

Aligning Instructions

1969

REMOVAL OF CHASSIS

1. Pull knobs and lay unit face down
2. Loosen three screws at case bottom and back part upward
3. Take off battery cover and remove batteries
4. Pull telescopic antenna
5. Loosen the screws marked by shaded squares in the dismounting sketch
6. Remove chassis carefully and desolder loudspeaker

D. C. ALIGNMENT (no signal, $U_B = 7.5$ V, AM-button pressed)

Adjustment of AF Push-Pull Stage

Connect Milliammeter in place of wire link to collector AC 188 k. Adjust quiescent current of AC 187 k and AC 188 k with R 59 (500 Ω) to 5.5 mA. Resolder wire link after completion of adjustment of quiescent current.

Adjustment of the IF Amplifier

Adjust with R 28 collector current of BF 240 (T V) to obtain a voltage of 1.3 V at the emitter resistor R 34.

FM-IF ALIGNMENT 10.7 MHz (unit in position FM, tone control at full treble, AFC off)

Alignment Sequence	Connection of Wobblulator Output	Connection of Wobblulator Scope	Alignment
Filter IV	to point 6 of F III	to point 6 in F IV (via test prod)	detune (b) (a) to maximum and symmetrie
Filter III	to point 5 of F II		(c) and (d) to maximum and symmetrie
Filter II	to point 5 of F I		(e) and (f) to maximum and symmetrie
Filter I and IF circuit 9226-703	to variable capacitor of AM-input circuit		(g) and (h) to maximum and symmetrie
Discriminator and AM-Suppression	to point 6 F III	to point 1/2 of F IV	(b) to symmetrie. Now increase input signal so that the IF voltage at the base of T VI (BF 241) amounts to 50 mV. Adjust now with R 3 (in filter IV) at signal AM modulated (30 - 40%) to best suppression.
	to variable capacitor of AM-input circuit (without AM modulation)		correct (b) if necessary

AM-IF ALIGNMENT 460 kHz (button AM pressed)

Alignment Sequence	Connection of Wobblulator Output	Connection of Wobblulator Scope	Alignment
Filter III	to point 5 of F II	loose coupled with collector of BF 240 (F III point 12)	(I) to maximum and symmetry
Filter II	to point 5 of F I		(II) and (III) to maximum and symmetry
Filter I	to variable capacitor of AM-input circuit		(IV) and (V) to maximum and symmetry

ALIGNMENT OF AM-OSCILLATOR AND INPUT CIRCUIT

Range Frequency (pointer position)	Oscillator	Input Circuit	Sensitivity	Oscillator Voltage	Remarks
AM 560 kHz	ⓐ max.	ⓑ max.	10 μ F	70 - 80 mV	Carry out SW-alignment at desoldered telescopic antenna. Feed signal via 18 pF in telescopic antenna.
1450 kHz	ⓐ max.	ⓑ max.	10 μ F		
KW I 1.8 MHz	ⓐ max.	ⓑ max.	6 μ F	60 - 80 mV	
3.7 MHz	ⓐ max.	ⓑ max.	6 μ F		
KW II 6.5 MHz	ⓐ max.	ⓑ max.	4 μ F	40 - 50 mV	
15 MHz	ⓐ max.	ⓑ max.	4 μ F		

ALIGNMENT OF FM-OSCILLATOR AND IF CIRCUIT (FM button pressed, AFC off)

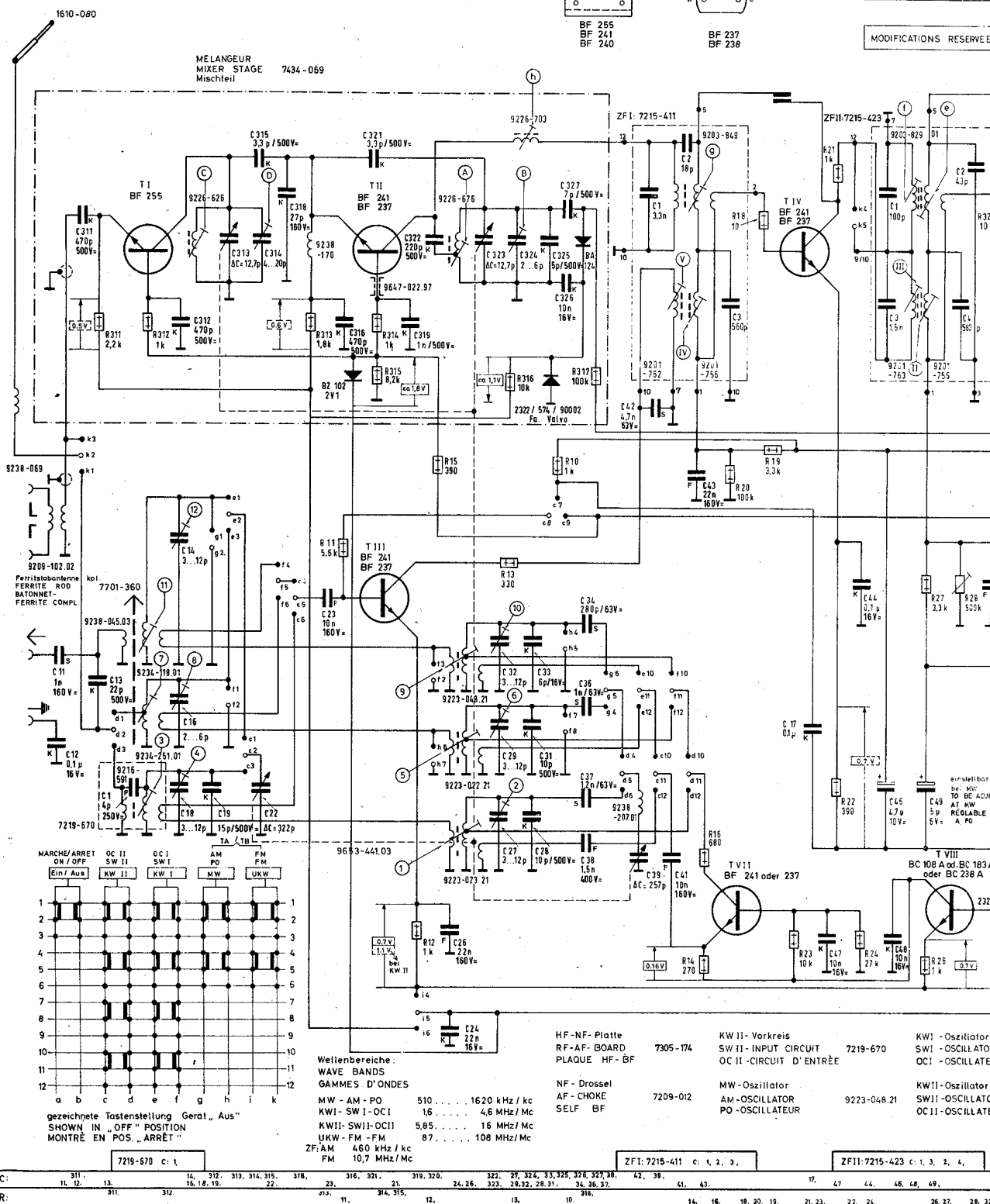
Generator Frequency (pointer position)	Oscillator	Intermediate Circuit	Oscillator Voltage (at emitter of BF 241)	Remarks
88 MHz	(A) max.	(C) max.	75 mV	The signal of the generator with an output resistance of 60 Ω is feed directly to the mixer stage
106 MHz	(B) max.	(D) max.		

To check the AFC, a signal of at least 2 μ V must be applied at the input of the mixer stage. If the applied signal frequency alters by ± 75 kHz of the adjusted mid-frequency, an AF maximum at point 1/2 of F IV at switched on AFC should be obtained. If not, correct with core of secondary of F IV. At a load resistance of 60 Ω the fundamental oscillation should not exceed 2 mV after the alignment at the mixer stage input. The noise factor is 3.5-5 kTo.

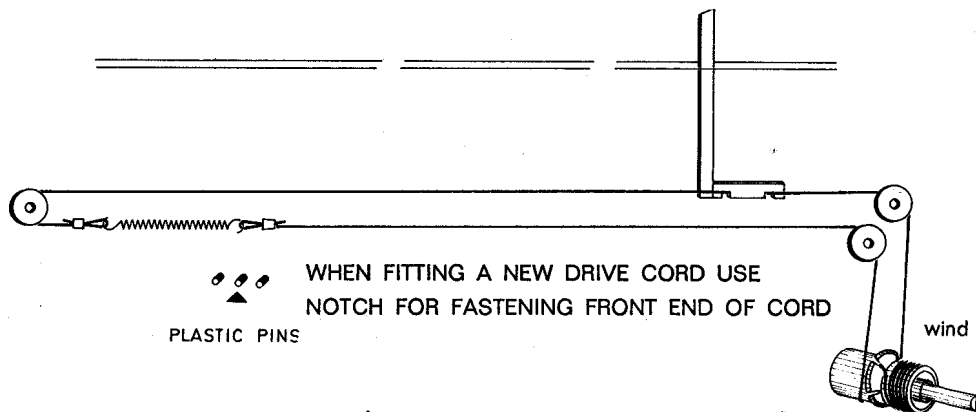
Änderungen vorbehalten

ALTERATIONS RESERVED

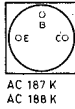
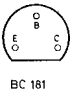
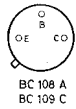
MODIFICATIONS RESERVEE



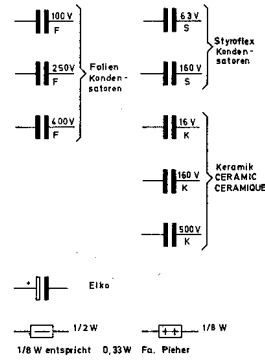
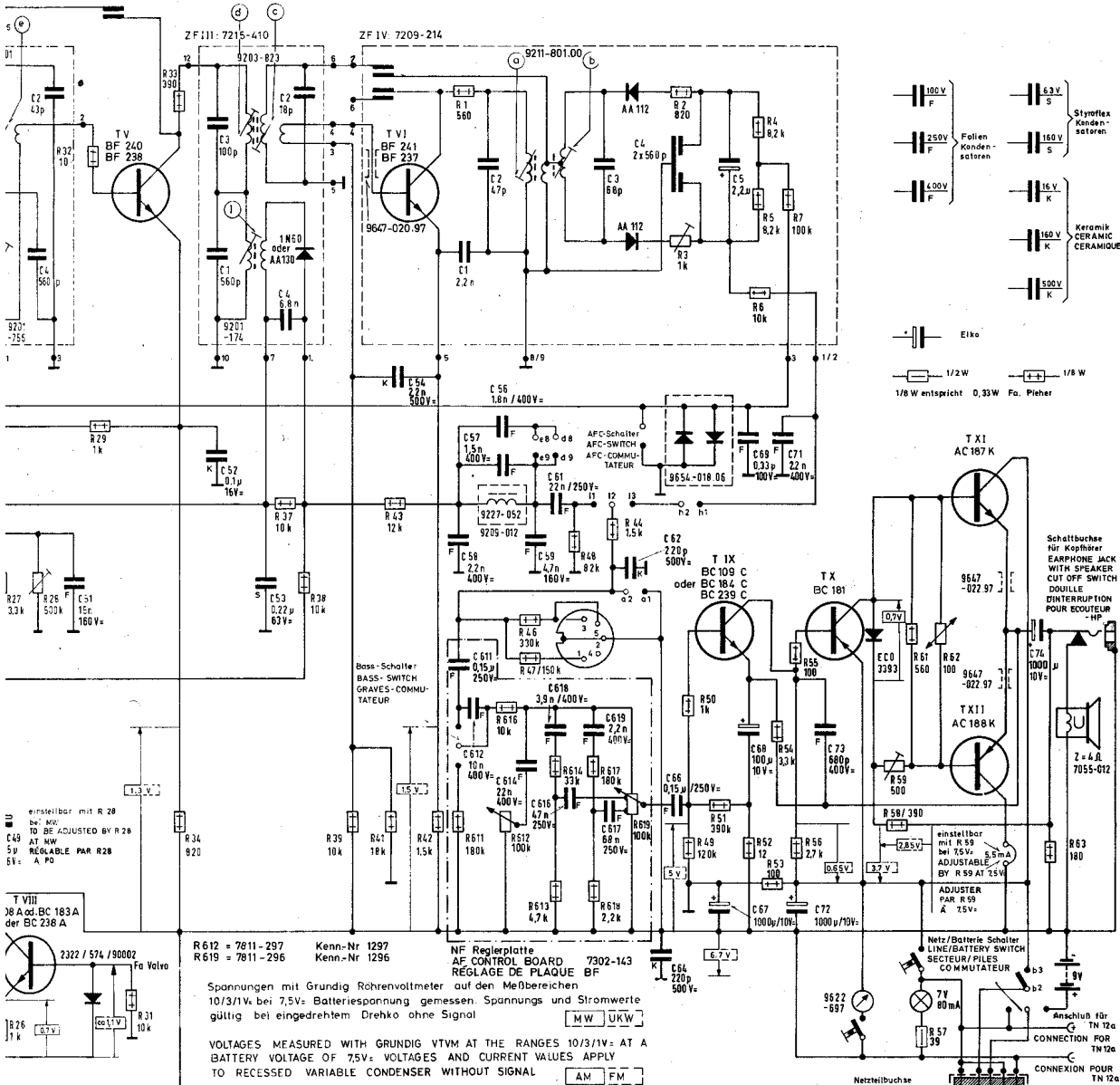
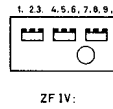
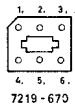
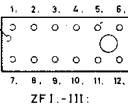
CORD GUIDANCE
Length: approximately 35"



vorbehalten
RESERVED
IS RESERVEES



Kennloch IDENTIFICATION POINT
TROU-REPÈRE



instellbar mit R 28
bei 7,5V
10 SE ADJUSTED BY R 28
AT 7.5V
5V RÉGLABLE PAR R 28
À 7.5V

T VIII
38 A od. BC 183 A
der BC 238 A

2322 / 574 / 90802
Fa. Valvo

1026 11k

R 612 = 7811-297 Kenn-Nr 1297
R 619 = 7811-296 Kenn-Nr 1296

NF Reglerplatte
AF CONTROL BOARD
RÉGLAGE DE PLAQUE BF 7302-143

Spannungen mit Grundig Rohrvoltmeter auf den Meßbereichen
10/3/1V bei 7,5V Batteriespannung gemessen. Spannungs und Stromwerte
gültig bei eingedrehtem Drehko ohne Signal

VOLTAGES MEASURED WITH GRUNDIG VTM AT THE RANGES 10/3/1V: AT A
BATTERY VOLTAGE OF 7.5V: VOLTAGES AND CURRENT VALUES APPLY
TO RECESSED VARIABLE CONDENSER WITHOUT SIGNAL

TENSIONS MESURÉES AVEC GRUNDIG VOLTMÈTRE À LAMPE UNIVERSAL
AUX GAMMES DE MESURE 10/3/1V: D'UNE TENSION DE PILES À 7.5V:
VALEURS DE LA TENSION ET DU COURANT
AU CONDENSATEUR VARIABLE SANS SIGNAL

/I - Oszillator
/I - OSCILLATOR 9223-022.21
/I - OSCILLATEUR

/II - Oszillator
/II - OSCILLATOR 9223-023.21
/II - OSCILLATEUR

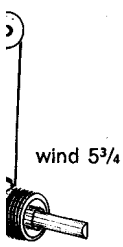
NF-Reglerplatte
AF-CONTROL BOARD 7302-143
PLAQUE DU RÉGULATEUR BF

Ferritstabantenne kpl.
FERRITE ROD 7701-360
BATONNET FERRITE COMPL.

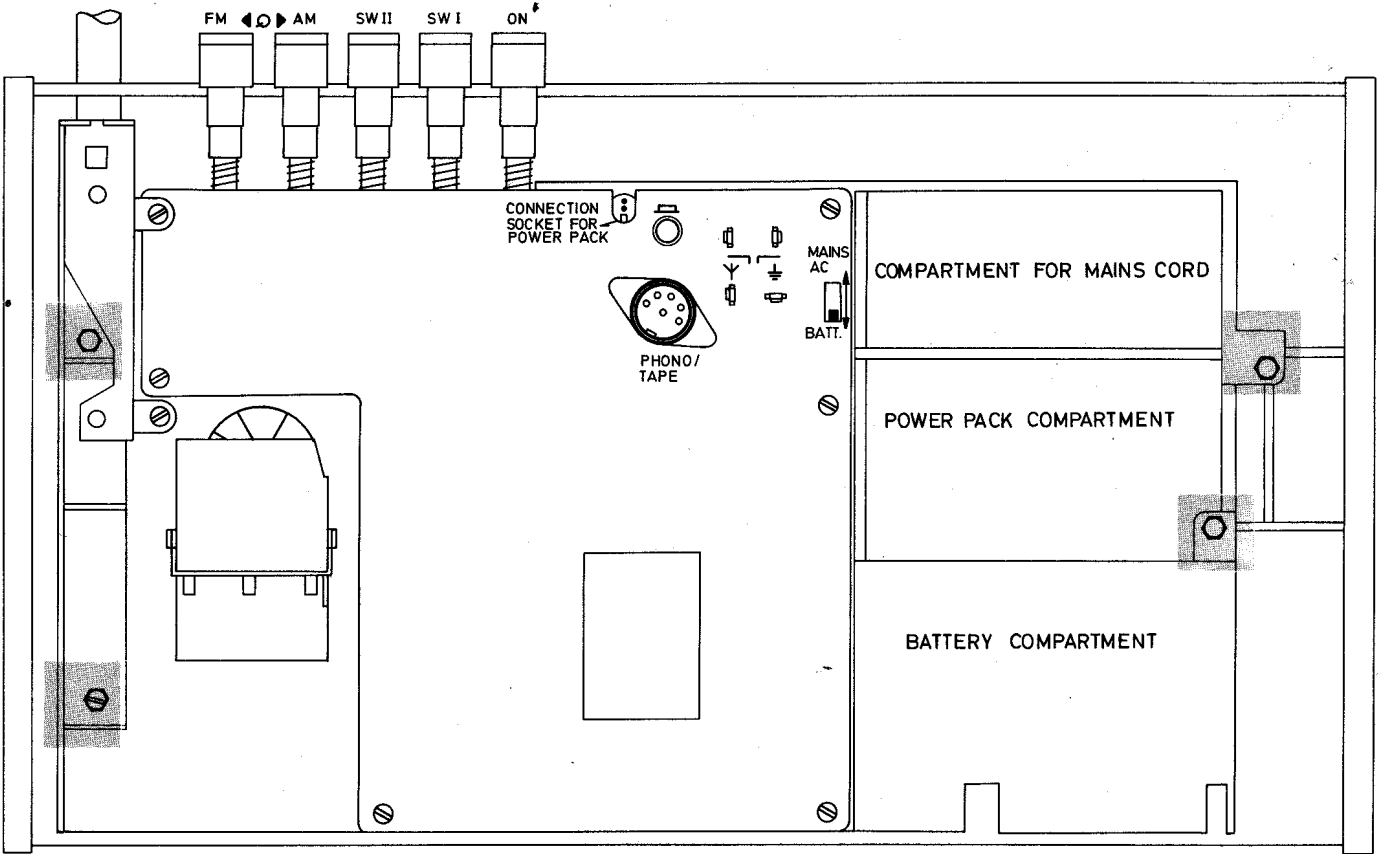
3, 2, 4,	ZF III: 7215-410 C: 1, 3, 2, 4, R: 1	ZF IV: 7209-214 C: 1, 2, 3, 4, 5, R: 1	611, 612, 616, 618, 619, 617, 58, 57, 56, 59, 61	64, 62, 66	67, 69, 69, 71, 72, 73,	74,
48,	51,	52,	53,	54,	55,	56,
26, 27,	28, 32, 29,	31, 33, 34,	37,	38, 39, 41, 43, 42,	45,	46, 47,
49,	51,	52,	53,	54,	55, 56,	58, 59, 61, 57, 62,
61,	616, 612, 613, 614,	617, 618, 619,	64,	66,	67,	69,
46,	44, 46, 47,	48, 44,	49,	51,	52,	

Transistor 860 mariner

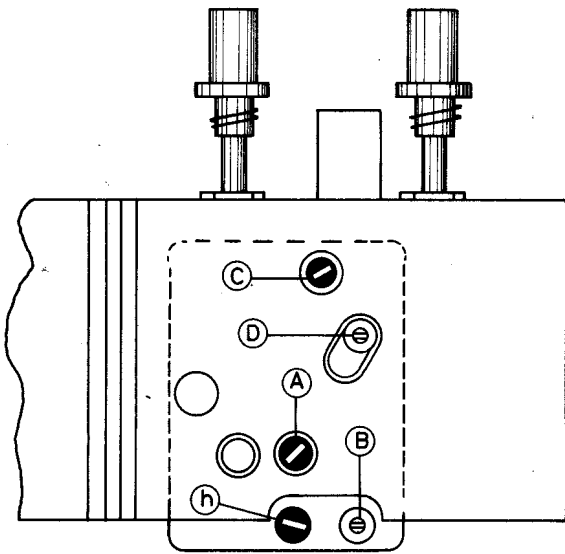
(14-1611-8141)



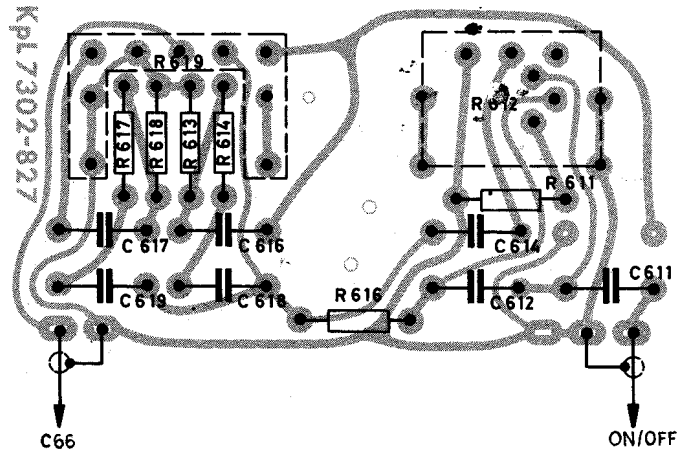
DISMOUNTING SKETCH



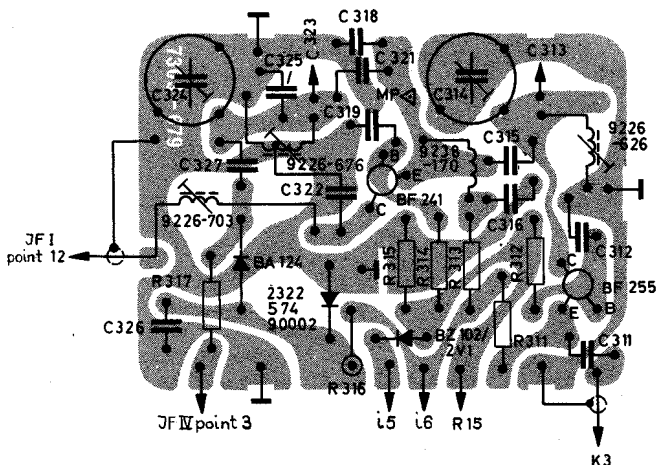
FM-MIXER STAGE, BOTTOM VIEW



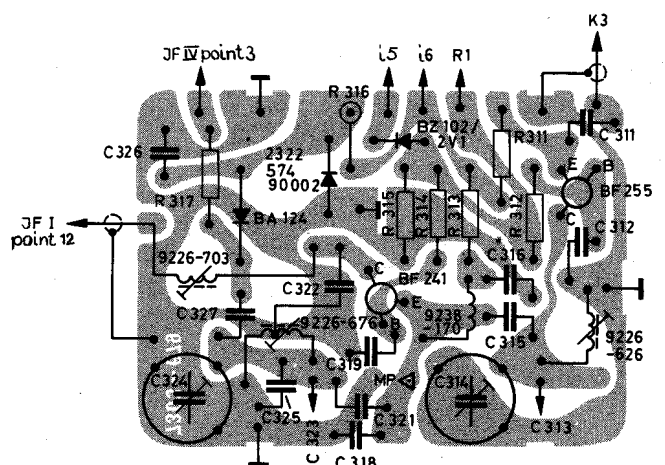
POTENTIOMETER BOARD, SEEN FROM SOLDER SIDE



FM-MIXER STAGE, SEEN FROM SOLDER SIDE

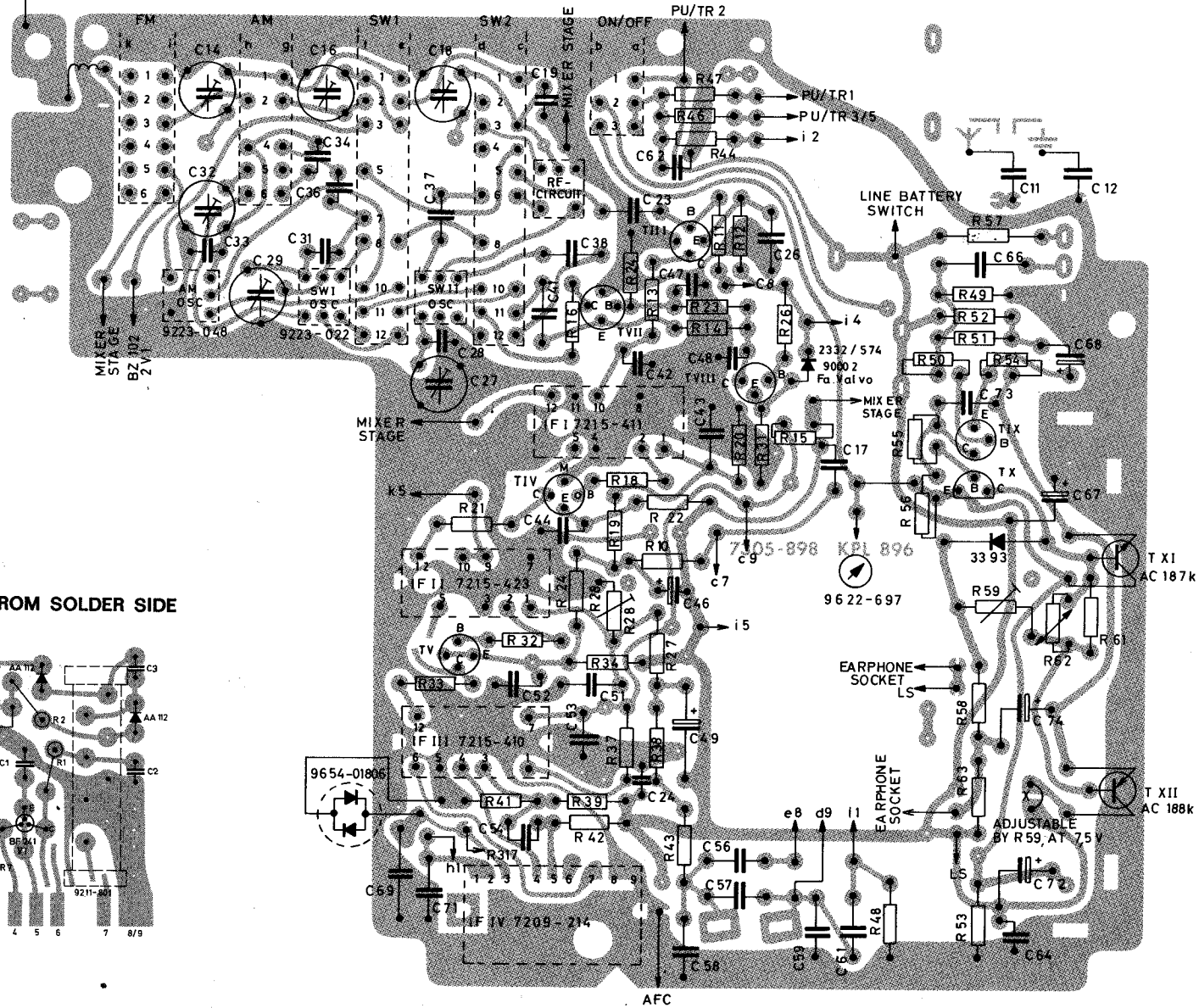


FM-MIXER STAGE, SEEN FROM COMPONENT SIDE

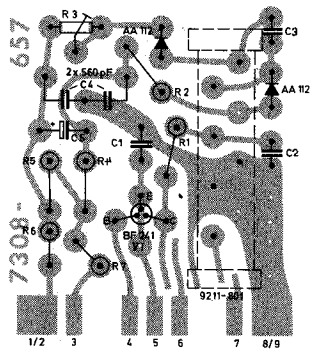


RF/AF PRINTED CIRCUIT BOARD, SEEN FROM SOLDER SIDE

TELESCOPIC ANTENNA



F IV, SEEN FROM SOLDER SIDE



ALIGNMENT SCHEME

