

Modifications for the ALINCO

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19-07-1998

(ALR-206) Undocumented function of the Alinco ALR-206T

here is one feature of the ALR-206T that does not show up in the manual. The ability to scan 2 frequencies.

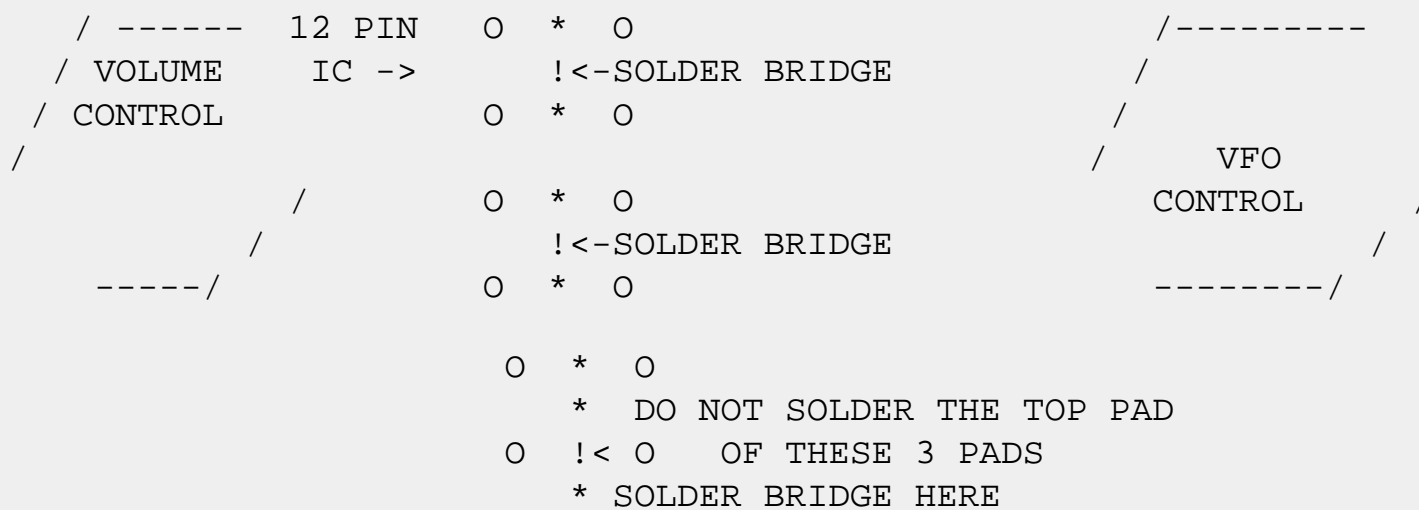
1. Enter the lower of the 2 frequencies from the mic and press the F key and then the SCAN W key.
2. Enter the upper of the 2 frequencies from the mic and press F key and then the SCAN W key.
3. Press the F key and the SCAN W key.
4. To activate the 2 frequency scan, press the F key and PROG S key.

This is a nice feature if you wish to monitor 2 frequencies without a full memory or band scan.

07-08-1999**(ALR-22) Extended frequency RX/TX of the ALR22T & ALR22HT**

1. Remove the top and bottom covers of the radio.
2. Remove the 4 screws that hold the front panel ssembly to the main chassis.
3. Pull front panel away from the main chassis very gently.
4. Locate the VolumeSquelch pot on the left side of the radio.
5. Locate the VFO control on the left side of the radio.
6. Between the two above units is an IC that runs vertically between the two units. (ONLY THE 12 PINS OF THE IC ARE SEEN FROM THE BACK)
7. After locating the IC locate 3 sets of unsoldered jumper pads between the IC pins.
8. Make a solder bridge between the top 2 pads, then the middle 2 pads, then between the bottom 2 ONLY of the bottom set of 3 pads.

REAR VIEW OF FRONT PANEL



9. RE-assemble radio.
10. Reset microprocessor.

This mod will extend the RX range as well as the TX range of the above unit. The display will have a range from 29mhz to 299 mhz but this is just an erroneos display as the PLL on a typical radio will rx between 130 MHz and 180mhz with a TX range that may be a little beyond these these frequencies.

19-07-1998

(ALR-72) ALR-72E fuer 9600Bd FSK mit DF9IC-Modem

Hallo 9k6 Freaks

Gestern habe ich das ALR-72e von meinem Vater fuer 9k6 umgebaut.

Hierzu gleich vorweg die dringende Warnung:

Fuer den Umbau sollte man genuegend Loeterfahrung und eine ruhige Hand haben. (Nicht das mein Vater das nicht hat, ich habe im qrl halt die noetigen Messmittel, sprich Funkgeraetemessplatz hi).

Man muesste eigentlich die ganze Platine fuer den 9k6-Anschluss ausbauen. Das war mir jedoch ein viel zu grosser Aufwand, also habe ich nach einer anderen Loesung gesucht und gefunden..

Ganz nebenbei entdeckte ich beim Studium des Schaltplanes eine unwarscheinliche Aehnlichkeit der Mikrofonbuchse des ALR-72e mit dem Kenwood TM431e. Bis auf den Pin 6, welcher beim ALR unbeschaltet ist, sind sie naemlich identisch. Beim TM431e liegt auf diesem Pin die ungesquelchte NF vom ZF-IC mit ca 100mV mit Ri 10KOhm.

Und das ist das Abfallprodukt des Umbaus: Pin 6 wird mit der NF vom Diskriminator versorgt -> volles 1k2 Packet ueber die Mikrobuchse...

So, nun aber zum 9600Bd Umbau. Benoetigt wird:

ca 30cm geschirmtes Kabel (4 adrig)
Kabelkupplung nach eigenem Wunsch (ich verwende 5pol/270Grad Din-Kupplung)
1 Kabelschuh fuer 1mm² mit 4mm Loch
1 mal 470 Ohm
1 mal 8.2 kOhm
2 mal 10 kOhm
1 mal 2 MOhm (es geht auch 2,2 MOhm)
1 mal 1 uF 16 V axial !!!

ein Stueck Schrumpfschlauch ca 3mm Innendurchmesser ungeschrumpft
ein " " " 1mm " "
ein duenner Kabelbinder

Vorbereitungen:

Als erstes werden beide Gehaeusedeckel des ALR-72e entfernt. Sicherheitshalber werden die beiden Lautsprecherdraehte an der Kopfhoererbuchse abgeloetet.
An der Rueckseite wird der kleine Kuehlkoerper entfernt (4 Schrauben).

Kabeleinfuehrung:

Unter der Koaxeinfuehrung befindet sich ein ca. 4*4mm grosses Loch, das zum durchgehenden Kuehlkoerper auf der Geraeteunterseite fuehrt.

Dieses Loch wird mit einem 6mm Bohrer vorsichtig aufgebohrt. Das geht am besten mit einer in der Drehzahl regelbaren Bohrmaschine. Mit moeglichst langsamer Drehzahl und wenig Druck beginnen, damit der Bohren in dem rechteckigen Loch nicht verkantet.

Durch das 6mm past nun UFB das 4adrige Kabel.

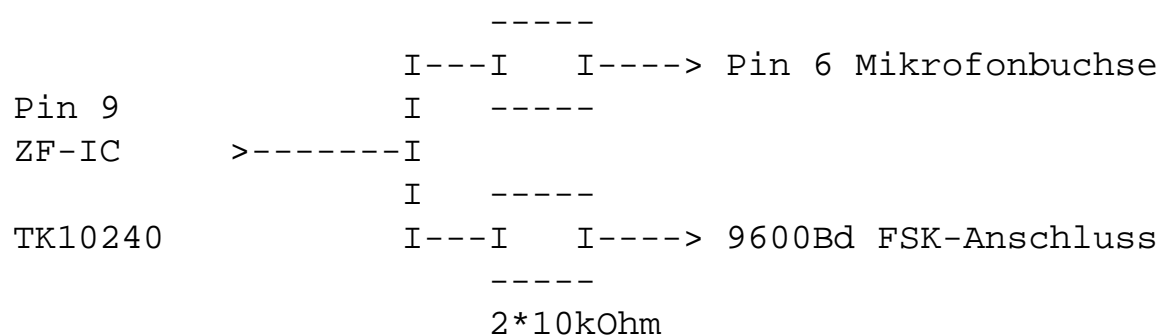
Nun ca 10-15cm des Kabels abmanteln und den Schirm auf ca 2cm kuerzen.

Wenn das Kabel durch das Loch geschoben wurde, kann der Kabelschuh auf den verdrillten Schirm geloetet werden.

In der Naehe der Kabeleinfuehrung ist eine kleine Platine mit einer M3 Schraube befestigt. Diese Schraube verwendet man fuer den Kabelschuh. Den Kabelbinder legt man im Geraet um den Kabelmantel und zieht ihn fest an -> Kabelabfangung !!

3 der 4 Draehte fuerht man bei der Stromversorgungseinfuehrung, den 4. Draht beim abgeschraubten Kuehlkoerper auf die Oberseite des Geraetes.

RX-NF:



Die beiden Widerstaende legt man Parallel und verdrillt auf einer Seite die beiden Anschlussdraehte. Wenn die Verdrillung verzinnt ist, wird der Anschluss auf ca. 5mm gekuerzt und auf den Pin 9 des ZF-ICs geloetet.

Das Ende des einen 10kOhm wird mit dem einzelnen Draht des 9k6-Anschlusses verloetet und mit Schrumpfschlauch isoliert.

Der andere Anschluss kommt auf Pin 6 der Mikrofonbuchse:

Bei dem hier vorliegenden Geraet mit Kabelschwanz und angegossener Mikrofonbuchse ist Pin 6 zwar in der Buchse angeschlossen, jedoch war der pinke Draht am Ende des Kabelmantels abgewickelt.

Wenn man nun ca. 1cm des Kabelmantels entfernt, kann man diesen Draht gut packen, abisolieren, verzinnen und verlaengern.

Ein Messendersignal auf 435Mhz mit -87dBm und 1khz Fmod bringt bei 2kHz Hub ca 285 mV an dem neuen Anschluss "Pin 6" der Mikrofonbuchse.

Setzt man nun den 9k6 RX-NF Anschluss einer brutalen Fehlanpassung (Kurzschluss hi) aus, so sinkt der Pegel an Pin 6 der Mikrofonbuchse nur um etwa 13mV ab !!

PTT:

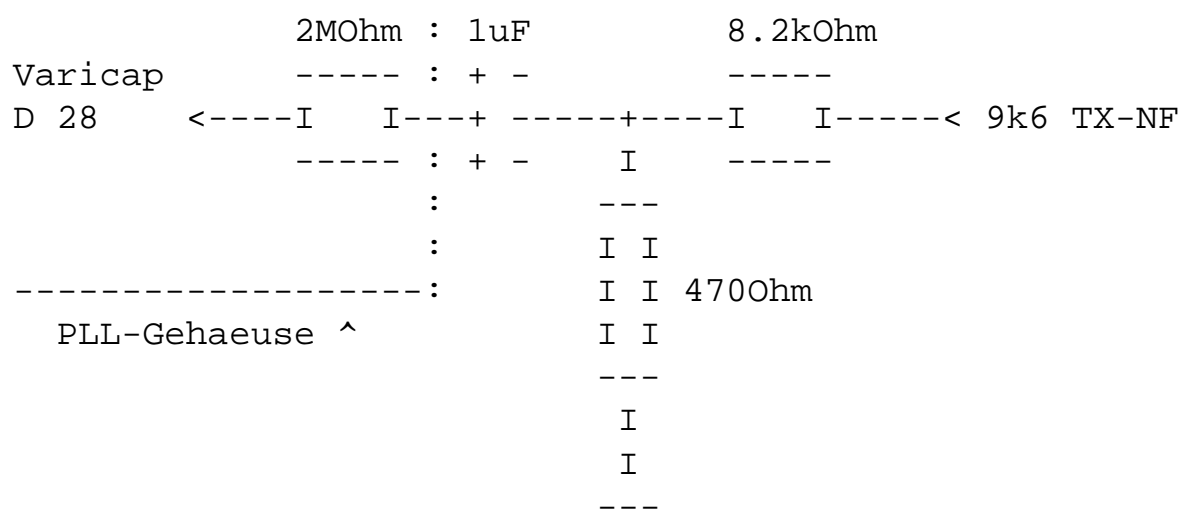
Der rote Draht zum Mikrofonanschluss wird ca 3cm nach Ende des Kabelmantels durchgezwickelt. Auf der einen Seite schiebt man nun ein Stueck Schrumpfschlauch auf. Nun verloetet man die gekappte Stelle mit einem Draht der zum 9600Bd-Anschluss fuehrt. Schrumpfschlauch ueber die Loetstelle schieben und schrumpfen.

Masse:

Einen Draht vom 9k6 Anschluss auf den Kabelschuh an der PA-Modulverschraubung aufloeten.

TX-NF:

:



Deckel am PLL-Gehaeuse entfernen (4 Schrauben).

Betrachtet man die PLL, sieht man links die VARICAP-Diode. An der Kathode wird der auf 4mm gekuerzte Anschluss des 2MOhm Widerstand geloetet. Der andere Widerstandsanschluss beleibt vorerst ungekuerzt.

So, wie fuehrt man nun den FSK-Anschluss aus dem PLL-Gehaeuse heraus ? Duch ein Abgleichloch ? Nee.. is nich schoen hi.

Betrachtet man die Deckelbefestigungslasche in der Naehe der Varicap-Diode, So erkennt man links und rechts neben der Lasche je eine Kerbe mit ca. 1*1mm. Und genau durch so eine Kerbe fuerht man den Anschluss.

Dazu ca 1cm des duennen Schrumpfschlauches auf den Pluspol des Elkos bis an das Gehaeuse schieben und schrumpfen.

Dieses Stueck Anschlussdraht legt man nun in die Kerbe und verloetet ihn mit dem 2Mohm Anschluss. Danach die Drahtenden des Rs und des Cs an der gemeinsamen Loetstelle kuerzen. PLL-Dekel wieder aufschrauben und zur Sicherheit auf Kurzschluss der R-C Loetstelle mit dem Deckel kontrollieren.

Da der FSK-Anschluss nun noch zu empfindlich ist, braucht man noch einen Spannungsteiler. Masse findet man zwischen den beiden ICs links der PLL. Dort wird der 470Ohm stehend aufgelootet. Auf der freien Seite wird der Kondensator und der 8.2Kohm Wiederstand angelootet.

Auf das noch offenen Ende des 8.2Kohm Widerstandes kommt der letzte Draht des 9600Bd Anschlusskabels.

Der FSK-TX-NF Anschluss hat bei 435 MHz ein Empfindlichkeit von ca 250mV fuer 2 KHz Hub bei Fmod 1KHz .

Alle Angaben OHNE GEWAEHR.... hi Wer sein Geraet beim umfriemeln schrottet ist selber Schuld und ich ueber nehme dafuer keine Verantwortung...

vy 73, viel spass mit 9k6

de Hans DL7GAI@OE9XPI in Konstanz

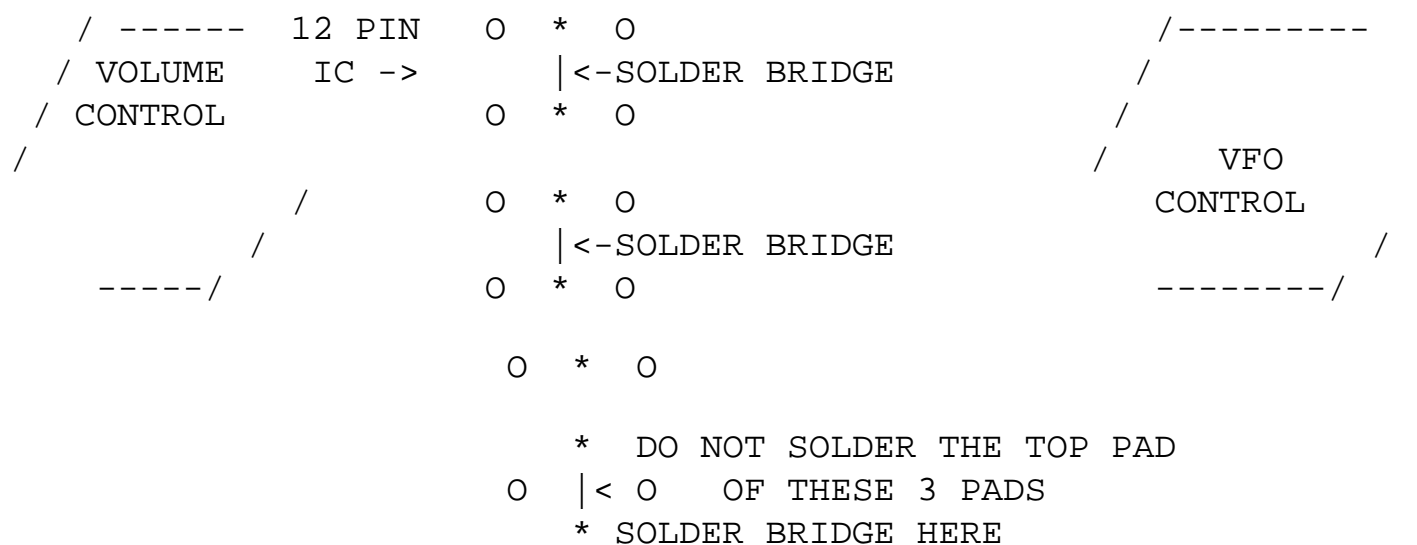
19-07-1998

(ALR-72) Extended frequency RX and TX of the ALR-72T & ALR-72HT

Beware of any static when working with this radio !!!

1. Remove the top and bottom covers of the radio.
2. Remove the 4 screws that hold the front panel assembly to the main chassis.
3. Pull front panel away from the main chassis very gently.
4. Locate the VolumeSquelch pot on the left side of the radio.
5. Locate the VFO control on the left side of the radio.
6. Between the two above units is an IC that runs vertically between the two units. (ONLY THE 12 PINS OF THE IC ARE SEEN FROM THE BACK)
7. After locating the IC locate 3 sets of unsoldered jumper pads between the IC pins.
8. Make a solder bridge between the top 2 pads, then the middle 2 pads, then between the bottom 2 ONLY of the bottom set of 3 pads.

REAR VIEW OF FRONT PANEL



9. RE-assemble radio.
10. Reset microprocessor.

Good luck and happy moding 73 Carl VE3ZCO@VE3GYQ

(DJ-100) Adjustment points for DJ-100T**1. Transmitting Unit**

Item	Adjustment Point	Adjustment Method	Spec
1. Frequency adjustment	CV301 (Main PCB)	Set the unit in the transmission mode at 144.03 MHz and adjust CV301. (Transceiver tester, counter)	144.03 MHz ± 50 Hz
2. Modulation degree adjustment	VR303 (Main PCB)	Input a signal of 1 KHz/50mV into the SP/MIC jack and adjust VR303 so that you obtain 4.7 KHz/DEV in the transmission mode.	4.7 KHz ± 0.2 KHz
3. Subaudible tone	VR401 (RF unit)	Set the subaudible tone to 114.8 Hz by DIP Switch and adjust VR401 so that you obtain 800 Hz/Dev.	800 Hz ± 50Hz
4. DTMF	VR601 (DTMF Unit)	Puch [1] in the transmission mode and adjust VR601 so that you obtain 3 KHz/DEV.	3 KHz ± 500 Hz

2. Receiving Unit

Item	Adjustment Point	Adjustment Method	Spec
1. VCO P/D voltage adjustment	L502 (VCO)	Adjust L502 so that P/D voltage is 0,5 V at 144.03 MHz. (DC voltmeter)	0.5 V ± 0.1 V
2. RF amp	L405, 406, 407 & 408 (RF PCB)	1 KHz, 3.5 KHz/Dev. - 6 dB μ (Meter directreading). 145.03 MHz, audio output 50 mV/8ohm (Transceiver tester) Adjust L405, 406, 407 & 408 so that SINAD sensitivity becomes maximum.	-2 dB μ Max.
3. Squelch Sensitivity	VR301 (Main PCB)	1 KHz, 3.5 KHz/Dev, -8 dB μ (Meter directreading), 145.02 MHz (Transceiver tester). Turn VR301 counterclockwise from closed conditions and set to a point where the squelch is open.	-8 dB μ ± 1

4. S-meter adjustment	VR302 (Main PCB)	1 KHz, 3.5 KHz/Dev, +17 dB μ (Meter directreading). Turn VR302 so that [FULL] -bar begins to light.	
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This modification is read 497 times.

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19-07-1998

(DJ-120) Extended frequency for Alinco DJ-120

Hi all, i have recently heard of a mod for the alinco dj-120. The mod opens up transmit from 130 mhz to 174 MHz.

To do this, please folow these simple procedures:

1. Open the front and top case of the ht.
2. Look for 2 jumpers, one vertical, on horizontal next to the microprocessor and cut both of them.
3. Reset the microprocessor by pressing the reset button on front panel.

Be careful! that will reset all memories stored in the radio

This modification is read 805 times.

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07-10-2001

(DJ-120) Adjustment points for DJ-120T

1. Transmitting Unit

Item	Adjustment Point	Adjustment Method	Spec
1. Frequency adjustment	CV301 (Main PCB)	Set the unit in the transmission mode at 144.03 MHz and adjust CV301. (Transceiver tester, counter)	144.03 MHz \pm 50 Hz
2. Modulation degree adjustment	VR303 (Main PCB)	Input a signal of 1 KHz/50mV into the SP/MIC jack and adjust VR303 so that you obtain 4.7 KHz/DEV in the transmission mode.	4.7 KHz \pm 0.2 KHz
3. Subaudible tone	VR401 (RF unit)	Set the subaudible tone to 114.8 Hz by DIP Switch and adjust VR401 so that you obtain 800 Hz/Dev.	800 Hz \pm 50Hz

4. DTMF	VR601 (DTMF Unit)	Puch [1] in the transmission mode and adjust VR601 so that you obtain 3 KHz/DEV.	3 KHz ± 500 Hz
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2. Receiving Unit

Item	Adjustment Point	Adjustment Method	Spec
1. VCO P/D voltage adjustment	L502 (VCO)	Adjust L502 so that P/D voltage is 0,5 V at 144.03 MHz. (DC voltmeter)	0.5 V ±0.1 V
2. RF amp	L405, 406, 408 & 409 (RF PCB)	1 KHz, 3.5 KHz/Dev. - 6 dB μ (Meter directreading). 145.03 MHz, audio output 50 mV/8ohm (Transceiver tester) Adjust L405, 406, 408 & 409 so that SINAD sensitivity becomes maximum.	-6 dB μ Max.
3. Squelch Sensitivity	VR301 (Main PCB)	1 KHz, 3.5 KHz/Dev, -8 dB μ (Meter directreading), 145.03 MHz (Transceiver tester). Turn VR301 counterclockwise from closed conditions and set to a point where the squelch is open.	-8 dB μ ± 1
4. S-meter adjustment	VR302 (Main PCB)	1 KHz, 3.5 KHz/Dev, + 17 dB μ (Meter directreading). Turn VR302 so that [FULL] -bar begins to light.	

This modification is read 757 times.

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07-10-2001

(DJ-1400) Adjustment points for DJ-180TE & DJ-1400

[Adjustment points](#) for DJ-180TE & DJ-1400

This modification is read 439 times.

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19-07-1998

(DJ-160) Extended xmit for DJ-160-T

The new Alinco DJ-160 Radio will receive between 137-174 Mhz, and transmit in the 2Meter band only (144-148Mhz). A simple modification to the radio will enable it to transmit in the full range it receives currently. I have not tested the output power on other frequencies (Due to my one and only watt meter getting fried) however I have tried setting a weather receiver a small distance away, and I did hear the radio in the receiver. To make the mod, the following must be done: (I assume that you have some experience with electronics and that you can tell a wire from a resistor, from a transistor)

1. Take the battery of the radio by lifting the battery release button. If you look at the bottom of the radio, there will be a metal plate that is held on with 4 small screws. Take this plate off, noting exactly how the clip was held on (like the slot for the battery release clip)
2. On the back of the radio there are two screws that hold the back of the radio on, take these screws out.
3. Now you should be able to lift the bottom part of the radio by the battery release button slightly apart. I was told that you should take the top knobs off, but I found that I didnt have to.
4. If you take the Battery Release Button and turn it about 90 degrees, the button should come out easily. After you get the small piece of plastic that is the button, you should see a yellow wire behind where the clip was.
5. Take a small wire cutter and CUT this YELLOW wire. You should probably make sure that the wire doesnt have bare metal showing from a lousy cutter, because I dont think that grounding this wire to the case would be HEALTHY for your radio. :-)
6. After You cut this wire. Assemble the radio, and just before you turn on the radio, do a power reset by holding the FUNC button while turning on the radio. This will reset the radio to ALL of the factory set parameters. YOU WILL LOOSE PROGRAMMED FREQUENCIES that were programmed into the memory mode of the radio, so just write the frequencies down before proceeding with the above instructions.
7. The radio should be just like new, except that the transmit will be enabled for ALL frequencies! GOOD Luck!

If you use these mods for ILLEGAL purposes, pity upon thy sole, for you do not belong in the ranks of Amateur Radio. This information is only supplied for Legal and Informational Purposes only and I can NOT be held responsible for anything that you do with this INFO. And if you screw up your radio, TOO BAD. I cant be held responsible.

This modification is read 936 times.

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19-07-1998

(DJ-160) Alinco DJ160T Supplementary Notes

The manual for the Alinco DJ160T is remarkably badly written, and certain functions in particular (DTMF squelch and paging, DTMF decode) are especially hard to understand. I've puzzled out most of this, and have written up for my own reference the following notes. Some of what follows will be relevant to other Handitalkies than the DJ 160T, especially other Alinco handitalkies such as the DJ 460T and DJ 560T.

Introduction:

Keys on the Alinco are given here in brackets []. The function key is given as [f].

DTMF functions:

There are three broad categories of DTMF functions supported by the DJ160T. These are DTMF squelch, DTMF paging, and DTMF decoding. DTMF paging is further broken down into DTMF group paging and DTMF personal paging.

DSQ overview

To use the DTMF squelch and page functions, you must first SET your DTMF code(s). This is done using the [f] [DSQ set] button combination. Now you can enter FIVE digits that determine DSQ functions. They are displayed as a group of three digits, a period, a single digit, another period, and a final fifth digit.

The FIRST THREE DIGITS are used for DSQ squelch and for DSQ group paging. This is the three digit code required to break a DSQ squelch, or the three digit "group page code" that, when followed by a *, will cause the handitalki to beep when the handitalkie is placed in G DSQ or GP DSQ modes.

These three digits are really the most important ones! The other two digits are part of personal paging / personal ID options that are complex of less importance in day to day use. However, I do explain their functions.

The fourth digit is the single digit used in combination with the group

code to page a particular person in a group. Note that some newer handitalkies provide for a three digit personal code. This may be why the Alinco uses two *s as part of its group page format, where the *s are dummies for the missing two digits that other radio DTMF systems use in their personal codes. The Alinco DJ160T has provisions to transmit and receive any three digit personal code ("Additional Feature of DSQ Function" on page 27 of the manual), but implementing that provision is hideously complex and probably not worth bothering with.

The fifth digit is REWRITTEN whenever the radio receives a proper group or personal page code, and will display personal code number that was received. It is transmitted only when the radio is in GP DSQ mode. It is NOT transmitted when the radio is in DSQ or G DSQ modes. See below.

To set the DSQ number, push [f] [DSQ set], enter five numbers, then push [V/M].

NOTE:

In the examples that follow, I will assume you have programmed the code 123.4.5 into your DSQ using the DSQ set function.

(a) DSQ Squelch Operation:

Receive Mode:

DSQ squelch is used to cause the radio to be silent (squelched) while in receive until it receives a three digit code. IF it receives the correct three digits during the first second or two of a

transmission, it will release the squelch and then receive the rest of that transmission.

Transmit Mode:

When used to transmit, the radio will automatically transmit the three digit DSQ group code right after you press the [PTT] button, so remember to pause a moment before talking if using the radio in DSQ mode.

To set DSQ Squelch, push [f] [GP DSQ] until DSQ is displayed. Be sure that ONLY DSQ is displayed, not G DSQ or GP DSQ. Normally, if you start with no DSQ display, hitting [f] [GP DSQ] once will cause DSQ only to be displayed.

Summary of DTMF Squelch function:

Receive: Radio remains squelched unless it receives the tones 1,2,3

Transmit: Radio transmits the tones 1,2,3 whenever [PTT] is pressed.

(you must hold down the PTT button throughout your transmission. If you let go of the PTT button, you must re-transmit the three digit code if you want the receiver to hear you! This is not a problem when using one DJ160 with another, but can be if you are using the DJ160 with a different radio where manual entry of the DTMF tones is required)

NOTE:

If using another radio to manually send DTMF squelch codes, the three digits must be punched in within a space of 1.5 seconds total.

(b) DTMF page function:

This mode is set using the [f] [GP DSQ] buttons. Hold down the [f] button and press the [GP DSQ] button until G DSQ or GP DSQ is displayed. G DSQ stands for group page mode, and GP DSQ stands for personal page mode. Normally if no DSQ function is displayed, you hold down the [f] key and press the [GP DSQ] key once to display DSQ, twice to display G DSQ, three times to display GP DSQ, and a fourth time to clear the DSQ function from the display.

Receive Mode: In this mode, the radio is silent until it receives the proper page tone sequence. At that point, it will beep in a fashion that is characteristic of either receipt of a group page or of a personal page. The tone for a group page consists of several dual beeps, with all beeps being of the SAME tone. eg: beep beep beep beep beep etc.

The tone for a personal page consists of several dual beeps, but the two beeps within each dual beep are of different frequencies. eg: beep boop beep boop beep boop etc.

NOTE:

The radio behaves EXACTLY the SAME when in either G DSQ or GP DSQ modes when it is RECEIVING. The two modes (G DSQ and GP DSQ) differ ONLY in terms of what tones get transmitted when you push the [PTT] button!! I recommend you use only the G DSQ mode, for it is simpler to understand. But I will attempt to shed some light on the GP DSQ mode too.

Group Paging:

Receive:

(Radio may be set to either G DSQ or GP DSQ) Radio must receive group code (1,2,3) followed by a star (*) at a minimum in order to produce the pager tone. If the radio receives ONLY the three digit group code followed by a star (1,2,3,*) it will give the group page beep, the "G" in the G DSQ of the display will flash, but "Err" will be shown in the main display because the personal code was not properly sent. If the radio receives a group code followed by a star followed by a personal code OR a group code followed by a star followed by a personal code followed by two stars (1,2,3,*,4)

or (1,2,3,*,4,*,*) it will give the beep for receipt of a group page, the "G" on the display in the G DSQ will flash, AND, if you press [f] [DSQ set] the fifth digit displayed will be the personal code that was just received (4 in this case). If the unit was set for 123.4.5 in the DSQ SET mode, that display will be altered to 123.4.4 to reflect the fact it received a "4" as a personal code digit. After a page is received and the "G" in the display is flashing, pushing [V/M] button once will cause the G to stop flashing.

Transmit:

The DJ 160T must be in G DSQ mode to properly transmit a group page (not in GP DSQ mode). Pressing the [PTT] key will automatically send out the group code, followed by a star, followed by your personal code (fourth digit in the DSQ set display), followed by two stars (1,2,3,*,4,*,*).

Personal Paging:

This is a somewhat complicated variant of group paging, used to page a particular person in a group. Not only is it complicated, but the implementation on the Alinco DJ 160T differs from that used on some other radios, for the Alinco uses a single digit personal code where other radios sometimes use a three digit personal code. Generally I recommend users not bother with this overly complicated feature, but I will attempt to at least partially document it here. Its primary use where you have a party of several individuals all with the same group but different personal paging codes. In this situation one can either page all members of the group using the group page function OR page a given individual member of the group using the personal page function.

Receive:

The radio may be set to display either "G DSQ" or "GP DSQ". This is done using the [f] [GP DSQ] buttons. If the three digit group code followed by a single digit personal code followed by a star is received (1,2,3,4,*), the unit will make the "personal page type" tone (beep boop), the "GP" in the display will flash, and "Err" will be displayed on the main display. The "Err" is displayed because a personal identifier digit was not sent. If in addition to the above codes a personal identifier code is received (1,2,3,4,*,7) the radio will make the personal page type beeping and "GP" will flash. In addition, the last digit of the DSQ code will be re-written to 7, to reflect the fact that a page FROM the person with code number 7 was sent. Pushing [V/M] button will stop the flashing of the "GP" in the display.

Transmit:

(Pay CLOSE attention here! The radio uses the numbers in its DSQ SET significantly differently when transmitting in GP DSQ mode than it does when in G DSQ mode!) Radio MUST be in GP DSQ mode (NOT G DSQ mode) to properly automatically transmit a personal DTMF page. Let us assume that you have set your DSQ code to 123.4.5. When the [PTT] button is pressed, the radio will send the following tones: 1,2,3,5,*,4.

The first three tones sent are the group code. This is followed by personal code of the person you want to PAGE. Then a star is sent, then YOUR personal code is sent as an identifier. Note carefully that it is the FIFTH (last) digit of the five digit DSQ number that is sent as the FOURTH digit of the DTMF transmission when you are in GP DSQ mode! Note too that this last digit is rewritten every time you RECEIVE a page, so if you want to send a personal page to someone OTHER THAN the person who paged you last, you must use DSQ SET to rewrite the last digit of your five digit code to specify the personal code digit of the person you want to page. Alternatively, note that when you enter GP DSQ mode by pressing [f] [GP DSQ] three times, the five digit code is displayed. At this point, entering a SINGLE digit will usually cause the fifth digit to be changed to whatever you want it to be. Pressing [f] [GP DSQ] a fourth time will put the radio in GP DSQ mode, removing the display of the five DSQ code digits.

If no code is entered when the GP DSQ display of the code is called up, after about 5 seconds the display will automatically revert to the normal radio display with GP DSQ set. Alternatively, you can reset the entire DSQ display using the [f] [DSQ set] button combination. In any case, when using the GP DSQ (personal page) function, you must each time check the code to make sure you

have set the personal and group code correctly. Be especially careful that the outgoing personal code (last digit of the display) is correct for the person you want to page.

Summary of DSQ Code digits:

123.4.5 in display
a b c

a Three Digit Group Code.

DTMF Squelch:

(receive mode) These three digits must be received to break squelch when DTMF squelch (DSQ only displayed) is used.

(transmit mode) These three digits only are transmitted when in DSQ mode upon pressing the [PTT] button. example: if you have set 123.4.5 as your DSQ code, when you press [PTT] in DSQ mode 1,2,3 will be transmitted.

Group and Personal Page functions: These three digits are used as the group code in both group and personal paging functions and are the first three digits transmitted as part of a larger group or personal page code transmission. They are the first three digits that **MUST** be received when trying to activate a group or personal page. See below for more details.

b This is YOUR personal page code.

DTMF Squelch:

This digit **IS NOT USED** in DTMF squelch functions.

Group Paging:

(receive mode) this digit **IS NOT USED** in group paging receive mode. **ONLY** the first three digits and the last digit are used when receiving a group page.

(transmit mode) When you press [PTT] in G DSQ mode, first the three digit group code is sent, then a star, then this digit (your personal page code) is sent followed by two stars (1,2,3,*,4,**). Thus, this digit is the digit that is **SENT OUT TO OTHERS** to identify to them who has sent the page. It will be displayed in the fifth digit of the DSQ code display on all radios that received your group page, to identify you as the one who sent the page.

Personal Paging:

(receive mode) this digit specifies what "other party code" must be sent by someone trying to page you personally. In order to receive a **PERSONAL** page, your radio must receive the group code followed by this digit followed by a star (1,2,3,4,*). Preferably you should receive all that **PLUS** an additional single digit that identifies who was sending you the page (1,2,3,4,*,N where N is a single digit that identifies the person who sent the page). If this last identifier digit is not sent, you will hear a personal page type beep, and "GP" will flash, but "Err" will be on the main display indicating that a personal identifier code was not received.

(transmit mode) This is the digit sent out **LAST** when you press the [PTT] button. It identifies **YOU** as the person sending the page. example: with DSQ set to 123.4.5 if you press [PTT] 1,2,3,5,*,4 will be sent. The 4 is received and displayed as the last digit of the DSQ code on all radios that received your page.

c This is the single digit code for "the other party".

DTMF Squelch:

This digit is **NOT USED** in DTMF squelch functions.

Group paging:

(receive mode) This digit is re-written any time a proper group page is received to reflect the number of the other party who sent you the page. example: you have 123.4.5 in your DSQ setting and you now receive a group page consisting of 123*8** (or one simply consisting of 123*8). Your pager will make the group page type beep, "G" will flash in the display, AND, if you go to DSQ set mode, you will see that the last digit of the code displayed is now NOT a 5, but is instead an 8, informing you that "person number 8" was the originator of that group page. Thus, if your page code WAS set to 123.4.5 and you receive the group page 123*8**, when you now press [f] [DSQ set] you will no longer see 123.4.5 but instead see 123.4.8.

(transmit mode) This digit is NOT USED in group page transmit mode.

Personal paging:

(receive mode) This digit is re-written any time you receive a valid personal page, and will display the personal code of the person who sent that page. example: you have 123.4.5 as your DSQ code, and you receive the following sequence: 1234*7 Your pager will now make the personal page type beep, "GP" will flash on the display, and if you press [f] [DSQ set] you will no longer see 123.4.5 displayed, but instead will see 123.4.7. The last digit reflects the fact you received a personal page from a person whose own personal code is 7.

(transmit mode) This is the digit that is sent out FOURTH when you push the [PTT] button. It specifies which person in the group will receive the personal page. You must be careful to set this digit correctly for the person you in the group who you wish to page, keeping in mind that this digit gets re-written every time you receive a page of any kind! If you have 123.4.5 set as your DSQ code, pressing [PTT] in GP DSQ mode will cause 1,2,3,5,*,4 to be transmitted. Note very carefully that this, the fifth digit in your DSQ setting display, is sent out FOURTH when you are in GP DSQ mode and press the [PTT] button!

DTMF Wild Card function:

If you forget a squelch or paging code, you can pick up and decode codes sent by others. Use [f] [DSQ set] to set DSQ first to 000.0.0 and then set it to ###.0.0. (upside down As will be displayed instead of #s).

Now set your radio to G DSQ mode. If you receive ANY valid page, the radio will beep. Press [f] [DSQ set] and the ###.0.0 display will be replaced by the page code you just received.

DTMF Decode function:

At any time, any codes received will be decoded and kept in the M3 dialing number. Thus, any time you hear a bunch of DTMF codes on the air, you can press the [Dial Ch] button, then rotate the top selector knob so that M3 is displayed, then use the up and down arrow buttons (* and #) to scroll the display right (up arrow) or left (down arrow). Up to 16 digits will be retained. You can also set the radio to DSQ mode while lying in wait to receive DTMF tones. That way, the radio will break squelch when it has received three or more DTMF tones, alerting you to the fact it has captured a code. Note: according to the manual, you must have phone numbers stored in one or both dial memories (M1 and M2) for the decode to work. But in my experience that does not seem to be required by my unit.

19-07-1998

(DJ-160) DJ-160-RX/TX-Erweiterung (Neueinspielung!)

Auf mehrfachen Wunsch in den Mailboxen hier nochmal eine Anleitung zum Erweitern des kleinern 2m-Monobanders DJ-160E (...) !

Ich gab der Msg. eine Lifetime von 30 Tagen, was die einzelnen BBS draus machen weiss ich nicht, hi...!

RX-Erweiterung: softwaremaessig !

TX-Erweiterung: hardwaremaessig !

Software-RX-Erweiterung:

1. Druecken & Halten der Funktionstaste.
2. Zweimaliges Druecken der Taste "B". (-> Frequenzy-Lock !)
3. Funktionstaste weiterhin gedrueckt halten !
4. Druecken der folgenden Tasten in angegebener Reihenfolge: --> 2 1 2 <--
5. Im Display erscheint "OPEN" und es ertoent eine kurze Melodie.
6. Das Geraet ist nun - empfangsseitig - erweitert.
7. Durch ein Wiederholen des o.g. Vorganges wird der Frequenzbereiches wieder auf die vorherigen zwei MHz beschraenkt (es erscheint ein "CLOSE" im Display und es ertoent die bekannte Melodie !).
8. Jeweils nach dem Oeffnen oder Schliessen ist mittels Druecken der Funkt.-Taste & der Taste "B" wieder die Tastatur freizugeben !
9. Mittels der Taste "B" ohne gedrueckte Funktionstaste ist ein Umschalten von drei Empfangsbereichen moeglich:
 - A) 108.000 MHz - 142.995 MHz
 - B) 137.000 MHz - 173.995 MHz
 - C) 850.000 MHz - 909.995 MHzNUR der Bereich B ist wirklich funktionsfaehig, alle anderen erscheinen nur im Display. Im Bereich A erscheint ein "A" im Display, dies soll auf "Amplituden-Modulation" hinweisen. In verschiedenen amerikanischen Publikationen sollen hierfuer Hardwaremodifikationen erschienen sein, leider kann ich mit solchen nicht dienen !! Im Bereich C ist zwar FM-Rauschen zu hoeren, allerdings vermute ich, dass die (wenn ueberhaupt vorhandene) Empfindlichkeit nicht berauschend sein wird (Vielleicht liegts auch nur an der Antenne, hi!).

Hardware-TX-Erweiterung:

1. Batteriekasten abnehmen.
2. Metallplatte mit Batteriekontaken abschrauben. (4 kleine Metallschrauben)
3. Rueckplatte des TRX abschrauben (2 Schrauben).
4. Den kleinen schwarzen Schieber fuer die Akku-/Batteriepackbefestigung entfernen.
5. Hinter dem soeben enternten Schieber befindet sich ein GELBES kleines Kabel, dieses muss durch-trennt werden ! Die beiden Enden sind zu isolieren und wieder "zurueckzudruecken" !
6. TRX wieder in umgekehrter Reihenfolge montieren.
7. Akku-/Batteriepack wieder anbringen (darauf achten, dass der o.g. kleine Schieber wieder einwandfrei schliesst).
8. TRX mit gedrueckter Funktionstaste einschalten. (--> RESET !)
ALLE MEMORIES WERDEN HIERDURCH GELOESCHT !!
9. Der TRX ist nun erweitert !
10. Sendebetrieb auf dem gesammten "B-Band" !

Anmerkungen:

Die Software-RX-Erweiterung wurde vom mir ausführlich getestet und durch ihre Durchführung entstehen keinerlei Nachteile. Die Hardware-TX-Erweiterung wurde von mir weder durchgeführt noch getestet, allerdings wurde von Tims Seite bekannt, dass nach ihrer Durchführung der 1750-Tonruf NICHT mehr in Funktion ist ! Ich uebernehme fuer etwaige Schaeden, gleich welcher Art, die bei der Ausfuehrung o.g. Erweiterungen entstehen, keinerlei Haftung ! Die sich ergebenden Erweiterungen koennen nach Erfahrung von Geraet zu Geraet unterschiedlich sein !!

Quellennachweis:

RX-Erweiterung: Eigene Gedankenblitze und Zusammen-arbeit mit Tim, DG5AAU. TX-Erweiterung: Aus dem Amerikanischen von KB2LZF, ebenso aus den AX.25-BBS, er wiederum hatte es aus dem InterNet !

Viel Spass beim Hobby,

** 73" de Michael, DG1GMY @ DBOCZ.DEU.EU * DARC A14 * AFV e.V. * JN48GB **

This modification is read 779 times.

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19-07-1998

(DJ-160) DJ160 DTMF Decode

I received your message about the DTMF decoding on the DJ-160, and I thought I should tell you that the process is not that complicated.

1. Put radio on frequency to catch tones to be decoded.
2. Push the DIAL CH button (lower right corner of keypad) The LCD will indicate the channel currently selected. The channel must be 3 to decode DTMF. If it is not Channel 3 then use the M button (top left) to change selected channel. Once you have the M3 in the window you can push the DIAL CH button again to bring the display back to indicate the frequency. The word DIAL will remain in the lower right corner of the LCD window.

From this point on any DTMF will be stored in MEM channel 3, but you can not recieve DTMF while you are looking at MEM channel 3 , you must be looking at the frquency being displayed while decoding. To see the decoded data, just push DIAL CH and read the displayed data. Use the frequency knob to rotate the stored DTMF tones that do not appear. The radio will store 16 digits on each transmission, but the window will only show about 6 at a time. As your message indicated, any new data will over write the old...

73 Joe KC4WTX @ KB4VOL

This modification is read 781 times.

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12-07-2001

(DJ-160) DJ-160SX (Japanese) Extended RX and TX.

Author: 7L3AXT/7 & JM7OCK

How to expand RX range of DJ-160SX.

This is a "keypad" mod.

1. Push "B" key with "F" key. Then display will be "KL" or "FL".
2. Push "2" key, next push "1" key, next push "2" key, with "F" key. Then display will show "OPEN" and beep, then finish.
3. Push "B" key with "F" key, which will make "KL" or "FL" disappear from the display.
4. Band select key is "B".
5. Expanded RX range will be 108-174MHz & 850-910MHz.

How to expand TX range of DJ-160SX.

Cut off BP1 and BP2 jumpers. BP1 is behind the battery release clip, with a yellow wire; BP2 is located right above it, hidden. The jumper is a blue wire.

Hit "All reset". Then TX frequency will be 130.00MHz - 173.995MHz.

This is the second step. If you modify all steps, frequency range will be:

RX 108-142.995MHz

TX&RX 130-173.995MHz

RX 850-909.995MHz

Again, select the band with the "B" key to the right of the radio.
Hope this helps!

Loren Fields
N1UMF

1. Transmitting Unit

Item	Adjustment Point	Adjustment Method	Spec
1. Frequency adjustment	TC304 (RF PCB)	Set the unit in the transmission mode at 146.03 MHz and adjust TC304. (Transceiver tester, counter)	144.03 MHz ± 50 Hz
2. TX Power adjustment	VR301 (RF PCB) (Hi power) VR302 (RF PCB) (Lo Power)	Adjust VR301 so that TX power becomes 3 W at 146.03 MHz. Adjust VR302 so that TX power becomes 300 mW at 146.03 MHz.	3.0W ± 0.1 W 300mW ± 50 mW
3. Modulation degree adjustment	VR204 (IF PCB)	Input a signal of 1 KHz/50mV into the MIC jack, transmitting at 146.03 MHz and adjust VR204 so that you obtain 4.7 KHz/DEV in the transmission mode.	4.8 KHz ± 0.1 KHz
4. Subaudible tone	VR203 (IF unit)	Adjust 88.5 KHz by VR203 so that you obtain 800KHz/Dev	800 Hz ± 100 Hz
5. DTMF	VR205 (IF PCB)	Puch [1] in the transmission mode and adjust VR205 so that you obtain 3.1 KHz/Dev.	3.1 KHz ± 100 Hz

2. Receiving Unit

Item	Adjustment Point	Adjustment Method	Spec
1. VCO P/D voltage adjustment	L106 (VCO)	Adjust L106 so that P/D voltage is 2.0 V at 146.03 MHz. (DC voltmeter) in the transmission mode.	2.0 V
2. Detection Coil adjustment	L202 (IF PCB)	Input 1KHz, 3.5 KHz/Dev. +66dB μ at 146.05 MHz and adjust L202 so that detection power becomes maximum	

3. VHF FRONT END adjustment	L306, L308, L309, TC305, L311, L312 (RF PCB)	At 146.03 MHz and adjust L306, L308, L309, TC305, L311 and L312, so that 12 dB SINAD sensitivity becomes maximum.	Under -9 dB μ
4. S-meter adjustment	VR202 (IF PCB)	Input a signal of 17 dB μ from transceiver tester at 145.03 MHz. Turn VR202 so that [FULL] -bar begins to light.	17dB μ \pm 1 dB μ

This modification is read 776 times.

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07-10-2001

(DJ-160) Adjustment points for DJ-160E / DJ-460E

1. Transmitting Unit

Item	Adjustment Point	Adjustment Method	Spec
1. Frequency adjustment	TC304 (RF PCB)	Set the unit in the transmission mode at 145.03 MHz and adjust TC304. (Transceiver tester, counter)	145.03 MHz \pm 50 Hz
2. TX Power adjustment	VR301 (RF PCB) (Hi power) VR302 (RF PCB) (Lo Power)	Adjust VR301 so that TX power becomes 3 W at 146.03 MHz. Adjust VR302 so that TX power becomes 300 mW at 146.03 MHz.	3.1W \pm 0.1W 300mW \pm 50mW
3. Modulation degree adjustment	VR204 (IF PCB)	Input a signal of 1 KHz/50mV into the MIC jack, transmitting at 145.03 MHz and adjust VR204 so that you obtain 4.7 KHz/DEV in the transmission mode.	4.7 KHz \pm 0.1 KHz
4. Subaudible tone	VR203 (IF unit)	Transmit at 145.03 MHz and adjust VR203 to obtain a frequency modulation of 3.0 KHz, making sure that tone burst 1750 Hz within a range of 1750Hz \pm 20 Hz	3.0 KHz \pm 500 Hz

5. DTMF	VR205 (IF PCB)	Puch [1] in the transmission mode and adjust VR205 so that you obtain 3.1 KHz/Dev.	3.1 KHz ± 100 Hz
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2. Receiving Unit

Item	Adjustment Point	Adjustment Method	Spec
1. VCO P/D voltage adjustment	L106 (VCO)	Adjust L106 so that P/D voltage is 2.0 V at 145.03 MHz. (DC voltmeter) in the transmission mode.	2.0 V ± 0.1 V
2. Detection Coil adjustment	L202 (IF PCB)	Input 1KHz, 3.5 KHz/Dev. + 66dB μ at 145.05 MHz and adjust L202 so that detection power becomes maximum	
3. VHF FRONT END adjustment	L306, L308, L309, TC305, L311, L312 (RF PCB)	At 145.03 MHz and adjust L306, L308, L309, TC305, L311 and L312, so that 12 dB SINAD sesitivity becomes maximum.	Under -9 dB μ
4. S-meter adjustment	VR202 (IF PCB)	Input a signal of 17 dB μ from transceiver tester at 145.95 MHz. Turn VR202 so that [FULL] -bar begins to light.	17dB μ ± 1 dB μ

This modification is read 759 times.

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19-07-1998

(DJ-162) Alinco DJ-162 Mod Ext RX/TX

I requested this mod from the net several times and received no responses. This morning I see were NORWZ has posted his luck with a similar inquiry. Well, I finally found it so here it is.

1. Remove the battery pack.
Remove the battery plate from the bottom of the radio.
2. Remove the back cover from the radio.
This is a tedious process. You must take the knobs off the top and remove the top plate first.
3. Under the Battery clasp on the side of the radio (The little sliding thumb switch that keeps the battery from falling off the radio) you will find a yellow loop of wire. This loop is small and

hard to get to. You will need a very small pair of cutters or scissors.

--Cut this wire.

4. Put the radio back together

5. Reset the radio. (You will lose your memories)

6. Go to the VFO mode.

Pressing the 'B' key on the keypad will now allow you to cycle through the extended rx bands. It will cycle from 2 mtrs, am aircraft, to 800. The radio does NOT have the guts to receive 800. It just happens to be in the processor so don't waste your time listening.

7. This same jumper also opens extended transmit.

Hope this helps out...

Ron Wright - KA5LUG

RON@ALPHA.NSULA.EDU

This modification is read 671 times.

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07-10-2001

(DJ-162) Adjustment points for DJ-162TD

1. Transmitting Unit

Item	Adjustment Point	Adjustment Method	Spec
1. Frequency adjustment	TC304 (RF PCB)	Set the unit in the transmission mode at 146.03 MHz and adjust TC304. (Transceiver tester, counter)	146.03 MHz ± 50 Hz
2. TX Power adjustment	VR301 (RF PCB) (Hi power) VR302 (RF PCB) (Lo Power)	Adjust VR301 so that TX power becomes 3 W at 146.03 MHz. Adjust VR302 so that TX power becomes 300 mW at 146.03 MHz.	3.1W ±0.1W 300mW ± 50mW
3. Modulation degree adjustment	VR204 (IF PCB)	Input a signal of 1 KHz/50mV into the MIC jack, transmitting at 146.03 MHz and adjust VR204 so that you obtain 4.7 KHz/Dev in the transmission mode.	4.7 KHz ± 0.1 KHz

4. Subaudible tone	VR203 (IF unit)	Adjust 88.5 KHz by VR203 so that you obtain 800 HZ/dev.	800 Hz ± 100 Hz
5. DTMF	VR205 (IF PCB)	Puch [1] in the transmission mode and adjust VR205 so that you obtain 3.1 KHz/Dev.	3.1 KHz ± 100 Hz

2. Receiving Unit

Item	Adjustment Point	Adjustment Method	Spec
1. VCO P/D voltage adjustment	L106 (VCO)	Adjust L106 so that P/D voltage is 2.0 V at 145.03 MHz. (DC voltmeter) in the transmission mode.	2.0 V
2. Detection Coil adjustment	L202 (IF PCB)	Input 1KHz, 3.5 KHz/Dev. + 66dB μ at 146.05 MHz and adjust L202 so that detection power becomes maximum	
3. VHF FRONT END adjustment	L306, L308, L309, TC305, L311, L312 (RF PCB)	At 146.03 MHz and adjust L306, L308, L309, TC305, L311 and L312, so that 12 dB SINAD sesitivity becomes maximum.	Under -9 dB μ (EMF)
4. S-meter adjustment	VR202 (IF PCB)	Input a signal of 10 dB μ from transceiver tester at 146.03 MHz. Turn VR202 so that [FULL] -bar begins to light.	10dB μ ± 1 dB μ (EMF)

This modification is read 653 times.

[top of page](#)

07-10-2001

(DJ-162) Adjustment points for DJ-162ED

1. Transmitting Unit

Item	Adjustment Point	Adjustment Method	Spec
1. Frequency adjustment	TC304 (RF PCB)	Set the unit in the transmission mode at 145.03 MHz and adjust TC304. (Transceiver tester, counter)	145.03 MHz ± 50 Hz
2. TX Power adjustment	VR301 (RF PCB) (Hi power) VR302 (RF PCB) (Lo Power)	Adjust VR301 so that TX power becomes 3 W at 145.99 MHz. Adjust VR302 so that TX power becomes 300 mW at 145.99 MHz.	3.1W ± 0.1 W 300mW ± 50 mW
3. Modulation degree adjustment	VR204 (IF PCB)	Input a signal of 1 KHz/50mV into the MIC jack, transmitting at 145.03 MHz and adjust VR204 so that you obtain 4.7 KHz/Dev in the transmission mode.	4.7 KHz ± 0.1 KHz
4. Subaudible tone	VR203 (IF unit)	Transmit at 145.03 MHz and adjust VR203 to obtain a frequency modulation of 3.0 KHz, making sure that tone burst 1750 Hz within a range of 1750Hz ± 20 Hz	3.0 KHz ± 500 Hz
5. DTMF	VR205 (IF PCB)	Puch [1] in the transmission mode and adjust VR205 so that you obtain 3.1 KHz/Dev.	3.1 KHz ± 100 Hz

2. Receiving Unit

Item	Adjustment Point	Adjustment Method	Spec
1. VCO P/D voltage adjustment	L106 (VCO)	Adjust L106 so that P/D voltage is 2.0 V at 145.03 MHz. (DC voltmeter) in the transmission mode.	2.0 V

2. Detection Coil adjustment	L202 (IF PCB)	Input 1KHz, 3.5 KHz/Dev. +66dB μ at 145.03 MHz and adjust L202 so that detection power becomes maximum	
3. VHF FRONT END adjustment	L306, L308, L309, TC305, L311, L312 (RF PCB)	At 145.95 MHz and adjust L306, L308, L309, TC305, L311 and L312, so that 12 dB SINAD sensitivity becomes maximum.	Under -9 dB μ (EMF)
4. S-meter adjustment	VR202 (IF PCB)	Input a signal of 10 dB μ from transceiver tester at 145.95 MHz. Turn VR202 so that [FULL] -bar begins to light.	10dB μ \pm 1 dB μ (EMF)

This modification is read 630 times.

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19-07-1998

(DJ-180) Extended frequency for Alinco DJ-180

The modification for the new ALINCO DJ180 is very simple:
 Just press the "LAMP"-key on switch on the unit and the range is from 130.000 - 173.995 MHz. For the RESET press the "F"-key (FUNCTION) and switch on the handy and it is in HAM-MODE from 144.000 - 145.995 MHz again.

Enjoy the handy, wich is very useful and snsitive on RX.

This modification is read 1761 times.

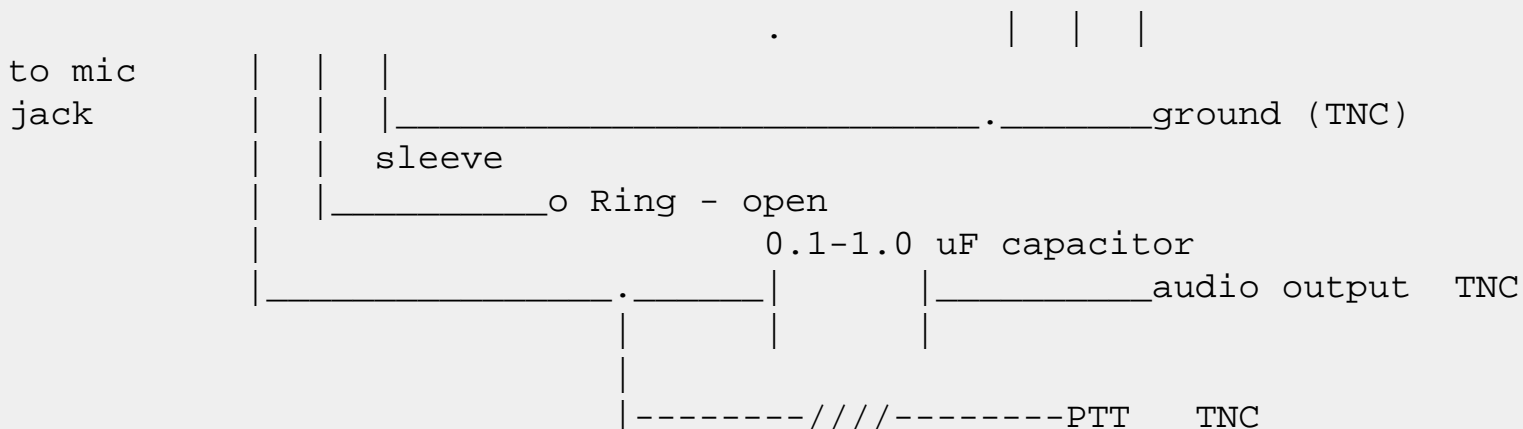
[top of page](#)

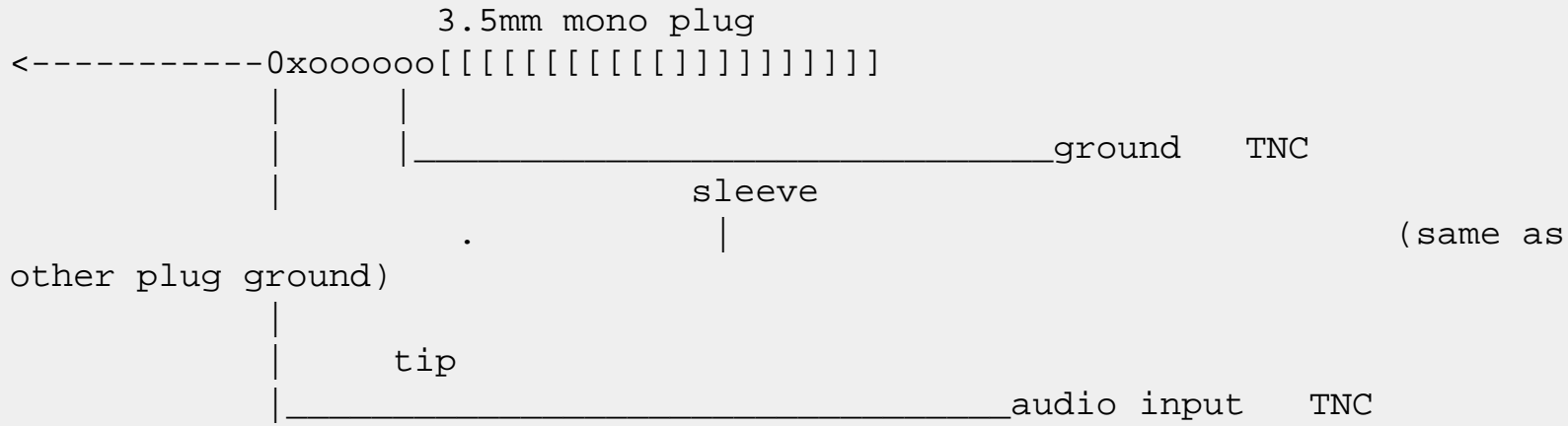
19-07-1998

(DJ-180) Alinco DJ-180T Packet Connection

2.5mm stereo plug

<-----0xooxoo[[[[]]]]]]]





2.5mm stereo plug into mic jack

- Tip to TNC audio output through 0.1 to 1.0 microfarad capacitor with parallel resistor 4.7 to 33K ohm to PTT switch
- Ring open
- Sleeve to TNC ground

3.5mm mono plug

- tip to TNC audio input
- sleeve to TNC ground (same ground as other plug)

Data received as FAX from Alinco this morning (11 NOV 93)

Sorry about the graphics, so much for ASCII
Milt

07-10-2001

(DJ-180) Adjustment points for DJ-180TE & DJ-1400

[Adjustment points](#) for DJ-180TE & DJ-1400

05-11-2001

(DJ-180) Expanded frequency (another way)

Author: Jack (PA7JS) - pa7js@qsl.net.MODIFICATION.NET

Just push function and Lamp button and switsch power on to expand frequency.

Just push function and Monitor button and switsch power on to go back to legal Frequenty 144-146 Mhz.

This Mod is friendly to the memory,s you stored, because everething will be in it 73

Pa7js

Pa7js@qsl.net.MODIFICATION.NET

This modification is read 1293 times.

[top of page](#)

13-02-2002

(DJ-180) DJ-180 mods expand TX 130 - 170 MHz (Hardware)

Author: *anonymous*

- take battery off
- take the four screws that hold the board that the battery contacts.
- cut the loop of red wire that is in there. Tape ends so that they dont short out to the board.
- put radio back together
- hold function and turn on radio.

TX is now expanded to approx. 130-170 MHz.

This modification is read 408 times.

[top of page](#)

22-01-2000

(DJ-190) Extending the frequency range of DJ-190E to 130-173.995MHz

1. Press (F)unction and Set (Moni) buttons and release.
2. Press V/M once to display LOC.
3. Rotate VFO until FL is also displayed.
4. Press PTT briefly once.
5. Press (F)unction briefly once.
6. Press V/M briefly twice.
7. Press MW briefly once.
8. Press Set (Moni) briefly twice.
At this point the display should briefly show "Open".
9. Press (F)unction and Set (Moni) buttons and release.
10. Rotate VFO until KL or FL are no longer displayed.
11. Press PTT briefly once.

The radio is now in the wide band mode and will remain there until a factory reset is performed ((F)unction pressed whilst turning on) be aware however that a reset will erase ALL memories.

To turn the DJ190E back to European Mode repeat steps 1-11 above (at step 8. the display should briefly show "Closed" instead of "Open").

An alternative (permanent) method is to remove R79 for receive range only, or R79 and either R1008 or R99 (depending on PCB version).

Some people have said that you may then have to go through the steps listed above once or twice to activate. You should be aware however that this will invalidate your warrantee.

Date: 22-03-2002

User comment

From: [Bob Myers KG4RRD](#)

Subject: DJ 190,DJ191,

I have found that if you clone two or more of these radios via cable cloning that the receiver of clone does not need to have the full mod. Simply put no mod is necessary, If master radio is expanded to trans/receive 133.00 to 179.9995 then the recipient does not need the wire removed to be "expanded"also. Will return to stock radio by resetting in normal manner. Will work on all Alinco radios that are "cable clonable"

20-02-2000

(DJ-190) Increase transmit 130.00 & 173.995MHz for DJ-190T

Author: Craig - daddyo581@webtv.net.MODIFICATION.NET

Take the back cover off!

Four screws on the back and two on the side of the CPU board and PTT board!

Fan open the CPU board! You will see a blue wire like the DJ-C1!

Cut it!

Hold function key turn it on!

Enjoy!

This modification is read 1037 times.

[top of page](#)

29-11-2000

(DJ-190) Display mod

Author: - loroyaco@teleline.es.MODIFICATION.NET

For display not switch off for few seconds , turn on DJ-190, push power key and AMP(LIGHT) key at same time.

At this moment your alinco DJ-190 only turn on or turn off the light.

For return at the first mode, repeat this operation.

This modification is read 1007 times.

[top of page](#)

07-10-2001

(DJ-190) Adjustment points for DJ-190

[Adjustment points](#) for DJ-190.

This modification is read 926 times.

[top of page](#)

06-08-1999

(DJ-191) Alinco DJ-191 Receive-Transmit 130-176 MHz

When you go into the programming menu (KL) and type #212.

Then you can receive and transieve from 130-176 MHz.

This modification is read 1331 times.

[top of page](#)

15-12-1999

(DJ-191) Alinco DJ-191 extended frequency

- Push funk + B at the same time while you are turning the radio on.
- It will show KL in the display.
- Push # - 2 - 1 - 2, open will kom in the display.
- To the end, push funk + B and funk + B again, while you are turning the radio on.

Date: 03-02-2000

User comment

From: [joen4omp](#)

Subject: Extra note

- With radio on push funk and scan together.
- The letters KL will be displayed.
- Push # 2 1 2 the word \"open\" will be displayed for about 2 sec.
- Push funk and scan together again until KL or FL is no longer displayed.
- Turn off radio and reset pll by holding funk while turning on radio continue to hold funk for 2 sec after power is on.

Note: All memory will be erased.!

You will see the display fully on activated. this will give tx and rx from 173.995 to 130.000 mhz.

(pressing funk + B while turning on power toggles beep mode on and off)

Date: 16-10-2001

User comment

From: Unknown user

Subject:

The expanded Freq. Mod, has a problem. It works, BUT ONLY AFTER the jumper above the processor inside the radio is removed.

Remove back cover, locate Processor (aprox 1 inch square) look just above the processor for a jumper wire soldered to the board.

REMOVE THAT WIRE JUMPER, then proceed to assemble radio. After radio is assembled, turn radio on. press and hold (F) and (B) till KL is displayed. (You will not see what you type) TYPE IN " #212 ", and you will see the word " open " displayed for a couple secends.

Your Radio is open for TX on ALL FREQ's. NOTE: Freq's from 148 to 160 are normally used by LAW ENFORCEMENT COMMUNICATION. USEING THESE FREQ'S WITHOUT AUTHORIZATION = JAIL TIME. 73'rds

07-10-2001

(DJ-191) Adjustment points for DJ-191

[Adjustment points](#) for DJ-191.

This modification is read 1085 times.

[top of page](#)

30-12-1999

(DJ-195) Modification DJ-195T and DJ595T for extended TX .

1. Remove Battery
2. Place HT facedown on Soft Surface
3. Remove Black Plastic cover plate (Located at lower right corner of back of HT)
4. Locate Blue wire (Directly under cover plate)
5. Clip Blue Wire and insulate the ends to prevent shorting.
6. Re-attach battery
7. Hold down [F] key & power on.

Your HT is now capable of Transmitting out of Freq.

REMINDER: It is Illegal to transmit out of Frequency with out MARS/CAP PERMIT

Date: 10-03-2002

User comment

From: [Cowboy- KG4LJF](#)

Subject: Alinco DJ-195 mod

I performed this mod on my radio. I do not reccomend doing it unless you want to lose all of your memory pre- sets. This is exactly what happened to me. It is a neat mod, but it wasn't worth me giving up the memory.

This modification is read 1556 times.

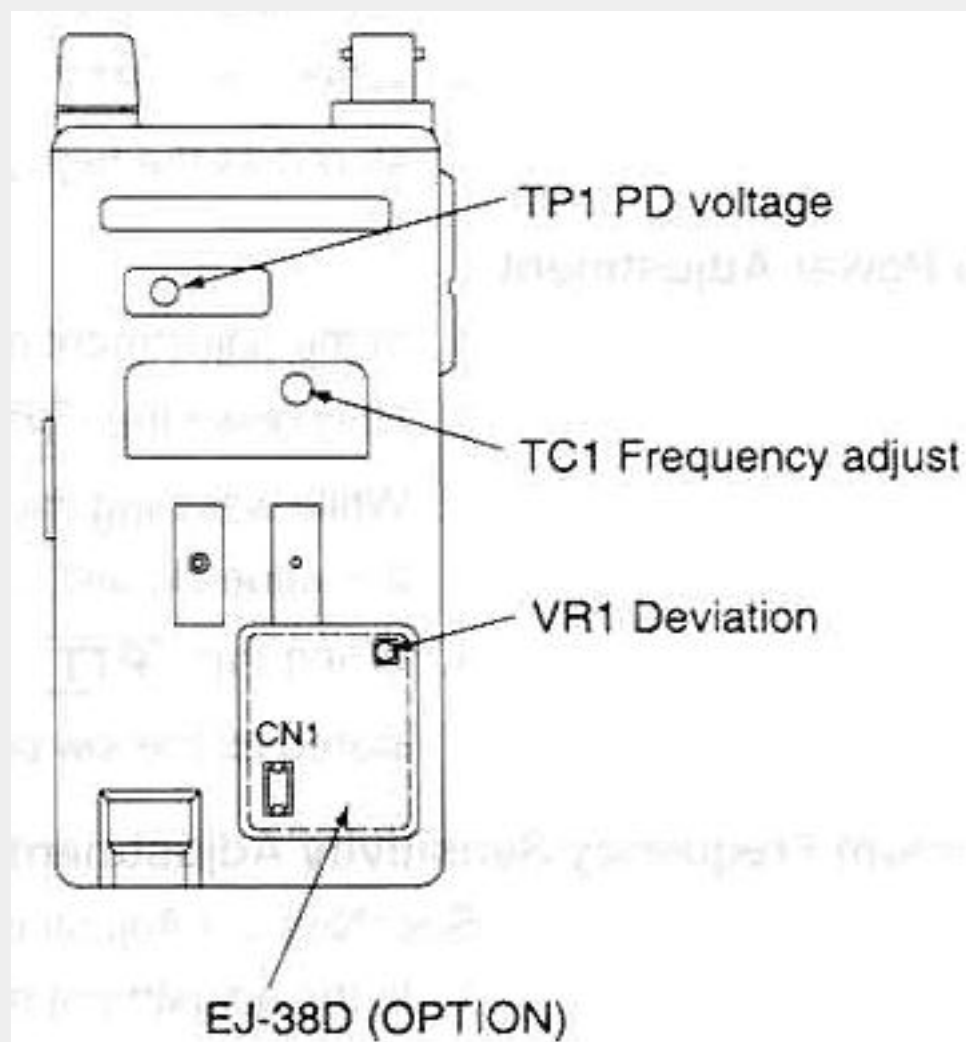
[top of page](#)

14-01-2000

(DJ-195) Adjust mode for Alinco DJ-195

The DJ-195 does not require a serviceperson to manipulate the components on the prined-circuit board, except the ttimmer when adjusting reference frequency and deviation. Most of the ajuustments for the transceiver are made by using thekeys on it while the unit is in the adjustment mode. Because the adjustment mode temporarily uses the channels, frequency must be set on each channe before adjustments can be made.

For instrucitons on how to program the channels, see the "DJ-195 INSTRUCTION MANUAL" which came with the product. In consideration of the radio environment, the frequency on each channel must be near the value (+/-1 MHz) listed in the table below. To enter the adjustment mode. set key lock and input 490217, Decimal point at 700MHz and 10MHz appears ln LCD. (To release the mode; set key-lock and input 490217.)



Channel	Channel function	Frequency
1	Reference frequency adjustment	145 MHz
2	High power adjustment	145 MHz
3	Low power adjustment	145 MHz
4	Minimum frequency sensitivity adjustment	130 MHz
5	Medium frequency sensitivity adjustment	145 MHz
6	Maximum frequency sensitivity adjustment	174 MHz
7	S-meter (1) adjustment	145 MHz
8	S-meter (FULL) adjustment	145 MHz
9	Deviation	145 MHz
10	DTMF (1) test	145 MHz
11	DTMF (D) test	145 MHz
12	Tone 67 Hz test	145 MHz
13	Tone 88.5 Hz test	145 MHz
14	Tone 250.3 Hz test	145 MHz
15	DCS code 255 test	145 MHz
16	Tone burst test	145 MHz
17	Aging (Not required to use)	145 MHz

Reference Frequency Adjustment

1. In The adjustment mode, select channel 1 by rotating the main tuning dial.
2. Press the PTT Key to start transmission.
3. Rotate TC7 on the Main board until the value on the frequency counter matches the one displayed on the LCD.
4. On 145,05 MHz measure TP1 near the VCO and to obtain $1.2V \pm 0.1V$ (if the frequency display

is flashing, the PLL is unlocked.)

High Power Adjustment

1. In the adjustment mode, select channel 2 by rotating the main tuning dial.
2. Hold down the PTT key to start transmission.
3. While watching the reading of the TX power meter, set the output power to the value closest to 5W by rotating the main tuning dial.
4. When the PTT key is released, the output power at that time will be stored as the high power setting.

Low Power Adjustment

1. In the adjustment mode, select channel 3 by rotating the main tuning dial.
2. Hold down the PTT key to start transmission.
3. While watching the reading of the TX power meter, set the output power to the value closest to 0.8 W by rotating the main tuning dial.
4. When the PTT key is released, the output power at that time will be stored as the low power setting.

Minimum Frequency Sensitivity Adjustment

See "Note on Adjusting the Sensitivity" later in this section.

1. In the adjustment mode, select channel 4 by rotating the main tuning dial.
2. Set the minimum frequency sensitivity rotating the main tuning dial, while F appears after the FUNC key is pressed.

Medium Frequency Sensitivity Adjustment

See "Note on Adjusting the Sensitivity" later in this section.

1. In the adjustment mode, select channel 5 by rotating the main tuning dial.
2. Set the frequency sensitivity rotating the main tuning dial, while F appears after the FUNC key is pressed.

Maximum Frequency Sensitivity Adjustment

See "Note on Adjusting the Sensitivity" later in this section.

1. In the adjustment mode, select channel 6 by rotating the main tuning dial.
2. Set the maximum frequency sensitivity rotating the main tuning dial, while F appears after the FUNC key is pressed.

S-meter (1) Adjustment

1. In the adjustment mode, select channel 7 by rotating the main tuning dial.
The S-meter will show a single circle (●)
2. Enter "0" dBu(EMF) with the transceiver tester (SSG).
3. Press the F Key. The transceiver beeps indicating the new setting has been stored successfully.

S-meter (Full)

1. In the adjustment mode, select channel 8 by rotating the main tuning dial.

The S-meter will show all six circles(●●●●●●)

2. Enter "+20" dBu (EMF) with the transceiver tester (SSG)
3. Press the F key. The transceiver beeps indicating the new setting has been stored successfully.

Deviation

1. In the adjustment mode, select channel 9 by rotating the main tuning dial.
2. Input a 50mVrms, 1Khz signal with your transceiver tester though the external microphone jack.
3. With the tester, put the transceiver in the transmission mode.
4. Rotate the VR1 on the printed-circuit board of the transceiver until the deviation is set to 4.5 KHz.

DTMF (1) Test

This function is only for checking the DTMF code, not adjusting it.

1. In the adjustment mode, select channel 10 by rotating the main tuning dial.
2. Press the PTT key. DTMF code "1" is automatically sent and you will hear the monitoring tone from the speaker.
3. Check the deviation with the transceiver tester.

DTMF (D) Test

1. In the adjustment mode, select channel 11 by rotating the main tuning dial.
2. Press the PTT key. DTMF code "D" is automatically sent and you will hear the monitoring tone from the speaker.
3. Check the deviation with the transceiver tester.

Tone 67Hz Test

This function is only for checking the tone encoder, not adjusting it.

1. In the adjustment mode, select channel 12 by rotating the main tuning dial.
2. Press the PTT key. A 67Hz tone is automatically sent.
3. Check the deviation with the transceiver tester.

Tone 88.5Hz Test

1. In the adjustment mode, select channel 13 by rotating the main tuning dial.
2. Press the PTT key. An 88.5Hz tone is automatically sent.
3. Check the deviation with the transceiver tester.

Tone 250.3Hz Test

1. In the adjustment mode, select channel 14 by rotating the main tuning dial.
2. Press the PTT key. An 250.3Hz tone is automatically sent.
3. Check the deviation with the transceiver tester.

DCS Code 225 Test.

1. In the adjustment mode, select channel 15 by rotating the main tuning dial.
2. Press the PTT key. An 255 DCS code is automatically sent.

3. Check the deviation with the transceiver tester.

Tone Burst Test

This function is only checking the tone burst, not adjusting it.

1. In the adjustment mode, select channel 16 by rotating the main tuning dial.
2. Press the PTT key. A 1750Hz tone is automatically sent.
3. Check the deviation with the transceiver tester.

Aging

Perform this aging test only when necessary.

1. In the adjustment mode, select channel 17 by rotating the main tuning dial.
The transceiver automatically repeats transmission for a minute and reception for another minute.

Note on Adjusting Sensitivity

Sensitivity is adjusted by applying the optimum voltage from the CPU to the varicap of the tuning circuit.

1. Program any frequency within 145 MHz +/- 1 MHz on memory channel 5.
2. To enter the adjustment mode, set key lock and input 490217. Decimal point at 100MHz and 10MHz appears in LCD. (To release the mode, set key lock and input 490217).
3. Select channel 5 by rotating the main tuning dial.
4. Press the F key and, while the F appears, rotate the main tuning dial.
Set the adjustment data to "***" for maximizing the sensitivity ("**" appears in the channel number area on the LCD).
5. Press the F key.
6. In the key lock mode, input 490217. Decimal point at 100MHz and 10MHz disappear.
Turn the power OFF. The transceiver is in the normal status.

This modification is read 1377 times.

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26-04-2001

(DJ-195) DJ-195E coverage in France

Author: *Unknown*

In France for all coverage, take the DJ-195e and make a CPU reset for all coverage between 130 and 174 MHz.

This modification is read 1075 times.

[top of page](#)

29-05-2001

(DJ-195) DJ-195 Alkaline AA battery pack mod

Author: Chris Bunting, K1CWB - cbunting@fission2.com. MODIFICATION.NET

Here's how to modify the DJ-195 Alkaline AA battery pack to accept Ni-CD/Ni-MH batteries and charge them using the built in charging circuit and an ac adapter/13.8v input.

Simply remove the cover from the battery pack (remove the 2 screws) and locate the diode underneath the battery terminal on the bottom on the battery pack. Desolder the diode and solder the wire directly to the battery terminal instead.

Now you have a fully functional rechargeable battery pack without having to buy Alinco's special Ni-Cd pack.

Mod by Chris Bunting, K1CWB, cbunting@fission2.com. Preform this mod at your own risk. I will not accept any liability or responsibility when doing this modification.

This modification is read 1265 times.

[top of page](#)

24-02-2001

(DJ-196) DJ-196 extended transmit modification

The DJ-196 is as easily modified as most other handhelds alinco makes.

- Just take the silver cover behind the battery off, it is held in with one screw.
- Cut the blue wire (or remove it would be better) and there you go.

Haven't done it to mine yet, but the dealer said he has modified many and they work real well.
Mike, KB5TAR

Date: 08-02-2002

User comment

From: [Scott Sell](#)

Subject: DJ-196 modification

I clipped the blue wire and it still will not transmit out of iuts range. help!?

Date: 20-02-2002

User comment

From: [mike](#)

Subject: mod for dj-196

i did the mod to my 196 and it worked wonderfully.every thing works and transmit out of band from 130 to 174 i wish i could find one more.

This modification is read 823 times.

[top of page](#)

22-03-2002

(DJ-280) Expanded transmit for the Alinco DJ-280T

Author: Dan, KC8LQA - kb7uxe@yelm.tel.com. MODIFICATION.NET

I have found some mods for the Alinco DJ-280 which I have found to work well. I have not yet tried everything yet and it is up to you to do what a ham does best "tinker".

First remove the battery and battery contact plate on the bottom of the radio.

Second remove the 3 screws on the radio case, 2 on the back next to the PTT and 1 on the front next to the lanyard hole. There is no need to remove the belt clip or the plate under the belt clip.

Three remove the squelch knob and the off/vol knob, take off the front half of the case **(be careful there are 2 small wiring harnesses between the 2 halves of the case)** by swinging the bottom out and lifting up. Then unclip the 2 wiring harnesses, 1 from the speaker and the other from the keypad.

Now looking at the board you will see 5 solder jumper spots on the left side of the radio. Two of them are on the top going horizontal, and three jumpers going vertical. The 3 going vertical are the ones to use, I have not worked with the other two yet.

I have soldered blobs on TRX and TX, which gives me the standard US band plan TX 222 Mhz- 224.995 Mhz.

Which is model DJ-280T

TX jumper CLOSED

RX jumper OPEN

TRX jumper CLOSED

By opening the TRX jumper and closing the RX jumper it will now work on 220 Mhz- 239.995 Mhz. Which is model DJ-280TA1

TX jumper CLOSED

RX jumper CLOSED

TRX jumper OPEN

By closing all jumpers it will work on 240 Mhz- 259.995 Mhz. Which is model DJ-280TA2

TX jumper CLOSED

RX jumper CLOSED

TRX jumper CLOSED

73, KC8LQA

22-03-2002

(DJ-280) Expanded receive for the Alinco DJ-280T

Author: KB8QFL - kb8qfl@yahoo.com.MODIFICATION.NET

To extend the Receive, press and the LAMP button while powering the unit. The receive will be extended to 200-299 MHz. Once the TX expand has been done, it will show TX from the same range.

Mine transmits from 200 - 272.4 It does show trx above that, but its 272 MHz so maybe it can be increased.

23-02-2002

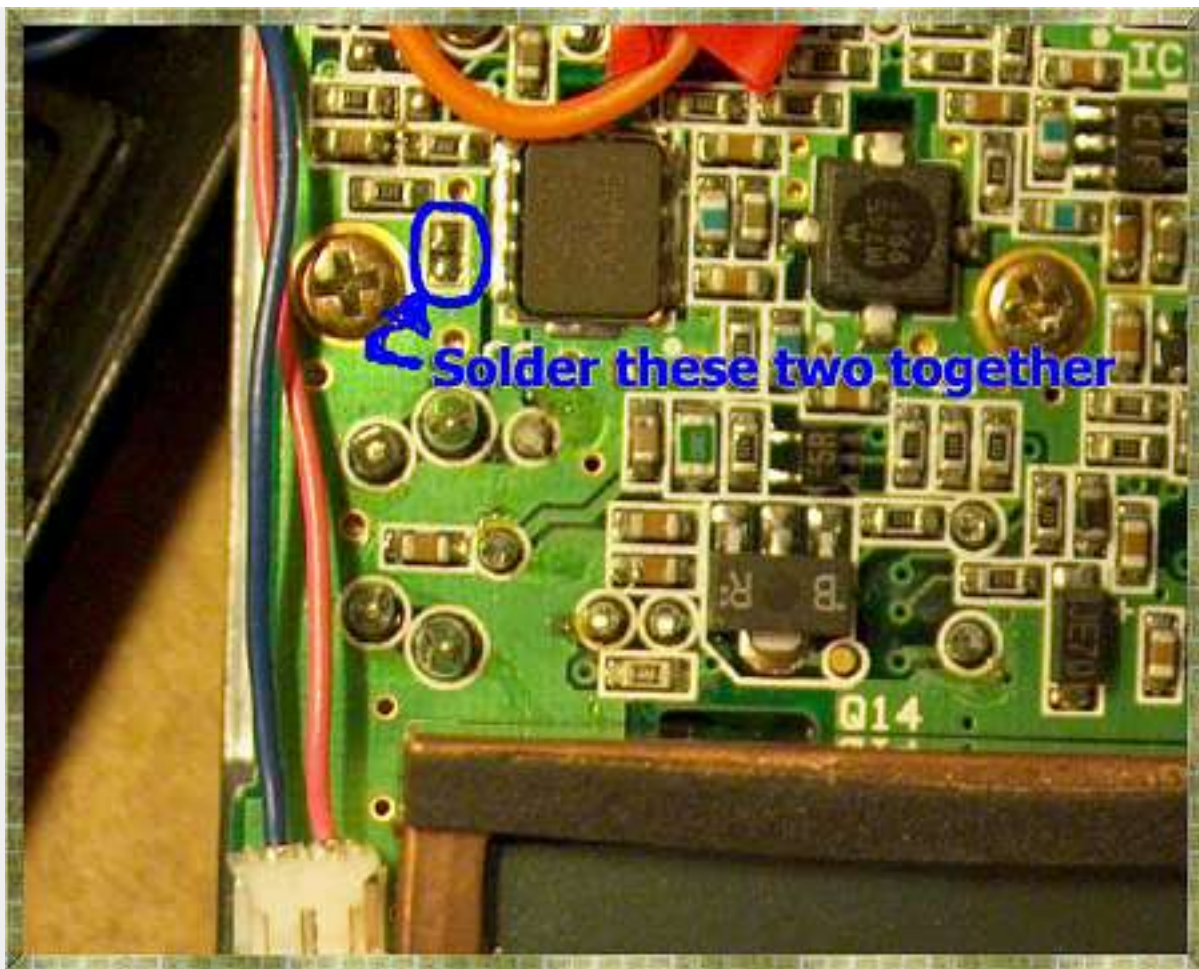
(DJ-446) DJ-446 TX power increase

Author: Martin Higgins - martinhiggins@blueyonder.co.uk.MODIFICATION.NET

How to modify the UK Alinco DJ-446 446MHz PMR Handportable Radio power output from the default 500mw to 5 Watts.

Remove the antenna/MIC/Sp cover rubber and mail dial. No tool is required but just carefully pull them out. With slightly enlarging the bottom of the front plastic case toward outside by hand, take the metal main chassis out of the case. No screw is used. Be careful; the chassis and the case is connected with a speaker cable harness. There is a small connector at the left side of LCD. Remove it before you completely separate the unit.

On the main unit circuit board, just below the antenna there is a screw and there is another one just about 2cm below. Between the screw and a black square component, there is a blank terminal without any component soldered. Solder this terminal (close circuit).



Reassemble the unit. No CPU reset is necessary.

Kind Regards

Martin Higgins

ICQ#: 128096269

This modification is read 268 times.

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19-07-1998

(DJ-460) Frequ. extension for your DJ-460E handy

Hello dear OM's and all other eavesdroppers and carrierpushers.

Now I will tell you how to EXTEND an ALINCO DJ-460E Handy which normally receives and transmits only between 430 Mhz and 440 Mhz for receiving and transmitting between 410 MHz and 470 MHz.

1. remove the accumulator pack.
2. remove the battery metal bracket with its four screws on the bottom of your DJ-460E.
3. Open the chassis of your DJ-460E by pushing the chassis halves softly away from themselves.
4. remove the plastic battery release button.
5. now you can see one SHORT YELLOW WIRE BRIDGE and behind another SHORT BLUE WIRE BRIDGE behind this removed button.
6. CUT these two short wire bridges with a spit pair of scissors or something else.

Congratulations. Your Frequency extension has successfully been accomplished right now.

19-07-1998**(DJ-460) Steckerbelegung TNC2S <-> DJ460E**

Se des TNC2S ist folgendermassen mit meinem Handfunkgeraet DJ460E verbunden.

Diodenbuchse TNC2S

Alinco DJ460E

```

-----
Stift 1:          3-poliger 2,5mm Mikrofonstecker      Stift 1
Stift 2:          3-poliger 2,5mm Mikrofonstecker      Stift 3
                  + 2-poliger 3,5mm Lautsprecherstecker  Stift 2
Stift 3: ueber 3,3 kOhm Widerstand verbunden mit Stift 1 der Diodenbuchse am
          TNC2S
Stift 4:          2-poliger 3,5mm Lautsprecherstecker  Stift 1
Stift 5: nicht belegt

```

Diodenbuchse:

```

  2
  o
5 o  o 4
3 o  o 1

```

Mikrofonstecker:

```

-----
  I-----
  I      I-----
3 I 2 I 1 I
  I      I-----
  I-----
-----

```

Lautsprecherstecker:

```

-----
      Ix-----
      2 I 1 I
      Ix-----
-----

```

73 de Uwe

BBS: dl4sdx @db0sdx

19-07-1998

(DJ-460) Meßwerte DJ-460T

Hier einige Ergebnisse diverser Messungen am DJ-460 (es handelt sich um ein DJ-460T, das auf den DL-AFu-Bereich umgeglichen wurde)!

Alle Messungen wurden mit aufgeladenem Akkupack EBP-10N durchgeführt.

Frequenzhub des Meßsenders: +/- 2.4 kHz

Toleranz der Ausgangsleistung des Meßsenders an 50 Ohm: +/- 1dB

Toleranz des Leistungsmesser: +/- 6% vom Meßwert

Toleranz des Hubmesser: +/- 1.5% vom Meßwert

Gleichstromaufnahme:

Standbybetrieb (APO ausgelöst) : 11mA

Ruhestrom (Rauschsperr aktiv) : 62mA

Empfang / NF ist "mittellaut" : 90mA

Senden mit max. Leistung : 1200mA

Senden mit 50mW Leistung : 400mA

max. HF-Ausgangsleistung:

420 MHz	=>	1.8 W
425		1.9
430		2.0
432		2.0
434		2.0
436		2.0
438		2.0
440		2.0
445		1.9
450		1.8
455		1.7
460		1.5

HF - Eingangsempfindlichkeit für einen Rauschabstand von $S+N / N = 20$ dB:

405 MHz	=>	-104 dBm
410		-111
420		-114
425		-116
430		-119
432		-121
434		-122
436		-122
438		-122
440		-122
445		-122
450		-122
455		-121
460		-120
465		-119

NF - Frequenzgang am Lautsprecherausgang (fuer PR interessant) der Meßsender wurde ohne Preemphasis betrieben:

Bezugsfrequenz: 1kHz

125 Hz	=> - 4 dB
250	+ 3
500	+ 4
800	+ 2
1000	0
1500	- 5
2000	- 9
2500	-12
3000	-16
3500	-19

Hubmessungen:

max. Hub: +/- 4.3 kHz

Modulationsempfindlichkeit des Mikroeinganges: +/- 1 kHz pro 1mV Ueff

DTMF - Hub: +/-3.0 kHz

Subtone - Hub: ca. +/- 650 Hz

Selektionswerte:

Nachbarkanaldämpfung (+/- 25 kHz) : 66dB

Spiegelfrequenzdämpfung (fsp = fempf - 2*fzfI) : 64 dB

Spiegelfrequenzdämpfung (fsp = fempf - 2*fzfII): 53 dB

Hallo YLs und OMs,

ich habe mal die von DG5AAU veröffentlichte Tastenfolge, die fuer das DJ-160 gilt, auch bei meinem DJ-460T (US-Version) mit aufgetrennter Pro-grammierbrücke 2 ausprobiert. Damit läßt sich auch bei diesem Gerät der erweiterte Frequenzbereich ein- bzw. abschalten! Die zumindest von der Eingabe möglichen Frequenzbereiche sind:

1. 335 MHz bis 409.995 MHz hier rastet die PLL allerdings nur im Bereich von 335 MHz bis 360 MHz; dies ist der Spiegelfrequenzbereich des 70 cm- Bandes! Dementsprechend unempfindlich ist dort auch der Empfänger: ca. 60 dB schlechter als im AFu-Band!
2. 400 MHz bis 469.995 MHz hier rastet die PLL bei RX im gesamten Bereich; bei TX ergibt sich ein Bereich von ca. 415 MHz bis 465 MHz;
3. 810 MHz bis 909.995 MHz hier rastet die PLL nie!!!!

Also für alle BesitzerInnen, die gern mit ihrem Handy rumexperimentierem - hier noch einmal die Tastenfolge:

1. Funktionstaste gedrückt halten und zweimal die B-Taste drücken - Funktionstaste weiterhin gedrückt halten und die Ziffernkombination 2 - 1 - 2 drücken!
Im Display erscheint "open" bzw. "close" und es ertönt eine Melodie.
2. Im "open"-Modus kann im VCO-Betrieb über die B-Taste der gewünschte Frequenzbereich eingestellt werden.

Vielleicht gibt es ja noch weitere Tastenfolgen, die weitere nie benötigte Funktionen freigeben, hi!
.....bis demnächst, 73 de Ulrich aus Wolfenbüttel!

19-07-1998

(DJ-500) Extended range for DJ-500T

This mod is for the alinco dj-500t, if you have little or no soldering experience do not !!! repeat do not try this mod on your radio. It is necessary to remove a chip resistor from the cpu board.

Tools you will need:

0 phillips screwdriver
25 watt soldering pencil,
Exacto knife.

I received a schematic and board layout from alinco free. Phone 1-213-618-8616. or send a sase to me at : bryan todd 318 aldrich road howell, nj 07731 and i will send you a copy of the board layout.

1. Remove the battery pack
2. Remove 3 screws from the back of the radio
3. Remove 2 screws from the bottom (front panel side)
4. Split the case carefully.
5. Put the radio face down on the table with the top away from you. The speaker at the bottom.
6. Find the "d" shaped gold pads under the speaker on the right side of board.
7. The chip resistor is two pads up from the "d" shaped ones. The next steps can cause great illness to the radio !!!!!
8. Very carefully heat one end of the chip and pry with knife.
9. Then heat the other end and repeat until resistor is off the board.
10. Hold the battery pack in contact with bottom of radio, turn on radio, press the reset button with toothpick (hole under ptt switch).
11. Check that you have the new frequencies then reassemble the radio.

You can now program

130.00 MHz to 169.995 MHz

340.00 MHz to 379.995 MHz

420.00 MHz to 469.995 MHz

870.00 MHz to 899.995 MHz

Since you have the soldering iron hot you can build a nice accessory.

19-07-1998

(DJ-500) Remote microphone and speaker

To make a cable you have to buy:

1/8" stereo plug "rs #274-284"

1/8" to 3/32" stereo adapter "rs # 274-373"

10 k ohm 1/4 watt resistor "rs # 271-1335"

10 microfarad 35 volt cap "rs # 272-1013"

Mate plug for your spare microphone.

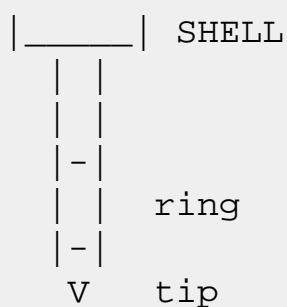
Plastic mini box.

I made one with a 8 pin standard mic plug so i can use my spare hand mic in the car with a 6" speaker.

Speaker mic connections:

shell	ground
tip	rec audio
ring	ptt & audio in.

Connect shield, ptt common and speaker common to the shell. Connect speaker plus to the tip. Connect a 10k ohm resistor and 10 microfarad cap to the ring. connect the ptt switch between the shell and the 10k resistor. Connect the mic plus to the 10 microfarad cap. Now you can use a real speaker and real microphone. That will also work for packet but use a .1 microfarad cap not 10 mf....



This modification is read 663 times.

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19-07-1998

(DJ-500) DJ-500E all freqs

Hallo everybody,

To extend the frequency-range of the dj500e, just cut two resistors.

The resistors are R61-R63.

The european version has the resistors in the following position:

BP1 and BPX.

The open version needs no!! Resistors. So cut them off.

They are located on the printboard with the speaker and microphone.

If you have the display on the left, you will look on the board and see them in the upper right

corner.....

There are two resistors with the numbers 000 (zero zero zero) on it.

Actually they are no resistors, just a wire, but in smd it looks like a resistor. so get them off the board and do a reset !!!!

The reset is very important because otherwise you will not get the new freq-range....

You got it????

Hopefully, if not, leave a msg in bbs DB0AHA.

Greetings from DL1BEQ frank

Rmks: This modification let you loose your warrantee, and also may cause problems with your national communicantions authority.

This modification is read 703 times.

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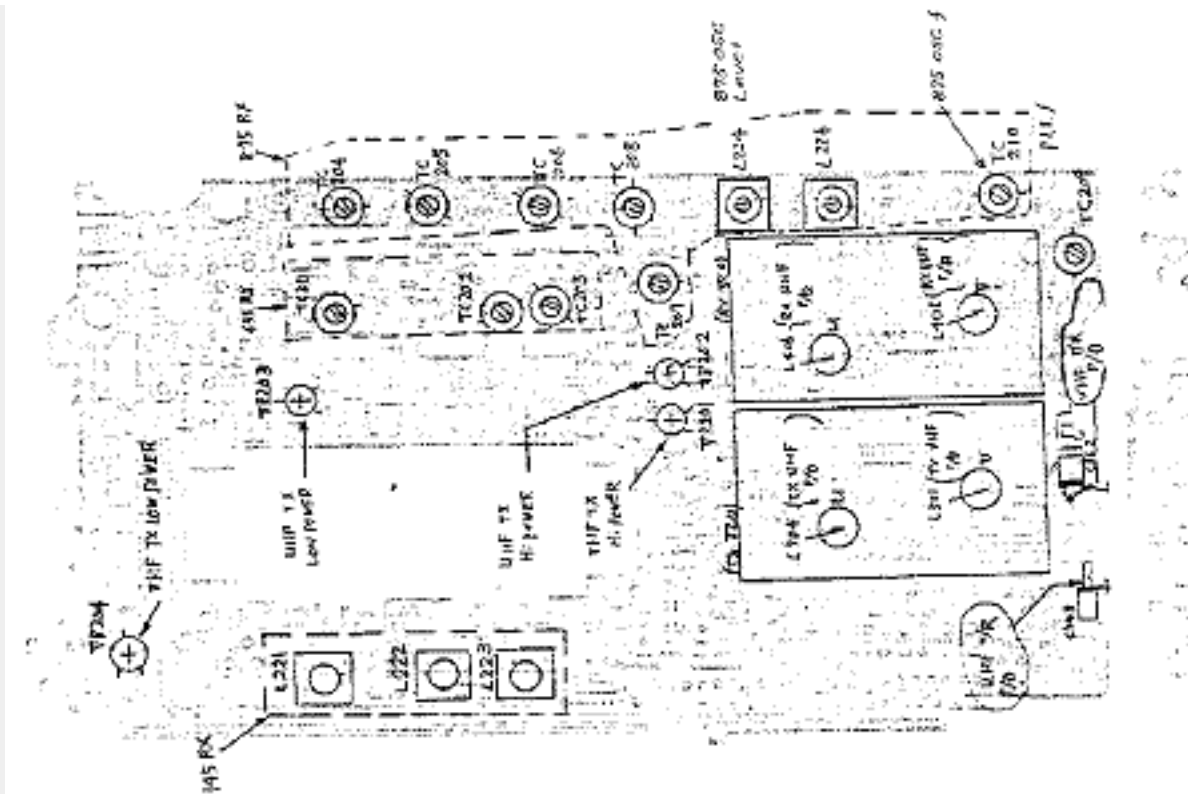
07-10-2001

(DJ-500) Adjustment points for DJ-500TE

Item	Adjustment Point	Adjustment Method	Spec
5 volt line voltage	VR605	Turn VR605 so that the voltage of 16 pin og IC601 should be 5.1 V.	5.1 V \pm 0.1 V
VCO P/D voltage	L401 (RX VCO) (VHF)	Adjust L401 so that the voltage of C362 (+) is 1.5 V.	1.5 V \pm 0.3 V (145 MHz)
	L501 (TX VCO) (VHF)		2.0 V \pm 0.3 V
	L406 (RX VCO) (UHF)	Adjust L501 so that the voltage of C362 (+) is 2.0 V.	1.1 V \pm 0.2 V (435.0 MHz)
	L504 (TX VCO) (UHF)		1.9 V \pm 0.2 V (445.0 MHz)
	DJ-500E	Adjust L406 so that the voltage of C343 (+) is 1.1 V.	2.1 V \pm 0.3 V
	DJ-500T	Adjust L406 so that the voltage of C343 (+) is 1.9 V.	3.0 V \pm 0.3 V
	DJ-500E	Adjust L504 so that the voltage of C343 (+) is 2.1 V.	
	DJ-500T	Adjust L504 so that the voltage of C343 (+) is 3.0 V.	

Frequency	TC209	Set the unit in the transmission mode at 435 MHz (DJ-500T: 445 MHz) and adjust TC209.	435 MHz \pm 500 Hz (445 Mhz \pm 500 Hz)
VHF power output	VR201 VR204	On "Hi" position, turn VR201 for 6.6 W output at 145.0 MHz 13.0 V. On "Lo" position, turn VR204 for 0.6 W output at 145.0 MHz 13.0 V.	6.5 W \pm 0.5 W 0.5 W \pm 0.1 W
UHF power output	VR202 VR203	On "Hi" position, turn VR202 for 5.6 W output at 435 MHz 13.0 V. (DJ-500T: 445 MHz 13.0 V) On "Lo" position, turn VR203 for 0.6 W output at 435 MHz 13.0 V. (DJ-500T: 445 MHz 13.0 V)	5.5 W \pm 0.5 W 0.5 W \pm 0.1 W
VHF deviation	VR604	Input a signal of 1 KHz/50mV into the MIC jack and adjust VR604 so that you obtain 4.8 KHz/Dev in the transmission mode.	4.8 KHz \pm 0.2 KHz
UHF deviation	VR601	Input a signal of 1 KHz/50mV into the MIC jack and adjust VR601 so that you obtain 4.8 KHz/Dev in the transmission mode.	4.8 KHz \pm 0.2 KHz
Subaudibel tone deviation (DJ-500T)	VR1	On the "ENC" mode at 449 MHz, turn VR1 so that the deviation is 0.8 KHz.	0.8 KHz \pm 0.1 KHz
1750 Hz tone burst deviation (DJ-500E)	VR1	Pressing Tone button at 435.0 MHz, turn VR1 so that the deviation is 3.5 KHz.	3.5 KHz \pm 500 Hz
DTMF deviation	VR1	Pressing [1] key at 435.0 MHz (DJ-500T: 445.0 MHz), turn VR1 so that the deviation is 3.3 KHz.	3.3 KHz \pm 500 Hz

<p>UHF receiving sensitivity (SG output: Mod 1KHz, 3.5KHz/dev)</p>	<p>TC201 TC202 TC203 L602 L603 L607</p>	<ol style="list-style-type: none"> 1. Set the frequency at 435.0 MHz (DJ-500T: 445.0 MHz) and turn the squelsh control OFF. 2. Adjust TC201, TC202, TC203, L602 and L603, so that the RX sensitivity becomes maximum. 3. Adjust L607 so that the audio output becomes maximum. 	<p>(12 dB SINAD) (EMF) under -6 dBμ</p>
<p>VHF receiving sensitivity (SG output: Mod 1KHz, 3.5KHz/Dev)</p>	<p>L221 L222 L223</p>	<ol style="list-style-type: none"> 1. Set the frequency at 145.0 MHz and turn the squelch OFF. 2. Adjust L221, L222 and L223 so that the sensitivity becomes maximum. 	<p>under -6 dBμ</p>
<p>S-meter (SG output: +6 dBμ EMF)</p>	<p>VR603 (VHF) VR609 (UHF)</p>	<p>Turn VR603 so that the [1] begins to light. Turn VR609 so that the [1] begins to light.</p>	<p>+4 to +8 dBμ</p>
<p>Squelch sensitivity</p>	<p>VR606</p>	<ol style="list-style-type: none"> 1. Connect the antenna terminal to the chassis ground and set the squelsh volume to the 10 o'clock direction. 2. Turn VR606 to set the threshold point. 	<p>Threshold point</p>



This modification is read 661 times.

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(DJ-560) Extended xmit for DJ-560-T

The following modification to the Alinco DJ-560-T will enable it to xmit out of band. Rumor: may also enable cross-band repeat.

1. Turn power off.
2. Remove battery.
3. Unscrew stainless steel battery connector plate. This is the rectangular s/s plate found at the bottom of the unit and is held in place with (4) small chromed, phillips head screws.
4. Remove Antenna.
5. Unscrew the one black head, phillips head screw found immediately adjacent to the BNC.
6. Carefully remove the grey DIAL, UHF and VHF plastic knobs.
7. Unscrew the lock ring nuts that are found under each of the three sets of knobs.
8. Gently remove the plastic top cover on the unit.
9. Unscrew the (4) black head phillips screws that hold the body halves together.
10. Place the unit face down on a work surface that is covered with a towel or a similar soft cloth. This will protect the unit from being marred while you work on it.
11. Gently separate the two body halves about 1/2" to 3/4".
12. Cut the ORANGE wire loop and reseal the exposed ends with heat shrink tubing.
(**NOTE:** if your DJ-560T is serial numbered from #0636-0705, the loop will be YELLOW in color! However whichever the color, cut only the loop! It will be the only loop to be found!)
13. Reassemble the unit in the reverse order of the above instructions.
14. Reset the CPU by holding the 'F' key (above the PTT key) down and turning on the unit.

This modification is read 950 times.

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(DJ-560) Manual for Alinco DJ-560 model

[dj-560man.zip](#) ZIP file.

This modification is read 873 times.

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(DJ-560) Alinco DJ560E Duoband-Handy 9k6 auf 70 cm

Jawoll, es geht! (Mit 9k6 FSK auf 70 cm eingespielt in DB0FAU)

Aber die Warnung gleich vorweg: Es ist nichts für zittrige Finger, und Garantie übernehme ich nicht und für eventuell verursachte Schäden komme ich auch nicht auf! So, nachdem das geklärt ist, kann es losgehen:

Die TX und RX Signale gebe ich über die seitliche Stereo-Klinke herein, die Buchse scheint mir dafür ideal, und auf den gedachten Zweck (UHF und VHF RX auf Stereo-Kopfhörer) konnte ich bisher gut verzichten. PTT kommt über die 2,5 mm Klinke oben (2,2k Widerstand!) (übrigens braucht man keine 2,5 er Stereo-Klinke verwenden, Mono geht auch!!).

Da die Umbelegung der seitlichen Klinkenbuchse mir recht sinnvoll erscheint, und nicht jeder das Manual vorliegen haben mag, gebe ich nun eine nahezu komplette Beschreibung:

1. Antenne, Akkupack, Trageschlaufe abnehmen.
2. 5 Schrauben am Geräteboden ausdrehen.
3. Bedienknöpfe, Gummideckel für Buchsen oben abziehen.
4. 3 Ringmuttern um Bedienknöpfe abschrauben, eine Schraube oben ausdrehen und Deckel abnehmen.
5. 4 Gehäuseschrauben ausdrehen (3 lange, 1 kurze).
6. Gerät sachte auseinanderziehen, Akkuverriegelung nicht verlieren!
7. Unten in der hinteren Gehäuseschale Flachbandkabel lösen, in dem der Kragen der Buchse auf der untersten Platine beidseitig etwa 1,5 mm angehoben wird.
8. Neben der Mic-/Lautsprecherbuchse den Mehrfachstecker ausziehen (Blaues Kabel oben, kann man aber nicht verwechseln)
9. Mehrfachstecker an Func-PTT-Call-Leiste ausziehen (Schwarz oben, kann dto. nicht verwechselt werden)
10. 2-Pol-Stecker oberhalb des kleinen Abschirmgehäuses rechts abziehen (Schirmung nach innen, s.o.!))
11. dto. " " grösseren " links " (Schirmung ebenfalls nach innen...)
12. Mittlere Platine mit 4 Schrauben aus Frontschale lösen (28-Pol. Pfostenstecker!)
13. Oberhalb der seitlichen Hörer-Klinke verlaufen 3 Leiterbahnen (Draufsicht) nach oben. Die beiden Inneren zwischen Buchse und Lötunkten gaaanz vorsichtig durchtrennen.
14. Das mittlere Kabel der internen Platinenverbindung ist dicht unterhalb des oberen Steckers abzukneifen und an Pin 9 des LINKEN (Draufsicht) MC3361D zu löten.
15. Das orange Kabel links und das danebenliegende ebenfalls dicht unterhalb des oberen Steckers abkneifen und diese beiden Punkte auf der Rückseite der Platine brücken.
16. Diese beiden Kabel ebenso am unteren Stecker kurz abkneifen. Somit ist die ursprüngliche Funktion der Buchse umgangen, und die RX-NF direkt aus dem UHF-Diskriminator liegt schon an am mittleren Kontakt des Steckers.

17. Der Lötspunkt der seitlichen Klinke, der direkt unterhalb der 5-poligen (modifizierten) Verbindung liegt (Platinenunterseite!) ist jetzt mit der Seele einer dünnen, geschirmten Leitung zu verbinden, Abschirmung an Masse. SORGFALT!!
18. Mittlere Platine wieder montieren, auf + Fahne Akku achten!
19. Untere Gehäuseschale: 4 Lötspunkte Abschirmblech ablöten, Masse- fahnen vom VCO-Gehäuse und BNC-Buchse vorsichtig wegbiegen.
20. Ebenso Mittelpin der BNC-Buchse (Zinntropfen) ablöten.
21. 5 Schrauben ausdrehen und Schirmblech abnehmen.
22. Messingpfosten, PA-Modul und weitere Platinenschraube ausdrehen.
23. Platine herausheben, umdrehen, auf Power-Schalterknebel achten!
24. Zwischen den beiden PLL-ICs (MB1501PF) befinden sich zwei SMD-Transistoren (Q13 oben und Q22 darunter). Am oberen, mittleren Pin des oberen Transistors ist nun die Seele des neuen geschirmten Kabels zu legen (Modulatoreingang des UHF-TX-VCO). Ich habe dort noch einen winzigen 560-Ohm Widerstand zwischengeschaltet, der Wert kann aber noch höher sein. Abschirmung an Masse nicht vergessen und Kurzschlüsse vermeiden!!! Hierzu habe ich einen kleinen Streifen Klebeband auf die Platine geklebt, worauf das Kabel und der Widerstand ruht.

Anschliessend Remontage des Gerätes in umgekehrter Reihenfolge.

Der RX-NF Pegel ist absolut ausreichend für das DF9IC-Modem, TX-seitig ist das Poti nur wenig aufzudrehen (Schleiferpfeil des Potis steht etwa waagrecht) und die TX-FSK kann im Empfang durchlaufen, da für den Empfang im Gerät ein anderer VCO-Zweig gilt.

Mit Messwerten kann ich leider nicht dienen, ich habs einfach so probiert, und es funktionierte (fast) auf Anhieb! Für Rückfragen stehe ich aber gerne zur Verfügung, Mail dann bitte an mich oder in der Rubrik ALINCO. Viel Erfolg und GUT LÖT und awds in 9k6!

Lutz, DL4OBG @ DB0FAU.DEU.EU

postscriptum

Nach so einigen Versuchen hat sich gezeigt, dass ein $15\text{k}\hat{\Omega}$ -Widerstand in der Leitung TX-NF die TX-Abstimmung erleichtert, der R kann aber problemlos noch vergrössert werden (Evtl. $10\text{k}\hat{\Omega}$ vor das heisse Ende des Potis legen oder Spindeltrimmer verwenden). Das Auskoppel-C der TX-NF habe ich mit $10\ \mu\text{F}$ bipolar(oder $2 \times 22\ \mu\text{F}$ in Reihe mit + jeweils aussen) als besser befunden als $5\ \mu\text{F}$ bipolar.

Weiterhin sollte der Serienwiderstand in der PTT-Zuleitung oben über die 2,5mm Klinke so klein wie möglich gemacht werden, wenn man parallel auf 2m hören möchte. Die Elektretkapsel und der Mic.-Verstärker arbeiten nämlich noch und laute Geräusche können sich auf die FSK legen, das macht dann die Information kaputt.

Das programmierbare Filter hat sich mit on off on off am besten gezeigt, aber da muss halt jeder ein wenig experimentieren.

19-07-1998

(DJ-560) MOD for 800MHz RX on DJ-560

Here is the mod for the DJ-560. I haven't had my friend try it yet, but thanks anyway to Kevin Jessup for supplying the information!!

There is NO mod required to do crossband repeat. It is a standard feature. If crossband repeat operates on the 800 MHz band (after the modification), that is another matter!

Performing the aircraft mod (as described in the back of the owners manual, also gets you 800 Mhz).

BTW, cutting the RED jumper provides AIRCRAFT and 800 MHz. Cutting the BLUE wire provides out of band transmit (but NO guarantess that performance will be within amateur band specs).

To enable 800 MHz, press the UHF key 3 times (to guarantee that your are in UHF VFO mode). Then press the function key (keep it held down) and then press UHF.

This modification is read 924 times.

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19-07-1998

(DJ-580) Alinco DJ580E to TNC info

Pin outs for Alinco DJ580E and TNC connections

	MIC 2.5mm PLUG		EAR 3.5mm PLUG		
	1	1	1	1	
	1	1	1	1	
	1--1	1--1	1-----1	1-----1	
	1	1	1	1	
Microphone	1	1	1	1	Earphone or
ground (screen)	1	1	1	1	speaker ground
	1----1		1-----1		(Brown wire)
	1----1		1-----1		
* +5 volts	1	1	1	1	UHF audio out
output	1	1	1	1	(Red wire)
	1----1		1-----1		
	1----1		1-----1		
	1	1	1	1	
Microphone	>	<	>	<	VHF audio out
signal & Tx	1	1	1	1	(Green wire)
switching	/	/	/	/	
(white wire)	/	/	/	/	
has +5v for switching					

NOTE:

Wire colours refer to the Alinco lead normally supplied with the EMS-8 speaker microphone.

*

This segment of the MIC plug may not be connected in the lead you have. It is used to supply auxilliary power for such items as VOX mic circuits. In the normal electret microphone the power is obtained from the mic signal line.

19-07-1998

(DJ-580) ALINCO DJ-580EB sensitivity measurements

- All sensitivity measurements performed with Radiocommunication Tester CMT from Rohde & Schwarz.
- DJ-580 EB externally supplied with 13.8 Volt
- Modifications present during this test:
 1. Keyboard modification (130 - 174 MHz & 400 - 470 MHz reception)
 2. Hardware modification (108 - 143 MHz (AM !) & 810 - 990 MHz reception)

144-146 MHz band:

Generator of CMT set to 2.8 KHz FM-deviation with 1 KHz AF.

Sensitivity is measured for 12 dB SINAD with CCITT filter in CMT switched ON.

144.000 MHz	0.12 μ V	max. 36 dB SINAD at 5.60 μ V
144.500 MHz	0.11 μ V	
145.000 MHz	0.13 μ V	
145.500 MHz	0.12 μ V	
145.995 MHz	0.12 μ V	max. 36 dB SINAD at 5.60 μ V

430-440 MHz band:

Generator of CMT set to 2.8 KHz FM-deviation with 1 KHz AF.

Sensitivity is measured for 12 dB SINAD with CCITT filter in CMT switched ON.

430.000 MHz	0.15 μ V	
432.000 MHz	0.18 μ V	
434.000 MHz	0.18 μ V	max. 36 dB SINAD at 3.0 μ V RF input
436.000 MHz	0.18 μ V	
438.000 MHz	0.16 μ V	
439.995 MHz	0.17 μ V	

Aircraft band: 108 - 142.990 MHz AM (after hardware modification)

Generator of CMT set to 80% AM-depth with 1 KHz AF. Sensitivity is measured for 12 dB SINAD with CCITT filter in CMT switched ON.

108.000 MHz	0.80 μ V	max. 16 dB SINAD (!!) (ca. 18% dist. !!)
109.000 MHz	0.75 μ V	
110.000 MHz	0.68 μ V	
115.000 MHz	0.77 μ V	
120.000 MHz	0.60 μ V	max. 17 dB (!!) SINAD at 1,15 mV RF input
125.000 MHz	0.55 μ V	
130.000 MHz	0.45 μ V	max. 16.8 dB (!!) SINAD at 0.66 mV RF input
135.000 MHz	0.43 μ V	
140.000 MHz	0.37 μ V	max. 17 dB (!!) SINAD at 0.45 mV RF input
141.000 MHz	0.36 μ V	
142.000 MHz	0.35 μ V	
142.990 MHz	0.38 μ V	

UHF extended band: 810 - 999 MHz FM (after hardware modification)

Generator of CMT set to 2.8 KHz FM-deviation with 1 KHz AF. Sensitivity is measured for 12 dB SINAD with CCITT filter in CMT switched ON.

810 - 825 MHz	no reception (probably due to not locking of the PLL)
826.000 MHz	0.60 μ V max. 34 dB SINAD at 9 μ V RF input
827.000 MHz	0.60 μ V
830.000 MHz	0.40 μ V
840.000 MHz	0.25 μ V
850.000 MHz	0.25 μ V max. 34 dB SINAD at 8.5 μ V RF input
860.000 MHz	0.28 μ V
870.000 MHz	0.50 μ V
880.000 MHz	0.64 μ V
890.000 MHz	0.78 μ V
900.000 MHz	0.82 μ V
910.000 MHz	1.00 μ V
920.000 MHz	1.14 μ V
930.000 MHz	1.08 μ V
940.000 MHz	1.33 μ V
950.000 MHz	2.53 μ V
953.000 MHz	3.60 μ V
954 - 999 MHz	no reception (probably due to not locking of the PLL)

This modification is read 1123 times.

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19-07-1998

(DJ-580) ALINCO DJ-580EB output power measurements

All power measurements performed with Radiocommunication Tester CMT from Rohde & Schwarz.

144 - 146 MHz band:

Freq.	L	M	H	Remark
144.000 MHz	0.327 W	1.28 W	5.40 W	(13.8 V. ext.)
	0.343 W	1.28 W	3.18 W	(EBP-20, fully charged)
144.500 MHz	0.322 W	1.26 W	5.35 W	(13.8 V. ext.)
	0.339 W	1.26 W	3.16 W	(EBP-20, fully charged)
145.000 MHz	0.318 W	1.25 W	5.27 W	(13.8 V. ext.)
	0.333 W	1.25 W	3.16 W	(EBP-20, fully charged)
145.500 MHz	0.313 W	1.23 W	5.20 W	(13.8 V. ext.)
	0.330 W	1.23 W	3.19 W	(EBP-20, fully charged)
145.995 MHz	0.309 W	1.21 W	5.16 W	(13.8 V. ext.)
	0.324 W	1.21 W	3.17 W	(EBP-20, fully charged)

430 - 440 MHz band:

Freq.	L	M	H	Remark
430.000 MHz	0.294 W	1.48 W	4.91 W	(13.8 V. ext.)

432.000 MHz	0.313 W	1.44 W	2.44 W	(EBP-20, fully charged)
	0.294 W	1.49 W	4.91 W	(13.8 V. ext.)
434.000 MHz	0.313 W	1.45 W	2.43 W	(EBP-20, fully charged)
	0.290 W	1.49 W	4.90 W	(13.8 V. ext.)
436.000 MHz	0.313 W	1.46 W	2.41 W	(EBP-20, fully charged)
	0.290 W	1.48 W	4.88 W	(13.8 V. ext.)
438.000 MHz	0.320 W	1.45 W	2.40 W	(EBP-20, fully charged)
	0.287 W	1.47 W	4.93 W	(13.8 V. ext.)
439.995 MHz	0.307 W	1.45 W	2.39 W	(EBP-20, fully charged)
	0.284 W	1.45 W	4.95 W	(13.8 V. ext.)
	0.302 W	1.43 W	2.39 W	(EBP-20, fully charged)

This modification is read 1139 times.

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19-07-1998

(DJ-580) DJ-580EB S-meter indication

For these measurements the Radiocommunication Tester CMT from Rohde & Schwarz was used to generate the HF signal.

Note:

Especially at lower levels the segments of the DJ-580 were flashing on and off. The signal levels below were measured at the point where the segments remained ON for about 50% of the time.

144 - 146 MHz band:

SEGMENT	Level
1	0.22 μ V
3	0.34 μ V
5	0.52 μ V
7	1.00 μ V
9	1.95 μ V
FULL	3.24 μ V

430 - 440 MHz band:

SEGMENT	Level
1	0.19 μ V
3	0.33 μ V
5	0.44 μ V
7	0.69 μ V
9	1.20 μ V
FULL	(not seen)

This modification is read 1139 times.

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19-07-1998

(DJ-580) DJ-580 secret codes/modes

Some time ago, fellow hams have send out not mentioned codes which can be activate when the keyboard is lock (with the key-sequence FUNC * = FL).

One of them was #123 - I think I found out what this code do. If you type in this code when the keyboard is locked the display shows up one digit and after each new try it will increment the digit starting from 0 to H. - This code change the DTMF-Setup!!! - It seems there are serveral DMTF-mode stored in the DJ-580 (from 0 to H). The difference between these modes are different signal length and probably different signal/tone frequencies. After changing to a otherdigit than 0, you are only able to decode DTMF from other stations with the samesetup.

If you have changed your DTMF - don't worry. Type in #123 serveral times until the digit 0 appears on the display again and than unlock your keyboard. Now your DJ-580 should be in the default mode again.

This modification is read 1669 times.

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19-07-1998

(DJ-580) DJ-580T coverage for newer rig

Here is another mod for the Alinco DJ-580T...

Depending on the age of the rig this is a mod to open the rec and transmitter.

If you have a newer rig, take the battary off and the 4 screws that hold on the battary and find the RED wire, cit it and tape the ends to open the recever to be able to transmit on all bands you rec with the acception on 800 and 900 cut the Blue wire, I have dont this and have had no problemsat all...

The RED and BLUE wire are looped so you cant mis them...

Injoy the new coverage...

This modification is read 1326 times.

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19-07-1998

(DJ-580) DJ-580 HT review/info (long)

I mailed information on the new Alinco dual band hand-held, the DJ-580T to a couple folks that had enquired about them. These people had some requests for the information, so decided that I'd just post it. This is not intended to be a complete review of the radio, just information I had e-mailed.

Note: I posted a couple weeks ago about a stolen DJ-160, the 2 meter Alinco. I had a few e-mail responses to that post. It was stolen by a brother of one of the Girl Scouts in my Daughter's troop. We now have it back -- returned after two weeks, one day before I was going to mail a claim to the ARRL insurance.

The DJ-580 dual band radio is one of the "small" hand helds, not the smallest thing out but a very nice size. I think it has a nice solid feel to it. Display shows both VHF & UHF frequencies, as well as indication for which band is receiving a signal. Lighted keyboard. Built in CTCSS encode and

decode, as well as tone paging.

I purchased my first DJ-580 from Amateur Radio Supply in Seattle (ARS) at the ham fair in Washington. Price was \$399. After playing with it for a weekend I decided that it was a great radio and I purchased another one for my wife. The second one was from Ham Radio Outlet (HRO) in Tigard, Oregon. Price there was also \$399.

At a ham fair in Salem a couple weeks ago Electro-Comm (a small Alinco only dealer in Washington) sold out of their 580s and had not yet received new ones. At the ham fair last week ARS had just received them -- I don't know how many they got, but every time I passed their booth I saw someone buying one. HRO has had two shipments of 10 each, and after I got mine they had one left. These things seem to be popular.

They use a battery specific to Alinco. The battery is **MUCH** improved over the DJ-160 (2 meter only) radio. On the DJ-160 the battery can be easily removed when the radio is stressed in a purse or backpack. This doesn't break it, but is a nuisance. On the DJ-580 the connection seems quite secure. It comes with a drop in charger -- standard slow charge. I think there is a fast charger for it. Standard battery is 7.2 volt 700 ma nicad.

I measured the current draw, and with a single band turned on it draws about 60 ma, and with both bands on 100 ma (squench not broken of course). With the battery saver feature you should get about 60 percent improvement on power consumption. In battery save you listen for 130 ms and then drop to standby power for 390 ms. Unfortunately it is not easy for me to measure the power used in this standby setting but I'd guess that it averages out to perhaps a 60 percent savings.

Only thing I worry about a bit with Alinco is that they seem to come out with a neat new model each year. The 580 is a clear winner over the 560 dual band. Don't know what they will have next year, but perhaps the 580 is selling well enough that they will stick with it a while. Anyway, hope they decide that this is a good battery design and keep it.

We did put this on a signal generator and it was a bit more sensitive than the Yaesu FT470 (think that is their small dual bander) we also had with us. I hadn't made the out of band mods yet so couldn't check sensitivity out of band. I do know that many of the radios will display out of band but are not sensitive enough to actually pick up anything. The 580 does seem to receive out of band quite well. As I say though, I don't have any info on intermod rejection.

I was asked about modification of the DJ-580 for out of band operation. They couldn't have made it much easier:

- Remove battery pack.
Use a small philips screwdriver (ie. jeweler size) to remove the 4 screws that hold the metal battery slide on the radio. These are at the outer corners of the metal clip.
- Gently lift off the metal clip. Note that the two power wires are on this so don't pull it too far off. Also note that there is a small metal tab on this clip that is inserted in the battery release slide. You will want to insert it back in the same hole when you replace the metal clip.
- You will see a small RED wire loop as well as a small BLUE wire loop. You can gently pull these up with some needle nose pliers. Cut the loops and then cover the ends so they don't contact anything. My method was to cut them not quite at the top, so one wire was a bit longer than the other. I then slipped a small piece of heat shrink tubing over the wires so the ends could not contact each other again. This is probably adequate. I took a CLEAN soldering iron and used that to shrink the tubing a bit just so it wouldn't move.
- Push the wire loops back into the radio. The metal battery clip will push up against the circuit board running down the center of the radio so you don't want the wire loops crossing over

the circuit board.

- Replace the metal plate -- remember to stick the projection into the small hole on the battery release slide.
- Replace the battery pack and reset the radio. You reset the radio by holding the function key down and turning on the power. Note that this clears all memories, so make the mod early -- this thing has 40 memory channels - a lot to reprogram.

I cut both jumpers. Documentation I have, as well as verbal instructions was that the RED jumper opens up the out of band receive -- aircraft and cellular, while the BLUE wire opens up the out of band transmit. You certainly can't transmit in the aircraft or 800 band, I don't know just what transmit limits are, don't have any reason to stray outside of the ham band.

Also, the default memory set up is 20 channels for VHF and 20 for UHF.

You can allocate these differently if you wish, for example 30 VHF and 10 UHF. The manual describes this procedure. The manual that comes with it isn't too bad -- at least not for the "simple" stuff. I don't know if it does a good job of describing things like cross band repeat. If you get one of these radios contact jay Appell at jay@zen.cac.stratus.com and tell him you have a 580 and would like to have him e-mail you a manual. He has one in progress now. I have the first draft and it is pretty good. Think the second draft will be out in a month or so.

This modification is read 1155 times.

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19-07-1998

(DJ-580) Alinco DJ-580 repair

OK, since I just went through this broken antenna thing recently, let me jot down a few of the highlights...

First thing is to remove the wrist strap and all the knobs from the top of the radio. The knobs just pull straight off.

Around the knob shafts is a nut of sorts, more like a sleeve with threads. They sit down in the gap between the shaft and the radio shell, and have two notches, 180 degrees apart. They probably want you to use some sort of special tool to unscrew them, but I just used a really small screw driver (basically anything small and pointy will do). This is probably the part you missed. Use the screw driver to push the notches around the shaft to unscrew the nut.

Un-do the 4 screws that hold the base plate on. Be careful with the wires and the spring that pushes on the battery release. Also un-do the 3 screws that hold the front and back halves of the radio together. The radio can now come apart, although it won't want to.

The ribbon cable joining the two halves of the radio has enough stretch to just barely allow the radio to be taken apart. The thing you're trying to do is get the knob shafts out of their holes. Once that is done you can lay the radio open on the table.

Of course, you're looking at two PC boards, one in each half. The BNC connector isn't on either of them :-(. It's buried below the one on the back side of the radio. There are 4 screws holding that one down, one in roughly each corner. Remove them, and carefully lift that board. Under it is yet another PC board, and under that one is the BNC connector. Alinco must have stock in the folks producing "Dr. Who".

At the top of the radio is a rubber gasket thingy which goes around the plugs for the

mic/earphone/etc. I don't remember exactly how this went, but it will end up coming out.

With the second board lifted out of the way, you'll see some copper foil covering where the BNC connector is. There is a screw on the top right, and a solder blob at the bottom. Remove the screw and peel the foil back. I ended up breaking the solder blob in the process, but it was easy to put back. The under side of the foil has an adhesive on it.

There is a wire connecting the BNC's threads which broke off at the PC board *and* the center connection had cracked from the solder post. Use a really small soldering iron and touch up both connections. Be real careful not to burn anything, drop solder on anything, or bend the little coils near the center connector's post. I didn't use any extra solder, just re-flowing what already was there.

With the repair complete, reverse the process to put things back together. Don't forget to re-blob the foil, and get all the rubber gizmos (PTT/Function switch, and the seal around the speaker/mic connectors back in place, and not pinched under something else.

As a final step, get some good epoxy and run a bead around the BNC connector to keep it from moving in the future. Come to think of it, you might want to put some on the inside while the radio's open, but I put it on the outside.

Seemed safer.

I've probably forgotten some minor, but important detail in all this, but this is from memory, so use your best judgment. Don't force anything; they put it together without a hammer, so you shouldn't need one to take it apart. You will need a real fine Phillips screwdriver, fine tip soldering iron, and NO INTERRUPTIONS to pull this off.

Good luck,
Greg KD6KGW

This modification is read 1261 times.

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19-07-1998

(DJ-580) DJ580 mod info (Blue wire)

11/95

hello alinco user !

In the following, i will discuss the modification of an alinco DJ-580e, which will maybe also work for us model.

There is the well known methode, of cutting the blue wire.

Some om's are reseting their handy, and befor reassembling, they connect the blue (now two) wire together. so, if you reset the DJ-580 again, you have an transceiver without modifications.

There is also an other possibility:

Cut the blue wire. make sure, that the ends are isolated and make no connection to any other equipment. reassemble the alinco. Now you must full reset the 580. this is made by pressing the function key during power on. you have an opened handy for receiving and transmitting.

** Connect the dummy load for tests **

You can program the memories and so on.

I think till now, it's well known.

Now, for closing the handy again, do the following. The 580 is powered off. press the function key - and leave it pressed. then power on and leave the function key already pressed. Now power off again. (now you can release the function key - hi) during the poweron phase, you have seen all the symbols on the display. and the fine think is: with this half reset you do not lose the contents of the memories, but the handy is set to the normal ham band limits.

If you want open for receiving, you can do it, by software mod. Remember, the blue wire is already cutted.

Beware, it's not allowed to receive or transmit out of the ham bands. use the dummy load for tests.

This modification is read 1411 times.

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19-07-1998

(DJ-580) Manual for Alinco DJ-580 model

[dj-580man.zip](#) ZIP file.

This modification is read 1218 times.

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19-07-1998

(DJ-580) DJ-580T Keypad mods

#1:

First, disable the primary functions of the Keypad by Holding down the "FUNC" and hitting the " * ". Next, Hit in sequence, " # 1 2 0 ".

If " open " is displayed on screen, You may use the battery for an extended period on recieve (for ALKALINE batteries) .

If " close " is displayed on screen, you may only use the battery down to the normal preset level (for NI-CAD batteries) . You may switch between the settings, but turn the radio off briefly to bring the radio into the new setting. Have fun.

#2:

First, disable the primary functions of the Keypad by Holding down the " FUNC " key on the side of the radio. Now hit the " * " key.

Next, hit in sequence " # 1 2 3 ". This mod. adjusts the Auto-Dialer Setting in the Radio. A number or letter will appear on screen.

Play with the settings only on a simplex freq. with low power.

Repeaters can not yet handle the slow speeds much less the fast speeds , so this mod. will be important only in the near future. However, have fun with this one too.

Although these mods. are for the Alinco-580T/E. It is believed that other Alinco products have similar mods. available via Keypad Entry. Mobiles and HTs alike.

Send comments to N0VKG on the TOYBBS:KD9SG BBS or IPALN:KB9BPF Mailbox here in the St. Louis Area.

19-07-1998

(DJ-580) Alinco DJ-580 unt 9600Bd

Ich habe mir vor ca. einem halben Jahr mein DJ-580 auf 9k6 umgebaut.

Den RX hab ich folgendermasen abgenommen (Ich hoffe Du verstehst was ich meine, sonst einfach Nachfragen (TNC läuft meistens auf AAB (vor allem Abends)) Also..vom IC 101 geht an pin 11 ein 1k Ohm Widerstand auf ein kleines Netzwerk. An diesem habe ich mit 6,8k Ohm den RX abgegriffen . (mittelpunkt R 113, C 117,R 122 und R 123).

Das mit den 6,8k Ohm geht recht gut, habe damals auch ein bissl mehr (bis 10k) ausprobiert aber dann war das Signal für das TNC zu klein.

TX hab ich direkt auf die VCO Unit aufgeschaltet und zwar direkt auf den MOU-Eingang der VCO-U einheit (bei R 528,C 561). Das hat zwar den Nachteil, daß auf 2m kein TX möglich ist, aber das braucht man ja eh nicht..hi

Ich hatte Anfangs Angst, daß mir das Signal ohne auftrennung der bestehenden TX zu weit verändert wird, aber das hat sich nicht bestätigt.

Lageplan hab ich leider keinen und im Kopf hab ich das von damals auch nicht mehr so genau, aber da muß man halt die Leiterbahnen verfolgen. (Lupe ist da sehr hilfreich..hi)

So, was mir noch als gute Idee erschien und ich dann auch so realisiert habe war, daß ich zur Signalrausführung die V/U Buchse verwende (V und U getrennt auf linken und rechten Kanal ,direkt neben der Ant-Buchse).

Da muß man dann zwar etwas überbrücken und einen Draht abzwicken aber ich habe für diese Buchse sowieso keine Verwendung.

Welche zwei Drähte das waren weiß ich zwar leider nicht mehr, aber das kann man ja aus dem Schaltplan raussehen.

So, zuletzt wäre noch zu sagen, daß nachden ich das TNC noch auf den TRX ab-geglichen habe das ganze UFB funktioniert ,wie gesagt seit gut 6 Monaten. Garantie übernehme ich natürlich keine, egal in welcher Form auch immer, aber das dürfte ja klar sein..hi

So, ich hoffe daß ich Dir weiterhelfen konnte.

73's de Thomas aus Bad Tölz ,JN57SS

19-07-1998

(DJ-580) Umbauanleitung des Dualband-Handfunkgerätes Alinco DJ580 für Betrieb mit 9k6

Hallo Om's,

Ich habe mich einmal daran gemacht mein DJ580 für 9k6 umzubauen. Als erstes fiel mir nach dem Aufschrauben des Gerätes auf, daß hier wirklich kein Platz ist, um eine zusätzliche Buchse einzubauen. Die Lösung, welche ein anderer Om schon einmal vorgeschlagen hatte, die vorhandene V/U-Buchse zu nehmen gefiel mir nicht, da ich dann einen zusätzlichen Stecker für die PTT benutzen müßte. Also habe ich mir etwas anderes einfallen lassen. Die vorhandene V/U-Buchse habe ich ausgebaut, und das Loch etwa 0,5 mm aufgebohrt. Hier paßt nun der untere Teil des Innenlebens einer Mini-DIN-Kabelbuchse hinein. Ich hatte grad 6-polig mit passendem Stecker im Hause, aber es geht auch jede andere. Es werden nur 4 Kontakte (TX,RX,PTT,Masse)gebraucht. Die V/U-Buchse ist auf einer kleinen Platine eingelötet. Diese Platine kann man leicht herauserschrauben, um die Buchse dann auszulöten. Die Gummidichtung, welche von innen im Gehäuse eingesetzt ist, muß man dann für die neue Buchse entsprechend ausschneiden.

Als erstes habe ich also gebohrt, das Innenteil meiner Kabelbuchse stramm eingesetzt und mit etwas 2-Komponenten-Kleber fixiert. Die Buchse steht ca. 10mm aus dem Gehäuse heraus, aber wenn es fertig ist, sieht es so aus, als müßte es so sein. Sie sitzt dann neben der BNC-Buchse hinter dem Lautstärkeregler UHF und stört absolut nicht.

Danach kann man von innen an die 4 zu benutzenden Kontakte der Buchse jeweils einen Draht entsprechend der benötigten Länge anlöten.

Nun muß man die darunterliegende große Platine ausbauen. Dazu erstmal die große Weißblechabdeckung abschrauben, danach die verbleibenden 2 Schrauben der Platine herausdrehen. Nun die Antennenbuchse ablöten. Danach kann man die Platine herauskippen.

Man muß mit dem TX-Signal an den UHF-Oszillatoreingang MOU gehen. Hier kann man die Leiterbahn vom Steckeranschluß (Verbindung zum anderen Board, dritte von oben) verfolgen, hier ist die Schaltung ganz hilfreich. Ich habe den Draht an den Widerstand R528 (22k) und Kondensator C584 (1000p) gelötet.

Nun kann man die Platine wieder befestigen, und das Weißblech wieder einschrauben. Antennenbuchse wieder anlöten, und die Platine mit den Mic- und Lautsprecherbuchsen wieder einsetzen. Mit dem PTT-Anschluß kann man über ca. 2k2 an die Mikrofonbuchse gehen. Masse ist in der Gegend auch reichlich vorhanden...hi.

Nun fehlt noch der Draht für das RX-Signal. Hierzu muß man an die Platine in der anderen Gehäusehälfte gehen. Das Rx-Signal greift man am besten zwischen R113 (1k) und R122 (47k) ab. R113 kommt von Pin 11 am UHF-Demodulator IC 101. Leider liegt er aber auf der Unterseite der Platine. Unter dem IC101 ist eine Durchkontaktierung von Pin 11 auf die Unterseite. Da kann man dann die Leiterbahn bis R122 verfolgen. Dort am besten den Draht anlöten.

Nun kann alles wieder zusammengebaut werden, mit dem gleichzeitigen Gebet, daß doch bitte noch alles funktionieren möchte...hi.

Bei mir klappte es auf Anhieb mit 9k6, weiterhin ist natürlich 1k2-Betrieb über die Mic-LS-Buchsen möglich. Zur Anpassung der Filterkurve mußte ich bei meinem 9k6-Modem nach DF9IC alle 4 Jumper ziehen, damit klappt es am besten. Außerdem kann ich mit einem TX-Delay von 18 noch gut arbeiten, was für ein PLL-Gerät nicht schlecht ist (mein Quarz-TX zum Vergleich TXD 8).

Abschließend möchte ich noch bemerken, daß ich diesen Umbau nur Om's empfehle, die etwas Erfahrung im Umgang mit SMD-Geräten haben. Eine feine Lötspitze, eine Lupe und eine ruhige Hand sind Voraussetzung. Weiterhin übernehme ich natürlich keine Verantwortung für irgendwelche Schäden oder sonstiges.

Viel Spaß beim Basteln wünscht

19-07-1998

(DJ-580) Extended frq. DJ-580 new mod

Hi folks,

Here is a "new" (ish !) mod, concerning the expansion of this excellent rig.

Everyone knows of the "cut blue wire for extended RX" and even the other one for TX ! but once done, there is no way of reversing the process...

Oh yes there is !! listen carefully...

Turn off rig,

Hold down the function button and turn on,

Still holding the function button,

Switch off.

(do NOT let go of the function button until the rig is OFF, or you will reset the radio, and lose all your memories !)

The radio is now "as standard" ie Ham only freqs... now to toggle the wideband operation, use the #212 keycode (as listed in the manual, for enabling the airband)

Date: 03-03-2002

User comment

From: [Marian](#)

Subject: back to extended mod

To return to extended mod without restarting the radio just type #ABC. I try this on DJ-580E.

19-07-1998

(DJ-580) DJ-580T 800 MHz software mod

Here's a neat keyboard mod which will allow the Alinco DJ680T to receive in the 800 band:

This mod requires you to already have performed the AM Aircraft/Expanded RX mod described in the owners manual (cut the red wire and reset the radio).

Having done that, place your radio in VFO mode on the UHF band. Hold down the [Function] button then repeatedly press the [UHF] button until you see a number in the display like 875.00. You can now tune from 810.00 to 998.9875 in .0025 steps!

Also, having done this, while in VFO mode on either band if you hold the [Function] button and repeatedly press the respective [VHF] or [UHF] key you will toggle between your standard VFO and the expanded RX VFO. Neat!

73's de Lee n8vyh @ wb8h. #semi.mi.usa.na

19-07-1998**(DJ-590) Alinco tone DTMP manual for DJ-590****6 SPECIELLE FUNKTIONER****6.1 Tonekald (option)**

Denne option giver Dem og Deres modpart, med tilsvarende udstyr, mulighed, at tale sammen. Dem der ikke har denne option kan ikke vil ikke blive berørt af opkaldet. Parterne (hhv. udstyret) genkender hinanden ved hjælp af tonekaldfrekvensen. Bedere, det er deres DE-590E der erkender, at De bliver kaldt af en partner der har sættet et aftalt tonekald foran udsendingen. Ved udsendinger uden genkendings-signalet bliver modtageren tavse. Så som sige, er De selektiv QRV Basissen for denne mulighed danner 38 valgfrie tonekaldfrekvenser, samt en squelch der reagerer på kun een af disse frekvenser.

6.1.1 Modulationsarter for tonekaldet**A. Tonekald AUS ingen markering**

Det er radioens normale virkemåde.

B. Tonekald EIN kun sending, markering "ENC"

Der sendes kun den valgte tonekaldfrekvens. Dvs. udsendingen startes hver gang tonekaldfrekvensen (bliver i nogle lande brugt at køre via repeater).

C. Tonekald EIN sending + modtagning, markering "ENC DEC"

Den valgte tonekaldfrekvens bliver sendt og genkendt ved modtagningen. Modtageren bliver så længe tavse indtil der dedekteres et signal der startes med tonekaldfrekvensen. Frekvensen åbner så tonekaldens squelchen.

TIP:

Tonekald kræver en modstation med samme indretning.

6.1.2 Valg af tonekaldfrekvens samt modulationsart CTCSS

1. I Vfo-mode trykkes tasten CTCSS. Derpå vil der fremkomme markeringen "ENC" og på displayet afbilledes tonekaldfrekvensen.

2. Vælg den ønskede tonekaldfrekvens v.hj. af tuningen eller tasterne UP/DOWN. Se også tabellen.

3a. Ønsker De at aktivere tonekaldet for kun at sende, trykkes kortvarig på PTT-tasten. Radioen vender tilbage i vfo-mode med "ENC" i displayet og apparatet er klar til at sende.

4a. For at slå tonekaldet for udsendingen atter fra, trykkes tre gange CTCSS-tasten. Herefter er der ingen markeringen for tonekaldet.

3b. Hvis De, i modsætning til før, ønsker at aktivere tonekaldet for både, sending og modtagning gennemføres trinene 1 og 2 påny samt at CTCC-tasten trykkes for anden gang. Radioen så vender tilbage til vfo-mode og viser "ENC DEC" som bekræftigelse.

4b. For at slukke atter for både udsendingens og modtagningens tonekald, trykker De atter Tasten CTCSS. Bagefter ses der ingen markeringen for tonekaldet.

Hz	Hz	Hz	Hz	Hz	Hz
67.0	85.4	107.2	131.8	162.2	203.5
71.9	88.5	110.9	136.5	167.9	210.7
74.4	91.5	114.8	141.3	173.8	218.1
77.0	94.8	118.8	146.2	179.9	225.7
79.7	97.4	123.0	151.4	186.2	233.6
82.5	100.0	127.3	156.7	192.8	241.8
	103.5				250.3

6.2 DTMF-MODULET SAMT MIKROFONEN TIL FJERNBETJENINGEN (OPTION)

Forkortningen DTMF står for Dual Tone Multi Frequency. Her drejer det sig om en metode at vælge, der bliver brugt i moderne tryknaptelefoner. I Danmark ville det hedde FFM (flerefrekvensmetoden). I Tyskland hedder metoden forkortet også MFV (Mehrfrequenz-Wahlverfahren).

DTMF-modulet og mikrofon med fjernbetjening er en forudsætning for gensidig virkemåde.

I DTMF-moduldet forfindes følgende funktioner:

- Fjernbetjeningen af radioen via mikrofonen.
- Opkald med kode med tilhørende squelch.
- Automatisk opkald (phone patch).

6.2.1 Mikrofon med fjernbetjening (option)

1 og 2 Tasterne UP/DOWN

Med disse taster indstilles frekvenser i vfo-mode og i relais-mode kanalerne..

I kanalmode bliver kanalerne udvalgt, når man har trykket F-tasten forinden.

Efter aktivering af funktionerne indstilles herved step (kanalraster), repeaterspacing, samt tonekaldfrekvenserne (option). Se også de tilsvarende afsnitte.

3 Tast PTT

Så længe denne tast trykkes er senderen samt mikrofonen aktiveret. Efter frigivelsen er det atter modtageren, der er aktiv.

4 Mikrofon

Der tales til mikrofonen fra omtrend 12 cm afstand.

5 Funktionstasterne

Detailerede forklaringer findes i de tilsvarende afsnitte.

Anvendes disse taster til input af tegn arbejder tastaturet i DTMF-mode.

Tasternes toner i tabelform:

overtone Hz	1.209	1.336	1.447	1.633
undertone Hz				
697	1	2	3	A
770	4	5	6	B
852	7	8	9	C
941	*	0	#	D

Attention:

tallene 1.209, 1.336, 1.447, 1.633, skal hedde:
1209, 1336, 1447, 1633!!!

6 Lock

Denne skydekontakt låser alle funktionstaster undtagen PTT-tasten.

7 Funktions-mode / Data-mode

REMOTE / DTFM

I stillingen REMOTE er de 16 taster aktiveret for udvælgelsen af funktionerne.

I stillingen DTFM kan de på tastaturet angivende tegn blive sendt i DTMF-mode.

6.2.2

* De funktioner der kan vælges fra mikrofonen aktiveres med trecifret kode.

* Hvis der vælges vfo-mode kan man væælge frekvenserne direkte via tastaturet.

Overblik over de valgbare funktioner

Tastekom- bination	Tilsvarende funktionstaste	Funktion
C00	Cancel	Fortryde programmering
C01	VFO	Sætte vfo-mode til
C02	MR	Sætte kanal-mode til
C03	---	Ikke brugt
C04	ARM	Sættes til repeater-mode
C05	VHF	VHF vælges som det primære bånd
C06	UHF	UHF vælges som det primære bånd
C07	H/M/L	Udgangseffekt vælges
C08	MHz UP	VFO: Frekvensskift med 1MHz op Kanal: Plus 1 kanal

C09	MHz DOWN	VFO: Frekvensskift med 1MHz ned Kanal: Minus 1 kanal
C10	---	Input i koderegister
C11	---	Udvælgelse af koderegisteren til sendingen
C12	---	Udvælgelse af mode til opkald med kode
C13	---	Input i register
C14	---	Aktivering af register til sending
C15	---	Sende indholdet af register

6.3 OPKALD MED KODE OG KODE-SQUELCHEN

6.3.1. Almene oplysninger

DR 590 råder med denne yderst fleksibel option over en funktion, der giver Dem en række selektive kommunikationsmuligheder. Funktionen kan udføres både i vfo- og kanal-mode, så som på de to bånd.

Hvis alarmfunktionen [BELL] er aktiv, meldes en gyldig kode også på akkustisk vis.

De fire mode at kalde med kode:

A.

Gruppekald, "G D.SQ": Selektiv kommunikation med medlemmer, af en gruppe, der anvender den samme gruppekode.

Hos alle gruppemedlemmer åbnes kode-squelchen gennem gruppekoden

B.

Selektivt kald indenfor gruppen, "PG D.SQ": Selektivt kommunikation mellem to medlemme af en gruppe.

Kun ved een udvalgt gruppemedlem åbnes tonekaldens squelch gennem kombinationen gruppekode/højste placeringen/individuel kode.

C.

Individuel kald, "P D.SQ": Individuelle kommunikation mellem to enkel personer.

Ved kun een speciel partner, hvor den individuel kode stemmer overens med den sendte får åbnet tonekaldens squelch.

6.3.2 Kodekaldregisteren og kode

DTFM-modulet stiller Dem for hver bånd fire fælles kodekaldregister med tre decimaler, desuden per bånd en femte koderegister for de nævnte modes til rådighed. Disse er i det følgende organiseret:

Registerno.	Indhold	Antal register
0	Eigen individuel- kode	-
1 - 3	Gruppekode	3 fælles

I registerne mellem 0 og 4 lagres brugerkoden for enkelte personer. Herved står i register 0 altid Deres egen kode, under hvilken De kan kaldes med individualkaldet. I register 4 står koden til den person, som De agter at nå med koden.

I registerne 1 til 3 kan der lagres koden for 3 forskellige grupper.

Coden

Den rigtige lagrede kode kan sammensatte sig på følgende måde:

- af cifrene 0 til 9
- af bogstaverne A til D og
- af sææærtegnene * og #

Særtegn

Ved en kodekalds udsending vil kodens enkelte dele (f. eks. gruppe- og individualkoder) automatisk blive adskilt gennem særtegnet "*".

SOM ADSKILLESTEGEN FREMKOMMER DETTE PÅ INGEN DISPLAY .

Indgives * som gyldtig tegn i en register, fremkommer det i displayet som "H".

Særtegnet # fremkommer i displayet som "H" .Dens særfunktion vil blive omtalt senere. Se under 6-3-7 vildcard.

Bogstaverne A, B, C og D fremkommer på displayet som A, b, C og d.

6.3.3 Arbejds måden af modes

A. Gruppekald "G D.SQ"

I denne mode består den sendte kodekombination af ialt 7 tegn.

Disse er:

1. Den trecifrede gruppekode,
2. Skilletegnet * og
3. Den egne trecifrede individualkode

Fastslås ved den kaldte station en overensstemmelse med de i udsendelsen indholdte gruppekodes og de egne registerne 1 til 3, åbner squelchen sig. Desuden indstilles automatisk gruppekald-mode - altså G D.SQ -, hvis denne er ikke indstiller på forhånd. Radioen er således parate, at sende i denne mode den tilsvarende kodekombination.

B. Udvælgeseskald indenfor en gruppe "PG D.SQ"

I denne mode består den sendte kode af ialt seks tegn.

Det er følgende:

1. Den trecifrede gruppekode

2. Individualkodens venstre tegn af den kaldte station
3. Skilletegnet "*" og
4. Individualkodens venstre tegn af den kaldende station.

Fastslås ved den kaldte station en overensstemmelse med de i udsendelsen indholdte gruppekodes og de egne registre 1 til 3, og de under 2. nævnte tegn og med den egne individualkode på venstre side, åbner squelchen sig. Desuden indstilles automatisk gruppekald-mode - altså PG D.SQ -, hvis denne er ikke indstiller på forhånd. Radioen er således parate, at sende i denne mode den tilsvarende kodekombination.

C. Individualkald "P D.SQ"

I denne mode består den sendte kode af ialt 7 tegn.
Det er følgende:

1. Den trecifrede individualkode af den kaldte station,
2. Skilletegnet "*" og
3. Den egne trecifrede individualkode.

Fastslås ved den kaldte stations udsendelse en overensstemmelse de i udsendelsen indholdte under 1. nævnt individualkode og med den egne, åbner squelchen sig. Desuden indstilles automatisk gruppekald-mode - altså P D.SQ -, hvis denne er ikke indstiller på forhånd. Radioen er således parate, at sende i denne mode den tilsvarende kodekombination.

D. Codekald-squelch "D.SQ"

Herved benytter De i en forenkelt form kodekald-squelchens egenskab, at åbne sig kun ved overensstemmende kode. Virkemåden ligner dem fra tonekaldet.

I denne mode består den sendte kodekombination kun af en af 3 tegn af de register 1 til 3 (ellers brugt for gruppekoden)

Fastslås ved den kaldte station en overensstemmelse med de i udsendelsen indholdte gruppekodes og de egne registre 1 til 3, åbner squelchen sig. Radioen er således parate, at sende i denne mode den tilsvarende kodekombination

6.3.4 Indtastningen i koderegisteren

1. De skifter over i vfo- mode og udvælger med tastekombinatione C10 registerne. Som bekræftigelse begynder displayet at blinke.
2. De vælger med cifrene 0 - 4 den ønskede register ud. Som bekræftigelse blinker numret af den valgte register på venstre side og på den højre blinkende den indtilnuværende indholds højste decimal (bogstave, tegn).
3. Nu kan De denne registers højste programere påny vi indtastningen af det nye tegn. Som bekræftigelse rykker det tastede tegnet led til venstre, og koderegisterens næste bogstave/tegn kommer frem blinkende. Tast efterhinanden det anden og tredje ønskede tegn ind.
4. Efter indtastningen af det sidste tegn skifter radionen atter i vfo-mode.

TIPS

Hvis De allerede har valgt en register kan De ved hjælp af tuningknappen (Dial) omgående indstille hver bogstave/tegn.

Hvis De ønsker at afbryde en registers programmering, trykkes en hvilken som helst tast på radioen.

Skilletegn "*" "

Forsigtighed ved brug af skilletegne!

HVIS STJERNEN UNDER EGEN INDIVIDUALCODE - ALTSÅ REGISTER 0 STÅR I DET HØJSTE (VENSTRE) LED KAN MODEN UDVÆLGESELSKAL IKKE BLIVE GENNEMFØRT.

6.3.5 Udvalgelsen af modes

Ved kodekald kan De vælge mellem fire modes:

- D.SQ kun kodekald-squelchen er sat til
- P D.SQ individualkaldet er sat til
- D D.SQ gruppekald er sat til
- P G D.SQ udvalgskald indenfor en gruppe er sat til

Mode ON

1. Indgiv tastekombinationen C12. Som bekræftigelse fremkommer de blinkende tegn "D.SQ"
2. Med tasterne MHz UP/DOWN på grejet udvælger De den ønskede mode. Også tastekombinationen C08/C09 kan bruges. De tilsvarende tegn blinker stadigvæk. Efterhinden fremkommer de tre modes.
3. Når den ønskede mode er valgt, bliver denne gennem PTT-tasten eller tastekombinationen C07 aktiveret. Samtidig vender radioen tilbage til udgangsstillingen.

Mode OFF

1. C12 indtastes
2. Med MHz UP/DOWN (eller C08/C09) at taste så længe indtil ingen tegn vises mere.
3. Brug FUNC, PTT eller C07

6.3.6 Coderegisternes udvalg til sending

I individualkaldmode bliver register 4 altid automatisk kaldt, ergo behøves den ikke vælges.

Ved gruppekald og udvælgelseskald de kun vælge register 1, 2 eller 3, de resterende udvælgelseskalde indstillinger foregår automatisk, afhængig af den tilsvarende mode.

Deres fremgangsmåde:

1. C11 taster
2. med MHz UP/DOWN (eller C08/C09) indstilles den ønskede register og

3. F-tasterne eller tastekombinationen C07 bruges.

Nu er grejet til udsendelsen af den ønskede kode forberedt.

6.3.7 Funtion wildcard

Denne funktion hjælper Dem at dechifrere koden af en modtagende udsendelse. I mange situation kan det være yderst nyttig.

Således f. eks. når De har, uanset årsag , glemt at lagre gruppekoden plus At skulle har glemt samme.

I den slags tilfælde anvende De bedst på alle tre gruppekoderegisters led - bedst i register 1 - særtegnet "#". Den erstatter de valgte pladser - så at sige som pladshoder alle anre mulige cifre/bogstaver og særtegn. I displayet fremstilles dette som "H".

de skifter over i en af de modes "G D.SQ" eller "P D.SQ" Når De nu modtager en gruppe- eller udvægelseskald omstiller De radionen i første ombæring til den rigtige mode og lagrer desuden den modtagende gruppekode i register 1. Muligvis er det den de har glemt. I andre tilfæde må De prøve påny.

Når det drejer sig en om en glemt individualkode vælger De den samme fremgangsmåde, me bruger blot register 4 istedet for.

Advarsel:

De skal undlade at anvende to forskellige registertyper samtidig - f.eks. 1 og 4 - til wildcard. Disse register bliver aflæst i rækkefølgen 0 til 4. En modtaget individualkode bliver således tydet som gruppekode og lagt i register 1. Således skifter radioen i mode "G D.SQ" i stedet for "P D.SQ".

This modification is read 698 times.

[top of page](#)

19-07-1998

(DJ-590) Fix to DJ-590 crossband repeat

Many of you have reported a problem with the 590 keying up automatically in crossband repeat.

In general, Crossband repeaters aren't 100% duty cycle machines. They are a convenient way to perform a crossband transmission. If any crossband radio is used for an extended period of time, it will get hot and be subjected to a possible failure.

Problem:

The crossband repeat function may lock up in transmit during use.

Explanation:

The Alinco 590 has a temperature sensitive squelch. This is by design and has been removed from the new DR599 mobile. As the radio gets increasingly more use, it can become warm and then hot and then the squelch window begins to decay. When squelch finally opens up, the radio interprets it as a transmission and then locks up.

Correction:

Alinco will make available some components (caps) that will alleviate the problem. Contact them at 213-618-8616 for more details. If you wish , they will perform the fix.

Suggestion:

Send your radio back to ALINCO and state that you would like their free upgrade. This consists of new caps (1 for the head and 1 for the main unit), caps for crossband audio correction and caps for temperature sensitive squelch.

All components are in stock.

Jay Appell (KA1SNA)

This modification is read 749 times.

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01-11-2001

(DJ-595) Modification DJ-195T and DJ595T for extended TX .

1. Remove Battery
2. Place HT facedown on Soft Surface
3. Remove Black Plastic cover plate (Located at lower right corner of back of HT)
4. Locate Blue wire (Directly under cover plate)
5. Clip Blue Wire and insulate the ends to prevent shorting.
6. Re-attach battery
7. Hold down [F] key & power on.

Your HT is now capable of Transmitting out of Freq.

REMINDER: It is Illegal to transmit out of Frequency with out MARS/CAP PERMIT

This modification is read 609 times.

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23-12-2001

(DJ-596) Modification DJ-195T and DJ595T/DJ596T for extended TX .

1. Remove Battery
2. Place HT facedown on Soft Surface
3. Remove Black Plastic cover plate (Located at lower right corner of back of HT)
4. Locate Blue wire (Directly under cover plate)
5. Clip Blue Wire and insulate the ends to prevent shorting.
6. Re-attach battery
7. Hold down [F] key & power on.

Your HT is now capable of Transmitting out of Freq.

REMINDER: It is Illegal to transmit out of Frequency with out MARS/CAP PERMIT

Date: 09-01-2002

User comment

From: [Mike Hughes, N9GI](#)

Subject: Alinco DJ596 Mod??

How about an extended receive mod for the DJ596?

Mike Hughes
211 Woodland Drive
Lowell, IN 46356

Date: 16-02-2002

User comment

From: anonymous

Subject: TX/RX range

What is the TX/RX range after the modification?

This modification is read 928 times.

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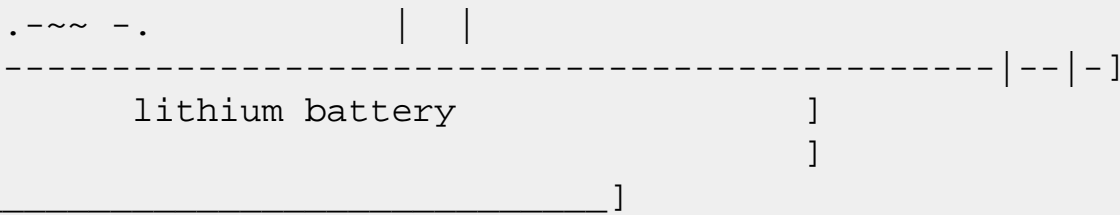
28-03-1999

(DJ-C1) DJ-C1 expanded coverage

Carefully remove the rear case.

CUT THE BLUE WIRE loop directly above the Lithium-ion battery.

Reset the microprocessor (Press and hold [VM] and [FUNCTION] buttons and turn on the radio (all memories will be lost)) New ranges: rx 118-174 tx/rx 136-173.995.



This modification is read 599 times.

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27-02-2000

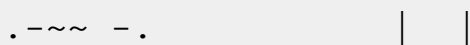
(DJ-C4) Alinco DJ-C4 wideband RX/TX mod

Carefully remove the rear case.

CUT THE RED WIRE loop directly above the Lithium-ion battery.

Reset the microprocessor (Press and hold [VM] and [FUNCTION] buttons and turn on the radio (all memories will be lost))

New ranges: rx 380-470 tx/rx 420-473.995.



----- | -- | -]
lithium battery]
]]
_____]

This modification is read 570 times.

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13-06-1999

(DJ-C5) Alinco DJ-C5 MARS/CAP Mods

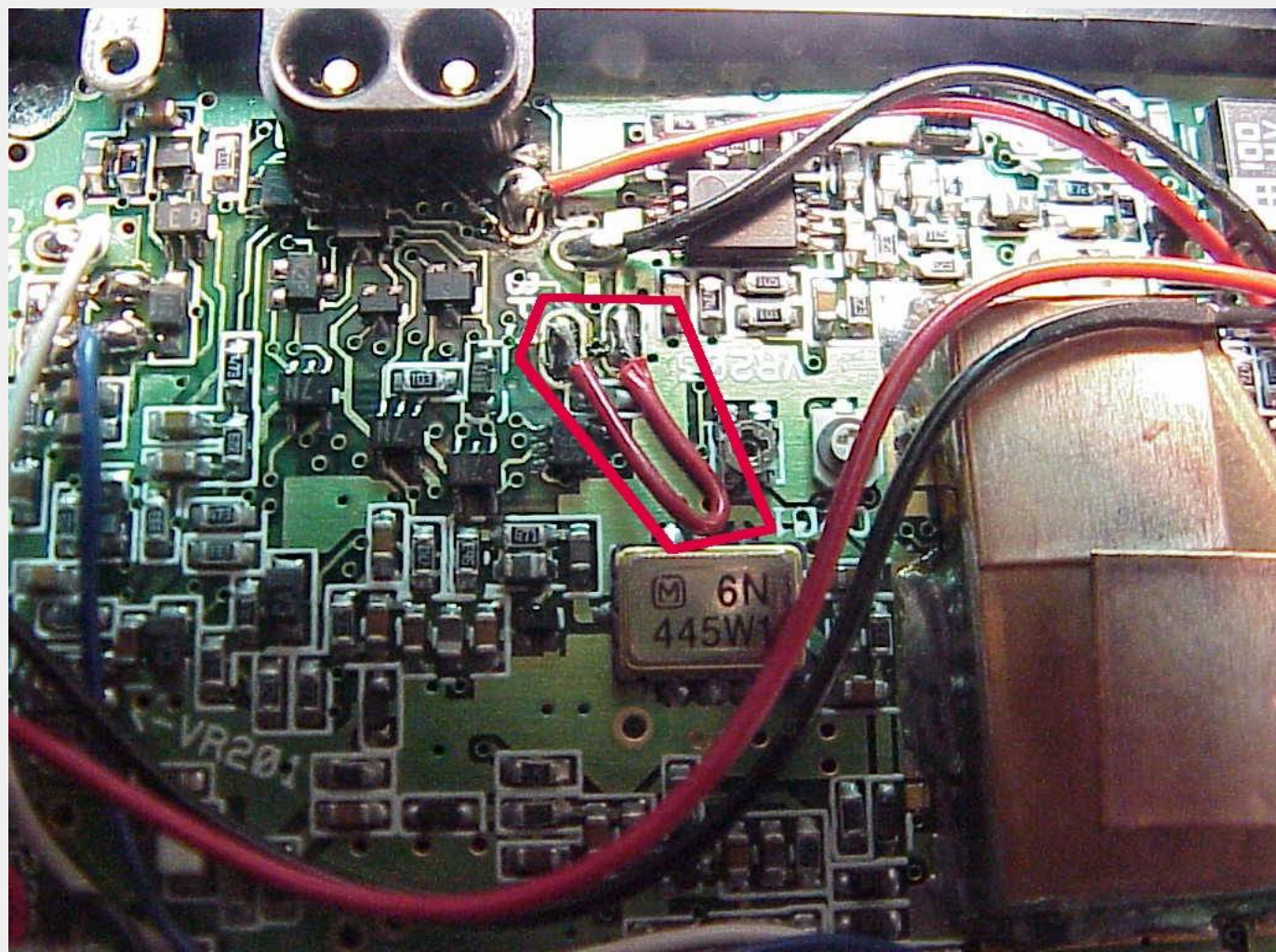
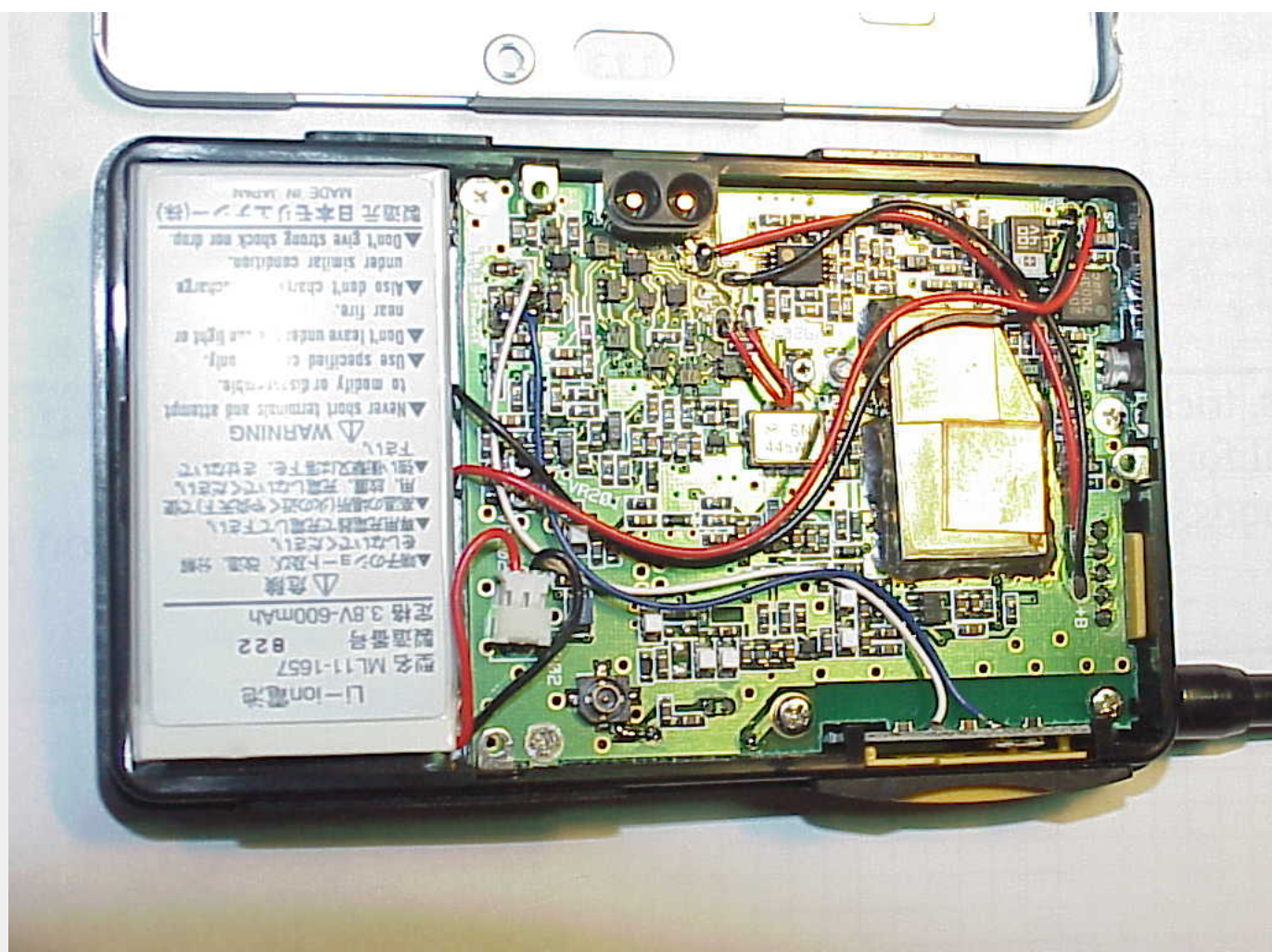
WARNING: PERFORMING THIS MOD MAY VOID ANY AND ALL WARRANTIES

1. Remove the three case screws on the rear of the DJ-C5T.
2. Carefully remove the rear case to expose the main circuit board.
3. Locate and cut the RED wire loop towards the middle of the circuit board.
The red wire is a loop about 5/8" long located about 1/2" from the charging jack in the 2:00 position.
4. Reassemble the radio.
5. Reset the CPU (press the FUNC key and the MW key while turning the radio on).

New frequency range = RX 118.000 ~ 135.995 AM Aircraft
 TX/RX 136.000 ~ 173.995 NFM
 TX/RX 380.000 ~ 472.995 NFM

Gruß DCOEO
Peter aus Duisburg

Thanks to WD9HIK for the picture.



This modification is read 1073 times.

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30-01-2000

(DJ-G1) General coverage for Alinco DJ-G1

Put radio in tx KL mode, push and hold the func key, then you pres v/m (v/m-m/v) + call (call/band) + A (pri) the display shows open or close.

Same prosedyre to open and close the radio.

It transmit from 130-173 MHz.

This modification is read 562 times.

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19-07-1998

(DJ-G5) Alinco DJ-G5T extended TX

To extend the TX (RX is already extended) do the following:

1. Remove the 4 screws that hold the back cover of the unit on.
2. CAREFULLY pry the case apart (It's helps to remove the VFO/Mem/etc knob first)
3. On the FRONT portion (DTMF Pad) of the case, in the upper right-hand corner you will see a BLUE wire. Cut that carefully.
4. Reassemble the unit.
5. While holding the FUNC key, press POWER to reset the unit.
6. Viola! You know have extended TX!

Hope this helps all DJ-5GT users.

Sincerely,
Kevin Bednar
KB2YPU

This modification is read 1826 times.

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09-11-1999

(DJ-G5) Extended RX/TX for DJ-G5E

Author: Sean (G0NVJ) - gatsby@dircon.co.uk.MODIFICATION.NET

Extending the receive range.

To extend the receive range to AM/FM 108-173.995mhz, 400-511.995mhz and 800-999.990mhz there is a simple keypad sequence as follows.

- Press and hold the function button on the side and press the FL button twice
- This puts the frequency lock on. Then whilst pressing the function button press #212, The display should then read "OPEN".
- Then remove the frequency lock by pressing function and FL together.

Extending The Transmit range.

The radio can be made able to transmit between 130-174mhz and 400-512mhz (if it cant already after the above mod) by removing the back and cutting the blue loop of wire near the speaker socket and resetting the radio.

I have since found out that this mod does not appear to work for the DJ-G5T

This modification is read 1811 times.

[top of page](#)

09-12-2000

(DJ-G5) Open and reset the Alinco DJ-G5E radio

Author: Kevin Bednar - bednark@garden.net.MODIFICATION.NET

As in dg-g5T you can open your radio as described:

1. Remove the 4 screws that hold the back cover of the unit on.
2. CAREFULLY pry the case apart (It's helps to remove the VFO/Mem/etc knob first)
3. On the FRONT portion (DTMF Pad) of the case, in the upper right-hand corner you will see a BLUE wire. Cut that carefully.
4. Reassemble the unit.
5. While holding the FUNC key, press POWER to reset the unit.

09-12-2000

(DJ-G5) Extended TX/RX for the Alinco DJ-G5E (European Model)

Author: Joao Seabra - CT2GNL - seabra@aac.uc.pt. MODIFICATION.NET

In the DJ-G5E you can extend TX/RX just by doing this (you don't have to open the radio):

- a. Keylock your radio (Func 0)
- b. Press Func #212

It will appear on the screen:

Open

Now you have:

VHF

RX: 108Mhz - 174Mhz

TX: 130Mhz - 174Mhz

UHF

RX: 400Mhz - 512Mhz

TX: 400Mhz - 512Mhz

On the right VFO

RX: 800Mhz - 1000Mhz

In VHF or UHF you can receive in AM just by pressing Func 6

To close te radio use the same procedure:

- a. Keylock your radio (Func 0)
- b. Press Func #212

it will appear on the screen:

Closed

09-12-2000

(DJ-G5) Channel mode for the Alinco DJ-G5E (European Model)

Author: Joao Seabra - CT2GNL - seabra@aac.uc.pt.MODIFICATION.NET

You can put your radio in channel mode:

- a. Keylock your radio (Func 0)
- b. Press Func #986

It will appear on the screen Ch 1

This channel is M1.

If you have M100 then you will have 100 channels

To put the radio in "normal" mode just press:

Func *284

This modification is read 1406 times.

[top of page](#)

09-12-2000

(DJ-G5) Unknown mod for the Alinco DJ-G5E (European Model)

Author: Joao Seabra - CT2GNL - seabra@aac.uc.pt.MODIFICATION.NET

I dont know what this is, maybe a weird serial number...

- a. Keylock your radio (Func 0)
- b. Press Func #355

On my screen appears this number:

0362

It seems there is no way of changing it just by turning the knob or pressing the keypad.

This modification is read 1441 times.

[top of page](#)

28-07-2001

(DJ-G5) Battery replacement for DJ-G5 and maybe other

Author: MW1DNY

Replacing dud batteries is easy and not so expensive as buying new ones.

Just put the battery pack in your domestic freezer for a couple of hours then you can prise it open easily with a knife.

Unsolder red and black wires replace dead cells with four tagged AA solder tagged cells soldered in series.

Resolder black and red wires (take care to observe polarity). Reinsert in battery case, glue with a spot of super glue in each corner then lightly clamp in a vice until glue is set.

Remove surplus glue from join. **Do not use NMH batteries. Only use NICADS.**

I carried out this mod twice in last 3 years and it works ok.

Cost of new Alinco battery pack £40 in UK, this mod will no more than £5. I don't know if this will work with other makes of battery packs it's worth trying.

73s MW1DNY.

This modification is read 1560 times.

[top of page](#)

16-12-2001

(DJ-G5) Backup from the Alinco DJ-G5

Author: Jan-Willem W. - Etherpiraatje@home.nl. MODIFICATION.NET

You can make a backup from your Alinco DJ-G5 with your PC and a 70cm transmitter receiver.

You must first connect a audiocable from your 70cm transmitter/receiver to your PC. One Jack plug push into your 70cm transmitter/receiver and the other Jack plug into your soundcard "line-in". Then you go and calibrate your audiosignal not to LOUD that's very bad. Startup a Recording program that can record about 15min.

Switch your Alinco DJ-G5 on and search a LPD frequencies 433.925 and switch your Alinco off. Then you hold down the "5" or the "M->V" button and switch your DJ-G5 on. In the display can you read it Clone and the frequencies 433.925. Start the record on your pc and push now the PTT button on your Alinco DJG5.

Now we make then clone to your PC.

When you want the backup load into your Alinco DJ-G5:

Start a player on your pc, Open the file search a LPD frequencies on your 70cm Transmitter/reciever. Lock the mike, and lay down this in the front of your PC speaker, the Alinco must in the clone stand on the same frequencies. Play your backup file on your pc but not to LOUD.

In the display your can read the frequencies and "LOAD" and that says that the file is succesfull transfered to the radio.

It's Works very good,

I have 1 time reset my Alinco with all the frequenties since that date i'm thinking how can i make a Backup i read some in the manual the clone stand.

Greatings from Jan-Willem Nederland

Date: 12-01-2002

User comment

From: [ok1lba](#)

Subject: Alinco dj-g5 making backup and editing frequencies.

Hello, i wrote a programm to make a backup from your alinco djg5. it converts the dtmf from microphone to a binary file. You can after that modify the data and send back via cable (i2c) or an other transciever.

Have you any questions or comments. so please send me an email.

If are you interested in the program send me a mail. its for free.

allamat296@volny.cz

Thanks

This modification is read 1005 times.

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19-07-1998

(DJ-S11) Expanded RX / TX mod for Alinco DJ-S11

This modofication is very much like the one described by KB1MZ for the DJ-S41. I like to thank him for initial modification.

Performing this modification will void any warranties. All standard disclaimers apply. This mod is for the DJ-S11T.

1. Place the radio face down on a soft towel. This avoids scratching the display and gives you a place to put the seven tiny screws to be removed.
2. Remove the batteries. You will lose all of the memory contents.
3. Remove the three screws on the upper rear cover, and the four screws inside the battery compartment. The rear cover can be lifted and removed easily, as there are no wires to be concerned about. The antenna connection is made by means of a gold-plated spring contact.
4. Look for a small (about 1 mm) green surface mount resistor (actually a 0 ohm jumper), located on the far left side of the exposed circuit board, located to the "northwest" of the speaker. There is a marking in white letters, OP/CL, this resistor is located near by. It is the only green component visible on the board. (This radio does not have the traditional Alinco red and blue wires which have become so familiar...)

5. Carefully remove this resistor, using a small tip soldering iron, tweezers and a steady hand. The thin board can be easily damaged by a high wattage soldering iron.
6. Re-assemble the radio, being careful that the thin rubber gasket is seated around the inside edge of the rear cover. Replace the batteries, press and hold the "F" button on the left side of the radio, and turn it on. The display should show all segments and markings. Release the "F" button and the radio will now be capable of operating from approximately 136.000 MHz to above 173.995 MHz, depending on the VCO's tuning. The display will blink if the VCO is taken out of its range. Re-tweaking of the VCO is not recommended.

THE NOT-SO-FINE PRINT:

7. Although reception on the expanded frequencies is legal, transmission is not. This unit is not FCC type-accepted for anything but ham band (144 - 147.995 MHz) operation.

Again thanks to KB1MZ for his nice writeup.

73's de KG7HQ; Michael

This modification is read 945 times.

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19-07-1998

(DJ-S41) Expanded RX / TX mod for Alinco DJ-S41

Performing this modification will void any warranties. All standard disclaimers apply. This mod is for the DJ-S41T, and not the DJ-S41(C) 10 mW version.

1. Place the radio face down on a soft towel. This avoids scratching the display and gives you a place to put the seven tiny screws to be removed.
2. Remove the batteries.
3. Remove the three screws on the upper rear cover, and the four screws inside the battery compartment. The rear cover can be lifted and removed easily, as there are no wires to be concerned about. The antenna connection is made by means of a gold-plated spring contact.
4. Look for a small (about 1 mm) green surface mount resistor (actually a 0 ohm jumper), located on the far left side of the exposed circuit board, located to the "northwest" of the speaker. There is a marking in white letters, OP/CL, this resistor is over the top of the "P". It is the only green component visible on the board. (This radio does not have the traditional Alinco red and blue wires which have become so familiar...)
5. Carefully remove this resistor, using a small tip soldering iron, tweezers and a steady hand.
6. Re-assemble the radio, being careful that the thin rubber gasket is seated around the inside edge of the rear cover. Replace the batteries, press and hold the "F" button on the left side of the radio, and turn it on. The display should show all segments and markings. Release the "F" button and the radio will now be capable of operating from approximately 425 MHz to above 470 MHz, depending on the VCO's tuning. The display will blink if the VCO is taken out of its range. Re-tweaking of the VCO is not recommended.

THE NOT-SO-FINE PRINT:

7. Although reception on the expanded frequencies is legal, transmission is not. This unit is not FCC type-accepted for anything but ham band (425 - 440.995 MHz) operation.

KB1MZ 28-May-1997

This modification is read 1842 times.

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01-11-1998

(DJ-S41) Ekstra funktioner for DJ-S41T

1. Monitor (L).knappen.

Pres denne kontakt for at udløse squelch, og lydt signalet.

Ved at presse **F** og derefter **L** låses radioen i den indstilling der nu ønskes, den samme fremgangsmåde når der skal låses op igen.

2. Funktion (F) knappen.

Pres og hold denne kontakt og en anden for at aktivere de sekundære funktioner. Pres og gentag **F** det hurtigt efter hinanden og frekvens (MHz) blinker nu i displayet, og med **UP** og **DOWN** kan der ændres frekvens hurtigt. **RESET** (tryk på **F**-knappen og hold den inde mens der tændes for stationen).

3. V/M/MW knappen.

Skifter mellem VFO og Memory kanaler. For at programmere en memory kanal, pres og hold **F** og tryk **UP** eller **DOWN** og vælg en memory kanal nr., tryk igen på **V/M/MW** igen for at gemme den i displayet valgte frekvens (incl. spacing og tone encoder) til denne kanal, der er fra 0-19 memory kanaler.

4. DOWN/tone.

Trykkes for at ændre frekvens/kanal ned. Pres **F** og derefter TONE for at ændre CTCSS encoderen, tryk igen **F** og **TONE**. og et T vil vise sig i displayet, T indikere at der er encoder ON, pres **PTT** for at komme tilbage til normal brug. (Der er, og kan ikke indbygges en CTCSS Unit), altså virker CTCSS toner kun på sendesiden.

5. Lyd(Beep).

Ved sending kan såkaldt ApolloBeep slås fra ved at slukke stationen, trykke på **DOWN** og holdt den nede mens der tændes for stationen, og kan ændres tilbage igen ved samme proces blot trykkes **UP** knappen nede.

6. UP/DOWN.

Pres **UP** el. **DOWN** knappen sammen med **PTT** for at transmittere en 1750 Hz tone, der kan vælges enten en 1750 Hz tone eller telefonringetone, dette kan ændres ved at slukke helt, og derefter holde **CALL/BELL** knappen nede mens der tændes igen, og der vil enten stå C eller b i displayet, alt efter hvad det iforvejen var valgt.

C = ringetone (telefonlyd) i højtaleren.

b = 1750 Hz opkaldstone. Tryk **PTT** og **Down** tasterne nede hvis repeater vil kaldes.

VFO scanning kan startes ved tryk på enten UP/DOWN knappen.

7. UP/step.

Pres denne knap for at ændre frekvens eller kanal opad. Pres **F**-knap og **STEP** for at ændre kHz step, med 5/10/12,5/15/20/25/ kHz.

Pres PTT for at komme ud.

8. LAMP/APO.

Pres denne knap og der er lys i displayet i 5 sek. Hvis der skal være lys i displayet hele tiden slukkes først for stationen, og **LAMP/APO** knappen holdes nede mens der igen tændes for stationen, nu vil der være lys i displayet hele tiden, men det kan dog slukkes ved et tryk på **LAMP/APO** knappen.

APO betyder auto power-off. Tryk på **F** knappen og hold den inde mens **LAMP/APO** trykkes ned og nu kan der med **UP/DOWN** knappen ændres mellem OFF/30/60/90/120 min. inden stationen slukker automatisk, såfremt der ikke har været aktiveret noget på stationen inden for den valgte tid.

9. SCAN/SHIFT.

Tryk denne knap hvis der skal scannes.

Pres **F**-knapen og **SCAN/SHIFT** og nu kan der med **UP/DOWN** ændres spacing. I OZ land er det 1,6 MHz der anvendes, mens du er inde i denne menu skal der også indstilles om det er + eller - spacing, i OZ er det - spacing, og det ændres ved tryk på **SCAN/SHIFT** knappen. Pres **PTT** for at komme ud af denne funktion.

10. CALL/BELL.

Pres denne knap for at skifte mellem operations frekvens eller CALL frekvens eller memory kanaler.

Pres **F**-knapen og tryk på **CALL/BELL** nu vil der i displayet vise sig en klokke som indikere at der vil komme en elektronisk lyd i højtaleren når der kommer en bærebølge på frekvensen.

Alarm kan kobles helt fra ved at slukke stationen, og derefter holde **L** kappen inde og tænde igen samme fremgangsmåde når der igen skal lyde BEEB lyd i taster og alarm skal lyde.

11. Effekt 10Mw/340 mW. (Er ikke oplyst i den Engelske brugervejledning).

Med **PTT** knappen holdt inde trykkes på **SCAN/SHIFT** knappen samtidig, og der vil i displayet stå LOW, så der sendes med kun 10mW (T model 50 mW). Høj effekt er 340 mW. I øvrigt kan C modellen lades med en 5,5 volts lader i DC stikket, men kun hvis du bruger genopladelige celler.

12. REVERSE.

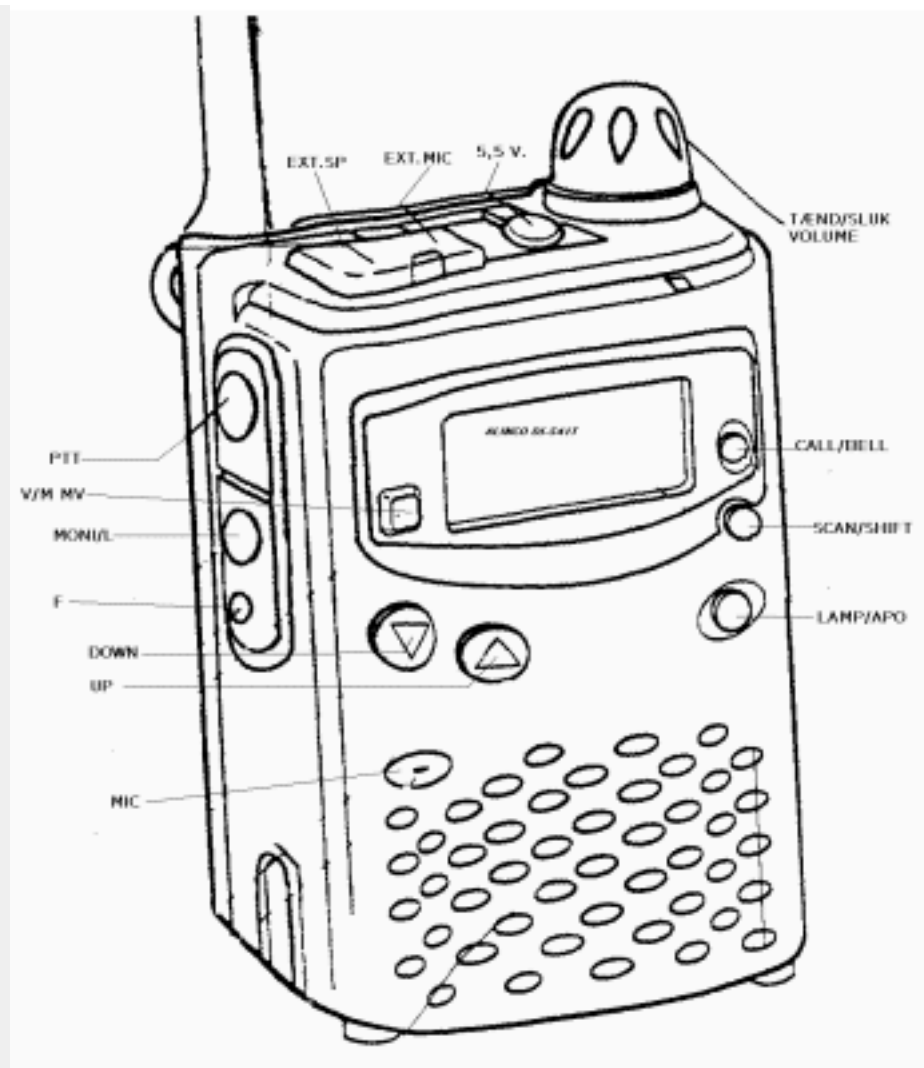
For at kunne se uplink frekvensen,(i displayet) til en repeater tryk på **PTT**. (Se punkt 9).

13. Kanal nr. i displayet.

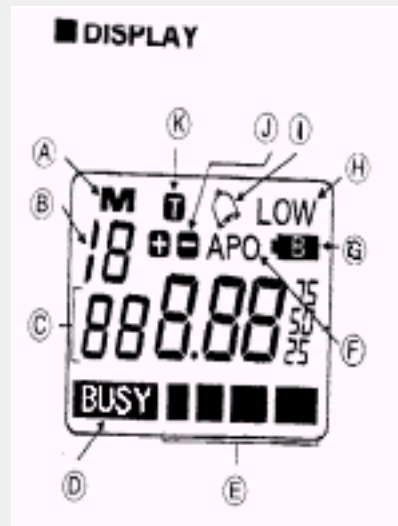
Sluk for stationen og tryk **V/M MV** og hold den nede, mens der igen tændes for stationen, herefter vises der kun kanal nr. i displayet, samme proces gøres for at vende tilbage til normal visning af frekvens.

Hurtig ref. lister

Knap	Pres alene	Pres med F knap	Pres og hold ved Power ON.
F			reset
MONI / L	ophæv squelch	Lås & låsop	beep on/off
PTT	send		
V/M	VFO< >Memory	Memory med	Canal indikation indstilling
UP	frekv/mem op (scan hvis der presses med PTT 1750 Hz tone	Kanal step	stand-by beep ON
DOWN	frekv/mem down (scan hvis der presses med PTT1750 Hz tone	Tone frekv. ændring	stand-by beep OFF
CALL	Call kanal	alarm on/off	1750 Hz tone
SCAN/SHIFT	scan start	offset programmering	
LAMP	lys on/off	Auto Power Off	ændre lys indstilling



Opslagsord	Ref nr.	Display	Sign. i manuel
1750 Hz.	6		
Alarm	10	Klokke vises	I
Batteri low	B	vises	G
BEEP i tastatur	10		
Busy			D
CTCSS	4	T vises	K
Effekt / Ladning	11	Low	H
Effekt meter			E
kHz. Step	7		C
Lyd (Beep)	5		
Lys i display	8		
Memory Ch.	3&10&13		A&B
Opkaldstone	6		
Power-off	8	APO vises	F
Reset	2	Alt vises	A-K
Reverse	12	MHz vises	C
Ringtone	6&10	Klokke (kun 10)	I
Scan	9		
Signal meter			E
Spacing	9	plus eller minus	J
Squelch	1		
Tone	4&6	T vises	



Udarbejdet af OZ5AET Palle Iversen. Kritik modtages men helst i en positiv "tone".

Email palle@iname.com. MODIFICATION.NET

Dette er udsendt efter aftale med Alinco Danmark. ®

Reproduceret af OZ2AEP@OZ9BUL, Erik Hansen i HTML kode. E-mail:

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This modification is read 1251 times.

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12-09-1999

(DJ-S41) Alinco DJ-S41T Reviewed

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§ [Impressions](#) § [Documentation](#) § [Technical](#) § [Accessories](#) § [Rumors and Ideas](#) § [Summary](#)

Impressions

I am enjoying playing with the vest-pocket HT I bought recently (in between playing with the new TNC). This is a **small** radio. Not only will it fit in a shirt pocket, it will fit in a **vest** pocket or sport-jacket outside breast pocket.

I haven't found many repeaters that can hear me over Boston's loud background noise if I'm any distance away, but I can hit the fine NETARC machine from several miles out, so I think the radio is fine. I worked a guy in Hampton Beach NH via NETARC the first night. I have yet to figure out how practical it's going to be for joining the fox-hunt chat on 440 mobile (may need a passive-re-radiator on the window like cellphone users have for 800MHz -- no, I don't want a new dual-band mobile!).



This web page is so big because I think this radio is hamstrung by its user manual, so I've done a longer one than it came with.

Documentation

Vendor Supplied

I've managed to figure out the DJ-S41T with precious little help from the "Manual" (although most of what I figured was there, hidden). What a stupid little "manual", it's all of one sheet, with some space wasted with cyrillic and japanese translations of the half-complete quick reference chart. But it fits in the vest pocket with the radio :-). The [Alinco homepage](#) has a good set of specifications as well as a nice [prospective press release](#) and [first convention splash](#).

[The Interactive Diagram](#)
image cred: [Alinco Home Page](#)

My Documentation

Most controls are labelled "**Button**/Another". "Button" is what it does normally and "Another" (or **F-Another**) is what it does with **F** pressed. The [Modes](#) described under each key are cross-referenced further down.

Volume (On/Off)

Normal single-use volume control with associated power switch, seemingly nothing fancy. Except... if a button is depressed while turning it on, some [mode](#) changes. And [AutoPowerOff](#) can turn it off without touching the volume. *but can you turn it back on without turning it off for real?*

Call/Bell

Call switches from VFO or Memory to Memory-C, the calling channel. You can tell which you're in since the Calling channel when in use from **Call** shows as C in the memory channel number, rather than c.

F-Bell sets the alarm which will indicate if something came in. I think it's supposed to beep, but maybe only if it gets the 1750Hz tone.

On-Call toggles between which of a 1750 tone or a rising "alert" sweep tone will be sent as an outgoing call when **PTT+UP** or **PTT+DOWN** is hit while transmitting.

Scan/Shift

Tapping **Scan** initiates up-scanning (same as holding Up). If in VFO, it will scan the whole band (including outside the FM bandplan). If in Memory, it will scan all 21 memories including c. While scanning, tapping some buttons are ignored, others just stop the scan.

F-Shift enters Offset Programming (or Shift) mode for the current VFO or Memory channel.

Up/Down will let you modify the default 5MHz shift should you need to, but that's unlikely. Tapping **F-Shift** in Shift mode will toggle three-ways between simplex with no shift indicator in the LCD, tx-up showing [+], and tx-down showing [-].

***Note** that if done on a **memory** channel, it will NOT be saved unless the memory channel is re-written from itself before you change off the channel. This may be a feature, it lets you test a change without committing to it.*

On-Scan is not documented as doing anything.

Other Shift-related combinations: **PTT**-Scan/Shift is low power toggle, and **Moni**-Scan/Shift is reverse (input) monitor.

Lamp/APO

Tapping **Lamp** turns the light on for however long it feels like.

F-APO engages auto-power-off mode, which sets (up/down to set, PTT to save) the number of



seconds of non-receive that will elapse before it shuts down.

On-LAMP will [toggle](#) whether the light stays turned on until you tap it off again or goes out on its own.

Down/Tone

Down decrements the frequency by the current increment (step), see under "Up".

F-Tone enters CTCSS Tone Selection mode. Up/Down change the tone; while in tone-select mode, **F-Tone** toggles tone on or off, [T] appears on the LCD when on. PTT to exit.

Held, Down will initiate a scan, like [SCAN](#) only downward.

Modes: In most modes, Up and Down select whatever parameter PTT will save.

PTT+DOWN: Pressing up or down while transmitting with PTT will SEND either a 1750Hz tone or a rising sweep tone (depending on the mode setting) as a call.

On-DOWN turns the "stand-by beep" or courtesy tone off.

Up/Step

The **up** button increments the frequency by the current increment, which is set by **F-Step's** mode, in which Up/Down adjust the step; 25kHz, 50k, 100k as 10, 150k (as 15), 200k (as 20). Note that the displayed step sizes are not intuitive. Traditionally, 25>20 but "20" is the biggest step and "25" is the smallest.

Held, Up will initiate an upward scan, same as **SCAN**, except taking longer.

Modes: In most modes, Up and Down select whatever parameter PTT will save. Tapped during Scan, will stop it on current freq (VFO or memory).

PTT+UP: Pressing up or down while transmitting with PTT will SEND either a 1750 tone or a rising sweep tone as a call.

On-UP turns the "stand-by beep" or courtesy tone On. The unit will can send courtesy tones, possibly useful when simplex or if the repeater doesn't but you want to. Probably rude when on a repeater that has courtesy tones already, as it makes you sound like a linked repeater system.

"V/M"/MW

Toggles between using the single **VFO** and the 21 **Memory** channels.

F-MW starts memory-write mode from the current VFO setting or the current memory slot; use the Up/down buttons to pick which memory to write to (Memory number blinks), and finish with *unshifted* **V/M/MW**. Use **F-MW** while in MW-mode to erase the memory channel selected (blinking). (I guess you could use a **PTT** to cancel MW mode.) Writing from a memory slot to itself is how you save temporary changes (eg adjustments to shift or tone) which would otherwise be reset to their old values if you changed channels and came back.

On-V/M toggles the unit into/out-of the mode used on the non-programmable business band model: fixed channellized by channel number, you only see the channel numbers. Not terribly useful for hams, who ought to know their frequency...

PTT

Push To Talk. Does what you expect most of the time, push it and you talk. It will display the xmit frequency if it's legal, or OFF if it's offset out of band.

PTT exits many of the modes.

PTT enables [SHIFT](#) to toggle LOW power (50mW or +17dBm)/regular (340mW / +24dBm).

There is no documented F-PTT or On-PTT function.

Moni/L

Monitor bypasses the squelch, so you can hear anything down in the noise.

This is used for the mandator listen-before-talk as specified in Part-97 and ARRL good operating practices.

It's in a very handy location for its intended use, even thought at 350mW, who'm I gonna win a double with? I guess with a IC-4AT a few miles further out.

(Since the TONE doesn't do tone decode, this is just bypassing the pre-set carrier/ signal squelch.)

Tapping [Shift](#) while hodling **MONI**tor will switch you to listening to the transmit side of the repeater (or back), the "reverse" monitor, when transmit shift is in use.

Function

The Function button, while pushed, enables the non-bolded versions of the keys.

F introduces many of the [modes](#), modifying other keys.

Tapped quickly by itself, **F** enables changing the MHz with Up/Down, which it denotes by blinking the digit in question: 44**8**.17₅₀. Tap a second time, it moves to the 100KHz:

44**8**.17₅₀ and a third time to exit the mode, but it will time out quickly to normal (only mode that does?). This is not usable in MEMORY mode, only in VFO. It is also usable in SHIFT to change MHz, in case you need to go from 5MHz offset to 1 or 10MHz in your local bandplan. *I haven't tried it in TONE, maybe it would let you do tones quicker? I doubt it.*

Mic

Talk here.

speaker

Listen here.

display

LCD display, has memory channel #, frequency is displayed like 44**9**.**92**₅₀. The .25/.50/.75 are stacked as literal items on the LCD, not formed from segments, so the .75 looks like a superscript and the .25 like a subscript and the .50 like a withered arm, but it actually reads better than this sounds, since they're nice crisp numbers, and it gives a feel of how high it moved.

Has indicators [+] [-] for active offset, [T] for Tone active, [LOW] for low-power setting, [APO] for AutoPowerOff active, a **Bell** for Alarm set (blinking if triggered).

antenna

There is no BNC or SMA connector to attach a gain antenna to. It comes with a fold-down rubber duckie that might be >0dBi if you're lucky. I'm wondering if a passive-re-radiator on/out the window (such as are sold for use with 300mW pocket cellphones, but re-engineered twice the size) would help when using it in a car that isn't mounting a "real" 440 rig.

Modes

Modes are described under the [key](#) that initiates them. Some modes are transient programming modes, usually exited by PTT. Some Modes are global settings toggled on and off. Many modessome keys uses in modes are cross referenced.) Just about each **F**-button combo either enters programming mode or toggles a global mode. Turning the unit **On** with most any button depressed also affects some mode; some toggle, some others are paired with another button for set/reset so that you can know what state you'll be in without knowing where you are.

The programming modes initiated by the **F**-of-key are:

- [Tone : Down](#)
- [Step : Up](#)
- [Offset : Scan](#)
- [Memoryies: V/M](#)

The global settings / modes and their keys are:

- [Alarm : **F-Call** \(toggle\)](#)
- [keylock: **F-MONI** \(toggle\)](#)
- [Reset: **On-F**](#)
- [Key Beep: **On-MONI** \(toggle\)](#)
- [Channels Only: **On-V/M** \(toggle\)](#)

- [Stand-by beep \(courtesy tone\): On-UP on, On-DOWN off.](#)
- [Call tone sent 1750Hz vs rising alert: On-Call \(toggle\)](#)
- [Lamp stays on: On-LAMP \(toggle\)](#)

Explanations, Elaborations, Warnings

Things which weren't obvious after reading the original instructions once, and probably bear repeating even after my above expansion/cross-referencing.

1. Faster QSY'ing is **tap F**, then **up/down** the blinking MHz digit, tap F, up/down blinking 100kHz. This is addition; it carries. (On the sheet, but I found it on the radio first.)
2. I could not figure how to get it into 50mW "low power" mode. (Nor can I figure why I'd want to, except when at the MIT flea.) **Alinco replied (email):** *While pressing the PTT, press the [SCAN/SHIFT](#) key to toggle between hi and low power.*
3. If I understand correctly, the only pages (calls) this unit will respond to are if the *other* unit sends 1750Hz. (Alinco didn't correct me, so I guess I'm right.)
4. I find no distinction between the scan mode started by holding UP and by pressing scan, except how long you push it; neither will STOP once it finds something. (*ditto*)
5. This unit has CTCSS/Tone/PL Encode but not Tone Decode (*ditto*), and no option to install same.
6. If you set the wrong split (or Offset, using **F-Shift: [+]** or **[-]**) the LCD will show **[OFF]** instead of the xmit frequency when you push PTT to transmit.
7. Setting the *desired* **Tone** or Shift value isn't enough, you have to *activate* it. While in [TONE](#) programming mode (**F-Tone**), hit (**F-Tone**) again to turn on **[T]** indicator to send the PL tone you've chosen. In [Offset programming \(split, shift\)](#) set mode (**F-Shift**), hit Shift to toggle **[+]**, **[-]**, none.
8. Repeater offsets start at 5MHz, conforming to expectations. To program a deviant split, enter Shift programming mode with **F-Shift** and then **tap-f**, **Up/Down** to change the MHz of split and **tap-f** again for 100kHz and either timeout or then **tap-f** yet again to use the normal up/down to tweak it finer if it's *really* peculiar. They say this can do $\pm 15.99\text{Mc}$ shift, but I don't think NFM is going to excite an ATV repeater? (*I'll never do this, everybody's $\pm 5\text{Mc}$ here, except of course the cross-banders :-*).

Technical

Reading the Schematic

The schematic is printed on the back of the single sheet manual. If you can't read the fine print on the schematic, you probably don't want to mess with surface mount anyway, but I want to know how it works.

From the size, I had assumed it was all custom ICs on a one board, LCD and buttons on another, but no, it's a real radio minaturized. The idea that there are three board in there *plus* the keyboard and LCD, all with multiple transistors, is really odd, when you consider that most of the volume of the unit is batteries (3xAA), with the LCD/buttons/speaker consuming much of the the rest!

The schematic indicates a surprising number of discrete transistors and other components. At 350mW it's using paralleled finals: three 2SC3356's provide the drive. The CPU+AF board sports 4 ICs (not including two power regulators numbered as ICs), one of which has a 4.00MHz xtal for its clock. The RF board has a PLL and an NFM discriminator chip, but otherwise the transmit amp/multiplier chain, the receive down-converter chain, and the VCO daughter board are all

discrete transistors and parts (surely surface mount!). The RF board has three filter sections right at the antenna for both spur suppression on xmit and interference rejection on receive, and further filters in the IF.

Is the second IF really 450kHz [as documented] rather than 455kHz like everything else since Collins? (*I guess it doesn't matter since there's no room to go adding a Collins filter : -*). I suppose one might add an IF tap; I had supposed the low IF probably wouldn't leave the main chip, but it actually is routed through an off-chip filter, so if one really wanted to grab the 450kHz IF to add SSB detection or something, it'd only be a question of having *room* enough. (*Why would you? I dunno. I may do that mod to my cheap junk scanner, though.*)

In Use

I was expecting more intermod rejection on a unit that isn't cursed with extended receive. I realize there really isn't room for a set of helicals, even for 440, but since I do *not* buy anything (except used scanners cheap at a flea market) that has "extended receive" expressly to avoid intermod and image problems, I was a little dissatisfied to have 'scan' fetch up on some perfect doubles between commercial and public service UHF users. But not bad either, compared to say my cheap wide-open scanner on the same frequencies, though, it's *reasonably* intermod resistant.

350mW (25dBm) doesn't seem to be enough to kerchunk repeaters with high squelch settings or in desensed environments like city-center. I was expecting a bit more range; I think some of our downtown repeaters must have desense problems or have their squelch too high. (*With all those megawatt pagers downtown I can't imagine why : -*) Since I get into one linked system from several miles away on the back side of the hill, I don't think it's me and the DJ-S41T. (*I may need to borrow a unit with CTCSS Decode/ display to verify/correct published PL's for some of 'em too.*)

Accessories

HRO didn't have ANY accessories for it. Not yet knowing how long the Alkaline AA's will last, nor how long I'll have to change 'em and keep memories, I didn't know whether I'd be needing the charger stand or not, but they *couldn't* do the "do you want fries with that" thing. I expect HRO will have it soon.

With a 5.5V connector on top, I figured a dashboard adapter would be smart. I'll have to 'brew one with a 7805 or whatever....

Alinco replied to my comment: *"There is a mobile DC to DC adapter (12v to 5.5v) available. The drop in charger and nicads are not available yet. The batteries should last you at least a few weeks under normal use."*

(Indeed, my first set of Alkaline Batteries did last several weeks on mostly receive.)

I've seen passive-re-radiators for folks using pocket cellphones (also 300mW devices) in cars without installation kits; they clipped to the car window. I'm thinking such a device would be useful for those of us with only 2m mobiles so we could use the 440 pocket in the car. (*yes, I could buy a 440mobile, but that's not the point.*)

Rumors and Ideas

The guy at HRO says rumor is Alinco is doing a 2m version. Sounds good. I like my RS HTX-202,

but it is bulky. My wife and daughter know they can choose either of the DJ-S41T or it's 2m twin when available when they get their licenses (when for daughter, if for wife).

Alinco replies: *"There may be a 2mtr version on the market soon. Stay tuned for that. "*

A dual-bander at 300mW would be an ever better urban YL/XYL HT.

Somebody will introduce a 220M+ 1.2G dual which'll be very popular with the coded classes fleeing the no-code-bands and folks who go to Dayton (where 440 and 2m are desensed completely, so I hear). (I understand the reason we don't see this yet is that the US is one of very few countries with a 220 allocation.)

Alinco closed with: *"We appreciate your comments and are working to improve areas that need improving."*

Summary

I'm not ecstatic yet, but I'm not yet convinced I made a mistake either. I expect it'll be fun wandering at the MIT flea at least, and I can check into the AMSAT net on NETARC once a week.

This modification is read 1452 times.

[top of page](#)

12-09-1999

(DJ-S41) Alinco DJ-S41 quick reference (PDF file)

Download [Alinco DJ-S41 quick reference](#).

This modification is read 1332 times.

[top of page](#)

26-10-2001

(DJ-S41) EC10/DJ-S41C FSK-Ausgang & Rauschsperr

Author: Jann DG8NGN - jann@gmx.de.MODIFICATION.NET

Hallo,

Ich habe den kleinen UHF-TRX mal genauer unter die Lupe genommen. Als FSK-Ausgang für meinen geplanten POCSAG-RX Betrieb dachte ich, dass ich einfach den IC2 (TA31136FN) am Pin 9 (AFO) anzapfen müsste. Leider konnte ich mit einem Lautsprecher nichts hören. Lediglich hat das Gerät die Rauschsperr geöffnet !?! Naja, vielleicht weiss jemand, wo man den richtigen Punkt wählt.

Der IC2 befindet sich übrigens auf der Rückseite der Tochterplatine (im Inneren des Blechkastens). Vielleicht hab ich ja die Rauschsperr getroffen, was ja auch nicht schlecht wäre (wegen der SAVE-Funktion).

Hat jemand schon PR, Pocsag oder ähnliches mit dem Gerät gemacht ??

26-07-1999

(DJ-V5T) Alinco DJ-V5TH Receive-Transmit Mod by N3WRJ

1. Write down and SAVE your Frequency Memory list as the later memory reset will LOSE ALL of this information.
2. Remove Battery Pack.
3. Remove (2) Philips Screws on both lower sides of Metal chassis under Battery.
4. Remove Antenna and Rubber Mic-Ear cover from SMA antenna jack.
5. Unscrew and remove spanner nut from SMA Antenna jack.

Chuck, N7BTC has report this:

In my case that step is not necessary and risks damage to the spanner nut since it is lock-tited in place by the factory.

The chassis slides right out of the black plastic case with the spanner nut in place. I have the DJ-V5TH black case model. I cannot speak for the blue transparent case on the DJ-V5tdc model.

Thought this might save others an extra step.

6. Pull off Frequency and Volume control knobs.
7. CAREFULLY lift Battery connector edge of chassis up and out of case...the speaker leads are not very long, so proceed slowly.
8. Flip the chassis over to reveal the PC board side and lay the chassis to the left of the case.
9. Look for the 3/4" long Blue wire 1/2 loop...just below the SMA antenna jack on the right side of the PC board...You need to carefully unsolder the lower end of the wire jumper and tape it carefully to allow resoldering it into place if Warranty Service is ever needed. (Most out of band Mods WILL void the Factory Warranty.)
10. Re-assemble chassis into case and replace SMA Antenna Jack spanner nut, (2) Philips Screws, Mic-Ear jack rubber cover, Frequency & Volume Knobs, the SMA antenna and the Battery Pack / Clip.
11. RESET - While holding down on Band/Set button push Power Up button. (Reset *) will be displayed. Now push the * button on the keypad next to the 0 key. The display will countdown and you are finished.
12. Receive range looks to be :

76.000 - 107.900 Wideband FM (Transmit Blocked)

108.000 - 135.975 Aircraft AM (Transmit Blocked)
136.000 - 173.995 FM (Transmission will be limited by tuning of the RF section)
174.000 - 381.9875 FM (Transmit Blocked)
382.000 - 519.995 FM (Transmission Blocked 500-520 and by the RF Section-elsewhere)
520.000 - 999.990 FM (Minus the Cellular Bands 824-850 & 869-895) (Transmit Blocked)

13. It's GREAT to be able to use the wide range capabilities of this Receiver ! Happy Listening!

73's [N3WRJ](#)

Date: 22-06-2001

User comment

From: [WA2JXJ](#)

Subject: Extra info

First, I can confirm that "step 5 Unscrew and remove spanner nut from SMA Antenna jack" was not necessary for my clear case model, purchased 6/01.

Second, for this and possibly other radios programmed by RT Solutions software: PROBLEM.. Downloading to the radio defeats the expanded bands mod. BACKGROUND... Took a while, but I came up with the solution. I wanted to see what RT had to say, so I posed the problem to them and they responded quickly with the same answer (worded nicely), so here's their quote:

"Reset your radio to its wide receive capabilities. Once in that mode, read from the radio into the programmer. Save the file. Then always use that file to begin a file into which memory channel information will be entered. Using a fresh file resets the radio. Reading from the expanded radio saves that setting in the file. Using that file to send to the radio will not change that setting."

Now the DJ-V5 and the software work GREAT! (Thanks Alinco & RT!)

WA2JXJ

ANSWER: Unscrew and remove spanner nut from SMA Antenna jack.

Date: 17-02-2002

User comment

From: [kb5udf](#)

Subject: AM Mode Selection for All Bands

I recently purchased the DJ-V5TH. It features extended receive capabilities out of the box. However, the AM mode was not selectable via the function keys. AM mode was selected by entering a frequency between 110-137mhz (approximately). On one occasion I was monitoring on 121.05 AM and I selected FM mode. I was unable to return to AM mode, until I performed a memory reset on the radio. The 'blue wire' mode mentioned above allows the selection of all modes, seemingly at all times and on all bands. Also, the mod DID NOT disable automatic repeater offsets as do the mods on many other radios I've read about recently.

73'

23-12-2000

(DJ-X10) DJ-X10T mods.

Author: Jay - i555007@netzero.net. [MODIFICATION.NET](http://www.netzero.net/Modification.NET)

To receive the cell bands on a Alinco DJ-X10T remove (delete) 824.0~850.0 & 869.0~895.0 from band plane then write to radio, you will need a registered version of Bruce Pope's software and a RS232 interface cable, the schematic of the home built interface cable works good.

You can find these items at <http://www.ccintlgrp.com/djx10/>

This modification is read 1673 times.

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10-09-2000

(DJ-X1D) Increase frequency range ALINCO DJ-X1D

Here's a way to increase the freq.range of the Alinco DJ-X1D:

1. Press (and hold) the F-key, now press the FL-key - the keypad is locked
2. Enter the following code: 212617 - "open" appears in the display
3. Now press the F-key and the FL-key again

Now the freq.range will be +/- 100kHz ~ 1.3GHz !!!

This modification is read 575 times.

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19-07-1998

(DJF-1) Extended TX and RX for DJF-1T

Open the radio and place it face down with the BNC jack up, and locate two jumper wires on the lower right hand corners of the set. The red jumper is for extended receive, and the blue (I think it is blue?) jumper is for extended transmit. Just cut/unsolder the red jumper for extended receive, blue for extended transmit, or both jumpers if you want both.

Push the F button while turning the set on to reset radio to factory defaults. The extended receive (AM aircraft) can be activated by pressing the B button on the keypad. (If you cut both jumpers) A letter A will show up on the LCD indicating that radio is in the AM mode. To go back to FM, just press B again. I think B just activates a second VFO in the radio, since radio retains the AM frequency when toggle in and out of the AM mode. My serial number is 8221, so this mod should work for radio with serial numbers close to mine.

The radio will not transmit in AM mode, but it will transmit up to the ~160MHz range. I can say that it works up to the weather band frequencies. I've checked it by transmitting on 162MHz to a FT-415 at the lowest power setting inside an enclosed screen room.

A few words about the radio in general. I had the radio for about two days and I already had several IFR flights with it on board an airplane. The radio performed flawlessly. The fit and finish of

the radio is excellent. The entire radio case is cast aluminum, except the battery case, which is plastic.

The only gripe I have about the radio is the battery latch. It seems to do the job, but looks a little flimsy. If I really squeeze the radio HARD, I can feel a tiny bit of movement between the battery case and radio. But I complaint about the same thing about the glove compartment in my Honda....

I prefer the what we pilots called " human engineerd" aspect of the radio. Most of what I use in the airplane are rarely more than two buttons away. God only gave me two hands a while back, and I need one to fly the airplane, and the other to toggle the radio controls.

This modification is read 544 times.

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19-07-1998

(DR-110) Extended TX and RX for DR-110

- Remove the top cover.
- Find the yellow wire at the front left corner (next to the tuning knob)it makes a loop about 1 1/2 inches long.
- Clip the wire in two and insulate.
- Replace top cover.
- Reset the radio as per the manual. (i.e. hold f and vfo/m button down while turning the radio on.
- To change bands, press funtion followed by mhz button.
- Rig will change bands each time you do so.

This should allow reception from 130 - 169.995 MHz

Te rig will also transmit from 103 - 169.995 MHz

Just wanted to let you know about something that the mod does, that i didn't know at first....

130-170 Receive and xmit

340-380 Receive only

870-890 Receive only

After you make the mod on the yellow wire, you reset the rig as per the mod. Then to go from 130-170 to 340-380, you hit the f and mhz key. To go from 340-380, to the cellular 870-890, you hit the f and mhz key again. to go from 870-890 back to 130-170, you hit the f and mhz again.

Pretty neat.

Just thought that you might to know what it will do.....

This modification is read 1016 times.

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19-07-1998

(DR-110) Alinco DR-110 lcd readout repair

This should also work for the DR-112 as well as the DR-410

Tools needed

Low power solder pencil or solder station

Solder wick or de-solder station

Small dykes

Small needle nose pliers

Hemostats

Small/medium philips screw driver

Solder, rosin core fine wire type

6 Grain of wheat lites from alinco or radio shack part no.272-1141 12 vdc .025a.

The radio shack parts have nice pig tails on them and you do not need the yellow sleeves for these lites or use raio shack part no. 272-1092 12 vdc 60 mA micro lamps these do not have the insulated pig tails on them and are brighter !!!

I did get alinco to send me the lites free of charge.

If you are not use to working on these small circuits send the radio to your local ham repair station i cannot teach soldering via packet radio so only do if you can solder in small places.

1. Remove top and bottom cover
2. Remove 3 knobs from front of radio
3. Remove nut from shaft of the channel selector
4. Remove nut from the microphone connector
5. Remove front plate from radio, this has snaps on top and bottom, so be careful !!
6. Remove 3 small philips screws that hold the pc board to the front of the radio. Do not cut wires !!!
7. Locate tabs that are holding the display to the pc board and bend straight. be careful do not break off !!!
8. Remove display from pc board and set aside.

Step 7 and 8 can be eliminated if you can find the 2 lites that light up the display from the back of the pc board.

9. Locate lites (6). 1 lite under the off/on sw 3 above the row of small switches. These 4 lites have a blue rubber cover on them. 2 lites mounted where the lcd display was.
10. Replace lite under power switch, remember to use the blue cover over the new lite as well as the yellows sleeves on wires. This lite you solder from the front.
11. Replace 3 lites that are above the micro switches on the front of the pboard. this will have to be un-solder from the back. Also replace the blue covers over the 3 lites.
12. Replace 2 lites that stick through holes that go where the lcd display is, also replace the yellow sleeves. These lites solder from the back.
13. Re-install the lcd display and be shure there is no contamination of the contacts on the board and lcd display. Be shure to re twist the tabs on the display that goes through the pc board. This display must be tight to the pc board or the display will not work either with missing lcd segments on or no segments on. This lcd display shows the freq. Signal strength, channel number, and other functions.
14. Test the display by powering up the radio. If you are getting missing numbers, pull the lcd display and clean the contacts on the pc-board and the display. I did by scrapping the pc board with a screw driver as well as the lcd display contact ribbon.
15. Assemble the radio and check the display at each major assembly point.

16. Reset the cpu as shown in your owners manual. This is because that the cpu is located on the board you were working on and may have some bad data after working on the rig. You may have to reset the cpu when you test the rig in order to show the full lcd display.

Any questions can be sent to me at my home bbs and i will try to answer them to the best of my ability.

Thanks and 73's

Frank N2JYG @ WAOPTV.#WNY.NY.USA.NOAM

This modification is read 879 times.

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19-07-1998

(DR-110) 9600bd ALINCO 110,112,1200

Hello FELLOW Packeteers! I just got off the phone with Matt from Alinco!
I have been asked if the 9600 baud Mod that I posted would also work fr the 110.
YES IT WILL!

The 110, 112 and 1200 radios are identical except for the power output of the 1200 (25-watts high power compared to the 45-watts of the 110 and 112!) and the 112 has a LCD display to replace the piece of junk one on the 110! Also, if you want to have more power in the 1200, you can buy the 100/112 PA Board (45-watts) for \$65.00 from Alinco. It also requires buying 4 high power switching diodes for \$20.00 from Alinco. \$85.00 for 20-watts?...Doesn't sound like a good investment to me. Don't forget the time involved with doing this mod. I discourage the use of HIGH POWER and have posted bulletins on this subject! Never the less, I feel obligated to pass this info on to you, I am not the U.S. Government, I will NOT keep things from you! To follow is the 9600 baud Mod I received from Alinco. Alinco warns that the Warranty is void if this Mod is performed! KA1BOY has been great enough to try this Mod and says it works great for 1200 baud as well as 9600 baud! From all of us to you, THANK YOU BARRY! One point to remember, you will not be able to use the radio for voice. This mod uses the Mic Connector...

TRANSMITTER

1. Remove R-31
2. Remove C-40 (save this part, it is to be reused!)
3. Connect one leg of C-40 to PIN 7 of the VCO Board
4. Connect a jumper from the free leg of C-40 to the HOT end of C-35 The MIC input is now connected DIRECTLY to the VCO!

RECEIVER

1. Disconnect the PINK wire connected to the MIC connector and the PC Board from the PC Board
2. Reconnect the PINK wire to PIN 2 on the IF Board connector This eliminates the low pass filtering on the discriminator!

That is it to the MOD for the 110, 112, and the 1200! Remember, you now use the MIC Connector For inputting 9600 baud and it WILL work for 1200 baud! A special note to all SYSOPS out there...Buy this radio and do this MOD! It will allow users to set their TXDelay down to a lower

setting giving the channel MORE throughput! USERS, make a DONATION to your SYSOPS so they can help make the system YOU are using, BETTER! We must all do our part to help! I would like to hear from all of you that tries this MOD!

I give partial credit to barry, ka1boy, for his input on this modification!!!

73 FELLOW PACKETEERS

DINO...KC6RIX @ WF6O.#SOCA.CA.USA.NA

Article 3528 of rec.radio.amateur.packet:
Newsgroups: rec.radio.amateur.packet
From: pst@cisco.com (Paul Traina)
Subject: Re: 9600 baud mod for Alinco 110, 112, 1200 radios
Sender: news@morrow.stanford.edu (News Service)
Organization: cisco Systems, Menlo Park, California
References: <1992Jul26.043534.23205@cbfsb.cb.att.com>
Date: Sun, 26 Jul 1992 20:51:55 GMT

I have made this mod, and I have the following suggestions:

1. you can get a "map" of the board via FAX or snail mail from Alinco -- this helps a LOT (it's impossible to read component labels) -- Alinco is in Torrance Calif, in the phone directory.
2. Throw away C40, it is impossible for a mere mortal to do what they are suggesting. Replace that SMT C40 with an axial .01uf cap (non-polarized, anything kind you want, I used a tant.) and some insulation tubing over the leads (it needs to stretch 2 inches across the bottom of the pcb.

Alinco claims this mod makes 1200bps unusable, untrue, I use my modded 1200 on both 1200 and 9600 bps without noticable degradation of performance.

This modification is read 778 times.

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19-07-1998

(DR-112) Modes DR-112T Extended RX/TX

This is just to confirm that the modification that was posted to the Alinco DR110T also works on the DR112T (same radio, but with an LCD display as opposed to the DR110T's LED display). Pop the cover, cut one wire, reset the radio, and PRESTO! Instant expanded coverage.

I verified that the radio will receive the National Weather Service.

However, I haven't tried listening to the 300 MHz or 800 MHz segments the radio now covers. I have no idea how well (or how poorly) the receiver performs at those frequencies.

Andre Molyneux KA7WVV

for reference, here is the DR110 mod file:

After installing the out-of-band receive mod on my Alinco 110, I accidentally pressed a couple of keys and found I could receive from:

130 -> 170 MHz + Xmit of this range

340 -> 380 MHz - no Xmit

870 -> 890 MHz - no Xmit

To modify the Alinco to receive out of band, perform the following steps:

Remove the top cover by removing the obvious screws. Be careful, as the speaker may stick to the cushion on the top cover. If it does, separate the speaker from the top panel and replace it back in its receptacle within the rig.

Positioned at the front of the rig, look near the tuning knob and you will see a little yellow jumper coming from behind the front panel, looping around and returning to the front panel. This jumper looks like it should have a tag on it saying "cut me for more features". Go ahead and take the wire cutters to this jumper.

Be careful that the cut ends don't short to something!

Replace the top cover on the rig, get everything set back up and turn on the rig.

The next step is to reset the radio. If you don't remember its current programming, you may want to write it down at this time.

When ready to reset the rig, hold down the F key and the VFO/M key at the same time, turn the POWER off, back on, and then let go of the keys. The rig is reset and will display 144.00.

You will now be able to tune around, and transmit, from 130.00 -> 169.99 MHz.

To move to the next "band segment", press F and then the MHZ key.

The display will go the 340.00 MHz segment. F+MHZ again will get you cellular, and F+MHZ a third time will return you to the 2 meter segment. Happy monitoring...

Gene - AA6IY @ N6LDL

This modification is read 1003 times.

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19-07-1998

(DR-112) 9600bd ALINCO 110,112,1200

Hello FELLOW Packeteers! I just got off the phone with Matt from Alinco!
I have been asked if the 9600 baud Mod that I posted would also work fr the 110.
YES IT WILL!

The 110, 112 and 1200 radios are identical except for the power output of the 1200 (25-watts high power compared to the 45-watts of the 110 and 112!) and the 112 has a LCD display to replace the piece of junk one on the 110! Also, if you want to have more power in the 1200, you can buy the 100/112 PA Board (45-watts) for \$65.00 from Alinco. It also requires buying 4 high power switching diodes for \$20.00 from Alinco. \$85.00 for 20-watts?...Doesn't sound like a good investment to me. Don't forget the time involved with doing this mod. I discourage the use of HIGH POWER and have posted bulletins on this subject! Never the less, I feel obligated to pass this info on to you, I am not the U.S. Government, I will NOT keep things from you! To follow is the 9600 baud Mod I received from Alinco. Alinco warns that the Warranty is void if this Mod is performed! KA1BOY has been great enough to try this Mod and says it works great for 1200 baud as well as 9600 baud! From all of us to you, THANK YOU BARRY! One point to remember, you will not be able to use the radio for voice. This mod uses the Mic Connector...

TRANSMITTER

1. Remove R-31
2. Remove C-40 (save this part, it is to be reused!)
3. Connect one leg of C-40 to PIN 7 of the VCO Board
4. Connect a jumper from the free leg of C-40 to the HOT end of C-35 The MIC input is now connected DIRECTLY to the VCO!

RECEIVER

1. Disconnect the PINK wire connected to the MIC connector and the PC Board from the PC Board
2. Reconnect the PINK wire to PIN 2 on the IF Board connector This eliminates the low pass filtering on the discriminator!

That is it to the MOD for the 110, 112, and the 1200! Remember, you now use the MIC Connector For inputting 9600 baud and it WILL work for 1200 baud! A special note to all SYSOPS out there...Buy this radio and do this MOD! It will allow users to set their TXDelay down to a lower setting giving the channel MORE throughput! USERS, make a DONATION to your SYSOPS so they can help make the system YOU are using, BETTER! We must all do our part to help! I would like to hear from all of you that tries this MOD!

I give partial credit to barry, ka1boy, for his input on this modification!!!

73 FELLOW PACKETEERS

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Article 3528 of rec.radio.amateur.packet:
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Organization: cisco Systems, Menlo Park, California
References: <1992Jul26.043534.23205@cbfsb.cb.att.com>
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I have made this mod, and I have the following suggestions:

1. you can get a "map" of the board via FAX or snail mail from Alinco -- this helps a LOT (it's impossible to read component labels) -- Alinco is in Torrance Calif, in the phone directory.
2. Throw away C40, it is impossible for a mere mortal to do what they are suggesting. Replace that SMT C40 with an axial .01uf cap (non-polarized, anything kind you want, I used a tant.) and some insulation tubing over the leads (it needs to stretch 2 inches across the bottom of the pcb.

Alinco claims this mod makes 1200bps unusable, untrue, I use my modded 1200 on both 1200 and 9600 bps without noticable degredation of performance.

19-07-1998

(DR-119) Extended frequency for Alinco DR-119T

Hi and thanks for reading this message. I have performed the following mods to the DR-119T.

Once the top cover has been removed there is a large loop of blue wire behind the tuning dial. This needs to be cut and insulated.

Replace the cover and reset the rig.

(F-key and VFO/M key to be depressed while the rig is turned off and then on again) By then using the following key sequence other bands are opened up. F-key followed by the Mhz -key shifts you into the 300Mhz band. Coverage here is 335.00 Mhz - 410.00 Mhz. Using the sequence of the F- key and the Mhz - key you now shift into the 800 Mhz range. Coverage here is from 810.00 - 990 Mhz.

The only problem is that I have not been able to receive anything in the upper two bands. If anyone has performed the above mod and had successful results of reception in the upper two bands would you please contact me and let me know what I still need to do.

73 de Brendan ZR6AIU @ ZS6AI

This modification is read 460 times.

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19-07-1998

(DR-1200) 9600bd ALINCO 110,112,1200

Hello FELLOW Packeteers! I just got off the phone with Matt from Alinco!
I have been asked if the 9600 baud Mod that I posted would also work fr the 110.
YES IT WILL!

The 110, 112 and 1200 radios are identical except for the power output of the 1200 (25-watts high power compared to the 45-watts of the 110 and 112!) and the 112 has a LCD display to replace the piece of junk one on the 110! Also, if you want to have more power in the 1200, you can buy the 100/112 PA Board (45-watts) for \$65.00 from Alinco. It also requires buying 4 high power switching diodes for \$20.00 from Alinco. \$85.00 for 20-watts?...Doesn't sound like a good investment to me. Don't forget the time involved with doing this mod. I discourage the use of HIGH POWER and have posted bulletins on this subject! Never the less, I feel obligated to pass this info on to you, I am not the U.S. Government, I will NOT keep things from you! To follow is the 9600 baud Mod I received from Alinco. Alinco warns that the Warranty is void if this Mod is performed! KA1BOY has been great enough to try this Mod and says it works great for 1200 baud as well as 9600 baud! From all of us to you, THANK YOU BARRY! One point to remember, you will not be able to use the radio for voice. This mod uses the Mic Connector...

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Alinco claims this mod makes 1200bps unusable, untrue, I use my modded 1200 on both 1200 and 9600 bps without noticable degradation of performance.

19-07-1998

(DR-1200) Alinco DR-1200T 9600 mods (Another modification)

If anyone is interested in modifying the Alinco DR-1200 Dataradio for 9600 packet use, here is the info.

I recently purchased this radio, in the hope of modifying it for 9600 packet use, as the advertisements mention. Being true fm and not phase modulated, I thought this radio would be a true performer at 9600 baud. What I didn't know is that there is no info in the manual on how to hook up the G3RUH modem to it.

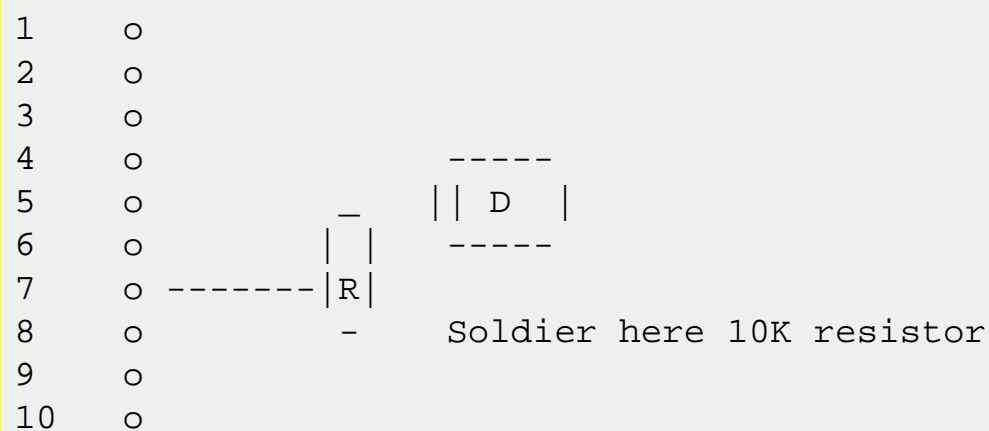
Luckily I bumped into the May 1992 issue of CQ Amateur Radio, and on page 69, Buck Rogers, K4ABT, describes how to modify the Alinco DR-110T for 9600 baud use. I was almost sure the dataradio was nothing else than a DR-110T with no mike, an LED panel, 25w output and a catchy name. Comparing the insides of the dataradio with the dr-110t mods showed it was the same.

To inject the Tx audio is a bit difficult. The VCO unit is enclosed in a solid metal case, with the PC board hidden away. When opening the unit, the VCO is located to the left side, just behind the VFO knob. You must unsolder the VCO unit out of the main board. It is held by its case at 4 points. Under the VCO unit are 10 pin connectors. These must also be unsoldered. I used a Radio Shack desoldering iron, and was a piece of cake to remove.

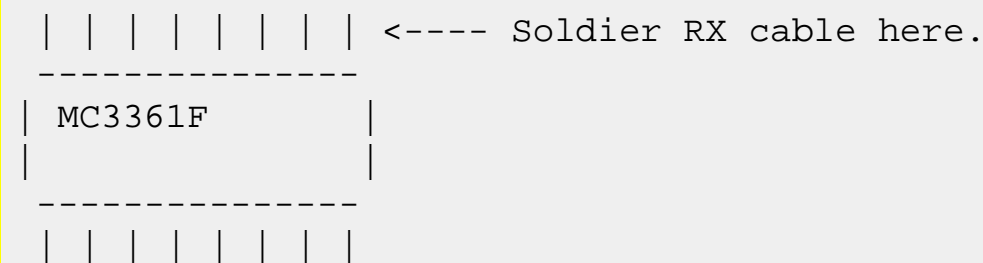
Once you remove the VCO unit, look at Pin 7 on the solder side of it. This pin will go all the way to a surface mounted resistor, and next to it is the varactor diode. Solder a 1/4 watt 10K resistor to the junction of the resistor and the diode. The diode is surface mount, so be very careful.

Then connect the TX audio cable to the other end of the 10k resistor.

K4ABT suggest to use a 4uf non-polarized capacitor after the resistor, but I didn't use it and worked ok.



To get RX audio from the discriminator, locate a PC board sticking up next to the lithium battery backup. Behind the volume. You can see at the top a 16 pin surface mount chip, labeled MC3361F. Pin 9 of this chip is the discriminator output. It is also tiny, so be careful.



As all 9600 baud work, **USE SHIELDED AUDIO COAXIAL CABLES!**

I did the mod, and TX and RX are absolutely perfect. For the price of this radio, it is a great

performer.

73's de Ramon (KP4TR)

This modification is read 626 times.

[top of page](#)

19-07-1998

(DR-1200) DR-1200 intermod reduction

Caution:

The following procedure involves desoldering smd (surface mount devices). If you are not qualified to work on smd devices or do not have the proper equipment, do not attempt this mod! seek professional technical assistance. The originator of this modification is not responsible for any loss involving the performance of this modification.

Caution:

This radio employs static sensitive devices. Suitable means should be employed to assure a static-free environment prior to beginning work on this radio.

1. Remove power and antenna from rig
2. Remove bottom cover
3. Locate C-19, left side front of board (clearly labeled, near Q3).
4. Remove C-19: suck up the solder and carefully pry away from board while still warm.
5. Save the capacitor in case you got the wrong part!
6. Reassemble the radio, no retuning necessary.

This capacitor connects D1 (back to back diodes) to the first IF line.

D1 is supposed to be a "limiter". Unknown why Alinco chose to put in such a limiter, as the integrated IF chip IC-1, an MC3357, has a built-in limiter. Also, the Kenwood TM-231 which uses nearly the same layout and circuit, doesn't have such a circuit.

While the intermod hasn't gone away entirely (I'm not done with it yet!), it has diminished enough to make the rig usable on packet AND voice now.

73 de Bill, KOZL@WOLJF.#NECO.CO.NOAM

This modification is read 604 times.

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19-07-1998

(DR-1200) DR-1200T Full Band Modification

1. Remove 2 screws located on top of cover.
2. Loosen the 4 screws on both sides of top cover (do not remove).
3. Remove top cover
4. Locate Yellow wire Loop behind tuning Knob (this wire loops from the control board mounted on front pannel).
5. Cut loop and tape ends.
6. Replace top cover.
7. Reset radio (press "F" and VCO/M keys together. While holding down keys turn off and on Power).

Factory settings will be restored however the new frequency range will be from 132 to 173 MHz. Any memory will have to be reprogramed.

These insructions are from Alinco, I've done them to my set and it works great.

This modification is read 671 times.

[top of page](#)

19-07-1998

(DR-130) Here is the expanded TX mod for the Alinco DR-130

1. Open the top of the case by removing the three screws.
2. Locate the blue and red loop of wire near the display, facing toward you.
3. Cut the blue and red loop of wire, and tape up the ends.

Red wire = RX and
Blue wire= TX.
4. Replace cover of the radio.
5. Reset the radio by holding the function key down and turning on the power.

This modification is read 1306 times.

[top of page](#)

19-07-1998

(DR-130) Change display between frequency or channel

Insted of seeing frequency display (147.585 etc.) You can have it read out like a business band radio (CH-1) by holding the VFO/M/W key and turning on the power.

This modification is read 1152 times.

[top of page](#)

20-08-2000

(DR-135) Alinco DR-135T MARS/CAP Mod

DR135T all versions (T/TG/TP/TPG)

Waring:

You must have a proper license to operate on the MARS/CAP frequencies. Alinco declines responsibilities for the use of modified equipment out of ham bands. The warranty is void when the modification is done. The declared specs are not applicable out of the ham bands. DR-135T operates in the narrow FM mode TX/RX but the unit is not officially new CAP requirements compliant.

Modification:

Turn the radio off. Disconnect the power source. Open the bottom cover by removing the 4 screws located on each corner of the bottom cover surfce. Locate a BLUE looped jumper wire that comes out of a slot on the back of the front control unit (it is attached to the back of the front panel on a pad labeled JP3). Remove the jumper and trim the remaining wire properly to prevent a short circuit.

Reassemble the bottom cover. Connect the power source and turn on the unit with the FUNC key pressed to reset the microprocessor. Settings will become the factory default.

The unit will transmit and receive between approximately 140 and 170 MHz where the VCO will lock. If the display is flashing, you have lost VCO lock and operation is not possible. Alinco does not guarantee any operations outside of the amateur bands.

[from an Alinco mod sheet, with some clarifications added!]

[Good luck, but don't blame me if you foul-up your new radio! :-)]

This modification is read 1252 times.

[top of page](#)

19-07-1998

(DR-140) Here is the expanded TX mod for the Alinco DR-140

1. Open the top of the case by removing the three screws.
2. Locate the blue loop of wire near the display, facing toward you.
3. Cut the blue loop of wire, and tape up the ends.
4. Replace cover of the radio.
5. Reset the radio by holding the function key down and turning on the power.

For E-Version (DR-140E) Give RX from 118 - 173 MHz.

- a. Bring the radio into Key-Lock. Press V/M, CALL, SET in this sequence three times. Exit from Key-Lock. If you reset the radio the range will diminish to the original state.
- b. Instead of doing the above, you may remove R349 and reset the radio.

This modification is read 653 times.

[top of page](#)

11-06-2000

(DR-150) Alinco DR-150T

Author: *Terry E Muskoff*

Wow I'm the only one with the mods for this, Alright! It's so simple just cut both red and blue wires which are on the left side of the display. Tape the ends so they don't touch anyone.

To get : TX - 136.00mhz - ~173.995mhz
 RX - 108.00mhz - ~175.00mhz
 430.00mhz - ~510 mhz

1. Unscrew the 4 screws on the top plate
2. Cut red loop of wire by the display on the left
3. Cut the blue loop of wire by the display on the left
4. Tape ends
5. Put cover back on
6. Hold down f when you turn it on

I know this by experimenting with my own radio. I don't take responsibly if you ruin yours trying this. GOOD LUCK and don't stress out, it's not as hard as it sounds.

18-03-2001

(DR-235) Alinco DR-235-T expanded xmit/rcv

Author: - EDatBCFR@aol.com.MODIFICATION.NET

Turn the radio off. Disconnect the power source. Open the bottom cover by removing the 4 screws located on each corner of the bottom cover surface. Locate a BLUE looped jumper wire that comes out of a slot on the back of the front control unit (it is attached to the back of the front panel on a pad). Remove the jumper and trim the remaining wire properly to prevent a short circuit.

Reassemble the bottom cover. Connect the power source and turn on the unit with the FUNC key pressed to reset the microprocessor. Settings will become the factory default.

The unit will transmit and receive between approximately 200.000 and 299.999 MHz where the VCO will lock. If the display is flashing, you have lost VCO lock and operation is not possible.

Also, if you press the FUNC key and the SQL key when you turn the power on you will get a handy digital voltage display. (Example: 13.7v)

19-07-1998

(DR-430) Alinco DR-430 Extended TX modification

This is the Alinco DR-430 Extended TX modification. This modification will expand TX coverage to 403-499 MHz. Please follow the steps and do the work CAREFULLY! This modification works great in my rig and I assume this modification will work on almost all 430's (no warranty implied).

1. Unscrew the 3 small screws on the top cover.
2. Gently remove the top cover.
3. Cut the little loop wire (blue) that's located just behind the display, 2" left from the Power button.
4. Reassemble the radio.
5. Reset the radio's CPU by turning power ON while pressing the F key.

73's & DX de Eduardo "Ed" Sweet - LU7AKC.
Packet radio: lu7akc @ lu7akc.#col.cf.arg.soam
Internet: postmaster@asarin.org.ar

19-07-1998

(DR-430) Alinco DR-430 9600 Bps modification

This is the Alinco DR-430 9600 Bps modification. This modification will allow the use of a G3RUH/NB96 9600 Bps packet radio/satellite modem. Please follow the steps and do the work VERY CAREFULLY as this rig uses SMC technology! This modification works great in my rig and I assume that it will work on almost all 430's (no warranty implied).

1. Unscrew the 3 small screws on the top cover.
2. Gently remove the top cover and unplug the speaker connector.
3. Remove the bottom cover by unscrewing the 3 small screws.
4. Remove the VFO, VOL and SQL knobs from the front panel.
5. Carefully remove the front panel's plastic cover.
6. Unscrew the 3 small screws that hold the front panel board attached to the main board.
7. Pull out gently the front panel's board.
8. Locate pin #2 of the microphone connector and solder a small wire to it (this will be the PTT wire).
9. Remount the front panel's board and screw the 3 small screws.
10. Carefully remount the front panel's plastic cover and place the 3 knobs in their proper positions.
11. In the main board (bottom side) locate the TK10487M chip.
12. Solder the inner conductor of an RG-174 coaxial cable to pin #11 (this will be the Audio-to-modem wire).
13. Locate the CN302 connector (just under the other's side shielding).
14. Solder the inner conductor of an RG-174 coaxial cable to pin #1 (this will be the Audio-from-modem wire).
15. Solder a wire to pin #2 (ground).
16. Very carefully drill a 1/4" hole on the radio's back, just near the SP.OUT connector and pass through it all the new wires.
17. Reassemble the radio.
18. Connect the new wires to the modem and adjust it to properly handle the signal levels.

Notes:

- A. The Audio-to-modem signal level is lower than the one you can get from a Yaesu FT-736r.
- B. The Audio-from-modem signal feeds the varactor diode (D303) through a 47K resistor (R324) so you must adjust the modem's output to provide enough signal level to drive the varactor

properly.

73's & DX de Eduardo "Ed" Sweet - LU7AKC.
Packet radio: lu7akc @ lu7akc.#col.cf.arg.soam
Internet: postmaster@asarin.org.ar

This modification is read 758 times.

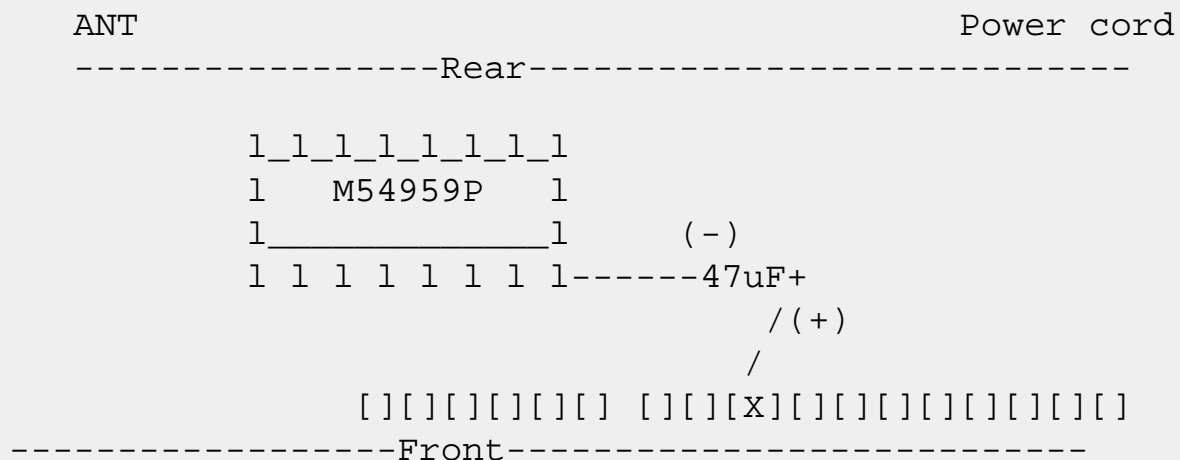
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19-07-1998

(DR-510) Alinco DR-510 Crossband Repeater Modification

How to do it

1. Remove bottom cover
2. Remove 2 Phillips screws at corners of subtone board (small board near center in front) and move the tone board out of the way.
3. Solder an 16V electrolytic capacitor (10MFD to 100MFD but best to use 40MFD to 50MFD) as follows:
 - A. Neg (-) lead to pin 8 on device (IC) labeled - M54959P
 - B. Pos (+) lead to pin 3, counting from left while facing front of transceiver of the white 11 pin connector.



Remove top cover and faceplate of transceiver. Be careful of speaker wires!

A. To remove faceplate:

1. Remove main dial knob and retaining nut.
2. Remove mic. socket retaining ring.
3. GENTLY lift tabs, located approximately 3/4" in from each side, on top of faceplate and "rotate" toward front of the transceiver.
4. When tabs are "free", turn transceiver over and repeat the process. Remember - gently!
5. Set free plate aside.
4. Locate surface monnt device labeled R-35 on control board (front of transceiver).
 - A. R-35 is positioned between, and slightly below, the squelch and high/low power button. To the left of device R-35 is a "circle" trace. inside the "circle" trace are two solder pads, one of which is already soldered to R-35.
5. Bridge the unsoldered pad to the soldered pad inside the "circle" trace.
6. Short R-35

```

-----Top-----
LCD          (Vol)   (Seq)   [Power]

```

(11)- + [Hi/low]
^ ^
1 R-35
1
"circle" trace pads

-----bottom-----

7. Replace faceplate, retaining nut, retaining ring, tone board, bottom and top of transceiver.

Operation

1. Store different bands (2m or UHF) in VFO mode and Memory Channel 1-9. Any thing you can store in memory 1-9, split, subtone enc, subtone dec will work.
2. Store "DUAL" mode in VFO (Simplex) also it will accept subtone enc and subtone dec.
3. Turn power off and then keep pressing the REV key, turn on the power switch.
4. Audio Vol. control is your deviation control in repeater mode.
5. To return to normal operation turn off power then turn on again without pressing any keys.

Notes:

The transceiver scans back and forth between the VFO and Memory until it finds a signal then it locks on and transmits what it hears on the other band. This scanning causes a slight delay when keying up as the radio takes time to scan. I recommend the use of subtones when possible so that the radio will not key up on noise and not allow non-authorized personal to use your radio, the transmissions of which YOU are responsible.

This modification is read 805 times.

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19-07-1998

(DR-510) DR-510T Out of Band Coverage

1. Pull off top cover.
2. With radio knobs facing you look behind the VFO knob and you will see a yellow wire laying on top of the VFO board.
3. Cut the yellow wire and tape end.
4. Replace top cover and hold down the "F" key and the VFO key at the same time, turn on the radio and release.
5. Hit the "F" & MHZ to get different receive ranges.
6. The radio will have to be re-programmed.

This modification is read 833 times.

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19-07-1998

(DR-510) FM-Hub beim DR-510E

Hallo OM's, da ja das Alinco DR 510E bekanntlich etwas leise ist, hier nun mein Tip zur Erhöhung des Frequenzhubs. Beide Deckel abschrauben. Dann sieht man links oben (auf beiden Seiten gleich) 4 Potis zusammensitzen. Das linke untere ist für den Hub zuständig. Sollte nach erfolgter Einstellung der Ruftone nicht mehr richtig funktionieren, kann man den Tonhub etwas zurücknehmen. Dieses geschieht mit dem Poti ganz vorne rechts auf der Platine. (Ebenfalls auf beiden Seiten gleich).

Wer nun noch sein Output etwas verbessern will, sollte ein anständiges Wattmeter hinter sein Gerät schalten. Dann kann man an dem hinteren rechten Poti (im Abschirmblech ist extra ein Loch gelassen) den eingebauten Diplexer auf seine Antenne einstellen. (ebenfalls beide Seiten gleich).

Bei mir kam so eine Leistung von 55W auf 2m und 40W auf 70cm zustande. So ich hoffe ich konnte einigen OM's helfen ihr Gerät etwas zu verbessern.

Tsch]ss dann und 73 de Andreas.

This modification is read 704 times.

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19-07-1998

(DR-510) DR-510E: Umbau fuer 9k6

Hallo DR-510-Besitzer und 9k6-Freunde !

Ich, als armer Schueler (hi), habe es "nur" zum DR510e gebracht.

Dabei sind ein TNC2C mit 10 MHz (10 MHz ist Minimum, sonst wird der TNC beim ersten Boxbesuch vollgebaggert !!) und das G3RUH-Modem.

Das DR510 ist nicht gerade ideal fuer 9600Bd FSK. Leider !

Es funktioniert aber - wie gesagt nicht ideal - aber immerhin.

Ich quaele mich z. Zt. noch mit REJs herum; ich bin leider noch nicht dahintergekommen warum !?

Das Senden klappt da schon etwas besser. Ich komme bis zu einem TXDelay von 15 und der Digi nimmt (fast) alles an.

Wer noch Tips hat oder wer es anders (und besser ?) geloest hat schicke mir doch bitte eine msg !

Nun aber zum Umbau:

HINWEIS !!

Wer noch nie einen Loetkolben in der Hand hatte und etwas Erfahrung gesammelt hat, sollte an dieser Stelle besser aufhoeren zu lesen, hi !

Ein Schaltplan von dem Gerate erleichtert die Sache sehr...

Ich habe die Zugenlastung von der Stromversorgung herausgenommen und ein 5-aderiges ABGESCHIRMTES Kabel durchgefuehrt, die Zugenlastung etwas vergroessert und wieder eingebaut. Die PTT-Leitung habe ich direkt von innen an die Mike-Buchse geloetet. Dazu musste die gesamte Frontplatine abgeschraubt werden.... etwas muehselig, aber es lohnt sich.

Die Diskriminator-Strippe (G3RUH Pin 3-4 RX Audio) muss komplett ABGESCHIRMT sein! Sie wird an den SMD-Widerstand (IC abgewandte Seite !), der mit Pin 9 des MC3361d verbunden ist, gelötet. Der MC3361d befindet sich auf der senkrecht stehenden IF-Platine. Man kommt gut von oben heran.

So, nun sollte man noch (ausprobieren !!) am TNC-Stecker einen Widerstand in die Leitung schalten. Man kann es natürlich auch im Gerät, ich habe es aber, weil es besser zum experimentieren ist, am Stecker gemacht.

Der Widerstand hat bei mir etwa 10kOhm, das klappt am besten.

Nun versucht man einen 9k6-Digi mitzulesen - wenn alles einwandfrei mitzulesen ist, ist die halbe Miete gewonnen. Sollten nicht alle Pakete mitgelesen werden, muss der Widerstand verändert werden. Ausprobieren !! Raucht oder knistert es, ist garantiert etwas schiefgelaufen ... hi.

Machen wir uns an die Sendeseite... Jetzt wird es kompliziert !

Die KOMPLETT ABGESCHIRMTE Modulator-Leitung (G3RUH Pin 3-1 TX Audio) muss an den Pin 7 des VCOs gelötet werden und an diesen Pin kommt man leider nur von unten heran, wenn man die gesamte 70cm-Hauptplatine ausbaut.

Ist das erledigt (Bitte keine lose Schraube oder Schraubenzieher im Gerät vergessen !), muss noch ein grosser Widerstand in die Leitung geschaltet werden. (Genauso wie beim RX.) Bei mir sind es 100 kOhm. Bitte ausprobieren ! Der Spindeltrimmer VR1 (G3RUH) sollte zu 3/4 aufgedreht werden, da sonst irgendwelche digitalen Signale zu stark durchkommen.... Der VCO schickt alles raus, was er bekommt!! Der VCO wird auch sehr leicht uebersteuert.

Ist das erledigt, sollte man das TX-Signal mit einem Handy oder sonstigen Zweitgerät abhören. Dazu stellt man am besten ein TXDelay von 100 ein.

Das TXSig sollte ungefähr so laut wie das Sig vom Digi sein. (Das ist nur ein Rauschen...)

Nun kommt der Spannende Augenblick. TXDelay UNBEDINGT wieder auf ca. 22 zurückstellen und einen Connect versuchen. Kommt er ? CONGRATS !! Klappt es nicht, dann stimmt etwas noch nicht... noch einmal alles ueberprüfen und mit den Parametern spielen !

Läuft alles, sollte man das TXDelay immer etwas zurückstellen, bis der Digi nichts mehr hört, dann wieder 2 bis 3 drauf und schon stimmt's.

Bei mir funktioniert es mit 150 bis 170ms am besten.

Für die Richtigkeit der Beschreibung und für evtl. Schäden an Geräten übernehme ich keine Haftung !

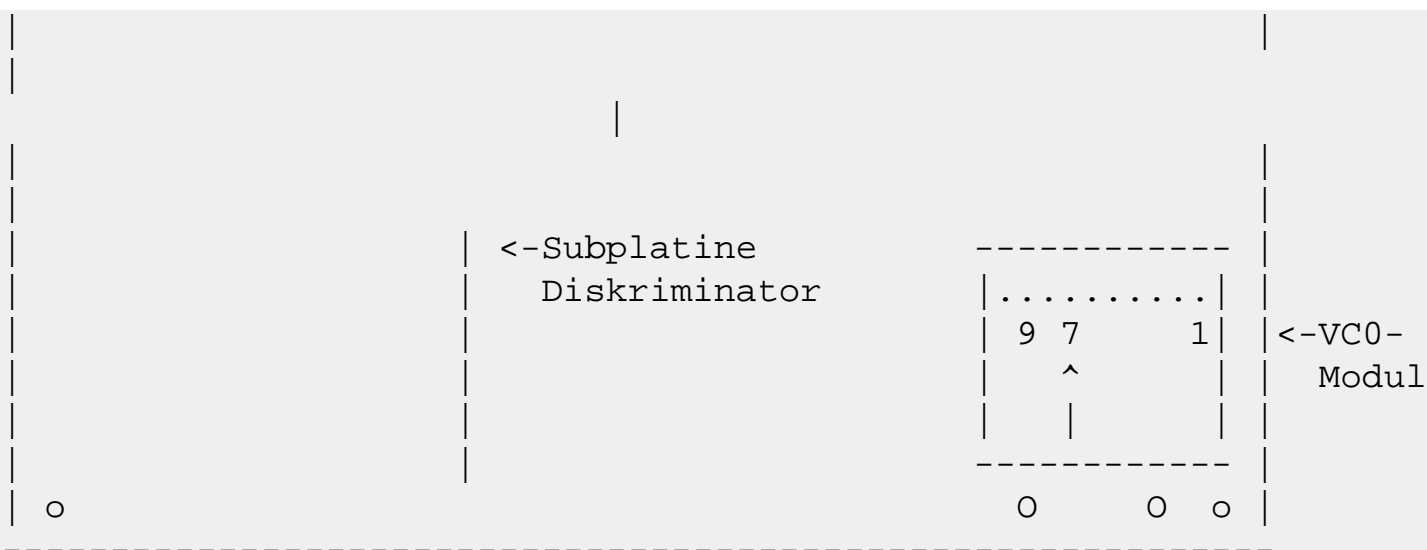
Der Umbau geschieht auf eigene Verantwortung !

Ich habe wie gesagt unheimliche Probleme mit REJECTs, warum und wieso weiss ich nicht. Wer noch Tips, Vorschläge oder Erfahrungen hat, schicke mir sie bitte! Ich bin dankbar für jeden Tip !

Fragen werden natürlich auch sofort beantwortet (soweit ich es kann, hi) !

Viel Spass und vor allem Erfolg beim Umbau !!

73 de Andy, DL3EBS @ DB0IZ



So.. das wars im Prinzip.
 Jedwede Garantieansprüche muá ich im vorraus ablehnen!
 Der Umbau erfolgt auf eigene gefahr.
 Ich wünsche guten Umbau und awdh auf 9k6.

DC4EX, Wolfgang<

This modification is read 698 times.

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19-07-1998

(DR-570) DR-570E expanded coverage

Hello OM's!

I just received a msg from Veijo, OH5NFC @OH5AG, in which he described how to

- expand frequency coverage and
- switch to converter-mode

First, the frequenzy-enlargenment:

- work your way through to the board behind the LCD-display
- search for jumper >> J 3 << and cut it
- reset the CPU by turning on the power whilst pressing the FUNCTION-key

Second, the convertermode:

- switch main band to VHF
- switch on the converter by pressing FUNCTION, BAND, BAND ... ==> First comes 345, then 875, and finally 145 MHz again; the convertermode now is in function...

This modification is read 1017 times.

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19-07-1998

(DR-570) Umbau des Alinco DR-570 für 9k6 mit G3RUH

Vor 2 Tagen wurde von mir mit Unterstützung von Kai, DJ9LX, der Umbau meines DR-570 und G3RUH-Modem erfolgreich getestet.

Der Eingriff in das Gerät beschränkt sich auf das Einbringen von 2 Koaxkabeln für den RX / TX Anschluß.

Vorrangegangene Messungen am Diskriminator (UHF-Main, IC1) ergaben einen optimalen Anschlußpunkt mit ausreichendem NF-Signal.

TX-Seitig wurde direkt der VCO (VHF-PLL) mit der vom TNC kommenden NF beaufschlagt und brachte nach einer Neueinstellung des NF-Pegels seitens des G3RUH sofort den erwünschten Erfolg.

Nun zum eigentlichen Umbau:

RX:

Die Ankopplung am Diskriminator erfolgte nach dem R 25 3k3 mit einem Stück RG 274.

Der R 25 befindet sich auf dem Schaltplan "UHF MAIN SCHEMATIC DIAGRAM" direkt am Ausgang Pin 9 vom IC1 MC3361D.

TX:

Das TX-Signal wird am R6 47k vom VCO eingespeist. Dadurch ist ein zusätzlicher Entkopplungswiderstand überflüssig (wurde auch getestet, jedoch ohne merklichem Unterschied).

Zu finden ist der Widerstand auf dem Schaltplan "UHF PLL, VCO SCHEMATIC DIAGRAMM".

Um das Koaxkabel anschliessen zu können, ist jedoch der Ausbau der UHF-MAIN Platine erforderlich. Der Widerstand befindet sich nämlich auf der Unterseite (A-Seite) direkt unterhalb des VCO's (das ist der Abschirmblock an der linken Seite, von vorne gesehen).

Der Widerstand ist in SMD ausgeführt. Die notwendige Masseverbindung kann direkt neben den Ankopplungen (RX u. TX) auf den Masseflächen vorgenommen werden (etwas den Lötstopplack freikratzen).

So.. das wars im Prinzip.

Garantieansprüche muß ich leider im vorraus ablehnen! Ich wünsche guten Umbau und awdh auf 9k6.

Ergänzungen:

Hallo Leute,

nachdem nun doch unzählige Nachfragen bei mir eingetroffen sind bezüglich des Umbau's hier noch einige Korrekturen und Tips:

1. Bei mir hatte sich gezeigt, daß die NF-Spannung günstiger ist, wenn man das RX-Signal "nach" dem R 25 (3k3) abnimmt. Bei mir liegt an dieser Stelle ein nachträglich, eingelöteter Kondensator (muß wohl C35 sein) zum VR1.
2. Das TX-Signal kann am einfachsten am C 84 (PIN 9 vom PLL-Block) eingespeist werden. Dieser Kondensator ist zu finden auf der Unterseite der MAIN-Platine, im linken unteren

Drittel, oberhalb der 5 Bauteile Q 13-C81.

3. Das Poti für den HUB am G3RUH sollte so eingestellt werden, daß sich ein TX-Signal von ca. 0,4 VSS einstellt.
4. Die Jumper für die TX-Kurve sollten auf 10 und 11 stehen.

So, das wars von mir.

Ansonsten läuft alles Prima.

vy 73, de Martin @ DB00Q

This modification is read 825 times.

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19-07-1998

(DR-570) RX 850-890Mhz on the DR570T

If you have already opened up the expanded TX/RX ability of the DR570T by cutting the jumper and resetting the CPU, you can also RX 850-890Mhz (and 335-375Mhz) by doing the following:

1. make sure the 2M side of the radio is in VFO mode...
2. push to make 2M the sub-band (440 side is the main band)
3. push ... "SUB" indicator should come on...
4. push ... should see some 350.xxx freq. in the sub-band.
5. push ... should see some 850.xxx freq. in the sub-band.
6. push ... back to "normal" radio mode...
7. push to switch the 850.xxx band to the main band where you can play with it..

Note:

While monitoring the 800Mhz band, the 440 band will be desensed.

This modification is read 913 times.

[top of page](#)

22-02-1999

(DR-570) Expanded RF / Cross band repeater mod Alinco DR-570T

1. Remove Battery and antenna.
2. Remove screws from case and open radio(3 screws in the top and 2 in the bottom).
3. Locate and cut the diode J1 behind LCD display.
4. Turn repeater/radio switch to repeater mode.
5. Reset the microprocessor. (press and hold [FUNCTION] and turn power on.)
6. Remove the twopin connector to disable audio bleed in repeater mode. (optional)
7. Reassemble radio.

19-07-1998**(DR-590) Expanded frq. for DR-590T**

>I just picked up a brand new Alinco DR-590T and have had some problems that
 >I would like to share with you all out there in ham-net land. Maybe someone
 >out there can help me with a couple of these problems.

I guess not too many people have these rigs yet otherwise I would not have to respond to your request. I hope there are others besides yourself that are interested in this information. In any event this is what worked for me (sans jinglish). I am not however responsible for what you do to your rig . . . etc.

>1, I got this unit because of all the cool features it is supposed to have,
 >including cross-band repeat. The instruction manual does not even mention
 >this feature. After calling Alinco I found that this was a feature functions
 >only after modification. They said (more than a week and a half ago) that the
 >would send me the modification instructions. I haven't heard anything from
 >them.

If you ask them (nicely) there are (a few) dudes at Alinco that are willing to help and are smart enough to be helpfull (there is a differance ;-}).

They can fax you the information or even send it to you next day air at no charge if you ask politely or are VERY persistant (as in my case).

Now the big news . . . to modify the rig to xmit out of band (to call the cops etc ;-}), to operate as a cross band remote, etc. follow these easy steps.

1. Remove the control head from the unit (2 screws on each side of the forward part of the rig, near the control head).
2. Hold the control head in your hand face down and remove the two screws you see on the back of the control head.
3. Remove the cover from the back of the control head (it snaps off)
4. Locate a blue loop of wire. There is only one blue loop of wire.
5. Cut, unsolder, remove, destroy, nuke, the blue wire (your choice) [I neither advocate nor encourage the indiscriminate use of nukes]
6. Undo step 3
7. Undo step 2
8. Undo step 1
9. Connect the rig to antennas, power etc as outlined in the manual.
10. Hold down the function key and turn on the power

This is what you will find . . .

The rig now transmits everywhere.

it now will display (not receive) 800Mhz band and 300Mhz band on the 440 side of the display in rotation (press the uhf switch to switch from band to band).

It will now display (not recieve) the aircraft band (yes it does indicate AM) on the 2 meter side of the rig. There is no AM detector presently but I am working on it.

Subject: More 590 Mods?

I read all the 590 mods, and read in the first one there may be more to come. Anymore mods for the addition of extra freqs/bands yet? Have had mine for quite a while, and really like it, just no time to really use it.

73,

Paul Munsel N5XMV

Hearne, Tx.

EM10

This modification is read 919 times.

[top of page](#)

19-07-1998

(DR-590) Cross band operation

To enable cross band remote press (and hold) the function key and then (while still holding the function key) press the vhf switch. Cross band operation is now enabled using the displayed TX and RX frequencies. Splits still function in cross band operation so don't link 2 repeaters together! Frequency selection for each band can be from the vfo, memory, or ARM (a cool Alinco function).

To disable cross band operation simply press (and hold as before) the function key and press the uhf switch. Note: failing to hold the f-key down and then pressing uhf or vhf enables a strange function that I have yet to figure out.

*>2, The Autodialer (an option for the 590E according to page 13 of the manual)
>did not work as in the instructions. Another call to Alinco and I found
>that it is also an option in the 590T. On page 19 it was pointed out to
>me is a note to this effect. These instructions are also unclear. Anyway
>I went out and purchased the required DTMF unit and installed it. Now I
>can store the numbers in the autodialer's memories, however I cannot get
>the rig to autodial any number except the number stored in memory #1. I
>have tried every possible interpretation of the directions on page 13 of
>the manual and had no success. Another call to Alinco . . . they told me
>that they knew that the manual was written in jinglish (japanese/english)
>and was hard to understand. They said that they would send me a complete
>manual written by someone who spoke english as their primary language. I
>asked them why this manual was not provided with the rig and they said that
>it was free to anyone who asked for it !?!*

Simple problem . . . a typing error (translation error?).

Turn to page 13 of the instructions find "Transmitting the Stored Autodialer Number: (DR-590E: Option)

Step 2 should read:

Enter DTMF pad code c14 and select the desired autodialer channel.

*>3, This rig is supposedly able to receive DTMF codes from another transmitter
>What will allow remote control of the rig (useful as a very flexible cross
>band repeater). I have not been able to get this to function on my rig at
>all. I can only hope that possibly the modification they promised to send
>me will enable this function or that the new english directions will be able
>to explain how to make this happen.*

Even the grand Alinco wizzard has not figured this out. He said that he was working on better directions and that as soon as he had them he would send them to me.

*>4, The remote page/DTMF squelch function are completely cryptic I hope they
>are also explained in the english directions.*

Same deal as above. However if you sat around with a friend who also had a similarly equipped rig you could probably figure it out.

*>Anyone with any mods or operation instructions for this rig please let me
>know. Am I the only one with these problems? Does anyone have any solutions?*

>Is Alinco always this slow? etc.?

Here are your mods/instructions. Yes I believe you are. I found the solutions. In my experience Alinco has always operated in this manner.

*>I will post a summary when a solution is found
>so send responses to me at my address:szarekw@lonex.radc.af.mil*

Here is the summary. In case you haven't figured it out by now I am answering my own query. I just figured someone might want the info.

This modification is read 838 times.

[top of page](#)

19-07-1998

(DR-590) Alinco DR-590 9600Bd Modifikation

Hello Om's,

I have modified an Alinco DR-590 for 9600 Baud Packet operation. Due to many questions about that here the solution:

You need:

- 1 small phillips screwdriver
- 1 solderiron with fine tip
- 1 condensator abt. 1uF
- 1 47 Ohm resistor
- 1 4-wire shielded wire abt. 30cm

preparation:

- remove all kables from, to the trx
- remove the trx cover without the loudspeaker
- turn the trx so that the front face towards you
- remove the silver shildingplate from the pa-unit
- put your cable through the unused opening near the uhf-ant cable fuehren
- remove the frontpanel, unlock the link between the panel an the trx
- remove the plastikshild from the back of the frontpanel

soldering:

- take the rx-nf from pin 9 of ic1 (front left), put the 47 ohm resistor in series
- put the tx-nf to the little c in 2 o'clock from vr2, put the 1uf condensator in series
- i soldered the ptt direkt at pin 2 of the micjack, i found no better solution right now
- solder the groundwire somewhere to the ground of the trx

the end:

- reassemble the cover to the front panel
- raassamble the front panel (don't forget the connection front-trx)
- reassemble the shilding plate at the pa-unit
- fasten the cover
- connect your tnc to the new wire

remark:

- the DR-590 can handle 9600 baud, BUT not very good !
- the txdelay must be ≥ 30

February 1996

Kai, DJ9LX - (packet:DJ9LX@DB0RDB.#SLH.DEU.EU - email:DJ9LX@AMSAT.ORG)

This modification is read 771 times.

[top of page](#)

19-07-1998

(DR-599) DR-599ERP 9600Bd

Hallo PR-Fans,

Ich habe mir von der Firma Bo... den ALINCO DR599E(RP) zugelegt. Ja, ich weiss, man kann ihn auch selbst umbauen. Ich musste auch selbst Hand anlegen, da die Fa. Bo... die Auskopplung der NF aus meiner Sicht falsch gemacht hat. Sie haben die NF am IC 1 (3361BD) der UHF Main Unit Pin 16 ausgekoppelt. Der Signalpegel ist hier viel zu gering für ein G3RUH-Modem (und wohl auch für alle anderen Modems). Außerdem ist der HF-Anteil hoch und muß auch noch ausgefiltert werden. Die Auskopplung sollte am Pin 9 dieses Schaltkreises vorgenommen werden. Danach kann man direkt zum G3RUH-Modem gehen und alles läuft (RX-seitig).

Die TX-Seite wurde von der Fa. Bo... richtig eingekoppelt und zwar hinter dem C68 und vor VR2.

UMBAU

1. Gehäusedeckel mit der beschrifteten Seite entfernen (ALINCO DR-599E).
2. Gerät mit dem Lüfter auf sich zeigend hinlegen.
3. Ca. in 1-2 Uhr Position (von der Mitte) befindet sich der IC 1, MC 3361 BC. Hier ist am Pin 9 die NF auskoppeln.
4. Ca. in 11 Uhr Postion (von der Mitte) befindet sich C68. Hier an der abgewandten Seite die NF vom Modem einspeisen. (Zwischen C68 und VR 2)

Es versteht sich von selbst, daß abgeschirmte Kabel benützt werden müssen. TX-seitig ist ein ca. 1µF Kondensator einzufügen ("Gleichstrom-Vernichter"). Wie mir bereits die Fa. Bo... sagte, ist die HUB-Einstellung beim G3RUH Modem sehr kritisch, ich habe deshalb diese geändert:

HUB-EINSTELLUNG BEIM G3RUH

Die Hub-Einstellung beim G3RUH Modem ist in ihrer ursprünglichen Form ungeeignet für den DR599E (wie übrigens auch bei fast allen anderen Geräten). Man muß das Poti fast ganz zudrehen, sonst sendet man unversehens mit einem Hub von 100kHz, ein bißchen viel. Um diese Einstellung etwas feinfühler vornehmen zu können, habe ich einfach einen 33k Widerstand zwischen das Poti P1 (10k) und dem Pin 1 des IC 12 A (LM 324) gelötet.

An dieser Stelle der Hinweis, daß ich für Umbauten und eventuelle Schäden keinerlei Garantie übernehme.

Ich möchte hervorheben, daß die Zusammenarbeit mit Herrn Boger recht gut war. Er empfahl mir die entsprechenden Pegel auf der NF-Seite zu messen und gab mir dafür Richtwerte. Somit war mir klar, daß bei meinem Gerät etwas falsch angeklemt sein mußte. Dem Gerät war außerdem ein Schaltplan (allerdings ohne die PR-Änderungen) beigelegt. Außerdem war der passende MIC-Stecker für die PTT dabei.

Herr Boger erklärte mir außerdem von vorn herein, daß die HUB-Einstellung beim Sendebetrieb einer besonderen Sorgfalt bedarf. Die Änderung am G3RUH kann ich wirklich prinzipiell empfehlen. Jeder wird dies auch selbst bemerken, wenn der Pegelmessungen am G3RUH Modem macht.

73 und viel Spaß mit 9600 Baud wünscht Jens, DL7VHS @ DB0BLO

This modification is read 874 times.

[top of page](#)

19-07-1998

(DR-599) Expand RX for DR-599T AM

If you take off the removeable front panel and remove the two phillips screws holding the front panel together, you will find two jumper wires (one red, the other blue). Cut both jumpers and reset (funct + power).

Remember to write down all your memories. You will find that the radio will receive on 108.00 to 142.990 AM on the vhf side and 850.000 to 909.9875 on the uhf side. To activate the (EXTRA OPTIONS), just press the VHF and also the UHF BAND buttons twice. With each press, you will activate either the normal or the EXPANDED band capabilities of the radio. It's nice when a Ham creates a rig to do things for other Hams. Look Ma, no special wiring or soldering to do. just cut some jumpers and away you go.

This modification is read 974 times.

[top of page](#)

19-07-1998

(DR-600) Activate 108 - 142 MHz and 810 - 998 MHz Receive

- Remove head unit from radio and open it up.
- Inside you will see a red and blue wire.
- Cut the red wire.
- Open the main unit and attach a wire to CN-205. This will be your antenna for 810-998 MHz.
- Close everything up.
- Reset the CPU by holding down the FUNC key while you turn the radio on.

To use:

The VHF key toggles between 108-142 and 2m. This toggle only works in VFO mode.

The UHF key toggles between 810-998 and 70cm. This toggle only works in VFO mode.

Chris Levin

levin@cosmic.physics.utah.edu

This modification is read 825 times.

[top of page](#)

19-07-1998

(DR-600) Extended TX/RX on 2m and 70cm

- Remove head unit from radio and open it. (2 screws on back)
- Inside you will see a red and a blue wire.
- Cut the blue wire.
- Put everything back together.
- Reset the CPU by holding down the FUNC key while you turn the radio on.

You can now transmit and receive on the following freqs: 130-174MHz and 400-517MHz

Chris Levin

levin@cosmic.physics.utah.edu

This modification is read 826 times.

[top of page](#)

19-07-1998

(DR-600) Installing Antenna Connection For 800MHz Band

The radio will receive this band as shipped from the factory after the above modification, however, there is NO ANTENNA connected to the input.

On the back of the radio you will notice three holes in the heat sink next to the 70cm antenna lead. You will need to add a third coax lead through this hole and connect it to the 800MHZ input. Remove the covers from the radio and follow the 70cm coax into the radio. The UHF portion of the radio is located on the bottom half of the radio. Remove the RF shield covering the transmit area by removing the 4 screws holding the shield to the chassis. You will notice a small coax cable going from the transmit section to the receiver next to the 70cm antenna coax.

In the receiver section it plugs into a small connector soldered to the board at a 45 degree angle. Along the outside edge you will see another connector of the same type labeled CM50, this is the 800MHZ input. You will need to solder a coax cable from this open connector, route it through the transmitter section and then through the open hole in the heat sink. There is a nice channel cut in the chassis where the coax will lay nicely so it won't get pinched when the RF shield is replaced. I just soldered the end of the coax center conductor and then filed it down to fit snugly in the socket. The coax shield is soldered to the connector housing. This is the best option for making the connection unless you can find the proper connector for the socket. I left about 6 inches of coax hanging out the back of the radio and installed a BNC connector.

Any type of small diameter coax should work, I used a small piece of RG-58. The last step, reassemble the radio being careful to not pinch the internal wiring.

I found the sensitivity between 810 to 889 to be excellent, varying between .15 to .35 u/V. Though it will receive between 810-998MHZ, outside the 810 to 889 range the sensitivity is extremely poor. The aircraft band, 108-142 is very sensitive across the entire band.

This modification is read 794 times.

[top of page](#)

19-07-1998

(DR-605) Alinco DR-605T extended RX/TX

I have tried an experiment and it worked. I researched how alinco has done their mods on their other radios and I found they usually have a red and blue wire which opens up the TX. The DR-605T only has a blue wire. After removing mine I found that the radio can now transmit from 135 to 173 and from 400 to 499 (into a Dummy load). I make no promises. You're completely on your own, and this probably voids the warranty.

Steps:

1. Remove the top cover (four screws).
2. Hold the radio face down on a cloth.
3. If you look down inside the front cover you can see the single blue wire. It attaches to the surface of the board with two solder joints. Remove the jumper.
4. Replace the top cover.
5. Hold down the function key and repower the radio. This resets the computer and you will lose your memory channels.

Remember it is illegal to transmit out of the band that the radio was type classified for...

John KC8JMP

Date: 20-03-2002

User comment

From: [TREVOR .P ZR6TR](#)

Subject: BAD RX

HI I DID THE SOFT MOD ON MY 605 AND FOUND THE RX &TX 400-420 UN SATISFACTORY FOR USE AND AM LOOKING FOR A NEW RIG.

Date: 23-03-2002

User comment

From: [David](#)

Subject: Bad RX

I assume you took into consideration that the Antenna you are using was probably not optimized for out of band reception. If not, you may not need a new Rig but rather need to build yourself a dipole or something that suits the radio's new range of frequencies.

This modification is read 2536 times.

[top of page](#)

30-01-2000

(DR-605) Alinco DR-605E Extended TX/RX and Cross band repeater.

You can software program your radio for extended TX and X-band operation.
The details are as follows:

1. Place radio in Key Lock mode (Func + TOT)
2. Press V/M, MHZ and Moni keys in this order three times
3. LCD shows Open. Press any key to clear Open
4. Exit Key Lock mode.

Gi6IRL 17/8/99

This modification is read 2366 times.

[top of page](#)

09-02-2000

(DR-605) Soft mods for the Alinco DR-605

Press function and "lock" button does appears lock fuction.

Then TX are locked press : --> v/m -> mhz -> monitor--> v/m -> mhz -> monitor--> v/m -> mhz -> monitor.

Then the display appears "OPEN"

Unlock the transiever and go :)))

This modification is read 2272 times.

[top of page](#)

19-07-1998

(DR-610) Frequency range expansion DR-610E/EA

1. The expansion can be done through keyboard operation.

First bring into key-lock, then press CALL, REV and RC in this sequence three times.

You will see OPEN on the LCD.

Then press any key once to erase OPEN and unlock key.

2. Note: Resetting will bring back to the original diminished range. Make sure you remember the above sequency before resetting.

3. Expanded modes

The radio can be channelized

The radio can be set to Cross Band Repeater

The radio can receive AM on the left side band

4. The range of 800 MHz band is now available but for actual receiving do as follows:
Remove the lower case of the main body and make short circuit on "D" pad.
The "D" pad will connect the 800 MHZ receiving circuit with the antenna terminal. Without shortening the D pad the antenna is not connected to the 800 MHz receiving circuit.

Expansion by hardware

1. Remove R575 for RX expansion
2. Remove R575 and R566 for TX and RX expansion and mode expansion related above
3. Removing the R566 only will expand neiter RX nor TX.

Important:

Reset after removing the R575/R566, that is, while pressing FUNC turn on the power. After expansion by hardware resetting will not diminish the range.

Channelizing

(Making the LCD to show only the minority channel numbers)

1. First perform the frequency range expansion (as shown in the previous pages).
2. Then, while pressing REV, turn on the power to Channelize.
3. To come back, while pressing SRCH, turn on the power.
4. Notes on the channelized mode:
 1. Memories must be programmed before channelizing.
 2. The following functions are not operable if once channelized: Packet, APO, Channel scope, Bell, Mon, Key Lock, Scan Previous Settings, if any of the above functions they are automatically cancelled.
 3. PTT and CT indications cannot be moved now.
 4. Only the following functions are available on the channelized mode: Cannel UP/DOWN now works synchronized between left and right. Only those channels written in the main band side will be accessible (TX will take place always on the mainband side). Power H/L, Autodiler, LITZ, CTCSS (operation only, not setting), DSQ (operating only, neither setting nor programming).
 5. Resetting is not possible on the channelized mode.
5. Full duplex trunking logic board EJ-21 is available as an option.

This modification is read 1353 times.

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19-07-1998

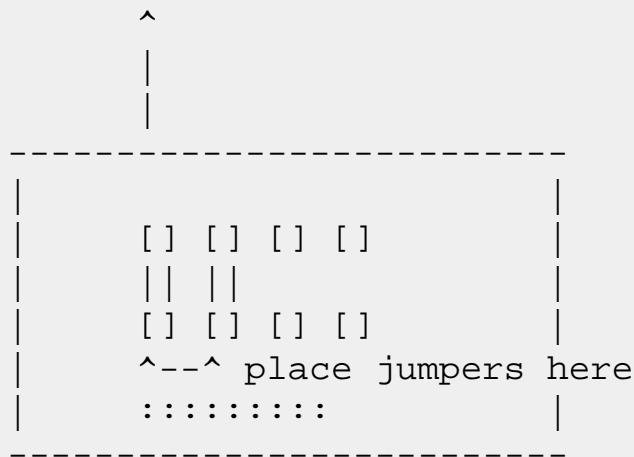
(DR-M06T) TX and RX MOD DR-M06T Alinco

RX 32-87Mhz

TX 42-70Mhz

1. Remove top and bottom covers.
2. Remove the main dial from the case
3. Remove the front plastic case.
4. Unscrew the 3 screws on the control unit and remove.
5. Locate jumper locations (see diagram)
6. Place solder on the left 2 locations.
7. Reassemble the radio.
8. Reset the Microprocessor (press and hold [FUNC] and turn on)

Control unit backside



Expanded RX only Mod RX 40-60 TX 50-54

Press and hold the [CALL] key and turn radio on

Thats it.

This modification is read 1051 times.

[top of page](#)

19-07-1998

(DR-M06T) Channel display MOD

Press and hold the [TOT] key and turn radio on.

the radio will no display channel numbers.

This modification is read 844 times.

[top of page](#)

19-07-1998

(DR-M06T) Extended RX and TX for DJ-M06T

There's a hardware mod for extended transmit/receive. I have NOT done this, but have been assured by the Technical Editor of a respected UK ham radio magazine that it's ok. The coverage will become 40.000 to 72+ MHz, though I understand that the power falls off at the top end, and the receiver performance is lousy on the (UK only) 70.000 to 70.500 (4m) ham band:

1. Remove the front panel (I know that's easier said than done. That's why I haven't tried it yet!)
2. Locate a pair of solder blobs on the pcb directly behind the display and short them together.
3. Re-assemble (again, easier said than done).

This modification is read 937 times.

[top of page](#)

19-07-1998

(DX-70) TX and RX MOD DX-70

Extended TX, open the RX up to 35Mhz and down to 30 Khz, Open the VHF side from 45-60 Mhz RX/TX. All can be done quickly by , by removing or changing a series of chip-resistors located in the detachable front face panel. This mod is a little tricky to perform, since it uses surface mount devices, so I TAKE NO RESPONSIBILITY IF YOU BREAK YOUR RIG.

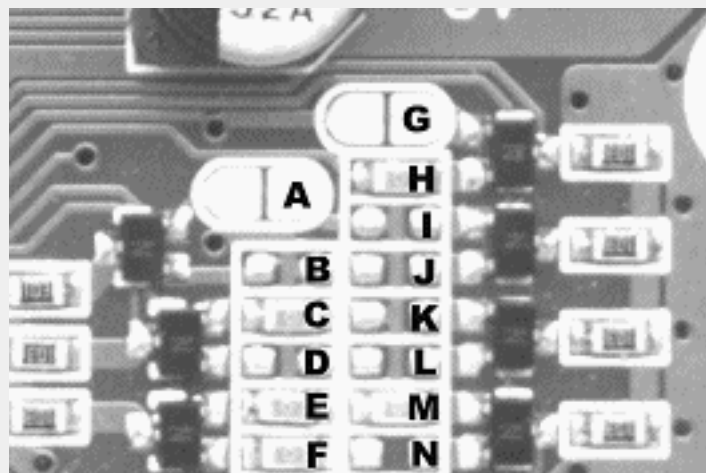
Alinco, further, in their mod sheet, warns that performing this mod incorrectly will NOT BE COVERED via warranty. At first, I tried using a Salami sized soldering iron--- take my word, get a good, very fine point iron of about 15 or 20 watts max! Make sure it is static guarded too.

Ok...Here we go.

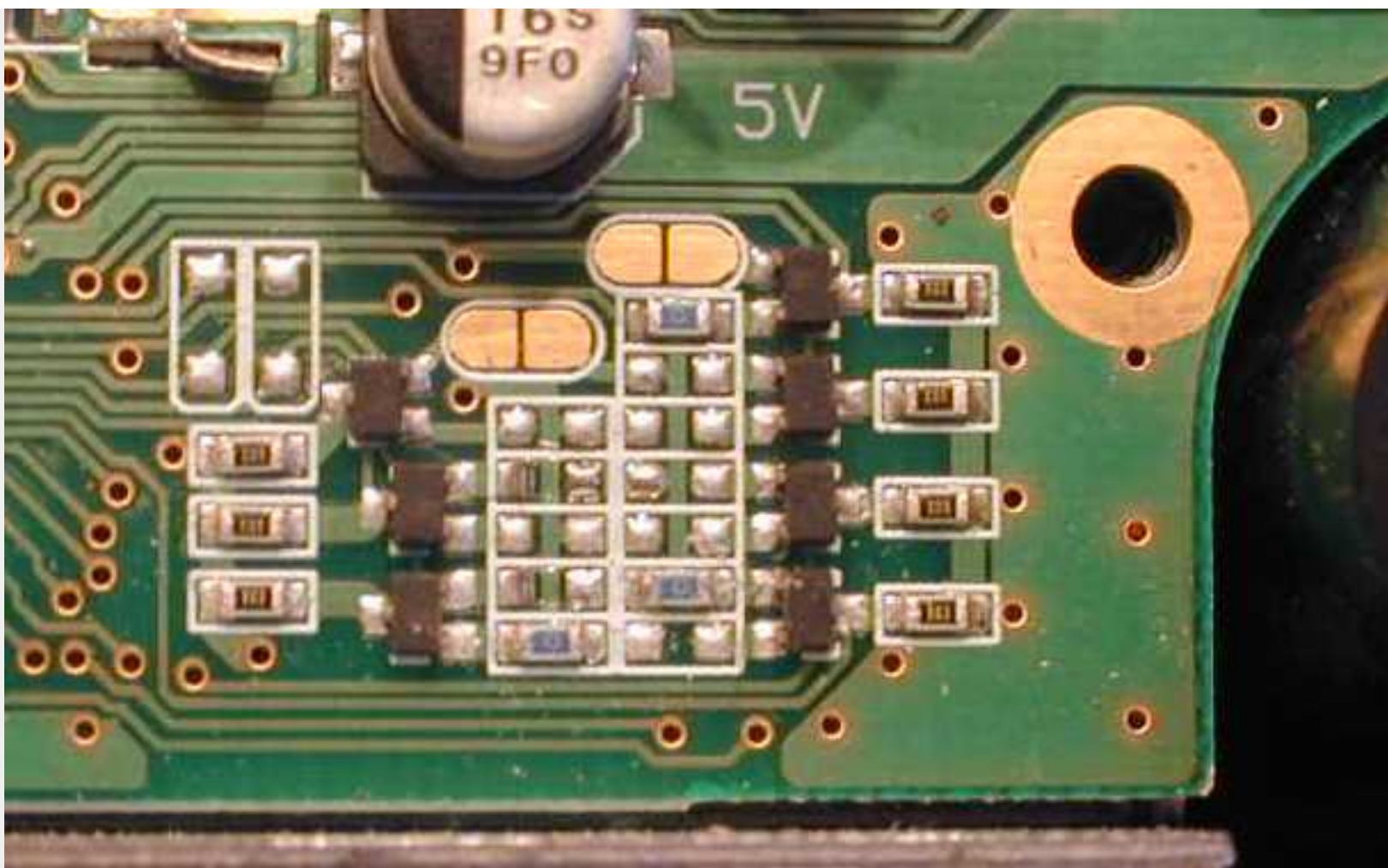
1. disconnect power
2. disconnect antenna
3. remove control head, disconnect control cable
4. remove 4 screws on back of control head,
5. remove (unsnap is more like it) the control head back panel.
6. THE MOD:

Once you have the back panel removed, and using the big VFO knob as your guide (circuit board facing you, LCD display not facing you). The VFO knob should be on the left side. On the right side, in the lower right hand corner, you should see 2 distinct columns of chip resistors.

On the board, they are NOT labeled, but I will draw the diagram below to help you. You cant miss these because there are 5 chip resistors in the left-hand row, and the right-hand row has 7 chip resistors. Above both rows is a solder-pad.



Thanks to [W7TBY](#) for the photo.



Several chip resistors will be soldered in, depending on the model of your rig, and a solder pad is jumpered. Here are the mods per Alinco:

- A. HF RX down to 30 Khz - remove the jumper m
- B. beyond just Mars Mod - TX/RX everywhere remove both jumpers c and e
- C. HF RX up to 35 MHZ - solder a bridge across pad a

After performing the above mods, reassemble the unit.

7. DONT FORGET to reset the microprocessor (with the radio off, hold the F button and simultaneously turn the power on. All memories are wiped out, but the new bands are opened.

I've tried all mods with my Alinco rig and can confirm they work. I am able to pick up business band communication in the 46 Mhz range (FM), and cordless phones in 46/49 range. It TX's everywhere now too.

I do not take responsibility if you perform this mod incorrectly, and I am not responsible for your operation practice if you choose to illegally transmit out of band.

Thanks and again, sorry for such a delay in getting this out here.

73 de Joe BV/NOIAT Taipei, TAIWAN (FORMOSA)

Date: 15-02-2002

User comment

From: [kc9aao](#)

Subject: step 7

what is the "f" button listed in step 7?

27-02-2000

(DX-77) Mod for transmit from 1.8 MHz to 30 MHz for DX-77T and DX-77EQ

1. Remove top cover.
2. Look at circuit board behind from panel and you will see a jumper labled "D".
3. Cut or remove jumper.
4. Reset radio per instructions in operator manual

26-10-2001

(EC-10) Stepweite EC10 Info

Author: Hans, DL4OCJ

Hallo Allerseits, also, die Stepweite lässt sich lt. Alinco nicht verändern. Das Problem scheint ja wohl zu sein, daß man nach dem Durchkneifen des Draghtes (für Frequenzerweiterung) und dem RESET nur noch 5kHz-Schritte hat, was für einen Funkamateure Mist ist. Das kann man ändern. Der Trick ist dies:

Den Draht durchkneifen und KEINEN Rest durchführen, so hat man die QRG-Erweiterung und 12.5kHz-Schritte. Mit der taste "F"unctin kann man dann 1MHz, 100kHz und 12.5kHz anwählen. Übrigens, nach der Erweiterung kann man , wenn man während des >Sendebetriebs auf SCAN drückt, auf 10mW TX-Power umschalten.

Eine Option, die ich noch nicht heruasgefunden habe, und wohl auch nicht funktioniert:

PTT,UP und DOWN gleichzeitig drücken und das Gerät einschalten, dann wird der Clonemodus aktiviert. Drückt man dann PTT, will das Gerät wohl senden, geht aber nicht (ERR erscheint).

Wenn einer mehr weiß, wüßte ich auch gern mehr. Pse Message in meine Box oder ALINCO. TNX im Voraus !

26-10-2001

(EC-10) EC-10 packet-untauglich

Author: *Karl DK5EC*

Hallo Alinco-Kenner,
Ich habe hier ein LPD-Geraet EC-10, und wollte da mal Packet versuchen. Ich habe die APO (Automatic Power Off) Funktion abgeschaltet.

Wenn das Geraet etwa nur 15 sec nicht betrieben wurde, oeffnet der Squelch erst so nach einer Sekunde. Bei Packet ist das natuerlich toetlich, da der der erst Ruf dann grundsaeztlich verloren geht.

Das Ding scheint vermutlich so nach 15 sec in einen "Sparbetrieb" umzuschalten, der Empfaenger ist also nicht voll da bzw. nicht sofort empfangsbereit. Erst wenn ein Signal laenger als 1 sec empfangen wird, dann oeffnet der Squelch und laesst das Signal durch.

Wenn da einer einen Tip hat, diese Verzoegerung abzustellen, oder die Zeit von derzeit ca. 15 sec (Sparbetrieb) auf mehrere Stunden einzustellen, waere ich sehr verbunden.

73, de Karl DK5EC aus Koenigswinter

This modification is read 733 times.

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