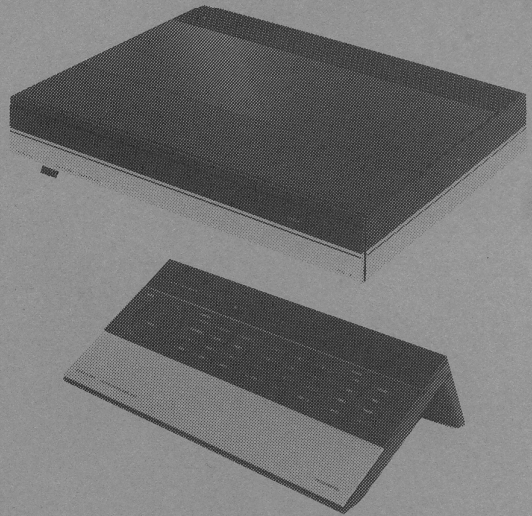


Bang & Olufsen



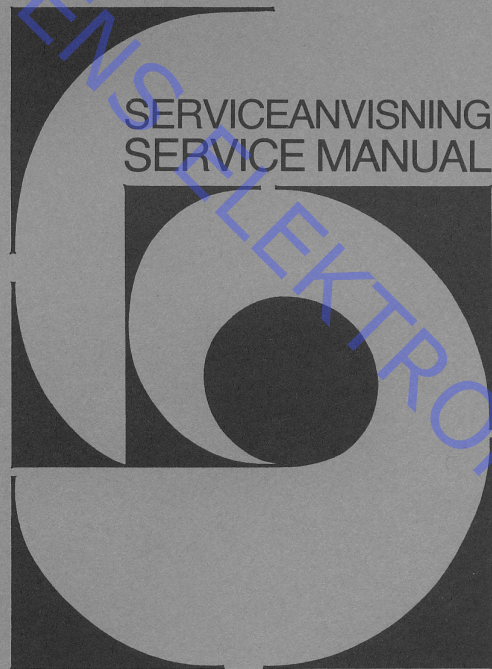
Beomaster 6500

Type 2336, 2337, 2338,
2339, 2340

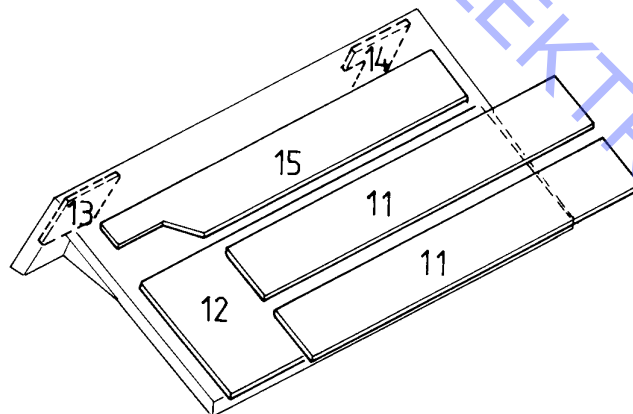
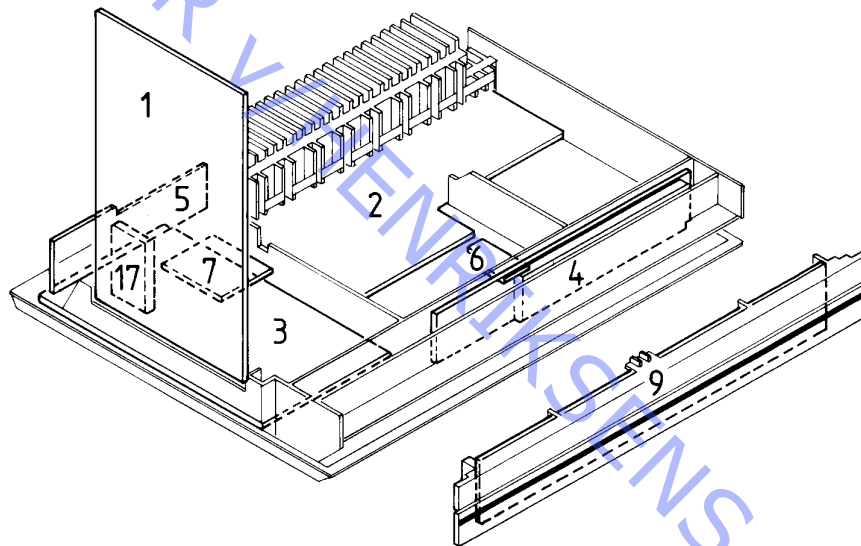
Master Control Panel

Type 1551

SERVICEANVISNING
SERVICE MANUAL



1	HF	diagr. A page 2-2	9	Display	diagr. C page 2-5
2	Output and Power Supply	diagr. B page 2-4	11	Master Control, keyboard	diagr. E page 2-6
3	Preamplifier	diagr. B page 2-4	12	Master Control, Mircocomputer	diagr. E page 2-6
4	Microcomputer	diagr. C page 2-5	13	Master Control, IR-left	diagr. E page 2-6
5	Speaker sockets	diagr. B page 2-4	14	Master Control, IR-right	diagr. E page 2-6
6	Fan regulation	diagr. B page 2-4	15	Master Control, Display	diagr. E page 2-6
7	Relay	diagr. B page 2-4	17	Tuner - FM	diagr. ??? page 1-7



TECHNICAL SPECIFICATIONS

Beomaster 6500	Type 2336, 2337, 2338, 2339, 2340
	Master Control Panel 6500, two-way
	Beolink 7000, two-way
	Beolink 1000, one-way
Long-term max. output power IEC	2 x 110 watts/8 ohms
Total harmonic distortion IHF	<0,09%/50 watts 20-20,000 Hz
Dynamic headroom	1.5 db/8 ohms
Intermodulation IHF	<0.1%
Input sensitivity/impedance:	
Phono	30 mV/100 kohms
Tape - AUX	30 mV/100 kohms
CD player	20 mV/100 kohms
Line	25 mV/100 kohms
Response vs frequency:	
Phono	20-20,000 Hz \pm 1.5 dB
Tape	20-20,000 Hz \pm 1.5 dB
Wideband damping factor	50
Signal-to-noise ratio:	
Phono A-weighted, 1 W IHF	>78 dB
Tape A-weighted, 1 W IHF	>80 dB
Tape A-weighted, 50 W output	>97 dB
Channel separation 10,000 Hz	>50 dB
Output:	
Tape	500 mV/1 kohms
Line	500 mV/1 kohms
External power amplifier	1 V/1 kohms
Headphones	Max. 10 V/470 ohms
Bass control at 40 Hz	\pm 10 dB
Treble control at 12,500 Hz	\pm 8 dB
FM tuner section:	
FM range	76-90 MHz (Type 2339)
	87.5-108 MHz (Type 2336, 2337, 2338, 2340)
FM aerial impedance	75 and 240 ohms
Usable sensitivity mono	14 dBf-1.4 μ V/75 ohms
Usable sensitivity stereo	19 dBf-2.5 μ V/75 ohms
50 dB quieting sensitivity mono	19 dBf-2.5 μ V/75 ohms
50 dB quieting sensitivity stereo	40 dBf-28 μ V/75 ohms
Signal-to-noise ratio 65 dBf mono	75 dB
Signal-to-noise ratio 65 dBf stereo	70 dB
Frequency response	20-15,000 Hz \pm 1 db
Distortion at 65 dBf mono	0.16%
Distortion at 65 dBf stereo	0.2%
Intermodulation mono	0.1%
Intermodulation stereo	0.1%
Capture ratio	1.7 dB
Adjacent channel selectivity	10 dB
Alternate channel selectivity	70 dB
Spurious response	100 dB
Image response ratio	80 dB
IF response ratio	120 dB

AM suppression	57 dB
Stereo channel separation	45 dB
Subcarrier product rejection	70 dB

AM tuner section:

LW range	150-350 kHz (Type 2336, 2337)
MW range	520-1610 kHz (Type 2336, 2337, 2338, 2339, 2340)
LW sensitivity 20 dB S/N ratio	80 μ V
MW sensitivity 20 dB S/N ratio	60 μ V

Connections:

Audio Link	CD, Tape 1, Tape 2, PH (RIAA in Beogram 6500)
Audio Aux Link	Beovision, 7 pin
Power Link	Beolab speakers, 2 sockets 8-pin
Speaker Link	Beovox speakers, 2 sockets 4-pin
Master Control Link	2 sockets 3-pin

Power supply	Type 2336 220 V
	Type 2337 240 V
	Type 2338 120 V
	Type 2339 100 V
	Type 2340 240 V

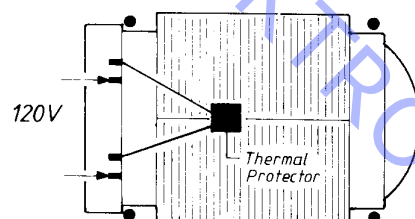
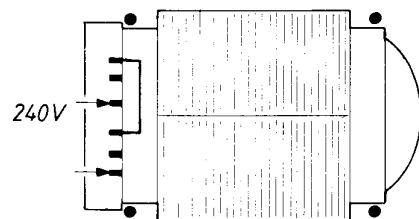
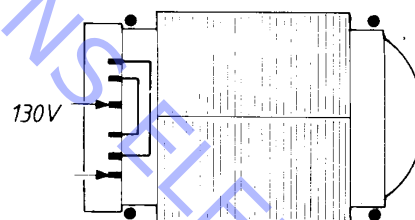
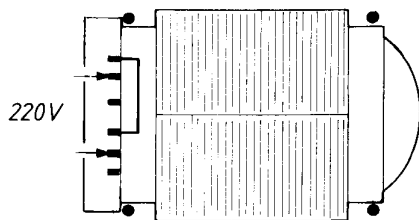
Power frequency	50-60 Hz
Power consumption	Max. 225 watts
Dimensions W x H x D	42 x 7.5 x 32.5
Weight	8.5 kg
	18.8 lbs

Installationskit:

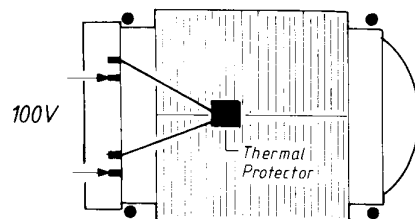
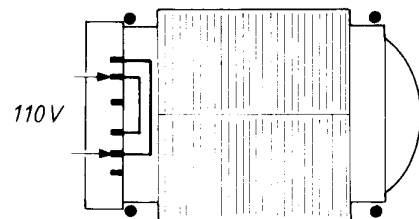
RIAA amplifier	8001245
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Subject to change without notice

**Tilslutning af nettransformer/
Connection of Mains Transformer/**



8013363 for type 2338



8013364 for type 2339

Options:**En Beomaster i et Beolinksystem**

Options eller situationer beskriver hvordan både audio- og videoprodukterne i et Beolinksystem skal programmeres i den valgte stilling.

Option 1 (Situation 1):

Et audio- og et videosystem placeres i samme rum, så signalerne fra Beolink terminalen kan opfanges af begge systemer samtidigt.

Option 2:

Audio- og videosystemet er placeret i hver sit rum, så signalerne fra Beolink terminalen kun kan opfanges af ét system ad gangen.

Beomaster 6500 i Master Control Link 2-systemet:

Option 3:

Anvendes når der er to audiokilder i samme rum (f.eks.: en MCL2-enhed og en Beomaster 6500).

Option 4:

Anvendes når der er to audio- og en videokilde i samme rum (f.eks.: MCL2, Beomaster og Beovision).

Option 0:

Sætter IR-føler ud af funktion, hvilket kan udnyttes f.eks. i butiksvinduer eller ved udstillinger. Der kan dog stadig vælges ny option med Beolink terminalen.

Programmering:

Options programmeres med Beolink terminalen, med Beomaster 6500 i standby:

Tast: , Option nr.
Display viser: Option nr.

Beomaster 6500 er fra fabrikken programmeret til option 1.

Stikdåserne Line in/out og AUX/TV:

Line in/out anvendes ved tilslutning af en equalizer. Husk kortslutningsprop (bestillingsnr. 7220265) når equalizer ikke er tilsluttet.

AUX/TV anvendes ved tilslutning af et Beolink-kompatibelt fjernsyn eller f.eks. Bang & Olufsen båndoptager.

Options:**A Beomaster in a Beolink System**

Options or situations describe how both the audio and video products in a Beolink system are programmed in the chosen setting.

Option 1 (Situation 1):

An audio and a video system are placed in the same room so the signals from Beolink terminal can be received by both systems at the same time.

Option 2:

The audio and video systems are placed in separate rooms so the signals from Beolink terminal can only be received by one system at a time.

Beomaster 6500 in the Master Control Link 2 system:

Option 3:

Is used when there are two audio sources in the same room (e.g. an MCL2 unit and a Beomaster 6500).

Option 4:

Is used when there are two audio sources and one video source in the same room (e.g. MCL2, Beomaster and Beovision).

Option 0:

Puts the IR sensor out of operation; this can be used in shop windows or at exhibitions for example. However, new options can still be selected with Beolink terminalen.

Programming:

Options are programmed with Beolink terminal, with Beomaster 6500 in standby:

Key: , Option no.
Display shows Option no.

Beomaster 6500 is programmed at the factory to option 1.

The Line in/out and AUX/TV sockets:

Line in/out is used for connecting an equalizer.

Remember short-circuiting fuse (order no. 7220265) when the equalizer is not connected.

AUX/TV is used for connecting a Beolink-compatible television or e.g. Bang & Olufsen cassette recorder.

DIAGRAMFORKLARING

På diagrammerne er der angivet typenumre på transistorer og IC'er. Hvis positionsnummeret er efterfulgt af en stjerne, skal reservedelsnummeret altid benyttes, da denne komponent er specielt udvalgt, f.eks. TR102*.

Positionsnummeret for udgangsforstærkerens venstre kanal er angivet i parenteser i diagrammet for højre kanal.

Komponenttryk og koordinatsystem

De største printplader er forsynet med komponenttryk og et koordinatsystem på både print- og komponentside.

På diagrammerne er enhver komponent forsynet med et koordinatnummer. Dette fortæller i hvilket koordinat på printpladen, komponenten er placeret. Koordinatnumrene er angivet med mindre skrifttype end positionsnumrene.

Styrekredsløb

I visse styrekredsløb er den aktive tilstand angivet med en funktions- eller bogstavsangivelse. Denne kan eksempelvis være $\overline{ST.BY.} = \text{»low«}$ i stand-by-stilling eller $ST.BY. = \text{»high«}$ i stand-by-stilling.

Ledningsforbindelser

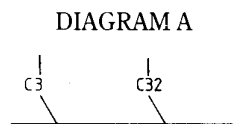
Ledningsforbindelserne på diagrammerne er samlet i »bundter«. De enkelte ledninger er forsynet med en af følgende koder:

INTERN FORBINDELSE PÅ EN DIAGRAMSIDE



Interne forbindelser på en diagramside angives med et tal. Knækket på ledningen viser, i hvilken retning, den anden ende af ledningen findes.

FORBINDELSE TIL EN ANDEN DIAGRAMSIDE



Forbindelsen til en anden diagramside angives med et tal samt et bogstav for det diagram, forbindelsen går til.

EXPLANATION OF DIAGRAM

Type numbers of transistors and ICs are indicated on the diagrams.

If the position number is followed by an asterisk the spare part number must always be used because the component in question has been specially selected, e.g. TR102*.

The position number for the left channel of the output amplifier are stated in brackets in the diagram for right channel.

Component print and coordinate system

The largest PCBs have component prints and a coordinate system on both the print and the component side.

On the diagrams every component has a coordinate number. This indicates in which coordinate on the PCB the component is situated. The coordinate numbers are written in smaller print types than the position numbers.

Control Circuit

In certain control circuits the active mode is indicated by a function term or by an abbreviation. This may be e.g. $\overline{ST.BY.} = \text{low}$ in the stand-by mode or $ST.BY. = \text{high}$ in the stand-by mode.

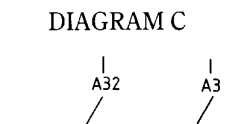
Wiring Connections

The wiring connections on the diagrams are assembled in 'bundles'. The individual wires are provided with one of the following codes:

INTERNAL CONNECTION ON ONE DIAGRAM PAGE

Internal connections on a diagram page are indicated by a number. The bend of the wire indicates in which direction the other end of the wire is found.

CONNECTION TO ANOTHER DIAGRAM PAGE



A connection to another diagram page is indicated by a number as well as by a letter of the diagram to which the connection leads.

Forsyningsspændinger

Alle forsyningsspændinger i diagrammerne er angivet med en pil og en spændingsangivelse.

Eksempel:

Ved siden af spændingsangivelsen står der f.eks. 7 CON. Dette betyder, at den pågældende forsyningsspænding går til 7 steder på den pågældende diagramside (7 CON. = 7 connections).

Supply Voltages

All supply voltages in the diagrams are indicated by an arrow and a voltage indication.

Example:

"7 CON.". This means that the supply voltage in question goes to 7 different places on the diagram page in question (7 CON. = 7 connections).

SYMBOL FOR SIKKERHEDSKOMPONENTER**SYMBOL OF SAFETY COMPONENTS**

Ved udskiftning af komponenter med dette symbol skal der anvendes komponenter med samme reservationsnummer. Den nye komponent skal monteres på samme måde som den udskiftede.

When replacing components with this symbol, components with identical part numbers must be used. The new component must be mounted in the same way as the one replaced.

MÅLEBETINGELSER

Alle DC-spændinger er målt i forhold til stel med et voltmeter med en indgangsimpedans på 10 Mohm.

MEASURING CONDITIONS

All DC voltages have been measured in relation to ground with a voltmeter with an input impedance of 10 Mohms.

DC-spændingerne er opgivet i volt (V), f.eks. 0,7 V.

The DC voltages are stated in volts (V), e.g. 0.7 V.

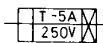
Alle oscillogrammer og AC-spændinger er målt i forhold til stel med et oscilloskop eller et voltmeter med en indgangsmodstand på 1 Mohm.

All oscillograms and AC voltages have been measured in relation to ground with an oscilloscope or a voltmeter with an input resistance of 1 Mohm.

AC-spændingerne er opgivet i millivolt (mV), f.eks. 660 mV.

AC voltages are stated in millivolts (mV), e.g. 660 mV.

Type 2338 Explanation of the fuse symbols used in the set.
Explanation de symboles du fusible utilisés dans l'appareil



Replace with same type 5 ampere 250 volts slow acting fuse.
Remplacer par un fusible de meme type retardé et de 5 amperes 250 volts.

ADVARSEL!
 LITHIUMBATTERI – EKSPLOSIONSFARE
 UDSKIFTNING MÅ KUN FORETAGES AF EN SAGKYNDIG,
 OG SOM BESKREVET I SERVICE MANUAL.

WARNING!
 LITHIUM BATTERY – RISK OF EXPLOSION
 TO BE REPLACED BY QUALIFIED SERVICEMAN ONLY
 AND AS DESCRIBED IN THE SERVICE MANUAL.

ADVARSEL VED LITHIUM-BATTERIER

Kortslutning og overopladning af visse typer lithium-batterier kan medføre en voldsom eksplosion.

Ved udskiftning af lithium-batteriet i dette apparat må der kun anvendes et batteri af det fabrikat og den type, der er angivet i denne serviceanvisning (se side 4-5).

Batteriet skal monteres nøjagtigt som det originale batteri.

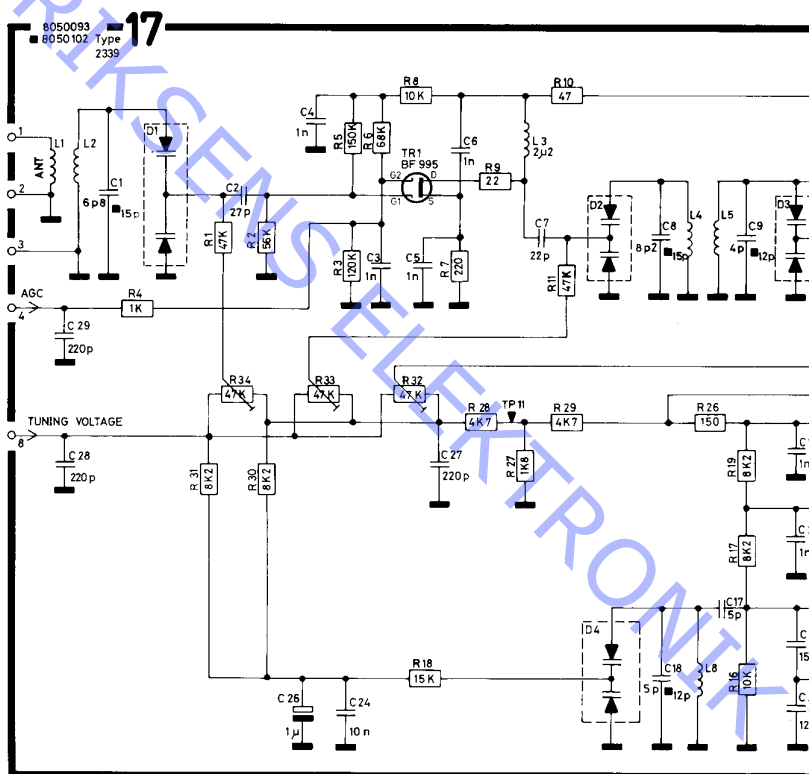
WARNING LITHIUM BATTERIES

Short-circuit and overcharging of some types of lithium batteries may result in a violent explosion.

When replacing the lithium battery in this set, use only batteries of the make and type mentioned in this service manual (see page 4-5).

Fit the battery exactly like the old one.

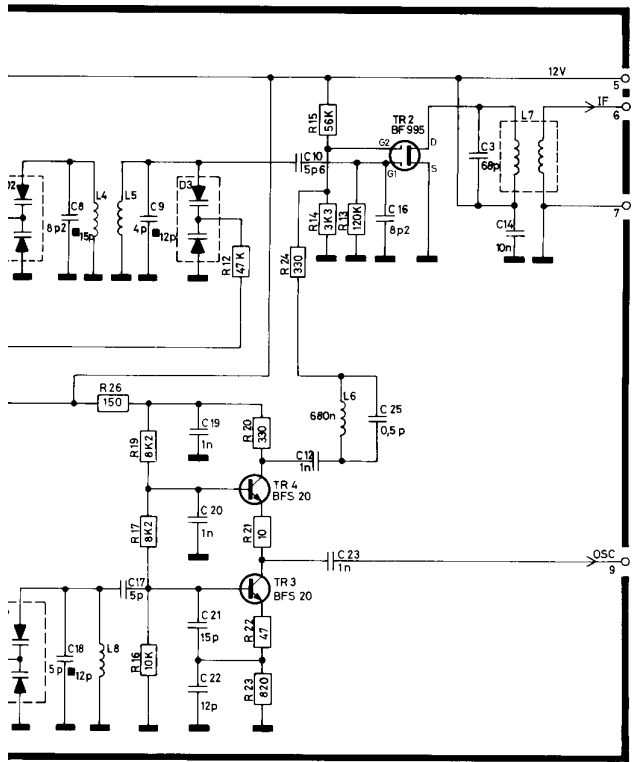
FM TUNER



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in

ABO-CENTER V/HENRIK SVS ELEKTRONIK

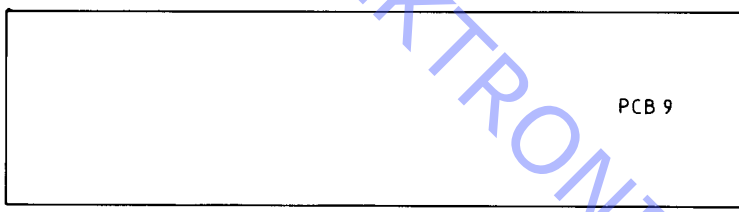
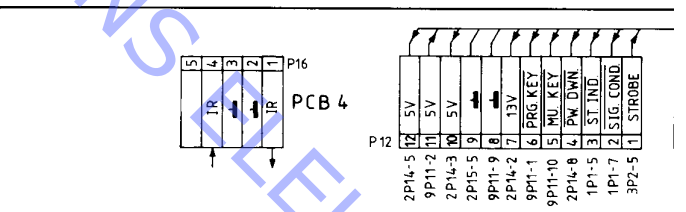
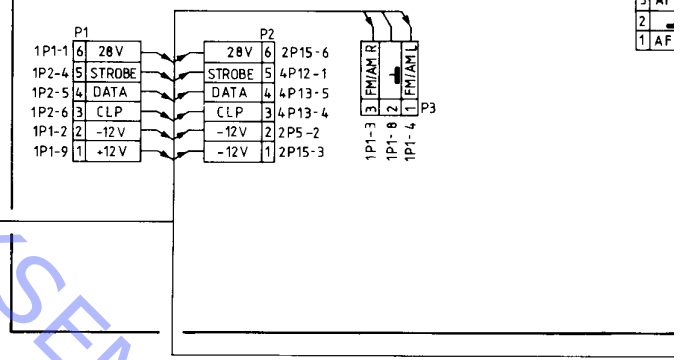
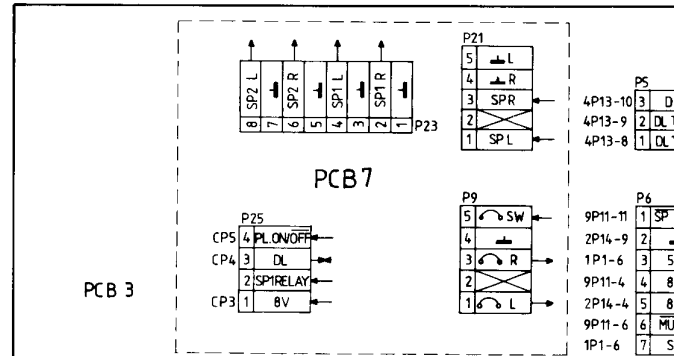
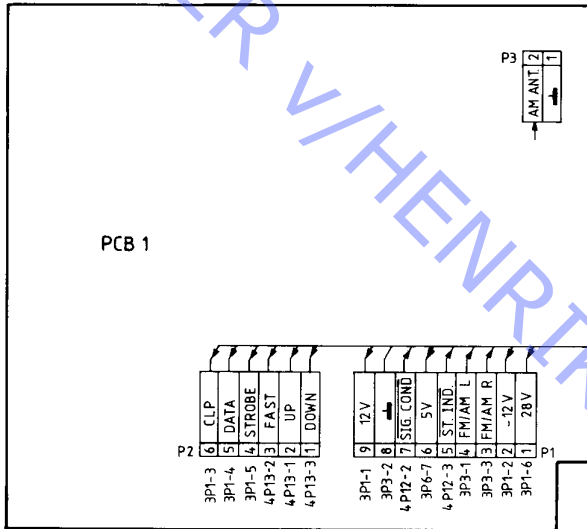


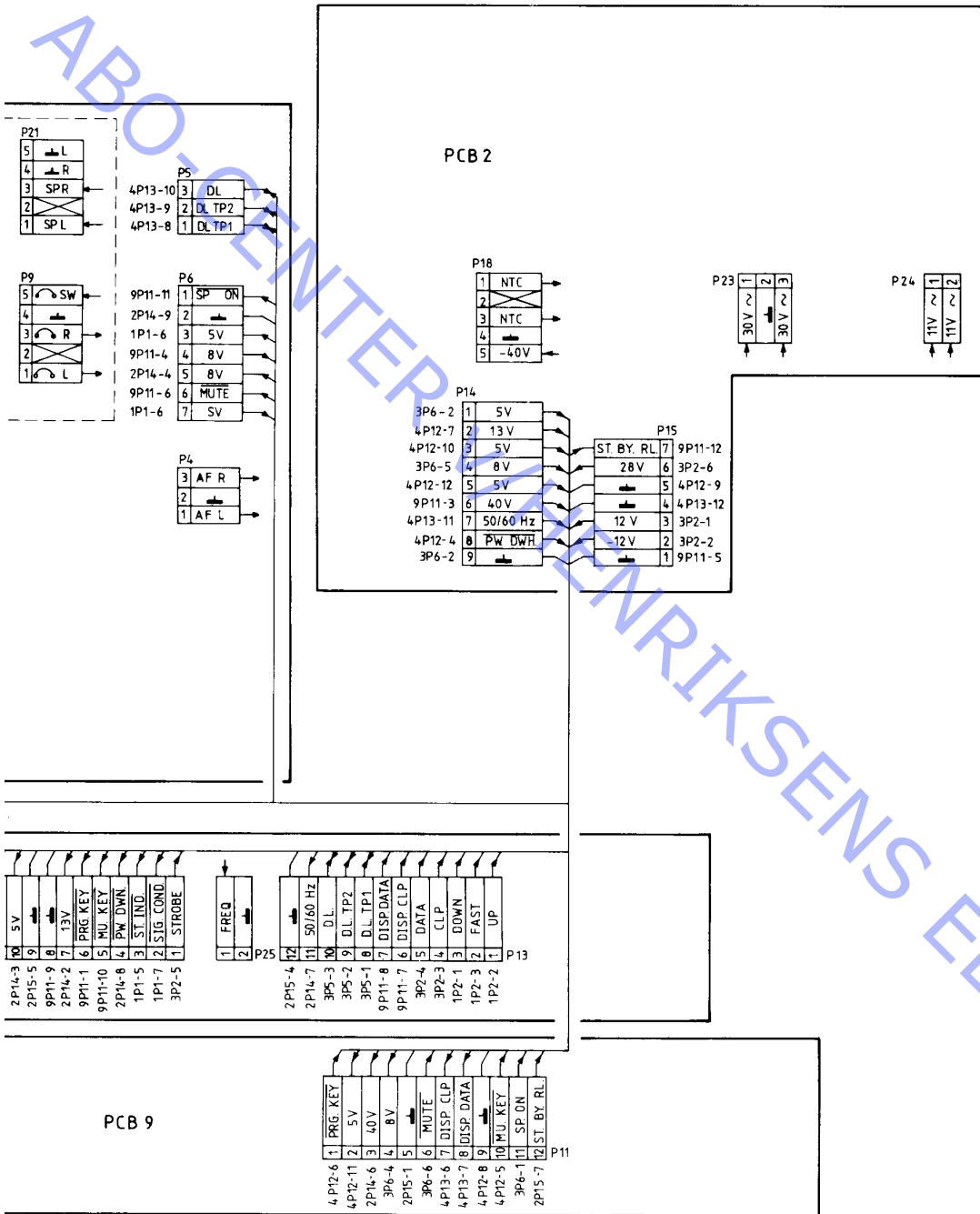
The FM TUNER is a single unit.
 With failure in this unit we recommend
 replacing the Whole unit.
 However the part nos. of semi-conductors are
 in the list of semi-conductors.

2-1

PLUG SURVEY

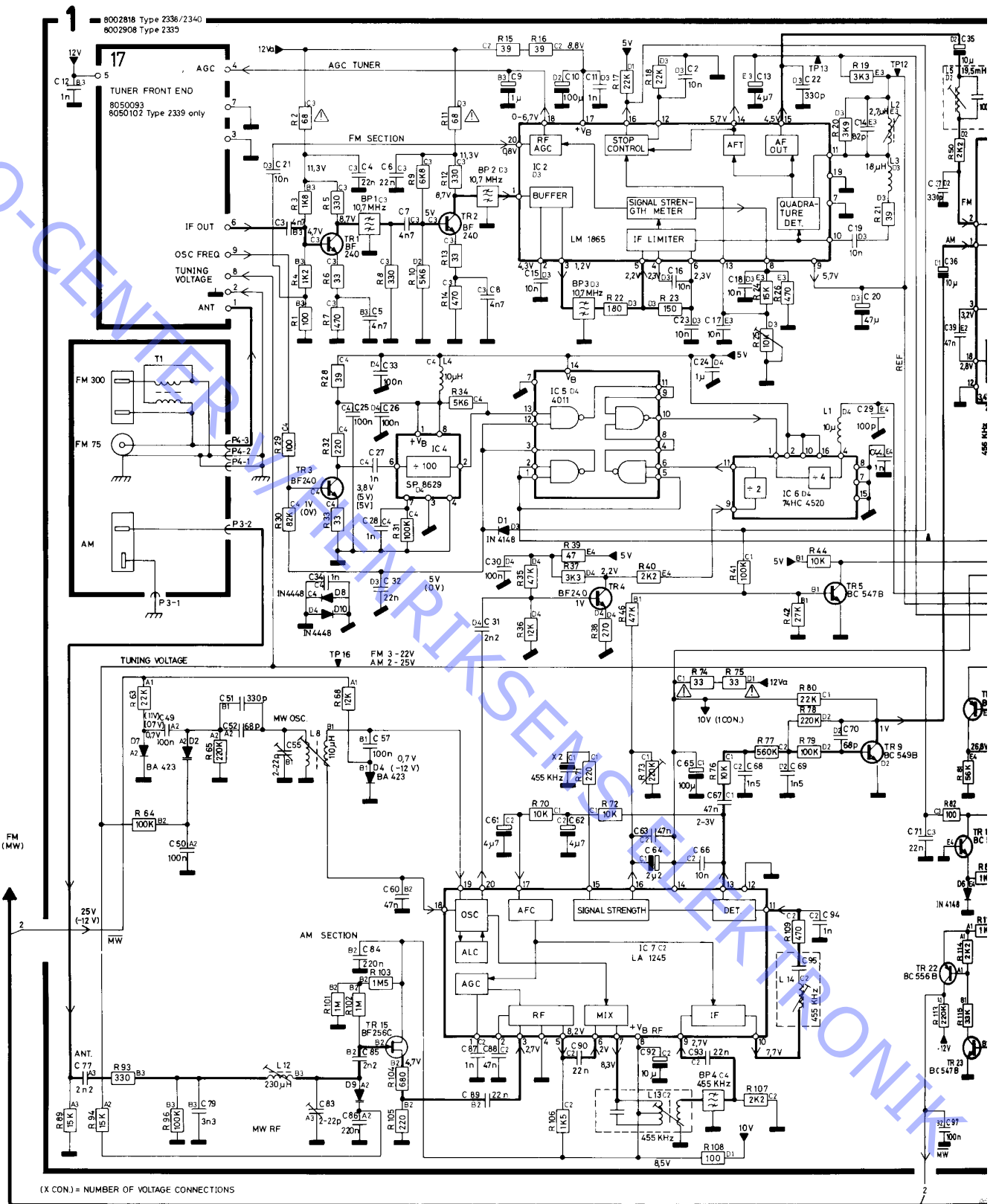
ABO-CENTER V/HENRIKSENS ELEKTRONIK

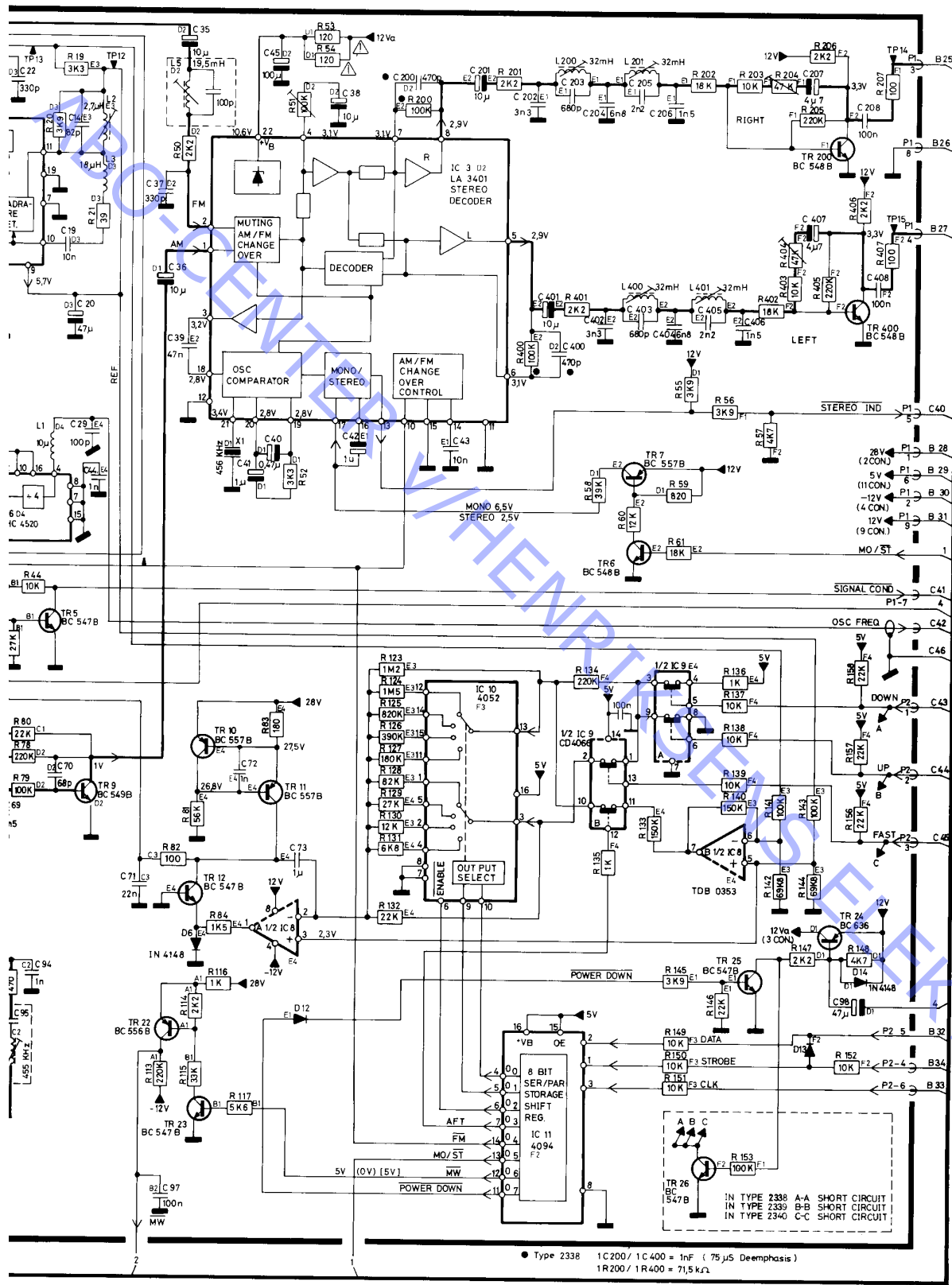




ABO CENTER HENRIKSENS ELEKTRONIK

DIAGRAM A AM-FM, TUNER, IF, STEREO DECODER (Type 2338, 2339, 2340)





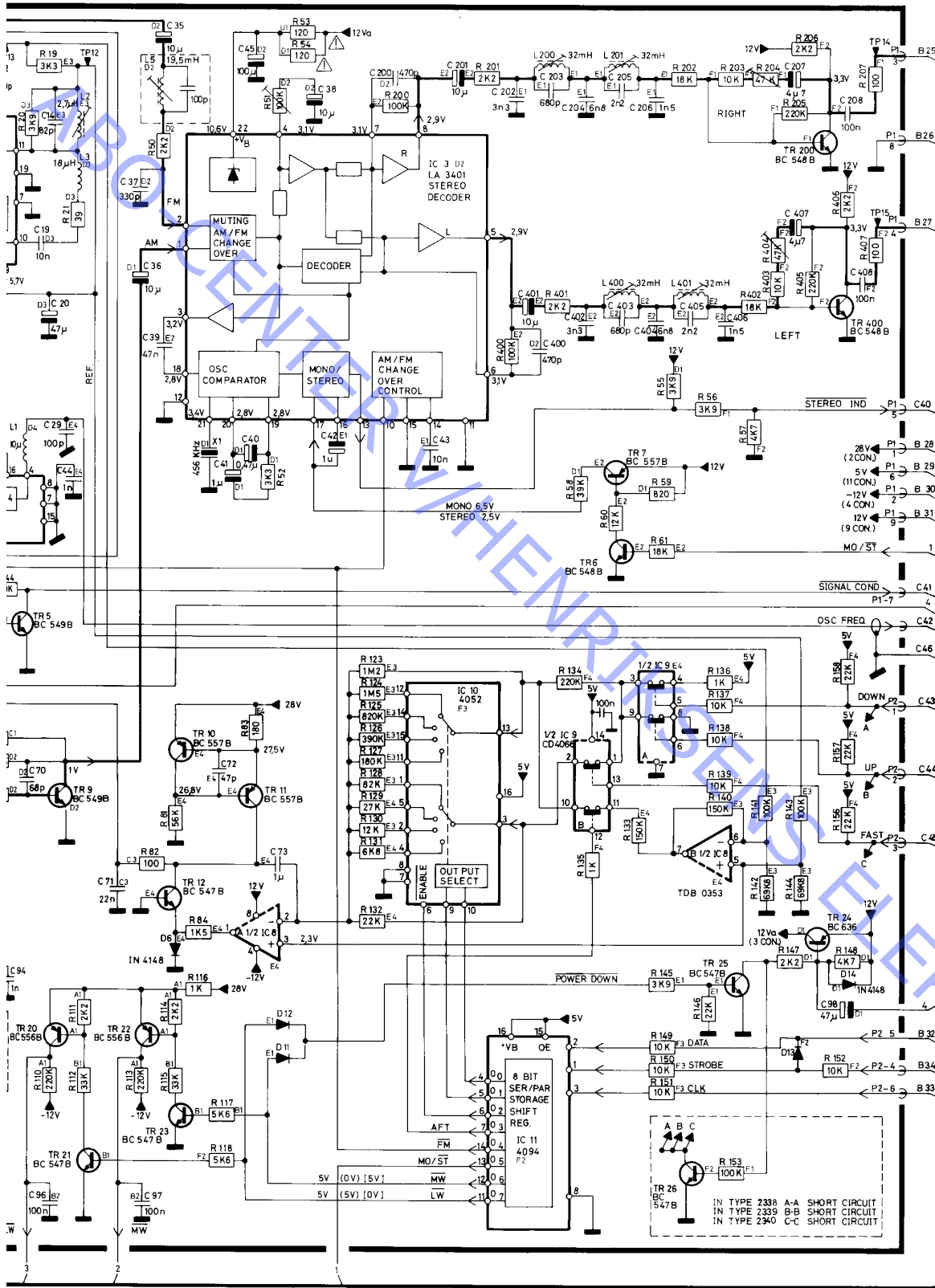
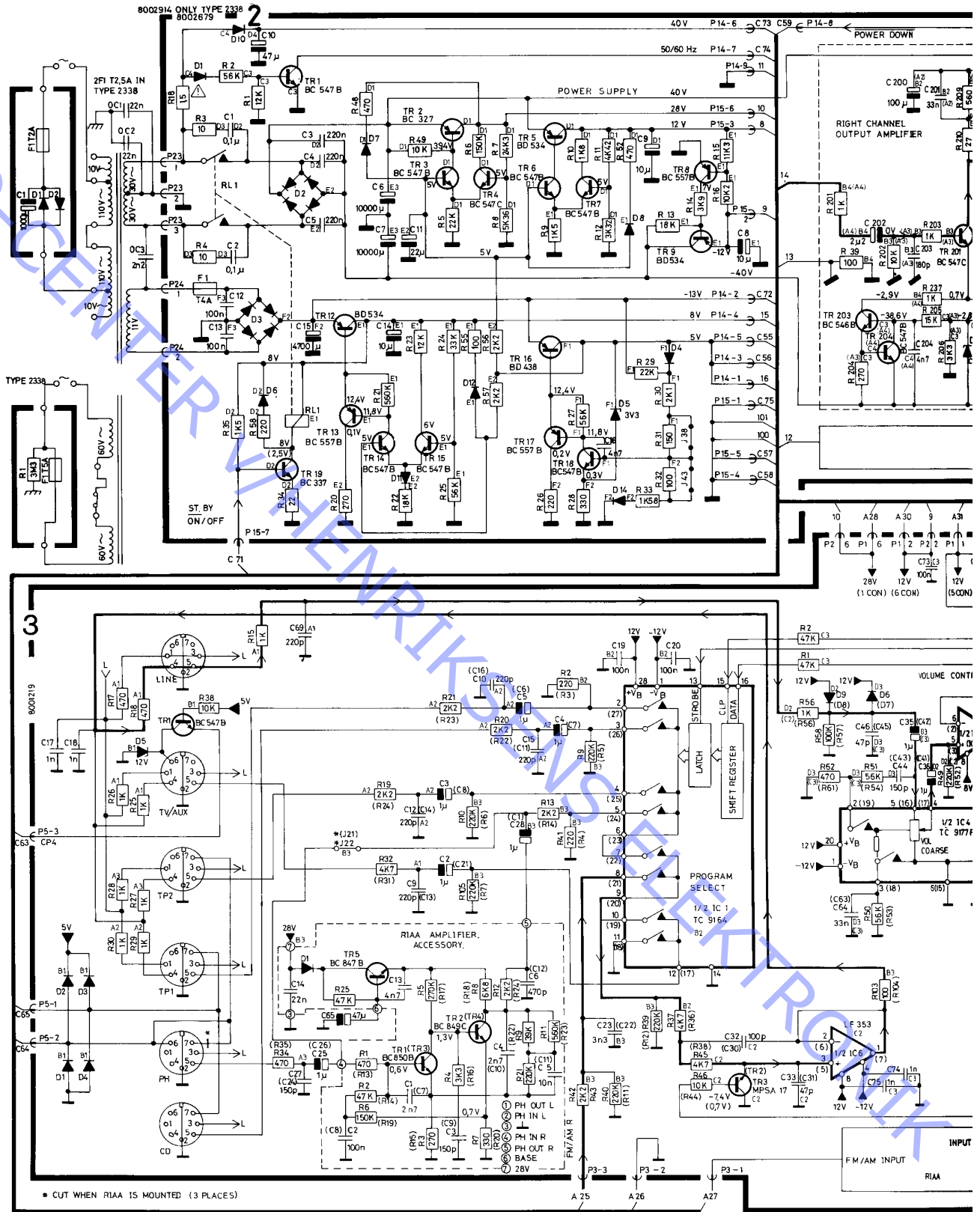
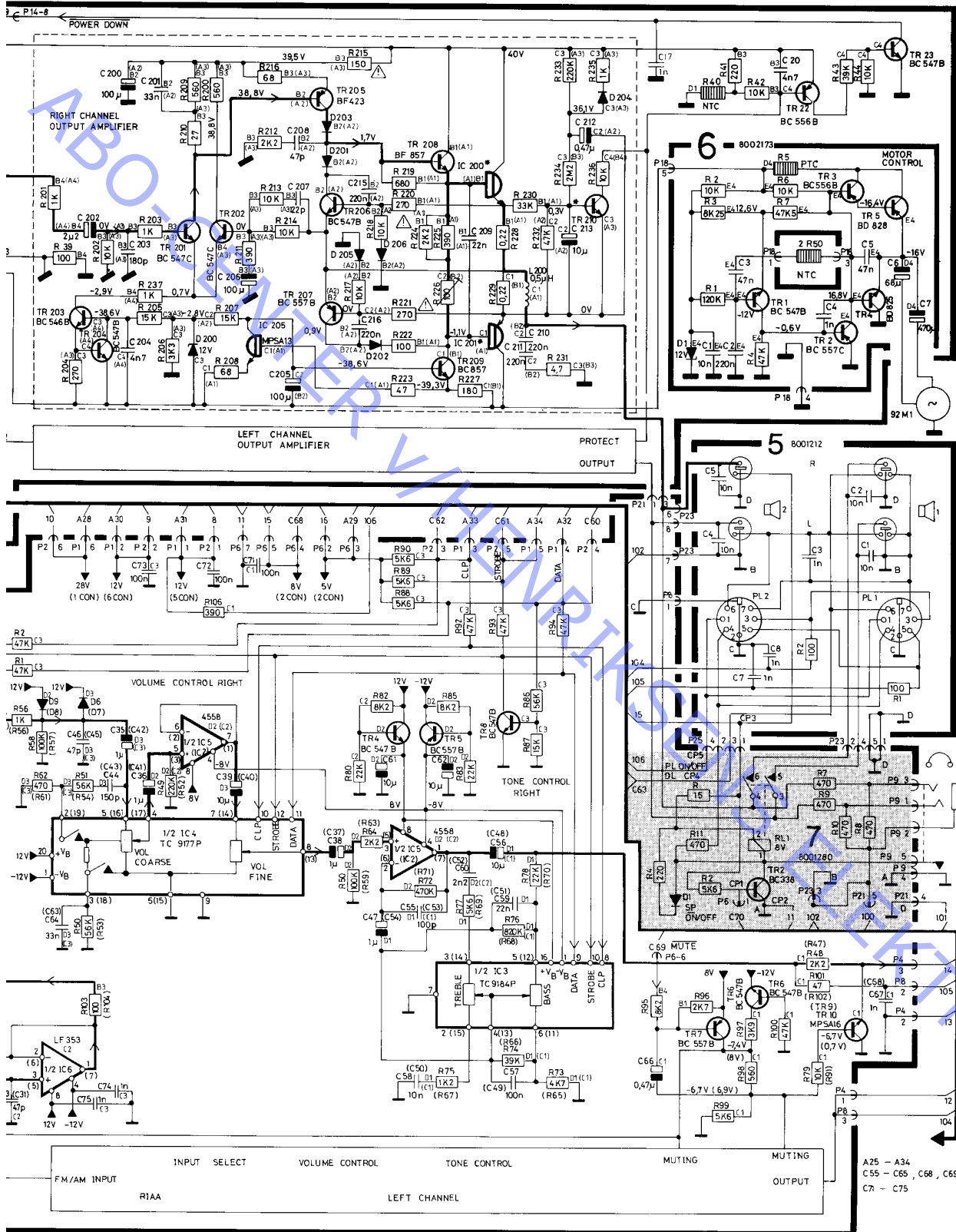


DIAGRAM B RIAA AMPL., INPUT SELECT, VOLUME AND TONE CONTROL, OUTPUT AMPL., POWER SUPPLY



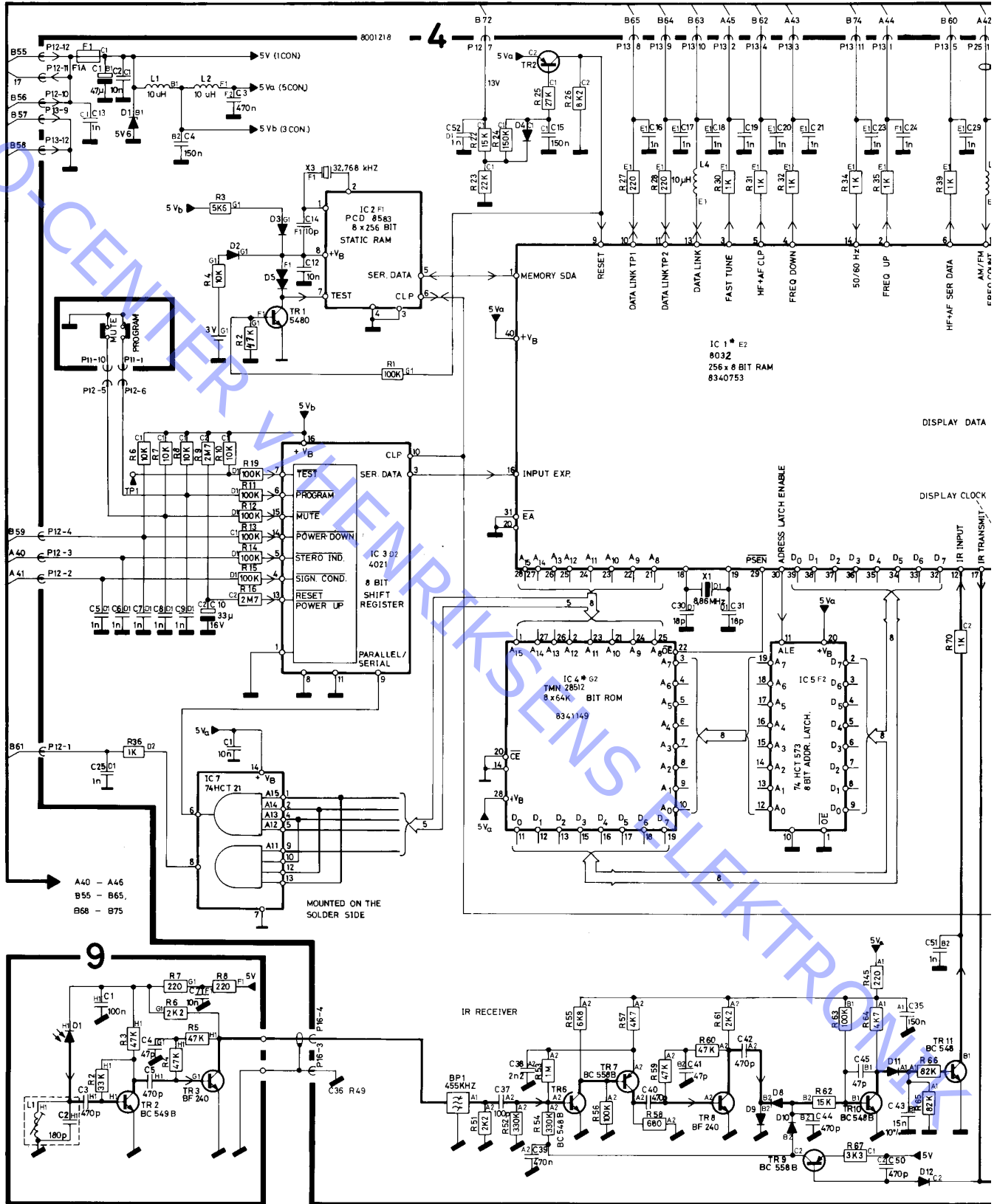
ER SUPPLY



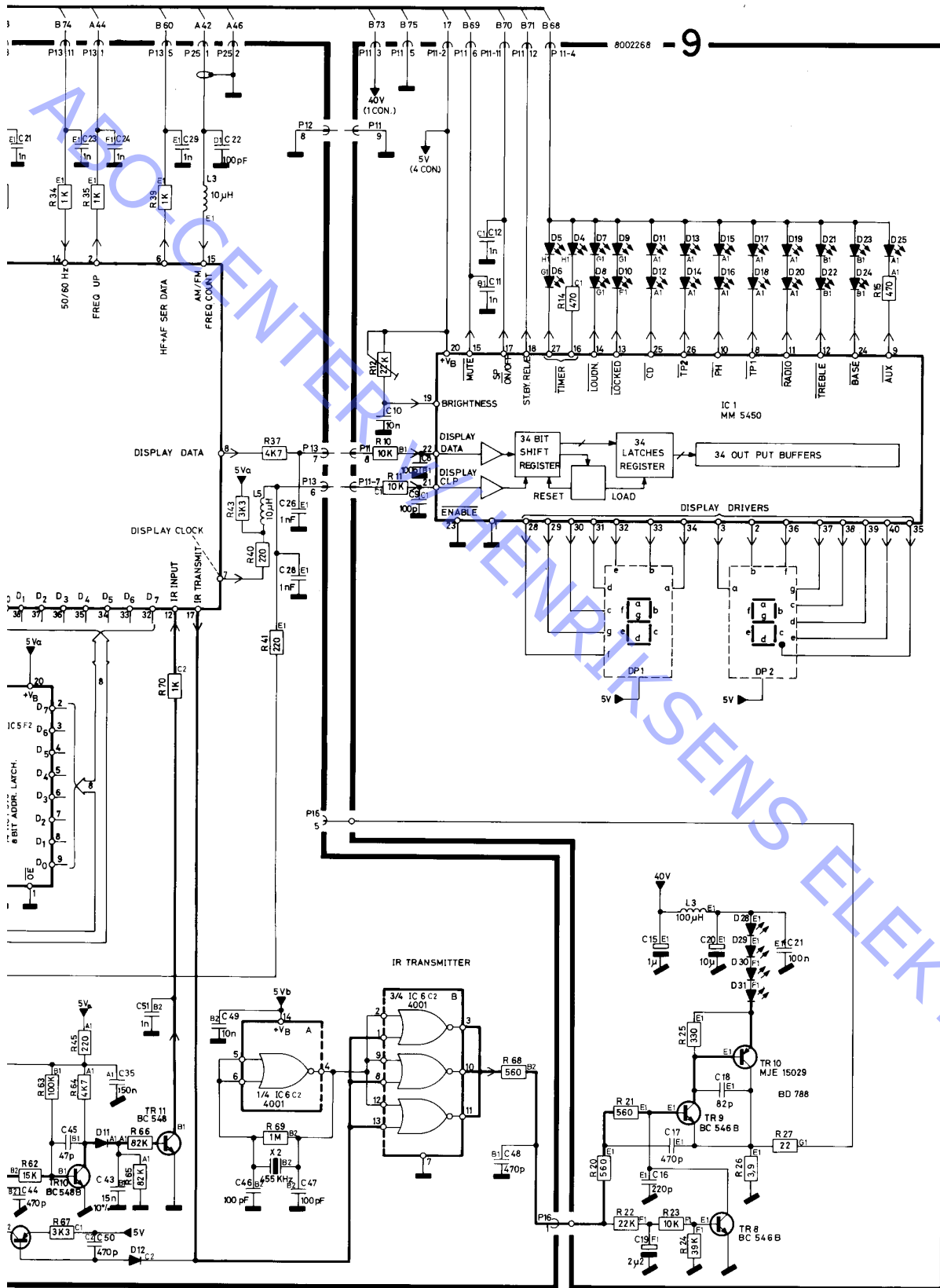
ELECTRONIK

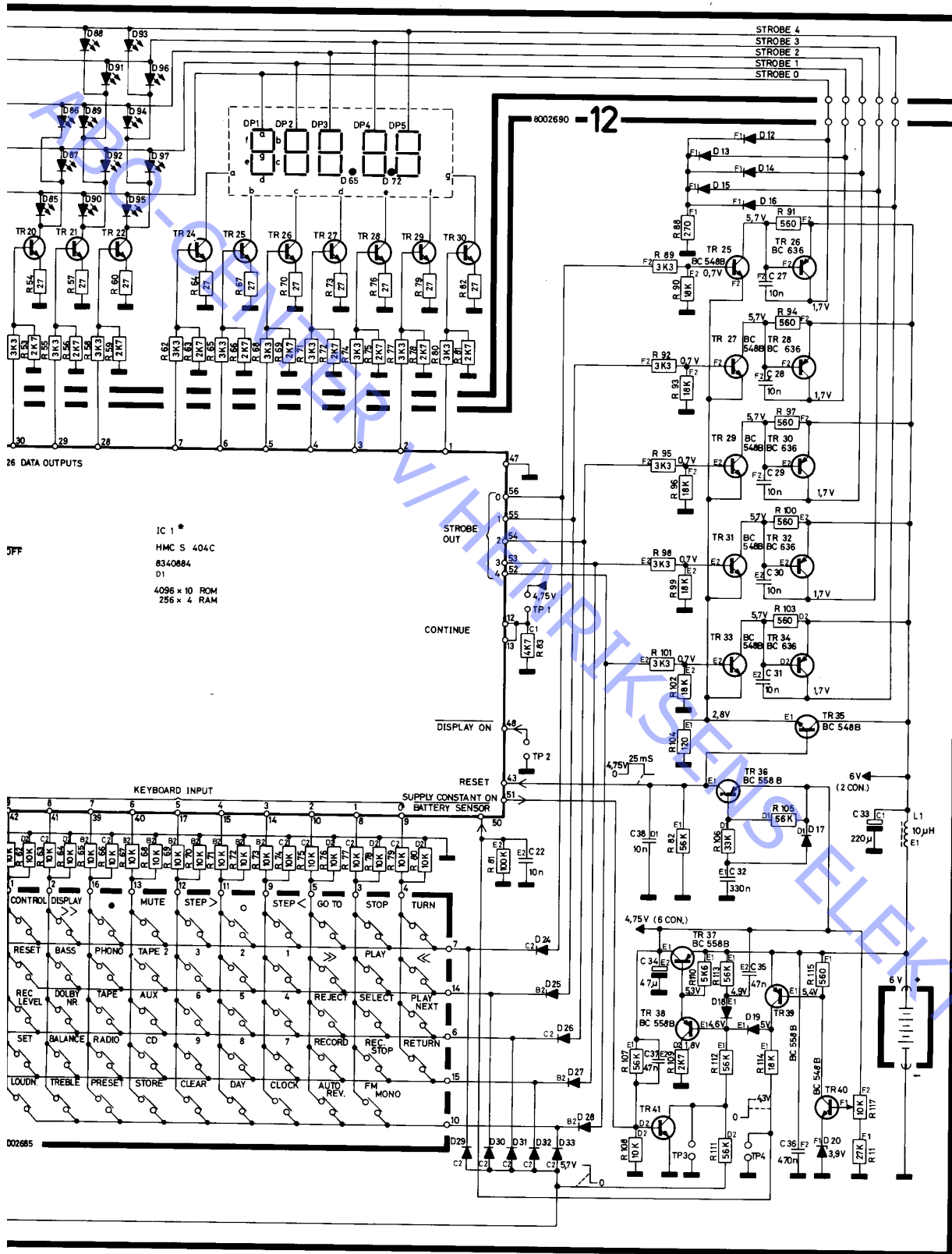
A25 - A34
C55 - C65, C68, C69
C70 - C75

DIAGRAM C MICROCOMPUTER, IR TRANSCEIVER, DISPLAY



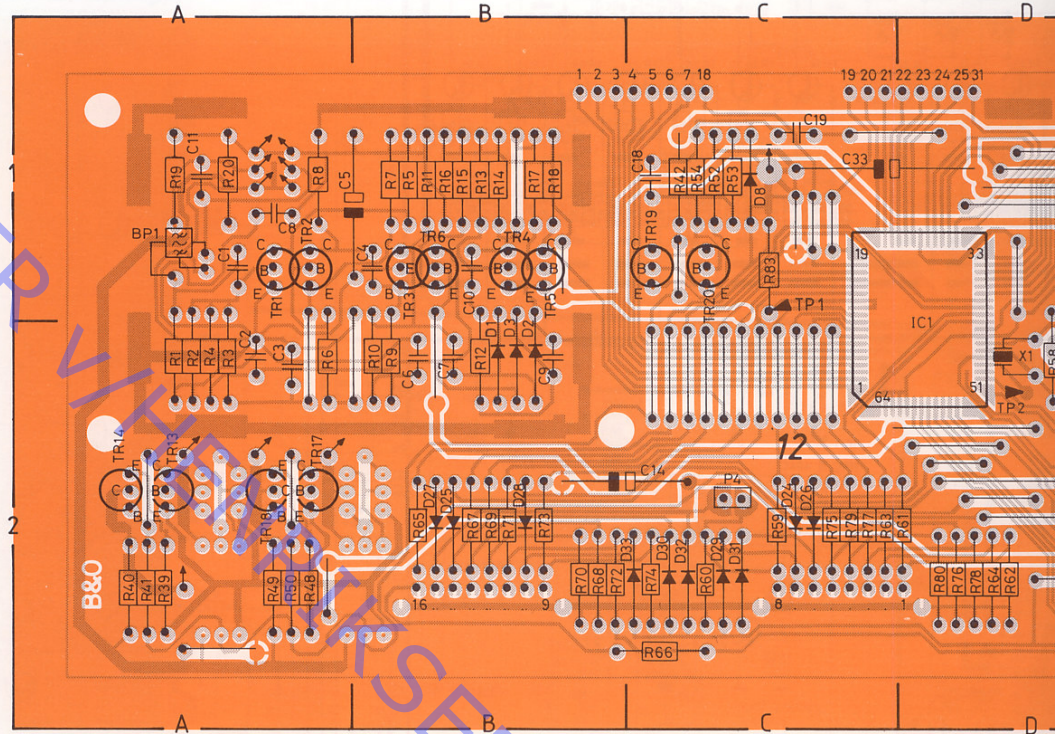
(X CON) = NUMBERS OF VOLTAGE CONNECTION.



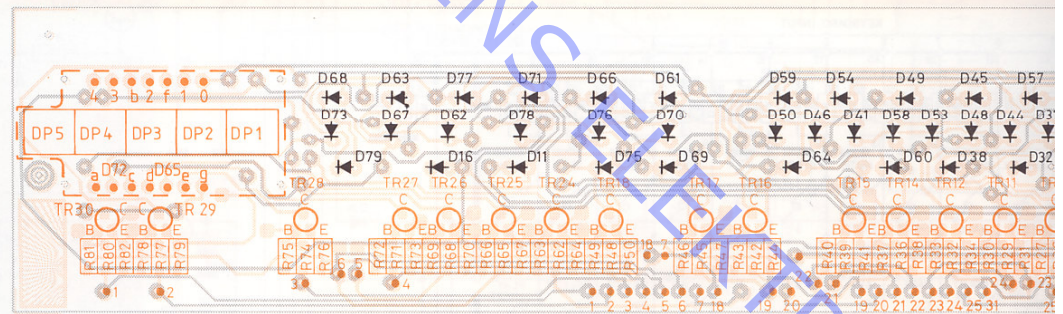


Microcomputer
8002690 PCB 12

ABO-CENTER

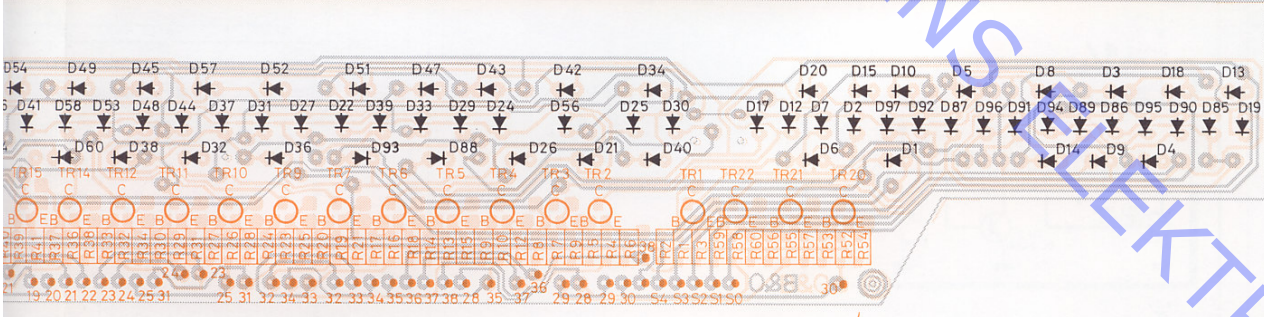
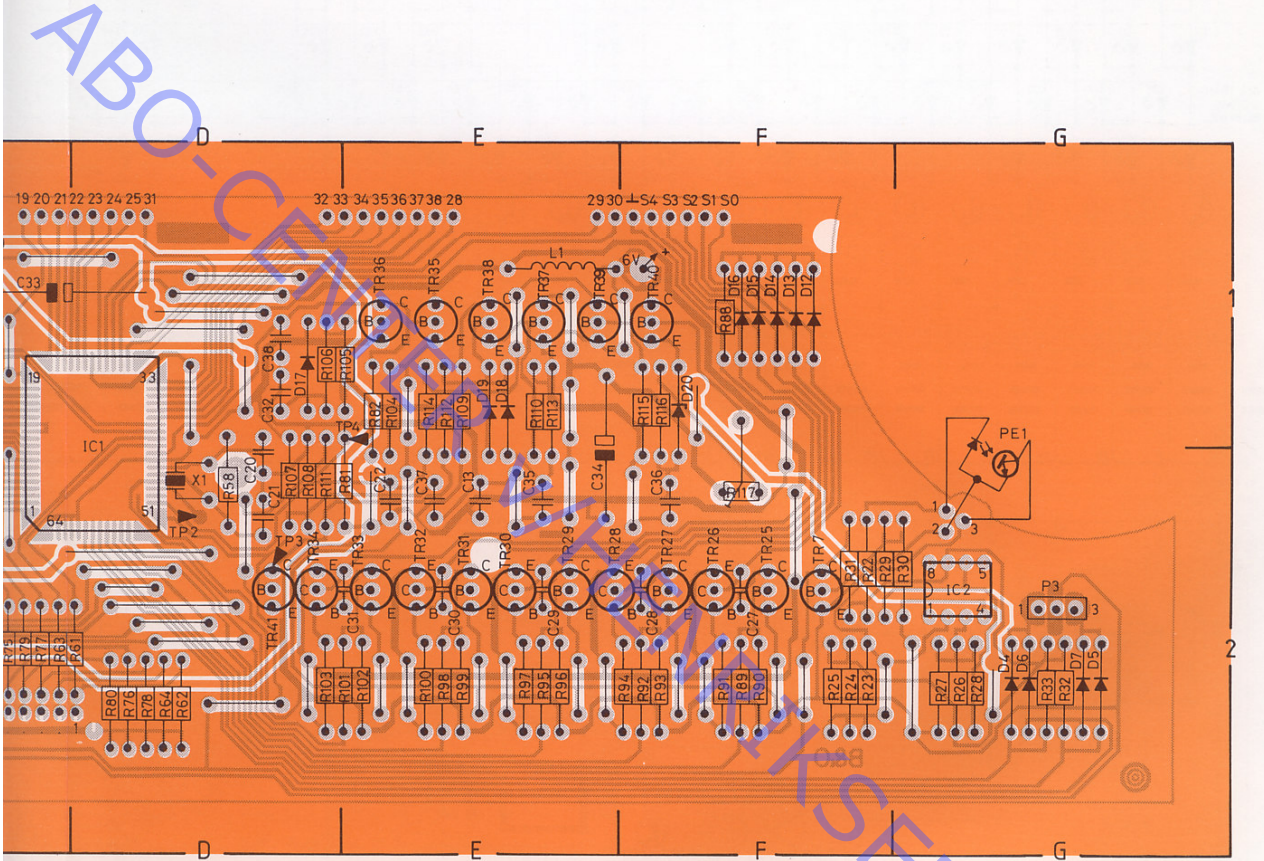


Display
8002694, PCB 15



Pins on μ C 12IC1

TRONIK

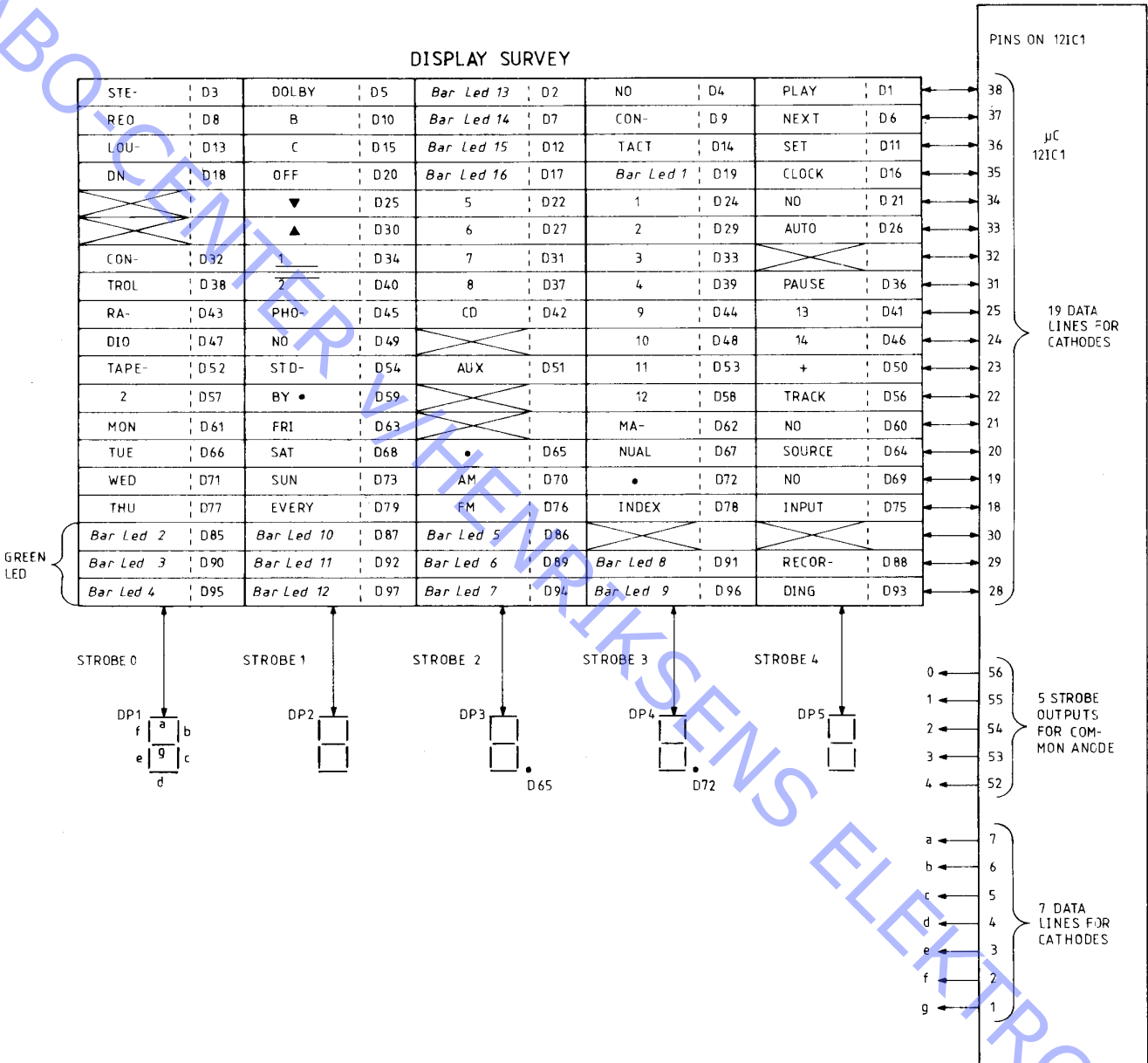


Pins on μ C 12IC1

ABO-CENTRUMS ELETROENKONIK

DISPLAY SURVEY FOR PCB 15 IN MASTER CONTROL PANEL

DISPLAY SURVEY



12IC

4IC1

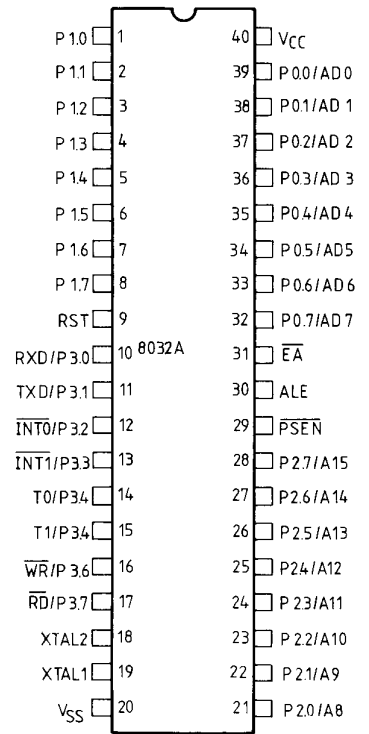
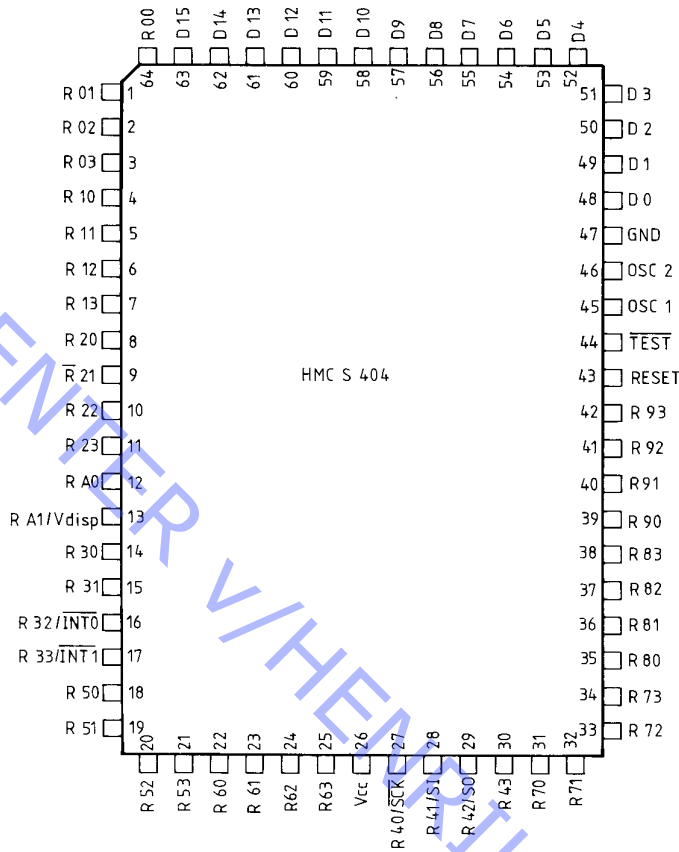
VS ON 12IC1

μC 12IC1

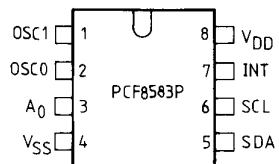
19 DATA LINES FOR CATHODES

5 STROBE OUTPUTS FOR COMMON ANODE

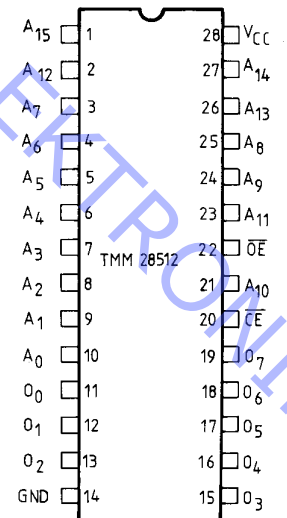
7 DATA LINES FOR CATHODES

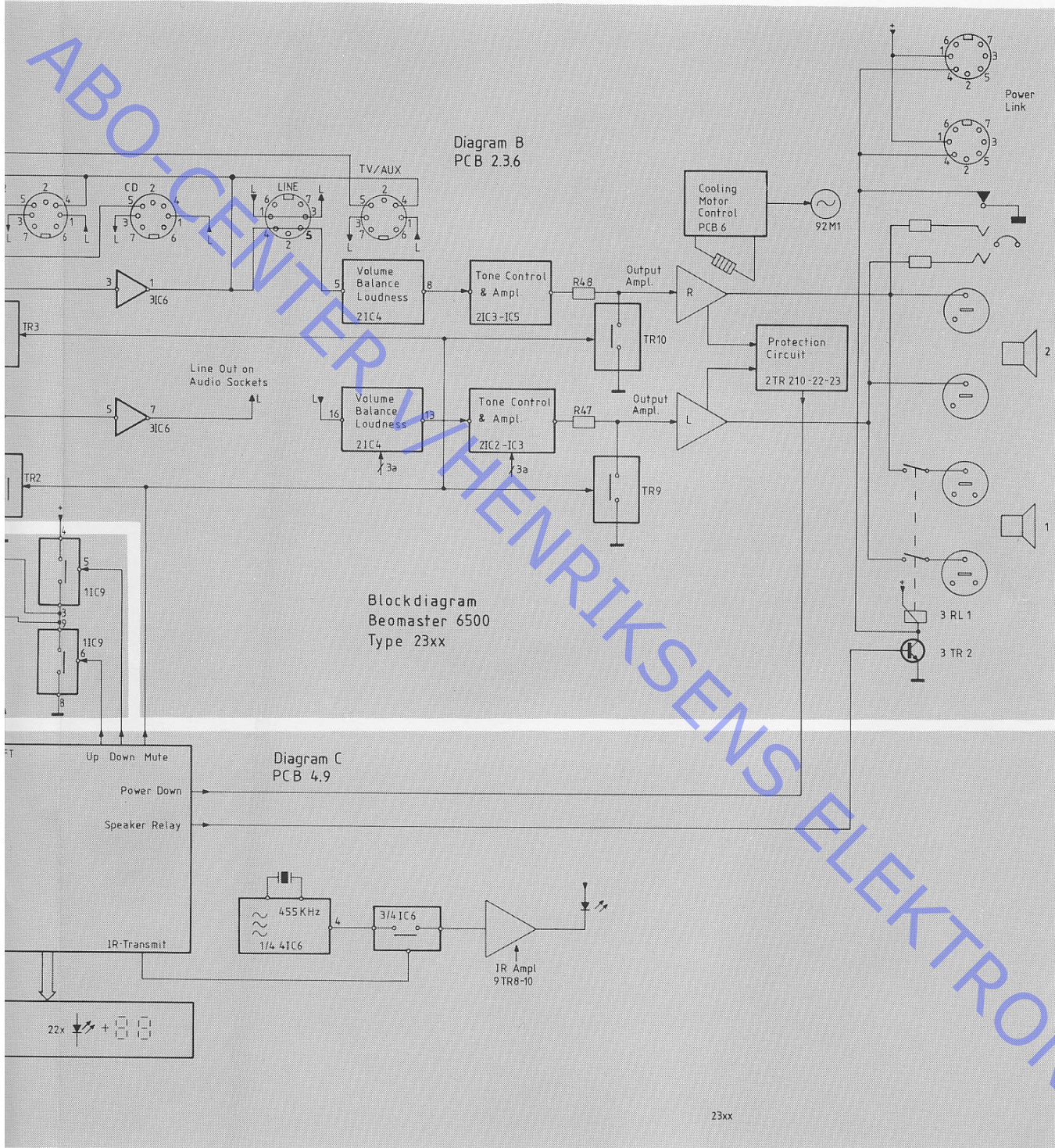


4IC2

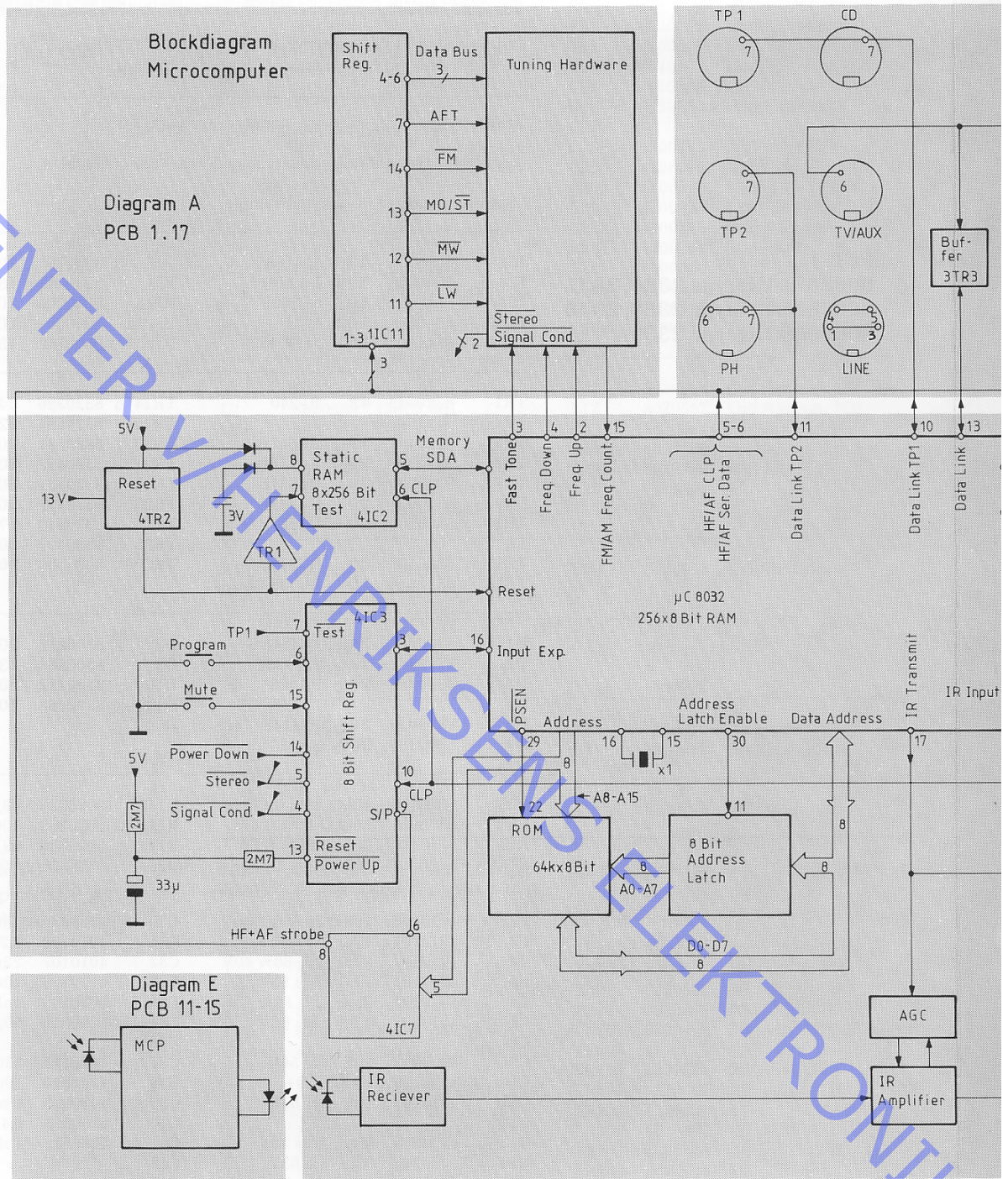


4IC4





BLOCK DIAGRAM



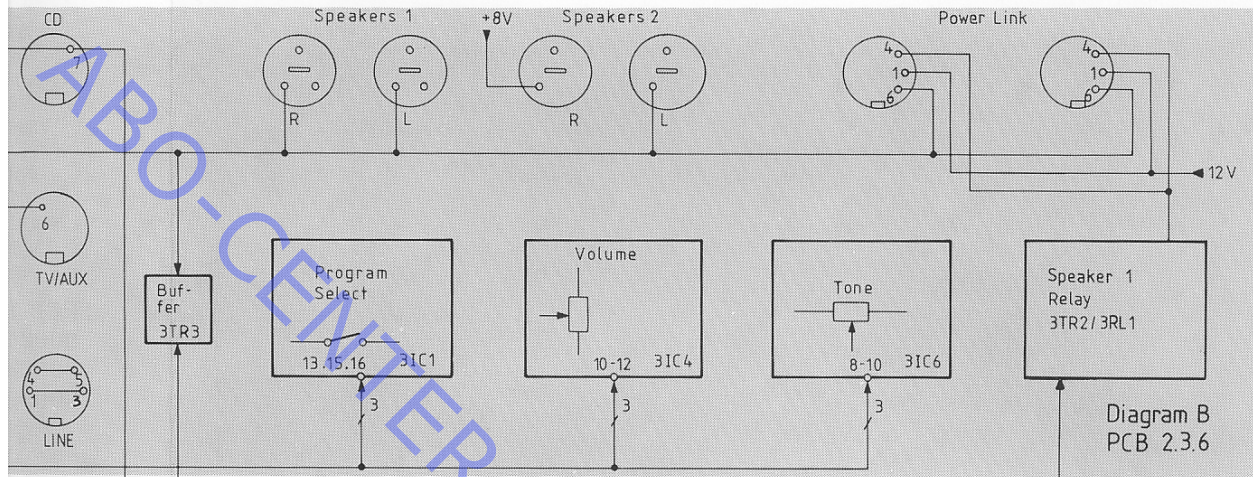


Diagram B
PCB 2.3.6

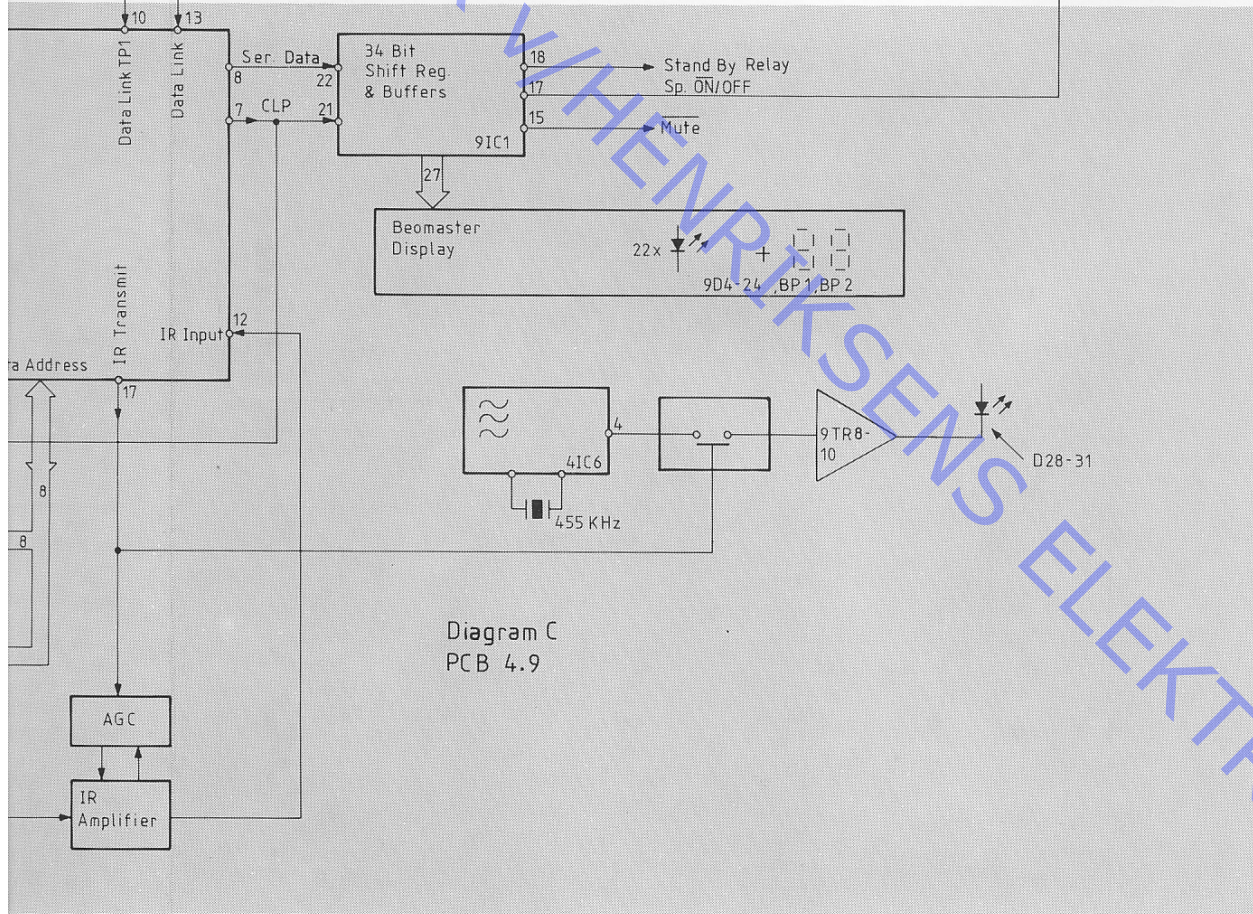


Diagram C
PCB 4.9

ABO-CENTER
WHENRKSSENS ELEKTRONIK

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Henvi
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Alle b

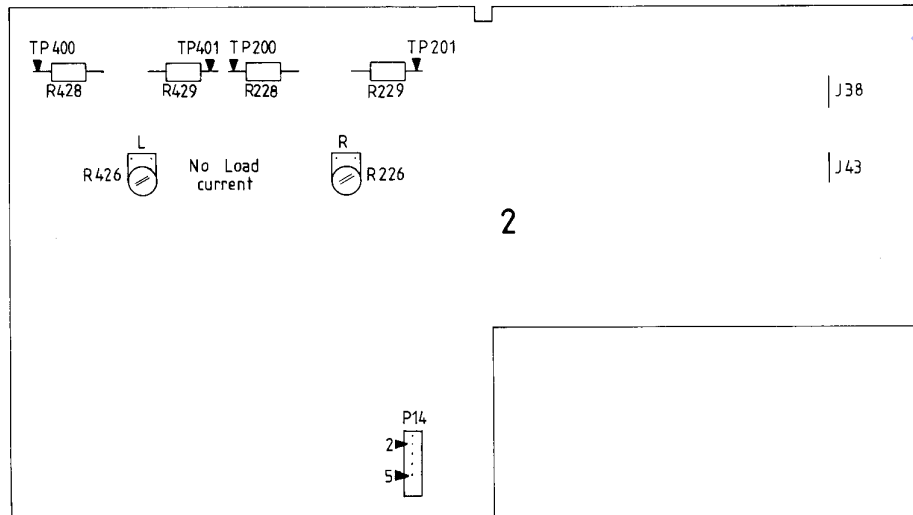
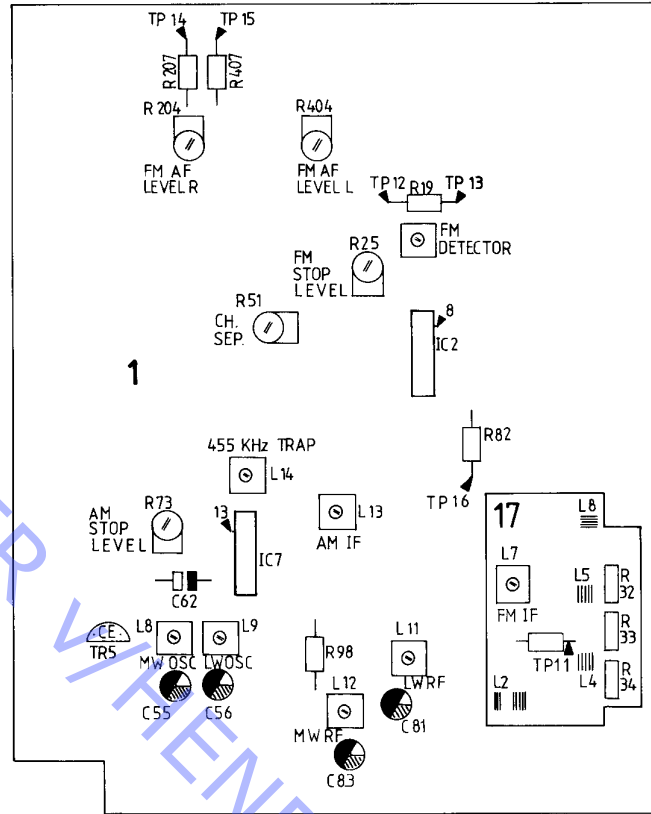
5V No
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lodde



ABO-CENTER
VILHJENRIKSENS
ELEKTRONIK

ELEKTRISKE JUSTERINGER

Henvisningerne er for højre kanal. (Henvisningerne i parentes er for venstre kanal).

Alle betjeninger gøres på Master Control Panelet.

5V Netdel

Tilslut DC voltmeter til 2P14-5.

Juster til $5,1V \pm 0,1V$ ved at afbryde eller kortslutte 2J38 og 2J43.

Tomgangsstrøm

Tomgangsstrømmen justeres medens modtageren er kold og med neddrejet volumekontrol.

Højtalere må ikke være tilsluttet.

Tilslut DC voltmeter mellem 2TP200 og 2TP201 (2TP400 og 2TP401).

Juster 2R226 (2R426) til 11mV.

Brightness (Display)

Tilslut DC voltmeter over 9R15.

Tryk AUX.

Juster 9R12 til 3,75V.

Strømforsyning (MCP)

Kortslut 12TP3 til stel.

Tilslut et DC voltmeter til kollektor på 12TR37.

Juster 12R117 til 4,75V.

Volume sensor (MCP)

Tilslut DC voltmeter til ben 2 på 12IC2.

Når volume hjulet drejes skal spændingen svinge minimum mellem 2V og 2,8V.

Eventuel justering kan gøres ved at klippe eller lodde 12R23, 12R25 eller 12J57.

ELECTRICAL ADJUSTMENTS

Instructions apply to the right channel. (Instructions given in brackets apply to the left channel). All

operations are carried out from the Master Control Panel.

5V Power-supply unit

Connect DC voltmeter to 2P14-5.

Adjust to $5.1V \pm 0.1V$ by disconnecting or short-circuiting 2J38 and 2J43.

No-load current

Adjust the no-load current while the receiver is cold and with the volume control turned down.

Speakers must not be connected.

Connect DC voltmeter between 2TP200 and 2TP201 (2TP400 and 2TP401).

Adjust 2R226 (2R426) to 11mV.

Brightness (Display)

Connect DC voltmeter across 9R15.

Press AUX.

Adjust 9R12 to 3.75V.

Power supply (MCP)

Short-circuit 12TP3 with chassis.

Connect a DC voltmeter to the collector at 12TR37.

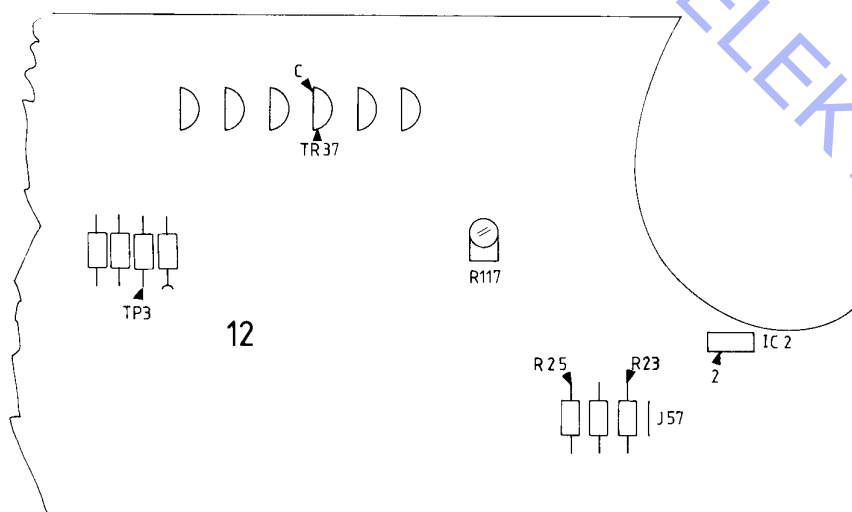
Adjust 12R117 to 4.75V.

Volume sensor (MCP)

Connect DC voltmeter to pin 2 at 12IC2.

When the volume wheel is turned, the voltage should oscillate between 2V and 2.8V as a minimum.

Any adjustments which might be necessary may be performed by cutting or soldering 12R23, 12R25 or 12J57.



HF JUSTERINGER

Ved visse justeringer skal AFT'en være in-aktiv. Dette ses ved at LOCKED indikatorens skal være slukket (LOCKED off). Ved justeringer uden AFT skal signalgeneratoren først tilsluttes, når modtagerens frekvens er indstillet.

Alle betjeninger gøres på Master Control Panelet.

Udskiftning på FM tuner

Ved udskiftning af FM tuner er det kun nødvendigt at justere MF spolen 17L7.

MF

Tilslut et oscilloskop til 11C2 ben 8.

Tryk RADIO.

Tryk GO TO.

Tryk TURN til displayet viser 87,4.

Tilslut en sweepgenerator til antenneindgangen og indstil den til 87,4 MHz.

Juster 17L7 til maksimum og symmetrisk MF kurve.

TUNER JUSTERINGER (KUN HVIS TUNEREN ER MISJUSTERET)

Oscillator

Der skal ikke tilføjes signal.

Tilslut DC voltmeter mellem 17TP11 og ben 8 på tunerens.

Tryk RADIO.

Tryk GO TO.

Tryk TURN til displayet viser 87,4.

Juster 17L8 til 0V.

HF 87,4 MHz

Tilslut et oscilloskop til 11C2 ben 8.

Tryk RADIO.

Tryk GO TO.

Tryk TURN til displayet viser 87,4.

Tilslut en sweepgenerator til antenneindgangen og indstil den til 87,4 MHz.

Juster 17L2, 17L4, 17L5 og 17L7 til maksimum og symmetrisk MF kurve.

HF 108 MHz

Tryk GO TO.

Tryk 1080.

Når displayet slukker, tryk GO TO (LOCKED off).

Sweepgeneratorens frekvens ændres til 108 MHz.

Juster 17R32, 17R33 og 17R34 til maksimum.

Detektor

Tilslut oscilloskop til 11C2 ben 8.

Tilslut DC voltmeter over 1R19 (1TP12 og 1TP13).

Tryk RADIO.

Tryk GO TO.

Tryk TURN til displayet viser 87,4.

Tryk GO TO.

Tryk 940.

Når displayet slukker, tryk GO TO (LOCKED off).

RF ADJUSTMENTS

The AFT needs to be inactive for certain adjustments. This is shown by the LOCKED indicator being off (LOCKED off). When adjustments are made without the AFT, the signal generator should not be connected until the frequency of the receiver has been set.

All operations are carried out from the Master Control Panel.

Replacement of FM tuner

When replacing an FM tuner, it is only necessary to adjust the IF coil 17L7.

IF

Connect an oscilloscope to 11C2 pin 8.

Press RADIO.

Press GO TO.

Press TURN until the display shows 87,4.

Connect a sweep generator to the aerial input and adjust it to 87,4 MHz.

Adjust 17L7 to maximum and symmetrical IF curve.

TUNER ADJUSTMENT (ONLY IF TUNER IS MALADJUSTED)

Oscillator

Do not input a signal.

Connect DC voltmeter between 17TP11 and the tuner's pin 8.

Press RADIO.

Press GO TO.

Press TURN until the display shows 87,4.

Adjust 17L8 to 0V.

RF 87,4 MHz

Connect an oscilloscope to 11C2 pin 8.

Press RADIO.

Press GO TO.

Press TURN until the display shows 87,4.

Connect a sweep generator to the aerial input and adjust it to 87,4 MHz.

Adjust 17L2, 17L4, 17L5 and 17L7 to maximum and symmetrical IF curve.

RF 108 MHz

Press GO TO.

Press 1080.

When the display goes off, press GO TO (LOCKED off).

Change sweep generator frequency to 108 MHz.

Adjust 17R32, 17R33 and 17R34 to maximum.

Detector

Connect oscilloscope to 11C2 pin 8.

Connect DC voltmeter across 1R19 (1TP12 and 1TP13).

Press RADIO.

Press GO TO.

Press TURN until the display shows 87,4.

Press GO TO.

Press 940.

When the display goes off, press GO TO (LOCKED off).

Tilslut en målesender til antenneindgangen og indstil den til 94 MHz.
Finindstil målesenderens frekvens til minimum 2. harmonisk forvrængning af signalet, som vist på kurven.

Connect a signal generator to the aerial input and adjust it to 94MHz.
Fine-tune the signal generator to at least second harmonic distortion of the signal as indicated on the curve.

RIGTIG



CORRECT

FORKERT



INCORRECT

Juster 1L2 så tæt mod 0V DC som muligt.
NB! Spændingen over 1R19 vil hele tiden variere p.g.a. korrektionspulser fra mikrocomputeren.
Efter detektor justering indstil FM DISPLAY INDIKERING se afsnit 8.

Adjust 1L2 as close to 0V DC as possible.
NOTE! The voltage across 1R19 will vary continuously because of correction pulses from the microcomputer.
After adjustment of the detector, adjust the FM DISPLAY INDICATION, see section 8.

FM LF output

Tilslut en målesender til antenneindgangen og indstil den til mono, 94MHz, 1mV EMF, $\Delta \pm 75$ kHz.
Tilslut LF voltmeter til 1TP14 (1TP15).
Tryk RADIO.
Tryk GO TO.
Tryk TURN til displayet viser 87,5.
Tryk GO TO.
Tryk 940.
Juster 1R204 (1R404) til 1V RMS.
(Type 2333 justeres til 700mV RMS).

FM AF output

Connect a signal generator to the aerial input and adjust it to mono, 94MHz, 1mV EMF, $\Delta \pm 75$ kHz.
Connect AF voltmeter to 1TP14 (1TP15).
Press RADIO.
Press GO TO.
Press TURN until the display shows 87.5.
Press GO TO.
Press 940.
Adjust 1R204 (1R404) to 1V R.M.S.(Adjust type 2333 to 700mV R.M.S.)

Kanalseparation

Tilslut en stereokoder (Encoder) til antenneindgangen og indstil den til 94 MHz og umoduleret signal i den ene kanal.
Tilslut LF voltmeter til 1TP14 eller 1TP15 (den umodulerede kanal).
Tryk RADIO.
Tryk GO TO.
Tryk TURN til displayet vises 87,5.
Tryk GO TO.
Tryk 940.
Juster 1R51 til minimum signal i den umodulerede kanal.
Tilslut LF voltmeter til den anden kanal, og indstil stereokoderen til umoduleret signal i den samme kanal.
Kontroller, juster til symmetrisk kanalseparation.

Channel separation

Connect a stereo encoder to the aerial input and adjust it to 94MHz and unmodulated signal in one channel.
Connect AF voltmeter to 1TP14 or 1TP15 (the unmodulated channel).
Press RADIO.
Press GO TO.
Press TURN until the display shows 87.5.
Press GO TO.
Press 940.
Adjust 1R51 to minimum signal in the unmodulated channel.
Connect AF voltmeter to the other channel, and adjust the stereo encoder to unmodulated signal in the same channel.
Check, adjust to symmetrical channel separation.

FM stop niveau

Tilslut en målesender til antenneindgangen, og indstil den til 94MHz, 20 μ V EMF, $\Delta \pm 75$ kHz.
Tryk RADIO.
Tryk GO TO.
Tryk TURN til displayet visere 87,5.
Tryk GO TO.
Tryk 940.
Drej 1R25 mod uret til stop.
Drej 1R25 med uret til LOCKED indikatoren netop tænder.

FM stop level

Connect a signal generator to the aerial input, and adjust it to 94MHz, 20 μ V EMF, $\Delta \pm 75$ kHz.
Press RADIO.
Press GO TO.
Press TURN until the display shows 87.5.
Press GO TO.
Press 940.
Turn 1R25 anticlockwise to stop.
Turn 1R25 clockwise until the LOCKED indicator just goes on.

AM

For at undgå indvirkning fra ACC'en, anbefales det at kortslutte 1C62.

LW oscillator

Der skal ikke tilføres signal.
Tilslut DC voltmeter til 1TP16.
Tryk RADIO.
Tryk GO TO.
Tryk TURN til frekvensdisplayet viser 150.
Juster 1L9 til $2V \pm 0,25V$.
Tryk GO TO.
Tryk 350.
Juster 1C56 til $25V \pm 0,5V$
Gentag evt. proceduren.

MW oscillator

Der skal ikke tilføres signal.
Tilslut DC voltmeter til 1TP16.
Tryk RADIO.
Tryk GO TO.
Tryk TURN til frekvensdisplayet viser 150.
Tryk GO TO.
Tryk 520.
Juster 1L8 til $2V \pm 0,25V$.
Tryk GO TO.
Tryk 1610.
Juster 1C55 til $25V \pm 0,5V$.
Gentag evt. proceduren.

AM MF

Tilslut en sweepgenerator til antenneindgangen, og indstil den til centerfrekvens 455 kHz $\Delta 10$ kHz.
Tilslut et oscilloskop til 1IC7 ben 13.
Tryk RADIO.
Tryk GO TO.
Tryk TURN til frekvensdisplayet viser 150.
Tryk GO TO.
Tryk 1500.
Kortslut 1R98.
Juster 1L13 og 1L14 til maksimum og symmetrisk MF kurve.
Kortslutningen over 1R98 fjernes.

ANTENNEKREDSE

MW antennekredsene skal justeres først.

MW

Tilslut en målesender til antenneindgangen, og indstil den til 1500 kHz, 30% modulation.
Tilslut oscilloskop eller LF voltmeter til 1IC7 ben 13.
Tryk RADIO.
Tryk GO TO.
Tryk TURN til frekvensdisplayet viser 150.
Tryk GO TO.
Tryk 1500.
Juster 1C83 til maksimum output.
Målesenderens frekvens ændres til 575 kHz.
Tryk GO TO.
Tryk 575 kHz.
Juster 1L12 til maksimum output.
Gentag evt. proceduren.

AM

In order to avoid any kind of influence from the AGC, it is recommended that 1C62 be short-circuited.

LW oscillator

Do not input a signal.
Connect DC voltmeter to 1TP16.
Press RADIO.
Press GO TO.
Press TURN until the frequency display shows 150.
Adjust 1L9 to $2V \pm 0.25V$.
Press GO TO.
Press 350.
Adjust 1C56 to $25V \pm 0.5V$.
Repeat this procedure if necessary.

MW oscillator

Do not input a signal.
Connect DC voltmeter to 1TP16.
Press RADIO.
Press GO TO.
Press TURN until the frequency display shows 150.
Press GO TO.
Press 520.
Adjust 1L8 to $2V \pm 0.25V$.
Press GO TO.
Press 1610.
Adjust 1C55 to $25V \pm 0.5V$.
Repeat this procedure if necessary.

AM IF

Connect a sweep generator to the aerial input, and adjust it to centre frequency, 455 kHz $\Delta 10$ kHz.
Connect an oscilloscope to 1IC7 pin 13.
Press RADIO.
Press GO TO.
Press TURN until the frequency display shows 150.
Press GO TO.
Press 1500.
Short-circuit 1R98.
Adjust 1L13 and 1L14 to maximum and symmetrical IF curve.
Remove the short-circuit across 1R98.

AERIAL CIRCUITS

The MW aerial circuits must be adjusted first.

MW

Connect a signal generator to the aerial input, and adjust it to 1500 kHz, 30% modulation.
Connect oscilloscope or AF voltmeter to 1IC7 pin 13.
Press RADIO.
Press GO TO.
Press TURN until the frequency display shows 150.
Press GO TO.
Press 1500.
Adjust 1C83 to maximum output.
Signal generator frequency is changed to 575 kHz.
Press GO TO.
Press 575 kHz.
Adjust 1L12 to maximum output.
Repeat this procedure if necessary.

LW

Målesenderens frekvens ændres til 330 kHz.
Tryk GO TO.
Tryk 330.
Juster 1C81 til maksimum output.
Målesenderens frekvens ændres til 160 kHz.
Tryk GO TO.
Tryk 160.
Juster 1L11 til maksimum output.
Gentag evt. proceduren.

AM stop niveau

Kortslutninger over 1C62 fjernes.
Tilslut en målesender til antenneindgangen, og indstil den til 1MHz 30% modulation, og 30 μ V.
Tilslut DC voltmeter til kollektor på 1TR5.
Tryk RADIO.
Tryk GO TO.
Tryk TURN til frekvensdisplayet viser 150.
Tryk GO TO.
Tryk 1000.
Juster 1R73 til 2,5 V.

LW

The signal generator frequency is changed to 330 kHz.
Press GO TO.
Press 330.
Adjust 1C81 to maximum output.
Change the signal generator frequency to 160 kHz.
Press GO TO.
Press 160.
Adjust 1L11 to maximum output.
Repeat this procedure if necessary.

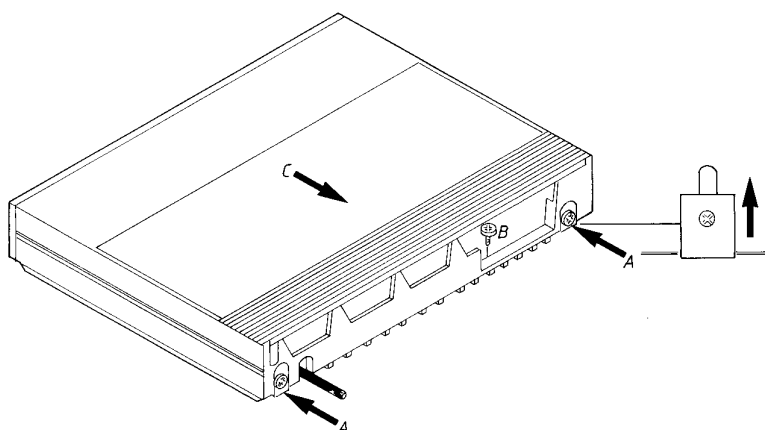
AM stop level

Remove the short-circuit across 1C62.
Connect a signal generator to the aerial input, and adjust it to 1MHz 30% modulation, and 30 μ V.
Connect DC voltmeter to the collector at 1TR5.
Press RADIO.
Press GO TO.
Press TURN until the frequency display shows 150.
Press GO TO.
Press 1000.
Adjust 1R73 to 2.5V.

ABO-COMPUTER V/HENRIKSENS ELEKTRONIK

Adskillelse

Dismantling

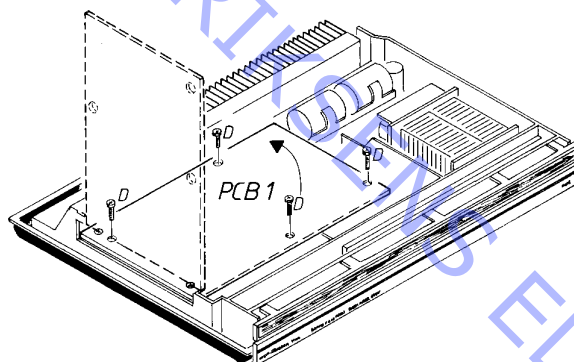


Kabinet

- Løsn skruerne, skub op og stram.
- Løft kølegitteret og fjern skruen i stikmodul.
- Pres kabinettet ca. 1 cm bagud og løft op.

Cabinet

- Loosen the screws, push up and tighten.
- Lift the heat dissipation grill and remove the screw from the socket module.
- Push the cabinet approx. 1 cm backwards and lift it out.

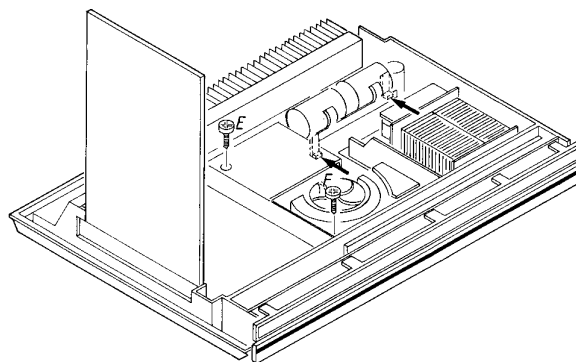


PCB 1

- Fjern skruerne D (4 stk.).
- Placer PCB 1 i servicestilling som vist.

PCB 1

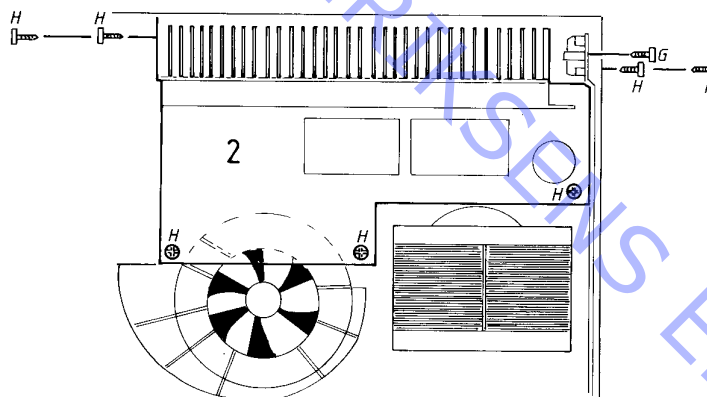
- Remove the screws D (4 pcs.).
- Place PCB 1 in service position as shown.

*Hus og blæser*

- Fjern skruen E.
- Frigør de to plasttæppe (ved pilene).
- Huset afmonteres.
- Skruen F fjernes.
- Blæseren løftes of.

Housing and fan

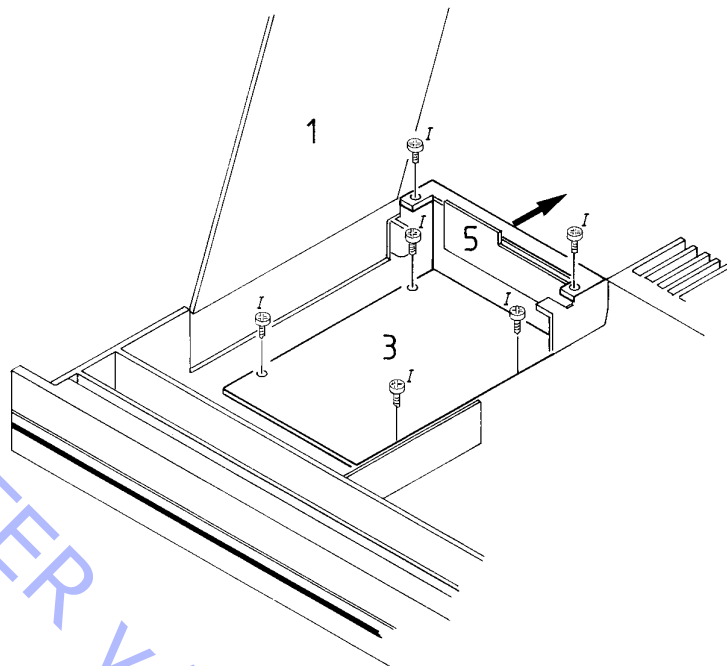
- Remove the screw E.
- Disengage the two plastic pins (at the arrows).
- Dismantle the housing.
- Remove the screw F.
- Lift out the fan.

*PCB2*

- Afmonter hus.
- Fjern skruen G.
- Afmonter ledningsholderen.
- Fjern skrue H (7 stk).
- Løft PCB2 og træk det ud.

PCB2

- Remove housing.
- Remove the screw G.
- Remove the cable holder.
- Remove the screws H (7 pcs.).
- Lift PCB2 and pull it out.

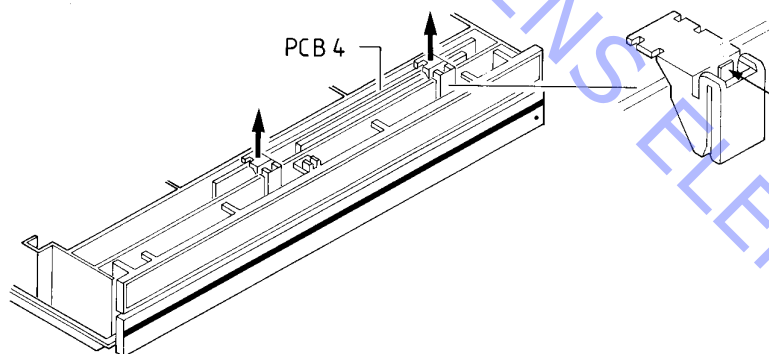


PCB3 og stikmodul

- Fjern skrue I (6 stk.).
- Løft stikmodulet og træk.
- Træk PCB3 ud.

PCB3 and socket module

- Remove the screws I (6 pcs.).
- Lift the socket module and pull.
- Pull out PCB3.



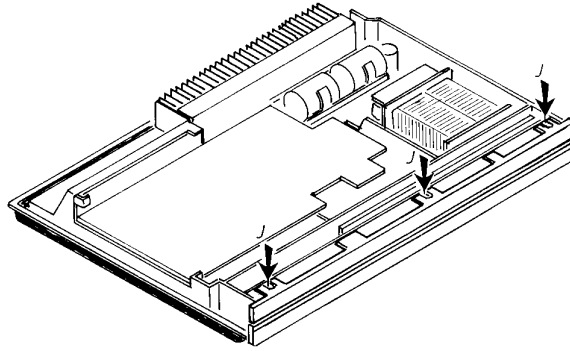
PCB4

- De to viste plastholdere løsnes og løftes op.
- PCB4 trækkes op.

PCB4

- Loosen and lift out the two plastic holders as shown.
- Pull out PCB4.

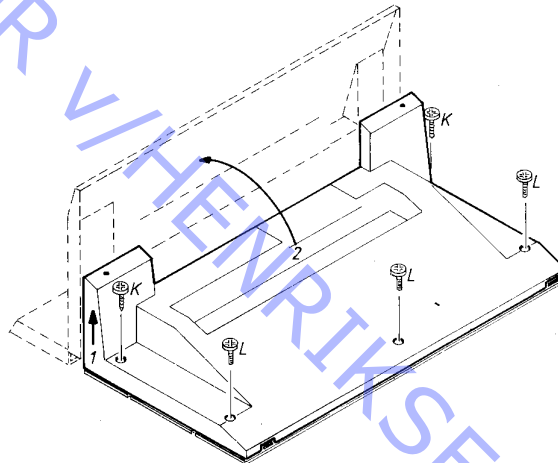
ABO-CENTER V/HENRIKSENS ELEKTRONIK

*PCB9*

- Fjern skrue J (3 stk.).
- Løft displayet.

PCB9

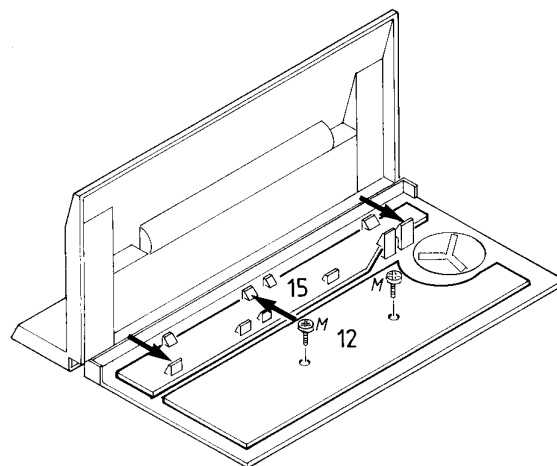
- Remove the screws J (3 pcs.).
- Lift the display.

*MCP*

- A. Fjern skrue K og L i bunden.
Løft op og vip bunden frem.

MCP

- A. Remove the screws K and L from the bottom.
Lift up and tilt the bottom forwards.



B. PCB12 og PCB15.

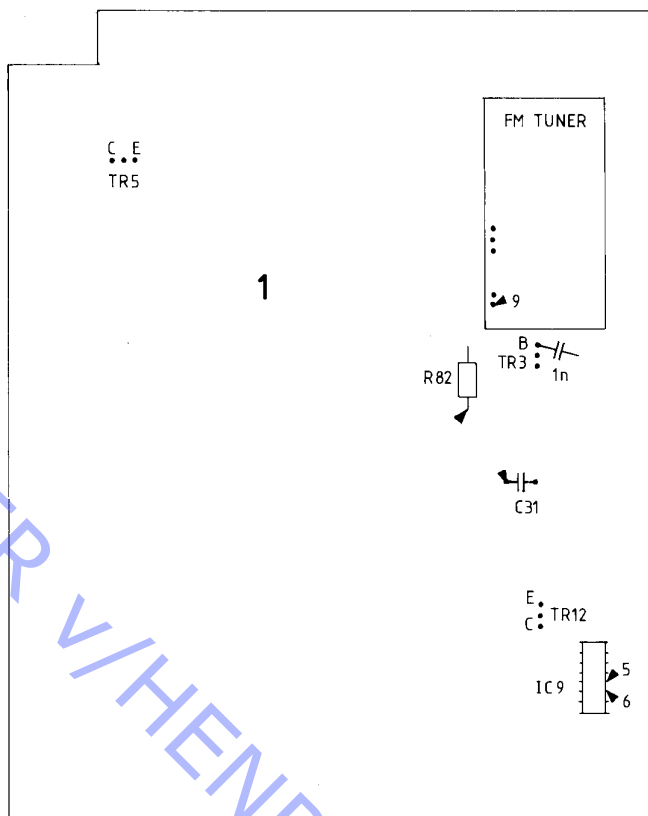
- Løsn de tre plasttæppe og de 2 skrue M.
- Printene kan nu vippes op.

B. PCB12 and PCB15.

- Loosen the three plastic tags and the 2 screws M.
- The PCB's may now be tipped up.

REPARATIONSTIPS

REPAIR TIPS



Reparation i tuningsystemet

Ved reparation i tuningsystemet kan det være vanskeligt at lokalisere en fejl. Følgende servicetips kan benyttes til at »åbne sløjfen« mellem mikrocomputeren og resten af tunings-systemet. Alle betjeninger gøres på Master Control Panelet.

1. Neddeler af oscillatorfrekvens:

Kortslut kollektor og emitter på 1TR5. Ben 9 på tunerens suges fri for tin, så der ikke er forbindelse til loddeøen. Tilslut en målesender til basis på 1TR3 via en 1nF kondensator. Indstil målesenderen til FM, og en frekvens på f.eks. 100,7 MHz, output større end 15mV. Tryk RADIO. Tryk GO TO. Tryk TURN til frekvensdisplayet viser 87,4. Tryk GO TO. Tryk STEP>. MCP's frekvensdisplay skal nu vise en frekvens, der er 10,7MHz under målesenderens frekvens, i dette tilfælde 90MHz. Frekvensdeleren deler med 400. Kortslutningen fjernes.

Repairs in the tuning system.

When carrying out tuning system repairs, it may be difficult to localize a fault. The following service tips may be used for "opening the loop" between the microcomputer and the rest of the tuning system. All operations are carried out from the Master Control Panel.

1. Oscillator frequency divider:

Short-circuit collector and emitter at 1TR5. Remove all solder from tuner pin 9 so that there is no connection to the soldering point. Connect a signal generator to the base of 1TR3 via a 1nF capacitor. Set the signal generator to FM and a frequency of, for example, 100.7MHz, the output being greater than 15mV. Press RADIO. Press GO TO. Press TURN until the frequency display shows 87.4. Press GO TO. Press STEP>. The MCP frequency display will now show a frequency which is 10.7MHz less than the frequency of the signal generator, i.e., 90MHz in this example. The frequency divider divides by 400. Remove the short-circuit.

2. Korrektion af afstemningsspænding:

Ben 9 på tuneren suges fri for tin, så der ikke er forbindelse til loddeøen.
 Tilslut en målesender til basis på 1TR3 via en 1nF kondensator.
 Indstil målesenderen til FM, 100,7MHz, output større end 15mV.
 Tilslut et oscilloskop til 1IC9 ben 5 og ben 6.
 Tilslut et DC voltmeter til kollektoren på 1TR12.
 Tryk RADIO.
 Tryk GO TO.
 Tryk TURN til frekvensdisplayet viser 87,5.
 Tryk GO TO.
 Tryk 900.
 Når frekvensdisplayet slukkes, tryk GO TO.
 Målesenderens frekvens reguleres langsomt op. Dette opfattes som oscillator drift mod højere frekvens af mikrocomputeren, som så skal sende positive korrektionspulser til 1IC9 ben 5.
 Reguleres der ned for målesenderens frekvens, i forhold til 100,7 MHz, skal mikrocomputeren sende positive korrektionspulser til 1IC9 ben 6.
 Opregulering af frekvensen skal give faldende spænding på DC voltmeteret.
 Nedregulering af frekvensen skal give stigende spænding på DC voltmeteret.

3. FM oscillator og HF:

1R82 løftes (den side af 1R82 som vender mod 1C32 loddes fra).
 En variabel DC strømforsyning tilsluttes med + til den fraloddede side af 1R82, og indstilles til 0V.
 Tilslut en målsender til FM antenneindgangen.
 Indstil senderen til 88MHz.
 Tryk RADIO.
 Tryk GO TO.
 Tryk TURN til frekvensdisplayet viser 87,5.
 Tryk GO TO.
 Tryk 880.
 Når frekvensdisplayet slukker, tryk GO TO.
 DC strømforsyningen skrues langsomt op, og når modtageren »fanger« 88MHz skal spændingen være ca. 4V.
 Målesenderens frekvens ændres til 107 MHz.
 Strømforsyningen skrues op, og når modtageren »fanger« frekvensen skal spændingen være ca. 19V.

4. AM oscillator og HF:

1R82 løftes (den side af 1R82 som vender mod 1C32 loddes fra).
 En variabel DC strømforsyning tilsluttes med + til den fraloddede side af 1R82, og indstilles til 0V.
 Tilslut en målesender til AM antenneindgangen.
 Indstil senderen til 150kHz.
 Tryk RADIO.
 Tryk GO TO.
 Tryk TURN til frekvensdisplayet viser 150.
 DC strømforsyningen skrues langsomt op, og når modtageren »fanger« 150kHz skal spændingen være ca. 2V.

2. Correction of tuning voltage:

Remove all solder from tuner pin 9 so that there is no connection to the soldering point.
 Connect a signal generator to the base of 1TR3 via a 1nF capacitor.
 Set the signal generator to FM, 100.7MHz, output greater than 15mV.
 Connect an oscilloscope to 1IC9 pins 5 and 6.
 Connect a DC voltmeter to the collector of 1TR12.
 Press RADIO.
 Press GO TO.
 Press TURN until the frequency display shows 87.5.
 Press GO TO.
 Press 900.
 When the frequency display goes off, press GO TO.
 Increase the signal generator frequency slowly.
 The microcomputer understands this as oscillator drift towards higher frequency, and it therefore has to send positive correction pulses to 1IC9 pin 5.
 If the signal generator frequency is decreased compared to 100.7MHz, the microcomputer has to send positive correction pulses to 1IC9 pin 6.
 A frequency increase should result in decreasing voltage on the DC voltmeter.
 A frequency decrease should result in increasing voltage on the DC voltmeter.

3. FM oscillator and RF:

Lift 1R82 (desolder the side of 1R82 facing 1C32).
 Connect a variable DC power supply with + at the desoldered side of 1R82, and adjust to 0V.
 Connect a signal generator to the FM aerial input.
 Set the generator to 88MHz.
 Press RADIO.
 Press GO TO.
 Press TURN until the frequency display shows 87.5.
 Press GO TO.
 Press 880.
 When the frequency display goes off, press GO TO.
 Turn up the DC power supply slowly, and when the receiver "catches" 88MHz the voltage should be approx. 4V.
 The signal generator frequency is changed to 107MHz.
 Turn up the power supply, and when the receiver "catches" the frequency the voltage should be approx. 19V.

4. AM oscillator and RF:

Lift 1R82 (desolder the side of 1R82 facing 1C32).
 Connect a variable DC power supply with + at the desoldered side of 1R82, and adjust to 0V.
 Connect a signal generator to the AM aerial input.
 Set the generator to 150kHz.
 Press RADIO.
 Press GO TO.
 Press TURN until the frequency display shows 150.
 Turn up the DC power supply slowly, and when the receiver "catches" 150kHz the voltage should be approx. 2V.

Målesenderens frekvens ændres til 350 kHz.
Strømforsyningen skrues op, og når modtageren »fanger« frekvensen skal spændingen være ca. 25V. Samme procedure kan benyttes i mellembølgeområdet:
520 kHz spænding ca. 2V.
1610 kHz spænding ca. 25V.

Testpunkter i Master Control Panel (MCP)

MCP'en har 4 testpunkter, som kan anvendes ved service:

»CONTINUE« 12TP1

Hvis 12TP1 kortsluttes kortvarigt til 4,75V vil senderen sende et signal med et puls/pause forhold på 200µs/3,1ms.
Senderen slukkes ved at trykke på en knap.

»DISPLAY ON« 12TP2

»DISPLAY ON« anvendes hvis man ønsker at holde på display billedet.
Tryk på en knap for det ønskede display billede. Når displayet er tændt, kortsluttes 12TP2 til stel og MCP'en vendes væk fra Beomasteren, så MCP'en ikke modtager »stopordre« fra Beomasteren. Displayet fastholdes til der trykkes på en knap.

»SUPPLY CONSTANT ON« 12TP3

Når 12TP3 kortsluttes til stel, tændes netdelen. Netdelen slukker igen når kortslutningen fjernes.

»BATTERY SENSOR« 12TP4

Når 12TP4 kortsluttes, afprøves battery sensor funktionen.
Tryk på en knap. Når displayet er tændt, kortsluttes 12TP4 til stel, og displayet skal blinke.

The signal generator frequency is changed to 350kHz.

Turn up the power supply, and when the receiver "catches" the frequency the voltage should be approx. 25V.

The same procedure may be followed in the medium wave range:

520 kHz voltage approx. 2V.

1610 kHz voltage approx. 25V.

Test points in the Master Control Panel (MCP)

The MCP has four test points which may be used when servicing:

"CONTINUE" 12TP1

If 12TP1 is short-circuited briefly to 4.75V, the transmitter will transmit a signal with a pulse/pause ratio of 200µs/3.1ms.
The transmitter is switched off by pressing a button.

"DISPLAY ON" 12TP2

"DISPLAY ON" is used when it is desirable to hold the display picture.
Press a button for the desired display picture. When the display is on, short-circuit 12TP2 to chassis, and turn the MCP away from the Beomaster so that the MCP will not receive a "stop order" from the Beomaster.
The display is held until a button is pressed.

"SUPPLY CONSTANT ON" 12TP3

When 12TP3 is short-circuited to chassis, the power-supply unit is switched on. The power-supply unit switches off again when the short-circuit is removed.

"BATTERY SENSOR" 12TP4

When 12TP4 is short-circuited, the battery sensor function is tested.
Press a button. When the display is on, short-circuit 12TP4 to chassis, and the display should flash.

TESTFUNKTIONER

Bring Beomaster 6500 i »TESTMODE« på følgende måde:

- Tast **RADIO**
- Kortslut 4TP1 (kortvarigt)

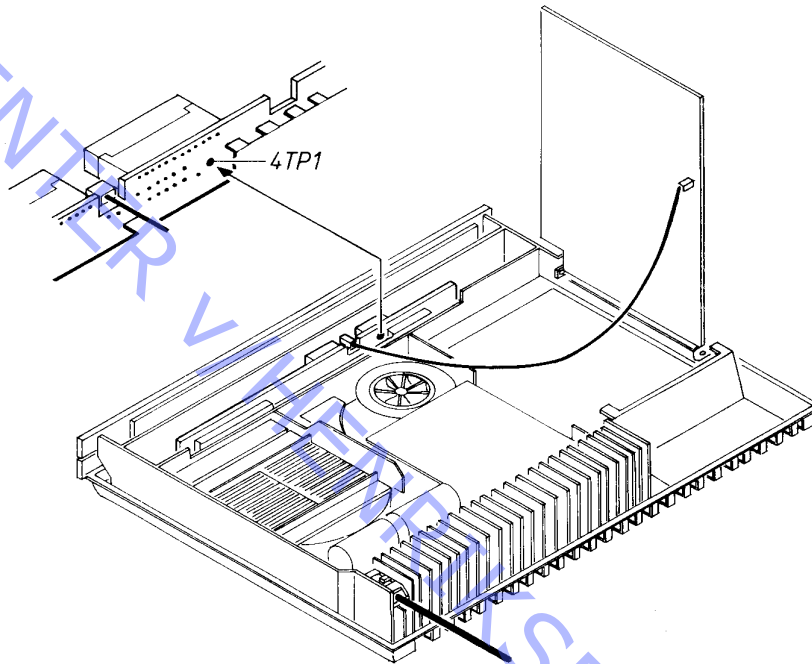
Der kan nu vælges mellem nedenstående testprocedurer ved at sende de tilhørende cifferkommandoer fra enten Master Control Panelet eller en Beolink terminal.

TEST FUNCTIONS

Bring the Beomaster 6500 into "TESTMODE" in the following way:

- Press **RADIO**
- Short-circuit 4TP1 (briefly)

It is now possible to choose among the below-mentioned test procedures by transmitting the relevant digital commands from either a Master Control Panel or a Beolink terminal.

**Oversigt over testfunktioner:**

- 3 Status over tuner-variant
- 4 Status over software-version
- 5 ROM/RAM-test
- 6 LED-test
- 7 Sletning af RAM
- 13 IR-sender
- 16 Sletning af AM/FM offset-værdi

Generel regel for testfunktioner:

Hvis ikke andet er beskrevet, viser Beomasterens display:

- 88 for 'OK'
- for 'Error'

Tast stand-by eller tag netstikkete ud for at forlade »TESTMODE«.

Summary of test functions:

- 3 Status of tuner model
- 4 Status of software version
- 5 ROM/RAM test
- 6 LED test
- 7 Erasure of RAM
- 13 IR transmitter
- 16 Erasure of AM/FM offset value.

General rule applying to test functions:

Unless otherwise specified, the Beomaster will display:

- 88 for "OK"
- for "Error"

Press stand-by or disconnect the mains plug to leave "TESTMODE".

3 Status over tuner-variant

- Sæt Beomasteren i »TESTMODE«.
- Tryk [3].

- Display: 0 = Europa (type 2336, 2337)
- FM 87,5 – 108 MHz, efterbetoning 50 µS
 - AM 150 – 350 kHz, 520 – 1610 kHz, frekvensstep 9 kHz
- 1 = USA, Canada (type 2338)
- FM 87,5 – 108 MHz, efterbetoning 75 µS
 - AM 520 – 1610 kHz, frekvensstep 10 kHz
- 2 = Japan (type 2339)
- FM 76 – 90 MHz, efterbetoning 50 µS
 - AM 520 – 1610 kHz, frekvensstep 9 kHz
- 3 = Australien (type 2340)
- FM 87,5 – 108 MHz, efterbetoning 50 µS
 - AM 520 – 1610 kHz, frekvensstep 9 kHz

3 Status of tuner model

- Set the Beomaster into "TESTMODE".
- Press [3].

- Display: 0 = Europe (types 2336, 2337)
- FM 87.5 – 108 MHz, deemphasis 50 µS
 - AM 150 – 350 kHz, 520 – 1610 kHz, frequency step 9 kHz
- 1 = USA, Canada (type 2338)
- FM 87.5 – 108 MHz, deemphasis 75 µS
 - AM 520 – 1610 kHz, frequency step 10 kHz
- 2 = Japan (type 2339)
- FM 76 – 90 MHz, deemphasis 50 µS
 - AM 520 – 1610 kHz, frequency step 9 kHz
- 3 = Australia (type 2340)
- FM 87.5 – 108 MHz, deemphasis 50 µS
 - AM 520 – 1610 kHz, frequency step 9 kHz

4 Status over software-version

- Sæt Beomasteren i »TESTMODE«.
- Tryk [4].

Display: X, Y = En talværdi (f.eks. 0,4), som angiver hvilken software-version (4IC4), apparatet indeholder.

4 Status of software version

- Set the Beomaster into "TESTMODE".
- Press [4].

Display: X, Y = A numerical value (e.g. 0.4) indicates which software version (4IC4) the product contains.

5 ROM/RAM-test

Testfunktion 5 tester ROM (4IC4), intern RAM (4IC1) og NV-RAM (4IC2). I NV-RAM testes tillige, om hardware-uret er korrekt initialiseret.

- Sæt Beomasteren i »TESTMODE«.
- Tryk [5].

Display: X, Y = Efter ca. 30 sek. vises en talværdi (f.eks. 1,7), som angiver resultatet af testen:

5 ROM/RAM test

Test function 5 tests the ROM (4IC4), the internal RAM (4IC1) and the NV-RAM (4IC2). In NV-RAM the correct initialization of the hardware watch is also tested.

- Set the Beomaster into "TESTMODE".
- Press [5].

Display: X, Y = After about 30 sec., a numerical value is displayed (e.g. 1.7) that indicates the result of the test:

X	Y	NV-RAM watch	ROM	Int. RAM	NV-RAM
1		ok			
0		error			
	7		ok	ok	ok
	6		ok	ok	error
	5		ok	error	ok
	4		ok	error	error
	3		error	ok	ok
	2		error	ok	error
	1		error	error	ok
	0		error	error	error

Udfør testfunktion 16 og 7 i den nævnte rækkefølge, ved udskiftning af NV-RAM (4IC2).

Carry out test functions 16 and 7 in this sequence when replacing the NV-RAM (4IC2).

6 LED-test

Alle LED's tændes i 6 sek.

- Sæt Beomasteren i »TESTMODE«.
- Tryk [6].

7 Sletning af RAM

Ved sletning af RAM nulstilles NV-RAM:

- a) Indlæste AM/FM programmer slettes.
- b) »Balance«, »bass«, »treble« og »loudness« bliver sat i 'neutral'.
- c) »Volume« bliver sat til '26'.
- d) »Option« bliver sat til '1'.
- e) Hardware-ur bliver sat til '890101'.

- Sæt Beomasteren i »TESTMODE«.
- Tryk [7].

Efter ca. 6 sek. vises resultatet af testen.

13 IR-sender

Testfunktion 13 sender kontinuert på IR.

- Sæt Beomasteren i »TESTMODE«.
- Tryk [13].

Display: 13

16 Sletning af AM/FM offset-værdi

Testfunktion 16 sletter AM/FM offset bytes i NV-RAM.

- Sæt Beomasteren i »TESTMODE«.
- Tryk [16].

FM-displayindikering:

Skal udføres ved udskiftning af båndpasfilterne 1BP1, 1BP2 og 1BP3 eller PCB01.

Tast STAND BY

Tast RADIO

Tast GO TO

Tast TURN

(til MCP
indikerer 87,5)

6 LED test

All LED's will be lit for 6 sec.

- Set the Beomaster into "TESTMODE".
- Press [6].

7 Erasure of RAM

The NV-RAM is reset when the RAM is erased:

- a) Store AM/FM programmes are erased.
- b) "Balance", "bass", "treble" and "loudness" are brought into "neutral".
- c) "Volume" is set to "26".
- d) "Option" is set to "1".
- e) Hardware watch is set to "890101".

- Set the Beomaster into "TESTMODE".
- Press [7].

After about 6 sec., the result of the test is displayed.

13 IR transmitter

Test function 13 is transmitting continuously on IR.

- Set the Beomaster into "TESTMODE".
- Press [13].

Display: 13

16 Erasure of AM/FM offset value

Test function 16 erases the AM/FM offset bytes in the NV-RAM.

- Set the Beomaster into "TESTMODE".
- Press [16].

FM display indication:

This test should be carried out in connection with replacement of the band-pass filters 1BP1, 1BP2 and 1BP3, or PCB01.

Press STAND BY

Press RADIO

Press GO TO

Press TURN

(until MCP
indicates 87,5)

Indstil på en station hvor du kender den nøjagtige frekvens
Kontrollere at eller LOCKED lyser

Kortslut (2 gange kortvarigt) 4TP1

Tast

Indtast den nøjagtige frekvens (eks. 98,5MHz)

Tast (inden 3 sec.)

Display: 4 Indstillet korrekt 5 Frekvens kan ikke indlæses.

AM-displayindikering:

Skal gennemføres, hvis det keramiske filter 1BP4 eller PCB01 udskiftes.

Tast

Tast

Tast

Tast (til MCP indikerer 150)

Kortslut (2 gange kortvarigt) 4TP1

Tast

*Indtast frekvens 455 kHz.

Tast (inden 3 sec.)

Display: 4 Indstillet korrekt 5 Frekvens kan ikke indlæses.

* Ved udskiftning af 1BP4 indtastes den frekvens der står på det nye filter.

Tune in to a station for which you know the exact frequency or

Check that LOCKED is lit

Short-circuit (twice briefly) 4TP1

Press

Enter the exact frequency (e.g., 98.5MHz)

Press (within 3 sec.)

Display: 4 Set correctly 5 Frequency input not possible

AM display indication:

This test should be carried out in connection with replacement of the band-pass filter 1BP4 or PCB01.

Press

Press

Press

Press (until MCP indicates 150)

Short-circuit (twice briefly) 4TP1

Press

*Enter frequency 455 kHz

Press (within 3 sec.)

Display: 4 Set correctly 5 Frequency input not possible

* When replacing 1BP4, enter the frequency stated on the new ceramic filter.

Omstilling mellem HF varianter

På diagram A i nederste højre hjørne er vist forskellige koblingsmåder mellem HF varianter. De forskellige koblingsmåder gør, at mikrocomputeren softwaremæssigt kan »se« forskel på varianterne.

- Forbindelse A-A: USA og Canada (type 2338).
Søgning på AM i 10 kHz trin,
ingen langbølge.
- Forbindelse B-B: Japan (type 2339).
Søgning på AM i 9 kHz trin,
ingen langbølge.
FM frekvensområde 76-90 MHz
(kræver speciel FM tuner, bestil-
lingsnr. 8050102)
- Forbindelse C-C: Australien (type 2340).
Søgning på AM i 9 kHz trin,
ingen langbølge.

Switching between RF variants

Different ways of switching between RF variants are showed in the lower right corner of diagram A. As to the software the different ways of switching enables the microcomputer to "see" the difference between the variants.

- Connection A-A: USA and Canada (type 2338).
Searching on AM in steps of
10 kHz, no long wave.
- Connection B-B: Japan (type 2339).
Searching on AM in steps of
9 kHz, no long wave.
FM frequency range 76-90 MHz
(demands a special FM tuner,
part no. 8050102).
- Connection C-C: Australia (type 2340).
Searching on AM in steps of
9 kHz, no long wave.

ABO-CENTER V/HENRIKSENS ELEKTRONIK