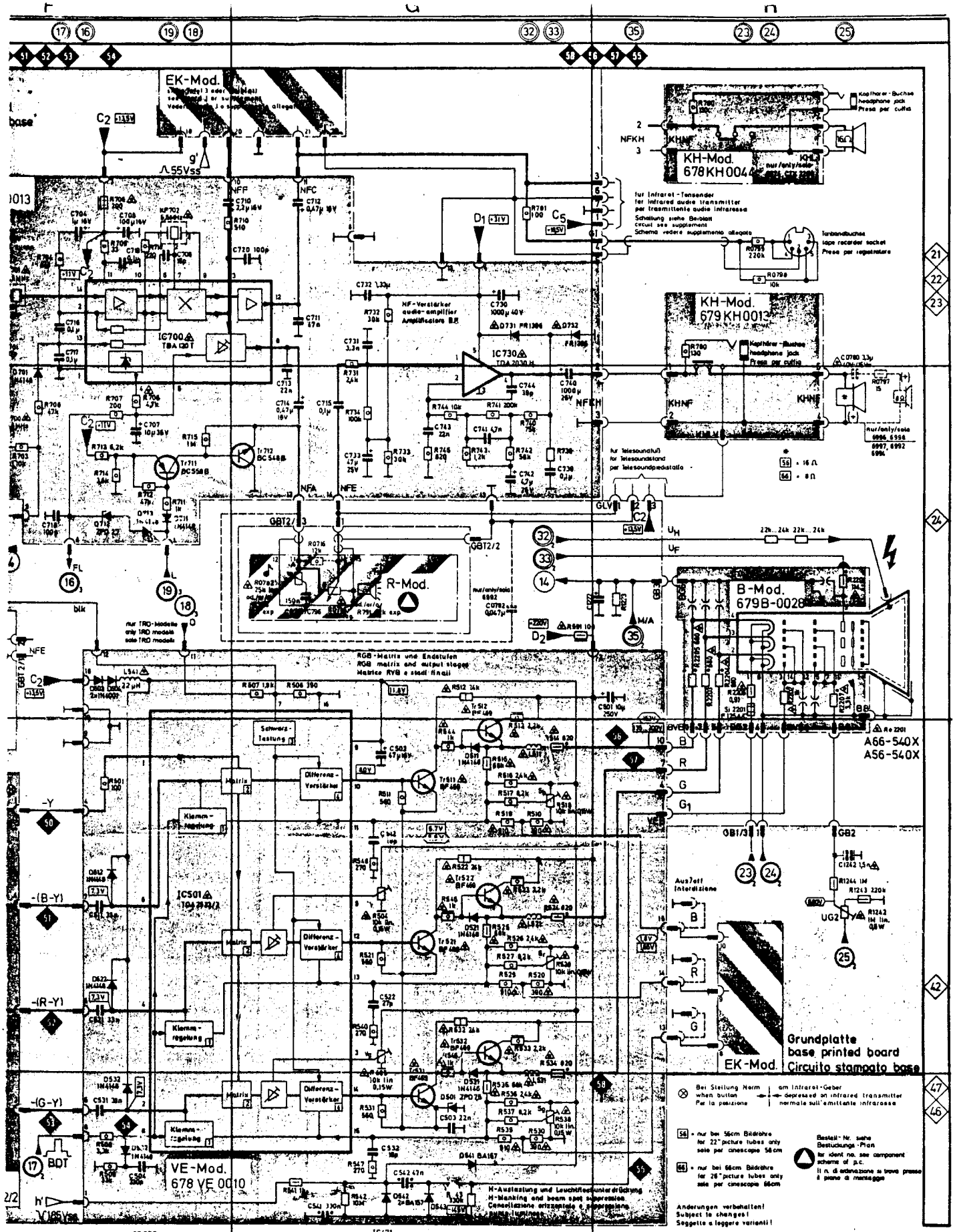


IC 200
1 = gain controlled IF amplifier/Amplificatore FI controllato
2 = noise blanking/Eliminazione rumore
3 = AGC-detector, noise limiter/Amplificatore tensione di controllo Limitatore di rumore
4 = synchronous demodulator/Demodulatore sincrono
5 = video amplifier/Amplificatore video
6 = AFT-synchronous demodulator/Demodulatore sincrono per controllo automatico di frequenza
7 = limiter-amplifier/Amplificatore limitatore

IC 501
1 = clamping control/Regolazione ripristinazione livello
2 = matrix/Matrice
3 = display blanking/Cancellazione scritta
4 = differential amplifier/Amplificatore differenziale

IC 471
1 = phase detector/Comparazione di fase
2 = gating pulse seperator/Separatore impulsi porta
3 = oszillator/Oscillatore
4 = flipflop/Multivibratore
5 = H/2-Detector
6 = divider/Divisore
7 = PAL-switch/Interruttore PAL
8 = colour killer/Color killer
9 = B-Y demodulator/Demodulatore
10 = G-Y matrix/Matrice
11 = R-Y demodulator/Demodulatore

IC 401
1 = contrast control/Regolazione contrasto
2 = saturation control/Regolazione saturazione
3 = blanking; black level-clamping/Cancellazione/Ripristinazione livello del nero
4 = gated amplifier/Amplificatore comandato a porta
5 = gating pulse seperator/Separatore impulsi porta

Lautstärke volume Volume
Helligkeit brightness Luminosità
Klang tone Tono
Basse bass Basso
Höhen treble Alto

Metz

COLOR 6964 6983* 6984* 6998* 7064

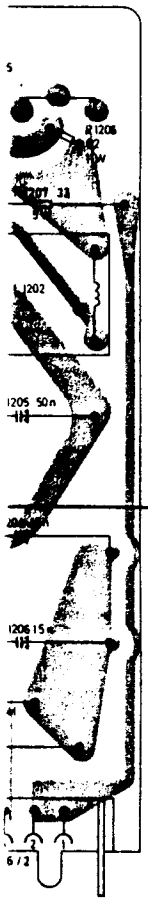
*auch als Modelle A/E/N/T
also models/anche modelli

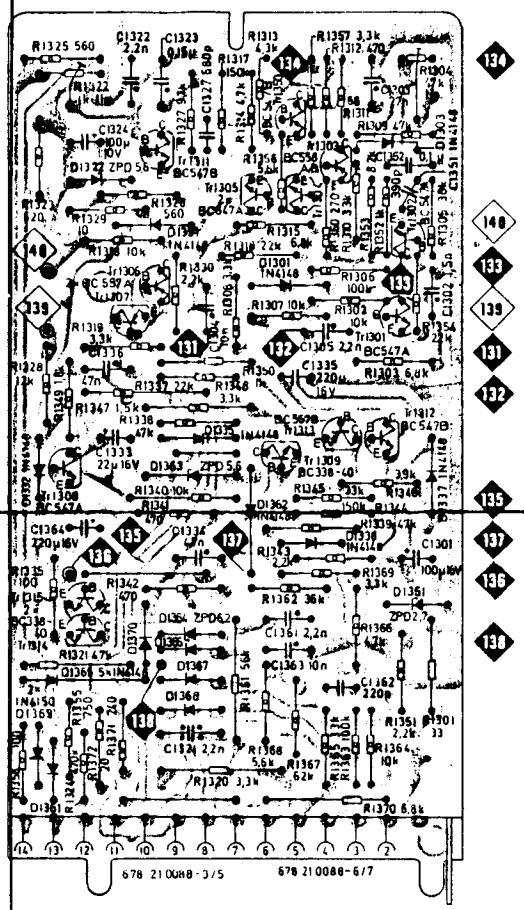
Chassis 679 G-0038

Ton- und Bildsignalstufen — **Tafel 1**
Sound and picture circuits — **Board 1**
Circuiti suono ed immagine — **Tavola 1**

S 679 46 1026/58008

F G H



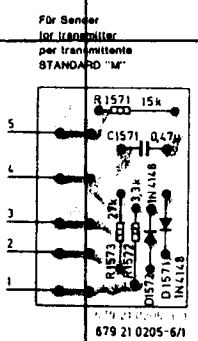


RS-Mod.
678 RS 0018

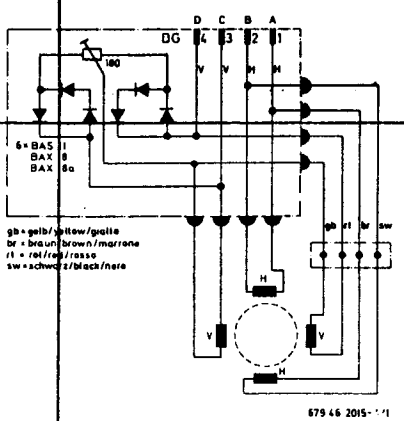
Achtung!
Moduln mit gleicher Sachnummer (9stellig links vom Schrägstrich) sind voll austauschbar! Zahlen oder Buchstaben rechts vom Schrägstrich stehen nur für unterschiedliche Ausführungen.

Attention!
Modules having the same reference number (9 digits on the left of the slant) are fully interchangeable. Numbers or figures at the right of the slant refer to differences in finish only.

Attenzione!
Moduli con numeri d'identità uguali (9 cifre a sinistra della linea di separazione) sono interamente ricambiabili! Numeri o lettere a destra della linea di separazione indicano soltanto versioni diverse.



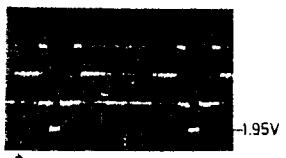
OM-Mod.
679 OM 2012



Ablenkeinheit
Deflection Yoke
Giogo di deflessione

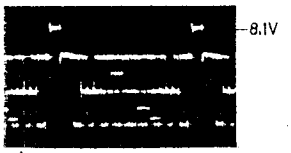
Sicht auf gelötete Seite! View on to soldered side! Vista dalla parte saldature!
Änderungen vorbehalten! Subject to changes! Soggetto a leggere varianti!

zu Schaltbild Tafel 1
for circuit diagram board 1
forme d'onda tavola 1

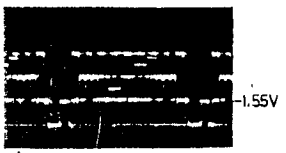


29 H SW 1,4Vss

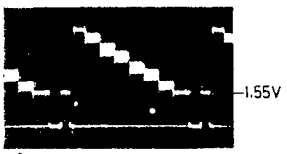
29 H F 1,2Vss



40 H SW 3,6Vss



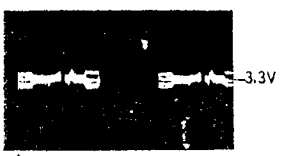
41 H SW 3,6Vss



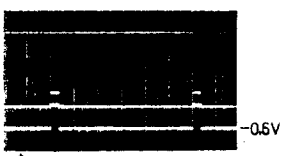
41 H F 2,7Vss

43 H F 1,5Vss

44 H F 0,22Vss



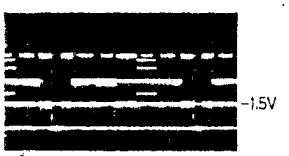
45 H F 0,3Vss



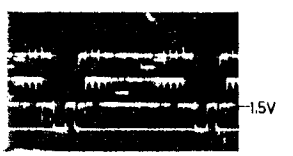
48 V 9,2Vss

48 H 9,2Vss

49 V 5Vss



50 V SW 1,25Vss



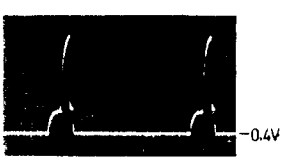
50 H SW 1,25Vss

50 H F 1Vss

51 H F 1,27Vss

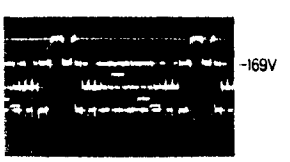
52 H F 1Vss

53 H F 0,6Vss



54 H 9Vss

55 H 160Vss



56 57 58 H SW 140Vss

56 H F 100Vss

57 H F 100Vss

58 H F 100Vss

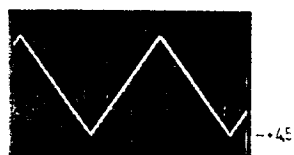
H = Horizontal / orizzontale
V = Vertikal / vertical / verticale
SW = SW-Testbild
b/w pattern
monoscopio bianco e nero
F = Farbbalken
color bars
barre a colori
Vss ≙ Vpp

678 46 4008 - 1/2

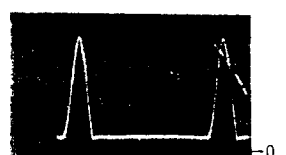
Alle Oszillogramme sind bei maximalem Kontrast und nominaler Helligkeit und Farbstärke aufgenommen.
All oscillograms are shown at maximal contrast, nominal brightness and color saturation.
Tutti gli oscillogrammi sono ripresi con contrasto al massimo, con luminosità e intensità colore nominali.

zu Schaltbild Tafel 2
for circuit diagram b
forme d'onda tavola

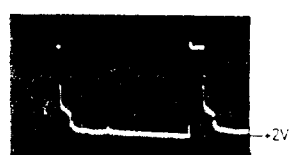
110 H 12Vss



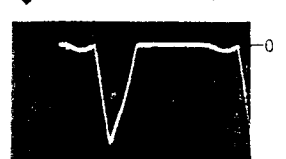
115 H 3,2Vss



120 H 270Vss

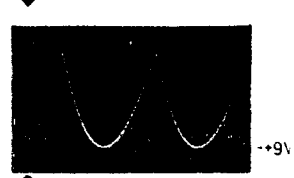


131 H 8,4Vss



138 H 0,28Vss

143 V 22Vss



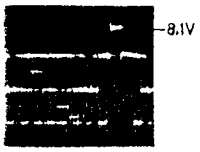
151 V 4,4Vss

172 H 620Vss

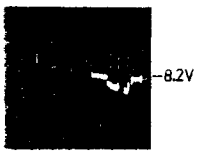
679 46 4028 - 2/2

H = Horizontal / orizzontale
V = Vertikal / vertical / verticale
SW = SW-Testbild / b/w pattern / mo
Vss ≙ Vpp

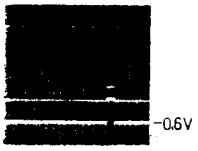
zu Schaltbild Tafel 2
for circuit diagram board 2
forme d'onda tavola 2



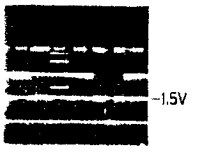
SW 3,6Vss



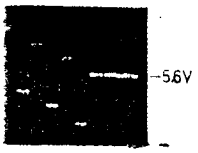
F 1,5Vss



9,2Vss

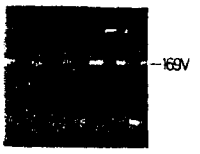


SW 1,25Vss



F 1,27Vss

9Vss



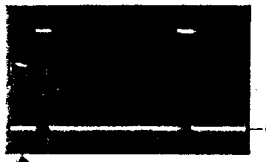
F 100Vss

zontale
/ verticale

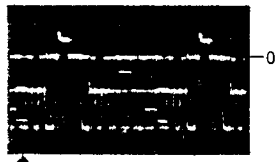
inco e nero

enommen.

nominali.



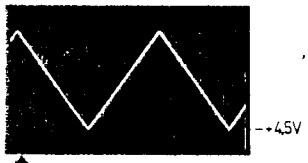
110 H 12Vss



111 H SW 3,2Vss

112 V 13Vss

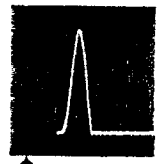
113 H



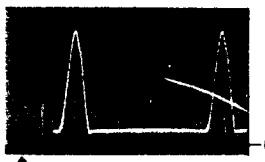
114 H 3,2Vss

122 H 9Vss

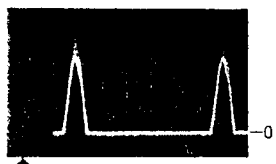
123 H 580Vss



124 H

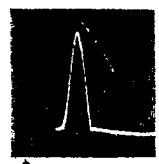


126 H 270Vss



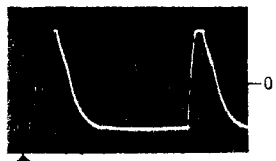
127 H 240Vss

127 V 240Vss



128 H

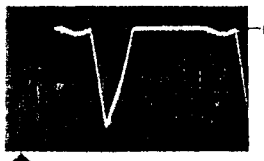
131 H 8,4Vss



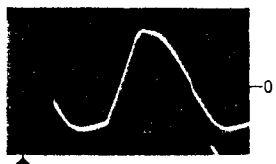
132 H 2,4Vss

133 H 11,4Vss

134 H



136 H 0,28Vss



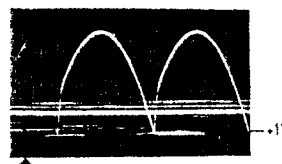
137 H 9,4Vss

138 H 1,2Vss

141 V

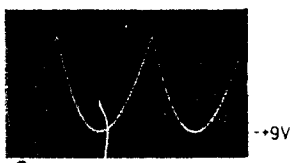
143 V 22Vss

144 V 37Vss

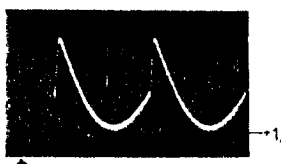


146 V 2,8Vss

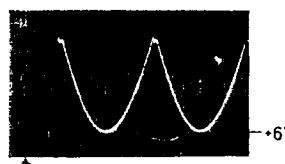
148 V



151 V 4,4Vss



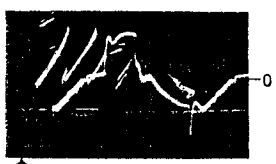
152 V 0,95Vss



155 V 12Vss

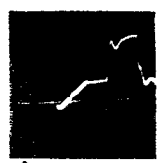
160 H

162 H 620Vss



163 H 68Vss

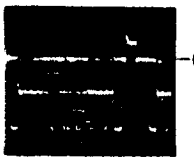
164 H 1050Vss



165 H

679 46 4028-2/2

H = Horizontal / orizzontale
V = Vertikal / vertical / verticale
SW = SW-Testbild / b/w pattern / monoscopio bianco e nero
Vss ≙ Vpp



SW 3,2Vss

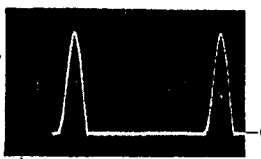
112 V 13Vss

113 H 10Vss

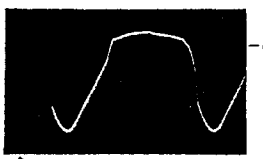
114 H 2Vss

9Vss

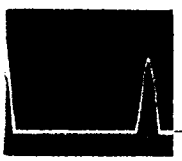
123 H 580Vss



124 H 630Vss

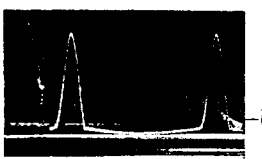


125 H 38Vss

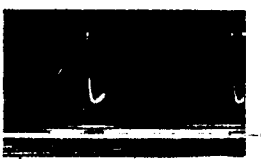


240Vss

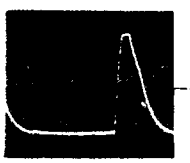
127 V 240Vss



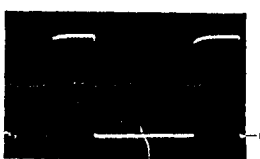
128 H 1520Vss



130 H 25Vss

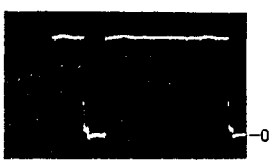


2,4Vss

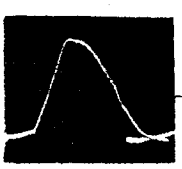


133 H 11,4Vss

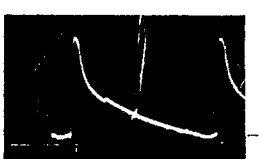
134 H 3,8Vss



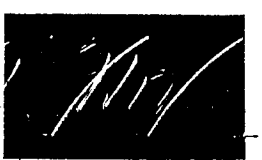
135 H 3,8Vss



9,4Vss



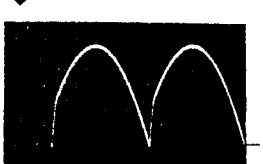
140 H 1,2Vss



141 V 2,3Vss

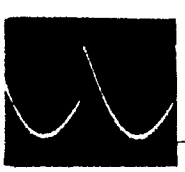
142 V 6,2Vss

37Vss



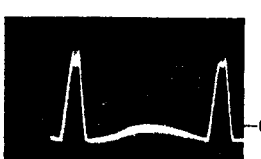
145 V 2,8Vss

146 V 1Vss

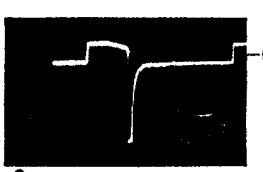


0,95Vss

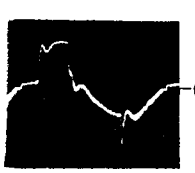
153 V 12Vss



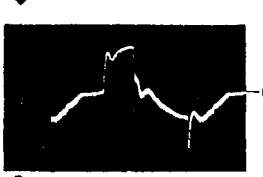
160 H 260Vss



161 H 8Vss



68Vss

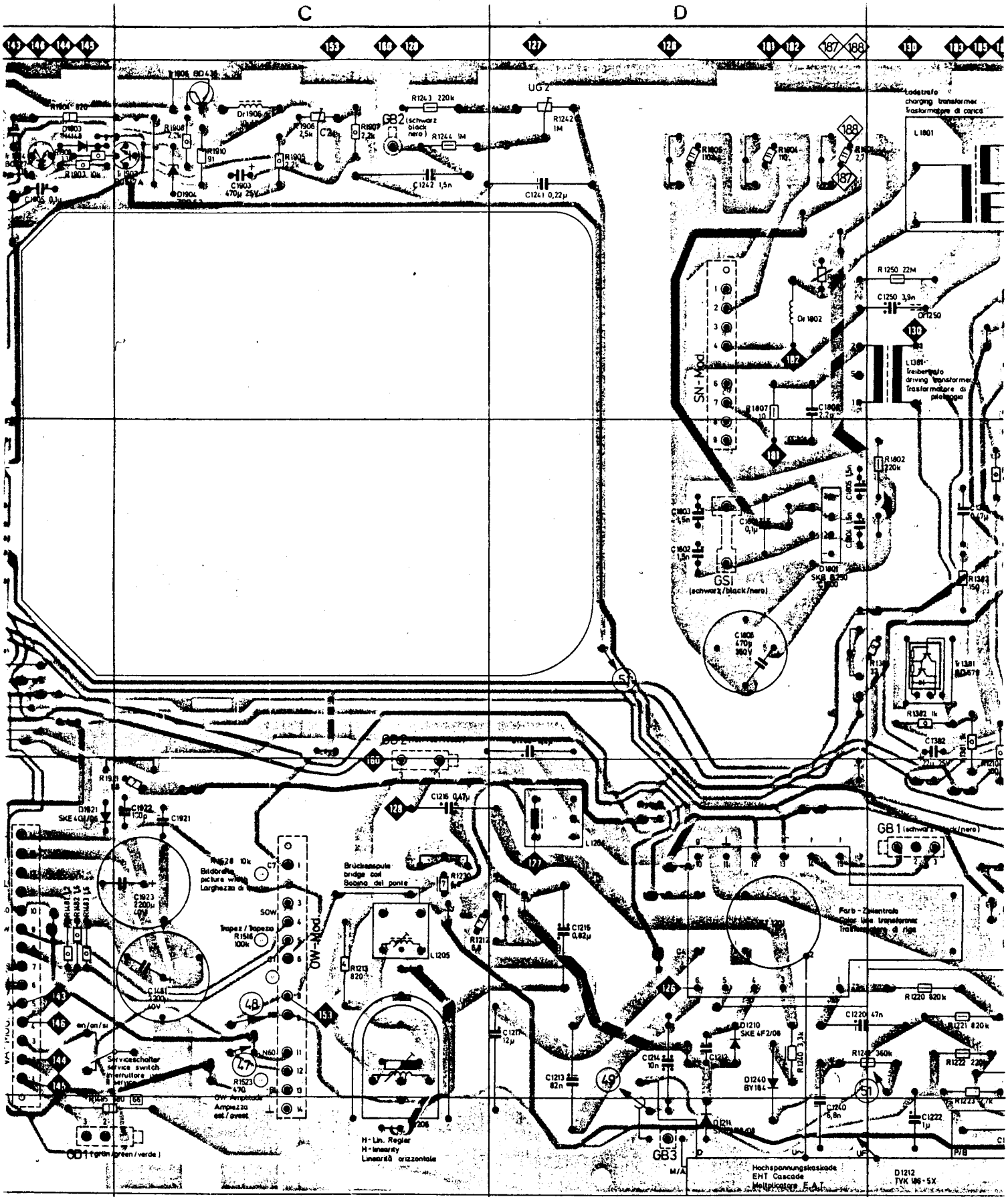


104 H 1050Vss

105 H 550Vss

106 H b. $I_{Str.}=0$ 3,1Vss
beam current
corrente di raggio

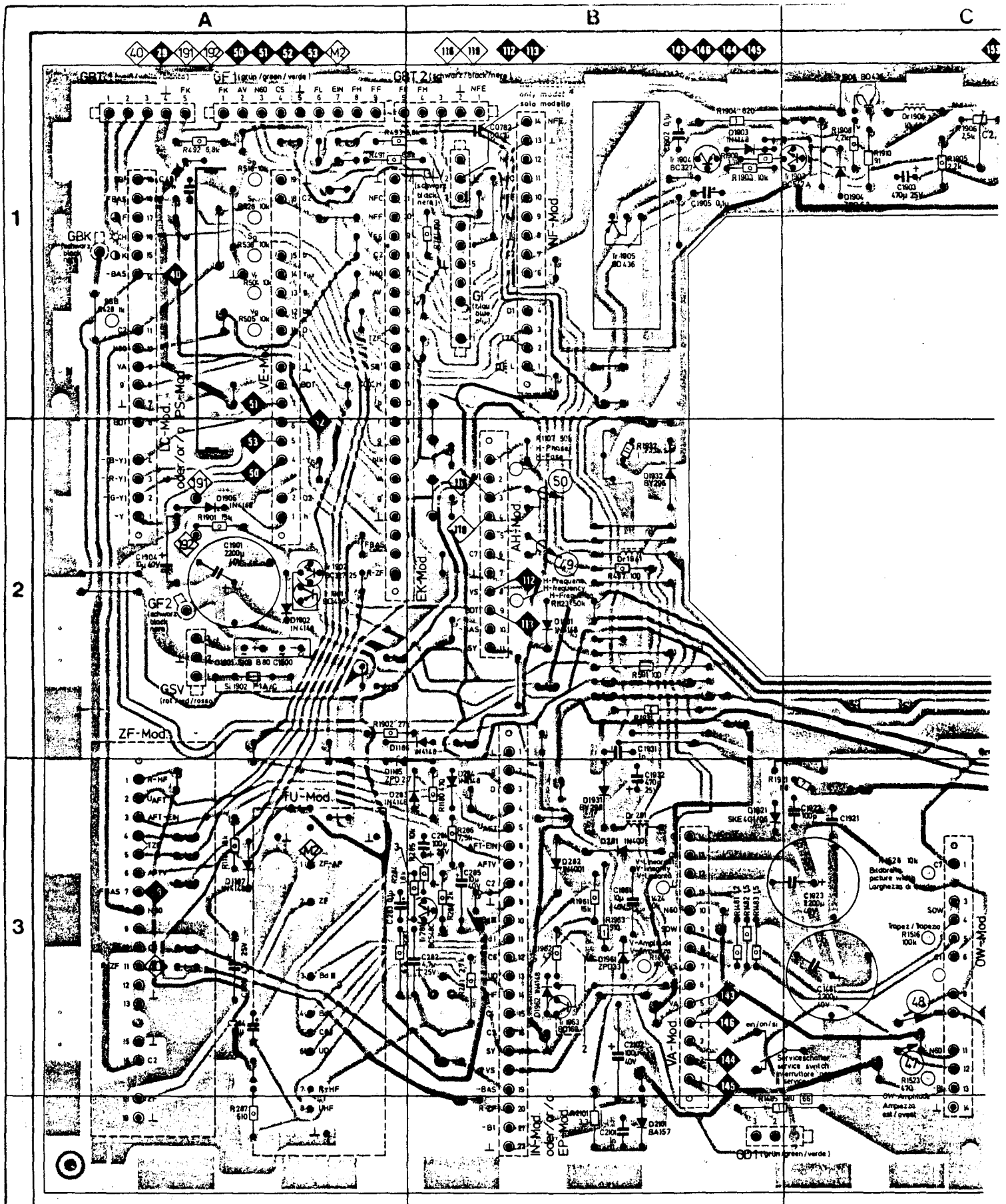
e nero



abweichungen / Alterations of circuit / Differenze tra i circuiti:

1: ohne/without/senza: Tr 281, D 283, 284, 1185, 1186, 1187, R 284, 285, 286, 287, 288, 1180, 1181, C 284, 285, 1188
mit/with/con : Brücke 3, bridge 3, ponticello 3 (für/for/per R 284)

8: ohne/without/senza: Si 1902, D 1962, Tr 1963, R 1962, 1963, C 1961, 0782
mit/with/con : Brücke 1, bridge 1, ponticello 1 (für/for/per Si 1902); Brücke 2, bridge 2, ponticello 2 (für/for/per Tr 1963, R 1962)



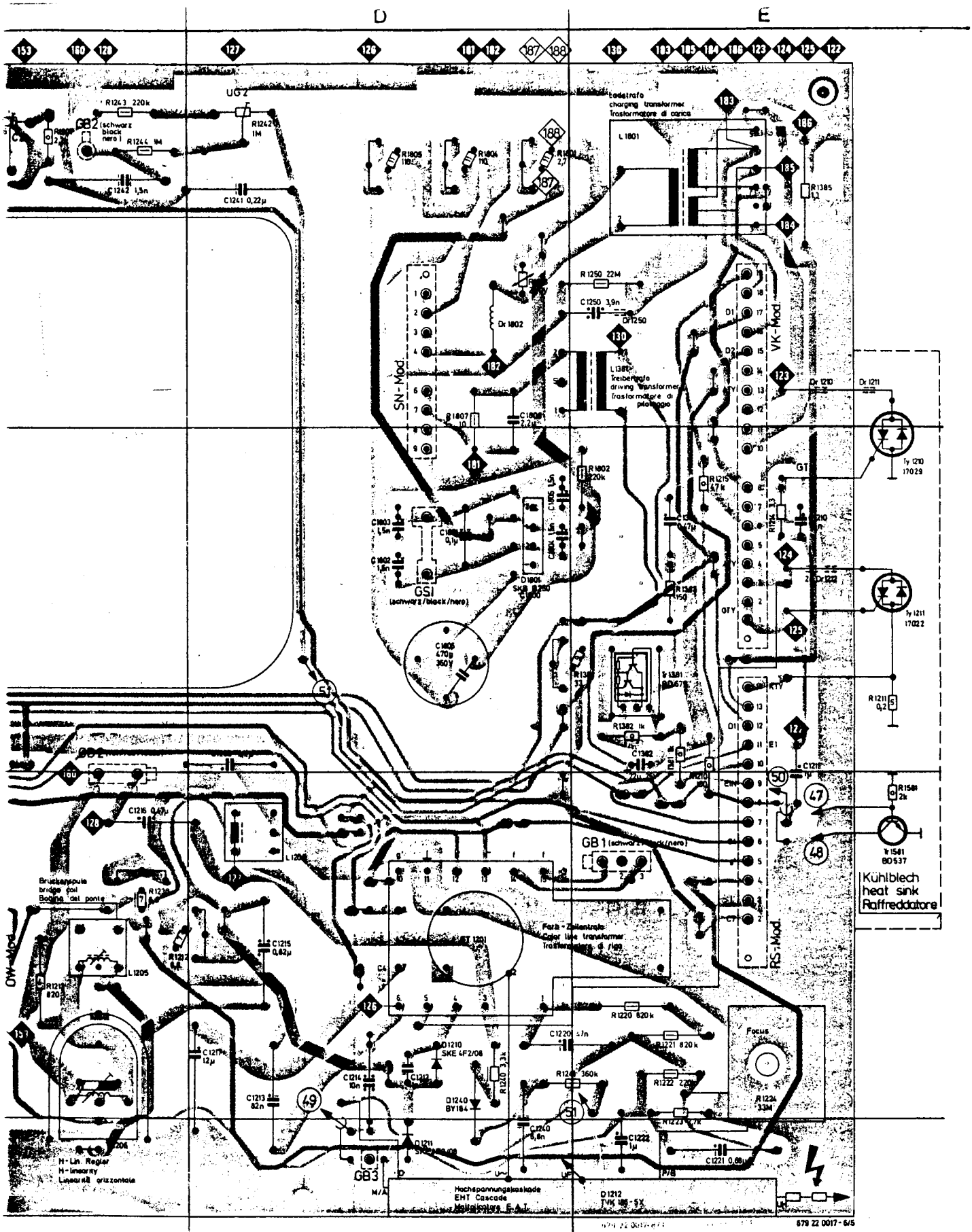
Grundplatte für Chassis 679 G-0011
Base printed board for Chassis 679 G-0038
Circuito stampato base del telaio

679 G-0011: ohne/without/senza: Tr 281, D 283, 284,
mit/with/con : Brücke 3, bridge 3,

679 G-0038: ohne/without/senza: Si 1902, D 1962, Tr
mit/with/con : Brücke 1, bridge 1,

Sicht auf gelötete Seite
View on to soldered side
Vista dalla parte saldature

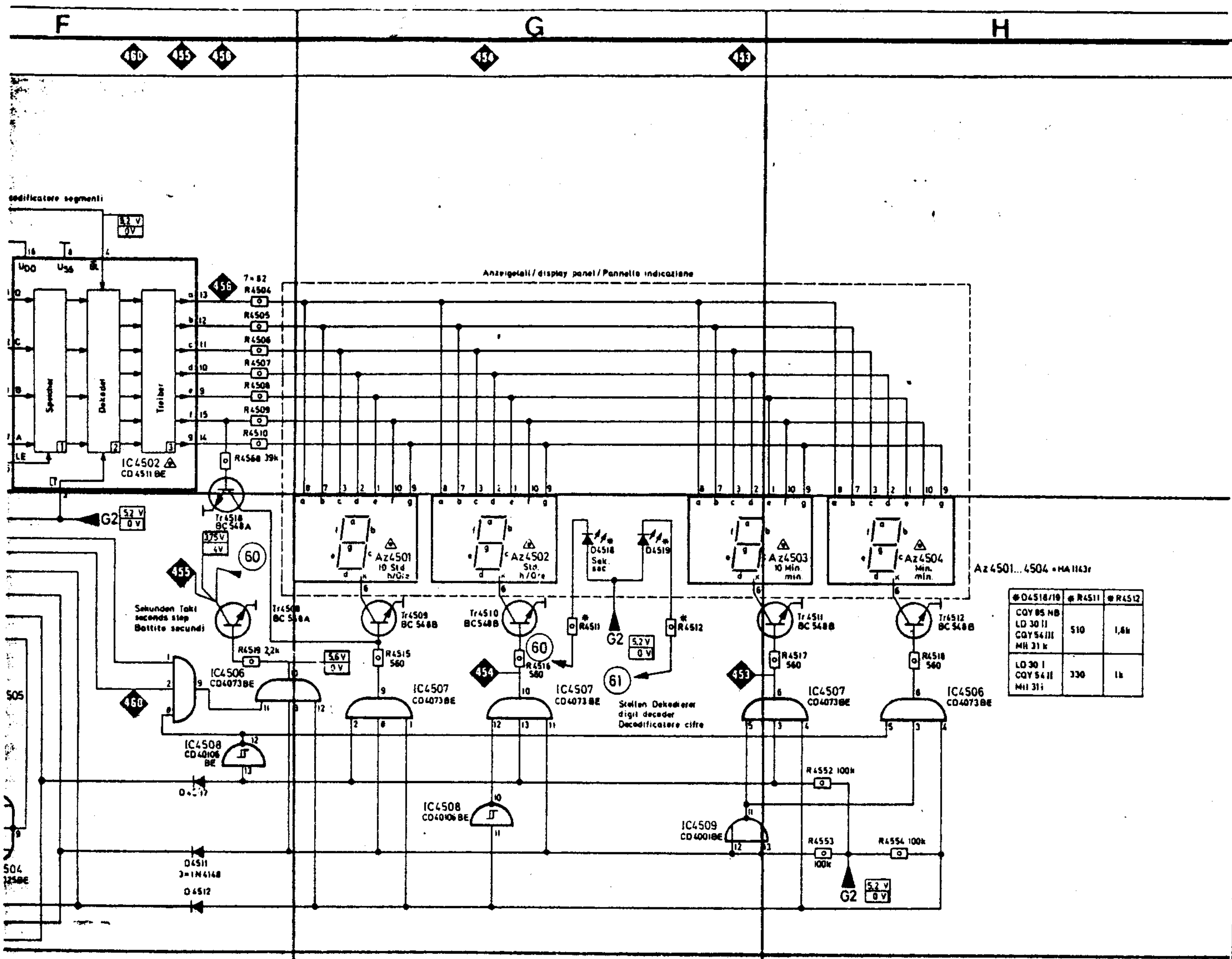
Änderungen vorbehalten!
Subject to changes!
Soggetto a leggere varianti!



Differenze tra i circuiti:

, 1185, 1186, 1187, R 284, 285, 286, 287, 288, 1180, 1181, C 284, 285, 1188
3, ponticello 3 (für/for/per R 284)

r 1963, R 1962, 1963, C 1961, 0782
, ponticello 1 (für/for/per Si 1902); Brücke 2, bridge 2, ponticello 2 (für/for/per Tr 1963, R 1962)



* D4518/19	* R4511	* R4512
CQY 85 NB LD 30 II CQY 54 III MH 31 k	510	1,6k
LD 30 I CQY 54 II MH 31 i	330	1k

TS-Mod.
678 TS 0028

IC4501

1 = 'OFF' counter / Contatore periodo di spegnimento
2 = digit decoder / Decodificatore cifre
3 = seconds, minutes and hours multiplexer / Multiplexer per secondi, minuti ed ore
4 = shaping circuit / Formatore d'impulsi
5 = 'ON' hours counter / Contatore ore "Si"
6 = 'ON' minutes counter / Contatore minuti "Si"
7 = 24 hours counter / Contatore 24 ore
8 = 60 minutes counter / Contatore 60 minuti
9 = 60 seconds counter / Contatore 60 secondi
10 = 50 or 60 pre-scale counter / Predivisore 50 o 60
11 = comparator / Comparatore
12 = control logic and O/P buffers / Pilotaggio logica e stadi d'uscita

Änderungen vorbehalten! Subject to changes! Soggetto a leggere varianti!

Achtung: Trimmer C4501 nicht verstellen! Nach Ausfall neben stehender Bauelemente ist das TS-Modul ins Werk zur Reparatur einzusenden:

Attention: Do not adjust trimmer C4501! After falling-out of the components listed on the right the TS-Module should be repaired at the factory:

Attenzione: Non ritoccare il trimmer C4501! Il modulo TS dovrà essere inviato in fabbrica in caso di guasto dei componenti a fianco:

Tr4513, Tr4514
R4550, R4551, R4556
C4501, C4503
Q4501

Bestell Nr siehe Bestückungs Plan
For ident-no see component scheme of p.c
Il n. di ordinazione si trova presso il piano di montaggio

Metz

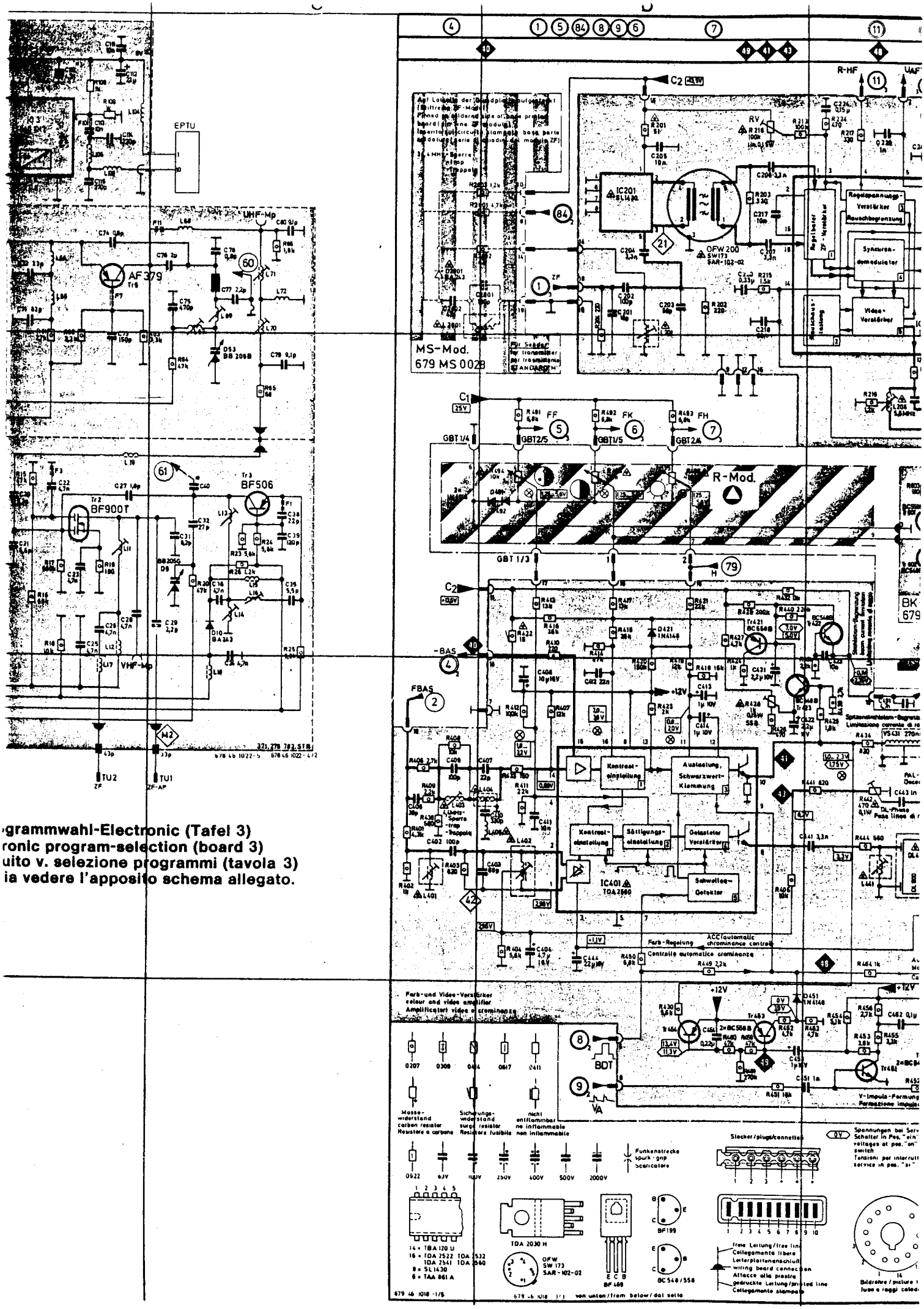
COLOR 6964* 6984*
6998* 7064

* auch als Modelle A/E/N/T
also models / anche modelli

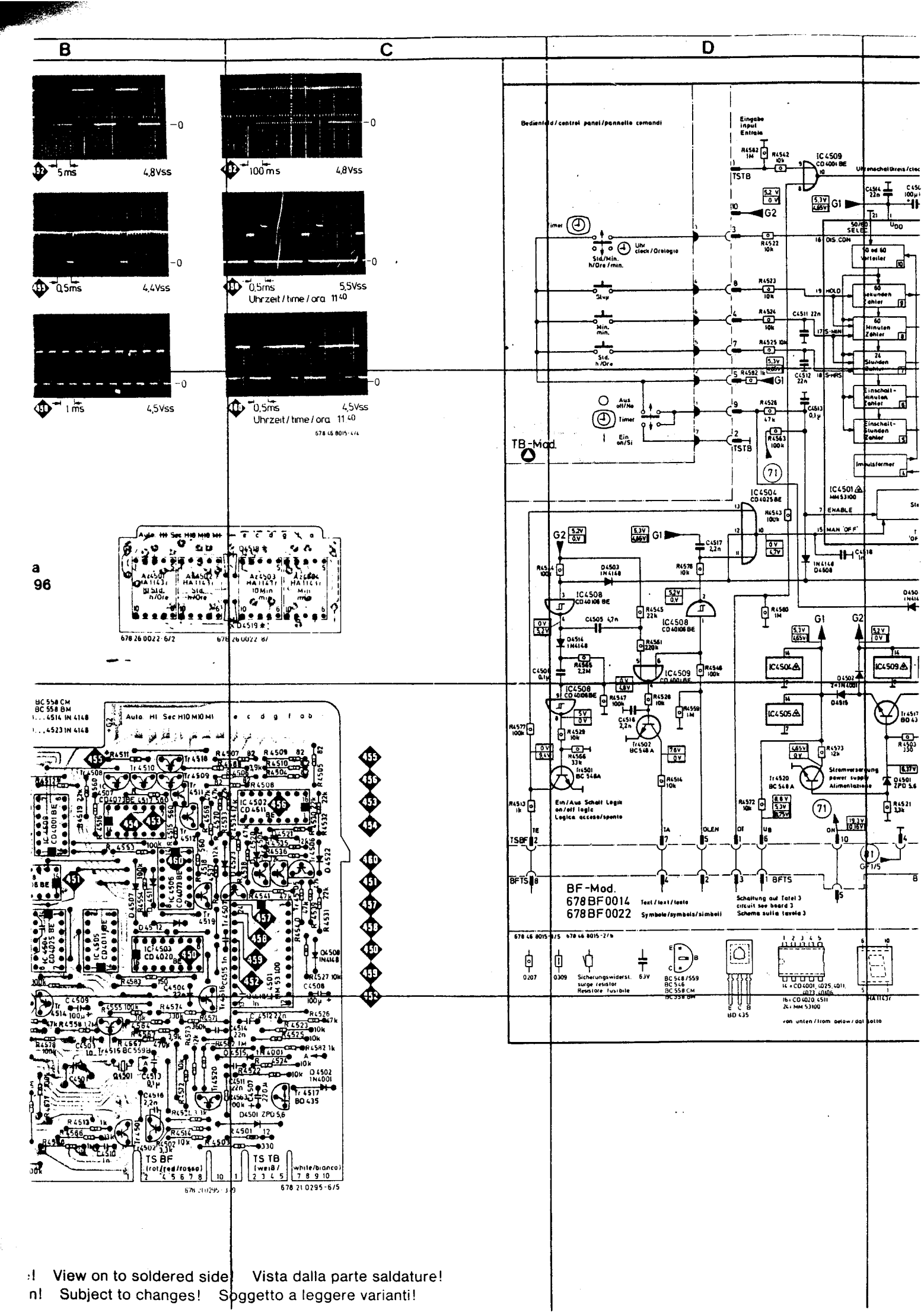
Chassis 679 G-0038

Quarz-Elektronik-Uhr
Electronic digital clock
Orologio elettronico a quarzo

S 679 46 8019/28008



grammwahl-Electronic (Tafel 3)
ronic program-selection (board 3)
uito v. selezione programmi (tavola 3)
ia vedere l'apposito schema allegato.



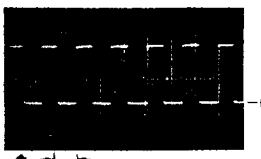
a
96

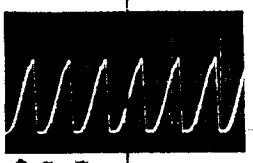
:! View on to soldered side! Vista dalla parte saldature!

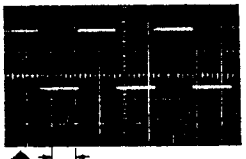
n! Subject to changes! Soggetto a leggere varianti!

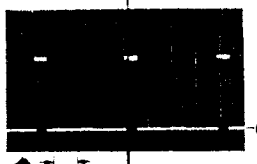
A B C

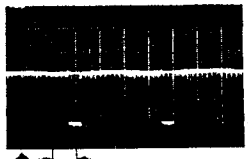
1

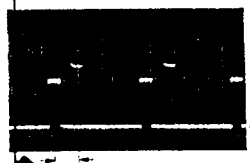


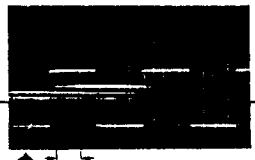


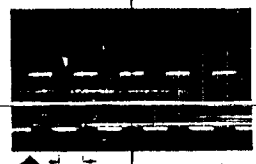


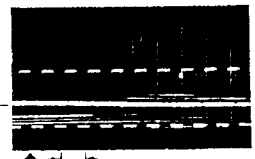


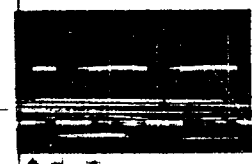












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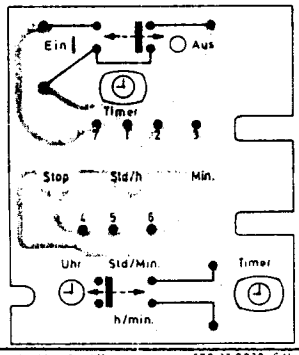
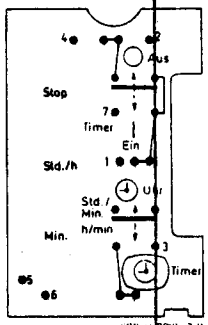
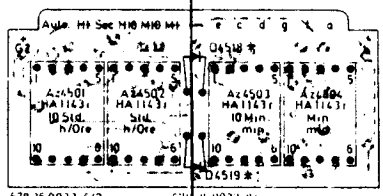


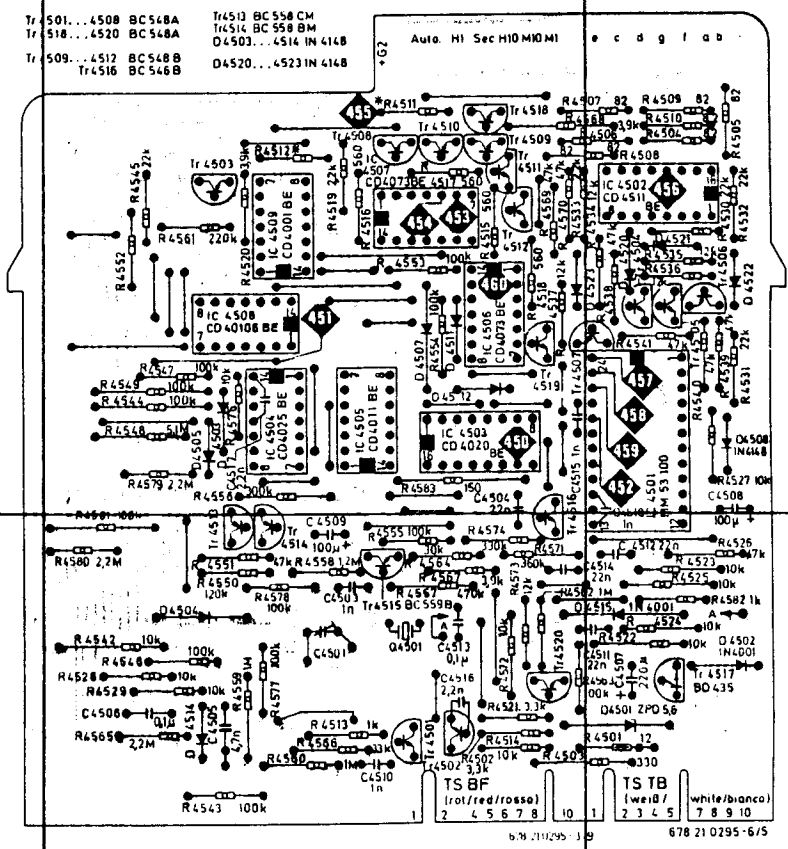


TB-Platte
board
piastra
680 96 0296
(7064)



3

TB-Mod.
679 TB 0013 (6998)



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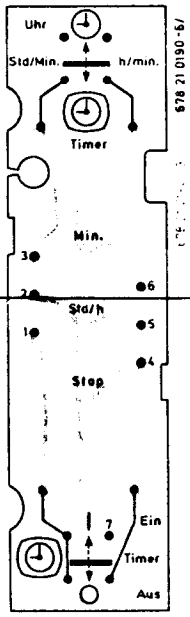
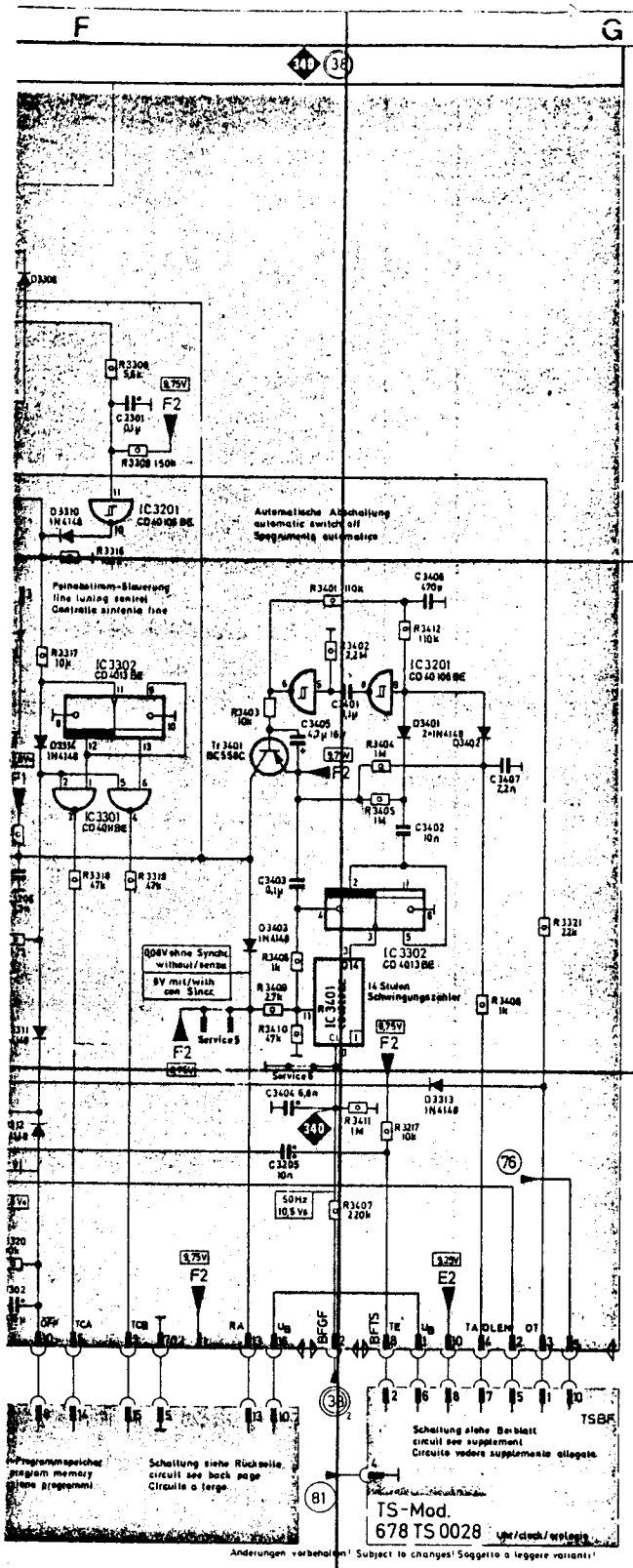


TB-Mod.
678 TB 0028 (6984, CTX 2200)
678 TB 0036 (6964)

TS-Mod.
678 TS 0028

Sicht auf gelötete Seite! View on to soldered side Vista dalla parte sa
Änderungen vorbehalten! Subject to changes! Soggetto a leggere varia



Nur solange Fernsteuerbefehl Norm gesendet wird

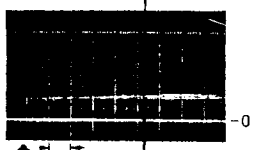
As long as remote control key Norm is pressed

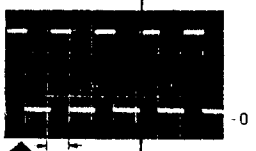
Soltanto per il tempo in cui il tasto Norm del comando a distanza viene premuto

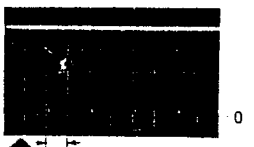
Einmaliger Vorgang beim Einschalten

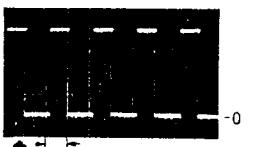
Will appear only when switching on

Appare soltanto all'accendere dell'apparecchio









678 46 3027-4/2

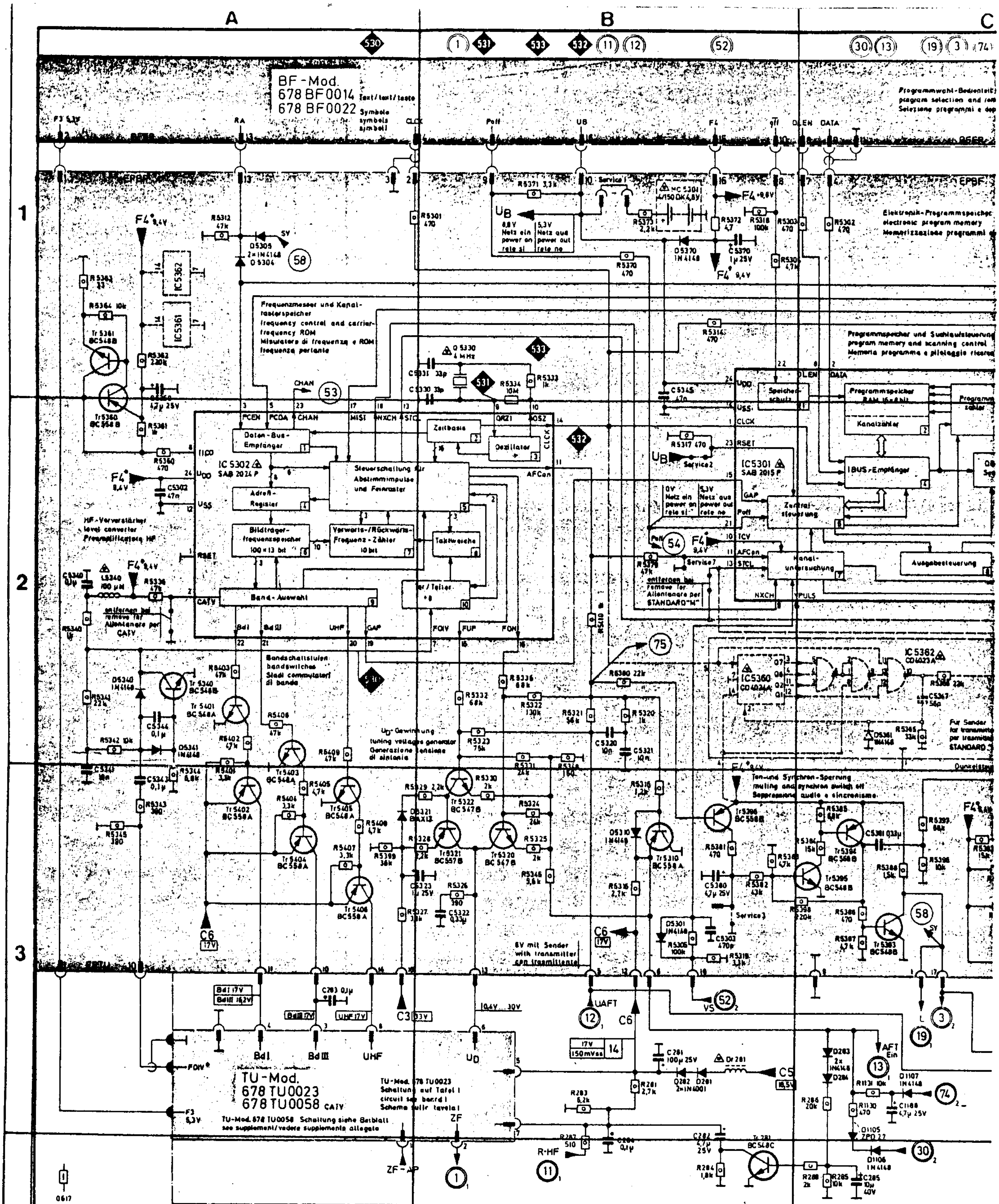
teil und Fernsteuerdecoder
remote control
decodificatore comando a distanza

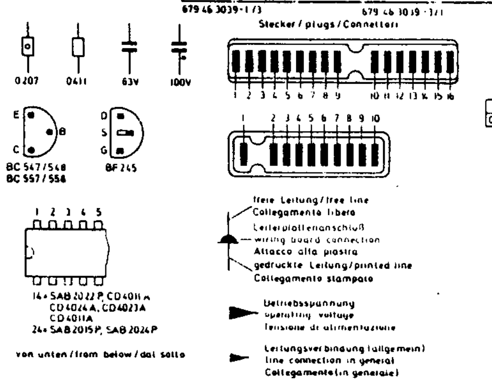
COLOR 6964 6983* 6984* 6998* 7064

*auch als Modelle A/E/N/T
also models/anche modelli

Chassis 679 G-0038

Programmwahl-Elektronik	**Tafel 3**
Electronic program selection	**Board 3**
Selezione programmi elettronica	**Tavola 3**





0V — Spannungen mit Schwarz-Weiß-Signal gemessen / voltages measured with black and white signal / Tensioni misurate con segnale bianco nero

Betriebsspannung/operating voltage/Tensione di alimentazione

0V / 0Vss — Diagnose Punkt/diagnostic point/punto diagnostica

Brummspannung/hum voltage/tensione di rumore gemessen ohne Ton, Strahlstrom max., 220V~ / measured without volume, beam current max. 220V~ / misurate senza volume, corrente di raggio max., 220V~

Leitungen fortführend auf Tafel 1 od. 2 / lines conduct to board 1 or 2 / I collegamenti conducono alle tavole 1 o 2 — Tafel/board/Tavola

Meßpunkt Oszillogramm / waveform testpoint / Punto di misura con oscillogramma

Achtung: Nur Original-Ersatzteile verwenden! Bestell-Nr. siehe Ersatzteil-Liste

Attention: please use original spare part only! compare spare parts list for order number

Attenzione: Sostituire soltanto con componente originale! Per il n. d'ordinazione vedere lista componenti di ricambio

IC5302

1 = Data Bus receiver/Bus dati del ricevitore
2 = clock/Marcatore di tempo
3 = oscillator/Oscillatore
4 = address register/Registro indirizzi
5 = control unit for tuning voltage generation and micro function/ Unità di controllo per la generazione tensione di sintonia e tensione a microgradini
6 = ROM for carrier frequencies/ROM per frequenze portanti
7 = Up/down frequency counter 10 bit/ Contatore di frequenza in avanti/alla rovescio
8 = control/Diramazione marcatura tempo
9 = band selection/Selezione banda di frequenza
10 = gate and 8 to 1 divider/Porta e divisore per 8

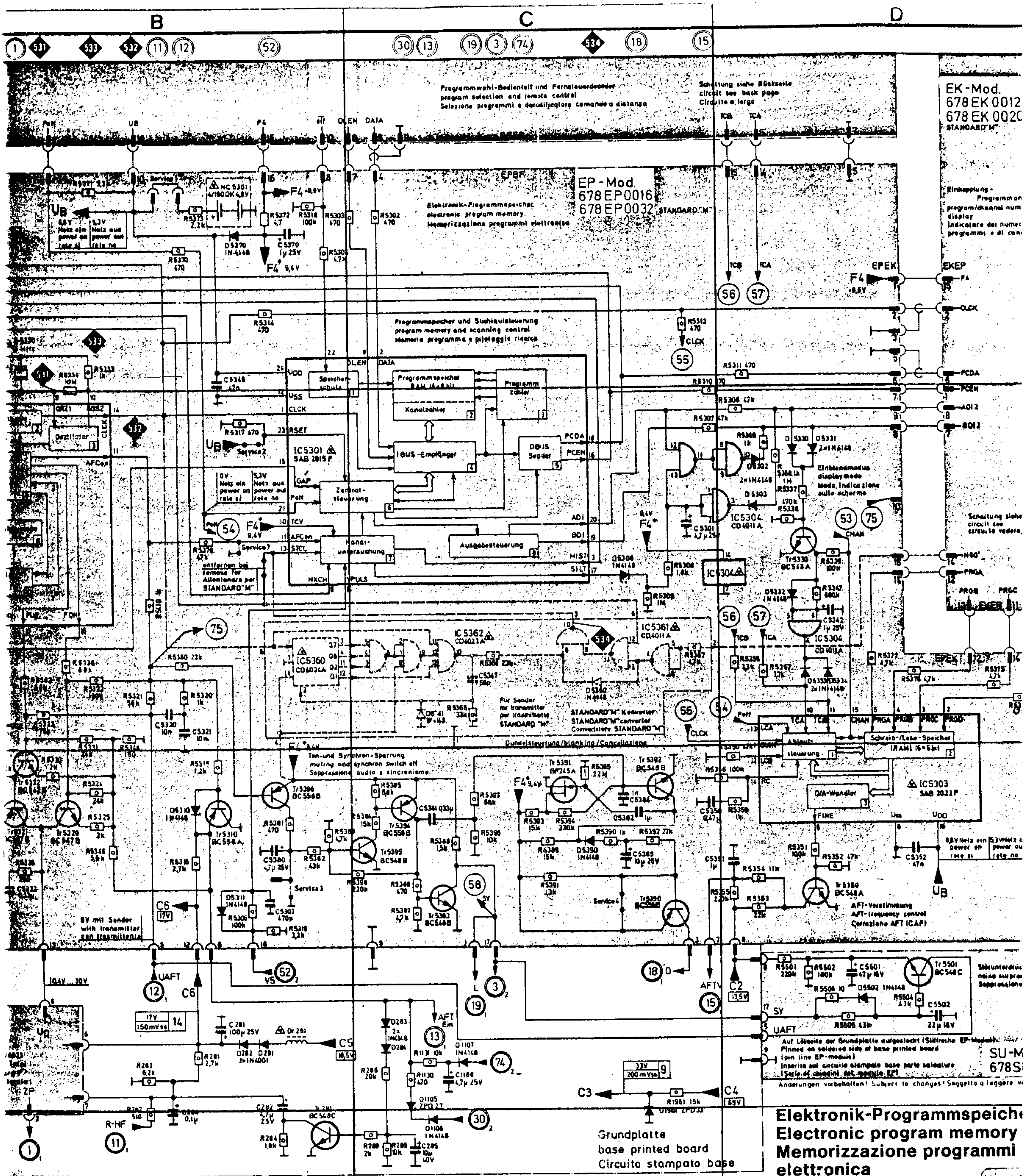
IC5303

1 = control unit/Pilotaggio andamento
2 = 16×5 bit RAM
3 = D/A converter/Convertitore D/A

IC5301

1 = in
2 = µ
3 = p
4 = I
5 = D
6 = c
7 = f
8 = d

Service
Service
Service
Service



Elektronik-Programmspeicher
Electronic program memory
Memorizzazione programmi elettronica

…pannungen mit Schwarz-Weiß-Signal gemessen
…ltages measured with black and white signal
…ensioni misurate con segnale bianco nero

…etriebsspannung/operating voltage/Tensione di alimentazione

…iagnose Punkt/diagnostic point/punto diagnostica

…rummspannung/hum voltage/tensione di rumore
…emessen ohne Ton Strahlstrom max. 220V ~
…easured without volume, beam current max. 220V ~
…isurate senza volume, corrente di raggio max. 220V ~

…eitungen fortführend auf Tafel 1 od. 2
…nes conduct to board 1 or 2
…collegamenti conducono alle tavole 1 o 2

…afel/board/Tavola

…eßpunkt Oszillogramm
…waveform testpoint
…unto di misura con oscillogramma

…chtung Nur Original-Ersatzteile verwenden! Bestell-Nr. siehe Ersatzteil-Liste

Attention please use original spare part only! compare spare parts list for order number

Attenzione Sostituire soltanto con componente originale! Per il n. d'ordinazione vedere lista componenti di ricambio

IC5302

- [1] = Data Bus receiver/Bus dati del ricevitore
- [2] = clock/Marcatore di tempo
- [3] = oscillator/Oscillatore
- [4] = address register/Registro indirizzi
- [5] = control unit for tuning voltage generation and micro function/ Unità di controllo per la generazione tensione di sintonia e tensione a microgradini
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- [8] = control/Diramazione marcatura tempo
- [9] = band selection/Selezione banda di frequenza
- [10] = gate and 8 to 1 divider/Porta e divisore per 8

IC5303

- [1] = control unit/Pilotaggio andamento
- [2] = 16×5 bit RAM
- [3] = D/A converter/Convertitore D/A

IC5301

- [1] = memory protection/Protezione memoria
- [2] = program memory/Memoria programma channel counter/Contatore dei canali
- [3] = program counter/Contatore programmi
- [4] = IBus receiver/Ricevitore IBus
- [5] = DBus transmitter/Trasmittente D Bus
- [6] = controller/Pilotaggio centrale
- [7] = TV signal recognizing/Indagine canale
- [8] = display control/Pilotaggio indicazione sullo schermo

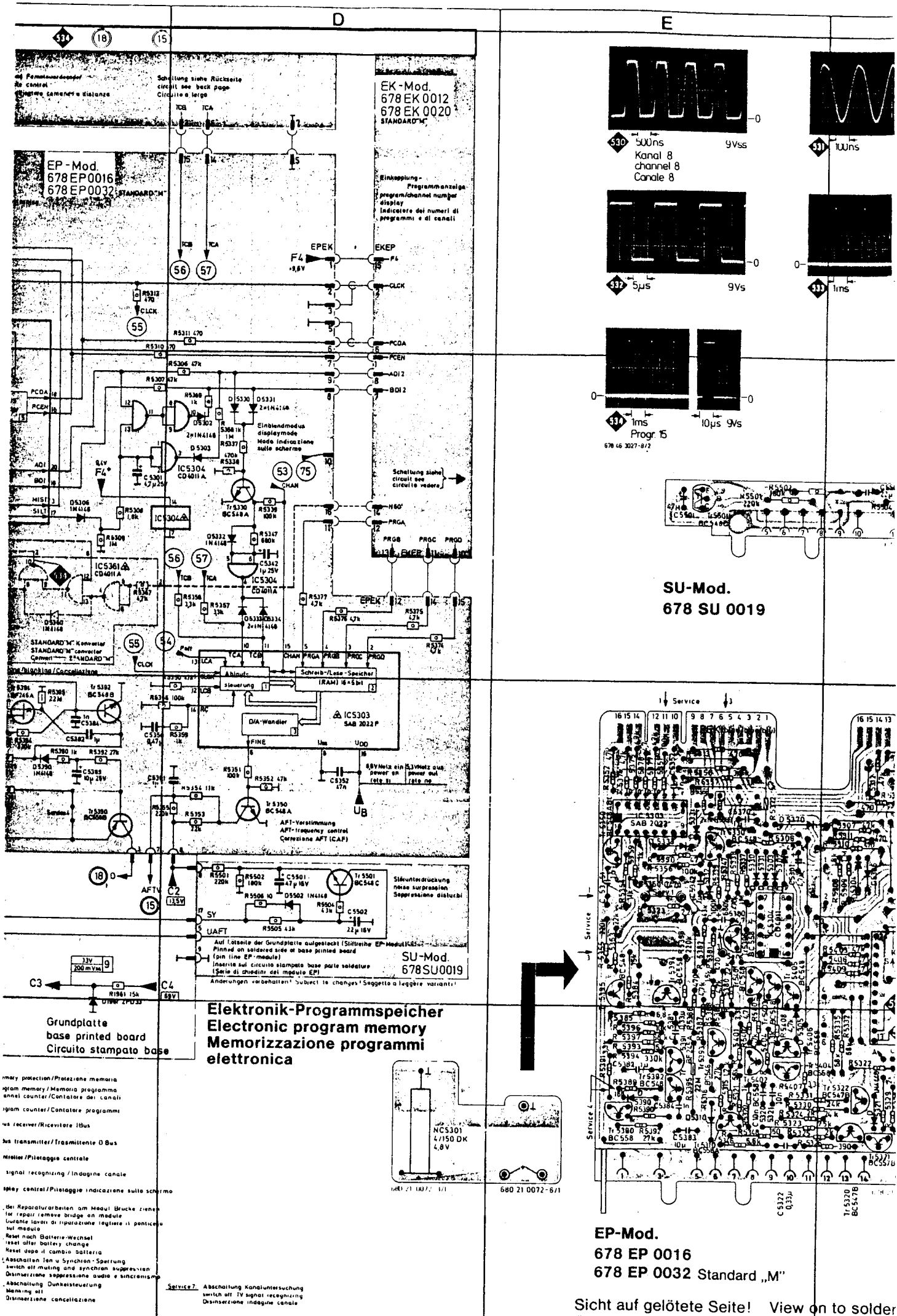
Service 1 Bei Reparaturarbeiten am Modul Brücke ziehen
for repair remove bridge on module
Durante lavori di riparazione togliere il ponticello sul modulo

Service 2 Reset nach Batterie-Wechsel
reset after battery change
Reset dopo il cambio batteria

Service 3 Abschalten Ton u. Synchron-Sperrung
switch off muting and synchron suppression
Disinserzione soppressione audio e sincronismo

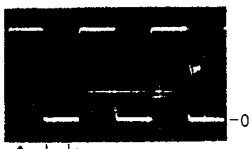
Service 4 Abschaltung Dunkelsteuerung
blanking off
Disinserzione cancellazione

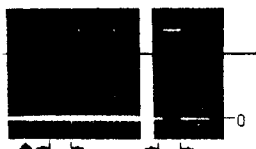
Service 7 Abschaltung Kanaluntersuchung
switch off TV signal recognizing
Disinserzione indagine canale



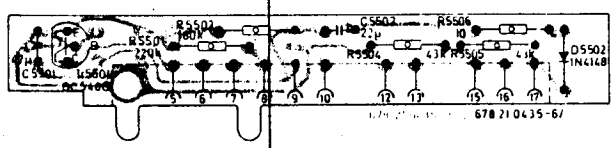
Sicht auf gelötete Seite! View on to solder

E F G

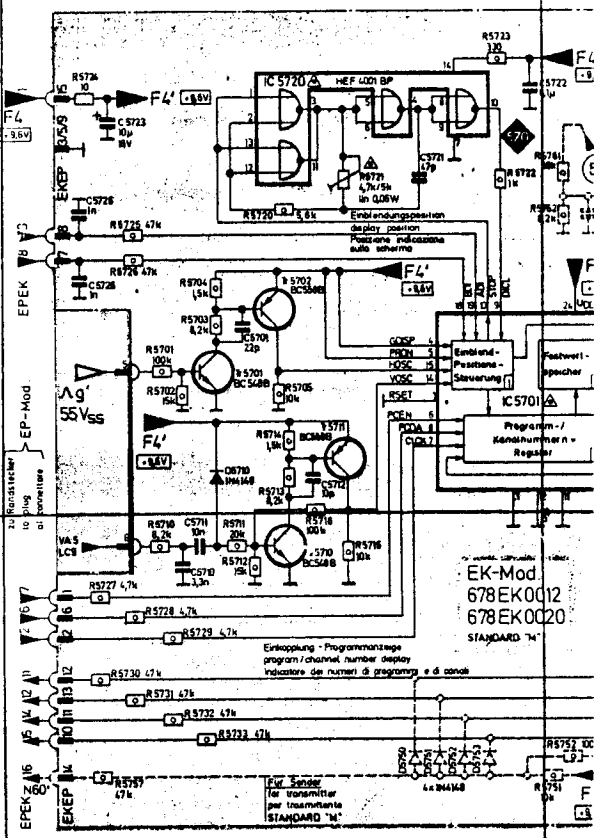




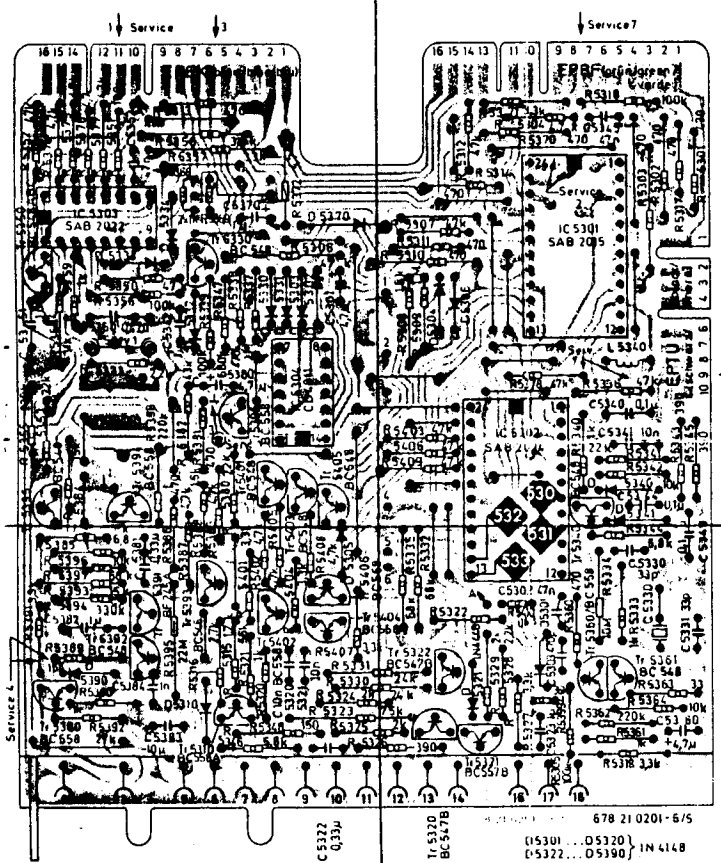
678 46 3027-8/2

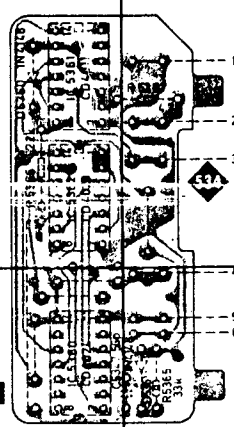


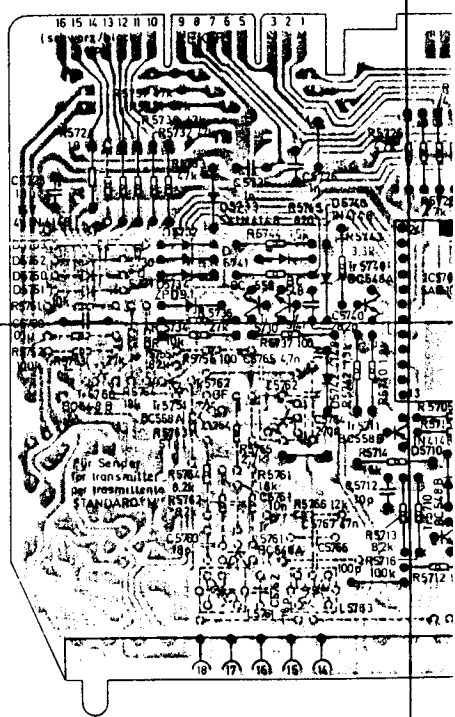
SU-Mod.
678 SU 0019



Einkopplung - Programmanzeige
Program/channel number display
Indicatore dei numeri di programmi e di ca





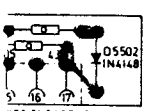


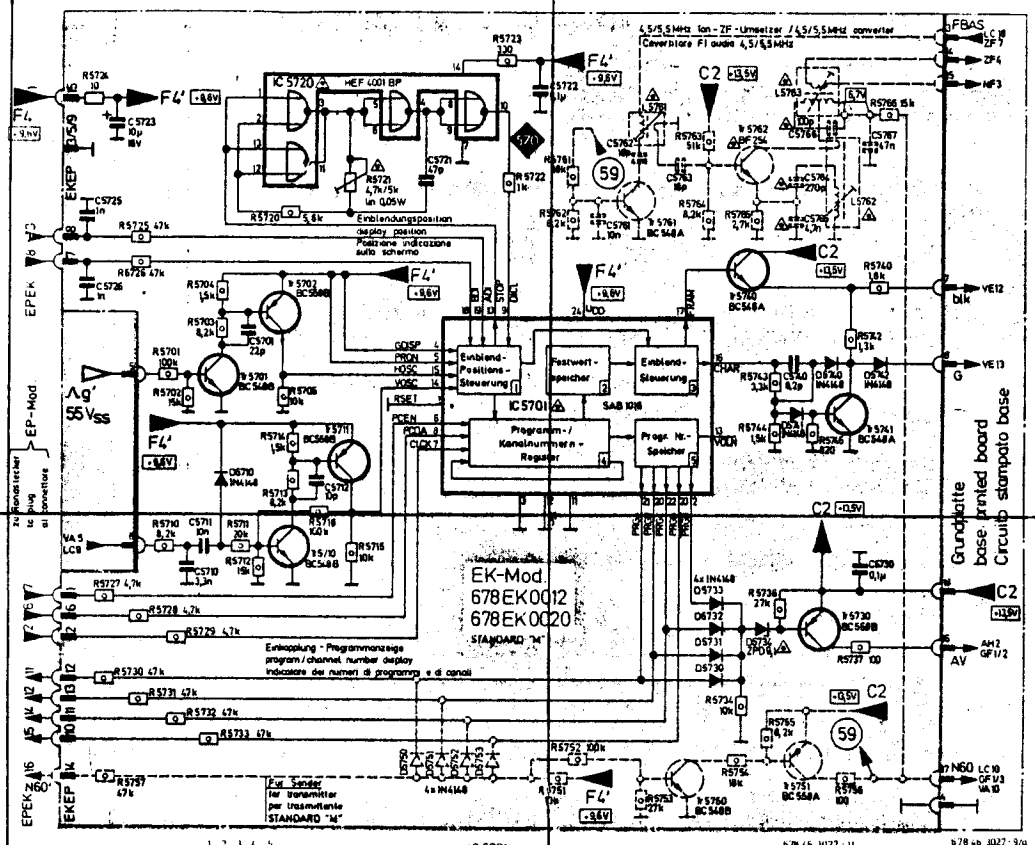
EP-Mod.
678 EP 0016
678 EP 0032 Standard „M"

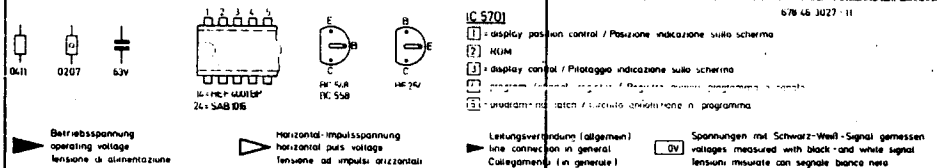
EK-Mod.
678 EK 0012/2
678 EK 0020/2 Standard „M"

Sicht auf gelötete Seite! View on to soldered side! Vista dalla parte saldature!
Änderungen vorbehalten! Subject to changes! Soggetto a leggere varianti!

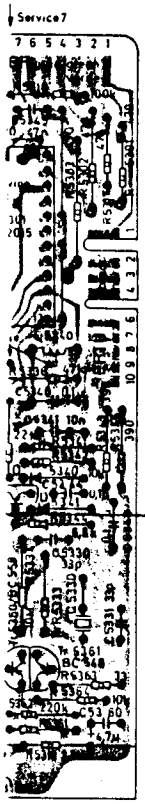
F G H

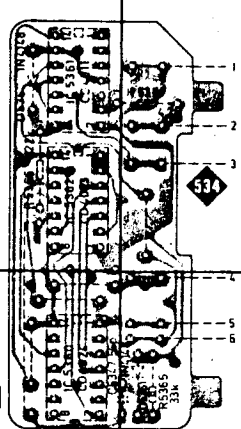


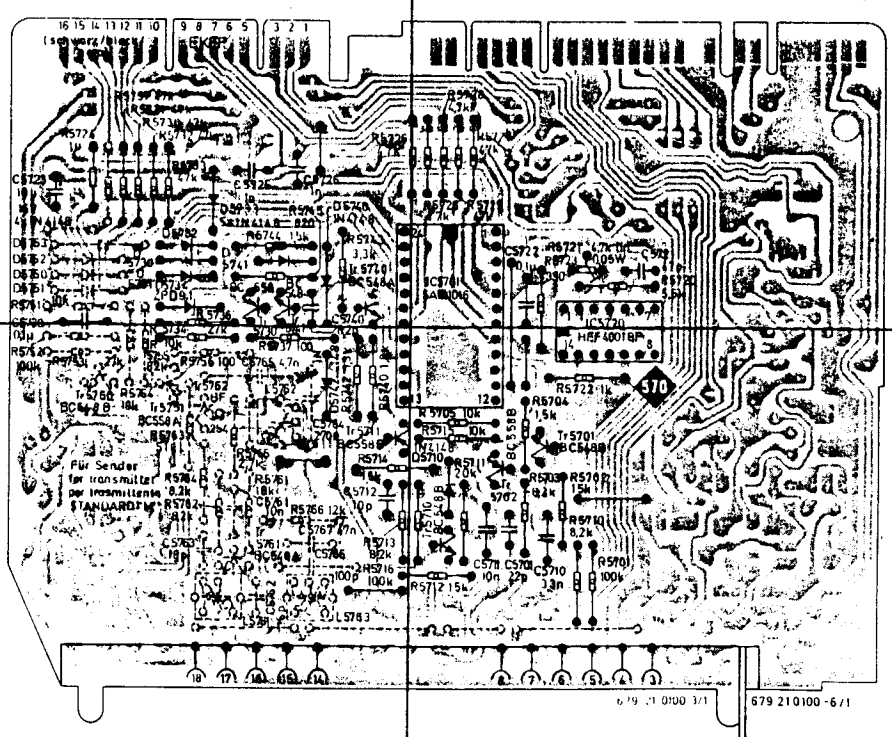




Einkopplung - Programmanzeige
Program/channel number display
Indicatore dei numeri di programmi e di canali

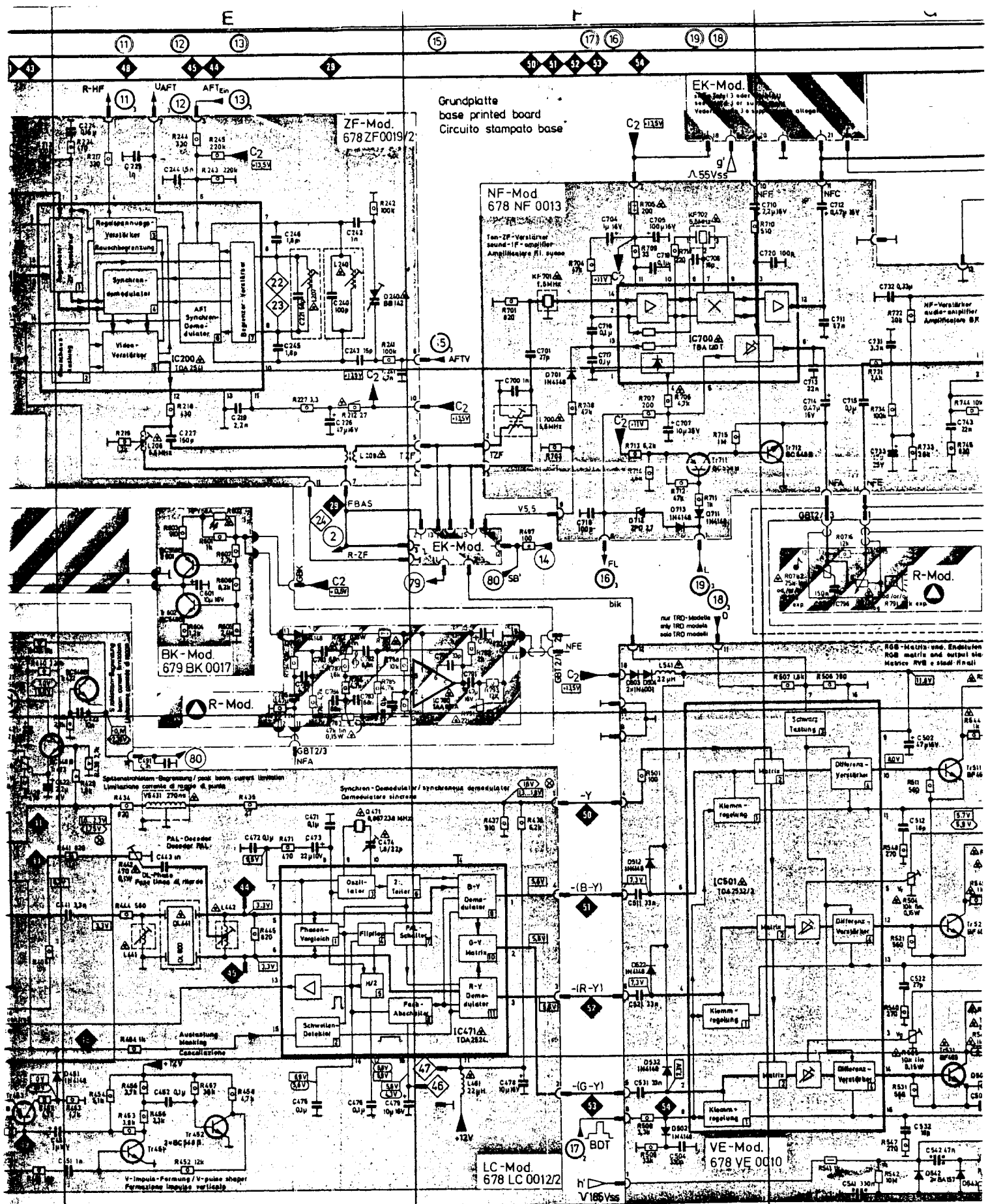






EK-Mod.
678 EK 0012/2
678 EK 0020/2 Standard „M"

de! Vista dalla parte saldature!
Soggetto a leggere varianti!



Spannungen bei Service-Schalter in Pos. "ein"
voltages at pos. "on" service switch
Tensioni per interruttore service in pos. "si"

Spannungen mit Schwarz-Weiß-Signal gemessen
voltages measured with black-and white signal
Tensioni misurate con segnale bianco nero

Spannung mit Farbsignal gemessen
voltages measured with chroma-signal
Tensioni misurate con segnale a colori

Meßpunkt Oszillogramm
waveform testpoint
Punto di misura con oscillogramma

Meßpunkt
testpoint
Punto di misura

Leitungen fortfahrend auf fol. 2 od. 3
lines conduct to board 2 or 3
I collegamenti conducono alla tavola 2 o 3

Leitungsverbindung (allgemein)
line connection in general
Collegamento (in generale)

Betriebsspannung
operating voltage
Tensione di alimentazione

Horizontal-Impulsspannung
horizontal puls voltage
Tensione ad impulsi orizzontali

Achtung: Nur Original-Ersatzteil verwenden!
Bestell-Nr. siehe Ersatzteil-Liste

Attention please use original spare part only! compare spare parts list for order number

Attenzione Sostituire soltanto con componente originale! Per il n. d'ordinazione vedere lista componenti di ricambio

Kontrast
contrast
Contrasto

Lautstärke
volume
Volume

Klang
tone
Tono

Farbsättigung
colour saturation
Intensità di colore

Helligkeit
brightness
Luminosità

Basse
bass
Basso

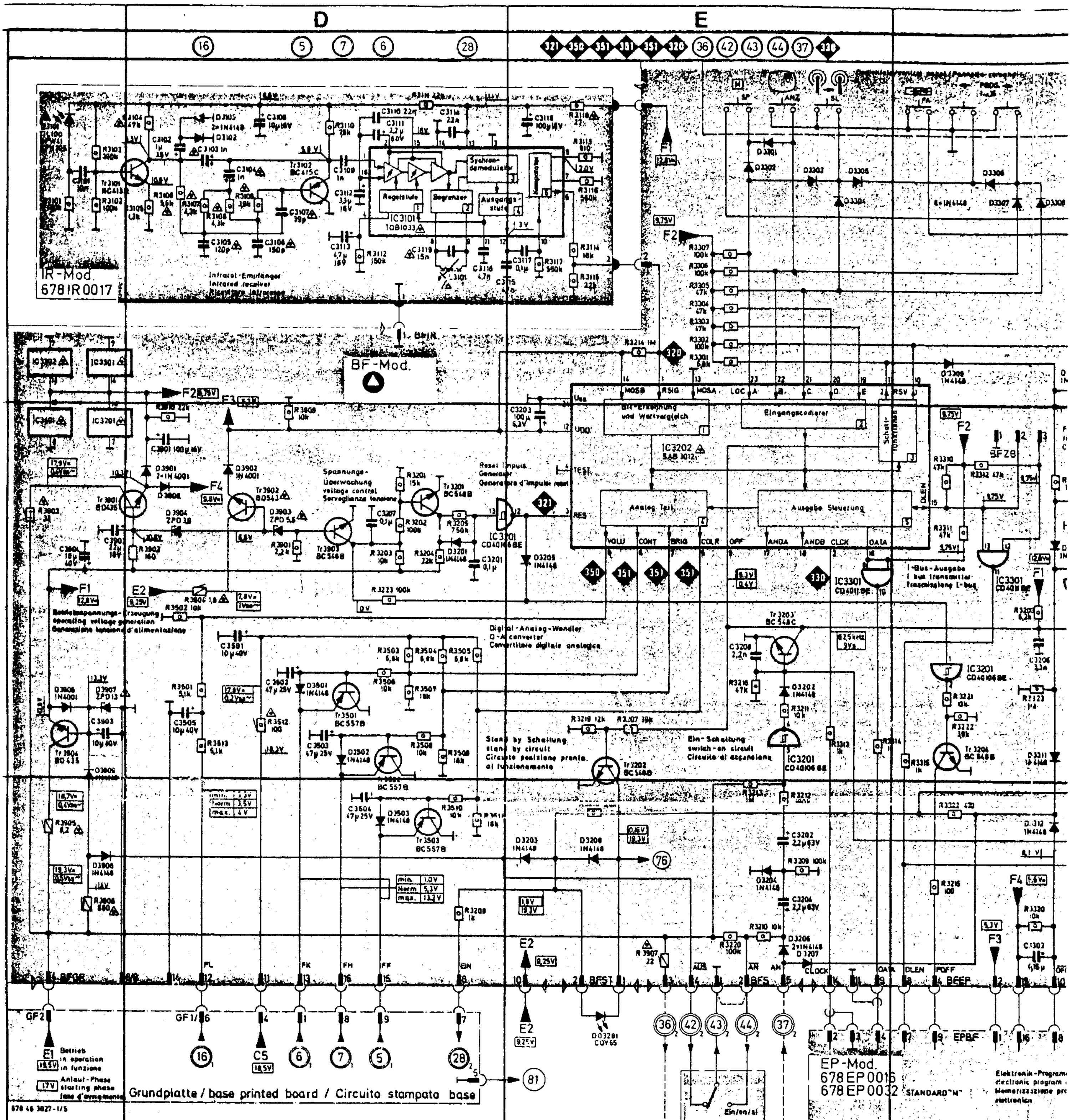
Hohen
treble
Alti

IC 200
1 = gain controlled IF amplifier/Amplificatore FI controllate
2 = noise blanking/Eliminazione rumore
3 = AGC-detector, noise limiter/Amplificatore tensione di controlle Limitatore di rumore
4 = synchroneous demodulator/Demodulatore sincrone
5 = video amplifier/Amplificatore video
6 = AFT-synchroneous demodulator/Demodulatore sincrone per controlle automatica di frequenza
7 = limiter-amplifier/Amplificatore limitatore

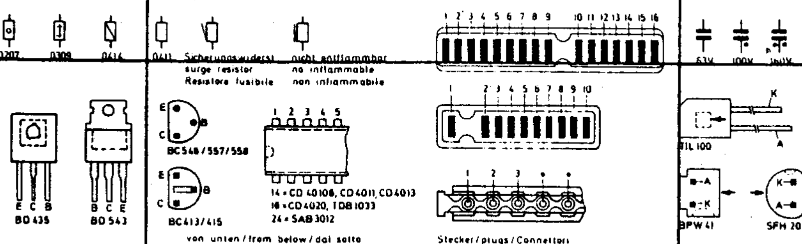
IC501
1 = clamping control/Regolazione ripristinazione livelle
2 = matrix/Matrice
3 = display blanking/Cancellazione scritte
4 = differential amplifier/Amplificatore differenziale

IC471
1 = phase detector/Can
2 = gating pulse separ
3 = oszillator/Oscillato
4 = flipflop/Multivibrat
5 = H/2-Detector
6 = divider/Divisore
7 = PAL-switch/Inter
8 = colour killer/Color
9 = B-Y demodulator/
10 = G-Y matrix/Matri
11 = R-Y demodulator/

IC401
1 = contrast control/R
2 = saturation control
3 = blanking-black lev
4 = gated amplifier/A
5 = gating pulse sepa



Programmwahl-Bedienteil u
Program selection and rem
Selezione programmi e dec



ANZ = Bildschirm-Anzeige / screen indication / Indicazione sulle schermo

SL = Sendersuchlauf / station finder / Ricerca stazioni trasmittenti

PROG. 1...16 — Programmwahl / program selection / Selezione programmi

FA = Feinabstimmung / fine tuning / Sintonia fine

SP = Speichern / storing / Memorizzazione

Kontakte des Stecker / connections of plug / Contatti del connettore

0V — Spannungswerte in Bereitschaftsstellung / voltages in stand by position / Valori di tensione in posizione pronta al funzionamento

0V — Spannungswerte bei Betrieb / voltages in operation / Valori di tensione in condizione di funzionamento

Leitungen fortführend auf Tafel 1 od 2 / lines conduct to board 1 or 2 / I collegamenti conducono alle tavole 1 o 2 — Tafel / board / Tavola

Meßpunkt Oszillogramm / waveform testpoint / Punto di misura con oscillogramma

freie Leitung / free line / Collegamento libero

Leiterplattenanschluß / wiring board connection / Attacco alla piastra

gedruckte Leitung / printed line / Collegamento stampato

Bestell-Nr. siehe Bestückungsplan / for ident no. component scheme of p.c / Il n. di ordinazione si trova presso il piano di montaggio

Achtung: Nur Original-Ersatzteil verwenden! Bestell-Nr. siehe Ersatzteil-Liste

Attention: please use original spare parts only! compare spare parts list for order number

Attenzione Sostituire soltanto con componente originale! Per il n. d'ordinazione vedere lista componenti di ricambio

Service 5. Verbinden bei Reparaturarbeiten am Gerät! Verhindert automatische Abschaltung / please connect during repair work on set avoids automatic switch-off. / Collegare durante la riparazione, si elimina così la disinserzione automatica

Service 6 Bei Reparaturarbeiten kann durch Verbinden ein Weitersetzen des Abschalt-Zählers verhindert werden / connection avoids moving on of switch-off automatism / Durante la riparazione si elimina con il collegamento il funzionare avanti del contatore di disinserzione

Betriebsspannung / operating voltages / Tensione di alimentazione

Leitungsverbindung (allgemein) / line connection in general / Collegamento (in generale)

IC 3401

1 = 14 stage ripple counter / Contatore di oscillazioni a 14 stadi

IC 3101

1 = control stage / Stadio di regolazione

2 = limiter / Limitatore

3 = synchronous demodulator / Demodulatore sicrono

4 = output stage / Stadio d'uscita

5 = comparator / Comparatore

IC 3202

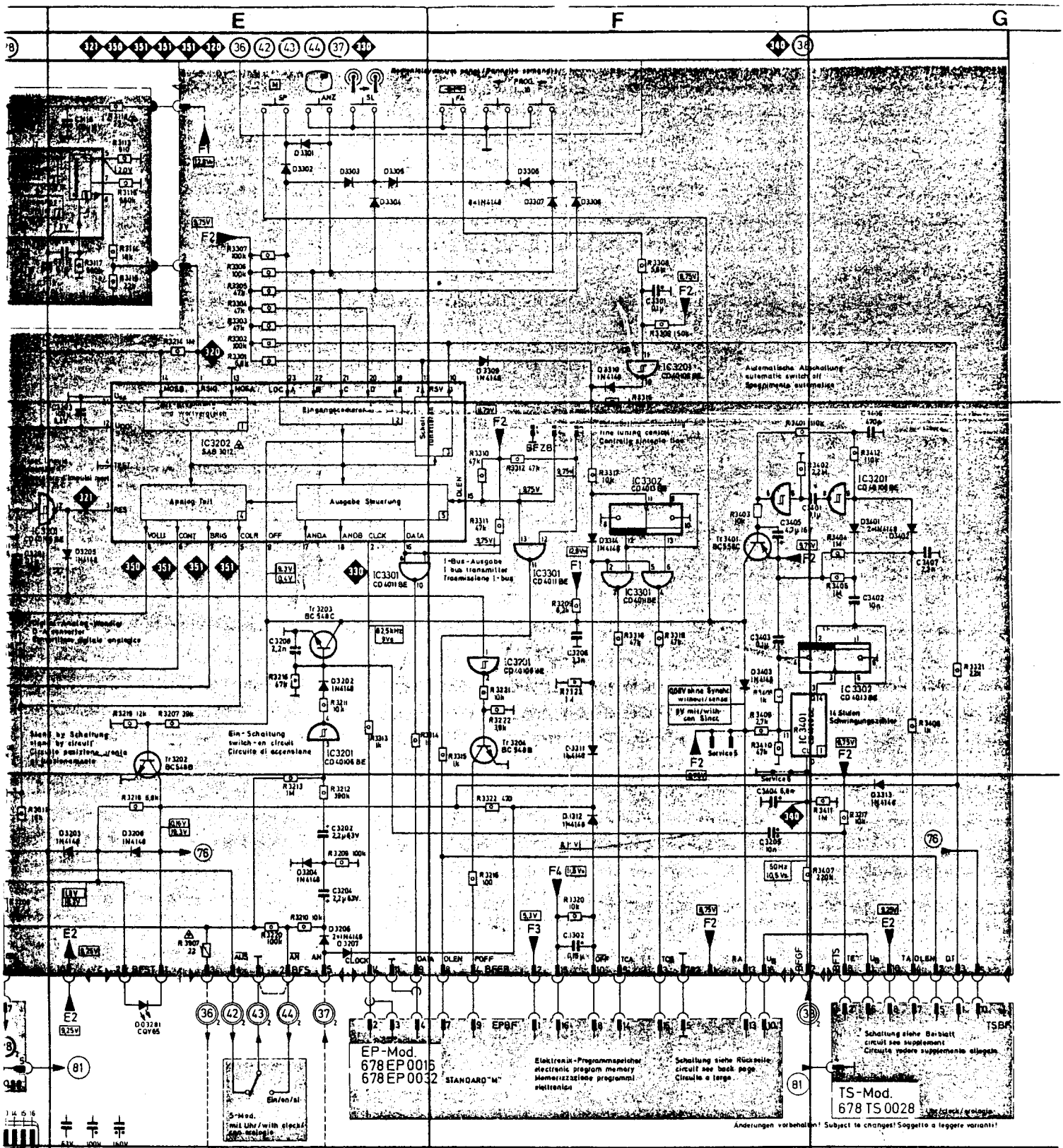
1 = bit identification and word comparison / Bit identificazione e comparazione di parola

2 = input coder / Codificatore d'entrata

3 = switching function / Funzioni di commutazione

4 = analog section / Parte analogica

5 = output control / Pilotaggio dati d'uscita



Programmwahl-Bedienteil und Fernsteuerdecoder
Program selection and remote control
Selezione programmi e decodificatore comando a distanza

IC 3401

1 = 14 stage ripple counter
Contatore di oscillazioni a 14 stadi

IC 3101

1 = control stage / Stadio di regolazione

2 = limiter / Limitatore

3 = synchronous demodulator / Demodulatore sincrono

4 = output stage / Stadio d'uscita

5 = comparator / Comparatore

IC 3202

1 = bit identification and word comparison
Bit identificazione e comparazione di parola

2 = input coder / Codificatore d'entrata

3 = switching function / Funzioni di commutazione

4 = analog section / Parte analogica

5 = output control / Pilotaggio dati d'uscita

Bestell-Nr siehe Bestückungsplan
for ident no component scheme of p.c.
Il n. di ordinazione si trova presso il piano di montaggio

Achtung: Nur Original-Ersatzteil verwenden!
Bestell-Nr siehe Ersatzteil-Liste

Attention please use original spare parts only!
compare spare parts list for order number

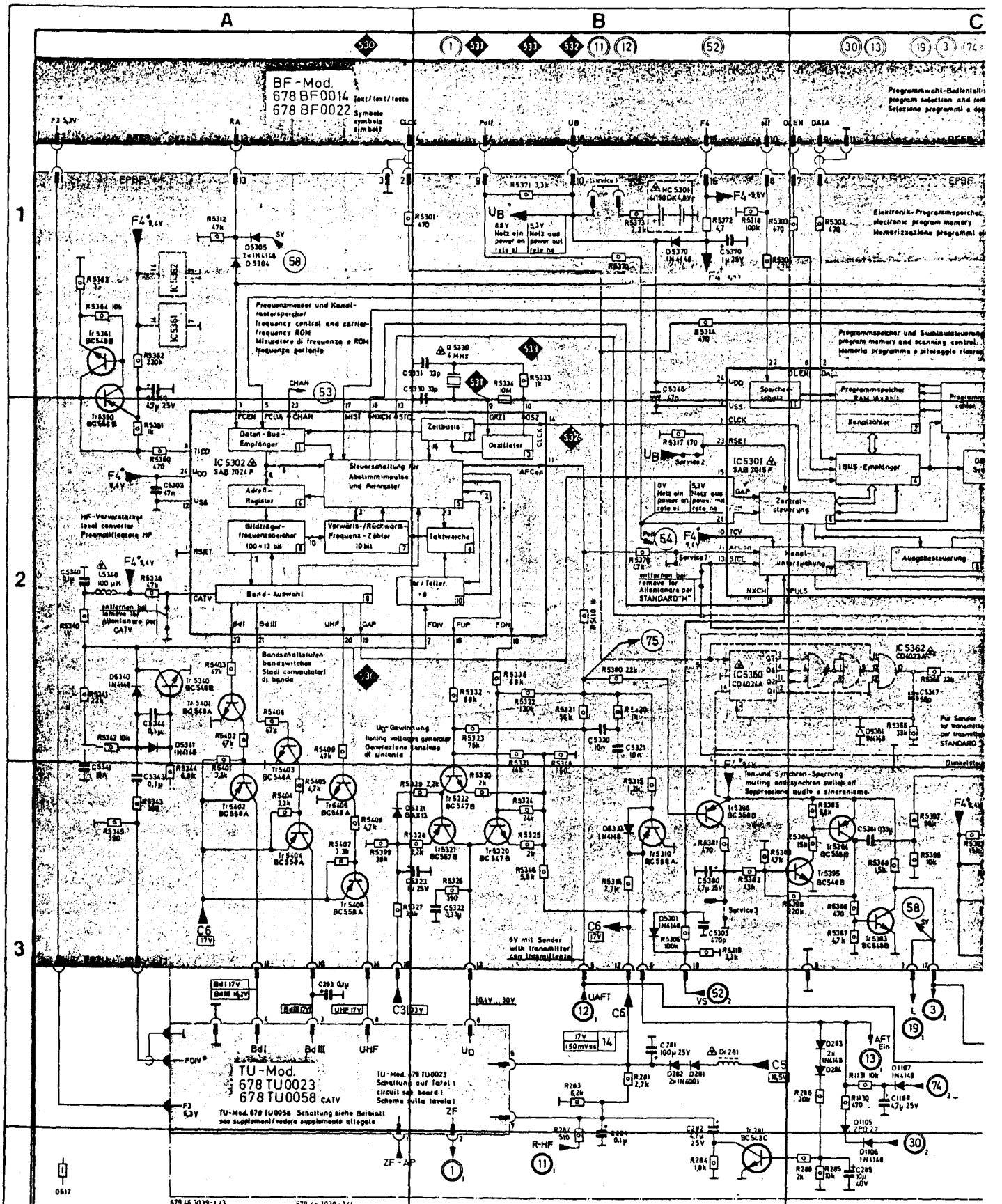
Attenzione Sostituire soltanto con componente originale!
Per il n. d'ordinazione vedere lista componenti di ricambio

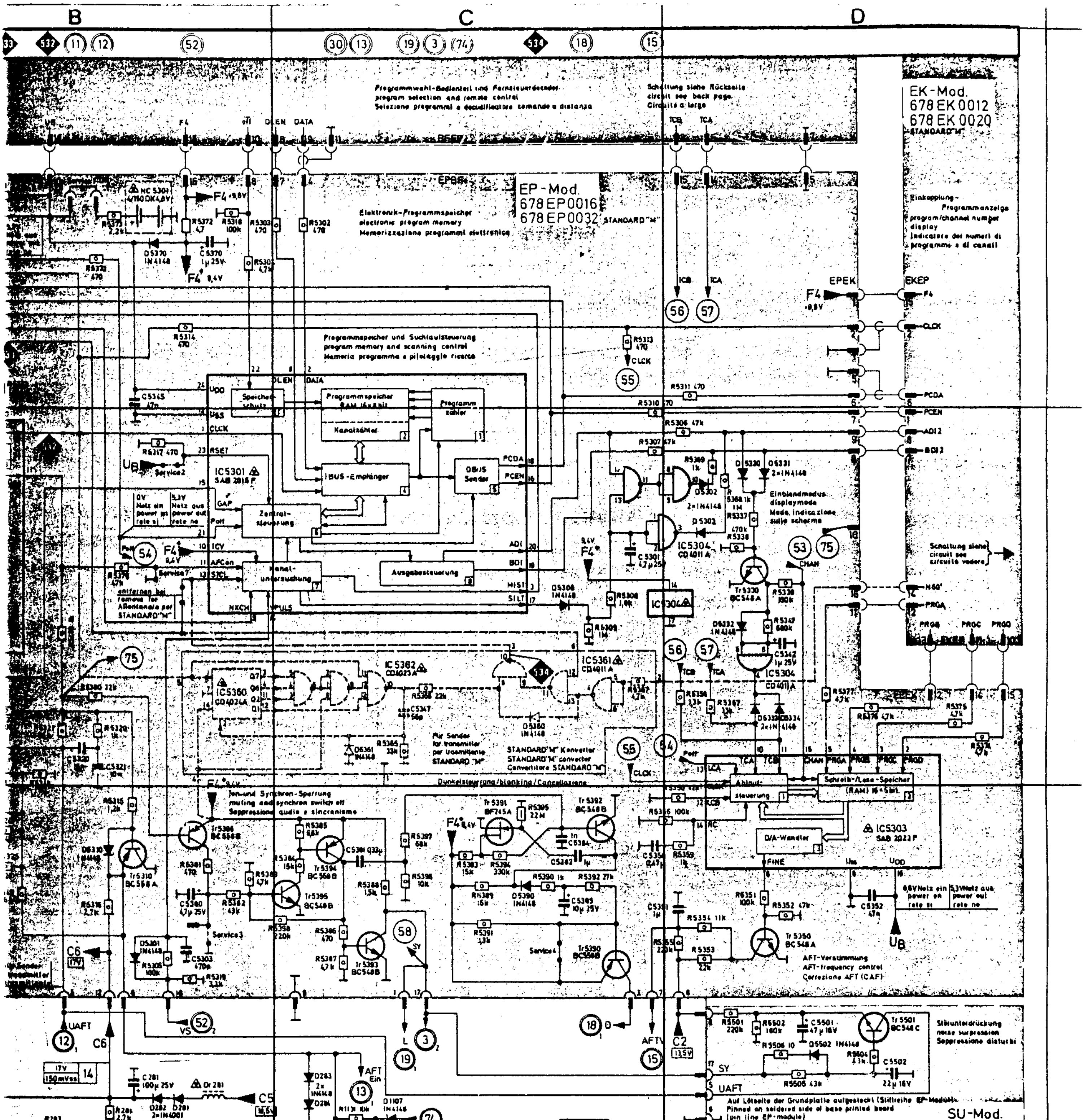
Service 5 Verbinden bei Reparaturarbeiten am Gerät! Verhindert automatische Abschaltung
please connect during repair work on set avoids automatic switch-off.
Collegare durante la riparazione, si elimina così la disinserzione automatica.

Service 6 Bei Reparaturarbeiten kann durch Verbinden ein Weitersetzen des Abschalt-Zählers verhindert werden
connection avoids moving on + switch-off automatism
Durante la riparazione si elimina con il collegamento il funzionare avanti del contatore di disinserzione

Betriebsspannung
operating voltage
Tensione di alimentazione

Leitungsverbindung (allgemein)
line connection in general
Collegamento (in generale)


A
B
C
1
2
3
4
BF-Mod.
678 BF0014
678 BF0022
Text/text/testo
Symbole
symbols
simboli
Programmwahl-Bedienteil
program selection and
Selezione programmi
Elektronik-Programmspeicher
electronic program memory
Memorizzazione programmi
Frequenzmesser und Kanalrasterspeicher
frequency control and carrier-frequency ROM
Misuratore di frequenza e ROM frequenze portanti
Programmspeicher und Suchlaufsteuerung
program memory and scanning control
Memoria programma e pilotaggio ricerca
Daten-Bus-Empfänger
Steuerschaltung für Abstimmimpulse und Fernwahl
Adreß-Register
Bildträger-frequenzspeicher 100 × 13 bit
Vorwahl-/Rückwärts-Frequenz-Zähler 10 bit
Taktwerke
Zeitbasis
Oszillator
IC 5302 SAB 2026 P
IC 5301 SAB 2018 P
IC 5360 CD4024A
IC 5362 CD4023A
Speicherschutz
Programmspeicher RAM 1K×4bit
Kanalzähler
IBUS-Empfänger
Zentralsteuerung
Kanaluntersuchung
Ausgabesteuerung
HF-Vorverstärker
level converter
Preamplificatore HF
entfernen bei Antenne für Allentenare per CATV
Band-Auswahl
Bandschaltstufen
bandswitches
Stadi commutatori di banda
Ton- und Synchron-Sperrung
muting and synchron switch off
Soppressione audio e sincroniamo
6V mit Sender
with transmitter
con trasmettitore
TU-Mod.
678 TU0023
678 TU0058 CATV
TU-Mod. 678 TU0058 Schaltung siehe Beiblatt
see supplement/vedere supplemento allegato
TU-Mod. 678 TU0023 Schaltung auf Tafel 1
circuit on board 1
Schema sulla tavola 1
679 46 3039-1/3
679 46 3039-3/1
Stecker/plugs/Connettori
BC 547/548
BC 557/558
BF 245
14 × SAB 2022 P, CD4011 A
CD4024 A, CD4023 A
CD4011 A
24 × SAB 2015 P, SAB 2026 P
von unten/from below/dal sotto
freie Leitung/free line
Collegamento libero
Leiterplattenanschluß
wiring board connection
Attacco alla piastra
gedruckte Leitung/printed line
Collegamento stampato
Betriebsspannung
operating voltage
Tensione di alimentazione
Leitungsverbindung (allgemein)
line connection in general
Collegamento (in generale)
Spannungen mit Schwarz-Weiß-Signal gemessen
voltages measured with black and white signal
Tensioni misurate con segnale bianco nero
Betriebsspannung/operating voltage/Tensione di alimentazione
Diagnose Punkt/diagnostic point/punto diagnostico
Brummspannung/hum voltage/tensione di rumore
gemessen ohne Ton, Strahlstrom max. 220V~
measured without volume, beam current max. 220V~
misurate senza volume, corrente di raggio max. 220V~
Leitungen (geführt auf Tafel 1 od 2
lines conduct to board 1 or 2
I collegamenti conducono alle tavole 1 o 2
Tafel/board/Tavola
Meßpunkt Oszillogramm
waveform testpoint
Punto di misura con oscillogramma
Achtung Nur Original-Ersatzteile verwenden!
Bestell-Nr. siehe Ersatzteil-Liste
Attention please use original spare part only!
compare spare parts list for order number
Attenzione Sostituire soltanto con componenti originali!
Per il n. d'ordinazione vedere lista componenti di ricambio
IC 5302
1 = Data Bus receiver/Bus data del ricevitore
2 = clock/Marcatore di tempo
3 = oscillator/Oscillatore
4 = address register/Registro indirizzi
5 = control unit for tuning voltage generation and micro function/Unità di controllo per la generazione tensione di sintonia e tensione a microgradini
6 = ROM for carrier frequencies/ROM per frequenze portanti
7 = up/down frequency counter 10 bit/Contatore di frequenza in avanti/alla rovescia
8 = control/Diramazione marcatura tempo
9 = band selection/Selezione banda di frequenza
10 = gate and 8 bit divider/Porta e divisore per 8
IC 5303
1 = control unit/Pilotaggio andamento
2 = 16×5 bit RAM
3 = D/A converter/Convertitore D/A
IC 5301
Service



Elektronik-Programmspeicher
Electronic program memory
Memorizzazione programmi elettronica

…-Signal gemessen
…k and white signal
…e bianco nero

…voltage/Tensione di alimentazione

…point/punto diagnostica

…ge/tensione di rumore
…trom max., 220V~
…eam current max., 220V~
…ente di raggio max., 220V~

…afel 1 od.2
…
…ille tavole 1 o 2

…gramma

…teile verwenden!
…rsatzteil-Liste
… spare part only!
…s list for order number
… con componente originale!
…one vedere lista componenti)

IC5302

1 = Data Bus receiver/Bus dati del ricevitore
2 = clock/Marcatore di tempo
3 = oscillator/Oscillatore
4 = address register/Registro indirizzi
5 = control unit for tuning voltage generation and micro function/ Unità di controllo per la generazione tensione di sintonia e tensione a microgradini
6 = ROM for carrier frequencies/ROM per frequenze portanti
7 = up/down frequency counter 10 bit/ Contatore di frequenza in avanti/alla rovescia
8 = control/Diramazione marcatura tempo
9 = band selection/Selezione banda di frequenza
10 = gate and 8 to 1 divider/Porta e divisore per 8

IC5303

1 = control unit/Pilotaggio andamento
2 = 16×5 bit RAM
3 = D/A converter/Convertitore D/A

IC5301

1 = memory protection/Protezione memoria
2 = program memory/Memoria programma channel counter/Contatore dei canali
3 = program counter/Contatore programmi
4 = IBus receiver/Ricevitore IBus
5 = Dbus transmitter/Trasmittente D Bus
6 = controller/Pilotaggio centrale
7 = TV signal recognizing/Indagine canale
8 = display control/Pilotaggio indicazione sullo schermo

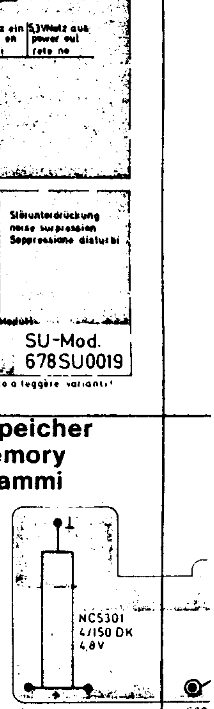
Service 1: Bei Reparaturarbeiten am Modul Brücke ziehen / for repair remove bridge on module / Durante lavori di riparazione togliere il ponticello sul modulo

Service 2: Reset nach Batterie-Wechsel / reset after battery change / Reset dopo il cambio batteria

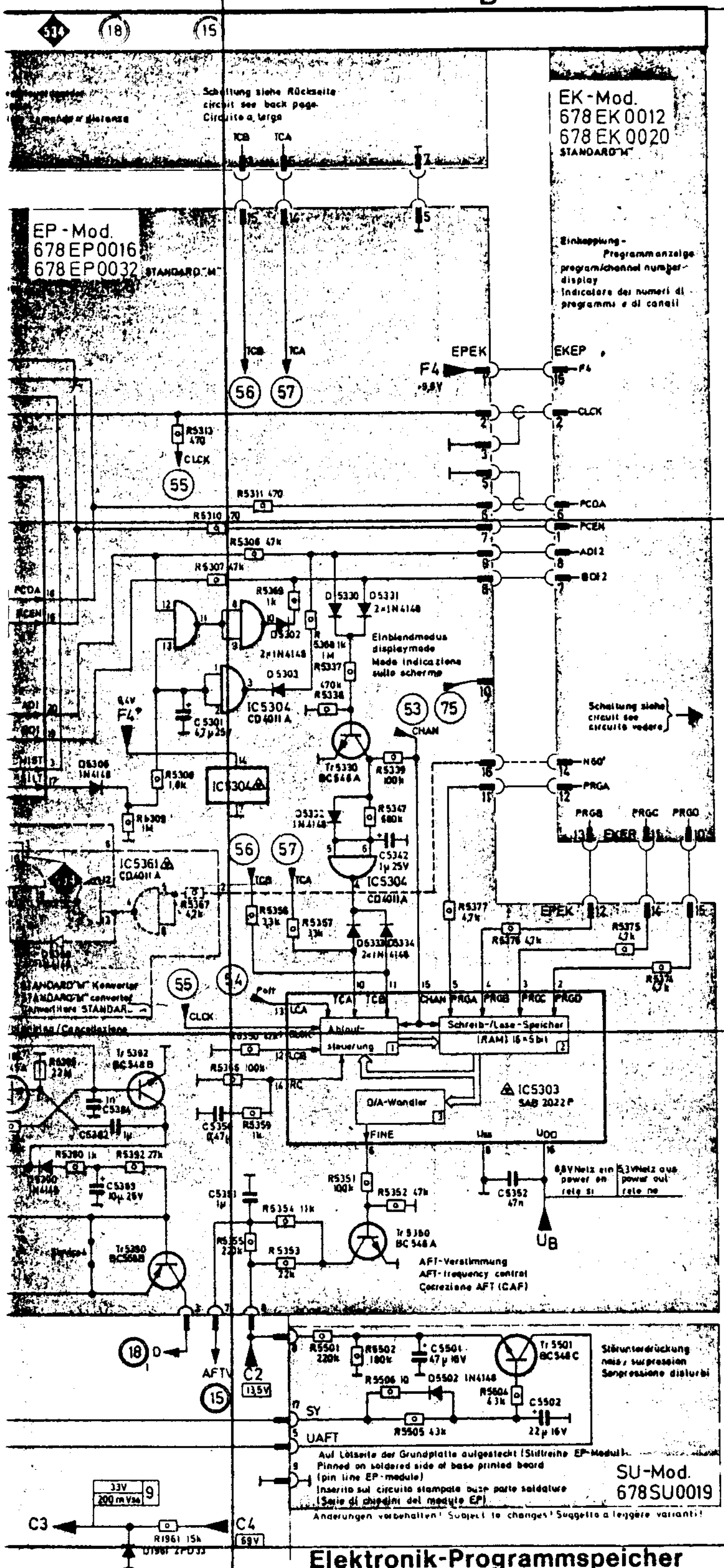
Service 3: Abschalten Ton u. Synchron-Sperrung / switch off muting and synchron suppression / Disinserzione soppressione audio e sincronismo

Service 4: Abschaltung Dunkelsteuerung / blanking off / Disinserzione cancellazione

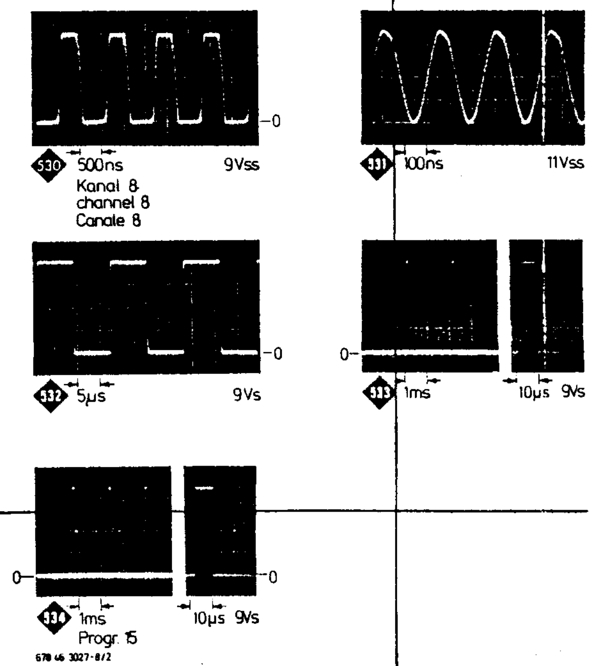
Service 7: Abschaltung Kanaluntersuchung / switch off TV signal recognizing / Disinserzione indagine canale

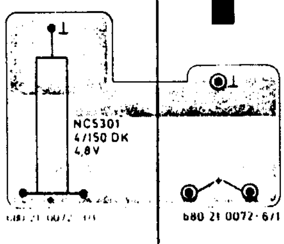


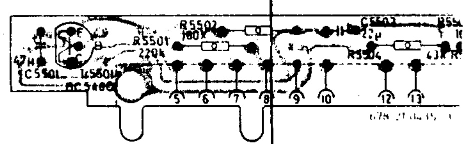
D	E



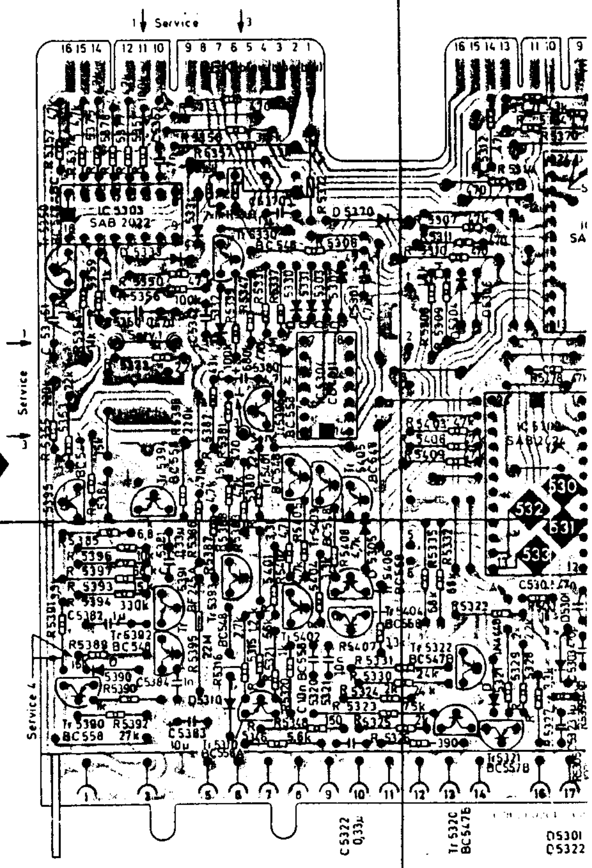
Elektronik-Programmspeicher
Electronic program memory
Memorizzazione programmi elettronica







SU-Mod.
678 SU 0019



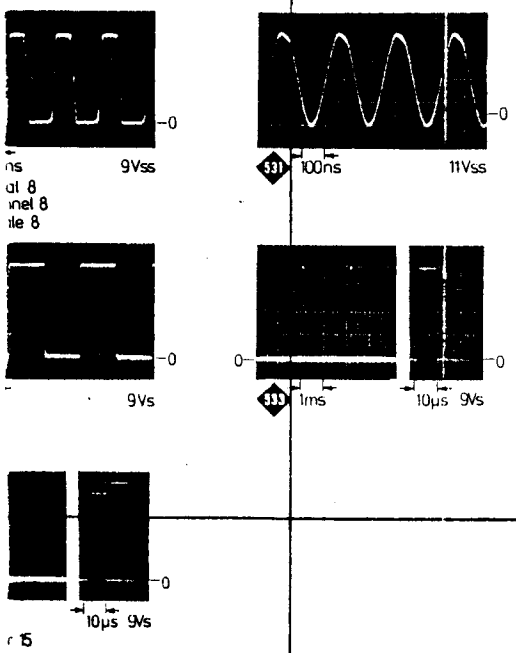
EP-Mod.
678 EP 0016
678 EP 0032 Standard „M"

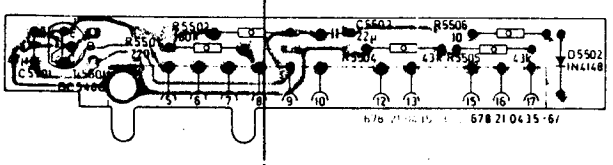
Sicht auf gelötete Seite! View on to soldered s
Änderungen vorbehalten! Subject to changes!

...y protection/Protezione memoria
...m memory/Memoria programma
...el counter/Contatore dei canali
...m counter/Contatore programmi
...receiver/Ricevitore IBus
...transmitter/Trasmittente 0 Bus
...ller/Pilotaggio centrale
...gnal recognizing/Indagine canale
...ay control/Pilotaggio indicazione sullo schermo

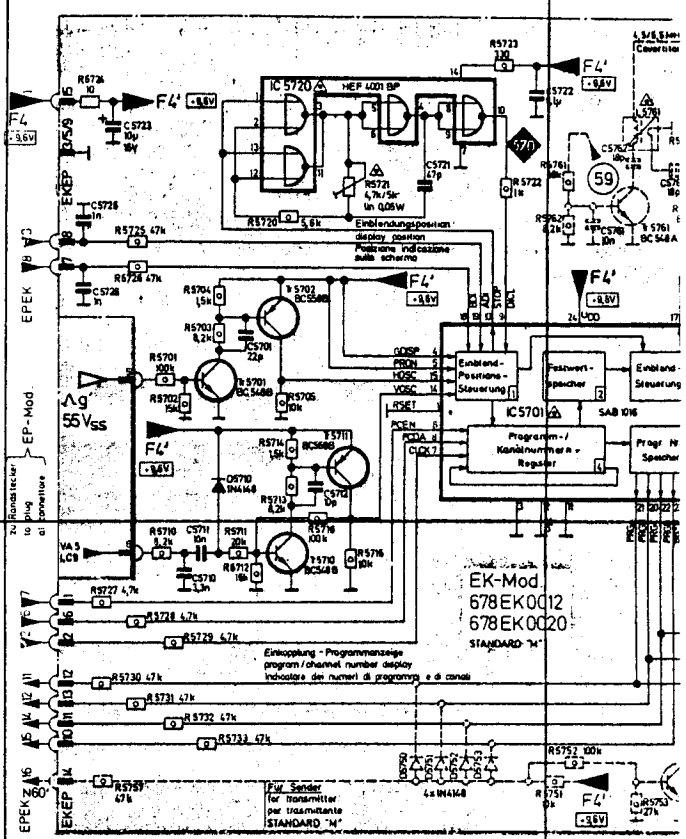
...ei Reparaturarbeiten am Modul Brücke ziehen
...r repair remove bridge on module
...rante lavori di riparazione togliere il ponticello
...el modulo
...eset nach Batterie-Wechsel
...set after battery change
...eset dopo il cambio batteria
...bschalten Ton u. Synchron-Sperrung
...witch off muting and synchron suppression
...isinserzione soppressione audio e sincronismo
...bschaltung Dunkelsteuerung
...lanking off
...isinserzione cancellazione

Service 7 Abschaltung Kanaluntersuchung
switch off TV signal recognizing
Disinserzione indagine canale

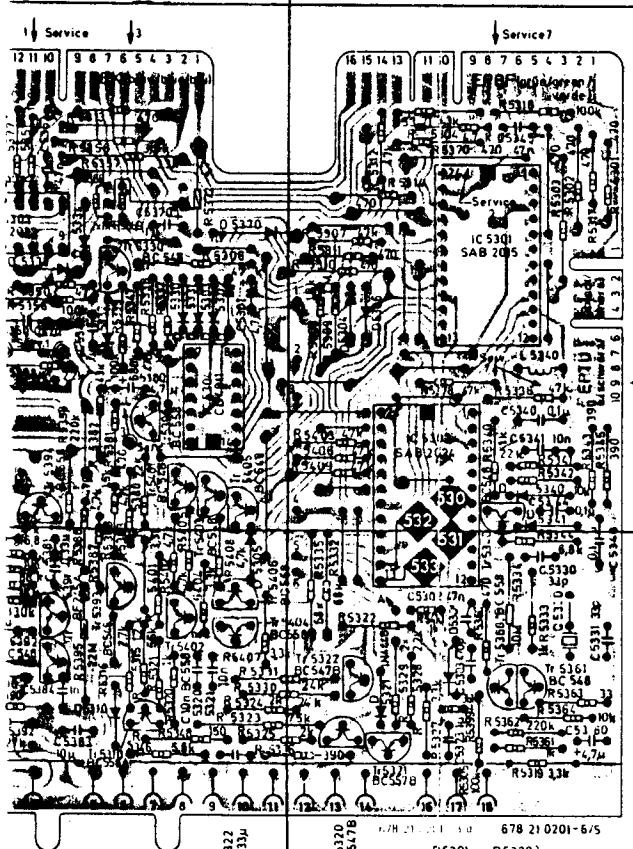


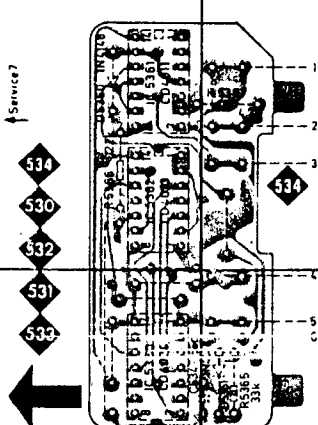


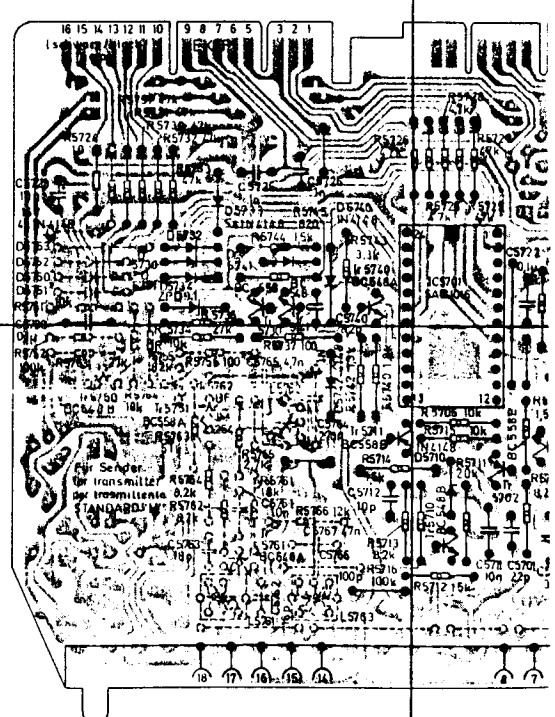
SU-Mod.
678 SU 0019



Einkopplung - Programmanzeige
Program/channel number display
Indicatore dei numeri di programmi e di canali





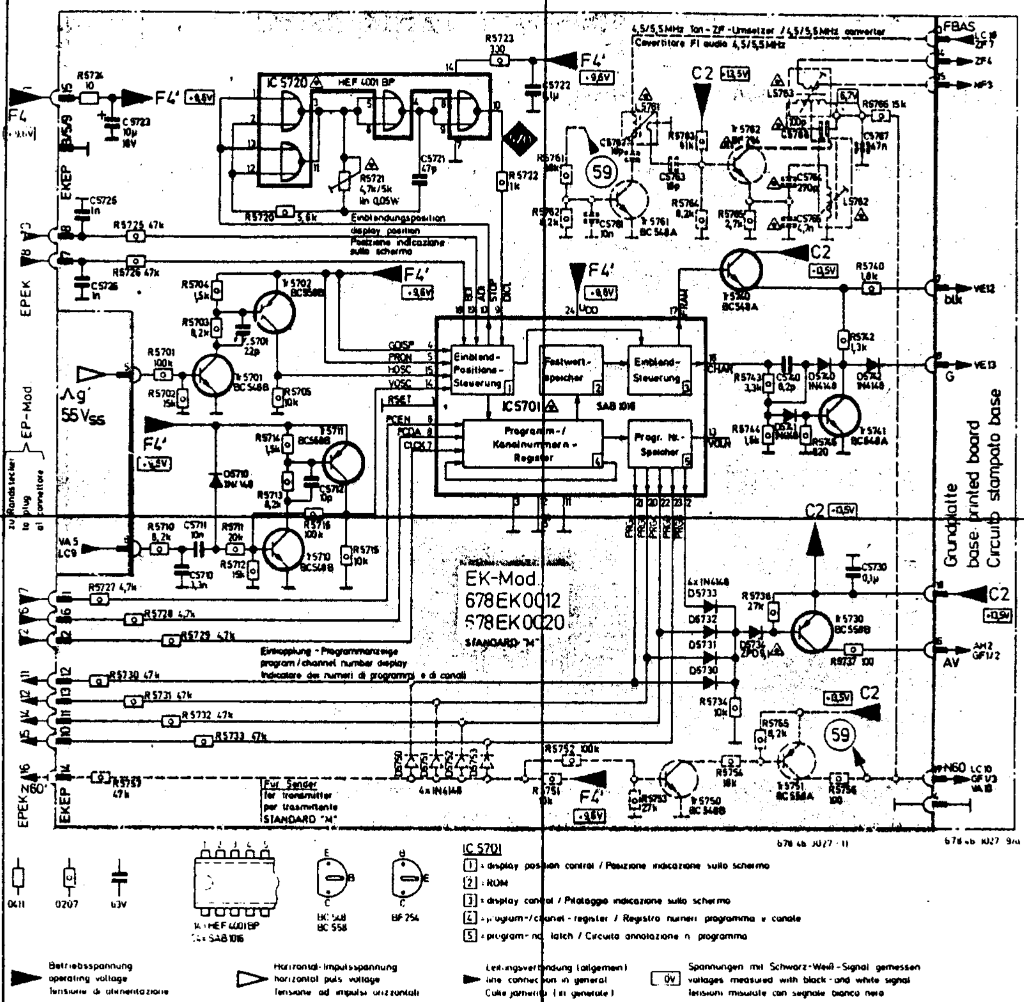


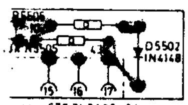
EK-Mod.
678 EK 0012/2
678 EK 0020/2 Standard „M"

d.
P 0016
P 0032 Standard „M"

gelötete Seite! View on to soldered side! Vista dalla parte saldature!
gen vorbehalten! Subject to changes! Soggetto a leggere varianti!

F G H



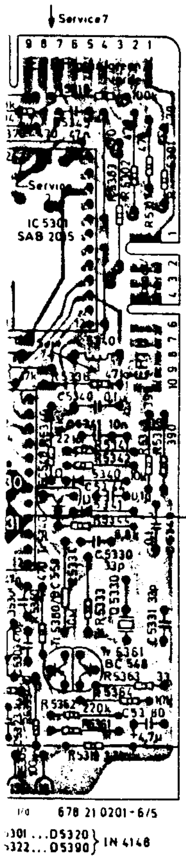


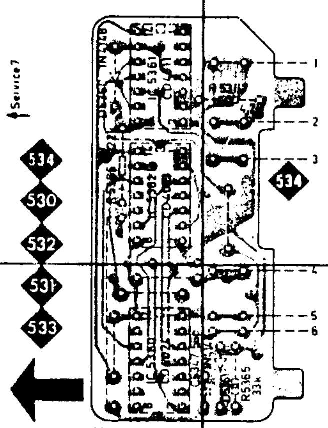
Einkopplung - Programmanzeige
Program/channel number display
Indicatore dei numeri di programmi e di canali

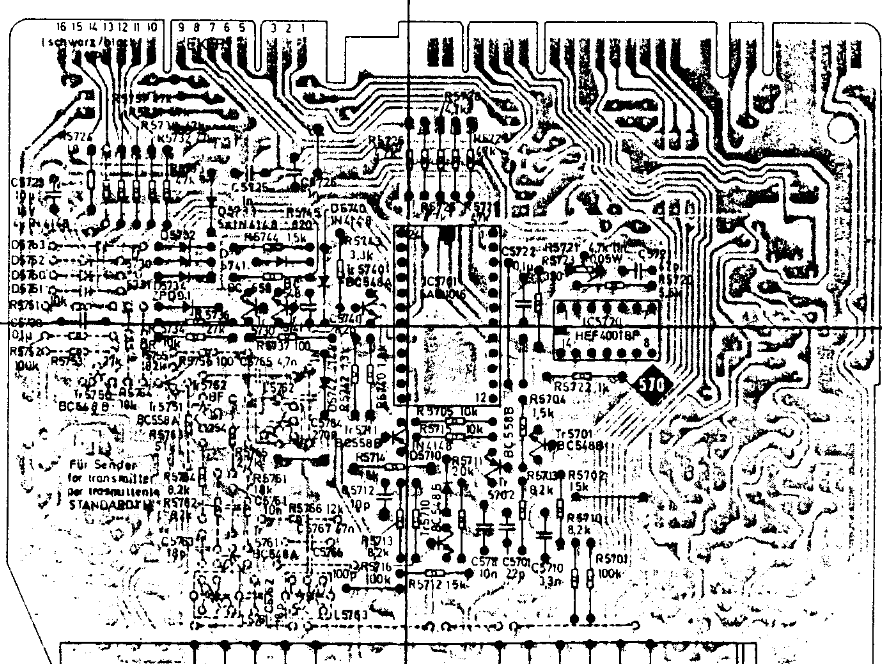
570 10ms/Div. 8,4Vs

Nur während der Einblendung vorhanden
appearing on the screen only during indication
Solo durante l'indicazione sullo schermo

678 46 3027-12

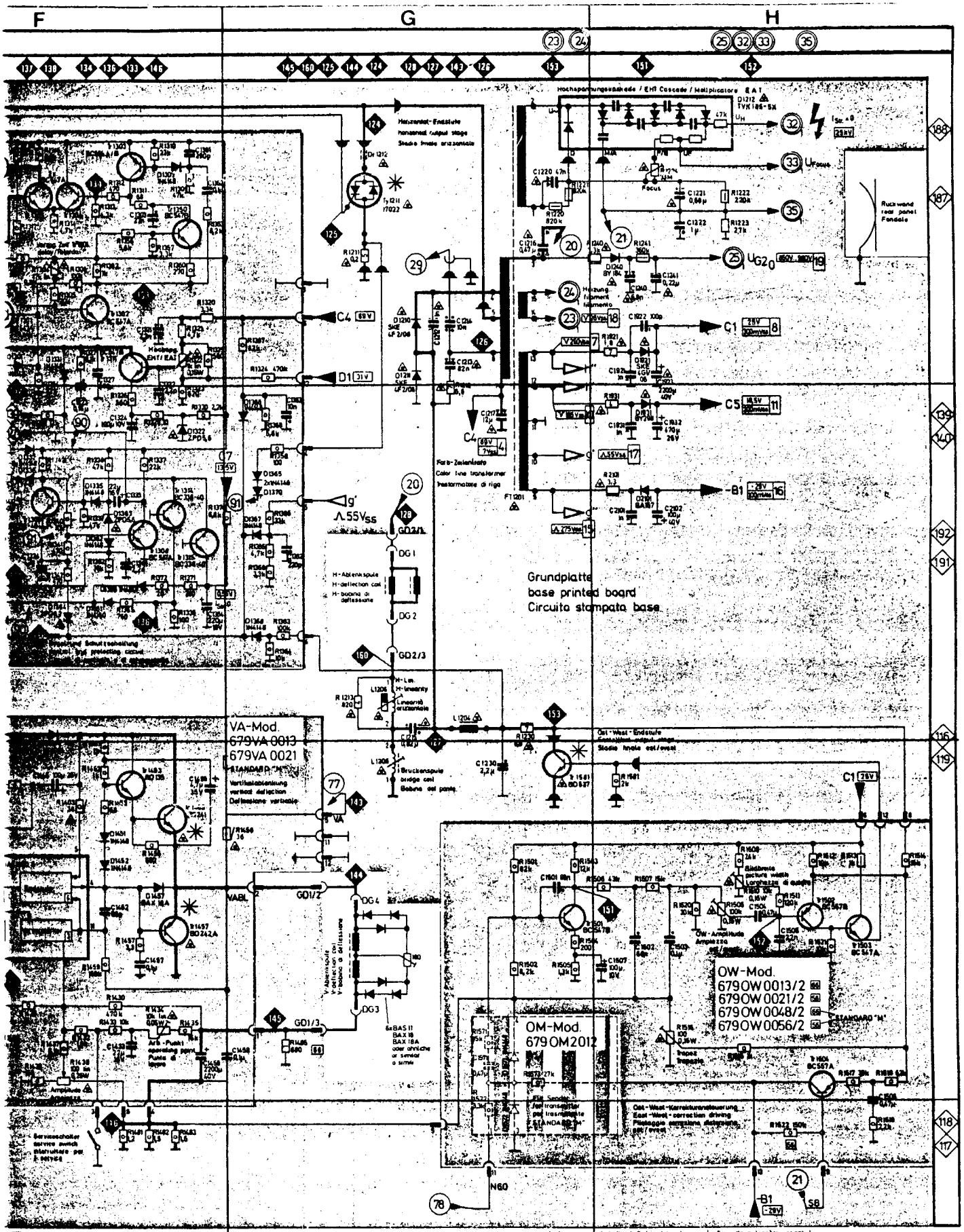






EK-Mod.
678 EK 0012/2
678 EK 0020/2 Standard „M"

...d side! Vista dalla parte saldature!
...s! Soggetto a leggere varianti!



Änderungen vorbehalten! Subject to changes! Soggetto a leggere varianti!

Metz

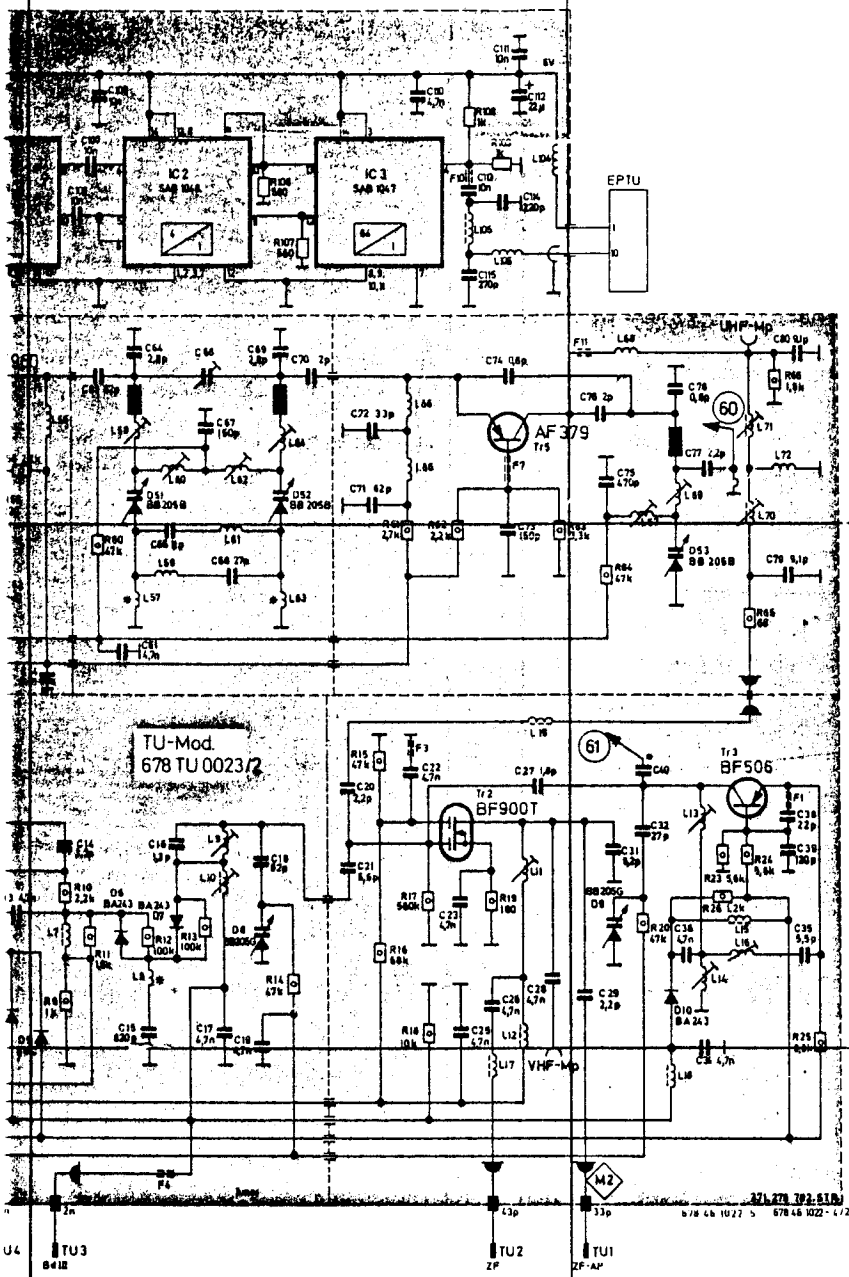
COLOR 6964 6983* 6984* 6998* 7064

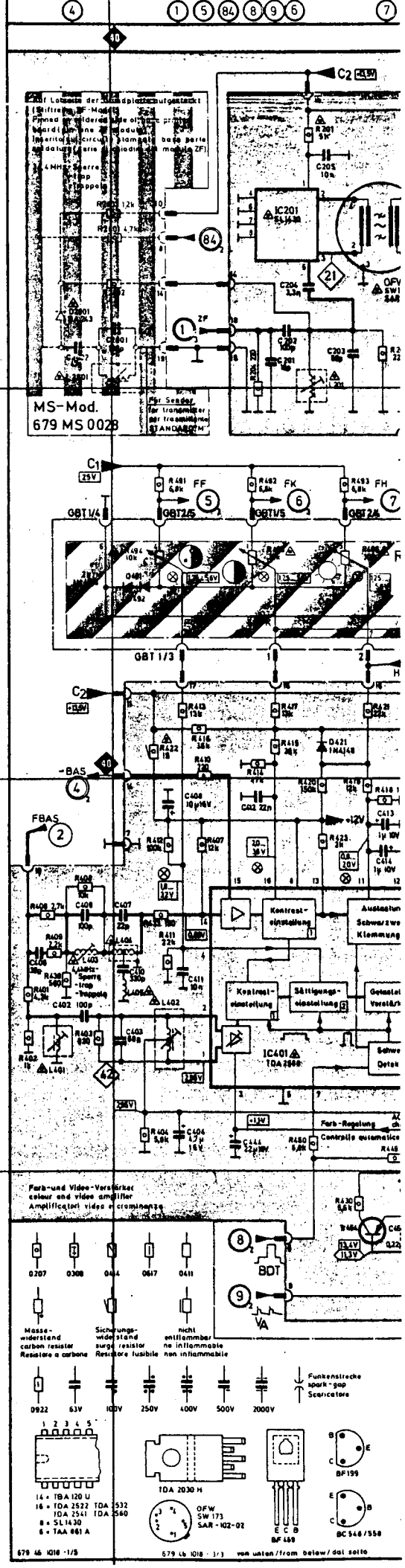
*auch als Modelle A/E/N/T
also models / anche modelli

Chassis 679 G-0038

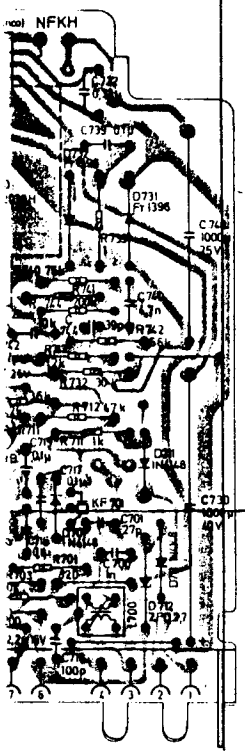
Ablenkteile und Stromversorgung — **Tafel 2**
Deflection and power circuit — **Board 2**
Deflessione ed alimentazione — **Tavola 2**

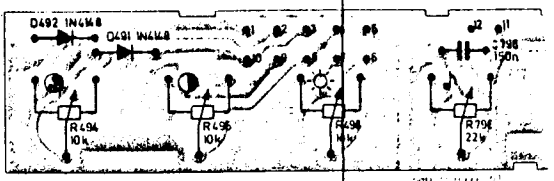
S 679 46 2023/58008



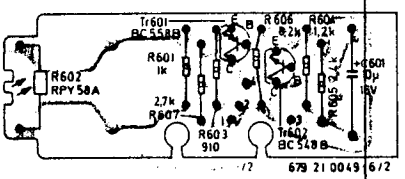


ammenschaltung siehe Programmwahl-Electronic (Tafel 3)
necting circuitry see electronic program-selection (board 3)
egamento al resto del circuito v. selezione programmi (tavola 3)
modelli con tuner per l'Italia vedere l'apposito schema allegato.



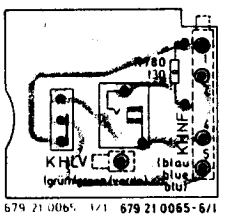


R-Mod.
679 R-0022/2 (6932, 6942, 6962, 6964, 6982, 6
6984, 7085, 7087, CTX 2200)

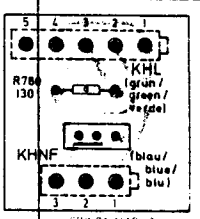


BK-Mod.
679 BK 0017

nicht bei
excluded
manca sul
6974
6981
CTX 2250



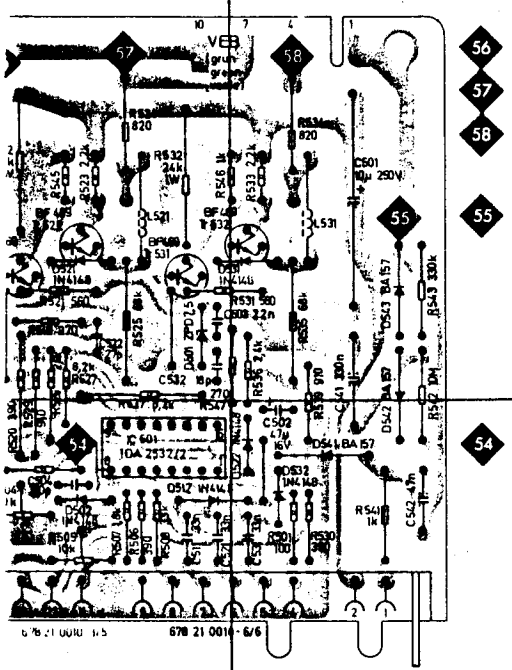
KH-Mod.
679 KH 0013

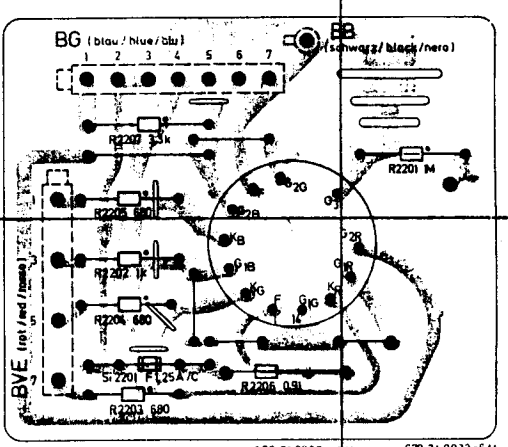


KH-Mod.
678 KH 0044 (6974,

MS-Mod.
679 MS 0028

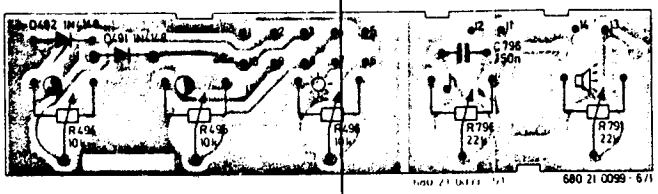
Für Sender
for transmitter
per trasmittente
STANDARD "M"



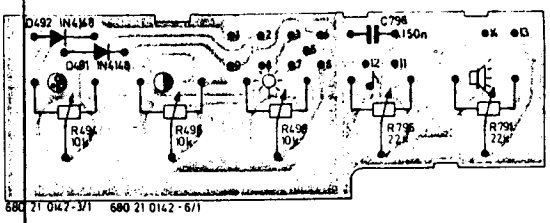


B-Mod.
679 B-0028

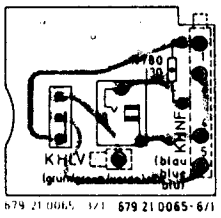
E F G



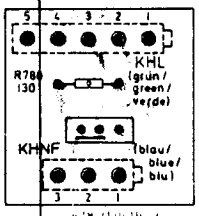
R-Mod.
679 R- 0022/2 (6932, 6942, 6962, 6964, 6982, 6983, 6984, 7085, 7087, CTX 2200)



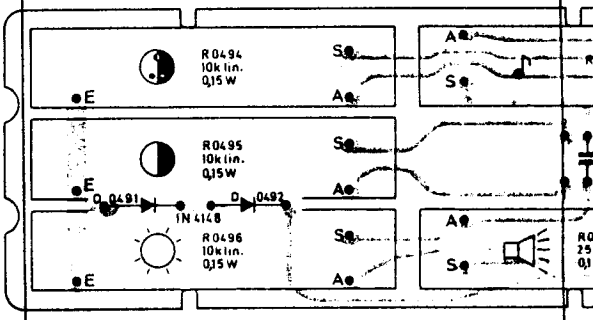
R-Mod.
680 R- 0048 (7054, 7062, 7064, 7074)



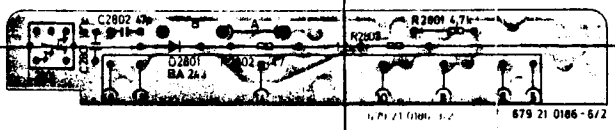
KH-Mod.
679 KH 0013



KH-Mod.
678 KH 0044 (6974, CTX 2250)

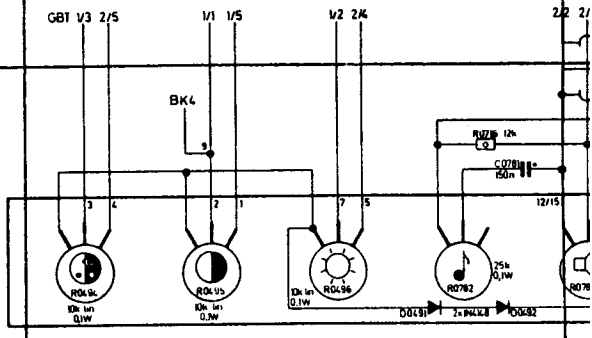


R-Mod.
678 R-0010 (6981)

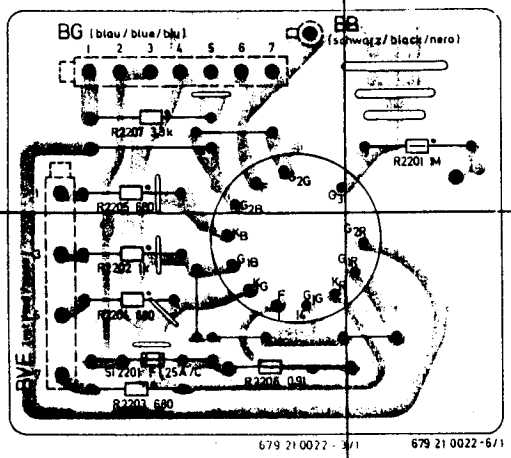


MS-Mod.
679 MS 0028

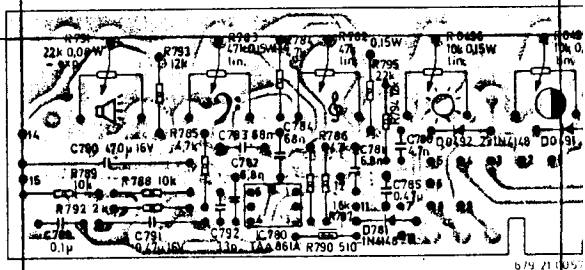
Für Sender
for transmitter
per trasmittente
STANDARD "M"



R-Mod.
679 R- 0022 (6932, 6942, 6962, 6964, 6982, 6983, 6984, 7085, 7087, CTX 2200)
678 R- 0045 (6974, CTX 2250)
680 R- 0013 (7086)



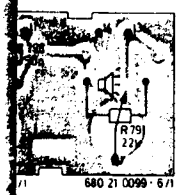
B-Mod.
679 B-0028

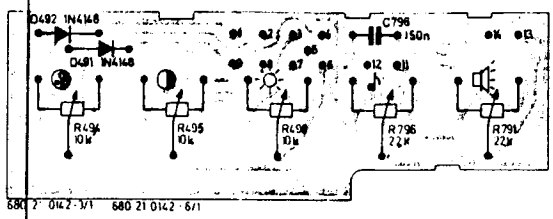


R-Mod.
679 R-0014 (6992, 6994, 6996, 6997, 6998)

Sicht auf gelötete Seite! View on to solde
Änderungen vorbehalten! Subject to chan

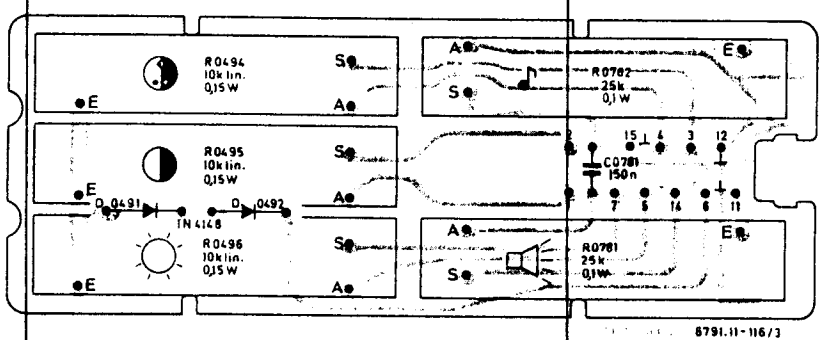
F G H





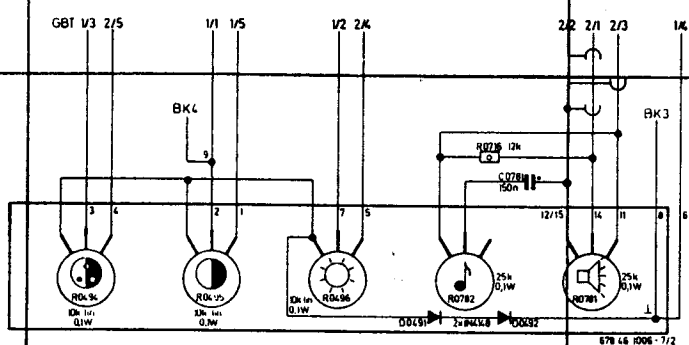
82, 6983,
0)

R-Mod.
680 R-0048 (7054, 7062, 7064, 7074)

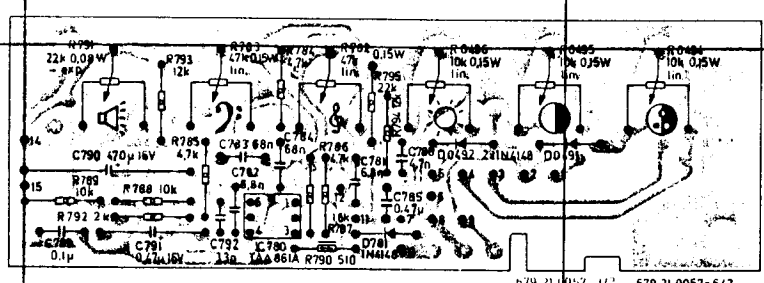


974, CTX 2250)

R-Mod.
678 R-0010 (6981)

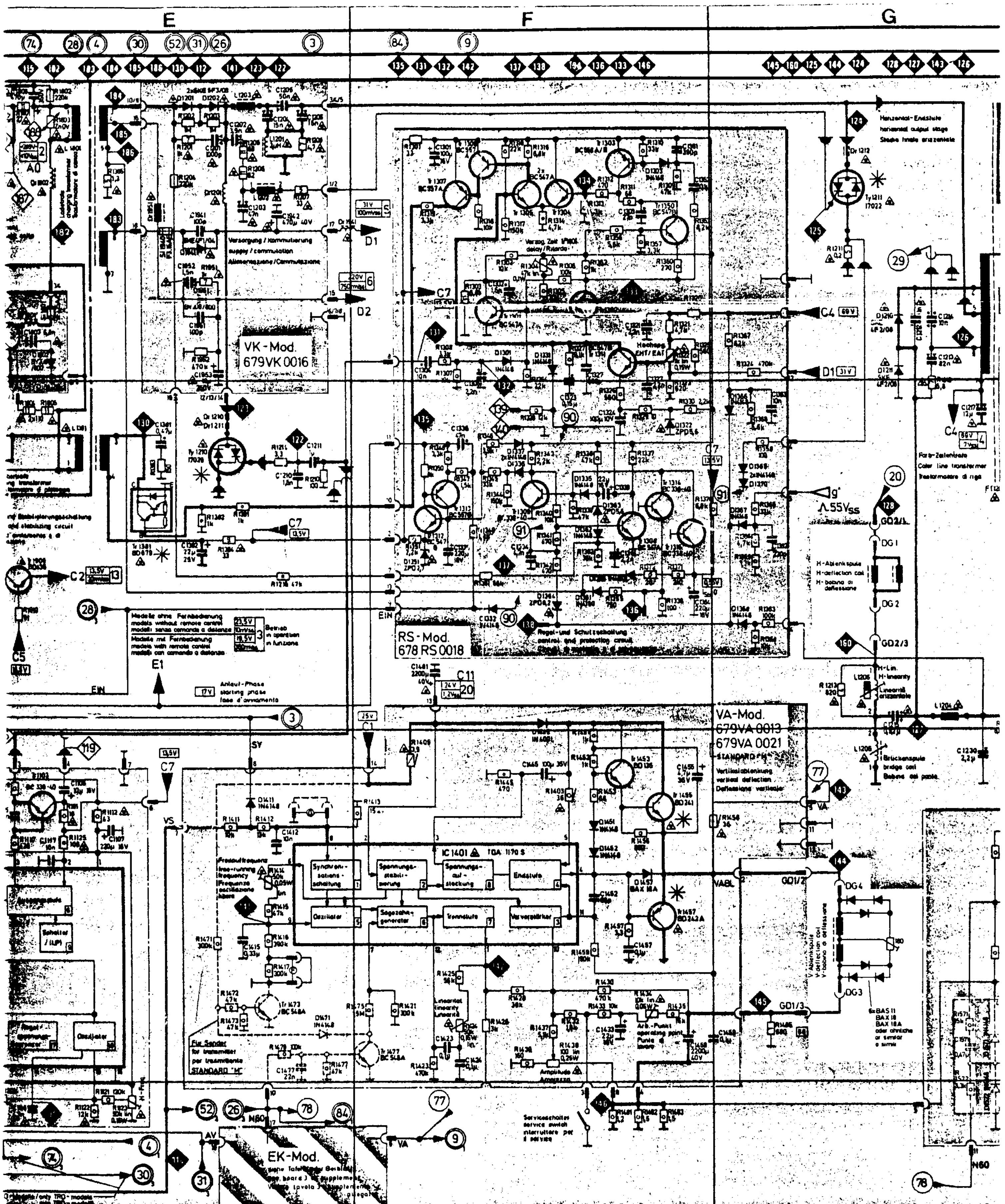


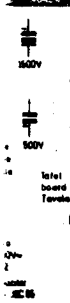
R-Mod.
679 R-0022 (6932, 6942, 6962, 6964, 6982, 6983, 6984, 7085, 7087, CTX 2200)
678 R-0045 (6974, CTX 2250)
680 R-0013 (7086)



R-Mod.
679 R-0014 (6992, 6994, 6996, 6997, 6998)

Sicht auf gelötete Seite! View on to soldered side! Vista dalla parte saldature!
Änderungen vorbehalten! Subject to changes! Soggetto a leggere varianti!





0V	Spannungen mit Schwarz-Weiß-Signal gemessen voltages measured with black-and white signal Tensioni misurate con segnale bianco nero	
◆ 0	Meßpunkt Oszillogramm waveform testpoint Punto di misura con oscillogramma	
◇ 0	Meßpunkt testpoint Punto di misura	
Tafel / board / Tavola ○ 0	Leitungen fortführend auf Tafel 1 oder 3 lines conduct to board 1 or 3 I collegamenti conducono alle tavole 1 o 3	
	Leitungsverbindung (allgemein) line connection in general Collegamento (in generale)	
	Betriebsspannung operating voltage Tensione di alimentazione	
	Horizontal-Impulsspannung horizontal puls voltage Tensione ad impulsi orizzontali	

✳ Halbleiter mit Kühler / semiconductor with heat sink / Semiconduttori con raffreddatore

⚠ **Achtung** Nur Original-Ersatzteil verwenden! Bestell-Nr. siehe Ersatzteilliste

Attention please use original spare part only! compare spare parts list for order number

Attenzione Sostituire soltanto con componente originale! Per il n. d'ordinazione vedere lista componenti di ricambio

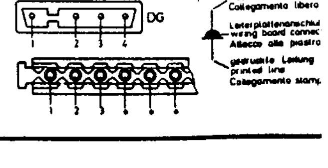
66 = nur bei 66cm Bildrohre / for 26" picture tubes only / solo per cinescopio 66 cm

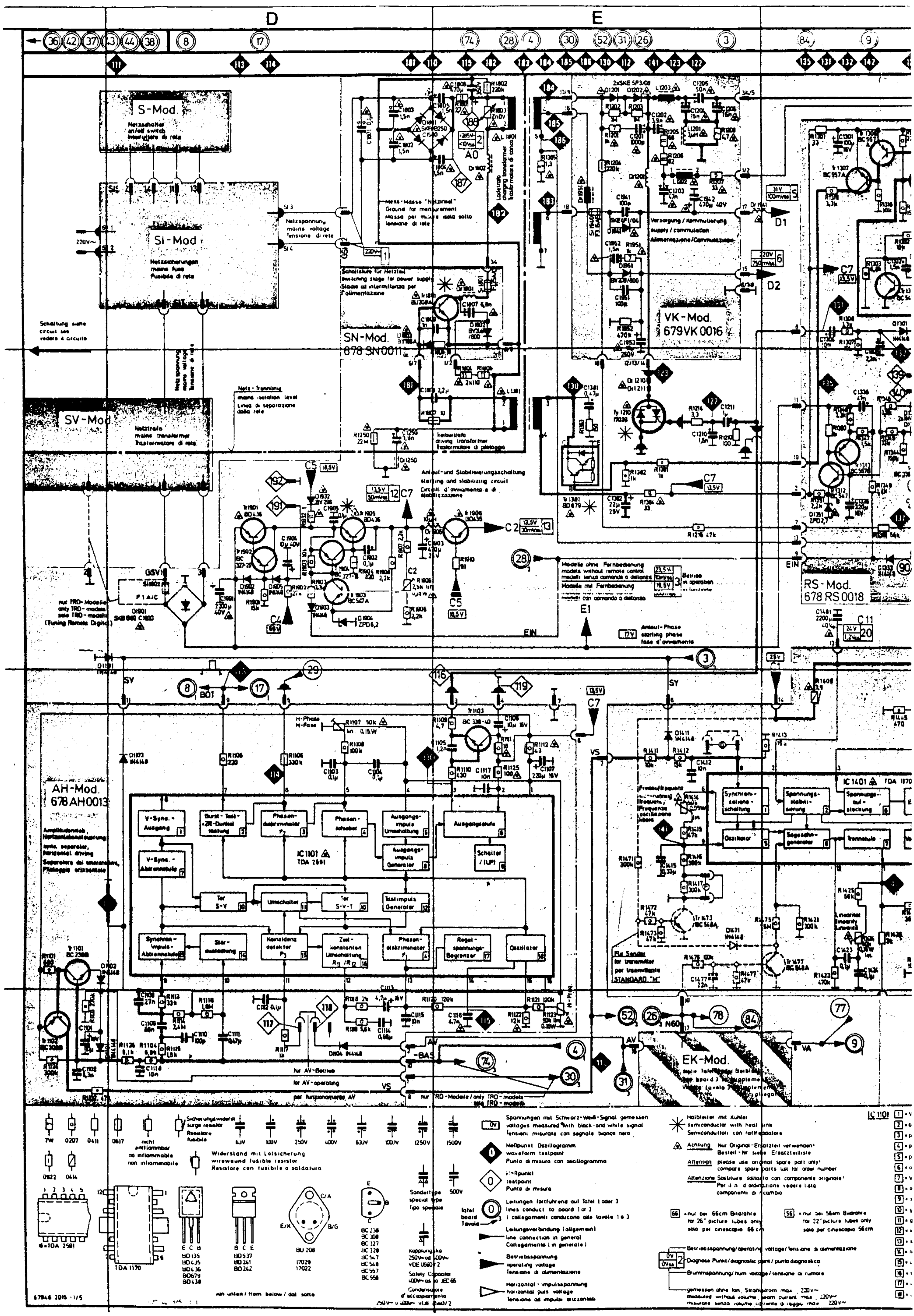
56 = nur bei 56cm Bildrohre / for 22" picture tubes only / solo per cinescopio 56cm

0V / 0Vss 2:
- Betriebsspannung/operating voltage/Tensione di alimentazione
- Diagnose Punkt/diagnostic point/punto diagnostico
- Brummspannung/hum voltage/tensione di rumore
- gemessen ohne Ton, Strahlstrom max., 220V~ / measured without volume, beam current max., 220V~ / misurate senza volume, corrente di raggio max., 220V~

IC 1101
1 = V-sync output / Uscita sincronizzazione verticale
2 = burst-gating-and line-blanking puls / impulsi di porta burst / impulsi cancellazione or
3 = phase discriminator / Discriminatore di fase
4 = phase shifter / Sfasatore
5 = pulse duration switch / Commutazione durata impulsi
6 = output stage / Stadio d'uscita
7 = V-sync. separator stage / Stadio di separazione sincronizzazione verticale
8 = output pulse generator / Generatore impulsi trigger
9 = switch / Salvaguardia bassa tensione
10 = gate S-V, gate S-V-G / Porta sinc / vert
11 = gate mode switch / Commutatore
12 = sync gating pulse generator / Generatore impulsi di porta
13 = sync separator stage / Stadio di separazione impulsi di sincronismo
14 = noise separator / Soppressione disturbi
15 = coincidence detector / Rivelatore di coincidenza
16 = time constant switch / Commutazione costante di tempo
17 = control voltage limiter / Limitazione tensione
18 = oscillator / Oscillatore

IC 1401
1 = synchronizing circuit / Circuito di sincronizzazione
2 = voltage stabilization / Stabilizzazione di tensione
3 = pre-amplifier / Preamplificatore
4 = output stage / Stadio finale
5 = oscillator / Oscillatore
6 = sawtooth generator / Generatore a denti di sega
7 = isolating stage / Stadio di separazione
8 = bootstrap / innalzamento tensione



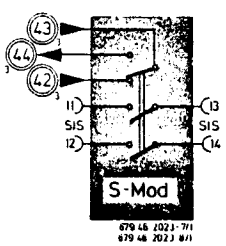


D
E
S-Mod.
Netzschalter
on/off switch
SI-Mod
Netzsicherungen
mains fuse
Fusibile di rete
SN-Mod.
678 SN 0011
VK-Mod.
679VK 0016
SV-Mod
Netztrafo
mains transformer
Trasformatore di rete
RS-Mod.
678 RS 0018
AH-Mod.
678 AH 0013
EK-Mod.
IC 1101
TDA 2591
IC 1401
Versorgung / Kommutierung
supply / commutation
Alimentazione/Commutazione
Anlauf- und Stabilisierungsschaltung
starting and stabilizing circuit
Circuiti d'avviamento e di stabilizzazione
Mess-Masse "Netzinsel"
Ground for measurement
Massa per misura isola sotto tensione di rete
Schaltstufe für Netzteil
switching stage for power supply
Stadio ad intermittenza per l'alimentazione
Netz-Trennung
mains isolation level
Linea di separazione dalla rete
Treibertrafo
driving transformer
Trasformatore di pilotaggio
Ladetrafo
charging transformer
Schaltung siehe
circuit see
vedere il circuito
Modelle ohne Fernbedienung
models without remote control
Modelle mit Fernbedienung
Anlauf-Phase
starting phase
fase d'avviamento
nur TRD-Modelle
only TRD-models
solo TRD-modelli
(Tuning Remote Digital)
für AV-Betrieb
for AV-operating
per funzionamento AV
nur TRD-Modelle / only TRD-models
Spannungen mit Schwarz-Weiß-Signal gemessen
voltages measured with black-and white signal
Tensioni misurate con segnale bianco nero
Meßpunkt Oszillogramm
waveform testpoint
Punto di misura con oscillogramma
Meßpunkt
testpoint
Punto di misura
Leitungen fortführend auf Tafel 1 oder 3
lines conduct to board 1 or 3
i collegamenti conducono alle tavole 1 o 3
Leitungsverbindung (allgemein)
line connection in general
Collegamento (in generale)
Betriebsspannung
operating voltage
Tensione di alimentazione
Horizontal-Impulsspannung
horizontal puls voltage
Tensione ad impulsi orizzontali
Halbleiter mit Kühler
semiconductor with heat sink
Semiconduttori con raffreddatore
Achtung Nur Original-Ersatzteil verwenden! Bestell-Nr. siehe Ersatzteilliste
Attention please use original spare part only! compare spare parts list for order number
Attenzione Sostituire soltanto con componente originale! Per il n. d'ordinazione vedere lista componenti di ricambio
nur bei 66cm Bildröhre
for 26" picture tubes only
solo per cinescopio 66 cm
nur bei 56cm Bildröhre
for 22" picture tubes only
solo per cinescopio 56 cm
Widerstand mit Lötsicherung
wirewound fusible resistor
Resistore con fusibile a saldatura
nicht entflammbar
no inflammable
non infiammabile
Sonder-type
special type
tipo speciale
Kopplungskondensator
Safety Capacitor
Condensatore d'accoppiamento
TDA 1170
BU 208
von unten / from below / dal sotto
67946 2015 - 1/5

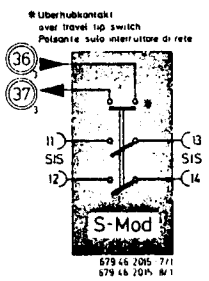
B C D

Modell Model Modello	S-Mod.	SI-Mod.	SV-Mod.
6964	678 S- 0024	678 SI 0020	678 SV 0038
6983	678 S- 0016	678 SI 0012	678 SV 0038
6984	678 S- 0024	678 SI 0020	678 SV 0038
6994	678 S- 0024	679 SI 0024	678 SV 0038
6998	679 S- 0036	679 SI 0024	679 SV 0015
7064	680 S- 0027	678 SI 0020	678 SV 0038
CTX 2200	678 S- 0024	678 SI 0020	678 SV 0038

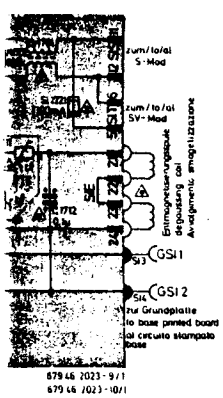
679 46 2023-15/2



678 S- 0024
679 S- 0036
680 S- 0027



678 S- 0016



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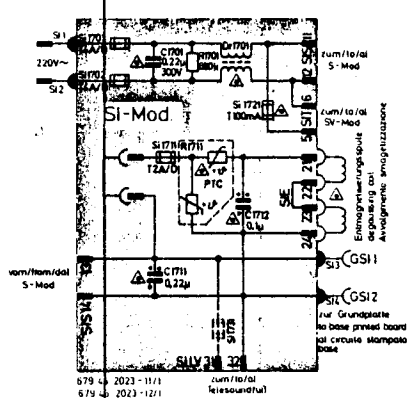
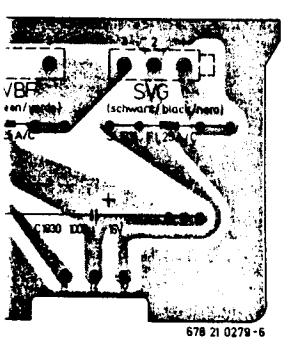
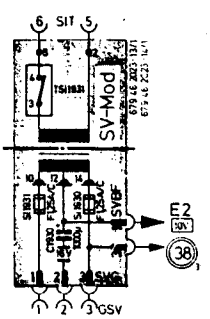


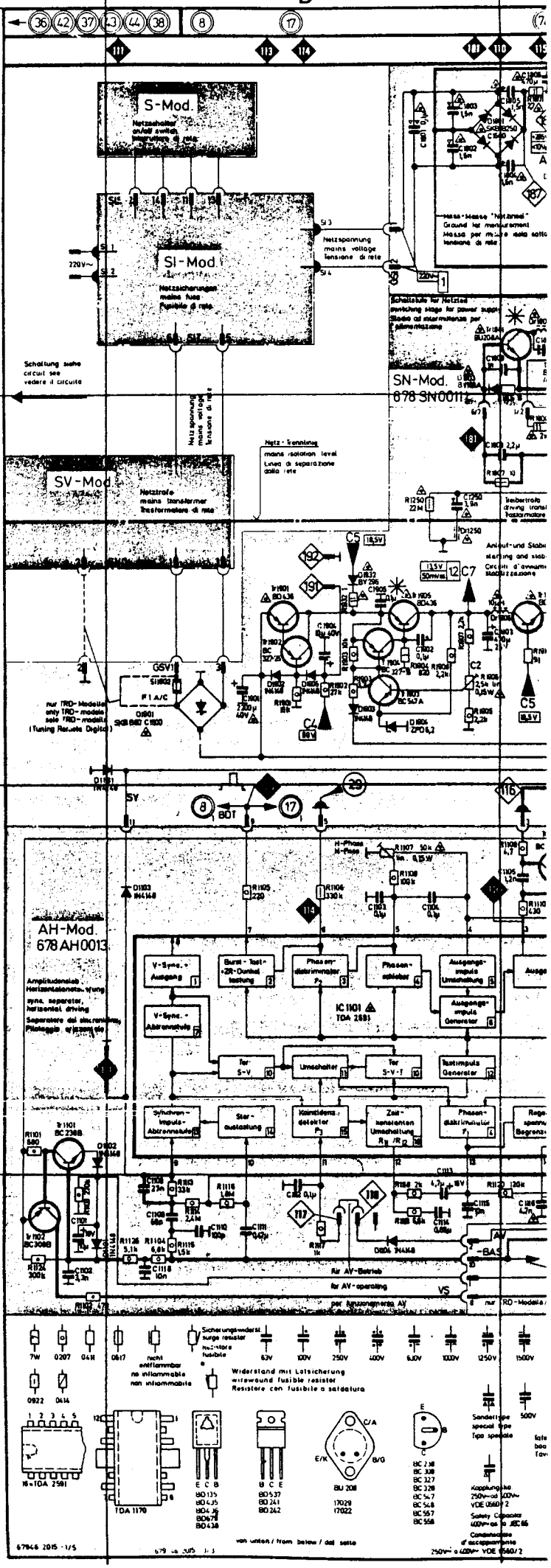
679 SI 0024



d.
0038
0015



678 SV 0038
679 SV 0015



A B C

1

Netzversorgung **Power part** **Alimentazione**

Die Netzversorgung bestehend aus S- , SI- und SV-Modul unterscheidet sich je nach Modell.
Die zusammengehörigen Moduln sind aus der Tabelle ersichtlich.

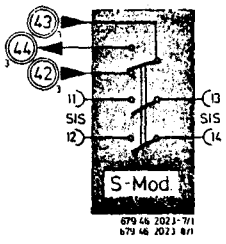
The mains supply circuit comprising the S-, SI- and SV-module differs according to models.
For the matching modules see the table.

L'alimentazione consiste nei moduli S, SI e SV, le versioni di questi cambiano secondo il modello.
La tabella indica le diverse combinazioni.

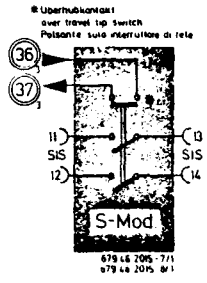
Modell Model Modello	S-Mod.	SI-Mod.	SV-Mod.
6964	678 S- 0024	678 SI 0020	678 SV 0038
6983	678 S- 0016	678 SI 0012	678 SV 0038
6984	678 S- 0024	678 SI 0020	678 SV 0038
6994	678 S- 0024	679 SI 0024	678 SV 0038
6998	679 S- 0036	679 SI 0024	679 SV 0015
7064	680 S- 0027	678 SI 0020	678 SV 003
CTX 2200	678 S- 0024	678 SI 0020	678 SV 003

679 46 2023-15

2



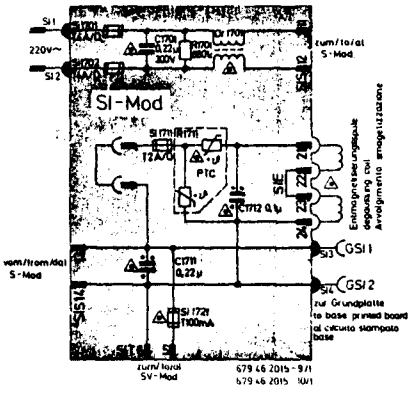
678 S- 0024
679 S- 0036
680 S- 0027



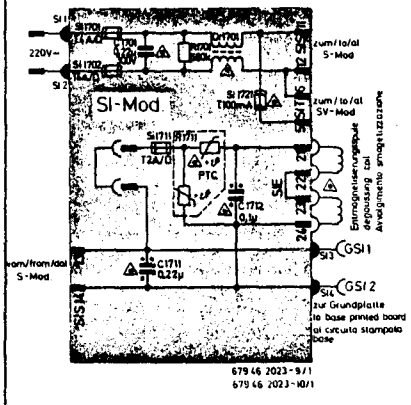
678 S- 0016

Zum Sicherungswechsel Kunststoff-Gehäuse von SI-Modul öffnen!
When changing the fuses open the plastic-housing of the SI-module!
Per sostituire i fusibili aprire la cassetta in plastica del modulo SI!

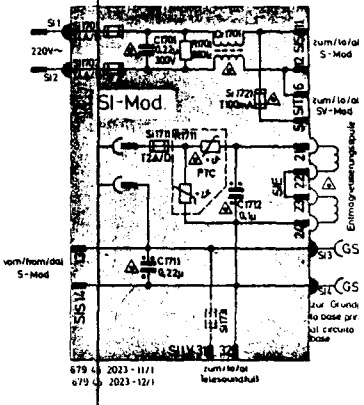
3



678 SI 0012



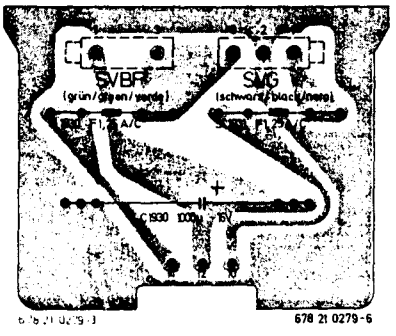
678 SI 0020



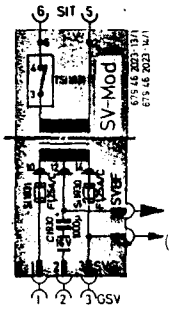
679 SI 0024

4

Sicht auf gelötete Seite
View on to soldered side
Vista dalla parte saldature



SV-Mod.
678 SV 0038
679 SV 0015

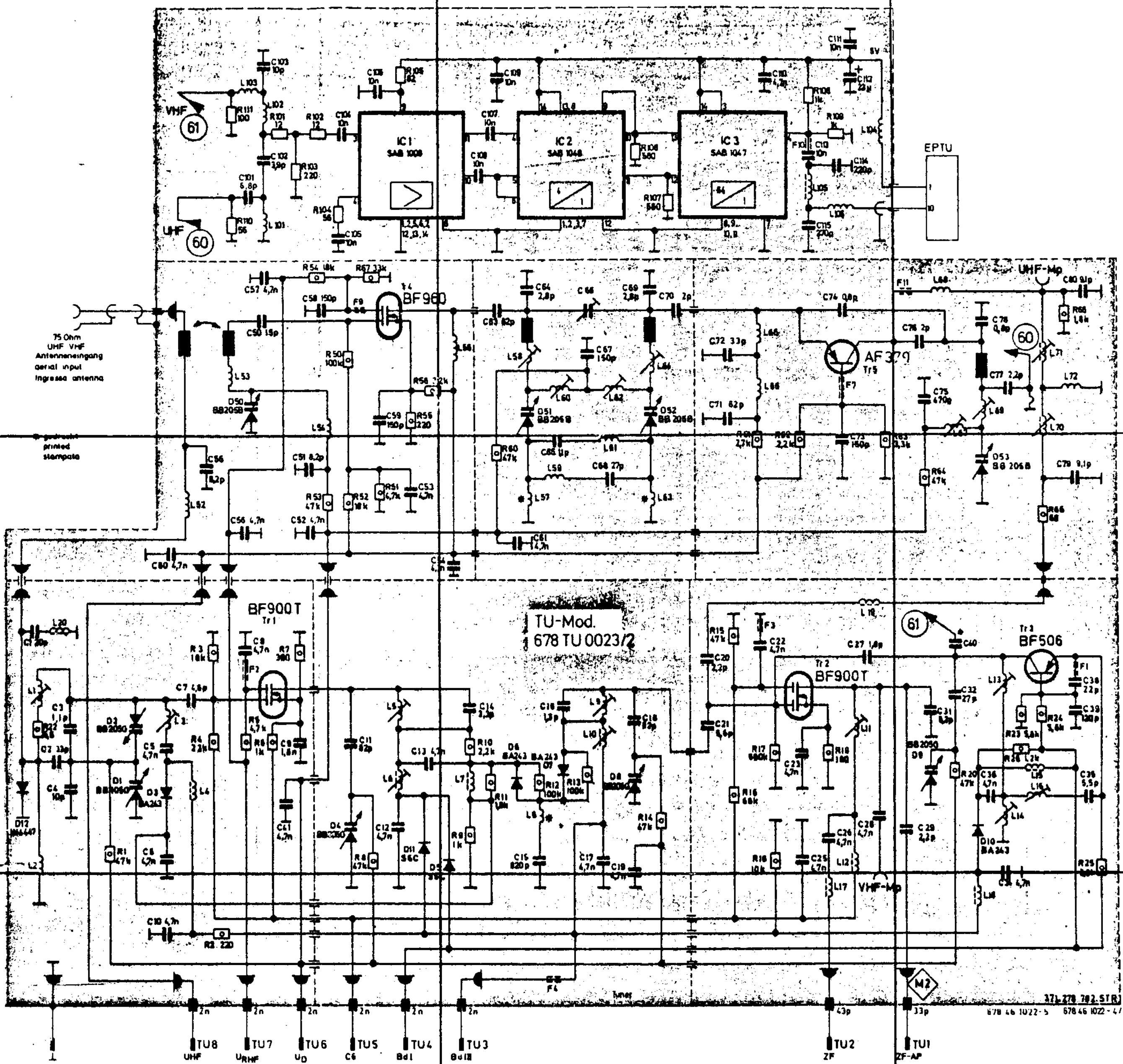


678 SV 0038
679 SV 0015

A B C

1

2

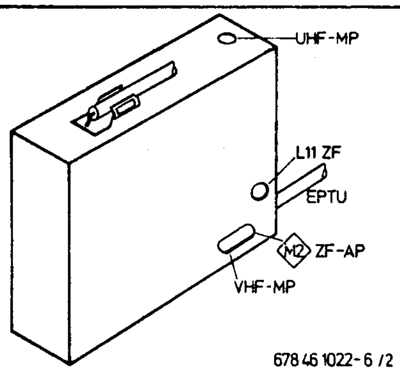


3

Tuner

Zusammenschaltung siehe Programmwahl-Electronic (Tafel 3)
Connecting circuitry see electronic program-selection (board 3)
Collegamento al resto del circuito v. selezione programmi (tavola 3)
Per modelli con tuner per l'Italia vedere l'apposito schema allegato.

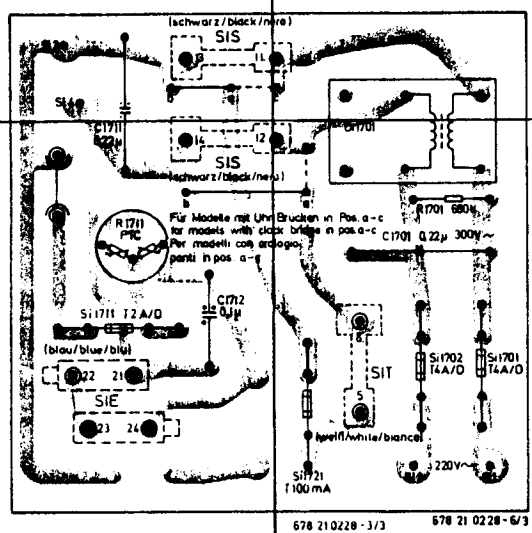
4



Anschlußbild für Tuner
Connection diagram for tuner
Schizzo per l'attacco al tuner

1

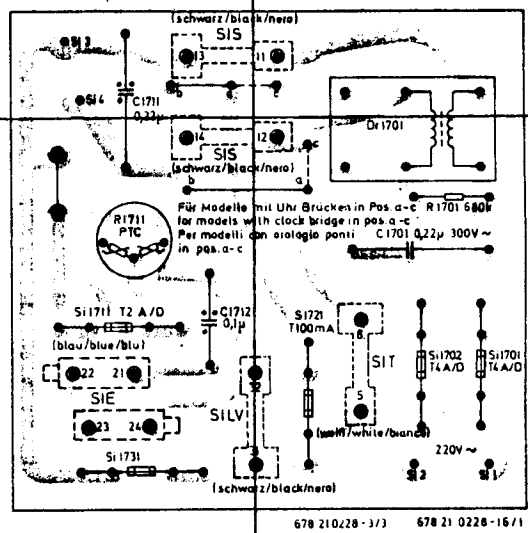
2



SI-Mod.

678 SI 0012

678 SI 0020 Uhr, clock, orologio

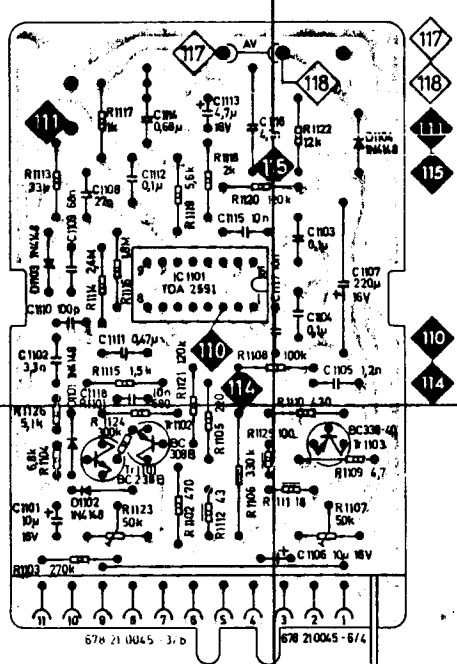


SI-Mod.

679 SI 0016

679 SI 0024 Uhr, clock, orologio

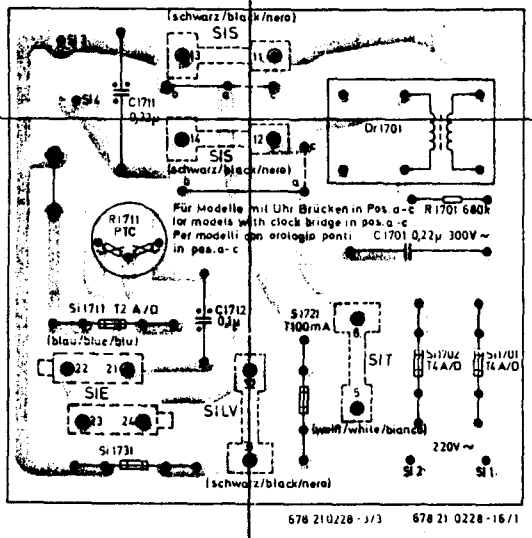
3



AH-Mod.

678 AH 0013

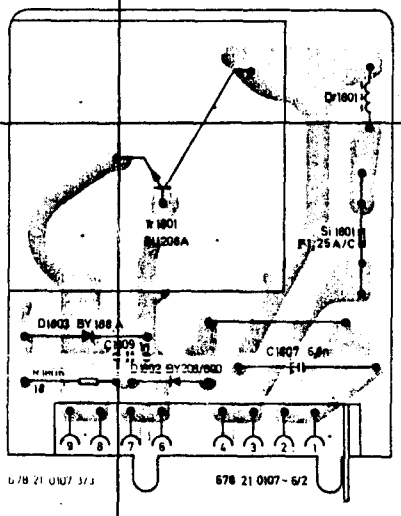
4



SI-Mod.

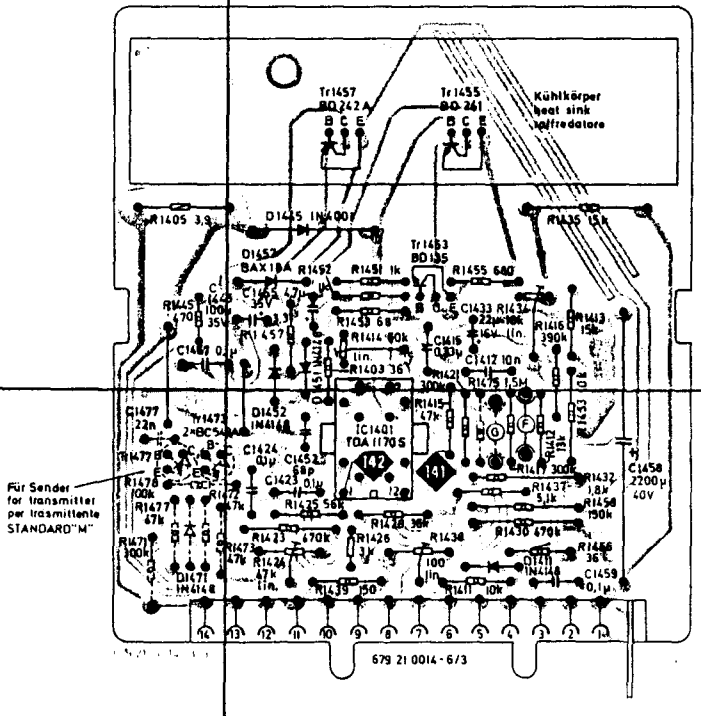
679 SI 0016

679 SI 0024 Uhr, clock, orologio



SN-Mod.

678 SN 0011

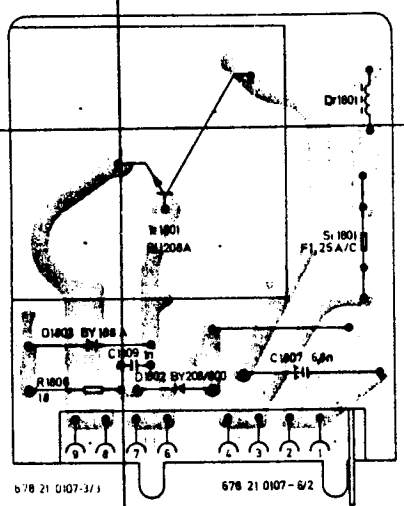


VA-Mod.

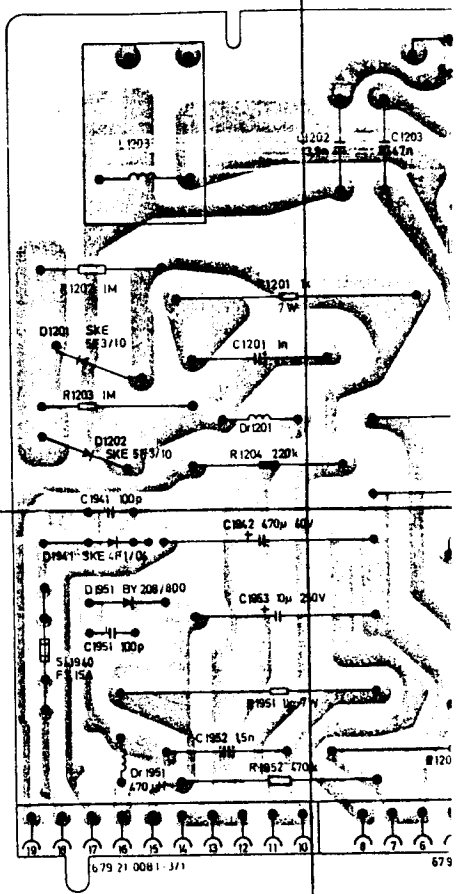
679 VA 0013

679 VA 0021 Standard „M"

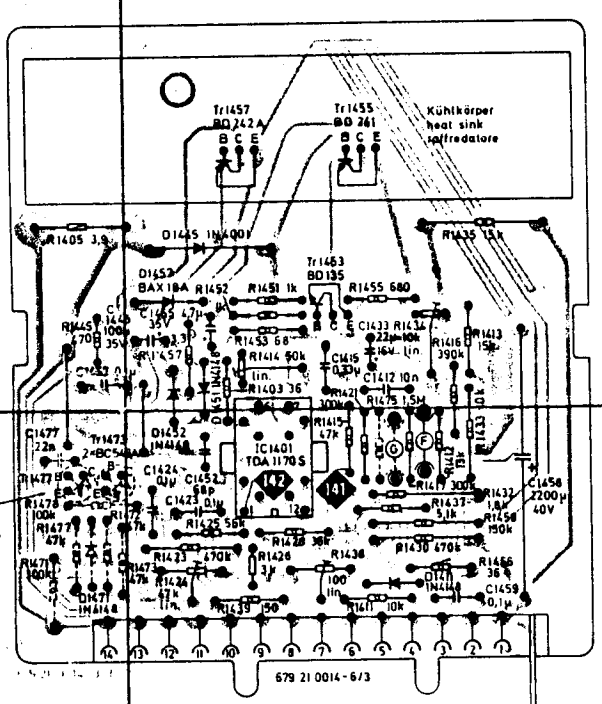
C D E



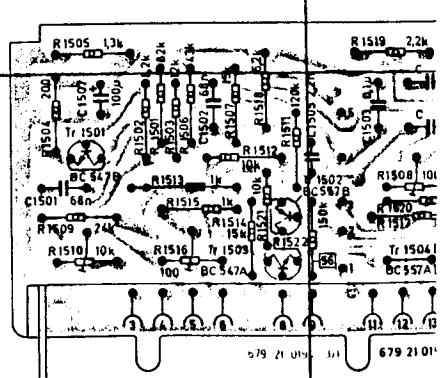
SN-Mod.
678 SN 0011



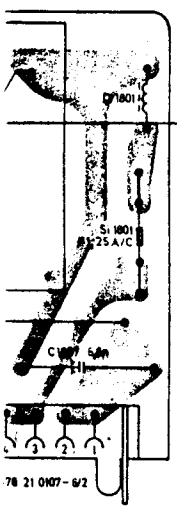
VK-Mod.
679 VK 0016

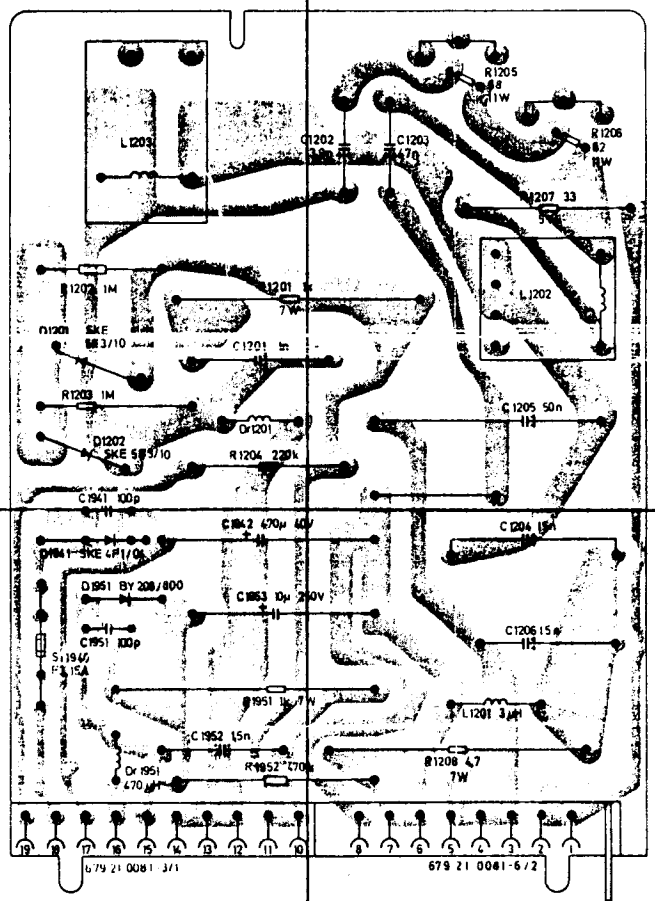


VA-Mod.
679 VA 0013
679 VA 0021 Standard „M"

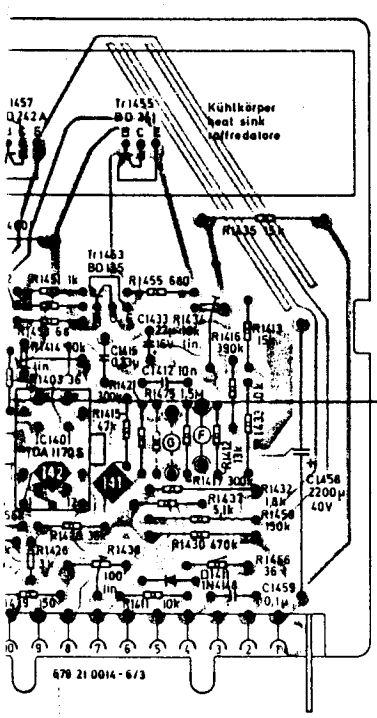


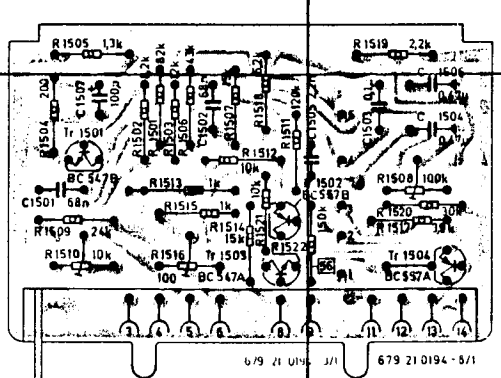
OW-Mod.
679 OW 0013/2 66
679 OW 0021/2 56
679 OW 0048/2 66 Standard „M"
679 OW 0056/2 56 Standard „M"





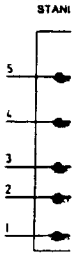
VK-Mod.
679 VK 0016



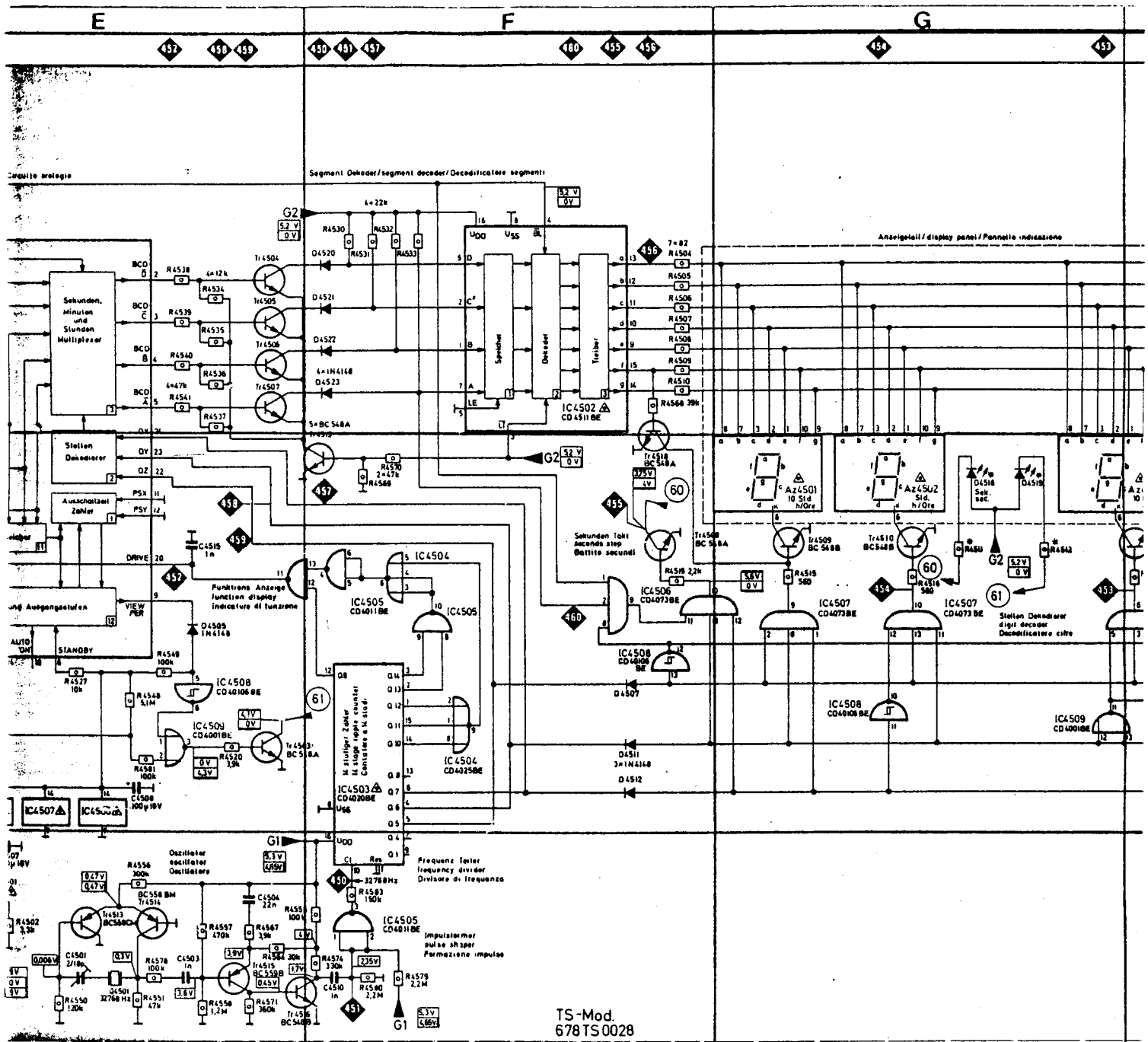


OW-Mod.
679 OW 0013/2 66
679 OW 0021/2 56
679 OW 0048/2 66 Standard „M"
679 OW 0056/2 56 Standard „M"

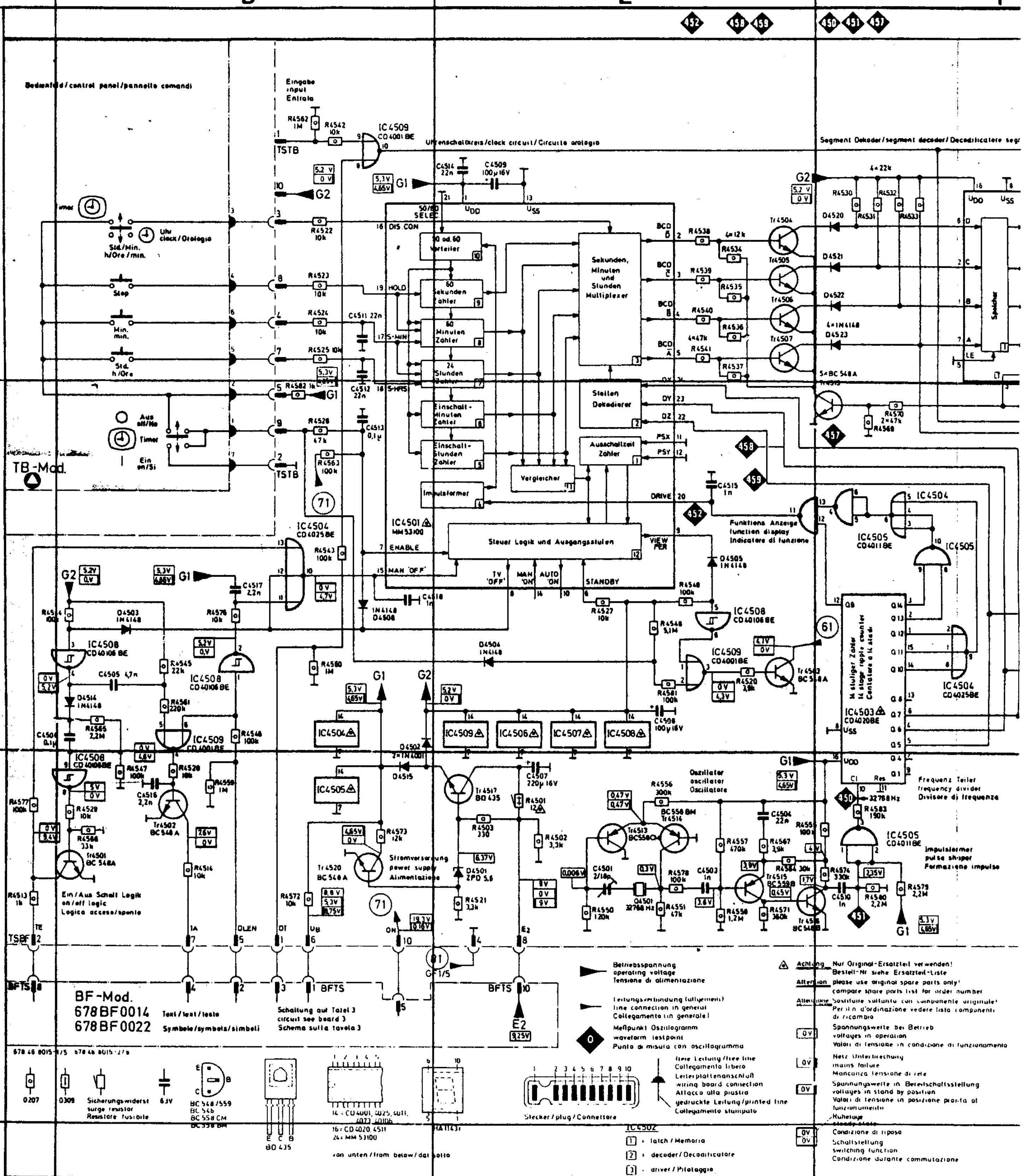
ndard „M"



OM-M
679 O


E
F
G
Segment Dekoder/segment decoder/Decodificatore segmenti
Anzeigeteil/display panel/Pannello indicazione
Sekunden, Minuten und Stunden Multiplexer
Stellen Dekodierer
Ausschalter Zähler
Funktions Anzeige function display indicatore di funzione
Sekunden Takt secondi step Battito secondi
Stellen Dekodierer digit decoder Decodificatore cifre
Oszillator oscillator Oscillatore
Frequenz Teiler frequency divider Divisore di frequenza
Impulsformer pulse shaper Formatore impulse
TS-Mod.
678 TS 0028
Betriebsspannung operating voltage Tensione di alimentazione
Leitungsverbindung (allgemein) line connection in general Collegamento (in generale)
Meßpunkt Oszillogramm waveform testpoint Punto di misura con oscillogramma
Freie Leitung/free line Collegamento libero
Leiterplattenanschluß wiring board connection Attacco alla piastra
gedruckte Leitung/printed line Collegamento stampato
Achtung Nur Original-Ersatzteil verwenden! Bestell-Nr. siehe Ersatzteil-Liste
Attention please use original spare parts only! compare spare parts list for order number
Attenzione Sostituire soltanto con componente originale! Per il n. d'ordinazione vedere lista componenti di ricambio
Spannungswerte bei Betrieb voltages in operation Valori di tensione in condizione di funzionamento
Netz Unterbrechung mains failure Mancanza tensione di rete
Spannungswerte in Bereitschaftsstellung voltages in stand by position Valori di tensione in posizione pronta al funzionamento
Ruhelage steady state Condizione di riposo
Schaltstellung switching function Condizione durante commutazione
IC4502
1 = latch / Memoria
2 = decoder / Decodificatore
3 = driver / Pilotaggio
IC4501
1 = OFF counter Contatore periodo di spegnimento
2 = digit decoder Decodificatore cifre
3 = seconds/minutes and hours multiplexer Multiplexer per secondi, minuti ed ore
4 = shaping circuit Formatore d'impulsi
5 = ON hours counter Contatore ore "Si"
6 = ON minutes counter Contatore minuti "Si"
7 = 24 hours counter Contatore 24 ore
8 = 60 minutes counter Contatore 60 minuti
9 = 60 seconds counter Contatore 60 secondi
10 = 50 or 60 pre-scale counter Predivisore 50 o 60
11 = comparator Comparatore
12 = control logic and O/P buffers Pilotaggio logico e stadi d'uscita
Achtung: Trimmer C4501 nicht verstellen! Nach Ausfall neben stehender Bauelemente ist das TS-Modul ins Werk zur Reparatur einzusen
Attention: Do not adjust trimmer C4501! After falling-out of the components listed on the TS-Module should be repaired at the facto
Attenzione: Non ritoccare il trimmer C4501! Il modulo TS dovrà essere inviato in fabbrica di guasto dei componenti a fianco:

D E F



Bedienfeld / control panel / pannello comandi
Eingabe
input
Entrata
IC 4509
CD 4001 BE
Uhrenschaltkreis / clock circuit / Circuito orologio
Segment Dekoder / segment decoder / Decodificatore seg
Uhr
clock / Orologio
Std./Min.
h/Ore / min.
Stop
Min.
min.
Std.
h/Ore
Timer
Aus
off/No
Ein
on/Si
TB-Mod.
TSTB
50/60 SELEC
DIS CON
HOLD
S-MIN
S-HRS
ENABLE
MAN 'OFF'
10 od. 60 Vorteiler
60 Sekunden Zähler
60 Minuten Zähler
24 Stunden Zähler
Einschalt-Minuten Zähler
Einschalt-Stunden Zähler
Impulsformer
Vergleicher
Sekunden, Minuten und Stunden Multiplexer
Stellen Dekodierer
Ausschaltzeit Zähler
Steuer Logik und Ausgangsstufen
VIEW PER
TV 'OFF'
MAN 'ON'
AUTO 'ON'
STANDBY
DRIVE
IC4501
MM 53100
Speicher
5×BC 548 A
4×1N4148
IC 4504
CD 4025 BE
IC 4505
CD 4011 BE
IC 4508
CD 40106 BE
IC 4503
CD 4020 BE
Funktions Anzeige
function display
Indicatore di funzione
14 stufiger Zähler
14 stage ripple counter
Frequenz Teiler
frequency divider
Divisore di frequenza
Impulsformer
pulse shaper
Formazione impulse
Oszillator
oscillator
Oscillatore
32768 Hz
Stromversorgung
power supply
Alimentazione
Ein/Aus Schalt Logik
on/off logic
Logica accesa/spenta
BF-Mod.
678 BF 0014
678 BF 0022
Text / text / testo
Symbole / symbols / simboli
Schaltung auf Tafel 3
circuit see board 3
Schema sulla tavola 3
Betriebsspannung
operating voltage
Tensione di alimentazione
Leitungsverbindung (allgemein)
line connection in general
Collegamento (in generale)
Meßpunkt Oszillogramm
waveform testpoint
Punto di misura con oscillogramma
freie Leitung / free line
Collegamento libero
Leiterplattenanschluß
wiring board connection
Attacco alla piastra
gedruckte Leitung / printed line
Collegamento stampato
Achtung Nur Original-Ersatzteil verwenden!
Bestell-Nr. siehe Ersatzteil-Liste
Attention please use original spare parts only!
compare spare parts list for order number
Attenzione Sostituire soltanto con componente originale!
Per il n. d'ordinazione vedere lista componenti di ricambio
Spannungswerte bei Betrieb
voltages in operation
Valori di tensione in condizione di funzionamento
Netz Unterbrechung
mains failure
Mancanza tensione di rete
Spannungswerte in Bereitschaftsstellung
voltages in stand by position
Valori di tensione in posizione pronta al funzionamento
Ruhelage
steady state
Condizione di riposo
Schaltstellung
switching function
Condizione durante commutazione
Sicherungswiderstand
surge resistor
Resistore fusibile
Stecker / plug / Connettore
IC 4502
1 = latch / Memoria
2 = decoder / Decodificatore
3 = driver / Pilotaggio
von unten / from below / dal sotto
BD 435

A B

1

Achtung!

Moduln mit gleicher Sachnummer (9stellig links vom Schrägstrich) sind voll austauschbar! Zahlen oder Buchstaben rechts vom Schrägstrich stehen nur für unterschiedliche Ausführungen.

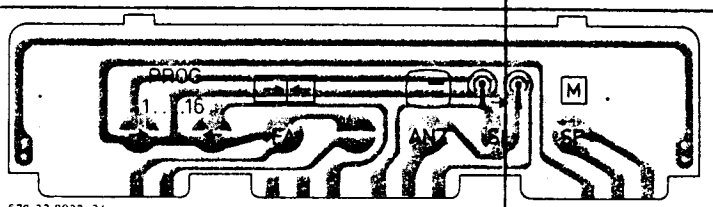
Attention!

Modules having the same reference number (9 digits on the left of the slant) are fully interchangeable. Numbers or figures at the right of the slant refer to differences in finish only.

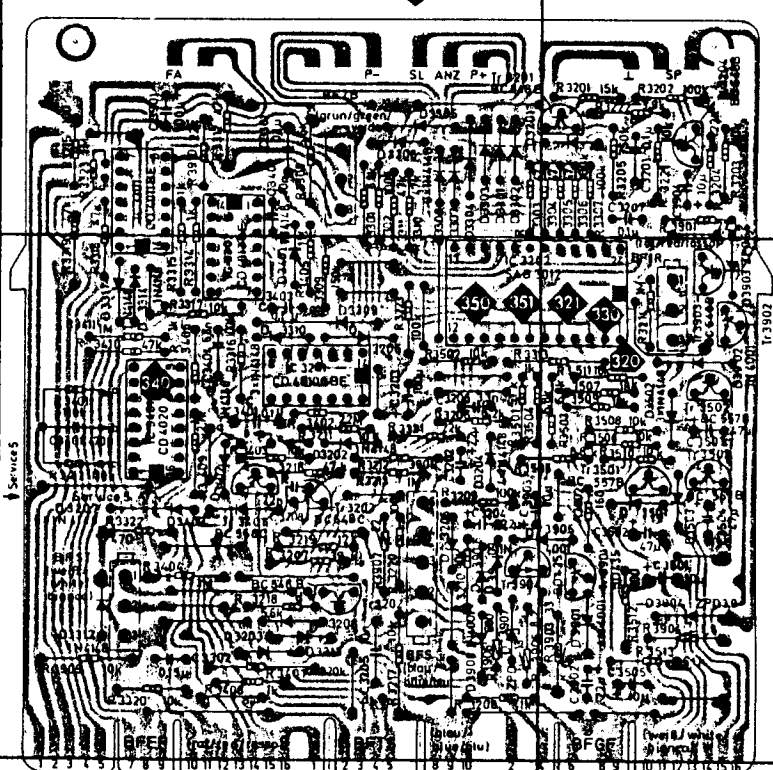
Attenzione!

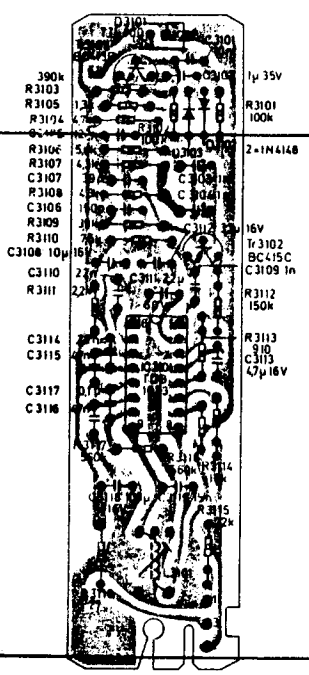
Moduli con numeri d'identità uguali (9 cifre a sinistra della linea di separazione) sono interamente ricambiabili! Numeri o lettere a destra della linea di separazione indicano soltanto versioni diverse.

2



678 23 0032-3/a 678 23 0032-6/





679 21 0073-6/1
679 21 0073-3/1

IR-Mod.
678 IR 0017/2

678 21 0287-3/7 678 21 0287-6/4

BF-Mod.

mit/with/con Text/testo	mit/with/con Symbol/simboli	
678 BF 0014	678 BF 0022	(6964, 6983, 6984, 6994, 6998, CTX 22
680 BF 0017	680 BF 0025	(7064)

4

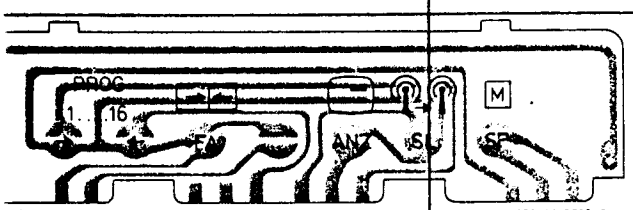
Sicht auf gelötete Seite
View on to soldered side
Vista dalla parte saldature

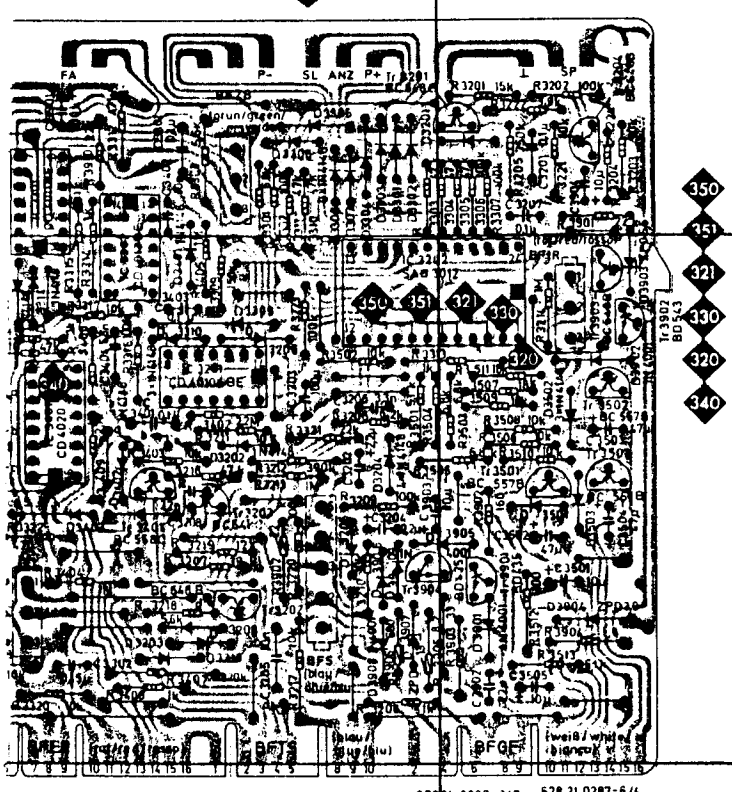
B C D

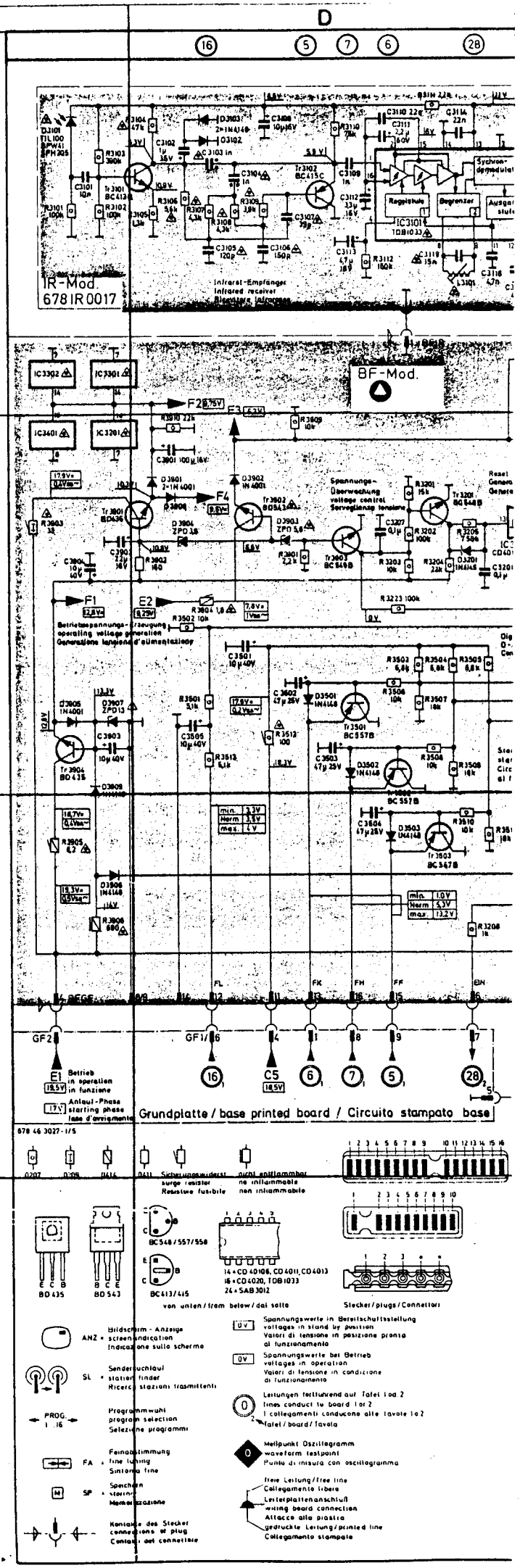
:hrägstrich) sind voll austauschbar!
ıen nur für unterschiedliche

ın the left of the slant) are fully
slant refer to differences in

ella linea di separazione) sono
a linea di separazione indicano







Mod.	mit/with/con Text/testo	mit/with/con Symbol/simboli
	678 BF 0014	678 BF 0022 (6964, 6983, 6984, 6994, 6998, CTX 2200)
	680 BF 0017	680 BF 0025 (7064

A B C

1

Achtung!

Moduln mit gleicher Sachnummer (9stellig links vom Schrägstrich) sind voll austauschbar! Zahlen oder Buchstaben rechts vom Schrägstrich stehen nur für unterschiedliche Ausführungen.

Attention!

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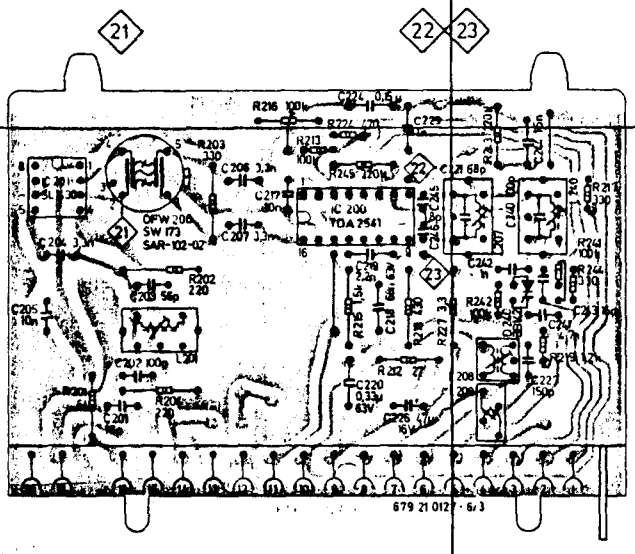
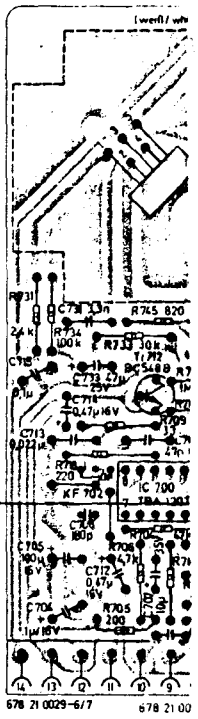
Attenzione!

Moduli con numeri d'identità uguali (9 cifre a sinistra della linea di separazione) sono interamente ricambiabili! Numeri o lettere a destra della linea di separazione indicano soltanto versioni diverse.

2

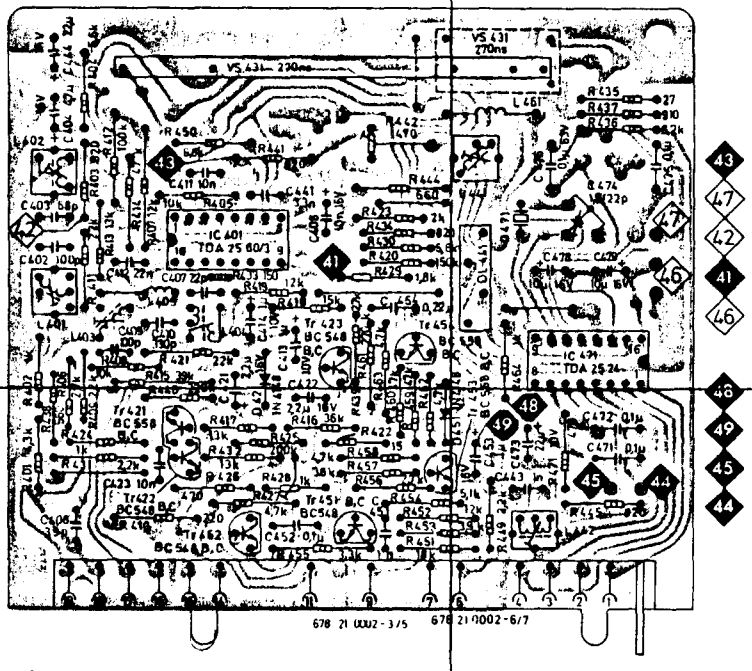


ZF-Mod.
678 ZF 0019/2

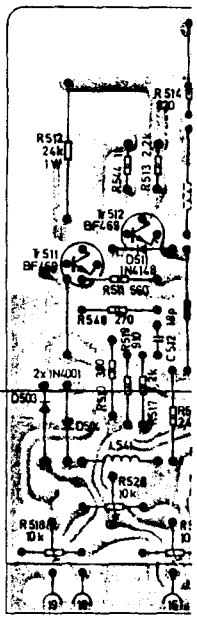


NF-Mod.
678 NF 0013

3



LC-Mod.
678 LC 0012/2



VE-Mod.
678 VE 0010

4

B

ırägstrich) sind voll austauschbar!
ın nur für unterschiedliche

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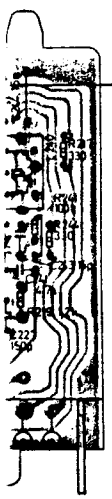
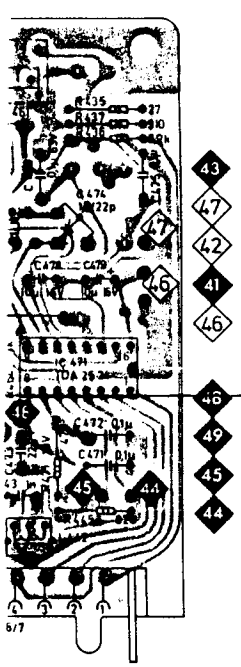
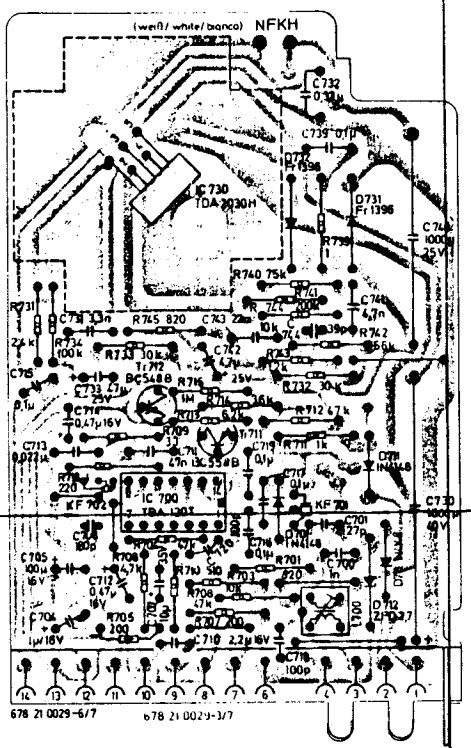
slant refer to differences in

la linea di separazione) sono
linea di separazione indicano

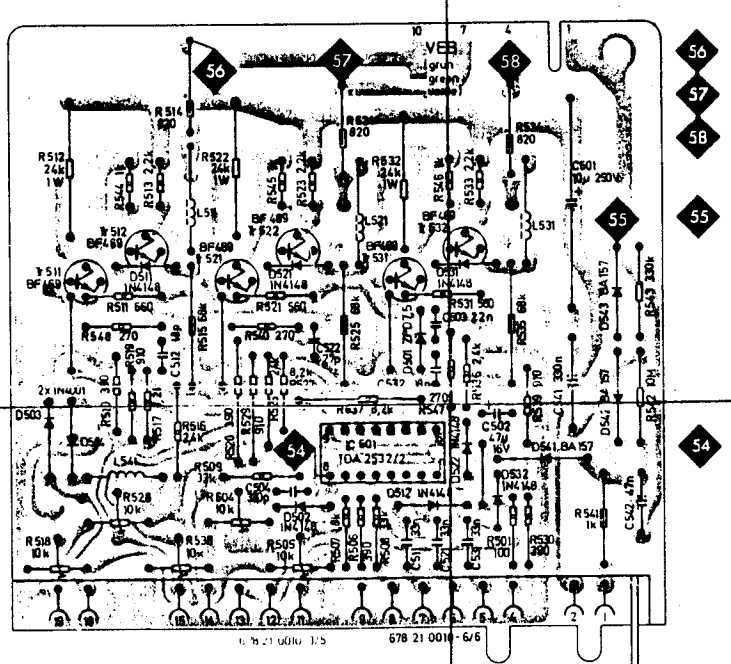




C

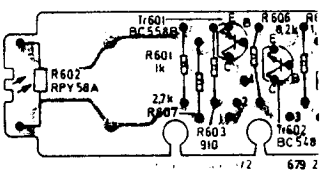


NF-Mod.
678 NF 0013



VE-Mod.
678 VE 0010

D



BK-Mod.
679 BK 0017

nicht bei
excluded
manca sul