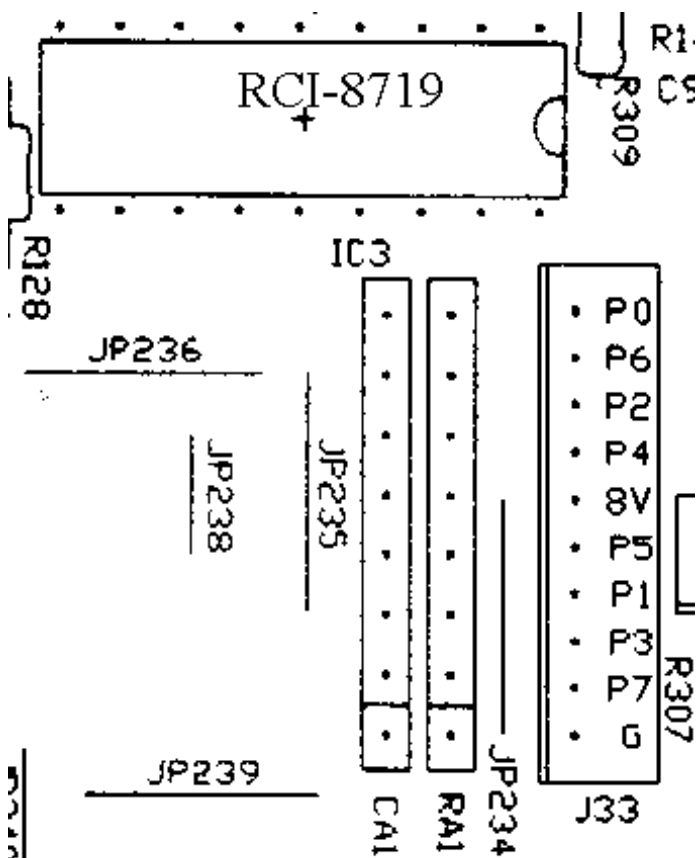


**Simple Channel modification for the following models:****Galaxy DX-949, DX-959, DX-2547****Texas Ranger TR-396, TR-396F, TR-696, TR-696F, TR-696FSSB Base, TR-399WX, TR-699WX, TR-900 Series, or most any Ranger manufactured EPT-069610Z board radio.**

1. On the Main board, just to the right and below the PLL 8719 locate J33.
2. Locate wires in in J33 marked P6 and P5. Take note of their colors.
3. Cut open these control lines and place a SPST switch in line with them.
4. The freq chart below shows what channels/frequencies you will get.
5. Some Galaxy DX-949 and DX-959 VCO will not track the entire freq range without additional modification.
6. The Texas Ranger models do not seem to have this same limitation.
  - o Additional channels and a slight variation of the coverage can be had.  
This requires the use of SPDT switches in place of the original SPST. Also it requires the attachment of the P7 control line to the switch. So that the line coming from the PLL, Main board, is switch between the original control line and P7. Best I can tell P7 is the direct opposite of P6.



Channel	P5 & P6	P6	P5	P5 & P6	divisor	p6	p5	p4	p3	p2	p1	p0
	Closed	Open	Open	Open								
1	26.965	27.605	26.965	27.605	91	1	0	1	1	0	1	1
2	26.975	27.615	26.975	27.615	92	1	0	1	1	1	0	0
3	26.985	27.625	26.985	27.625	93	1	0	1	1	1	0	1
4	27.005	27.645	27.005	27.645	95	1	0	1	1	1	1	1
5	27.015	27.655	26.695	27.335	96	1	1	0	0	0	0	0
6	27.025	27.665	26.705	27.345	97	1	1	0	0	0	0	1

7	27.035	27.675	26.715	27.355	98	1	1	0	0	0	1	0
8	27.055	27.695	26.735	27.375	100	1	1	0	0	1	0	0
9	27.065	27.705	26.745	27.385	101	1	1	0	0	1	0	1
10	27.075	27.715	26.755	27.395	102	1	1	0	0	1	1	0
11	27.085	27.725	26.765	27.405	103	1	1	0	0	1	1	1
12	27.105	27.745	26.785	27.425	105	1	1	0	1	0	0	1
13	27.115	27.755	26.795	27.435	106	1	1	0	1	0	1	0
14	27.125	27.765	26.805	27.445	107	1	1	0	1	0	1	1
15	27.135	27.775	26.815	27.455	108	1	1	0	1	1	0	0
16	27.155	27.795	26.835	27.475	110	1	1	0	1	1	1	0
17	27.165	27.805	26.845	27.485	111	1	1	0	1	1	1	1
18	27.175	27.815	26.855	27.495	112	1	1	1	0	0	0	0
19	27.185	27.825	26.865	27.505	113	1	1	1	0	0	0	1
20	27.205	27.845	26.885	27.525	115	1	1	1	0	0	1	1
21	27.215	27.855	26.895	27.535	116	1	1	1	0	1	0	0
22	27.225	27.865	26.905	27.545	117	1	1	1	0	1	0	1
23	27.255	27.895	26.935	27.575	120	1	1	1	1	0	0	0
24	27.235	27.875	26.915	27.555	118	1	1	1	0	1	1	0
25	27.245	27.885	26.925	27.565	119	1	1	1	0	1	1	1
26	27.265	27.905	26.945	27.585	121	1	1	1	1	0	0	1
27	27.275	27.915	26.955	27.595	122	1	1	1	1	0	1	0
28	27.285	27.925	26.965	27.605	123	1	1	1	1	0	1	1
29	27.295	27.935	26.975	27.615	124	1	1	1	1	1	0	0
30	27.305	27.945	26.985	27.625	125	1	1	1	1	1	0	1
31	27.315	27.955	26.995	27.635	126	1	1	1	1	1	1	0
32	27.325	27.965	27.005	27.645	127	1	1	1	1	1	1	1
33	27.335	27.335	27.335	27.335	128	0	0	0	0	0	0	0
34	27.345	27.345	27.345	27.345	129	0	0	0	0	0	0	1
35	27.355	27.355	27.355	27.355	130	0	0	0	0	0	1	0
36	27.365	27.365	27.365	27.365	131	0	0	0	0	0	1	1
37	27.375	27.375	27.375	27.375	132	0	0	0	0	1	0	0
38	27.385	27.385	27.385	27.385	133	0	0	0	0	1	0	1
39	27.395	27.395	27.395	27.395	134	0	0	0	0	1	1	0
40	27.405	27.405	27.405	27.405	135	0	0	0	0	1	1	1

Modify for High Power, about (30 ~ 35 watts PEP).

Texas Ranger TR-396, TR-396F, TR-696, TR-696F, TR-696FSSB Base, TR-399WX, TR-699WX

Galaxy DX-949 and DX-959, TR-900 Series Radios, or most any Ranger manufactured EPT-069610Z board radio.

1. Q47 One additional 2SC1969C Final with Isolation hardware.
2. A heat sink should be bolted to the rear of the chassis after the conversion.
3. D91 - 1N4148 diode.
4. C209 - 390pf 5% 50wv mica capacitor.
5. C212 - 104uf 5% 50wv ceramic capacitor

6. R242 - 22ohm 1/8 watt 5% carbon film resistor
7. R243 - 150ohm 1/2 watt 5% carbon film resistor
8. L34 - 22uh conformal coated choke
9. Q47 - 2SC1969 transistor.
10. VR11 - 100 variable potentiometer

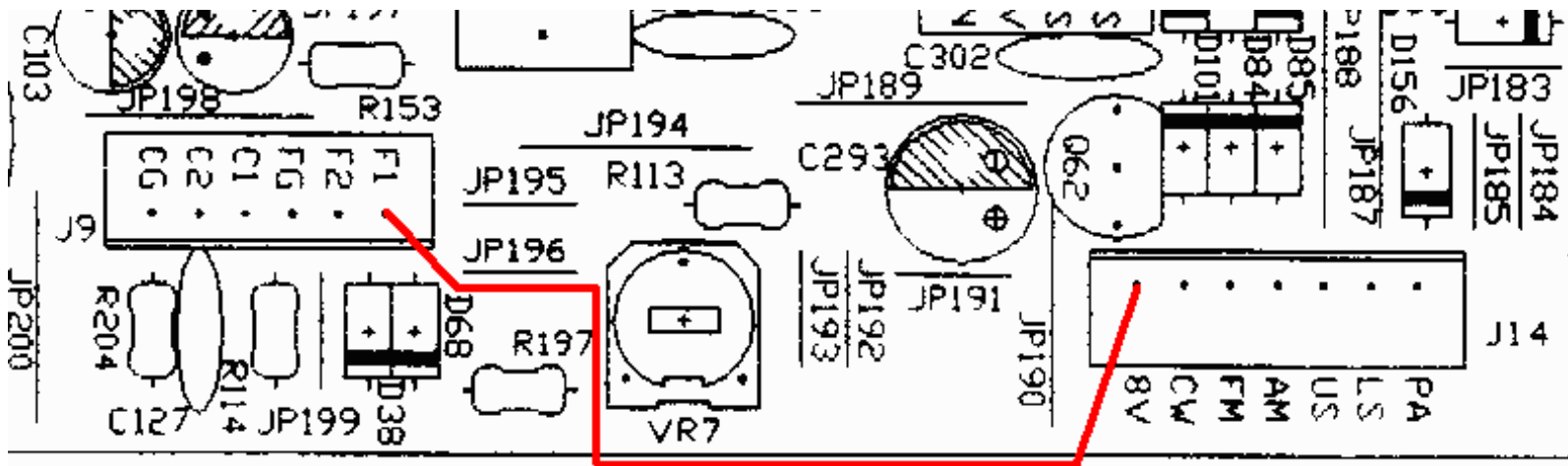
Tested this on DX-949 and it works great.

AM Modulation Limiter R-276

Mod: Simple Unlock the Fine Tune control.

Texas Ranger TR-396, TR-396F, TR-696, TR-696F, TR-696FSSB Base, TR-399WX, TR-699WX

Galaxy DX-949 and DX-959 or most any Ranger manufactured EPT-069610Z board radio.



1. Remove JP195
2. Remove JP196
3. Place wire from J14 pin +8V to J9 pin F1