- TNC2H-Einstellung: Modulationsregler weniger als 9Uhr-Stellung (nur wenig aufgedreht)
- Dip-Schalter zur Filtereinstellung:

```
5 Unten
6 und 7 Oben
8 und 9 Unten
```

SCHLUSSBEMERKUNG:

Der Umbau ist nicht ganz unkritisch. Probleme gab es z. B. beim Ausbau der Antennenbuchse. Der Umbau erfolgt auf eigenes Risiko!

Ich habe an meinem Gerät zusätzlich das 12,5khz ZF-Filter (Subminiatur) gegen ein normales handelsübliches 20khz-Filter ersetzt und an einem freien Platz mit Heisskleber fixiert und mit abgeschirmten Zuleitungen verdrahtet.

Hierzu musste allerdings die ZF-Unit ausgelötet werden, um das Keramikfilter auszubauen.(Vorsicht geboten !)

Noch Irgendwas an der PLL zu manipulieren, war mir das Risiko nicht wert, da diese total zugelötet ist. Man erreicht ein bescheidenes TX-Delay von etwa 180ms, wobei ich an dieser Stelle auf quarzmodulierte Geräte hinweisen möchte, die in jedem Fall vorzuziehen sind!!!

Trotzdem, vy 55 + 73 de Walter, DL2SEW @ DB0LX

top of page

19-07-1998

(FT-815) YAESU FT-815 expanded frequency range

Remove the screws holding battery track and rear cover. Locate the "CONTROL UNIT".
Close jumpers 3, 5, AND 7 if not allready closed, 6 must be open. Let other jumpers unchanged.

Reassemble the radio.

Turn on the radio and program it as following:
"1" 135.000 PRESS VFO THIS IS LOWER RX LIMIT
"2" 185.000 PRESS VFO THIS IS UPPER RX LIMIT
"3" 135.000 PRESS VFO THIS IS LOWER TX LIMIT
"4" 185.000 PRESS VFO THIS IS UPPER TX LIMIT
Press and hold MR, VFO and 2 while TURNING ON if you need to reset or reprogram the radio.

YAESU FT-815 expanded frequency range

Same as above.
Close jumpers 1, 5, and 7.
Program 420 to 460 mhz as above.

NOTES:

Jumper 9 is for battery back-up.
Jumper 10 is for 1750 Hz repeater tone acces.
Jumper 1 is for 25 KHZ steps default value.

top of page

19-12-2001

(FT-816) Extended frq.

1. Remove battery and antenna
2. Remove the 4 screws holding battery track.
3. Remove 2 screws in the back case.
4. Carefully separate the front cover.
5. Locate jumper pad 5 and 7

```
     +-+   +-+
+----+ ¦   ¦ +-----------------+
¦  ()  +---+               6   ¦
¦   9  ()10          5()  ()   ¦
¦  +----+            1()  ()2  ¦
¦  +----+  +------+  7()  ()8  ¦
¦          +------+  3()  ()   ¦
¦  +---+                   4   ¦
¦  ¦   +        +-------+      ¦
¦  ¦   +        ¦ Speaker      ¦
¦  +---+        ¦       ¦      ¦
¦               +-------+      ¦
+------------------------------+
```

6. Solder pads 5 and 7 (ped 9 already jumped.
7. Carefully reassemble all radio.
8. Reset the microprocessor.(press and hold [mr] [2] and [vfo] and turn the radio on.
9. The radio display will cycle orderly through the memory channel.
10. Press [f] [0] and [6] and select 5.000 mhz channel spacing in each vfo.

    enter the following band limits.

```
CH. 1    410.000   Press [VFO] Lower Rx
    2    510.000   Press [VFO] Upper Rx
    3    400.000   Press [VFO] Lower Tx
    4    510.000   Press [VFO] Upper Tx
```

Note: The VCO may need to be adjusted for TX above 460 Mhz

This modification is read 403 times.

top of page

02-01-2001

(FT-817) Battery mod for ft-817

Yaesu folks want you to buy the 9.6 vdc battery pack and do not recommend you attempt to charge batts. from the included "stock" alkaline pack.
They have even rigged the pack so it will not charge. Poking around with a VOM I discovered that there is a way to make the alkaline pack charge. Pull out the pack and peel the tape off of the end with the wires.
You will find 2 red wires, 2 black wires and a green wire. cut and insulate the green wire. Put Nicads or NiMh Batteries in the the pack and set up the charge time circut. I have done this with no problem. This keeps you from breaking the bank buying alkaline cells and give you portable batt. power.

Two words of caution:

As with all mods, the warranty is affected, do so at your own risk.

By during this mod you have now disabled the protection feature and can re-charge alkaline batts.
This could be dangerous and messy...be careful not to do that. Of course with this mod, you will have little reason to use alkaline cells.

Enjoy. I look forward to hearing about other ft-817 mods for this nifty little rig.

Date: 09-04-2001 **User comment** **From:** Bill - WA6CCA

Subject: Install fuse.

When you do the "green wire mod" on the FT-817 to permit charging of internal NiMH or NiCad batteries, it's very important to install fuse protection or you could ruin your motherboard (a VERY expensive mistake).

Perhaps the easiest way is to install a 2-3 amp Pico fuse in line with the positive (red) wires leading to the battery pack. Better still, put another Pico fuse in line with the negative (green) wires also.

Bill
WA6CCA

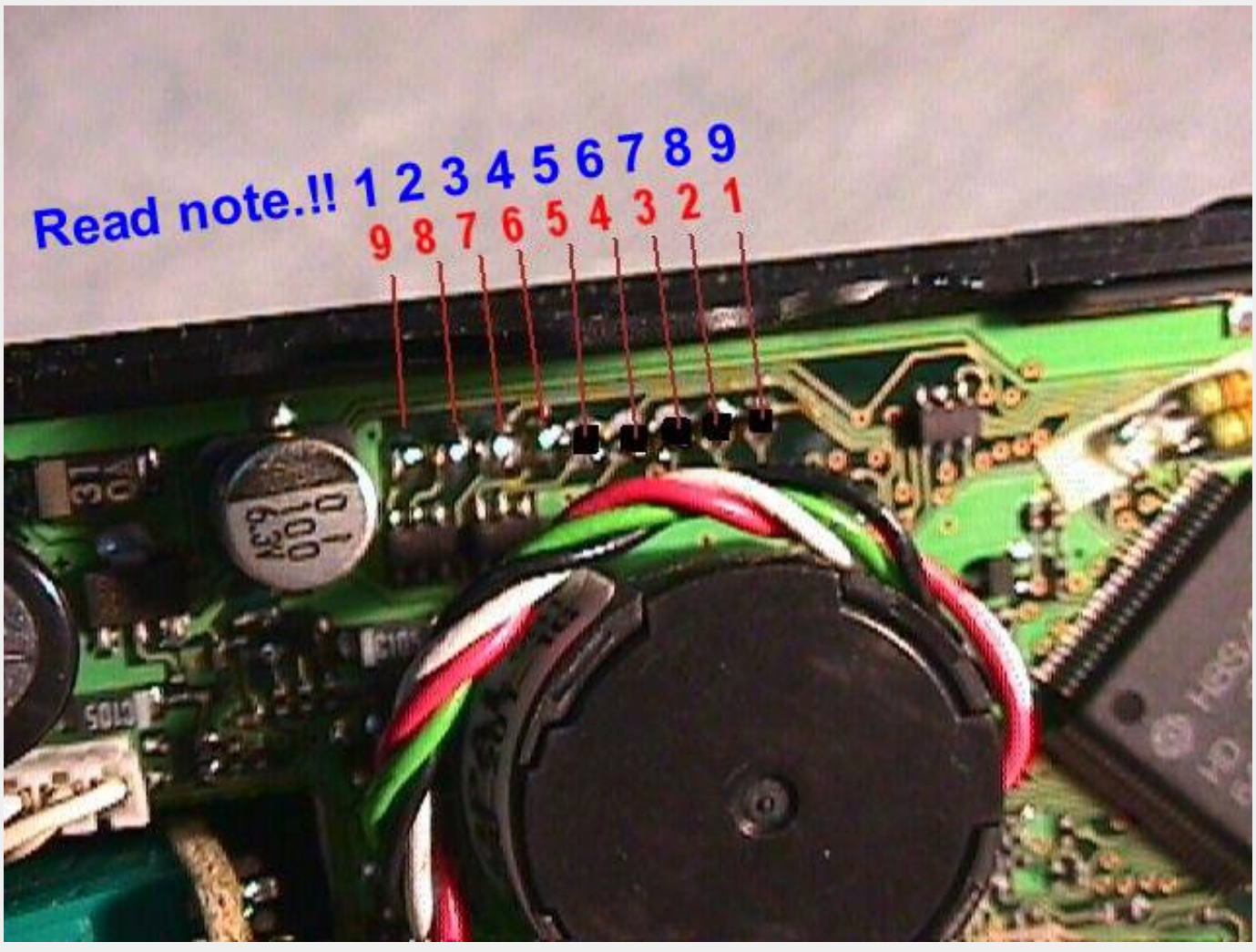
This modification is read 8273 times.

top of page

20-01-2001

(FT-817) Extended TX for FT-817

1. Remove the front panel
2. Look down on the back of front panel, with the VFO knob just left of center. Look at the jumper locations just above the VFO knob on the circut board. Solder the first four jumpers and remove the solder at location five.
3. Reassemble the radio, and reset the cpu by pressing the HOME and the power button.



This will extend the xmit freqs. on HF,VHF and UHF

Another mod.

The following Yeasu FT-817 frequency expansion modification is identical to the version provided by the manufacturer for MARS/CAP application.

1. Remove any power or battery from the Radio.
2. Remove the 14 screws holding the top and bottom covers to the radio.

3. Remove the battery cover latch.
4. Remove the covers.
5. Remove the BNC retaining nut.
6. Carefully lift the 4 plastic tabs holding the front panel to the chassis and slightly move the front panel forward.
7. Disconnect the ribbon cable that connects the chassis and the front panel.
8. Remove the jumper at location on Front Panel (J4005)
9. Press and hold the "VFO/MR" key and the "F" key while turning on the radio.
10. Reassemble the radio.

Note: The manufacturer states that "this modification opens up transmit coverage for MARS/CAP ONLY!" Other published modifications also have the user bridge the "first four jumpers". The difference between the two modification schemes has not been tested by the author.

Proceed at your own risk.

AA7W

pigeon3@gte.net

Date: 22-10-2001 **User comment** **From:** webmaster

Subject: Important about the photo.!

I have not this radio by myself, so i can verify the modification by myself.

About the photo, i have received messages that telling me that the numbers order should be reverse, so that the smallest number (1) should start from the left side, and not the right side.

Following has reported that the **BLUE** numbering is correct:
Rob Boux (ve4rrb) boux(a)shaw.ca
Tim Salisbury (KD7MBN) timsalisbury(a)qwest.net
Jim (W7LS) w7ls(a)blarg.net

Date: 29-12-2001 **User comment** **From:** Andrew VK3EGR

Subject: The BLUE numbers are correct .

I tried the extended TX modification using the blue numbers in the photo ie : where jumper 1 is at the left, and it worked. I found, tho, that you have to hold down the F and V/M buttons together whilst powering up the FT-817 for the changes to take effect.

Date: 15-01-2002 **User comment** **From:** Igor OM3CUG

Subject: The BLUE numbers are correct

I tried the extended TX modification using the blue numbers in the photo, where jumper 1 is at the left it works. Reset CPU: hold down the F and V/M buttons together whilst powering up the FT-817 for the changes to take effect. 73 Igor OM3CUG

Date: 22-02-2002 **User comment** **From:** 9M2ZC

Subject: Tx freqs

What are the new TX freqs. after the mods for all the specified bands??

Date: 22-02-2002 **User comment** **From:** Lars SM4IVE

Subject: Extended TX

Well after doing the mod & soldering the pos 1,2,3,4 and reseting the unit my ARS funtion disapered?
Have any one else noticed this.
greetings Lars

Date: 23-02-2002 **User comment** **From:** Mike KB3HND

Subject: Marine Band Capability?

Will this TX modification permit the 817 to transmit on marine band frequencies? We would like to use the transceiver as a back up on our sailboat.
Mike KB3HND

Date: 02-03-2002 **User comment** **From:** Bill-WD5INA

Subject: Verifed Jumper IDs

I rang out the jumpers to the foil traces on my FT-817 and found that the red numbers of the photo above agree with the schematic included with my radio. J4001 ~ J4009 follow the numbering in red from 1 ~ 9. This then changes the four (left hand) jumper IDs to 6 ~ 9 (J4006 ~ J4009) that should be shorted in order to open the transmit range of this rig.

My radio was a type BY3 (purchased in Singapore Feb. 2002). When I opened it up, jumper five (J4005) was not soldered but position 6&8 (J4006 & J4008)were. I soldered position 7&9 (J4007 & J4009)and checked out the rig. This mod opened up the transmit capability just as the posted mods above stated. No negative results were noted.

This modification worked on my rig, I take no credit or blame for your results.

Date: 27-03-2002 **User comment** **From:** Steve G8SBF

Subject: Extended TX FT817

I have a UK purchased FT817 and will travel to the USA soon where they use a different 70cm and 2m allocations. I want to modify the UHF Tx band limits to also cover 440-450MHz and 144- 148MHz as well as the 430-440MHz allocation here. Does anyone know whether the modification listed expands the UHF transmit to cover 430-450MHz and whether modifying the rig affects any other features. The US model has a front panel RF gain control - does the mod affect the function of this knob?

Thanks, Steve G8SBF

This modification is read 11558 times.

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18-03-2001

(FT-817) Hidden menu for YAESU FT-817

Author: *Noel - ON7XV - noel.vdb@worldonline.be.MODIFICATION.NET*

Just push and hold A, B and C simultaniously while putting the rig on, and you're in the hidden menu with about 57 settings.

Number 5 for the 2 meterband will increase sensitivity while increasing he numbers; Default setting / 79.

To leave the menu just push and holf the F function just as the "ignition" switch will do .

It works...
Noel - ON7XV - Belgium

This modification is read 8968 times.

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07-04-2001

(FT-817) FT-817 Tips

Author: *Volker - DL6OBU@qsl.net.MODIFICATION.NET*

Hallo liebe FT-817 Fans,

ich bin seit kurzem zufriedener Besitzer eines solchen Gerätes und möchte hier ein paar Tips loswerden, die entweder aus dem Internet stammen oder auf meiner eigenen Meinung beruhen.

Bevor es ins Eingemachte geht eine wichtige Anmerkung-ein besonderer Schwachpunkt ist das Batteriefach:

Beim Herausnehmen der Batterien ist darauf zu achten, daß diese nicht den Bodendeckel berühren. Dieser ist an der Seite, wo die Batterien darunter verschwinden, extrem schlecht entgratet. Es gibt leicht Kurzschlüsse nach Masse, wenn die Plastikhülle der Batterien beschädigt wird.
Dies ist besonders unangenehm bei der Bestückung mit Accus, weil diese einen "guten" Kurzschlußstrom liefern. Ich empfehle eine starke Folie dazwischen zu legen.

Grundsätzlich sind VOR dem Öffnen des Gehäuses auf jeden Fall die Battereien zu entfernen und eine externe Spannungsversorgung abzuklemmen!!!

Tip1- Betrieb mit Accus:

Das Batteriefach kann natürlich auch mit Accus bestückt werden. Wer die Accus nicht extern, sondern mit dem internen Timer laden möchte muß den grünen Draht, der zum Batteriefach führt irgendwo unterbrechen und die Enden isolieren, damit ein Accu erkannt wird. Wer wegen der Garantie eine reversible Änderung vorzieht kann im Stecker den entsprechenden Pin mit etwas Geschick und einer Nadel herausholen.
Weil der Yaesu-Accu nur 1000mAh hat und es für weniger Geld bereits 1600mAh NiHy Accus gibt kann ich das nur empfehlen! Beim Laden der Accus ist zu beachten, daß eine geeignete Ladezeit im Menü gewählt wird. Der Ladestrom ist etwa 170 mA.
Nach Ladeende fließt ein Erhaltestrom von 15 mA, es dürfen also keine Trockenbatterien mehr eingelegt werden wenn eine extere Spannungsversorgung erfolgt!!!

Tip2- Erweiterung des TX Frequenzbereiches zum Betrieb mit Transvertern

Hierzu ist zu sagen, daß im Internet Meinungen existieren, daß sich nicht alle FT-817 erweitern lassen- dies scheint zumindest bei den für den japanischen Markt gebauten zu stimmen. Mein Gerät, Serien-Nr. 1C20nnnn, mit CE-Zeichen, war in der Hinsicht freundlicher.

Den Lieferzustand habe ich nicht exakt in Erinnerung, auf KW / 6m waren es die DL Amateurbereiche und auf VHF / UHF erheblich mehr. Nach der u.a. Änderung ergab sich folgendes Bild:

TX: 1,8 - 33 MHz überall max. 5 Watt

TX: 33-56 MHz, 140-154 MHz, 420-470 MHz hier fällt außerhalb der USA-Amateurbänder die Leistung ab.

Die ARS-Funktion ist außer Betrieb, was (mich) aber nicht stört- man kann den Repeaterbetrieb und die Shift weiterhin von Hand einstellen. Der 1750 Hz Tonruf bleibt erhalten.

Nun zur Änderung:
Batterien entfernen (s.o.)
Alle Schrauben von Bodenblech und Deckel (nicht die direkt am Lautsprecher) lösen. Dann die beiden Bleche entfernen. Hierbei bitte beim Bodenblech den Riegel für das Batteriefach im Auge behalten- die zwei Federn sind schnell weggesprungen!

Wenn man schon mal die Deckel ab hat kann man auch mit einer Feile den Grat beim Batteriefach entfernen...

Das Flachbandkabel zur Frontplatte lösen, hierzu muß dessen Verschluß an der Platine vorsichtig hochgeklappt werden. Die Frontplatte nach vorne lösen, dazu die vier Plastikklemmen anheben.

Die Reihe mit den neun Lötbrücken ist leicht zu finden. Bei mir waren sie folgendermaßen gebrückt: =0=0=====

0 heißt dabei geschlossen und = offen

Mit: 0000===== ergibt sich die oben beschriebene Variante.

Vorsicht beim Löten, etwas Erfahrung sollte man schon haben um keine unerwünschten Kurzschlüsse zu produzieren!

Ganz wichtig- Nach dem Zusamenbau muß unbedingt der folgende Reset durchgeführt werden:

Die F und V/M Tasten gleichzeitig festhalten und den FT-817 einschalten. Dabei werden leider alle Speicher und Einstellungen gelöscht !

So, nun noch eine Frage zum Schluß:
Der Ft-817 ist ja angeblich "PR-tauglich", hat schon mal wer die Umschalt-zeiten (TXDelay) gemessen- sind sie wirklich für 9600Bd in einer vernünftigen Größenordung ???

73 de Volker in Hannover,
packet: DL6OBU @ DB0CEL.#NDS.DEU.EU
e-mail: DL6OBU @ QSL.NET
19.03.2001, 17:32:05 (Local Time)

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23-05-2001

(FT-817) YAESU FT-817 Servicepoints

Author: *DL5GBL*

(push A/B/C synchron and start device)

```
Number;Content;Point;Declaration;
1;HF1RXG RX GAIN;1.8MHz;181;
2;HF2RXG RX GAIN;7MHz;91;
3;HF3RXG RX GAIN;21MHz;123;
4;50MRXG RX GAIN;50MHz;66;
5;VHFRXG RX GAIN;144MHz;90;
6;UHFRXG RX GAIN;430MHz;117;
7;SSB-S9 SSB S-Meter;S9;70;
8;SSB-FS SSB S-Meter;FS;59;
9;FM-S9 FM S-Meter;S9;76;
10;FM-FS FM S-Meter;FS;109;
11;DISC-L FM Center;Meter;35;
12;DISC-H FM Center;Meter;69;
13;FM-TH1 FM;Squelch;82;
14;FM-TH2 FM;Squelch;82;
15;FM-TI1 FM;Squelch;14;
16;FM-TI2 FM Squelch;14;
17;VCC Power Supply;Voltage;138;
18;HF1-IC Over-current Protection;1.8MHz;111;
19;HF2-IC Over-current Protection;7MHz;116;
20;HF3-IC Over-current Protection;21MHz;111;
21;50M-IC Over-current Protection;50MHz;113;
22;VHF-IC Over-current Protection;144MHz;126;
23;UHF-IC Over-current Protection;430MHz;113;
24;HF1-HI RF Power HI;1.8MHz;116;
25;HF1-L3 RF Power L3;1.8MHz;67;
26;HF1-L2 RF Power L2;1.8MHz;21;
27;HF1-L1 RF Power L1;1.8MHz;4;
28;HF2-HI RF Power HI;7MHz;119;
29;HF2-L3 RF Power L3;7MHz;65;
30;HF2-L2 RF Power L2;7MHz;21;
31;HF2-L1 RF Power L1;7MHz;3;
32;HF3-HI RF Power HI;21MHz;117;
33;HF3-L3 RF Power L3;21MHz;63;
34;HF3-L2 RF Power L2,21MHz,20;
35;HF3-L1 RF Power L1;21MHz;2;
36;50M-HI RF Power HI;50MHz;115;
37;50M-L3 RF Power L3;50MHz;64;
38;50M-L2 RF Power L2;50MHz;23;
39;50M-L1 RF Power L1;50MHz;1;
40;VHF-HI RF Power HI;144MHz;140;
41;VHF-L3 RF Power L3;144MHz;93;
```

```
42;VHF-L2 RF Power L2;144MHz;28;
43;VHF-L1 RF Power L1;144MHz;12;
44;UHF-HI RF Power HI;430MHz;103;
45;UHF-L3 RF Power L3;430MHz;68;
46;UHF-L2 RF Power L2;430MHz;21;
47;UHF-L1 RF Power L1;430MHz;9;
48;HF1TXG TX Gain;1.8MHz;67;
49;HF2TXG TX Gain;7MHz;62;
50;HF3TXG TX Gain;21MHz;67;
51;50MTXG TX Gain;50MHz;89;
52;VHFTXG TX Gain;144MHz;79;
53;UHFTXG TX Gain;430MHz;69;
54;HF1POM Power Meter Sensitivity;1.8MHz;71;
55;HF2POM Power Meter Sensitivity;7MHz;72;
56;HF3POM Power Meter Sensitivity;21MHz;71;
57;50MPOM Power Meter Sensitivity;50MHz;70;
58;VHFPOM Power Meter Sensitivity;144MHz;83;
59;UHFPOM Power Meter Sensitivity;430MHz;64;
60;ALC1-M ALC;Meter;204;
61;ALC-M ALC;Meter;125;
62;HF1-RV Reverse;ALC;1.8MHz;13;
63;HF2-RV Reverse;ALC;7MHz;11;
64;HF3-RV Reverse;ALC;21MHz;21;
65;50M-RV Reverse;ALC;50MHz;15;
66;VHF-RV Reverse;ALC;144MHz;7;
67;UHF-RV Reverse;ALC;430MHz;28;
68;CW-CAR Carrier;Level;CW;252;
69;AM-CAR Carrier;Level;AM;210;
70;DEV-W;FM;Modulation;211
71;DEV-N;FM;Modulation;103;
72;M-MTR;FM;Modulation;188;
73;CTCSS;FM;Modulation;151;
74;DCS;FM;Modulation;129;
75;LSB-CP;SSB;Carrier Point;-19;
76;USB-CP;SSB;Carrier Point;-20;
```

Proceed at your own risk.

73 from ron, dl5gbl

This modification is read 7298 times.

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10-07-2001

(FT-817) Improvement of the ALC - better modulation and throughput

Author: *Andreas Duessler - Andreas.duessler@t-online.de.MODIFICATION.NET*

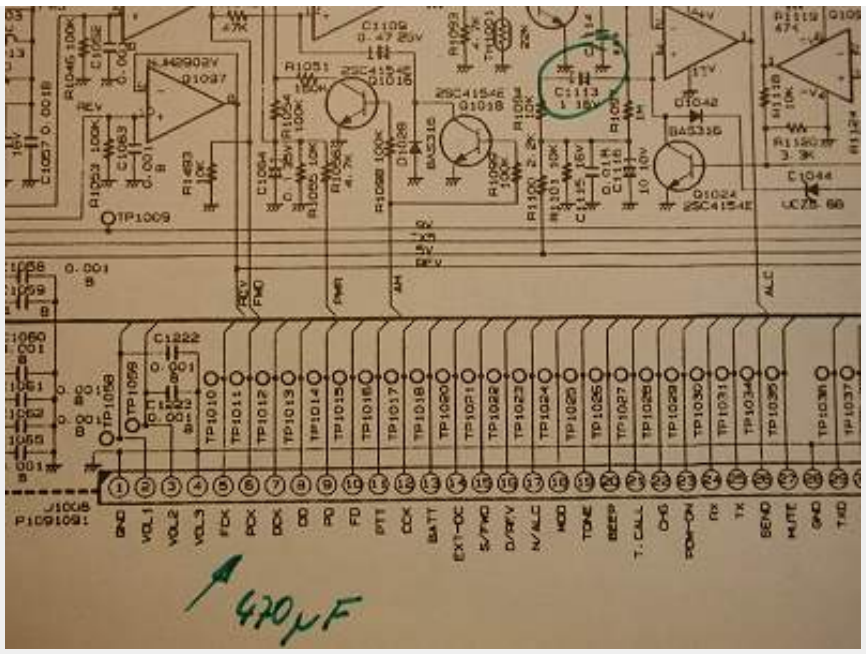
Hi ladies and gents,

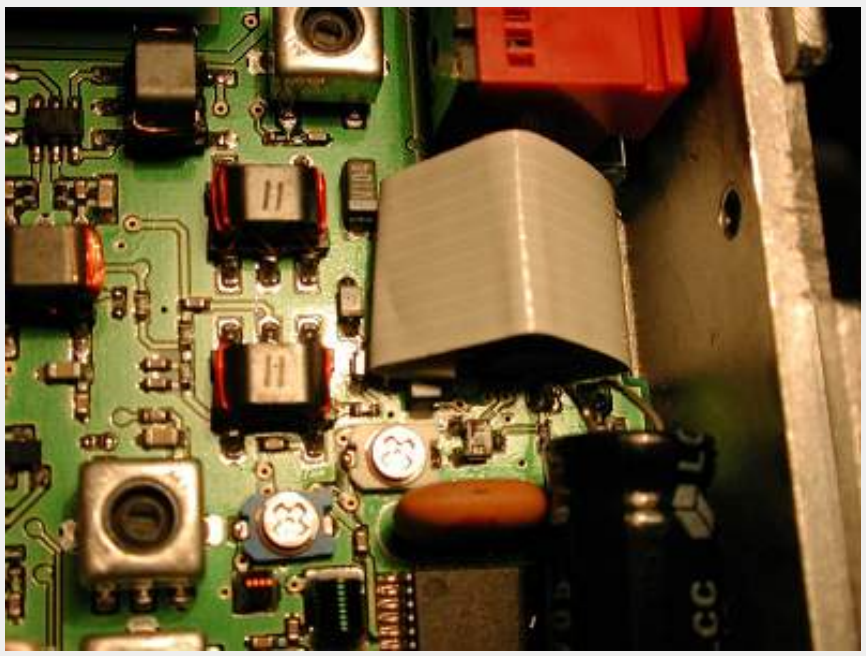
The FT-817 is a lovely rig, isn´t it? This is a radio one must have - without special reasons. But anyway, when I got the radio one week ago, I started to test it against excisting others. (like TS-870). Everything was quite okay, but the output in SSB is not reaching the 5W-mark, even when the CW-tone and in FM the rig runs on specified power. I walked through the curcuit-diagram and found the reason. The capacitor C1113 on the mainboard is too small. This has to be changed to bigger values. In my case it´s now 470 uF insted of former 1uF.

To find the place inside the rig .... boy! This took some time. But after locating the place, it´s now easy to descibe:

Open the upper side (where the loudspeaker fits) and locate the red jack on the rear side. Inside a flatband-cable comes up and is connected. Right beside this cable you find C1113, but it´s not labeled. But anyhow, look for the pictures taken and I´m sure you find the place. The new C is visible in the lower right corner of the picture (big and black) I removed the original C from the board before - but it´s still not necessary.

After finalizing, close the rig and test the output in SSB in comparison to FM and CW. The throughput is now there. And believe me, you get better voicereports. And running qrp - it´s sometimes the needed peace of junk !





Best wishes and good luck !

Andreas
DL6EAT

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10-07-2001

(FT-817) Improvement of the optional microphone MH-36 E8J with DTMF

Author: *Andreas Duessler - Andreas.duessler@t-online.de.MODIFICATION.NET*

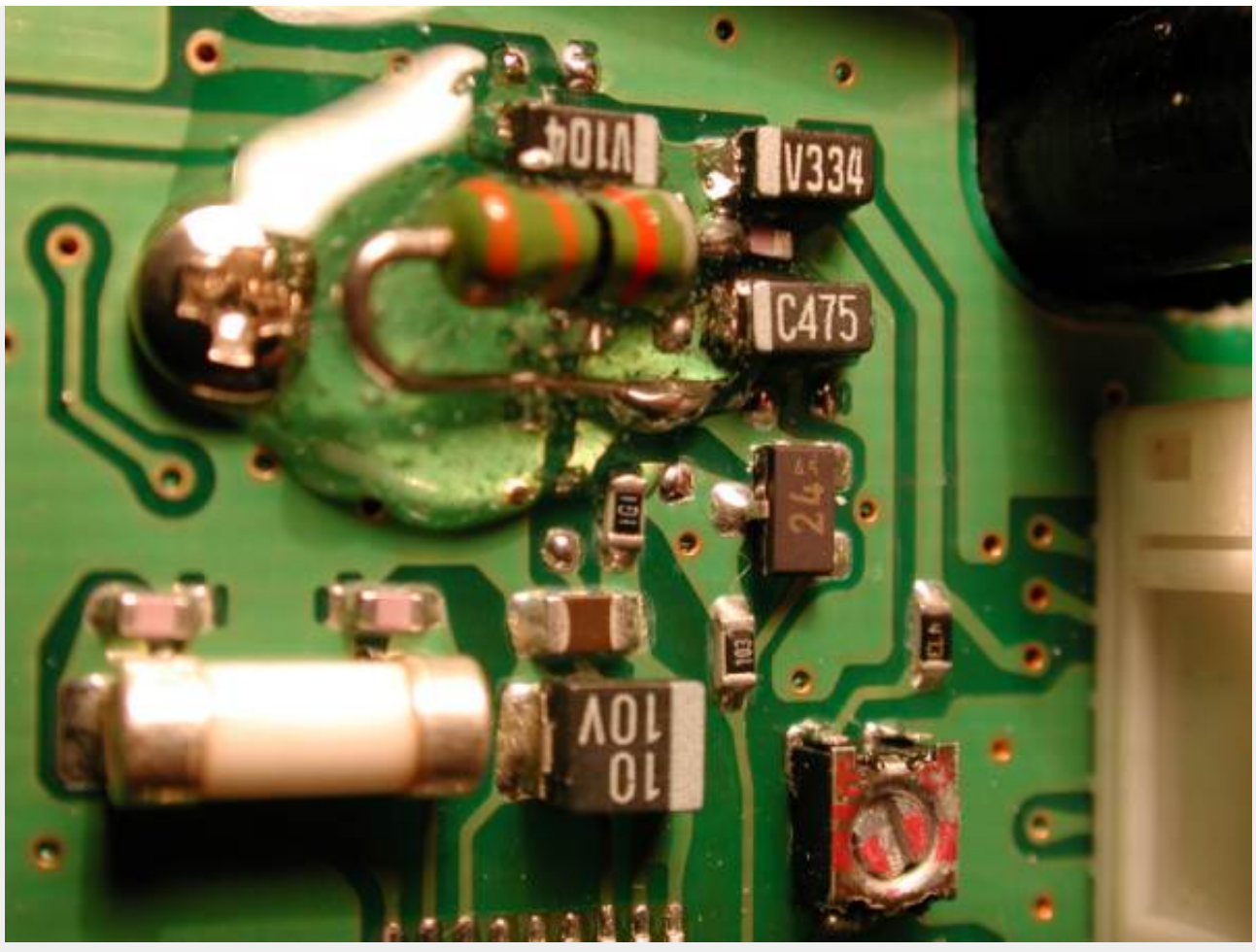
Hi ladies and gents,

The original microphone works good, but I tested also the DTMF-microphone, which is available now. It sounds really bad, and that wondered me, because a small electret-microphone is inside. But after opening the mic, the reason was easealy located. The necessary DC-voltage, comes to the microphone via a small resistor. The value of this resistor is by far too low - replace it to a value near 10 Kohms.

Now the microphone is better than the original one and has all these options like DTMF and it´s backlighted !

The picture should help to locate the small resistor. The new one is a traditional one (I had no SMD-resistor)

It looks bad, but it works fine....by the way the new microphone is very sensitive now...go down to values of 20 (original is 50 !) in the setup of the FT-817 specially in SSB.



Good luck !

Andreas
DL6EAT

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28-08-2001

(FT-817) AGC modification for FT-817

Author: *Andreas Duessler - Andreas.duessler@t-online.de.MODIFICATION.NET*

Hi YL´s XYL´s and OM´s,

Regarding the AGC (RX) of the FT817 I got some questions from some users. The dynamic of the AGC-regulation isn´t really nice researched. If you use the rig specially on 40m and/or 80m where often high signal strenths are present, the RX sounds like the AGC is switched completely "off". If using with small signal amplitudes it sounds much better. This seems to be a general problem of the FT817.

To fix this is only recommened for let me call it "advanced users". The rig has to be opended on the upper side (where the loudspeaker fits). Now you remove all connected cables from the visible main board and all srews. After this you can remove the board.

Please turn the board to the soldered side and locate C1324, which is nearest to the connected data-cable going to the user-interface (front panel).

Near this C you find R1305. Original values are 1 K and 2,2uF.

Now the mod:

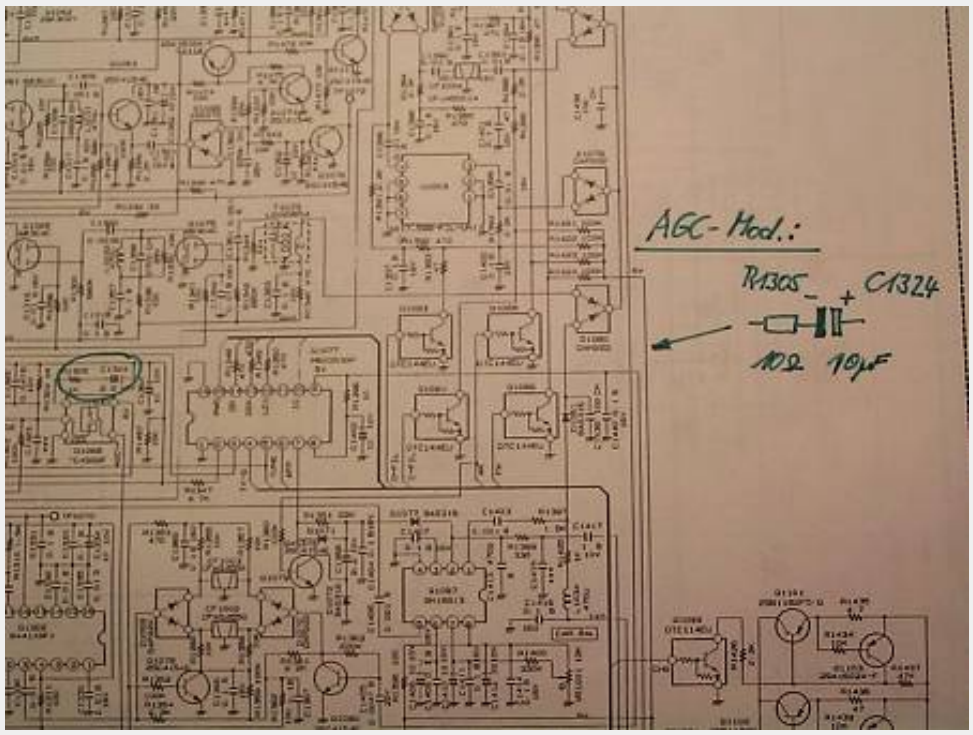
Please put 10 Ohms in parallel with R1305 and 10uF parallel to C1324.

Please be carefull in doing this, the SMD-parts are very small !

In my case, I had no SMD-C available (and I didn´t want to use Tantal-C´s), therefor I connected the 10uF via cable to the upper side of the main board. It´s not looking nice, but nevertheless it´s working.
Values over 10uF (470uF) are better, but the S-meter stand still at approx. S6-7 afterwards. It´s not recommended to go over 10uF.

Good luck and again: be carefull!!!

Thanks for reading this and I apologize for the picture, which is not exactly focused. (I saw it too late...)



Andreas
DL6EAT

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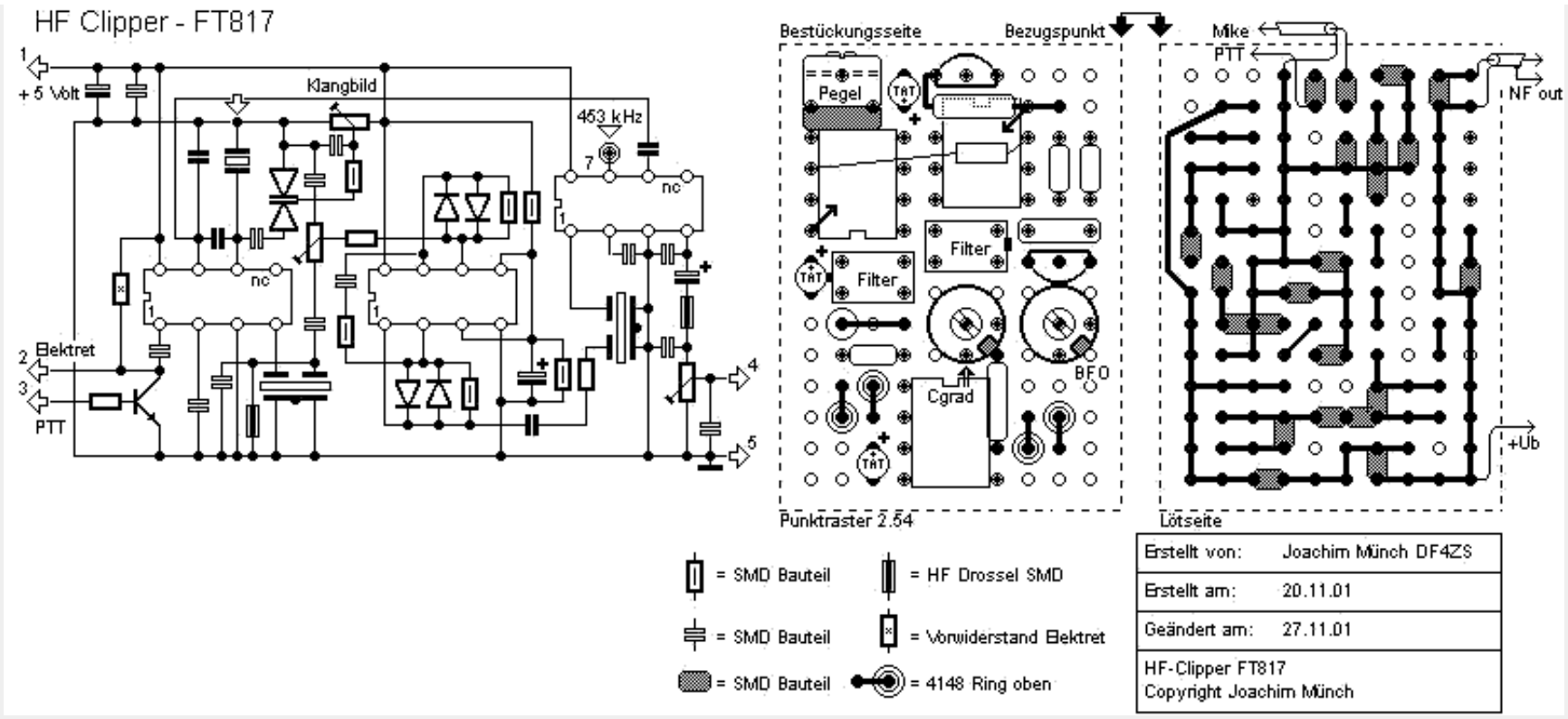
08-12-2001

(FT-817) HF Clipper für Einbau in das Handmikrofon des Yaesu FT-817

Author: *Joachim Münch DF4ZS - df4zs@t-online.de.MODIFICATION.NET*

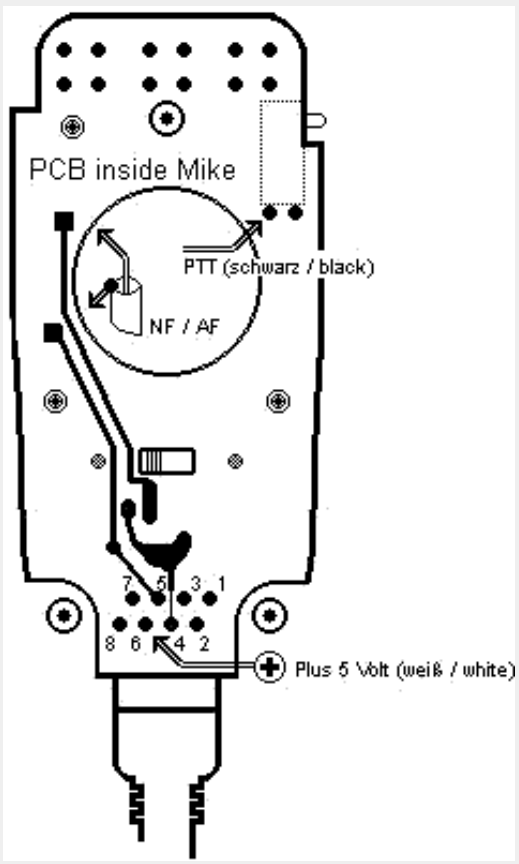
Joachim Münch DF4ZS - 7 Dezember 2001

Vorweg, für Schäden die durch den Umbau verursacht werden übernehme ich keine Haftung. Bei mir und einigen OM´s funktioniert der HF-Clipper bestens und bringt so an die 10 dB. Der Einbau in das Mikrofongehäuse erfolgt durch Austausch der dynamischen Mikrofonkapsel. Richtet man sich nach der unten stehenden Einbauanweisung kann nichts schief gehen, sorgfältiges löten voraus gesetzt. Das Clippermodul eignet sich auch für den Einbau in andere Handmikrofone. Ab einer Versorgungsspannung größer 9 Volt ist die Spannungsversorgung über einen 78L06 Spannungsregler dem Modul zu zuführen.

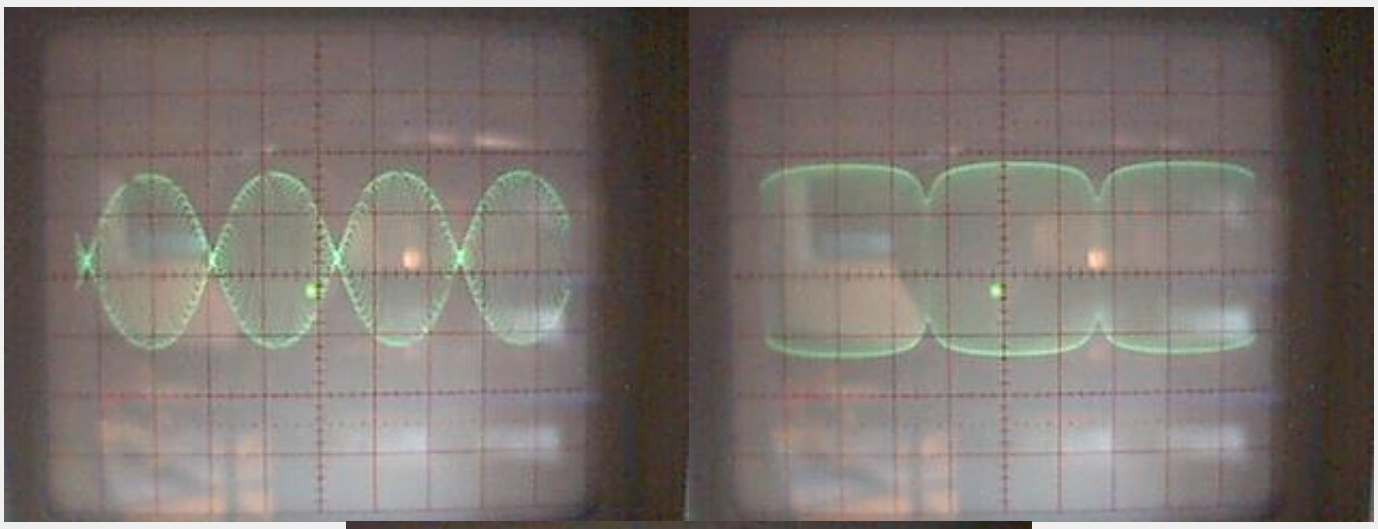


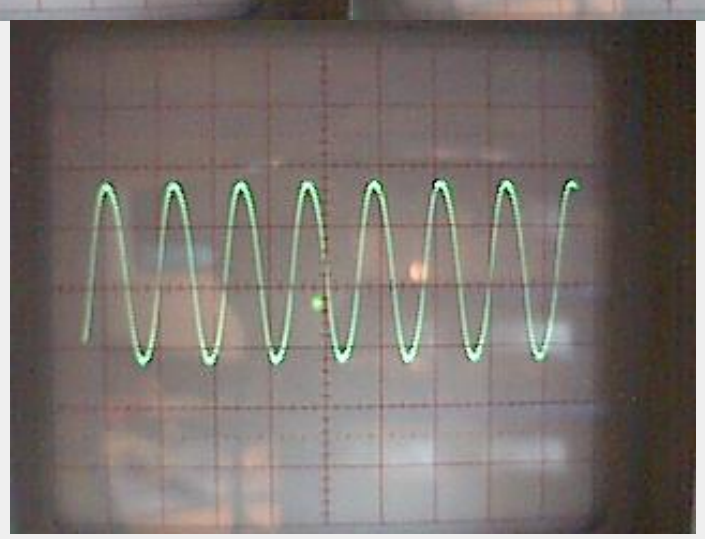
Der Einbau.

Mit einem Kreuzschlitzdreher wird der hintere Deckel des Mikrofons gelöst, beiseite gelegt und die Drähte der Mikrofonkapsel abgelötet. Die Platine wird durch lösen von drei Schrauben aus dem Gehäuse genommen, die dynamische Kapsel entfernt und gut verwahrt. In die freigewordene runde Aufnahme der Kapsel wird die Elektret-Kapsel des HF-Clippers gelegt und das Loch mit Dämmwolle für Lautsprecher (Boxenbau) gut bis zum oberen Rand der Mikrofonaufnahme gefüllt. Das Mikrofongehäuse legt man für die folgende Anleitung so, dass die Kabelöffnung zum eigenem Körper zeigt. Die PTT Taste ist nun auf der rechten Seite.
Das Clippermodul legt man mit der Lötseite nach unten über das gefüllte Aufnahmeloch, wobei der seitlich stehende Trimmer (Pegel) des Clippermoduls nach links zeigt. Die Anschlussdrähte des Clippers führt man durch die runde Öffnung der Platine und befestigt diese.
Nach untenstehender Zeichnung werden die Drähte des Moduls angelötet. Mit größter Sorgfalt ist der weiße Draht (Spannungsversorgung) an PIN - 6 zu löten und möglichst mit einer Lupe auf Schluß mit den umliegenden PIN´s zu kontrollieren. Das Clipper-Modul kommt abgeglichen. Der Einbau wäre fertig und die Abdeckung kann aufgeschraubt werden. Möchte man Clippgrad und Sprache nach eigenen Empfinden einstellen, lokalisiert man die einzelnen Trimmer und justiert diese. Die ALC des FT-817 ist dabei zu beachten. Die Tendenz der Trimmer jeweils wenn diese nach rechts gedreht werden. BFO-Trimmer erhöht dessen Frequenz (< > 500 Hz.). Clippgradregler reduziert Clippgrad und Pegeltrimmer minimiert.



Zweitonsignal ungeclippt - stark geclippt - Eintonsignal





Allgemeines

Die Funktion eines HF-Clippers habe ich bereits auf meinen Webseiten beschrieben und gehe hier auf einige Besonderheiten des HF-Clippers für den FT-817 ein. Bei der Konstruktion war zu überlegen ob ex- oder intern. Extern wäre kein Problem gewesen, hätte aber den Sinn und Zweck des FT-817 verfremdet. Es kam also nur eine interne Ausführung in Betracht, die dem Charakter des Transceivers entgegenkommt. Weiter war zu überlegen wie ein Umbau ohne bleibende Veränderungen machbar ist, der auch von jedem nicht so geschicktem OM realisiert werden kann.
Die einzige Möglichkeit diesen Überlegungen gerecht zu werden war der Einbau in das Handmikrofon. Um Raum für den

Einbau zu schaffen fiel die Wahl auf den Austausch der dynamischen Mikrofonkapsel. Vor einiger Zeit hatte ich bereits einen Mini-Clipper konstruiert der von OM´s die diesen durchweg ungeschirmt in Handmikrofone eingebaut haben, gut beurteilt wurde. Bis 100 Watt sind Probleme mit HF-Einstrahlung nicht bekannt geworden. Diese Ausführung wurde die Basis für den FT-817 HF-Clipper.
Der FT-817 reicht intern über die Mikofonleitung eine stabilisierte Spannung von 5 Volt durch die für das Modul zur Verfügung steht. Einige Bauteile konnten so eingespart werden und anderen Platz machen. Die Begrenzung des ZF-Signals wurde vom Typ PEP übernommen. Nach den ersten Versuchen in Verbindung mit dem FT-817 stellten sich zwei Nachteile heraus die behoben wurden. Kam das Mikrofon in die Nähe des Transceivergehäuses gab es eine akustische Rückkopplung. Im Empfangsbetrieb wird deshalb das Mikrofon über einen Transistor, von der PTT gesteuert, stumm geschaltet.
Lag die Elektretkapsel lose im Gehäuse war die Modulation bei abgenommener Rückseite des Handmikrofons einwandfrei. Bei montierter Rückseite jedoch stark verfremdet. Die Einbettung der Elektretkapsel in Lautsprecherdämmwolle schaffte Abhilfe.

You can also find this modification on http://www.jwm.de/afu/0ft817.htm

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05-01-2002

(FT-817) FT-817 paddle modification, very useful for CW ops.

Author: *Dick AF8X - af8x@arrl.net.MODIFICATION.NET*

I have two excellent pieces of equipment, the Yaesu FT 817 and the Palm Mini-Paddle, which I have combined into an integral unit. The Mini-Paddle comes with an optional magnetic base, however, there is no where on the FT 817 where it can be placed and be in a comfortable operating position, so using this paddle meant attaching it to some kind of base and operating on the desk top in the conventional manner.

The FT 817 has the option of keying the built-in keyer with the mic up and down buttons, enabled in menu # 36. I took advantage of this feature and modified my Mini- Paddle by installing an RJ 45 plug in the base and added an offset tongue to engage the strap bracket on the rig.
The paddle may still be retracted into the housing just as it was intended. To attach the paddle you first engage the tongue into the slot of the strap bracket, and then swing the assembly inward to insert the plug until the locking click is heard. This secures the paddle in an ideal operating position. The paddle can be left attached unless the microphone is needed for phone operation, then a thin piece of whatever is handy, can be inserted between the rig and paddle to release the locking clip on the RJ 45 plug. The paddle may then be removed in the reverse order of attachment.

I have found that having the rig and paddle configured this way is preferable especially when operating portable.

Attached

Detached

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08-01-2002

(FT-817) Yaesu FT-817 CW Filter Installation

Author: *Dave Fifield, AD6A - ad6a@cooltechstuff.com.MODIFICATION.NET*

By Dave Fifield, AD6A

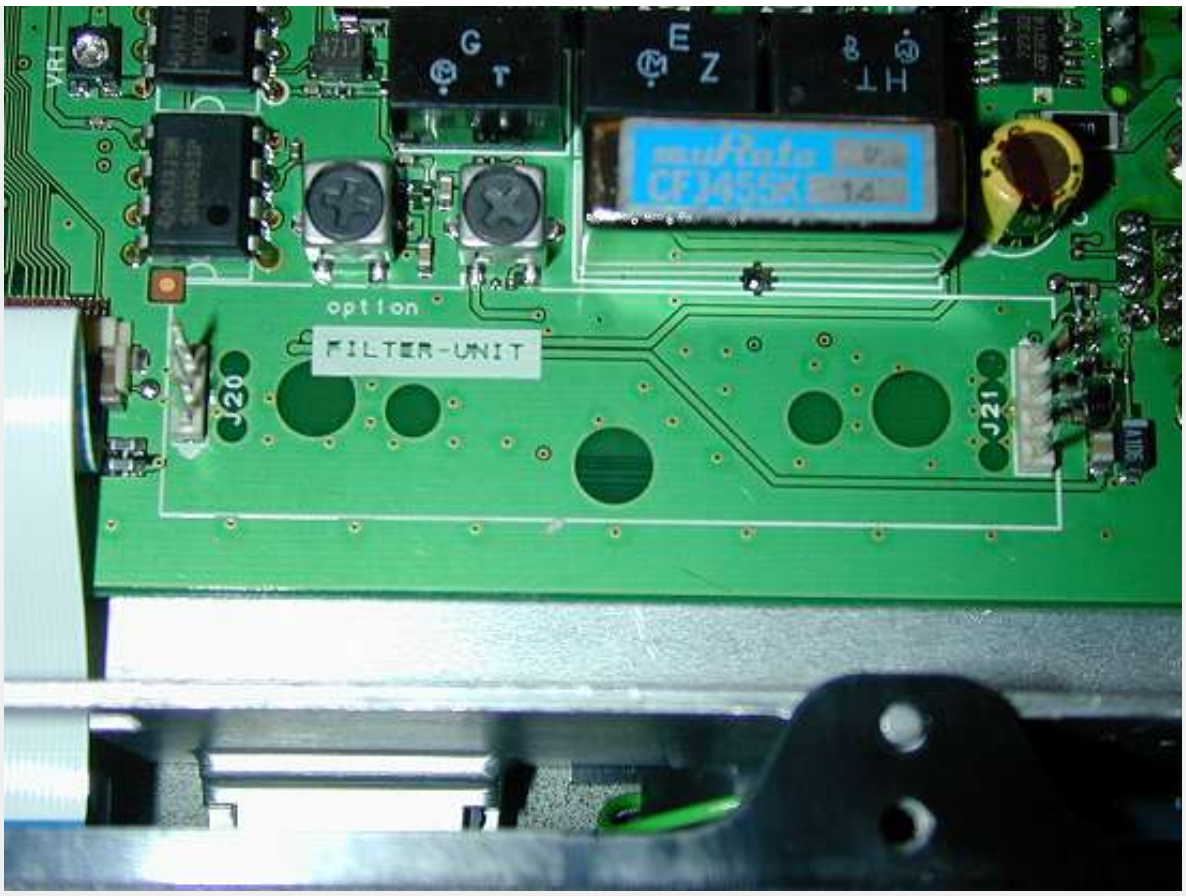
Original 1/19/01

Updated 4/18/01

I received my long awaited YF-122C 455KHz Collins Mechanical CW filter today. It was a snap to install, but there are a couple of things to look out for. Here's the photos and story. Click on any of the photos to see the full size version.

1. Removing the top cover is simple - first take off the shoulder strap brackets (4 screws) and then remove the 5 screws in the top cover and it pops right off - don't undo the two screws nearest the speaker grille, those hold the speaker in place on the underside of the top cover. Be sure not to damage the speaker wires or connector. The wire from the speaker is pretty short but there's just enough room to get to the connector to undo it if you tilt the top cover up at the rear.

2. The filter goes in the space at the front of the board.



3. Here's the filter correctly oriented ready to be put in. Note that the 3 pin connector is on the LHS and the 4 pin connector on the RHS. The filter is installed writing side up as shown.

4. Here's the filter after installation. It should look like this.

5. You can go ahead and put the top panel and shoulder strap brackets back on and turn the rig back on. Press the "F" key and hold it for half a second to take you into menu mode. Turn the SEL dial until you get to menu #38. It should say "OP FILTER" and "OFF" just above that. Rotate the main tuning dial until you see "CW" (not "OFF" or "SSB"). Important note - as you go through the "SSB" choice, you will notice that the rig switches to the newly installed CW filter - DON'T PANIC, all is okay. This threw me for a while until I understood what was going on. Make sure that menu #38 is set to "CW" (ignore what the receiver actually does!) and then press the "F" key for half a second again to exit menu mode.

6. You're almost done. You will probably panic at this time (as I did!) because as you switch through the modes from USB/LSB/CW/CWR etc., the rig seems to be stuck in SSB filter mode. There's one more thing you have to do to get the CW filter working. Check out page 14 of your FT-817 Operating Manual - number 7 at the bottom right of the page you will see the "C-Key" setting for "NAR". You have to set this in order for the receiver to switch to the narrow CW filter when you switch the rig to CW or CWR modes. To do this, first put the rig into CW or CWR mode then tap the "F" key once quickly. The FUNC Keys menu items for the A/B/C pushbuttons should appear. Rotate the SEL control until you see "IPO ATT NAR" over the A/B/C buttons. Then press the "C' pushbutton once to set the filter to Narrow. A small right-pointing arrow should appear and the rig should switch to the CW filter - you should hear a marked difference in the receiver noise "tone".

7. That's it. You can swap between the SSB and CW filters anytime by revisiting the FUNC Key menu and toggling the NAR function.

How does the filter sound?

I did some preliminary tests with my HP8642B signal generator - the receiver is very sensitive indeed. The CW filter is an ABSOLUTE JOY to behold....it has a superb frequency response - very very sharp skirts - great stopband. WOW!!!! I'm blown away by it....I'll have some real measurements to back up my first impressions for y'all sometime soon. It's late, so I tried it on the bottom end of 40m - sounds REAL NICE!!

Folks, if you are going to do CW seriously with the FT-817, you will simply HAVE to get the YF-122C filter option. It's a must have IMO.

This modification can also be found on http://www.cooltechstuff.com/FT817_CWfilterinstall.html

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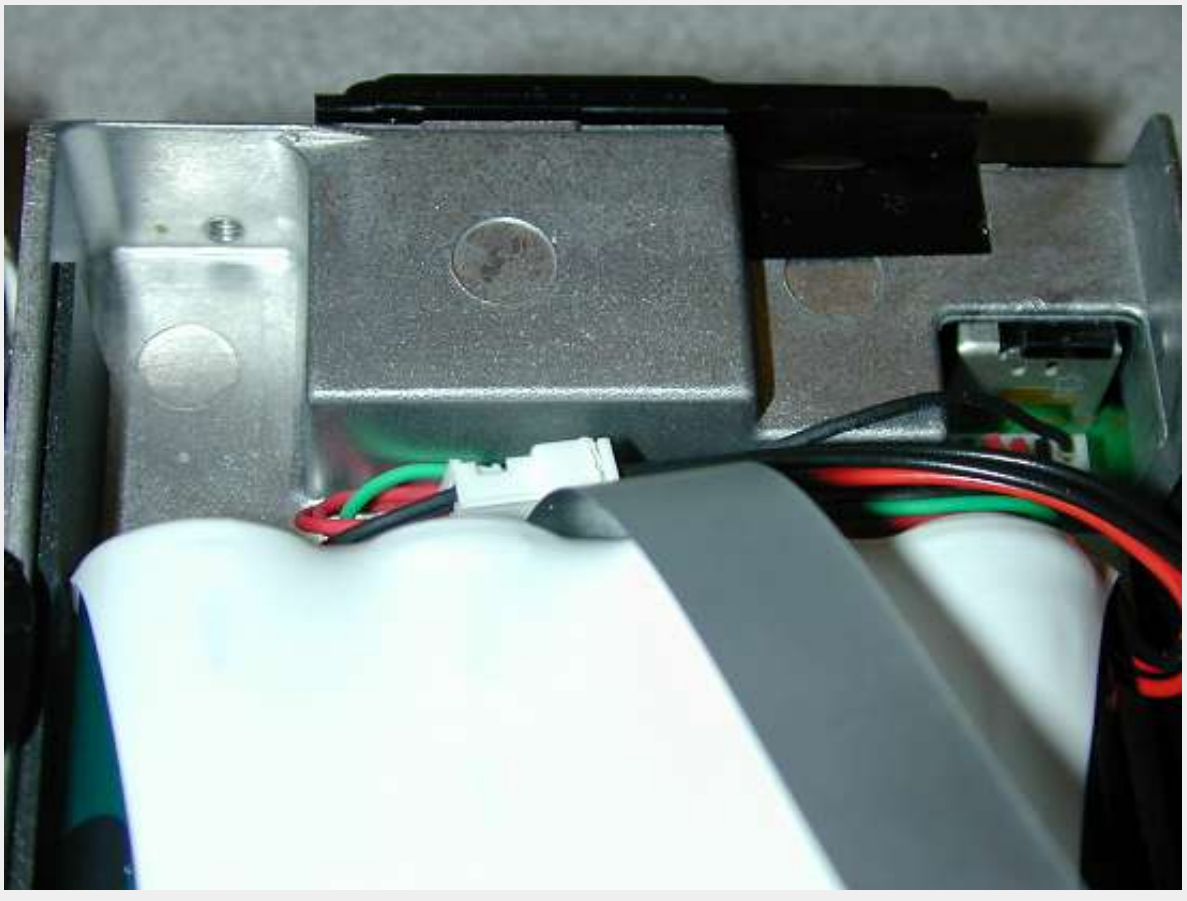
08-01-2002

(FT-817) Other Observations/Comments on the FT-817 BY AD6A

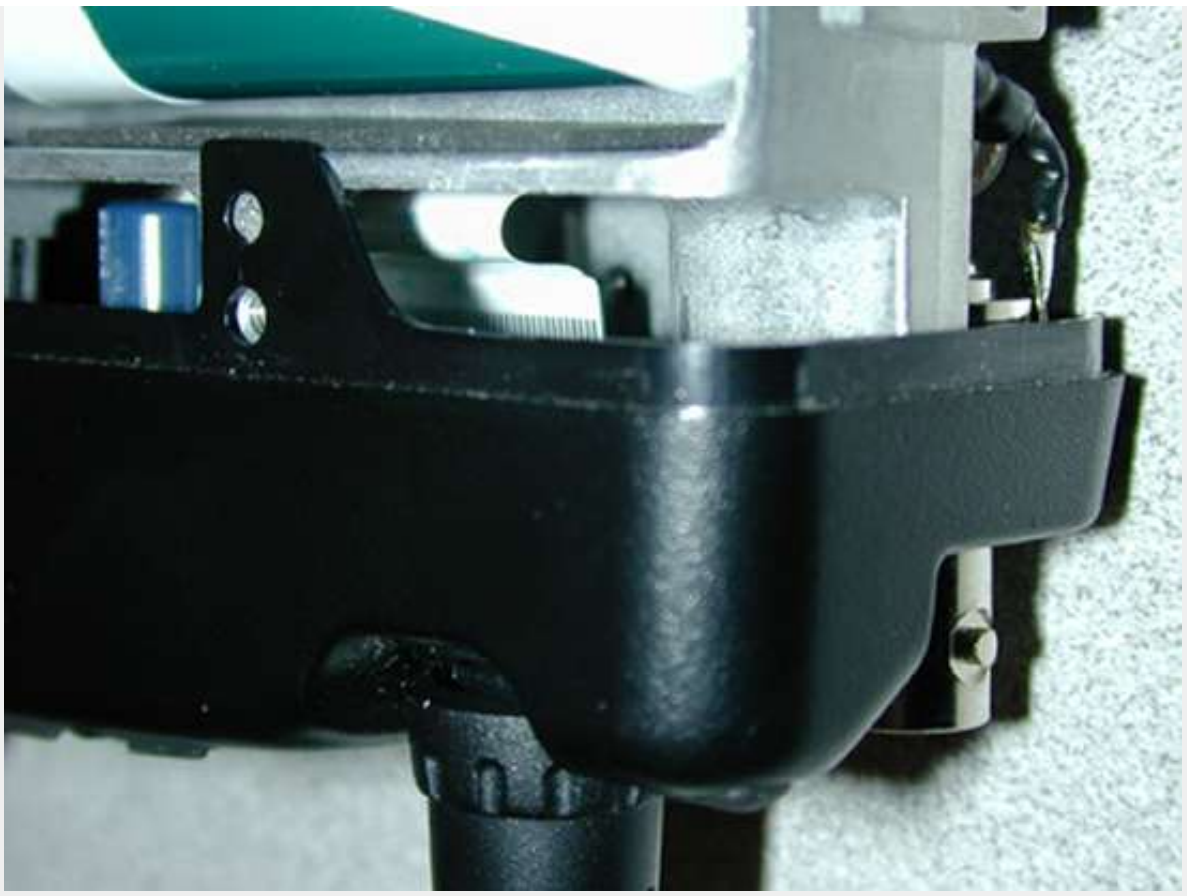
Author: *Dave Fifield, AD6A - ad6a@cooltechstuff.com.MODIFICATION.NET*

While I had the top off, I thought I may as well disrobe the rig completely and see what make her tick. Here are some photos of the underneath and front panel etc. The first picture shows the NICAD pack in place.

Notice that there's a small amount of space that could be used for mods or add-ons (hmmm, what else does this rig need though?). Here's a blow up of the mod space.



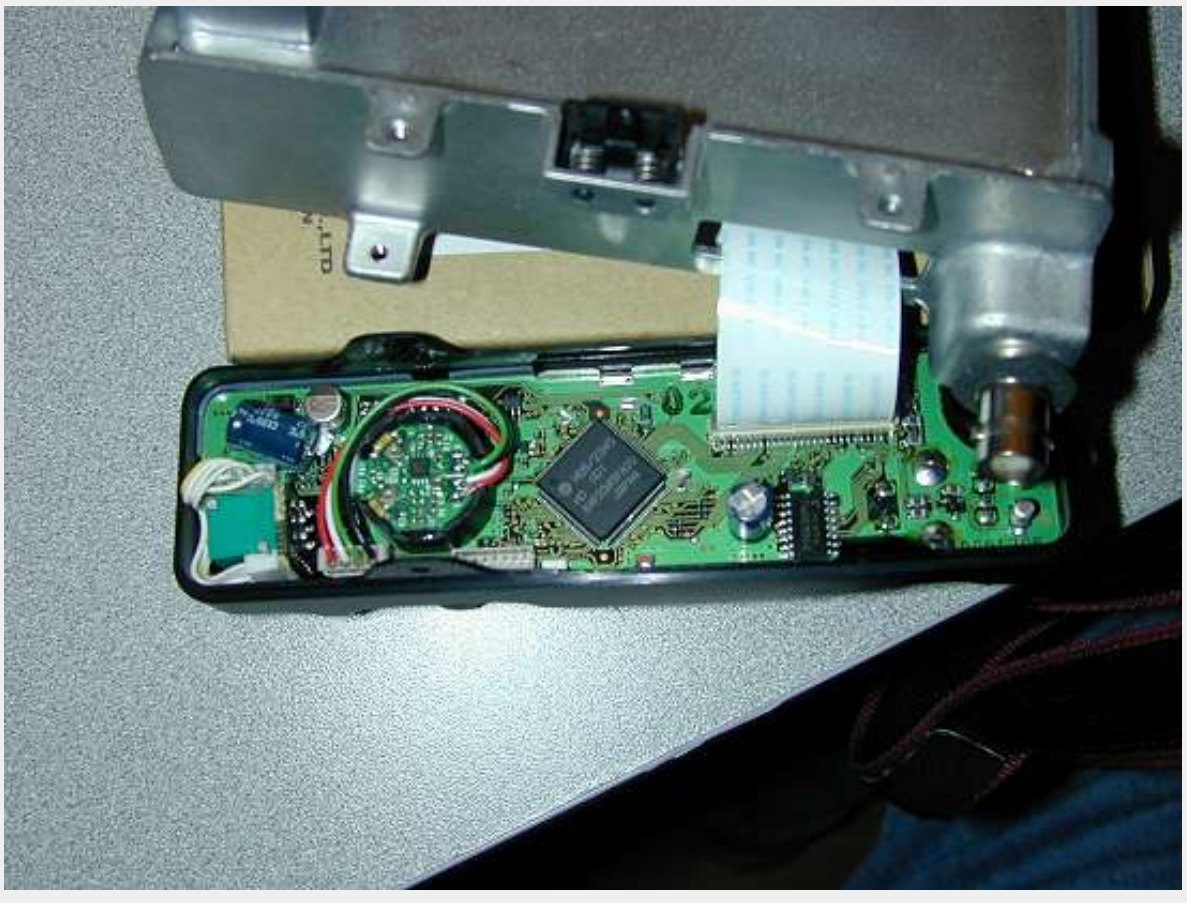
I went searching for other mod space - there's some between the front panel assembly and the diecast chassis...



...and some more between the CW filter and the chassis in the top compartment:

Here's the PA/Filter board (sorry about the focus). Real small PA (bottom of photo). Very neat.

I also took the front panel off for a look - it simply clips onto the chassis over four little "pips" next to the screws that hold the front edges of the top and bottom panels in place. If you take it apart please be VERY careful not to damage the front panel connector ribbon or connectors - they look fairly delicate!



Lastly, you may notice something a bit odd about the speaker mounting. If you look carefully, you will see that there are several grille holes that the speaker doesn't actually cover. The general concensus is that this improves the audio quality of the RX. A quick test I did to move it shows that it DOES sound better mounted like this.

72, Dave Fifield, AD6A

Email me if you have comments or questions

This modification can also be found on http://www.cooltechstuff.com/FT817_CWfilterinstall.html

Date: 18-03-2002 **User comment** **From:** Sylvain F1UJT

Subject: Complete coverage all mode ?

Hi !

All specimen i tryed aren't all mode on all frequencies. I'm interested in receiving 68-88MHz band in narrow FM instead of wide FM. Ideal would be to choose any mode on anyfrequency.

TNX

This modification is read 3509 times.

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02-02-2002

(FT-817) FT-817 RX-LED disconnect

Author: *AA1QG - AA1QG@arrl.org.MODIFICATION.NET*

By removing a resistor on the back of the front panel you can save approx. 12-15 mA on receive. On long backpacking expeditions this may result in significant power savings.

Disassemble the tranceiver, remove the front panel whilst taking care to carefully disconnect the cable between the front panel and the body of the radio.

Remove the rubber band on the VFO knob, and remove this knob as well as the locker underneath.

Then remove the sel knob by pulling it off. Subsequently remove the screw holding the front panel print and carefully pull out the print card.

The LED is located on the front of the print card, above the hole for the VFO knob. It looks like a small plastic rectangle with 4 connections. You will find two resistors just to the left of the LED.

Remove the resistor which is closest to the VFO hole; not the resistor closest to the top edge.

Carefully reassemble the front panel whilst making sure that all the rubber knobs are in place.

When you power up the radio no green light should be on on receive, whilst the red TX lights up on tx as before.

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19-07-1998

(FT-840) FT-840 General Coverage Transmit

1. ON local unit, connect tp2003 to ground
2. Switch radio on
3. Hold SSB and AM down
4. Switch off
5. Switch on
6. 02 OFF will appear on readout
7. Rotate main dial until 02 ON appears
8. Press AM NARROW--display will show 7.000 mhz lsb
9. Press MEM DOWN
10. Press MEM UP
11. Switch off radio
12. REmove earth at TP2003
13. Switch radio on

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26-07-2001

(FT-840) Yaesu FT-840 TCXO option

Author: *NB6Z*

The 840 is a great radio but in digital use the rig will drift pretty much as the fan kicks on and off. A great and cheap fix is just as near as your cache of styrofoam.

Remove the upper and lower covers of the radio, making sure to disconnect the speaker from the top cover. Notice that the back screw on the cover is different from the other screws.

After removing the lower cover leave the rig upside down because that is where your mod will be. Locate the xtal board near the center of the radio. Cut a section of styrofoam close to the size of the xtal board, press down lightly over the xtal to mark the area, then trim away the styrofoam to fit over the crystal, trim pot, and connection points going only deep enough for a snug fit.

That's all there is to it. Why spend that $100 for the TCXO option? W5ZIP

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03-11-2001

(FT-840) FT-840 CAT/PTT interface