

THE COBRA 146 GTL/TECH'S CHOICE SSB KIT (AND OTHER SISTER UNITS)

AND NO LONGER WILL THE OPERATOR HAVE TO HAVE A FREQUENCY COUNTER TO FIND OUT WHAT FREQUENCY THEY ARE ON. YOU JUST MAKE THEM A LIST OF FREQUENCIES FOR EACH CRYSTAL OR SELECTOR POSITION STARTING WITH CHANNEL 1 AS MARKED IN BLACK ON THAT CRYSTAL.

WE AT CARD-KIT FEEL THIS IS OUR FINEST HOUR AND SEE A BRIGHTER FUTURE FOR CBING AND FOR THE AMERICAN COMPANIES THAT SUPPLY THEM. WE ARE SURE YOU WILL FEEL THE SAME WHEN YOU START USING THESE KITS.

TECH'S NOTES

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THE FOLLOWING PROCEDURE MIGHT VARY SLIGHTLY FROM THE 146GTL TO ITS SISTER UNITS SUCH AS THE PRESIDENT & UNIDEN AX OR AR 144, THE MIDLAND 6001 & 7001, THE REALISTIC TRC-451, AND THE SEARS 663.3810050.

STEP ONE

1. REMOVE THE COVERS.
2. REMOVE C-86 (WHICH IS SOLDERED FROM THE PC BOARD TO THE GROUNDING TAB OF THE CHASSIS) AND RELOCATE IT ON THE PC SIDE OF THE BOARD.
3. USING THE FORWARD MOST POINT OF THE GROUNDING TAB WHERE C-86 WAS REMOVED AS A CENTER PUNCH, PUNCH A 13/32" HOLE THROUGH THE CHASSIS.
4. LOCATE AND PUNCH A 13/32" HOLE IN THE LOWER COVER, 2.05" TO THE REAR OF THE FRONT EDGE AND IN-LINE WITH THE CENTER OF THE UPPER MOST MIKE HOLDER SCREW HOLE. (THIS POINT IS ALSO 5/8" TO THE REAR OF THIS SAME HOLE.
5. USING THE FILLER BOARDS SUPPLIED, PLACE THEM UNDER THE LIP OF THE CHASSIS. USE ONE OF THE BRACKET MOUNTING BOLTS, AND RUN IT THROUGH THE MOUNTING HOLE TO HOLD THE FILLER BOARDS IN PLACE. DROP A BALL POINT PEN OR SOME SIMILAR OBJECT THROUGH THE 13/32" HOLES TO KEEP THEM ALIGNED. USING A PAIR OF PLIERS AND IN A ROLLING MOTION, BEND THE EARS ON THE CHASSIS DOWN OVER THE FILLER BOARDS AT EACH END. REMOVE THE MOUNTING BOLT AND PEN.
6. MOUNT ANY AND ALL CRYSTALS DESIRED ON THE SWITCH PC BOARD. (MAKE A NOTE OF THE FREQUENCY MARKED IN BLACK ON THE SIDE OF EACH CRYSTAL AND THE POSITION IN WHICH YOU INSTALLED IT). NOTE: THE MOST SIGNIFICANT NUMBER, NUMBER 2, MIGHT BE MISSING FROM THIS NUMBER DUE TO THE PRESENT STAMP SIZE AVAILABLE. THE FREQUENCY METAL STAMPED ON THE END OF THE CRYSTAL OR IN RED, INDICATES THE FREQUENCY OF CHANNEL 1 WHEN USED IN THE TECH'S CHOICE AM KIT. THEIR FREQUENCY IS 455KHZ. HIGHER.

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7. MOUNT THE SWITCH LEAVING ONE FLAT WASHER IN PLACE WITH THE OTHER TO BE MOUNTED OUTSIDE UNDER THE NUT.
8. REMOVE L-39 FROM THE PRINTED CIRCUIT BOARD AND CRACK OUT THE MIDDLE OF THE GLASS CAPACITOR LOCATED IN THE BOTTOM OF THE TANK. A GOOD TOOL TO USE IS A SMALL JEWELER'S SCREWDRIVER. REPLACE THE RESOLDER L-39 BACK IN PLACE. SOLDER THE 18PF. CAPACITOR SUPPLIED ACROSS THE OUTSIDE LEGS OF THE THREE LEG SIDE OF L-39.
9. JUST FORWARD OF THIS TANK (L-39) LOCATE AND REMOVE R-105 & R-202. CLEAN THE INSULATION OFF THE LEG OF R-202, TWIST AND SOLDER THESE TWO LEGS TOGETHER WITH THE BODIES OF THE RESISTORS PARALLEL. RESOLDER R-105'S BODY BACK WHERE IT WAS AND AT THE SAME TIME SOLDER R-202'S BODY BACK TO WHERE THE LEG WAS, LEAVING THE LEGS RAISED. THIS BECOMES TP-3.
10. USING 3M 4475 ADHESIVE, MOUNT THE EPOXY PACK JUST TO THE REAR OF THE SWITCH PC BOARD. MAKE SURE THE TUNER OF L-38 IS NOT COVERED.
11. LOCATE THE SWITCHING INPUT TO THE USB AND LSB TUNING TANKS OF THE 10.6975 CRYSTAL CIRCUIT. LOOKING AT THE PC SIDE OF THE PC BOARD, IT IS THE LAST RIBBON WIRE LEFT TO RIGHT, 5TH AND 6TH WIRE. CUT THESE TWO PC RUNS COMING OFF OF THESE TWO POINT AS THEY START TO THE LEFT, DIRECTLY TO THE REAR OF WIRE 4 OF THIS SAME RIBBON WIRE. NOW CROSS JUMPER THESE TWO CUTS. (CROSSING THE USB SWITCHING TO LSB AND LSB SWITCHING TO USB).

STEP TWO

1. SOLDER THE BLACK WIRE ON THE SWITCH PC BOARD TO THE SHIELD OF THE UPPER TANK ON THE EPOXY PACK AND THEN TO THE SHIELD OF L-37. LEAVE A LITTLE SLACK IN THIS WIRE FROM THE BOARD TO WHERE YOU BARE THE WIRE FOR SOLDERING TO THE UPPER TANK TO ALLOW FOR LATER CHANGING OR ADDING CRYSTALS ON THE SWITCH PC BOARD.
2. SOLDER THE WHITE WIRE ON THE SWITCH PC BOARD TO THE ORANGE DOT TERMINAL ON THE EPOXY PACK.
3. CONNECT A WIRE FROM THE POINT R-202 WAS RAISED FROM, TO THE BLUE DOT TERMINAL ON THE EPOXY PACK.
4. SOLDER A WIRE FROM THE RAISED LEGS OF R-105 AND R-202 (TP-3) TO THE YELLOW DOT TERMINAL ON THE EPOXY PACK.
5. RUN A WIRE FROM JP-22 (LOCATED IN CENTER OF PC BOARD NEAR VR-1) TO THE RED DOT TERMINAL ON THE EPOXY PACK.

ALIGNMENT

WITH A FREQUENCY COUNTER ATTACHED TO READ THE TRANSMIT FREQUENCY.

1. APPLY POWER AND SELECT CHANNEL 1.

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2. MAKE SURE VOICE-LOCK IS IN CENTER POSITION.
3. SELECT THE POSITION ON THE GROUP SELECTOR SWITCH YOU HAVE JUST INSTALLED THAT IS THE MOST CENTER OF THE FREQUENCY SPAN OF FREQUENCIES YOU HAVE INSTALLED CRYSTALS FOR.
4. USING A 40MHZ OR ABOVE SCOPE ON TP-3 ADJUST THE TWO TANKS ON THE EPOXY PACK FOR THE BEST AMPLITUDE AND CLEANNESS.
5. NOW WITH THE MODE SWITCH IN AM POSITION, PEAK THE TRANSMITTER FROM L-39 TO OUTPUT.
6. SELECT EACH POSITION ON THE GROUP SELECTOR SWITCH AND TUNE ITS ASSOCIATED VARIABLE CAPACITOR, LOCATED ON THE SWITCH PC BOARD, TO READ A TRANSMIT FREQUENCY EQUAL TO THAT FREQUENCY STAMPED IN BLACK ON THE CRYSTALS. RECHECK PART 4.
7. TOUCH UP AND BALANCE THE TRANSMITTER AN RECEIVER AT BOTH ENDS OF THE FREQUENCY SPAN.

FINISHING TOUCHES

THERE ARE TWO DECALS IN EACH KIT. USE AN X-ACTO KNIFE AND CUT A 13/32" TO 3/8" HOLE IN THE CENTER, (A GOOD ITEM TO USE IS A WASHER WITH A CENTER HOLE OF THIS SIZE). IN THE ROUND PAPER BACKED ONE. FIT IT OVER THE SWITCH WITH THE COVERS IN PLACE. RUB IT OUT SMOOTHLY INTO PLACE. MAKE A CUT ACROSS IT WHERE THE TWO COVERS COME TOGETHER. THE SECOND DECAL IS STUCK ON THE INSIDE PACKING BLISTER. AGAIN USING AN X-AUTO KNIFE, PEEL THE DECAL OFF AND PLACE IT JUST ABOVE THE S/RF METER ON THE FRONT OF THE UNIT.

LET'S HELP EACH OTHER DO A BETTER JOB.