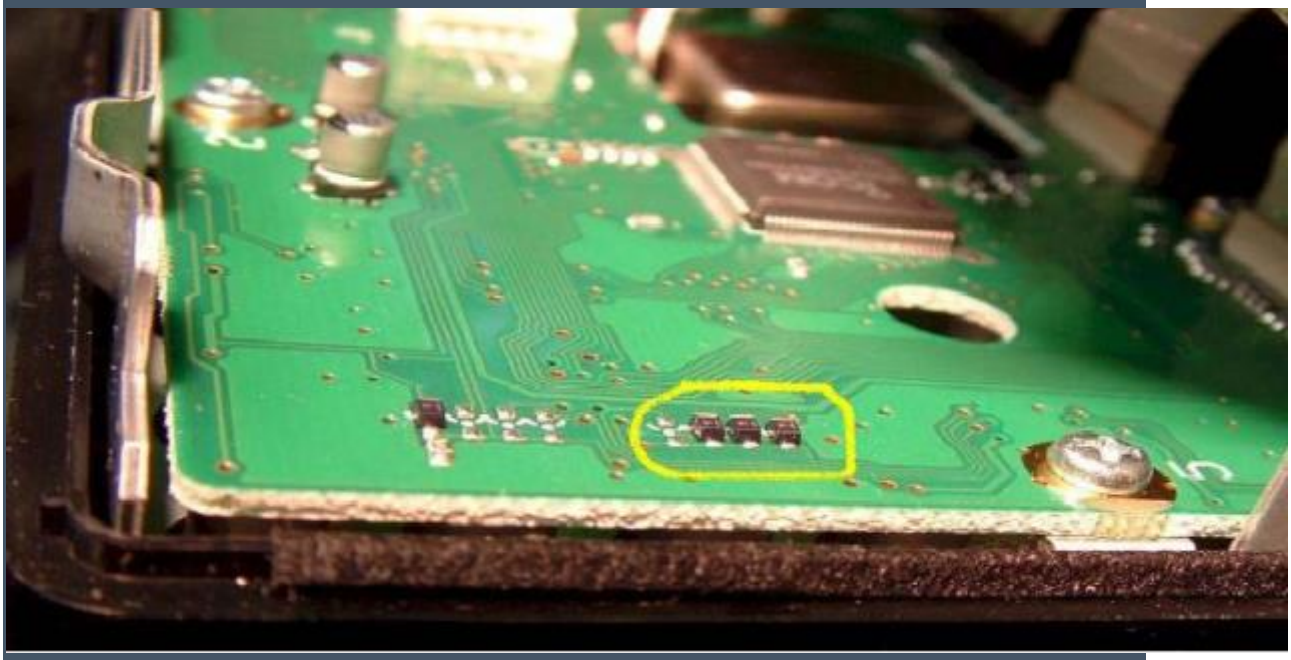
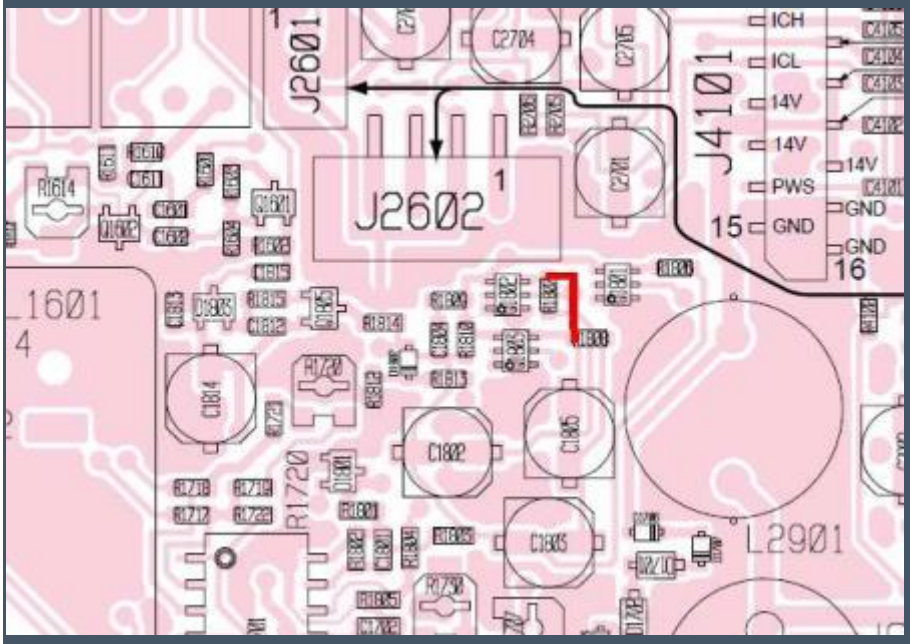
MODIFICAÇÕES VIÁVEIS NO RÁDIO IC-718

AUMENTANDO A POTÊNCIA DO IC-718 **Remova a tampa de baixo. Na parte de trás está a placa principal. No canto inferior direito existe a opção de filtros. Próximo dela você encontrará o R1707, que é responsável pelo ajuste de potência de transmissão. Próximo a ele você também encontrará do R1730, que é responsável pelo AM. Ajuste o R1707 para qualquer potência até 200 watts. é possível configurar até mesmo uma potência superior a isso mas, além de não aconselhável, provavelmente resultará em saturação. Ajuste o R1730 para obter entre 40 e 50 watts em AM somente.**

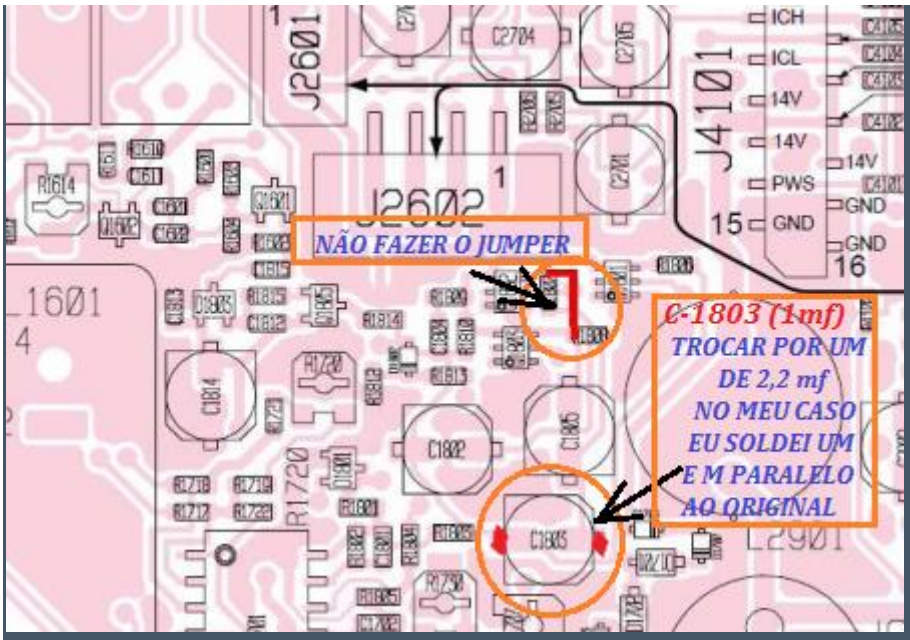
ABERTURA DE TX DO IC-718 **1 - O primeiro passo é remover a tampa que reveste o equipamento, conforme a foto abaixo. 2 - O segundo passo é liberar o painel frontal de maneira que seja possível acesso à placa de circuito. Localize os três componentes, diodos, D53, D54 e D55, destacados na foto abaixo. 3 - O próximo passo é soltar uma das pernas do diodo D54. Faça isso com muito cuido e perícia, pois, a placa de circuito é extremamente sensível a caloria. Recomendamos um ferro de solda com a ponta fina com no máximo 25W. Fazendo isso o equipamento transmitirá nas frequências de 0-30Mhz.**



MUDANÇA DO AGC DO IC-718 (REDUÇÃO DO RUIDO QUANDO EM RX) 1. Pequeno jumper entre dois resistores (R1807 E R1808) na parte inferior do rádio.



Outra forma de alterar o AGC



NO MEU CASO OPTEI POR SOLDAR OUTRO CAPACITOR EM PARALELO AO ORIGINAL

VENTILAÇÃO FORÇADA

VENTILAÇÃO FORÇA NO IC-718. UTILIZANDO-SE DE DOIS COOLERS DE 4X4, ALIMENTADOS PELO PRÓPRIO RÁDIO (CONECÇÃO DO ACOPLADOR AUTOMÁTICO), TENDO EM VISTA OS COOLERS TRABALHAREM COM A TENSÃO DE 12 VOLTS, UTILIZE UM RESISTOR DE 20R PARA BAIXAR A VOLTAGEM. (+-19,8 Volts).


MODEL FC-B-0026
12V DCFAN4010HS
YPE

OBS: O AR QUENTE É RETIRADO (SUGADO) DE DENTRO DO RÁDIO.

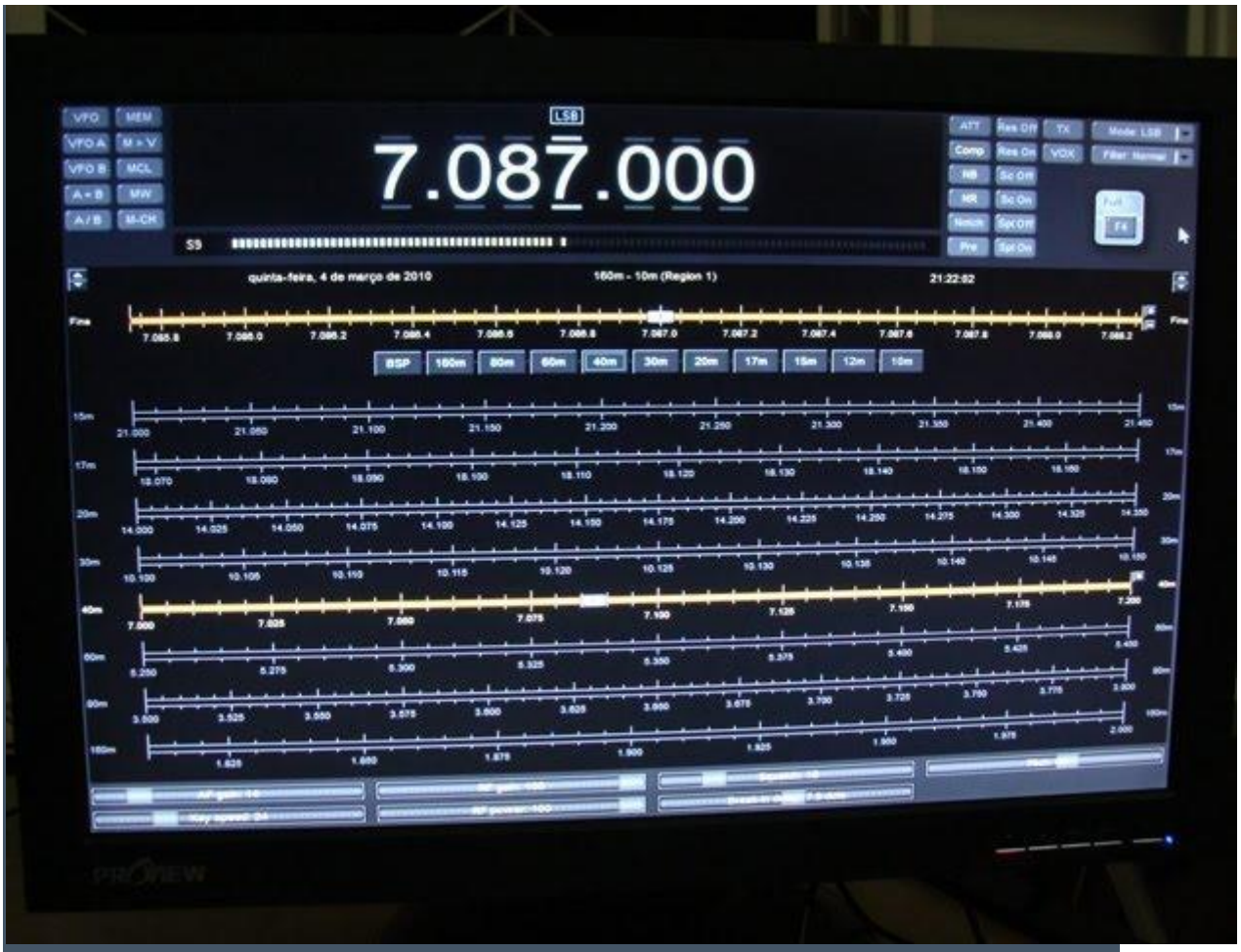
PTT ORIGINAL DO EQUIPAMENTO

MUDANÇA NO MICROFONE ORIGINAL DO RÁDIO 1. NO PTT, ABRIR E RETIRAR A ESPUMA (FELTRO) DE APROXIMADAMENTE 0,5CM QUE ESTA NA FRENTE DA CAPSULA DE ELETRETO. DEVIDO A SUA ESPESSURA, BLOQUEIA O AUDIO. NO LUGAR COLOCAR UMA ESPUMA "FININHA".

INTERFACE PARA CONTROLE DO RADIO IC-718 VIA PC (PROGRAMA HAMRADIODELUXE)

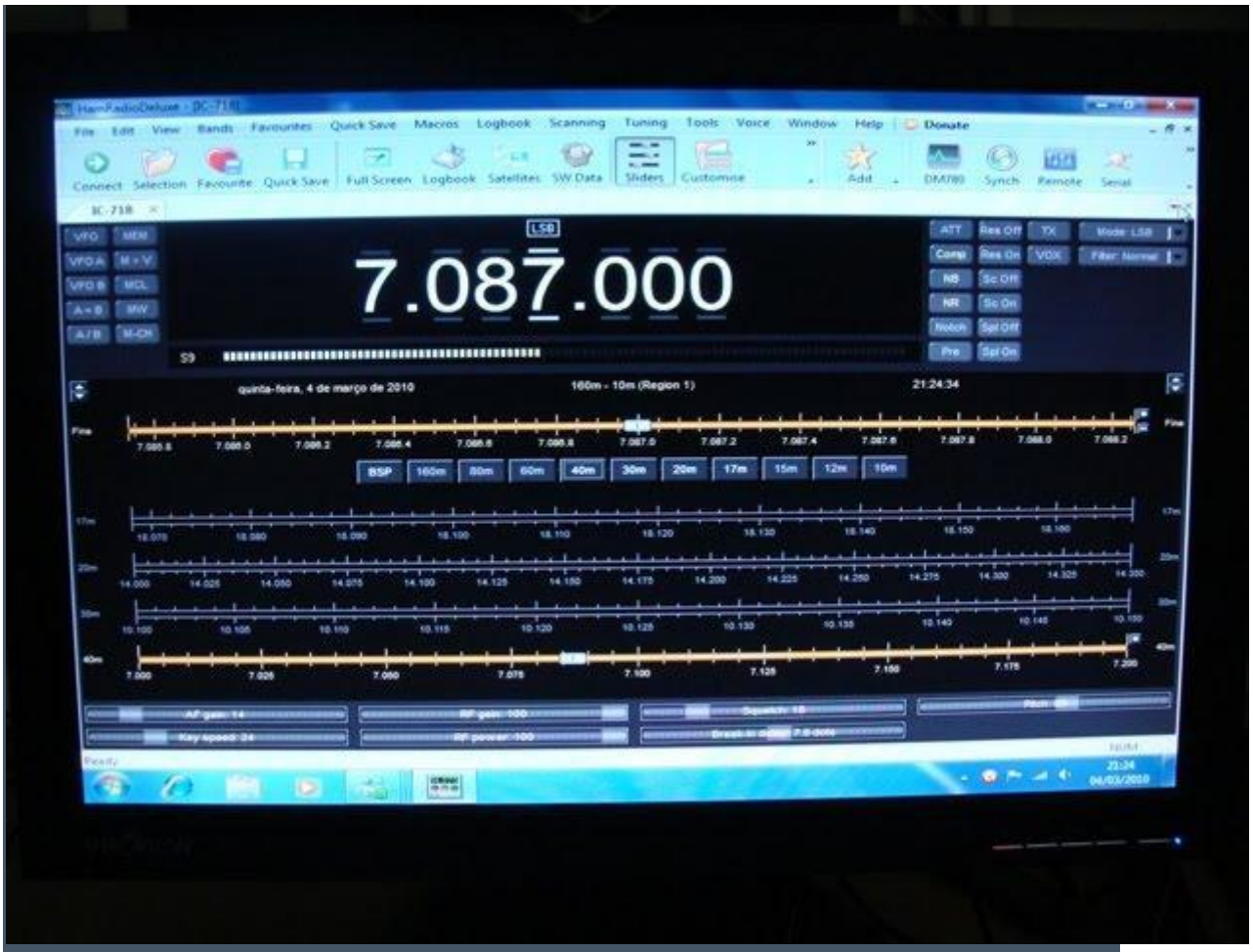
PLACA ADMINISTRA TODAS AS FUNÇÕES DO RÁDIO, INCLUSIVE TX/RX

TELA FULL SCREEN



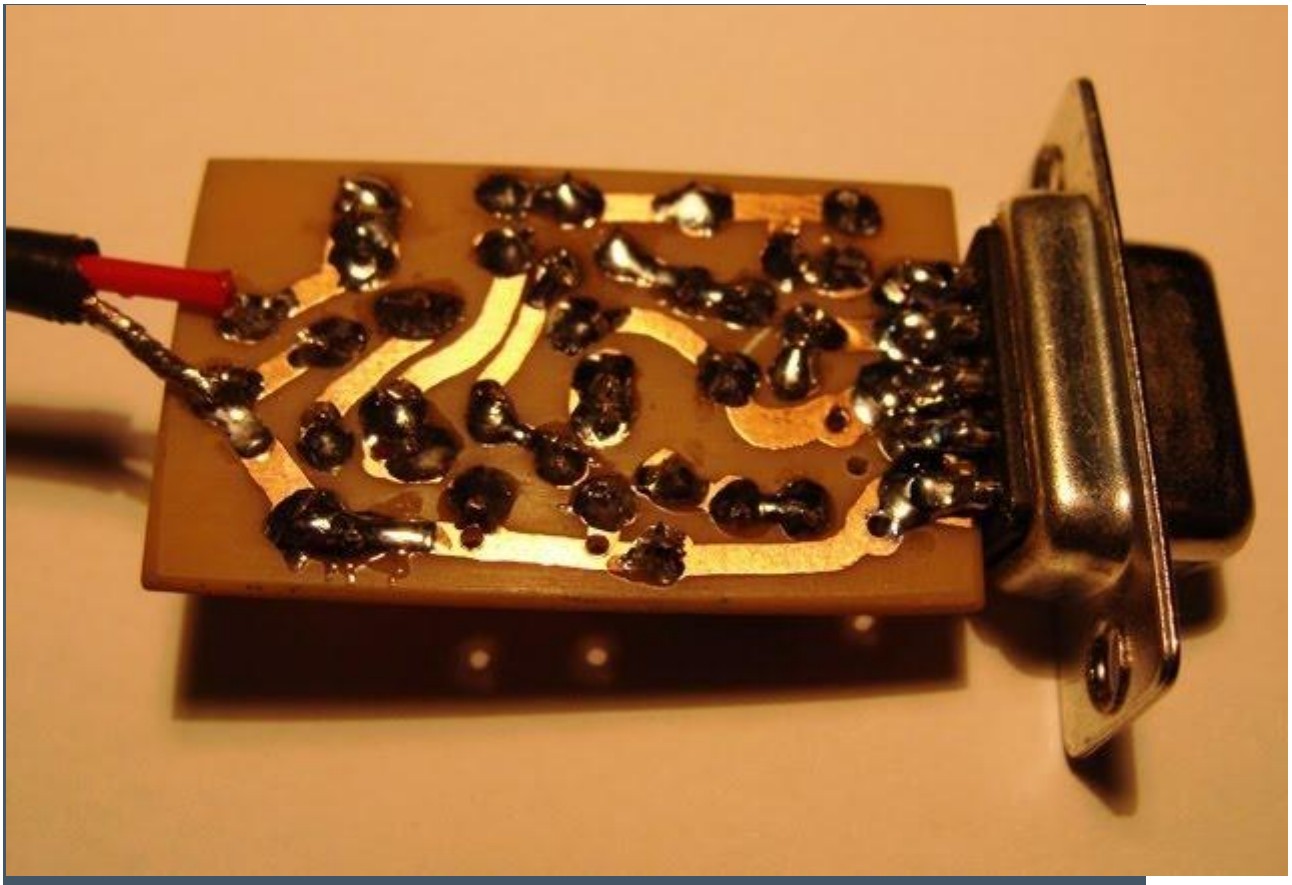
Programa HamRadioDeLuxe

TELA NORMAL COM CONTROLE ACIMA

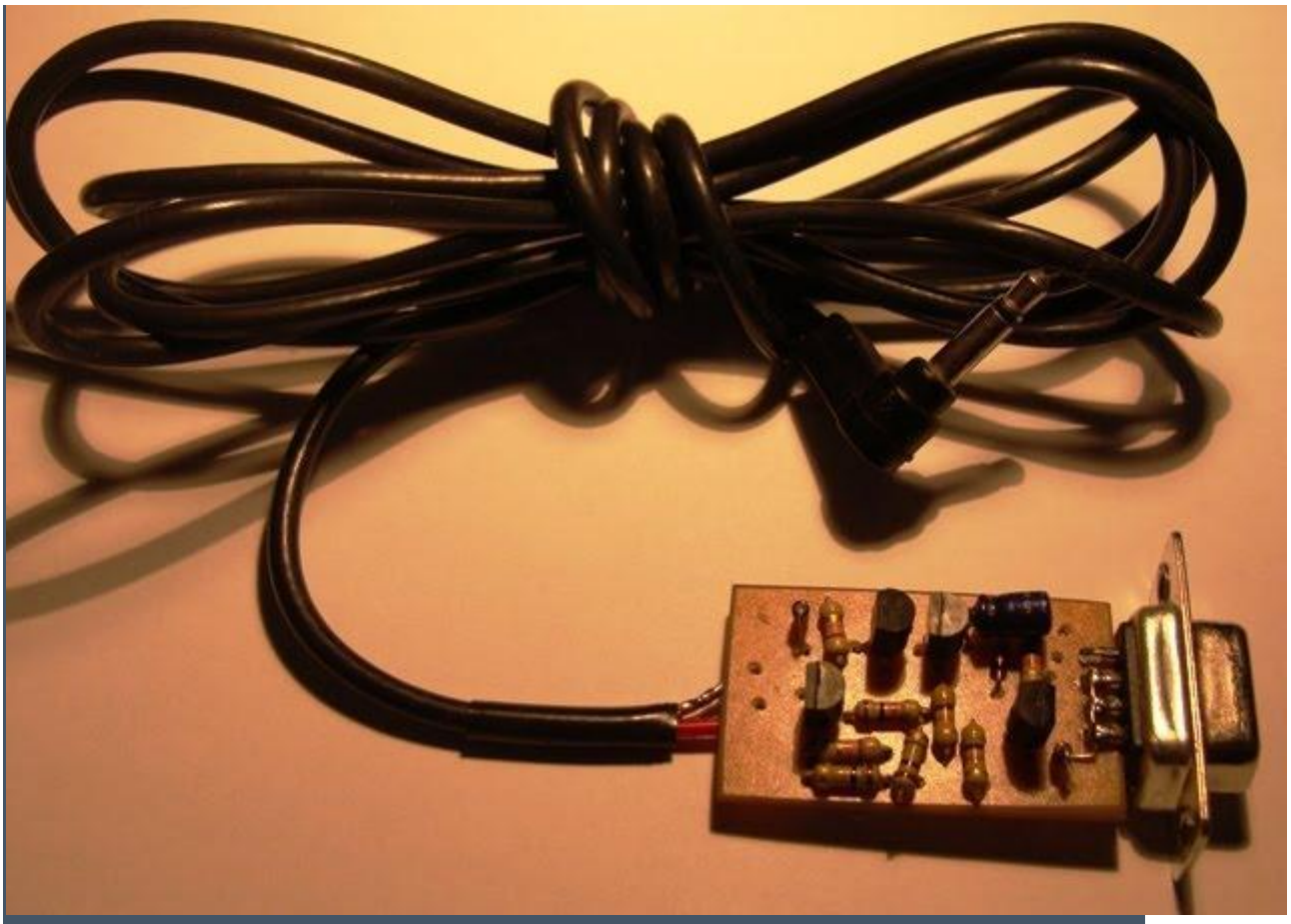


Interface - vista superior

vista inferior



vista geral



USANDO A INTERFACE COM O HAMRADIODELUXE

.Clique na imagem e visite o blog AMANTES DO RADIO.

+

Icom IC-718 on AM

« **on:** October 25, 2005, 01:07:37 PM »

This inexpensive transceiver works at a rated 40W output on AM. The audio compressor must be turned off. Back off the mike audio gain to about 50%. While transmitting, set to monitor the output power. If the power drops out on audio peaks, back off from the mike or lower the audio mike gain until it does not drop. This is the setting that the ALC will not cut in. You can also monitor the ALC while adjusting the mike gain until it does not change on audio peaks.

Re: Icom IC-718 on AM

« **Reply #1 on:** September 12, 2007, 05:54:09 AM »

You can also turn the modulation pot all the way up in radio, with that COMPRESSOR on, Mic Gain 4% and power level 50%(20 watts) to 60% (25 watts) for some great sounding audio, I was really surprised listening on another radio... It's certainly not plate modulated or sounds as good as my modified Yaesu FT-101EE BUT will certainly get you by in fine fashion and in a pinch for casual AM.

The compressor run like this cleans up the audio, makes the words a bit sharper and more articulate, and for some reason presents a louder audio on the receiver with ZILCH ALC clipping... Unless you start hollering into the Mic of 'course.

I used the stock hand mic for the test, and it worked great for me.

Re: Icom IC-718 on AM

« **Reply #2 on:** September 12, 2007, 07:38:38 AM »

I did give another listen on a good receiver... With the compressor off a little more lows/bass in the audio and leans more toward a good clean sound, much like were used to listening on the bands..

The compressor tightens up the audio a bit.. More of a cut-thru-the-

mustard sound. They both sound good though and have their place.

I noticed that by cranking the Mod pot up it dropped the alc level on the meter and seem to give the Icom a bit more "headroom" before she would buck the alc.. kinda hard to explain, but it works better all the way around with the mod Pot cranked wide open and the Mic gain at 4% with compressor on, and about 15% with compressor off, you might get away with 20% but at that point I detect a 'bit of distortion, something that may or may not be heard out in radio land.

Just my .02 cents... And that ain't worth much in this day and age!!

'73's,
Kevin

Re: Icom IC-718 on AM
« **Reply #3 on:** September 12, 2007, 09:10:54 PM »

The IC-718 has an ACC jack on the rear panel. Pin 11 is modulator input. It bypasses all the front end audio "screwing around" circuitry, and provides a nice 10K input impedance for an "IHY" box or some some other audio tailoring type boxes. The input will work in SSB and AM modes and will typically lower the low end response and add a tad to the high frequency response. Note, with this connection, compressor becomes non-functioning and also front panel mike gain since they are both ahead of the pin 11 "modulator input". Sound better with no internal diddling with pots and 718 front panel controls. If you use the ACC connection, there is no need to connect the front panel mike. You can also key the rig from one of the pin connections on the ACC jack. A foot switch works great here.

Re: Icom IC-718 on AM

« **Reply #5 on:** December 10, 2007, 09:38:39 AM »

Still .... it would be nice to totally defeat the transmit ALC. Turn it off. Pull the ALC rectifier or something like that.
Someone must have a schematic of this thing.

Ohh... the ALC still causes problems even when using the ACC audio input.

Icom IC-718 on AM

« **on:** October 25, 2005, 01:54:30 PM »

This is pretty standard set up for audio level on any ricebox on AM. I don't think Icom has
figured out how to rate their rice boxes on AM. This rig should not be run at 40 watts carrier,
but 25 watts max to alow audio peaks to reach 100 watts pep output. You may even noticed a upward
swing in power out on voice peaks..

Icom IC-718 on AM

« **Reply #1 on:** October 25, 2005, 08:36:55 PM »

I am thinking of getting a 718 for casual AM use. Intend to use an AL-811 amp
with it. Was using an IC-706MKII, but that nasty spike keeps me

from using the amp.
Best info is that the 718 does not spike. Receive filtering could be too wide. Might wire
in a seperate receiver connector. ICOM has a 3.3kc filter(pricey). With split VFO, transmit
AM on one and receive 3.3 SSB on the other.

Also, Jupiter does well on AM except I can't get rid of the RF problems when
running power. Hope the 718 is tolerant of that.

Lemme know what info is out there.

Icom IC-718 on AM

« **Reply #3 on:** December 27, 2005, 01:58:30 PM »

Quote from: K3ZS on December 27, 2005, 09:37:45 AM

The IC-718 seems to run fine at 40W output power on "AM". I think if the finals can handle the duty cycle, this is OK since it is SSB with carrier added. The 4 times PEP vs. carrier power applies when both sidebands are part of the total power. With my old tube SSB tranceiver (Tempo One) you could not run more that 25W of carrier, but I believe that was a duty cycle limit. Any comments on this or I am I missing somthing?

In many respects the 718 is a scaled down version of the 706, but with larger cabinet, display, knobs, etc. I can't remember if they use identical final transistors. Although Icom has stated in many of their current rigs 40 watts AM max., some distortion products do/or can appear on the output signal in the AM mode. Icom technical support stated to me at Dayton two years ago, the 40 watt AM max is for a "very short" duration of time. They did not recommend long key down in the AM mode at 40 watts. As stated in an earlier post, 25 watts or less, is recommended and encouraged, for most of Icom's rigs that have AM capability. I seem to remember the finals were not cheap.

Icom IC-718 on AM

« **Reply #8 on:** January 28, 2007, 11:43:55 AM »

It's possible the 718 is cleaner on transmitted AM than the 756 Pro II and III models because it does a better job handling higher audio input levels. I had asked an expert on the DSP based Icoms to help shed light on the distinctive and unattractive sound the 756 makes when used on AM, and to share the unreceptive level of interest a factory rep responded with when I telephoned Icom about this widespread and audible problem.

Although two questions are left unanswered (why this digital dirt can be heard at all amplitudes, and whether there are input sensitivity differences between the 718 and 756), this is one of the more relevant answers to explain what could be causing the noise.

I found his point especially interesting that Icom won't deal with such a problem if it considers the number of complaints small. That's in stark contrast to other manufacturers who have developed DSP radios. Flex Radio, the makers of the SDR1000, have taken individual, specific suggestions from users and swiftly implemented corrective action or improvement in response. That's the kind of company I can support, were I to find myself in the market for a contemporary transceiver (not likely).

Hi Paul,

Many thanks for the note. Actually, I wrote my article from a purely academic standpoint; my amateur AM career ended rather suddenly at the end
of 1963, never to resume.

The tests I ran on AM prior to writing the article yielded a very clean
display on my HP spectrum analyser. The test conditions were:

Po (resting carrier) < 25W.

%Mod < 90%.

Test tone: 1 kHz at 3 mV rms, injected into Mic socket.

Casual listening on a separate receiver did not reveal any audible artefacts
during test-tone or speech modulation - at least nothing that I could hear.

The "rumble" in the receiver was due to modulation by the NB of the +8V rail
feeding the low-level receive audio amplifiers. It affected the IC-756Pro,
and was corrected in the Pro2 and Pro3.

http://www.ab4oj.com/icom/756pro_nb/main.html

With any system involving A/D and D/A conversion, quantising distortion will
occur at high signal levels. This will manifest itself as noise on modulation peaks. As the ADC and DAC used in the Icom radios are 24-bit
devices originally intended for high-grade audio applications, I do not
believe quantising distortion will be significant as long as the devices are
not overdriven.

Icom will not treat this as an action item unless a significant number of
user complaints are received. Given the minority status of AM in the ARS
nowadays, and the fact that A3E is not even an authorised emission for other
radio services in which these radios may be deployed, I am not sanguine that
there will be any change.

Cheers for now, 73,
Adam VA7OJ/AB4OJ

Icom IC-718 on AM

« **Reply #9 on:** January 28, 2007, 01:43:38 PM »

It's understandable that Icom won't acknowledge a possible design flaw if the number of complaints are minuscule in comparison to the number of rigs they sell. Other than your complaint about "756 digital dirt" on this forum, QRZ, eham, etc., I cannot recall any vast support of this possible problem. As Adam has pointed out, if you overdrive a device, distortion might be the

result, but this anomaly is not limited to just DSP type rigs.

As far as the Flex products, the basic hardware "black box" hasn't changed much in about a year. There were bias changes implemented, I believe, after the ARRL Product Review (don't remember if it was after the first or second review). However, there have been loads of hardware problems with connectors, cables, PC hardware, processors, and peripheral type equipment that make the Flex work. Further, software changes, tweaking, and massaging seems to be an on-going exercise almost on a daily basis. With these types of activities, the threat of other bug introduction into the software is a notable reality. Fortunately, many owners of Flex products enjoy the ability to diddle with the open source software, so when bugs, requests for changes to existing versions of software, and new feature requests are dialoged, there's an army of free enthusiastic users jumping into the software fray to find a solution. Icom, on the other hand for the majority of their current amateur products, have their software feature and control imbedded in firmware, which is not easily changed. They also will not release the software to the amateur market for these products.

However, as time matches on, I suspect that we start seeing more "middle of the road $$" rigs entering the market that will have the ability to implement changes to the software through downloads from the manufacturer. Ten-Tec and Elecraft have been doing this for some time now, and I believe Icom and Yaesu's high-end rigs also have this feature.