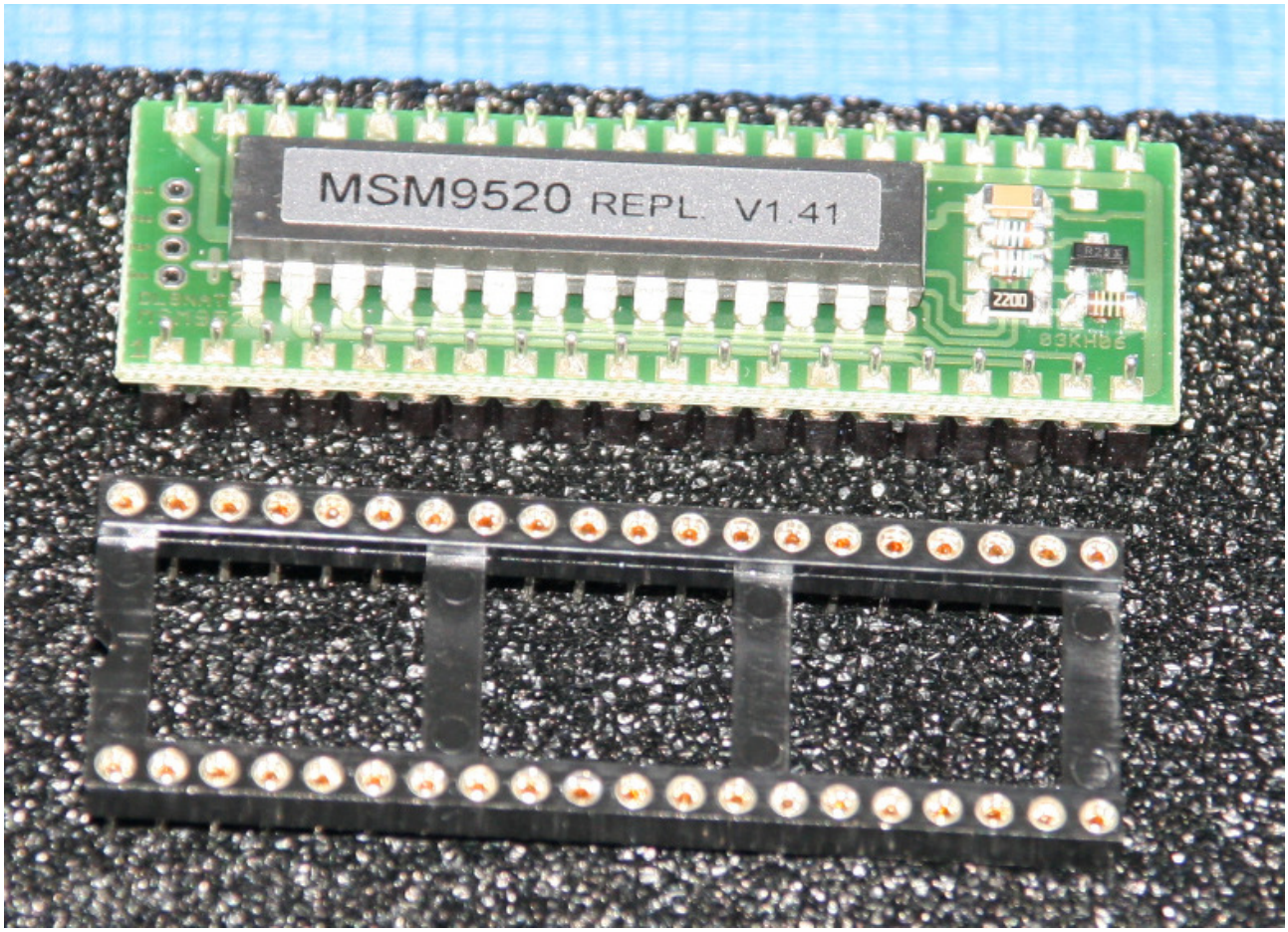
MSM9520 spare

Fixes display-problems on
FT-101ZD Mark II, FT-101ZD Mark III, FT-107 FT-707, FT-901 (late series), FT-902



Contents:

Characteristics

Problem: Display remains dark, shows strange or wrong frequency.
But supply and rf-signal on the input of the MSM9520 is ok (about 1,4Vpp)

Transceiver: FT-101ZD Mark II and Mark III (with 30m, 17m and 12m)
FT-707, FT-901 (late series), FT-902

Reason: The origin MSM9520 needs quite a lot of power. So it heats up. Over all those years the high operating temperature will kill the internal circuits.

Solution: Our MSM9520 spare

picture shows a repaired FT-107

Modifications: None – just replace the old msm9520 against the new socket and the new MSM9520 spare.

Function: the MSM9520 spare bases on the origin part and replaces it completelly. Counter and driver for display are integrated.

Distributed: since 2007

Support: included

SMD: None – spare part is already built up

RoHS: YES

For witch transceiver does the msm9520 NOT fit?

FT-101 ZD Mark I (has no WARC – without 30m 17m 12m)

FT-901 with counter-unit PB-1729 - early series

Those transceiver have the counter unit PB-1978 PB-1979 PB-1980 PB-1729.
Our spare part can't be not installed on this units – different parts!

For witch transceiver DOES the msm9520 fit?

FT-101 Mark II (has WARC – with 30m 17m 12m)

FT-101 Mark III (has WARC – with 30m 17m 12m)

FT-107

FT-707

FT-901 D / DM – **late series**

FT-902

please have a look into your transceiver and onto the number of the counter-unit.

They should be:

PB-2086 PB-2098 PB-3430 – on those units the msm9520 is installed and visible!

How to order:

You can order the ***MSM9520 spare*** in our online-shop, by Email, phone or fax

online-shop: http://www.hed-tafelmeyer.de/webshop/

email: info@hed-tafelmeyer.de

phone: (049) 9127 594866 (english service mo-fr 5 - 9pm MEST)

fax: (049) 9127 594865

payment:

we accept paypal and wired transfer

Price and conditions:

Price: 29,50€ (please visit our shop to make sure that this is the actual price)

shipping EU: 12,50Euro (please visit our shop to make sure that this is the actual price)

condition: prepay

feedback of some of our customers: http://151071.forum.onetwomax.de/area=6

We ship all our products well packed.

Our electronic components will always be packed esd-safe.

Technical informations about the spare part MSM9520.

Dear YL's, XYL's and OM's,
Before you order our ***msm9520 spare*** please make sure that the old IC on board 2086A is the reason for the problems.

This msm9520 spare can only replace the damaged IC.

To make sure, that the problems are caused by the msm9520 you need a DMM and a scope with a bandwith of about 20Mc.

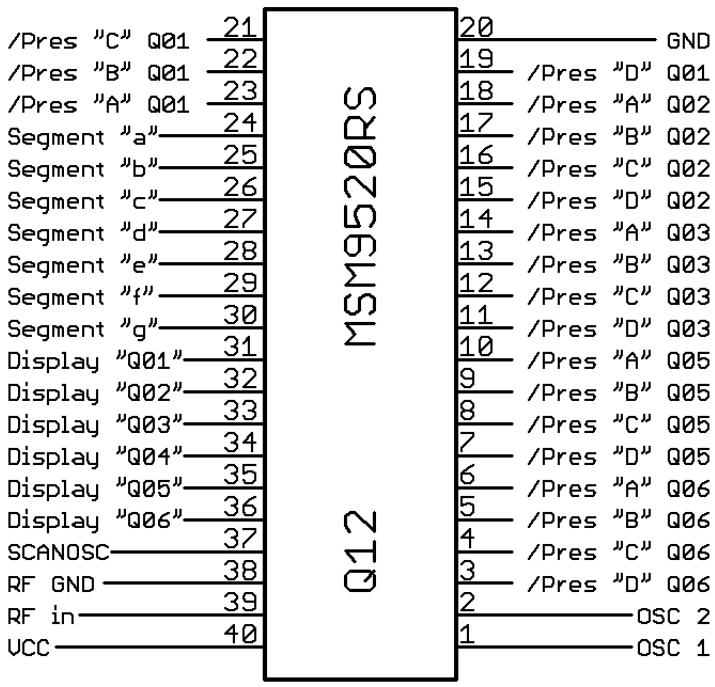
1. - Please check the supply on pin 40 (4,8V..5,2V).

2. - Switch on 80m and check the voltage on pin 39 with the scope (ca. 0,5Vpp).
   Shown frequency should be about 9Mc higher then the received freqency

3. - The oscillating voltage of the xtal on pin 1 is 510mVpp and on pin 2 about 680mVpp.

If those 3 checks are ok, and the display still shows a fix frequency, strange numbers or remains dark, it is probably the msm9520.

If voltage on pin 1 and pin 2 is missing, TC01, C24, X01 or C25 might also cause problems (shematic on last page).



Installation:

1. Desolder the old origin IC
2. put in the golden socket (included)
3. put in the 9520 spare

DONE!

There is no further modification on the pcb required!

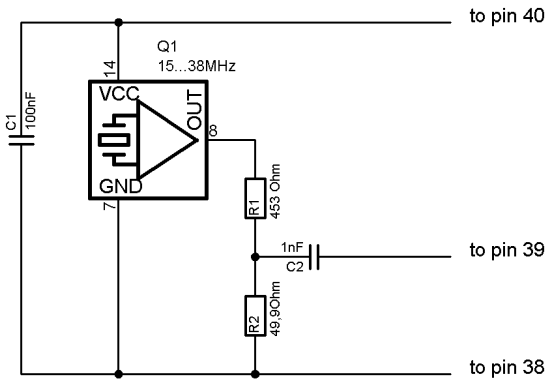
Quality

Each replacement module is:
- built up in handcraft, by the inventer himself in a very high quality
- made in Germany
- tested one by one
- packed esd-safe after final check.

Just in case: how to build a test-unit

If you don't have a scope, you can also check the proper function of the msm9520 or of the spare part with a small test circuit and an old xtal.
The values of the resistors (E96) are not critical.

The shown frequency should be f_{xtal} – 9MHz.
The capacitor C4421 has to be resoldered.
Therefor please connect the test circuit by 3 short wires with the counter.



This is a test circuit for the MSM9520 or the replacement module.
First unsolder C4421 on the counter-unit.
Now connect this circuit with short wires to Q4412.
The value of R1 and R2 is not very critical. The voltage division should be 10/1.
You can find such a TTL-oscillator on an old PC-motherboard.
The frequency being displayed should be the frequency of Q1 minus IF-offset, depending on the mode-switch.

Shematic of the MSM9520 spare