



Service-Unterlagen Stratofon M 12 Combi

Stand Oktober 1978

1. Radio

UKW-Stereo/MW Radio
Senderwahl durch Handabstimmung
Tastenumschaltung UKW/MW
Regler für Tonblende
Regler für Stereo-Balance
Taste für elektronische Störunterdrückung (ANL)/Mono-Umschaltung
Taste für Funkempfängerbereitschaft bei Radiobetrieb (Stand-by)
Stereo-Lautsprecherimpedanz 4 Ohm
Leistung 2 x 4 Watt

2. Mobilfunkgerät

1. Frequenzbereich	27.005 MHz - 27.135 MHz
2. Schaltbare Kanäle	12
3. Modulationsart	AM (Amplitudenmodulation)
4. Stromversorgung	13,2 V Bordnetz
5. Halbleiter Radio und Funk	7 ICs', 33 Transistoren, 22 Dioden, 2 LED

3. Sender — 3-stufig PLL-Technik

1. HF-Ausgangsleistung	500 mW bei 14.5 Volt
2. Frequenztoleranz	$\pm 0.001\%$ - 20° C - + 50° C
3. Modulationsgrad	max. 90 %
4. Oberwellendämpfung	entspricht den FTZ-Vorschriften
5. Nachbarkanalleistung	entspricht den FTZ-Vorschriften

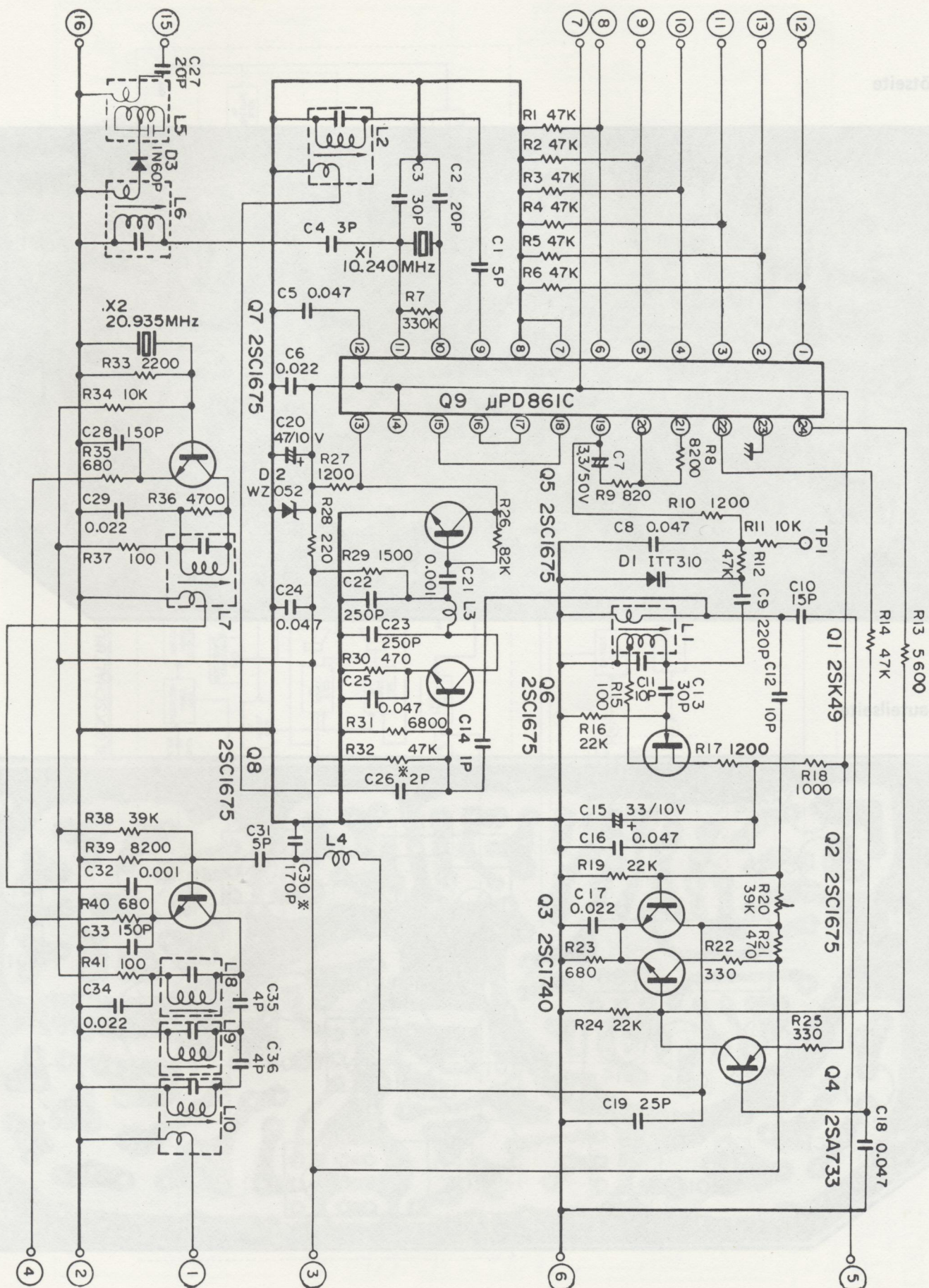
4. Empfänger

1. Schaltungsart	Doppelsuper mit HF-Vorstufe
2. ZF-Frequenz, Keramikfilter	1. ZF 10.695 MHz, 2 ZF 455 kHz
3. Frequenztoleranz	$\pm 0.001\%$ - 20° C - + 50° C
4. Empfängerempfindlichkeit	$< 0.7 \mu\text{V}$ bei 10 dB S + N/N
5. Squelchempfindlichkeit	$0.7 \mu\text{V}$ - $40 \mu\text{V}$
6. NF-Ausgangsleistung	2 x 4 Watt

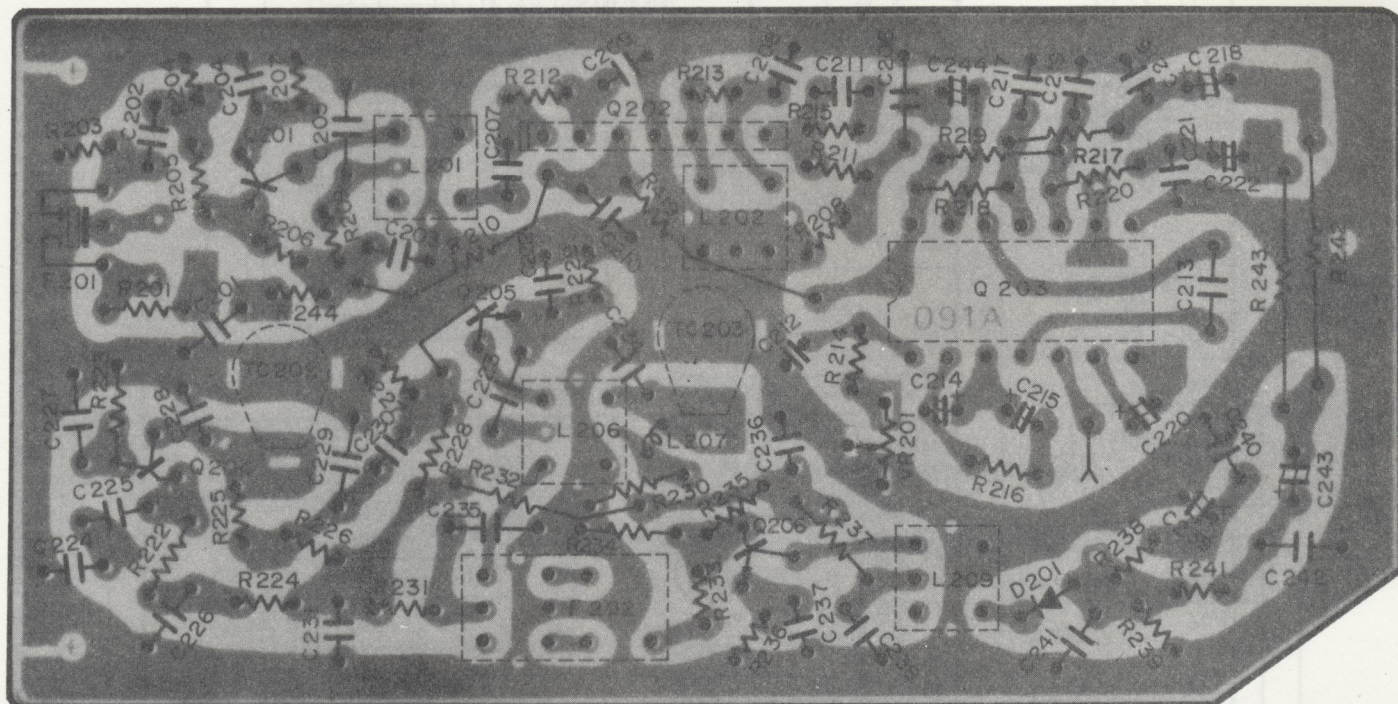
5. Besonderheiten

Kombiniertes Radio/Mobilfunkgerät
Ausführung in moderner PLL-Technik
Digitale Kanalanzeige
Funkempfängerbereitschaft bei Radiobetrieb (stand-by)
LED-Anzeige für Empfangsbetrieb
LED-Anzeige für Sendebetrieb/Stereosignal bei Radiobetrieb
Einbauöffnung nach DIN 75500 A

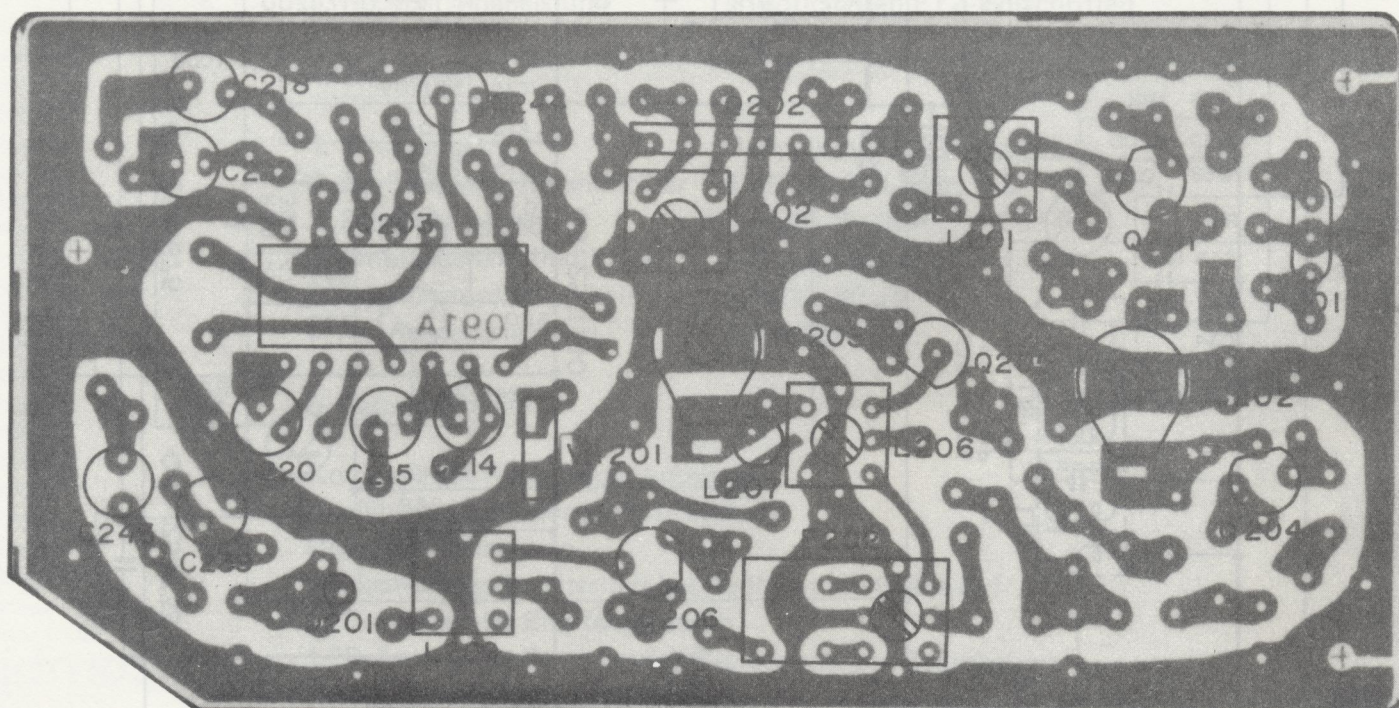
SCHALTPLAN PLL



Lötseite



Bauteilseite



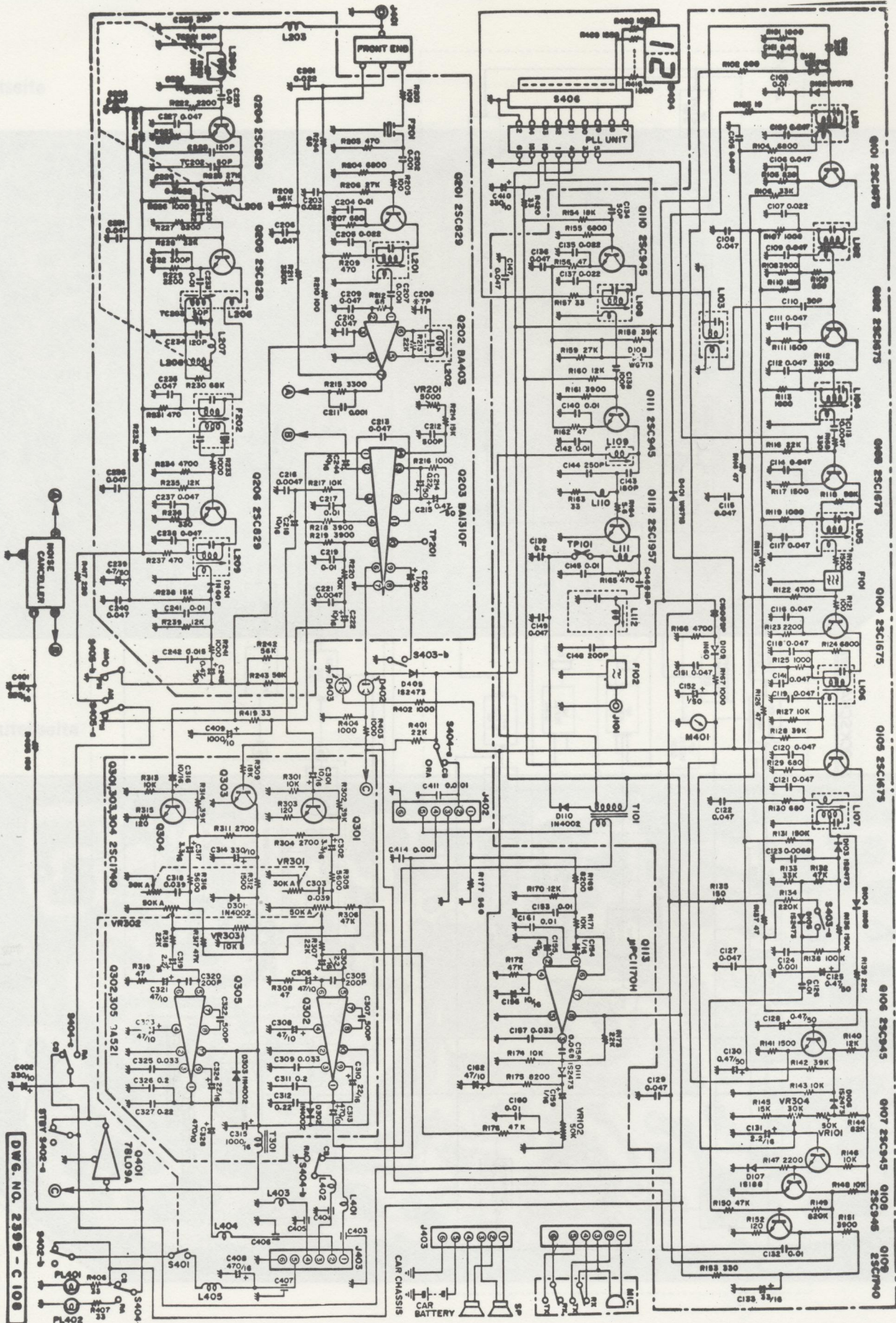
The diagram illustrates a PLL Frequency Synthesizer, divided into two main functional sections: the **FUNKTEIL** (RF section) and the **RADIOTEIL** (Radio section).

FUNKTEIL (RF Section):

- Power Supply:** A 9V SPANNUNGSSTABILISATOR (voltage stabilizer) provides power to the circuit.
- Frequency Synthesis:**
 - A **TEILUNGSAKTOR N55-108** (divider) receives a 10.24MHz signal (X1) and provides a 10.24MHz output (X2).
 - The divider is connected to a **PROGRAMMIERB. TEILER** (programmable divider) which has 10 outputs (1-10).
 - Output 10 is connected to a **MULTIPLIER D3**.
 - Output 11 is connected to a **VERB. SCHALTUNG** (variable switch).
 - Output 12 is connected to a **1/512** divider.
 - Output 13 is connected to a **TIEFPASS-FILTER** (low-pass filter).
 - Output 14 is connected to a **VERB. SCHALTUNG** (variable switch).
 - Output 15 is connected to a **SP. GEST. OSC. Q1** (frequency synthesizer oscillator).
 - Output 16 is connected to a **SICHERHEITSSCHALTUNG** (safety switch).
 - Output 17 is connected to a **MISCHER Q8** (mixer).
 - Output 18 is connected to a **VERST. Q5** (amplifier).
 - Output 19 is connected to a **OSC. Q7** (oscillator).
- Modulation and Antenna:**
 - A **MIC** (microphone) is connected to a **MIC VERST. Q114** (microphone amplifier).
 - The microphone amplifier is connected to a **MOD. REGELST. STUFE Q113** (modulation control stage).
 - The modulation control stage is connected to a **GLEICHSP. VERST. Q115** (DC amplifier).
 - The DC amplifier is connected to a **VOR-TREIBER Q116** (pre-driver).
 - The pre-driver is connected to a **TREIBER Q111** (driver).
 - The driver is connected to a **SENDER-ENDESTUFE Q112** (sender output stage).
 - The sender output stage is connected to an **ANT. FILTER F422** (antenna filter).
 - The antenna filter is connected to an **ANT.** (antenna).

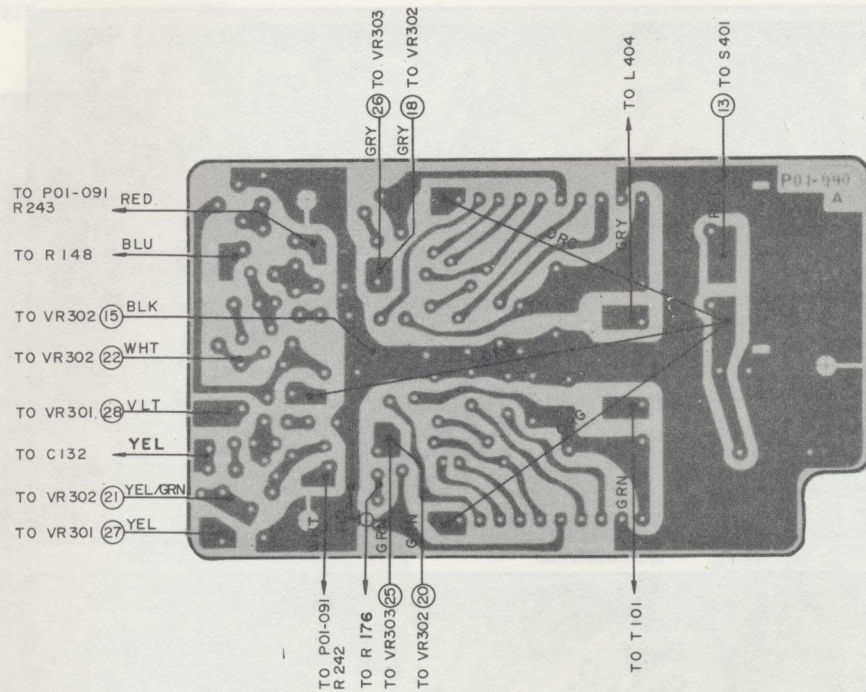
RADIOTEIL (Radio Section):

- Antenna and Tuning:**
 - An **ANT.** (antenna) is connected to an **HF VERST. Q204** (HF amplifier).
 - The HF amplifier is connected to an **OSC. MISCHER Q205** (oscillator mixer).
 - The oscillator mixer is connected to a **KERAM.-FILTER F202** (ceramic filter).
 - The ceramic filter is connected to a **ZF VERST. Q206** (IF amplifier).
 - The IF amplifier is connected to a **MODULATOR**.
- Demodulation and Stereo:**
 - The modulator is connected to a **ZF VERST. Q207** (IF amplifier).
 - The IF amplifier is connected to a **ZF-VERST. DISKRIMINAT. Q202** (IF amplifier discriminator).
 - The discriminator is connected to a **STEREO DECODER Q203** (stereo decoder).
 - The stereo decoder is connected to a **OSC. Q503** (oscillator).
 - The oscillator is connected to a **MISCHER Q502** (mixer).
 - The mixer is connected to an **HF VORSTUFE Q501** (HF pre-stage).
 - The pre-stage is connected to an **UKW-TUNER** (FM tuner).
- Audio Output:**
 - The UKW-tuner is connected to a **HF VERST. Q501** (HF amplifier).
 - The HF amplifier is connected to a **KERAM.-FILTER F201** (ceramic filter).
 - The ceramic filter is connected to a **ZF VERST. Q201** (IF amplifier).
 - The IF amplifier is connected to a **ZF-VERST. DISKRIMINAT. Q202** (IF amplifier discriminator).
 - The discriminator is connected to a **OSC. Q503** (oscillator).
 - The oscillator is connected to a **MISCHER Q502** (mixer).
 - The mixer is connected to an **HF VORSTUFE Q501** (HF pre-stage).
 - The pre-stage is connected to an **UKW-TUNER** (FM tuner).



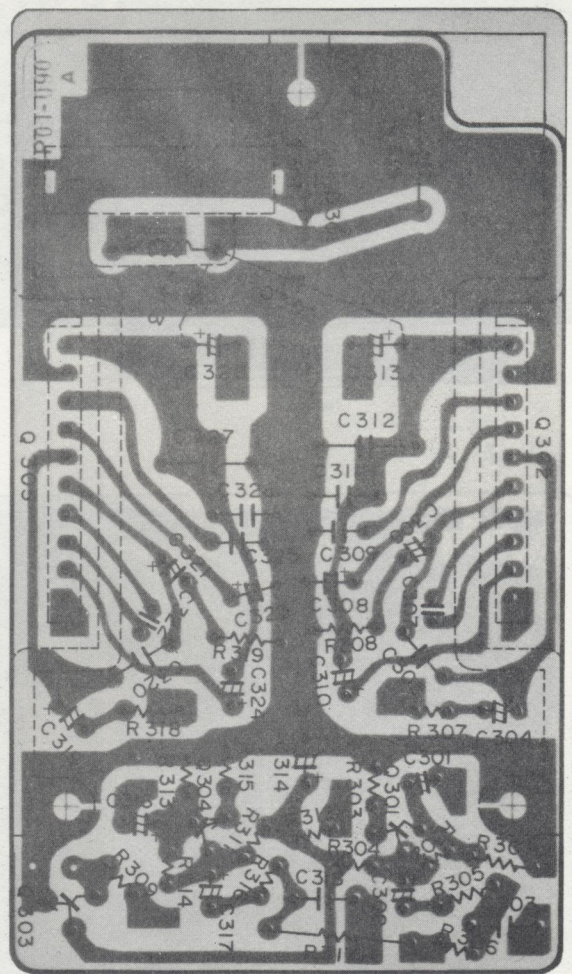
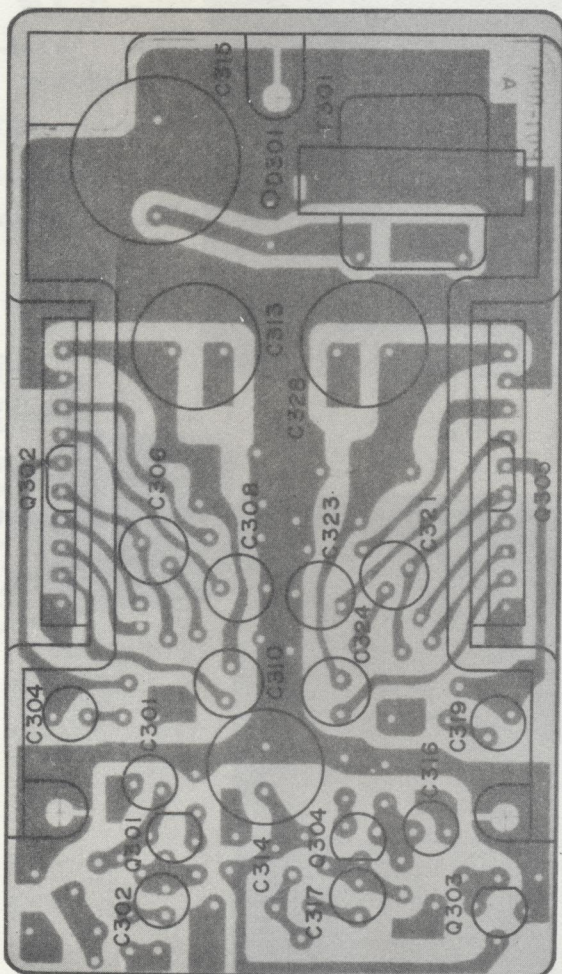
1 = NF
 2 = TX
 3 = Masse
 4 = RX
 5 = TX
 6 = Plank.
 = gnd
 = 5V

PLATINE STEREO-VERSTÄRKER

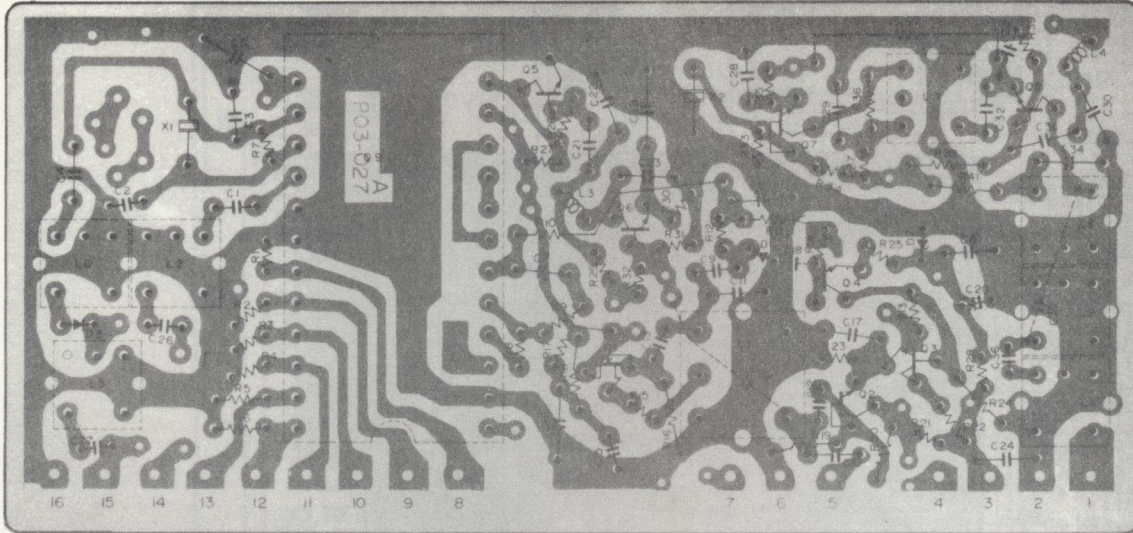


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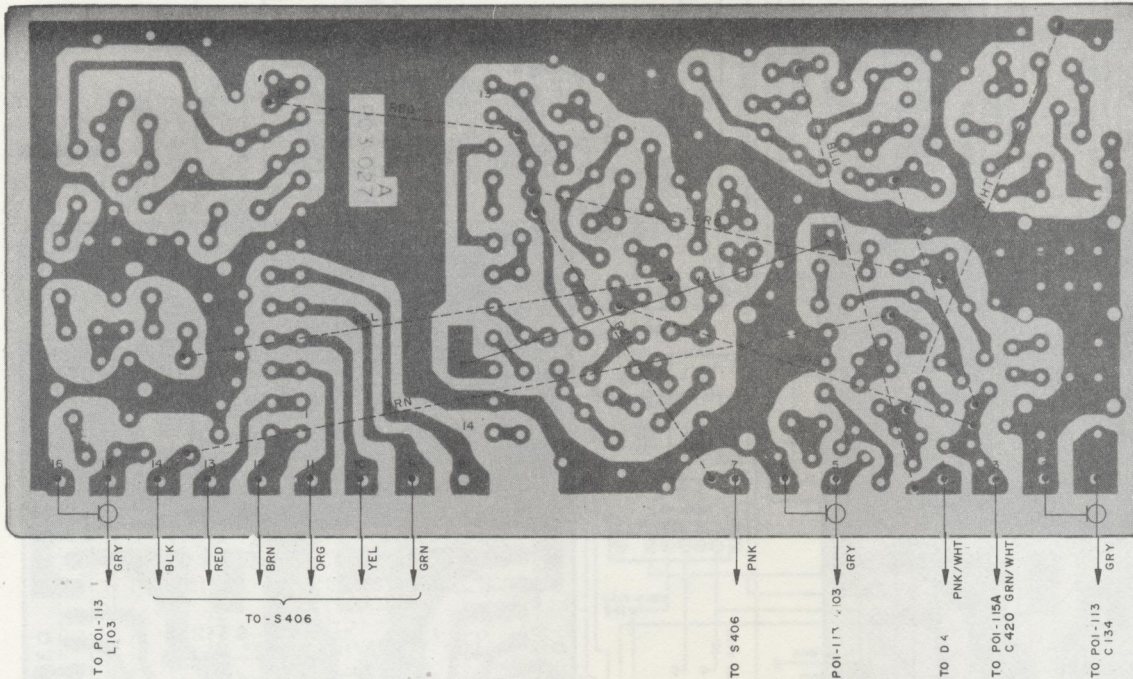
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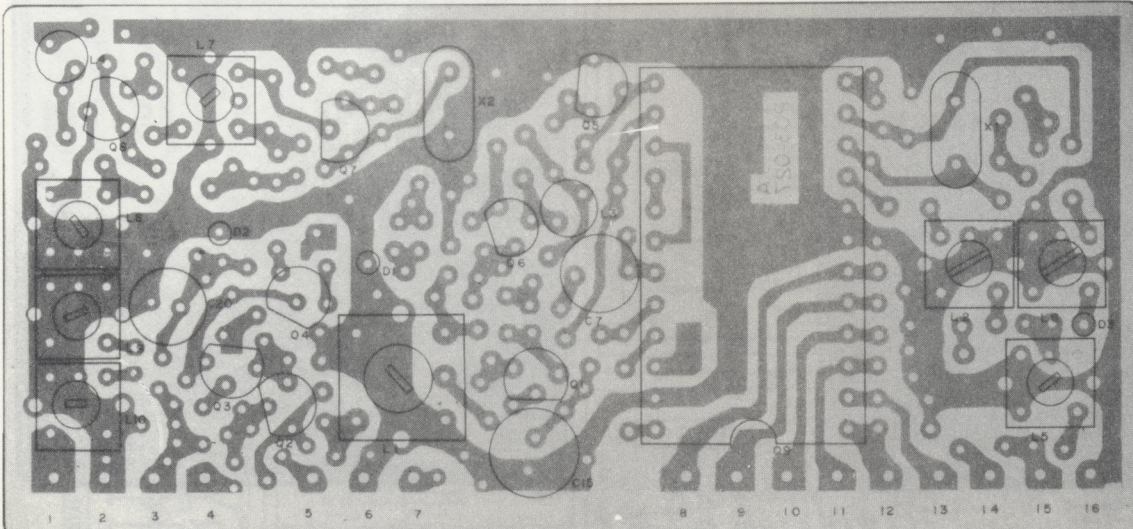
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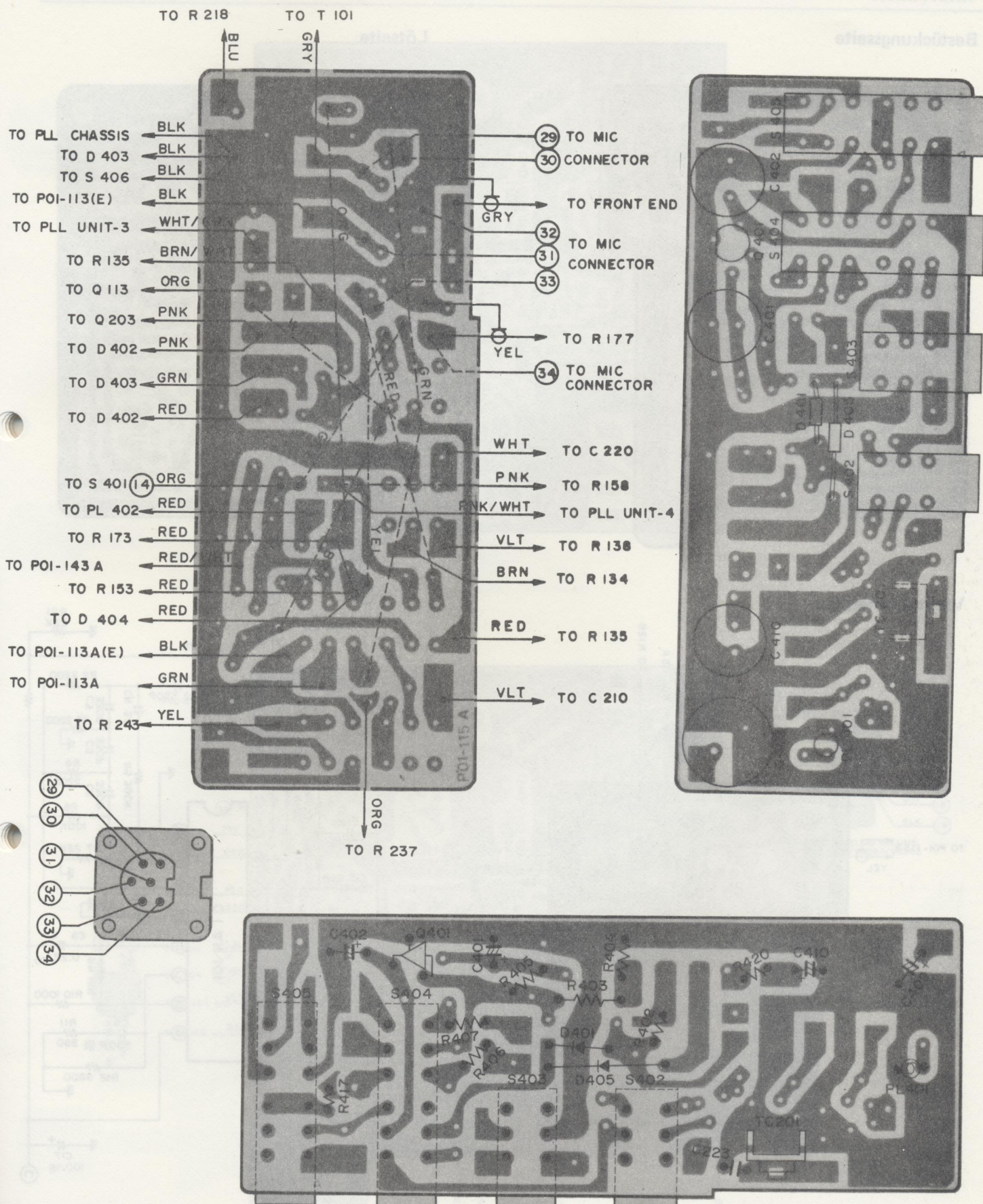


Verdrahtung

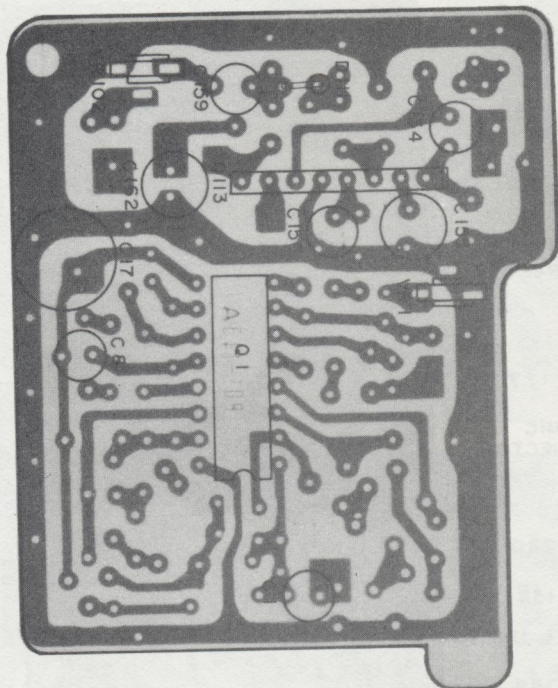


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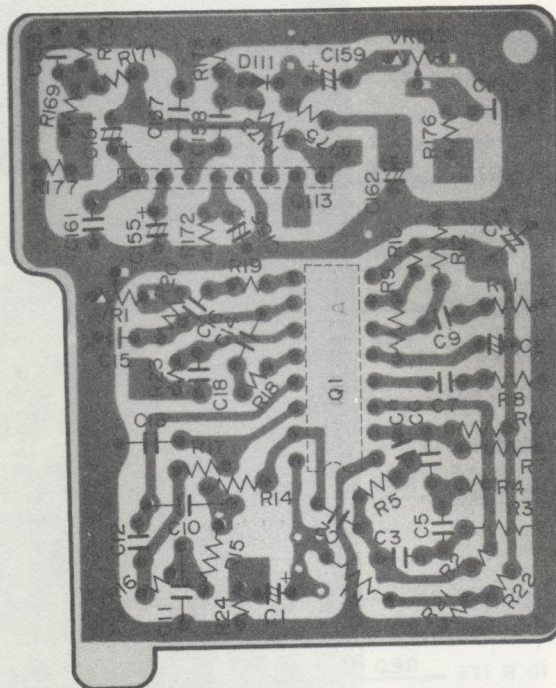




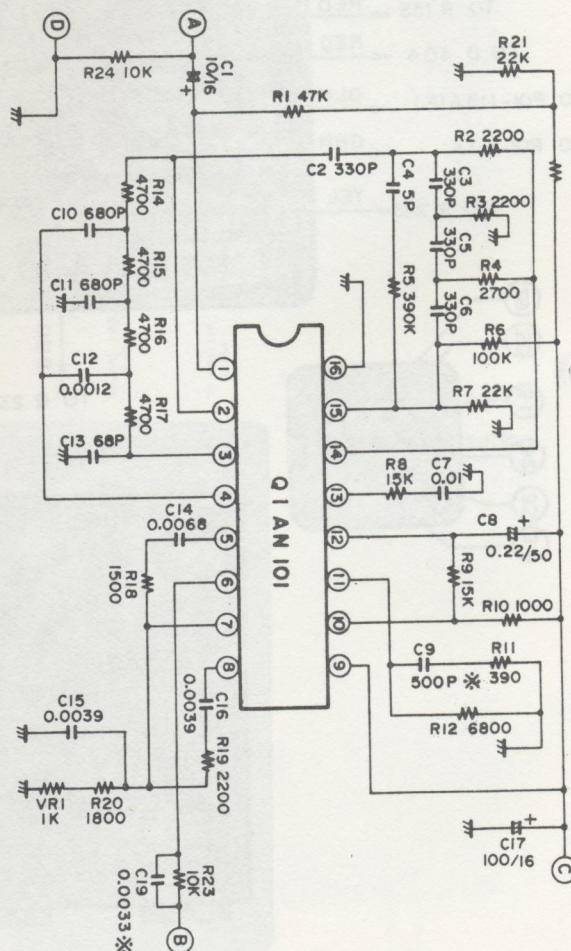
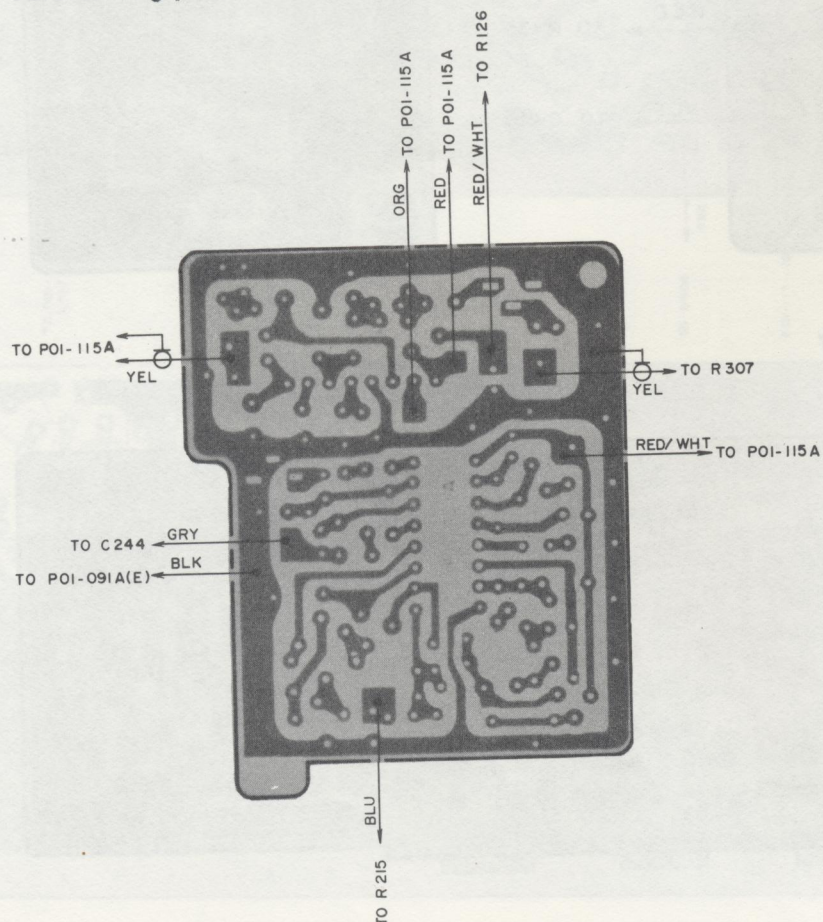
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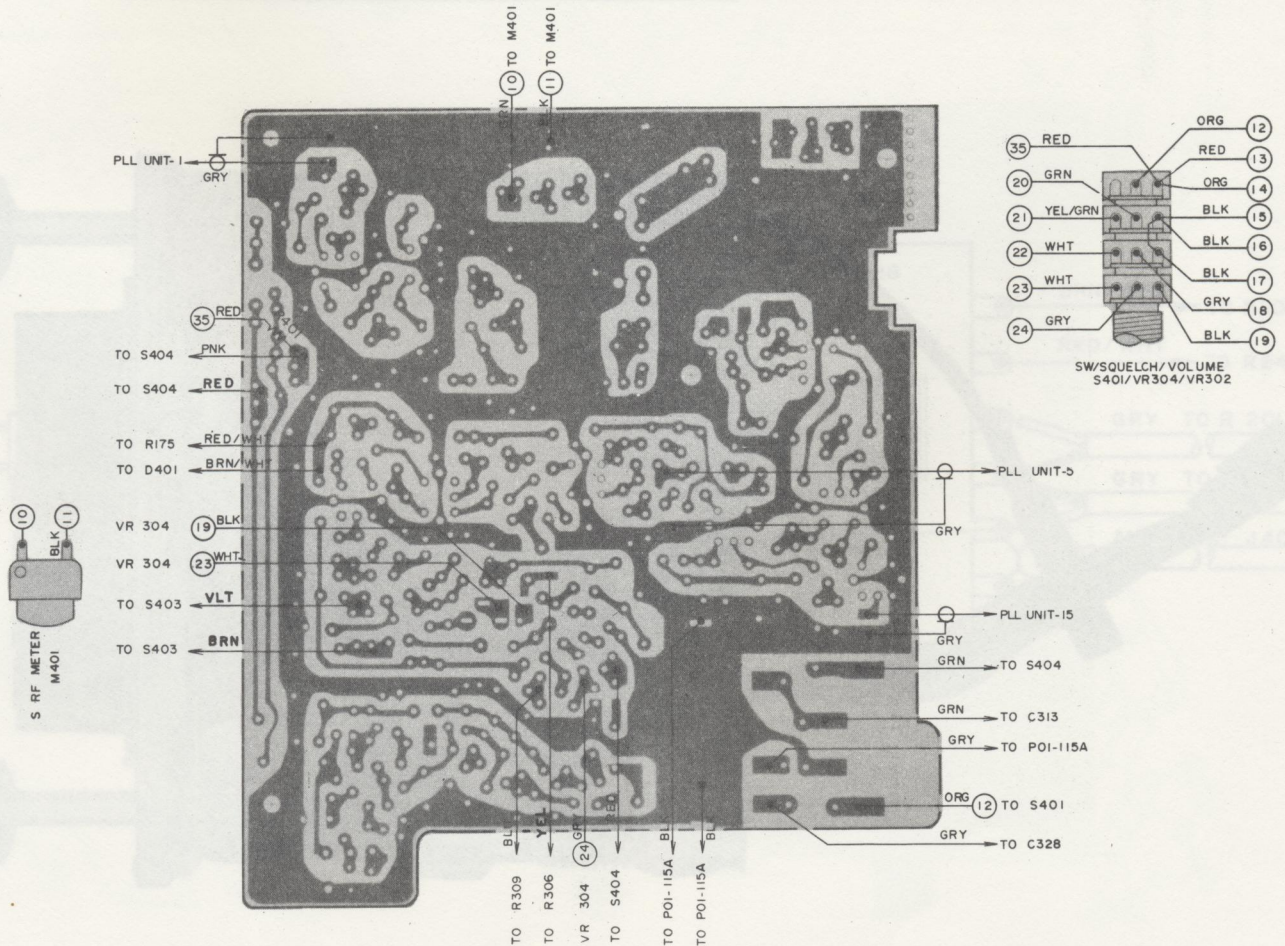
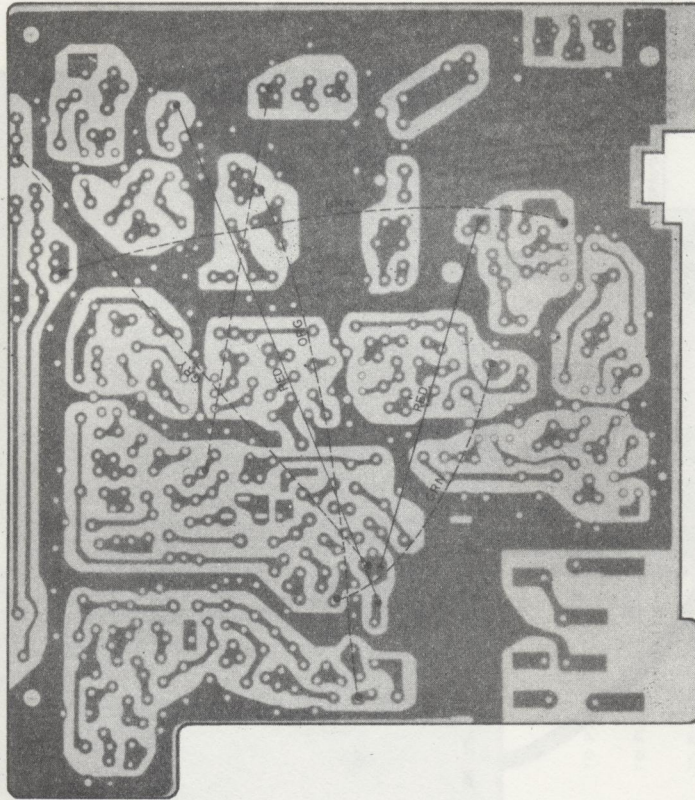


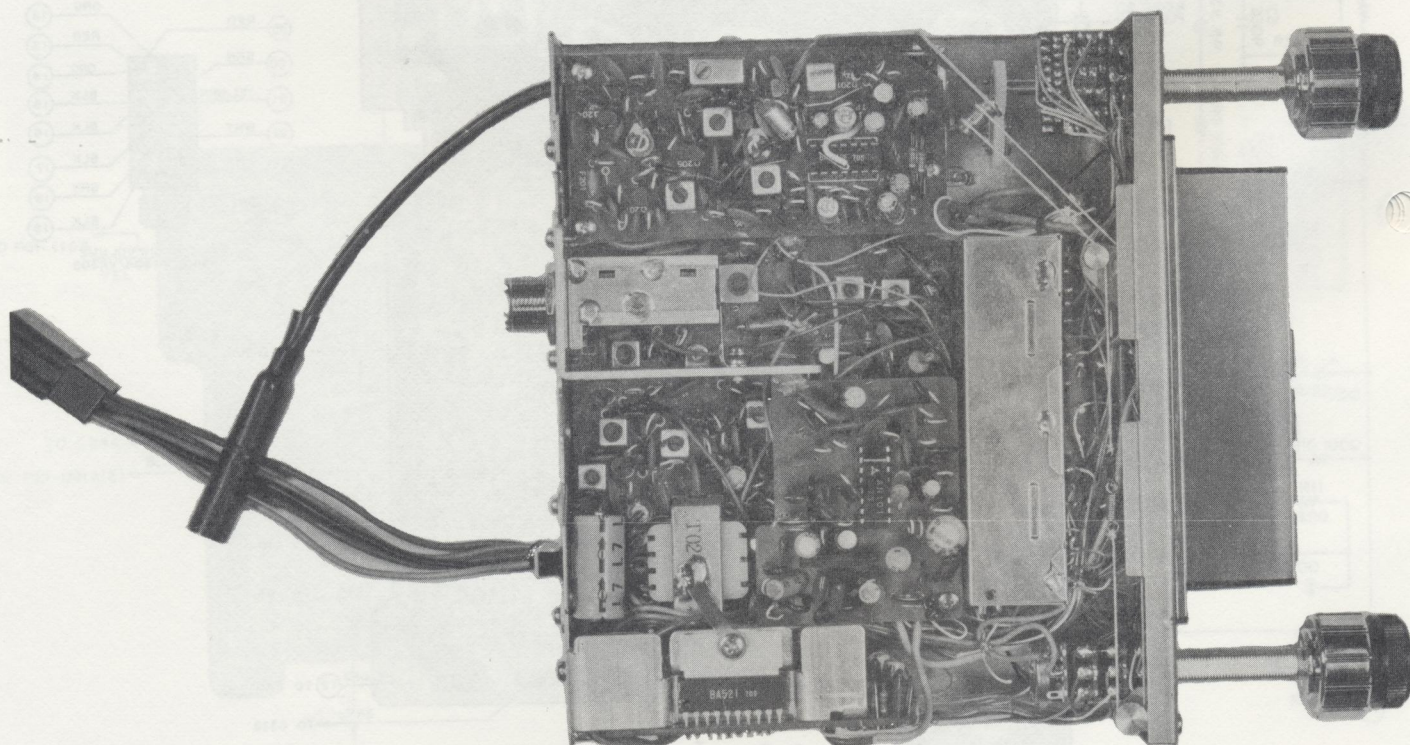
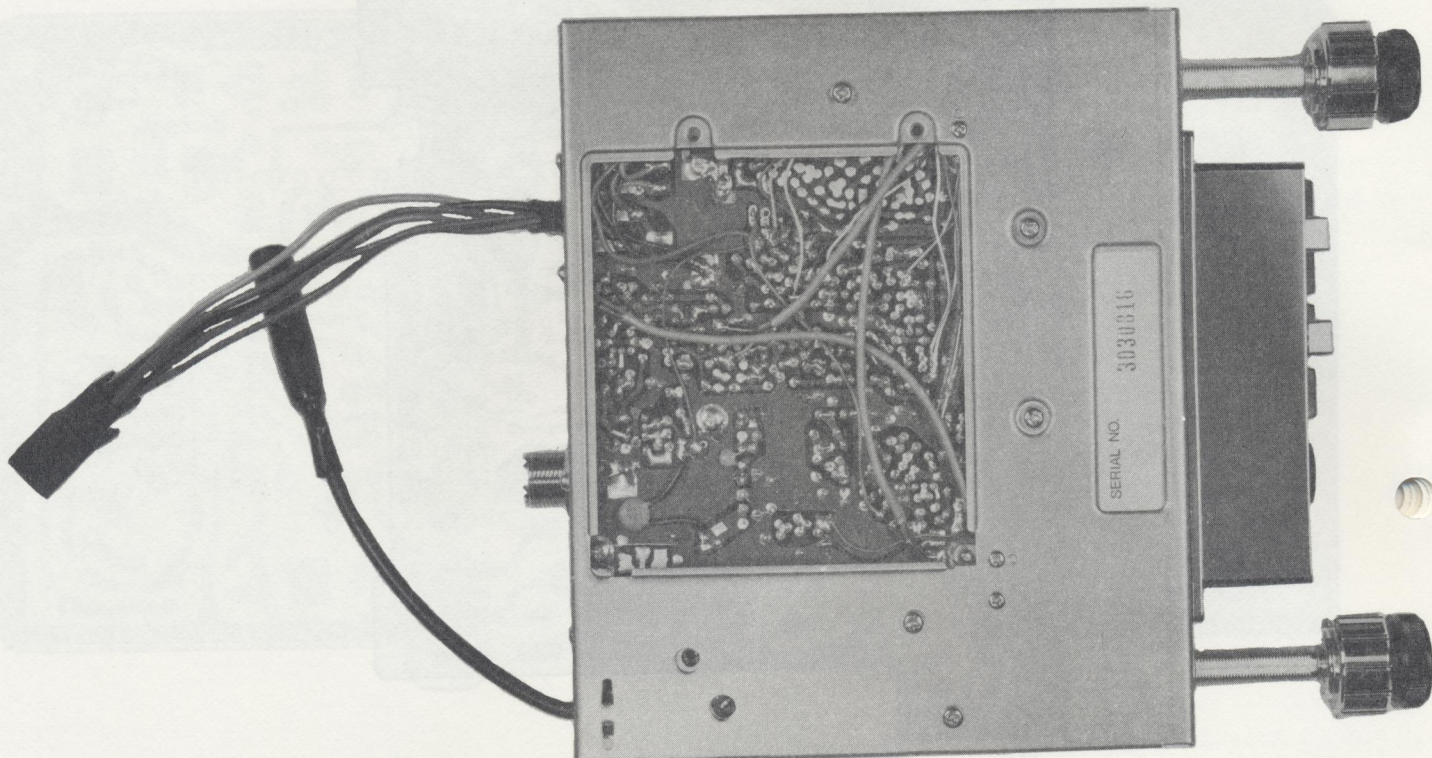
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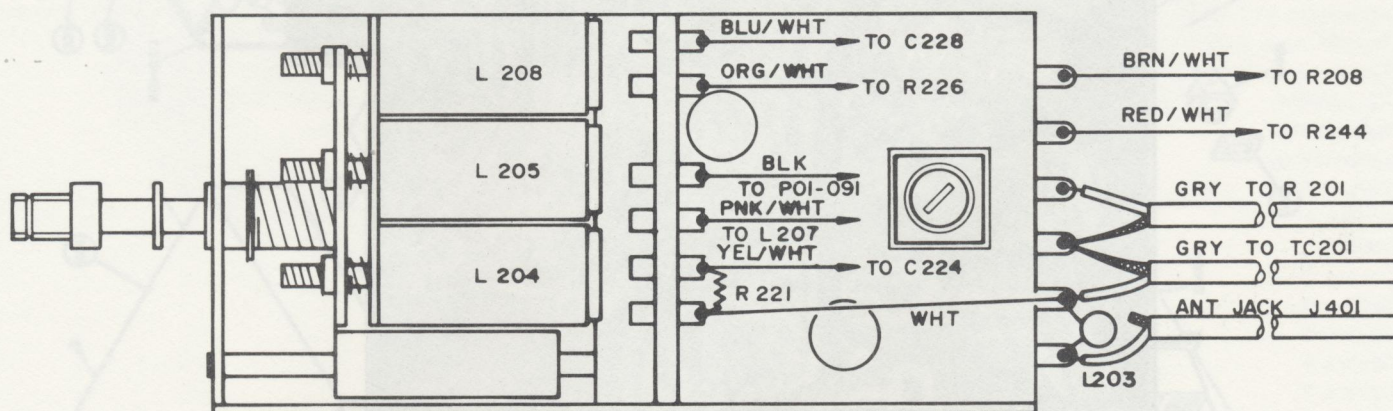
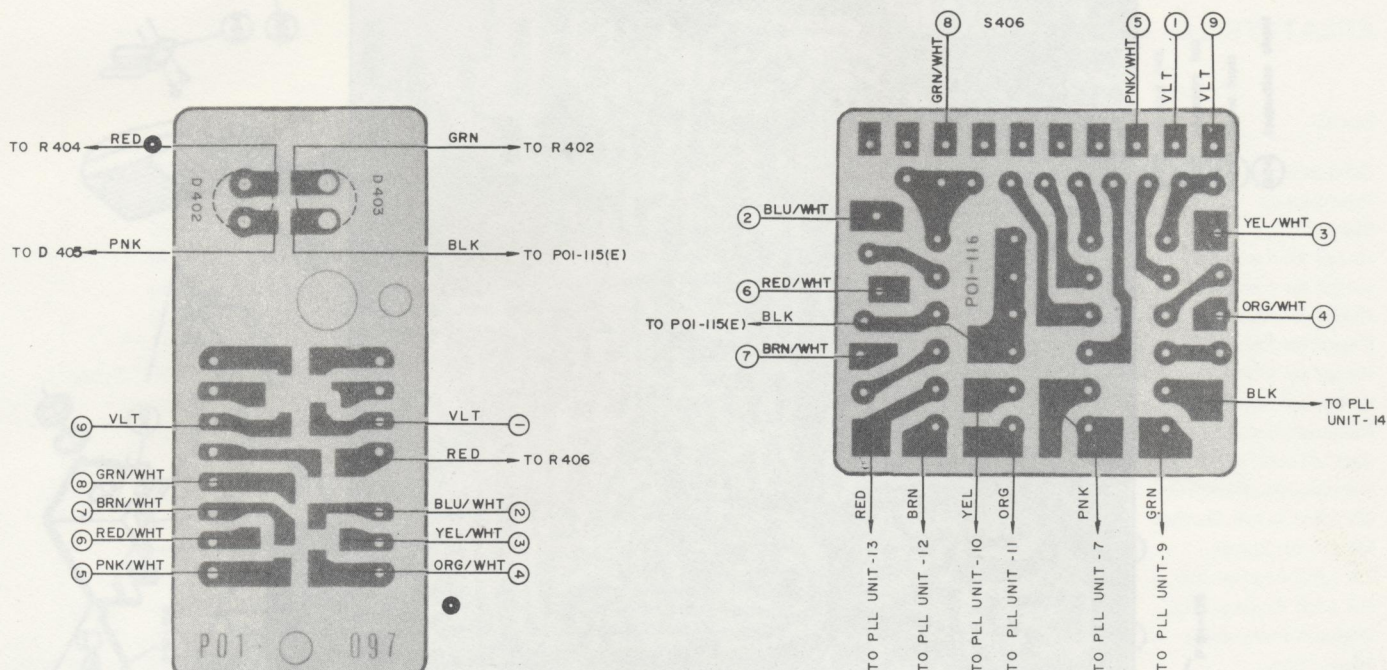
Verdrahtungsplan

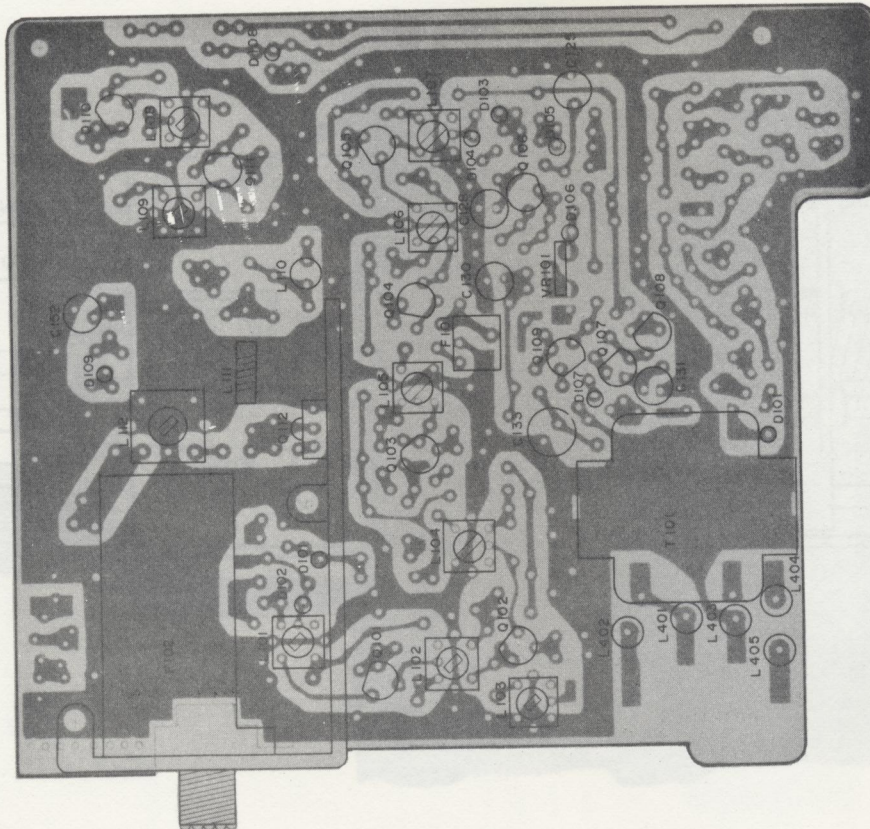
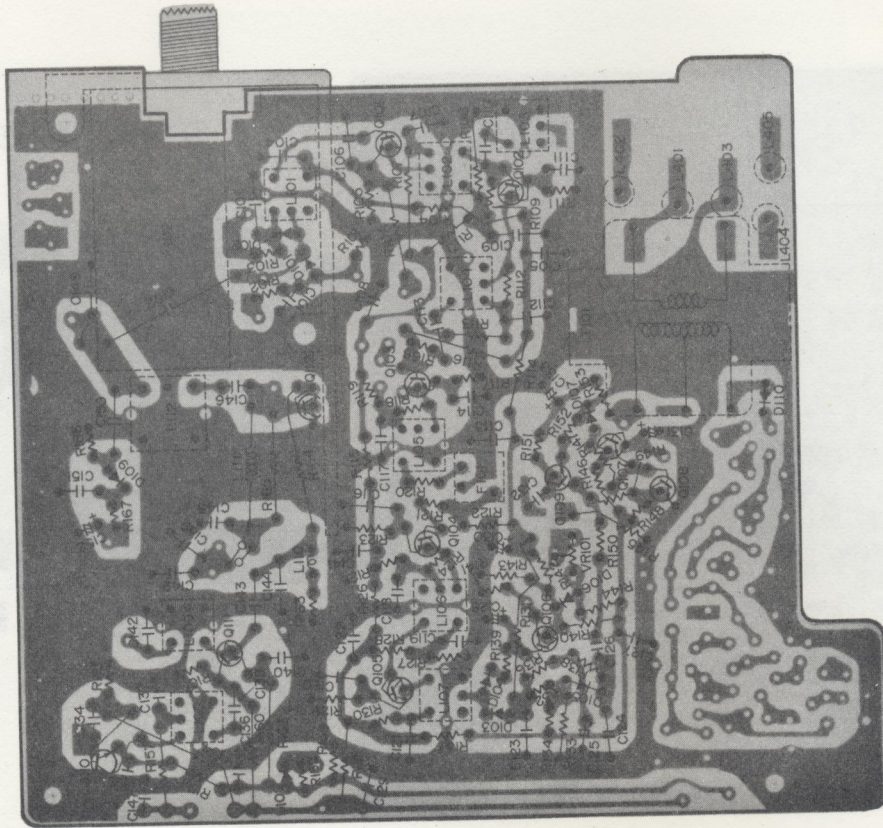


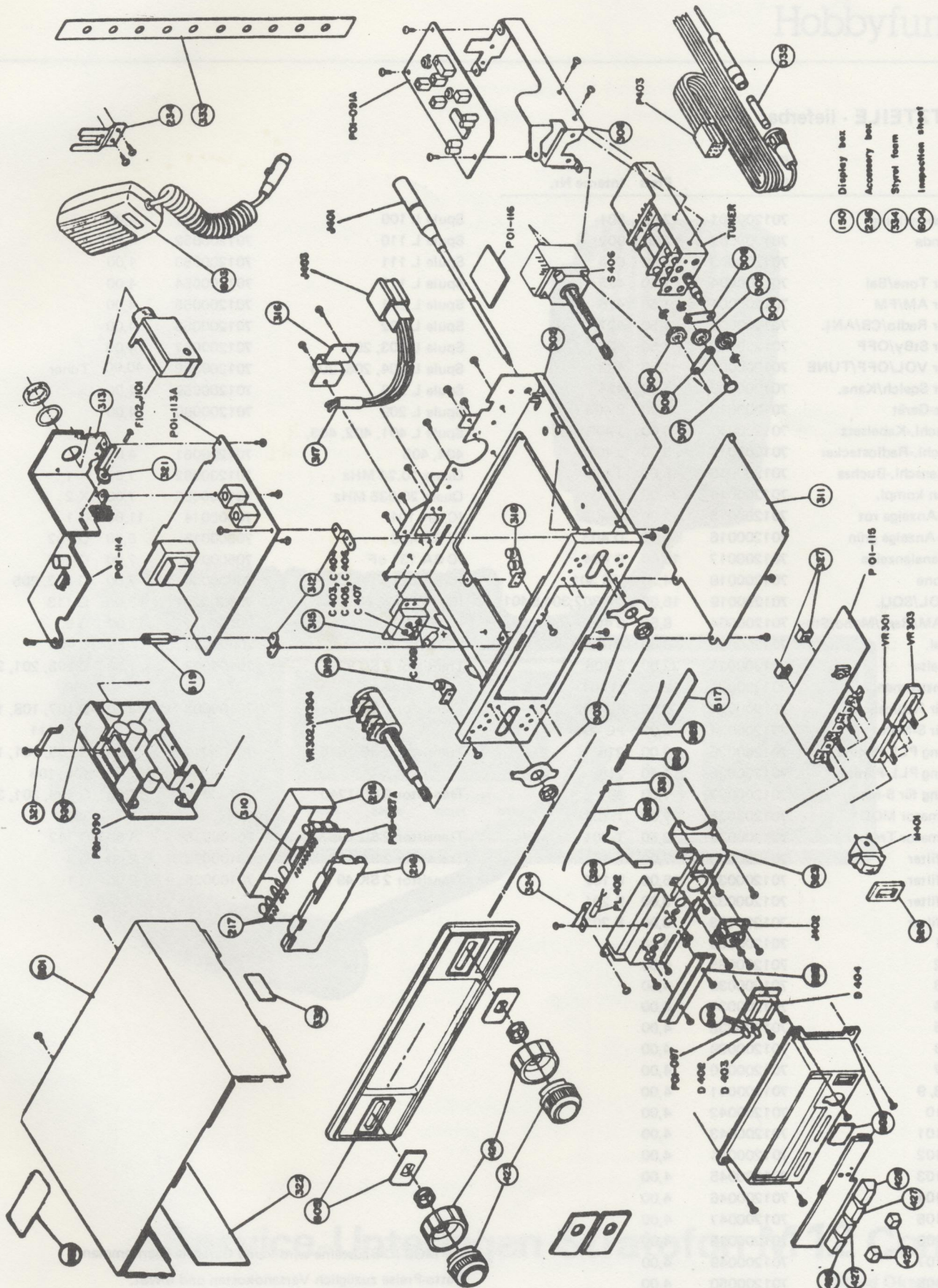




PLATINE LED-KANALANZEIGE, KANALSCHALTER, TUNER







ERSATZTEILE · lieferbar

Bauteil	Bestell-Nr.	Preis	Interne Nr.				
Gehäuseabdeckung	701200001	7,00	601	Spule L 109	701200051	4,00	
Frontblende	701200002	12,00	602	Spule L 110	701200052	4,00	
Blende	701200003	4,00	605	Spule L 111	701200053	4,00	
Knopf für Tone/Bal	701200004	1,50	425	Spule L 112	701200054	4,00	
Knopf für AM/FM	701200005	1,50	426	Spule L 201	701200055	4,00	
Knopf für Radio/CB/ANL	701200006	1,50	427	Spule L 202	701200056	4,00	
Knopf für StBy/OFF	701200007	1,50	428	Spule L 203, 207	701200057	4,00	
Knopf für VOL/OFF/TUNE	701200008	1,50	423	Spule L 204, 205, 208	701200058	40,00	Tuner
Knopf für Sqelch/Kana.	701200009	1,50	424	Spule L 206	701200059	4,00	
Kabelsatz-Gerät	701200010	6,00	P 403	Spule L 209	701200060	4,00	
Batt.-Anschl.-Kabelsatz	701200011	5,00	J 403	Spule L 401, 402, 403,			
Kabelanschl.-Radiostecker	701200012	5,00	J 401	404, 405	701200061	4,00	
Microfonanschl.-Buchse	701200013	5,00	J 402	Quarz 10.24 MHz	701200062	7,00	X 1
Micronfon kompl.	701200014	24,00	603	Quarz 20.935 MHz	701200063	7,00	X 2
TX LED-Anzeige rot	701200015	2,00	D 402	IC AN 101	70500014	11,00	Q 1
RX LED-Anzeige grün	701200016	2,00	D 403	IC BA 403	70500015	5,00	Q 202
Digital-Kanalanzeige	701200017	18,00	D 404	IC BA 131 oF	70500016	7,00	Q 203
Regler Tone	701200018	4,00	VR 301	IC BA 521	70500004	7,00	Q 302, 305
Regler VOL/SQU.	701200019	15,00	VR 302,304,S401	IC μ PC 1170 H	70500003	5,00	Q 113
Tastens. AM/Rad./Mono/Stby	701200064	8,50	S 401 - 404	IC μ PD 861 C	70500017	15,00	Q 9
Regler Bal.	701200020	3,00	VR 303	IC 781 L 09 A	70500020	2,50	Q 401
Kanalschalter	701200021	22,00	S 406	Transistor 2 SC 829	70100002	1,50	Q 205, 201, 204, 206
Anzeigeelement	701200022	12,00	M 401	Transistor 2 SC 945	70100003	2,50	Q 107, 108, 106, 110, 111
Lampe für Radioskala	701200023	2,00	PL 402	Transistor 2 SC 1675	70100012	1,50	Q 105, 101, 102, 104, 103
Lampe für S-Meter	701200024	2,00	PL 401	Transistor 2 SC 1740	70100014	1,50	Q 109, 301, 303, 304
Abdeckung PLL-Platine	701200025	3,00	215	Transistor 2 SC 1957	70100015	3,50	Q 112
Abdeckung PLL-Platine	701200026	1,40	216	Transistor 2 SA 733	70100022	2,00	Q 4
Abdeckung für S-Meter	701200027	1,00	307	Transistor 2 SK 49 F	70100025	2,00	Q 1
Transformator MOD	701200028	7,00	T 101				
Transformator Treiber	701200029	2,50	T 301				
Keramikfilter	701200030	7,00	F 101				
Keramikfilter	701200031	15,00	F 102				
Keramikfilter	701200032	3,00	F 201				
Keramikfilter	701200033	3,00	F 202				
Spule L 1	701200034	4,00					
Spule L 2	701200035	4,00					
Spule L 3	701200036	4,00					
Spule L 4	701200037	4,00					
Spule L 5	701200038	4,00					
Spule L 6	701200039	4,00					
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Spule L 8, 9	701200041	4,00					
Spule L 10	701200042	4,00					
Spule L 101	701200043	4,00					
Spule L 102	701200044	4,00					
Spule L 103	701200045	4,00					
Spule L 104	701200046	4,00					
Spule L 105	701200047	4,00					
Spule L 106	701200048	4,00					
Spule L 107	701200049	4,00					
Spule L 108	701200050	4,00					

Für MOS-IC-Bausteine wird keine Garantie übernommen.
Netto-Preise zuzüglich Versandkosten und MWSt.