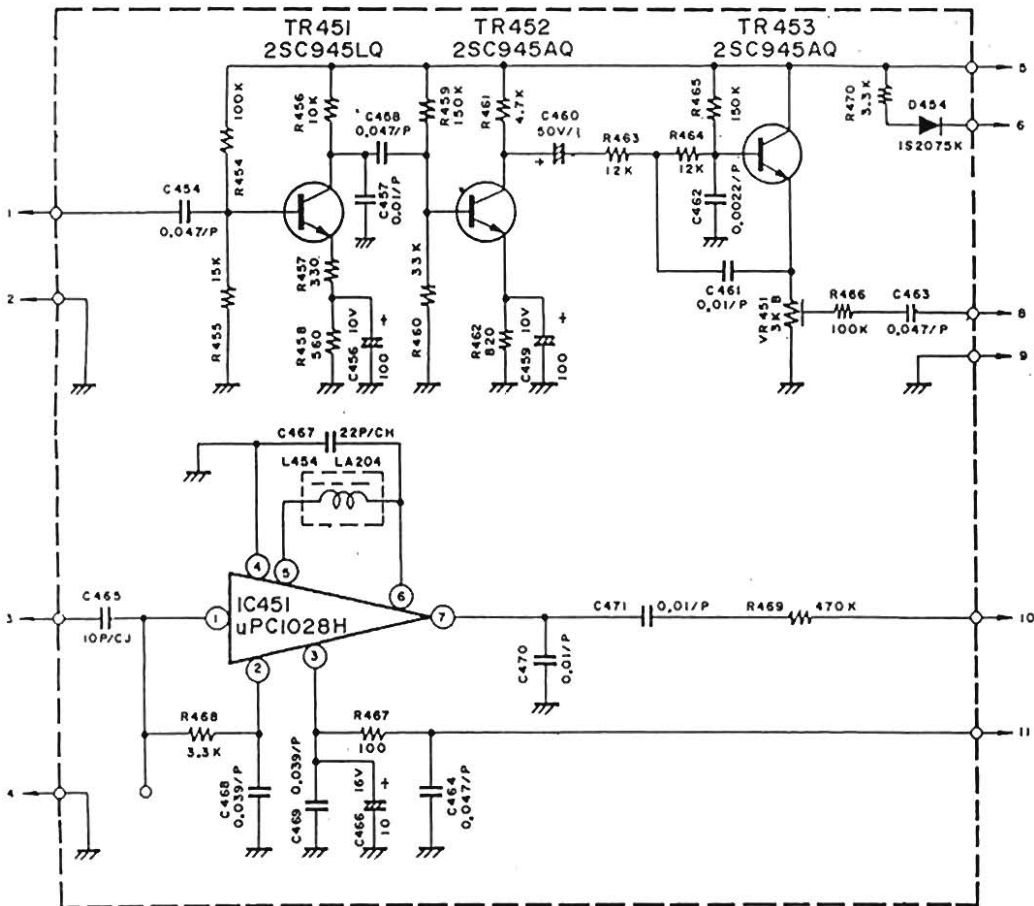
STEP	PRESET TO	ADJUSTMENT	REMARKS
9	as Step 1 except Mode SW: AM No modulation	VR10	Adjust for 4.0W reading on RF Power Meter.
10	as Step 9	VR6	Adjust for "4W" reading on the Tranceiver's meter.
11	as Step 9	L36	Adjust minimum 2'nd harmonic on Spectrum Analyzer or Monitor receiver.
12	as Step 1 except SWR-RF/MOD: RF/MOD OSC 1: 1000Hz S1: ON	VR5	Adjust VR5 to obtain 100% modulation.
13	as Step 1	VR12	Adjust VR12 so that LED of AWI don't light when 50 ohm load, and when 100 ohm load, LED light.
14	as Step 1	RT301	Connect DC VTVM to R302(+), R301(-). Adjust RT301 for 13.8V on DC VTVM.

Test Equipment Connection





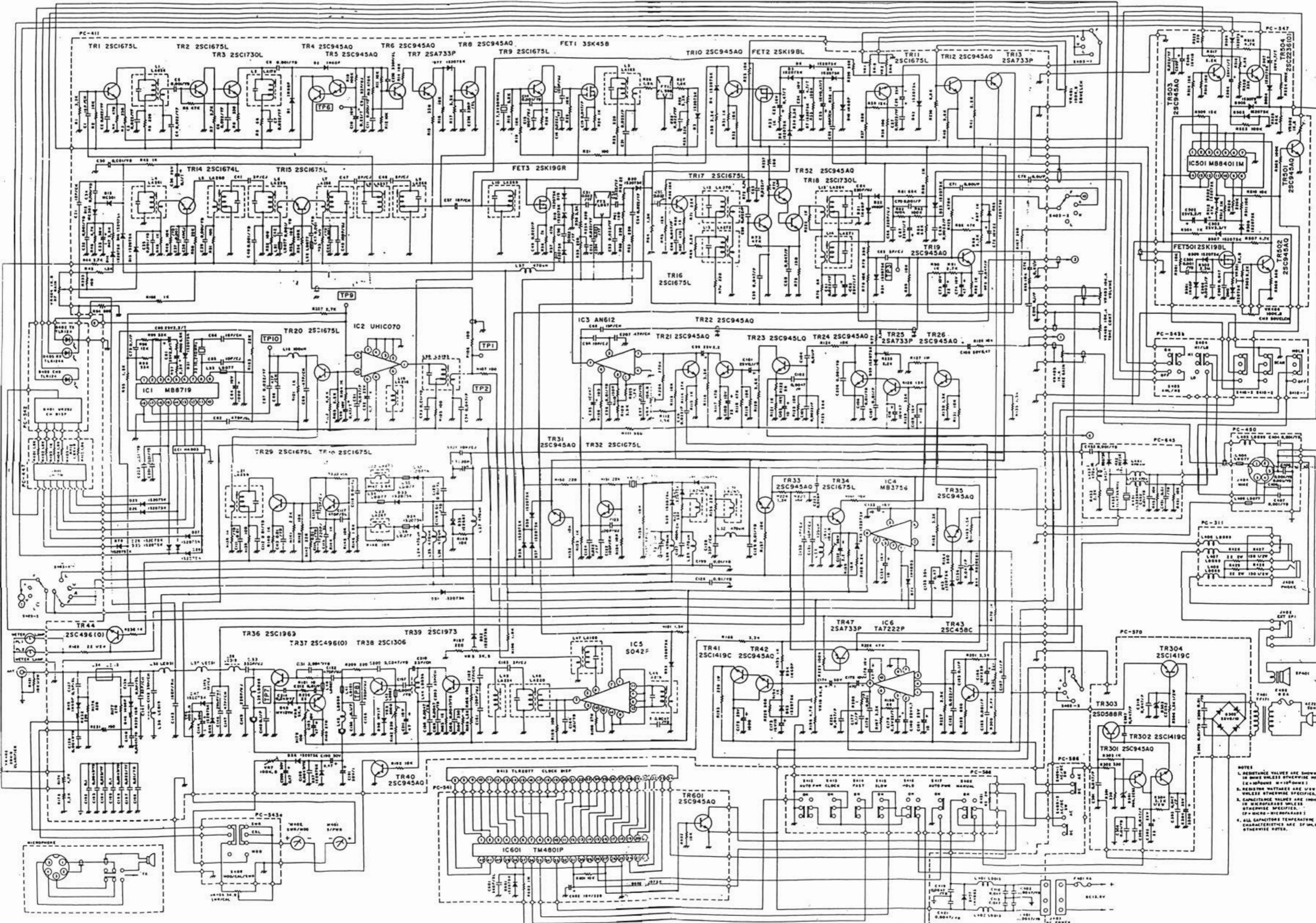
PC 411



STALKER XX

機種名	UT-537E	
図名	回路図(FM部)	
図番	E14-1620	
承認	検図担当作成	
技研 54.11.19 村竹	技研 54.11.19 村竹	技研 78.11.9 大野

Channel No.	Reception frequencies (MHz)	Divide ratio (N)	1st Local Oscillator Frequency (MHz) AM mode	1st Local Oscillator Frequency (MHz) USB mode	1st Local Oscillator Frequency (MHz) LSB mode	1st IF frequency (MHz)
1	26.965	79	34.765	34.7665	34.7635	7.8
2	.975	80	.775	.7765	.7735	"
3	.985	81	.785	.7865	.7835	"
4	27.005	83	.805	.8065	.8035	"
5	.015	84	.815	.8165	.8135	"
6	.025	85	.825	.8265	.8235	"
7	.035	86	.835	.8365	.8335	"
8	.055	88	.855	.8565	.8535	"
9	.065	89	.865	.8665	.8635	"
10	.075	90	.875	.8765	.8735	"
11	.085	91	.885	.8865	.8835	"
12	.105	93	.905	.9065	.9035	"
13	.115	94	.915	.9165	.9135	"
14	.125	95	.925	.9265	.9235	"
15	.135	96	.935	.9365	.9335	"
16	.155	98	.955	.9565	.9535	"
17	.165	99	.965	.9665	.9635	"
18	.175	100	.975	.9765	.9735	"
19	.185	101	.985	.9865	.9835	"
20	.205	103	35.005	35.0065	35.0035	"
21	.215	104	.015	.0165	.0135	"
22	.225	105	.025	.0265	.0235	"
23	.255	107	.055	.0565	.0535	"
24	.235	106	.035	.0365	.0335	"
25	.245	108	.045	.0465	.0435	"
26	.265	109	.065	.0665	.0635	"
27	.275	110	.075	.0765	.0735	"
28	.285	111	.085	.0865	.0835	"
29	.295	112	.095	.0965	.0935	"
30	.305	113	.105	.1065	.1035	"
31	.315	114	.115	.1165	.1135	"
32	.325	115	.125	.1265	.1235	"
33	.335	116	.135	.1365	.1335	"
34	.345	117	.145	.1465	.1435	"
35	.355	118	.155	.1565	.1535	"
36	.365	119	.165	.1665	.1635	"
37	.375	120	.175	.1765	.1735	"
38	.385	121	.185	.1865	.1835	"
39	.395	122	.195	.1965	.1935	"
40	.405	123	.205	.2065	.2035	"



NOTES
 1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED.
 2. RESISTOR WATTAGES ARE LOW UNLESS OTHERWISE SPECIFIED.
 3. CAPACITANCE VALUES ARE INDICATED IN MICROFARADS UNLESS OTHERWISE SPECIFIED.
 4. ALL CAPACITORS TEMPERATURE CHARACTERISTICS ARE 5% UNLESS OTHERWISE NOTED.