

JACKSON EXTENDED LO BAND

BY STUDYING THE CHART, YOU CAN SEE HOW THE SWITCH SHIFTS THE FREQUENCIES. APPLY THIS SHIFT TO YOUR CONVERSION FREQUENCIES AND YOU CAN SEE HOW EVERY CHANNEL CAN BE PICKED UP WITH THE FLIP OF A SWITCH. TO GET CHANNELS 105-108, APPLY THE SWITCH WHEN MODE 60-104 IS ENABLED. 105-108 WILL BE ON CHANNELS 37-40.

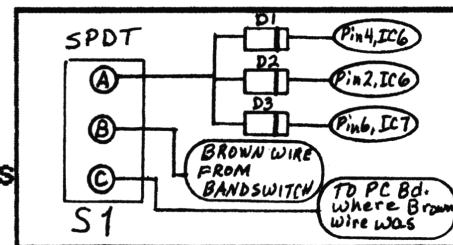
JACKSON EXTENDED LO BAND

. *M.WASSERMAN*

THIS MODIFICATION ADDS ONE MORE BAND OF COVERAGE TO THE JACKSON. IT GIVES 25.615MHZ TO 26.055MHZ ON BAND 'A' WITH EXTEND SWITCH SELECTED. REFER TO VOLUME 27 PAGE 08.(BAND 'A' IS THE ONLY BAND AFFECTED BY THE NEW SWITCH.)

PARTS YOU WILL NEED: 3 1N4148 DIODES. 1 SPDT SWITCH.

1. FOLLOW THE BROWN WIRE FROM THE BAND SWITCH TO THE P.C. BOARD BEHIND THE CHANNEL SELECTOR.
2. UNSOLDER THE BROWN WIRE AT THE PC BOARD AND CONNECT IT TO PIN 'B' OF SWITCH 1.
3. RUN ANOTHER WIRE FROM WHERE YOU REMOVED THE BROWN WIRE IN STEP 2, TO PIN 'C' OF SWITCH 1.
4. CONNECT THE CATHODE OF D1 TO PIN '4' OF IC6.
5. CONNECT THE CATHODE OF D2 TO PIN '2' OF IC6.
6. CONNECT THE CATHODE OF D3 TO PIN '6' OF IC7.
7. SOLDER THE ANODES OF THE THREE DIODES TOGETHER.
8. CONNECT THE ANODES TO PIN 'A' OF SWITCH 1.
9. REMOVE DIODES D26 AND D27. REPLACE THEM WITH 'ONE' (1) 'SUPER DIODE'.



CONNEX-3300 EXPORT ALIGNMENT

. *RAYSRADIO*

200 CHANNEL UNIT (25.615-28.305MHz). SAME EXACT CASE AND FRONT FACE PLATE AS THE SUPER STAR 3600 LESS CW AND SSB. IN ITS PLACE IS HI/LO PWR AND ECHO. MODE SELECT SWITCH HAS THREE POSITIONS (PA,FM,AM). ECHO BOARD LOOKS LIKE TYPICAL BBC CIRCUIT. UNIT HAD IDENTICAL PCB AS EXCALIBUR. USED BOARD LAYOUT IN VOLUME 22 PAGE 31.ANOTHER ONE HAD SLIGHT DIFFERENCE IN SYNTHESIZER CRYSTAL ARRANGEMENT. THE FIRST UNIT WITH SER.# 86060341 HAD THREE CRYSTALS IN A GROUP WITH A VARIABLE CAP NEXT TO EACH ONE. THE SECOND UNIT SER.# 012270 HAD THREE CRYSTALS BUT ONLY ONE VARIABLE CAP AND TWO TUNING COILS IN PLACE OF THE VARIABLE CAPS. DRIVER TRANSISTOR IS A 2SC2166 AND FINAL

TRANSISTOR IS A 2SC1969. HIGH POWER WAS 10 WATTS DEADKEY WITH 14 WATTS PEP. LO POWER POSITION WAS 4 WATTS DEADKEY AND 7 WATTS PEP. I SUGGEST REMOVING AMC TRANSISTOR TR32 AND ADJUST VR13 IN HIGH POWER POSITION FOR 5 WATTS DEADKEY AND 20 WATTS PEP. ADJUST VR16 IN LO POWER POSITION FOR 2 WATTS AND 12 WATTS PEP. IF HIGHER CARRIER LEVELS ARE DESIRED, I RECOMMEND REPLACING TR50 WITH TR51 AND REPLACE TR51 WITH ECG37. SOME OF THE VARIABLE RESISTORS ARE USED FOR ADJUSTMENTS OTHER THAN LABELED ON THE PCB. ALL THE VARIABLE RESISTOR ADJUSTMENTS ARE AS FOLLOWS:

- VR1 AM/FM SIGNAL METER
- VR4 SQUELCH RANGE
- VR5 FM DEVIATION
- VR8 RF POWER METER
- VR12 LO POWER MODULATION
- VR13 HIGH POWER CARRIER
- VR14 HI POWER MODULATION
- VR16 LO POWER CARRIER

SYNTHESIZER ALIGNMENT

CONNEX-3300 SYNTHESIZER ALIGNMENT

TEST EQUIPMENT	TRANSCIVER	ADJUST	REMARKS
INPUT OF FREQ CNTR TOIC5 PIN3	CH.19		CHECK FOR 10.240MHz
INPUT OF FREQ CNTR TOIC3 PIN3	CH.19 AM XMIT	UNMARKED VARIABLE CAP NEXT TO 10.695MHzXTAL	CHECK FOR 10.695MHz
INPUT OF DC METER TOTP2 (R109)	BAND F CH.40	L17	ADJUST FOR 5 VOLTS CHECK FOR APROX 1.5V ONBAND A CH.1
INPUT OF O'SCOPE TO TP4 (R107)	BAND D CH.19	L16	ADJUST FOR MAXIMUM RF OUTPUT
INPUT OF O'SCOPE TO TP3 (R74)	BAND F CH.40	L18	ADJUST FOR MAXIMUM RF OUTPUT
INPUT OF FREQ CNTR TOTP3 (R74)	BAND C CH.19	UNMARKED VARIABLE CAP NEXT TO 14.010MHz XTAL OR L19 ON LATER UNITS, SAME MODEL	ADJUST FOR 16.040MHz EXTERNAL CNTR SHOULD READ 26.735MHz
INPUT OF FREQ CNTR TOTP3 (R74)	BAND F CH.19	UNMARKED VARIABLE CAP OR COIL 'A' NEXT	ADJUST FOR 17.390MHz EXTERNAL CNTR SHOULD

TO 15.360MHz
XTAL

READ 28.085MHz

RECEIVER ALIGNMENT

OUTPUT OF SIG GEN FOR 27.185MHz, 30%MOD	BAND D CH.19 AM	L3L4L5 L7 L8 L10 L11 L12	ADJUST FOR MAXIMUM OUTPUT
OUTPUT OF SIG GEN FOR 27.185MHz, NO MOD FM 1uV 1.5KHz DEV.	BAND D CH.19	L5	ADJUST FOR MAXIMUM AUDIO OUTPUT
1KHz AUDIO TO ANT.			
INPUT JACK			
OUTPUT OF SIG GEN FOR 27.185, 30% MOD	BAND D CH.19 AM	VR4	ADJUST SO THAT SQUELCH JUST BREAKS
1KHz 1000uV	SQUELCH MAX		
OUTPUT OF SIG GEN FOR 27.185MHz, 30% MOD.,	BAND D CH.19 AM	VR1	ADJUST FOR 9 ON SIGNAL SCALE OF METER
1KHz 100uV			
OUTPUT OF SIG GEN FOR 26.045MHz, NO MOD. 100uV DC METER TO TP1 (D2 CATHODE)	BAND A CH.40 AM NB/ANL ON	L1, L2	ADJUST FOR 2-3 VOLTS

TRANSMITTER ALIGNMENT

TEST EQUIPMENT	TRANSCEIVER	ADJUST	REMARKS
INPUT OF WATTMETER TO ANTENNA INPUT	BAND F CH.40 AM	L40 L42 L43 L44	ADJUST FOR MAX RF OUT ADJ L33 FOR BALANCE PWR
* *	* *	L33 *	BETWEEN BAND F CH.40 AND BAND A CH.1
INPUT OF WATTMETER TO ANTENNA INPUT	BAND D CH.19 AM	VR13	ADJUST FOR 5 WATTS
* *	RFPWR IN HI POSITION	* *	* *
INPUT OF WATTMETER TO ANTENNA INPUT	BAND D CH.19 AM	VR16	ADJUST FOR 2 WATTS
* *	RFPWR IN LO POSITION	* *	* *
INPUT OF SCOPE OR MODULATION METER TO TO ANTENNA INPUT INSERT 1KHz 30mV TO MIC INPUT	BAND D CH.19 AM RFPWR IN "HI" MIC GAIN TO MAX	VR14 * * * *	ADJUST FOR 100% MODULATION * * * *
INPUT OF O'SCOPE OR MODULATION METER TO TO ANTENNA INPUT INSERT 1 KHz 30mV TO MIC INPUT	BAND D CH.19 AM RFPWR IN "LO" MIC GAIN TO MAX	VR12 * * * *	ADJUST FOR 100% MODULATION * * * *

INPUT OF DEVIATION	BAND D	VR5	ADJUST FOR 2-3 KHz DEV.
METER TO ANT INPUT	CH.19 FM	*	*
INSERT 1KHz 30mV TO MIKE INPUT	XMIT	*	*
	*	*	*
INPUT OF WATTMETER TO ANTENNA INPUT	BAND D	VR8	AT 5 WATTS RF OUTPUT ADJUST SO RF PWR METER AGREES W/ WATT-METER
*	MIC GAIN	*	*
*	TO MIN. XMIT	*	*
*		*	*

IMPROVED 326-G GLEN COUNTER

F.J.BUCKLEY

THE MODIFICATION SHOWN IN VOLUME 5, PAGE 13, REQUIRED A GLEN PREAMPLIFIER. THIS AMPLIFIER IS NO LONGER AVAILABLE. THE MODIFICATION AS SHOWN WITHOUT USING THE AMPLIFIER WAS NOT SENSITIVE ENOUGH FOR LOW LEVEL SIGNALS. THIS MODIFICATION WILL PERMIT READING THE FREQUENCY OF A SINGLE TRANSISTOR OSCILATOR CIRCUIT.

PARTS NEEDED:

- 1 DPDT SWITCH
- 1 PHONO JACK
- 1 FOOT OF RG-174/U COAX CABLE
- 1 390pf CAPACITOR

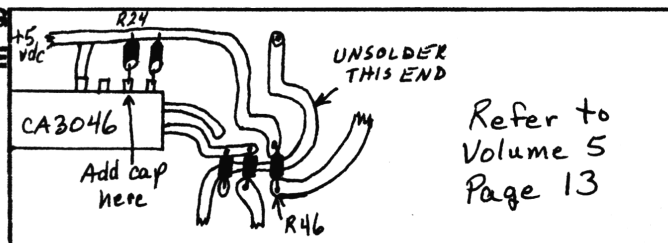


FIGURE 1. GLEN 326-G

BEFORE STARTING THE MODIFICATION, UNMODIFY, IF EARLIER MODIFICATION HAS BEEN MADE BY UNSOLDERING THE GREEN WIRE THAT RUNS FROM THE RF TAB ON THE TOP CIRCUIT BOARD TO THE OUTPUT JACK OR SWITCH, FROM THE OUTPUT JACK OR SWITCH. RESOLDER TO THE END OF THE GREEN WIRE CONNECTED TO TERMINAL 'L' OF THE LOWER BOARD. (DO NOT REMOVE THE WHITE WIRE FROM THE JACK.)

MODIFICATION STEPS

1. DRILL A HOLE SUITABLE FOR MOUNTING THE AUDIO JACK BETWEEN THE HEATSINK AND FREQUENCY SET COIL ON THE REAR OF THE CHASSIS.
2. REMOVE THE LOWER BOARD BY REMOVING TWO SCREWS AND UNPLUGGING.
3. REFER TO FIGURE 1. UNSOLDER AND REMOVE THE END OF R46 THAT IS ATTACHED TO THE B+ SUPPLY.
4. REMOVE WIRES FROM STANDBY/ON SWITCH AND REMOVE THE SWITCH.
5. SOLDER THE ENDS OF BOTH WIRES JUST REMOVED TOGETHER AND INSULATE.
6. LOCATE R24 AND SOLDER ONE END OF THE 390pf CAP TO THE TOP EXPOSED END OF THE RESISTOR.