

VOLUME 14

PUBLISHED JUNE, 1982

SECRET CB[®]



CONFIDENTIAL
**FACTUAL
REPORT**

SCHEMATICS ETC.

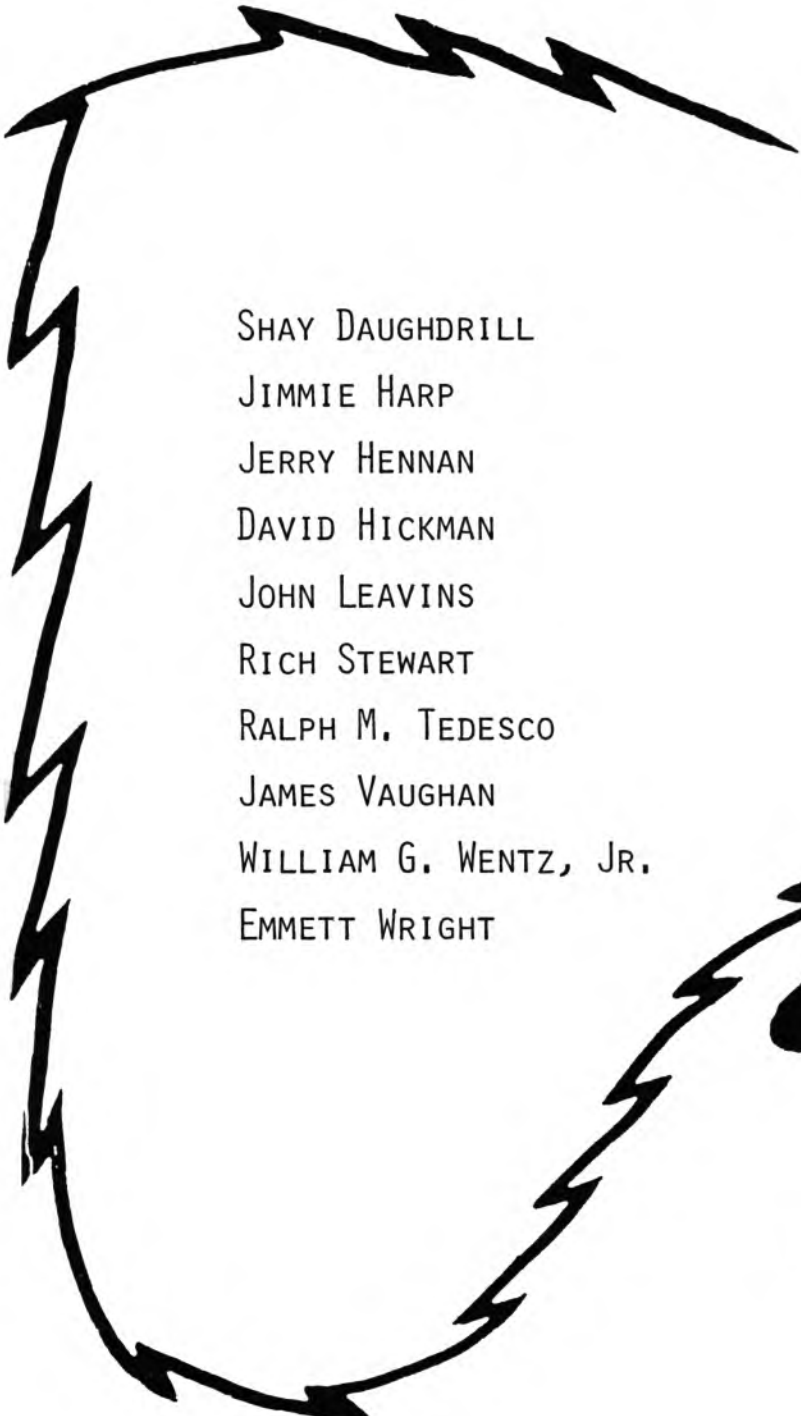
UPDATED QUARTERLY

PRICE \$19.95

BY VIC RICHTER

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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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 and have a standing offer of honorary mention and FREE BOOK to contributors of NEW, previously unpublished material.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

TABLE OF CONTENTS

	PAGE #
ACKNOWLEDGEMENTS.....	1
INTRODUCTION.....	2
TABLE OF CONTENTS.....	3-4
SSB CONVERSIONS:	
GOLDEN EAGLE MARK IV-A.....	5-6
KENWOOD TS-820S.....	7-8
LAFAYETTE SSB-75.....	9
MIDLAND 78-574 (02A).....	10
MB8719/11.1125 CHASSIS UPDATE.....	11-12
CRAIG L321.....	12
PRESIDENT GRANT "HOME CHANNEL CONVERSION".....	13-14
MB8719/11.3258 TRUTH TABLE.....	15-17
NEW PRODUCT RELEASE:	
FM-30B THRU-LINE FREQUENCY COUNTER.....	18-19
NEW! "KIT A" FOR LC7130/7131 & TC9106P CHIPS....	20
"KIT A" INSTALLATION INSTRUCTIONS:	
HOW TO MAKE UP THE SPDT SWITCH.....	21
COBRA 21 & 25 GTL/LTD.....	22
COBRA 19X.....	23
COLT 210 & 222.....	23
GE 3-5804F.....	24
GE 3-5805A.....	25
GE 3-5805B.....	23
K40 K-401.....	26
MIDLAND 151M, 102M, 100M, 2001, 3001, 4001.....	23
MIDLAND 200M.....	27
MIDLAND 77-824B.....	28
PRESIDENT AR-7.....	29
PRESIDENT AX-7.....	30
PRESEDENT AX-11.....	31
PRESIDENT AX-43.....	32
PRESIDENT AR/AX 44 & AR/AX 711.....	22
PRESIDENT JAMES K.....	34
PRESIDENT "OLD HICKORY".....	33
REALISTIC TRC-427.....	28
REALISTIC 410.....	35
REALISTIC 421.....	36
REALISTIC TRC 422A/421A.....	37
REALISTIC TRC 426.....	38
REALISTIC TRC 428.....	39
SEAHAWK 40.....	32
TEABERRY STALKER III.....	40
AM CONVERSIONS & TUNE-UPS:	
CHANNEL MASTER CB6830.....	41
GE 3-5813A/3-5869A.....	41
MECTRON ME-402.....	41
SPARKOMATIC CB-4020S.....	41
VARIOUS MODULATION ADJUSTMENT: BROWNING SABRE, COBRA 29 & 1000 GTL, MIDLAND 102M & 130858, MORSE 2001, PACE CB144, PANASONIC RJ3200, ROBERTS 40Ch., and ROYCE 1-650.....	
	42
BOMAN CB920 (02A).....	43
BOWMAN CB-755 (23Ch. - Xtal Rig.....	44

TABLE OF CONTENTS CONT'D.

AM CONVERSIONS & TUNE-UPS (CONT'D):	PAGE #
CHANNEL MASTER CB6834.....	44
COBRA CAM89.....	45-46
COLT 350 (M-374) D861C-PLL.....	46
JC PENNEYS 981-6225 (981-8253).....	47
MIDLAND 13-862.....	48-49
MIDLAND 13-879.....	50
MIDLAND 76-860 (TC9102P).....	51
PANASONIC RJ-3660.....	52
PEARCE SIMPSON COUGAR 23 (LATE PRODUCTION).....	53
PRESIDENT ZACHARY T, DWIGHT D w/uPD 2816C PLL...	54
REALISTIC TRC 206 (21-1635).....	55
ROYCE 611.....	55
SBE CORTEX 21CB (SAMS CB58).....	56-57
SUPER SCOPE AIR COMMAND CB1040 BASE (uPD861)....	57
TENNA 10901 MSM 5807.....	58
TRS CHALLENGER 460 (861).....	59
TRUETONE MCC4434A-57.....	60
WARDS GEN-680A (TC 9103P).....	61
WARDS GEN-696A(TC-9103P).....	61
BROWNING PING INFORMATION.....	41
25-29 MHZ FREQUENCY ASSIGNMENTS.....	62-63
ELECTRONIC TERMINOLOGY.....	63
"YOU CAN BUILD IT":	
FET RECEIVER PRE-AMP.....	64
BUILD YOUR OWN SPACE SOUND.....	65
BUILD AN AMPLIFIER.....	66-67
SECRET CB INDEX FOR VOLUMES 1-13.....	68-80

GOLDEN EAGLE MARK IV A 26.285MHZ - 28.035MHZ

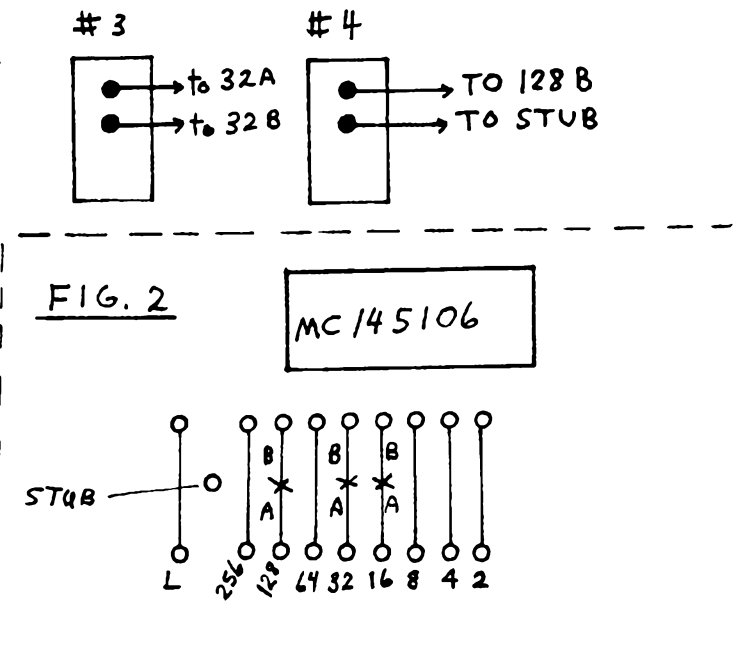
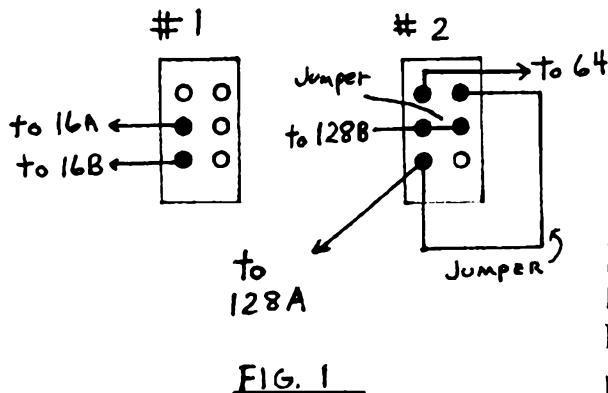
Transmitter Modification

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.

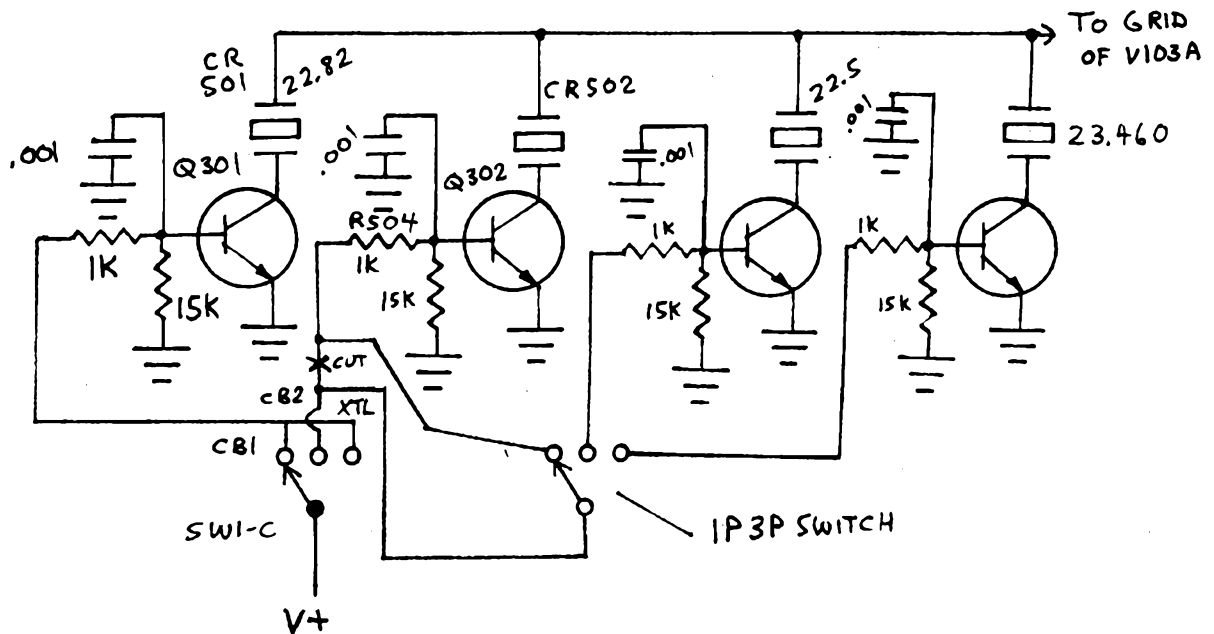
* You will need to adjust L701,L702, and L705 for full coverage.



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 $\frac{1}{4}$ w resistor; 15K $\frac{1}{4}$ w 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.

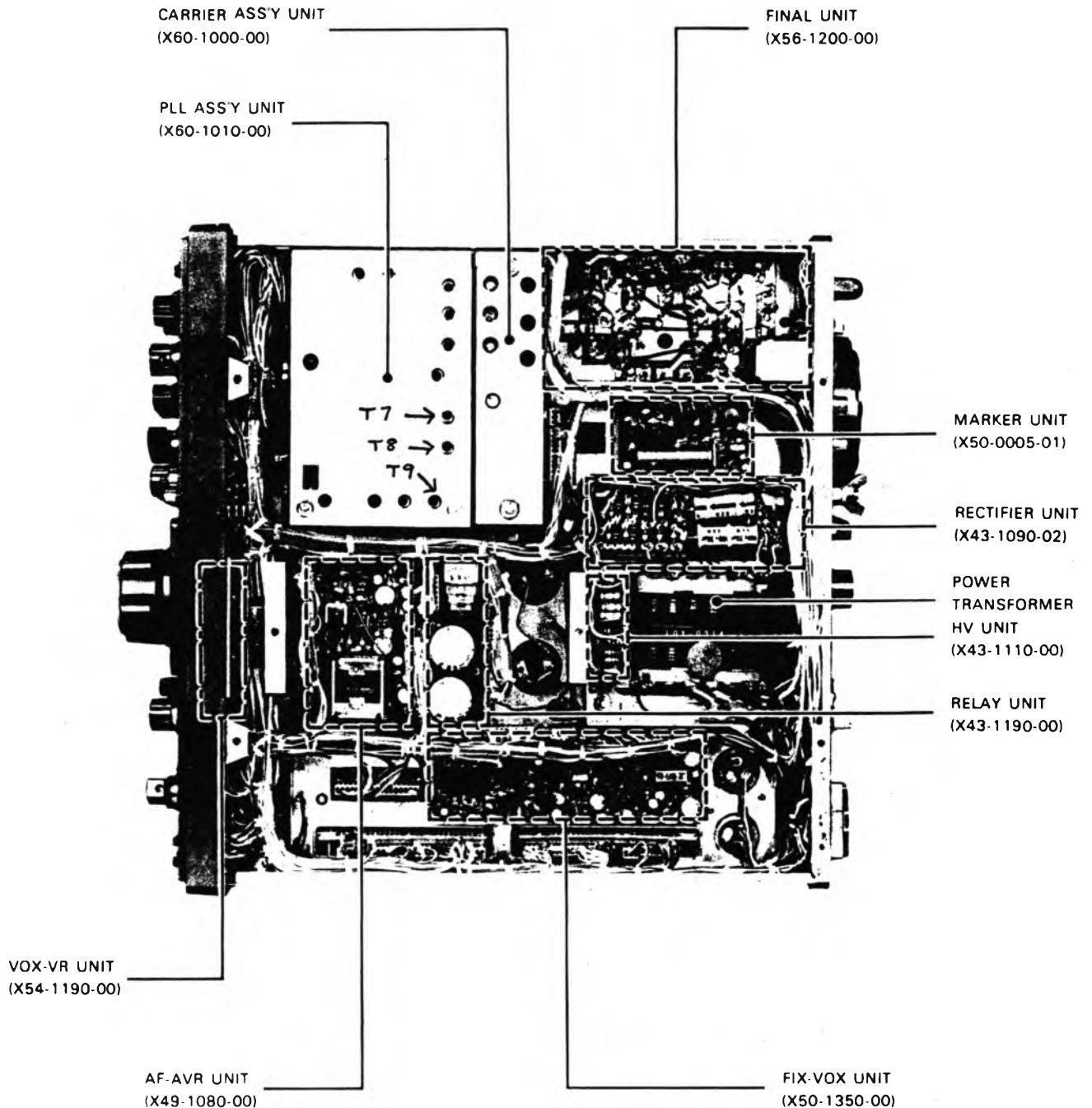
* Reference: Vol.7. Now you are in business!

KENWOOD TS-820S

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.



KENWOOD TS-820S (CON'T)

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 Green wire on the FINE TUNE control. Cut at board end and resolder to ground.
2. Locate and cut the Brown 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.

TX Alignment:

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
TV1; 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

RX Alignment:

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

MIDLAND 78-574 (O2A)

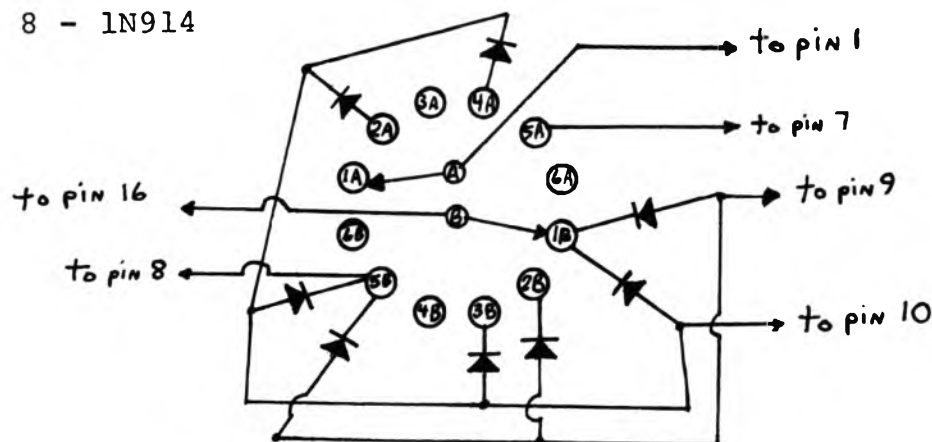
Clarifier

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

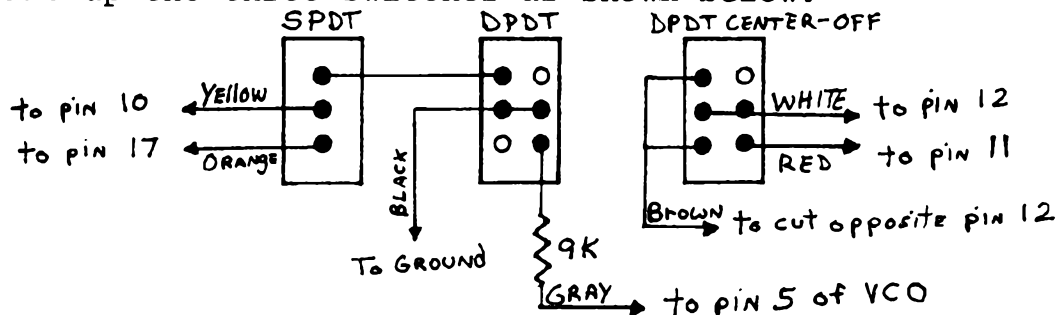
Frequency Range: 26.175 - 28.085 MHz.

Prototype Set: President Washington

Parts Required: 1 SPDT Switch
1 DPDT Switch
1 DPDT Center Off Switch
1 9K $\frac{1}{4}$ 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.

MB8719/11.1125 CHASSIS UPDATE (CON'T)

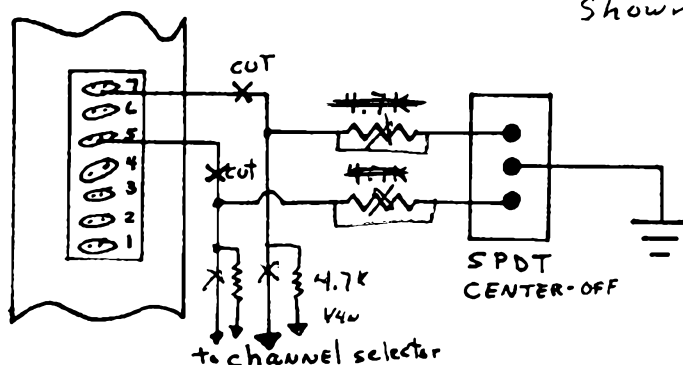
- C. The Center-Off switch will give 27.415-27.445 in the center. Frequencies of 26.815-26.965, 28.005-28.085, and 26.775-26.805 are obtained by using different combinations of the other two switches.
- D. Using the DPDT and Center-Off combinations gives 26.175-26.325.
- E. Using the SPDT switch only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

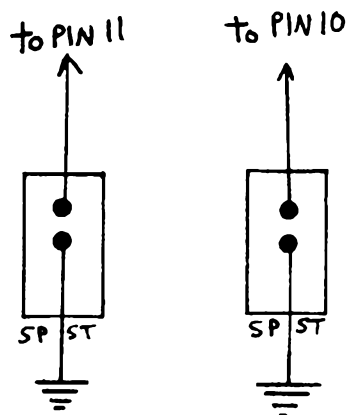
D28 anode to pin 10.

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;



PRESIDENT GRANT (CONT)

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

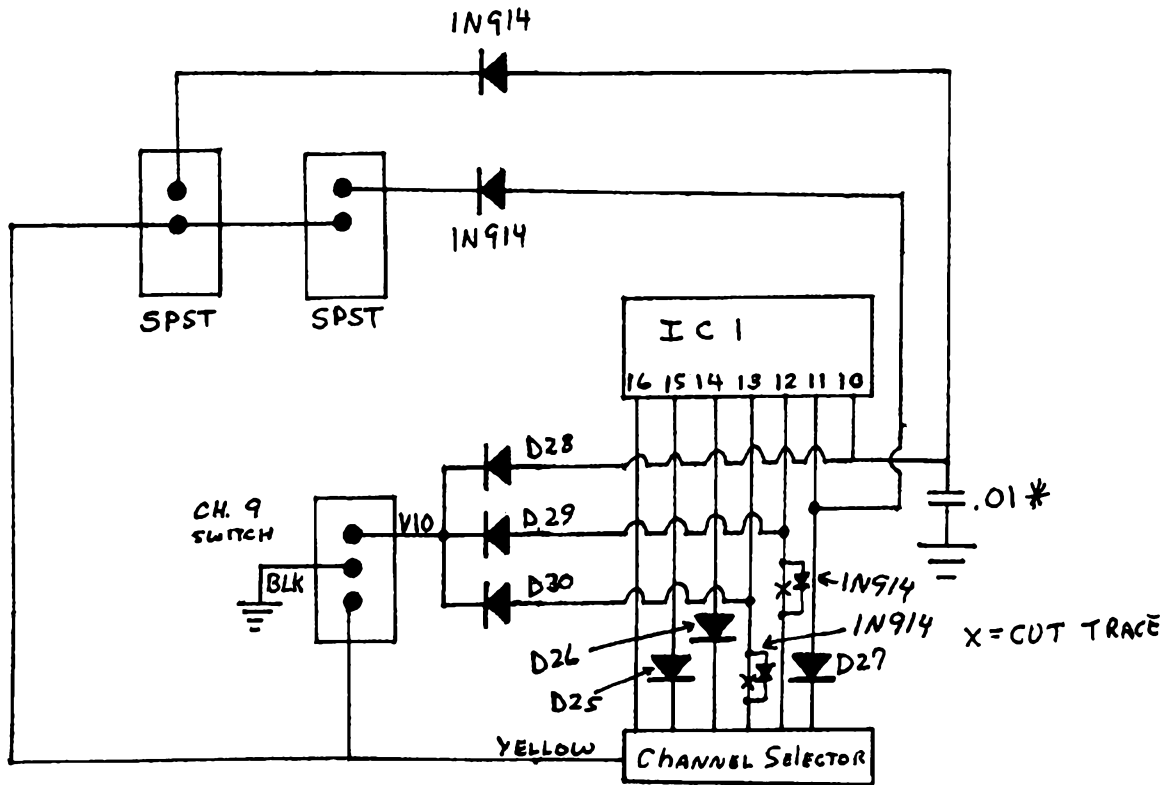


FIGURE 1

*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 Pin #	64 10	32 11	16 12	8 13	4 14	2 15	1 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 frequencies.
- Stable crystal oscillator circuit.
- Low power consumption and reverse polarity protection.
- Positive or Negative ground operation.
- Reliable C-Mos. L.S.I. (Large scale integration) 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.

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. $10^\circ - 40^\circ\text{c}$
- Accuracy ± 10 P.P.M. ± 1 count (L.S.D.**)
- Frequency resolution 1 KHz., 100 Hz.
- Gating speed012 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.

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

** (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

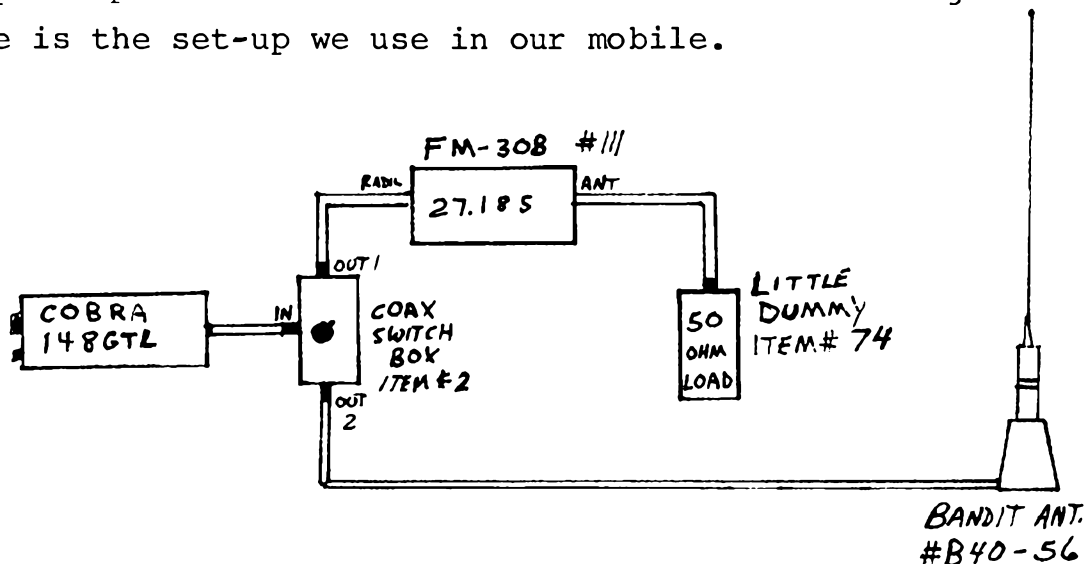
NEW!

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 switchable 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 inherent skips on channels 45, 50, 55, 60, and 65.

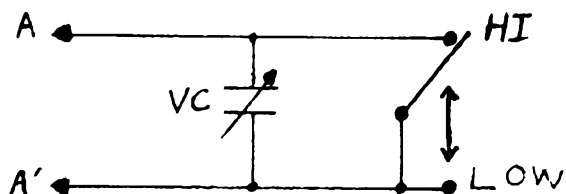
This kit is the result of months of "determination" and "experimentation" and shows the "Old American Know How" is still alive and well. Of course, this kit is for expanding the receiver only and no responsibility is assumed for any other use which could exceed FCC Rules and Regulations.

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.)

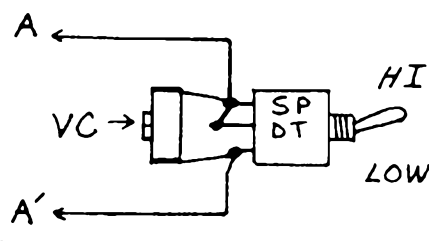


HOW TO MAKE UP THE SPDT SWITCH

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



and Physically like this:



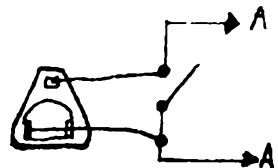
On the three leg trimmer capacitors, turn the bottom legs inward from this



to this.



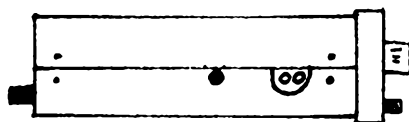
Bottom View



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

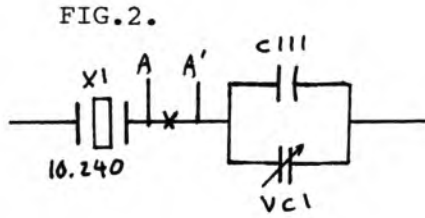
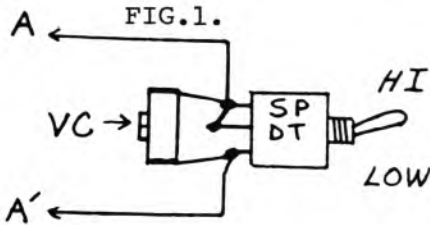
Use a hole saw or chassis punch 1" in size and cut the component side cover as illustrated, at a point where switches can be accommodated without interfering with alignment, etc.



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

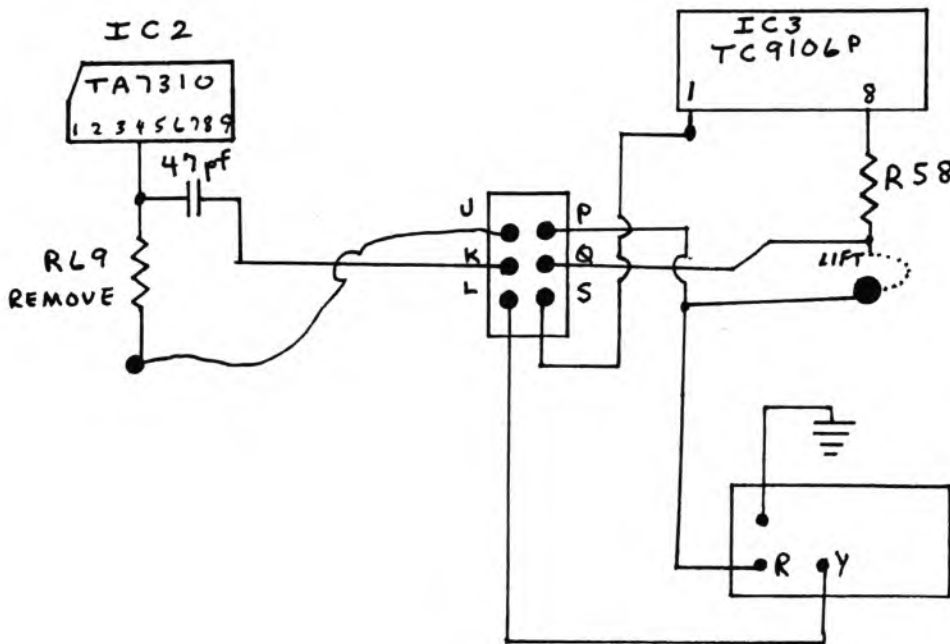


1. Wire up the SPDT switch and the trimmer capacitor (supplied) as shown in Fig.1.
2. Cut the trace between the 10.240MHz. crystal and VC1/C111. Solder the wires from the switch to each side of the cut trace as shown in Fig.2.
3. With switch in low position, adjust VC for 27.410 MHz on Ch. 40.
4. Switch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

CHANNEL CONVERSION

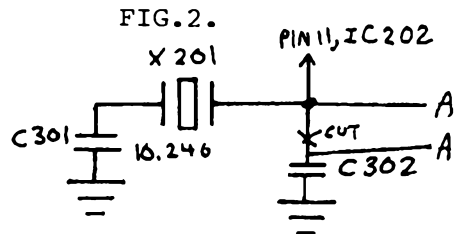
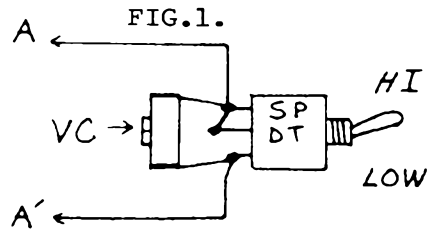
1. Unsolder and lift the end of R58 opposite pin 8 of IC3.
2. Run a wire from terminal Q of the DPDT switch to the lifted end of R58.
3. Run a wire from terminal P to where R58 was connected. Also run a wire from P to the red dot post of the epoxy pak. *ALSO Run wire from L to Yel Dot on Epoxy Pak*
4. 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

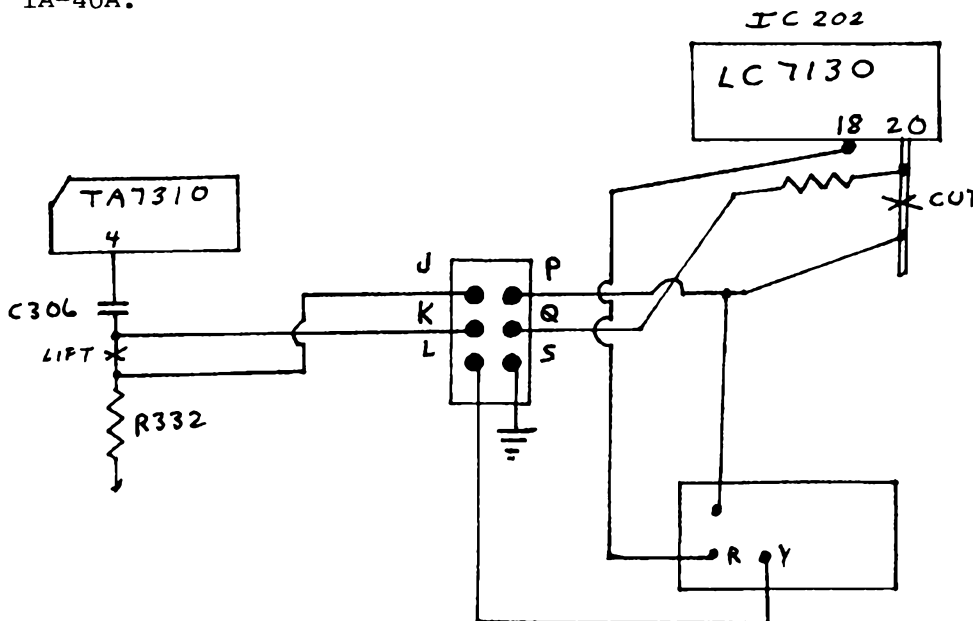


1. Wire up the SPDT switch and the trimmer capacitor supplied as shown Fig.1.
2. Cut foil at leg of 10.240 as shown. Solder wires from the switch to each side of the cut trace.
3. With switch in low position, adjust VC for 27.410 on Ch.40.
4. Check for 27.405 on high position. If necessary, alter value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

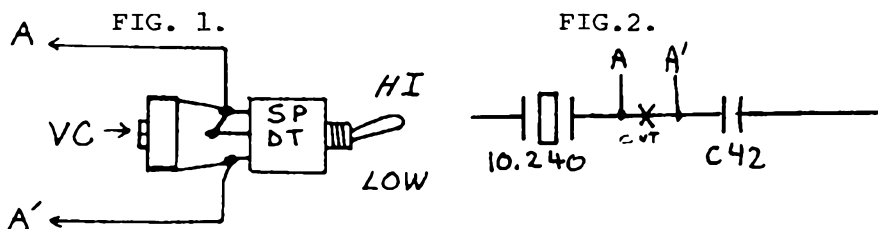
CHANNEL CONVERSION

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

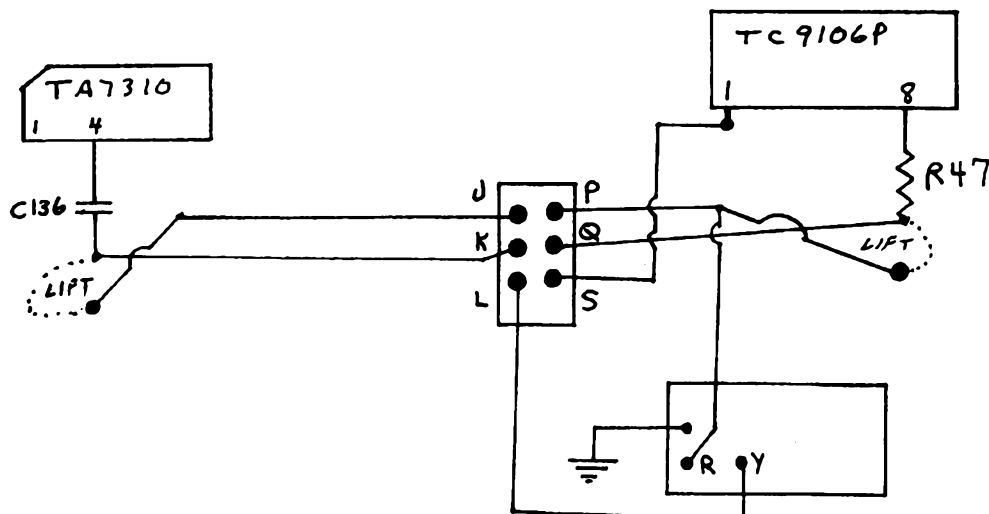


1. Wire up the SPDT switch and trim capacitor (supplied) as shown in Fig. 1.
2. Cut the foil trace between the 10.240 crystal and C42 and wire as shown in Fig. 2.
3. With switch in low position adjust VC for transmit freq. of 27.410 on Ch. 40.
4. Switch to high position and check for 27.405. If necessary,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



GE 3-5805A

5KC OFFSET

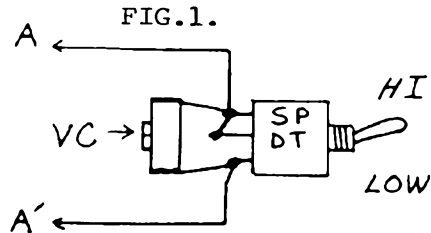
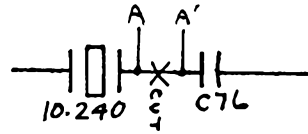


FIG.2.

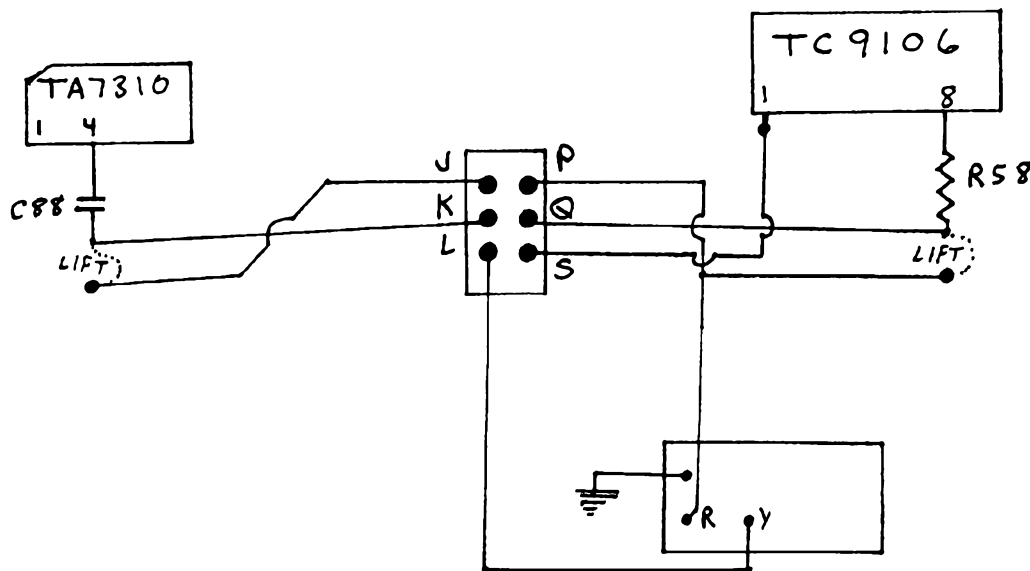


1. Wire up the SPDT switch and the trimmer capacitor (supplied) as shown in Fig.1.
2. Cut the foil trace between the 10.240 crystal and C76 as shown Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust VC for 27.410 on Ch.40.
5. Switch to Hi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

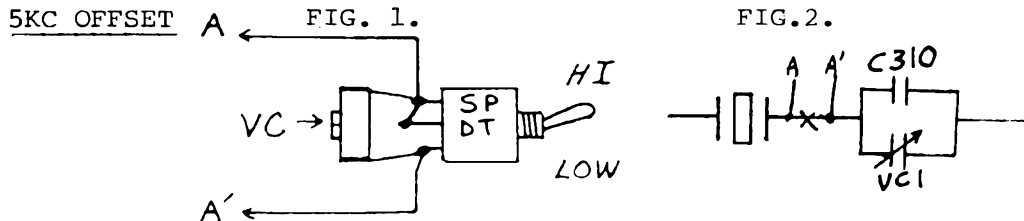
CHANNEL CONVERSION

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.



K40 K-401

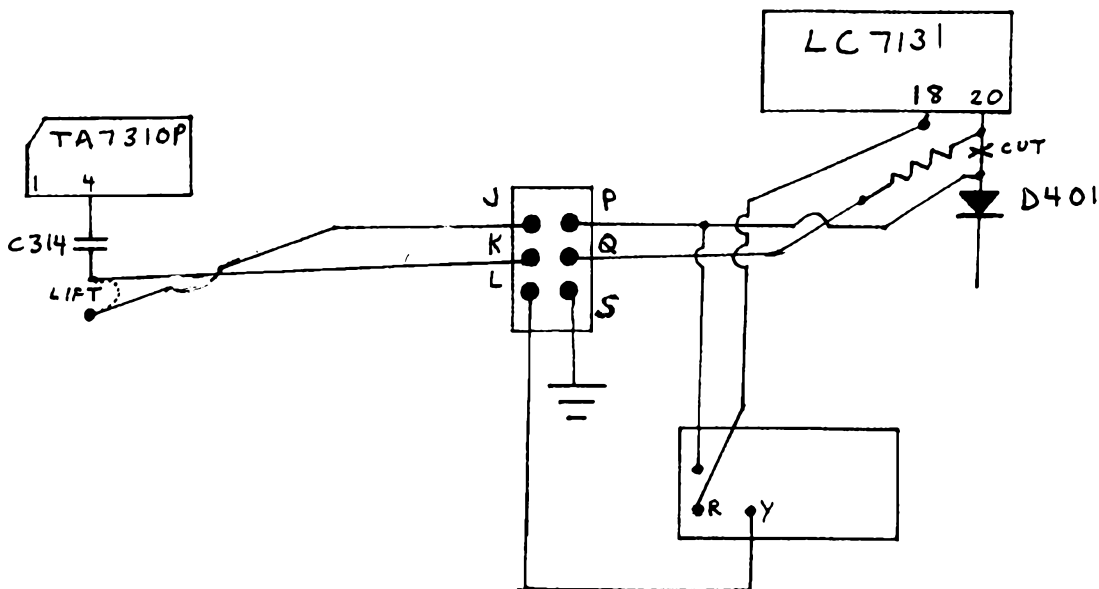


1. Wire up the SPDT switch and the trimmer capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240 crystal and C310/trim cap.
3. Solder the wire from the switch to each side of the cut trace.
4. With switch in low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high position and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

CHANNEL CONVERSION

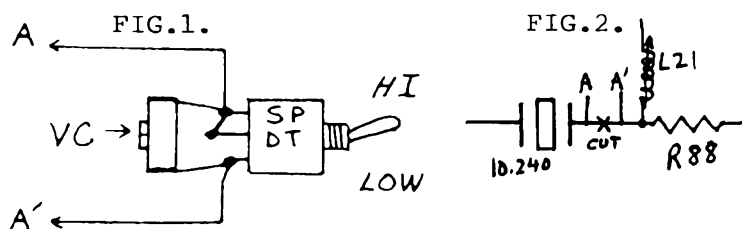
1. Cut the foil trace between pin 20 of the LC-7131 PLL chip and D401.
2. Solder a leg of the 4700 Ω resistor (supplied) to pin 20.
3. Run a wire from the other leg of the resistor to terminal Q of the DPDT switch provided.
4. Run a wire from terminal P to the other side of the cut trace. Also, run a 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

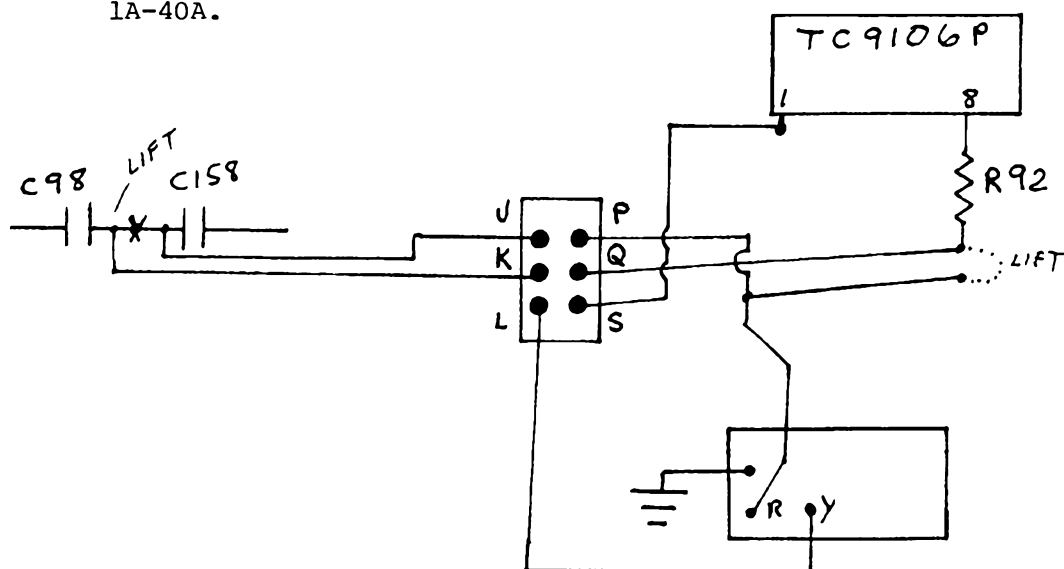


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240 crystal and R88/L21 as shown in Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high position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

CHANNEL CONVERSION

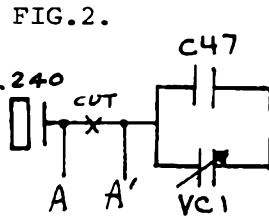
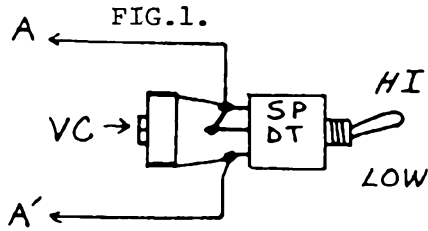
1. Unsolder and lift the end of R92 opposite pin 8 of the TC9106P PLL chip.
2. Run a wire from terminal Q on the DPDT switch provided to the lifted end of R92.
3. Run a wire from terminal P on the switch to where R92 was connected and also to the red dot post of the epoxy pak.
4. Run a wire from terminal 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.



MIDLAND 77-824B & REALISTIC TRC-427

5KC OFFSET

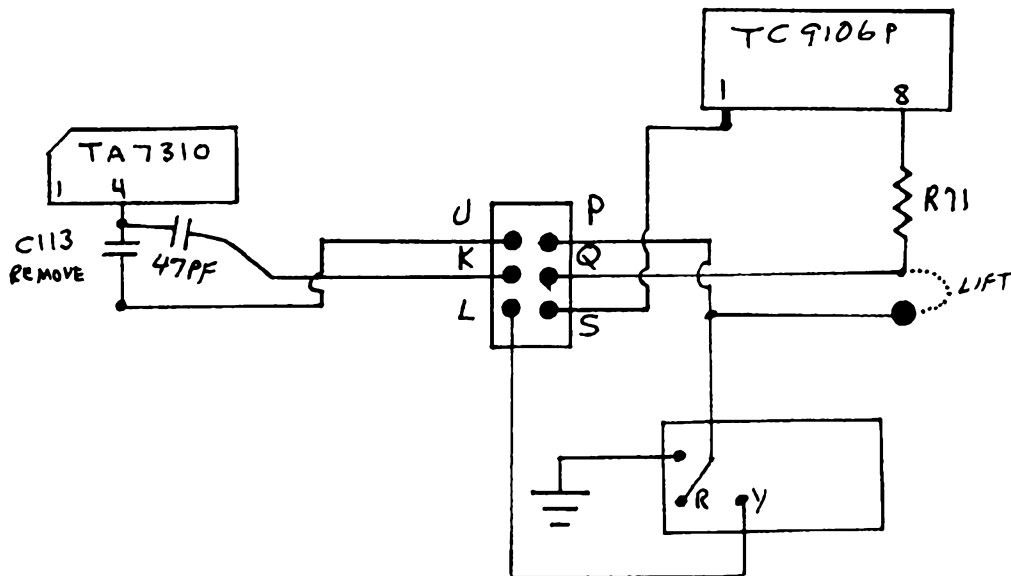


1. Wire up the SPDT switch and trim cap as shown in Fig.1.
2. Cut the foil trace between the 10.240 MHz. crystal and VC1/C47, Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust VC for 27.410 on CH. 40.
5. Switch to high position and check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

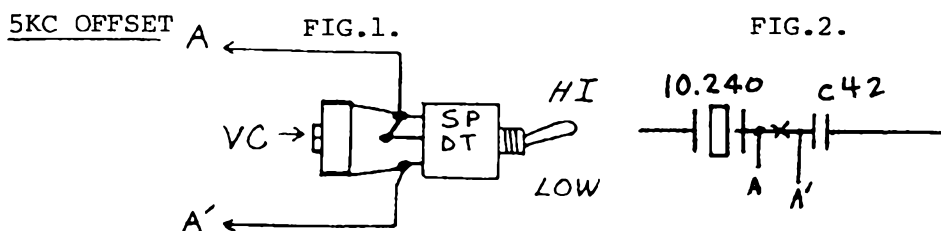
CHANNEL CONVERSION

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

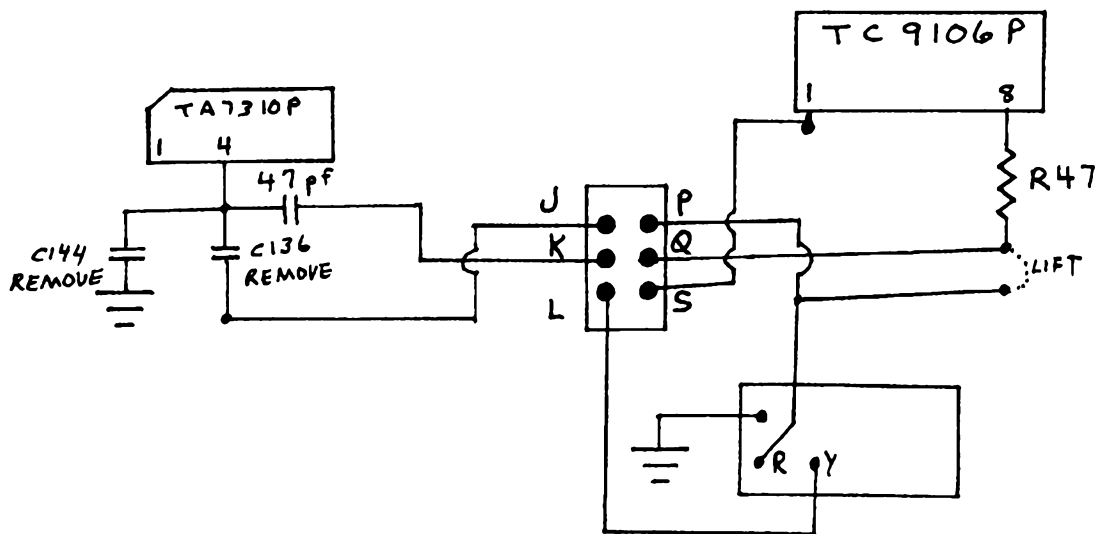


1. Wire up the SPDT switch and trim cap as shown in Fig.1.
2. Cut the foil trace between the 10.240Mhz. crystal and C42 as shown in Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust the VC for 27.410 on Ch.40.
5. Switch to high position and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

CHANNEL CONVERSION

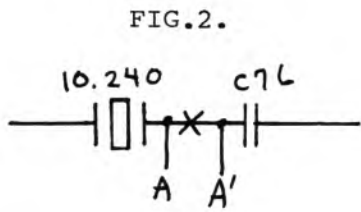
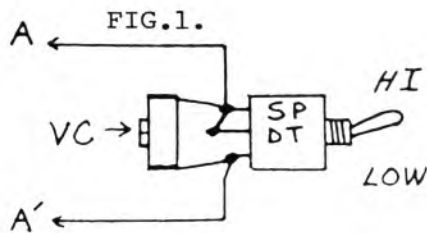
1. Unsolder and lift the leg of R47 opposite pin 8 of the TC9106P PLL chip.
2. Run a wire from terminal Q on the DPDT switch provided to the lifted leg of R47.
3. Run a wire from terminal P on the switch to where R47 was connected. Also run a wire from P to the red dot post on the epoxy pak.
4. Run a 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.



PRESIDENT AX-7

5KC OFFSET

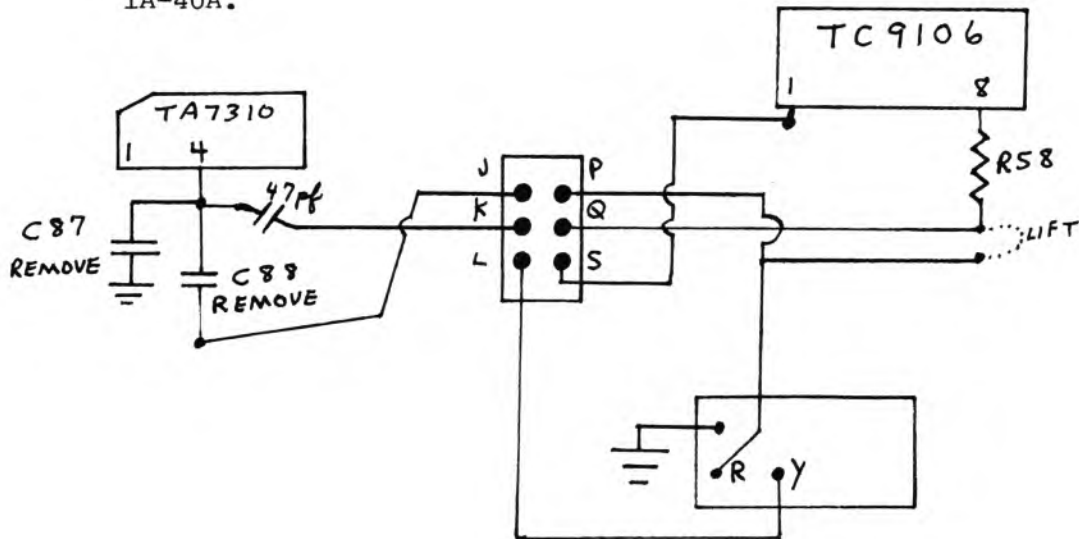


1. Wire up the SPDT switch and trim capacitor as shown in fig. 1.
2. Cut the foil trace between the 10.240MHz. crystal and C76 as shown in Fig. 2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust the VC for 27.410 on Ch. 40.
5. Switch to the high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

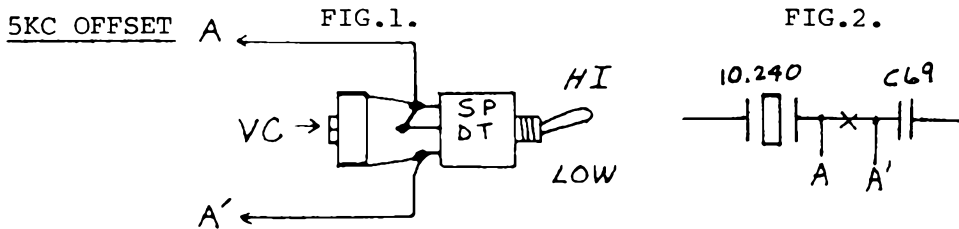
CHANNEL CONVERSION

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.



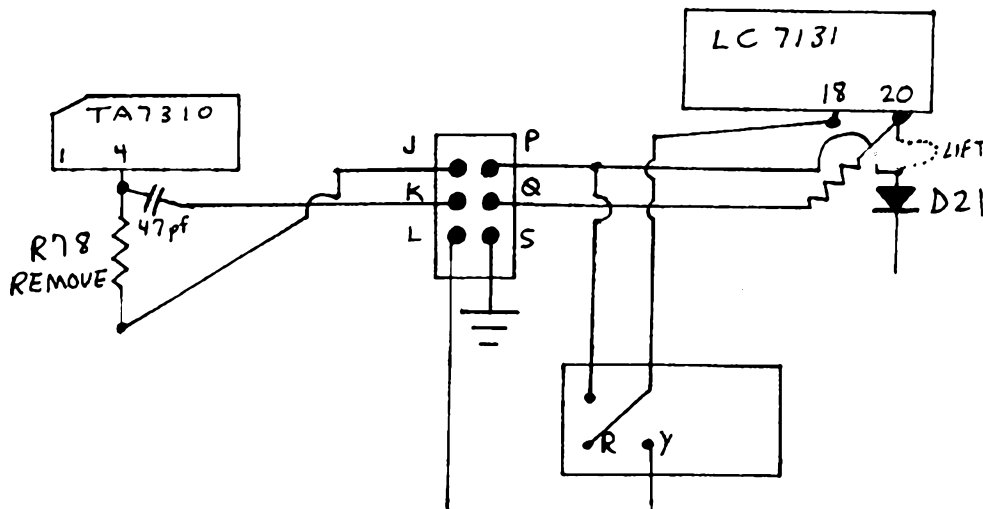
PRESIDENT AX-11



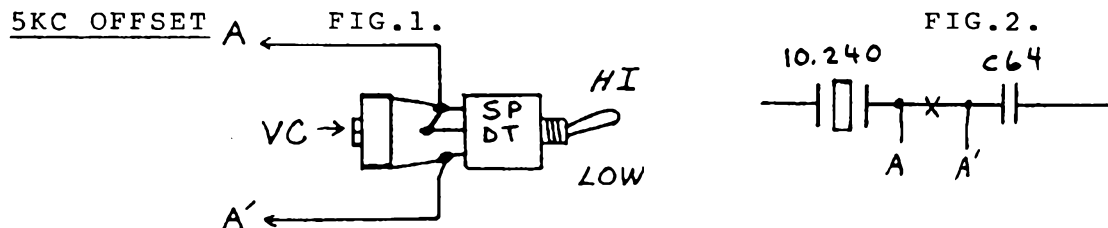
1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C69.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust the VC for 27.410 on CH. 40.
5. Switch to the high position and check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

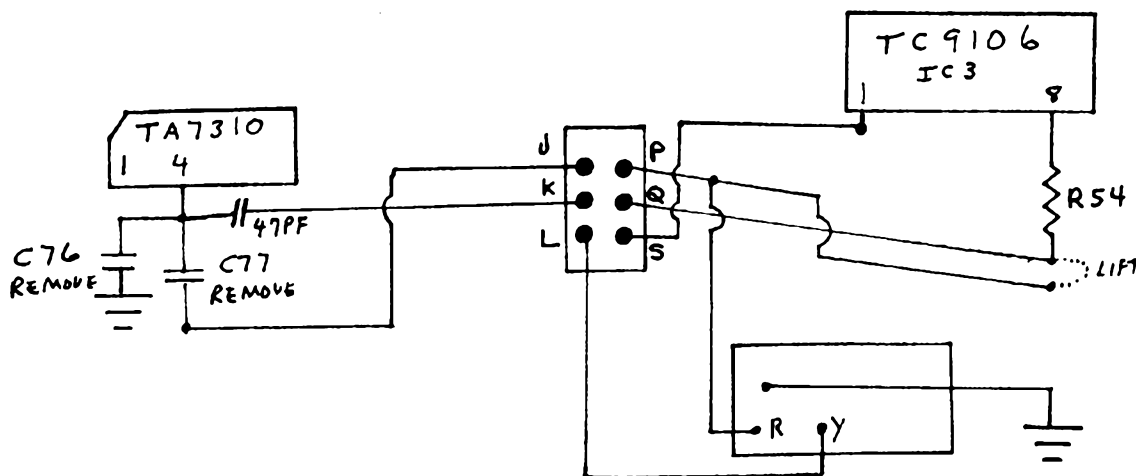


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C64 as shown in Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With switch in low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high position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

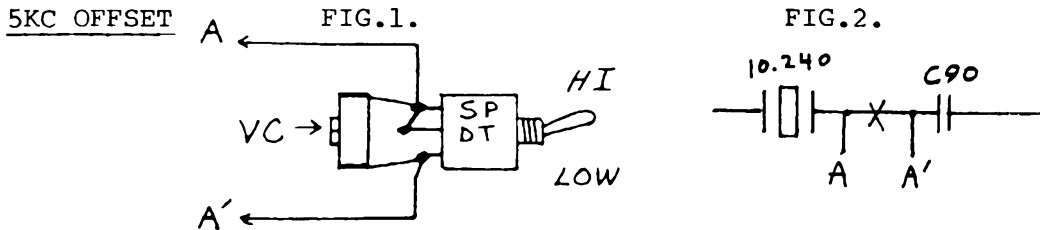
CHANNEL CONVERSION

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"

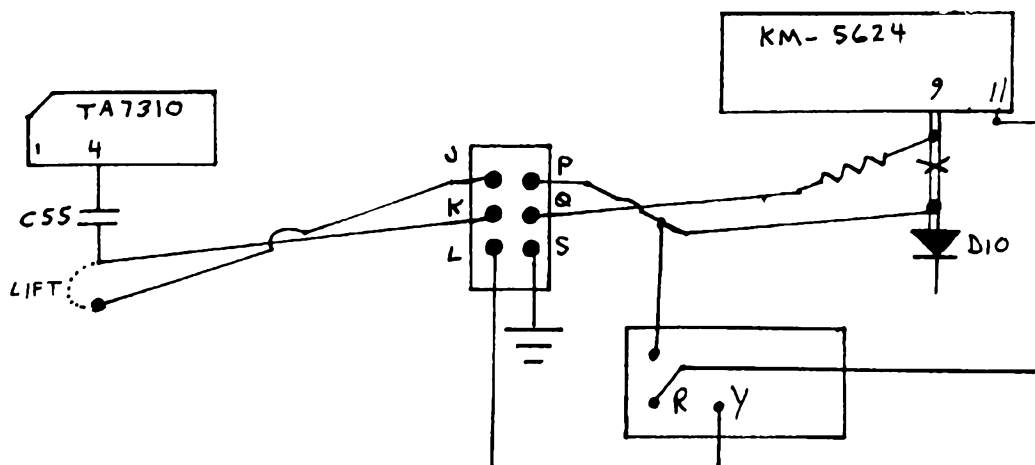


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Unsolder and lift the leg of C90 next to the 10.240-MHz. crystal.
3. Solder the wires from the switch to these two points as shown above in Fig.2.
4. With the switch on the low position, adjust VC for 27.410 on Ch.40.
5. Switch to the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

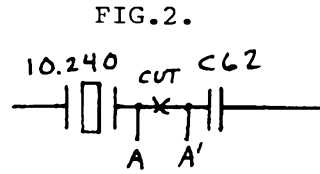
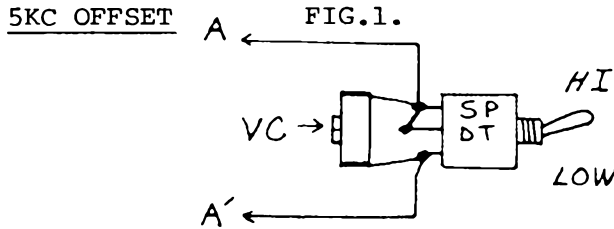
CHANNEL CONVERSION

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 Channels 42-86, 1-40 and on half channels 1A-40A.



PRESIDENT JAMES K.

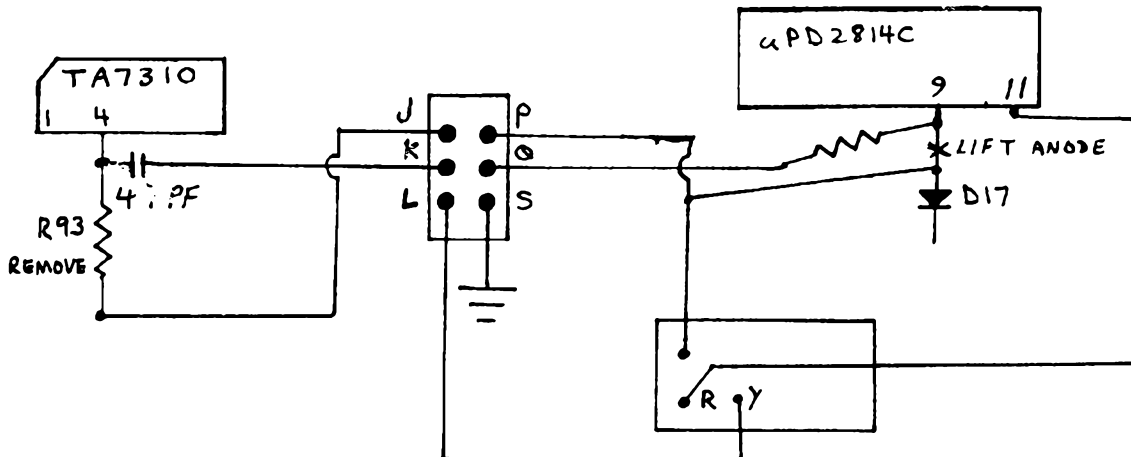


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz crystal and C62 as shown in Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With the switch on low position, adjust VC for 27.410 on Ch.40.
5. Switch to high position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

CHANNEL CONVERSION

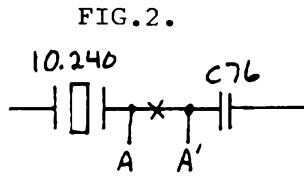
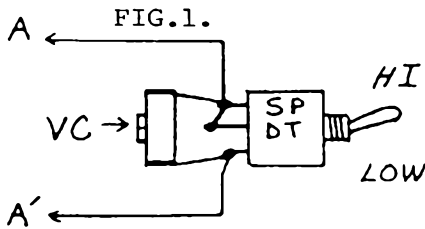
1. Unsolder and lift anode of D17 where it connects to pin 9 of the uPD2814C PLL chip.
2. Solder one leg of the 4700ohm resistor supplied to pin 9 of the PLL chip.
3. Run a wire from the other leg of the resistor to terminal Q on the DPDT switch provided.
4. Run a wire from terminal P on the switch to 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

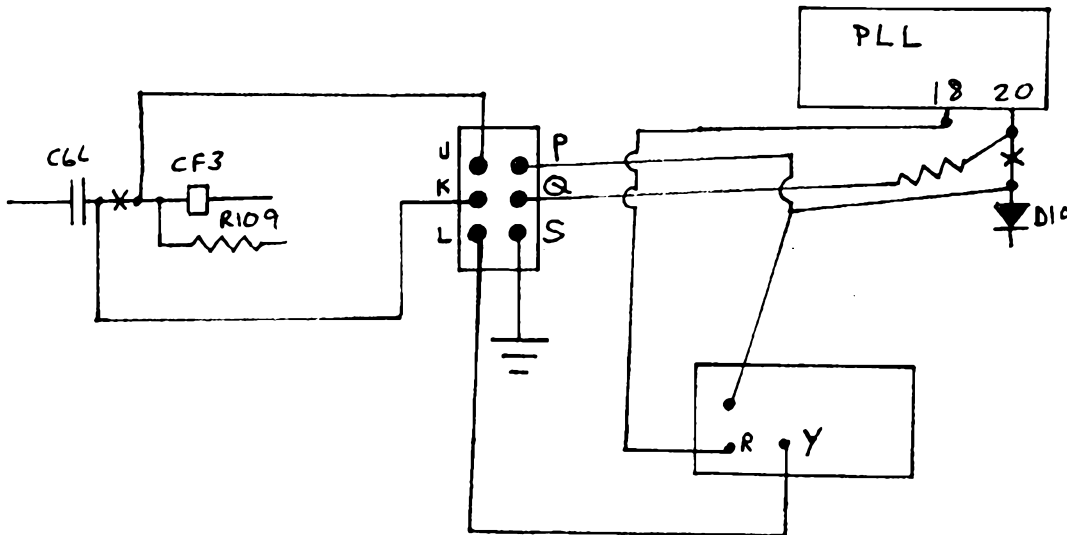


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C76 as shown in Fig.2.
3. Solder the wires from the switch to each side of the cut trace.
4. With the switch in the low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high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

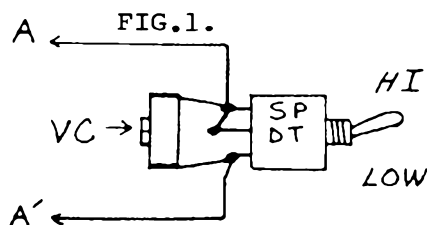
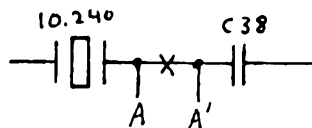


FIG. 2.

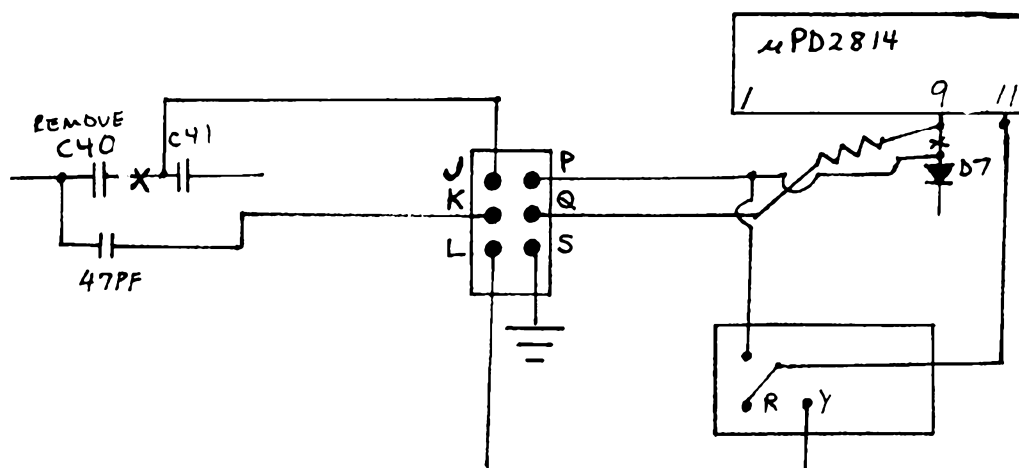


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C38 as shown.
3. Solder the wires from the switch across the cut trace.
4. With the switch in the low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high position and check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

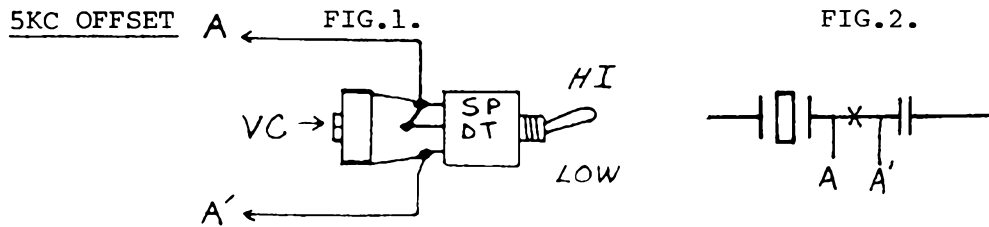
CHANNEL CONVERSION

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.



REALISTIC TRC 422A/421A

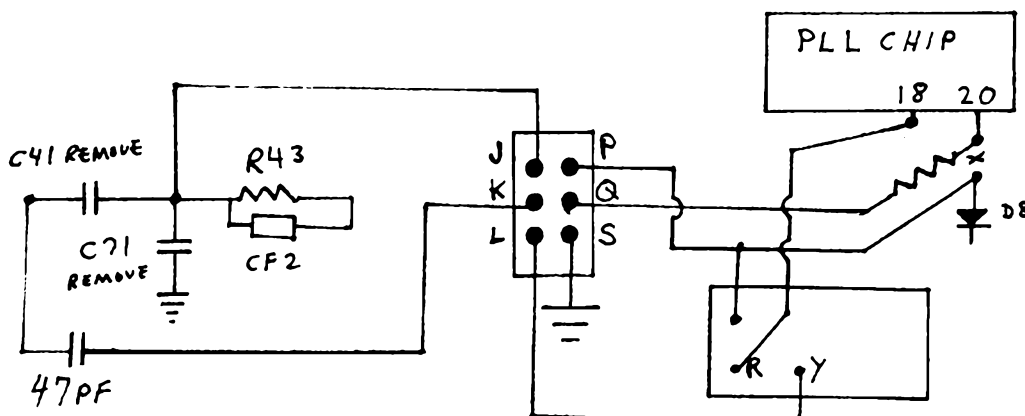


1. Wire up the SPDT switch and the trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C37 as shown Fig.2.
3. Solder the wires from the switch to the cut trace.
4. With switch on low position, adjust VC for 27.410 on CH. 40.
5. Switch to high position and check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

CHANNEL CONVERSION

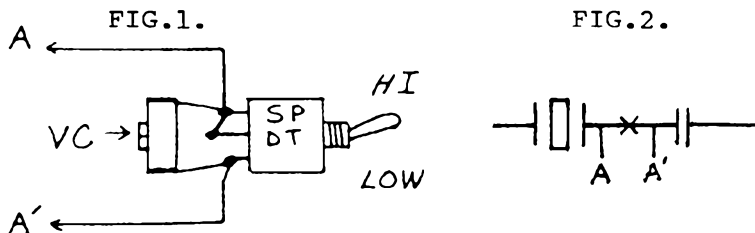
1. Isolate pin 20 of the PLL chip by cutting the foil trace.
2. Solder one leg of the 4700ohm resistor provided to pin 20.
3. Run a wire from the other leg of the resistor to terminal Q on the DPDT switch provided.
4. Run a wire from terminal P on the switch to the unmarked post of the epoxy pak. Also 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

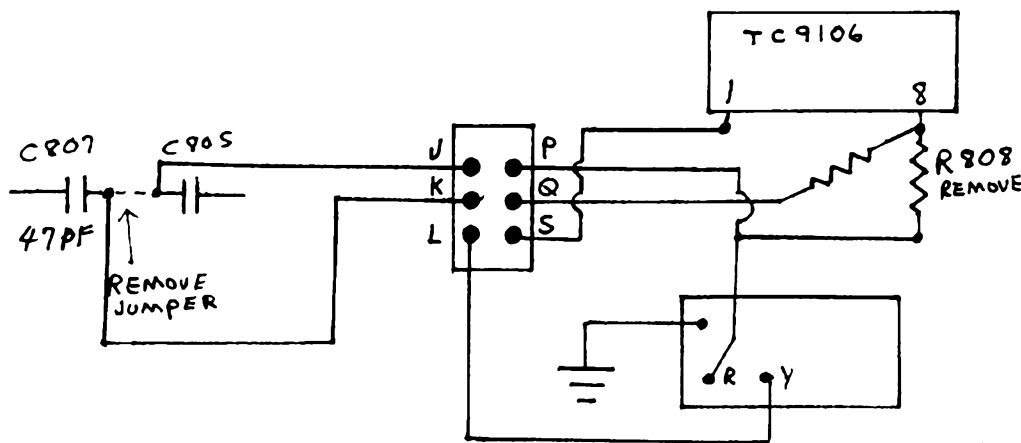


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Unsolder and lift the collector of Q804 and at the same point lift the leg of C809.
3. Cut the foil trace between the 10.240MHz. crystal and C802 as shown in Fig.2.
4. Solder the wires from the switch across the cut trace.
5. With the 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.

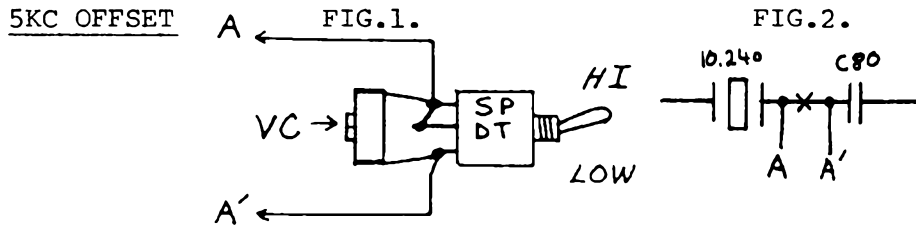
CHANNEL CONVERSION

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

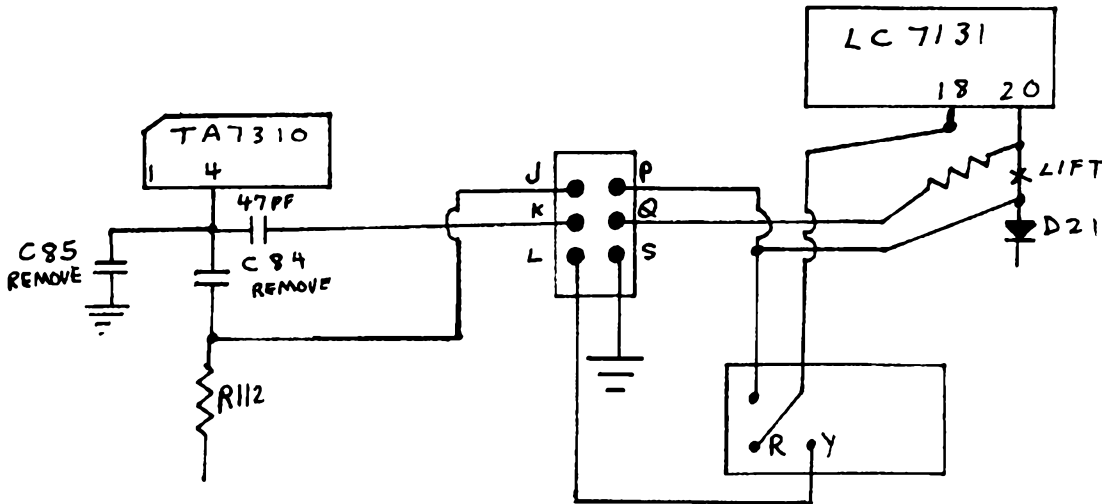


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C80 as shown in Fig.2.
3. Solder the wires from the switch across the cut trace.
4. With switch in low position, adjust VC for 27.410 on Ch. 40.
5. Switch to high position and check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

5KC OFFSET

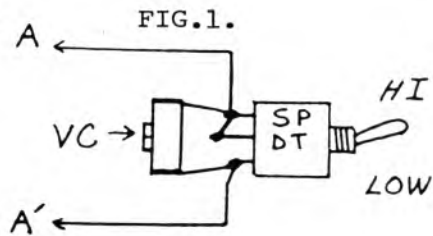
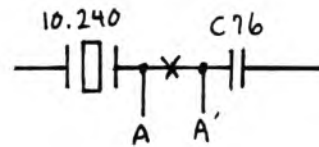


FIG.2.

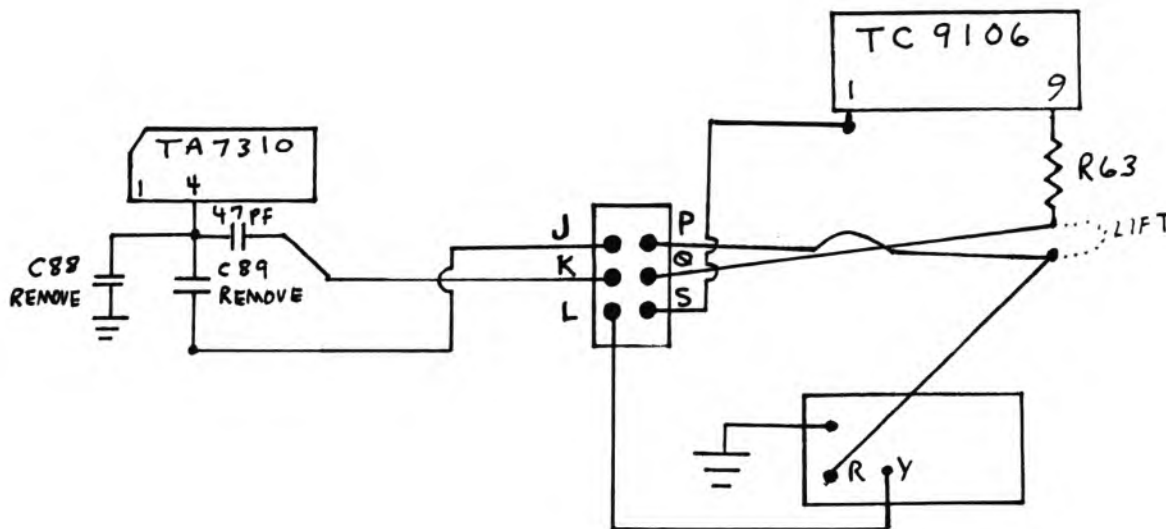


1. Wire up the SPDT switch and trim capacitor as shown in Fig.1.
2. Cut the foil trace between the 10.240MHz. crystal and C76 as shown in Fig.2.
3. Solder the wires to each of the cut trace.
4. With the switch in the low position, adjust VC for 27.410 on Ch.40.
5. Switch to the high position and check 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 ~~Q2A~~ Q2A chip with Q2A
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 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 (O2A)

SYNTH:

CT1 Adjust for 10.240 Mhz \pm 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:

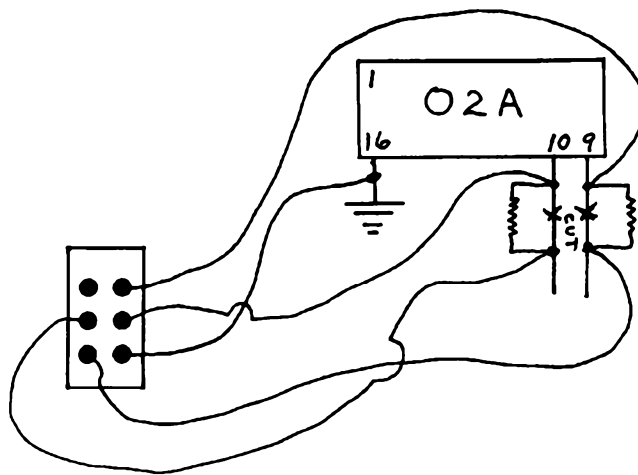
Peak L5,T3,T4,L7,L11,L12.

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.

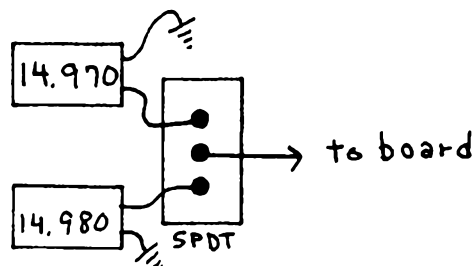
23.690 gives 27.365,27.375,27.385,27.405.

23.740 gives 27.415,27.425,27.435,27.455.

23.790 gives 27.465,27.475,27.485,27.505.

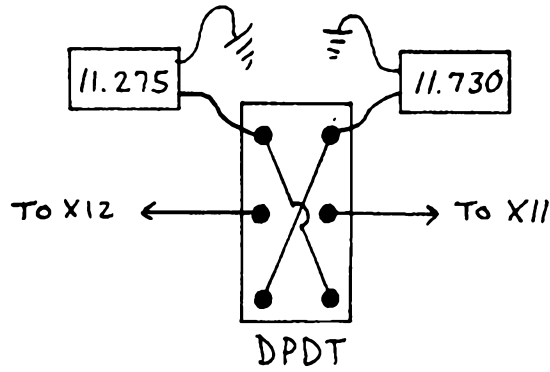
Kit #4 can be used to switch 4 Xtals with one switch.
(Kit #4 can be obtained from "Secret CB")

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.



MIKE WIRING: 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 without distortion.)

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 (1uf 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 T1,T2,T18 for maximum.

R45 S Meter S9=100uV.

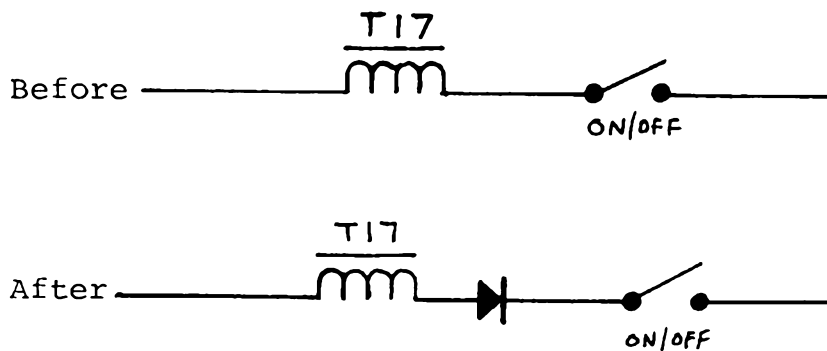
TX: Peak T7,T8,T9,T10,T11,T12,T13,T14,L3,C5.

C1,C2,L1 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:



X1,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.

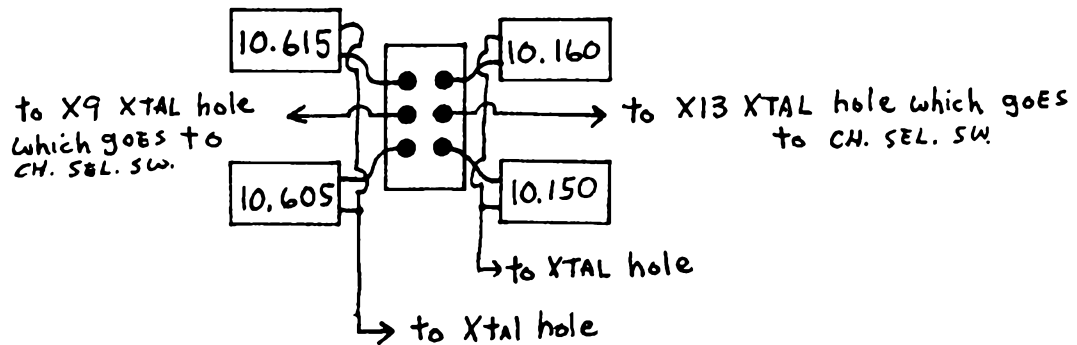
38.050 gives 27.415,27.425,27.435,27.455.

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.

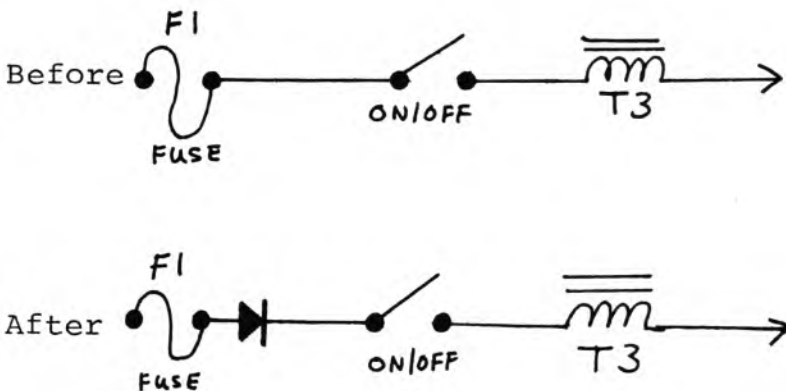
MIKE WIRING: 4 Pin Locking Ring Type

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

No protection diode on DC.

Wire in a HEPl70 (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.

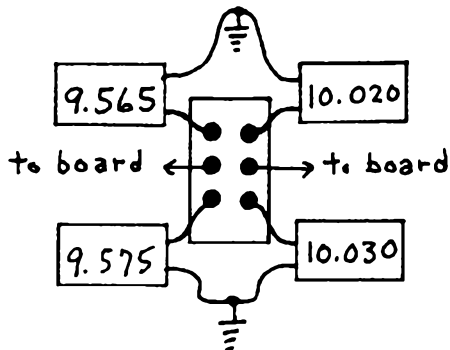
Kit #4 can be used to switch 4 Xtals with one switch.

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

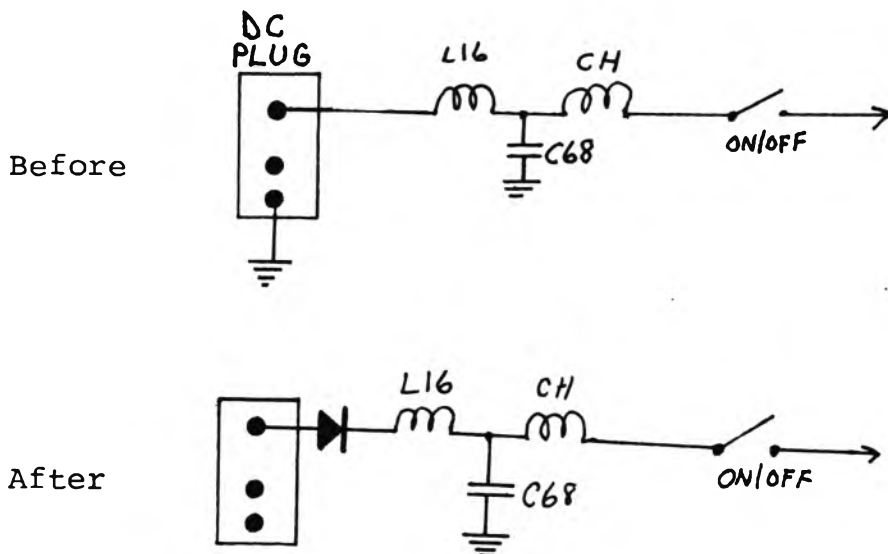
For maximum modulation, remove C39.

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")



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,T1 on 455KC.

Peak L2,L1 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.	25.575	U.S. Navy
25.013	U.S. Navy	25.590	U.S. Navy
25.020	U.S. Army	25.597	U.S. Air Force
25.035	U.S. Army	25.845	U.S. Marine Corps
25.040	Oil Spills Cleanup	26.110	U.S. Navy
25.069	U.S. Navy	26.310	U.S. Navy
25.080	U.S. Coast Guard	26.356	U.S. Air Force
25.085	U.S. Navy-Ships	26.389	U.S. Air Force
25.090	U.S. Navy-Ships	26.485	U.S. Navy
25.095	U.S. Navy-Ships	26.490	U.S. Navy
25.100	U.S. Navy-Ships	26.500	Inter-Military Freq.
25.105	U.S. Navy-Ships	26.510	U.S. Army
25.110	U.S. Navy-Ships	26.515	U.S. Air Force
25.113	U.S. Navy	26.535	U.S. Navy
25.130	U.S. Air Force	26.540	U.S. Navy
25.161	U.S. Air Force	26.550	Inter-Military Freq.
25.198	U.S. Air Force	26.560	U.S. Navy
25.230	Inter-Military Freq.	26.575	U.S. Army
25.240	U.S. Army	26.580	U.S. Navy
25.245	U.S. Air Force	26.590	U.S. Air Force
25.333	U.S. Air Force	26.610	U.S. Navy/Marine
25.335	U.S. Marine Corps	26.615	U.S. Navy
25.340	U.S. Air Force	26.620	Civil Air Patrol
25.350	Inter-Military Freq.	26.625	U.S. Air Force
25.360	U.S. Navy	26.630	U.S. Army
25.365	Inter-Military Freq.	26.650	U.S. Navy
25.380	U.S. Coast Guard	26.665	U.S. Navy
25.390	U.S. Army	26.675	U.S. Navy
25.400	Inter-Military Freq.	26.684	U.S. Air Force
25.410	U.S. Navy	26.700	U.S. Army
25.415	U.S. Coast Guard	26.710	U.S. Air Force
25.412	U.S. Navy	26.725	U.S. Marine Corps
25.425	U.S. Army	26.750	U.S. Navy/Air Force
25.430	U.S. Dept. of Energy	26.775	U.S. Marine Corps
25.440	U.S. Navy	26.800	Border Patrol
25.450	U.S. Army	26.825	U.S. Navy
25.470	U.S. Navy/Air Force	26.835	U.S. Navy
25.480	U.S. Navy	26.850	U.S. Navy/Army
25.515	U.S. Navy/Air Force	26.875	U.S. Navy
25.525	U.S. Air Force	26.880	Border Patrol
25.535	U.S. Army	26.900	Inter-Military Freq.
25.550	U.S. Army	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

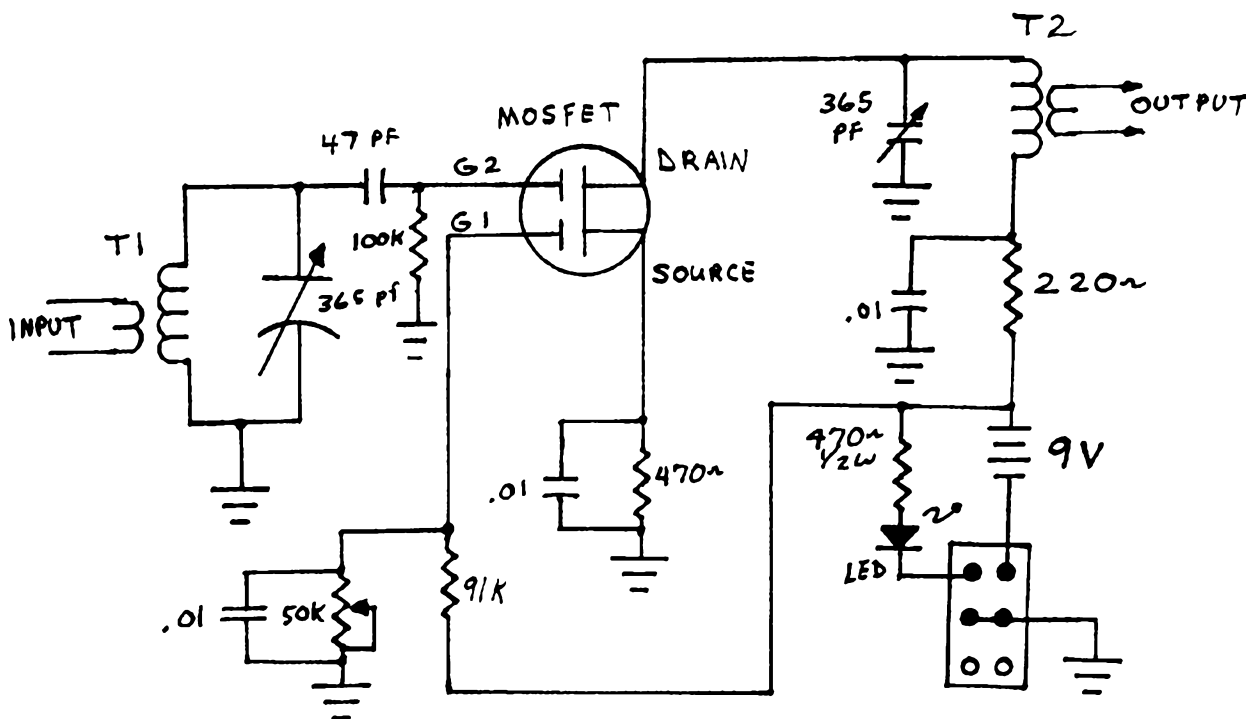
- '90 DAY WONDER'.....The thick plastic insulators sometimes used on driver and final transistors. They do not allow adequate heat transfer so we advise to replace them with standard mica type insulators with a liberal amount of silicone heatsink compound (ECG 424).
- LSB-MSB.....Refers to binary bits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

PARTS LIST:

- 1 - 50K Linear Taper Pot.
- 2 - 365 pf Variable Capacitor.
- 3 - .01 uf disc capacitor (50V).
- 1 - 100K $\frac{1}{4}$ W Resistor.
- 1 - 91K $\frac{1}{4}$ W Resistor.
- 1 - 470 Ω $\frac{1}{4}$ W Resistor.
- 1 - 470 Ω $\frac{1}{4}$ W Resistor.
- 2 - Miller D-5495-A RF Transformer.
- 1 - DUAL MOSFET ECG454,SK3065.
- 1 - Red LED.
- 1 - 9 Volt Battery.
- 1 - 220 Ω $\frac{1}{4}$ W Resistor.
- 1 - DPDT Switch.
- 1 - 47PF (50V).

SECRET CB SAYS
"You Can Build It"



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.

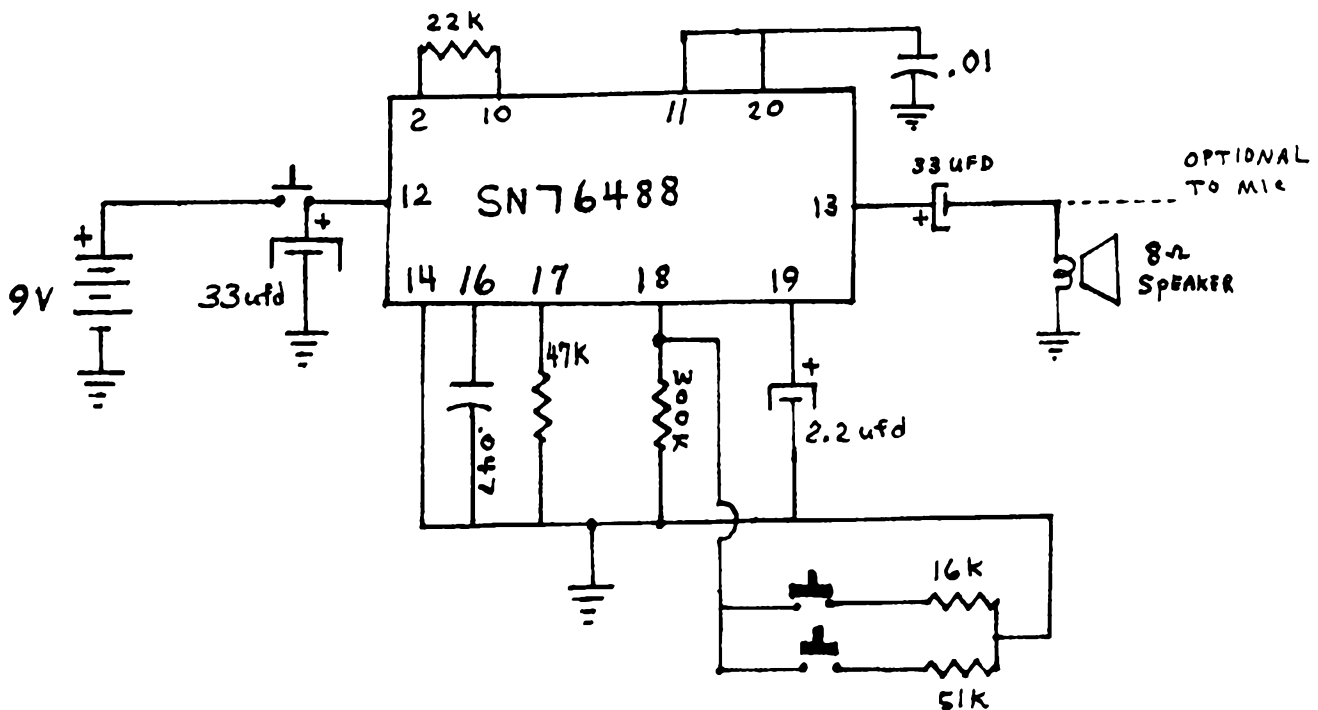
BUILD YOUR OWN SPACE SOUND

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 $\frac{1}{4}$ W Resistor (Red-Red-Orange)
- 1 - 47K $\frac{1}{4}$ W (Yellow-Violet-Orange)
- 1 - 16K $\frac{1}{4}$ W (Brown-Blue-Orange)
- 1 - 51K (Green-Brown-Orange)
- 1 - 300K $\frac{1}{4}$ W (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 *

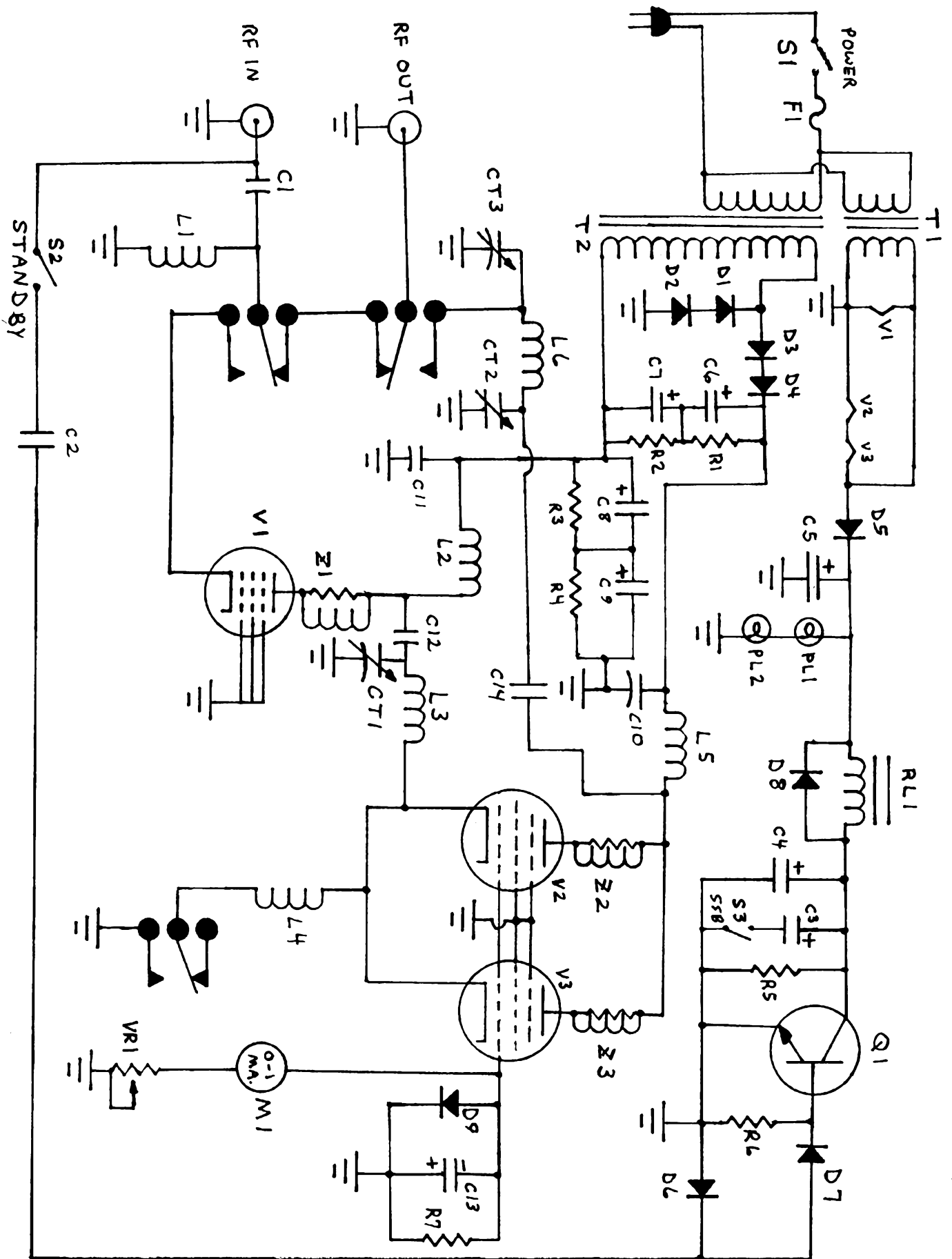
AMPLIFIER PARTS LIST

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,PL2	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 $\frac{1}{2}$ W
R6	100ohm $\frac{1}{2}$ W
R7	47ohm $\frac{1}{2}$ W
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, $\frac{1}{2}$ " diameter
L3	9 turns #12 $\frac{3}{4}$ " diameter $1\frac{1}{4}$ " Long
L4	25 turns #18, $\frac{1}{4}$ " diameter
L5	22uH, 75 turns #26 $\frac{1}{4}$ " 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

CONVERSIONS	VOL/PG	COBRA (Con't)	VOL/PG	DEMCO	VOL/PG
Conversion tips for all SSB radios.....	9/7	148GTL.....	8/16	Star II.....	5/60
"A" Channel Mod. for all SSB.....	9/16-17	2000 (C.A.P.).....	6/23	Super Satellite.....	5/60
MB8719 Modification.....	10/25-27 13/33	2000GTL.....	5/20,7/15-17	FIELDMASTER	
Tech tips on the 858 Chassis.....	10/55	COLT		Micro-mini 40 Frequency expansion details..	11/37
Uniden 858PLL update.....	9/8-11	SX33.....	3/4-7	G.E.	
How to get on 28 & 29 MHz. w/the uPD858 PLL Chip	11/4-7	210 LC7130PLL.....	11/33	Superbase 3-5875-A.	10/48
How to increase ANL efficiency 70%.....	11/8	290.....	3/4-7	GEMTRONIX	
Ham Radio Crystal Selector.....	12/24	390.....	3/4-7	GTx77.....	5/39
23 Ch PLL02A AM Conversion for 26.645 to 27.275.	12/32	480.....	3/8-15,5/39	HALLICRAFTERS	
Receiver Widebanding for 858 Chassis.....	13/34	485.....	3/8-15	HCM271.....	5/50,51,6/39
Thumbwheel Conversion,NEW for 858 Chassis...	13/35-37	800.....	3/4-7	HYGAIN	
BOWMAN		1000.....	3/8-15	I-A.....	1/22
CB910.....	11/41,13/58	COURIER		PLL.....	1/32
CB930.....	3/21	Centurion PLL.....	1/31,61, 62,5/55	II.....	8/20
CB950.....	5/39	Centurion 40D.....	10/53	V-02A.....	11/8
CBH990.....	5/43	Galaxy.....	5/53,54 7/18-22	ITT	
BROWNING LTD		Gladiator PLL.....	1/31,61, 62,5/55	CB-4000M.....	13/61
LTD.....	1/53	Spartan.....	1/61,62, 5/30,53,55	J.C. PENNEY	
MKIII.....	6/28	CPI		6246.....	13/61
MKIV.....	6/29-30	300.....	8/21	6248.....	8/24
MKIV, IVA.....	7/8-13	400.....	8/21	JOHNSON	
COBRA		2000.....	3/25	242-4730	10/49-51
32XLR.....	4/47	2000 Low.....	9/23	4125/4174.....	13/61
132B.....	1/53	2500.....	5/37,38	4740 (NDC40013)....	11/9
132XLR.....	10/45-46	ALC Mod for increased SSB Power.....	11/9	KENWOOD	
135B.....	1/53	CRAIG		TS-120S.....	12/22
135XLR.....	4/38	L131 & L231.....	9/12-14	TS-130	12/23
135XLR Update.....	10/43/46	L132 & L232.....	9/12	KRACO	
138XLR.....	1/20,23	L232 & L132 w/UPD		KCB233A.....	9/15
139XLR.....	1/20,23	2824C Chip.....	10/47,11/10	MIDLAND	
140GTL.....	3/19,20	DAK		13-883B (UPD858)....	12/4
142GTL.....	8/15	IX	5/21-23	13-882C (02A).....	13/62
146GTL 11.....	10/41	IX Mod update.....	9/18-19	13-892.....	11/10
		X	4/39-46	79-892.....	11/11
		DELCO		79-893.....	2/20
		Delco factory AM/FM/CB Combo Unit.....	11/38-40	79-900.....	5/47
				6001-7001.....	11/16

SECRET CB INDEX (CONT'D)

CONVERSIONS (Con't)	REALISTIC (Con't) VOL/PG	SHARP VOL/PG
MORSE VOL/PG		
3005.....2/27	TRC-450.....10/31	CB-5470 HD42851B3..11/24
MOTOROLA	TRC-451.....12/10-13	SILTRONIX
CM555 (TC9105P).....12/7	TRC-455 (SM5104)....12/30	1011C.....1/46
NESCO	TRC-457.....10/36	1011D.....1/46
1249.....6/38	TRC-459.....10/32-35	SOMMERKAMP
PACE	TRC-480.....10/37,38	TS-788DX13/25-30
8092.....6/35,36	TRC-490.....12/14,15	SONAR
POLOMAR	RAY JEFFERSON	FS-2340.....5/31
500.....4/19,20	CB845 (02A).....12/27	STANDARD HORIZON
5/32-36	ROBYN	29-A.....13/63,5/58
8/21	GT-440D.....1/23	STONER
PANASONIC	SB-505.....5/41,42	Pro-40 4/52,53
RJ3600.....10/57	SB-520D.....2/21,22	SUPERSCOPE AIRCOMMAND
RJ3700.....13/16-17	SB-540D.....5/19,36	CB 340.....8/19
PEARCE	7/25-38	CB340 (861PLL)Update9/24
Cheetah PLL1/31,32	WV-23.....1/24,25	SWAN SIGNET
Simba PLL.....1/31,32	WV-110 (SM5104).....12/31	270.....5/58
PRESIDENT	ROYCE	TEABERRY
Adams.....2/16	1-601.....1/26	52 Ch. Capability..1/43
AR144 11/17,18	1-612.....5/45	CAP Mod.5/30
AR144 UPD2824C PLL.11/41	1-632 Update.....13/23	Model T.4/3,4
AR144 Update.....11/42	11/21	Racer T.1/58
Grant.....1/22,23,59	1-641.....11/20	Ranger T.4/1,2
2/17,23-26	1-642.....13/24	6/24,25
Grant (New).....5/24-27	SBE	
Honest Abe.....1/60	Formula D.....1/49	STALKER
John Q.....1/60	Touch Com. 1/50,51	I (4001/4003).....4/7-9
Madison w/11.3258..10/30	39CB Sidebander V.2/36,37	T Bear.....4/14,15
PRESIDENT	Sidebander II.....2/28-35	T Dispatch.....4/14,15
McKinley.....4/12,13	Console IV.....2/28-35	Titan T.....4/14,15
McKinley w/11.1125.10/29	Sidebander ConsoleVI.8/14	XV.....10/39
Teddy R.1/60	Console V2/37,38	XX.....10/40
Washington ...1/22,23,59	LCBS-4.....7/29-33	
Washington w/11.1125	LCMS-4.....7/34-37	TRAM
.....10/28-29	SEARS	D12.....10/56
Zachary T.....1/60	562-3822070010/56	D42.....4/47,5/40
RCA	663-3810 w/2824Chip.11/22	D60.....1/53
14T302.....5/11,39	934-3677150.....12/16,17	D62.....10/45,46
14T302 (PLL 02AG)....4/36	934-36772600.....12/16,17	D80.....10/30
REALISTIC	934-38260700.....6/26,27	D201..... 1/56,3/22,23
TRC-57.....12/28	10/52	D201A Update.....10/54
TRC-4317/23,24	934-38270700.....5/28,29	D300.....8/11-13
TRC-448 REC86345PLL.11/16	934-38260700.Update.11/23	
	934-38270700.Update9/20-22	
	P11 D63911 w/UPD861C Chip	
12/26	

SECRET CB INDEX (CONT'D)

<u>CONVERSIONS (Cont.)</u>					
TRS CHALLENGER	VOL/PG	CRAIG	VOL/PG	PRESIDENT	VOL/PG
460.....	4/28	L-131,L-231.....	9/12,14	Adams.....	2/16
600.....	4/28	L-132,L-232.....	9/12	Adams-858.....	13/18-20
730.....	4/30	L-231.....	12/3	Grant.....	1/59
1200.....	4/31			Grant (NEW).....	8/34
850/1400.....	4/21-27,32-35	DAK		Grant-8719.....	13/21-22
TRUETONE		X.....	4/45	McKinley.....	4/12
CYJ-4837A-87.....	11/14	FANON		Washington.....	1/59
VICTOR		Fanfare 350 F...13/11-12		Washington.(New) .8/33,34	
770.....	4/56,57	GEMTRONICS		RCA	
790.....	4/58,59	GTX-77.....	4/49	14T302.....	4/49
WARDS		HYGAIN		REALISTIC	
719A w/UPD2824 Chip..11/10		623.....	1/33	TRC-47.....	1/41
YAESU		674-A.....	4/60	TRC-48.....	1/42
100.....	5/58	JC PENNEY		TRC-458.....	8/39,40
FT-901.....	6/3-12	6248.....	13/14-15	ROBYN	
FT-7B.....	7/38-41	981-6247.....	13/13	SB-505.....	5/41
FT-707.....	10/20-24	JOHNSON		SB-540D.....	5/19
*****		352	1/34	T240D.....	13/63
<u>SLIDE MODIFICATIONS</u>		MIDLAND		ROYCE	
BOMAN	VOL/PG	13-892.....	11/13	1-632.....	13/23,5/41
950.....	4/49	13-893.....	4/51	1-641.....	4/51
COBRA		13-898.....	1/36	1-642.....	13/24
132-A.....	1/28	13-898B.....	1-35	SBE	
135-A.....	1/28	79-960.....	5/47	Sidebander II.....	1/47
135-B.....	1/29	N.D.I.			2/28-35
138.....	1/28	PC-201 (NDC40013PLL)12/8		Sidebander V.....	2/38-40
139.....	1/30	PACE		Console IV.....	2/28-35
25GTL.....	13/57	1000.....	1/37,38	Console V..2/28-35,38-40	
140GTL.....	4/50	DX1023B.....	1/39	SEARS	
142GTL.....	4/50,8/35-37	8092.....	6/37	934-38270700.5/28,9/20-22	
135XLR.....	8/38	8193 (CC13001).....	12/9	934-38310700.....	5/19
2000GTL.....	12/20	POLOMAR		Roadtalker SM5104..12/18	
COLT		500.....	4/19,5/32,35	SILTRONIX	
485.....	4/49	PANASONIC		SSB.....	1/45
COURIER		RJ-3700.....	13/16-17	STONER	
Centurion.....	1/61	PEARCE		Pro-40.....	4/52,53
Galaxy.....	5/53	Bengal.....	1/40	TEABERRY	
Gladiator PLL.....	1/61	Cheetah.....	1/40	Stalker IX/XV.....	4/7,8
Spartan.....	1/61	Simba.....	1/40		
CPI					
2500.....	5/37				

SECRET CB INDEX (CONT'D)

SLIDE MODIFICATIONS (Cont.)					
TRAM	VOL/PG	COBRA	VOL/PG	COURIER	VOL/PG
D60.....	1/52	19.....	7/51	Blazer 40D.....	3/58
D64.....	13/31	19GTL.....	12/34	Centurian 40D.....	13/10
D201.....	1/56	21GTL.....	3/41,58	Classic PLL 40.....	3/43
D300.....	12/19	21XLR.....	1/20	Classic PLL 40 update	10/59
*****		21XLR Update.....	10/58	Fanfare 125F.....	3/43
		25GTL.....	3/41,58	Fanon Rouge 40.....	3/43
<u>SPECIFIC RADIO TUNEUPS</u>		29GTL.....	3/45	Nightrider 40DR.....	3/46
AIR COMMAND		29LTD.....	13/59	Rangler 40D.....	3/58
CB640.....	5/38	29XLR.....	1/20	Redball.....	1/21
ALARON		32XLR.....	3/58	Renegade 40.....	3/46
B-4075.....	9/30	45XLR.....	12/34		
B-4900.....	9/30	46XLR.....	3/43	CRAIG	
B-5050A.....	9/30	47XLR.....	3/45	L101.....	6/20,11/42
B-5200.....	3/41	50XLR.....	3/43	L102.....	6/20
AMERICAN MOTORS		55XLR.....	3/43	L131.....	10/59
3221847/48/49/50.....	12/34	66GTL.....	10/58	L231 (AM,SSB).....	10/60
AUDIOVOX		77X.....	9/30		
MCB750.....	3/41	78X.....	9/44	CYBERNET	
MCB5000.....	11/42	78XLR.....	4/49,6/19	AM Radios.....	13/59
MDV6000.....	6/18	86XLR.....	3/45	DAK	
AUTOMATIC		87GTL.....	6/19	Mark II.....	10/60
CBH2265.....	3/41	89GTL.....	6/18	Mark V.....	12/34
BOMAN		132XLR.....	3/45	DELCO	
CB555.....	3/44	135XLR.....	3/45	70BFMC3.....	2/43
CB750.....	2/43	139.....	1/20	80BCB2.....	6/20
CBH900.....	3/44	140GTL.....	3/20,58,4/50	90BCB1.....	10/60
CB910.....	1/21,3/44	142GTL.....	4/50	90BFMC1.....	12/26
CB920.....	1/21	148GTL.....	6/19	90BFMC1 (FM,AM,CB)...	10/60
CB930.....	1/21,3/44	1000GTL.....	6/18	90BFPC1.....	12/26
CB950.....	3/43	COLT		91YFMC1.....	12/26
CBR9600.....	2/42,3/41	222.....	6/20	FANON	
CBR9940.....	3/44	290.....	3/40	10-40.....	6/20
CBR9950.....	10/58	390.....	3/4	Fanfare 182F.....	3/41
CHANNEL MASTER		480.....	3/8,58	Fanfare 184DF.....	3/47
CB6835.....	6/18	485.....	3/8,6/19	Fanfare 185PLL.....	3/46
CHRYSLER		800.....	3/4	Fanfare 190DF....	3/47,7/51
4048076/8077.....	6/18	800 Update.....	10/58	Fanfare 350F.....	3/47
CLARION		1000.....	3/8,58		13/11-12
DMA066.....	3/45	1200.....	9/30,31	FORMAC	
JC202E.....	3/45	CAMMANDO		40.....	10/60
RCJ003.....	3/45	2340.....	1/21	GE	
TC203E.....	6/18	CONVOY		3-5800A.....	3/50
		CON-400.....	3/58	3-5804B.....	6/21
		CPI		3-5804F.....	10/61
		CP400.....	10/59	3-5804G.....	12/35
				3-5805A.....	9/31

SECRET CB INDEX (CONT'D)

SPECIFIC RADIO TUNEUPS (CONT.)

GE (Cont) VOL/PG
 3-5811B.....9/31,10/61
 3-5812A.....10/61
 3-5814B.....6/21
 3-5817A.....7/51
 3-5818A.....2/42
 3-5819A.....11/42
 3-5821A.....9/31
 3-5821B.....3/54
 3-5825A.....9/31,32
 3-5830.....3/42
 3-5869A.....2/42
 3-5871B.....3/46
 3-5875A.....9/32
 3-5900A.....12/35

GEMTRONICS

GT44.....2/42
 GT55.....3/48
 GTX66.....6/21
 GTX77.....6/21
 GTX4040.....3/48
 GTX5000.....13/60,3/42

GM

CBD-20U.....12/36
 CBD-203.....3/48
 4120.....3/46
 4145.....9/32
 4175.....3/46

HYGAIN

VIII.....3/59
 674A.....4/60
 V674B.....1/21
 2701.....2/42
 2702.....3/48
 2703.....3/48
 2716.....12/36

ITT

4400M.....4/17

J.C. PENNEYS

981-6204.....9/32
 981-8360.....10/61
 981-6247.....11/14
 981-6248.....13/14-15
 981-7461.....9/32

JIL

615CB.....11/42

JOHNSON VOL/PG
 123A1/21
 Viking 200.....12/36
 Viking 260/270.....3/49
 Messenger 40.....12/36
 Messenger 50.....7/51
 Messenger 80 (242-0080)7/51
 Messenger 4120.....3/47
 Messenger 4135.....3/48
 Messenger 4140/4145...3/54
 Messenger 4170/4175...3/47
 Messenger 4170/4175 Update
11/43
 Messenger 4250.....3/48
 Viking 4330/4360.....11/43

KRACO

KCB-2340.....2/42
 KCB-4000.....11/43
 KCB-4003.....3/43
 KCB-4005.....9/38,11/43
 KCB-4020.....3/49
 KCB-4030.....8/44
 KCB-4088.....3/50

KRIS

XL25.....2/43

LAFAYETTE

Comstate 525.....11/45
 Dynacom 40.....11/44
 HB640.....2/43
 LM-100 (PLL02A).....12/36
 LM-300.....12/37
 SSB140.....11/44
 Telestat 1240.....5/14

LAKE

410.....12/37
 450.....12/37
 600.....12/37

MEDALLION

63-240.....3/50

MIDLAND

150 M7/52
 13-867.....13/62
 13-882C.....13/62
 13/893.....4/51
 63-445.....11/45
 76-858.....3/49
 77-101B.....8/44
 77-101C.....12/38

MIDLAND (Cont.) VOL/PG
 77-821.....3/42
 77-824.....8/44
 77-824B.....12/38
 77-824C.....12/39
 77-838.....9/33
 77-849.....3/50
 77-856.....11/45
 77-861.....3/50
 77-861B.....11/45
 77-865.....9/33
 77-899.....9/33
 77-963.....3/42
 78-574.....9/38,12/39
 79-892.....3/49
 79-893.....2/20
 79-900.....9/33,34
 3001.....12/37
 4001 (77-004).....7/52
 5001.....12/37
 7001 (79-007)....11/45,46
 78-999 (02A).....12/7
 79-891 (02A).....12/5

MOPAR

4094173.....3/51
 4094176.....3/51
 4094177.....3/49
 4094178.....3/60

MOTOROLA

T4000A/05A10A/20A...3/50
 CF925AX.....11/46
 Mocat 40.....11/46

NDI

PC-102.....11/46
 PC-200.....7/52

PACE

8003.....11/47
 8008.....2/43
 8016.....11/47
 8046.....9/33
 8113.....12/39
 8117.....11/47
 8155.....9/34,12/40
 8193.....7/52

PALOMAR

49.....3/60
 500.....4/19,5/32
 4100.....3/54

SECRET CB INDEX (CONT'D)

SPECIFIC RADIO TUNEUPS (Cont.)		REALISTIC (Cont.)	ROYCE (Cont.)
	VOL/PG	VOL/PG	VOL/PG
PANASONIC			
CR-B474EU (AM,FM,CB)	9-34	TRC-422	1-651
RJ-3250	11/47	TRC-422A	1-655
RJ-3600	11/48	TRC-424	1-660
RJ-3700	13/16,17	TRC-425	1-673
PEARCE		TRC-426	1-675
Simpson Leopard B	3/49	TRC-427	1-680
Simpson Puma 23B	13/62	TRC-428	
Simpson Tiger 40A	9/34	TRC-431	SBE
Supertiger 40A	3/60	TRC-432	26CB1A
POINEER		TRC-440	42CB Cortez 40
GT-100G (AM,FM,CB)	10/62	TRC-441	44CB
PRESIDENT		TRC-448	45CB Trinidad III
AR-7	12/40	TRC-449	49CB Tahoe 40
AR-44	10/63	TRC-452	47CB
AX-711	12/40	TRC-454	43CB
Adams	2/16	TRC-455	LCB-8 (uPD2816C)
Andrew J.	9/34	TRC-457	LCM-5 Land Command
Dwight D.	10/62	TRC-458	LCM-8
James K.	7/53,12/40	TRC-461	LCM-8 (PLLo3A)
Old Hickory	9/34	TRC-462	LCMS-8 (uPD2816C)
Washington	1/22	TRC-466	
RAY JEFFERSON		TRC-468	SEARS
CB-845	11/48	TRC-470	CM-6000LA
RCA		TRC-471	CM-600LC
14T270	9/36	TRC-480	Roadtalker 40
14T300	2/43	TRC-490	370-38050700
14T302	3/53		562-38200700
14T303	11/48		663-38020800
REALISTIC			663-38070700
TRC-45A	4/37		934-38061700
TRC-47	1/21		934-38062700
TRC-57	1/21		934-38080700
TRC-99A	4/37		934-38081700
TRC-100	4/37		934-38120700
TRC-180	4/37		934-38260700
TRC-200	4/37		934-38270700
TRC-200 Update	10/63		934-38310700
TRC-204	10/63		
TRC-205	12/40		SHAKESPEARE
TRC-209	10/63		GBS240
TRC-209 (GRE7189PLL-VC)	12/49		SHARP
	12/29		CB-23
TRC-410	12/29		CB-800
TRC-420	12/41		CB-2170
TRC-421	8/44,12/41		CB-4370
TRC-421A	9/35		CB-4470
			CB-4670
			SONAR
			FS-2340

SECRET CB INDEX (CONT'D)

SPECIFIC RADIO TUNEUPS (Cont'd)					
SPARKOMATIC	VOL/PG	TEABERRY (Cont'd)	VOL/PG	UTAC	VOL/PG
SR-42/CBM	3/54	Stalker IX.....	10/65	TRX-400.....	3/59
STANDARD		Stalker XII.....	7/56	TRX-500.....	3/56
29A (uPD857).....	13/63	TENNA		VECTOR	
SURVEYOR		11.302 (AM,FM,CB).....	9/37	X.....	2/43
620.....	3/55	10902.....	10/65	770.....	9/37
2610.....	3/54	TRS		790.....	9/37
TEABERRY		Challenger 600.....	9/37	WARDS	
Model T.....	3/55	Challenger 850.....	7/55	GEN-775A.....	3/61
T Charlie.....	10/65	Challenger 1200.....	12/44		
T Command.....	3/55	TRAM			
T Dispatch.....	3/55	D12.....	3/54		
Racer T.....	3/55	D64.....	13/31		
Stalker II.....	1/21	TRUETONE			
Stalker III.....	7/55	CYJ4832-A-87.....	2/43		
Stalker IV.....	12/44	CYJ4837-A-87.....	3/59		
Stalker V.....	7/55	CYJ4862-A-87.....	9/39		
Stalker VIII.....	10/65				

VOLUME 1

	<u>PAGE #</u>
CRYSTAL CROSS REFERENCE GUIDE	5-10
LETTER CHART FOR CRYSTAL FREQUENCY CORRELATION	11-18
GENERAL INFORMATION	63-67
LINEARS	68-70
40 CHANNEL PLL SWITCH	71-72

VOLUME 2

	<u>PAGE #</u>
NEW CRYSTAL CROSS REFERENCE GUIDE	5-9
LETTER CHART FOR CRYSTAL FREQUENCY CORRELATION	10-13
ANTENNA REPORTS	53-55
BETA-COM INFO (Upgrading 23 channel radios)	57-87

VOLUME 3

	<u>PAGE #</u>
SUPER MOD. IV (Frequency Counter Kit)	16-18
MICROPHONE WIRING INSTRUCTIONS	26-32
PLL CHANNELIZER	33-40
ANTENNA SECRETS (K40 Stud Mount for Big Stick)	63-64

SECRET CB INDEX (CONT'D):

VOLUME 3

	<u>PAGE #</u>
(Cont.)	
SPECIAL SECTION ON LINEAR AMPLIFIERS:	
50-70W Mobile	66
300-400W Base	67-69
70W Base	70-71
Eagle 200	72
Eagle 500	73
CONVERSION FROM AMATEUR TRANSMITTER TO LINEAR AMP	74
LINEAR AMP PROBLEMS & SOLUTIONS	75-76

VOLUME 4

	<u>PAGE #</u>
HOW TO BUILD YOUR OWN RELAY MODULE	16
02A CHIP INFORMATION	54-55
TURNER MIC EXPANDER (500AMC Disable)	62
K40 BLINKIE	63
SUNSPOT PREDICTION CHART	64
LINEAR REPORT SECTION:	
D & A Maverick	65
D & A 500 Triple Conversion	65
Eagle 515 Modification	66-67
UNIDEN SSB 10 METER POWER CONVERSION	68-70
SUPER CLARIFIER DIODE	71

VOLUME 5

	<u>PAGE #</u>
10 METER CONVERSION MICROCOMPUTER (Micromonitor PLL)	1-5
ECHO BOX	6
250 WATT DUMMY LOAD	7
BUILT IN POWER MIKE	8-9
5-MILE SIMULATOR	10
RECEIVER PRE-AMP	11
GLEN DIGITAL CONTROLLER	12-13
GETTING SWR DOWN ON BASE ANTENNAS	15
APARTMENT ANTENNA	16
GROUNDING MOBILE RADIOS	17
OOPS! WE GOOFED!	17-18
Vol. 1, Page 23	18
Vol. 2, Page 20, 21	18
Vol. 3, Page 4, 7, 11, 25, 25, 33	18
Vol. 4, Page 5, 45, 50	17
THE ART OF WIDEBANDING 858 CHIP	44
CONVERSION KIT + MARS & CAP FOR SSB	48-49
CONVERSION OF AM/SSB TO 10 METER AMATEUR	52
REDCO UFO INSTALLATIONS	61-70
SLIDE INCREASE, ALL SSB RADIOS	71
RADAR COMMUNICATOR	72

SECRET CB INDEX (CONT'D):

VOLUME 6

	<u>PAGE #</u>
PLL CRYSTAL CROSS REFERENCE GUIDE	1-2
SECRET CB TEST TONE	13
ERRONEOUS SIGNAL LOCATOR	14
LOW COST AMATEUR CONVERSION FOR 10 METERS	15
BASE ANTENNA GROUNDING	16-17
SUPER CLARIFIER 10-TURN POT	22
OOPS! WE GOFFED!	25
Vol. 5, Page 19, 20, 28	25
THUMBWHEEL 200 CHANNEL CONVERSION FOR 858 CHASSIS	31-34
REDCO UFO APPLICATIONS	40-52
SPECIAL SECTION ON LINEAR AMPLIFIERS:	
PDX 400	54
D & A Maverick 250	55
Maco Duster 300, 750 & 1000 Transmitter	56-57
Maco 75	58
500 CX & 700 CX 10 to 11 Meter Conversions	58
RDX-75	59
HDX-50	59
MDX-200	60
PDX-400	61
10 METER EXPERIMENTER BOARD INFORMATION	62-63
SUPER CLARIFIER HINTS	66
REDCO DX-50	68-70

VOLUME 7

	<u>PAGE #</u>
HOW TO MAKE YOUR EAGLE SCREAM	14
IMPROVED SLIDE MODIFICATION FOR 02A SSB RADIOS	42
UPDATED 200 CHANNEL AMATEUR CONVERSION FOR 858 CHIP	43-48
10 METER CONVERSION FOR SSB RADIOS USING MB8719 CHIP	49-50
HOW TO MAKE YOUR 858 CHASSIS SLIDE	56
LINEAR AMPLIFIER NOTES	57
ECHO BOX SPEECH PROCESSING FOR TRC-449	60
ADDING PING	61
CORRECTION TO THUMBWHEEL 200 CHANNEL CONVERSION	62-63
MICROMONITOR TECH NOTES	64-69
MICROMONITOR INSTALLATION INSTRUCTIONS FOR RADIOS USING 858 CHIP	70-71
AMP FOR RF PROBE	72
OSCILLOSCOPE MODIFICATION FOR RF & MODULATION DISPLAY	73
THE "BANDIT" ANTENNA	74-76
EXPO 100 KIT	76
SECRET CB'S OWN "TROUBLESHOOTER"	77

SECRET CB INDEX (CONT'D):

VOLUME 8

	PAGE #
WHAT'S NEW ON THE ELECTRONICS HORIZON?	1-6
UHF FM CB (GMRS)	7-10
UNIDEN MB8719 PLL CHIP FREQUENCY CONVERSION	15
FREQUENCY MOD. FOR J.C. PENNEY, COLT, LAFAYETTE, HYGAIN, ETC.	18
BROWNING MKIVA MOD. & UFO INSTALLATION	22-23
BROWNING MKIV TRANSMITTER TROUBLESHOOTING	25-32
OOPS! WE GOOFED!	41-43
Vol. 5, Pages 31-34	41
Vol. 7, Pages 31, 37	42-43
LINEAR AMPLIFIER NOTES:	
Installing & troubleshooting Linear Amplifiers	47-49
10 Meter Amp board modification to upright driver	50
YOU CAN BUILD IT	
Two-Tone Generator	51
Yaesu 601(B) frequency counter modification to read CB Low, Middle, High frequencies	52-54
RF Test Meter	56-57
REDCO UFO MODIFICATION (form 20 to 29.995MHz)	55
SECRET CB'S POWER VECTORING	58
HOW THE ECHO BOX CAN ACTUALLY SURPASS THE POWER OF A LINEAR IN SSB	59
MICROMONITOR QUESTIONS	60-62
MICROMONITOR INSTALLATION INSTRUCTIONS:	
SM5104 PLL	63-64
ICOM 22S	65-67
NEW PRODUCT RELEASE:	
Zapper 9000	68-69
Redco Digi-Scan UFO Elite	70
Chopper Charlie Antenna, Model 64 #5	71
Troubleshooter	73

VOLUME 9

	PAGE #
SSB'er LOSE OUT AGAIN	1
FCC ANNOUNCES PLANS FOR SIDEBAND	2-3
FCC DELAYS NPRM; SSB RREQS. DOUBTFUL	3-4
PRODUCT REVIEW; SPEED-O-MATIC "SPEEDO-1" X-BAND RADAR GUN	5-6
RELAY CRYSTAL SWITCHING	25-26
LETTER FROM A FRIEND	27-28
HINTS & KINKS-ELECTRONIC CRYSTAL SWITCHING	29
SOLVING T.V.I.	40-42
IMPORTANT FACTS ABOUT ECHO BOXES	43-44
VOICE SIGNAL BOOSTER (VSB-1) INSTALLATION	45-48
POWER SUPPLY MODIFICATION FOR REALISTIC PRE-AMP NOISE-CANCELLING MIKE #21-1175	49-50
HINTS & KINKS- SWITCHABLE MODULATION INCREASE	51
RF ATTENUATOR	52-54
PRESIDENT SERVICE BULLETINS	55-61
OOPS! WE GOOFED!	
Vol. 8, Page 17	29
Vol. 4, Page 51	44

SECRET CB INDEX (CONT'D):

VOLUME 10

	<u>PAGE #</u>
LETTER FROM VIC	1
SECRET CB'S TROUBLESHOOTER	2-4
VOICE SIGNAL BOOSTER- "VSB-1"	5-19
UNCONVERTIBLE CHIP LIST	66
MODULATION ADJUSTMENTS FOR NEW RADIOS	67
LINEAR SUGGESTIONS	68-69
ZAPPER INSTALLATION HINTS	70
OOPS! WE GOOFED!	
Vol. 3, Page 33	71
Vol. 5, Page 24, 28 & 48	72
Vol. 8, Page 16, 17	72-73
Vol. 9, Page 9, 51	74-75
Vol. 9, Page 29	72

VOLUME 11

	<u>PAGE #</u>
CPI ALC MODIFICATION FOR INCREASED SSB POWER	9
VSB-1 UPDATES	25-26
NEW FRONTIER: FM CB	27-29
NEW PRODUCT: DIGI-SCAN DS-400	30-31
COMING ATTRACTIONS-SERIAL DATA/PLL FREQ. SYNTHESIZERS	32
UNCONVERTIBLE AT THIS TIME-GE 3-5900A TC9109P	33
ZAPPER 9000 INSTALLATION UPDATES	34
RADIO MODULATION ADJUSTMENTS FOR VARIOUS BRANDS/MODELS	51-53
HINTS ON SERVICING	54
SERVICE NOTES-GOLDEN EAGLE MARK IV TRANSMITTER	55
D104 & D104M6 ASTATIC MIKE MODIFICATION	55
HOW TO SOLVE NOISE PROBLEMS	56-58
MORE ON THE "TROUBLESHOOTER"	57
IN HOUSE VALUE LISTING	59
HOW TO BUILD	60-71
PLL PINOUT DIAGRAMS	72-77
THE "BANDIT" ANTENNA	53
OOPS! WE GOOFED!	
Vol. 3, Page 25	78
Vol. 6, Page 32	78
Vol. 7, Page 43,53,63	78
Vol. 8, Page 52	78
Vol. 10, Page 3	78
858 AM CONVERSION	35

SECRET CB INDEX (CONT'D):

VOLUME 12

	<u>PAGE #</u>
SIMPLE CURE FOR RX-TX TRACKING PROBLEMS	21
VSB-1 HOOK-UP:	
Teaberry Stalker XX	25
Realistic TRC-490	25
Wards GEN-719A	25
MODULATION ADJUSTMENTS FOR VARIOUS REALISTICS	33
ZAPPER 9000 REFERENCE CHART	46
ZAPPER TROUBLESHOOTING HINTS	47-48
TC9106 PLL OPERATION ANALYSIS	50-53
THE "SPREAD EAGLE" ANTENNA BREAK-THRU FOR TRUCKERS	54-55
BASIC PLL	56
ELECTRONIC TERMINOLOGY	57
SCANNER PROGRAMMING TIPS	58
INTO THE KNOW WITH JAPANESE SEMICONDUCTORS	59
TRANSISTOR SPECIFICATIONS	60
RESISTOR COLOR CODE	61-62
YOU CAN BUILD IT	
"Secret CB's" Super-Duper Power Supply Controller	63
Audio Test Station	64
Power Line Filter	65
OPPS! WE GOOFED!	
Vol. 4, Page 38	66
Vol. 10, Page 10, 16, 28	66
Vol. 11, Page 3, 10, 15, 16 & 71	66
"SECRET CB" INDEX ON VOLUMES 1 THRU 11	67-68
"SECRET CB" BOOK ORDER FORM	79

VOLUME 13

	<u>PAGE #</u>
INTRODUCING THE SOMMERKAMP TS-788DX	4-9
MB 8719 PINOUT	32
AGC SELECTOR SWITCH	38
CYBERNET 02A CHASSIS	39
HOW TO HOOK UP A 10T POT TO 2000 GTL	40
2824C OPERATION ANALYSIS	41-43
VSB-1 HOOK-UP:	
TRC-448	43
MIDLAND 77-0004 4001	44
TROUBLE SHOOTING CLARIFIER PROBLEMS ON THE 858	45-47
SUPER REGULATOR	48
BUILD A RECEIVER PREAMP	49
LINEAR NOTES	50-51
MODULATED GUNN OSCILLATER	52-56
REALISTIC DX300 (20-204)	64
BEARCAT 250	65

SECRET CB INDEX (CONT'D)

VOLUME 13

(Cont.)

PAGE #

OOPS! WE GOOFED!

VOL. 4, PAGE 39

66

VOL. 6, PAGE 3 & 12

66

VOL. 7, PAGE 54

66

VOL. 10, PAGE 25 & 48

66-67

VOL. 11, PAGE 4, 6, 10, 41, & 75

67

INDEX VOLUMES 1 thru 12

68-80

NOTES