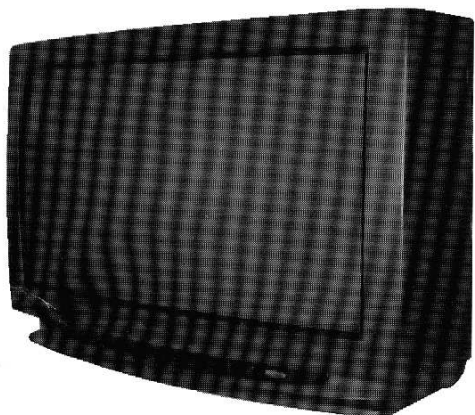


Service Manual



Colour Television TX-W28D1F Chassis E 2100

Specifications

Power Source: 220-240 V AC, 50 Hz
Power Consumption: 145 W
Aerial Impedance: 75 Ω unbalanced, Coaxial Type
Receiving System: Ant.: PAL B,G,I,D,K • SECAM B,G,D,K,L,L1 •
 NTSC Video 4.43
 SCART: NTSC 3.58

| Receiving Signal Empfangssignal | Channel Kanal | Receiving Channels Empfangskanäle | Receiving Signal Empfangssignal | Channel Kanal | Receiving Channels Empfangskanäle |
|------------------------------------|------------------|--------------------------------------|------------------------------------|------------------|--------------------------------------|
| PAL/SECAM B,G | CH02 - CH12 | VHF E2 - E12 | PAL I | CH01 - CH09 | VHF A - J |
| | CH11 - CH12 | VHF H1 - H2 (Italy/Italien) | | CH10 - CH13 | VHF 10 - 13 |
| | CH13 - CH20 | VHF A - H (Italy/Italien) | | CH01 - CH12 | VHF R1 - R12 |
| PAL/SECAM B,G,I,D,K,L | CH21 - CH69 | UHF E21 - E69 | SECAM D, K | CH02 - CH04 | VHF B', C1', C' |
| PAL/SECAM B,G,I,D,K | CC42 - CC46 | VHF U1 - U5 | SECAM L1 | VHF C1 - C6 | (France/Frankreich) |
| PAL/SECAM B,G,I,D,K | CC01 - CC20 | VHF S1 - S20 | SECAM L | | |
| PAL/SECAM B,G,I,D,K,L | CC21 - CC39 | VHF S21 - S39 | | | |
| PAL/SECAM B,G,I,D,K,L | CC40 - CC41 | UHF S40 - S41 | | | |

Intermediate Frequency:

Video: 38.9MHz / Sound: Sound 1 = 33.4MHz (32.4MHz receiving system D/K, 32.9MHz receiving system I, 32.7MHz receiving system L),
 Sound 2 = 33.16MHz, Colour: 34.47MHz

Video / Audio Terminals:

| | | |
|---------|---------------------------|--------------------------|
| AV1 IN | Video (21 pin) | 1 Vp-p, 75 Ω |
| | Audio (21 pin) | 500 mVrms, 10 k Ω |
| | RGB (21 pin) | |
| AV1 OUT | Video (21 pin) | 1 Vp-p, 75 Ω |
| | Audio (21 pin) | 500 mVrms, 1 k Ω |
| AV2 IN | Video (21 pin) | 1 Vp-p, 75 Ω |
| | Audio (21 pin) | 500 mVrms, 10 k Ω |
| | S-Video IN | Y: 1 Vp-p, 75 Ω |
| | (21 pin) | C: 0.3 Vp-p, 75 Ω |
| AV2 OUT | Video (21 pin) | 1 Vp-p, 75 Ω |
| | Audio (21 pin) | 500 mVrms, 1 k Ω |
| | regulable output (21 pin) | |
| AV3 IN | S-Video IN | Y: 1 Vp-p, 75 Ω |
| | (4-pin) | C: 0.3 Vp-p, 75 Ω |
| | Audio (RCA x 2) | 500 mVrms, 10 k Ω |
| | Video (RCA x 1) | 1 Vp-p, 75 Ω |

High Voltage:

Picture Tube: W66LFC195X01 72 cm SUPER FLAT FST 110°
Visible screen size: 66 cm

Audio Output:

Internal Speakers 2x 14 W/8 Ω (Music Power)
External Speakers 2x 20 W (Music Power)

4 - 8 Ω Impedance

Speakers 2x 12x8 cm oval
 2x 3.5 cm round Dome Speaker

1 x $\geq 8 \Omega$ Impedance

Headphones

Accessories supplied:

Remote Control
 R6 (UM8) Batteries

Dimensions:

Height: 492 mm
 Width: 705 mm
 Depth: 520 mm

Weight:

44 kg

Specifications are subject to change without notice.
 Weight and dimensions shown are approximate.

Technische Daten

Netzspannung: 220-240 V AC, 50 Hz
Leistungsaufnahme: 145 W
Antennenimpedanz: 75 Ω asymmetrisch, Koaxial-Typ
Empfangssystem: Ant.: PAL B,G,I,D,K • SECAM B,G,D,K,L,L1 •
 NTSC Video 4.43
 SCART: NTSC 3.58

Zwischenfrequenz:

Video: 38.9MHz / Ton: Ton 1 = 33.4MHz (32.4MHz Empfangssystem D/K, 32.9MHz Empfangssystem I, 32.7MHz Empfangssystem L),
 Ton 2 = 33.16MHz, Farbe: 34.47MHz

Video / Audio Anschlüsse:

| | | |
|-------------|------------------------------|--------------------------|
| AV1 EINGANG | Video (21 pol.) | 1 Vss, 75 Ω |
| | Audio (21 pol.) | 500 mVeff, 10 k Ω |
| | RGB (21 pol.) | |
| AV1 AUSGANG | Video (21 pol.) | 1 Vss, 75 Ω |
| | Audio (21 pol.) | 500 mVeff, 1 k Ω |
| AV2 EINGANG | Video (21 pol.) | 1 Vss, 75 Ω |
| | Audio (21 pol.) | 500 mVeff, 10 k Ω |
| | S-Video IN | Y: 1 Vss, 75 Ω |
| | (21 pol.) | C: 0.3 Vss, 75 Ω |
| AV2 AUSGANG | Video (21 pol.) | 1 Vss, 75 Ω |
| | Audio (21 pol.) | 500 mVeff, 1 k Ω |
| | regelbarer Ausgang (21 pol.) | |
| AV3 EINGANG | S-Video IN | Y: 1 Vss, 75 Ω |
| | (4-pol.) | C: 0.3 Vss, 75 Ω |
| | Audio (RCA x 2) | 500 mVeff, 10 k Ω |
| | Video (RCA x 1) | 1 Vss 75 Ω |

Hochspannung:

Bildröhre: W66LFC195X01 72 cm SUPER FLAT FST 110°
Sichtbare Diagonale: 66 cm

Ton Ausgangsleistung:

Interne Lautsprecher 2x 14 W/8 Ω (Musikleistung)
Externe Lautsprecher 2x 20 W (Musikleistung)

4 - 8 Ω Impedanz
Lautsprecher 2x 12x8 cm oval
 2x 3.5 cm rund Dome Speaker

1 x $\geq 8 \Omega$ Impedanz

Kopfhörer

Geräte-Zubehör

Fernbedienung

R6 (UM8) Batterien

Abmessungen:

Höhe: 492 mm
 Breite: 705 mm

Tiefe: 520 mm

Gewicht: 44 kg

Änderungen der technischen Daten vorbehalten
 Gewichte und Abmessungen sind Näherungsangaben..

Adjustment procedure • Abgleich-Anweisung

Service-Mode E2100

Vx.xx

21.9.95

1. Function

Service mode permits the calibration of variable EAROM values and allows the set to be programmed via the EAROM programmer interface (via Scart 2) using the "EAROM programmer". Using the programmer, a service engineer can carry out a normal standard set programming for „his“ district (channel numbers, programme names and analog values, e.g. in areas with cable networks) with a few seconds with no effort and no mistakes. Order the "EAROM Programmer" via Your Panasonic Service Department, P/N TZS2EK002. It is the same model of "programmer" used for EURO-1 type chassis.

Detailed operating instructions are supplied with this useful service aid.

2. Entering Service Mode

Please proceed as follows:

- Set bass to maximum and treble to minimum.
- Upon simultaneous pressing of the key "F" on the local control and the key "Reset" on the remote control (see also page 10).

Hint: Entering Service Mode could be done by using the "Service Remote Control" of EURO-1 type chassis, P/N TZS2EK004.

The set is now in the service mode basic routine "Actions with the EAROM programmer" and documents this with the following on-screen display (here shown in a frame!):

| | | | | |
|-----------|-----------|----------|----------|----------------------|
| PANASONIC | E 2 1 0 0 | V x . x | xx/xx/xx | X x x x x x |
| | chassis | software | Date | EAROM identification |
| | Chassis | Software | Datum | EAROM-Kennung |
| SERVICE 1 | | | | |
| Program | | | | |
| Ext >> TV | | | | |

(Set expects external programming via the EAROM programmer)

(Gerät erwartet externe Programmierung durch den EAROM-Programmer)

3. Operation within Service Mode

- Select functions: Red and Green key on the remote control
- Change value: Yellow and Blue key on the remote control (not for option bytes)
With number keys "0-7" (only for option bytes)
With the "STR" key at the control panel of the TV set
- Store value: With the "STR" key at the control panel of the TV set
- Exit from Service mode: With the "RESET" key

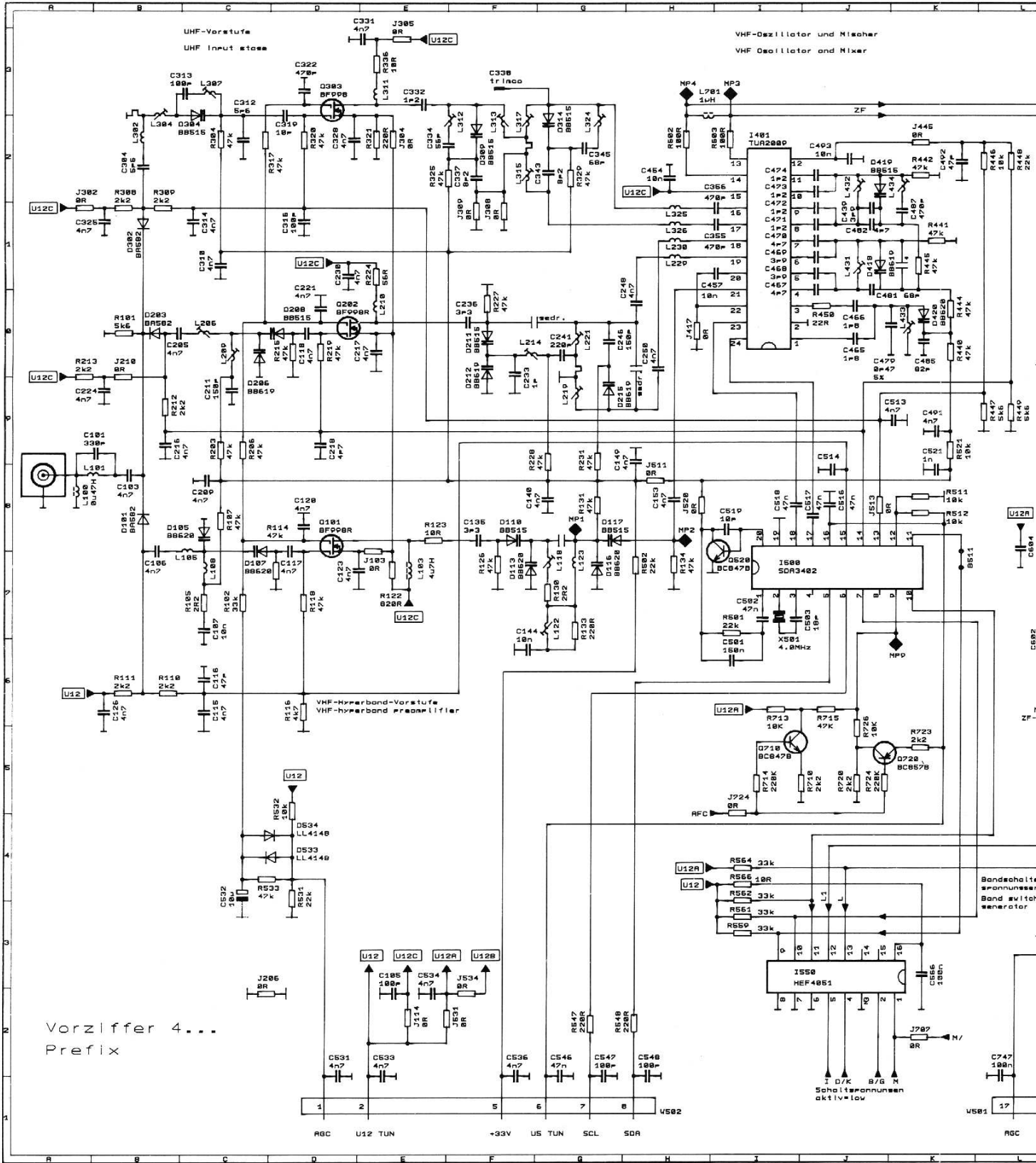
3. Bedienung innerhalb des Service-Mode

- Funktion wählen: Rote und Grüne Taste auf der Fernbedienung
- Wert verändern: Gelbe und Blaue Taste auf der Fernbedienung (nicht bei Option-Byte)
Mit den Ziffern-Tasten "0-7" (nur bei Option-Byte)
Mit der "STR" -Taste am Bedienteil vom TV-Gerät
- Wert speichern: Mit der "STR" -Taste am Bedienteil vom TV-Gerät
- Service-Mode verlassen: Mit der "RESET" -Taste

4. Alignment function**4. Abgleichfunktionen**

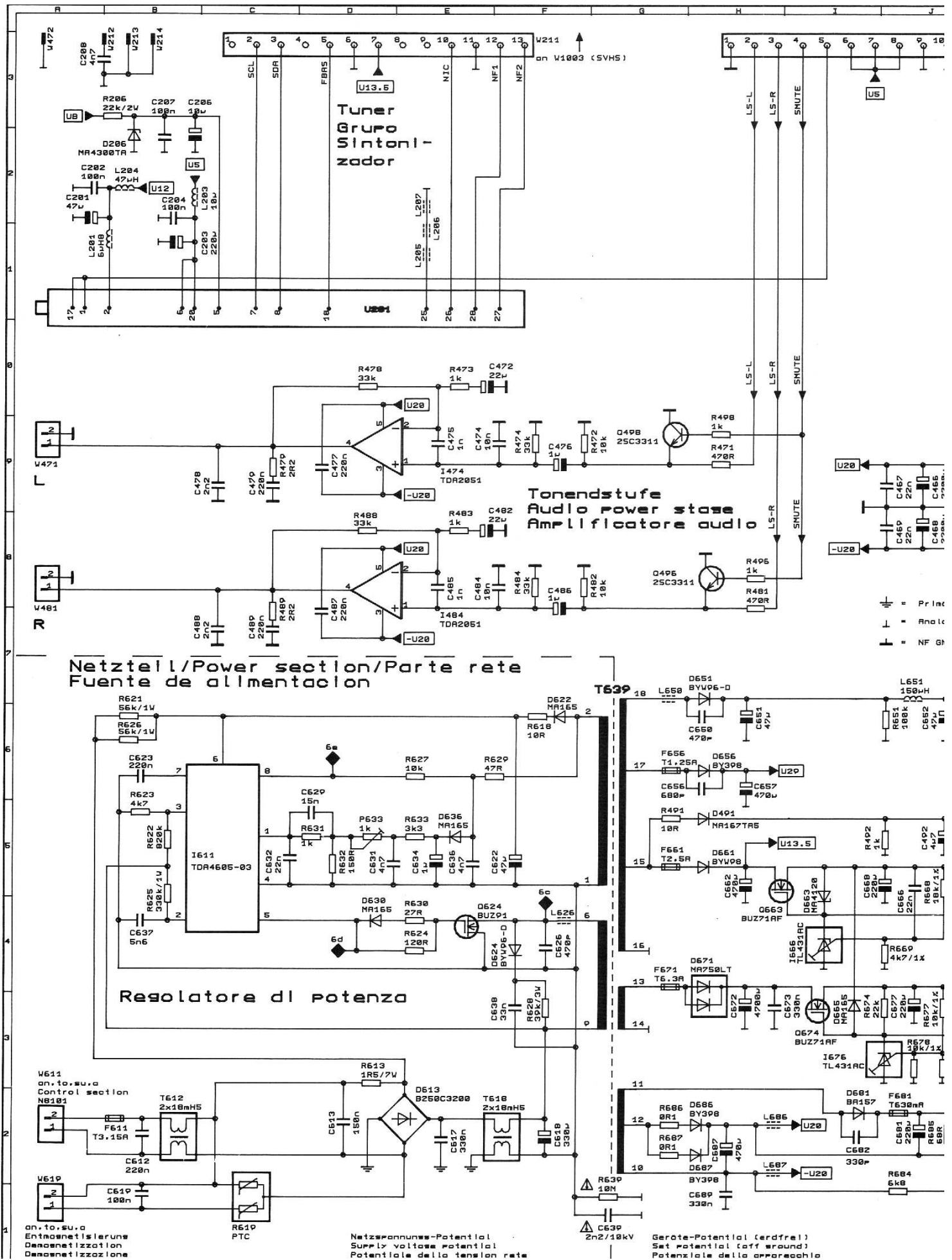
| Alignment function Abgleichfunktion | e. g. display picture tube z. B. Anzeige Bildröhre | Settings / special features Einstellwerte / Besonderheiten |
|--|---|---|
| 0 EAROM Programmer EAROM-Programmer | SERVICE 1 Program Ext >> TV | Load / store program data Programmdaten laden / speichern |
| 1 vertical amplitude Vertikal-Amplitude | SERVICE 1 V-Amp xxx | Optimum setting Optimale Einstellung |
| 2 vertical slope Vertikal-Steilheit | SERVICE 1 V-Slope xxx | |
| 3 vertical position Vertikal-Position | SERVICE 1 V-Wait xxx | |
| 4 vertical symmetry Vertikal-Symmetrie | SERVICE 1 V-Sym xxx | |
| 5 vertical linearity Vertikal-Linearität | SERVICE 1 V-Lin xxx | |
| 6 horizontal amplitude Horizontal-Amplitude | SERVICE 1 H-Amp xxx | Optimum setting Optimale Einstellung |
| 7 horizontal position Horizontal-Position | SERVICE 1 H-Pos xxx | |
| 8 horizontal position TT Horizontal-Position VT | SERVICE 1 Text Pos xxx | |

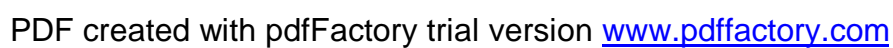
Color test pattern (FuBK)
FuBK-Testbild

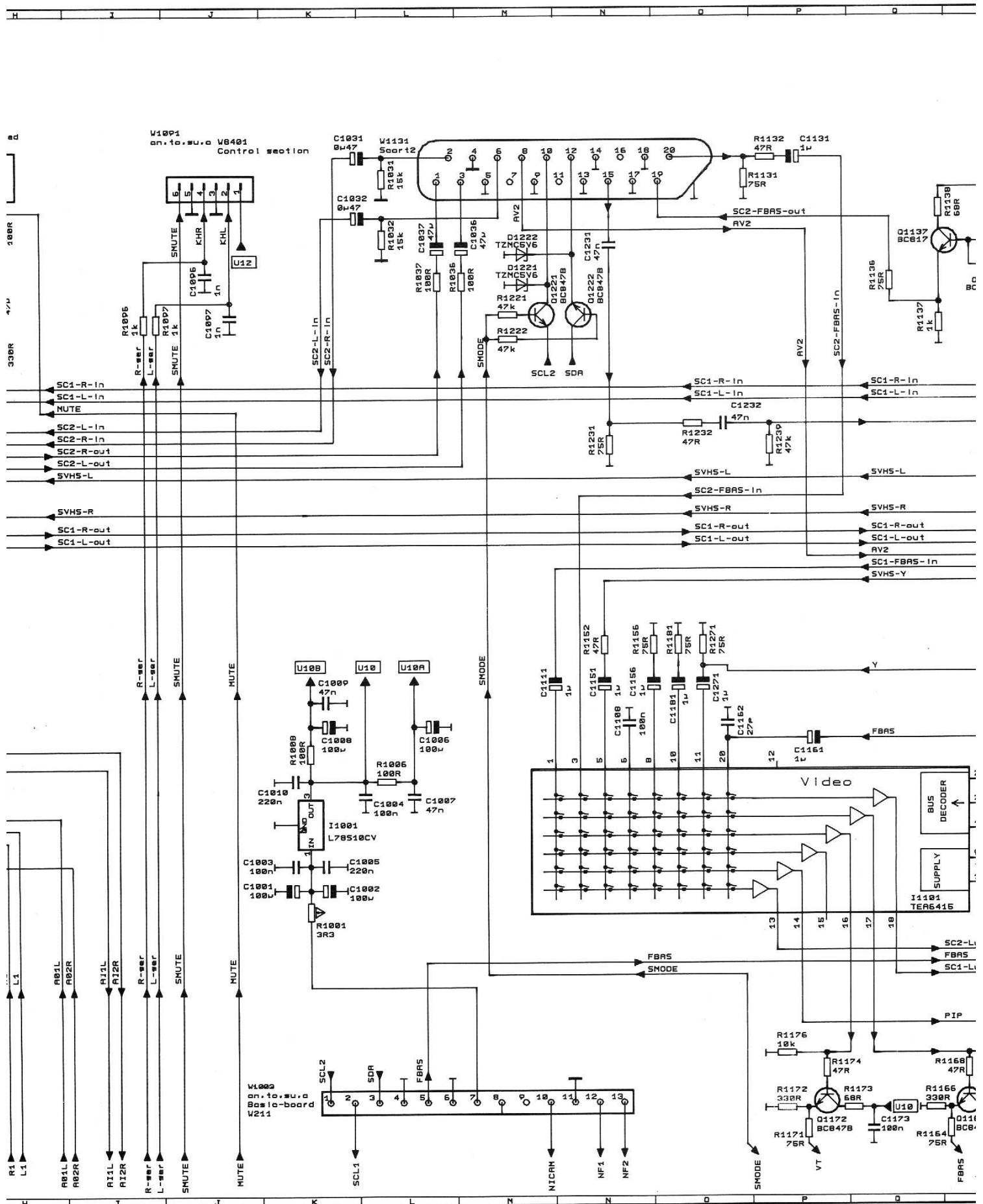












Signal-board
(S-VHS)

