KDK DISTRIBUTING CO., INC.
617 SOUTH GALLATIN ROAD – MADISON, TN 37115

3/30/82 TB

UP-DATE ON AUDIO MODIFICATION

THE PURPOSE OF THIS MODIFICATION IS TO IMPROVE ATTACK TIME OF IC12 SPEECH PROCESSOR (UPC 1170) AND SUPERCEDES PREVIOUS MODIFICATIONS.

ALL THAT IS REQUIRED IS ABOUT 3 INCHES OF FINE INSULATED WIRE AND A SHARP CUTTING TOOL.

REMOVE BOTTOM AND EXPOSE BOTTOM OF PC BOARD. REMOVE THE SIX SCREWS FROM THE BOARD, UNSOLDER BROWN OR WHITE WIRE GOING FROM MIDDLE OF THE REAR OF THE BOARD THAT GOES TO THE FIVE VOLT REGULATOR (7805). TILT BOARD FORWARD OVER THE RADIO.

LOCATE PIN NUMBER 7 OF IC12 AND ISOLATE IT FROM ALL OTHER CONTACTS WITH CUTTING TOOL. SOLDER THE THREE INCH WIRE TO PIN 7 OF IC12 AND CONNECT OTHER END OF ANY 5 VOLT SOURCE ON THE BOARD. CAN BE TRACED BY FOLLOWING WHERE 5 VOLT REGLUATOR WIRE CONNECTS TO THE BOARD (THE ONE YOU REMOVED EARLIER, WHITE OR BROWN, FROM THE REGULATOR IC, THAT IS THE 5 VOLT SUPPLY).

WHAT YOU HAVE DONE IS WIRED THE SPEECH COMPRESSOR TO BE ON ALL THE TIME THEREBY ELIMINATING ATTACK TIME ON INITIALIZATION OF TRANSMISSION.

TB/KDK

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5/82 TB

SERVICE NOTE KDK 2025A MK11

FREQUENCY LOCK-UP

IF FREQUENCY LOCK-UP OCCURS UNDER CERTAIN CONDITIONS AS EVIDENCED BY TRANSMIT OFFSETS NOT WORKING, FREQUENCY NOT CHANGING WITH DIAL OR MEMORY FREQUENCIES NOT CHANGING, THE CAUSE IS NOISE AND/OR LOW VOLTAGE CONDITIONS OCCURING AS A TRANSIENT, SUCH AS STARTING CAR, ETC.

THE CURE IS TO REMOVE BOTTOM COVER OF RADIO. INSTALL 1000V PIV DIODE 2 AMP IN SERIES WITH YELLOW WIRE(LARGE) CONNECTING TO RIGHT HAND SIDE OF POWER CHOKE ON REAR PLATE OF RADIO. BANDED SIDE OF DIODE CONNECTS TO WIRE(YELLOW), OTHER SIDE TO CHOKE TERMINAL.

TOM BRENT
SERVICE MANAGER

KDK DISTRIBUTING CO., INC
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SERVICE NOTES/HINTS AND KINKS 0182-TB

Loss of power, loss of high power

In some cases we have found that when there is a sudden loss of power that it is caused by failure of an RF choke on the Low Pass Filter Unit. This is the small board in the rear of the bottom side of the unit. The choke, if burned, is easily identifiable, but is green and is marked 8R2.

The choke should be replaced, if open, by one marked 1R0 and is available from us.

At the same time the glass 1N60 on the same board should be replaced with a 1N914. The glass 1N60 is D1. Replacing the 1N60 with the 1N914 at the same time as the choke is replaced is an absolute must.

After replacing these two items, the high power and low power should be reset. Do not allow the unit to run more than 25 watts output. Although the module is capable of much more power output than 25 watts, the heat sink will not provide enough cooling for more than the 25 watts as designed, and the end result will be a ruined power module.

Should the choke marked 8R2 not be at fault, it is still a good idea to replace the 1N60 with a 1N914. In the event that the choke is not the culprit, then it should be assumed that the power module is defective, and if so, should naturally, be replaced.

Low or slowly dropping meter reading on transmit

There have been cases of hams complaining that when the radio is first keyed up the meter reads well up on the scale but slowly drops. They note that although the actual power output remains the same, the meter reading changes slowly downward.
This, again, is the 1N60 diode and it should be replaced with a 1N914, resetting the high and low power levels.

Note: These are not factory modifications, but cures for problems that might come up. The factory feels that selected 1N60 diodes are sufficient and our experience is that the 1N914 is a good cure for 1N60 ills.

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0282-TB

SERVICE NOTES/HINTS AND KINKS

Complaint of alternator whine or low frequency buzz on carrier (Transmit).

In cases where there is a complaint of alternator whine or low frequency buzz on transmit carrier, be sure the tone switch is off. If on, there will be a low frequency tone, of course. If the tone switch is off and the noise is still there, the best cure is as follows:

Install duplicate transformer/choke as per diagram #1 & #2 and rewire as shown. Use heavy stranded wire to wire the choke in parallel with the existing choke. Install a .068 mfd mylar capacitor at the power module and ground lug as shown in figure #3. Then check power output. Some readjustment of the high and low setting might be required.

Important: This modification is factory approved, but is not recommended unless you have this problem.

As the 2025A is manufactured, all the voltages to the radio are delivered through the AF choke with the exception of the power module. The power module is fed not through the AF choke.

What is being done in this modification is to place a second choke in parallel with the original choke. The single choke will not carry the current of the radio plus the power module. So, you are doubling the current carrying capacity plus the .068 mfd capacitor to ground bypass. When the automobile has hash or whine in its dc line, this cure is highly effective.

These parts are available from our parts department should the dealer wish to make this modification, or the owner might wish us to do it, or many will choose to do it themselves. Either way, any reasonably competer technician or Ham can accomplish this particular modification with no problems.

After the choke and capacitor have been installed, loosen the three screws holding the speaker to the outside bottom cover and rotate the speaker 90 degrees inward so that the terminal lugs are now placed on the inside, rather than facing forward or to the rear. See drawing #4. Then retighten the three screws. If the speaker is not moved so that the terminals are placed as shown, the terminals might short against the newly installed choke.

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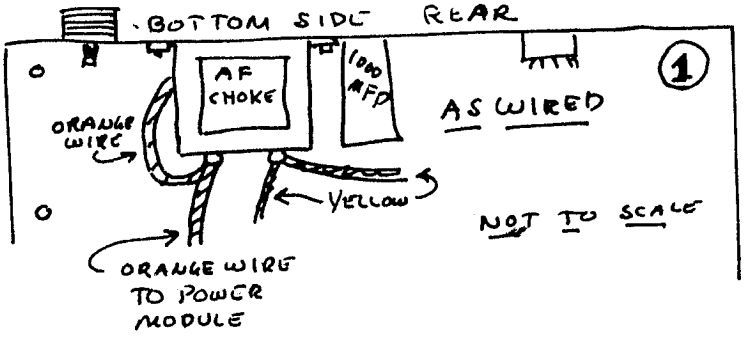
Drawing #1 shows the unit as it comes from the factory. Note that the lugs on the left of the AF choke have two orange wires. One of the wires on the far left goes to the switch. The other orange wire goes to the power module. This wire will be moved to the right lug as shown in figure #2.

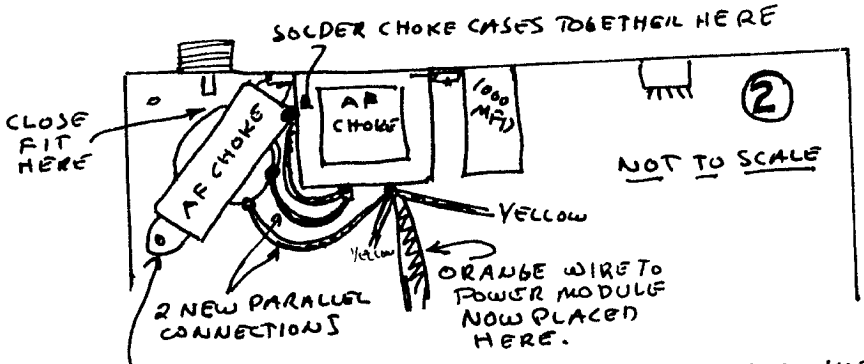
Drawing #2 The second AF choke is placed on the chassis. Rather close fit. It is suggested that the cases of the two chokes be soldered together where they touch. Scrape the enamel from the surfaces to be soldered and tin each first using a good hot iron. The mounting tab on the far left should also be cleaned and soldered first and the protruding bolt as well. Then they will solder well and hold. A longer bolt through the low pass filter unit with a nut on the end holding the new choke inplace is to be preferred over soldering the tab to the bolt. Two wires, about 18 guage are now used to wire the lugs of the two chokes in parallel as per drawing. Only the orange wire from the power module is moved and is now soldered to the right lug on the original choke.

Drawing #3 Place a .068 mfd mylar capacitor of at least 50 volt rating on the wire protruding from the power module which has the orange wire coming from the AF filters and solder in place. Connect the other end of the capacitor to the ground lug bolted on the left hand mounting tab of the power module.

Drawing #4 shows the speaker mounting and how it is turned 90 degrees.

Note: This modification is quite simple. If we spend too much time explaining it, it is merely to be sure the instructions are quite clear.





SOLDER CASE OF CHOKE TO PROTRUDING BOLT* OR - USE LONGER BOLT THRU LO PASS FILTER BOARD AND PUT A NUT ON THIS END TO HOLD CASE OF CHOKE TO CHASSIS

*BE SURE SOLDER STICKS TO BOLT AND CHOKE FRAME. USE FILE OR SANDPAPER TO CLEAR SURFACE BEFORE SOLDERING.