VOLUME 14

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SECRET CB®

CONFIDENTIAL

FACTUAL REPORT

SCHEMATICS ETC.

UPDATED QUARTERLY

BY VIC RICHTER

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ACKNOWLEDGEMENTS

SECRET CB WISHES TO GRATEFULLY ACKNOWLEDGE THE FOLLOWING PEOPLE FOR THEIR HELP AND CONTRIBUTIONS TOWARD GETTING VOLUME 14 IN PRINT. THEIR ENCOURAGEMENT AND CONTRIBUTION OF MATERIAL HAS BEEN INVALUABLE.

SHAY DAUGHDRILL
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JOHN LEAVINS
RICH STEWART
RALPH M. TEDESCO
JAMES VAUGHAN
WILLIAM G. WENTZ, JR.
EMMETT WRIGHT

WANTED

NEW MODIFICATIONS
NEW CONVERSIONS
TECHNICAL TIPS
PROJECT PLANS
ETC. ETC. ETC.

VIC says "THANKS" and a free book to the above people

INTRODUCTION

Some exciting things are happening again in the CB industry and looks like things are picking up. We are introducing a new kit module for those "impossible LC7130/7131/TC9106P chassis." It covers 27.425 - 27.865 along with even channels on 1-40. Complete installation instructions have been included.

Many times we get inquires about WHERE to purchase products mentioned in our book. Ask your Secret CB dealer to get them for you or you can order direct from us. Call us at 1-512-992-1303 to get a copy of our latest FREE CATALOG or to order by phone. (COD or VISA/MC accepted.) We are continually looking for new products, kits conversions, etc. and have a standing offer of honorary mention and FREE BOOK to contributors of NEW, previously unpublished material. So send them in. We also solicit ideas, suggestions, & comments on how to improve/expand Secret CB. Only by your feedback can we be responsive to your needs. We want to thank all the contributors to date, a few which are regular contributors. We appreciate your help in assembling this information which would otherwise be an impossible task.

Till Next Time.

Best Regards,

Vic Richter

Vic Richter
STX 105

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GOLDEN EAGLE MARK IV A 26.285MHZ - 28.035MHZ

Transmitter Modification

First obtain the following parts;

2-DPDT Center-off Miniature Toggle Switches
2-SPST Miniature Toggle Switches
3'-22 guage Stranded hook-up wire, any color

1. Remove the covers from the transmitter unit. Locate the 9 wires which are labelled 2,4,8,16,32,64,128,256, and L. Also, notice the stub of wire sticking up between the wires labelled L and 256.
2. Remove the wire labelled 32 and solder a length of wire from each hole to where you want the first SPST Switch. See Fig.1.
3. Solder one end of a wire to the wire labelled 64. Solder the other end to a DPDT Center-off Switch as shown in Fig.1.
4. Remove the wire labelled 16 and solder a length of wire from each hole to where you want to mount the other DPDT Center-off Switch. Wire as shown in figure 1.
5. Remove the wire labelled 128 and solder 3 wires in its place- one from one hole (A) and two from the other hole.(B) See Fig.2.
6. Solder these three wires, two of which go to the #2 DPDT Center-off Switch and the other to the #4 SPST Switch as shown in Fig.1. Add jumpers as illustrated.
7. Solder a wire onto the stub sticking up between the wires labelled L and 256. Solder the other end to the #4 SPST Switch as shown in Figure 1.

* You will need to adjust L701,L702, and L705 for full coverage.

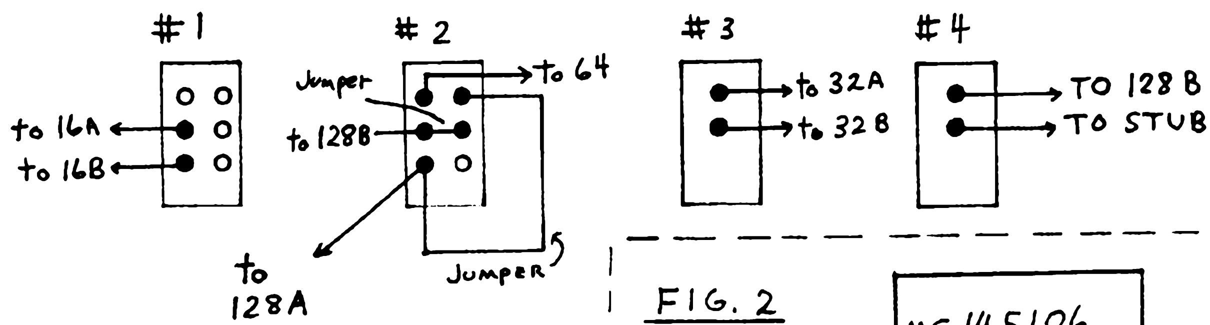
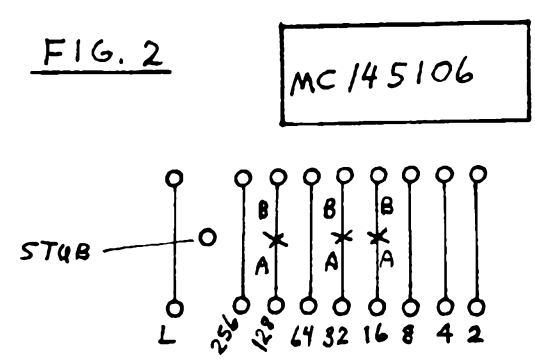


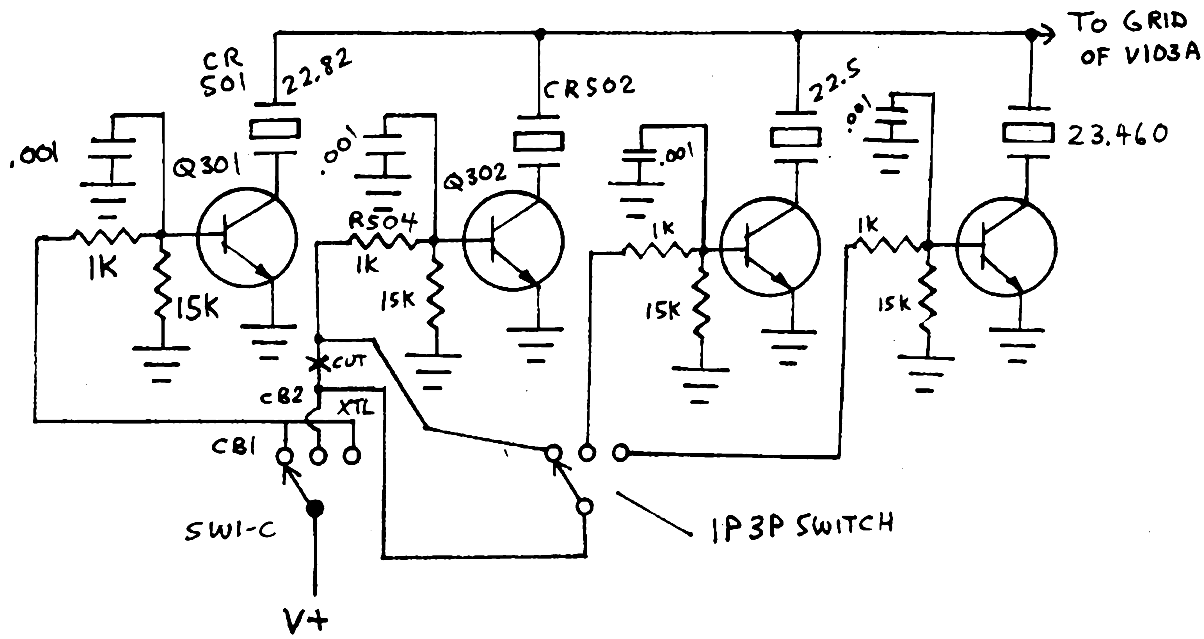
FIG. 1



GOLDEN EAGLE MARK IV (CON'T)

The receiver already has the capacity to function up to 27.605. A 22.500 MHz. crystal will give coverage from 26.575 - 26.915. To receive above 27.605, a 23.460 MHz. crystal is necessary which gives coverage up to 27.925 MHz. To add the extra crystals, the following modification to the receiver will have to be made.

1. Unsolder the wire from CB2 to R504 on SW1-C. (CB1,CB2,XTL Switch)
2. Install a 1 Pole 3 position switch in a convenient place near SW1.
3. Run a wire from CB2 to the common of the new switch.
4. Run a wire from the wire unsoldered in Step 1 to position 1.



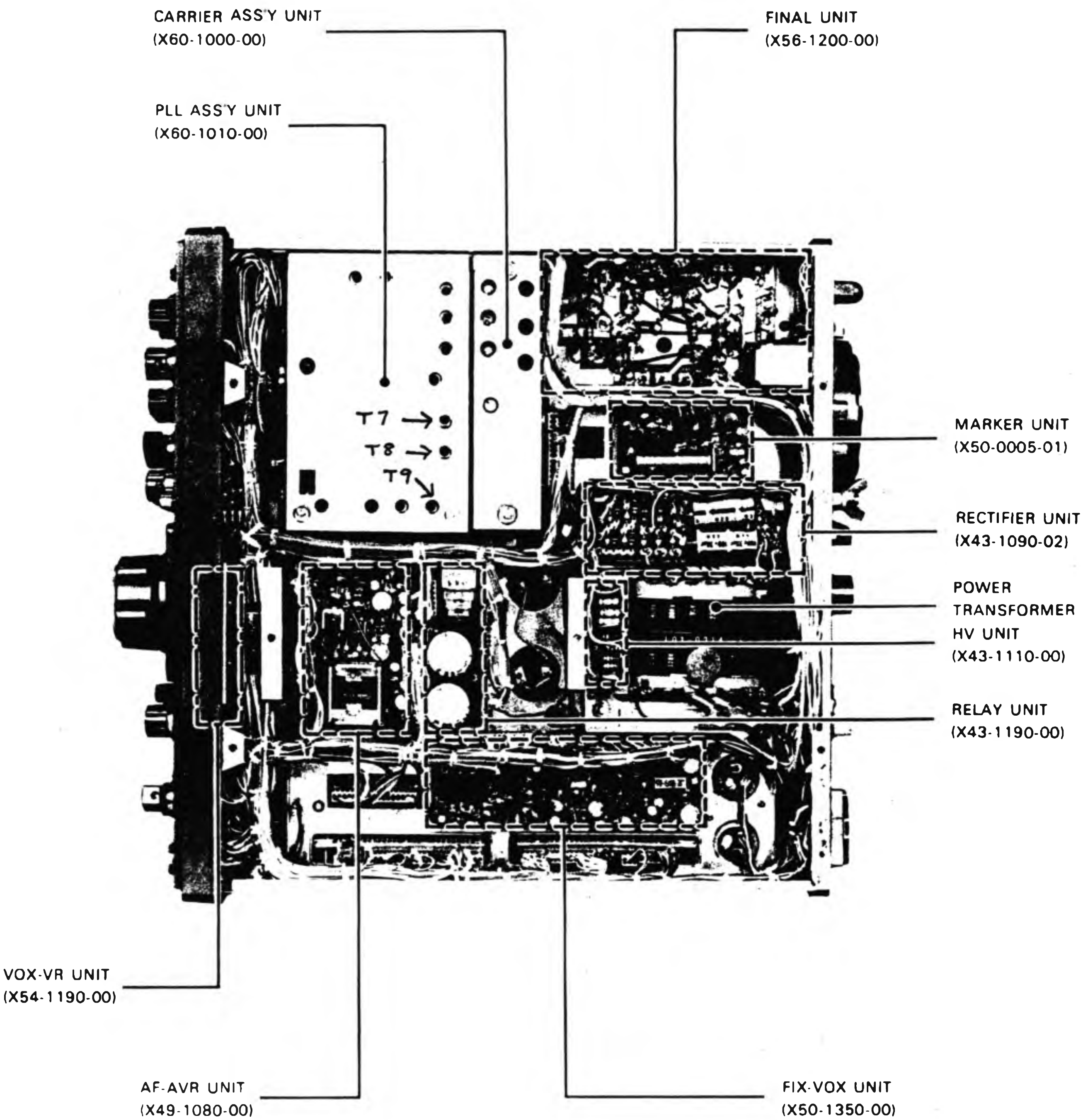
5. Duplicate the Q301/Q302 circuits by building two new transistor crystal switches on a piece of perforated board as shown. Parts needed for each one are: .001 ufd disc capacitor; 1K ¼w resistor; 15K ¼w resistor; 2N2222 or 2N3904 transistor, crystal.
6. Wire to the switch as shown.
7. Connect other ends of new crystals to CR501/CR502 junction which goes to the grid of V103A.

* Reference: Vol.7. Now you are in business!

11 Meter Modification

Crystals needed: 33.000,32.500,32.000 (one each)

Remove bottom cover. Set radio up on its side with front of radio to your left. You will see a box in the top left corner. This is the PLL assembly, (X60-1010-00) and must be removed for access.



To do so, remove two screws at top and bottom. Pull box out and over. Next unplug wires from box. (Watch your work carefully because you will have to put this all back together!) Turn box over and take the bottom off. You will see the PDX 50-1340.00 board and the crystals you will need to replace. Remove the 5 screws that hold down the board to the box. Take a plastic screw driver and pry from the front the board up off the plug. It has 2 plugs in it. Pry a little on each one so it will come up evenly. Now you are ready to replace the crystals. Remove X7 33.500 and install the 33.000 in its place. This will give frequencies 27.5 to 28.0MHz. Next remove X8 34.000 crystal and install the 32.500 in its place. This will give frequencies 27.0-27.5.

Finally, remove X9 34.500 crystal and install the 32.000 in its place. This will give frequencies 26.5 to 27.0MHz. Recheck your work and make sure there are no solder bridges. Do not overheat board or crystal. Now you are ready to re-assembly. Be sure you get all the plugs back in their proper place. You should now be ready to hook it up and do three simple adjustments. First, adjust T7 with band switch on 28.0. It may work without any adjustment. If not turn it CCW 1/16 of a revolution. Put band switch to 28.5. This will activate the new X8 crystal for 27-27.5. It will probably work in the high side and drop out on low side. Adjust T8 CCW 1/16 of a revolution at a time with the VFO on low side until the readout stabilizes on 27.000 MHz. Now go to 29.0. The display will be blank. Thats OK. Just adjust T9 CCW about 1½ turns or until frequency display lights up. Adjust a little at a time until you read 26.500 with VFO on Zero low side. Now you are ready to put the bottom back on. Fire up and E-N-J-O-Y.

LAFAYETTE SSB-75

1. Locate the <u>Green</u> wire on the FINE TUNE control. Cut at board end and resolder to ground.

2. Locate and cut the <u>Brown</u> wire on the FINE TUNE tap. It is no longer needed.

3. D205 may be replaced with a Super Diode or a choke can be added in series with the anode.

NOTE: Each XTAL has a fixed capacitor and a variable capacitor in parallel. The values can be altered to get more slide but you will loose centering and they may not line up with each other.

For additional channels, a XTAL Switch Box can be installed in position X205 or a new XTAL substituted for one of the crystals. However, you will loose the original 4 channels. Each XTAL will yield 4 channels.

<u>TX Alignment</u>:

RV3; RF Panel Meter
RV7; AM Mod.

For maximum modulation, remove Q206.

RV8; SSB Mod.
RV5; SSB ALC.

AM:

Peak L202, L203, L204, L2, L3, L4, L5, L6, L7.
Output Power: RV304
TVI; L301

SSB:

Carrier Balance: RV4, TC2, L9

SSB Exciter: L12, L13, L14, L15, L16, L17.

Bias Final: RV2 Adjust bias for .6V
Bias Driver: RV1 Adjust bias for .6V

<u>RX Alignment</u>:

RV10; AGC.
RV6; Squelch Range
RV9; S Meter S9 = 100uV.
Peak L18, L19, L20, L10, L11.

MIDLAND 78-574 (02A)

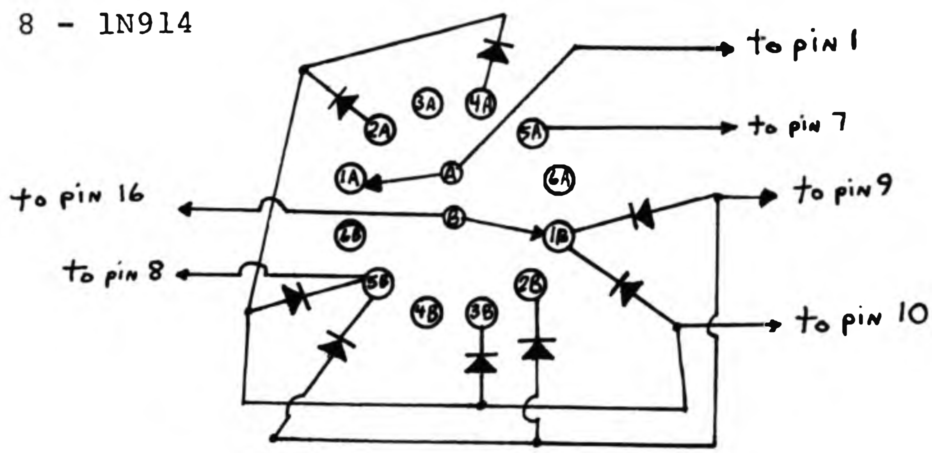
Clarifier

1. Clip D205.
2. Clip R221.
3. Run a wire from the unused terminals of the clarifier pot to the emitter of Q216.
4. Remove D204 and replace with a piece of wire.

Frequency Expansion

1. Isolate pin 7 of IC203 (PLL02AG) from ground by cutting the pc trace.
2. Solder a 1K resistor across the cut.
3. Isolate pin 8 and solder a 1K resistor across the cut.
4. Isolate pin 9 and solder a 1K resistor across the cut.
5. Isolate pin 10 and solder a 1K resistor across the cut.

Assemble 8 diodes onto a 2 pole 6 position switch as shown:



Adjust VCO for full frequency coverage.

Transmitter Alignment:

Adjust T204,T205,T3,T209,L209,L212,L214 for maximum RF output on USB.

RV1, RV2	Carrier Balance
RV206	XMTR Final Bias-Adjust for .7 volt.
RV3	SSB Mod. Gain
RV201	SSB RF ALC
RV9	AM Modulation Control
RV202	RF Power Meter
VR1	AM Power

MB8719/11.1125 CHASSIS UPDATE

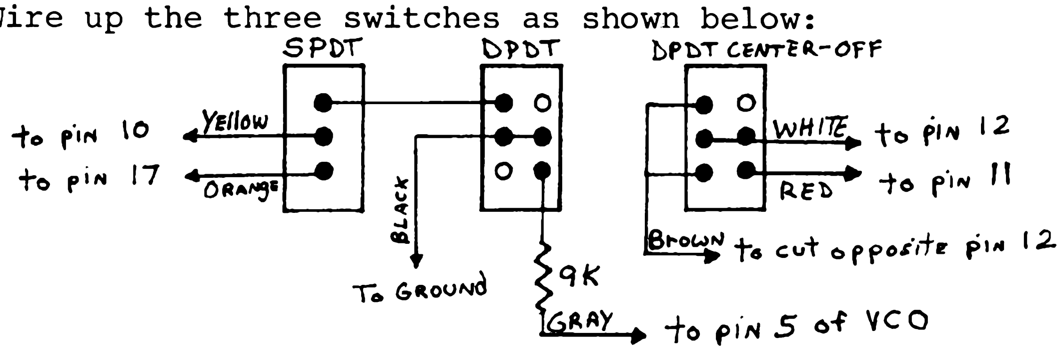
Frequency Range: 26.175 - 28.085 MHZ.

Prototype Set: President Washington

Parts Required: 1 SPDT Switch
1 DPDT Switch
1 DPDT Center Off Switch
1 9K ¼ W. Resistor
12" 7 Conductor Ribbon Wire (Yellow-Orange-Red-Brown-Black-White-Gray)

NOTE: This modification will work on sets using 8719/11.3258 also. However, to get the frequency range described above, the 11.3258 crystal will have to be substituted with the 11.1125 called for above. Also, on sets using the MB8734 chip, it will have to be replaced with the MB8719 chip.

1. Wire up the three switches as shown below:



2. Isolate pin 10 of the MB8719 chip. Solder Yellow wire to pin 10.
3. Make a cut on the trace of pin 12 between chip and channel selector. Solder the White wire to pin 12 and the Brown wire to other side of cut trace.
4. Solder the Orange wire to pin 17 of the MB8719 chip.
5. Solder the Red wire to pin 11 of the MB8719 chip.
6. Solder the Black wire to ground (pin 18 of MB8719 chip).
7. Solder the Gray wire to pin 5 of the VCO chip (IC1). L18, Tripler adjustment, is critical and must be carefully aligned. L13 and L14 (VCO) will have to be realigned also.

Synthesizer Alignment:

A. Toggle the first switch so that pins 10 and 17 are connected together, Adjust L18 to give upper channels. Tune L13 & L14 so set will key up.
B. Toggle the first switch so pin 10 is now grounded. This gives 26.325-26.765. VCO is not strong enough at low frequency so a 9K resistor has been added to pin 5 of VCO-slight alignment of VCO may be necessary.

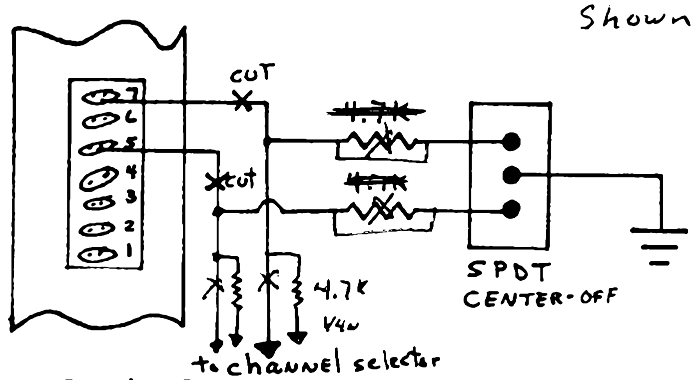
C. The Center-Off switch will give 27.415-27.445 in the center. Frequencies of 26.815-26.965, 28.005-28.085, and 26.775-26.805 are obtaindd by using different combinations of the other two switches.
D. Using the DPDT and Center-Off combinations gives 26.175-26.325.
E. Using the SPDT switch only gives 27.605-28.045.
F. Using the DPDT alone gives 26.325-26.765.
G. Using the SPDT and Center-Off gives 27.455-27.605.

See specific models for Clarifier/Tune Up procedure previously published.

CRAIG L321

1. Remove wires from terminals 5 and 7.
2. Add a 4.7k resistor in series with each wire.
3. Solder other ends of the resistors to the outside terminals of a SPDT Center-Off switch as shown.
4. Solder a wire from the middle terminal on the switch to ground. This yields channels 41-47 on 33-39 and 48-72 in other position. Center is normal.

Do Not cut The traces as shown



CLARIFIER- Real Simple

1. Remove Gray and Green wires next to relay and solder together.
2. Cut Blue wire next to relay and resolder to ground.
3. Adjust L5 for desired slide range.

PRESIDENT GRANT "HOME CHANNEL CONVERSION"

Alot of people use a particular channel as a "home channel." Here is a conversion on how to turn the "Ch.9" switch into a custom programmed frequency selector.

First, decide what you want your home channel to be. Now, circle that channel on the Truth Table in red ink. Lets look at an example.

Suppose we want our home channel to be 27.845. The truth chart is; 11,14,15,16,high; 10,12,13,Low. To deactivate the Ch.9 function, we will unsolder and lift the anodes of diodes D28, D29, D30. Reconnect as follows.

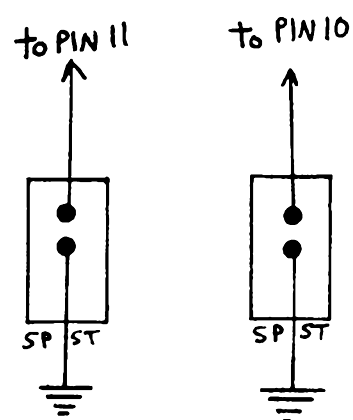
D28 anode to pin 10.

D29 anode to pin 12.

D30 anode to pin 13.

Since pins 11,14,15,16 have to be high, we need not do anything to those pins as they have internal pull up resistors on them so they are normally high. However, the traces on pins 12 & 13 must be cut between the chip & channel selector and 1N914 diodes added as shown in FIG.1.

NOTE: You may have to modify the way you install extra channels. For example, if you used two switches like this;



You will have to rewire and add 1N914 diodes like this:

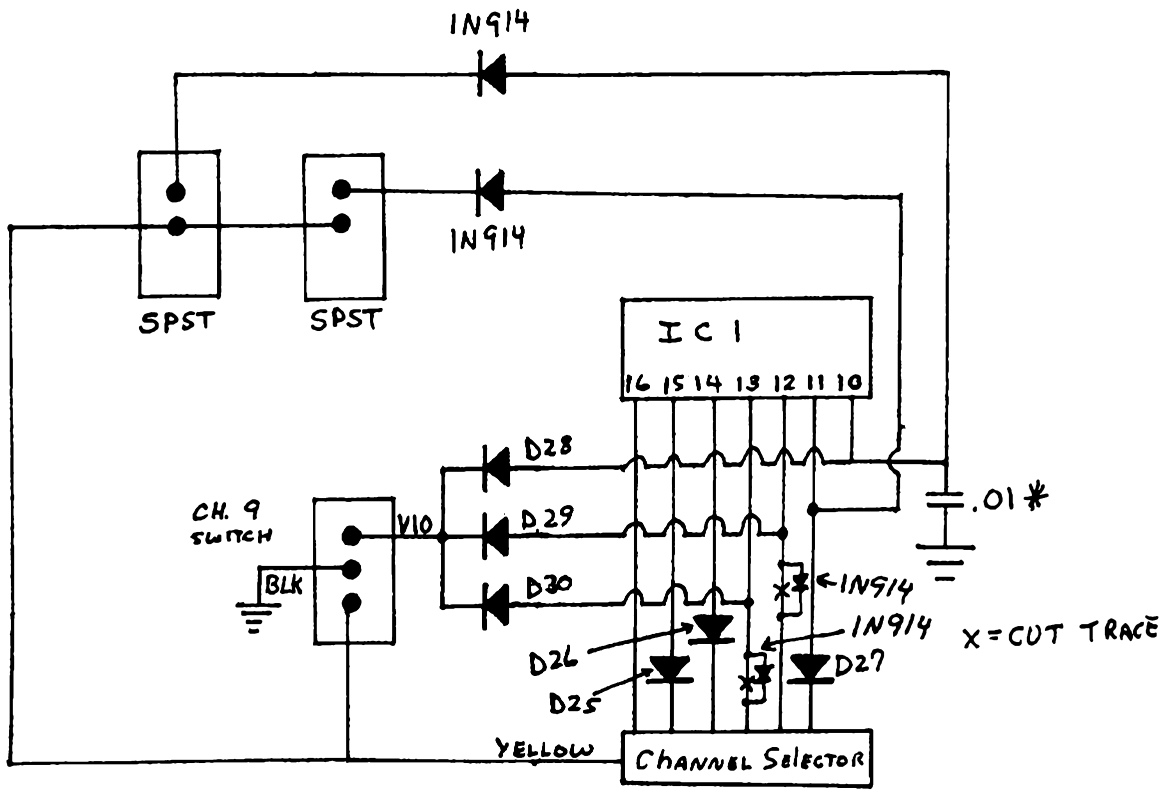


FIGURE 1

*Add .01/50v disc cap from pin 10 to ground.

You can program in any channel between 26.815-28.085.
What are you waiting for?

8719/11,3258 TRUTH TABLE

Weight Pin #	64 10	32 11	16 12	8 13	4 14	2 15	1 16	N
26.815	1	0	0	0	0	0	0	64
26.825	1	0	0	0	0	0	1	65
26.835	1	0	0	0	0	1	0	66
26.845	1	0	0	0	0	1	1	67
26.855	1	0	0	0	1	0	0	68
26.865	1	0	0	0	1	0	1	69
26.875	1	0	0	0	1	1	0	70
26.885	1	0	0	0	1	1	1	71
26.895	1	0	0	1	0	0	0	72
26.905	1	0	0	1	0	0	1	73
26.915	1	0	0	1	0	1	0	74
26.925	1	0	0	1	0	1	1	75
26.935	1	0	0	1	1	0	0	76
26.945	1	0	0	1	1	0	1	77
26.955	1	0	0	1	1	1	0	78
26.965	1	0	0	1	1	1	1	79
26.975	1	0	1	0	0	0	0	80
26.985	1	0	1	0	0	0	1	81
26.995	1	0	1	0	0	1	0	82
27.005	1	0	1	0	0	1	1	83
27.015	1	0	1	0	1	0	0	84
27.025	1	0	1	0	1	0	1	85
27.035	1	0	1	0	1	1	0	86
27.045	1	0	1	0	1	1	1	87
27.055	1	0	1	1	0	0	0	88
27.065	1	0	1	1	0	0	1	89
27.075	1	0	1	1	0	1	0	90
27.085	1	0	1	1	0	1	1	91
27.095	1	0	1	1	1	0	0	92
27.105	1	0	1	1	1	0	1	93
27.115	1	0	1	1	1	1	0	94
27.125	1	0	1	1	1	1	1	95
27.135	1	1	0	0	0	0	0	96
27.145	1	1	0	0	0	0	1	97
27.155	1	1	0	0	0	1	0	98
27.165	1	1	0	0	0	1	1	99
27.175	1	1	0	0	1	0	0	100
27.185	1	1	0	0	1	0	1	101
27.195	1	1	0	0	1	1	0	102
27.205	1	1	0	0	1	1	1	103
27.215	1	1	0	1	0	0	0	104
27.225	1	1	0	1	0	0	1	105
27.235	1	1	0	1	0	1	0	106
27.245	1	1	0	1	0	1	1	107
27.255	1	1	0	1	1	0	0	108

TRUTH TABLE (CONT)

Weight	64	32	16	8	4	2	1	
Pin #	10	11	12	13	14	15	16	N
27.265	1	1	0	1	1	0	1	109
27.275	1	1	0	1	1	1	0	110
27.285	1	1	0	1	1	1	1	111
27.295	1	1	1	0	0	0	0	112
27.305	1	1	1	0	0	0	1	113
27.315	1	1	1	0	0	1	0	114
27.325	1	1	1	0	0	1	1	115
27.335	1	1	1	0	1	0	0	116
27.345	1	1	1	0	1	0	1	117
27.355	1	1	1	0	1	1	0	118
27.365	1	1	1	0	1	1	1	119
27.375	1	1	1	1	0	0	0	120
27.385	1	1	1	1	0	0	1	121
27.395	1	1	1	1	0	1	0	122
27.405	1	1	1	1	0	1	1	123
27.415	1	1	1	1	1	0	0	124
27.425	1	1	1	1	1	0	1	125
27.435	1	1	1	1	1	1	0	126
27.445	1	1	1	1	1	1	1	127
27.455	0	0	0	0	0	0	0	0
27.465	0	0	0	0	0	0	1	1
27.475	0	0	0	0	0	1	0	2
27.485	0	0	0	0	0	1	1	3
27.495	0	0	0	0	1	0	0	4
27.505	0	0	0	0	1	0	1	5
27.515	0	0	0	0	1	1	0	6
27.525	0	0	0	0	1	1	1	7
27.535	0	0	0	1	0	0	0	8
27.545	0	0	0	1	0	0	1	9
27.555	0	0	0	1	0	1	0	10
27.565	0	0	0	1	0	1	1	11
27.575	0	0	0	1	1	0	0	12
27.585	0	0	0	1	1	0	1	13
27.595	0	0	0	1	1	1	0	14
27.605	0	0	0	1	1	1	1	15
27.615	0	0	1	0	0	0	0	16
27.625	0	0	1	0	0	0	1	17
27.635	0	0	1	0	0	1	0	18
27.645	0	0	1	0	0	1	1	19
27.655	0	0	1	0	1	0	0	20
27.665	0	0	1	0	1	0	1	21
27.675	0	0	1	0	1	1	0	22
27.685	0	0	1	0	1	1	1	23
27.695	0	0	1	1	0	0	0	24
27.705	0	0	1	1	0	0	1	25

TRUTH TABLE (CONT)

Weight	64	32	16	8	4	2	1	
Pin #	10	11	12	13	14	15	16	N
27.715	0	0	1	1	0	1	0	26
27.725	0	0	1	1	0	1	1	27
27.735	0	0	1	1	1	0	0	28
27.745	0	0	1	1	1	0	1	29
27.755	0	0	1	1	1	1	0	30
27.765	0	0	1	1	1	1	1	31
27.775	0	1	0	0	0	0	0	32
27.785	0	1	0	0	0	0	1	33
27.795	0	1	0	0	0	1	0	34
27.805	0	1	0	0	0	1	1	35
27.815	0	1	0	0	1	0	0	36
27.825	0	1	0	0	1	0	1	37
27.835	0	1	0	0	1	1	0	38
27.845	0	1	0	0	1	1	1	39
27.855	0	1	0	1	0	0	0	40
27.865	0	1	0	1	0	0	1	41
27.875	0	1	0	1	0	1	0	42
27.885	0	1	0	1	0	1	1	43
27.895	0	1	0	1	1	0	0	44
27.905	0	1	0	1	1	0	1	45
27.915	0	1	0	1	1	1	0	46
27.925	0	1	0	1	1	1	1	47
27.935	0	1	1	0	0	0	0	48
27.945	0	1	1	0	0	0	1	49
27.955	0	1	1	0	0	1	0	50
27.965	0	1	1	0	0	1	1	51
27.975	0	1	1	0	1	0	0	52
27.985	0	1	1	0	1	0	1	53
27.995	0	1	1	0	1	1	0	54
28.005	0	1	1	0	1	1	1	55
28.015	0	1	1	1	0	0	0	56
28.025	0	1	1	1	0	0	1	57
28.035	0	1	1	1	0	1	0	58
28.045	0	1	1	1	0	1	1	59
28.055	0	1	1	1	1	0	0	60
28.065	0	1	1	1	1	0	1	61
28.075	0	1	1	1	1	1	0	62
28.085	0	1	1	1	1	1	1	63

NEW PRODUCT RELEASE

FM - 30 B THRU-LINE FREQUENCY COUNTER

FEATURES:

- 500 Watts P.E.P. Max. RF Input.
- Two SO 239 connectors for transmitter thru-line input. Limits noise interference and readout instability.
- Bright red light emitting diodes for display.
- Resolution switch allows accurate tuning to 100 Hz.
- Floating decimal, eliminates guesswork.
- Instantaneous display update when changing frequencys.
- Stable crystal oscillator circuit.
- Low power consumption and reverse polarity protection.
- Positive or Negative ground operation.
- Reliable C-Mos. L.S.I. (Large scale integeration) with proven performance.
- Black textured chassis with blackout front panel.
- Compact lightweight, designed for vehicle and base station use.*
- One year warranty parts and labor.
- 48 Hour Factory burn in assures reliability.

**Optional AC power pack Model #P.S. 110*

SPECIFICATIONS:

Frequency range .... 1 MHz to 40 MHz.

Input impedance .... 50 ohms

Input sensitivity ....less than 1 watt

Max input power .... 500 watts P.E.P.

Frequency stability .... ± 10 P.P.M. 10° - 40°c

Accuracy ....±10 P.P.M. ± 1 count (L.S.D.**)

Frequency resolution .... 1 KHz., 100 Hz.

Gating speed .... .012 sec. 1 KHz., .12 sec. 100 Hz.

Power consumption ....290 ma. @ 12 V.D.C.

Input voltage .... 10 V. to 16V.D.C.

Display .... Five digit 1/2" high seven segment light emitting diodes.

***(L.S.D.) Least significant digit*

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Order yours today from your favorite "Secret CB" Distributor, Dealer, or order direct from your "Secret CB" Catalog - Item #111 & 111A.

FM - 30 B THRU-LINE FREQUENCY COUNTER

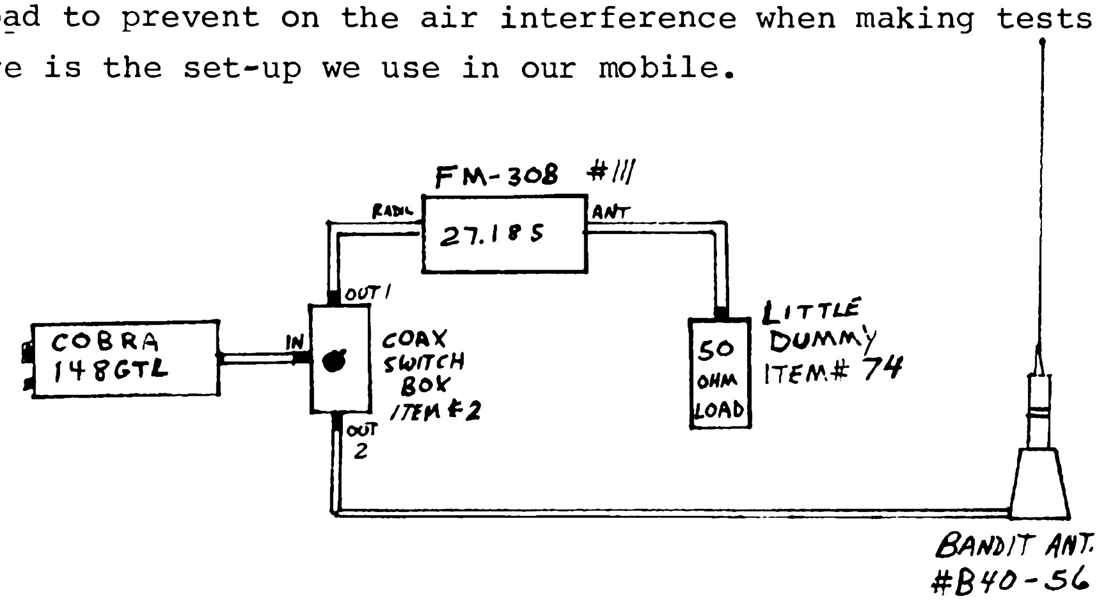
NEW!

We have just received the new DIGALOG FM-30B thru-line frequency counter and it looks like the folks at D.T.I. have done it again. The unit is small in size (same as DS 400) but big in performance. It features a bright red half inch high 5 digit LED READOUT with switch-able 1 KHz/ 100 Hz. resolution. Using the optional AC Adapter, it can be used on your base station as well as your mobile.

The S0239's on the back provide for quick and easy hookup using standard PL259 connectors. Simply unscrew the antenna coax from your CB and reconnect to the ANT connector on the FM-30B. Then run a coax jumper from your CB antenna connector to the RADIO connector on the counter. Hook up the RED power lead to 10-16v.D.C. and ground the black wire and you are in business. Since this unit is only about 1½ inches thick, 5" wide and 5" deep it will fit almost anywhere your fancy dictates. No longer will you have to fumble with charts or cramped dials to find out what frequency you are on (and if you are in fact on frequency!) I wouldn't be suprised if you get spoiled and have to have one for every transceiver!

With a dead key, the FM-30B will show your carrier frequency. When you modulate the carrier, the frequency should show fluctuating random numbers. This can be used as an indication that your mike is working. On sideband, frequency can be measured by using a 1KC Tone or whistling a stable tone into the mike. D.T.I. suggest using a dummy load to prevent on the air interference when making tests.

Here is the set-up we use in our mobile.



NEW PRODUCT RELEASE

NEW! "KIT A" NOW AVAILABLE FOR 19X, AX711, ETC.

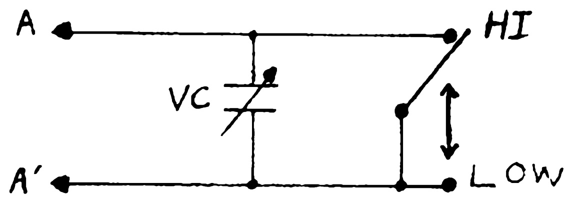
A major breakthrough in engineering has resulted in the introduction of a new up-kit for previously unmodifiable sets. Specifically, the LC7130/7131 and TC9106P PLL Chips. The following pages describe specific installations on various models of popular units. You will find the procedure to be straight forward and accurate. The new kit will yield channels 27.425-27.865 and also half channels (even) on 1-40 in addition to, of course, the standard forty. It has inherant skips on channels 45, 50, 55, 60, and 65.

This kit is the result of months of "determination" and "experimentation" and shows the "Old American Know How" is still alive and well. Of course, this kit is for expanding the receiver only and no responsibility is assumed for any other use which could exceed FCC Rules and Regulations.

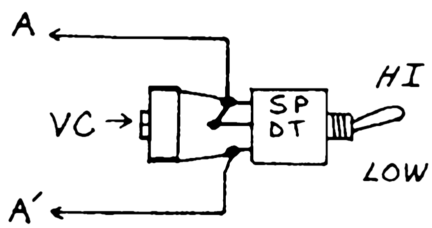
The kit consists of a 3-lead epoxy pak with yellow, red, and unmarked terminals; a 5KC drop switch with trimmer cap, and a Normal-High selector switch. The two toggle switches can be mounted in any convenient location, usually in the lid or side of the chassis. Also included are a 4700 ohm resistor and a 47 pf capacitor for use in some installations. Now we are ready to proceed with the specifics. (Kit can be obtained from your local CB Dealer or order direct from Secret CB, catalog #136.)

HOW TO MAKE UP THE SPDT SWITCH

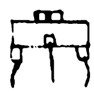
Kits may come with a two post or a three post trimmer capacitor. Electronically, they will connect like this:



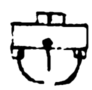
and Physically like this:



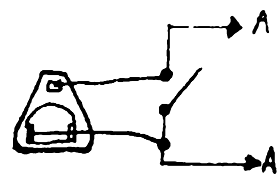
On the three leg trimmer capacitors, turn the bottom legs inward from this



to this.



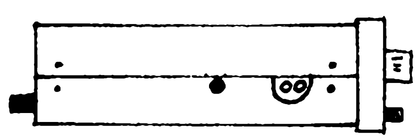
Bottom View



Most mobile CB's are mounted with the component side of the board down. Take this in account when mounting your switches.

PREPARING THE UNIT FOR THE KIT

Use a hole saw or chassis punch 1" in size and cut the component side cover as illustrated, at a point where switches can be accomodated without interfering with alignment, etc.



Use the two lock washers for proper spacing and as a guide for drilling and in mounting the switches.

CAUTION: When mounting the switches, do not apply pressure on the body part of the switch. Use the locking washers and apply torque on the nuts only. Failure to follow this advice could result in a broken switch.

5KC OFFSET

FIG.1.

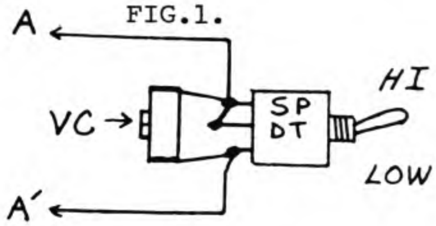
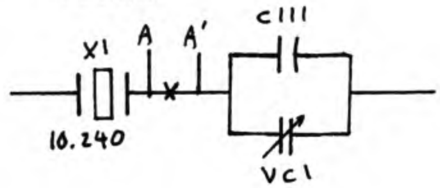


FIG.2.

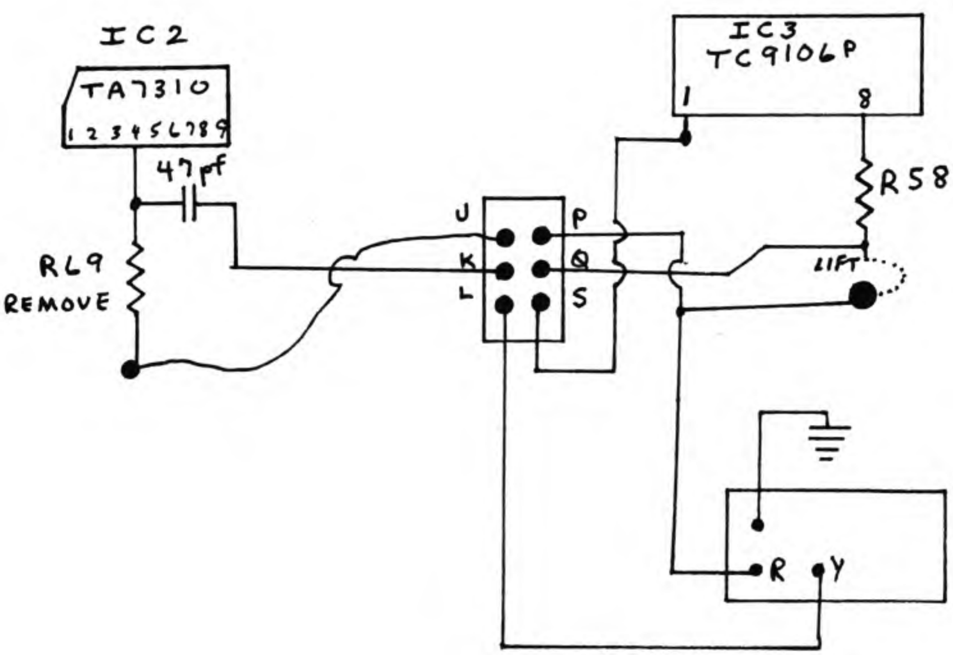


1. Wire up the SPDT switch and the trimmer capacitor (supplied) as shown in Fig.1.
2. Cut the trace between the 10.240MHz. crystal and VC1/C111. Solder the wires from the switch to each side of the cut trace as shown in Fig.2.
3. With switch in low position, adjust VC for 27.410 MHz on Ch. 40.
4. Switch to high position and check for 27.405. If necessary, adjust VC1 or change C111 to obtain this reading.

CHANNEL CONVERSION

1. Unsolder and lift the end of R58 opposite pin 8 of IC3.
2. Run a wire from terminal Q of the DPDT switch to the lifted end of R58.
3. Run a wire from terminal P to where R58 was connected. Also run a wire from P to the red dot post of the epoxy pak. ALSO Run wire from L to Yel Dot on Epoxy Pak
4. Run a wire from terminal S to pin 1 of the PLL chip.
5. Unsolder and remove R69 (off pin 4 of IC2).
6. Solder one end of the 47pf capacitor supplied to pin 4.
7. Connect the other leg of the 47pf capacitor to terminal K of the switch.
8. Run a wire from terminal J to where R69 was connected opposite pin 4.
9. Run a wire from the unmarked post of the epoxy pak to ground.

Now this unit will operate on Channels 42-86, 1-40 and on half channels 1A-40A.



MIDLAND 151M, 102M, 100M,2001,3001,4001

GE 3-5805 B; COLT 210,222; COBRA 19X

5KC OFFSET

FIG.1.

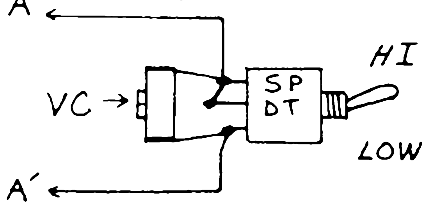
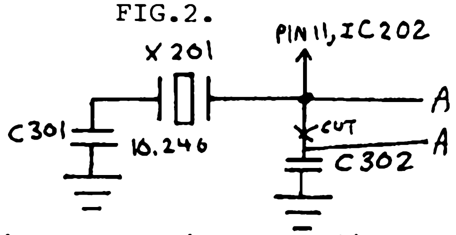


FIG.2.

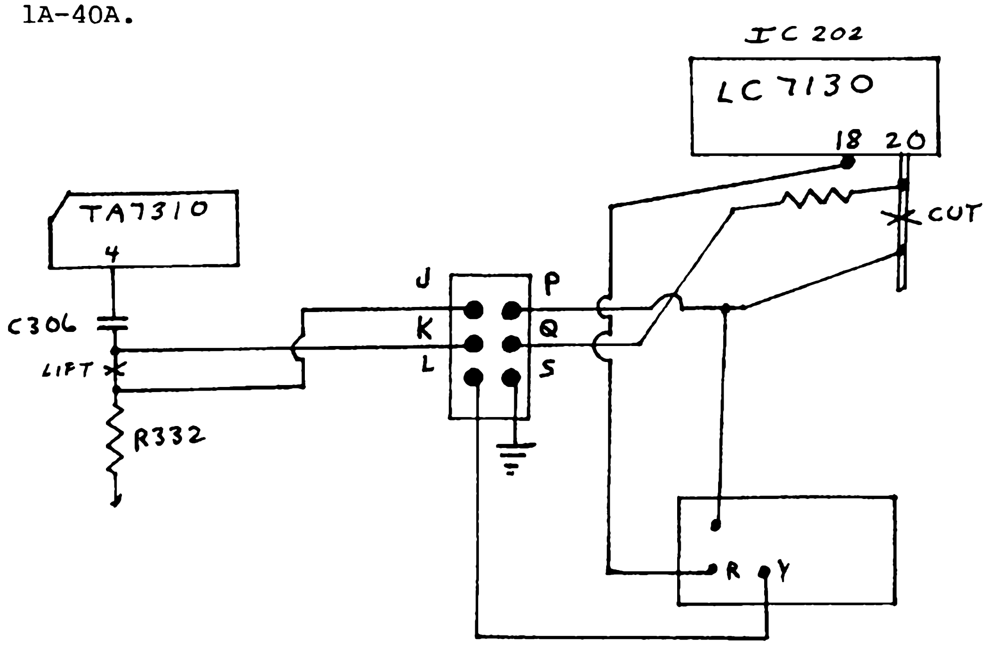


1. Wire up the SPDT switch and the trimmer capacitor supplied as shown Fig.1.
2. Cut foil at leg of 10.240 as shown. Solder wires from the switch to each side of the cut trace.
3. With switch in low position, adjust VC for 27.410 on Ch.40.
4. Check for 27.405 on high position. If necessary, alter value of C302/ C351 to obtain this reading.

CHANNEL CONVERSION

1. Isolate pin 20 of IC202, LC7130 by cutting foil trace.
2. Solder one leg of the 4700ohm resistor supplied to pin 20.
3. Run a wire from the other leg of the resistor to terminal Q of DPDT switch provided.
4. Run a wire from terminal P on the switch to the other side of the trace and to the unmarked terminal of the epoxy pak.
5. Connect the S terminal on the switch to ground.
6. Locate pin 4 of the TA7310/AN103 VCO/Mixer chip. Unsolder the leg of C306 opposite pin 4 , and lift.
7. Solder a wire from terminal K on the switch to the lifted leg of C306.
8. Solder a wire from terminal J on the switch to where C306 was connected.
9. Run a wire from the yellow dot post of the epoxy pak to terminal L of the switch.
10. Connect the red dot post to pin 18 of IC202.

Now this unit will operate on Channels 42-86,1-40 and on half channels 1A-40A.



5KC OFFSET

FIG. 1.

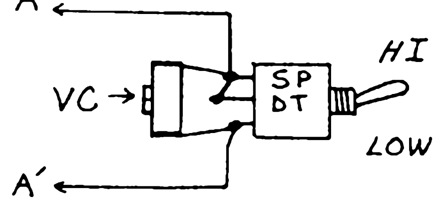
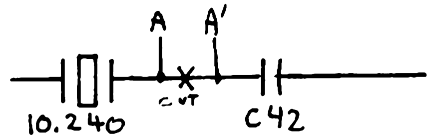


FIG.2.

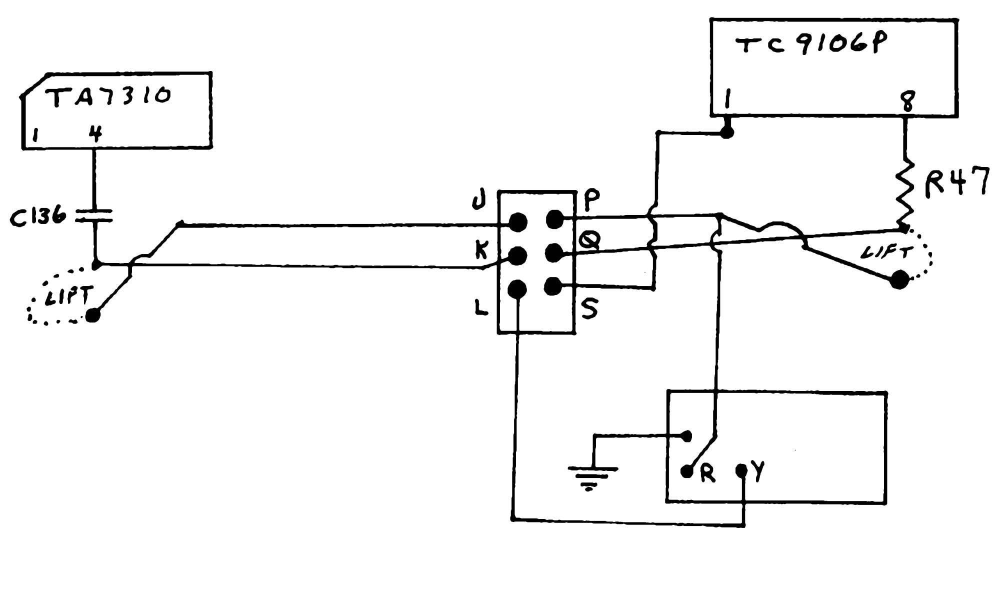


1. Wire up the SPDT switch and trim capacitor (supplied) as shown in Fig. 1.
2. Cut the foil trace between the 10.240 crystal and C42 and wire as shown in Fig. 2.
3. With switch in low position adjust VC for transmit freq. of 27.410 on Ch. 40.
4. Switch to high position and check for 27.405. If necessary, alter the value of C42 to compensate.

CHANNEL CONVERSION

1. Locate, unsolder, and lift the leg of R47 opposite pin 8 of the TC9106 PLL chip.
2. Run a wire from the lifted leg of R47 to terminal Q on the DPDT switch provided.
3. Run a wire from terminal P on the switch to where R47 was connected. Also run a wire from terminal P to the red dot post of the epoxy pak.
4. Run a wire from terminal S on the switch to pin 1 of the PLL chip.
5. Locate, unsolder, and lift the leg of C136 opposite pin 4 of the TA7310P VCO/Mixer chip.
6. Run a wire from the lifted leg of C136 to terminal K on the switch.
7. Run a wire from terminal J to where the other leg of C136 was connected.
8. Run a wire from terminal L to the yellow dot post of the epoxy pak.
9. Run a wire from the unmarked post of the epoxy pak to ground.

Now this unit will operate on Channels 42-86,1-40 and on half channels 1A-40A.



5KC OFFSET

FIG.1.

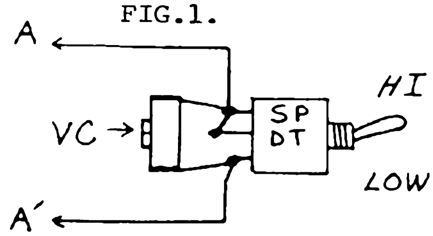
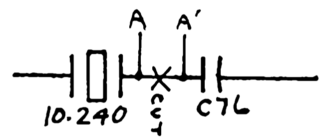


FIG.2.

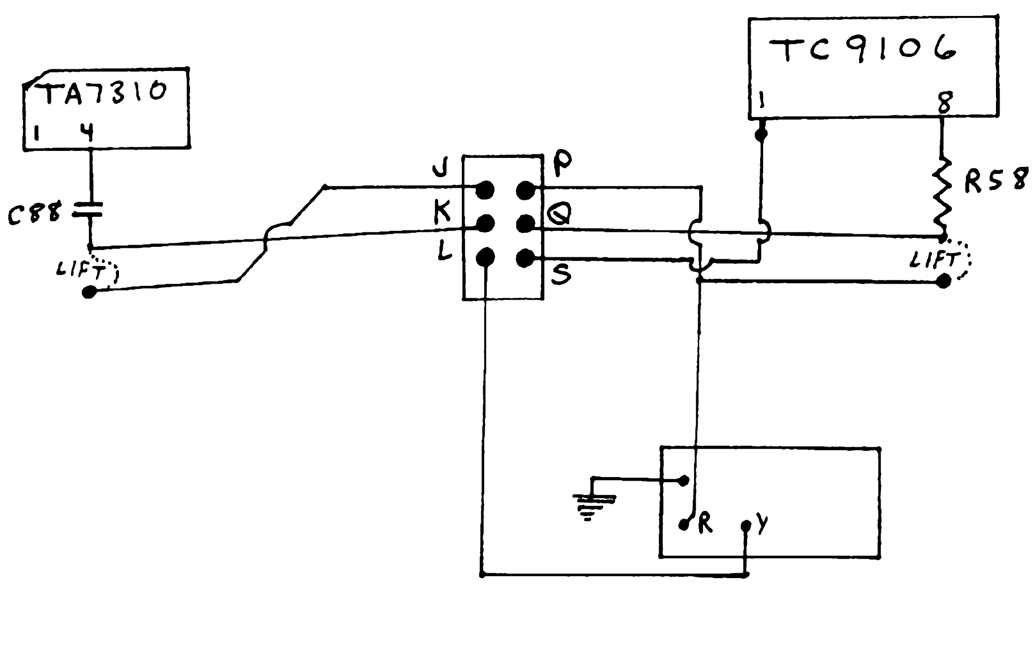


1. Wire up the SPDT switch and the trimmer capacitor (supplied) as shown in Fig.1.
2. Cut the foil trace between the 10.240 crystal and C76 as shown Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust VC for 27.410 on Ch.40.
5. Switch to Hi position and check for 27.405. If necessary, alter value of C76 to compensate.

CHANNEL CONVERSION

1. Unsolder and lift the leg of R58 opposite pin 8 of the TC9106P chip.
2. Run a wire from terminal Q of the DPDT switch provided to the lifted end of R58.
3. Run a wire from terminal P to where R58 was connected, Also run a wire from terminal P to the red dot post of the epoxy pak.
4. Run a wire from terminal S on the switch to pin 1 of the TC9106P chip.
5. Locate pin 4 of the TA 7310 VCO/Mixer chip. Unsolder and lift the leg of C88 opposite pin 4.
6. Run a wire from terminal K on the switch to the lifted end of C88.
7. Run a wire from terminal J to where C88 was connected.
8. Run a wire from terminal L to the yellow dot post of the epoxy pak.
9. Run a wire from the unmarked post of the epoxy pak to ground.

Now this unit will operate 42-86, 1-40 and half channels 1A-40A.



5KC OFFSET

FIG. 1.

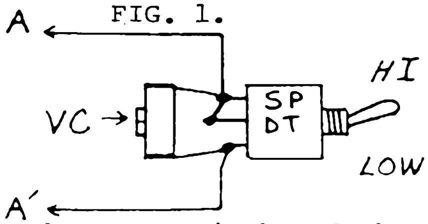
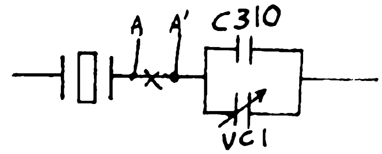


FIG.2.

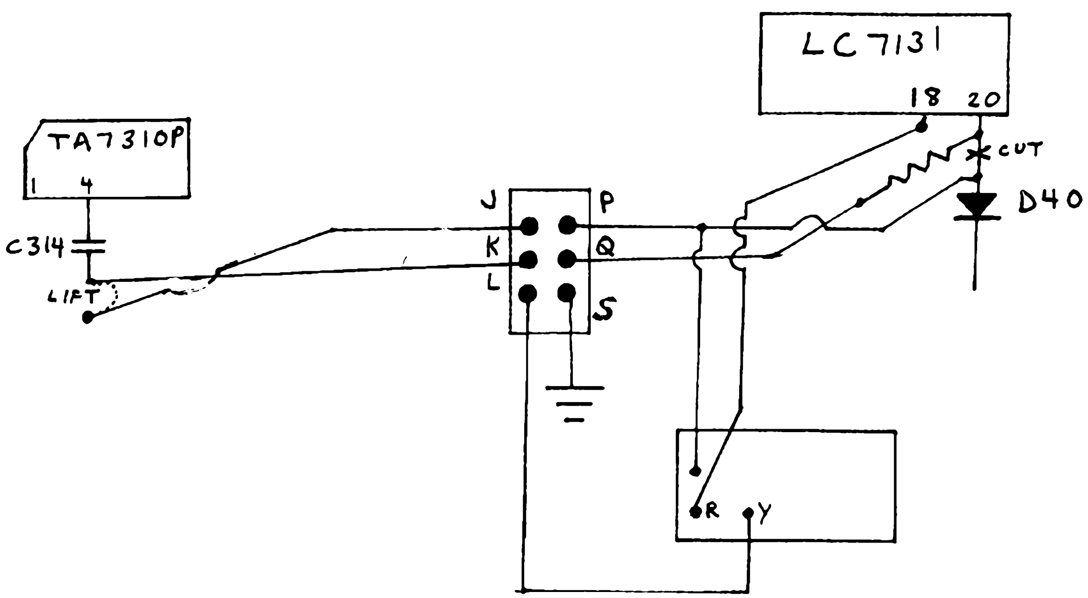


1. Wire up the SPDT switch and the trimmer capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240 crystal and C310/trim cap.
3. Solder the wire from the switch to each side of the cut trace.
4. With switch in low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high position and check for 27.405. If necessary, change the value of the trim cap to compensate.

CHANNEL CONVERSION

1. Cut the foil trace between pin 20 of the LC-7131 PLL chip and D401.
2. Solder a leg of the 4700^ resistor (supplied) to pin 20.
3. Run a wire from the other leg of the resistor to terminal Q of the DPDT switch provided.
4. Run a wire from terminal P to the other side of the cut trace.
   Also, run a wire from P to the unmarked post of the epoxy pak.
5. Run a wire from terminal S to ground.
6. Locate pin 4 of the TA7310 VCO/Mixer chip. Unsolder and lift the leg of C314 opposite pin 4.
7. Run a wire from terminal K on the switch to the lifted leg of C314.
8. Run a wire from terminal J on the switch to where C314 was connected.
9. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
10. Run a wire from the red dot post of the epoxy pak to pin 18 of the LC7131 chip.

Now this unit will operate on channels 42-86,1-40 and half channels 1A-40A.



MIDLAND 200M

5KC OFFSET

FIG.1.

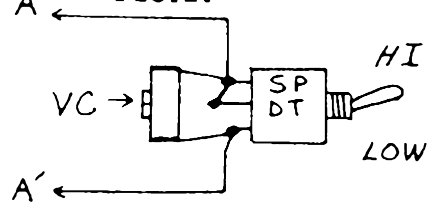
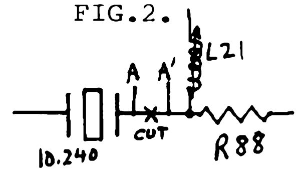


FIG.2.

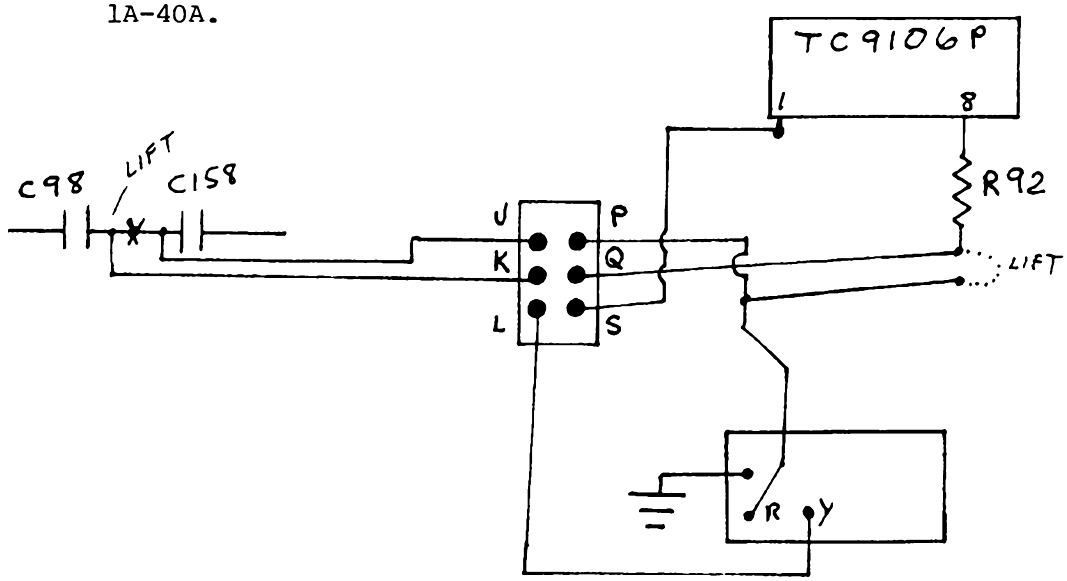


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240 crystal and R88/L21 as shown in Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high position and check for 27.405. If necessary, adjust L21 to compensate.

CHANNEL CONVERSION

1. Unsolder and lift the end of R92 opposite pin 8 of the TC9106P PLL chip.
2. Run a wire from terminal Q on the DPDT switch provided to the lifted end of R92.
3. Run a wire from terminal P on the switch to where R92 was connected and also to the red dot post of the epoxy pak.
4. Run a wire from terminal S on the switch to pin 1 of the TC9106 P chip.
5. Locate C98 (next to L20) and lift the leg of C98 connected to C158.
6. Run a wire from the lifted leg of C98 to terminal K on the switch.
7. Run a wire from where C98 was connected to terminal J on the switch.
8. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
9. Run a wire from the unmarked post of the epoxy pak to ground.

Now this unit will operate in channels 42-86, 1-40 and half channels 1A-40A.



5KC OFFSET

FIG.1.

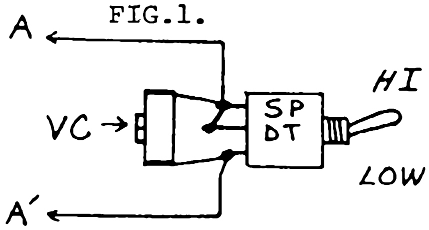
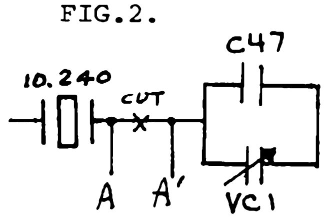


FIG.2.

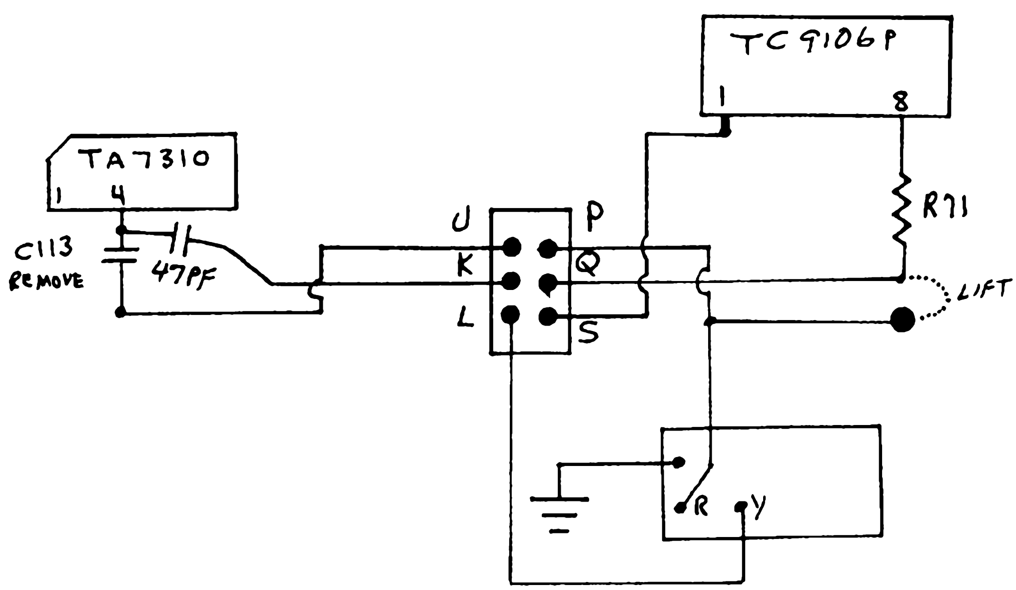


1. Wire up the SPDT switch and trim cap as shown in Fig.1.
2. Cut the foil trace between the 10.240 MHz. crystal and VC1/C47,Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust VC for 27.410 on CH. 40.
5. Switch to high position and check for 27.405, adjust VC1 if necessary to obtain this reading.

CHANNEL CONVERSION

1. Unsolder and lift the leg of R71 opposite pin 8 of the TC9106P PLL chip.
2. Run a wire from terminal Q on the DPDT switch provided to lifted leg of R71.
3. Run a wire from terminal P on the switch to where R71 was connected. Also, run a wire from Terminal P on the switch to the red dot post of the epoxy pak.
4. Run a wire from terminal S on the switch to pin 1 of the TC9106P chip.
5. Unsolder and remove C113 (just off pin 4 of the TA7310 VCO/Mixer chip)
6. Solder one leg of the 47pf capacitor supplied to pin 4 of the TA7310 chip.
7. Run a wire from the other leg to terminal K on the switch.
8. Run a wire from terminal J on the switch to where other end of C113 was connected.
9. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
10. Run a wire from the unmarked terminal of the epoxy pak to ground.

Now this unit will operate on channels 42-86, 1-40 and on half channels 1A-40A.



PRESIDENT AR-7

<u>5KC OFFSET</u>

FIG.1.

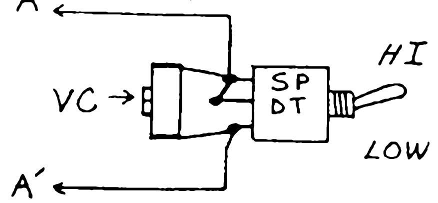
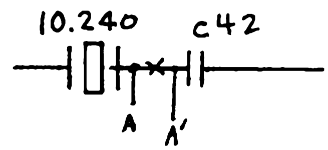


FIG.2.

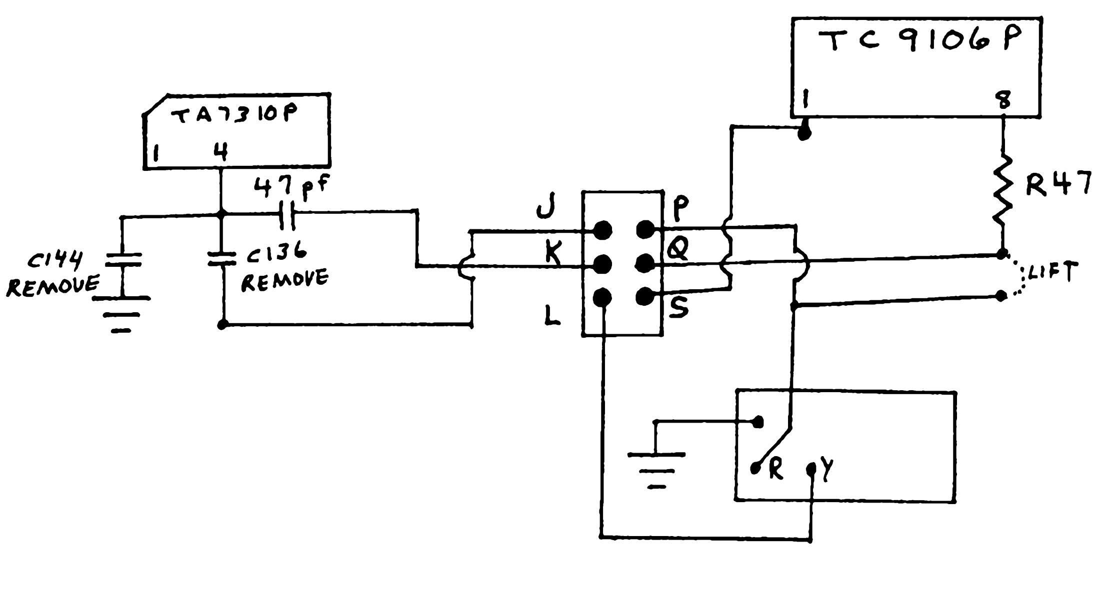


1. Wire up the SPDT switch and trim cap as shown in Fig.1.
2. Cut the foil trace between the 10.240Mhz. crystal and C42 as shown in Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust the VC for 27.410 on Ch.40.
5. Switch to high position and check for 27.405. If necessary, alter the value of C42 to compensate.

<u>CHANNEL CONVERSION</u>

1. Unsolder and lift the leg of R47 opposite pin 8 of the TC9106P PLL chip.
2. Run a wire from terminal Q on the DPDT switch provided to the lifted leg of R47.
3. Run a wire from terminal P on the switch to where R47 was connected. Also run a wire from P to the red dot post on the epoxy pak.
4. Run a wire from terminal S on the switch to pin 1 of the TC9106P chip.
5. Locate, unsolder, and remove C144 and C136 (off of pin 4 of IC2-TA310P VCO/Mixer chip).
6. Solder one leg of the 47pf capacitor provided to pin 4 of IC2.
7. Run a wire from the other leg to terminal K on the switch.
8. Run a wire from terminal J on the switch to where the other side of C136 was connected.
9. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
10. Run a wire from the unmarked post of the epoxy pak to ground.

Now this unit will operate on channels 42-86, 1-40 and on half channels 1A-40A.



5KC OFFSET

FIG.1.

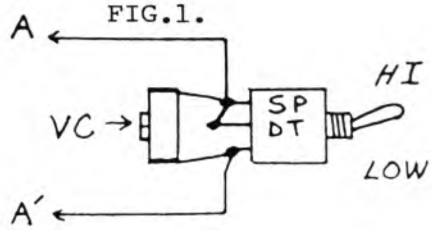
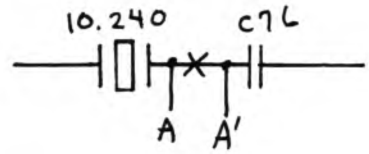


FIG.2.

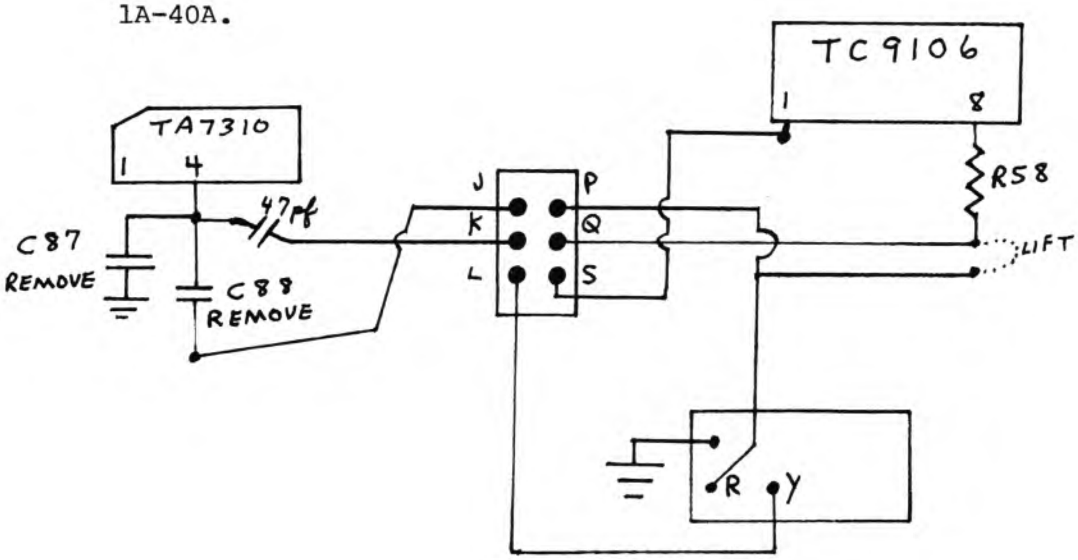


1. Wire up the SPDT switch and trim capacitor as shown in fig. 1.
2. Cut the foil trace between the 10.240MHz. crystal and C76 as shown in Fig. 2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust the VC for 27.410 on Ch. 40.
5. Switch to the high position and check for 27.405. If necessary, alter the value of C76 to compensate.

CHANNEL CONVERSION

1. Unsolder and lift the leg of R58 opposite pin 8 of IC3, the TC9106P PLL chip.
2. Run a wire from terminal Q on the DPDT switch supplied to the lifted leg of R58.
3. Run a wire from terminal P on the switch to where R58 was connected. Also run a wire from terminal P on the switch to the red dot post of the epoxy pak.
4. Run a wire from terminal S on the switch to pin 1 of the TC9106P chip.
5. Locate, unsolder and remove C87 and C88 (off of pin 4 of IC2 TA7310 VCO/Mixer chip.)
6. Solder the leg of the 47pf capacitor supplied to pin 4 of the TA7310P chip.
7. Run a wire from the other leg to terminal K on the switch.
8. Run a wire from terminal J on the switch to where the other side of C88 was connected.
9. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
10. Run a wire from the unmarked post of the epoxy pak to ground.

Now this unit will operate on channels 42-86, 1-40 and on half channels 1A-40A.



PRESIDENT AX-11

5KC OFFSET

FIG.1.

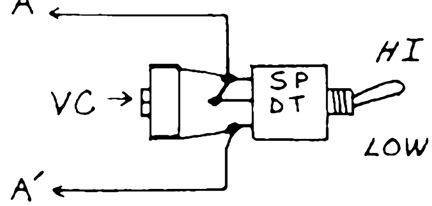
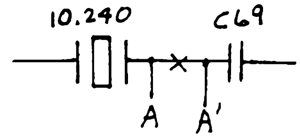


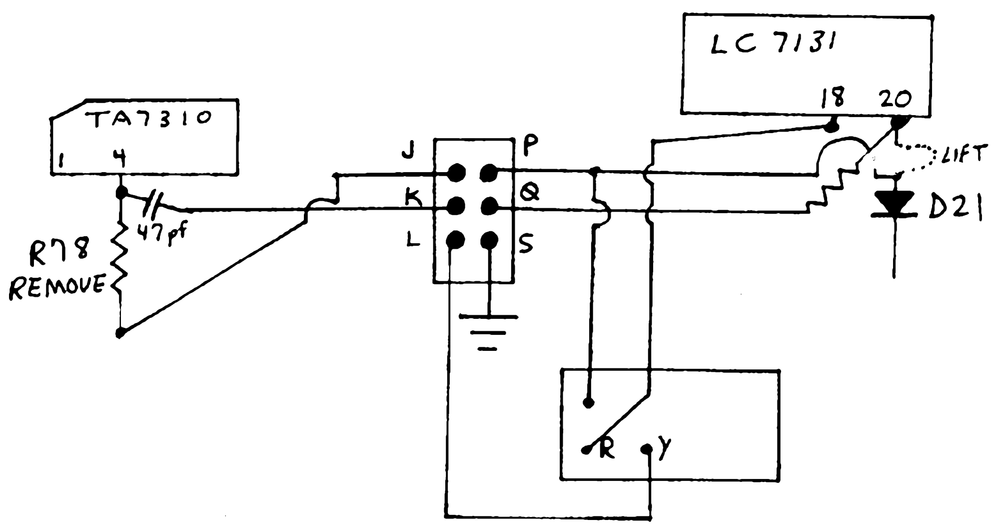
FIG.2.



1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C69.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust the VC for 27.410 on CH. 40.
5. Switch to the high position and check for 27.405. If necessary, alter the value of C69 to compensate.

CHANNEL CONVERSION

1. Unsolder and lift the anode of D21 connected to pin 20 of IC1, the LC7131 PLL chip.
2. Solder one leg of the 4700ohm resistor provided to pin 20 of the LC7131 chip.
3. Run a wire from the other leg of the 4700ohm resistor to terminal Q on the DPDT switch provided.
4. Run a wire from the lifted anode of D21 to terminal P on the switch. Also run a wire from terminal P on the switch to the unmarked post of the epoxy pak.
5. Run a wire from terminal S on the switch to ground.
6. Locate, unsolder, and remove R78 (off of pin 4 of IC3 TA7310 VCO/Mixer chip)
7. Solder on leg of the 47pf capacitor provided to pin 4.
8. Run a wire from the other leg of the 47pf capacitor to terminal K on the switch.
9. Run a wire from terminal J on the switch to where the other side of R78 was connected.
10. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
11. Run a wire from the red dot post of the epoxy pak to pin 18 of the PLL chip. Now this unit will operate on Channels 42-86, 1-40 and on half Channels 1A-40A.



PRESIDENT AX43 & SEAHAWK 40

5KC OFFSET

FIG.1.

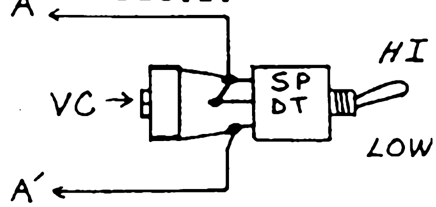
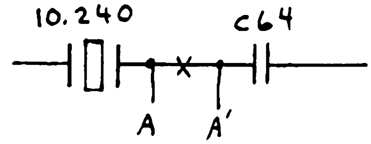


FIG.2.

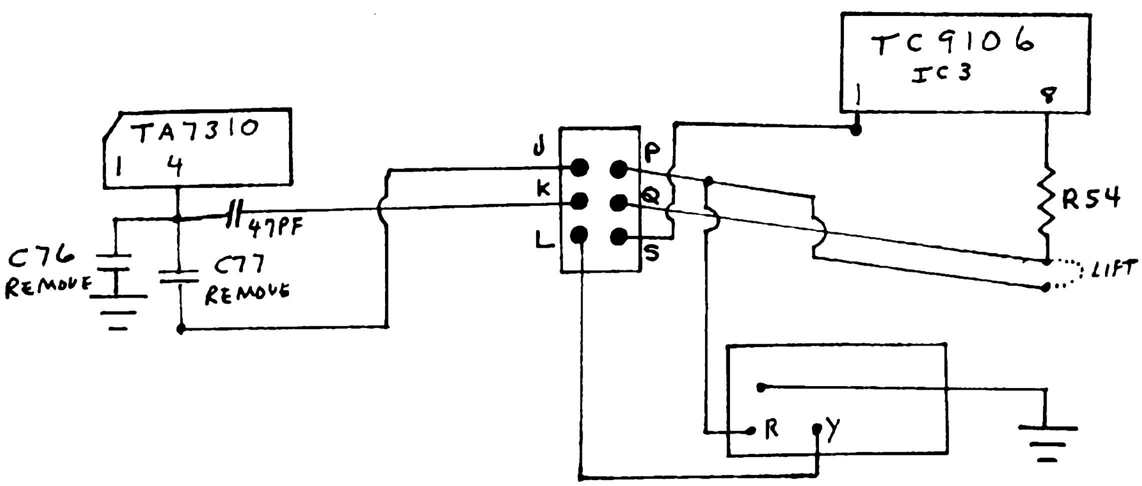


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C64 as shown in Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high position and check for 27.405. If necessary, alter the value of C64 to compensate.

CHANNEL CONVERSION

1. Unsolder and lift the leg of R54 opposite pin 8 of IC3, the TC9106 PLL chip.
2. Run a wire from terminal Q on the DPDT switch provided to the lifted leg of R54.
3. Run a wire from terminal P on the switch to where R54 was connected. Also run a wire from terminal P on the switch to the red dot post of the epoxy pak.
4. Run a wire from terminal S on the switch to pin 1 of IC3.
5. Locate, unsolder and remove C76 & C77 (off pin 4 of IC2, the TA7310P VCO/ Mixer chip).
6. Solder one leg of the 47pf capacitor provided to pin 4 of IC2.
7. Run a wire from terminal K on the switch to the other leg of the 47pf capacitor.
8. Run a wire from terminal J on the switch to where the other leg of C77 was connected.
9. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
10 Run a wire from the unmarked post of the epoxy pak to ground.

Now this unit will operate on Channels 42-86,1-40 and on half channels 1A-40A.



PRESIDENT "OLD HICKORY"

5KC OFFSET

FIG.1.

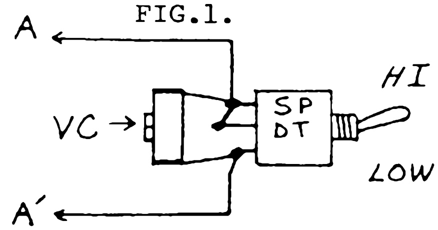
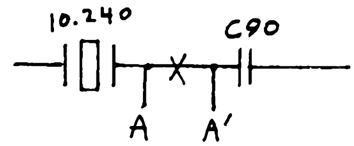


FIG.2.

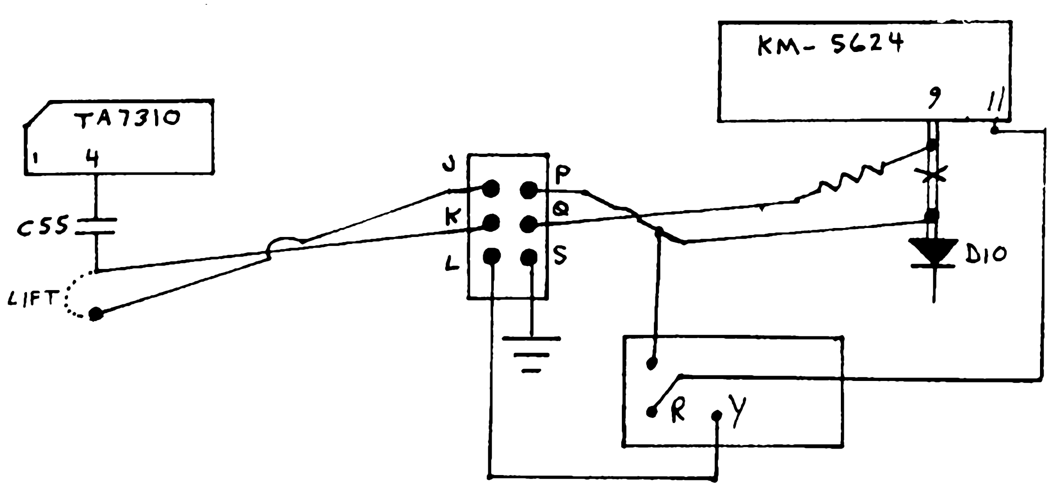


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Unsolder and lift the leg of C90 next to the 10.240 MHz. crystal.
3. Solder the wires from the switch to these two points as shown above in Fig.2.
4. With the switch on the low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high position and check for 27.405. You may need to adjust VC1 to obtain this reading.

CHANNEL CONVERSION

1. Isolate pin 9 of the KM-5624 PLL chip by cutting the foil trace.
2. Solder one leg of the 4700ohm resistor supplied to pin 9.
3. Run a wire from terminal Q on the DPDT switch provided to the other end of the resistor.
4. Run a wire from terminal P on the switch to the other side of the cut trace (anode of D10). Also run a wire from terminal P on the switch to the unmarked post of the epoxy pak.
5. Run a wire from terminal S on the switch to ground.
6. Locate, unsolder and lift the leg of C55 opposite pin 4 of the TA7310 VCO/Mixer chip.
7. Run a wire from the lifted leg of C55 to terminal K on the switch.
8. Run a wire from terminal J on the switch to where C55 was connected.
9. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
10. Run a wire from the red dot post of the epoxy pak to pin 11 of the KM5624 PLL chip.

Now this unit will operate on Channels42-86,1-40 and on half channels 1A-40A.



PRESIDENT JAMES K.

5KC OFFSET

FIG.1.

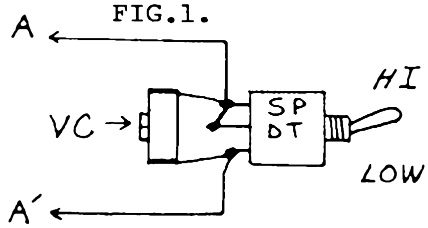
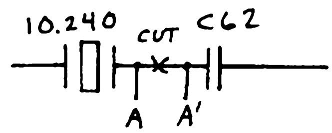


FIG.2.

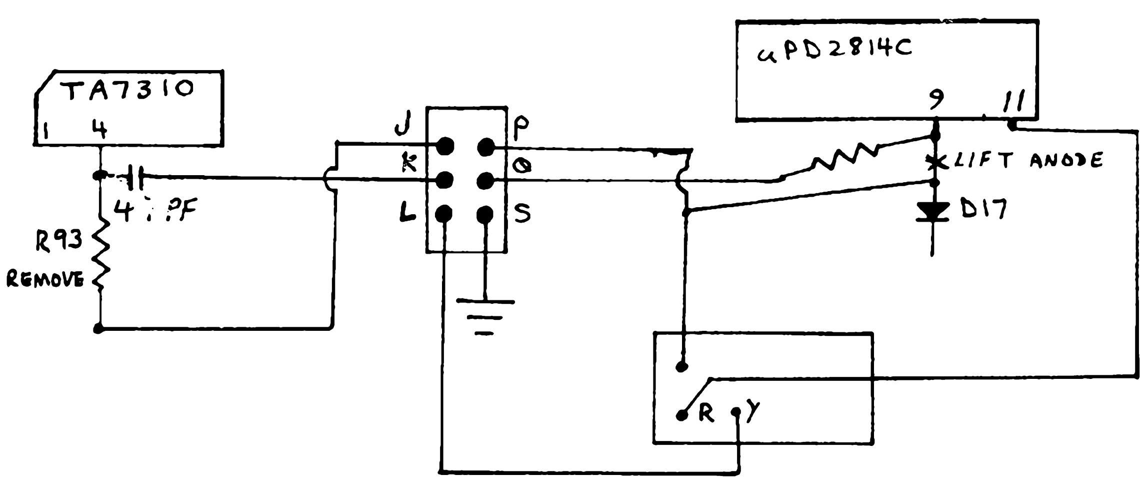


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz crystal and C62 as shown in Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With the switch on low position, adjust VC for 27.410 on Ch.40.
5. Switch to high position and check for 27.405. If necessary alter the value of C62 to obtain this reading.

CHANNEL CONVERSION

1. Unsolder and lift anode of D17 where it connects to pin 9 of the uPD2814C PLL chip.
2. Solder one leg of the 4700ohm resistor supplied to pin 9 of the PLL chip.
3. Run a wire from the other leg of the resistor to terminal Q on the DPDT switch provided.
4. Run a wire from terminal P on the switch to the lifted end (anode) of D17. Also run a wire from terminal P to the unmarked post of the epoxy pak.
5. Run a wire from terminal S on the switch to ground.
6. Locate, unsolder and remove R93 (off pin 4 of the TA7310 VCO/Mixer chip).
7. Solder one leg of the 47pf capacitor supplied to pin 4 of the TA7310 chip.
8. Run a wire from terminal K on the switch to the other leg of the capacitor.
9. Run a wire from terminal J on the switch to where the other leg of R93 was connected.
10. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
11. Run a wire from the red dot post of the epoxy pak to pin 11 of the PLL chip.

Now this unit will operate on Channels 42-86,1-40 and on half channels 1A-40A.



REALISTIC 410

5KC OFFSET

FIG.1.

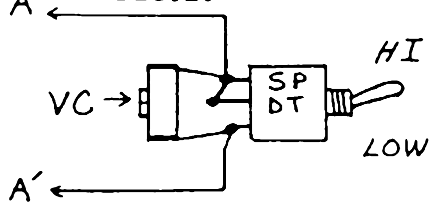
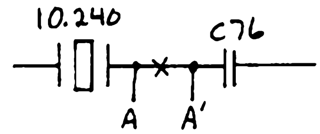


FIG.2.

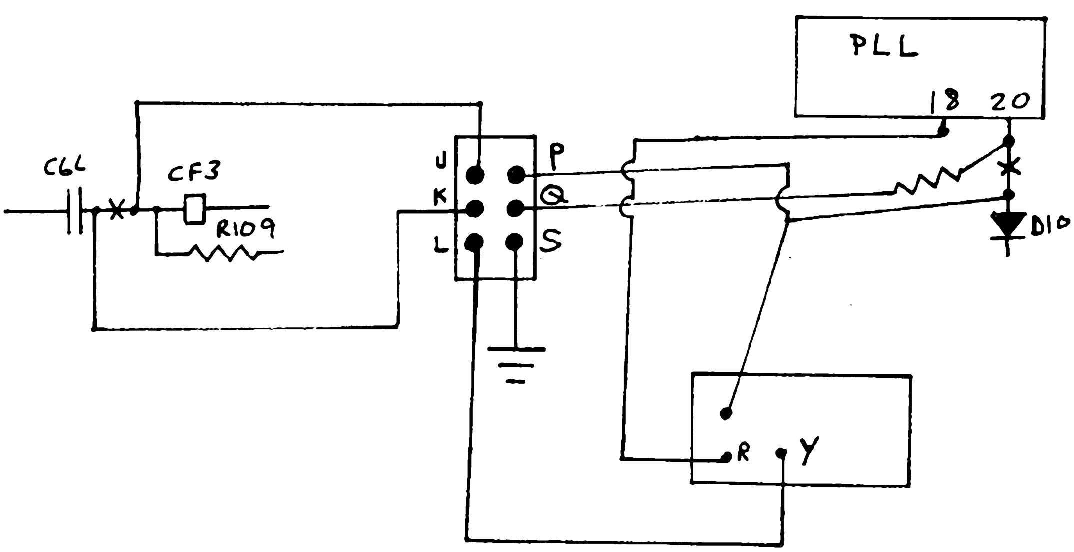


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C76 as shown in Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With the switch in the low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high position and check for 27.405. If necessary, alter the value of C76 to obtain this reading.

CHANNEL CONVERSION

1. Isolate pin 20 of the PLL chip by cutting the foil trace.
2. Solder one leg of the 4700ohm resistor supplied to pin 20 of the PLL chip.
3. Run a wire from the other leg of the resistor to terminal Q on the DPDT switch supplied.
4. Run a wire from terminal P on the switch to the other side of the cut trace (anode of D10). Also run a wire from terminal P to the unmarked post of the epoxy pak.
5. Run a wire from terminal S on the switch to ground.
6. Unsolder and lift the leg of C66 connected to CF3/R109.
7. Run a wire from terminal K on the switch to the lifted leg of C66.
8. Run a wire from terminal J on the switch to where C66 was connected.
9. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
10. Run a wire from the red dot post of the epoxy pak to pin 18 of the PLL chip.

Now this unit will operate on channels 42-86, 1-40 and on half channels 1A-40A.



REALISTIC 421

5KC OFFSET

FIG.1.

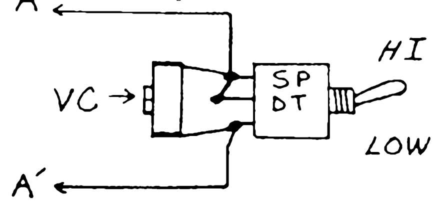
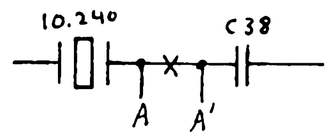


FIG.2.

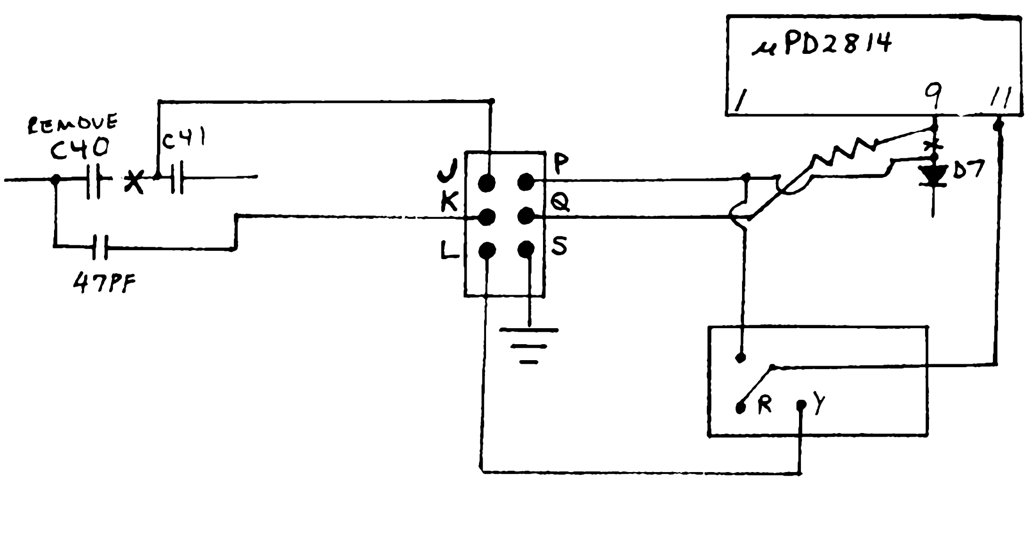


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C38 as shown.
3. Solder the wires from the switch across the cut trace.
4. With the switch in the low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high position and check for 27.405 Adjust CT if necessary to obtain this reading.

CHANNEL CONVERSION

1. Isolate pin 9 of the PLL chip by cutting the foil trace.
2. Solder one leg of the 4700ohm resistor supplied to pin 9 of the PLL chip.
3. Run a wire from the other leg of the resistor to terminal Q on the DPDT switch provided.
4. Run a wire from terminal P on the switch to the other side of the trace (anode of D7). Also run a wire from terminal P to the unmarked post of the epoxy pak.
5. Run a wire from terminal S on the switch to ground.
6. Locate,unsolder, and remove C40.
7. Solder one leg of the 47pf capacitor provided to the hole opposite C41.
8. Run a wire from the other leg of the 47pf capacitor to terminal K on the switch.
9. Run a wire from terminal J on the switch to where C40 was connected to C41.
10. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
11. Run a wire from the red dot post of the epoxy pak to pin 11 of the PLL chip.

Now this unit will operate on Channels 42-86, 1-40 and on half channels 1A-40A.



5KC OFFSET

FIG.1.

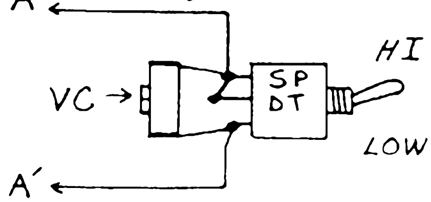
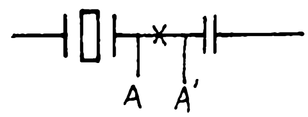


FIG.2.

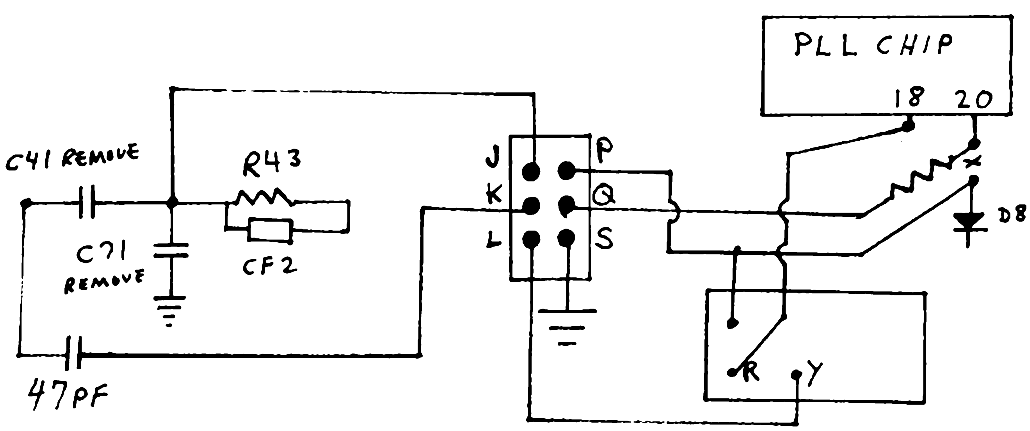


1. Wire up the SPDT switch and the trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C37 as shown Fig.2.
3. Solder the wires from the switch to the cut trace.
4. With switch on low position, adjust VC for 27.410 on CH. 40.
5. Switch to high position and check for 27.405. If necessary, alter the value of C37 to obtain this reading.

CHANNEL CONVERSION

1. Isolate pin 20 of the PLL chip by cutting the foil trace.
2. Solder one leg of the 4700ohm resistor provided to pin 20.
3. Run a wire from the other leg of the resistor to terminal Q on the DPDT switch provided.
4. Run a wire from terminal P on the switch to the unmarked post of the epoxy pak. Also run a wire from terminal P on the switch to the other side of the cut trace (anode of D8).
5. Run a wire from terminal S on the switch to ground.
6. Unsolder and remove C71.
7. Unsolder and remove C41.
8. Solder one leg of the 47pf capacitor supplied to the hole opposite R43/CF2.
9. Run a wire from terminal K on the switch to the other leg of the 47pf capacitor.
10. Run a wire from terminal J on the switch to where the other leg of C41 was connected.
11. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
12. Run a wire from the red dot post of the epoxy pak to pin 18 of the PLL chip.

Now this unit will operate on Channels 42-86, 1-40 and on half channels 1A-40A.



REALISTIC TRC-426

5KC OFFSET

FIG.1.

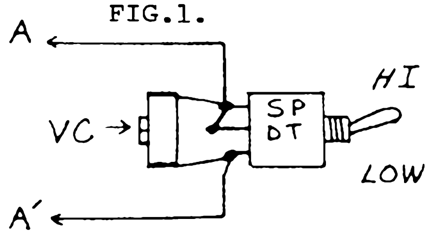
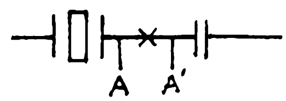


FIG.2.

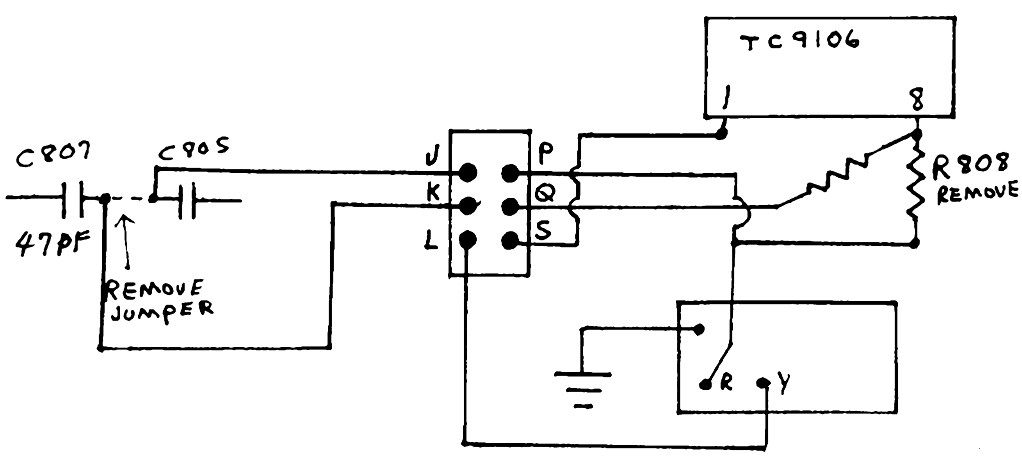


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Unsolder and lift the collector of Q804 and at the same point lift the leg of C809.
3. Cut the foil trace between the 10.240MHz. crystal and C802 as shown in Fig.2.
4. Solder the wires from the switch across the cut trace.
5. With the switch in low position, adjust VC for 27.410 on Ch.40.
6. Switch to the high position and check for 27.405. If necessary, adjust CT801 to obtain this reading.

CHANNEL CONVERSION

1. Locate, unsolder, and remove R808 (off of pin 8 of the TC9106P PLL chip.)
2. Solder one leg of the 4700ohm resistor provided to pin 8 of PLL chip.
3. Run a wire from the other leg of the resistor to terminal Q on the DPDT switch supplied.
4. Run a wire from terminal P on the switch to where the other leg of R808 was connected, Also run a wire from terminal P to the red dot post of the epoxy pak.
5. Run a wire from terminal S on the switch to pin 1 of the PLL chip.
6. Remove the jumper between C807 & C805.
7. Replace C807 with the 47pf capacitor provided.
8. Run a wire from C807 to terminal K on the switch.
9. Run a wire from C805 to terminal J on the switch.
10. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
11. Run a wire from the unmarked terminal on the epoxy pak to ground.

Now this unit will operate on Channels 42-86,1-40 and on half channels 1A-40A.



REALISTIC TRC 428

5KC OFFSET

FIG.1.

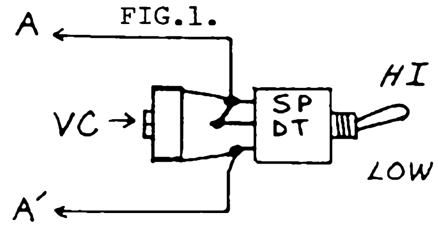
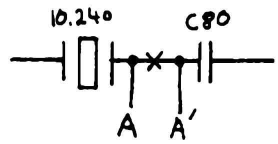


FIG.2.

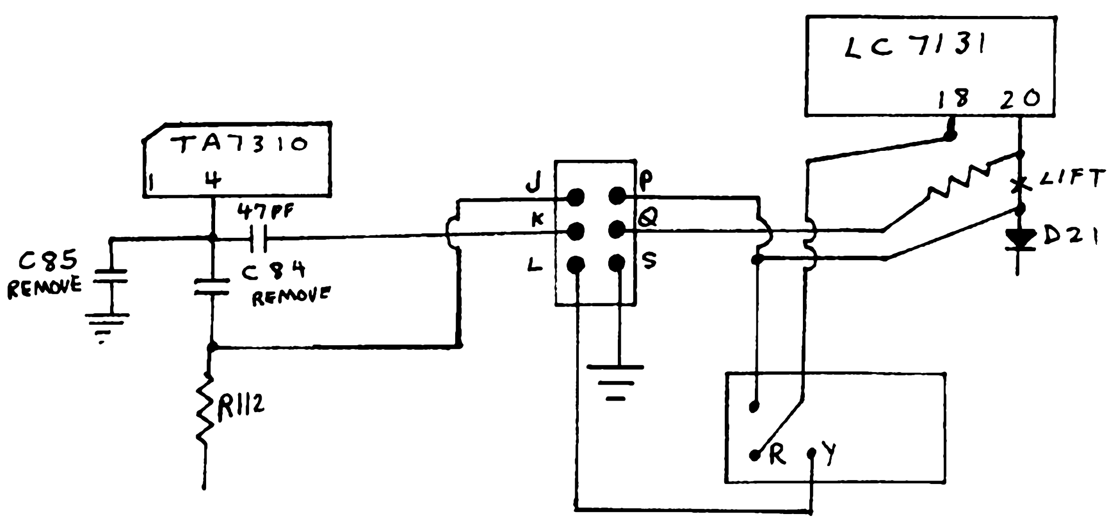


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C80 as shown in Fig.2.
3. Solder the wires from the switch across the cut trace.
4. With switch in low position, adjust VC for 27.410 on Ch. 40.
5. Switch to high position and check for 27.405. If necessary, alter the value of C80 to obtain this reading.

CHANNEL CONVERSION

1. Locate, unsolder, and lift the anode leg of D21 (off of pin 20 of the PLL chip LC7131).
2. Solder one leg of the 4700ohm resistor supplied to pin 20 of the PLL chip.
3. Run a wire from the other leg of the resistor to terminal Q of the DPDT switch provided.
4. Run a wire from terminal P on the switch to the unmarked post of the epoxy pak. Also run a wire from terminal P to the anode of D21.
5. Run a wire from terminal S on the switch to ground.
6. Unsolder and remove C84 and C85 (off pin 4 of TA7310 VCO/Mixer chip).
7. Solder one leg of the 47pf capacitor provided to pin 4 of the VCO/Mixer chip.
8. Run a wire from the other leg of the capacitor to terminal K on the switch.
9. Run a wire from terminal J on the switch to where the other leg of C84 was connected (R112).
10. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
11. Run a wire from the red dot post of the epoxy pak to pin 18 of the PLL chip.

Now this unit will operate on Channels 42-86, 1-40 and on half channels 1A-40A.



TEABERRY STALKER III

FIG.1.

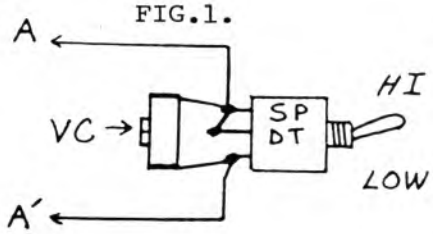
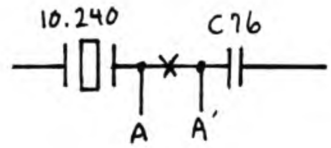


FIG.2.



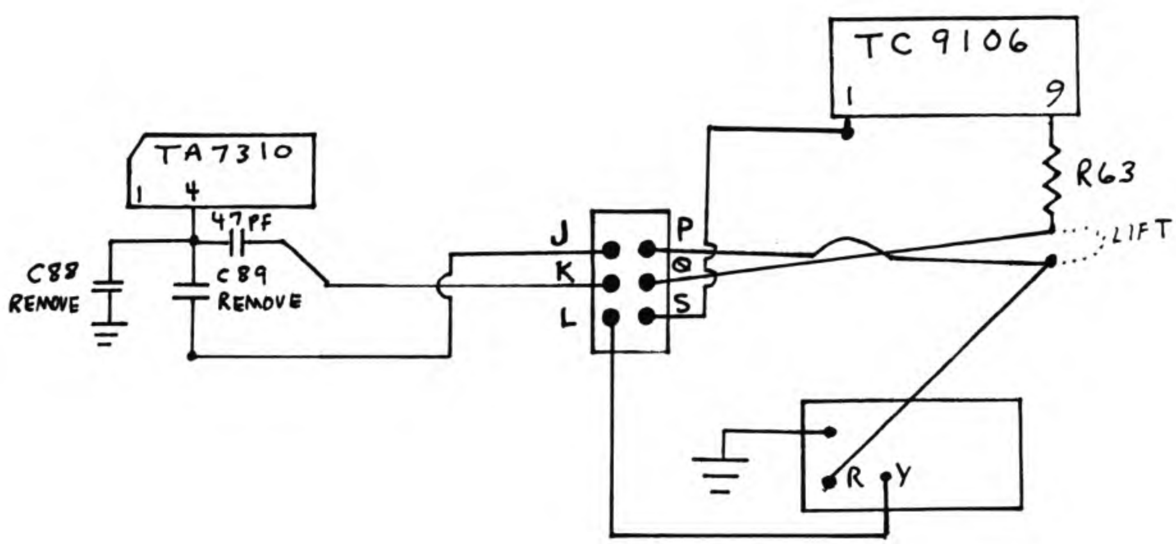
5KC OFFSET

1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C76 as shown in Fig.2.
3. Solder the wires to each of the cut trace.
4. With the switch in the low position,adjust VC for 27.410 on Ch.40.
5. Switch to the high position and check for 27.405. If necessary, alter the value of C76 to obtain this reading.

CHANNEL CONVERSION

1. Locate, unsolder, and lift the leg of R63 opposite pin 8 of the TC9106 PLL chip.
2. Run a wire from the lifted leg of R63 to terminal Q on the DPDT switch provided.
3. Run a wire from terminal P on the switch to where R63 was connected. Also run a wire from terminal P to the red dot post of the epoxy pak.
4. Run a wire from terminal S on the switch to pin 1 of the PLL chip.
5. Locate, unsolder, and remove C88 & C89 (off pin 4 of the TA7310P VCO/ Mixer chip.)
6. Solder one leg of the 47pf capacitor provided to pin 4 of the VCO/Mixer chip.
7. Run a wire from terminal K on the switch to the other leg of the 47pf cap.
8. Run a wire from terminal J on the switch to where C89 was connected.
9. Run a wire from terminal L on the switch to the yellow dot post of the epoxy pak.
10. Run a wire from the unmarked post of the epoxy pak to ground.

Now this unit will operate on Channels 42-86,1-40 and on half channels 1A-40A.



CHANNEL MASTER CB 6830

Connect a SPST switch between pins 3 and 13 of the M58472 PLL chip. This gives channels 27.285 - 27.575.

GENERAL ELECTRIC 3-5813A/3-5869A

First change 03A Chip with 02A

Connect a SPST switch between terminal labelled E and 5 on board. This gives channels 27.425-27.565. Pull Q503 for maximum modulation.

MECTRON ME-402

On channel selector board cut the sixth trace and connect a a SPST switch across the cut. This gives channels 27.405-27.595 on channels 11-27.

SPARKOMATIC CB 4020S

Behind the front panel cut the sixth trace from the left and add a SPST switch across cut. This gives channels 27.285 - 27.595 on 1-27.

A NOTE FROM BROWNING REGARDING PING

The "ping" ("squeal," "scream," "whistle," etc.) that was common in the older base stations; i.e., R-27/S-23, Mark II, Mark III; is alas, no longer legal for use in the Golden Eagle Mark IV. The Federal Communications Commission (FCC) has disallowed the familiar ping, and we have had to make modifications to the Mark IV in order to meet Type Acceptance.

The ping was caused by the screen by-pass capacitor on V206, storing the supply voltage (B+) on the receiver for a few milliseconds after the transmit relay opens the B+ circuit.

We had to remove the ping by changing the screen by-pass capacitor in the receiver from a 20 MFD, 450 VDC to a 2 MFD, 450 VDC. This action decreased the RC time constant to the point that the feedback would not occur.

Any modification to this circuit on the Mark IV would be in direct violation of FCC Rules and Regulations and would also void all warranty to the equipment.

VARIOUS MODULATION ADJUSTMENT

Browning Sabre

Clip R75 for maximum modulation.

Cobra 29 GTL

Clip D11 for maximum modulation

Cobra 1000 GTL

Clip TR16 for maximum modulation

We use the Turner Super Side Kick mike for performance you can't touch.

Midland 102M

RV201 Adjust for maximum modulation.

Midland 13-858

RV-2 Adjust for maximum modulation. Jump D3 for more power.

Morse 2001

VR202 Adjust for maximum modulation

Pace CB144

R92 Adjust for maximum modulation

Panasonic RJ3200

R74 Adjust for maximum modulation (Located near antenna connector)

Roberts 40Ch.

VR202 Adjust for maximum modulation

Royce 1-650

For maximum modulation, jump C302 with a wire.

BOMAN CB920 (02A)

SYNTH:

CT1 Adjust for 10.240 Mhz ± 50 Hz. @TP1. on Ch.19.

T1 Adjust for maximum RF @ TP2 on Ch.19.

.L1 Adjust for 3.6v on Ch.1 @ TP8. Ch.40 Approx. 1.9v (VCO)

With Frequency Counter of TP3 check for 3.3 Mhz.

Peak T2,L2, on Ch.19 using O-scope @ TP4.

With Frequency Counter on TP4, check for 37.660 on Ch.1.

Key XMTR on Ch.1,Check for 26.965 MHz.

RX:

Peak T10,T9,T8 on 455KC.

Peak T7,L14,T6,T5 on Ch.19.

RV1 Squelch Range

RV3 S Meter S9=100uV.

TX:

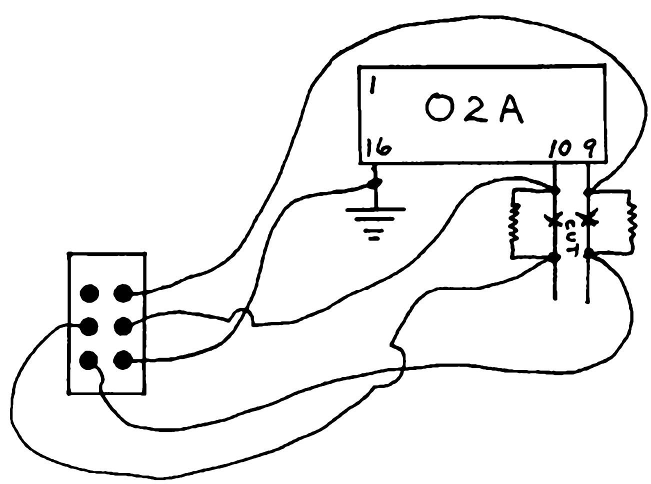
Peak L5,T3,T4,L7,L11,L12.

RV2 Modulation Adj.

RV4 RF Power Meter

FREQUENCY CONVERSION:

Cut Trace on pins 9 and 10 of IC1, PLL02A chip. Install 4.7K resistors across cuts, Wire up a DPDT Center Off Switch as Shown:



BOWMAN CB-755 (23 CH. - XTAL RIG)

RX: R-31, Squelch Range
R-24, S Meter

TX: R-109, RF Meter

Peak T10,T11,T12,T13,T14,L3,L6,L7 (Pour It On!

Unit has 12W Driver & 25W Final!)

AMC Defeat---D-17

CHANNEL MASTER CB6834

RX:

Peak T304,T303 on 455KC.

Peak T302,T301,L102,L101 on Ch.19.

VR1 A G C

VR3 Squelch Range

VR4 S Meter

TX:

Peak L901,L903,L905.

F901 is T.V.I. Filter

VR6 is Modulation control (or remove Q503)

VR7 RF Power Meter

MIKE WIRING: 4 Pin Locking Ring Type.

1. REC. (Black)

2. Audio hot (Yellow)

3. Xmit (White)

4. Shield

COBRA CAM89

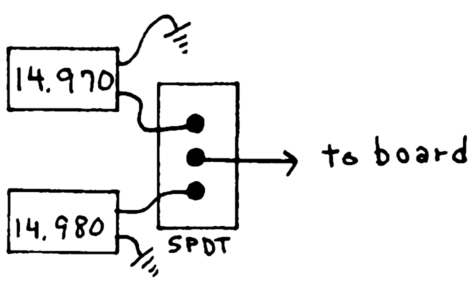
RX: VR12 Adj. for 13.4V @ TR21 emitter.
Peak T5,T6,T8 on 455KC.
Peak T1,T2,T3,T4,T11,T12,T13,T14 on Ch. 11.
VR1 A G C adj.
VR3 Squelch Range
VR7 S Meter S9=100uV.

TX: Peak T15,T16,T27,L13,L12,L9.
VR11 Modulation Meter Adj.
VR6 RF Power Meter
L7 TVI filter

X1,X2,X3,X4,X5,X6, can be switched for new channels.

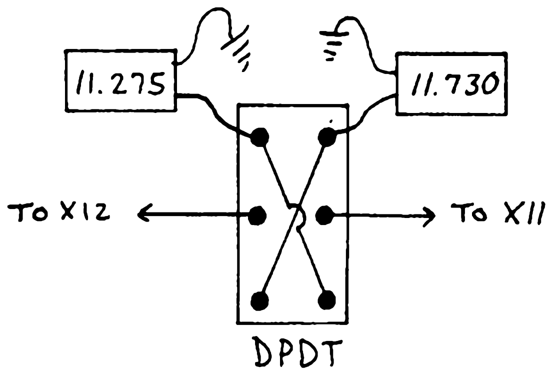
23.085 gives 26.760,26.770,26.780,26.800.
23.090 gives 26.765,26.775,26,785,26.805.
23.140 gives 26.815,26.825,26.835,26.855.
23.190 gives 26.865,26.875,26.885,26.905.
23.240 gives 26.915,26.925,26.935,26.955.
23.590 gives 27.265,27.275,27.285,27.305.
23.640 gives 27.315,27.325,27.335,27.355.
23.690 gives 27.365,27.375,27.385,27.405.
23.740 gives 27.415,27.425,27.435,27.455.
23.790 gives 27.465,27.475,27.485,27.505.
Kit #4 can be used to switch 4 Xtals with one switch.
(Kit #4 can be obtained from "Secret CB")

X9 can be switched to pick up missed channels.



COBRA CAM89 continued:

Even channels from 26.510 - 26.800 can easily be obtained by switching X12 and X11 as shown.



<u>MIKE WIRING</u>: 4 Pin Locking Ring Type - Electronic Switching

1. Shield
2. Audio hot (White)
3. Xmit (Red)
4. REC (Black)

COLT 350 (M-374) D86IC-PLL

RX: R-44, Squelch Range

TX: L29,L30,L31,L32,L33,L34,L37.

R-121 Mic Gain (Adjust for Maximum!)

Q-17 (Remove)

L-19,L20 (Adjust for maximum modulation <u>without distortion</u>.)

J.C. PENNEYS 981-6225 (981-8352) HD42851A2 - PLL

R-417 RF Meter

R-2 ALC

R-312 S Meter

R-336 Squelch Range

R-314 A G C

TX: Peak T401,L403,L406

C-2 (luf electrolytic) Modulation defeat

KRACO KB-4045 (02A)

RX:

Peak T10,T9,T8, on 455KC.

Peak T7,L14,T6,T5 on Ch.19.

RV1 Squelch Range

RV3 S Meter

TX:

Peak L5,T3,T4,L7,L11,L12 for maximum RF output.

RV2 Modulation Control

RV4 RF Power Meter

FREQUENCY EXPANSION

See 02A information in previous issues.

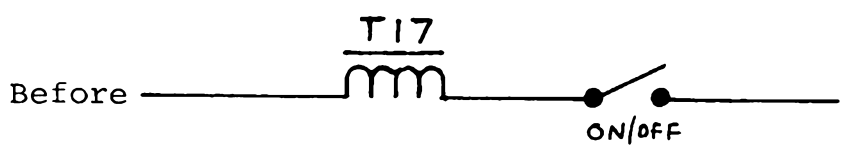
MIKE WIRING: Electronic Switching

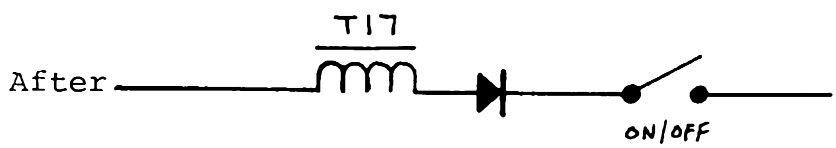
1. Audio Hot (White)
2. Shield
3. REC (Black)
4. Xmit (Red)

MIDLAND 13-862

RX: Peak T3,T4,T5,on 455KC for maximum.
Peak Tl,T2,T18 for maximum.
R45 S Meter S9=100uV.

TX: Peak T7,T8,T9,T10,T11,T12,T13,T14,L3,C5.
Cl,C2,Ll TVI filter
R3 RF Output Meter
R58 Modulation Adj.
No polarity Protection Diode. Unsolder wire from T17 to Power Switch. Install a HEP170 (#99) silicon diode as shown:

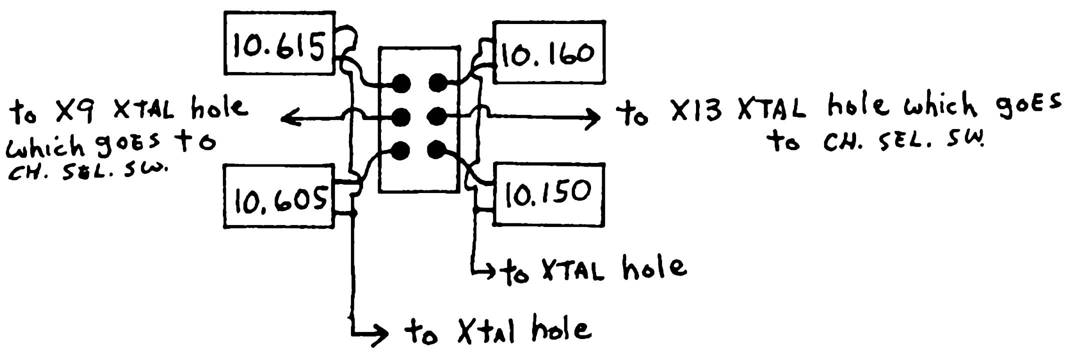




Xl,X2,X3,X4,X5,X6, can be switched for new channels.
37.395 gives 26.760,26.770.26.780,26.800.
37.400 gives 26.765,26.775,26.785,26.805.
37.450 gives 26.815,26.825,26.835,26.855.
37.500 gives 26.865,26.875,26.885,26.905.
37.550 gives 26.915,26.925,26.935,26.955.
37.900 gives 27.265,27.275, 27.285,27.305.
37.950 gives 27.315,27.325,27.335,27.355.
38.000 gives 27.365,27.375,27.385,27.405.
38.050 gives 27.415,27.425,27.435,27.455.
38.100 gives 27.465,27.475,27.485,27.505.
Kit #4 can be used to switch 4Xtals with one switch.

MIDLAND 13-862 continued:

X9 and X13 can be switched with 10.605 and 10.150 Xtals to get missed channels as shown.



MIKE WIRING: 4 Pin Locking Ring Type.

1. Audio hot (Red)
2. Shield
3. Xmit (Black)
4. REC (White)

NOTE: #99 and Kit #4 can be obtained direct from "Secret CB".

MIDLAND 13-879

RX: Peak IFT1,IFT2, on 455KC.
Peak L1,L2,L3,L4, on Ch.13.
VR3 Squelch Threshold
VR6 S Meter 100uV= S9

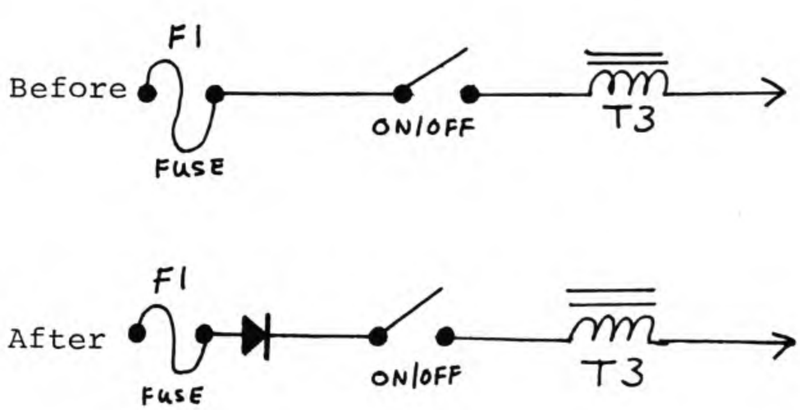
TX:
Peak L7,L8,L9,L10,L11,L15.
VR5 RF Power Meter
VR7 Adjust for 13.8 VDC.
L16 T.V.I. filter

Extra channels are obtained in same manner as in 13-862 model previously described.

MIKE WIRING: 4 Pin Locking Ring Type

1. Audio hot (Red)
2. Ground (Shield & Blue)
3. Xmit (White)
4. REC (Black)

No protection diode on DC.
Wire in a HEP170 (Item #99) as shown:
(Item #99 can be obtained from "Secret CB".



MIDLAND 76-860 (TC9102P)

RX:

Peak T11,T10,T9 on 455KC.

Peak T7,T6,T5, on Ch.19.

VR7 A G C

VR10 Squelch Range

VR3 S Meter S9=100uV.

T105 is VCO.

TX:

Peak T1,T2,L3,L4,L5.

T3 is T.V.I. filter

VR6 is Modulation Control

VR2 RF Power Meter

VCI,VRI Antenna Warning Indicator

FREQUENCY:

Use Zapper for hi-lo channels (kit 89)

Install @ C117.

MIKE WIRING: Electronic type 4 Pin Locking Ring Connector

1. Audio Hot

2. Ground

3. Rec

4. Xmit

Note: Kit #89 can be obtained direct from "Secret CB".

PANASONIC RJ-3660

RX:

Peak T14,T12,T11 on 455KC

Peak T8,T3,T2,T1 on Ch.19.

R46 Squelch Range

R143 S Meter

R163 VU Meter

TX:

Peak T5,T6,T7,T9,T10,L7,FL1,L11 for maximum RF output. R94 Modulation Control (or remove D11 and D12 and install wire from where cathode of D11 was to cathode of where D12 was.)

R146 RF Power Meter

FREQUENCY EXPANSION

X2 (35.740Mhz) Xtal may be switched for hi-lo channels.

L2 is VCO Coil.

MIKE WIRING - Electronic Switching

1. REC (Black)
2. Audio hot (Red)
3. Xmit (White)
4. Common (shield)

UNIQUE FEATURE:

Unit includes a receiver on the FM Public Service band from 136-174Mhz.

PEARCE SIMPSON COUGAR 23 (LATE PRODUCTION)

RX: Adjust T3,T4,T5,T6,CT2 for Maximum with a 455KC signal.
Peak L6,L7,T1,T2,L8,L11 on Ch.13.
VR5 Squelch Adjustment
L1,CT1 Adjust for minimum on Ch.4.
Adjust L2,L3,L4,L5,for maximum using a 25Mhz,1KC,30% signal input.
VR3 S Meter

TX: Peak L12,L13,L14,L15,L17,L22.

VR7 RF Power Meter

L23 T.V.I. filter

VR6 Modulation Adjustment (or clip D15)

X1 thru X6 may be replaced for extra channels. See the Midland 13-862 previously described for Xtal frequency information.

MIKE WIRING: 3 Pin Locking Ring Type - Relay Switching

1. Audio hot (Yellow)
2. Shield & Violet
3. Xmit (Red)

PRESIDENT ZACHARY T, DWIGHT D
WITH uPD 2816C PLL

Channel expansion is possible using the Zapper oscillator-injection module. Remove C79 and install kit in its place.

RECEIVER ALIGNMENT:

Peak L8, L7, L6, L5, L3, L2, L1.

VR1 IF Gain.

VR3 Squelch Range.

VR2 S Meter 9=100uV.

TRANSMITTER ALIGNMENT:

Peak L24, L25, L17, L16, L13. Do not touch L10 - TVI filter.

VR6 AMC (or remove TR16).

VR4 RF Power Meter.

VR201 Power Supply voltage output (Zachary T only).

Remove D13 and install solid wire jumper in its place.

SYNTHESIZER ALIGNMENT:

L23 Scope or RF VTVM on TP6 - Peak.

L21 Adjust for 10.240 using frequency counter @ TP6.

L20 VCO Coil 2.1V Ch. 40 rec./3.3V Ch. 40 Xmit.

L19 Scope or RF VTVM on TP11 (IC2, pin 4) - Peak.

L18 Scope or RF VTVM to TP2 - Peak.

MICROPHONE WIRING:

1. Audio Shield and Common.
2. Audio Hot.
3. Transmit.
4. Receive.

NOTE: Zapper can be obtained from your favorite Secret CB Dealer or order direct from "Secret CB".

REALISTIC TRC206 (21-1635)

VR3 Squelch Range.

R53 Remove for maximum modulation.

Peak L8 and L10 with field strength meter.

ROYCE 611

RX:

Peak T601 on 455KC.

Peak T103,T102,T101,VR101 on Ch.19.

VR102 Squelch Range

VR104 S Meter

VR1 Channel 9 Alert

TX:

Peak T301,T302,L303,VC1, for maximum.

VR202 Modulation Control (or remove Q205)

VC2,VR Antenna Warning Indicator

MIKE WIRING: Electronic Switching

1. Audio hot (Yellow)
2. Shield
3. Xmit (Red)
4. REC (Green)
5. Volume (White)

SBE CORTEZ 21CB (SAMS CB58)

RX: Peak T6,T3,T4,T5,T2.
Adjust L1 for minimum using 10 Mhz, 1KC @ 30% signal input.
VR5 S Meter
VR2 Squelch Threshold.

TX: Peak T7,T8,T9,T10,L6,L9,L8.
CVI TVI filter
VR6 RF Power Meter
VR4 Modulation Limiter (or remove C87)

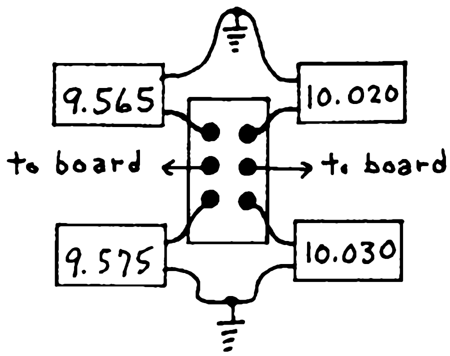
Our unit had a bad alternator whine which was cured by the installation of a GC 18-252 Hot Line Filter installed inside the chassis.

X5-X10 can be replaced or switched for additional channels.

17.760 gives 26.760,26.770,26.780,26.800.
16.765 gives 26.765,27.775,27.785,27.805.
16.815 gives 26.815,26.825,26.835,26.855.
16.865 gives 26.865,26.875,26.885,26.905.
16.915 gives 26.915,26.925,26.935,26.955.
17.235 gives 27.235,27.245.27.255,27.275.
17.265 gives 27.265,27.275,27.285,27.305.
17.315 gives 27.315,27.325,27.335,27.355.
17.365 gives 27.365,27.375,27.385,27.405.
17.415 gives 27.415,27.425,27.435,27.455.
17.465 gives 27.465,27.475,27.485,27.505.
Kit #4 can be used to switch 4 Xtals with one switch.
The missed channels can be obtained by switching the 9.565 with a 9.575 Xtal and the 10.020 crystal with a 10.030.
(Kit #4 can be obtained direct from "Secret CB")

SBE Cortez 21CB continued:

They can be mounted on a DPDT switch as shown;



MIKE WIRING: 4 Pin Locking Ring Connector - Relay Switching.

1. Shield 3. Xmit (Red)

2. Audio hot (White) 4. Common (Black)

SUPER SCOPE AIR COMMAND CB1040 BASE (uPD861)

RX: L401-L498

TX: L606, L607, L610

ADJ. R810 for Power Increase

R508 is AM Modulation Control

Remove Q501 to eliminate AMC (located under meter).

Comments: I recently set up one of these to 9W with 100% + modulation and have had no problems with Final or Driver. This unit comes with a desk mike with 3 position gain setting that works real good. Also has excellent receive and a noise blanker that is hard to beat.

TENNA 10901 MSM 5807

RX:

Peak T4 and T5 on 455KC.

Peak T3,T2,T1,L4 on Ch.19.

R26 Squelch Range

R16 S Meter

TX:

Peak T6,T7,T8,T9,T10,T11,L3 for maximum RF

R54 Modulation Control (or remove Q11)

R3 RF Power Meter

FREQUENCY:

T14 is VCO Coil. Pins 12,13,14,15,1,2,3,4,5 are address pins. (IC1) X2,39.570mhz, is the offset oscillator. Crystal can be switched for hi-low channels.

MICROPHONE WIRING: 4 Pin Locking Ring Type

1. Audio Hot
2. Xmit (Violet)
3. REC (Red)
4. Shield

TRS CHALLENGER 460 (861)

RX:

Peak T108, T107,T106 on 455KC.

Peak T105, T104, T103, T102, T101 on Ch.19.

VR2 AGC

VR8 IF Gain

VR6 Squelch Range

VR5 8 Meter S9=100uV.

TX:

Peak T112, T114, L101, L103, L106, L107.

L109 is T.V.I. Filter

VR3 Modulation Control

VR4 RF Power Meter

FREQUENCY

Switch X3 (36.750) Xtal to go higher or lower.

T3 is VCO Coil.

MIKE WIRING: 4 Pin Locking Ring Type. Electronic Switching

1. Audio hot (yellow)
2. Common (shield)
3. REC (violet)
4. Xmit (red)

TRUETONE MCC4434A-57

RX: Peak T3,T4,T5 on 455KC.
Peak L5,L6,L7,T1,T2 on Ch.13.
VR3 A.G.C.

TX: Peak L4,L8,L9,L10,L11,L12,L4.
L1 T.V.I filter
VR1 RF Output Meter

For maximum modulation, remove C39.

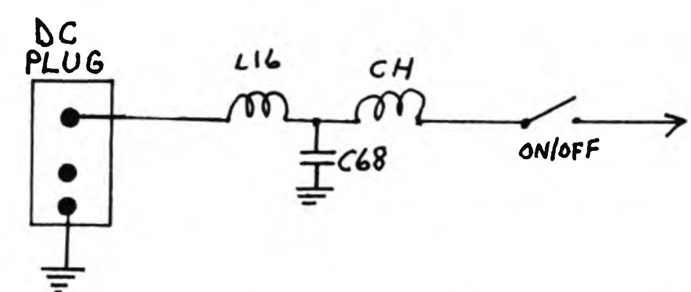
For additional frequencies, consult the information on the Midland 13-862 previously described.

MIKE WIRING: Electronic Switching.

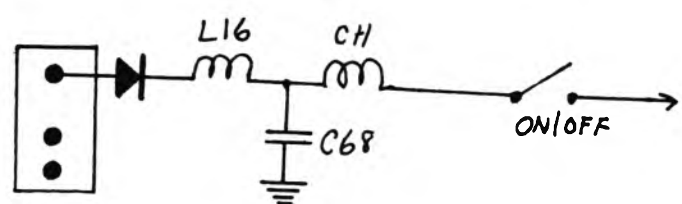
1. Audio hot
2. Xmit
3. Rec.
4. Shield

No polarity protection diode. Add a HEP170 (#99) as shown:
(#99 can be obtained from "Secret CB")

Before



After



WARDS GEN-680A (TC 9103P)

SYNTH:

Peak L102 on Ch. 19 (Scope to TPK)

Adjust TC 101 For 10.240Mhz. (Counter @ TPK)

Adjust L105 (VCO) for 2 volts on Ch.1. CHeck for 3 volts on Ch.40. Peak L3 for maximum RF with scope on TPC on Ch.19. Peak L103,L104,105 for maximum. Rf with scope on TPL,Ch.19 Xmit.

RX:

Peak T2,Tl on 455KC.

Peak L2,Ll on Ch.19.

VR1 Squelch Range

VR 2 S Meter

TX:

Peak L4,L5 on Ch.19.

Peak L6,L7,L9 for maximum.

VR3 Modulation Adjustment (or remove Q8)

FREQUENCY:

Zapper 9000,(#89), can be installed @ C111 for extra channels.

MIKE WIRING: 6Pin Din Connector

1. White
2. Blue
3. Violet
4. Yellow
5. Sheild
6. Red

Note: #89 can be obtained direct from "Secret CB".

WARDS GEN-696A TC-9103P PLL

Mod. Defeat (D-8)

AMC-VR3

Peak TX-L4,L5,L6,L7,L9

Squelch Range-VR4.

25-29 MHZ FREQUENCY ASSIGNMENTS

25.000	N.B.S.
25.013	U.S. Navy
25.020	U.S. Army
25.035	U.S. Army
25.040	Oil Spills Cleanup
25.069	U.S. Navy
25.080	U.S. Coast Guard
25.085	U.S. Navy-Ships
25.090	U.S. Navy-Ships
25.095	U.S. Navy-Ships
25.100	U.S. Navy-Ships
25.105	U.S. Navy-Ships
25.110	U.S. Navy-Ships
25.113	U.S. Navy
25.130	U.S. Air Force
25.161	U.S. Air Force
25.198	U.S. Air Force
25.230	Inter-Military Freq.
25.240	U.S. Army
25.245	U.S. Air Force
25.333	U.S. Air Force
25.335	U.S. Marine Corps
25.340	U.S. Air Force
25.350	Inter-Military Freq.
25.360	U.S. Navy
25.365	Inter-Military Freq.
25.380	U.S. Coast Guard
25.390	U.S. Army
25.400	Inter-Military Freq.
25.410	U.S. Navy
25.415	U.S. Coast Guard
25.412	U.S. Navy
25.425	U.S. Army
25.430	U.S. Dept. of Energy
25.440	U.S. Navy
25.450	U.S. Army
25.470	U.S. Navy/Air Force
25.480	U.S. Navy
25.515	U.S. Navy/Air Force
25.525	U.S. Air Force
25.535	U.S. Army
25.550	U.S. Army
25.575	U.S. Navy
25.590	U.S. Navy
25.597	U.S. Air Force
25.845	U.S. Marine Corps
26.110	U.S. Navy
26.310	U.S. Navy
26.356	U.S. Air Force
26.389	U.S. Air Force
26.485	U.S. Navy
26.490	U.S. Navy
26.500	Inter-Military Freq.
26.510	U.S. Army
26.515	U.S. Air Force
26.535	U.S. Navy
26.540	U.S. Navy
26.550	Inter-Military Freq.
26.560	U.S. Navy
26.575	U.S. Army
26.580	U.S. Navy
26.590	U.S. Air Force
26.610	U.S. Navy/Marine
26.615	U.S. Navy
26.620	Civil Air Patrol
26.625	U.S. Air Force
26.630	U.S. Army
26.650	U.S. Navy
26.665	U.S. Navy
26.675	U.S. Navy
26.684	U.S. Air Force
26.700	U.S. Army
26.710	U.S. Air Force
26.725	U.S. Marine Corps
26.750	U.S. Navy/Air Force
26.775	U.S. Marine Corps
26.800	Border Patrol
26.825	U.S. Navy
26.835	U.S. Navy
26.850	U.S. Navy/Army
26.875	U.S. Navy
26.880	Border Patrol
26.900	Inter-Military Freq.
26.925	U.S. Navy/Army

(con't)

25-29 MHZ FREQUENCY ASSIGNMENTS (cont'd)

26.930	U.S. Navy/Marine Corps.	27.750	U.S. Navy/Army
26.945	Federal Aviation Admin.	27.775	U.S. Army
27.545	U.S. Navy	27.785	U.S. Coast Guard
27.550	U.S. Navy/Army	27.794	U.S. Army
27.565	U.S. Navy/Army	27.800	U.S. Navy/Army
27.575	F.C.C.	27.825	U.S. Army
27.585	F.C.C.	27.850	U.S. Navy/Army
27.590	U.S. Coast Guard	27.870	U.S. Air Force
27.595	U.S. Navy	27.875	U.S. Army
27.600	U.S. Navy/Army	27.900	U.S. Army
27.615	U.S. Navy	27.925	U.S. Army
27.625	Federal Aviation Admin.	27.950	U.S. Navy/Army
27.630	N.A.S.A.	27.964	U.S. Navy
27.650	U.S. Navy/Army	27.975	U.S. Army
27.655	U.S. Navy	27.980	U.S. Coast Guard Reserve
27.675	U.S. Army	27.995	U.S. Army
27.700	U.S. Navy/Army	29.895	U.S. Navy
27.715	U.S. Navy	29.900	Air Force One
27.725	N.A.S.A.	29.905	Inter-Military Freq.
27.745	U.S. Navy		

ELECTRONIC TERMINOLOGY

'90 DAY WONDER'.......The thick plastic insulators sometimes used on driver and final transistors. They do not allow adequate heat transfer so we advise to replace them with standard mica type insulators with a liberal amount of silicone heatsink compound (ECG 424).

LSB-MSB...............Refers to binary bits in a digital system. LSB is the least significant bit (Po) and MSB is the most significant bit (P6). often seen used in programmable dividers address pins.

Po....................In a programmable divider chip, the least significant bit.

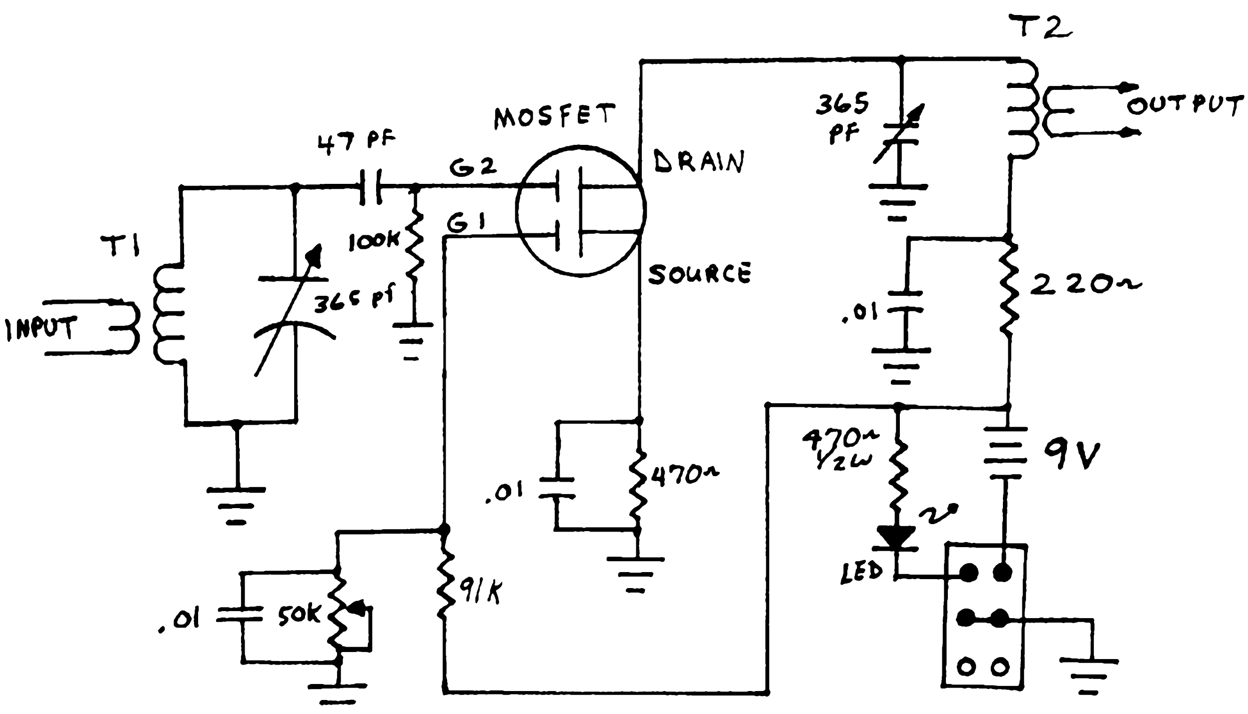
P6,P8, etc............In a programmable divider chip, the most significant bits.

FET RECEIVER PRE-AMP

"SECRET CB SAYS "You Can Build It"

PARTS LIST:

1 - 50K Linear Taper Pot.
2 - 365 pf Variable Capacitor.
3 - .01 uf disc capacitor (50V).
1 - 100K ¼W Resistor.
1 - 91K ¼W Resistor.
1 - 470Ω ¼W Resistor.
1 - 470Ω ½W Resistor.
2 - Miller D-5495-A RF Transformer.
1 - DUAL MOSFET ECG454,SK3065.
1 - Red LED.
1 - 9 Volt Battery.
1 - 220Ω ¼W Resistor.
1 - DPDT Switch.
1 - 47PF (50V).



Coils should be shielded with Miller type S-33 Shields.
LEAD from T2 should be as short as possible.
T1 and T2 should be placed at Right angles.

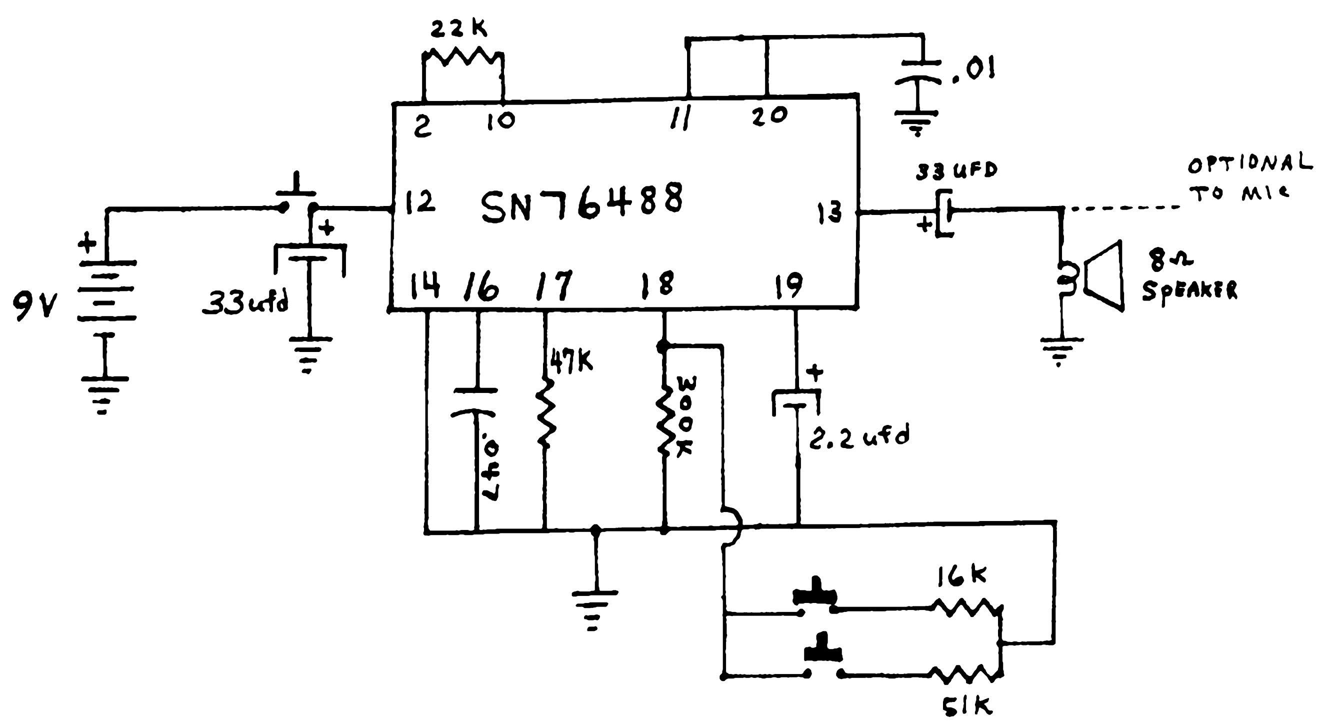
BUILD YOUR OWN SPACE SOUND

This novel circuit uses a SN76488 Sound Generator Chip, available from Radio Shack and a hand full of resistors and capacitors

PARTS LIST

1 - SN76488 IC Chip
1 - 22K ¼W Resistor (Red-Red-Orange)
1 - 47K ¼W (Yellow-Violet-Orange)
1 - 16K ¼W (Brown-Blue-Orange)
1 - 51K (Green-Brown-Orange)
1 - 300K ¼W (Orange-Black-Yellow)
1 - .01 uf (103)
1 - 2.2 uf/25V
1 - .047 uf (473)
2 - 33uf/25V
3 - SPST Momentary contact P.B. Switches

Pin 13 is the audio output. It can be connected to a speaker or can modulate the Xmtr by connecting to the mic input audio hot wire.



BUILD AN AMPLIFIER *

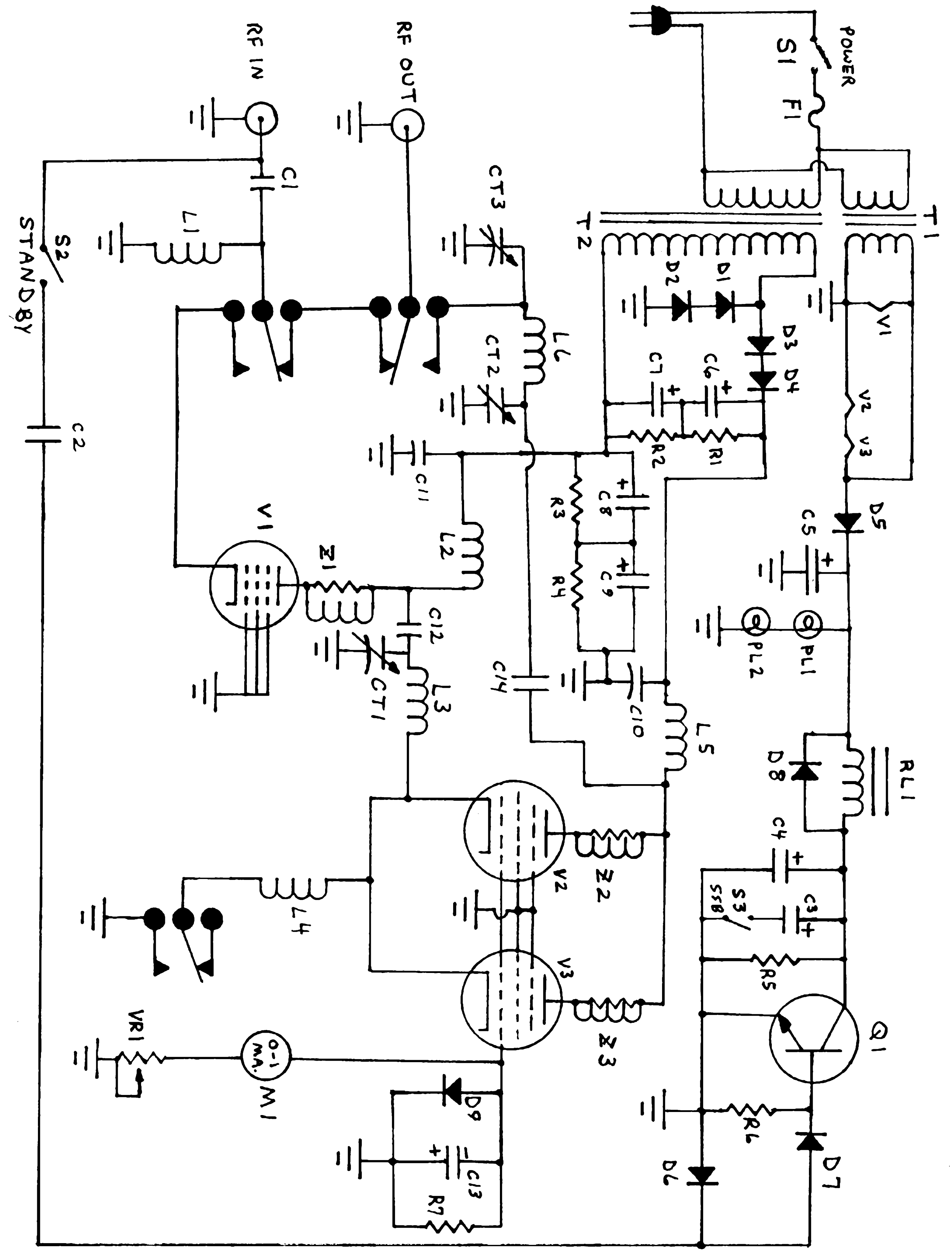
AMPLIFIER PARTS LIST

S1	120VAC/10A SPST Toggle Switch
S2,S3	120VAC/3A Submini Toggle Switch
M1	0-1 Milliammeter, DC
RL1	3PDT 12VDC Relay
F1	5 Amp Fuse
PL1,P12	12 Volt Pilot Lamps
V1	12JB6 Tube
V2,V3	6LQ6 (6MJ6,6JE6C) Tube
Q1	2N2222(2N3904) Transistor
R1,R2,R3,R4	220K/2W Resistor
R5	4.7k ½W
R6	100ohm ½W
R7	47ohm ½W
VR1	10k/1W POT
Z1,Z2,Z3	100ohm/2W Resistor with 4 turns #18 ennamuled wire.
T1	120V Primary, 12.6VAC/4A Secondary.
T2	120V Primary, 365VAC/.4 Secondary.
C1,C12,C14	.01/1KV Disc Capacitor
C2	47pf Disc. Cap.
C3,C5	1000ufd./35VDC Electrolytic Capacitor
C4,C13	100ufd/35VDC Electrolytic Capacitor
C6,C7,C8,C9	100ufd/350WV Electrolytic Capacitor
C10,C11	.005/3KV Disc Cap.
CT1	50pf Trimmer Cap.
CT2	35pf Trimmer Cap.
CT3	365pf Trimmer Cap.
L1	2.5mh choke
L2	22uh, 50turns #26,½" diameter
L3	9 turns #12 3/4" diameter 1¼" Long
L4	25 turns #18,¼" diameter
L5	22uH, 75 turns #26 ¼" diameter
L6	12 turns #12 1" diameter
D1,D2,D3,D4	1kv/1A Silicon Diode
D5,D8,D9	HEP 170 (IN4002)
D6,D7	IN34

SCHEMATIC ON FOLLOWING PAGE.

* Illegal on 27 MHz. Citizens Band Radio Service.

SCHEMATIC FOR AMPLIFIER:



SECRET CB INDEX

LISTING ALL MODELS/CHASSIS COVERED
"SECRET CB" SERIES VOLUMES 1 THRU 13

SPECIFIC RADIO TUNEUPS (CONT.)

VOLUME 3

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VOLUME 4

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VOLUME 5

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VOLUME 6

****

VOLUME 7

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VOLUME 8

****

VOLUME 9

****

VOLUME 10

****

VOLUME 11

****

VOLUME 12

****

VOLUME 13

VOLUME 13

NOTES