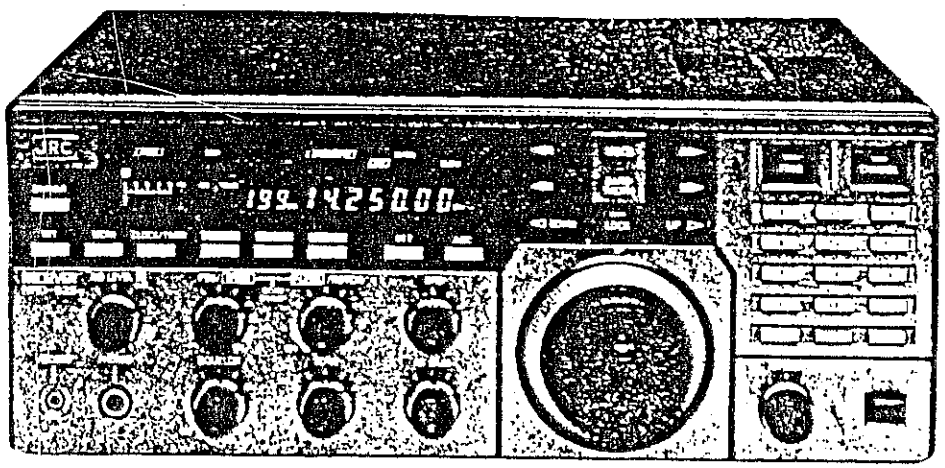
ESKAB
P.O.Box 32001
S-20064 MALMOE
Sweden

INSTRUCTION MANUAL

E D V I S PHASE LOCKED AM & IF-FILTERBOARD
M O D I F I C A T I O N S

JRC Japan Radio Co., Ltd.

MODEL NRD-525



the communication specialists

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P L A M & FILTER OPTION
N R D 5 2 5

NOTE: Any repairing or total adjustment (exept for P1) of the PHASE-LOCKED LOOP AM & IF-FILTER BOARD should only be done by those who own the original JRC NRD 525 EXTENTION & SERVICE BOARD. Upon request we will send full instructions for adjustment and repair.

PHASE LOCKED LOOP AM & IF-FILTER BOARD SERIAL No._____

STANDARD VERSION WITH FILTER POSITIONS WIDE & INTER: I__I

VERSION WITH FILTER POSITIONS: WIDE, INTER & AUX: I__I

VERSION WITH FILTER POSITIONS: WIDE, INTER, NARROW & AUX: I__I

VERSION UPON INDIVIDUAL REQUEST INCLUDING_____WIDE:_____,

_____INTER:_____,NARROW:_____,AUX:_____,

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THE SPECIALISTS IN RADIOCOMMUNICATION

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##

THE INSTALLATION INSTRUCTIONS FOR THE *P H A S E L O C K E D A M * & FILTER OPTION FOR THE JAPAN RADIO CORPORATION N R D 5 2 5

1. Remove the 4 screws on each side of the NRD 525.

2. Remove the top and bottom covers. When removing the top cover, pull out the loudspeaker plug from the CAE-182 = IF AF AMP Board.

3. Place the receiver upside down with the front panel facing you.

4. Now you are looking at the motherboard. Each board has it's own pair of connector numbers. (e.g.: Connector J21 & J22 belong to the CGA-132 (loop2) board.)

5. Locate the coaxial cable on connector J22,Pin 20 leading to connector J28,Pin 2. This coaxial cable carries the BFO signal.
   THE PHASE LOCKED LOOP AM OPTIONAL BOARD has to be inserted into this signal line.

6. Disconnect the inner cable of the coaxial cable from connector J28,Pin 2 and remove the screen from the ground plane close to Pin 2 of J28.

7. Connect the inner cable (see 6.) to connector 26,Pin 5 and the screen to J26,Pin 7 =ground plane motherboard.

8. Connect the coaxial cable supplied with the option as follows (approx. length 8 cms).
   The inner cable of this coaxial cable must be soldered to Pin 15 on J25 and the screen must be soldered to Pin 18 on J25 =ground plane motherboard.
   The opposite end of this coaxial cable must be soldered to Pin 2 on J28
   The screen is soldered to the groundplane close to Pin 2 of J28.(see 6.)

   WARNING: Be careful when soldering the coaxial cables. A short circuit between the inner lead and the screen may occur if the cable is soldered with excessive heat. Always start with soldering the screen to the ground plane.

9. Connect the single wire supplied with the option (approx. 9 cms) as follows! one end to Pin 5 on J25 and the opposite end to Pin 21 on J29.

   THIS COMPLETES THE MODIFICATIONS ON THE MOTHERBOARD.

10. Turn the NRD 525 upright again, with the frontpanel facing you.

11. Pull out the CFH-36 IF Filter Board 6PCJD00159B. Use a small screwdriver for pulling out the board. The board has small holes on each side, pull each side of the board for a few millimetres at a time and the board will leave it's slot undamaged.

12. A connector with a multicolour flat cable is supplied with the option, connect this cable as follows.(See Drawing No.2)
    BROWN WIRE : To Pin 5 on IC1
    RED WIRE : To Pin 4 on IC1
    ORANGE WIRE : To SIP resistor RA1,Pin4 (Pin 3 on IC1)
    YELLOW WIRE : To SIP resistor RA1,Pin3 (Pin 2 on IC1)
    GREEN WIRE : To SIP resistor RA1,Pin2 (Pin 1 on IC1)
    BLUE WIRE : To Sip resistor RA1,Pin 1

NOTE: As you can see on the IF-Filter board and the drawing all these six solder points are located very close to each other. The spacing between the solderpoints of the six wires is 2.54 mm (0.1") WARNING: Special care must be taken when soldering these cables. A small soldering iron should be used. (good soldering tin is supplied with the option) Individuals without soldering experience should test their skills on a cheap hobby kit.

13. The installation of the multicolour flat cable on the CFH 36 IF Filter board is now completed. Insert the IF-FILTER BOARD back into its slot. Make sure that the board is pressed down properly to ensure good contact.

14. Pull out the CAE 182 IF AF AMP board 6PCJD00160B (for the pulling out procedure see 11.).

15. Two coaxial cables have to be soldered to the CAE 182 board (they are supplied with the option) Before you fit these two cables you have to cut one print track by means of a small, sharp knife. This print track connects transformer T4,Pin 6 to testpoint 1. The cutting has to be made precisely beside Pin 6 of T4.(see DRAWING No.1).

16. Connection of the coaxial cables:
The two cables are marked with a red and yellow sleeve.
The cable with the red sleeve has to be connected as follows:
The inner cable to Pin 6 of transformer T4 and the screen to the ground plane close to T4. (print edge)
The cable with the yellow sleeve has to be connected as follows:
The inner cable to Testpoint1 and the screen to the ground plane close to R84.

WARNING: The risks for short circuits as mentioned at 8. should not be neglected.

17. Re-insert your board CAE-182 and make sure that it has proper contact. Make sure that the board is pressed down properly, to ensure good contact.

18. Insert the PHASE LOCKED AM & FILTER OPTIONAL BOARD into the slot marked CGA 118 / V-UHF Local. Before totally inserting this board, the plugs of the multicolour cable and the coaxial cables have to be fitted. The multicolour cable must be connected to J1, the text on the board indicates the signal names. The coaxial cable has to be fitted to J2, the text on the board says input & output.
NOTE: The female connector locks to the male receptacle of the board. Should you wish to pull these connectors off the board, use a small screwdriver and release the locking edge.

19. Put the PHASE LOCKED AM & FILTER BOARD into its final position. Make sure that neither the multicolour nor the coaxial cables are twisted.

20. The Installation of the optional board is now completed and the receiver can be tested. The small potentiometer on the edge of the the optional board is meant for precision alignment of the PHASE LOCKED AM function in your receiver.

TEST AND ADJUSTMENT PROCEDURES

1.The IF-filter test.

a. The If-filter positions AUX,WIDE,INTER and NARROW can be tested by selecting these bandwidth modes and for checking whether the appropiate bandwidth is selected.(When the receiver is tuned to a known broadcast station.)

b. The NARROW & AUX mode can only be selected if an optional IF-filter has been inserted on the CFH 36 board and on the optional PHASE LOCKED LOOP AM & IF-FILTER BOARD.

c. The original IF-circuitry has a large degree of crosstalk, the only way to tackle this shortcomming is to insert two IF-filters of the same bandwidth in series on, one the PHASE LOCKED LOOP AM & IF-FILTER BOARD and second the CHF 36 IF-FILTER BOARD.

THE PHASE LOCK LOOP AM TEST

2.a Find a strong local AM station and switch the receiver to its USB or LSB mode.(the switching between USB and LSB should be done in the non offset mode.) (see owners manual, push MEMO and 3)

b. Select bandwidth mode WIDE.

c. Tune the station exactly on xxxx.00 Khz. If the receiver's TCXO is calibrated properly,the interference tone should be within 10 Hz of the station the receiver is tuned to.

d. Pull out the NB LEVEL knob (on WIDE). The PHASE LOCKED AM circuit should now be active and the station should lock.

e. Slowly tune 40 Hz up and down the zero beat frequency.The PHASE LOCKED AM detector has a lock range of approx. 50 Hz and should lock symmetrically in respect to the xxxx.00 readout.

f. If this is not the case (e.),the centre point can be moved by slowly turning the (trim) pot. P1 on the PHASE LOCKED LOOP AM & IF-FILTER BOARD. This pot. is accessible from the top and is marked PLAM zero adjust.

g. Check the "zero PLAM" procedure on other accurate stations. When the receiver's TCXO (temperature compensated crystal oscillator) is adjusted correctly, the PHASE LOCKED AM circuit should lock on all stations which are within 20 Hz of their nominal frequency. The kHz number may be keyed in and the receiver should lock.

h. This completes the test & adjustment procedure. Recalibration should not be necessary, but may be repeated at any time.

i. The adjustment procedure should be done when the receiver has reached it's permanent "working temperature". Eventual -offset- during the "warm up period" should be compensated with either the main dial or the RIT function.

OPERATING INSTRUCTIONS

In General.

The PHASED LOCKED LOOP AM & IF-FILTER BOARD improves the signal to noise ratio of weak stations up to 10 dB. The wideband noise on the audio spectrum is eliminated.

We offer IF-filter combinations for optimal shortwave listening and our board can carry almost any type of IF-filter. The board can be made to the specifications of the individual customer. We can offer IF-filters between 20.0 kHz and 0.3 kHz. For both the CFH-36 IF-FILTER BOARD and The PHASE LOCKED AM & IF-FILTER BOARD.

The PHASE LOCKED AM DETECTOR offers a high quality AM reception without selective fading and distortion.
PHASELOCKED ECSS RECEPTION. The PHASE LOCKED AM DETECTOR provides superb ECSS reception. (Exalted Carrier Selective Sideband)

By selecting sideband (USB or LSB) you can find the sideband with the least interference. By altering the settings PBT, NOTCH, TONE, BANDWIDTH you can get rid of interference and receive the station you are tuned to with better audio quality. Many -impossible situations- become possible.

OPERATION

1. Choose your AM station. Switch the receiver to either LSB or USB mode, bandwidth WIDE (6kHz) or if provided AUX (4kHz)

2. Pull the NOISE BLANKER CONTROL knob (NB WIDE)

3. The station should LOCK. (No interfering beat tone remains).

4. Select the sideband with the least interference and choose your own PBT, NOTCH,TONE and BANDWIDTH settings.

5. IF no LOCK occurs, you should slowly tune up and down in steps of 10 Hz.

6. As mentioned in the adjustment procedure it should be possible to achieve LOCK on all stations that are +/-10 Hz within their nominal frequency.

7. The IF-filters on the PHASE LOCKED AM & IF-FILTER BOARD provide a considerable improved overall skirt selectivity in the NRD 525 receiver. They reduce adjacent channel interference and improve reception of weak stations.The IF-filters on the board are automatically switched with the receiver's bandwidth control.It is recommended to have IF-filters on all available positions. WIDE and INTER are always installed as standard. For shortwave listeners we recommend 4 kHz for AUX and 1.5 kHz for NARROW.

8. Shortwave listeners who operate an RTTY decoder, should build or invest in an audio filter rather than choosing 0.6 kHz or 0.3 kHz IF-filters.

   The Wavecom W-4010 has built-in tunable tone filters and will operate properly on a bandwidth like INTER.

9. All PHASE LOCKED AM & IF-FILTER BOARDS are tested and adjusted in a NRD 525 receiver and should not require any further attention. On PLAM 525 boards we offer one year warranty.In case of malfunctioning, the board should be sent by airmail in a double plastic foam envelope and carry a postal C1 sticker marked, defective board, for service repair to: ESKAB / P.O. Box 32001 / S-200 64 MALMÖ / SWEDEN. An exchange board will be sent on arrival of the defective board.

The 525 PLAM option has been on the test bench for more than six months, prior to release, and we do not expect further changes.
However, specifications are subject to change without notice due to developments in technology.
We plan to institute an NRD 525 data bank. Those who wish to enlist should send USD 5,- or equivalent to our address. BANK NOTES or IRC's only. As soon as we have gathered substantial technical news, we will distribute to those who are enlisted.
A data bank exists for the JRC NRD 515 as well as for the ICOM R71A/E/D.

We are always thankful to receive your comments (also critical ones) on products produced by EDVIS & ESKAB.

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**. To operate the NRD 525 without the PHASE LOCKED AM & FILTER BOARD the following should be done.

a. Insert a jumper-wire between PIN 1 & PIN 6 (outer PIN's) of the plug with the two coaxial cables. It is recommended to insulate the plug and jumper wire with a bit of selfadhesive tape.

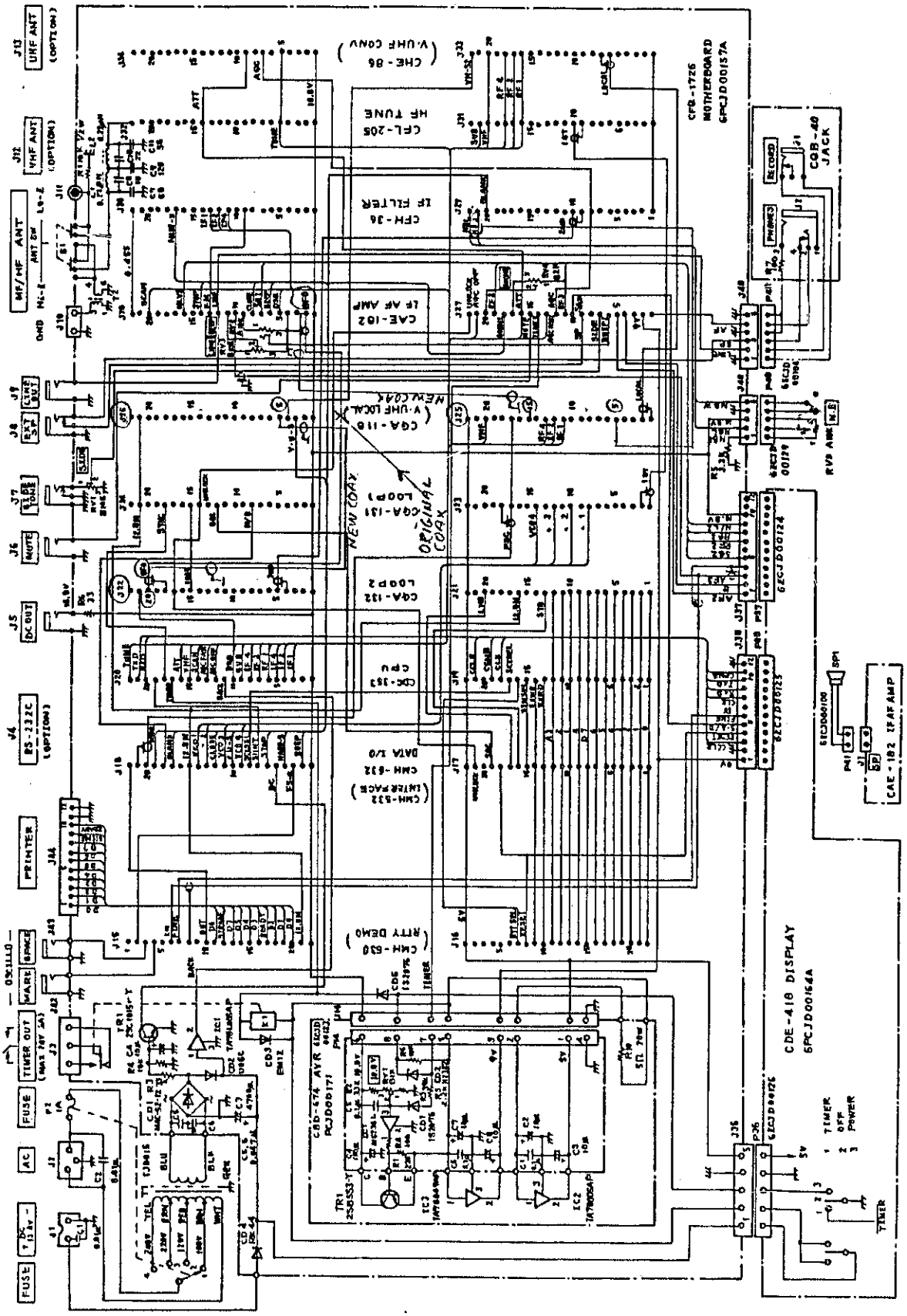
b. Connect a single wire (insulated) on the motherboard, between connector: J 26, PIN 5 and J 26, PIN 26. J25, Pin 15
Now the NRD 525 is restored to it's "original condition" and the PHASE LOCKED LOOP AM & IF-FILTER BOARD can be deleted.

c. When you wish to re-install the PHASE LOCKED LOOP AM & IF-FILTER BOARD do not forget to remove the wires mentioned in a.& b.

11. CIRCUIT DIAGRAM

NRD-525 CHASSIS

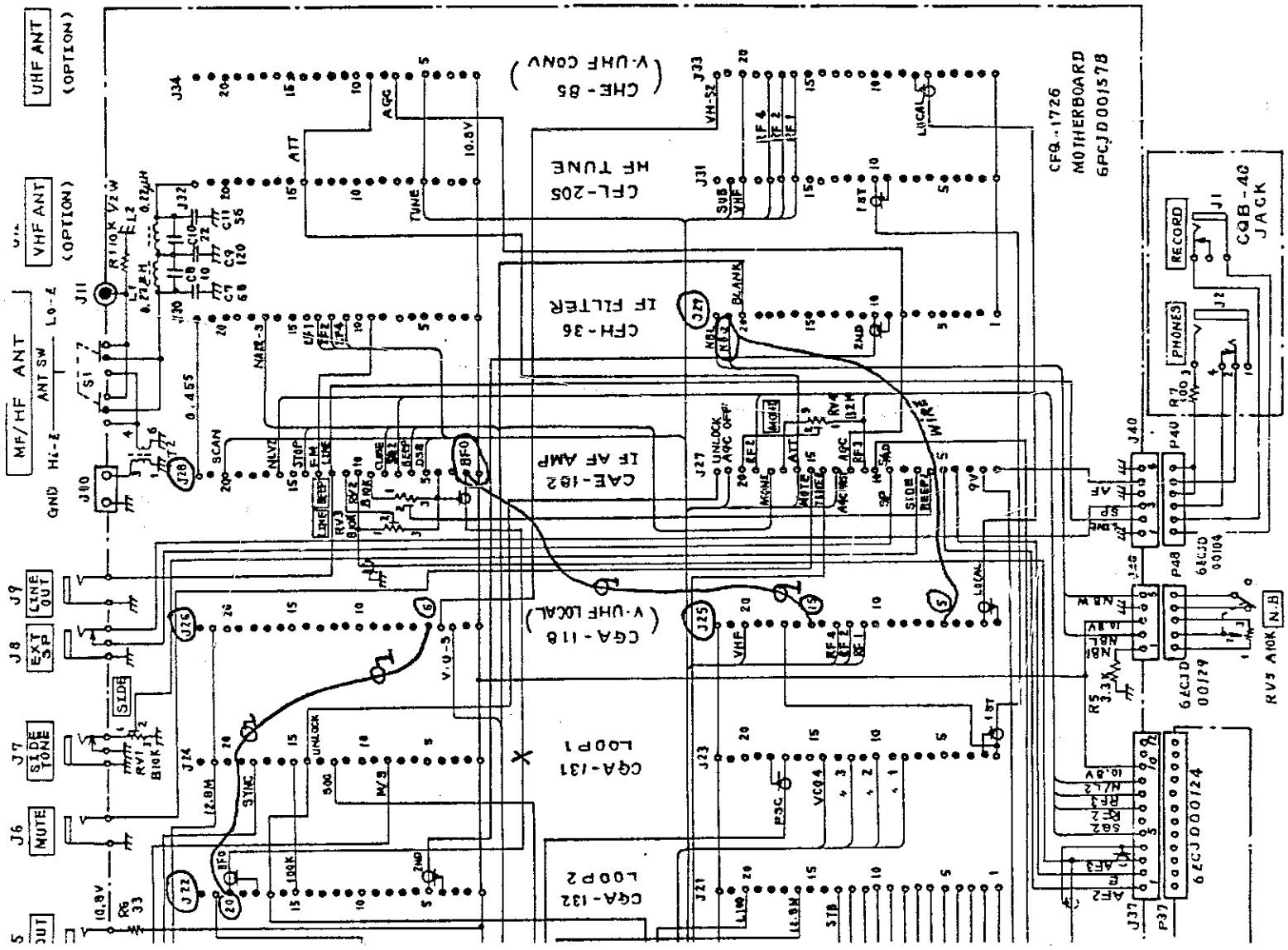
CIRCUIT AND COMPONENTS SUBJECT TO CHANGE FOR AN IMPROVEMENT WITHOUT NOTICE.

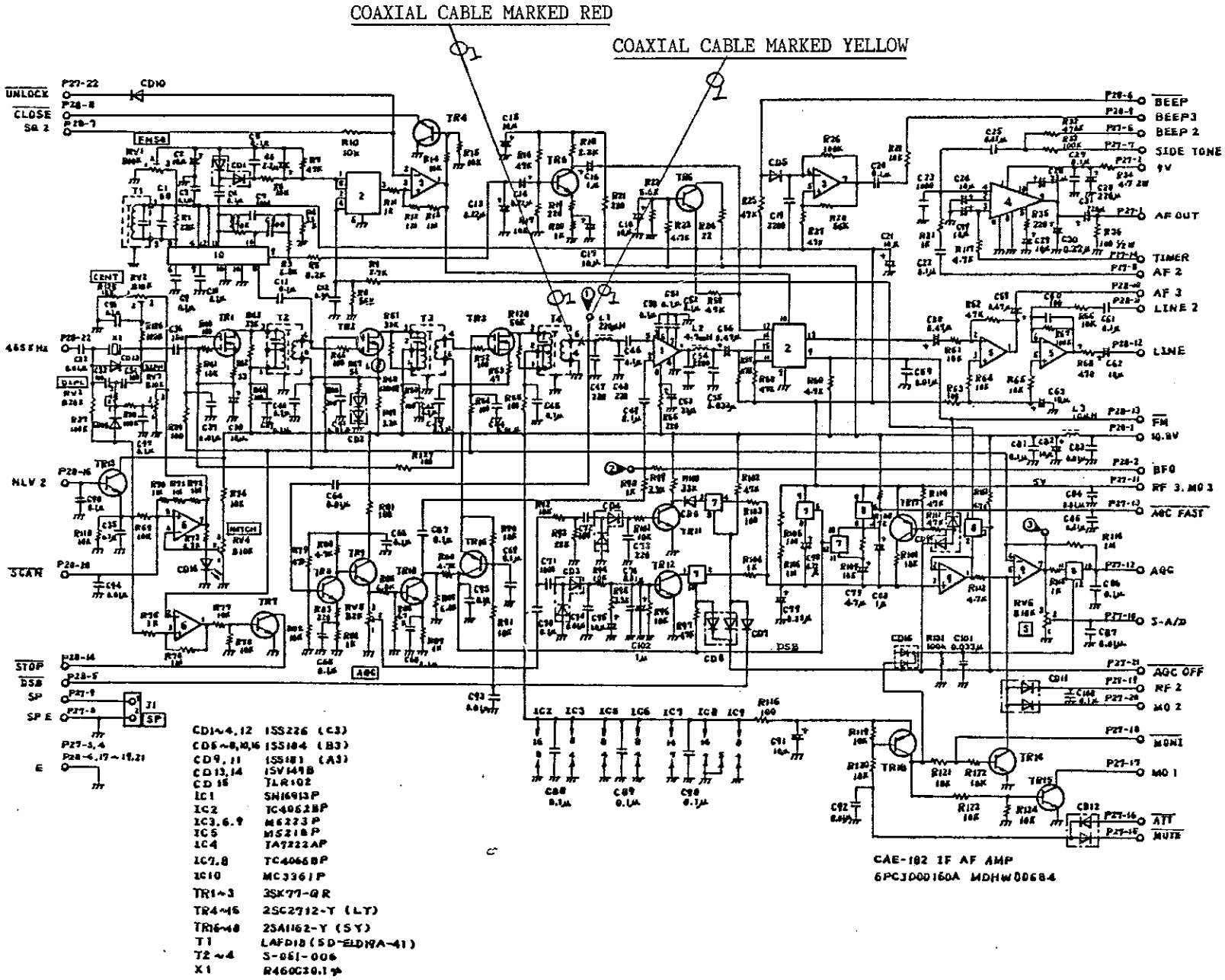


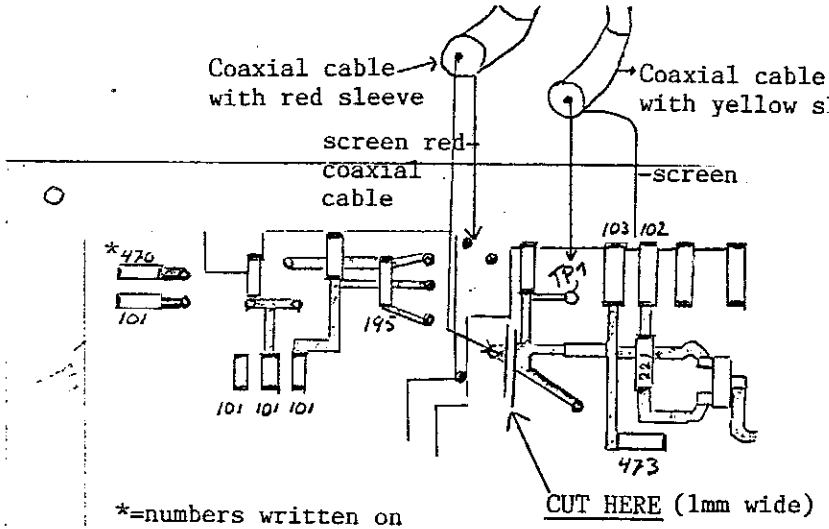
11. CIRCUIT DIAGRAM

NRD-525 CHASSIS

CIRCUIT AND COMPONENTS SUBJECT TO CHANGE FOR AN IMPROVEMENT WITHOUT NOTICE.




COAXIAL CABLE MARKED RED
COAXIAL CABLE MARKED YELLOW
UNLOCK
CLOSE
SQ 2
P27-22
P28-8
P28-7
CD10
EMS6
TR4
TR5
TR6
TR1
TR2
TR3
TR7
TR8
TR9
TR10
TR11
TR12
TR13
TR14
TR15
TR16
TR17
TR18
T1
T2
T3
T4
X1
CD1~4,12 1SS226 (C3)
CD5~8,10,16 1SS184 (B3)
CD9,11 1SS181 (A3)
CD13,14 1SV149B
CD15 TLR102
IC1 SN16913P
IC2 TC4052BP
IC3,6,9 M5223P
IC5 M5218P
IC4 TA7222AP
IC7,8 TC4066BP
IC10 MC3361P
TR1~3 3SK77-GR
TR4~15 2SC2712-Y (LY)
TR16~18 2SA1162-Y (SY)
T1 LAFD18 (SD-ELDNA-41)
T2~4 S-061-006
X1 R460C30.1%
CAE-182 IF AF AMP
6PCJD00160A MDHW00684
BEEP
BEEP3
BEEP 2
SIDE TONE
9V
AF OUT
TIMER
AF 2
AF 3
LINE 2
LINE
FM
10.8V
BFO
5V
RF 3, MO 3
AGC FAST
AGC
S-A/D
AGC OFF
RF 2
MO 2
MONI
MO 1
ATT
MUTE
NLV 2
SCAN
STOP
DSB
SP
SP E
E
J1
SP
AGC
MUTE
DSB



*=numbers written on
the components

CAE 182 IF AF AMP
6PCJD00160B

The board from the solderside (backside)
upper left corner.

This drawing is no 1:1 drawing, it is meant
for locating the two coaxial connecting points.

WARNING:
BE CAREFUL SOLDERING THE TWO COAXIAL
CABLES. BEGIN WITH THE SCREEN OF THE
CABLE.

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JAPAN RADIO NRD 525 PLAM MODIFICATION
INSTRUCTIONS

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SWEDEN

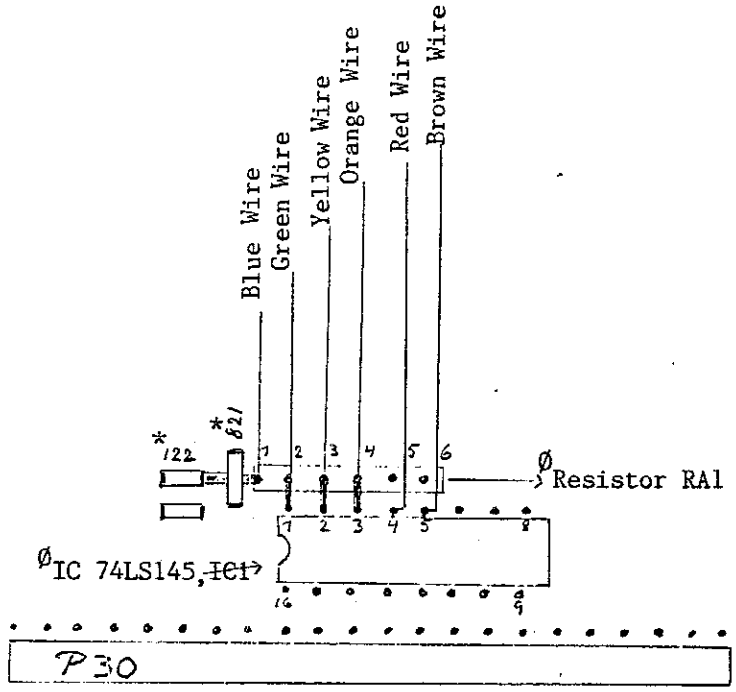
DRAWING No.1

JAPAN RADIO NRD 525 MODIFICATION INSTRUCTIONS
ESKAB & EDVIS
P.O. Box 32001
S-200 64 MALMOE
SWEDEN

CFH 36 IF FILTER BOARD
6PCJD00159B

This drawing is no 1:1 drawing, it is meant for locating the connection of the multicolour flat cable.

The board from the solderside (backside) area around P30.



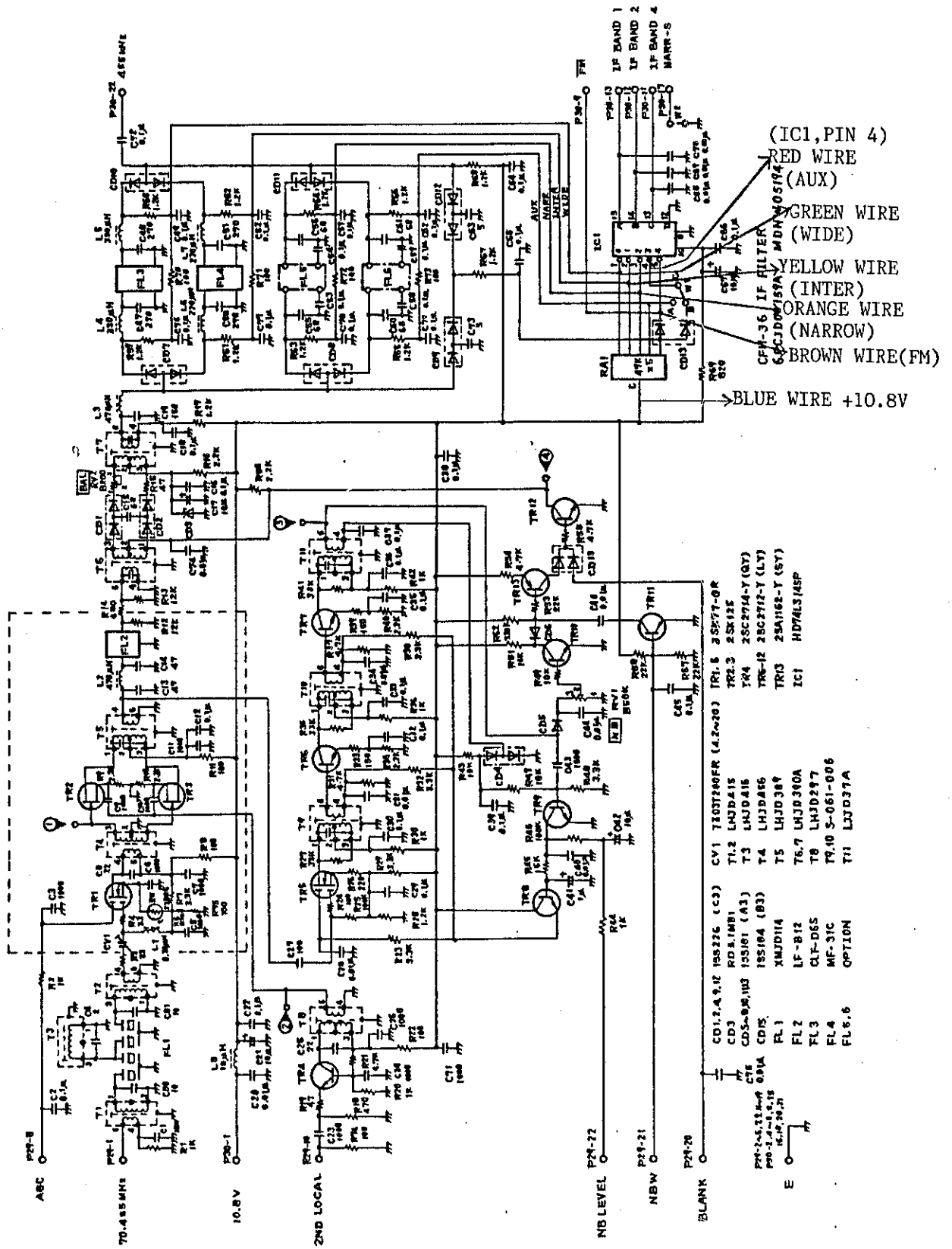
WARNING:
AVOID SOLDERING WITH A BIG SOLDERING IRON.

* = actual number on component
Ø = the IC 74LS145 can only be seen from the component side

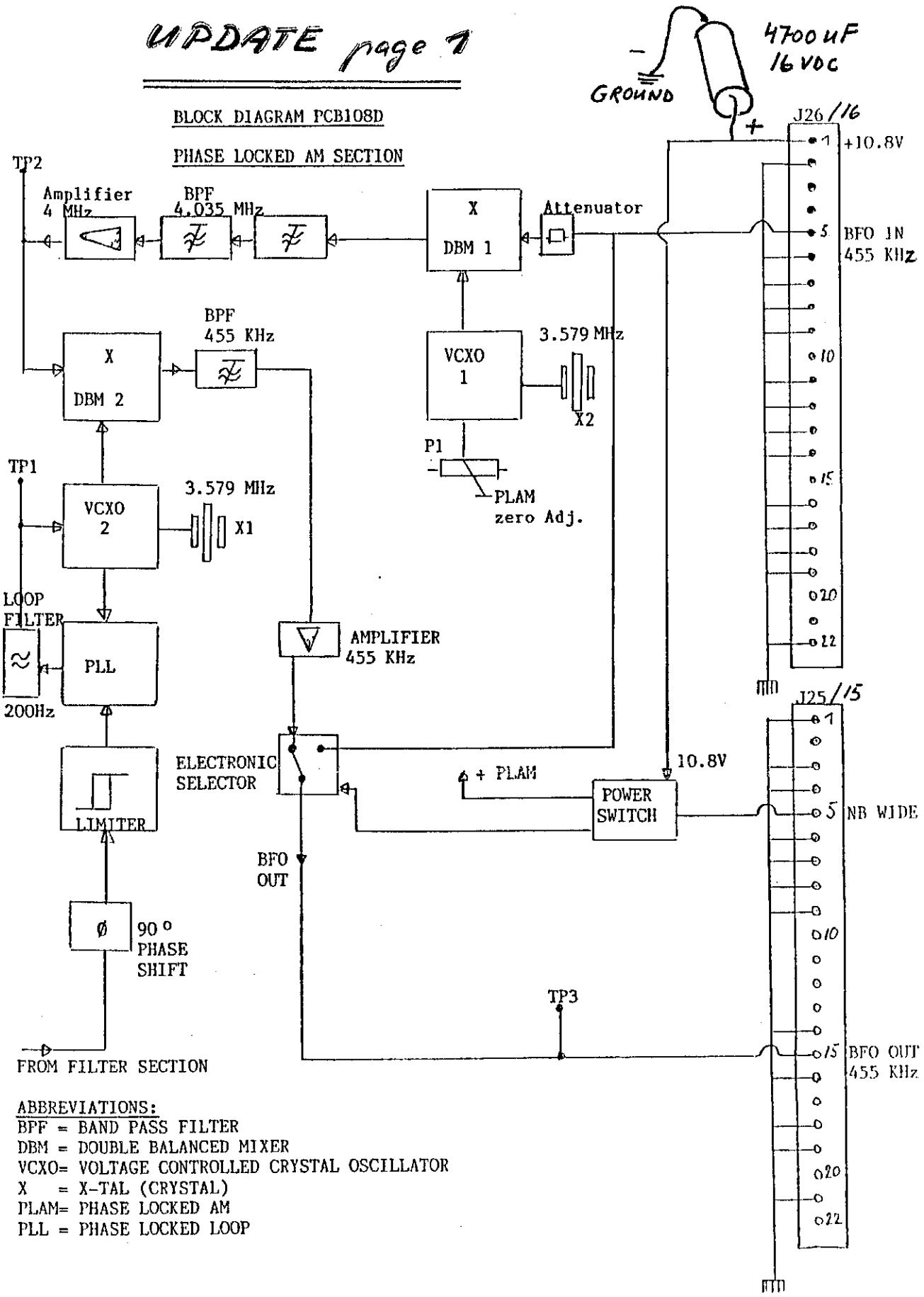
DRAWING No.2

IF-FILTER BOARD NRD 525

CFH-36 IF FILTER UNIT



UPDATE page 1



ABBREVIATIONS:
BPF = BAND PASS FILTER
DBM = DOUBLE BALANCED MIXER
VCXO= VOLTAGE CONTROLLED CRYSTAL OSCILLATOR
X = X-TAL (CRYSTAL)
PLAM= PHASE LOCKED AM
PLL = PHASE LOCKED LOOP

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DRAWING No.3

NRD 525 OPTIONAL PHASE LOCKED AM BOARD

October. 1989

Some NRD 525 receivers require extra "cleaning" of the DC-supply voltage and this can be achieved by inserting extra electrolytical capacitors.

BLOCK DIAGRAM PCB108D
FILTER SECTION

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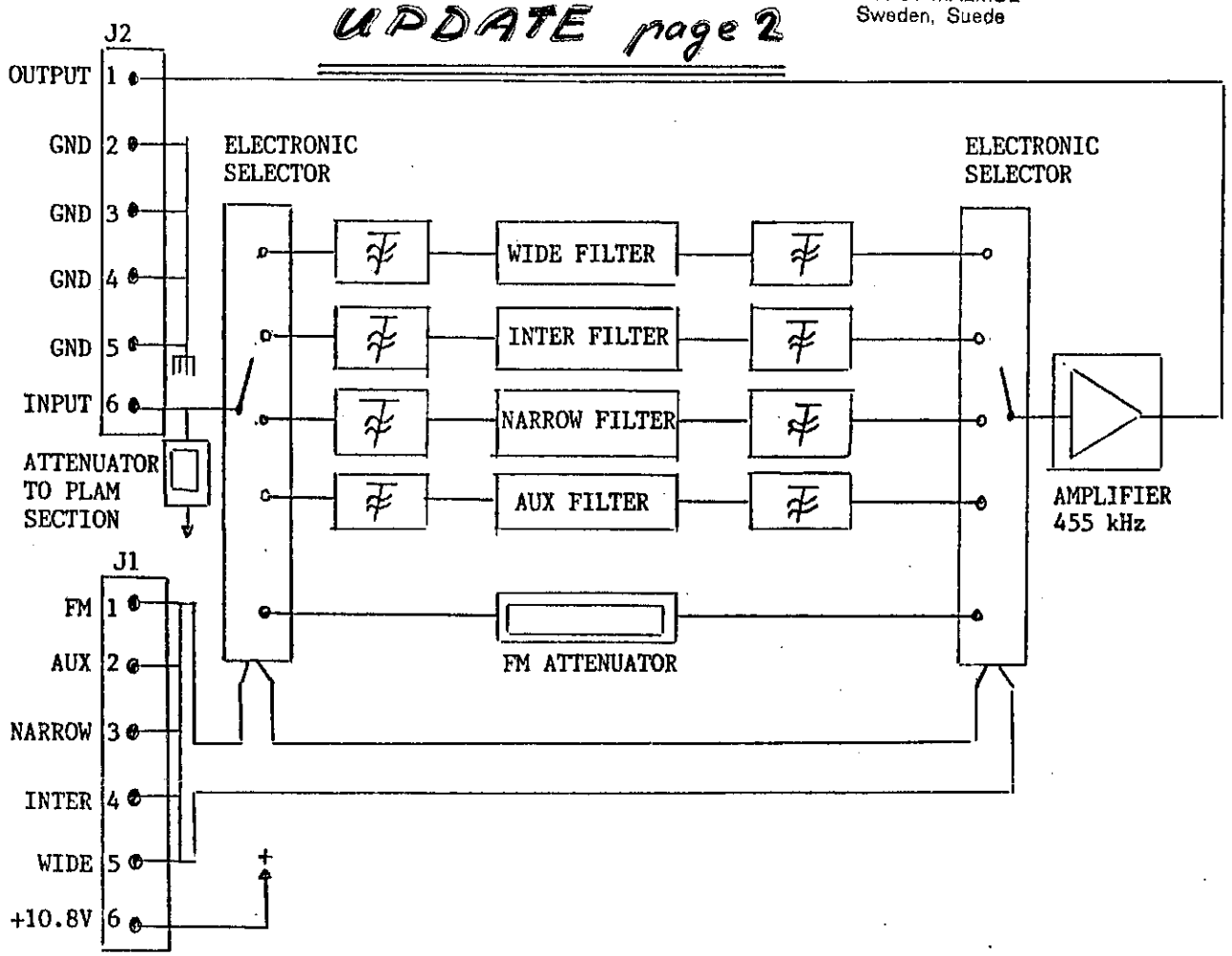
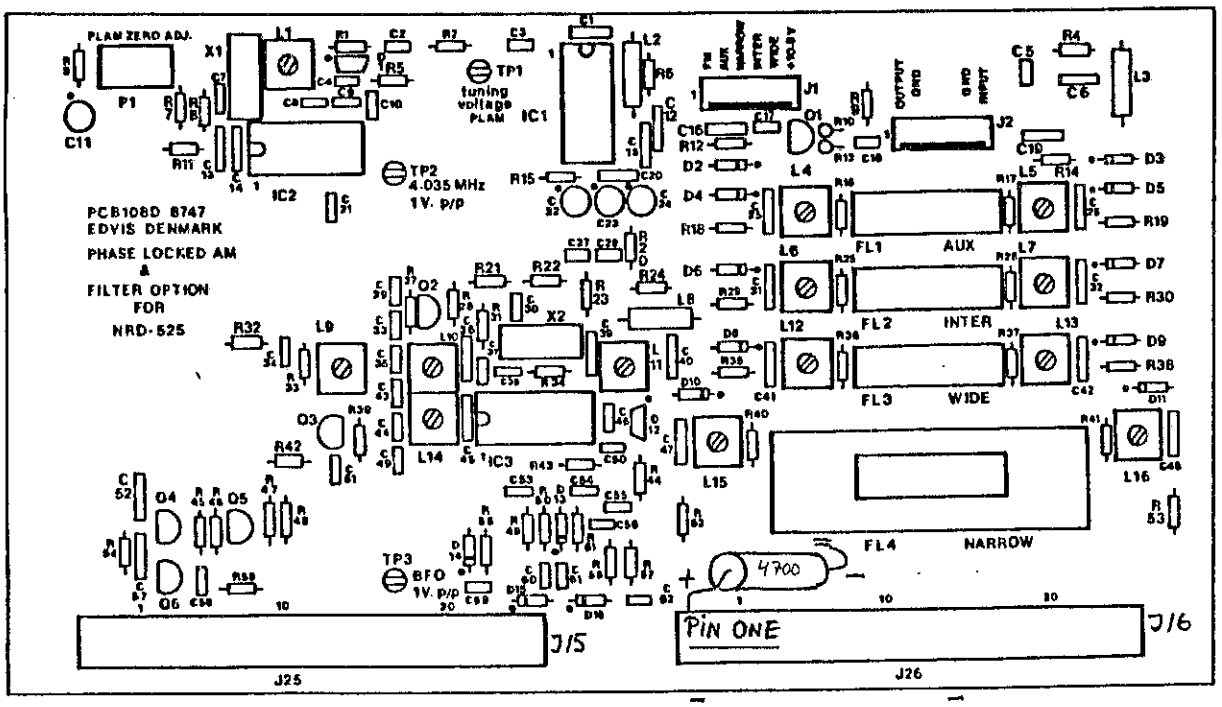
UPDATE page 2



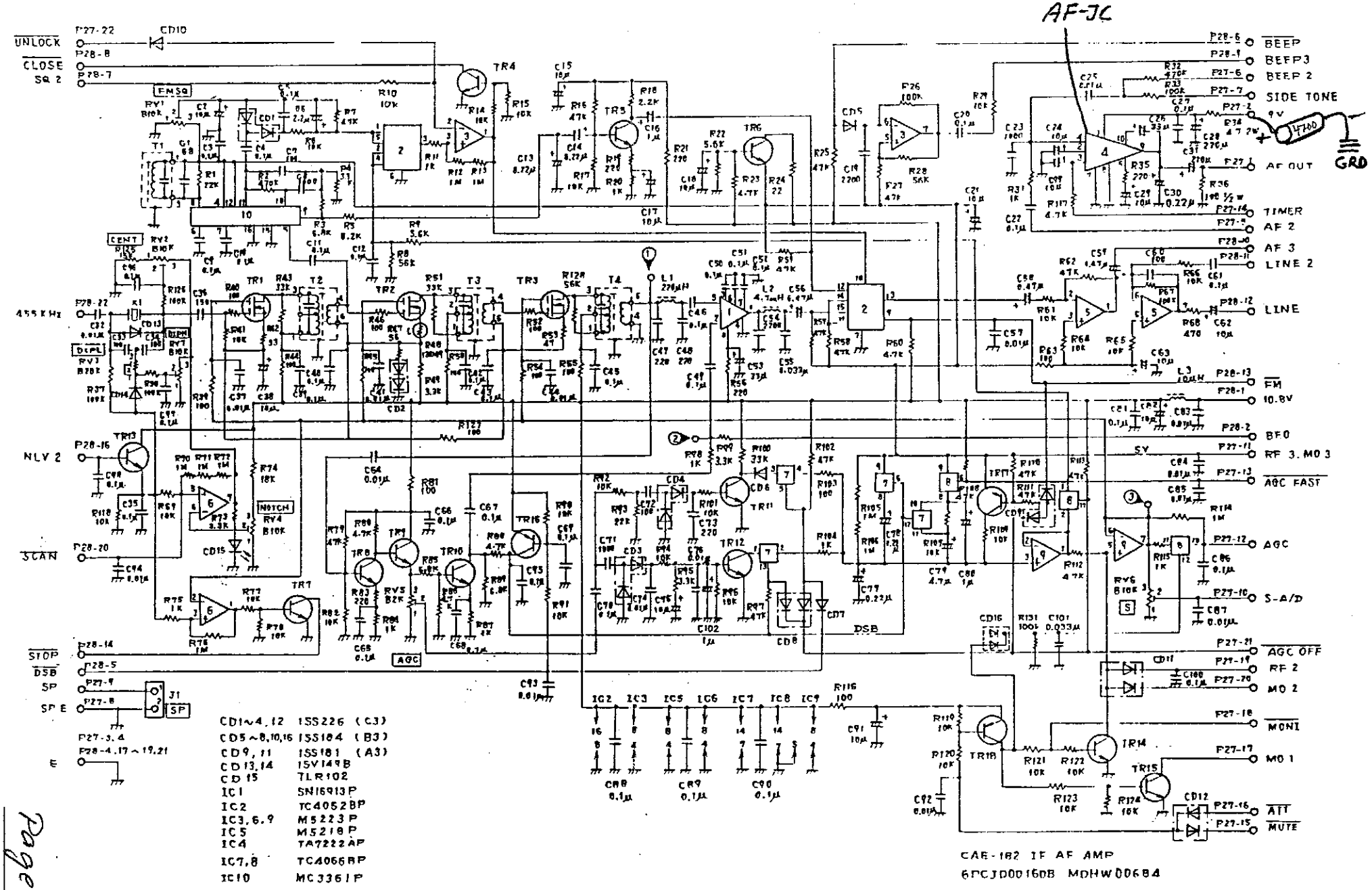
Component layout of EDVIS Phase Locked AM & Filter board



PIN 7 10,8 VDC IN

4700 uF or more 16 VDC or more

October 1989



CD1~4,12	1SS226 (C3)
CD5~8,10,16	1SS184 (B3)
CD9,11	1SS181 (A3)
CD13,14	1SV149B
CD15	TLR102
IC1	SN16913P
IC2	TC4052BP
IC3,6,9	M5223P
IC5	M5218P
IC4	TA7222AP
IC7,8	TC4066BP
IC10	MC3361P
TR1~3	3SK77-GR
TR4~15	2SC2712-Y (LY)
TR16~18	2SA1162-Y (SY)
T1	LAFD18 (5D-ELD19A-41)
T2~4	S-051-006
X1	R460C10.1 M

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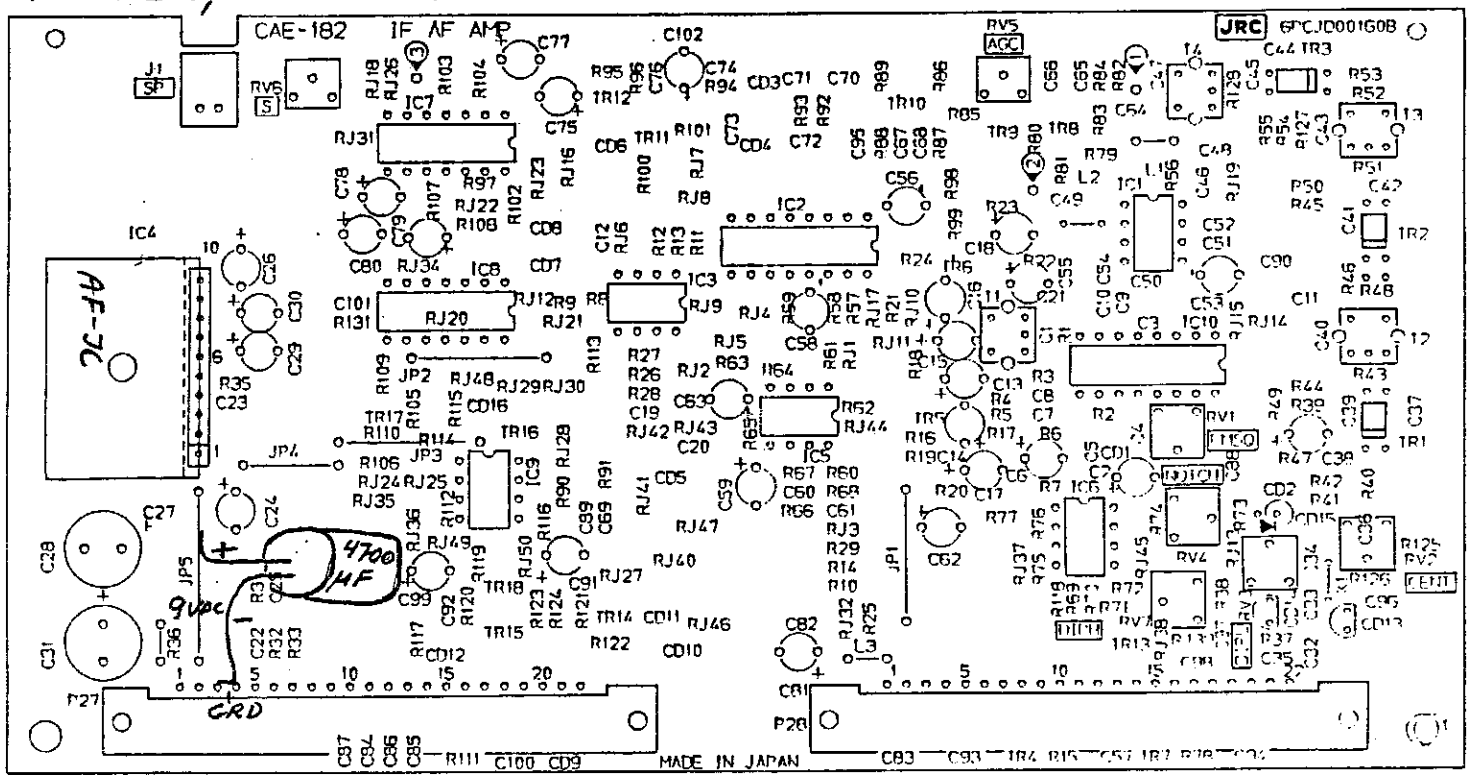
SOME NRD 52 RECEIVERS REQUIRE EXTRA "CLEANING" OF THE DC-SUPPLY VOLTAGE AND THIS CAN BE ACHIEVED BY INSERTING EXTRA ELECTROLYTICAL CAPACITORS.

TOP VIEW, COMPONENT SIDE



PIN 3&4 = GROUND PLANE

ELECTROLYTICAL CAPACITOR 4700 μF OR MORE, SMALL TYPE, 16 VDC OR MORE (SOME USE AS MUCH AS 15000 μF)

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E S K A B

<u>GENERAL INFORMATION FOR NRD 525 OWNERS WHO HAVE INSTALLED OUR OPTIONS:</u>

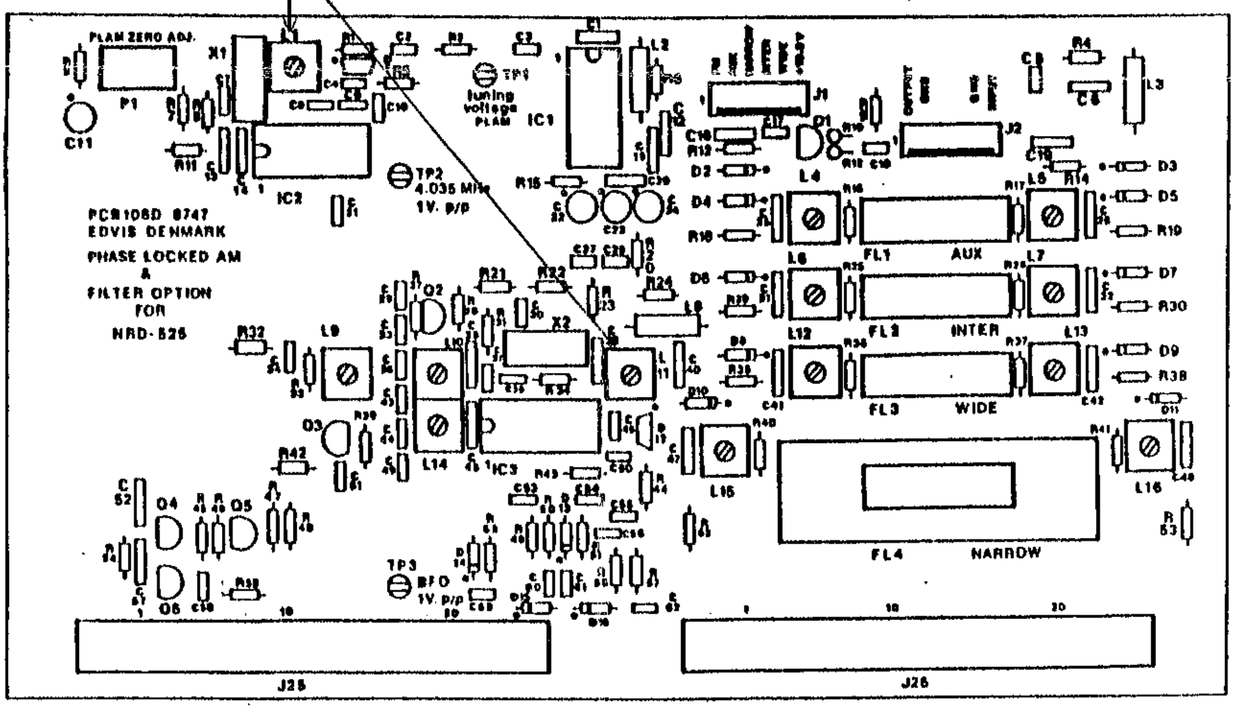
When designing complex options for a receiver like the NRD 525 it is very difficult if not impossible to forsee everything.

The synthesizer noise, the microprocessor noise and the AC - ripple present in each NRD 525 may variate a lot and it is quite difficult to pin point the cause of these variations.

It seems that in some cases the "noise" mentioned above can "coincide" with the "shifted phase" on our Synchronophase Locked AM & IF - Filter Board. Resulting in an undesirable amplification of the receivers own internal "noise".

Should your own receiver present a lot of "digital noise" in both the sideband modes and the Phase Locked AM mode try to align the cores of L1 & L11.
Procedure: Screw BOTH cores inward, about half a turn at a time and check the results. (If required readjust P1) Do not turn the cores more than two to three turns.
This should efficiently eliminate the problem mentioned above.

turn L1 and L 11 ↻ clockwise (the locking range will increase)



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Schweden — Sweden / Suede — Fax +46-40/124734

Computerbrummet flyttas då utanför lock-området.

mvh Hans

THE AGC-MODIFICATION KIT FOR THE JRC NRD 525

The AGC of the NRD 525 has the following shortcommings.

1. The attack time is much too fast, short electrical noise pulses cause the AGC to react and "deafen" the receiver.

2. The AGC is "overshooting" before, settling on its final value.

3. In the FAST MODE, the AGC is useless for AM and SSB, as the AGC response time is too fast. Only the SLOW MODE can be used for practical purposes.

4. The AGC voltage is not clean, meaning that AM modulation appears on the AGC line, which is giving distortion (dynamic compression effect) on AM signals. This is specially noticable in the PHASE LOCKED AM MODE, ECCS reception.

In order to eliminate the problems listed we have have modified the AGC circuitry as follows. (see diagram, drawing 5):

1. We have changed the attack time to 5ms, instead of 0.2ms, both in the "FAST" and "SLOW" MODE.
The AGC does not react on electrical noise pulses anymore. We changed the charging resistor R103, (100 Ohm) to 15K + 4K7 in the "FAST" MODE and to 4K7 in the "SLOW" MODE. The unused analog switch IC7, Pin 3 & 4 has been used for this purpose. Pin 5 (SWITCH ON/OFF CONTROL) is already on the layout connected to Pin 6, which is the correct control signal. IC 8

2. The overshooting has been reduced considerably by changing R107 from 10K to 33K (SLOW MODE).
In the "FAST" MODE the overshooting is reduced because R103 is now 19K7 (see 1.) and because the charging capacitor C77 is changed from 0,22 uF to 1 uF.

3. The "FAST" MODE has been changed to "MEDIUM" by changing C77 to 1 uF. The fall time is approx. 2 seconds. (if you require a fall-time of about 1 second, you may change C77 to 0.47uF)

4. The "SLOW" MODE has become marginally slower approx. 4-5 seconds. (in case you require the "SLOW MODE" to have a fall-time like before the modification, you may change both C77(FAST MODE) and C80(SLOW MODE) into 0.47 uF

5. In order to reduce overshoot in the AM MODE, the circuit uses the same attack time constants (5ms) for AM and SSB, by connecting IC7 Pin 2 and 4, R104 is removed.

6. The "cleaning" of the AGC voltage has been done with a circuit between IC9 Pin 1 and IC 9 Pin 5, in series with R112.
A 1 uF capacitor is charged with the modulation peaks of the AM signal, via a series resistor (against overshoot) and a diode. The capacitor is discharged via another diode and a 1M ohm resistor.

Compaired with to the original circuit modulation rests are reduced with about 90% and the distortion is not audiable anymore.

WE DO NOT RECOMMEND TO INSTALL THE PHASE LOCKED AM & FILTER OPTION WITHOUT THE AGC-MODIFICATION KIT.

Remark: Good soldering skills are required for installation of this kit.

The AGC modification is contained on two small PC-boards, with SMD-components, resp. PCB 120 and PCB 121.
PCB 120 is connected between resp. pins 2,3 and 4 of IC 7 and pins 2,3 and of IC 8.
PCB 121 is connected between pins 1,2,4 and 5 of IC 9.

Installation procedure, see drawing 5.

Modification steps:

1. Remove SMD (surface mounted device) resistor R 103 (100R), this resistor is soldered and glued to the print, use a plier and a soldering iron simultaneously for removing the SMD resistor.

2. Remove SMD resistor R104 (1K), procedure as 1.

3. Remove SMD resistor R112 (4K7), procedure as 1.

4. Remove SMD resistor R107 (10K or 22K depending on serialnumber), procedure as 1, and replace this resistor with the 33K SMD resistor, supplied with the kit. (black side with text facing upwards)

5. Remove C77 (0.22 uF), and replace it with the supplied tantalum capacitor of 1 uF.

6. Cut pin no. 10,11,12 and 13 of IC 7 shorter, to the same height of the surrounding SMD components.
(PCB 120 will rest on top of these pins, therefore they must be cut shorter)

7. Place PCB 120, between IC 7 and IC 8 as shown on the drawing. Solder pin 2,3 & 4 of IC 7 and pin 2,3 & 4 of IC 8 to the PCB 120. In order to ensure propper contact, solder a short wire on the solder point of the IC, and bend it over the print and then solder it on the contact-plating of the print and cut it as short as possible. We supply blank solder wire with the AGC KIT.

8. Solder a wire of approx. 5 mm between the minus pole of C 70, and the solder tap located on the middle-right side of PCB 120.

9. Place PCB 121, between the pins of IC 9, as shown on the drawing and solder pin 1,2,4 and 5 to PCB 121.
Use the same procedure as described at 7.

This completes the installation of the AGC modification.

Parts list of the AGC modification kit:

BOARD PCB 120	BOARD PCB 121	LOOSE COMPONENTS
4K7 SMD resistor	4K7 SMD resistor	1 uF tantal capacitor
15K SMD resistor	330K SMD resistor	33K SMD resistor
	1M SMD resistor	(+ 1 spare)
	1 uF SMD tantal capacitor	blank wire: approx. 5 cms
	BA682 SMD diode 2 pcs.	

Dear Shortwave Listener,

We always try to improve our products, your positive and negative comments are always welcome, never hesitate and write.

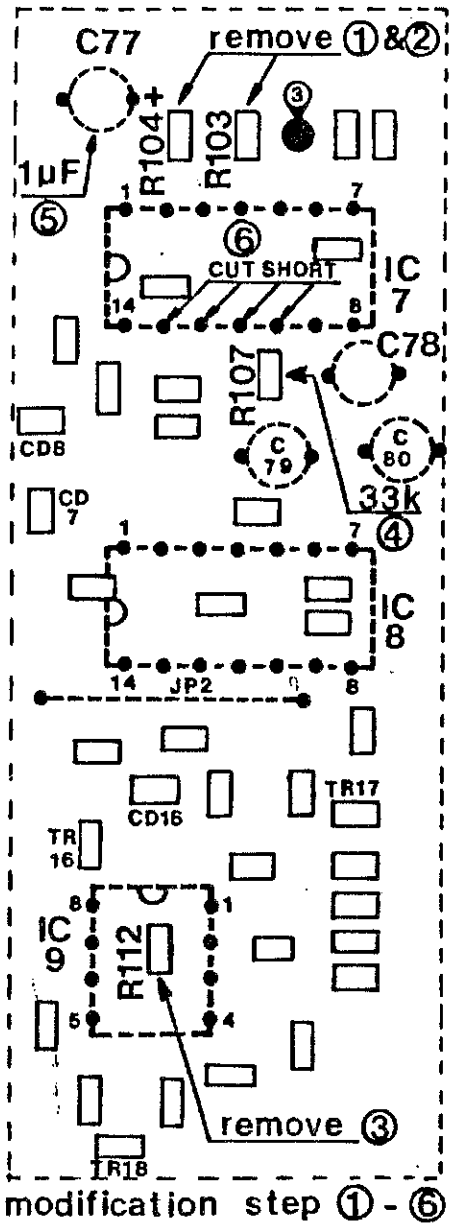
ESKAB & EDVIS THE SCANDINAVIAN COMUNICATIONS SPECIALISTS
P.O. BOX 32001 / S-200 64 MALMOE / SWEDEN
TELEX 32967 ECOM S / TELEFAX +46-40124734 type G2/s

DRAWING 5

AGC MODIFICATIONS

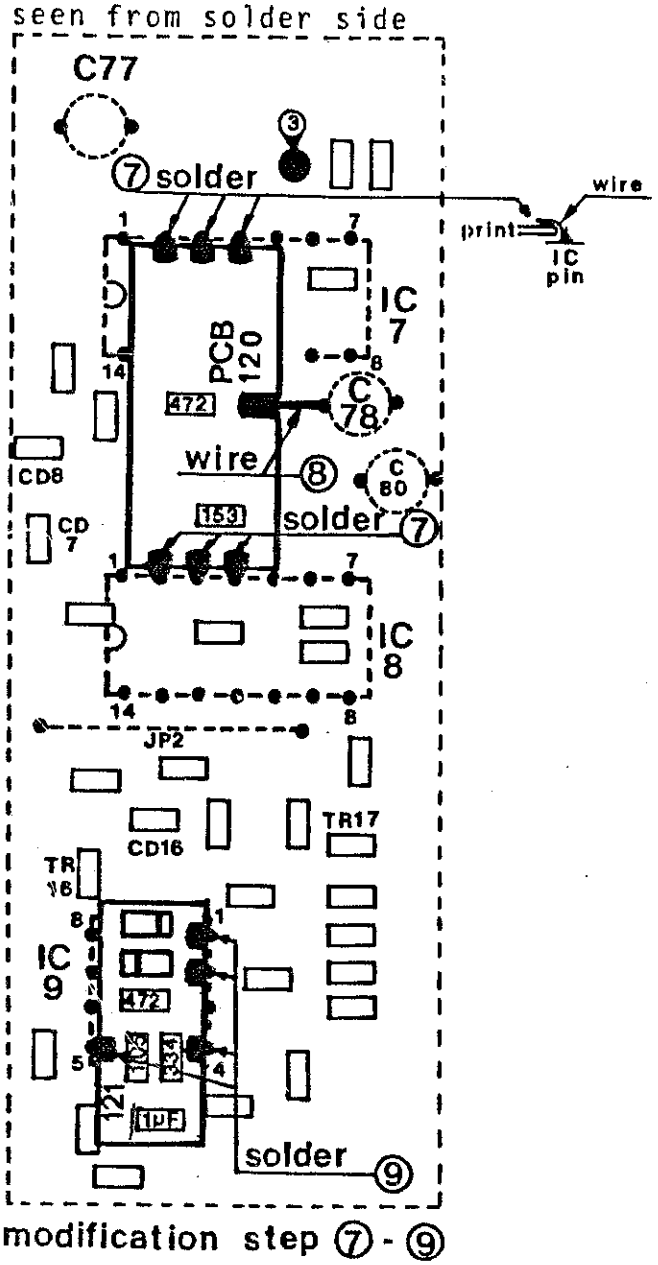
section of board CAE-182
seen from solder side

SCALE
2 : 1



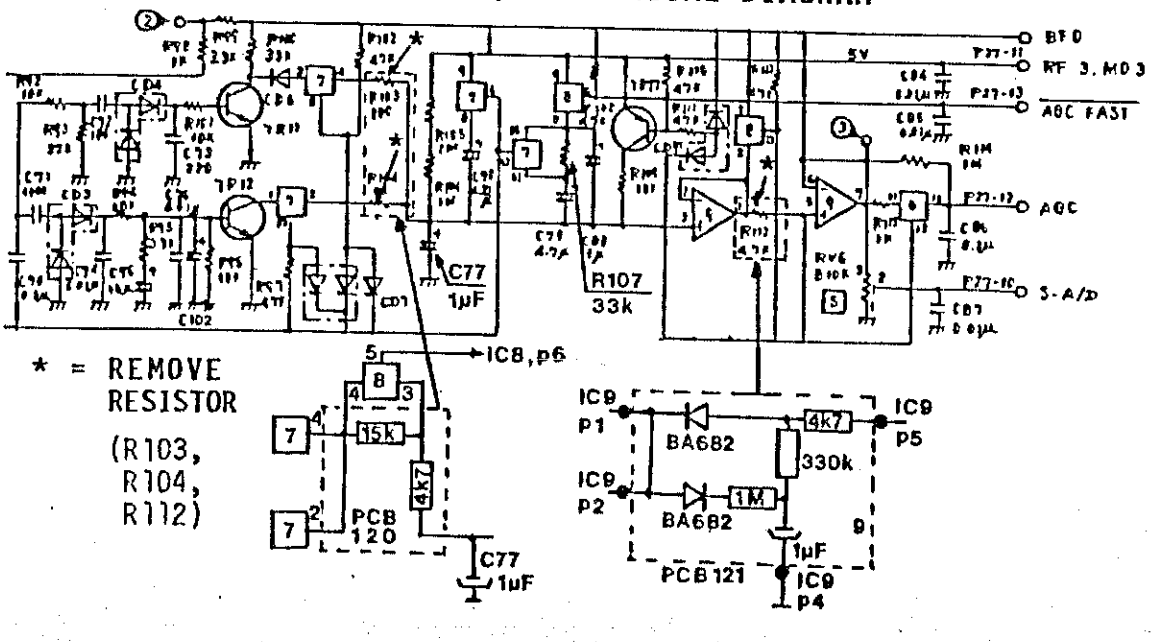
modification step ① - ⑥

section of board CAE-182
seen from solder side



modification step ⑦ - ⑨

AGC MODIFICATIONS, ELECTRICAL DIAGRAM



E S K A & E D V I S

MAJ 1991

UPPDATERING AV NRD 525

Efter installationen av vårt kristallfilter FL 1, vår dubbla filterbank och vår synchronfastillsats så kvarstår det ett visst mellanfrekvensbrus. Brantheten på 455 KHz filtren är heller inte så som man vill ha dem.
Efter en mängd tester och mätningar kom vi fram till att JRC-orinal-induktanserna på JRC-original-mellanfrekvenskortet inte ha det höga Q värdet som är önskvärd och att de sprider för mycket mellanfrekvenssignal som leder till överhörning och brus.
Genom att ersätta JRC-original-induktanserna med tyska magnetiskt skärmade "hög-Q" induktanserna elimineras bristen.

Anvisning:

På mellanfrekvenskortet CFH 36 byter man följande induktanser.

L2 470 uH mot Neosid 470 uH
(L 2 finns i skärmburken direkt före FL 2)

L3 470 uH mot Neosid 470 uH
(ingångsdrosseln på WIDE/INTER/NARROW/AUX - filter)

L4 och L5 330 uH mot Neosid 330 uH
(framför och bakom filtret WIDE = FL3)

L6 och L7 220 uH mot Neosid 220 uH
(framför och bakom filtret INTER = FL4)

Priset för ett komplett NRD 525 Neosid-iduktansset är Kr 130,- inkl.

För ägare av andra kortvågsmottagare med liknande mellanfrekvensfilter och induktanser. (NRD 505, NRD 515 ej Icom 70 & 71)
Troligen förbättras mottagarens MF avsevärd genom användningen av "hög-Q" drosslar av märket Neosid.

med vänliga hälsningar

Harm

Harm Broers

OBS: Vänligen notera min nya adress

vänligen send mig en kritisk rapport.

Harm

ESKA & EDVIS
Löftesgatan 23 | P.O.Box 22053 | Tel. 040/110520
S-214 58 MALMOE | S-200 63 MALMOE | Telex 32967 ECOM S
Schweden | Sweden / Suede | Fax +46-40/223060

E S K A B

October 1989

DEAR EDVIS & ESKAB CUSTOMER !

We are finally able to announce the ESKA 70.455 MHz, FL 1 - First IF Filter for the NRD 525.
So far I have not received any critical comments or testreports about our ESKA 70.455/8 crystal IF-Filter.
The new crystal filter improved my own receiver by more than 20% .
The installation is very easy and requires no special skills no alignement or extra matching is required.

You are an enlisted EDVIS & ESKAB customer and I will send you this option for:

US $ 50,- / DEM 90,- / F F 300,- / JPN Y 6000,- / GB £ 30,- EXPORT.
(shipping costs are included in the prices listed above)
(Swedish customers must pay Sw Cr 300,- + 23,46% purchase tax)

PLEASE DO NOT SEND US INTERNATIONAL BANK CHEQUES.(EUROCHEQUES IN Sw Cr ARE ALLRIGHT) SWEDISH BANKS CHARGE US $ 7,50 FOR EACH FOREIGN CHEQUE.
PLEASE SEND US AN INTERNATIONAL POSTAL MONEY ORDER OR CASH MONEY IN A REGISTERED / Lettre recommonde / LETTER.

Attached the installation information.

ry sincerely

Harm

Harm - Heyen Broers

Hej Thomas,
Ryktet sprider sig snabbare än vad jag kunde föreställa mig.

General update pages:
Those of you who live in the "bush" and cannot find suitable electrolytical capacitors may order them from us for US $ 3,- for two.

E S K A B
BERGSGATAN.3
S-211 54 MALMOE
Schweden

The Communications Specialists
P.O.Box 32001
S-200 64 MALMOE
Sweden / Suede

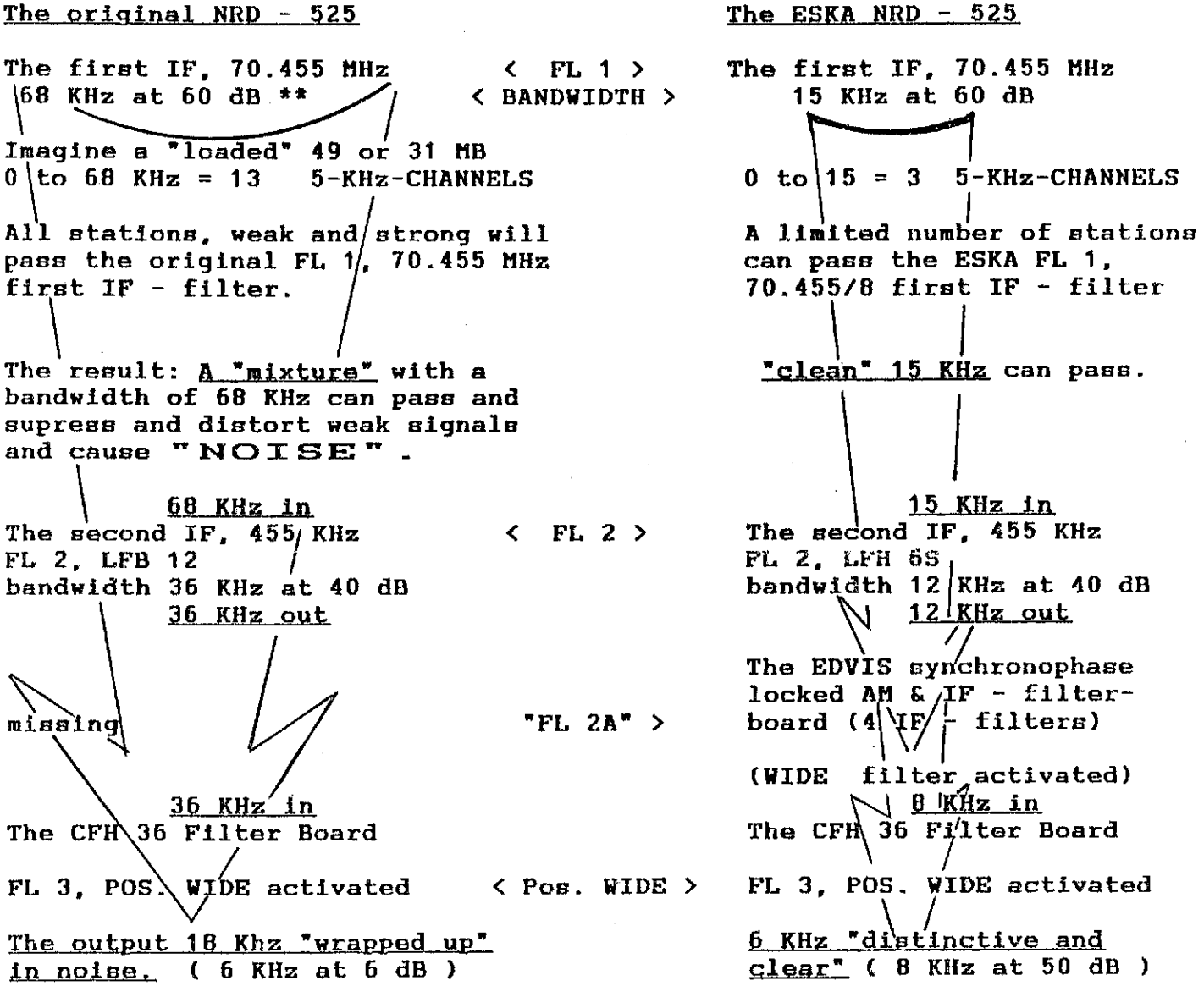
Tel. 040/110520
Telex 32967 ECOM S
Fax +46-40/124734

E S K A B

AT LAST !

THE ORIGINAL FIRST IF, CRYSTAL IF - FILTER, LIMITS THE ULTIMATE PERFORMANCE OF THE JRC RECEIVER NRD - 525 AND THE JRC TRANSCEIVER JST - 135.

W H Y !



Note: Also NRD 525 owners who have not invested in an ESKA & EDVIS option should consider to purchase our FL 1, 70.455/8 CRYSTAL IF-FILTER.
The ESKA FL 1, 70.455/8 CRYSTAL IF-FILTER IS A MAJOR IMPROVEMENT

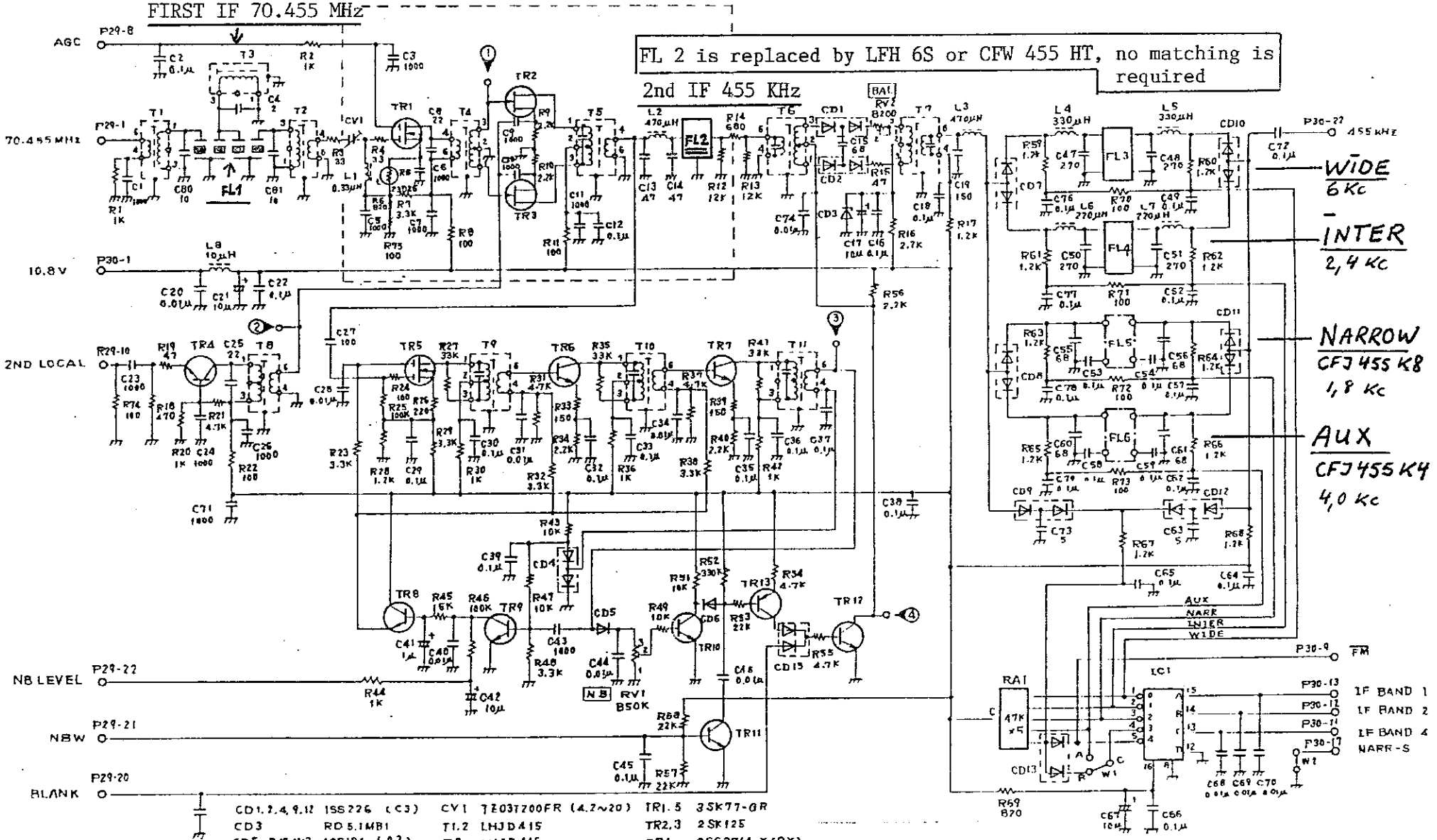
Installing the IF - Filter will take 15 minutes and no alignement is required.

PRICES: Air mail delivery included
US $ 75,- / DEM 150,- / F F 485,- / JPN Y 9700,- / GB £ 47 /

E S K A B — The Communications Specialists
BERGSGATAN.3 — P.O.Box 32001 — Tel. 040/110520
S-211 54 MALMOE — S-200 64 MALMOE — Telex 32967 ECOM S
Schweden — Sweden / Suede — Fax +46-40/124734

FL 1 is replaced by 7 .15-AUF & /OR15-AUG, a direct fully compat ble repla ment, bandwidth 8 KHz

Note: T1,T2 & T3 are the matching coils for FL 1
no matching is required.



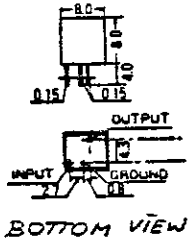
CD1,2,4,9,12	1SS226 (C3)	CV1	TZ03TZ00FR (4.2~20)	TR1,5	3SK77-GR
CD3	RD5.1MB1	T1,2	LHJD415	TR2,3	2SK125
CD5~8,10,11,13	1SS181 (A3)	T3	LHJD416	TR4	2SC2714-Y (QY)
CD15	1SS184 (B3)	T4	LHJD456	TR6-12	2SC2712-Y (LY)
FL 1	XMJD114	T5	LHJD389	TR13	2SA1162-Y (SY)
FL 2	LF-B12	T6,7	LHJD390A	IC1	HD74LS145P
FL 3	CLF-D6S	T8	LHJD297		
FL 4	MF-31C	T9,10	S-061-006		
FL 5,6	OPTION	T11	L33D37A		

ESKAB
P.O.Box 32001
S-20064 MALMOE
Sweden

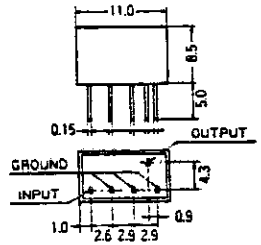
October 1989 JHG

"OLD" FL 2

LFB-12



LFH-6S / CFW 455 HT



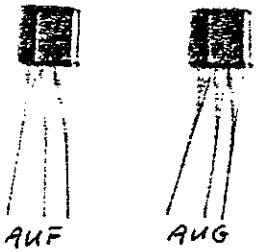
"NEW" FL2

FL2

1 GROUND
2 IF IN
3 IF OUT

FL 2	ORIGINAL	6 dB	40 dB	50 dB
	LFB 12	12 Kc	36 Kc	-
	REPLACEMENT			
	LFH-6S	6 Kc	-	18 Kc
	OR			
	CFW 455 HT			

FL 1 "NEW"

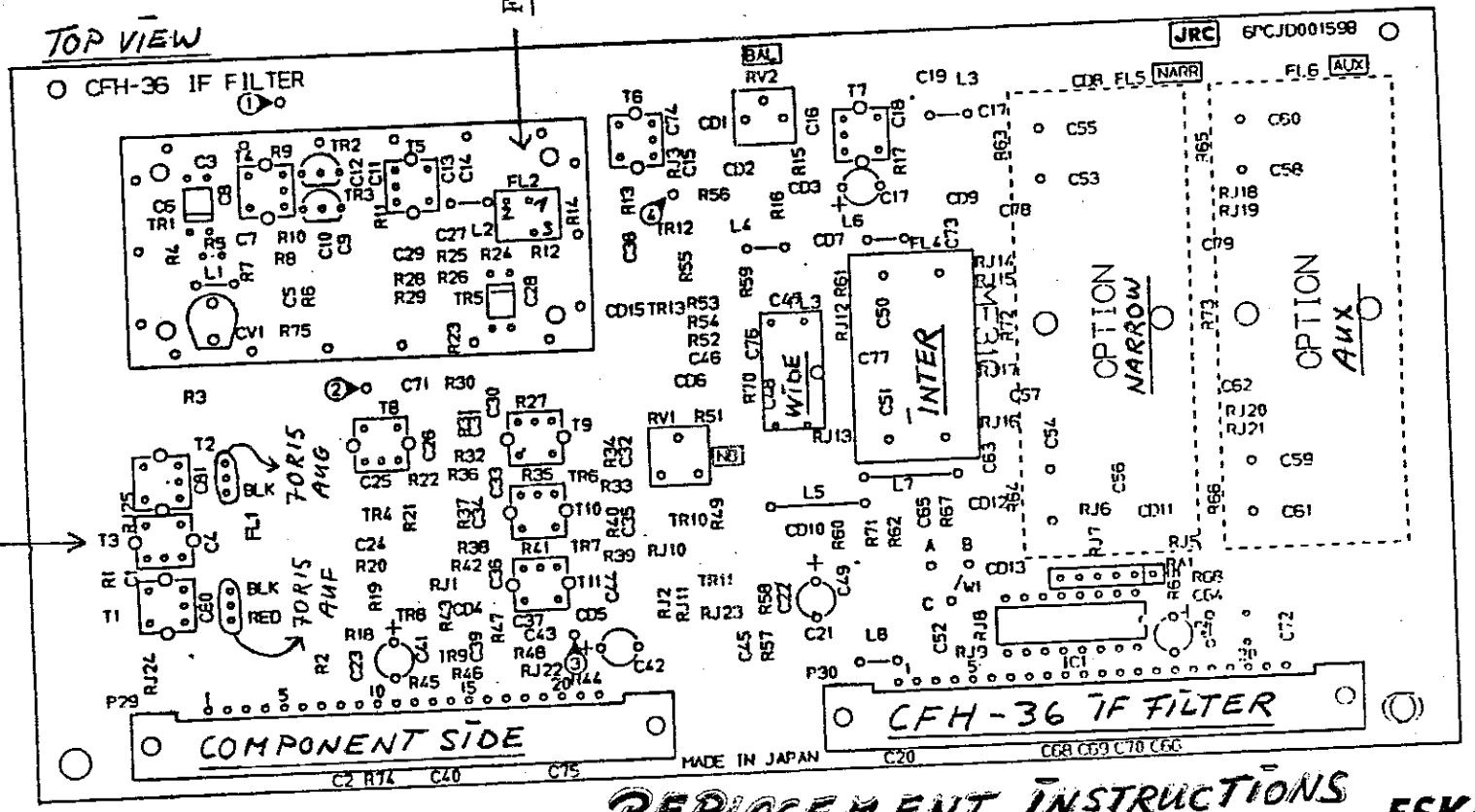


FL1

70.455 MHz
FIRST-IF

TOP VIEW

FL2



ORIGINAL
FL1 ≈ 68 Kc at 60 dB

REPLACED BY
70RIS-AUF 70RIS-AUG
≈ 7,5 Kc at 6dB ≈ 15 Kc at 60dB

REPLACEMENT INSTRUCTIONS
FOR FL 2 & FL 1
LFH-6S & ESKA 70.455/8

October 1989. JHG

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P.O.Box 32001
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Sweden