

Instruction Book for the
Rohde & Schwarz short-wave receivers

EK 07/2 and EK 07 D/2

R 8741
1163
Bl. 1
(52 Bl.)

Instruction Book

SHORT - WAVE RECEIVER

Type EK 07 D/2

For drawings, diagrams and tables of replaceable parts,
see German instruction book R 8426/763

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Note: Always quote the Type and Order Number (BN) in addition to the
Serial Number (FNr.) of the set when asking for technical information
and, in particular, when ordering repair parts.

Edition R 8741/1163

(Translation of the German edition R 8426/763)

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1. General Remarks on the Uses and Specifications of this Short-Wave Receiver

The Short-Wave Receiver Type EK 07 D/2 finds use as a communication and monitoring receiver in fixed and mobile radio stations. Its excellent characteristics make it particularly useful on large stations under adverse receiving conditions for commercial telegraphy and telephony. A1 to A4 modulated signals are received without auxiliary equipment. In conjunction with accessory units the receiver is also suitable to receive frequency-modulated signals (F1 to F4 and F6) and single-sideband transmissions (A3a and A3b).

Outstanding features are: high setting accuracy of better than 1 kc; scale discrimination of 300 cps per mm throughout the short-wave range; easy-to-read linear frequency scale, where only the scale of the selected range (covering 3 Mc each) is visible; high selectivity and image rejection with three tuned input circuits; high degree of freedom from cross modulation and good discrimination against powerful local transmitters; six IF bandwidths selectable between ± 0.15 kc and ± 6 kc; switch-selected adjustable noise limiter; very careful automatic gain control with five voltages differing in amplitude and, partly, in delay; time constant variable in three steps (0.1/1/10 sec); switch-selected type of control (MGC, MGC + AGC, AGC) with adjustable response threshold. Diversity selection is possible by interconnection of the AGC outputs of two or three receivers. A transmitter keying relay is provided for two-way communication at one frequency. The first and second intermediate frequencies (3.3 Mc and 300 kc) can be derived for the connection of accessory units, e.g. the Single-Sideband Demodulator Type NZ 10 or the Telegraphy Demodulator Type NZ 07.

A remote control unit will be available before long for remote control of the receiver over long distances via a usual two-wire circuit, over which the AF output level of the receiver is at the same time returned to the control location. No loss in setting accuracy is involved; the frequency adjustment on the dial is indicated at the control unit.

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2. Specifications

2.1 Electrical Characteristics

Total frequency range 0.5 to 30.1 Mc

Range A 3.1 to 30.1 Mc

Coarse scales: Range IV 3.1 to 6.1 Mc

V 6.1 to 9.1 Mc

VI 9.1 to 12.1 Mc

VII 12.1 to 15.1 Mc

VIII 15.1 to 18.1 Mc

IX 18.1 to 21.1 Mc

X 21.1 to 24.1 Mc

XI 24.1 to 27.1 Mc

XII 27.1 to 30.1 Mc

Vernier scale 0 to 100 kc

Scale discrimination approx. 0.3 kc per mm through-
out range A

Setting accuracy after an operating
time of 30 minutes at an ambient
temperature of 15 to 25°C better than 1 kc

Range B 0.5 to 3.1 Mc

Coarse scales: Range I 0.5 to 1.1 Mc

II 1.1 to 2.1 Mc

III 2.1 to 3.1 Mc

Vernier scale 100 divisions for interpolation

Data common to ranges A and B:

Types of emission A1, A2, A3, A4

with accessory units F1, F2, F3, F4, F6, A3a, A3b

Intermediate frequency

in the ranges I to IV 300 kc

V to XII 1st IF = 3.3 Mc

2nd IF = 300 kc

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IF bandwidths, switch-selected ± 0.15 , ± 0.3 , ± 0.75 kc
 ± 1.5 , ± 3.0 , ± 6.0 kc

IF filter selectivity	20 db	40 db	60 db
with bandwidth setting ± 0.15 kc	less than ± 0.45	less than ± 0.95	less than ± 1.35 kc
± 0.3 kc	less than ± 0.55	less than ± 1.00	less than ± 1.50 kc
± 0.75 kc	less than ± 0.85	less than ± 2.05	less than ± 3.25 kc
± 1.5 kc	less than ± 1.00	less than ± 2.00	less than ± 2.90 kc
± 3.0 kc	less than ± 1.00	less than ± 2.10	less than ± 3.50 kc
± 6.0 kc	less than ± 1.70	less than ± 3.50	less than ± 6.00 kc

off band limit

IF rejection better than 90 db in range A

Image rejection

in the ranges I to IV better than 70 db

V to XII better than 80 db

Cross modulation an interfering transmitter modulated 50% and 20 kc off tune from a station operating on IF mid-band frequency causes less than 10% cross modulation when the ratio interfering-signal amplitude to desired-signal amplitude is less than 60 db and the interfering input signal is smaller than 50 mv

Noise figure approx. 10 db

Signal-to-noise ratio

in A1 reception with ± 0.3 kc

IF bandwidth	20 db for 0.4 μ v	} input voltage
	30 db for 1.3 μ v	
	40 db for 5.5 μ v	

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in A3 reception with ± 6 kc

IF bandwidth	20 db for 4 μ v	} input voltage
	30 db for 15 μ v	
	40 db for 100 μ v	

Reradiation

with the antenna input terminated

by 60 Ω approx. 5 μ v

Standardizing oscillator controlled by 300-kc crystal

Antenna connection (a) coaxial input for 50- to 75- Ω feeders
(b) telephone jack for high-impedance feeders

IF output 300 kc, EMF 0.1 v, 250 Ω

AGC forward and backward control; with an input voltage between 0.7 μ v and 100 mv the output voltage varies less than 3 db

AGC time constant 0.1 or 1 or 10 sec, switch-selected

AGC voltage output for recording and for direct connection of 2 or 3 receivers for diversity reception

BFO 0 to ± 3 kc, adjustable; can be switched out of circuit

Monitoring of antenna voltage by meter from 1 to 10^5 μ v

Audio-frequency response 3 db from 40 to 6000 cps

Noise limiter adjustable; can be switched out of circuit

Output for transmission line level 0 db across 600 Ω at 30% modulation; distortion less than 1.5%

AF power output 2 w into 15 Ω ; distortion approx. 1.5% at 1 w

Headphones socket, broad band frequency response 3 db from 40 to 6000 cps, output impedance 4 k Ω , EMF 8 v max.

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Headphones socket, narrow band pass-band 800 to 1100 cps, output impedance 4 k Ω , EMF 20 v max.

Monitoring of output level by meter from 0 to 6 v for AF power output, from -6 to +16 db for output for transmission line

Valve check by meter with switch of 22 positions

Operating stages Off, Standby, On (bright), On (dimmed) (scale illumination)

Power supply 115/125/220/235 v, 47 to 63 cps, approx. 130 va

2.2 Dimensions and Weight

Front panel for 520-mm rack 520 x 304 mm

Front panel for 19" rack 482.5 x 311.2 mm

Steel cabinet 540 x 325 x 552 mm for 520-mm front panel

Weight with steel cabinet approx. 65 kg

2.3 Valves, etc. 3 valves EAA 901 S
 6 valves ECC 801 S
 8 valves EF 805 S
 1 valve EL 84
 3 valves E 88 CC
 4 valves E 180 F
 1 reference tube 85 A 2
 1 reference tube 150 C 2
 6 lamps (scale)
 R&S Stock No. RL 165 S
 1 glow lamp
 R&S Stock No. RL 290
 1 0.4-amp fuse 0,4 C DIN 41571
 2 1-amp fuses 1 C DIN 41571
 (2 x 1 amp for 220 and 235 v AC supply)
 2 2-amp fuses 2 D DIN 41571
 (2 x 2 amps for 115 and 125 v AC supply)
 1 crystal, R&S Stock No. QA 15000/300
 1 crystal, R&S Stock No. QA 16000/3000
 2 crystals, R&S Stock No. QA 15010/300

2.4 Accessories 1 power cord R&S Stock No. LK 333 or LK 335

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3. Preparation for Use

3.1 Adjusting the Set to the Available AC Supply Voltage

The receiver is factory-adjusted for operation from 220 v AC supply.

To adapt it to 115, 125 or 235 v, remove the cylinder-head screws at the left-hand and right-hand edges of the front panel and withdraw the receiver from its cabinet. Insert a suitable fuse into the pair of clips marked with the available supply voltage on the tapping panel, which is accessible at the lower side of the power section. For 220 v and 235 v, two 1-amp fuses are provided at the rear (for Si2 and Si3). For 115 and 125 v these are to be replaced by 2-amp fuses. The third fuse (Si1) must have a rating of 0.4 amp independent of the AC supply voltage. Connect the receiver to the AC supply using the power cord (R&S Stock No. LK 333 or LK 335) supplied with the set. The connector at the receiver is in the lower left-hand corner at the rear.

3.2 Setting the Mechanical Zero of the Meter

With the receiver switched off, the pointers of the two meters must be at the mechanical zero: this is the zero of the scale calibrated 0 to 6 v for the left-hand meter and the zero of the scale divided 0 to 20 on the right-hand meter. The slotted screws recessed in the meter housing serve for correction.

3.3 Setting up

Take care that air can freely enter through the perforation of the bottom and flow out through the round hole (of the blower) at the rear.

3.4 Switching on (see front panel, page 20 of German edition)

The receiver is switched on with the power switch (P2). Apart from its off position, this switch has the positions STANDBY, ON BRIGHT and ON DIMMED. In the STANDBY position the valves are heated but no anode supply voltage is applied. This position has been provided for short interruptions of operation. In the ON BRIGHT position the heater and anode supply voltages are applied and the lamps of the two frequency dials (1) and (6) light brightly. In the ON DIMMED position the heater and anode supply voltages are also present but the scale lamps light only dimly. This position is therefore selected if the receiver must be ready for operation while no scale illumination is needed. To put the receiver into operation, first set the switch to ON BRIGHT.

About one minute after switching on the receiver is ready for operation. The full setting accuracy is reached after about one hour.

3.5 Monitoring (see front panel page 20 and rear view page 22 of German edition)

The CHECK switch (4) and the left-hand meter (24) permit the most important receiver stages to be checked. For this purpose, the switch has the 22 positions marked 1 to 27 and the dial of the meter has a red mark below the two scales. In each of the 22 switch positions a pointer deflection within the red mark should be obtained. The following conditions and settings are required:

- (a) Switch (20) IF BANDWIDTH at "0.15 kc".
- (b) Switch (16) CONTROL at AGC.
- (c) Switch (11) FREQUENCY RANGE set so that range VI appears in the window (1).
- (d) Turn TUNING knob (14) so that cursor (3) of frequency dial is at 10.6 Mc.
- (e) No voltage must be applied to the sockets ANTENNA HIGH IMPEDANCE and ANTENNA 50-75 Ω (both at the rear) (disconnect antenna).
- (f) In the switch positions 2 and 18 the rear connector for a transmitter keying relay must be open.
- (g) In the switch position 6 the TUNING CHECK button (2) or the STAND. CRYSTAL 300 KC button (8) must be pressed.
- (h) In the switch positions 10, 11, 13 and 14 the button EXT. OSC. at the rear must not be pressed.

3.6 Connection of the Earth Lead

Connect the earth lead at the rear to one of the telephone jacks marked with the earth symbol ($\perp$).

3.7 Connection of Headphones

Connect the headphones either to sockets (10) PHONES BROAD or (23) PHONES NARROW. The inscriptions BROAD and NARROW suggest the audio-frequency range to be transmitted. The PHONES BROAD sockets with the frequency range 40 to 6000 cps are suitable for telephony, whereas the PHONES NARROW sockets with the frequency range 800 to 1100 cps are for telegraphy.

3.8 Connection of a Loudspeaker

A three-pole socket and a pair of sockets are provided at the rear for the connection of a loudspeaker of about 15 Ω input impedance. These are connected in parallel and marked POWER OUTPUTS 15 Ω . The three-pole socket mates with a Tuchel type plug T 3079 (R&S Stock No. FTS 20315) and the pair of sockets with a 4-mm plug.

3.9 Connection of the Antenna

Two connectors are provided at the rear: (a) the coaxial input ANTENNA 50-75 Ω for a low-impedance antenna connected via a coaxial line, (b) the ANTENNA HIGH IMPEDANCE socket for a conventional L or T antenna without transformer. Since both antenna inputs are unbalanced, a suitable transformer must be used for balanced antennae.

3.10 Connection of a 600- Ω Line

If the audio output voltage is to be passed on, for example, via a 600- Ω telephone line, connect this line at the rear to the 3-pole socket marked LINE OUTPUT 600 Ω . The suitable plug is the Tuchel type T 3079 (R&S Stock No. FTS 20315).

3.11 Connector for Keying Relay

This pair of sockets at the rear permits the connection of a keying line for break-in operation. Each of the two sockets contains a switch. If a 4-mm plug is inserted into each of the sockets, the first RF valve and the first IF valve are switched out of operation. The receiver recommences to operate immediately when the two lines are connected to each other (e.g. through a microphone button).

3.12 Connector for External Oscillator

An external frequency (e.g. from a decade exciter) can be fed to this coaxial input at the rear to replace the frequency of the built-in local oscillator.

If the button above the input is pressed, the built-in local oscillator is switched off and the path is free for the external frequency. The button is locked if it is turned about 90° in the depressed position.

3.13 Connector 3 MC EXT.

The external 3-Mc signal can be fed to this coaxial socket when the button above the socket is pressed and locked. If the button is released the internal 3-Mc frequency is available at this socket.

3.14 Connector LOCAL OSC. OUTPUT

The frequency of the local oscillator is available at this coaxial socket. It may be used, for example, as master oscillator frequency in diversity reception.

3.15 Connector STANDARDIZING OSC. OUTPUT 300 KC

The frequency of the 300-kc standardizing crystal is available at this coaxial socket at the rear.

3.16 Connector MASTER OSC. OUTPUT

The frequency (3.4 to 6.4) of the master oscillator is available, for example for measuring purposes, at this coaxial output at the rear.

3.17 Connector IF OUTPUT 300 KC, 0.1 V, 250 Ω

The IF (300 kc) is available at this coaxial socket at the rear. The output voltage is about 0.1 v, the output impedance 250 Ω . An accessory unit, for example the Single-Sideband Demodulator Type NZ 10 or the Telegraphy Demodulator Type NZ 07, can be connected to this output.

3.18 Output AGC VOLTAGE

These two coaxial sockets at the rear are connected in parallel. The available AGC voltage may be used, for example, for recording. Moreover, two or three receivers may be combined for diversity reception by connecting their AGC voltage outputs. The AGC time constant is retained independently of the number of receivers. The AGC voltages are selected automatically and an external selection

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unit is not required when the AF outputs of the receivers are connected in parallel so that the AF output voltages are added.

3.19 Output 1ST MIXER Socket

Part of the voltage across the cathode resistor ($R_{27} + R_{28}$) of the 1st mixer ($Rö12I$ in the RF section) is available at this coaxial socket. In this way, an IF signal can be taken out or another signal can be fed in for special purposes.

3.20 AF INPUT Socket

An AF signal applied to this coaxial socket at the rear is amplified and available at the AF outputs when the button to the right of the input socket is pressed. The button can be locked by turning about 90° in the depressed position.

3.21 Type of Coaxial Connectors at the Rear

The eleven coaxial sockets at the rear are Amphenol sockets of the C series, Amphenol No. 82 - 504, or VG standard connectors No. 95241.

4. Operating Instructions (see front panel page 20 of German edition)

The operation of the receiver is described in the following sections.

4.1 Frequency Dials (see also page 21 of German edition)

The frequency range is selected with the wing knob (11). The crank-type knob (14) and the vernier knob (13) serve for tuning. The knobs move the pointer (3) of the twelve frequency scales I to XII and the round scale (6) calibrated in kc. In the frequency ranges I to III (0.5 to 3.1 Mc) the reading is taken only on these scales, while the scale (6) (100 divisions) may be used for interpolation. In the frequency ranges IV to XII (3.1 to 30.1 Mc), the reading is taken on these scales and the scale (6) which is calibrated 0 to 100 kc. While the pointer (3) of the large scale advances 0.1 Mc, the round scale performs a full rotation, corresponding to a frequency change of 100 kc. The round scale thus constitutes a magnification of each 0.1-Mc distance of the scales IV to XII. The effect is the same as if each 0.1-Mc division of these nine scales were subdivided into two hundred 0.0005-Mc divisions. If the hairline of the pointer (3) of the large scales is, for example, between 6.5 and 6.6 Mc, while the hairline of the pointer of the round scale is at 75.5 kc, the reception frequency of 6.5755 Mc is adjusted for.

The tuning knob can be braked with the small knob (12) to avoid rotation by mistake during operation.

4.2 Standard Crystal 300 kc

The 300-kc standardizing crystal permits the calibration of the 12 scales I to XII and the zero of the scale calibrated 0 to 100 kc to be checked. Set the CONTROL switch (16) to MGC, advance the RF CONTROL knob (15) sufficiently, and press the STAND. CRYSTAL 300 KC button (8). A beat note is then audible in the headphones (BROAD) or loudspeaker at all scale points that are a multiple of 300 kc. When the tuning knob is slowly turned forward and backward at such a point, one finds the zero beat, where the beat note has become inaudible. At this point the pointer (3) should be at a division which is a multiple of 300 kc. The 300-kc calibration points are identified on the scales I to XII by scale marks which are extended below the base line; for example, on scale V, the points 6.3 Mc, 6.6 Mc, 6.9 Mc etc. Advance the RF CONTROL knob (15) for this check only so far that the beat notes are well audible. It is not absolutely necessary that the zero beat coincides with the 0 kc mark of the round scale. Correction is possible by turning the screwdriver adjustment (5).

The STAND. CRYSTAL 300 KC button (8) can be locked if it is turned about 90° in the depressed position.

4.3 Tuning Check

If the TUNING CHECK button (2) is depressed the receiver can be tuned accurately to the transmitter frequency; a beat note is obtained again (as described in section 4.2) which is reduced to zero beat by accurate tuning. The button (2) can be locked in the same way as button (8).

4.4 Left-hand Meter

The meter (24) serves, as mentioned in section 3.5, to check the most important receiver stages and to measure the output voltage of the 15-Ω power outputs and the output level of the 600-Ω line output.

To measure the output voltage of the parallel-connected 15- Ω power outputs (at the rear), set the CHECK switch (4) to E_{OUT} 15 Ω . Adjust the output voltage with the AF VOLUME knob (21) and take the reading on the scale calibrated 0 to 6 v.

To measure the output level of the 600- Ω line output (at the rear), set the CHECK switch (4) to E_{OUT} 600 Ω . The slotted shaft marked LINE LEVEL in the upper right-hand corner at the rear serves to adjust the line level. The output level is read on the scale calibrated -6 to +16 db.

4.5 Right-hand Meter

When the CONTROL switch (16) is at AGC, the meter (9) indicates the voltage applied to the antenna input. The scale calibrated 1 to $10^5 \mu v$ is valid.

The input voltage (μv) above which automatic control takes place is also indicated on this scale. Set switch (16) to MGC + AGC and adjust the RF CONTROL knob (15) so that the meter indicates the desired voltage. It is obvious that during this adjustment no voltage must be applied to the antenna input and the receiver must not be tuned to a transmitter.

The linear scale divided 0 to 20 (proportional to current) serves in the MGC position of the CONTROL switch (16) for relative measurements, e.g. voltage comparisons.

4.6 RF Control

The adjustment of the RF CONTROL knob (15) determines the sensitivity (gain) of the receiver if the CONTROL switch (16) is at MGC or MGC + AGC.

4.7 Type of Control

The CONTROL switch (16) serves to select the type of control. The MGC and AGC positions correspond to the usual facilities provided on receivers. In the MGC + AGC position, automatic control starts at a given input voltage. The point where automatic control starts can be predetermined with the RF CONTROL knob (15). Adjust this knob so that the right-hand meter indicates the desired value in μv . No voltage must be applied to the antenna input and the receiver must not be tuned to a transmitter, while this adjustment is made. With MGC +

AGC it is, for example, possible to reduce the average noise level and still retain the advantage of automatic control (constant AF output voltage).

4.8 AGC Time Constant

The AGC TIME CONSTANT switch (17) permits the selection of three time constants of the automatic gain control: 0.1 sec, 1 sec or 10 sec. The 0.1 SEC position is mainly for telephony reception, while the 1 SEC and 10 SEC positions are mainly for telegraphy reception (A1). Should selective fading occur it may occasionally be advantageous to receive telephony with a longer time constant.

4.9 Noise Limiting

In the OFF position of switch (18) the noise limiter is switched out of circuit. The noise limiting becomes more effective while the knob is turned clockwise. The noise limiting causes certain distortions of the AF output voltage.

4.10 IF Bandwidth

The setting of switch (20) determines the overall bandwidth of the receiver. 6 values are selectable: ± 0.15 kc, ± 0.3 kc, ± 0.75 kc, ± 1.5 kc, ± 3.0 kc and ± 6.0 kc. The selection depends on the audio-frequency range to be transmitted. For example, for telephony (A3) ± 6.0 kc or ± 3.0 kc will be suitable and for A1 telegraphy ± 0.15 kc.

4.11 Beat-frequency Oscillator

In the OFF position of switch (19) the BFO, which is mainly for A1 telegraphy, is ineffective. Starting from the centre position "0", the beat note can be varied ± 3 kc. The BFO is also switched off when the TUNING CHECK BUTTON (2) is pressed. Accurate tuning to a keyed carrier is thus possible.

4.12 AF Volume

The knob (21) serves to adjust the output voltage of the two headphones connectors (10) and (23) and of the 15- Ω power outputs at the rear. The level of the 600- Ω line output at the rear is not affected by this control.

Translations for Drawings and Table on Pages 20, 21 and 22 of German Edition

Frontplatte

FRONT PANEL

MHz

Mc

Abstimm-Kontrolle

TUNING CHECK

"
Überwachung

CHECK

Eichquarz

STAND. CRYSTAL

Hörer

PHONES

schmal

NARROW

Vorheizen

STANDBY

Aus

OFF

NF-Regelung

AF VOLUME

Ein

ON

hell

BRIGHT

dunkel

DIMMED

Netzschalter

POWER SWITCH

ZF-Bandbreite

IF BANDWIDTH

"
Überlagerer

BFO

Regel-Zeitkonstante

AGC TIME CONSTANT

Störbegrenzung

NOISE LIMITER

Regelung

CONTROL

Hand

MGC

Autom.

AGC

Hand + Autom.

MGC + AGC

HF-Regelung

RF CONTROL

Abstimmung

TUNING

gebremst

BRAKED

frei

LOOSE

Frequenzbereich

FREQUENCY RANGE

breit

BROAD

Eingangsspannung

im Bereich IV...XII

Frequenzskalen I...XII

Rückseite

Leitungs-Ausgang

NF-Eingang

Taste frei NF-eigen

Leistungs-Ausgänge

Anschluß für Sender-Tastrelais

Ausgang 1. Mischrohr

Regel-Spannung

Antenne hochohmig

Taste frei Hauptosz. eigen

Taste frei 3 MHz eigen

Taste gedrückt Hauptosz. fremd

Taste gedrückt 3 MHz fremd

Hauptosz. Ausgang

Eichosz. Ausgang

Steuerosz. Ausgang

ZF-Ausg.

Taste gedrückt NF-fremd

Leistungspegel

INPUT VOLTAGE

IN THE RANGE IV - XII

Frequency scales I - XII

Rear view

Line output

AF input

Button released AF int.

Power outputs

Connector for transmitter keying relay

Output 1st mixer

AGC voltage

Antenna high imp.

Button released local oscillator

Button released int. 3 Mc

Button depressed ext. oscillator

Button depressed ext. 3 Mc

Local osc. output

Stand. osc. output

Master osc. output

IF output

Button depressed AF ext.

Line level

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5. Description

5.1 General (see simplified block diagram page 25 of German edition)

The RF signal arriving from the antenna passes through an RF stage with three tuned circuits to the first mixer. The tuned circuits permit switch selection of 12 sub-ranges, achieve a high far-off selectivity and image rejection and prevent powerful stations from entering. The RF signal reaching the first mixer in the ranges I to IV = 0.5 to 6.1 Mc is converted to an IF signal of 300 kc. The RF signal arriving in the ranges V to XII = 6.1 to 30.1 Mc is first converted into the first intermediate frequency of 3.3 Mc to improve the image rejection. The 3.3-Mc IF signal is applied to a four-section filter followed by the second mixer, where it is converted into the second intermediate frequency of 300 kc. In this case, the set is a double superheterodyne receiver. The amplifier for the second IF contains two four-section filters which with six switch-selected bandwidths provide for the overall selectivity of the receiver. Next, the signal passes through three other IF stages, coupled to each other by two-section band-pass filters, and is then demodulated or heterodyned by the signal from the BFO. The AF signal can be clipped symmetrically in the adjustable noise limiter which can be switched in or out of circuit. In the power stage, the AF signal is amplified and applied to the LINE OUTPUT or, via the AF VOLUME control, to the AF output stage to which a loudspeaker or headphones may be connected.

The AGC circuit of the receiver is carefully designed to provide for the best possible level for the individual amplifier stages. The fourth IF amplifier is followed by a two-stage AGC amplifier whose output signal is applied to an arrangement of 4 diodes in order to produce five different AGC voltages. The special design of the circuitry used to produce the AGC voltages permits several receivers of the Type EK 07 D to be directly connected for diversity reception without additional use of a comparator-selector circuit. There are three different control actions, namely automatic gain control, manual gain control and manual plus automatic gain control where the sensitivity of the receiver can be reduced while signals whose strength is greater than the threshold level adjusted for are controlled in the usual way.

The Type EK 07 D differs from conventional receivers particularly in the control of the first oscillator in the ranges V to XII. The local oscillator, which, via a buffer stage, supplies its signal in the usual manner to the first mixer when operating in the ranges I to III (0.5 to 3.1 Mc) is replaced by the master oscillator in the range IV. The latter has only a single, relatively low, frequency range (3.4 to 6.4 Mc). For this reason, it could be given a particularly high frequency stability. The frequency of the master oscillator can be set using a coarse tuning control in addition to a vernier control geared 30 : 1. The scale discrimination is thus excellent, each complete turn of the vernier tuning scale corresponding to 100 kc. In the ranges I to IV = 0.5 to 6.1 Mc, the oscillator frequency is 300 kc higher than the input frequency, i.e. the intermediate frequency is 300 kc.

In the ranges V to XII = 6.1 to 30.1 Mc, the local oscillator again operates into the first mixer, but its frequency is now 3.3 Mc higher than the input frequency and is automatically controlled by a phase-sensitive circuit with a frequency error of ± 0 cps. The automatic control of the local oscillator is effected through a capacitor, which in turn is controlled by 2 diodes. For this purpose, the frequency of the local oscillator is beaten with a harmonic of a 3-Mc crystal, converted to the frequency of the master oscillator and compared with the latter on a phase-sensitive bridge which delivers the AFC voltage. In other words, the components determining the frequency are the crystal with its harmonics, and the master oscillator.

A standardizing oscillator controlled by a 300-kc crystal permits a receiver calibration check against its harmonics. Moreover, it is possible to apply the frequency of this crystal to the last IF stage when pressing the TUNING CHECK button. This is a very simple method of checking the tuning of the receiver by obtaining zero beat between the desired carrier and the 300-kc signal.

Translations for Simplified Block Diagram on Page 25 of German Edition

Antenne	Antenna
HF-Stufe	RF stage
1. Mischstufe	1st mixer
1. ZF	1st IF
2. Mischstufe	2nd mixer
2. ZF	2nd IF
Vierkreis-Filter	Four-section filter
Störbegr.	Noise limiter
NF	AF
Leitungsausgang	Line output
Leistungsausgänge	Power outputs
Hörer breit	Phones broad
Hörer schmal	Phones narrow
NF-Regler	AF volume control
NF-Filter	AF filter
Eichoszillator	Standardizing oscillator
Hauptoszillator	Local oscillator
Phasenbrücke	Phase sensitive bridge
Steuer-Oszillator	Master oscillator
Regelspannungen	AGC voltages
Regelverstärker	AGC amplifier
A1-Oszillator	BFO
Vereinfachtes Blockschaltbild	Simplified block diagram
kHz	kc
MHz	Mc

5.2 RF Section: (see block diagram page 46 and circuit diagram page 106 of German edition)

The RF section contains the RF amplifier with its tuned circuits, the first mixer, the local oscillator with its circuits, two other amplifiers, two diodes for automatic frequency control of the local oscillator, and an over-voltage protection circuit R11. The two antenna inputs at the rear, marked ANTENNA 50 $\pm$ 75 Ω and HIGH-IMPED. ANT. INPUT, are taken via coaxial lines to the coil turret (frequency range switch S1) in the RF section. C 244 couples the high-impedance input to the "high side" of the first tuned circuit. The low-impedance input is taken via the break contact a1 of the relay RSA to a tap of the coil of the first tuned circuit or, in the ranges above 15.1 Mc, via series capacitors to the "high side" of the circuit. Relay RSA connects the output of the standardizing oscillator, instead of the 50 - 75- Ω socket, to the receiver input when the button S8, STANDARD. CRYSTAL 300 KC, is depressed to check the calibration of the receiver. The glowlamp R11 fires at inadmissibly high input voltages and thus ensures over-voltage protection for the receiver.

A tuned and inductively coupled band-pass filter is inserted between the antenna and the RF amplifier valve R611. The use of this band-pass filter instead of a single tuned circuit ahead of the first amplifier ensures that even very strong signals from a nearby station do not overdrive the first stage as long as the interfering frequency is not too close to the tuned frequency. For matching the input level, the control grid of R611 is coupled by C246 to taps on the secondary circuit of the band-pass filter. A special AGC voltage, "Rsp II", is applied to the control grid of this valve through filtering elements. The low-noise variable-mu pentode used in a grounded-cathode configuration offers a high receiver sensitivity. It amplifies the received signal to such an extent that the noise of the mixer no longer affects the sensitivity of the receiver.

Another tuned circuit is inserted between the RF amplifier and the 1st mixer R612I. Both valves are loosely coupled to this circuit (by a coil tap or capacitive voltage divider, resp.) so that no detuning will occur if the valves are replaced and a change in capacitance results therefrom. The high RF selec-

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tivity secured by three tuned circuits prior to the first frequency changing eliminates image frequencies, etc., and reduces cross modulation to a high degree. At the same time, reradiation is suppressed to such an extent that nearby receivers remain undisturbed. The 1st mixer makes use of the section Rø12I of a low-noise duo-triode. It is an additive mixer where the local oscillator voltage is applied to the cathode and the RF input signal to the control grid. The OUTPUT 1ST MIXER socket connected between the cathode resistors R27 and R28 permits an IF voltage to be taken, e.g. for connection of a panoramic adapter, or a reference frequency to be fed in for checking purposes.

Section Rø12II of the duo-triode is connected between the local oscillator and the mixer so that the local oscillator is not influenced by the input frequency.

Rø13I, the local oscillator with a tuned grid circuit and inductive feedback from the anode supplies the signal required by the 1st mixer. The local oscillator frequency lies 300 kc above the input frequency in the ranges I to IV and 3.3 Mc above the input frequency in the ranges V to XII. In the range IV, Rø13I does not operate as an oscillator but as an amplifier with a tuned anode circuit since in this case the master oscillator supplies the required signal via the contacts b2 of the relay RsB. Contact b1 of this relay switches, individually for the range IV, the bias voltage for the control grid of the first mixer Rø12 — which also depends on the functioning of the limiter diode Rø74I and the variable resistor R425 — and determines a more favourable position of the operating point by inserting a variable resistor, R48, in parallel to R425. Minimum cross modulation is thus ensured in this range. Relay RsB is energized in range IV through the range switch wafer S1IIR. Relay RsC is energized if the EXT. OSC. socket is used, for example to connect two receivers for operation on the same frequency, i.e. for twin reception with a common local oscillator, and if the button S14 above the socket is pressed.

Contact c1 of relay C switches the grid of the section Rø12II from the local oscillator to the EXT. OSC. input, whereas the contact c2 disconnects the cathode resistor of the local oscillator Rø13I and thus puts the local oscillator out of operation.

The local oscillator also drives Rø13II, which is connected as a cathode follower. The output of the cathode follower is connected to the socket LOCAL OSC. through capacitor C269. In addition, the oscillator voltage applied to Rø43 in the frequency control section is taken via C276 (K2) from the input of Rø13II.

In the ranges V to XII, the AFC diodes G11 - G12 are connected to the grid circuit of the oscillator via trimmers C204 to C239. Diode G12 obtains a fixed +10 v bias via the filter section R46/C290/C289. Diode G11 is earthed for RF via C288 and obtains a control voltage from the AFC circuit in the frequency control section. The anode resistances of the diodes vary with the amplitude of the control voltage so that the capacitance of the particular trimmer connected in parallel with the resonant circuit becomes more effective and brings the frequency of the local oscillator back to its proper value.

5.3 Master Oscillator (see block diagram page 46 and circuit diagram page 107 of German edition)

The master oscillator is a highly stable, adjustable oscillator which covers the range of 3.4 to 6.4 Mc with a very linear tuning characteristic. Correct tracking exists between the master oscillator, the 3 RF tuned circuits and the local oscillator tuned circuit. This enables excellent scale discrimination and high setting accuracy to be obtained in range A (3.1 to 30.1 Mc) since in range IV the master oscillator, instead of the local oscillator, feeds the first mixer and in ranges V to XII the master oscillator is used to correct the frequency of the local oscillator. Because of the linearity of the master oscillator tuning characteristic and the fact that ranges IV to XII cover exactly 3 Mc, the vernier scale, which is geared 30:1 in relation to the main scale, can be directly calibrated in frequency. Each complete rotation of the vernier scale corresponds to exactly 100 kc. The frequency reading is obtained directly from the sum of the values indicated on the main and vernier scales. The master oscillator is hermetically sealed. Any residual moisture present is removed by a desiccant, which under normal operating conditions need not be changed even after years of service.

The master oscillator RÖ21 (see circuit diagram page 107) is a tuned-grid oscillator. The temperature compensated tuned-circuit connects to the oscillator valve via the capacitive voltage divider C305 - C306. The value of these capacitors is such that the circuit need not be retuned after a valve change, since any change in valve capacitance in comparison to C306 remains negligible.

The amplifiers R622I and R622II, which are loosely connected to the anode of the oscillator valve, amplify the oscillator output to the required level and provide a buffer between the load and the oscillator. Valve R622II has one unbalanced output which in range IV is sent to the local oscillator (operating as an amplifier in this range). A second connection from the unbalanced output connects to the MASTER OSC. OUTPUT socket. The balanced output connects to the phase sensitive bridge in the master oscillator section.

5.4 Frequency Control Section (see block diagram page 46 and circuit diagram page 109 of German edition)

The frequency control section contains the 2nd mixer with a four-section filter for the first IF of 3.3 Mc, a crystal oscillator and the stages necessary for tuning the local oscillator in ranges V to XII.

In ranges I to IV, an intermediate frequency of 0.3 Mc is taken from the first mixer stage. This signal is sent to the frequency control section (see circuit diagram page 109) and via the break contacts 12 and k2 of relays RsI and RsK passed on to the 1st IF stage located in the selection amplifier unit (see circuit diagram page 110). In ranges V to XII, the difference between the received frequency and the image frequency would be too small if an IF frequency of 0.3 Mc were used. For this reason, the first IF in this range is 3.3 Mc, which is changed by the second mixer R641I to the second IF of 0.3 Mc. The relays RsI and RsK are energized via the range switch S1IIR (in the RF section) so that the IF signal (3.3 Mc) coming from the first mixer stage is applied to the control grid of the second mixer stage via the make contact 12 and the capacitively coupled four-section filter. The lead to the filter and the connection of the mixer are connected to taps of the coils of the first and fourth circuit, respectively to ensure good matching. The second mixer also employs a low-noise triode and additive mixing. Applied to its cathode is the oscillator signal of 3.0 Mc obtained from the second half of R641II which is driven by the 3-Mc crystal oscillator R642.

The 3-Mc crystal oscillator R642 operates similarly to a triode oscillator with a tuned-grid and tuned-anode circuit. The crystal which is located in the grid circuit has a resonant frequency of 3 Mc and is excited in parallel resonance to its fundamental mode. The crystal is brought exactly to its rated frequency by means of the trimmer C534. The screen grid is used as the anode of the triode and has a tuned circuit connected to it. This circuit, whose resonant

frequency is tuned higher than that of the crystal, operates inductively at the crystal frequency. The feedback to maintain oscillations passes through the screen-to-control-grid capacitance. An output of 3.0 Mc is obtained at the tuned anode circuit and is fed via an RF transformer L65 to the second mixer Rø41III + Rø41I. This signal is also fed via break contact d1 of relay RsD to the 3 MC INT/EXT socket for checking purposes. If button S12 located above the socket is depressed, relay RsD energizes and connects the socket to the grid of the valve. At the same time resistor R211 is connected to the cathode of the valve and the crystal is shorted out. Rø42 then operates as an amplifier and an external frequency of 3 Mc can be fed in.

Also located in the anode circuit of the crystal oscillator is a harmonic generator which produces a spectrum of harmonics from the 3-Mc signal.

This spectrum is passed on via one of the three-section filters (L77, L78, etc.) which are switched into circuit with the frequency range switch. In each of the ranges V to XII, a different harmonic is picked out: range V 15.0 Mc, range VI 9.0 Mc, range VII 12.0 Mc, range VIII 15.0 Mc, range IX 18.0 Mc, range X 21.0 Mc, range XI 24.0 Mc, range XII 27.0 Mc.

The output of the three-section filter is sent to the 3rd mixer, which employs 4 diodes arranged in a ring modulator type circuit and connected between L79 and transformer Tr4.

The output signal of the local oscillator Rø13I is sent via Rø13II to the amplifier Rø43 which feeds it symmetrically via transformer Tr3 to the centre taps of L79 and Tr4. In ranges VI to XII, this circuit yields a signal of 3.4 to 6.4 Mc, which is later compared with that of the master oscillator, 3.4 to 6.4 Mc.

In range V, the signal from the local oscillator is changed twice in order to prevent beat notes. The mixing of the local oscillator signal 9.4 to 12.4 Mc with the crystal harmonic of 15 Mc in the 3rd mixer results in an output of 24.4 to 27.4 Mc. This is sent via the range switch S1IX and a fixed-tuned, four-section band-pass filter, which passes only the frequencies 24.4 to 27.4 Mc, to the 4th mixer, the arrangement of which is the same as that of the third mixer.

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Frequency Range	Input Frequency	IF	Local Oscillator	Crystal Harmonic	Bridge Frequency	Master Oscillator
I	0.5 to 1.1 Mc	0.3 Mc	0.8 to 1.4 Mc	—	—	—
II	1.1 to 2.1 Mc	0.3 Mc	1.4 to 2.4 Mc	—	—	—
III	2.1 to 3.1 Mc	0.3 Mc	2.4 to 3.4 Mc	—	—	—
IV	3.1 to 6.1 Mc	0.3 Mc	—	—	—	3.4 to 6.4 Mc
V	6.1 to 9.1 Mc	3.3 Mc	9.4 to 12.4 Mc	15 Mc 21 Mc	24.4 to 27.4 Mc 3.4 to 6.4 Mc	3.4 to 6.4 Mc
VI	9.1 to 12.1 Mc	3.3 Mc	12.4 to 15.4 Mc	9 Mc	3.4 to 6.4 Mc	3.4 to 6.4 Mc
VII	12.1 to 15.1 Mc	3.3 Mc	15.4 to 18.4 Mc	12 Mc	3.4 to 6.4 Mc	3.4 to 6.4 Mc
VIII	15.1 to 18.1 Mc	3.3 Mc	18.4 to 21.4 Mc	15 Mc	3.4 to 6.4 Mc	3.4 to 6.4 Mc
IX	18.1 to 21.1 Mc	3.3 Mc	21.4 to 24.4 Mc	18 Mc	3.4 to 6.4 Mc	3.4 to 6.4 Mc
X	21.1 to 24.1 Mc	3.3 Mc	24.4 to 27.4 Mc	21 Mc	3.4 to 6.4 Mc	3.4 to 6.4 Mc
XI	24.1 to 27.1 Mc	3.3 Mc	27.4 to 30.4 Mc	24 Mc	3.4 to 6.4 Mc	3.4 to 6.4 Mc
XII	27.1 to 30.1 Mc	3.3 Mc	30.4 to 33.4 Mc	27 Mc	3.4 to 6.4 Mc	3.4 to 6.4 Mc

Frequency table

To obtain the desired comparison frequency of 3.4 to 6.4 Mc, the 4th mixer requires a signal of 21.0 Mc. This is also obtained from the crystal oscillator via a four-section filter which passes only the 21-Mc spectrum frequency.

The comparison frequency (3.4 to 6.4 Mc) derived from the local oscillator, which in ranges VI to XII appears at the output of the 3rd mixer and in range V at the output of the 4th mixer, is sent via the range switches S1IX to S1XI to the three-stage control amplifier R844 to R846, consisting of three pentodes. The amplifier tuned circuits serve to correct the frequency response. Connected via a capacitor to the anode of the 3rd stage is a voltage doubler employing the rectifiers G16 and G17, which supplies a control voltage for the three stages so that a constant output voltage is obtained. Diode G15 serves to delay the control voltage. In order to compensate for the grid bias voltage, which is too high for normal operation, developed across the particularly large cathode resistors, a positive counteracting voltage is used. This voltage is obtained from the voltage divider R254 to R256 which has a regulated voltage of +150 v applied to it.

The constant-amplitude signal of 3.4 to 6.4 Mc taken from valve R846 is applied to the primary winding of the phase-sensitive bridge circuit, which consists of Tr5, G18, G19, R259, R260, C638, C639. The comparison signal from the master oscillator is applied to the centre tap of the secondary winding of Tr6 and to the connecting point between R259 and R260, so that both signals are compared in the phase sensitive bridge. The output signal of the bridge circuit is used to synchronize the converted local oscillator signal with the signal of the master oscillator, i.e. to correct the local oscillator frequency to its proper value. (See the simplified circuit diagram of the AFC circuit on page 34 of German edition.)

If the local oscillator signal is synchronized with that of the master oscillator, the output of the bridge circuit is a DC voltage. If synchronization does not exist, the bridge yields an AC voltage, the frequency of which corresponds to the difference between the two signals. These two conditions are used to drive various auxiliary stages, which make it possible to catch local oscillator frequency deviations up to 250 kc. The local oscillator is then brought back to its proper frequency and locked in with the master oscillator to within ± 0 cps.

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Translations for AFC Circuit on Page 34 of German Edition

Frequenznachregelung

AFC circuit

MHz

Mc

Phasenbrücke

Phase-sensitive bridge

Gleichspannung

DC

Wechselspannung

AC

Steueroszill.

Master oscillator

Fanghilfeverstärker

Pull-in amplifier

Begrenzer

Limiter

Fanghilfsstufen

Pull-in amplifier stages

Steuerteil

Frequency control section

Steuerverst.

Control amplifier

Quarzoberwellenfilter

Crystal harmonic filter

Mischstufe

Mixer

Hauptoszill.-Verstärker

Local oscillator amplifier

Auskopplung

Cathode follower

HF-Teil

RF section

Hauptoszillator

Local oscillator

Nachstimm-Dioden

AFC diodes

Steuerleitungsverst.

Cathode follower

In the case where synchronization does not exist, the AC voltage from the bridge is sent via R272 and C650 to the grid of the pull-in amplifier R647II, where it is amplified and sent on to the voltage doubler circuit, G110 and G111, where it is rectified and doubled. The positive control voltage thus obtained is sent via the limiter G112 to the control grids of the pull-in stages R648I + R648II, where it overcomes the negative cut-off voltage obtained from the voltage divider R275, R276 and R279. The AC voltage (derived from the power transformer) of 1.5 v at 50 cps applied 180° out of phase to both cathodes is amplified in these stages and is sent through Tr6 and the bridge circuit to the control line as a "search voltage". Thus, via the cathode follower R647I and the AFC diodes G11 and G12 in conjunction with capacitors C204 to C239, a large frequency variation is produced at the local oscillator. In the course of one cycle of search voltage, the frequency difference becomes so small that synchronization is obtained between the local oscillator comparison signal and the master oscillator signal. No signal is passed through the pull-in amplifier after the master and local oscillator are brought to synchronism. The DC voltage obtained from the phase bridge is used to keep the signals locked together within ± 0 cps.

5.5 Selection Amplifier Unit (see circuit diagram page 110 of German edition)

The selection amplifier unit contains two four-section filters, switchable in six steps, and the first IF stage. The main selection of the receiver takes place in this unit.

The IF signal of 300 kc coming from the 1st or 2nd mixer is applied to the first four-section filter. This filter consists of 4 sections, which have a selectable coupling through different size capacitors which are selected by means of switch S2 IF BANDWIDTH. In the switch position ± 0.15 KC, a crystal filter is connected between the 2nd and 3rd sections in place of the coupling capacitor. The disturbing effect of the capacitance in parallel connected with the crystal is eliminated by its inclusion in the parallel connected capacitance of the rejection circuit. The trimmers and resistors of the sections are connected in parallel according to the individual bandwidths so that the resonant curves of the staggered tuned sections yield a resultant curve which is flat on the top and has very steep edges.

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The coupling between the last section and the control grid of the 1st IF stage Rø51 is also changed so that this valve receives an IF voltage which is independent of the bandwidth. Valve Rø51 receives a special AGC voltage ("1/3 Rsp I").

The second four-section filter is loosely coupled to the anode of this valve (tapped coil). This filter is similar to the first one except that it does not include a crystal.

5.6 IF Section (see circuit diagram page 111 of German edition)

The IF section provides additional amplification and demodulation of the 300-ko IF signal. It contains three IF amplifiers, the demodulator, a noise limiter which can be switched in and out of circuit, and a control for setting the level of the AF signal sent to the AF section.

The IF signal is taken from the second four-section filter and sent, via the coupling capacitors which are changed with the IF BANDWIDTH switch S2, to the grid of the 2nd IF stage Rø61. The cathode resistor R354 enables the receivers in diversity reception to be adjusted so as to have equal gain or AGC voltage.

The IF signal is then sent to the 3rd IF stage Rø62 via a capacitively coupled band-pass filter. Rø61 and Rø62 receive the same AGC voltage "Rsp I".

The IF signal is then sent via another capacitively coupled band-pass filter to the 4th IF stage Rø63. This valve receives 1/5 of the AGC voltage I.

The IF signal is also sent from the grid circuit of this valve via C921 to the AGC amplifier Rø71. The cathode resistor of the 4th IF stage Rø63 is not bypassed and the IF signal can be taken via the coupling capacitor from the IF OUTPUT 300 KC socket located at the rear of the receiver and sent to a single-sideband selector, an FM demodulator, etc.

The IF signal is sent to the demodulator G114 via another band-pass filter. For A1 reception, the output of the BFO Rø76I is fed to the primary section of this filter. The demodulator rectifies the amplitude-modulated IF signal and produces an AF signal. In A1 reception, it produces the audible difference

frequency from the adjustable BFO frequency and the keyed RF/IF signal. A test socket is connected to the demodulator through R382. The AF signal goes from the arm of potentiometer R380 via the break contact eII of relay RsE, the break contacts fII and fI of relay RsF and the coupling capacitor C935 to the AF amplifier.

When the NOISE LIMITER control R602 (on the front panel) is switched from OFF to another position, relay RsF is energized and the AF signal is sent to the noise limiter R664. This consists of two series-connected diodes, the cathodes of which are directly connected together and receive a negative voltage from the NOISE LIMITER control R602 via resistor R389. In both diodes, an anode current flows through the respective anode resistor R388 or R387, the incoming AF signal passing through the diodes. Negative-going noise pulses which exceed the voltage set on the cathode of the first diode cause the anode of this diode to become negative in relation to the cathode and thus current ceases to flow. Positive noise pulses which exceed the voltage set on the cathode cause the cathode of the second diode to become more positive than the anode and in this case the second diode is cut off. The noise-free AF signal is then sent to the AF pre-amplifier.

5.7 AGC and AF Amplifier (see circuit diagram page 112 of German edition)

This section contains the two-stage AF amplifier, the BFO and the special AGC circuit which consists of two AGC amplifiers and four diodes (see also the simplified circuit diagram on page 38 of German edition).

The AF pre-amplifier R672II amplifies the AF signal coming from the IF section. The output of this stage is taken from the secondary of transformer Tr7 in the anode circuit and sent to the LINE OUTPUT 600 Ω socket via a balanced network (R441 to R443). With the CHECK switch S11 in position E_{OUT} 600 Ω , this output can be measured on meter I1 via the bridge rectifier G116.

The AC voltage on the anode of the AF pre-amplifier is sent via capacitor C1022 and the AF VOLUME control R447 to the control grid of the AF output stage R675. Here, the AF signal is again amplified, according to the setting of the VOLUME control, so that an output power of up to 2 w into 15 Ω can be taken from the secondary of transformer Tr8, i.e. the PHONES BROAD sockets on the front panel or the POWER OUTPUTS sockets on the rear of the receiver. This output can also be sent via rectifier G117 to meter I1, where it can be measured in position E_{OUT} 15 Ω of the CHECK switch.

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The BFO R676I is a tuned-grid oscillator circuit. The oscillator can be tuned in the range of 300 kc $\pm$ 3 kc with the variable capacitor C1053 — the BFO knob on the front panel. The shaft of this capacitor is coupled to switch S10. When the shaft of the capacitor is rotated in a clockwise direction, i.e. from OFF to the calibrated positions, S10 causes relay RsH to energize. Contact h1 connects the tuned circuit to the valve and, at the same time, contact h2 shorts out the cathode resistor R456 so that the valve can oscillate. An additional contact of S10 allows relay RsG in the AGC amplifier to energize and thus the AGC diode R673I to be changed from average to peak rectification. Operation of the TUNING CHECK button S9 or the STANDARD CRYSTAL 300 KC button S8 causes relay RsH to drop out, without affecting relay RsG. In this way R676I is again connected as an amplifier, i.e. the cathode resistor is reconnected, the tuned circuit is disconnected from the grid and the 300.0-kc signal coming from the standard oscillator is applied to the grid.

The output voltage of R676I is sent to the BFO output stage R676II and from there to a tap on the last IF band-pass filter between the 4th IF stage and the demodulator. It arrives at the demodulator together with the incoming IF signal. This IF signal is taken from the grid circuit of the 4th IF stage and applied to the first AGC amplifier R671, where it is again amplified to the desired value. The gain of this stage is factory-adjusted with the variable cathode resistor R403. The output of this stage is sent to another band-pass filter and then applied to the cathode follower output second AGC amplifier R672I which offers a low-impedance voltage source for transformer L112 and the following circuitry.

The AGC diode R673I which is connected in series with the secondary of L112, rectifies the IF signal and, as soon as the bias voltage (delay voltage) tapped from the voltage divider R414 to R418 is exceeded, produces a negative AGC voltage "Rsp. I". For telegraphy A1 reception, the BFO is switched in with the BFO switch S10 and relay RsG is energized. The contacts of this relay cause the AGC diode to change from average to peak rectification. In this way, the AGC voltage for each separate keyed signal does not go to the rated value slowly, instead it follows the signal immediately. The switching is accomplished by shorting the series resistor R417 and disconnecting capacitor C1014. At the same time, the delay voltage is increased by shorting out R416.

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The AGC voltage passes through the AGC voltage selection diode R573II. In diversity reception, this stage enables the AGC voltage of several receivers to be connected in parallel without needing a separate selection unit. If an external AGC voltage higher than that produced by R573I is fed in, the selection diode cuts off and only the external AGC voltage affects the remaining AGC circuits.

The AGC TIME CONSTANT switch S6 enables the AGC time constant to be increased from 0.1 second to 1 or 10 seconds by adding capacitors C1013 and C1012. Parallel connection of the AGC voltages of several receivers in diversity reception does not change the time constant, since both the capacitors and the resistors in the AGC circuits are connected in parallel. That is provided the receivers are of the same type and the settings are identical.

The CONTROL switch S7 has three positions: MGC, MGC + AGC, and AGC. In the MGC position, the AGC voltage coming from R573I is switched out and the gain of the receiver is determined entirely by the bias voltage set with the RF CONTROL R605. In the AGC position, it is controlled by the AGC voltage which is dependent on the input signal. In the MGC + AGC position, the AGC voltage is added to the voltage set by control R605. In this way, the automatic control is effective only when the AGC voltage produced exceeds the voltage set by R605. This type of operation is particularly advantageous for monitoring a certain frequency band on which signals will come in only periodically. In this way the noise level can be brought to a tolerable level and the signal, which naturally always exceeds the threshold value, will be received with the gain of the stable AF output voltage (automatic control).

Before entering the selection diode, the AGC voltage is sent via rectifier G115 and resistors R420 and R607 to the meter I2 for RF input voltage. In the AGC position of the CONTROL switch, this meter indicates the approximate input voltage. In the MGC + AGC position, the bias voltage set by the RF CONTROL R605 is sent to the meter via rectifier G124. Rectifiers G115 and G124 prevent the AGC voltage and the bias voltage from interfering with each other. With no input signal, the meter indicates the level above which automatic control takes place. The meter indication rises as soon as the threshold value is exceeded and indicates the existing signal value. In the MGC position, the scale is calibrated linearly.

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The AGC voltage Rsp I derived from the AGC diode (or from an external source) is sent via the CONTROL switch S7 to the control grids of the second and third IF stages. A voltage of $\frac{1}{3}$ this value is taken from the voltage divider R428/R427 and sent to the first IF stage as AGC voltage $\frac{1}{3}$ Rsp I. A still smaller voltage is tapped from R427 and sent to the fourth IF stage as AGC voltage $\frac{1}{5}$ Rsp I. The AGC voltage Rsp I is also sent through resistor R426 to the cathode of limiter diode R674I. The anode of this valve is negatively biased, which is obtained from the factory-adjusted voltage divider R47 (in the RF section) and R425. In range IV the maximum value of this negative bias is reduced by insertion of a parallel resistor (in the RF section) to R425, ensuring a more favourable operating point with respect to cross modulation. If the negative AGC voltage on the cathode exceeds the anode potential, the diode conducts and the maximum cathode potential is limited to the value set at R425. This value is the AGC voltage Rsp I limited and is used to control the first mixer stage. The entire AGC voltage Rsp I is also sent via R429 to the anode of the delay diode R674II, which at the same time receives via R430 a positive delay voltage divider R431 to R433. Also present on the cathode is a slightly less positive compensating voltage obtained from a tap on R433. As a result the diode has a zero-signal current. If the AGC voltage exceeds the delay voltage, the diode cuts off. The AGC voltage Rsp II applied to the anode of the delay diode, in order to produce a fixed delay voltage, is sent to the RF stage, which thus will be controlled if the receiving field strength reaches a certain value. The control action is slightly less than that of Rsp I.

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Translations for Simplified Circuit Diagram on Page 38 of German Edition

Regelspannungserzeugung	Production of AGC voltage
HF-Stufe	RF stage
1. Misch-Stufe	1st mixer
2. Misch-Stufe	2nd mixer
1. ZF-Stufe	1st IF
2. ZF-Stufe	2nd IF
3. ZF-Stufe	3rd IF
4. ZF-Stufe	4th IF
Verst. Angleich	Gain adj.
Rsp	AGC voltage
Komp.	Comp.
Verzög.-Diode	Delay diode
Verz.	Delay
Begr.	Lim.
Begrenz. Diode	Limiter diode
Regelsp. (Diversity)	AGC voltage (diversity)
Regelung	Control
Hand	MGC
Hand- u. Autom.	MGC + AGC
Autom.	AGC
Regel-Zeitkonst.	AGC time constant
Eingangssp.	Input voltage
HF-Regelung	RF control
Ablöse-Diode	AGC selection diode
Spitze	Peak
Gleichr.	Rectifier
Mittelw.	Average
Verz.	Delayed
Regelsp. Diode	AGC diode
2. Regelverst.	2nd AGC amplifier
1. Regelverst.	1st AGC amplifier

5.8 Standardizing Oscillator (see circuit diagram page 108 of German edition)

The standardizing oscillator consists of a 300-kc crystal oscillator and a harmonic generator. It supplies a spectrum of frequencies spaced 300 kc apart to the receiver input in addition to the fundamental frequency of the crystal (300 kc), which is fed via the BFO valves to the last IF filter. In this way it is possible to check the calibration of the entire receiver frequency range since the fundamental of the crystal can be compared with its harmonics through beat notes. The fundamental frequency of the crystal, which equals the rated IF frequency, can be beaten with received RF/IF signals so that extremely accurate receiver tuning is possible.

The 300-kc crystal oscillator R031I is connected in a tuned-anode-tuned-grid circuit that can be accurately calibrated with the trimmer capacitor C403. The crystal frequency is sent to the BFO for feeding the IF section and to the harmonic generator which consists of G13 and R031II where harmonics are generated and amplified. This spectrum is then sent to the low-impedance receiver input.

Both stages receive their anode voltage only after the STANDARD. CRYSTAL 300 KC button S8 or the TUNING CHECK button S9 is depressed. In both cases, relay RSH cannot be energized and the BFO operates as an amplifier for the incoming 300-kc signal. Depressing the STANDARD. CRYSTAL 300 KC button also causes relay Rsa to energize so that the frequency spectrum is connected (in place of the low-impedance antenna) to the input filter of the RF stage.

5.9 Power Section (see circuit diagram page 113 of German edition)

The power section supplies all the AC and DC voltages necessary for receiver operation. The AC supply voltage is fed from the power plug through a multi-section RF filter and the power switch S4 to the power transformer Tr9. The power switch has four positions: OFF / STANDBY / ON (BRIGHT) / ON (DIMMED).

The primary winding 1 to 6 has taps for AC supply voltages of 115, 125, 220 and 235 v. An additional tap for 150 v is used to feed the blower motor.

The secondary windings of the transformer, 21-22 and 23-24, supply the voltage for valve heating, 7-8 feeds the scale lamps.

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Winding 11-12 supplies a driving voltage for the pull-in stages in the frequency control section. R510 serves to adjust this voltage.

With switch S4 in positions ON (BRIGHT or DIMMED), winding 13-14 supplies a voltage via the filter network C1108/L121/C1109 to the parallel-connected bridge rectifiers G121 to 23 which supply an anode supply voltage of +220 v.

With S4 in the same position, ON (BRIGHT or DIMMED), the voltage from winding 18-19 is rectified in G118, filtered by the network C1110, C1111, R508 and R509, and regulated by R881. The result is a regulated +150 v DC. This voltage is used as anode supply voltage for the 1st mixer, the local oscillator, the local oscillator output stage and the 2nd mixer. It is also used as screen-grid voltage for IF stages 1 to 4 and as bias source for control amplifiers 1 to 3.

Winding 16-17 supplies a voltage to the half-wave rectifier G120, which via R507 and the regulator R882 produces a regulated bias voltage of -85 v. This voltage is used as bias voltage for the limiter diode and the pull-in stages 1 and 2. This voltage is also sent through R501 where it is decreased to -30 v and applied to the RF CONTROL and the NOISE LIMITER control.

The voltage from winding 9-10 is rectified by G119 which produces a DC voltage of +24 v. This voltage is used to feed all relays employed in the receiver. A voltage of +10 v is taken from this voltage via the voltage divider R503 to R505. This serves as bias voltage for the AFC diode and the cathode follower R847I.

5.10 Monitoring Facilities (see page 47 and circuit diagram of wiring harness page 115 of German edition)

The CHECK switch S11 and meter I1 serve to check the important voltages and currents (circuit diagram of front panel page 115 of German edition). 22 switch positions are provided. In each position the meter I1 should indicate a deflection within the red scale mark. The following conditions must be fulfilled and settings be accomplished, since the currents and voltages partly depend on the frequency range selected, the type of operation etc.:

(a) IF BANDWIDTH switch at "0.15 KC"

(b) CONTROL switch at AGC.

(c) Adjust for a reception frequency of 10.6 Mc. No signal of this frequency

must be applied to the antenna inputs, otherwise a control voltage would be produced in the receiver.

- (d) In the positions 2 and 18 of the CHECK switch the connector for transmitter keying relay must be free.
- (e) In position 6 either the TUNING CHECK or the STANDARD. CRYSTAL 300 KC button must be pressed.
- (f) In the positions 10, 11, 13 and 14 the EXT. OSCILLATOR button must not be depressed.

In the switch positions 1 to 27 marked on the front panel the following stages can be checked:

Switch Position	Stage	Remarks
1	+220 v	Anode supply voltage
2	R811	RF stage
3	R812II	1st mixer input
4	R841II	2nd mixer input
5	R876I+II	Standard. osc. - amplifier or BFO
6	R831I+II	Standard. osc. + harmonic generator
7	+150 v	Regulated anode supply voltage
8	R813I	
10	R821	Master oscillator
11	R822I+II	Master osc. - amplifier
13	R843	Local oscillator
14	R847I+II	Pull-in amplifier
16	R842	Crystal oscillator
18	R851	1st IF stage
19	R861	2nd IF stage
20	R862	3rd IF stage
21	R863	4th IF stage
22	R871	1st AGC amplifier
23	R872I	2nd AGC amplifier
24	R872II	AF pre-amplifier
25	R875	AF output stage
27	R844 to 46	Control amplifier

Translations for Block Diagram page 46 of German edition

Blockschaltbild	Block diagram
Antenne	Antenna
hochohm.	High impedance
"Übersp. Schutz	Over-voltage protection
Eichquarz 300 kHz	Standard crystal 300 kc
HF-Teil	RF section
HF-Stufe	RF stage
1. Mischstufe	1st mixer
Frequenzbereich	Frequency range
Abstimmung	Tuning
Ausgang 300 kHz	Output 300 kc
Eich-Oszillator	Standardizing oscillator
kHz	kc
Verzerrer	Harmonic generator
Hauptosz. fremd	Ext. osc.
Hauptosz. Eingang	Local osc. input
Osz. fremd-eigen	Osc. external-internal
Hauptosz. Ausgang	Local osc. output
Eing/Ausg. 3 MHz	Input/output 3 Mc
fremd/eigen	External/internal
Einkoppl. 1. Misch.	Input 1st mixer
Hauptoszillator	Local oscillator
Nachstimm-diode	AFC diode
3-MHz-Oszillator	3-Mc oscillator
Verzerr.	Harmonic generator
Kreise	Sections
Hauptosz.-Verst.	Local osc. amplifier
3. Mischstufe	3rd mixer
4. Mischstufe	4th mixer
Steuerverst.	Control amplifier
Phasenbrücke	Phase-sensitive bridge
Steuerteil	Frequency control section
Steuerleitungsv.	Cathode follower
Fanghilfsstufen I u. II	Pull-in amplifier stages I & II
Begrenzer	Limiter
Fanghilfeverst.	Pull-in amplifier
Steuer-Oszillator	Master oscillator
Ausg. Steuerosz.	Master osc. output
Einkopplung 2. Mischstufe	Input 2nd mixer

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Translations for page 46 of German edition (continued)

HF-Regelung	RF control
1. ZF	1st IF
2. Mischst.	2nd mixer
Rsp. I begr.	AGC voltage I, limited
Rsp.	AGC voltage
ZF-Bandbreite	IF bandwidth
Regelung	Control
Selektionsfilter	Selection amplifier
1. ZF-Stufe	1st IF stage
1/3 Rsp. I	1/3 AGC voltage I
Eingangs-Spannung	Input voltage
Regel-Zeitkonst.	AGC time constant
ZF-Teil	IF section
2. ZF-Stufe	2nd IF stage
3. ZF-Stufe	3rd IF stage
"Überlagerer	BFO
4. ZF-Stufe	4th IF stage
ZF-Ausgang	IF output
Abstimm-Kontrolle	Tuning check
Leistungspegel	Line level
NF-Eingang	AF input
Störbegrenzung	Noise limiter
Aus	Off
Störbegrenzer	Noise limiter
Regelverstärker	AGC amplifier
Begr.-Diode	Limiter diode
Verzög. Diode	Delay diode
Regelsp.-Ausgang	AGC output
Ablösediode	AGC voltage selection diode
Regelsp.-Diode	AGC diode
2. Regelverst.	2nd AGC amplifier
1. Regelverst.	1st AGC amplifier
A1 Überl.-Auskoppl.	BFO output
A1-Oszillator	BFO
NF-Regelung	AF volume
Hörer breit	Phones broad
NF-Verstärker	AF amplifier

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Translations for page 46 of German edition (continued)

NF-Vorstufe	AF pre-amplifier
NF-Endstufe	AF output stage
Leistungsausgang	Power output
"Überwachung	Check
Netzschalter	Power switch
Netzverdrosselung	Filter network
Netzteil	Power section
Netz	Power supply
Leitungsausgang	Line output

Anmerkung

Note: At the right-hand margin towards the middle read "Line output 600 Ω " instead of "Power output 600 Ω "

Translations for Checking Diagram on page 47 of German Edition

"	Überwachung	Checking
HF-Teil		RF section
Rsp. II		AGC II
Rsp. I begr.		AGC I lim.
HF-Stufe		RF stage
1. Mischstufe		1st mixer
Hauptosz.		Local osc.
Hauptosz.-Auskoppl.		Local osc. output
1. ZF		1st IF
2. Mischstufe Einkoppl.		2nd mixer input
Selektionsfilter		Selection amplifier
1/3 Rsp.		1/3 AGC voltage
ZF-Stufe		IF stage
ZF-Teil		IF section
1/5 Rsp. I		1/5 AGC voltage I
NF-Verstärker		AF amplifier
NF-Vorstufe		AF pre-amplifier
NF-Leitungs-Ausg.		AF line output
NF-Endstufe		AF output stage
NF-Leistungs-Ausg.		AF power output
Eichoszillator		Standardizing oscillator
Eichosz. Verzerrer		Harmonic generator
U~		E _{out}
Überwachung		Check
Steuerteil		Frequency control section
Quarzosz.		Crystal osc.
Hauptosz. Verstärker		Local osc. amplifier
Steuerverst.		Control amplifier
Steuerleitungsverst.		Cathode follower
Fanghilfeverst.		Pull-in amplifier
Steuerosz.-Verst.		Master osc. amplifier
Regelverstärker		AGC amplifier
Eichosz. Verst.+ A1-Osz. Verst.		Standard. osc. amplifier + BFO amplifier
A1-Überlagerer		Beat-frequency oscillator

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6. Replacement of Valves and Maintenance

6.1 Replacement of Valves

Almost all valves can readily be exchanged by valves of the same type. Though the replacement of the regulated valves does not appreciably affect the reception, it may happen that some of the specifications listed in section 2 are no longer met. This holds above all for R811 in the RF section, R861 in the IF section and R851 in the selection amplifier. The noise figure and the cross modulation may then slightly increase. The indication of the (right-hand) meter calibrated in μV may also change slightly. However, these changes do not impair the reception.

After replacement of valve R821 in the master oscillator check the calibration of the 0 to 100 kc scale. Correct according to section 4.2.

6.2 Blower

The bearings of the blower motor are sufficiently greased for several years of operation. If the motor makes too much noise it should be replaced (R&S Stock No. ZAM 170710).

6.3 Mechanical Test

Operation of the receiver in mobile systems requires a check every few months on the tightness of the various plug-in elements.

Translations for Tables of Replaceable Parts

Abgl. Prüffeld	Factory-adjusted
Anodenkreisspule	Coil, anode circuit
Anschlußkabel	Cord, power
Ausgangsübertrager	Transformer, output
Bandfilterspule	Coil (band-pass filter)
Benennung	Designation
Drahtdrehwiderstand	Resistor, variable, wire-wound
Draht-Trimmer	Trimmer, wire
Drahtwiderstand	Resistor, wire-wound
Drehkondensator	Capacitor, variable
Drehko	Capacitor, variable
Drehspul-Strommesser	Meter, moving-coil
Drossel	Choke
Drucktaste	Button, push
Duo-Diode	Duodiode
Duo-Triode	Duotriode
Eichoszillator	Standardizing oscillator
Einsatz	Slide-in unit
Elektrolyt-Kondensator	Capacitor, electrolytic
Endpentode	Pentode, output
enth. in	incl. in
etwa	approx.
Filterspule	Coil, filter
Filterübertrag., Filterübertrager	Transformer, filter
Gesamtverdrahtung	Wiring harness
Gleichrichter	Rectifier
Glimmer-Kondensator	Capacitor, mica
Glimmlampe	Lamp, glow
Heizdrossel	Choke, heater
HF-Teil	RF section
Kabel	Cable
Kammrelais	Relay
Kennzeichen	Ref. No.
Kennzeichen nach Stromlauf	Reference numbers according to circuit diagram
Ker. Bp-Kondensator	Capacitor, ceramic, bypass
Ker. Df-Kondensator	Capacitor, ceramic, feed-through
Ker. Rohrtrimmer	Trimmer, tubular, ceramic

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Keramik-Kondensator
 Keramikspule
 Kf-Kondensator
 Kleinschalter
 Korrektionskondensator
 Kristall-Diode
 Kristall-Dioden-Vierling
 lin.
 Lufttrimmer
 Motor
 MP-Kondensator
 Netzteil
 Netztransformator
 Nockenschalter
 Papier-Df-Kondensator
 Papierkondensator
 parallel
 Pentode
 pF
 Quarz
 Regel- und NF-Verstärker
 Ringmodulator
 R&S-Sach-Nr.
 Schaltbuchse
 Schalter
 Schaltteilliste(n)
 der Kabel
 zu Eichoszillator
 zu Gesamtverdrahtung
 zu HF-Teil
 zu Netzteil
 zu Regel- und NF-Verstärker
 zu Selektionsfilter
 zu Steueroszillator
 zu Steuerteil
 zu ZF-Teil
 Schalttrommel
 Scheibenschalter

Capacitor, ceramic
 Coil, ceramic
 Capacitor, synth. foil
 Switch, miniature
 Capacitor, correction
 Crystal diode
 Crystal diode rectifier
 Lin.
 Trimmer, air
 Motor
 Capacitor, MP
 Power section
 Transformer, power
 Switch, cam
 Capacitor, paper, feed-through
 Capacitor, paper
 parallel
 Pentode
 pf
 Crystal
 AGC and AF amplifier
 Modulator, ring
 R&S Stock No.
 Switching socket
 Switch
 Table(s) of Replaceable Parts
 for cables
 for standardizing oscillator
 for wiring harness
 for RF section
 for power section
 for AGC and AF amplifier
 for selection amplifier unit
 for master oscillator
 for frequency control section
 for IF section
 Switch, multi-gang
 Switch, wafer

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Schichtdrehwiderstand

Schichtwiderstand

Schmelzeinsatz

Schwingkreisspule

Schwingspule

Selektionsfilter

Skalenlampe

Spannungswähler

Spule

Stabilisator

Steueroszillator

Steuerquarz

Steuerteil

Trimmwert

"Übertrager

Wert

ZF-Teil

Resistor, deposited-carbon, variable

Resistor, deposited-carbon

Fuse

Coil, (tank-circuit)

Coil, oscillator

Selection amplifier unit

Lamp, scale

Selector, voltage

Coil

Reference tube

Master oscillator

Crystal, control

Frequency control section

Factory-adjusted

Transformer

Ratings

IF section

zugehörige Kabel siehe Abschnitt 7.11 For respective cables see section 7.11

Translations of Circuit Diagrams on pages 106 to 116 of German edition

HF-Teil

Bereich

Bereiche I...XII entspr.
Schalterkontakte 1...12

zur Frontplatte

zum Eichoszillator (Anschluß 1)

MHz

Steueroszillator

mA

Siehe Gesamtverdrahtung

Eichoszillator

zu Klemme 14 HF-Teil

Steuerteil

Selektionsfilter

ZF-Teil

Masse

NF-Eingang

NF-Ausgang

Regel- und NF-Verstärker

A1-Überlagerer

vom Eichoszillator

vom ZF-Teil

NF-Eingang

Leitg-Ausg.

Instr.

RF section

Range

Ranges I to XII correspond to switch
contacts 1 to 12

To front panel

To standardizing oscillator (connec-
tion 1)

Mc

Master oscillator

ma

See wiring harness

Standardizing oscillator

To terminal 14 RF section

Frequency control section

Selection amplifier unit

IF section

Chassis

AF input

AF output

AGC and AF amplifier

BFO

From standardizing oscillator

From IF section

AF input

Line output

Meter

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HF-Anzeige	RF indication
NF-Ausg.	AF output
Leistg.-Ausg.	Power output
Ablösediode	AGC voltage selection
<u>Netzteil</u>	<u>Power section</u>
<u>Frontplatte</u>	<u>Front panel</u>
Schaltstellung	Position
Ein dunkel	On dimmed
Ein hell	On bright
Vorheizen	Standby
Aus	Off
Netzschalter	Power switch
Störbegrenzung	Noise limiter
Regelzeitkonstante	AGC time constant
HF-Regelung	RF control
Hand + Autom.	MGC + AGC
Hand	MGC
Autom.	AGC
Regelung	Control
Eingangsspannung	Input voltage
Eichquarz	Stand. crystal
Abstimmkontrolle	Tuning check
dargestellte Schaltstellung: nicht gedrückt	Shown are the connections existing while the button released
Hörer schmal breit	Phones narrow broad
Überwachung	Check
<u>Gesamtverdrahtung</u>	<u>Wiring harness</u>
ZF-Teil	IF section
Einsatz	Slide-in unit
Netzteil	Power section
Regel- u. NF-Verstärker	AGC and AF amplifier

Frontplatte

HF-Teil

Steueroszillator

Eichoszillator

Steuerteil

Selektionsfilter

Lötleiste HF-Teil

zum Steuerteil

zum HF-Teil

vom HF-Teil

vom Steueroszillator

vom Eichoszillator

vom ZF-Teil

Lötanschlüsse am Steueroszillator

Lötanschlüsse am Eichoszillator

an

Draht- $\emptyset$ 0,8

ohne Kennzeichnung Draht- $\emptyset$ 0,5

Einsatz

Eigen

Fremd

Hauptosz.

NF

3 MHz

Netz

Leitungsausgang

Leistungsausgänge

Sender-Tastrelais

Front panel

RF section

Master oscillator

Standardizing oscillator

Frequency control section

Selection amplifier unit

Terminal strip RF section

To frequency control section

To RF section

From RF section

From master oscillator

From standardizing oscillator

From IF section

Soldering lugs at master oscillator

Soldering lugs at stand. oscillator

At

Wire 0.8 dia.

Not marked: wire 0.5 dia.

Slide-in unit

Int.

Ext.

Local oscillator

AF

3 Mc

AC supply

Line output

Power outputs

Transmitter keying relay

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Bl. 50

ZF-Ausgang

Regelspannung

NF-Eingang

Eichosz.-Ausg.

Steuerosz.-Ausgang

Hauptosz.-Ausgang

Ausgang 1. Mischrohr

Antenne

Antenne hochohmig

Hauptosz. fremd

IF output

AGC voltage

AF input

Standardizing osc. output

Master oscillator output

Local oscillator output

Output 1st mixer

Antenna

Antenna high impedance

Local oscillator ext.

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Table of Detachable Cable Connections

- K 1: K1 I in frequency control section conn. to K1 II in selection amplifier unit
- K 2: from frequency control section (fixed) to RF section (2)
- K 3: RF section (3) conn. to frequency control section (3)
- K 4: master oscillator (4) conn. to frequency control section (4)
- K 5: master oscillator (5) conn. to frequency control section (5)
- K 6: RF section (6) conn. to frequency control section (6)
- K 7: from RF section (fixed) to master oscillator (7)
- K 8: RF section (8) conn. to (8)
- K 9: from IF section (fixed) to AGC and AF amplifier (9)
- K 10: standardizing oscillator (10) conn. to BFO (10)
- K 11: from BFO (fixed) to IF section (11)
- K 12: from frame (intermediate panel, fixed) to IF section (12)
- K 13: from selection amplifier unit (fixed) to IF section (13)
- K 14: RF section (14) conn. with standardizing oscillator (14)
- K 15: from frame (intermediate panel, fixed) to RF section (15)
- K 16: from frame (intermediate panel, fixed) to RF section (16)
- K 17: from frame (intermediate panel, fixed) to RF section (17)
- K 18: from frame (intermediate panel, fixed) to RF section (18)
- K 19: from frame (intermediate panel, fixed) to RF section (19)
- K 20: from frame (intermediate panel, fixed) to master oscillator (20)
- K 21: from frame (intermediate panel, fixed) to frequency control section (21)
- K 22: from frame (intermediate panel, fixed) to standardizing oscillator (22)

S U P P L E M E N T

to Instruction Book R 8741/1163

SHORT-WAVE RECEIVER Type EK 07 D/2

refers to instruments with the Serial Nos.

M 1075/1 to 200

The following modifications have been made in the table of replaceable parts on pages 62, 68, 73, 79, 80, 81, 82, 83, 100 and 102:

Ref. No.	Designation	Ratings	R&S Stock No.
R47	Resistor, depos. carbon	60 k Ω /0.5 w	WF 60 k/0,5
R49	Resistor, depos. carbon	50 k Ω /0.5 w	WFO 50 k/0,5
C557	Capacitor, ceramic	5 pf	CCG 41/5
C559	Capacitor, ceramic	4 pf	CCG 41/4
C561	Capacitor, ceramic	4 pf	CCG 41/4
C698	Capacitor, ceramic	39 pf	CCH 31/39
C707	Capacitor, synth. foil	200 pf $\pm 2.5\%/500$ v	CKD 2/200/2,5/500
C722	Capacitor, synth. foil	200 pf $\pm 2.5\%/500$ v	CKD 2/200/2,5/500
	Capacitor, ceramic	18 pf	CCH 48/18 parallel
C734	Capacitor, synth. foil	200 pf $\pm 2.5\%/500$ v	CKD 2/200/2,5/500
	Capacitor, ceramic	39 pf	CCH 48/39 parallel
C746	Capacitor, synth. foil	200 pf $\pm 2.5\%/500$ v	CKD 2/200/2,5/500
	Capacitor, ceramic	27 pf	CCH 48/27
C766	Capacitor, ceramic	33 pf	CCH 48/33
	Capacitor, synth. foil	200 pf $\pm 2.5\%/500$ v	CKD 2/200/2,5/500
C780	Capacitor, synth. foil	200 pf $\pm 2.5\%/500$ v	CKD 2/200/2,5/500
C792	Capacitor, synth. foil	200 pf $\pm 2.5\%/500$ v	CKD 2/200/2,5/500
	Capacitor, ceramic	39 pf	CCH 48/39
C796	Capacitor, ceramic	1 pf	CCG 11/1
C804	Capacitor, synth. foil	200 pf $\pm 2.5\%/500$ v	CKD 2/200/2,5/500
R 8912 264	R671 Resistor, depos. carbon	100 k Ω /1 w	WFE 521 k 100
B1.1 (2 B1.)	K1II Cable		R 6402/15
	K13 Cable		R 6402/18
	K25 Cable		LK 335

Modification in the Circuit Diagram on page 106 RF section.

At the top, right-hand side at the relay RsB: the resistor R49 has now been fitted in between the open relay contact bI/3 and the wiper of the variable resistor R48.

Modification in the Circuit Diagram on page 109 Frequency Control section.

On the left of the valve Rø41: The resistor R209 no longer connects to the grid but to the anode of this triode section.

Modification in the Circuit Diagram on page 115 Wiring Harness.

On the right-hand side in the line filter: The resistor R671 has been connected across the fuse Si1.

S U P P L E M E N T

to the instruction book edition R 8741/1163

SHORT-WAVE RECEIVER

Type EK 07 D/2

The Short-Wave Receiver Type EK 07 D/2 delivered to you is a special model fitted with a meter with a low response time and the circuitry differs slightly from that of the standard model. The instruction book edition R 8741/1163 therefore has the following alterations:

Alterations (the page nos. refer to the German edition)

- | | | |
|---------|--------|--|
| page 90 | C 1016 | Capacitor, MP is omitted |
| page 93 | R 419 | Resistor, dep. carbon is omitted |
| page 98 | I 2 | Meter, moving coil Type INS 20401 is replaced by Type EK 07-99 |

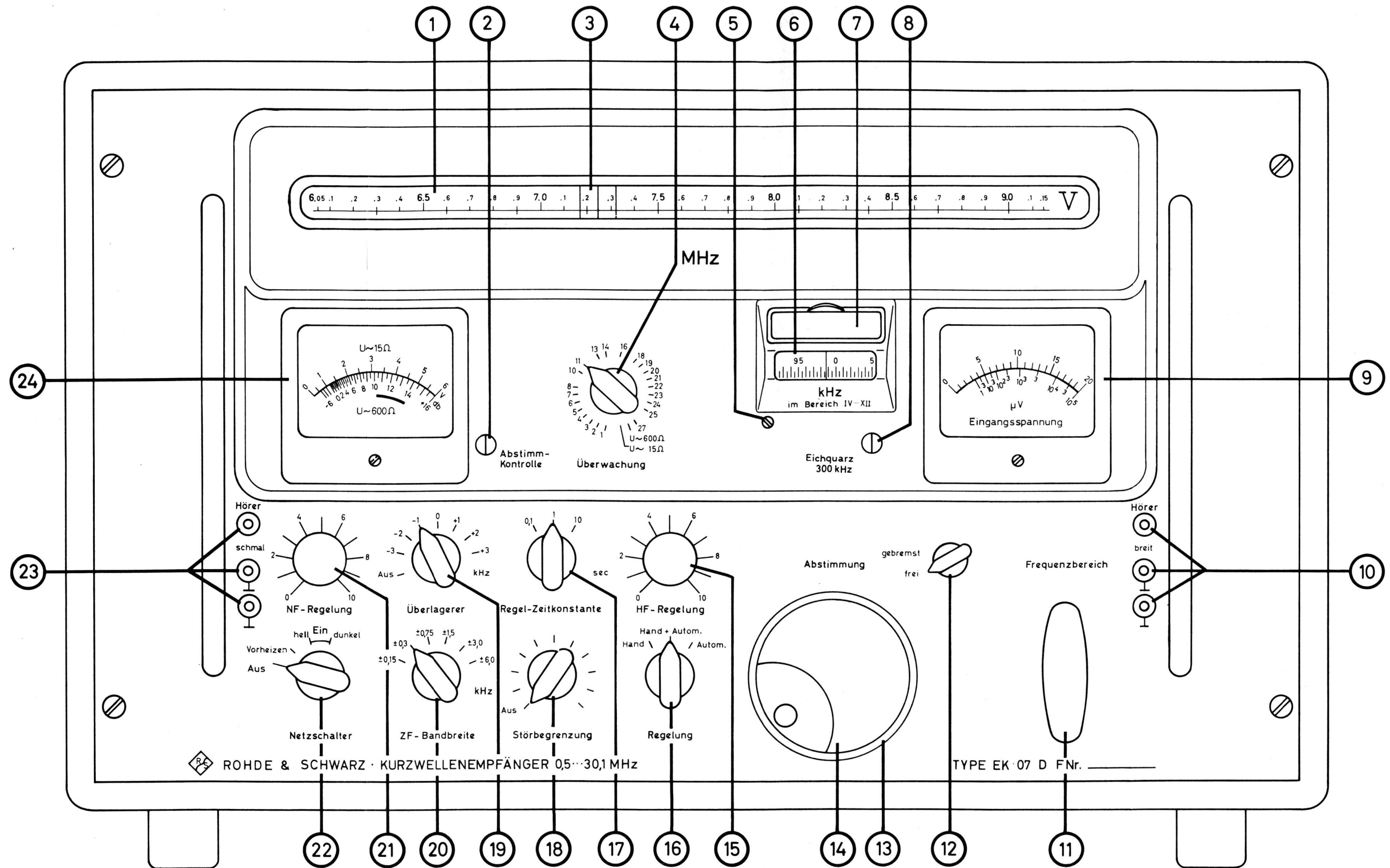
The resistors R606 and R607 each have a resistor of equal value and the same stock no. in parallel.

- | | |
|----------|--|
| page 112 | C1016 and R419 are omitted from the circuit diagram „AGC and AF Amplifier“ |
|----------|--|

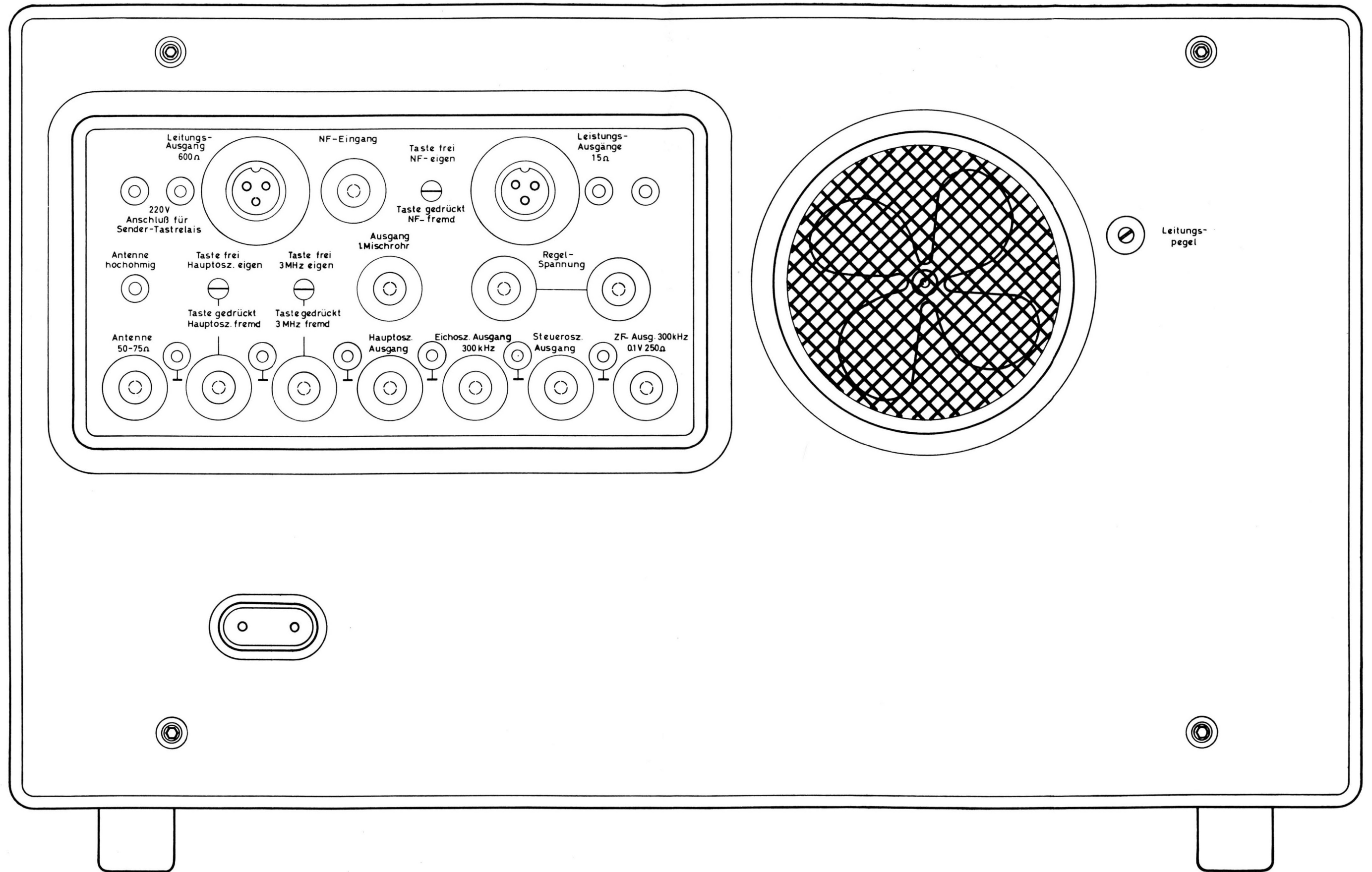
In addition, the standard IF section has been replaced in this model by the continuously adjustable IF Filter Type EK 07-80. The technical data for this are enclosed separately. They replace the corresponding section of the main instruction book.

Supplement edition R 10943/566

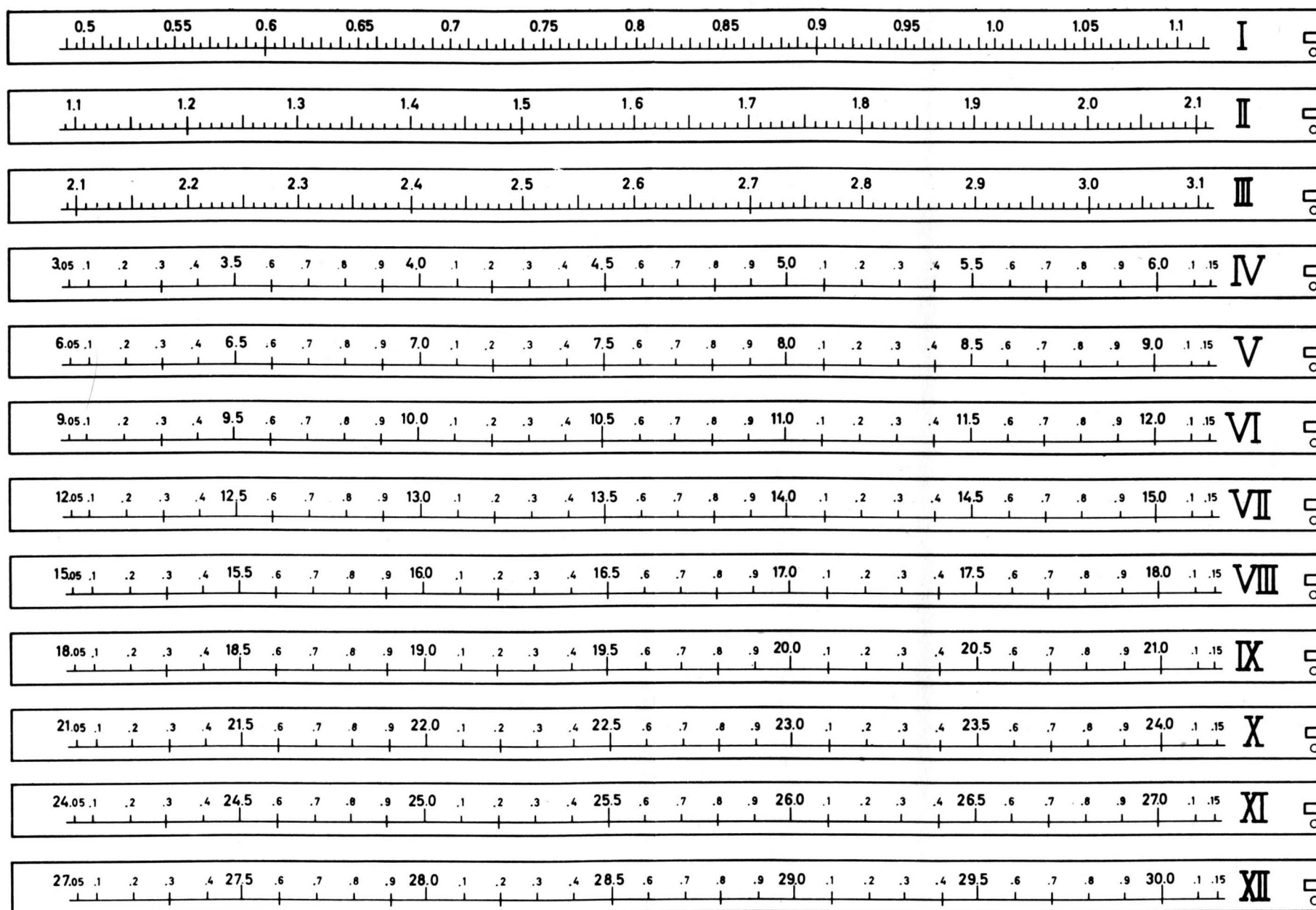
(Translation of German edition R 10895/566)



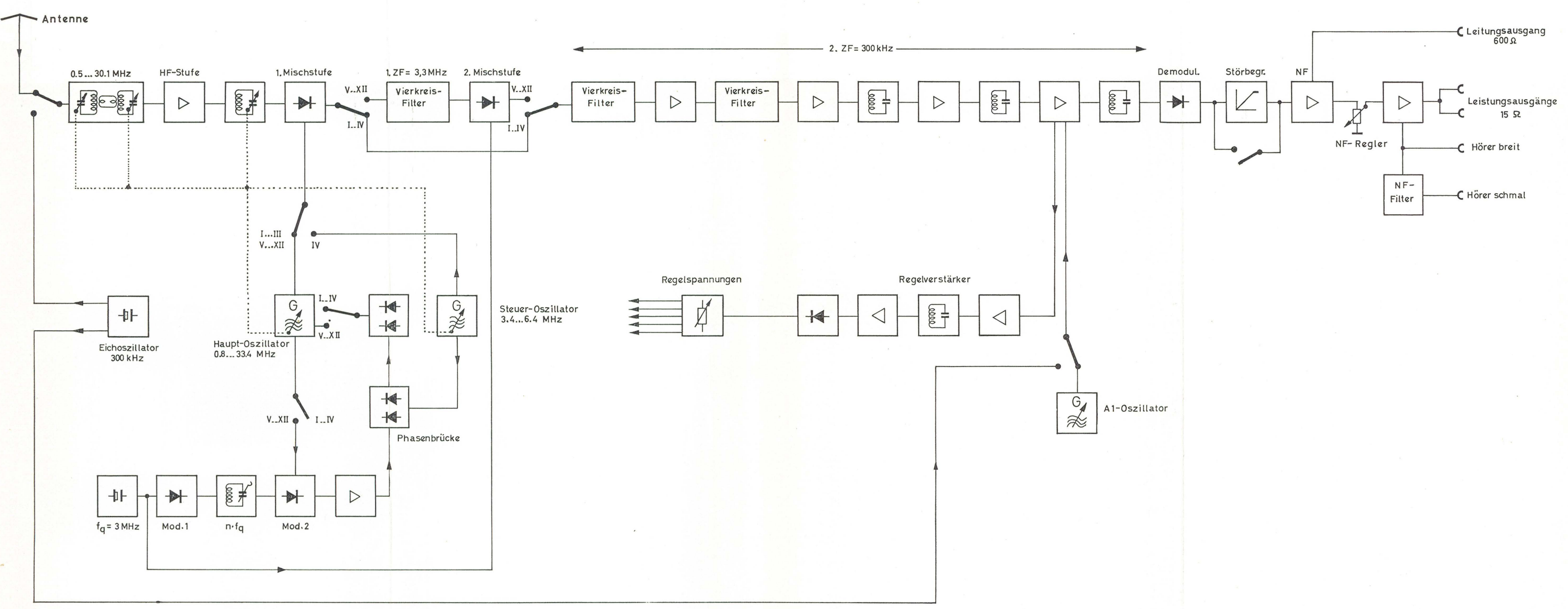
Front Panel



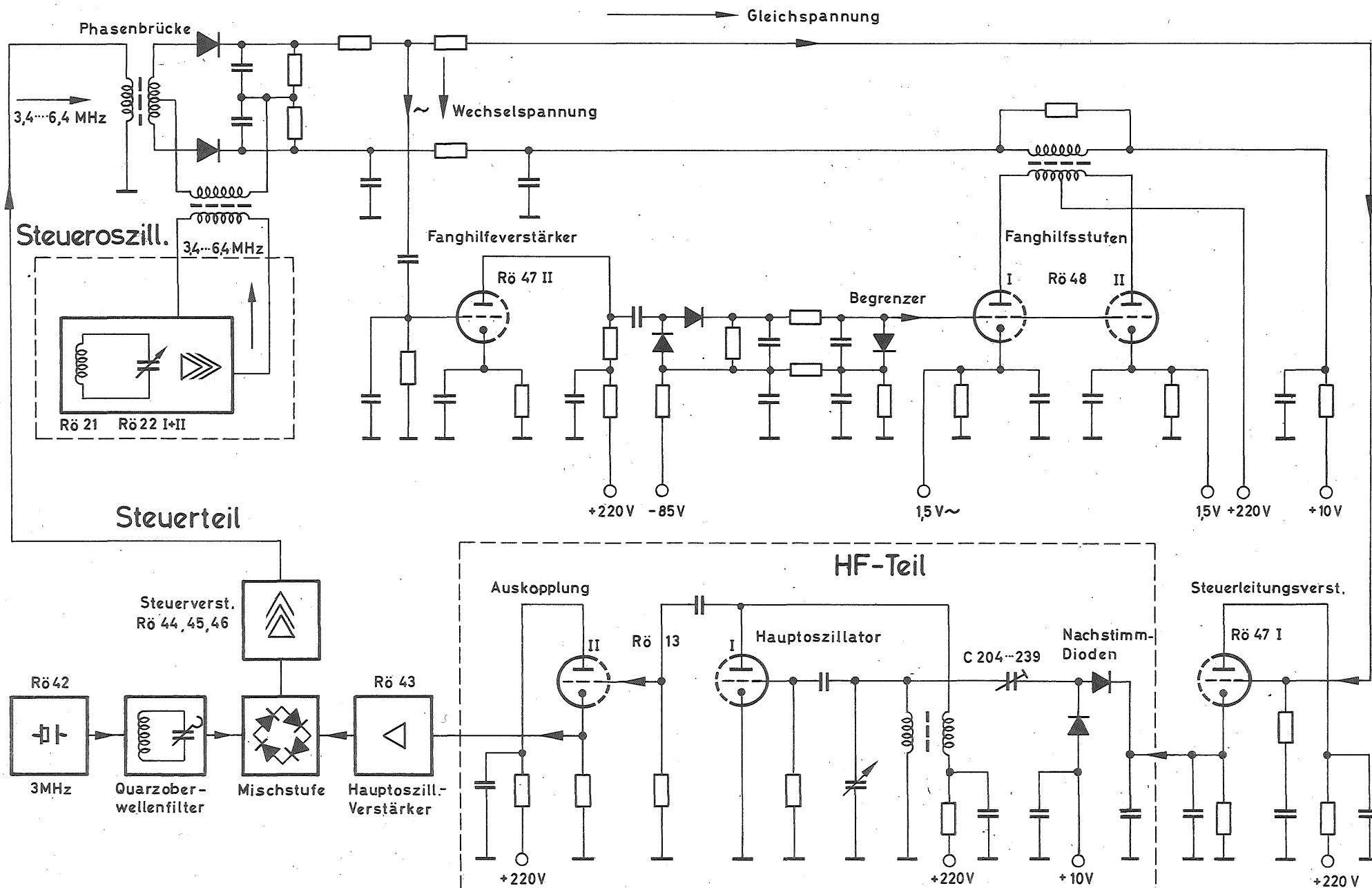
Rear panel

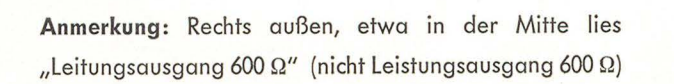


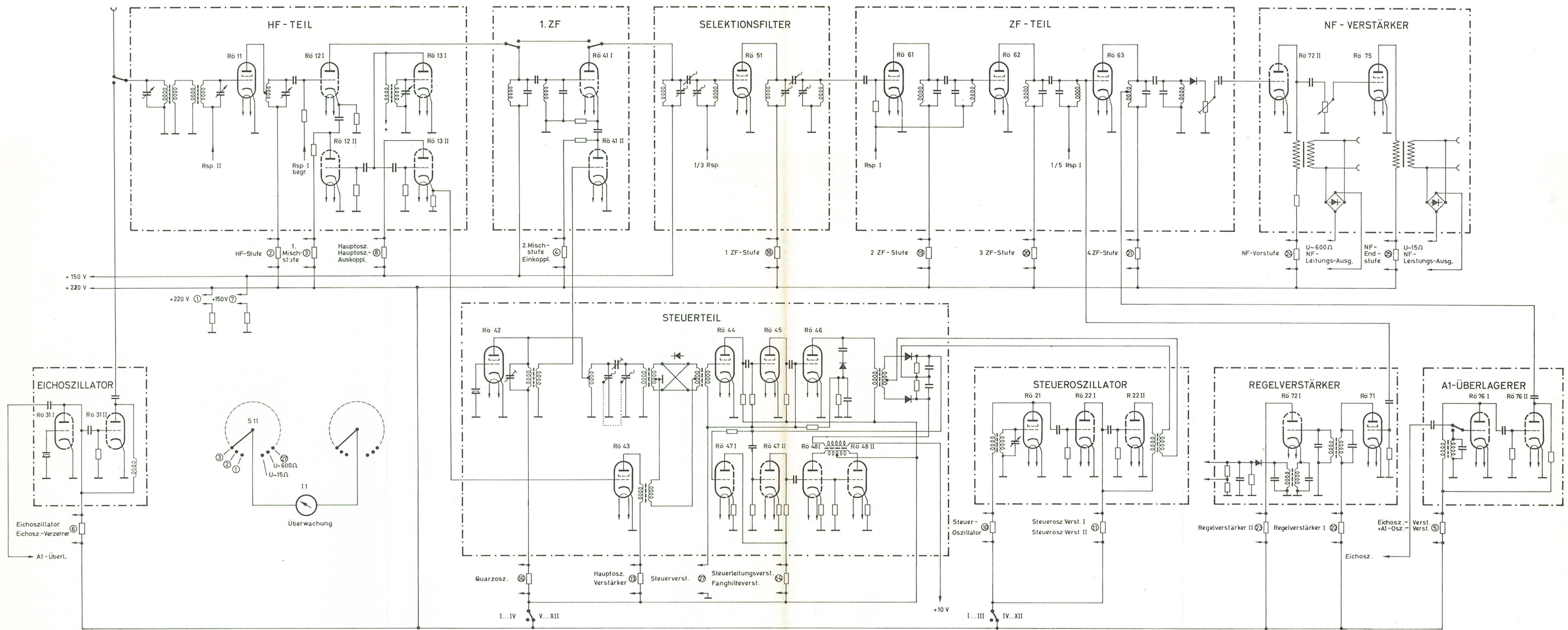
Dial scales I - XII



Vereinfachtes Blockschaltbild







Überwachung

7. Schaltteillisten

AZ „d“ Nr.10613

7.1. Schaltteilliste zu HF-Teil

(Kennzeichen nach Stromlauf)

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C2	Lufttrimmer	2...11 pF	CV 61509
C4	Keramik-Kondensator	5 pF Abgl. Prüffeld	CCG 41/5
C5	Keramik-Kondensator	0,5 pF Abgl. Prüffeld	CCG 11/0,5
C7	Lufttrimmer	2...11 pF	CV 61509
C9	Keramik-Kondensator	18 pF Abgl. Prüffeld	CCH 31/18
C12	Lufttrimmer	2...11 pF	CV 61509
C14	Keramik-Kondensator	100 pF 10 pF Abgl. Prüffeld	CCH 31/100 CCG 55/10 parallel
C15	Keramik-Kondensator	1 pF Abgl. Prüffeld	CCG 21/1
C17	Lufttrimmer	2...11 pF	CV 61509
C19	Keramik-Kondensator	18 pF Abgl. Prüffeld	CCH 31/18
C22	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C23	Keramik-Kondensator	2 x 150 pF	2 x CCH 48/150 parallel
C24	Lufttrimmer Keramik-Kondensator	2...11 pF 18 pF	CV 61509 CCH 31/18 parallel
	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C28	Keramik-Kondensator	150 pF 15 pF	CCH 48/150 CCH 48/15 parallel
C29	Lufttrimmer Keramik-Kondensator	2...11 pF 22 pF 3 pF	CV 61509 CCH 31/22 CCG 41/3 parallel
C32	Lufttrimmer Keramik-Kondensator	2...11 pF 8 pF Abgl. Prüffeld	CV 61509 CCG 55/8 parallel

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C33	Keramik-Kondensator	120 pF	CCH 48/120
C34	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	27 pF	CCH 31/27
		3 pF	CCG 41/3 parallel
C36	Keramik-Kondensator	15 pF Abgl. Prüffeld	CCH 31/15
C37	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C38	Keramik-Kondensator	95 pF	CCH 31/95
C39	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	33 pF	CCH 31/33 parallel
C41	Keramik-Kondensator	12 pF Abgl. Prüffeld	CCH 31/12
C42	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C43	Keramik-Kondensator	82 pF	CCH 31/82
C44	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	39 pF	CCH 31/39 parallel
C46	Keramik-Kondensator	12 pF Abgl. Prüffeld	CCH 31/12
C47	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C48	Keramik-Kondensator	68 pF	CCH 31/68
C49	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	39 pF	CCH 31/39 parallel
C51	Keramik-Kondensator	10 pF Abgl. Prüffeld	CCG 41/10
C52	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C53	Keramik-Kondensator	63 pF	CCH 31/63
C54	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	39 pF	CCH 31/39 parallel
C56	Keramik-Kondensator	10 pF Abgl. Prüffeld	CCH 31/10
C57	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C58	Keramik-Kondensator	56 pF	CCH 31/56
C59	Lufttrimmer Keramik-Kondensator	2...11 pF 39 pF Abgl. Prüffeld	CV 61509 CCH 31/39 parallel
C63	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C66	Keramik-Kondensator	15 pF Abgl. Prüffeld	CCH 31/15
C68	Lufttrimmer	2...11 pF	CV 61509
C71	Keramik-Kondensator	100 pF Abgl. Prüffeld	CCH 31/100
C73	Lufttrimmer	2...11 pF	CV 61509
C76	Keramik-Kondensator	15 pF Abgl. Prüffeld	CCH 31/15
C78	Lufttrimmer	2...11 pF	CV 61509
C81	Lufttrimmer Keramik-Kondensator	2...11 pF 18 pF	CV 61509 CCH 31/18 parallel
C82	Keramik-Kondensator	2 x 150 pF	2 x CCH 48/150 parallel
C83	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C86	Lufttrimmer Keramik-Kondensator	2...11 pF 22 pF 3 pF	CV 61509 CCH 31/22 CCG 41/3 parallel
C87	Keramik-Kondensator	150 pF 15 pF	CCH 48/150 CCH 48/15 parallel
C88	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C91	Lufttrimmer Keramik-Kondensator	2...11 pF 27 pF 3 pF	CV 61509 CCH 31/27 CCG 41/3 parallel
C92	Keramik-Kondensator	120 pF	CCH 48/120
C93	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C96	Lufttrimmer Keramik-Kondensator	2...11 pF 33 pF	CV 61509 CCH 31/33 parallel
C97	Keramik-Kondensator	95 pF	CCH 31/95
C98	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C101	Lufttrimmer Keramik-Kondensator	2...11 pF 39 pF	CV 61509 CCH 31/39 parallel
C102	Keramik-Kondensator	82 pF	CCH 31/82
C103	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C106	Lufttrimmer Keramik-Kondensator	2...11 pF 39 pF	CV 61509 CCH 31/39 parallel
C107	Keramik-Kondensator	69 pF	CCH 31/68
C108	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C111	Lufttrimmer Keramik-Kondensator	2...11 pF 39 pF	CV 61509 CCH 31/39 parallel
C112	Keramik-Kondensator	63 pF	CCH 31/63
C113	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C116	Lufttrimmer Keramik-Kondensator	2...11 pF 39 pF	CV 61509 CCH 31/39 parallel
C117	Keramik-Kondensator	56 pF	CCH 31/56
C118	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C121	Keramik-Kondensator	5 pF Abgl. Prüffeld	CCG 41/5
C123	Lufttrimmer	2...11 pF	CV 61509
C124	Keramik-Kondensator	5 pF Abgl. Prüffeld	CCG 41/5
C126	Keramik-Kondensator	22 pF Abgl. Prüffeld	CCH 31/22
C128	Lufttrimmer	2...11 pF	CV 61509
C129	Keramik-Kondensator	5 pF Abgl. Prüffeld	CCG 41/5
C131	Keramik-Kondensator	100 pF Abgl. Prüffeld	CCH 31/100
C133	Lufttrimmer	2...11 pF	CV 61509
C134	Keramik-Kondensator	12 pF Abgl. Prüffeld	CCG 68/12
C136	Keramik-Kondensator	15 pF Abgl. Prüffeld	CCH 31/15

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C138	Lufttrimmer	2...11 pF	CV 61509
C139	Keramik-Kondensator	18 pF Abgl. Prüffeld	CCH 31/18
C141	Lufttrimmer Keramik-Kondensator	2...11 pF 12 pF	CV 61509 CCH 31/12 parallel
C142	Keramik-Kondensator	2 x 150 pF	2 x CCH 48/150 parallel
C143	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C144	Keramik-Kondensator	10 pF Abgl. Prüffeld	CCG 55/10
C146	Lufttrimmer Keramik-Kondensator	2...11 pF 22 pF 3 pF	CV 61509 CCH 31/22 CCG 41/3 parallel
C147	Keramik-Kondensator	165 pF	CCH 48/165
C148	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C149	Keramik-Kondensator	7 pF Abgl. Prüffeld	CCG 55/7
C151	Lufttrimmer Keramik-Kondensator	2...11 pF 27 pF 3 pF	CV 61509 CCH 31/27 CCG 41/3 parallel
C152	Keramik-Kondensator	120 pF	CCH 48/120
C153	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C154	Keramik-Kondensator	10 pF Abgl. Prüffeld	CCG 55/10
C156	Lufttrimmer Keramik-Kondensator	2...11 pF 27 pF 3 pF	CV 61509 CCH 31/27 CCG 41/3 parallel
C157	Keramik-Kondensator	95 pF	CCH 31/95
C158	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C159	Keramik-Kondensator	10 pF Abgl. Prüffeld	CCG 55/10

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C161	Lufttrimmer Keramik-Kondensator	2...11 pF 27 pF 8 pF	CV 61509 CCH 31/27 CCG 41/8 parallel
C162	Keramik-Kondensator	82 pF	CCH 31/82
C163	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C164	Keramik-Kondensator	22 pF Abgl. Prüffeld	CCG 68/22
C166	Lufttrimmer Keramik-Kondensator	2...11 pF 27 pF 12 pF	CV 61509 CCH 31/27 CCG 55/12 parallel
C167	Keramik-Kondensator	68 pF	CCH 31/68
C168	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C169	Keramik-Kondensator	15 pF Abgl. Prüffeld	CCG 68/15
C171	Lufttrimmer Keramik-Kondensator	2...11 pF 39 pF	CV 61509 CCH 31/39 parallel
C172	Keramik-Kondensator	63 pF	CCH 31/63
C173	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C174	Keramik-Kondensator	15 pF Abgl. Prüffeld	CCG 68/15
C176	Lufttrimmer Keramik-Kondensator	2...11 pF 39 pF	CV 61509 CCH 31/39 parallel
C177	Keramik-Kondensator	56 pF	CCH 31/56
C178	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C179	Keramik-Kondensator	27 pF Abgl. Prüffeld	CCG 68/27
C181	Lufttrimmer	2...11 pF	CV 61509
C182	Keramik-Kondensator	2 x 150 pF 100 pF	2 x CCH 48/150 CCH 48/100 parallel
C183	Lufttrimmer Keramik-Kondensator	2...11 pF 5 pF Abgl. Prüffeld	CV 61509 CCG 41/5 parallel

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C184	Keramik-Kondensator	18 pF	CCH 31/18
C185	Keramik-Kondensator	5 pF	CCG 41/5
C186	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	18 pF	CCH 31/18 parallel
C187	Kf-Kondensator	2 pF/500 V	CKS 970/2/500
C188	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	8 pF	CCG 41/8 parallel
C189	Keramik-Kondensator	Abgl. Prüffeld 18 pF	CCH 31/18
C190	Keramik-Kondensator	5 pF	CCG 41/5
C191	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	100 pF 6 pF	CCH 31/100 CCG 55/6 parallel
C192	Kf-Kondensator	2 pF/250 V	CKS 2700/2/250
C193	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C194	Keramik-Kondensator	18 pF	CCH 31/18
C195	Keramik-Kondensator	5 pF	CCG 41/5
C196	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	3 pF	CCG 41/3 parallel
C197	Kf-Kondensator	2 pF/250 V	CKS 2700/2/250
C198	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C201	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	5 pF	CCG 41/5 parallel
C202	Keramik-Kondensator	180 pF	CCH 48/180
C203	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	5 pF Abgl. Prüffeld	CCG 41/5 parallel
C204	Lufttrimmer	2...11 pF Abgl. Prüffeld	CV 61509
C206	Lufttrimmer	2...11 pF	CV 61509
C207	Keramik-Kondensator	145 pF	CCH 48/145
C208	Lufttrimmer	2...11 pF	CV 61509
	Keramik-Kondensator	27 pF Abgl. Prüffeld	CCH 31/27 parallel

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C209	Lufttrimmer Keramik-Kondensator	2...11 pF 15 pF Abgl. Prüffeld	CV 61509 CCH 31/15 parallel
C211	Lufttrimmer Keramik-Kondensator	2...11 pF 5 pF	CV 61509 CCG 41/5 parallel
C212	Keramik-Kondensator	120 pF	CCH 48/120
C213	Lufttrimmer Keramik-Kondensator	2...11 pF 27 pF Abgl. Prüffeld	CV 61509 CCH 31/27 parallel
C214	Lufttrimmer Keramik-Kondensator	2...11 pF 15 pF Abgl. Prüffeld	CV 61509 CCH 31/15 parallel
C216	Lufttrimmer Keramik-Kondensator	2...11 pF 12 pF	CV 61509 CCH 31/12 parallel
C217	Keramik-Kondensator	95 pF	CCH 31/95
C218	Lufttrimmer Keramik-Kondensator	2...11 pF 33 pF Abgl. Prüffeld	CV 61509 CCH 31/33 parallel
C219	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C221	Lufttrimmer Keramik-Kondensator	2...11 pF 16 pF	CV 61509 CCH 31/16 parallel
C222	Keramik-Kondensator	82 pF	CCH 31/82
C223	Lufttrimmer Keramik-Kondensator	2...11 pF 27 pF 3 pF Abgl. Prüffeld	CV 61509 CCH 31/27 CCG 41/3 parallel
C224	Lufttrimmer Keramik-Kondensator	2...11 pF 5 pF Abgl. Prüffeld	CV 61509 CCG 41/5 parallel
C226	Lufttrimmer Keramik-Kondensator	2...11 pF 12 pF	CV 61509 CCH 31/12 parallel
C227	Keramik-Kondensator	75 pF	CCH 31/75
C228	Lufttrimmer Keramik-Kondensator	2...11 pF 33 pF Abgl. Prüffeld	CV 61509 CCH 31/33 parallel
C229	Lufttrimmer Keramik-Kondensator	2...11 pF 5 pF Abgl. Prüffeld	CV 61509 CCG 41/5 parallel
C231	Lufttrimmer Keramik-Kondensator	2...11 pF 15 pF	CV 61509 CCH 31/15 parallel
C232	Keramik-Kondensator	68 pF	CCH 31/68

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C233	Lufttrimmer Keramik-Kondensator	2...11 pF 33 pF Abgl. Prüffeld	CV 61509 CCH 31/33 parallel
C234	Lufttrimmer Keramik-Kondensator	2...11 pF 5 pF Abgl. Prüffeld	CV 61509 CCG 41/5 parallel
C236	Lufttrimmer Keramik-Kondensator	2...11 pF 27 pF	CV 61509 CCH 31/27 parallel
C237	Keramik-Kondensator	56 pF	CCH 31/56
C238	Lufttrimmer Keramik-Kondensator	2...11 pF 10 pF Abgl. Prüffeld	CV 61509 CCG 55/10 parallel
C239	Lufttrimmer Keramik-Kondensator	2...11 pF 5 pF Abgl. Prüffeld	CV 61509 CCG 41/5 parallel
C241	Drehkondensator		EK 07 - 1
C242	Ker. Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C243	Kf-Kondensator	10 000 pF/125 V	CKS 10 000/125
C244	Keramik-Kondensator	2 pF	CCG 41/2
C245	Keramik-Kondensator	10 pF	CCH 31/10
C246	Keramik-Kondensator	100 pF	CCH 48/100
C247	Papier-Kondensator	25 000 pF/250 V	CPM 25 000/250
C248	Papier-Kondensator	25 000 pF/250 V	CPM 25 000/250
C249	Keramik-Kondensator	2 pF	CCG 41/2
C252	Ker. Df-Kondensator	500 pF/500 V	CFR 1/500/500
C253	Ker. Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C254	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C255	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C256	Ker. Df-Kondensator	500 pF/500 V	CFR 1/500/500
C257	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C258	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250
C260	Keramik-Kondensator	100 pF	CCH 48/100
C261	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
G262	Papier-Kondensator	25 000 pF/250 V	CPM 25 000/250
G263	Ker. Rohrtrimmer	1...11 pF	CV 7210
	Keramik-Kondensator	15 pF	CCH 31/15 parallel
G264	Keramik-Kondensator	8 pF	CCG 55/8
G265	Keramik-Kondensator	6 pF	CCG 55/6
G266	Keramik-Kondensator	18 pF	CCH 31/18
G269	Kf-Kondensator	5000 pF/125 V	OKS 5000/125
G270	Ker. Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
G271	Kf-Kondensator	10 000 pF/125 V	OKS 10 000/125
G273	Ker. Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
G274	Keramik-Kondensator	47 pF	CCH 31 /47
G275	Keramik-Kondensator	10 pF	CCG 55/10
G276	Keramik-Kondensator	2 pF	CCG 41/2
G277	Ker. Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
G278	Ker. Df-Kondensator	500 pF/500 V	CFR 1/500/500
G279	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
G280	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
G281	Ker. Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
G282	Ker. Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
G283	Ker. Df-Kondensator	500 pF/500 V	CFR 1/500/500
G284	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
G285	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
G288	Ker. Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
G289	Ker. Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
G290	Elektrolyt-Kondensator	50 μ F/15 V	CED 21/50/15
G1 1	Kristall-Diode		GK/OA 85
G1 2	Kristall-Diode	GK/OA	GK/OA 85
K..	zugehörige Kabel siehe Abschnitt 7.11.		

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
L1	Spule		EK 07 - 1.55.1
L2	Spule		EK 07 - 1.55.2
L3	Spule		EK 07 - 1.55.3
L4	Spule		EK 07 - 1.55.4
L5	Spule		EK 07 - 1.55.5
L6	Spule		EK 07 - 1.55.6
L7	Spule		EK 07 - 1.55.7
L8	Spule		EK 07 - 1.55.8
L9	Spule		EK 07 - 1.55.9
L10	Spule		EK 07 - 1.55.10
L11	Spule		EK 07 - 1.55.11
L12	Spule		EK 07 - 1.55.12
L13	Spule		EK 07 - 1.55.13
L14	Spule		EK 07 - 1.55.14
L15	Spule		EK 07 - 1.55.15
L16	Spule		EK 07 - 1.55.16
L17	Spule		EK 07 - 1.55.17
L18	Spule		EK 07 - 1.55.18
L19	Spule		EK 07 - 1.55.19
L20	Spule		EK 07 - 1.55.20
L21	Spule		EK 07 - 1.55.21
L22	Spule		EK 07 - 1.55.22
L23	Spule		EK 07 - 1.55.23
L24	Spule		EK 07 - 1.55.24
L25	Spule		EK 07 - 1.55.25
L26	Spule		EK 07 - 1.55.26
L27	Spule		EK 07 - 1.55.27

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
L28	Spule		EK 07 - 1.55.28
L29	Spule		EK 07 - 1.55.29
L30	Spule		EK 07 - 1.55.30
L31	Spule		EK 07 - 1.55.31
L32	Spule		EK 07 - 1.55.32
L33	Spule		EK 07 - 1.55.33
L34	Spule		EK 07 - 1.55.34
L35	Spule		EK 07 - 1.55.35
L36	Spule		EK 07 - 1.55.36
L37	Spule		EK 07 - 1.55.37
L38	Spule		EK 07 - 1.55.38
L39	Spule		EK 07 - 1.55.39
L40	Spule		EK 07 - 1.55.40
L41	Spule		EK 07 - 1.55.41
L42	Spule		EK 07 - 1.55.42
L43	Spule		EK 07 - 1.55.43
L44	Spule		EK 07 - 1.55.44
L45	Spule		EK 07 - 1.55.45
L46	Spule		EK 07 - 1.55.46
L47	Spule		EK 07 - 1.55.47
L48	Spule		EK 07 - 1.55.48
L49	Drossel		EK 07 - 1.57
R1	Schichtwiderstand	1 M Ω /0,3 W	WFE 221 M 1
R2	Schichtwiderstand	1 M Ω /0,3 W	WFE 221 M 1
R6	Schichtwiderstand	600 Ω /0,5 W	WFE 321 E 600
R7	Schichtwiderstand	600 Ω /0,5 W	WFE 321 E 600

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R10	Schichtwiderstand	500 k Ω /0,1 W	WFE 221 k 500
R11	Schichtwiderstand	200 Ω /0,5 W	WFE 321 E 200
R12	Schichtwiderstand	40 k Ω /0,5 W	WFE 321 k 40
R13	Schichtwiderstand	20 k Ω /0,5 W	WFE 321 k 20
R14	Schichtwiderstand	100 Ω /0,1 W	WFE 221 E 100
R15	Schichtwiderstand	100 k Ω /0,1 W	WFE 221 k 100
R16	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R17	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R21	Schichtwiderstand	etwa 200 k Ω /0,3 W	WFE 221 k 200
R22	Schichtwiderstand	etwa 100 k Ω /0,3 W	WFE 221 k 100
R23	Schichtwiderstand	etwa 100 k Ω /0,3 W	WFE 221 k 100
R25	Schichtwiderstand	30 Ω /0,3 W	WFE 221 E 30
R26	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R27	Schichtwiderstand	400 Ω /0,5 W	WFE 321 E 400
R28	Schichtwiderstand	100 Ω /0,5 W	WFE 321 E 100
R29	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R30	Schichtwiderstand	250 Ω /0,5 W	WFE 321 E 250
R31	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R32	Schichtwiderstand	50 Ω /0,3 W	WFE 221 E 50
R33	Schichtwiderstand	1 k Ω /0,5 W	WFE 321 k 1
R34	Schichtwiderstand	250 Ω /0,5 W	WFE 321 E 250
R35	Schichtwiderstand	30 k Ω /0,3 W	WFE 221 k 30
R36	Schichtwiderstand	600 Ω /0,5 W	WFE 321 E 600
R37	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R38	Schichtwiderstand	160 Ω /0,5 W	WFE 321 E 160
R39	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R40	Schichtwiderstand	100 k Ω /0,3 W	WFE 221 k 100

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R41	Schichtwiderstand	10 k Ω /1 W	WFE 521 k 10
R42	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R43	Schichtwiderstand	100 Ω /0,3 W	WFE 221 E 100
R44	Schichtwiderstand	500 Ω /0,3 W	WFE 221 E 500
R46	Schichtwiderstand	800 Ω /0,5 W	WFE 321 E 800
R47	Schichtwiderstand	60 k Ω /0,5 W	WFE 321 k 60
R48	Schicht-Drehwiderstand	250 k Ω lin.	WS 9122 F/250 k
R49	Schichtwiderstand	50 k Ω /0,5 W	WFE 321 k 50
R1 1	Glimmlampe		RL 290
Rö11	Pentode		EF 805 S
Rö12	Duo-Triode		E 88 CC
Rö13	Duo-Triode		ECC 801 S
Rsa	Kammrelais		RSS 220048
Rsb	Kammrelais		RSS 220048
Rsc	Kammrelais		RSS 220048
S ^{I,II}	Scheibenschalter		SRN 3252/2/32
S ^{I,III...V}	Schalttrommel		EK 07 - 1

7.2. Schaltteilliste zu Steueroszillator

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C301	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250
C302	Lufttrimmer	4...10 pF	CV 8106
C303	Keramik-Kondensator	12 pF Abgl. Prüffeld	CCH 48/12
C304	Drehkondensator		enth. in EK 07 - 2
C305	Keramik-Kondensator	8 pF Abgl. Prüffeld	CCG 55/8
C306	Keramik-Kondensator	56 pF	CCH 68/56
C309	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250
C310	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250
C311	Keramik-Kondensator	0,5 pF	CCG 11/0,5
C312	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250
C313	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250
C314	Keramik-Kondensator	82 pF	CCH 68/82
C315	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250
C316	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250
C317	Keramik-Kondensator	27 pF Abgl. Prüffeld	CCG 68/27
C318	Keramik-Kondensator	39 pF	CCH 68/39
C322	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C324	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C326	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C328	Papier-Df-Kondensator	50 000 pF/160 V	CPD 50 000/160
C330	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
L51I	Keramik-Spule		MCC 0205/2
L51II	Keramik-Spule		MCC 0307/13,1
L53	Drossel		DUF 311/20
L55	Drossel		DUF 311/20
R101	Schichtwiderstand	2 k Ω /0,5 W	WFE 321 k 2
R102	Schichtwiderstand	125 Ω /0,5 W	WFE 321 E 125
R103	Schichtwiderstand	800 k Ω /0,3 W	WFE 221 k 800
R104	Schichtwiderstand	20 k Ω /0,5 W	WFE 321 k 20
R105	Schichtwiderstand	2 k Ω /0,5 W	WFE 321 k 2
R108	Schichtwiderstand	200 k Ω /0,3 W	WFE 221 k 200
R109	Schichtwiderstand	200 Ω /0,5 W	WFE 321 E 200
R110	Schichtwiderstand	10 k Ω /0,5 W	WFE 321 k 10
R111	Schichtwiderstand	2 k Ω /0,5 W	WFE 321 k 2
R112	Schichtwiderstand	200 k Ω /0,3 W	WFE 221 k 200
R113	Schichtwiderstand	200 Ω /0,5 W	WFE 321 E 200
R114	Schichtwiderstand	2 k Ω /0,5 W	WFE 321 k 2
R115	Schichtwiderstand	2 k Ω /0,3 W Abgl.Prüffeld	WFE 221 k 2
Rö21	Pentode		EF 805 S
Rö22	Duo-Triode		ECC 801 S
Tr1	Ausgangsübertrager		EK 07 - 2.27

7.3. Schaltteilliste zu Eichoszillator

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C401	Keramik-Kondensator	4 pF	CCG 41/4
C402	Keramik-Kondensator	4 pF	CCG 41/4
C403	Lufttrimmer	4...20 pF	CV 8016
C404	Keramik-Kondensator	12 pF Abgl. Prüffeld	CCH 31/12
C405	Keramik-Kondensator	2 x 180 pF	2 x CCH 48/180 parallel
C406	Keramik-Kondensator	33 pF	CCH 31/33
C407	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C408	Kf-Kondensator	2500 pF/250 V	CKS 2500/250
C410	Keramik-Kondensator	2 pF	CCG 41/2
C413	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C414	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
G13	Kristall-Diode		GK/OA 85
L58	Filterspule		EK 07 - 14.6
L59	Anodenkreisspule		EK 07 - 14.7
Q1	Quarz	300 kHz	QA 15000/300
R152	Schichtwiderstand	100 k Ω /0,5 W	WFE 321 k 100
R154	Schichtwiderstand	5 k Ω /0,5 W	WFE 321 k 5
R155	Schichtwiderstand	100 k Ω /0,5 W	WFE 321 k 100
R156	Schichtwiderstand	6 k Ω /0,5 W	WFE 321 k 6
Rö31	Duo-Triode		ECC 801 S

7.4. Schaltteilliste zu Steuerteil

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C501	Ker. Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C502	Ker. Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C503	Keramik-Kondensator	56 pF	CCH 31/56
C504	Ker. Rohrtrimmer	1...5 pF	CV 7205
C505	Keramik-Kondensator	39 pF	CCH 31/39
C506	Keramik-Kondensator	39 pF	CCH 31/39
C507	Keramik-Kondensator	3 pF	CCG 41/3
C508	Keramik-Kondensator	39 pF	CCH 31/39
C509	Keramik-Kondensator	39 pF	CCH 31/39
C510	Ker. Rohrtrimmer	1...5 pF	CV 7205
C511	Keramik-Kondensator	47 pF	CCH 31/47
C512	Keramik-Kondensator	1 pF Abgl. Prüffeld	CCG 21/1
C513	Keramik-Kondensator	47 pF	CCH 31/47
C514	Ker. Rohrtrimmer	1...5 pF	CV 7205
C515	Keramik-Kondensator	39 pF	CCH 31/39
C516	Keramik-Kondensator	39 pF	CCH 31/39
C517	Keramik-Kondensator	4 pF	CCG 41/4
C518	Keramik-Kondensator	39 pF	CCH 31/39
C519	Keramik-Kondensator	39 pF	CCH 31/39
C520	Ker. Rohrtrimmer	1...5 pF	CV 7205
C521	Keramik-Kondensator	39 pF	CCH 31/39
C522	Keramik-Kondensator	220 pF	CCG 91/220
C523	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250
C524	Kf-Kondensator	10 000 pF/125 V	CKS 10 000/125

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C525	Keramik-Kondensator	220 pF	CCG 91/220
C526	Papier-Kondensator	10 000 pF/400 V	CPK 62003 n 10
C528	Keramik-Kondensator	82 pF	CCH 31/82
C529	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C530	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250
	Ker.Bp-Kondensator	2500 pF/350 V	CBR 1/2500/350 parallel
C531	Ker.Bp-Kondensator	2500 pF/350 V	CBR 1/2500/350
C532	Ker.Bp-Kondensator	2500 pF/350 V	CBR 1/2500/350
C533	Kf-Kondensator	500 pF/500 V	CKS 500/500
C534	Ker. Rohrtrimmer	1...5 pF	CV 7205
C535	Keramik-Kondensator	15 pF	CCH 31/15
C536	Keramik-Kondensator	47 pF	CCH 31/47
C537	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C538	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C539	Keramik-Kondensator	82 pF	CCH 31/82
C540	Keramik-Kondensator	82 pF	CCH 31/82
C541	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C542	Keramik-Kondensator	47 pF	CCH 31/47
C545	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C546	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C547	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C548	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C549	Keramik-Kondensator	47 pF	CCH 31/47
C550	Keramik-Kondensator	1 pF	CCG 21/1
C551	Keramik-Kondensator	56 pF	CCH 31/56
C552	Keramik-Kondensator	2 pF	CCG 41/2

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C553	Keramik-Kondensator	56 pF	CCH 31/56
C554	Keramik-Kondensator	2 pF	CCG 41/2
C555	Keramik-Kondensator	56 pF	CCH 31/56
C556	Keramik-Kondensator	39 pF	CCH 31/39
C557	Keramik-Kondensator	5 pF	CCG 41/5
C558	Keramik-Kondensator	39 pF	CCH 31/39
C559	Keramik-Kondensator	4 pF	CCG 41/4
C560	Keramik-Kondensator	39 pF	CCH 31/39
C561	Keramik-Kondensator	4 pF	CCG 41/4
C562	Keramik-Kondensator	39 pF	CCH 31/39
C563	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 10 pF	CV 7210 CCG 41/10 parallel
C564	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 68 pF	CV 7210 CCH 31/68 parallel
C565	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 33 pF	CV 7210 CCH 31/33 parallel
C566	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 15 pF	CV 7210 CCH 31/15 parallel
C567	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 6 pF	CV 7210 CCG 41/6 parallel
C568	Ker. Rohrtrimmer	1...10 pF	CV 7210
C569	Ker. Rohrtrimmer	1...10 pF	CV 7210
C570	Ker. Rohrtrimmer	1...10 pF	CV 7210
C571	Draht-Trimmer		enth. in EK 07-4.2.33
C572	Draht-Trimmer		enth. in EK 07-4.2.33
C573	Draht-Trimmer		enth. in EK 07-4.2.33
C574	Draht-Trimmer		enth. in EK 07-4.2.33

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C575	Draht-Trimmer		enth. in EK 07-4.2.33
C576	Draht-Trimmer		enth. in EK 07-4.2.33
C577	Draht-Trimmer		enth. in EK 07-4.2.33
C578	Draht-Trimmer		enth. in EK 07-4.2.33
C579	Ker. Rohrtrimmer	1...10 pF	CV 7210
C580	Ker. Rohrtrimmer	1...10 pF	CV 7210
C581	Ker. Rohrtrimmer	1...10 pF	CV 7210
C582	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 6 pF	CV 7210 CCG 41/6 parallel
C583	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 15 pF	CV 7210 CCH 31/15 parallel
C584	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 33 pF	CV 7210 CCH 31/33 parallel
C585	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 68 pF	CV 7210 CCH 31/68 parallel
C586	Draht-Trimmer		enth. in EK 07-4.2.36
C587	Draht-Trimmer		enth. in EK 07-4.2.36
C588	Draht-Trimmer		enth. in EK 07-4.2.36
C589	Draht-Trimmer		enth. in EK 07-4.2.36
C590	Draht-Trimmer		enth. in EK 07-4.2.36
C591	Draht-Trimmer		enth. in EK 07-4.2.36
C592	Draht-Trimmer		enth. in EK 07-4.2.36
C593	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 68 pF	CV 7210 CCH 31/68 parallel
C594	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 33 pF	CV 7210 CCH 31/33 parallel
C595	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 15 pF	CV 7210 CCH 31/15 parallel
C596	Ker. Rohrtrimmer Keramik-Kondensator	1...10 pF 6 pF	CV 7210 CCG 41/6 parallel

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C597	Ker. Rohrtrimmer	1...10 pF	CV 7210
C598	Ker. Rohrtrimmer	1...10 pF	CV 7210
C599	Ker. Rohrtrimmer	1...10 pF	CV 7210
C601	Ker.Bp-Kondensator	2500 pF/350 V	CBR 1/2500/350
C603	Ker.Bp-Kondensator	2500 pF/350 V	CBR 1/2500/350
C604	Ker.Bp-Kondensator	2500 pF/350 V	CBR 1/2500/350
C606	Keramik-Kondensator	82 pF	CCH 68/82
C610	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C611	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C612	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C613	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C614	Ker.Bp-Kondensator	2500 pF/350 V	CBR 1/2500/350
C615	Keramik-Kondensator	6 pF	CCG 41/6
C617	Keramik-Kondensator	82 pF	CCH 68/82
C618	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C619	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C620	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C621	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C622	Ker.Bp-Kondensator	2500 pF/350 V	CBR 1/2500/350
C623	Keramik-Kondensator	4 pF	CCG 41/4
C625	Keramik-Kondensator	82 pF	CCH 68/82
C626	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C627	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C628	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C629	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C630	Ker.Bp-Kondensator	2500 pF/350 V	CBR 1/2500/350
C631	Keramik-Kondensator	4 pF	CCG 41/4
C633	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C634	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C635	Keramik-Kondensator	270 pF	CCH 68/270
C636	Keramik-Kondensator	270 pF	CCH 68/270
C637	Keramik-Kondensator	47 pF	CCH 68/47
C638	Keramik-Kondensator	82 pF	CCH 68/82
C639	Keramik-Kondensator	82 pF	CCH 68/82
C640	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C643	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C644	Kf-Kondensator	5000 pF/125 V Abgl. Prüffeld	CKS 5000/125
C646	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C647	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C648	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C649	Keramik-Kondensator	33 pF	CCH 68/33
C650	Kf-Kondensator	500 pF/500 V	CKS 500/500
C651	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C652	Kf-Kondensator	1000 pF/500 V	CKS 1000/500
C655	Keramik-Kondensator	220 pF	CCH 68/220
C656	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C657	Keramik-Kondensator	220 V	CCH 68/220
C658	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C659	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C660	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C661	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C662	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C663	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C665	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C666	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C667	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C670	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C671	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C672	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C673	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C674	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C675	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C676	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C677	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C678	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C679	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C680	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C681	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C682	Papier-Kondensator	100 000 pF/250 V	CPK 58004 n 100
C683	Papier-Df-Kondensator	25 000 pF/300 V	CPD 25 000/300
C684	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C685	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C686	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C687	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C688	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C689	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C694	Papier-Kondensator	10 000 pF/250 V	CPM 10 000/250
C695	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C696	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C697	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C698	Keramik-Kondensator	39 pF	COH 31/39
G14	Kristall-Diode		GK /OA 85
G15	Kristall-Diode		GK /OA 95
G16	Kristall-Diode		GK /OA 95
G17	Kristall-Diode		GK /OA 95
G18	Kristall-Diode		GK /OA 85
G19	Kristall-Diode		GK /OA 85
G110	Kristall-Diode		GK /OA 95
G111	Kristall-Diode		GK /OA 95
G112	Kristall-Diode		GK /OA 95
K..	zugehörige Kabel siehe Abschnitt 7.11.		
L61	Filterspule		EK 07 - 4.3.15
L62	Filterspule		EK 07 - 4.3.17/1
L63	Filterspule		EK 07 - 4.3.17/2
L64	Filterspule		EK 07 - 4.3.17/3
L65	Filterübertrager		EK 07 - 4.3.18
L66	Filterspule		EK 07 - 4.26
L67	Filterspule		EK 07 - 4.27
L68	Filterspule		EK 07 - 4.4.10

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
L69	Filterspule		EK 07 - 4.4.11
L70	Filterspule		EK 07 - 4.4.11
L71	Filterspule		EK 07 - 4.4.10
L72	Filterspule		EK 07 - 4.5.18
L73	Filterspule		EK 07 - 4.5.19
L74	Filterspule		EK 07 - 4.5.19
L75	Filterübertrager		EK 07 - 4.5.20
L77	Filterspule		EK 07 - 4.2.55
L78	Filterspule		EK 07 - 4.2.56
L79	Filterübertrager		EK 07 - 4.2.57
L81	Filterspule		EK 07 - 4.28
L82	Filterspule		EK 07 - 4.25
L83	Filterspule		EK 07 - 4.25
L84	Filterspule		EK 07 - 4.25
L88I	Drossel		EK 07 - 4.21.4
L88II	Drossel		EK 07 - 4.21.4
L88III	Drossel		EK 07 - 4.21.4
L88IV	Drossel		EK 07 - 4.21.4
L88V	Drossel		EK 07 - 4.21.4
L88VI	Drossel		EK 07 - 4.21.4
L88VII	Drossel		EK 07 - 4.21.4
L88VIII	Drossel		EK 07 - 4.21.4
L88IX	Drossel		EK 07 - 4.21.4
L88X	Drossel		EK 07 - 4.21.4
L88XI	Drossel		EK 07 - 4.21.4
L88XII	Drossel		EK 07 - 4.21.4

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
L89	Heizdrossel	15,5 μ H	EK 07 - 4.21.5
Md1	Ringmodulator		4 x GK/Gd 6 E
Md2	Ringmodulator		4 x GK/Gd 6 E
Q2	Steuerquarz	3 MHz $\pm 2 \times 10^{-5}$	QA 16 000/3000
R201	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R202	Schichtwiderstand	1 M Ω /0,3 W	WFE 221 M 1
R203	Schichtwiderstand	12,5 k Ω /1 W	WFE 521 k 12,5
R204	Schichtwiderstand	500 Ω /0,5 W	WFE 321 E 500
R205	Schichtwiderstand	300 Ω /0,5 W	WFE 321 E 300
R206	Schichtwiderstand	1 M Ω /0,5 W	WFE 321 M 1
R207	Schichtwiderstand	600 Ω /0,3 W	WFE 221 E 600
R208	Schichtwiderstand	500 Ω /0,5 W	WFE 321 E 500
R209	Schichtwiderstand	100 Ω /0,5 W	WFE 321 E 100
R210	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R211	Schichtwiderstand	250 Ω /0,5 W	WFE 321 E 250
R212	Schichtwiderstand	5 k Ω /0,5 W	WFE 321 k 5
R213	Schichtwiderstand	100 k Ω /0,5 W	WFE 321 k 100
R214	Schichtwiderstand	600 Ω /0,5 W	WFE 321 E 600
R215	Schichtwiderstand	600 k Ω /0,5 W	WFE 321 k 600
R216	Schichtwiderstand	250 Ω /0,3 W	WFE 221 E 250
R217	Schichtwiderstand	25 k Ω /0,3 W	WFE 221 k 25
R218	Schichtwiderstand	250 Ω /0,5 W	WFE 321 E 250
R219	Schichtwiderstand	50 k Ω /0,5 W	WFE 321 k 50
R220	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R221	Schichtwiderstand	100 Ω /0,3 W	WFE 221 E 100
R222	Schichtwiderstand	50 Ω /0,3 W	WFE 221 E 50

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R223	Schichtwiderstand	30 k Ω /0,3 W	WFE 221 k 30
R224	Schichtwiderstand	30 k Ω /0,3 W	WFE 221 k 30
R225	Schichtwiderstand	600 Ω /0,5 W	WFE 321 E 600
R226	Schichtwiderstand	10 k Ω /0,5 W	WFE 321 k 10
R227	Schichtwiderstand	100 Ω /0,3 W	WFE 221 E 100
R228	Schichtwiderstand	50 k Ω /0,3 W	WFE 221 k 50
R229	Schichtwiderstand	5 k Ω /0,3 W	WFE 221 k 5
R230	Schichtwiderstand	200 Ω /0,5 W	WFE 321 E 200
R231	Schichtwiderstand	1,6 k Ω /1 W	WFE 521 k 1,6
R234	Schichtwiderstand	30 k Ω /0,3 W	WFE 221 k 30
R235	Schichtwiderstand	30 k Ω /0,3 W	WFE 221 k 30
R236	Schichtwiderstand	600 Ω /0,5 W	WFE 321 E 600
R237	Schichtwiderstand	10 k Ω /0,5 W	WFE 321 k 10
R238	Schichtwiderstand	100 Ω /0,3 W	WFE 221 E 100
R239	Schichtwiderstand	50 k Ω /0,3 W	WFE 221 k 50
R240	Schichtwiderstand	1,6 k Ω /1 W	WFE 521 k 1,6
R241	Schichtwiderstand	1,6 k Ω /1 W	WFE 521 k 1,6
R244	Schichtwiderstand	30 k Ω /0,3 W	WFE 221 k 30
R245	Schichtwiderstand	600 Ω /0,5 W	WFE 321 E 600
R246	Schichtwiderstand	10 k Ω /0,5 W	WFE 321 k 10
R247	Schichtwiderstand	100 Ω /0,3 W	WFE 221 E 100
R248	Schichtwiderstand	50 k Ω /0,3 W	WFE 221 k 50
R249	Schichtwiderstand	1,6 k Ω /1 W	WFE 521 k 1,6
R250	Schichtwiderstand	40 k Ω /0,5 W	WFE 321 k 40
R251	Schichtwiderstand	200 k Ω /0,3 W	WFE 221 k 200

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R252	Schichtwiderstand	40 k Ω /0,5 W	WFE 321 k 40
R253	Schichtwiderstand	40 k Ω /0,5 W	WFE 321 k 40
R254	Schichtwiderstand	8 k Ω /0,5 W	WFE 321 k 8
R255	Schichtwiderstand	30 k Ω /0,5 W	WFE 321 k 30
R256	Schichtwiderstand	100 k Ω /0,5 W	WFE 321 k 100
R259	Schichtwiderstand	6 k Ω /0,5 W	WFE 321 k 6
R260	Schichtwiderstand	6 k Ω /0,5 W	WFE 321 k 6
R261	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R264	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R265	Schichtwiderstand	4 k Ω /0,5 W Abgl. Prüffeld	WFE 321 k 4
R266	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R267	Schichtwiderstand	400 k Ω /0,5 W Abgl. Prüffeld	WFE 321 k 400
R268	Schichtwiderstand	200 Ω /0,5 W	WFE 321 E 200
R269	Schichtwiderstand	500 k Ω /0,5 W	WFE 321 k 500
R270	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R271	Schichtwiderstand	6 k Ω /1 W	WFE 521 k 6
R272	Schichtwiderstand	12,5 k Ω /0,5 W	WFE 321 k 12,5
R275	Schichtwiderstand	50 k Ω /0,5 W	WFE 321 k 50
R276	Schichtwiderstand	50 k Ω /0,5 W	WFE 321 k 50
R277	Schichtwiderstand	50 k Ω /0,5 W	WFE 321 k 50
R278	Schichtwiderstand	10 k Ω /0,5 W	WFE 321 k 10
R279	Schichtwiderstand	2,5 k Ω /0,5 W	WFE 321 k 2,5
R282	Schichtwiderstand	10 Ω /0,5 W	WFE 321 E 10
R283	Schichtwiderstand	10 Ω /0,5 W	WFE 321 E 10
R284	Schichtwiderstand	1,6 k Ω /1 W	WFE 521 k 1,6

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R285	Schichtwiderstand	3 k Ω /0,5 W	WFE 321 k 3
R286	Schichtwiderstand	10 k Ω /0,5 W	WFE 321 k 10
R287	Schichtwiderstand	100 k Ω /0,5 W	WFE 321 k 100
R288	Schichtwiderstand	30 k Ω /0,5 W	WFE 321 k 30
Rö41	Duo-Triode		E 88 CC
Rö42	Pentode		EF 805 S
Rö43	Pentode		E 180 F
Rö44	Pentode		E 180 F
Rö45	Pentode		E 180 F
Rö46	Pentode		E 180 F
Rö47	Duo-Triode		ECC 801 S
Rö48	Duo-Triode		ECC 801 S
RsD	Kammrelais		RSS 220048
RsI	Kammrelais		RSS 220048
RsK	Kammrelais		RSS 220048
S1VI...XI	Scheibenschalter		enth. in EK 07 - 4.2
Tr2	Übertrager		EK 07 - 4.5.21
Tr3	Übertrager		EK 07 - 4.5.22
Tr4	Übertrager		EK 07 - 4.5.21
Tr5	Übertrager		EK 07 - 4.22
Tr6	Übertrager		EK 07 - 4.23

7.5. Schaltteilliste zu Selektionsfilter

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C701	Lufttrimmer	4...29 pF	CV 8025
C702	Lufttrimmer	4...29 pF	CV 8025
C703	Lufttrimmer	4...29 pF	CV 8025
C704	Lufttrimmer Keramik-Kondensator	4...29 pF 2 x 10 pF	CV 8025 2 x CCG 55/10 parallel
C705	Lufttrimmer Keramik-Kondensator	4...29 pF 10 pF	CV 8025 CCG 55/10 parallel
C706	Lufttrimmer	4...29 pF	CV 8025
C707	Kf-Kondensator	200 pF/ $\pm 2,5\%$ /500V	OKD 2/200/2,5/500
C708	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C709	Lufttrimmer Keramik-Kondensator	4...29 pF 22 pF	CV 8025 CCH 48/22 parallel
C710	Keramik-Kondensator	2 pF	CCG 55/2
C711	Keramik-Kondensator	5 pF	CCG 55/5
C712	Keramik-Kondensator	5 pF	CCG 55/5
C713	Keramik-Kondensator	27 pF	CCH 48/27
C714	Ker. Rohrtrimmer	0,5...3 pF	CV 7202
C715	Keramik-Kondensator	1 pF	CCG 21/1
C716	Lufttrimmer Keramik-Kondensator	4...29 pF 10 pF	CV 8025 CCG 55/10 parallel
C717	Lufttrimmer	4...29 pF	CV 8025
C718	Lufttrimmer Keramik-Kondensator	4...29 pF 15 pF	CV 8025 CCG 55/15 parallel
C719	Lufttrimmer Keramik-Kondensator	4...29 pF 27 pF	CV 8025 CCH 48/27 parallel
C720	Lufttrimmer Keramik-Kondensator	4...29 pF 22 pF	CV 8025 CCH 48/22 parallel

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C721	Lufttrimmer Keramik-Kondensator	4...29 pF 10 pF	CV 8025 CCG 55/10 parallel
C722	Kf-Kondensator Keramik-Kondensator	200 pF/ $\pm 2,5\%/500V$ 18 pF	CKD 2/200/2,5/500 CCH 48/18 parallel
C723	Keramik-Kondensator	1 pF	CCG 11/1
C724	Keramik-Kondensator	2 pF	CCG 55/2
C725	Keramik-Kondensator	7 pF	CCG 55/7
C726	Keramik-Kondensator	18 pF	CCH 48/18
C727	Kf-Kondensator	1000 pF/500 V	CKS 1000/500
C728	Lufttrimmer	4...29 pF	CV 8025
C729	Lufttrimmer	4...29 pF	CV 8025
C730	Lufttrimmer	4...29 pF	CV 8025
C731	Lufttrimmer	4...29 pF	CV 8025
C732	Lufttrimmer	4...29 pF	CV 8025
C733	Lufttrimmer	4...29 pF	CV 8025
C734	Kf-Kondensator Keramik-Kondensator	200 pF/ $\pm 2,5\%/500V$ 39 pF	CKD 2/200/2,5/500 CCH 48/39 parallel
C735	Keramik-Kondensator	3 pF	CCG 55/3
C736	Keramik-Kondensator	6 pF	CCG 55/6
C737	Keramik-Kondensator	4 pF	CCG 55/4
C738	Keramik-Kondensator	1 pF	CCG 11/1
C739	Kf-Kondensator Kf-Kondensator	300 pF/125 V 1000 pF/125 V	CKD 2/300/125 CKD 2/1000/125 parallel
C740	Lufttrimmer Keramik-Kondensator	4...29 pF 10 pF	CV 8025 CCG 55/10 parallel
C741	Lufttrimmer Keramik-Kondensator	4...29 pF 10 pF	CV 8025 CCG 55/10 parallel
C742	Lufttrimmer Keramik-Kondensator	4...29 pF 10 pF	CV 8025 CCG 55/10 parallel
C743	Lufttrimmer	4...29 pF	CV 8025

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C744	Lufttrimmer	4...29 pF	CV 8025
C745	Lufttrimmer	4...29 pF	CV 8025
C746	Kf-Kondensator Keramik-Kondensator	200 pF/±2,5%/500V 27 pF	CKD 2/200/2,5/500 CCH 48/27 parallel
C747	Lufttrimmer	4...29 pF	CV 8125
C748	Lufttrimmer	4...29 pF	CV 8125
C749	Lufttrimmer	4...29 pF	CV 8125
C750	Lufttrimmer	4...29 pF	CV 8125
C751	Lufttrimmer	4...29 pF	CV 8125
C752	Lufttrimmer	4...29 pF	CV 8125
C754	Papier-Kondensator	4700 pF/400 V	CPK 62003 n 4,7
C755	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C756	Keramik-Kondensator	12 pF	CCH 31/12
C757	Papier-Kondensator	47 000 pF/250 V	CPK 58003 n 47
C758	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C760	Lufttrimmer	4...29 pF	CV 8025
C761	Lufttrimmer	4...29 pF	CV 8025
C762	Lufttrimmer	4...29 pF	CV 8025
C763	Lufttrimmer	4...29 pF	CV 8025
C764	Lufttrimmer	4...29 pF	CV 8025
C765	Lufttrimmer	4...29 pF	CV 8025
C766	Keramik-Kondensator Kf-Kondensator	33 pF 200 pF/±2,5%/500 V	CCH 48/33 CKD 2/200/2,5/500 Parallel
C767	Lufttrimmer Keramik-Kondensator	4...29 pF 22 pF	CV 8025 CCH 48/22 parallel
C768	Keramik-Kondensator	0,5 pF	CCG 11/0,5

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C769	Keramik-Kondensator	0,5 pF	CCG 11/0,5
C770	Keramik-Kondensator	7 pF	CCG 55/7
C771	Keramik-Kondensator	27 pF	CCH 48/27
C772	Ker. Rohrtrimmer	0,5...3 pF	CV 7202
C773	Keramik-Kondensator	1 pF	CCG 21/1
C774	Lufttrimmer Keramik-Kondensator	4...29 pF 10 pF	CV 8025 CCG 55/10 parallel
C775	Lufttrimmer	4...29 pF	CV 8025
C776	Lufttrimmer Keramik-Kondensator	4...29 pF 39 pF	CV 8025 CCH 48/39 parallel
C777	Lufttrimmer Keramik-Kondensator	4...29 pF 39 pF	CV 8025 CCH 48/39 parallel
C778	Lufttrimmer Keramik-Kondensator	4...29 pF 39 pF	CV 8025 CCH 48/39 parallel
C779	Lufttrimmer Keramik-Kondensator	4...29 pF 39 pF	CV 8025 CCH 48/39 parallel
C780	Kf-Kondensator	200 pF/±2,5%/500V	CKD 2/200/±2,5/500
C781	Keramik-Kondensator	0,5 pF	CCG 11/0,5
C782	Keramik-Kondensator	0,5 pF	CCG 11/0,5
C783	Keramik-Kondensator	8 pF	CCG 55/8
C784	Keramik-Kondensator	18 pF	CCH 48/18
C786	Lufttrimmer	4...29 pF	CV 8025
C787	Lufttrimmer	4...29 pF	CV 8025
C788	Lufttrimmer	4...29 pF	CV 8025
C789	Lufttrimmer	4...29 pF	CV 8025
C790	Lufttrimmer	4...29 pF	CV 8025
C791	Lufttrimmer	4...29 pF	CV 8025

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C792	Kf-Kondensator Keramik-Kondensator	200 pF/ $\pm 2,5\%$ /500 V 39 pF	CKD 2/200/2,5/500 CCH 48/39 parallel
C793	Keramik-Kondensator	1,5 pF 1 pF	CCG 11/1,5 CCG 11/1 parallel
C794	Keramik-Kondensator	6 pF	CCG 55/6
C795	Keramik-Kondensator	3 pF	CCG 55/3
C796	Keramik-Kondensator	1 pF	CCG 11/1
C798	Lufttrimmer Keramik-Kondensator	4...29 pF 10 pF	CV 8025 CCG 55/10 parallel
C799	Lufttrimmer Keramik-Kondensator	4...29 pF 15 pF	CV 8025 CCG 55/15 parallel
C800	Lufttrimmer	4...29 pF	CV 8025
C801	Lufttrimmer Keramik-Kondensator	4...29 pF 8 pF	CV 8025 CCG 55/8 parallel
C802	Lufttrimmer	4...29 pF	CV 8025
C803	Lufttrimmer	4...29 pF	CV 8025
C804	Kf-Kondensator	200 pF/ $\pm 2,5\%$ /500 V	CKD 2/200/2,5/500
C805	Lufttrimmer	4...29 pF	CV 8125
C806	Lufttrimmer	4...29 pF	CV 8125
C807	Lufttrimmer Keramik-Kondensator	4...29 pF 33 pF	CV 8125 CCH 48/33 parallel
C808	Lufttrimmer	4...29 pF	CV 8125
C809	Lufttrimmer	4...29 pF	CV 8125
C810	Lufttrimmer	4...29 pF	CV 8125
C813	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C814	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C815	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C816	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C817	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
K..	zugehörige Kabel siehe Abschnitt 7.11.		
L91	Filterspule		EK 07 - 5.40
L92	Filterspule		EK 07 - 5.41
L93	Filterspule		EK 07 - 5.42
L94	Filterspule		EK 07 - 5.42
L96	Filterspule		EK 07 - 5.40
L97	Filterspule		EK 07 - 5.41
L98	Filterspule		EK 07 - 5.42
L99	Filterspule		EK 07 - 5.42
Q3	Quarz		QA 15010/300
Q4	Quarz		QA 15010/300
R300	Schichtwiderstand	3 M Ω /0,5 W	WFE 321 M 3
R301	Schichtwiderstand	1 k Ω /0,5 W	WFE 321 k 1
R303	Schichtwiderstand	1 M Ω /0,3 W	WFE 221 M 1
R305	Schichtwiderstand	800 k Ω /0,3 W	WFE 221 k 800
R306	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R307	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R308	Schichtwiderstand	3 M Ω /0,5 W	WFE 321 M 3
R309	Schichtwiderstand	1 M Ω /0,3 W	WFE 221 M 1
R310	Schichtwiderstand	500 k Ω /0,5 W	WFE 321 k 500
R311	Schichtwiderstand	80 k Ω /0,5 W	WFE 321 k 80
R314	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R315	Schichtwiderstand	1 M Ω /0,3 W	WFE 221 M 1
R316	Schichtwiderstand	1 k Ω /0,3 W	WFE 221 k 1

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R317	Schichtwiderstand	125 Ω /0,5 W	WFE 321 E 125
R318	Schichtwiderstand	30 Ω /0,3 W	WFE 221 E 30
R319	Schichtwiderstand	80 k Ω /0,5 W	WFE 321 k 80
R321	Schichtwiderstand	1 k Ω /0,5 W	WFE 321 k 1
R323	Schichtwiderstand	1 M Ω /0,3 W	WFE 221 M 1
R325	Schichtwiderstand	800 k Ω /0,3 W	WFE 221 k 800
R326	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R327	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R329	Schichtwiderstand	300 k Ω /0,3 W	WFE 221 k 300
R330	Schichtwiderstand	125 k Ω /0,3 W	WFE 221 k 125
R331	Schichtwiderstand	80 k Ω /0,3 W	WFE 221 k 80
R332	Schichtwiderstand	1 M Ω /0,3 W	WFE 221 M 1
R334	Schichtwiderstand	30 k Ω /0,5 W	WFE 321 k 30
R335	Schichtwiderstand	1 k Ω /0,5 W	WFE 321 k 1
R851	Pentode		EF 805 S
S2I...V	Stufenschalter		SRW 14523
S2VI...X	Stufenschalter		SRW 14523

7.6. Schaltteilliste zu ZF-Teil

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C901	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C902	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C903	Glimmer-Kondensator Keramik-Kondensator	200 pF $\pm 5\%$ /500 V 33 pF	CGT 200/5/500 DD 1 CCH 31/33 parallel
C904	Lufttrimmer	4...29 pF	CV 8025
C905	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C906	Keramik-Kondensator	12 pF	CCH 31/12
C907	Glimmer-Kondensator Keramik-Kondensator	200 pF $\pm 5\%$ /500 V 33 pF	CGT 200/5/500 DD 1 CCH 31/33 parallel
C908	Lufttrimmer	4...29 pF	CV 8025
C909	Keramik-Kondensator	100 pF	CCH 68/100
C910	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C913	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C914	Glimmer-Kondensator Keramik-Kondensator	200 pF $\pm 5\%$ /500 V 22 pF	CGT 200/5/500 DD 1 CCH 31/22 parallel
C915	Lufttrimmer	4...29 pF	CV 8025
C916	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C917	Keramik-Kondensator	15 pF	CCH 31/15
C918	Glimmer-Kondensator	200 pF $\pm 5\%$ /500 V	CGT 200/5/500 DD 1
C919	Lufttrimmer	4...29 pF	CV 8025
C920	Keramik-Kondensator	100 pF	CCH 68/100
C921	Keramik-Kondensator	100 pF	CCH 68/100
C922	Papier-Kondensator	2200 pF/1000 V	CPK 70 003 n 2,2
C925	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C926	Glimmer-Kondensator Keramik-Kondensator	200 pF $\pm 5\%$ /500 V 33 pF	CGT 200/5/500 DD 1 CCH 31/33 parallel
C927	Lufttrimmer	4...29 pF	CV 8025

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C928	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C929	Keramik-Kondensator	15 pF	CCH 31/15
C930	Glimmer-Kondensator Keramik-Kondensator	200 pF $\pm 5\%$ /500 V 22 pF	CGT 200/5/500 DD 1 CCH 31/22 parallel
C931	Lufttrimmer	4...29 pF	CV 8025
C932	Keramik-Kondensator	100 pF	CCH 68/100
C934	Kf-Kondensator	50 000 pF/125 V	CKS 50 000/125
C935	Kf-Kondensator	100 000 pF/125 V	CKS 100 000/125
C938	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C939	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C940	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C941	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C942	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C943	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C944	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C945	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C946	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C947	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C948	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C949	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C950	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C951	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C952	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
G114	Kristall-Diode		GK/OA 95
K..	zugehörige Kabel siehe Abschnitt 7.11.		

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
L101	Filterspule		EK 07 - 5.27.5
L102	Filterspule		EK 07 - 5.27.5
L103	Filterspule		EK 07 - 5.27.5
L104	Filterspule		EK 07 - 5.27.5
L105	Filterspule		EK 07 - 5.26.7
L106	Filterspule		EK 07 - 5.27.5
R351	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R352	Schichtwiderstand	1 k Ω /0,3 W	WFE 221 k 1
R353	Schichtwiderstand	30 Ω /0,3 W	WFE 221 E 30
R354	Schicht-Drehwiderstand	5 k Ω lin.	WS 9122 F/5 k
R355	Schichtwiderstand	125 Ω /0,5 W	WFE 321 E 125
R357	Schichtwiderstand	16 k Ω /0,5 W	WFE 321 k 16
R358	Schichtwiderstand	1 k Ω /0,5 W	WFE 321 k 1
R359	Schichtwiderstand	80 k Ω /0,3 W	WFE 221 k 80
R360	Schichtwiderstand	50 k Ω /0,3 W	WFE 221 k 50
R361	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R362	Schichtwiderstand	1 k Ω /0,3 W	WFE 221 k 1
R363	Schichtwiderstand	30 Ω /0,3 W	WFE 221 E 30
R364	Schichtwiderstand	125 Ω /0,5 W	WFE 321 E 125
R367	Schichtwiderstand	16 k Ω /0,5 W	WFE 321 k 16
R368	Schichtwiderstand	1 k Ω /0,5 W	WFE 321 k 1
R369	Schichtwiderstand	80 k Ω /0,3 W	WFE 221 k 80
R370	Schichtwiderstand	50 k Ω /0,3 W	WFE 221 k 50
R371	Schichtwiderstand	500 k Ω /0,3 W	WFE 221 k 500
R372	Schichtwiderstand	1 k Ω /0,3 W	WFE 221 k 1
R373	Schichtwiderstand	160 Ω /0,5 W	WFE 321 E 160

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R376	Schichtwiderstand	16 k Ω /0,5 W	WFE 321 k 16
R377	Schichtwiderstand	1 k Ω /0,5 W	WFE 321 k 1
R378	Schichtwiderstand	80 k Ω /0,3 W	WFE 221 k 80
R379	Schichtwiderstand	200 k Ω /0,3 W	WFE 221 k 200
R380	Schicht-Drehwiderstand	100 k Ω lin.	WS 9126/100 k
R381	Schichtwiderstand	100 k Ω /0,5 W	WFE 321 k 100
R382	Schichtwiderstand	1 M Ω /0,5 W	WFE 321 M 1
R385	Schichtwiderstand	300 k Ω /0,5 W	WFE 321 k 300
R387	Schichtwiderstand	1 M Ω /0,5 W	WFE 321 M 1
R388	Schichtwiderstand	800 k Ω /0,5 W	WFE 321 k 800
R389	Schichtwiderstand	2 M Ω /0,5 W	WFE 321 M 2
Rö61	Pentode		EF 805 S
Rö62	Pentode		EF 805 S
Rö63	Pentode		EF 805 S
Rö64	Duo-Diode		EAA 901 S
RsE	Kammrelais		RSS 220042
RsF	Kammrelais		RSS 220042

7.7. Schaltteilliste zu Regel- und NF-Verstärker

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C1001	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C1002	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C1003	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C1004	Lufttrimmer	4...29 pF	CV 8125
C1005	Keramik-Kondensator	27 pF 3 pF	CCH 31/27 CCG 41/3 parallel
C1006	MP-Kondensator	4 µF/350 V	CMR 4/350
C1007	Papier-Kondensator	100 000 pF/250 V	CPK 58 004 n 100
C1008	Papier-Kondensator	100 000 pF/400 V	CPK 62 004 n 100
C1010	Papier-Kondensator	100 000 pF/250 V	CPK 58 004 n 100
C1011	Keramik-Kondensator	150 pF	CCH 68/150
C1012	MP-Kondensator	8 µF/500 V	CMR 8/500
C1013	MP-Kondensator	1 µF/500 V	CMR 1/500
C1014	MP-Kondensator	1 µF/500 V	CMR 1/500
C1015	Papier-Kondensator	100 000 pF/250 V	CPK 100 000/250
C1016	MP-Kondensator	1 µF/500 V	CMR 1/500
C1017	Elektrolyt-Kondensator	100 µF/35 V	CED 21/100/35
C1021	MP-Kondensator	4 µF/350 V	CMR 4/350
C1022	Papier-Kondensator	100 000 pF/250 V	CPK 58 004 n 100
C1023	Kf-Kondensator	10 000 pF/125 V	CKS 10 000/125
C1024	Elektrolyt-Kondensator	50 µF/15 V	CED 21/50/15
C1025	Elektrolyt-Kondensator	4 µF/350 V	CED 21/4/350
C1029	Papier-Kondensator	100 000 pF/250 V	CPK 58 004 n 100
C1030	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C1031	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C1032	Ker.Df-Konensator	5000 pF/500 V	CFR 1/5000/500
C1033	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C1034	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C1035	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C1036	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C1037	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C1038	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C1039	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C1040	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C1041	Ker.Df-Kondensator	5000 pF/500 V	CFR 1/5000/500
C1042	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C1043	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C1044	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C1045	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C1046	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C1047	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C1048	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C1051	Papier-Kondensator	25 000 pF/250 V	CPM 25 000/250
C1052	Glimmer-Kondensator Keramik-Kondensator	700 pF $\pm 5\%$ /250 V etwa 100 + 50 pF	CGT 700/5/250 DD 1 CCH 11/... + CCH 31/...
C1053	Korrektionskondensator	3...43 pF	CV 52140
C1054	Lufttrimmer	4...29 pF	CV 8125
C1055	Keramik-Kondensator	56 pF 4 pF	CCH 31/56 CCG 41/4 parallel
C1056	Keramik-Kondensator	2 x 100 pF	2 x CCH 31/100 paral.
C1057	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C1058	Keramik-Kondensator	12 pF	CCH 31/12

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C1059	Papier-Kondensator	50 000 pF/250 V	CPM 50 000/250
C1060	Kf-Kondensator	1000 pF/500 V	CKS 1000/500
C1064	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C1065	Papier-Df-Kondensator	10 000 pF/300 V	CPD 10 000/300
C1066	Papier-Df-Kondensator	50 000 pF/300 V	CPD 50 000/300
C1068	Papier-Kondensator	100 000 pF/400 V	CPK 62 004 n 100
C1069	Kf-Kondensator	25 000 pF/250 V	CKS 25 000/250
C1070	Kf-Kondensator	10 000 pF/250 V	CKS 10 000/250
C1071	Papier-Kondensator	22 000 pF/250 V	CPK 58 003 n 22
G115	Kristall-Diode		GK/S 33
G116	Ge-Diode		4 x GK/OA 85
G117	Ge-Diode		4 x GK/OA 85
K..	zugehörige Kabel siehe Abschnitt 7.11.		
L111	Bandfilterspule		EK 07 - 6.8
L112	Bandfilterspule		EK 07 - 6.8
L114	Schwingspule		EK 07 - 6.9
L115	Schwingkreisspule		EK 07 - 6.14
R401	Schichtwiderstand	500 k Ω /0,5 W	WFE 321 k 500
R402	Schichtwiderstand	1 k Ω /0,3 W	WFE 221 k 1
R403	Schicht-Drehwiderstand	1 k Ω lin.	WS 9122 F/1 k
R404	Schichtwiderstand	200 Ω /0,5 W	WFE 321 E 200
R405	Schichtwiderstand	40 k Ω /0,5 W	WFE 321 k 40
R406	Schichtwiderstand	1 k Ω /0,5 W	WFE 321 k 1
R407	Schichtwiderstand	10 k Ω /1 W	WFE 521 k 10

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R408	Schichtwiderstand	100 k Ω /0,3 W	WFE 221 k 100
R409	Schichtwiderstand	10 k Ω /1 W	WFE 521 k 10
R410	Schichtwiderstand	400 Ω /0,5 W	WFE 321 E 400
R411	Schichtwiderstand	100 k Ω /0,5 W	WFE 321 k 100
R412	Schichtwiderstand	100 Ω /0,3 W	WFE 221 E 100
R413	Schichtwiderstand	100 Ω /0,5 W	WFE 321 E 100
R414	Schichtwiderstand	5 k Ω /0,5 W	WFE 321 k 5
R415	Schicht-Drehwiderstand	5 k Ω lin.	WS 9122 F/5 k
R416	Schichtwiderstand	2,5 k Ω /0,5 W	WFE 321 k 2,5
R417	Schichtwiderstand	50 k Ω /0,5 W	WFE 321 k 50
R418	Schichtwiderstand	30 k Ω /1 W	WFE 521 k 30
R419	Schichtwiderstand	50 k Ω /0,5 W	WFE 321 k 50
R420	Schichtwiderstand	10 k Ω /0,5 W	WFE 321 k 10
R421	Schichtwiderstand	600 Ω /0,5 W	WFE 321 E 600
R422	Schichtwiderstand	8 k Ω /0,5 W	WFE 321 k 8
R423	Schichtwiderstand	1,6 k Ω /0,5 W	WFE 321 k 1,6
R425	Schicht-Drehwiderstand	10 k Ω lin.	WS 9122 F/10 k
R426	Schichtwiderstand	3 M Ω /0,5 W	WFE 321 M 3
R427	Schicht-Drehwiderstand	1 M Ω lin.	WS 9122 F/1 M
R428	Schichtwiderstand	2 M Ω /0,5 W	WFE 321 M 2
R429	Schichtwiderstand	1 M Ω /0,5 W	WFE 321 M 1
R430	Schichtwiderstand	10 M Ω /0,5 W	WFE 321 M 10
R431	Schicht-Drehwiderstand	100 k Ω lin.	WS 9122 F/100 k
R432	Schichtwiderstand	50 k Ω /0,5 W	WFE 321 k 50
R433	Schicht-Drehwiderstand	1 k Ω lin.	WS 9122 F/1 k
R434	Schichtwiderstand	etwa 0...100 k Ω	WFE 321...

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R435	Schichtwiderstand	2 k Ω /0,5 W	WFE 321 k 2
R436	Schichtwiderstand	1 M Ω /0,5 W	WFE 321 M 1
R437	Schichtwiderstand	200 Ω /0,5 W	WFE 321 E 200
R438	Schichtwiderstand	50 k Ω /0,5 W	WFE 321 k 50
R439	Schichtwiderstand	8 k Ω /1 W	WFE 521 k 8
R440	Schichtwiderstand	125 k Ω /0,5 W	WFE 321 k 125
R441	Schichtwiderstand	200 Ω /0,5 W	WFE 321 E 200
R442	Schichtwiderstand	200 Ω /0,5 W	WFE 321 E 200
R443	Schichtwiderstand	2 k Ω /0,5 W	WFE 321 k 2
R444	Schichtwiderstand	16 k Ω /0,5 W	WFE 321 k 16
R445	Schichtwiderstand	16 k Ω /0,5 W	WFE 321 k 16
R446	Schichtwiderstand	2 k Ω /1 W	WFE 521 k 2
R447	Schicht-Drehwiderstand	500 k Ω log.	WS 7226/500 k
R448	Schichtwiderstand	1 k Ω /0,3 W	WFE 221 k 1
R449	Schichtwiderstand	125 Ω /0,5 W	WFE 321 E 125
R450	Schichtwiderstand	20 k Ω /0,5 W	WFE 321 k 20
R451	Schichtwiderstand	100 k Ω /0,5 W	WFE 321 k 100
R452	Schichtwiderstand	20 k Ω /0,5 W	WFE 321 k 20
R453	Schichtwiderstand	600 Ω /0,5 W	WFE 321 E 600
R454	Schichtwiderstand	20 k Ω /0,5 W	WFE 321 k 20
R455	Schichtwiderstand	400 k Ω /0,5 W	WFE 321 k 400
R456	Schichtwiderstand	500 Ω /0,5 W	WFE 321 E 500
R457	Schichtwiderstand	1 k Ω /0,5 W	WFE 321 k 1
R458	Schichtwiderstand	1 M Ω /0,5 W	WFE 321 M 1
R459	Schichtwiderstand	12,5 k Ω /0,5 W	WFE 321 k 12,5
R460	Schichtwiderstand	12,5 k Ω /1 W 12,5 k Ω /1 W	WFE 521 k 12,5 WFE 521 k 12,5 parallel

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R461	Schichtwiderstand	4 k Ω /0,5 W	WFE 321 k.4
Rö71	Pentode		EF 805 S
Rö72	Duo-Triode		E 88 CC
Rö73	Duo-Diode		EAA 901 S
Rö74	Duo-Diode		EAA 901 S
Rö75	End-Pentode		EL 84
Rö76	Duo-Triode		ECC 801 S
RsG	Kammrelais		RSS 220048
RsH	Kammrelais		RSS 220048
Tr7	Übertrager		EK 07 - 6.10/3
Tr8	Übertrager		EK 07 - 6.11/2

7.8. Schaltteilliste zu Netzteil

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C1101	Elektrolyt-Kondensator	2 x 100 μ F/35 V	2 x CED 21/100/35 parall.
C1102	Elektrolyt-Kondensator	100 μ F/35 V	CED 21/100/35
C1103	Elektrolyt-Kondensator	100 μ F/35 V	CED 21/100/35
C1105	MP-Kondensator	4 μ F/160 V	CMR 4/160 D
C1106	MP-Kondensator	4 μ F/160 V	CMR 4/160 D
C1108	Elektrolyt-Kondensator	50+50 μ F/350 V	CEG 21/50+50/350 parallel
C1109	Elektrolyt-Kondensator	50+50 μ F/350 V	CEG 21/50+50/350 parallel
C1110	Elektrolyt-Kondensator	50+50 μ F/350 V	CEG 21/50+50/350 parallel
C1111	MP-Kondensator	0,1 μ F/500 V	CMR 0,1/500
G118	Gleichrichter	250 V/40 mA	GNE 76341
G119	Gleichrichter	25 V/450 mA	GNB 74541
G120	Gleichrichter	250 V/40 mA	GNE 76341
G121	Gleichrichter	300 V/125 mA	GNB 19/300/125 M
G122	Gleichrichter	300 V/125 mA	GNB 19/300/125 M
G123	Gleichrichter	300 V/125 mA	GNB 19/300/125 M
L121	Drossel		DB 220/2
R501	Schichtwiderstand	80 k Ω /0,5 W	WFE 321 k 80
R502	Schichtwiderstand	800 Ω /1 W 800 Ω /1 W	WFE 521 E 800 WFE 521 E 800 parallel
R503	Schichtwiderstand	500 Ω /0,5 W	WFE 321 E 500
R504	Schicht-Drehwiderstand	500 Ω lin.	WS 9122 F/500
R505	Schichtwiderstand	400 Ω /0,5 W	WFE 321 E 400

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R507	Schichtwiderstand	12 k Ω /1 W 12 k Ω /1 W	WFE 521 k 12 WFE 521 k 12 parallel
R508	Drahtwiderstand	1 k Ω /4 W	WD 1 k/4
R509	Drahtwiderstand	2 k Ω /6 W	WD 2 k/6
R510	Draht-Drehwiderstand	50 Ω /4 W	WR 4 F/50
Rö81	Stabilisator		150 C 2
Rö82	Stabilisator		85 A 2
S 3	Spannungswähler		FD 60500
Tr9	Netztransformator		EK 07 - 8.5/2

7.9. Schaltteilliste zu Frontplatte

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
G124	Kristall-Diode		GK/S 33
G125	Kristall-Diode		GK/S 33
J 1	Drehspul-Strommesser		JNS 20108
J 2	Drehspul-Strommesser		JNS 20401
K..	zugehörige Kabel siehe Abschnitt 7.11.		
R601	Drahtwiderstand	2 Ω /6 W	WD 2/6
R602	Schicht-Drehwiderstand	500 k Ω lin.	WS 9126/500 k
R603	Schichtwiderstand	10 k Ω /0,5 W	WFE 321 k 10
R605	Schicht-Drehwiderstand	50 k Ω lin.	WS 7126/50 k
R606	Schichtwiderstand	1 M Ω /0,5 W Abgl. Prüffeld	WFE 321 M 1
R607	Schichtwiderstand	1 M Ω /0,5 W	WFE 321 M 1
R608	Schicht-Drehwiderstand	500 k Ω lin.	WS 9122 F/500 k
RL2	Skalenlampe		RL 165 S
S4	Nockenschalter		EK 07 - 13.14
S5	Mikroschalter		SDH 32300
S6	Scheibenschalter		SRN 314/32
S7	Scheibenschalter		SRN 314/2/32
S8	Drucktaste		EK 07 - 13.15
S9	Drucktaste		SR 613 F/2
S10	Schalter		EK 07 - 13.16

7.10. Schaltteilliste zu Gesamtverdrahtung

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
C1130	Papier-Df-Kondensator	1250 pF/350 V	CPD 1250/350
C1131	Kf-Kondensator	250 pF/1000 V	CKS 250/1000
C1132	Papier-Kondensator	2200 pF/1000 V	CPK 70 003 n 2,2
C1133	Papier-Kondensator	2200 pF/1000 V	CPK 70 003 n 2,2
C1134	Ker.Df-Kondensator	500 pF/500 V	CFR 1/500/500
C1135	Papier-Df-Kondensator	1250 pF/350 V	CPD 1250/350
C1136	Kf-Kondensator	250 pF/1000 V	CKS 250/1000
C1137	Papier-Kondensator	2200 pF/1000 V	CPK 70 003 n 2,2
C1138	Papier-Kondensator	2200 pF/1000 V	CPK 70 003 n 2,2
C1139	Ker.Df-Kondensator	500 pF/500 V	CFR 1/500/500
K..	zugehörige Kabel siehe Abschnitt 7.11.		
L130	Drossel		EK 07 - 10.3
L131	Drossel		EK 07 - 10.3
L132	Drossel		EK 07 - 10.4
L133	Drossel		EK 07 - 10.3
L134	Drossel		EK 07 - 10.3
L135	Drossel		EK 07 - 10.4
R651	Schichtwiderstand	10 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 10
R652	Schichtwiderstand	16 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 16
R653	Schichtwiderstand	16 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 16
R654	Schichtwiderstand	30 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 30

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R655	Schichtwiderstand	16 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 16
R656	Schichtwiderstand	40 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 40
R657	Schichtwiderstand	12,5 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 12,5
R658	Schichtwiderstand	12,5 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 12,5
R659	Schichtwiderstand	30 Ω /0,5 W 10 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 30 WFE 321 E 10 parallel
R660	Schichtwiderstand	12,5 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 12,5
R661	Schichtwiderstand	12,5 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 12,5
R662	Schichtwiderstand	30 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 30
R663	Schichtwiderstand	50 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 50
R664	Schichtwiderstand	16 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 16
R665	Schichtwiderstand	16 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 16
R666	Schichtwiderstand	40 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 40
R667	Schichtwiderstand	20 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 20
R668	Schichtwiderstand	12,5 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 12,5
R669	Schichtwiderstand	10 Ω /0,5 W 5 Ω /0,5 W Abgl. Prüffeld	WFE 321 E 10 WFE 321 E 5 parallel
R670	Schichtwiderstand	300 k Ω /0,5 W	WFE 321 k 300
R671	Schichtwiderstand	100 k Ω /1 W	WFE 321 k 300
R672	Schichtwiderstand	3 M Ω /0,5 W Abgl. Prüffeld	WFE 321 M 3

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
R673	Schichtwiderstand	1 M Ω /0,5 W Abgl. Prüffeld	WFE 321 M 1
R674	Schichtwiderstand	1 M Ω /0,5 W Abgl. Prüffeld	WFE 321 M 1
R675	Schichtwiderstand	12,5 k Ω /0,5 W Abgl. Prüffeld	WFE 321 k 12,5
R676	Schichtwiderstand	8 k Ω /0,5 W Abgl. Prüffeld	WFE 321 k 8
R13	Skalenlampe		RL 165 S
R14	Skalenlampe		RL 165 S
R15	Skalenlampe		RL 165 S
R16	Skalenlampe		RL 165 S
R17	Skalenlampe		RL 165 S
S11	Stufenschalter		SRW 30210
Si1	Schmelzeinsatz	0,4 A	M 0,4 C DIN 41571
Si2	Schmelzeinsatz	1 A (220/235 V)	M 1 C DIN 41571
Si3	Schmelzeinsatz	1 A (220/235 V)	M 1 C DIN 41571

7.11. Schaltteilliste der Kabel

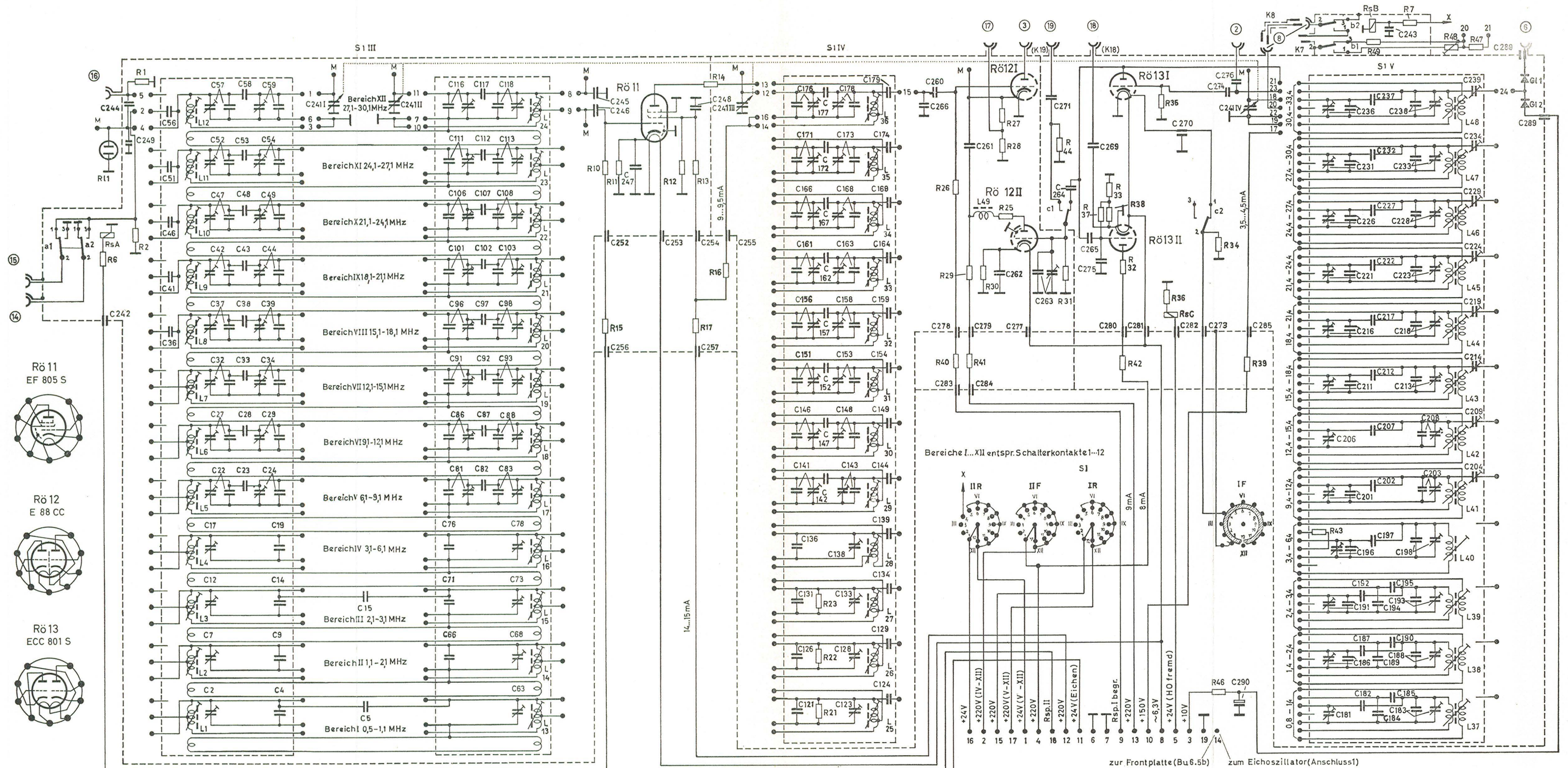
Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
K1I	Kabel		LKK 61900
K1III	Kabel		R 6402/15
K2	Kabel		LKK 61900
K3	Kabel		R 6422/35
K4	Kabel		R 6423/29
K5	Kabel		R 6423/28
K6	Kabel		R 6423/31
K7	Kabel		LKK 61900
K8	Kabel		R 6422/11
K9	Kabel		LKK 61900
K10	Kabel		R 6422/63
K11	Kabel		LKK 61900
K12	Kabel		R 6402/
K13	Kabel		R 6402/18
K14	Kabel		R 6423/51
K15	Kabel		R 6402/
K16	Kabel		R 6402/
K17	Kabel		R 6403/
K18	Kabel		R 6403/
K19	Kabel		R 6403/
K20	Kabel		R 6402/
K21	Kabel		R 6402/
K22	Kabel		R 6402/
K25	Anschlußkabel		LK 335

Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
K30	Kabel		LKK 91600
K31	Kabel		LFA 03022
K33	Kabel		LFA 03022
K34	Kabel		LKK 91600
K35	Kabel		LKK 91600
K36	Kabel		LKK 91600
K37	Kabel		LKK 92220
K38	Kabel		LKK 92220
K39	Kabel		LKK 92220
K40	Kabel		LKK 92220
K43	Kabel		LKK 91600
K44	Kabel		LKK 91600
K50	Kabel		LKK 61900
K51	Kabel		LKK 61900
K52	Kabel		LKK 61900
K53	Kabel		LKK 92220
K54	Kabel		LKK 92220
K55	Kabel.		LKK 92220
K56	Kabel		LKK 92220
K57	Kabel		LKK 92220
K58	Kabel		LKK 92220
K59	Kabel		LKK 92220
K60	Kabel		LKK 91600
K61	Kabel		LFA 03022
K62	Kabel		LFA 03022
K63	Kabel		LKK 91600

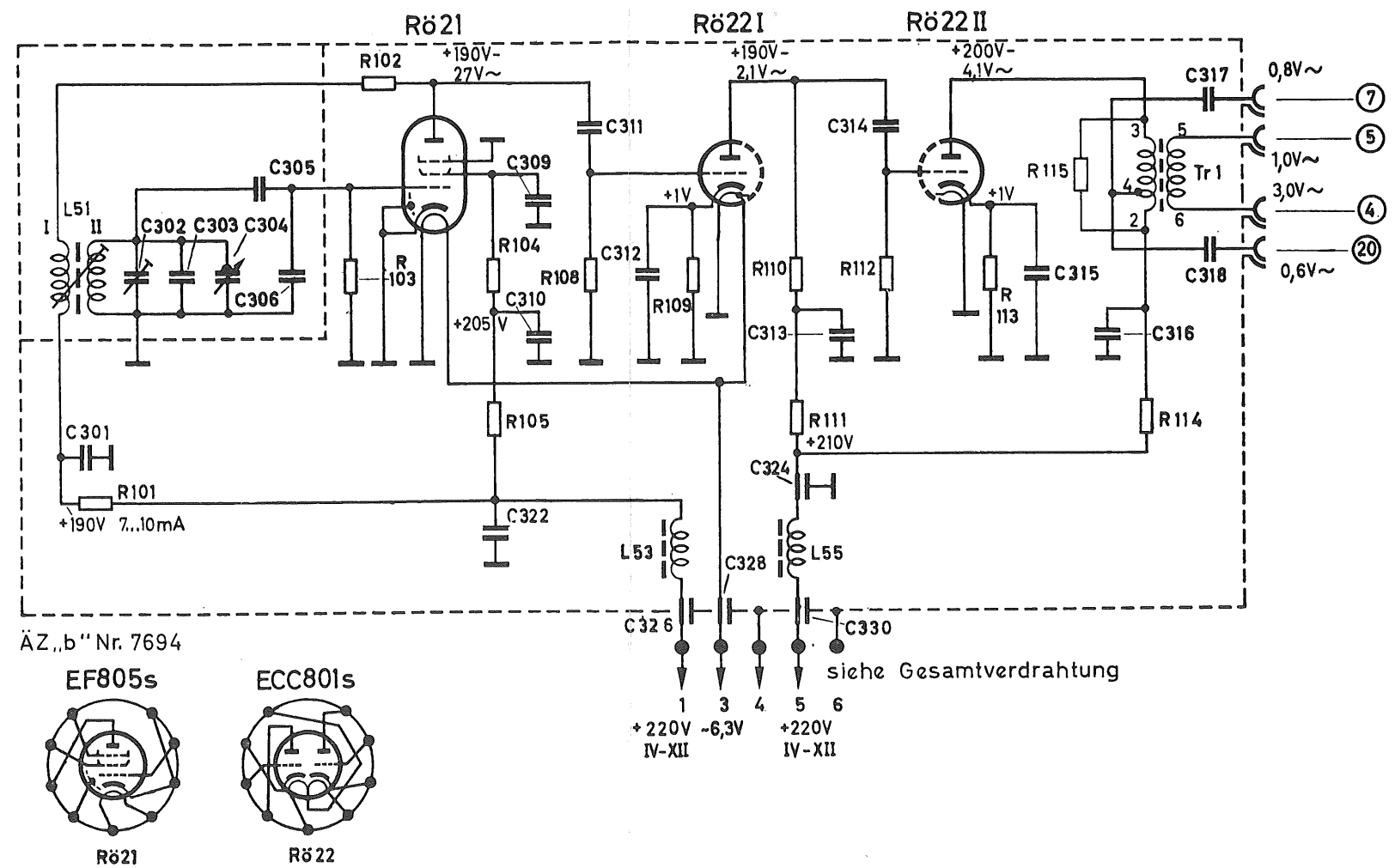
Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
K64	Kabel		LKK 91600
K65	Kabel		LFA 03022
K66	Kabel		LFA 03022
K67	Kabel		LFA 03022
K68	Kabel		LKK 92220
K69	Kabel		LKK 92220
K70	Kabel		LKK 92220
K71	Kabel		LKK 92220
K72	Kabel		LKK 91600
K73	Kabel		LKK 91600
K74	Kabel		LKK 92220
K75	Kabel		LFA 03022

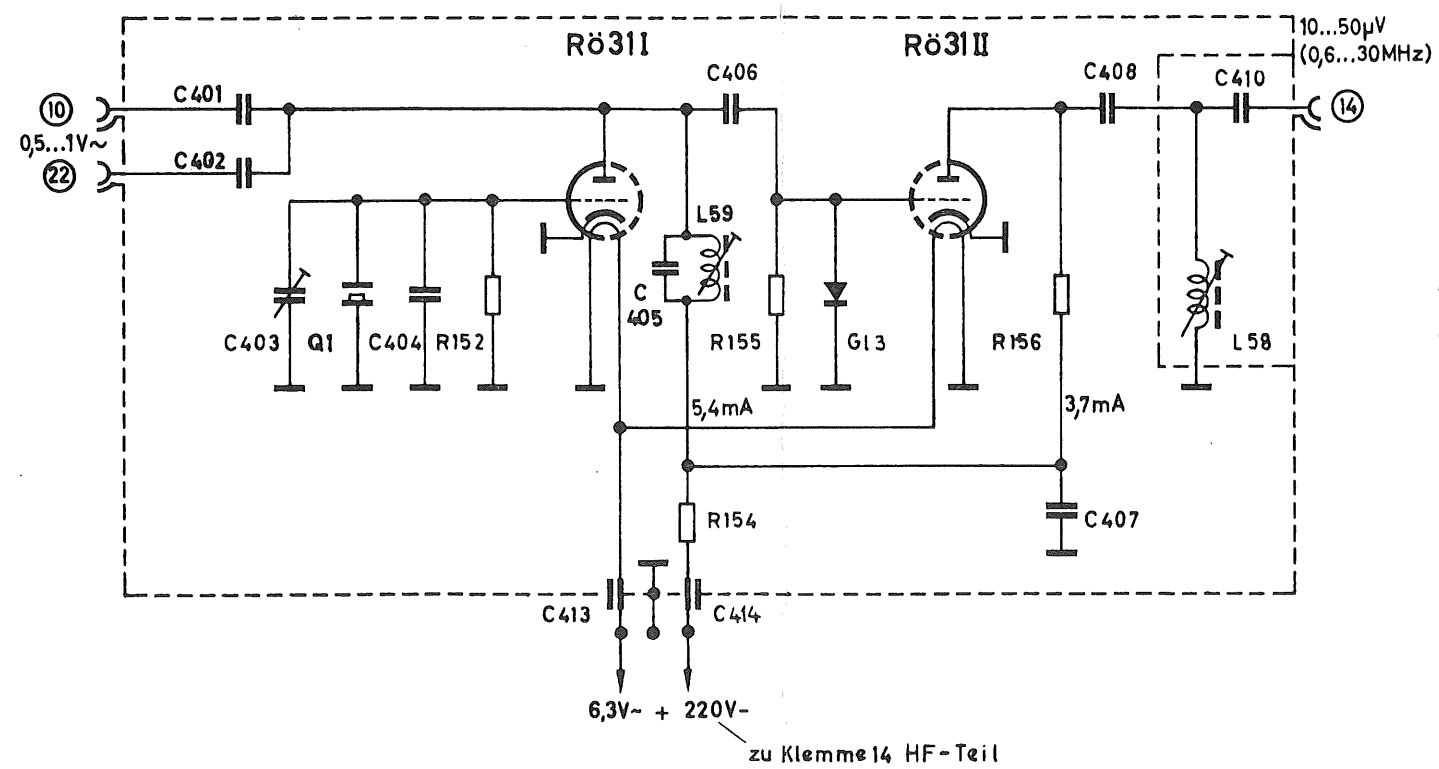
7.12. Einsatz

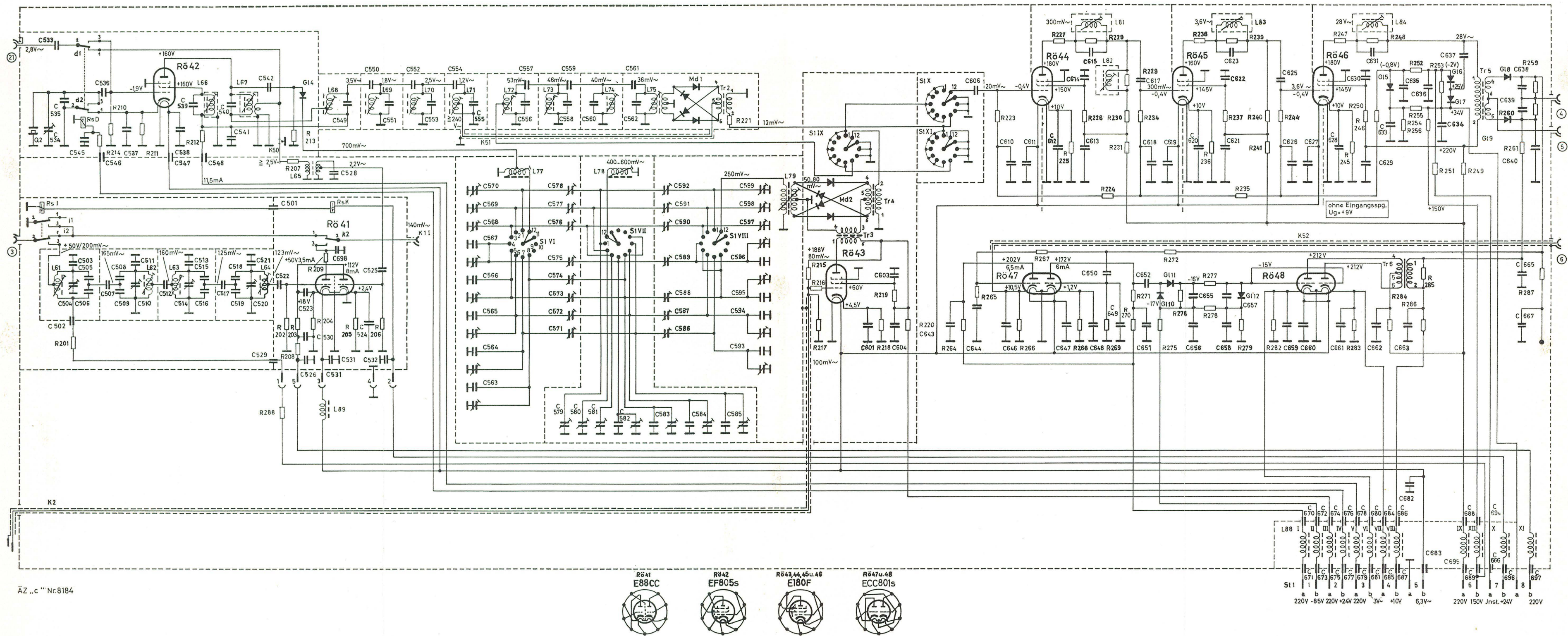
Kenn- zei- chen	Benennung	Wert	R&S-Sach-Nr.
K112	Kabel		LKK 61900
K115	Kabel		LKK 61900
K116	Kabel		LKK 61900
K117	Kabel		LKK 61900
K118	Kabel		LKK 91000
K119	Kabel		LKK 91000
K120	Kabel		LKK 61900
K121	Kabel		LKK 61900
K122	Kabel		LKK 61900
K131	Kabel		LFA 03022
K133	Kabel		LFA 03022
K135	Kabel		LKK 91600
Mo1	Motor		ZAM 170710
S12	Drucktaste		SR 613 F/1
S13	Drucktaste		SR 613 F/1
S14	Drucktaste		SR 614 F/2-2 (-)1
S15	Schaltbuchse		SR 632/2
S16	Schaltbuchse		SR 632/2



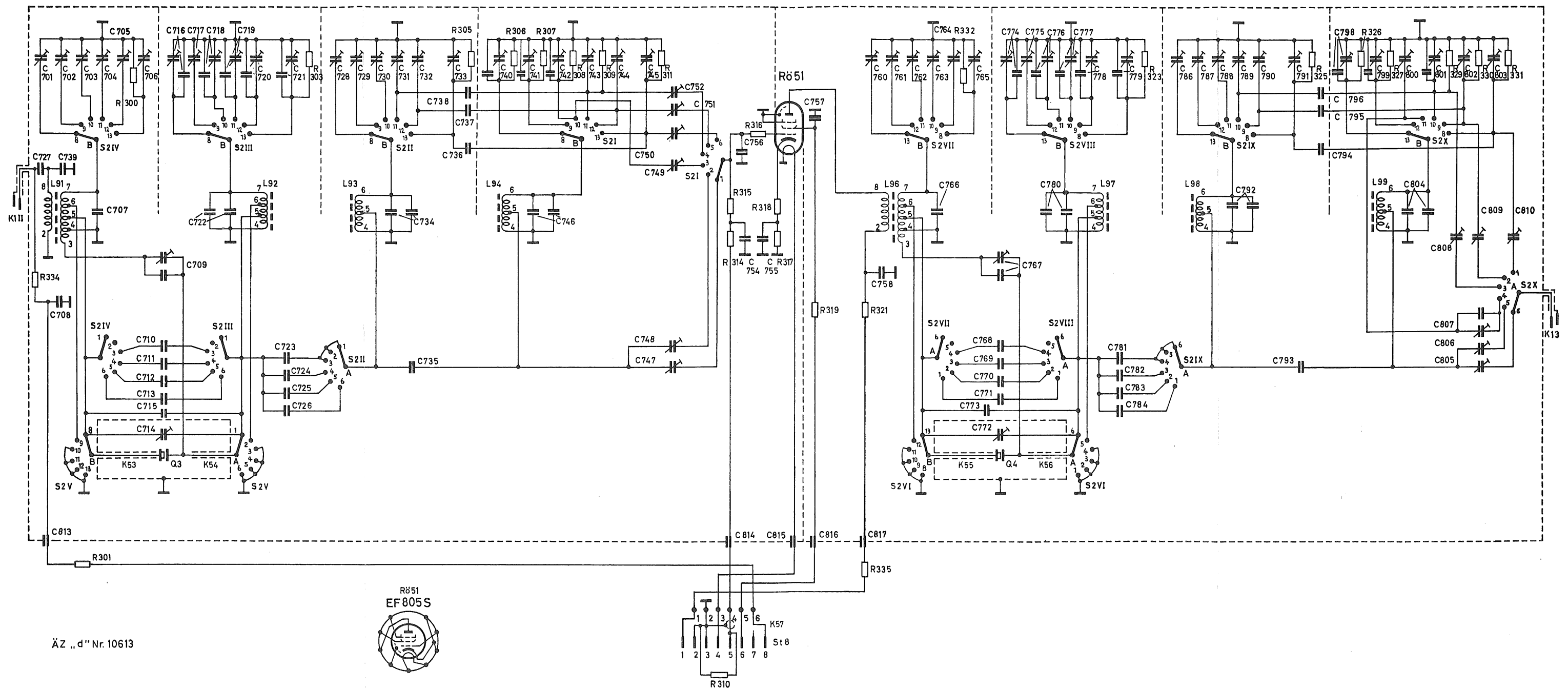
AZ „d“ Nr. 10613

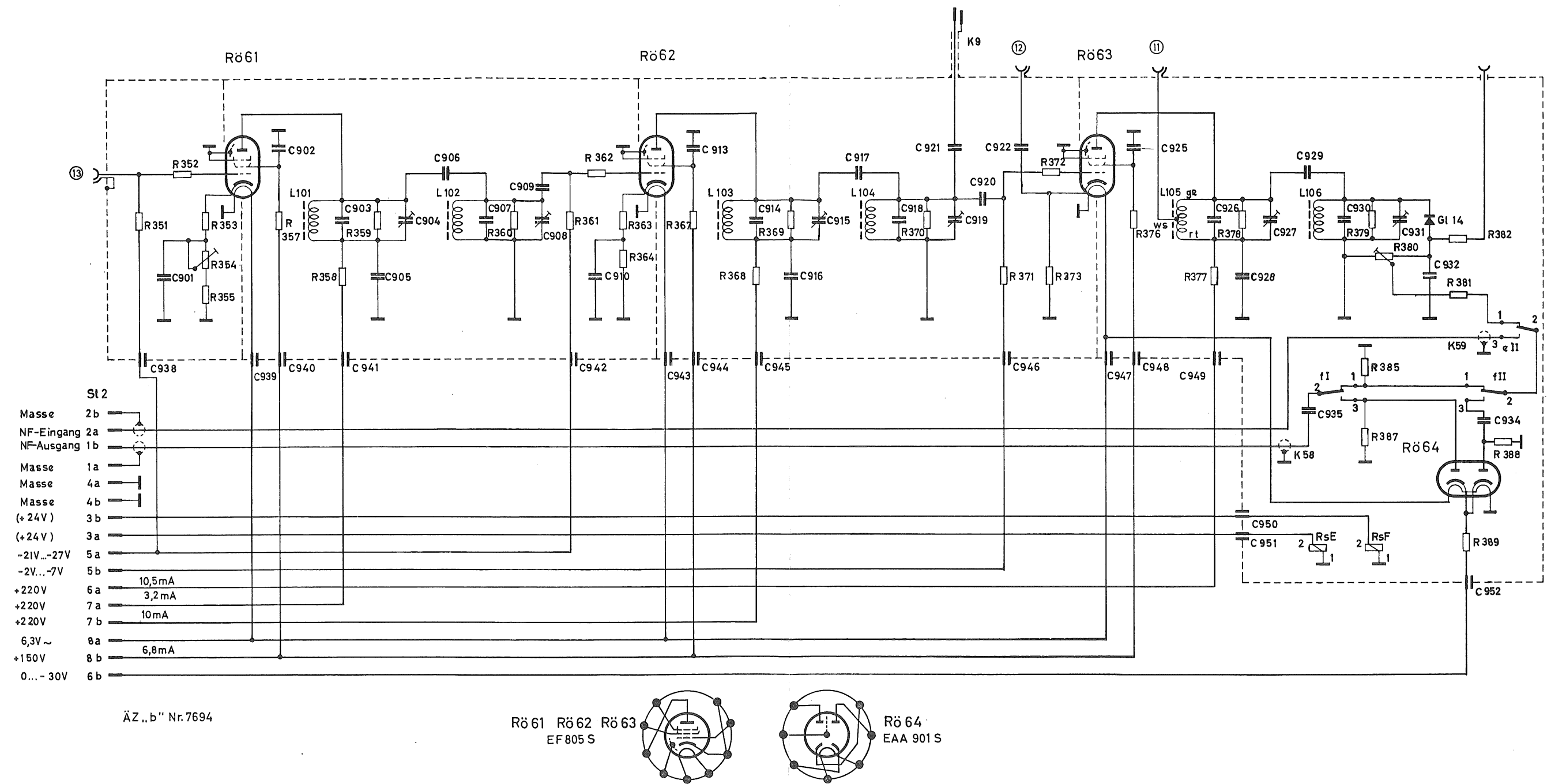




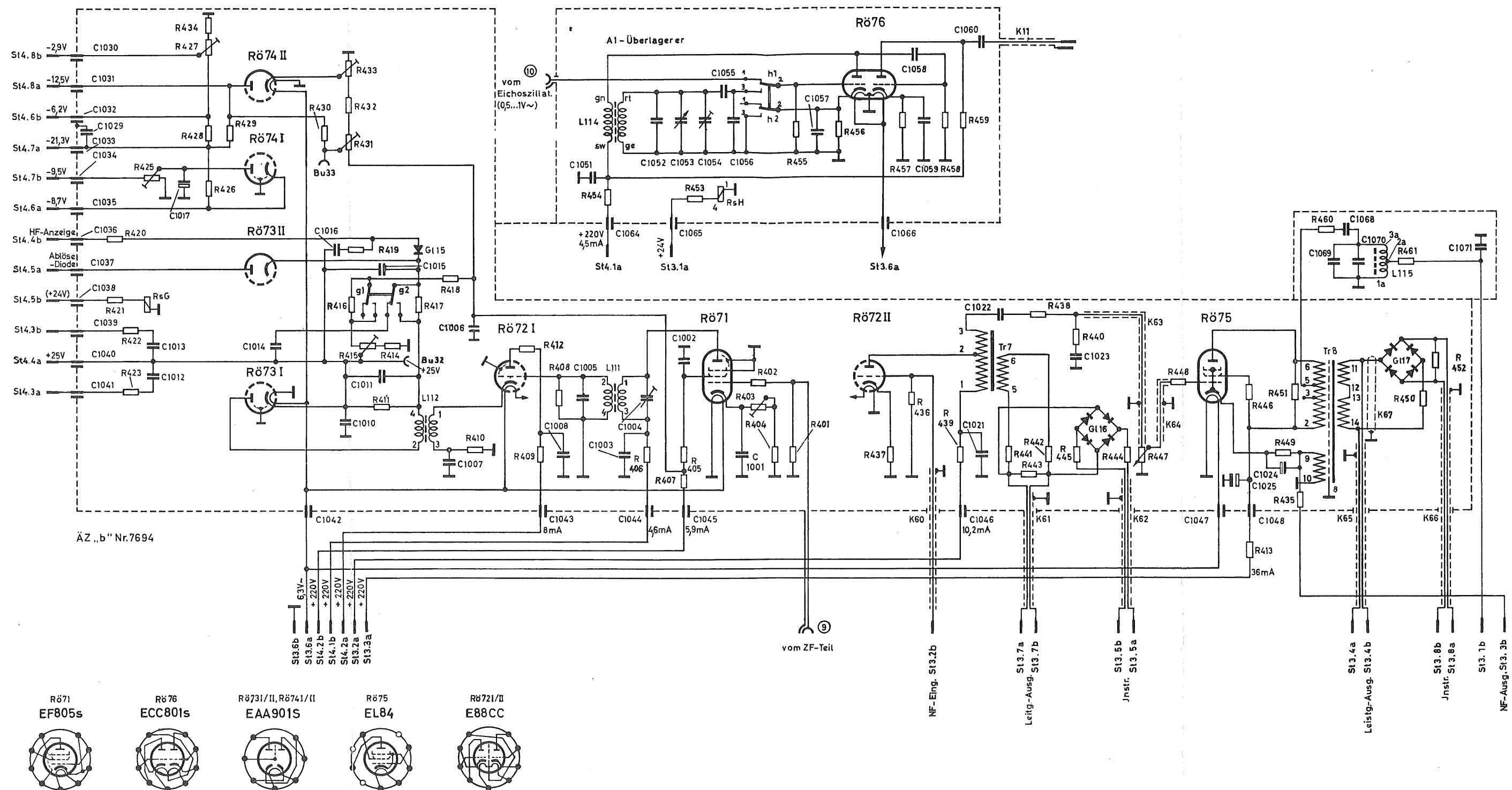


Steuerteil

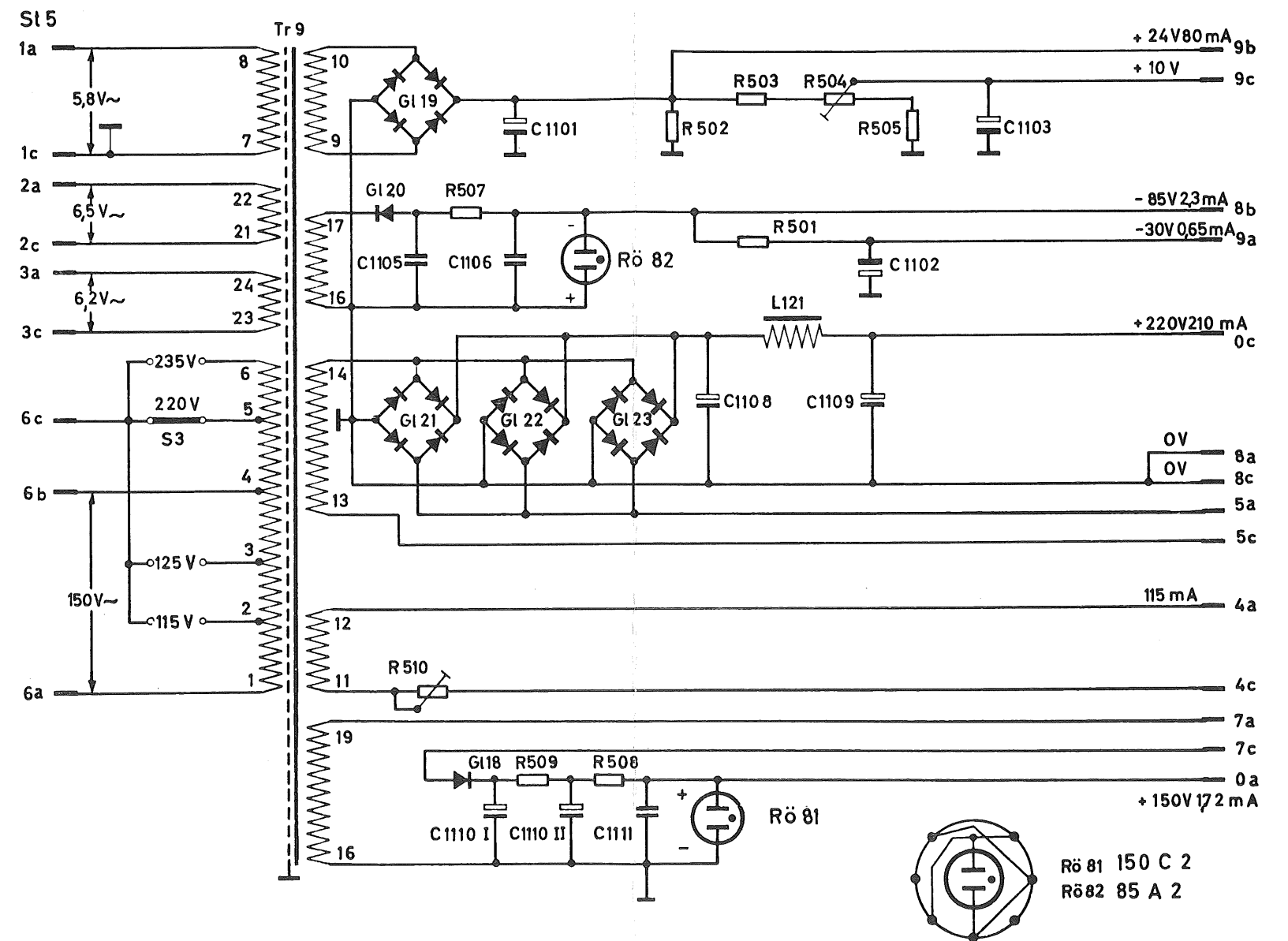




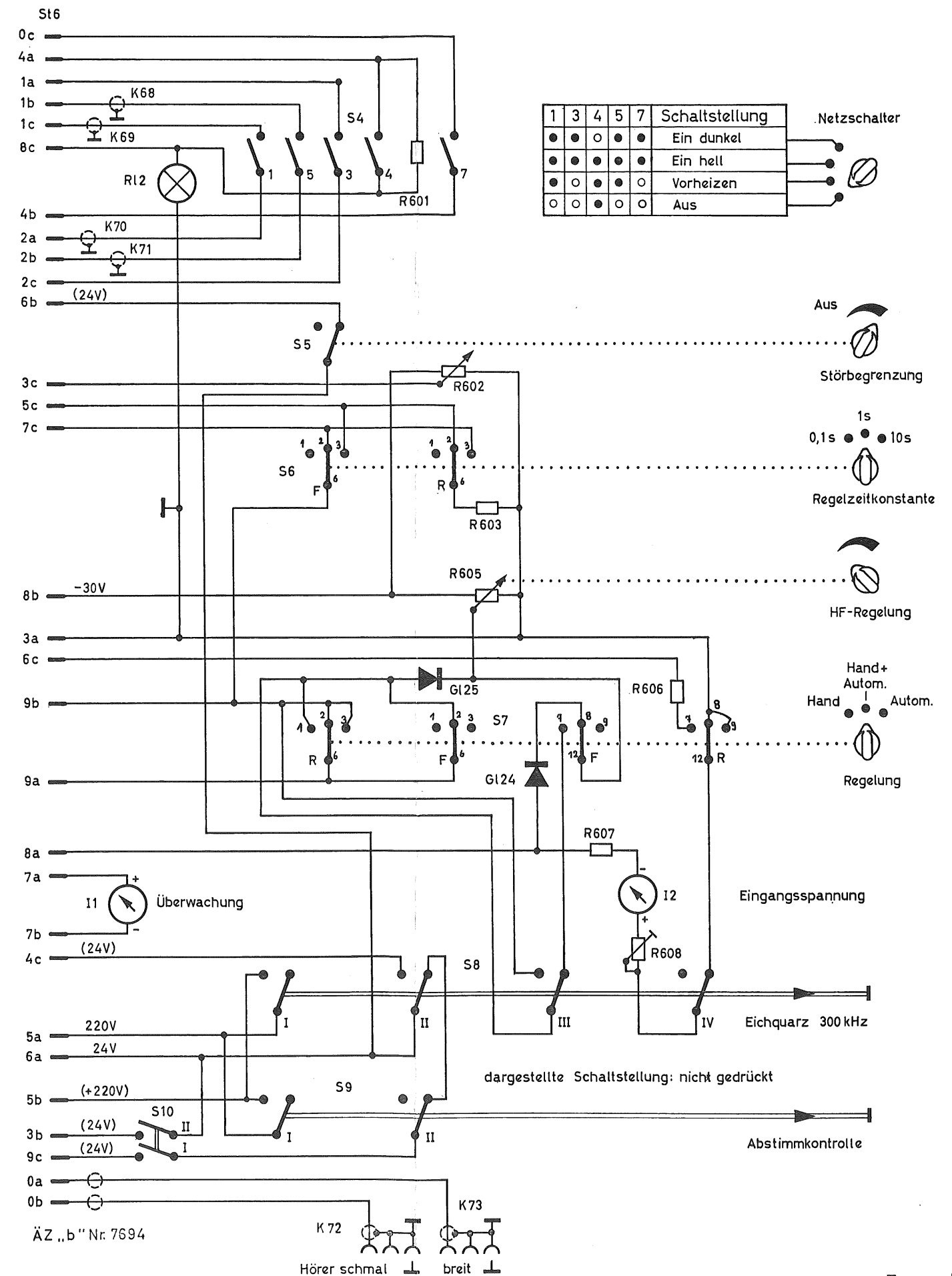
ZF-Teil



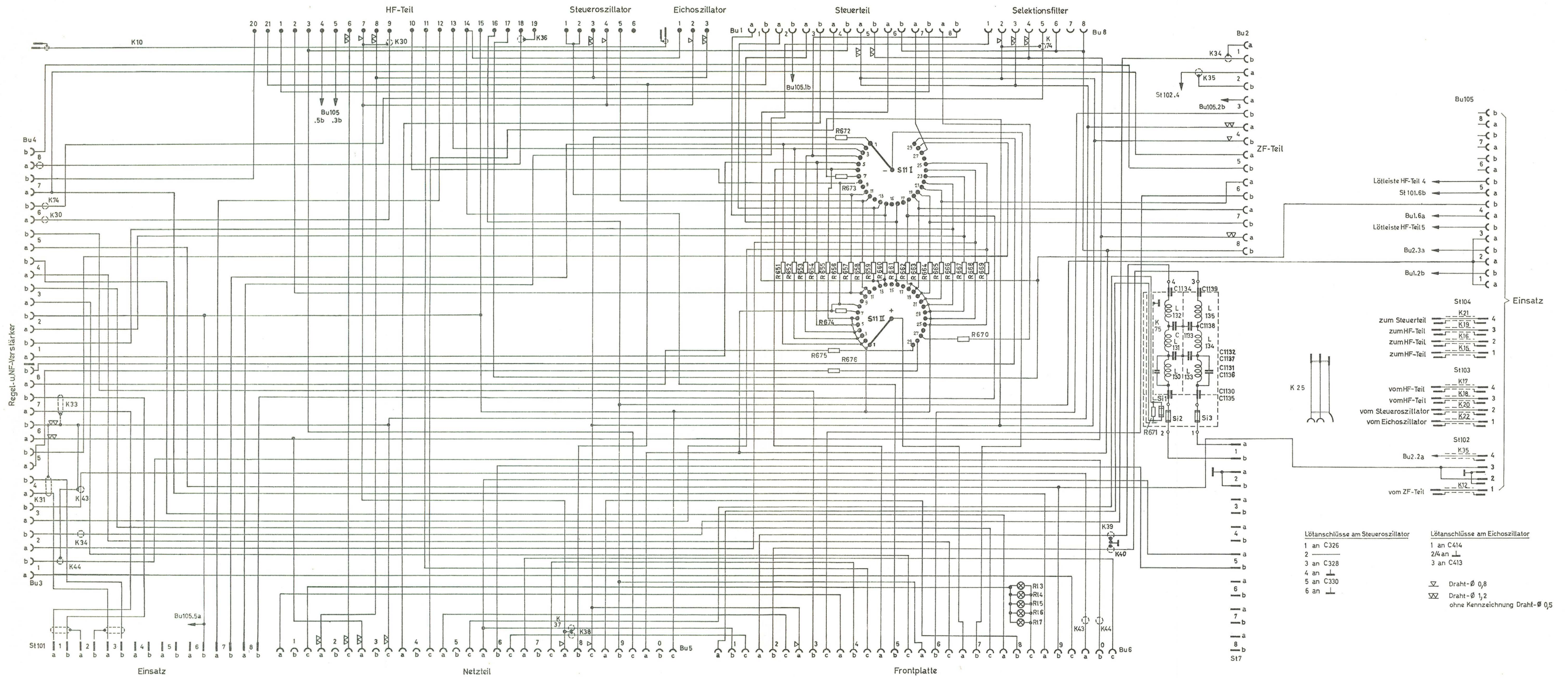
Regel- und NF-Verstärker



Netzteil



Frontplatte



ÄZ „c“ Nr. 8184

