MOTOROLA
Ph.Book
Message
V220

DEBUG GUIDE
V220
LEVEL 3

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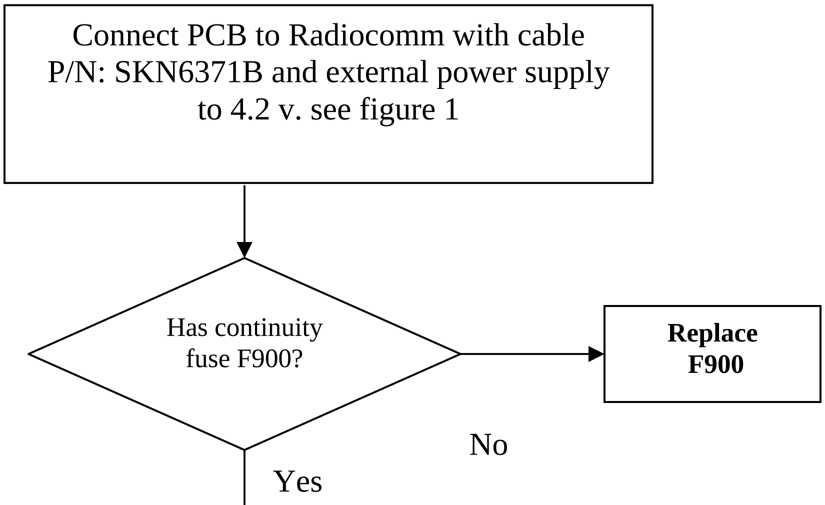
Version	Modification	Date
Versión 1.1	1st release	19-11-04

NO POWER UP


Connect PCB to Radiocomm with cable P/N: SKN6371B and external power supply to 4.2 v. see figure 1
Has continuity fuse F900?
Replace F900
No
Yes

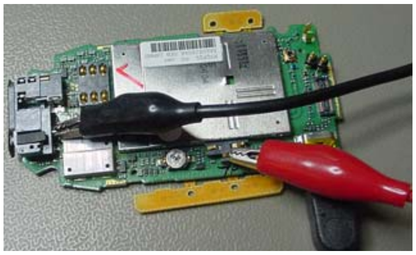
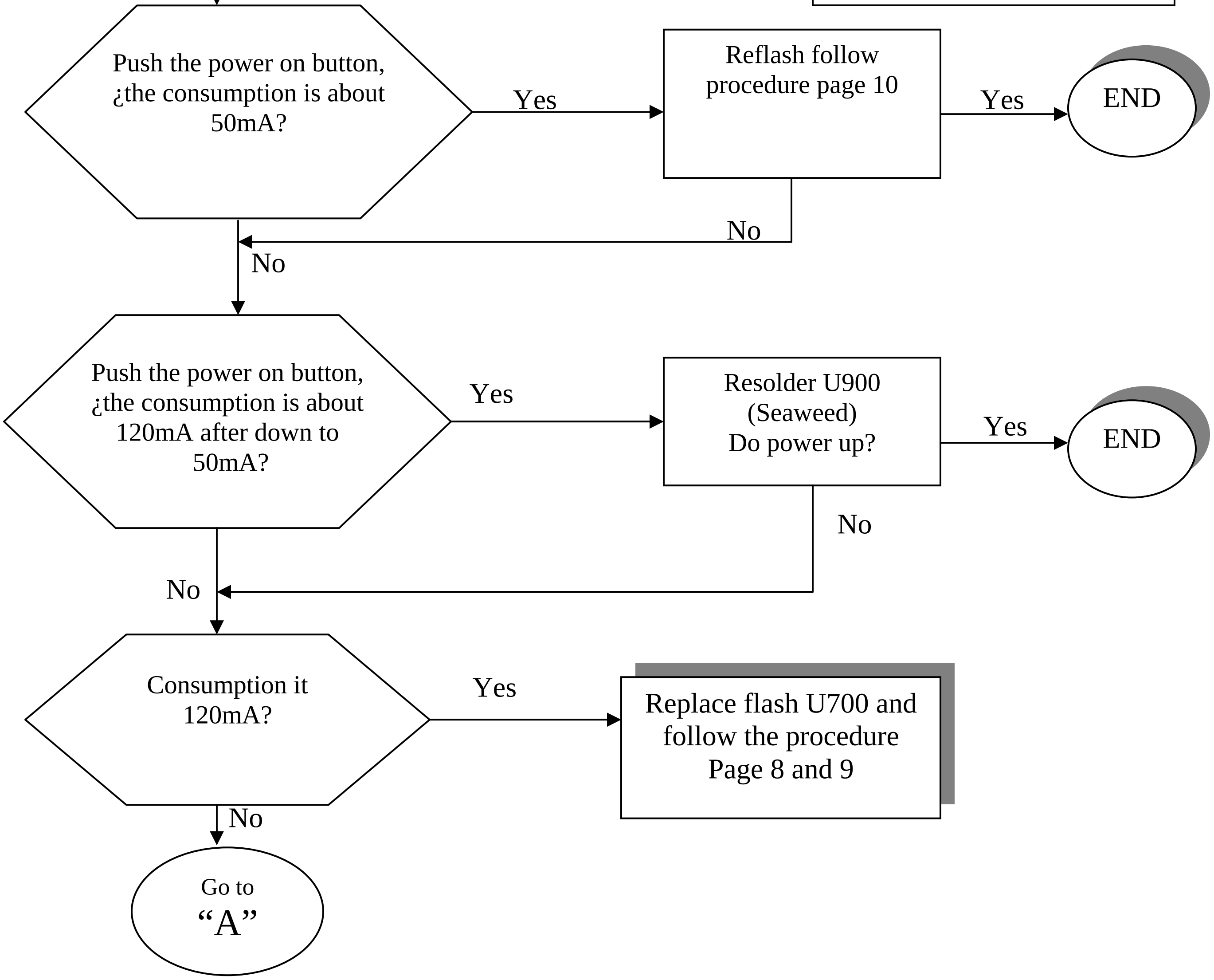
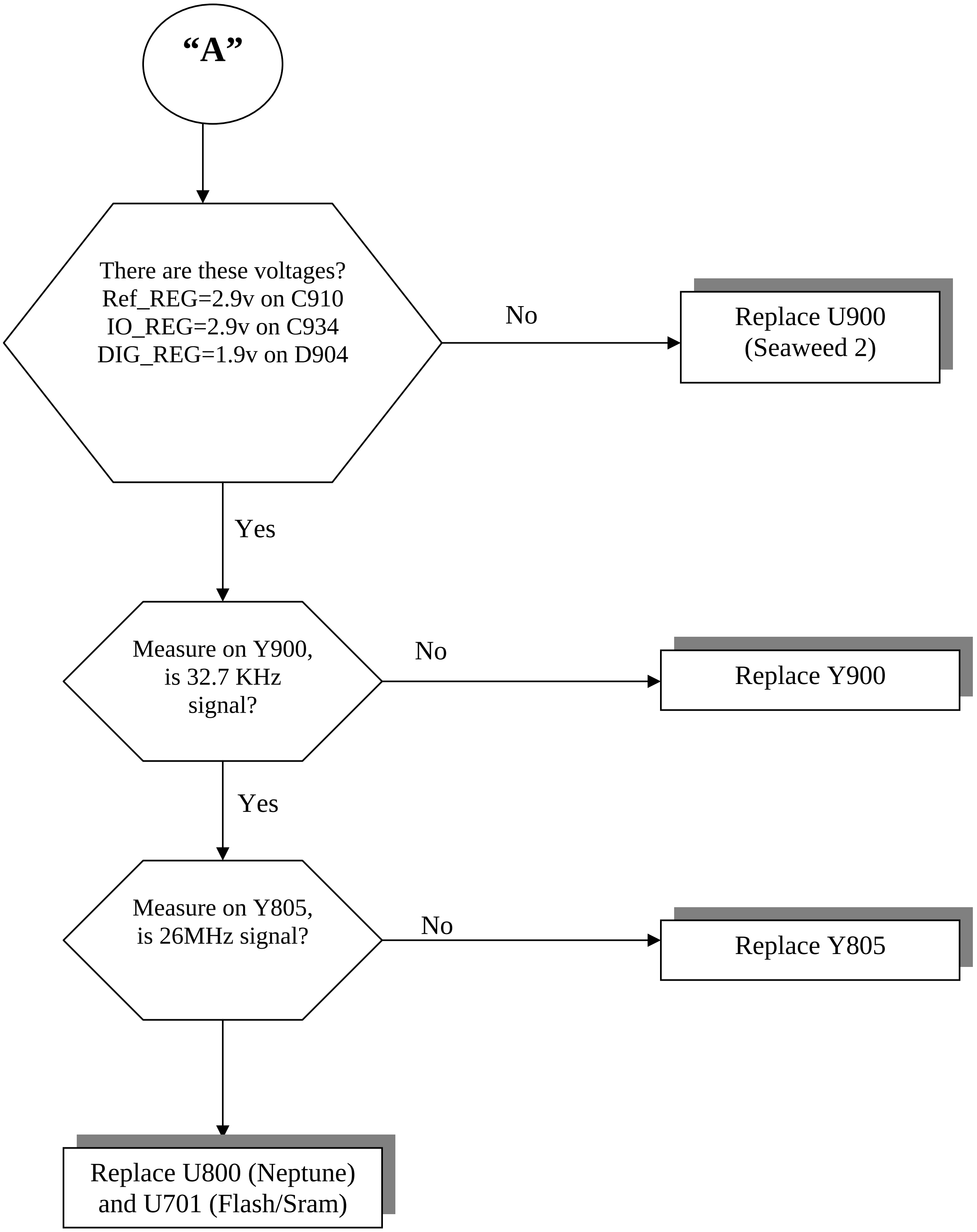


Figure 1 – Temporary until availability of Motorola repair fixture


Push the power on button, ¿the consumption is about 50mA?
Yes
Reflash follow procedure page 10
Yes
END
No
No
Push the power on button, ¿the consumption is about 120mA after down to 50mA?
Yes
Resolder U900 (Seaweed) Do power up?
Yes
END
No
No
Consumption it 120mA?
Yes
Replace flash U700 and follow the procedure Page 8 and 9
No
Go to “A”

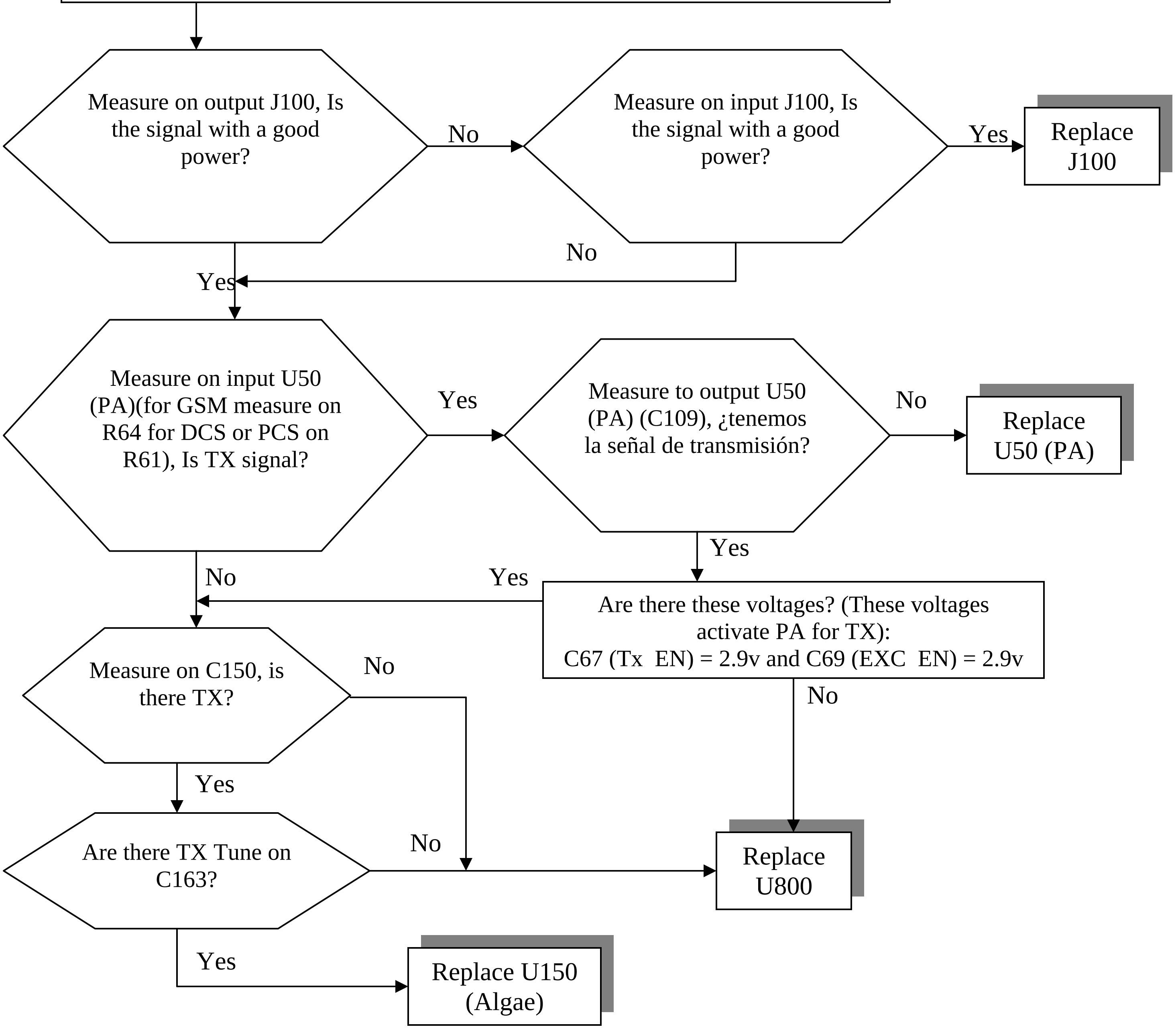

"A"
There are these voltages?
Ref_REG=2.9v on C910
IO_REG=2.9v on C934
DIG_REG=1.9v on D904
No
Replace U900
(Seaweed 2)
Yes
Measure on Y900,
is 32.7 KHz
signal?
No
Replace Y900
Yes
Measure on Y805,
is 26MHz signal?
No
Replace Y805
Replace U800 (Neptune)
and U701 (Flash/Sram)

No TX

Use this procedure to set TX in any band (GSM, DCS, etc). Main difference between setting bands is:

-Set band with Radiocomm.
-Set channels (accordingly to band selected) with Radiocomm.

Connect the PCB to Radiocomm with USB's cable P/N: SKN6371B and supply it with external supply (4,2 v) see figure 1. Put it to transmit with 15 LEVEL PA and select: "00- All zeroes", in window CARRIER, select the band and channel.

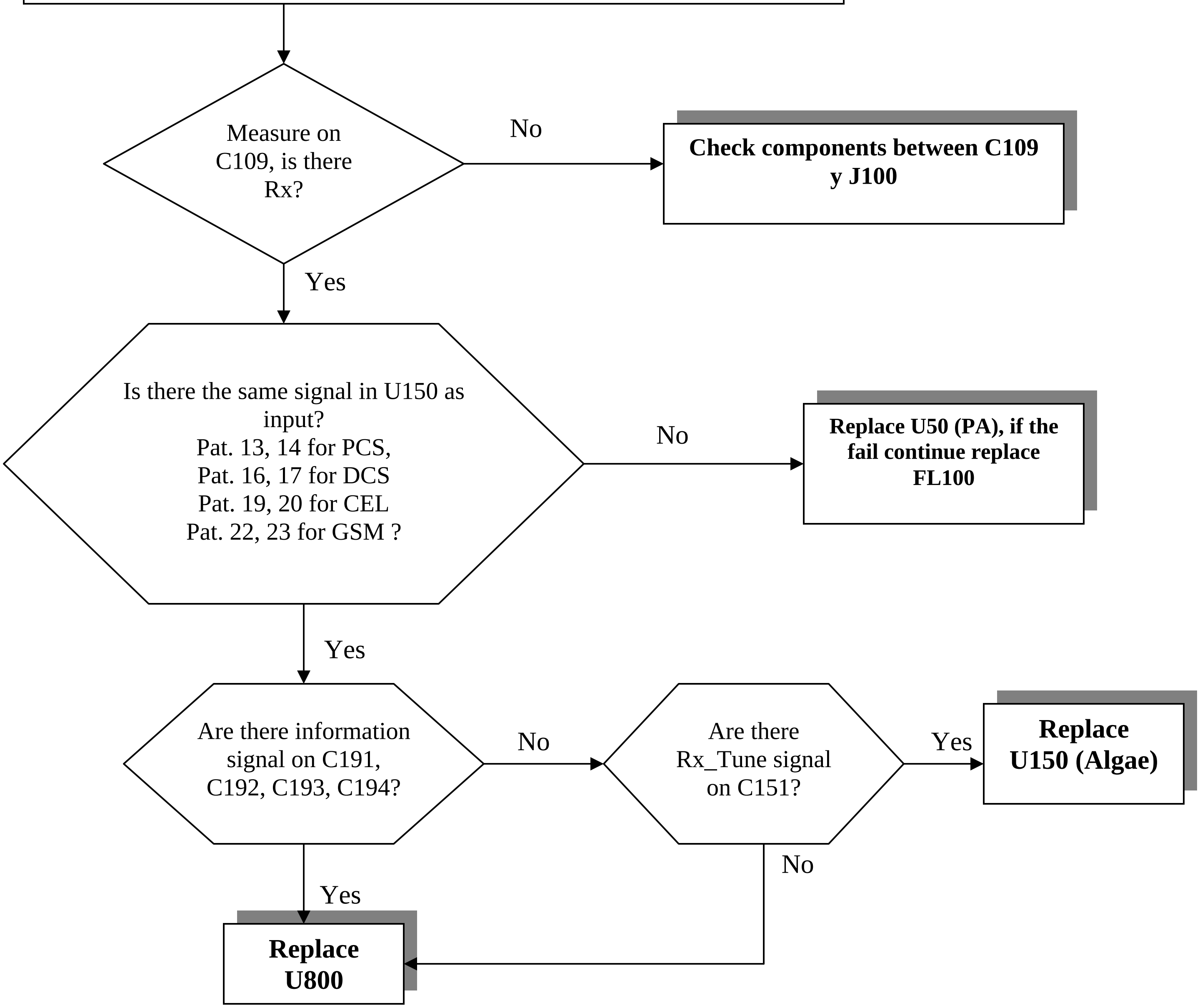

Measure on output J100, Is the signal with a good power?
No
Measure on input J100, Is the signal with a good power?
Yes
Replace J100
No
Yes
Measure on input U50 (PA)(for GSM measure on R64 for DCS or PCS on R61), Is TX signal?
Yes
Measure to output U50 (PA) (C109), ¿tenemos la señal de transmisión?
No
Replace U50 (PA)
Yes
No
Yes
Are there these voltages? (These voltages activate PA for TX): C67 (Tx EN) = 2.9v and C69 (EXC EN) = 2.9v
Measure on C150, is there TX?
No
No
Yes
Are there TX Tune on C163?
No
Replace U800
Yes
Replace U150 (Algae)

NO RX

Use this procedure to set TX in any band (GSM, DCS, etc). Main difference between setting bands is:

- Set band with Radiocomm.
- Set channels (accordingly to band selected) with Radiocomm.

Connect the PCB to Radiocomm with USB's cable P/N: SKN6371B and supply it with external supply (4.2 v)
See figure 1. Inject a signal (-50 dBm GSM channel or -50 dBm DCS cannel) to external connector J100.


Measure on C109, is there Rx?
No
Check components between C109 y J100
Yes
Is there the same signal in U150 as input?
Pat. 13, 14 for PCS,
Pat. 16, 17 for DCS
Pat. 19, 20 for CEL
Pat. 22, 23 for GSM ?
No
Replace U50 (PA), if the fail continue replace FL100
Yes
Are there information signal on C191, C192, C193, C194?
No
Are there Rx_Tune signal on C151?
Yes
Replace U150 (Algae)
No
Yes
Replace U800

FLASH REPLACING PROCEDURE

REQUIREMENTS: FOR THIS PROCEDURE WE USE,
WINDOWS 2000, PST 6.8 or RSD AND RADIOCOMM 7.1.1 or higher ALWAYS

1. – Connect phone to PC with WIN 2000 and PST 6.8 or higher (or RSD) and download this software:

R364_G_0B.D1.09R_LP0003_DRM0001_GMIC380001AA07C_image.shx

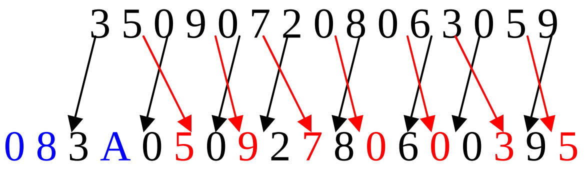
2. - Then restore IMEI, with Radiocomm 7.1.1:
   - Put the PCB in suspend mode.
   - Click in “GSM 2”
   - In STELEM/RDELEM write that information:

Element ID	0004
Record #	0001
Record Offset	0000
Length	0009
Data	xxxxxxxxxxx IMEI *Note

*Note: Example for writing an imei:

Pcb´s Imei

For write in Data:



-Click on STELEM

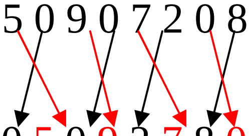
3. - Then restore Subsidy Lock, with Radiocomm 7.1.1:
    - Put the PCB in suspend mode.
    - Click in “GSM 2”
    - In STELEM/RDELEM write that information:

Element ID	0348
Record #	0001
Record Offset	0000
Length	0004
Data	xxxxxxxxxxx Subsidy Lock *Note

Element ID	0349
Record #	0001
Record Offset	0000
Length	0004
Data	xxxxxxxxxxx Subsidy Lock *Note

*Note: Example for writing a subsidy lock:

Pcb´s subsidy lock 5 0 9 0 7 2 0 8



For write in Data: 0 5 0 9 2 7 8 0

-Click on STELEM

4. - Then restore all NVM elements, with Radiocomm 7.1.1

5. - After downloading last software’s version, phasing the transceiver with GPGATE and Master Reset and Master Clear.

To read the NVM / Seem Elements from a golden unit:
1. - Connect the transceiver to Internal Radiocomm, INITIALIZE it and SUSPEND it.
2. - Select PHONE and NV/SEEM.
3. - In PRODUCT select the platform.
4. - Select READ.
5. - Save the NVM / elements with a product’s name

RECOVER THE REFLASH

.- This procedure must be used for no power up, power down in standby itself or “blocked”, failures.

REQUIREMENTS: FOR THIS PROCEDURE WE USE,
WINDOWS 2000, PST 6.8 AND RADIOCOMM 7.1.1 ALWAYS

1. – Connect phone to PC with WIN 2000 and PST 6.8 or higher (or RSD), press keys *, # and Send and download this software:

R364_G_0B.D1.09R_LP0039_DRM0001_JPG_0B_V220_06_00_39R_SE8545AXXL408C_FDI.shx

2. - Then restore all NVM elements, with the Radiocomm 7.1.1 or higher.

3. - After downloading last software’s version, phasing the transceiver with GPGATE and Master Reset and Master Clear.