

3. Remove the covers and punch or drill these marked points to 1/4". Also punch or drill matching holes in the chassis.
4. Make up the SPDT switch as indicated on the packing card.
5. Mount the switch and ep with the switch next to the PC board. Matching points according to "B" kit insert follow instructions or installation printed on the "B" kit card

Note: Step two part 3. . . PLL vdd is pin 18.

Modifying The UNIC-RV-CB45 For High And Low Channels

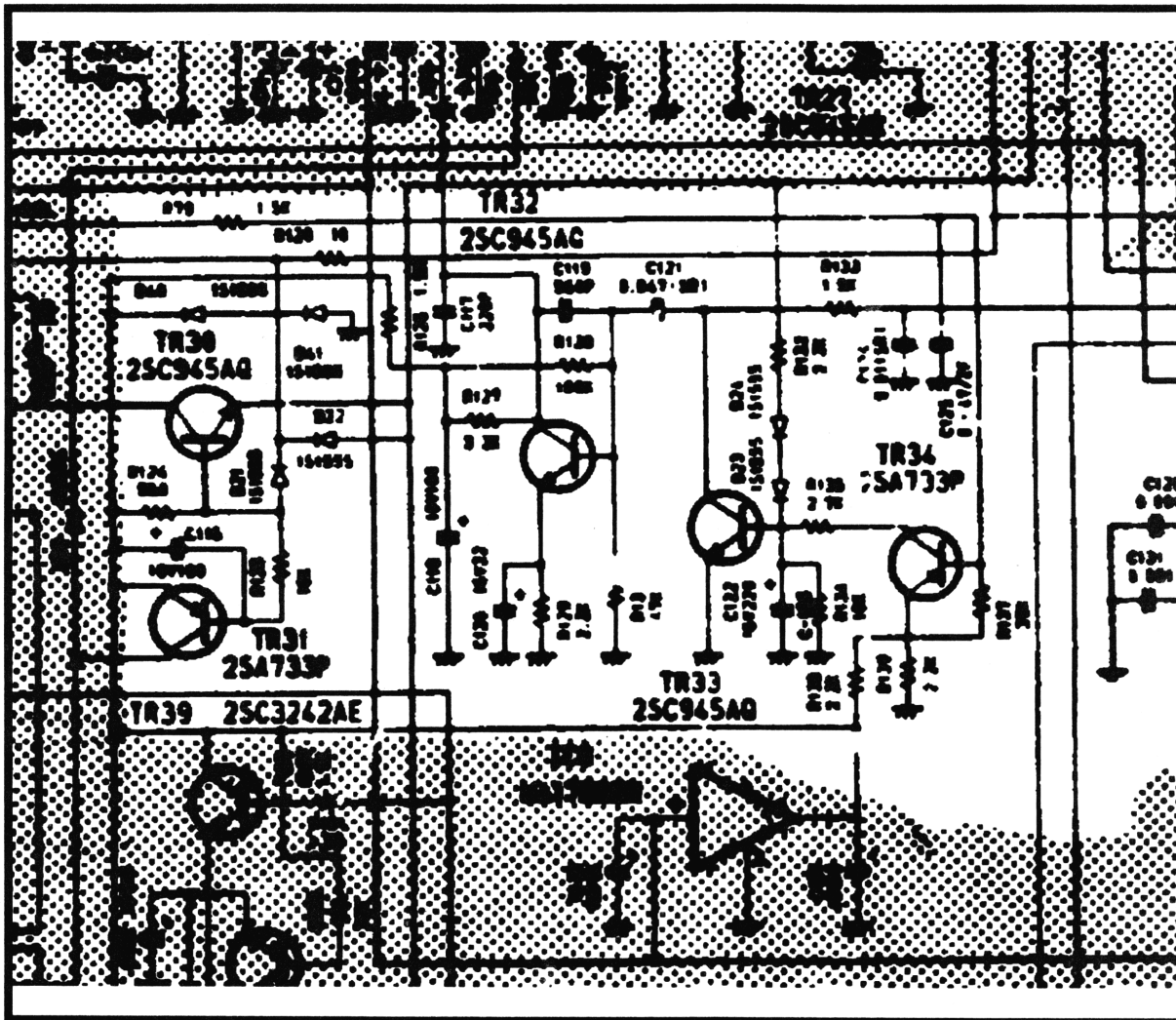
Using the "A" and "B" kits.

For mounting the DPDT switch for the "A" kit and the ep of the "B" kit we suggest that you use the same locationing and punch or drilling outlined for the "B" kit. For mounting the 5k offset SPST switch we suggest that you use the opposite side of the chassis. To find this point you will notice that there is a 1/4" and 1/8" hole in the chassis vertically located. Punch out the 1/8" hole to 1/4". Punch the top cover to coincide with this point, then "v" it out to the lip. This allows the cover to slide down over the switch.

1. Mount the two switches on the "A" kit and wire them according to instructions except the wire marked b.
2. Connect the brown wire of the "B" kit to "B" on the DPDT switch of the "A" kit and mount the "B" kit ep.
3. Follow the instructions for wiring the "B" kit (orange lead goes to pin20 of the PLL).

Circuit Of The Month

It was my intent to continue this discussion from the point in the receiver that I concluded last month, in fact I already had my notes ready when other things of more importance were brought to my attention. I feel that you will be better served if we discuss them now rather than 6 or 8 months from now. They are alignment procedures for the Cobra 21,25, and 29 Plus units, and the AMC (automatic modulation control) circuit for the same units. As long as you have an "s" meter, there are two ways of measuring or indicating the receive signal, enabling you to make fine, incremental adjustment in the tuning of the receiver's tanks.



FIGURE# 32.....AMC CIRCUIT

If you will notice, there is 8.1 volts applied at the top of R-132 during receive and not counting base current of TR-33, this voltage would be dropped across R-132, the two diodes D-23 and D-24, and the resistor R-134. The base current of TR-33 will however limit this voltage at the base to about 1 volt. During receive, C-122 (220uf) a very large capacitor, is charged to this voltage. During transmit this charge cannot be bled off to the ground that is applied to the top of R-132, because of the diodes and becomes a source for the collector of TR-34 (a PNP transistor). If it is not there, it must bleed off through R-134 (a 10k resistor). This might cause loading on the first couple words of the transmission.

If you remove TR-33, the effect will be that you have no ground on the mike hi input during receive.

AMC CIRCUIT

Any RF or noise picked up in the mike cord will be transferred to the amplifier and be fed into the audio amplifier.

Note: Because this point in the mike is grounded in receive, it is redundant to switch mike HI in the mike itself. This does however, allow you to adapt to these units, a mike that only has ground switching for transmit and receive.

The second purpose of TR-33 is to act as a variable resistor during transmit. If the mike high causes the audio amplifier to produce audio spikes that reduces the 13.8 volts on the secondary of the audio transformer to below 3.8 volts, the AMC diode will conduct. The lowering of the voltage on the base of TR-34 will cause this PNP transistor to conduct more. This causes the collector of TR-34 to go more positive which is reflected on the base of TR-33. This causes TR-33 to conduct heavier, causing loading of the mike HI signal. The sampling of the audio is made on the negative swing of the voltage which does not chop the positive peaks of the amplitude modulation. (I say "clever").

How can you change the AMC effect?

Two ways. If you will look at the 25 and 29 schematic you will see R-79. In one case it is on one side of the AMC diode and the other, on the opposite side. It is not important where it is because it is only a circuit limiting resistance. Also notice R-138 and R-139 (2.2k resistors). They set the voltage for TR-34's emitter to 4 volts, which sets the AMC sampling level to 3.8 volts.

Way # 1. Exchange these two resistors (R-79 and R-139). This will lower the sampling voltage to about 2.5 volts and at the same time give more limiting to the current that charges C-125.

Way # 2. Replace R-79 with a 10k resistor. You will find that in some units, this resistor has already been increased from 1.5k to 3.3k. TRY IT, YOU'LL LIKE IT!!!