WARNING : *Before servicing this chassis read the safety recommendations.*

ATTENTION : *Avant toute intervention sur ce châssis, lire les recommandations de sécurité.*

ACHTUNG : *Vor jedem Eingriff auf diesem Chassis, die Sicherheitsvorschriften lesen.*

ATTENZIONE : *Prima di intervenire sullo chassis, leggere le norme di sicurezza.*

IMPORTANTE : *Antes de cualquier intervención, leer las recomendaciones de seguridad.*

Do not disconnect modules when they are enregized! Repairs on power supply section are to be carried out only with isolating transformer.

Ne pas retirer les modules lorsqu'ils sont sous tension. N'effectuer les travaux de maintenance sur la partie reliée au secteur (Switch Mode) qu'au travers d'un transformateur d'isolement.

Module nicht bei eingeschaltetem Gerät entfernen ! Servicearbeiten am Netzteil nur unter Verwendung eines Regeltrenntrafos durchführen.

Non scollegare i moduli quando sono alimentati! Intraprendere riparazioni sulla sezione alimentatore solo con trasformatore isolante.

No desconectar los módulos cuando están activados. Las reparaciones en la sección de alimentación de energía deben ser ejecutadas solamente con un transformador de separación.

⚠ Indicates critical safety components, and identical components should be used for replacement. Only then can the operational safety be garanteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠) par des composants non homologués selon la Norme CEI 65 entraine la non-conformité de l'appareil. Dans ce cas, la responsabilité du fabricant n'est plus engagée.

Wenn Sicherheitsteile (mit dem Symbol⚠ gekennzeichnet) nicht durch Original - Ersatzteile ersetzt werden, erlischt die Haftung des Herstellers.

La sostituzione degli elementi di sicurezza (marcati con il segno⚠) con componenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio. In tal caso è "esclusa la responsabilità " del costruttore.

La sustitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato. En ese caso, el fabricante cesa de ser responsable.

Note : During measurements in the power supply unit, use the primary power unit ground (Emit. TP060).

Attention : Mesures dans le bloc alimentation. Utiliser la masse du bloc alimentation (Emet. TP060).

Achtung : Bei Messungen im Primärnetzteil. Primärnetzteilmasse verwenden (Emit. TP060).

Attentionze : Misure nell'alimentatore primario. Usare massa alimentazione primario (Emet. TP060).

Cuidado : Medida en el bloque de alimentación. Utilizar la masa del bloque de alimentación (Emet. TP060).

MEASUREMENT CONDITIONS - CONDITIONS DE MESURES - MESSBEDINGUNGEN CONDIZIONI DI MISURA - CONDICIONES DE MEDIDAS

RECEIVER :
Bar test pattern : PAL, I standard, 100% white.

- On UHF, input level 1 mV
- Via the scart socket, input level 1 Vpp

Colour, contrast and brightness at mid-position, sound at minimum.
Programme selected : PR 01.
DC voltages measured between the point and earth using a digital voltmeter.

RECEPTEUR :
Mire de barres : SECAM, Norm L, Blanc 100%.

- En UHF, niveau d'entrée 1 mV
- Par la prise Péritélévision, niveau d'entrée 1Vcc.

Couleur, contraste, lumière à mi-course, son minimum.
Programme affecté PR 01.
Tensions continues relevées par rapport à la masse avec un voltmètre numérique.

EMPFÄNGER :
Farbbalken : PAL, Norm G, Weiss 100%

- Bei UHF Eingangspegel 1 mV.
- Über die Scartbuchse : Eingangspegel 1 Vss.

Farbe, Kontrast, Helligkeit in der Mitte des Bereichs, Ton auf Minimum.
Zugeordnetes Programm PR 01.
Gleichspannungen mit einem digitalen Voltmeter zur Masse gemessen.

RICEVITORE :
Monoscopio per barre : PAL, norma G. bianco 100%.

- In UHF, livello d'entrata 1 mV,
- Per la presa SCART, livello d'entrata 1 Vcc.

Colore, Contrasto, Luce a metä corsa, Suono minimo.
Programma designato PR 01.
Tensioni continue rilevate rispetto alla massa con un voltametro numerico.

RECEPTOR :
Mira de barras : PAL, norma G, blanco 100%.

- En UHF, nivel de entrada 1 mV,
- Por la toma Peritelevision, nivel de entrada 1 Vpp.

Color, Contraste, luz a mitad de carrera, Sonido minimo.
Programa afectado PR 01.
Tensiones continuas marcadas en relacion a la masa con un voltimetro digital.

CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASER KLASSE 1
APARATO CON LASER DE CLASE 1
APPARECCHIO CON LASER DI CLASSE 1

DANGER :	**Invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.**
ATTENTION :	**Le rayon laser est invisible. Eviter l'exposition directe lors de la maintenance.**
VORSICHT BEI REPARATUREN :	**Bei geöffneter Schublade und Defekt der Sicherheits - vorrichtungen besteht die Gefahr unsichtbaren Laserlichts. Niemals direkt in den Laserstrahl sehen.**
ATTENZIONE :	**Il raggio laser è invisibile. Evitare l'esposizione diretta durante la manutenzione.**
IMPORTANTE :	**El rayo laser es invisible. Evitar la exposición directa en el momento del mantenimiento.**

PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE DEVICES (ESD)

Some semiconductor (solid state) devices can be damaged easily by static electricity.
Such components commonly are called Electrostatically Sensitive Devices (ESD). Examples of typical ESD devices are integrated circuits and some field-effect transistors and semiconductor chip components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ESD devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ESD devices.
4. Use only an anti-static solder removal devices. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESD devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESD devices.
6. Do not remove a replacement ESD device from its protective package until immediately before your are ready to install it. (Most replacement ESD devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive materials).
7. Immediately before removing the protective materials from the leads of a replacement ESD device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ESD devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ESD device).

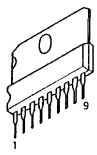
IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety, these part are marked by ⚠ symbol on the schematic circuit diagrams and replacement part list. It is essential that these safety critical components are replaced with the manufacture's specified parts to prevent electric shock, fire, or other hazards. do not attempt to modify the original design without permission of the manufacturer.

LIST OF ABBREVIATIONS - LISTE DES ABREVIATIONS - ABKÜRZUNGEN
LISTA DELLE ABBREVIAZIONI - LISTA DE ABREVIACIONES

- **ABL** AVERAGE BEAM CURRENT LIMITING
- **AQR_ON** DISABLE AQUISITION MODE REGUL.
  ENABLE PWM PULSE
- **AV1_8** PIN_8 DETECTOR
- **AV_LINK** AV_LINK DATAS VCR/TV
- **AV_R_ OUT** AUDIO RIGHT-OUT
- **AV_L_ OUT** AUDIO LEFT-OUT
- **AV_R_ IN** AUDIO RIGHT-IN
- **AV_L_ IN** AUDIO LEFT-IN
- **AV_B** BLUE SIGNAL FROM AV
- **AV_G** GREEN SIGNAL FROM AV
- **AV_R** RED SIGNAL FROM AV
- **AV_C_ IN** CHROMA-IN
- **AV_FB** FAST BLANK SIGNAL FROM AV SCART
- **AV_Y_ IN** VIDEO-IN
- **BEAM_INFO** BEAM CURRENT INFORMATION
- **BLKCURR** CUT OFF CURRENT
- **B_TXT** BLUE SIGNAL OUTPUT (TEXT)
- **B_OUT** BLUE SIGNAL TO VIDEO AMPLIFIER
- **BREATHING** COMPENSATE BREATHING PICTURE SIGNAL
- **BSVM** BEAM SCAN VELOCITY MODULATION
- **CNT1_20V** SAFETY SIGNAL TO INSURE A GOOD CONNECTION BETWEEN SIGNAL BOARD AND POWER BOARD (BV001- BL111)
- **CNT2_20V** SAFETY SIGNAL TO INSURE A GOOD CONNECTION BETWEEN SIGNAL BOARD AND POWER BOARD (BR003- BP005)
- **CRT** CATHODE RAY TUBE
- **CVBS** VIDEO
- **CVBS_M_IN** MASTER VIDEO FROM CHROMA DECODER
- **CVBS_S_IN** SLAVE VIDEO FROM CHROMA DECODER
- **DEFL_SAFETY** SAFETY INFORMATION FROM DEFLECTION
- **DEGAUSS** DEGAUSS SIGNAL
- **DPC** DYNAMIC PHASE COMPENSATION SIGNAL
- **EFC** EARTH FIELD CORRECTION
- **EHT** EXTREMELY HIGH TENSION
- **E.W_DRIVE** EAST - WEST DRIVE SIGNAL
- **EW_PROT** SAFETY SIGNAL FROM DIODE MODULATOR
- **FB DETEC** FAST BLANKING DETECT
- **FB_TXT** FAST BLANKING (TEXT)
- **FW ADJ.** FULL WHITE ADJUSTMENT
- **G_OUT** GREEN SIGNAL TO VIDEO AMPLIFIER
- **G_TXT** GREEN SIGNAL OUTPUT (TEXT)
- **H_DRIVE** DRIVE SIGNAL FOR HORIZONTAL DEFLECTION
- **HEATER** HEATER OUTPUT FROM THE DST TO CRT
- **H DEFL. PROT.** HORIZONTAL DEFLECTION PROTECTION
- **IIC_CL** I2C CLOCK BUS
- **IIC_DATA** I2C DATA BUS
- **INF_POW_FAIL** POWER FAIL INFORMATION
- **IR** INFRARED RECEIVER
- **LDR** LIGHT DEPENDENT RESISTOR
- **MUTE** MUTES AUDIO AMPLFIERS
- **PHI2_REF** PHI2 REFERENCE SIGNAL
- **PIF** PICTURE IF SIGNAL
- **PKS** PEAK SENSING
- **PO** POWER ON
- **PWM** PULSE WIDTH MODULATION
- **RES_MSP** MSP RESET
- **RESET** RESET TO MICROPROCESSOR
- **ROTATION** OUTPUT OF EARTH FIELD CORRECTION STAGE
- **R_OUT** RED SIGNAL TO VIDEO AMPLIFIER
- **R_TXT** RED SIGNAL OUTPUT (TEXT)
- **PIF** PICTURE IF SIGNAL
- **SIF** SOUND IF SIGNAL
- **SSC** SUPER SAND CASTLE
- **SSC_V_GUARD** SAFETY DATA GENERATED BY THE VERTICAL AMPLIFIER TDA8177F
- **TRAP_INFO** BG/L,L',D/K K' I SWITCH
- **TUBE_DETET.** SELECTS 16:9 OR 4:3 TUBES
- **U_OUT** U TO VIDEO PART
- **U_M_IN** U MASTER FROM CHROMA DECODER
- **U_S_IN** U SLAVE FROM CHROMA DECODER
- **+USYS** SYSTEM VOLTAGE
- **+/- UA** SOUND VOLTAGE
- **+UVERT** POSITIVE SUPPLY VERTICAL VOLTAGE
- **-UVERT** NEGATIVE SUPPLY VERTICAL VOLTAGE
- **+UVFB** POSITIVE SUPPLY VOLTAGE FOR VERTICAL POWER STAGE
- **+UVIDEO** VIDEO VOLTAGE FOR THE CRT BOARD
- **U_S_IN** U SLAVE FROM CHROMA DECODER
- **V_M_IN** V MASTER FROM CHROMA DECODER
- **V_S_IN** V SLAVE FROM CHROMA DECODER
- **V_DRIVE** VERTICAL DEFLECTION DRIVE SIGNAL
- **V_OUT** V TO VIDEO PART
- **V_S_IN** V SLAVE FROM CHROMA DECODER
- **Y_M_IN** Y MASTER FROM CHROMA DECODER
- **Y_S_IN** Y SLAVE FROM CHROMA DECODER
- **Y_OUT** Y TO VIDEO PART
- **1V8_STBY** 1V8 STANDBY
- **3V3** 3V3 POWER SUPPLY UP CONVERTER PART OF SIGNAL BOARD
- **3V3_STBY** 3V3 STANDBY
- **5V_A / 5V_V** 5V POWER SUPPLY SIGNAL BOARD
- **5V_STBY** 5V STANDBY
- **5V_UP** MICROPROCESSOR SUPPLY VOLTAGE
- **10 V** SUPPLIES THE 8V REGULATORS ON SIGNAL BOARD
- **8V_1H** 8V SUPPLY FOR 1H VIDEO PROCESSING
- **8V_2H** 8V SUPPLY FOR 2H VIDEO PROCESSING
- **8V_5** 8V5 POWER SUPPLY FRONT END AND SCART PART OF SIGNAL BOARD
- **7V_STBY** 7V STANDBY
- **40V** SUPPLY VOLTAGE TUNER
- **20V** SUPPLY VOLTAGE HORIZONTAL DRIVER AND BSVM CRT

INTEGRATED CIRCUITS AND TRANSISTORS OUTLINE - CIRCUITS INTEGRES ET TRANSISTORS INTEGRIERTE SCHALTUNGEN UND TRANSISTOREN - CIRCUITI INTEGRATI TRANSISTOR CIRCUITOS INTEGRADOS Y TRANSISTORES



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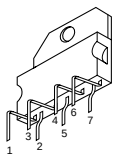

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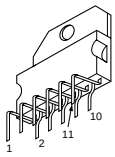

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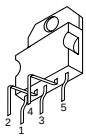

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LM293
LM393N
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LM358D
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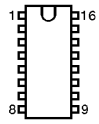

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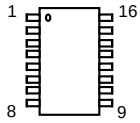

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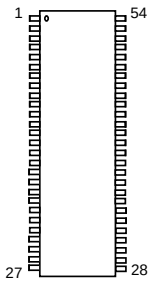

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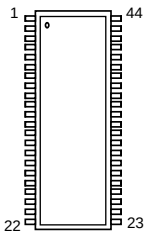

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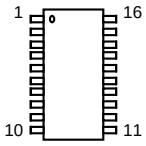

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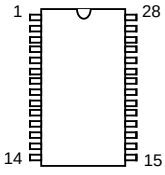

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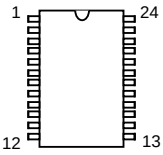

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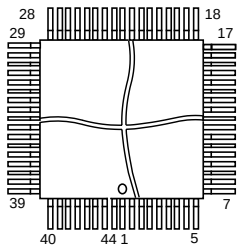

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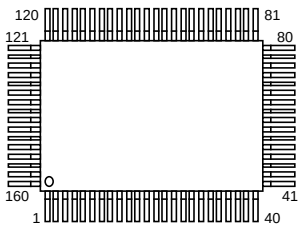

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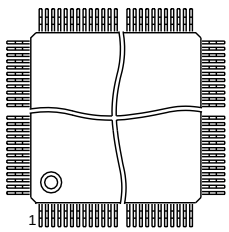

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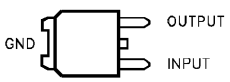

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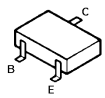

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BC 847B-BC856B
BC857B-BF 799
BC 848 A/B/C
BCR141-BCR141N
BCR191-BF660
DTC113ZK

LM431
1: REFERENCE
2: ANODE
3:CATHODE

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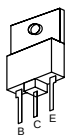
BC 337
BC546B
BC 548B
BC556B
BC 558B

MPS750P
MPSW01A



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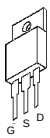

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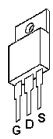

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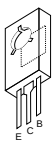
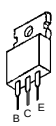


BD139
BD140

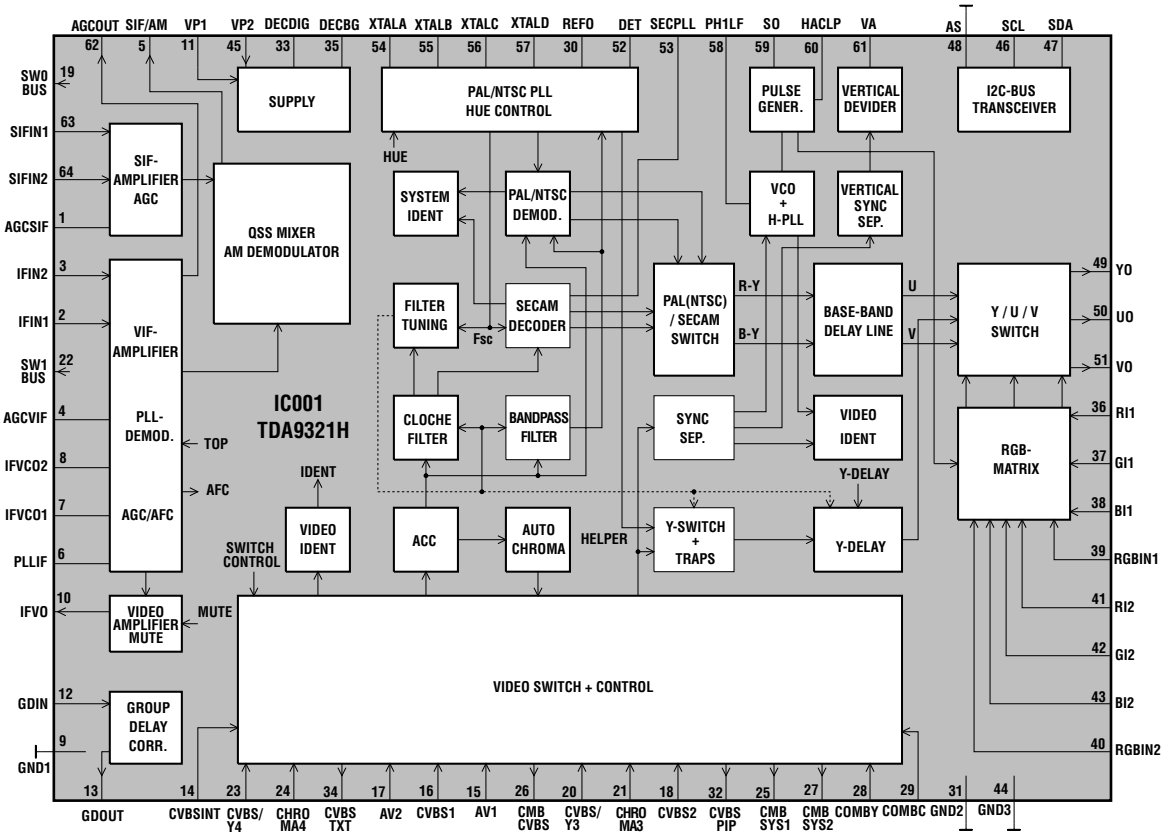


2SC3675

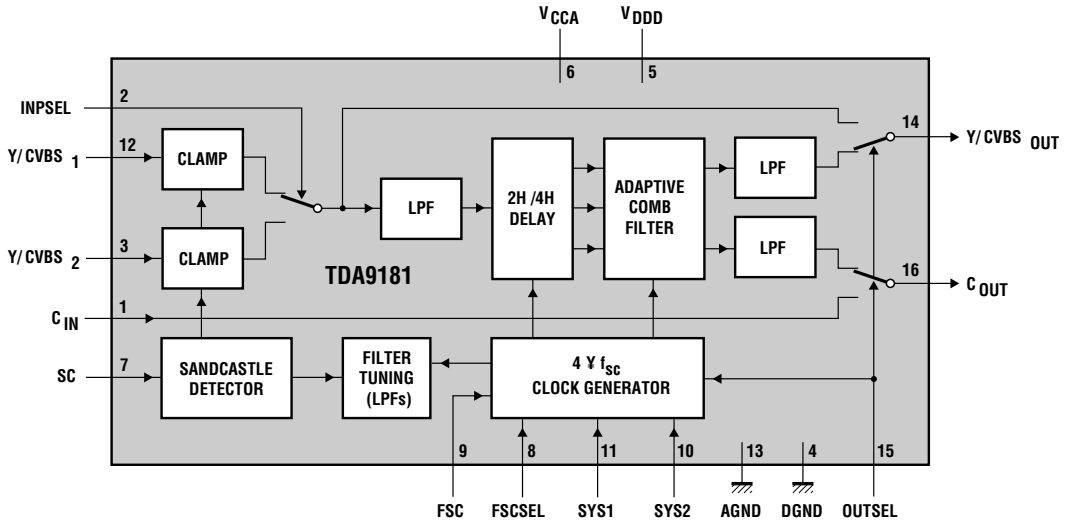
ICC21
First issue 09 / 01

INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER SCHEMA A BLOCCHI DEL CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

IC500 - IC700 - TDA9321H



IC900 - TDA9181



EACEM-IRIS REPAIR CODING SYSTEM

CONDITION CODE | MAIN SYMPTOM CODE | EXTENDED SYMPTOM CODE (*1)

1	CONSTANTLY
2	INTERMITTENTLY
3	AFTER A WHILE
4	IN A HOT ENVIRONMENT
5	IN A COLD ENVIRONMENT
6	WHEN SWITCHING
7	UNDER VIBRATION
8	IN A DAMP/WET/ RAINY/SNOWY ENVIRONMENT
9	IN A DRY ENVIRONMENT
A	AFTER BEING DROPPED/ TRANSPORT DAMAGE
B	AFTER LIGHTNING STRIKE
C	ONLY CERTAIN STATIONS/ SOFTWARE/ MODE/ CHANNELS/ FREQUENCY BAND
D	ONLY ON CERTAIN STANDARDS
E	ONLY ON ONE CHANNEL
F	ONLY WITH CERTAIN INPUT(S)
G	ONLY ON CERTAIN OUTPUT(S)
H	IN STANDBY/OFF MODE
J	AT EDIT POINT
K	WHEN INTERCONNECTED
L	LIQUID CONTAMINATION
M	FOR A SHORT WHILE AFTER SWITCH-ON
N	AFTER MAKING A COPY
O	UNDER STRESSED CONDITIONS / HIGH LOAD
P	AT SWITCH-OFF

(*1)

CAUTION

THE 'X' EXTENDED SYMPTOM CODES (*-**X) SHOULD ONLY BE USED TO INDICATE THAT A SUITABLE SYMPTOM DESCRIPTION IS NOT AVAILABLE IN THE CONCERNED SYMPTOM GROUP

BROWN GOODS
REV 03 - 2000/02

		1	NO ACTION	2	LEVEL	3	QUALITY	4	NOISE
1	GENERAL	110	**POWER PROBLEM OR NOT OPERATING**	120	**CHARGING PROBLEM**	130	**DISPLAY FUNCTION PROBLEM**	140	**ABNORMAL NOISE**
		111	NO POWER	121	NO BATTERY CHARGING	131	FAULTY DISPLAY	141	CRT DISCHARGING NOISE
		112	NO POWER WHEN USING AC-ADAPTER	122	INCOMPLETE BATTERY CHARGE	132	FAULTY LAMP/LED OPERATION	142	EHT DISCHARGING NOISE
		113	NO POWER WHEN USING DRY BATTERIES	123	CHARGING TIME TOO LONG	133	FAULTY LEVEL METER OPERATION	143	NOISY CABINET/CRACKING TRAYS
		114	NO POWER WHEN USING RECHARGEABLE BATTERIES	12X	OTHER 'CHARGING' PROBLEM	134	FAULTY ON-SCREEN DISPLAY OPERATION	144	NOISY TRANSFORMER/HUMMING
		115	NO POWER FROM SOLAR CELL			135	ELECTRONIC TUNING DISPLAY FAULT	145	NOISY COMPONENT(S)
		116	NO POWER WHEN USING A CAR BATTERY			136	MECHANICAL TUNING DISPLAY FAULT	146	RATTLE
		117	SHORT OPERATION TIME/SHORT BATTERY LIFE			137	FAULTY TIME CODE DISPLAY	147	CLICKING
		118	POWER-OFF FUNCTION NOT WORKING			138	FAULTY ALARM/ERROR DISPLAY	148	CLOCK NOISE
		119	NO SWITCH-ON FROM STANDBY			139	DISPLAY DIM/TOO DARK	149	CRACKING
		11A	POWERS UP, BUT NO OPERATION			13A	UNUSUAL OR INCORRECT MESSAGE IN DISPLAY	14A	WHISTLING
		11B	CYCLIC POWER ON/OFF			13B	NO BACKLIGHT	14X	OTHER 'ABNORMAL' NOISE
		11C	BLOWING EXTERNAL (MAINS) FUSE			13C	BEEPS, NO DISPLAY		
		11D	SET SWITCHES OFF BY ITSELF			13D	WARNING LIGHT DOES NOT WORK		
		11E	BACKUP BATTERY PROBLEM			13E	WARNING LIGHT LIGHTS UP		
		11F	NOT OPERATING			13X	OTHER 'DISPLAY FUNCTION' PROBLEM		
		11G	NO AUTOMATIC SWITCH ON/OFF						
		11H	PROTECTION SWITCH/FUSE IN SET TRIGGERS						
		11J	RECHARGEABLE BATTERY NOT RECOGNIZED						
		11X	OTHER 'POWER' PROBLEM						
2	COMMUNICATION	210	**NO RECEPTION OR CONNECTION**	220	**POOR RECEPTION OR CONNECTION**	230	**TRANSMISSION/CONNECTION PROBLEM**	240	**NOISY RECEPTION/TRANSMISSION**
		211	NO AM RECEPTION	221	POOR AM RECEPTION	231	NO TRANSMISSION/CONNECTION	241	LINE NOISE
		212	NO FM RECEPTION	222	POOR FM RECEPTION	232	POOR TRANSMISSION/CONNECTION	242	OSCILLATION
		213	NO SW RECEPTION	223	POOR SW RECEPTION	233	TRANSMISSION LEVEL TOO HIGH	243	INTERSTATION INTERFERENCE
		214	NO VHF RECEPTION	224	POOR VHF RECEPTION	234	NO TRANSMISSION BETWEEN BASE UNIT AND HANDSET	24X	OTHER 'NOISY RECEPTION/TRANSMISSION' PROBLEM
		215	NO UHF RECEPTION	225	POOR UHF RECEPTION	235	POOR TRANSMISSION BETWEEN BASE UNIT AND HANDSET		
		216	NO BS RECEPTION	226	POOR BS RECEPTION	236	NO IR TRANSMISSION		
		217	NO CS RECEPTION	227	POOR CS RECEPTION	237	ONE-SIDED CONNECTION		
		218	NO HDTV RECEPTION	228	POOR HDTV RECEPTION	238	MODEM HANGS UP IMMEDIATELY ONCE CONNECTED		
		219	NO GPS/QPS RECEPTION	229	POOR GPS/QPS RECEPTION	239	MODEM DROPS LINE DURING CONNECTION		
		21A	NO RECEPTION OF DIGITAL BROADCASTING	22A	POOR RECEPTION OF DIGITAL BROADCASTING	23X	OTHER 'TRANSMISSION/CONNECTION' PROBLEM		
		21B	NO IR RECEPTION	22B	POOR IR RECEPTION				
		21C	NO DIAL TONE	22X	OTHER 'POOR RECEPTION' PROBLEM				
		21D	NO MODEM/FAX CONNECTION						
		21E	MODEM NOT ANSWERING/NO CARRIER						
		21F	NO NETWORK CONNECTION/NETWORK INITIALIZATION FAILS						
		21X	OTHER 'NO RECEPTION' PROBLEM						
3	PICTURE	310	**NO PICTURE**	320	**PICTURE LEVEL PROBLEM**	330	**PICTURE QUALITY PROBLEM**	340	**PICTURE NOISE**
		311	NO PICTURE IN E TO E MODE	321	PICTURE TOO DARK	331	POOR PICTURE RESOLUTION	341	SNOWY PICTURE
		312	NO PICTURE IN PLAYBACK MODE	322	PICTURE TOO BRIGHT	332	POOR FOCUS	342	DOT NOISE OR DROPOUT ON PICTURE
		313	NO PICTURE IN VIEWFINDER	323	CONTRAST TOO LOW	333	RINGING ON PICTURE	343	NOISE BARS ON PICTURE
		314	NO PICTURE, ONLY RASTER	324	CONTRAST TOO HIGH	334	EXCESSIVE SMEAR/LAG	344	BLANKING LINES ON PICTURE
		315	NO RASTER, BLACK PICTURE	325	SATURATED WHITE OR BLACK LEVEL	335	POOR LINEARITY OR GEOMETRY	345	BEATING ON PICTURE
		316	ONLY HORIZONTAL LINE	326	SHADING ON PICTURE	336	PICTURE SIZE INCORRECT	346	GHOSTING ON PICTURE
		317	ONLY VERTICAL LINE	327	ONLY PARTIAL PICTURE	337	INCORRECT CENTRING OF PICTURE	347	VCR HEAD SWITCHING NOISE ON PICTURE
		318	NO PICTURE IN LCD	32X	OTHER 'PICTURE LEVEL' PROBLEM	338	PICTURE SLANTED	348	OVERMODULATION NOISE
		319	NO 2nd (OR HIGHER) MONITOR DISPLAY			339	V-SIZE INCORRECT	349	MOIRÉ
		31X	OTHER 'NO PICTURE' PROBLEM			33A	H-SIZE INCORRECT	34A	MOSAIC NOISE
						33X	OTHER 'PICTURE QUALITY' PROBLEM	34B	SCRAMBLED PICTURE
								34X	OTHER 'PICTURE NOISE' PROBLEM
4	COLOUR	410	**NO COLOUR**	420	**COLOUR LEVEL PROBLEM**	430	**POOR COLOUR QUALITY**	440	**NOISY COLOUR**
		411	NO COLOUR IN E TO E MODE	421	WEAK COLOUR	431	SOME OR ALL COLOURS MISSING	441	COLOUR NOISE ON A BLACK & WHITE PICTURE
		412	NO COLOUR IN PLAYBACK MODE	422	EXCESSIVE COLOUR	432	POOR WHITE BALANCE	442	COLOUR STREAKING
		413	NO COLOUR IN VIEWFINDER	42X	OTHER 'COLOUR LEVEL' PROBLEM	433	HUE PROBLEM	443	COLOUR BARS ON PICTURE
		414	NO COLOUR IN PART OF PICTURE			434	PURITY ERROR	44X	OTHER 'COLOUR NOISE' PROBLEM
		41X	OTHER 'NO COLOUR' PROBLEM			435	LANDING ERROR/WHITE UNIFORMITY		
						436	CONVERGENCE ERROR		
						437	REGISTRATION ERROR		
						438	PITCH MOIRÉ/RAINBOW PATTERN		
						439	COLOUR SHIFT		
						43X	OTHER 'COLOUR QUALITY' PROBLEM		
5	AUDIO	510	**NO AUDIO**	520	**AUDIO LEVEL PROBLEM**	530	**AUDIO QUALITY**	540	**NOISY AUDIO**
		511	NO SOUND IN E TO E MODE	521	LOW AUDIO LEVEL	531	POOR FREQUENCY RESPONSE	541	HUM
		512	NO PLAYBACK OF OUTGOING MESSAGE(S)	522	EXCESSIVE AUDIO LEVEL	532	DISTORTED AUDIO	542	HISS
		513	NO PLAYBACK OF INCOMING MESSAGE(S)	523	BALANCE PROBLEM	533	NO OR POOR TREBLE	543	CROSSTALK
		514	NO AUDIO PLAYBACK	524	FADER PROBLEM	534	NO OR POOR BASS	544	STATIC, POP OR CLICK NOISE
		515	NO SOUND FROM HANDSET	525	AUDIO LEVEL REMAINING/NO MUTING	535	EARPHONE/HEADPHONE AUDIO POOR	545	BUZZ
		516	NO SOUND FROM SPEAKER	52X	OTHER 'AUDIO LEVEL' PROBLEM	53X	OTHER 'AUDIO QUALITY' PROBLEM	546	SCRATCHING NOISE
		517	NO SOUND FROM EARPHONE/HEADPHONE					547	IGNITION NOISE
		518	NO MICROPHONE SOUND					548	WHISTLING/MULTIPATH NOISE
		519	NO SOUND FROM DIGITAL OUTPUT					549	DATA/DIGITAL NOISE
		51X	OTHER 'NO AUDIO' PROBLEM					54X	OTHER 'AUDIO NOISE' PROBLEM
6	MECHANISM	610	**NO MECHANICAL OPERATION**	620	**IRREGULAR MECHANICAL OPERATION**	630	**SPEED PROBLEM**	640	**MECHANICAL NOISE**
		611	NO ROTATION OF MOTOR/DISC	621	IRREGULAR ROTATION	631	SPEED TOO FAST	641	ROTATION NOISE/DRUM NOISE
		612	NO FORWARD OPERATION	622	IRREGULAR FORWARD MODE	632	SPEED TOO SLOW	642	MOTOR NOISE
		613	NO REVERSE OPERATION	623	IRREGULAR REVERSE OPERATION	633	SPEED UNADJUSTABLE	643	WIND/AIR NOISE
		614	NO FAST FORWARD OR REWIND FUNCTION	624	IRREGULAR FAST FORWARD OR REWIND FUNCTION	63X	OTHER 'SPEED' PROBLEM	644	SQUEALING
		615	NO LOADING	625	IRREGULAR LOADING OF MEDIA			645	FAN NOISE
		616	NO UNLOADING OR EJECTING	626	IRREGULAR UNLOADING OR EJECTING			646	DISC SCRAPING
		617	NO AUTO SHUT-OFF OPERATION	627	IRREGULAR AUTO SHUT-OFF OPERATION			647	NOISY TAPE LOADING
		618	TONEARM DOES NOT MOVE	628	IRREGULAR TONEARM MOVEMENT			648	GEAR NOISE
		619	DISC NOT BEING EJECTED	629	IRREGULAR EJECTION OF DISC			649	CONTROL OR SWITCH NOISY
		61A	MAGAZINE OR MODULE LOADING/UNLOADING	62A	IRREGULAR DIRECTION CHANGE			64A	GRINDING
		61B	CONTROL/SWITCH NOT WORKING	62B	FAULTY DISC CHANGE OPERATION			64B	RUMBLING
		61X	OTHER 'NO MECHANICAL OPERATION' PROBLEM	62X	OTHER 'IRREGULAR MECHANICAL OPERATION' PROBLEM			64C	VIBRATION NOISE
								64X	OTHER 'MECHANICAL NOISE' PROBLEM
7	DATA PROCESSING	710	**NO DATA PROCESSING OPERATION**	720	**FAULTY DATA PROCESSING OPERATION**	730	**DATA DISPLAY PROBLEM**	740	**KEYBOARD/POINTING DEVICE**
		711	NO INITIAL SCREEN	721	INCORRECT DATA	731	INCORRECT CHARACTER DISPLAY	741	MOUSE/TRACKBALL/TRACKPAD NOT WORKING
		712	SYSTEM DOES NOT RESET	722	SYSTEM RESET WHILE BEING USED	732	MISSING DISPLAY CHARACTERS		
		713	SYSTEM DOES NOT BOOT UP	723	SYSTEM LOCKS OUT/CRASHES/HANGS	733	FAULTY GRAPHIC DISPLAY	742	KEYBOARD LOCKS UP
		714	NO OPERATION FROM PLUG-IN MODULE/PERIPHERAL	724	FAULTY OPERATION OF PLUG-IN MODULE	734	FAULTY SWITCHING BETWEEN GRAPHIC/ CHARACTER MODE	743	POINTING DEVICE LOCKS UP
		715	NO KEYBOARD OPERATION	725	FAULTY KEYBOARD OPERATION	735	FAULTY PROMPT/CURSOR OPERATION	744	STICKY KEY(S)
		716	NO OPERATION FROM OTHER INPUT/OUTPUT DEVICE	726	FAULTY OPERATION OF OTHER INPUT/OUTPUT DEVICE	736	DATA DISPLAY COLOUR INCORRECT	745	INOPERATIVE KEY(S)
		717	NO DATA STORAGE OPERATION	727	FAULTY DATA STORAGE OPERATION	737	NO PAGING OR SCROLL MODE	746	POINTING DEVICE NOT TRACKING PROPERLY
		718	NO DATA COMMUNICATION	728	FAULTY DATA COMMUNICATION	73X	OTHER 'DATA DISPLAY' PROBLEM	747	POINTING DEVICE JITTERY
		719	ERROR MESSAGE DISPLAY	729	MEMORY ERROR			748	LEFT- OR RIGHT CLICK BUTTON INOPERATIONAL
		71A	HDD BOOT FAILURE	72A	REQUIRES 'SET UP' AT BOOTING			749	TRACKPAD SURFACE DAMAGED
		71B	FDD BOOT FAILURE	72X	OTHER 'FAULTY DATA PROCESSING' PROBLEM			74A	KEYBOARD KEY(S) DAMAGED
		71X	OTHER 'NO DATA PROCESSING' PROBLEM					74X	OTHER KEYBOARD/POINTING DEVICE PROBLEM
8	PRINT/COPY/SCAN	810	**NO PRINT/COPY/SCAN OPERATION**	820	**ERRONEOUS PRINT/COPY/SCAN OPERATION**	830	**POOR PRINT QUALITY**	840	**NOISY PRINTING**
		811	NOT PRINTING	821	PRINT IMAGE REVERSED (NEGATIVE/POSITIVE)	831	INCORRECT PRINTING POSITION	841	PRINTING NOISE LINES
		812	NO COMMUNICATION WITH PRINTER	822	IRREGULAR PAPER FEED	832	LOW PRINT CONTRAST	842	DIRTY PRINTING
		813	PAPER NOT LOADING	823	ERRONEOUS PRINT MODE SWITCHING	833	EXCESSIVE PRINT CONTRAST	843	UNPLEASANT SMELL (OZONE)
		814	NO PAPER FEED	824	COPY TOO DARK	834	BLURRED PRINT IMAGE	844	BLACK LINES/STRIPES IN FEED DIRECTION
		815	NO IMAGE FIXATION	825	COPY TOO BRIGHT	835	PRINT IMAGE NOT SHARP	845	WHITE LINES/STRIPES IN FEED DIRECTION
		816	NO DOCUMENT FEEDING	826	BLACK COPY	836	DOTS MISSING IN PRINT IMAGE	846	BLACK LINES/STRIPES ACROSS FEED DIRECTION
		817	SCANNER NOT WORKING	827	WHITE COPY	837	COLOUR STREAKING	847	WHITE LINES/STRIPES ACROSS FEED DIRECTION
		81X	OTHER 'NO PRINT/COPY/SCAN OPERATION' PROBLEM	828	POOR COLOUR LEVELS	838	NO COLOUR IN PART OF PICTURE	84X	OTHER 'NOISY PRINTING' PROBLEM
				829	IRREGULAR DOCUMENT FEED	839	PRINT IMAGE/COPY INCOMPLETE		
				82A	FAULTY CORRECTION FUNCTION	83A	FAULTY CALIBRATION		
				82B	POOR SCANNING QUALITY	83X	OTHER 'PRINT QUALITY' PROBLEM		
				82X	OTHER 'PRINT/COPY/SCAN OPERATION' PROBLEM				

SYMPTOM CODE TABLE

EACEM IRIS

5	UNSTABLE	6	RECORDING & PHYSICAL PROBLEMS	7	SPECIAL FUNCTIONS	8	OTHER CONDITIONS
150	**REMOTE CONTROL PROBLEM**	**160**	**PHYSICAL DAMAGE**	**170**	**GENERAL FUNCTION PROBLEM**	**180**	**SPECIAL REQUIREMENTS**
151	NO REMOTE CONTROL OPERATION	161	DAMAGED/DEFORMED CABINET/PANEL	171	FAULTY CLOCK FUNCTION	181	TEST AND CHECK
152	INCORRECT REMOTE CONTROL OPERATION	162	DAMAGED HANDLE/CLIP	172	FAULTY SLEEP FUNCTION	182	GENERAL OVERHAUL
153	REMOTE CONTROL PROGRAMMING/ LEARNING MODE PROBLEM	163	DAMAGED CONTROL KNOB(S)/BUTTON(S)/KEYPAD	173	FAULTY TIMER PROGRAMMING	183	SYSTEM/FREQUENCY CONVERSION
154	POOR REMOTE CONTROL SENSITIVITY	164	DAMAGED DOOR/COVER	174	FAULTY TIMER OPERATION	184	INITIAL SETUP/INSTALLATION REQUESTED
15X	OTHER 'REMOTE CONTROL' PROBLEM	165	DAMAGED SEAL	175	PROGRAMMING/USER ADJUSTMENT PROBLEM	185	MODIFICATION/CIRCUIT/INSTALLATION CHANGE
		166	DAMAGED PLUG/SOCKET/TERMINAL/CONNECTOR	176	FAULTY RECORD MUTE OPERATION	186	WRONG PRODUCT IN CARTON
		167	DAMAGED LENS	177	FAULTY PROGRAMMED PLAYBACK OPERATION	187	ACCESSORY MISSING
		168	DAMAGED CARTRIDGE OR STYLUS	178	FAULTY MEMORY FUNCTION	188	UNABLE TO CONNECT PARTS/-TO ASSEMBLE
		169	DAMAGED ANTENNA	179	FAULTY INPUT SWITCHING	189	WRONG COLOUR
		16A	DAMAGED CRT OR VIEWFINDER/LCD DISPLAY	17A	FAULTY OUTPUT SWITCHING	18B	BATTERY MOUNTING PROBLEM
		16B	MISSING COMPONENT(S) OR ORNAMENTAL PARTS	17B	ELECTRIC SHOCK/STATIC DISCHARGE	18X	OTHER SPECIAL REQUIREMENTS
		16C	PRINTED MARKINGS ERASED/PEELED OFF	17C	FAULTY SEARCH FUNCTION (INDEX/VIEW/TITLE/CHAPTER/TRACK...)	18Z	SYMPTOM NOT AVAILABLE
		16D	SET BURNING/EMITS SMOKE	17D	WRONG LANGUAGE/CHARACTER SET		
		16E	EXTERNAL SURFACE DAMAGE (BUBBLING/PEELING/RUSTING/SCRATCHED)	17E	ERROR CODE APPEARS IN DISPLAY		
		16F	SMELL	17F	SWITCH NOT OPERATING		
		16G	WEAK/DAMAGED STAND	17G	PEDAL NOT OPERATING		
		16H	DAMAGED SPEAKER	17H	FAULTY STANDBY MODE		
		16J	SET GETS VERY HOT / PARTS MELTING	17J	FAULTY HIBERNATION MODE		
		16K	FOREIGN SUBSTANCE ON/IN UNIT	17K	NO AUDIBLE WARNING SIGNAL		
		16L	BURNING MARKS	17L	FAULTY OPERATION OF PARENTAL LOCK/KEYLOCK FUNCTION		
		16M	INTERNAL SURFACE DAMAGE (BUBBLING/PEELING/RUSTING/SCRATCHED)	17M	FAULTY MODE SWITCHING		
		16N	DAMAGED POWER CABLE	17N	MENU FUNCTION PROBLEM		
		16P	DAMAGED ACCESSORY	17X	OTHER 'GENERAL FUNCTION' PROBLEM		
		16R	DISCOLOURATION				
		16X	OTHER PHYSICAL DAMAGE				
250	**UNSTABLE RECEPTION/TRANSMISSION**	**260**	**TUNING PROBLEM**	**270**	**SPECIAL COMMUNICATION PROBLEM**	**280**	**SPECIAL RECEPTION PROBLEM**
251	TUNING DRIFT	261	MANUAL TUNING PROBLEM	271	FAULTY DIALLING	281	FAULTY STEREO RECEPTION
252	FADING	262	AUTOMATIC TUNING PROBLEM	272	FAULTY CHANNEL SELECTION	282	FAULTY MAIN CHANNEL (A) FUNCTION
253	INTERMITTENT LINE/LINE BREAKING OFF	263	INCORRECT TUNING	273	FAULTY AUTO-ANSWER OPERATION	283	FAULTY SUB-CHANNEL (B) FUNCTION
254	NO OR UNSTABLE CONNECTION COMBINED WITH 'WEAK SIGNAL STRENGTH' INDICATION	264	TUNING MEMORY PROBLEM	274	FAULTY MESSAGE READ-OUT FUNCTION	284	FAULTY SSB RECEPTION
		26X	OTHER 'TUNING' PROBLEM	275	FAULTY AUTODIAL/REDIAL MEMORY	285	FAULTY RDS/VPS/PDC/XDS OPERATION
25X	OTHER 'UNSTABLE RECEPTION/ TRANSMISSION' PROBLEM			276	FAULTY SPEECH PROCESSING	286	FAULTY TELETEXT/CLOSE CAPTION/EPG RECEPTION
				277	NO RINGING TONE	287	FAULTY SATELLITE/RTTY RECEPTION
				278	LOUD/WEAK RINGING TONE	288	FAULTY FAX OPERATION
				279	MODEM STUCK OFF HOOK	289	MODEM NOT RECOGNIZED BY SYSTEM
				27A	FAX DOES NOT WORK PROPERLY	28A	FAULTY CALL CHARGE DISPLAY
				27B	MODEM CAUSES PROBLEM WITH PHONE	28B	FAULTY HANDS-FREE OPERATION
				27C	NO MODEM DIAL TONE	28C	SET LOCKED
				27X	OTHER 'SPECIAL COMMUNICATION' PROBLEM	28X	OTHER 'SPECIAL RECEPTION' PROBLEM
350	**UNSTABLE PICTURE**	**360**	**POOR PICTURE RECORDING**	**370**	**SPECIAL PICTURE FUNCTION PROBLEM**	**380**	**PICTURE DISPLAY/PICKUP PROBLEM**
351	SYNC PROBLEM	361	NO PICTURE RECORDING	371	EDITING PROBLEM	381	BURN MARK ON DISPLAY/PICKUP
352	PICTURE PUMPING	362	NO ERASURE PROTECTION FOR VIDEO	372	FAULTY FADING/WIPER OPERATION	382	SCRATCH ON DISPLAY/PICKUP
353	PICTURE JITTER	363	PREVIOUS VIDEO RECORDING NOT BEING ERASED	373	FAULTY NEGATIVE/POSITIVE SWITCHING FUNCTION	383	DUST/DIRT ON DISPLAY/PICKUP
354	PICTURE SHAKING (HORIZONTAL OR VERTICAL)	364	UNWANTED ERASURE OF PICTURE	374	FAULTY SUPERIMPOSE/TELOP OPERATION	384	PHOSPHOR/PIXEL MISSING ON DISPLAY/PICKUP
355	FLICKERING PICTURE	365	NO CAMERA RECORDING	375	FAULTY PICTURE IN PICTURE/DIGITAL PICTURE OPERATION	385	BRIGHT POINT(S) IN PHOSPHOR/PIXEL
356	FLASHING PICTURE	366	ONLY ONE FIELD PER FRAME BEING RECORDED	376	FAULTY PICTURE TRANSMISSION	386	LINES ACROSS/DOWN IMAGE
357	CYCLIC PICTURE MUTING	367	RECORDS ONLY A FEW PICTURES	377	FAULTY DIGITAL SHUTTER FUNCTION	387	OUT OF SPECS PIXEL DEFAULTS
358	HEAD IMPACT ERROR CAUSING UNSTABLE PICTURE	36X	OTHER 'PICTURE RECORDING' PROBLEM	378	FAULTY GENLOCK FUNCTION	388	BACKGROUND BURNT IN
359	VCR SKEW/H-SHIFT ERROR			379	FAULTY FLASH/STROBE FUNCTION	38X	OTHER 'PICTURE DISPLAY/PICKUP' PROBLEM
35A	FROZEN PICTURE			37A	FAULTY DIGITAL PICTURE/ZOOMING FUNCTION		
35B	JUMPING/REPEATING PICTURE			37B	FAULTY AUTO-EDIT FUNCTION		
35X	OTHER 'UNSTABLE PICTURE' PROBLEM			37C	FAULTY PICTURE STABILIZER FUNCTION		
				37D	FAULTY PICTURE CAPTURE FUNCTION		
				37E	FAULTY SUBTITLING FUNCTION		
				37F	FAULTY VARIABLE SPEED PLAYBACK		
				37G	FAULTY VIEW-/MULTI-ANGLE SWITCHING		
				37H	FAULTY ASPECT RATIO SWITCHING		
				37J	THUMBNAIL- OR INDEX PICTURE PROBLEM		
				37K	NO BLANKING SCREEN		
				37X	OTHER 'SPECIAL PICTURE FUNCTION' PROBLEM		
450	**UNSTABLE COLOUR**	**460**	**POOR COLOUR RECORDING**	**470**	**SPECIAL COLOUR FUNCTION PROBLEM**	**480**	
451	COLOUR FLASHING	461	NO COLOUR RECORDING	471	FAULTY AUTOMATIC WHITE BALANCE		
452	HUE CONSTANTLY CHANGING	462	NOISY COLOUR RECORDING	472	FAULTY COLOUR EFFECTS FUNCTION		
453	FLICKERING COLOUR	46X	OTHER 'COLOUR RECORDING' PROBLEM	47X	OTHER 'SPECIAL COLOUR FUNCTION" PROBLEM		
454	COLOUR NOT LOCKED						
45X	OTHER 'UNSTABLE COLOUR' PROBLEM						
550	**UNSTABLE AUDIO**	**560**	**POOR AUDIO RECORDING**	**570**	**POOR SPECIAL AUDIO FUNCTION**	**580**	**STEREO/MULTI MODE OPERATION PROBLEM**
551	JUMPING OR REPEATING AUDIO	561	AUDIO NOT BEING RECORDED	571	FAULTY FADE OPERATION	581	NO STEREO OPERATION
552	AUDIO PUMPING OR BREATHING	562	NO ERASURE PROTECTION FOR AUDIO	572	FAULTY ECHO OPERATION	582	POOR CHANNEL SEPARATION
553	AUDIO DROPOUTS	563	PREVIOUS AUDIO RECORDING NOT BEING ERASED	573	FAULTY MIXING OPERATION	583	DIFFERENCE IN PHASE BETWEEN CHANNELS
554	CYCLIC AUDIO MUTING	564	UNWANTED ERASURE OF AUDIO	574	FAULTY REPEAT MODE OPERATION	584	PROBLEM WITH SURROUND SOUND MODE
555	WOW AND FLUTTER	565	MESSAGE NOT BEING RECORDED	575	FAULTY AUDIO PROCESSING	585	PROBLEM WITH PCM AUDIO MODE
556	HOWLING/ACOUSTIC FEEDBACK	566	DISTORTED AUDIO RECORDING	576	FAULTY SYNC RECORDING OPERATION	58X	OTHER 'STEREO/MULTI MODE' PROBLEM
557	ECHO IN SOUND	56X	OTHER 'AUDIO RECORDING' PROBLEM	577	FAULTY DBB/DOL OPERATION		
55X	OTHER 'UNSTABLE AUDIO' PROBLEM			578	FAULTY NOISE REDUCTION OPERATION		
				579	FAULTY AUDIO DUB FUNCTION		
				57A	FAULTY TITLE PROGRAMMING		
				57B	FAULTY MIC CONTROL		
				57C	FAULTY PITCH CONTROL		
				57X	OTHER 'SPECIAL AUDIO FUNCTION' PROBLEM		
650	**MECHANICAL INSTABILITY**	**660**	**DAMAGE TO MEDIA**	**670**	**MECHANICAL OPERATION PROBLEM**	**680**	**LENS PROBLEM**
651	UNEVEN FEET	661	TAPE GETS SCRATCHED	671	FAULTY START/STOP OPERATION	681	FOCUS PROBLEM
652	FAULTY HINGE	662	DISC GETS SCRATCHED	672	FAULTY PAUSE OPERATION	682	ZOOM PROBLEM
653	VIBRATING/JUMPING	663	TAPE GETS CHEWED/WRINKLED	673	FAULTY AUTOMATIC PROGRAM SEARCH	683	IRIS PROBLEM
654	PARTS LOOSE	664	TAPE JAMMED OR BROKEN	674	FAULTY CUE/REVIEW MODE	684	MACRO PROBLEM
655	DAMAGED WHEEL(S)	665	TAPE GETS CURLED	675	FAULTY SLOW MOTION OPERATION	68X	OTHER 'LENS' PROBLEM
65X	OTHER 'MECHANICAL INSTABILITY' PROBLEM	666	SLACK TAPE	676	FAULTY HIGH-SPEED SCANNING MODE		
		667	TAPE STICKING	677	FAULTY SPEED COPY FUNCTION		
		66X	OTHER 'SOFTWARE DAMAGE' PROBLEM	678	FAULTY REPEAT OPERATION		
				679	FAULTY RECORD REVIEW MODE		
				67A	FAULTY AMS OPERATION		
				67B	AUTO-REVERSE MALFUNCTION		
				67C	FAULTY END DETECTION		
				67D	FAULTY DISC SIDE (A-B SELECT) SWITCHING		
				67X	OTHER 'MECHANICAL OPERATION' PROBLEM		
750	**PERIPHERAL PROBLEM (NON-STORAGE)**	**760**	**DATA STORAGE PROBLEM**	**770**	**SPECIAL DATA PROCESSING FUNCTION PROBLEM**	**780**	**INTERFACE PROBLEM**
751	PERIPHERAL DOES NOT INITIALISE	761	FORMATTING PROBLEM	771	FAULTY SELF-DIAGNOSTIC MODE	781	USB INTERFACE PROBLEM
752	COMMUNICATION FAILURE WITH PERIPHERAL	762	DATA ON STORAGE MEDIUM BEING LOST	772	FAULTY WORD PROCESSING FUNCTION	782	PARALLEL INTERFACE PROBLEM
753	INTERNAL PERIPHERALS FAILURE	763	FRAME MEMORY PROBLEM	773	FAULTY GRAPHIC EDIT FUNCTION	783	SCSI INTERFACE PROBLEM
754	EXTERNAL PERIPHERALS FAILURE	764	READ/WRITE ERRORS	774	PROGRAM CANNOT BE INSTALLED	784	SERIAL INTERFACE PROBLEM
755	NETWORK CARD ERROR	765	HARD- OR OPTICAL DRIVE PROBLEM	775	PRE-LOADED PROGRAM CANNOT BE STARTED UP	785	INCOMPATIBLE WITH OTHER SYSTEMS
756	PERIPHERAL FAILS SELF TEST	766	FLOPPY DRIVE PROBLEM	776	N

EACEM - SECTION CODES

COMMON	
ANT	ANTENNA SECTION
APR	SIGNAL PROCESSING (ANALOG)
BCH	BATTERY CHARGE
CLK	CLOCK/TIMER SECTION
CPA	COLOUR PROCESSING/ANALOG
CTR	CONTROL PANEL
DPR	SIGNAL PROCESSING (DIGITAL)
ERA	ERASE CIRCUIT
FLX	FLEXIBLE PRINTED CIRCUIT BOARD
HFS	HIGH FREQUENCY SECTION (RF)
IDS	INFORMATION DISPLAY SECTION
IFC	IF-CIRCUIT
ILN	i.LINK (IEEE1394) SECTION
INP	SIGNAL INPUT SECTION
IRD	INFRARED (IrDA) SECTION
MEM	MEMORY CIRCUIT
OUT	SIGNAL OUTPUT SECTION
PRG	PROGRAMMING SECTION
PRT	PROTECTION CIRCUIT
PSU	POWER SUPPLY
PWA	POWER AMP SECTION
REM	REMOTE CONTROL SECTION
RFU	BOOSTER,RF UNIT
SFT	SOFTWARE (TAPE, DISC, ETC.)
SNS	SENSOR UNIT
SVO	SERVO SECTION
SYS	SYSTEM CONTROL SECTION
TUN	TUNING SECTION
TXT	TEXT PROCESSING
SOUND-RELATED	
APA	AUDIO PROCESSING/ANALOG
APD	AUDIO PROCESSING/DIGITAL
CDC	CD CHANGER SECTION
CDS	CD SECTION
MDC	MD CHANGER SECTION
MDS	MINIDISC SECTION
MIC	MICROPHONE SECTION
PUD	PICK-UP DEVICE
SHD	STATIONARY HEAD(S)
SPK	SPEAKER
PICTURE-RELATED	
CAM	CAMERA CIRCUIT
CPD	COLOUR PROCESSING/DIGITAL
CRT	PICTURE TUBE
DFL	DEFLECTION CIRCUIT
DVD	DVD SECTION
FPK	FOCUS PACK
IMG	IMAGE DISPLAY UNIT

PICTURE-RELATED	
LCD	LCD SECTION
LMP	LAMP/FLASH SECTION
VPA	VIDEO PROCESSING/ANALOG
VPD	VIDEO PROCESSING/DIGITAL
VWF	VIEWFINDER
PC-RELATED	
FDD	FLOPPY DISC DRIVE
FMW	FIRMWARE
HDD	HARD DISC DRIVE
ISA	ISA SECTION
JST	JOYSTICK
KBD	KEYBOARD (SEPARATE)
MDM	MODEM SECTION
NIF	NETWORK INTERFACE
PAR	PARALLEL PORT
PCC	PC CARD
PCI	PCI SECTION
SCS	SCSI PORT
SER	SERIAL PORT
USB	USB PORT
MECHANICAL	
ARM	ARM MECHANISM
BZL	BEZEL
CBT	CABINET
CHA	CHASSIS
DDM	DISC DRIVE MECHANISM
EXC	EXTERNAL CONNECTOR
HCM	HEAD CARRIAGE MECHANISM
HOL	CASSETTE HOLDER
INC	INTERNAL CONNECTOR
LDG	LOADING MECHANISM
LNM	LENS MECHANISM
PFM	PAPER FEED MECHANISM
PIN	PINCH ROLLER/LEVER
PRI	PRINT BLOCK
RFM	RIBBON FEED MECHANISM
RHD	ROTARY HEAD(S)
SLD	SLED MECHANISM
SRS	SUPPLY REEL SECTION
STA	STATIC BLOCK
TDM	TAPE DRIVE MECHANISM
THR	THREADING MECHANISM
TNR	TENSION REGULATOR
TPT	TAPE PATH
TRS	TAKE-UP REEL SECTION
WIR	LEAD WIRE
XXX	CABINET/COSMETIC PARTS

EXAMPLE OF USE:

FLAG	SYMPTOM CODE	PART NO.	REF. NO.	SECTION	PCB	DEFECT CODE	REPAIR CODE	QTY
1	1436 4121	1134 1156 1178 1198 1XX1 XX1X X1XX 1XX1 XXX1	R123 1111	TDM	YA22	C1	Z1	

FLAG: INDICATES THE ONE MAJOR SYMPTOM/PART COMBINATION BY '1'

DEFECT CODES

MECHANICAL	
A	WORN OUT (OR GENERAL MECHANICAL DEFECT)
A1	MISOPERATING
B	DIRTY, CLOGGED
C	MECHANICALLY MISALIGNED
D	CUT, BROKEN
E	DEFORMED
F	SNAPPED
G	SCRATCHED, DENTED, SHARP EDGES
H	CRACKED, PEELED, CORRODED, MELTED
I	LOOSE/OFF/STRIPPED
J	SHAKY, UNSTABLE
K	LEAKING (MECHANICAL)
L	DRY (NO LUBRICANT)
M	FOREIGN OBJECT

ELECTRICAL	
N	DEFECTIVE ELECTRICAL COMPONENT/MODULE
O	BURNT, ARCING, MISSING PIXELS
P	ELECTRICALLY MISALIGNED/WRONG SETTING
Q	SHORT CIRCUIT
R	OPEN CIRCUIT
S	LEAKING (ELECTRICAL)
T	BAD CONTACT, CONNECTION
T1	BAD EARTH CONNECTION
U	OPEN PATTERN
V	CRACKED PRINTED CIRCUIT BOARD
W	COLD OR NO SOLDERING
X	BRIDGED SOLDERING
Y	WRONG COMPONENT/MODULE
Z	MISSING COMPONENT/MODULE
1	SOFTWARE PROBLEM
11	LOSING DATA FROM MEMORY
12	FAULTY PROGRAM SETTING/INSTALLATION
13	SOFTWARE DEFECTIVE OR INCOMPLETE
14	SOFTWARE SETUP PROBLEM
15	NO IDENTIFICATION / AUTHENTICATION OF PRODUCT OR USER
2	EXHAUSTED, LOW EMISSION
3	NO PROBLEM FOUND (SET WITHIN SPEC)
4	NO PROBLEM FOUND - CUSTOMER MISUNDERSTANDING
5	NO PROBLEM FOUND - LOCAL CONDITIONS
51	FAULTY MAINS VOLTAGE
6	UNABLE TO DIAGNOSE FAULT
7	INCORRECTLY WIRED/ASSEMBLED
81	INCORRECT EQUIPMENT CONNECTION
9	CUSTOMER MISUSE
93	UNAUTHORISED MODIFICATION

REPAIR CODES

A	REPLACEMENT
B	MECHANICAL ALIGNMENT
C	ELECTRICAL ALIGNMENT
D	RESOLDERING
D1	REFITTING, PUT BACK IN POSITION (CONNECTOR, TUBE...)
E	CLEANING
F	LUBRICATION
G	REPAIRED ELECTRICAL PARTS
H	REPAIRED MECHANICAL PARTS
I	MODIFICATION REQUESTED BY MANUFACTURER
J	REMOVED
K	ADDED
L	FUNCTIONAL CHECK
M	SPECIFICATION MEASUREMENT
N	MAINTENANCE
O	REFURBISHING, RECONDITIONING
P	PREVENTIVE PARTS REPLACEMENT

Q	PREVENTIVE ACTION WITHOUT PARTS REPLACEMENT
U	EXPLANATION FOR CUSTOMER
V	COST ESTIMATION REFUSED
W	COST ESTIMATION WITH PARTS
X	COST ESTIMATION WITHOUT PARTS
Y	RETURN WITHOUT REPAIR
Z	PRODUCT EXCHANGE
Z1	PRODUCT EXCHANGE (REPAIR TOO EXPENSIVE)
Z2	PRODUCT EXCHANGE (TOO MANY VISITS/REPAIRS)
Z3	PRODUCT EXCHANGE (PARTS NOT AVAILABLE)
Z4	PRODUCT EXCHANGE (IMPOSSIBLE TO REPAIR)
Z5	PRODUCT EXCHANGE (ON REQUEST OF RETAILER)
Z6	PRODUCT EXCHANGE (ON REQUEST OF MANUFACTURER)
1	SOFTWARE CORRECTION/RESET
2	SOFTWARE UPGRADE
3	PRODUCT UPGRADE (ON REQUEST)

REV 03 - 2000/02
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INFORMATION - INFORMATIONS - INFORMATIONEN
INFORMAZIONE - INFORMACIONES

EN **OUT OF FACTORY MODE**

To set TV into "**out of factory mode**", ready for a **new installation**:
- Put the TV into **standby** mode.
- Press the **VOL +** button on the TV keyboard for 8 seconds.

FR **SORTIE DE MODE PRODUCTION**

Pour initialiser le téléviseur en position **"sortie de mode production"** prêt pour une **nouvelle installation**:
- Mettre le téléviseur en position "**veille**" avec la télécommande.
- Appuyer sur la touche **VOL+** du clavier du téléviseur pendant 8 secondes.

DE **AUSLIEFERUNGSZUSTAND**

Um für eine **Neuinstallation** das Gerät in den **"Auslieferungszustand"** zu versetzen:
- Schalten Sie das Gerät in "**Standby**" Modus.
- Halten Sie die **VOL+** Taste am lokalen Bedienteil für 8 Sekunden fest.

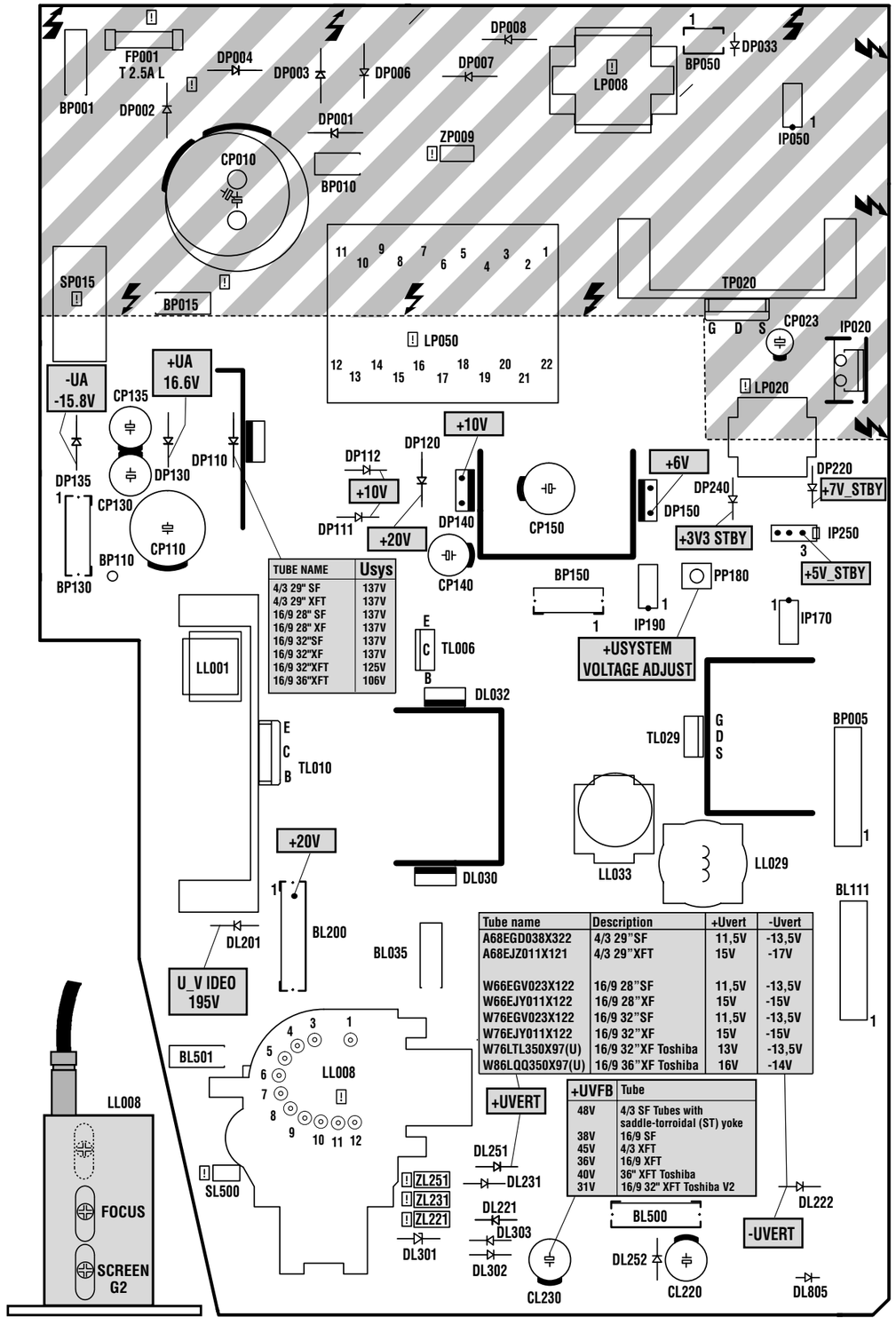
IT **MODO DEL TV ALL'USCITA DELLA FABBRICA**

Per mettere il TV " **nel modo all'uscita della fabbrica**" pronto per una **nuova installazione**:
-Posizionare il TV in modo **Standby**.
- Premere il tasto **volume+** della tastiera locale per 8 secondi.

ES **SALIDA DEL MODO PRODUCCIÓN**

Para salir del '**modo producción**', quedando dispuesto para una **nueva instalación**:
- Poner el TV en modo **Standby**.
- Mantener pulsada la tecla "**Volumen +**" del teclado durante unos 8 segundos.

LOCATION OF CONTROLS - EMPLACEMENT DES REGLAGES - SERVICE LAGEPLAN - POSIZIONE REGULATORI DI SERVIZIO - SITUACIÓN DE LOS AJUSTES



TUBE NAME	Usys
4/3 29" SF	137V
4/3 29" XFT	137V
16/9 28" SF	137V
16/9 28" XF	137V
16/9 32"SF	137V
16/9 32"XF	137V
16/9 32"XFT	125V
16/9 36"XFT	106V

Tube name	Description	+Uvert	-Uvert
A68EGD038X322	4/3 29"SF	11,5V	-13,5V
A68EJZ011X121	4/3 29"XFT	15V	-17V
W66EGV023X122	16/9 28"SF	11,5V	-13,5V
W66EJY011X122	16/9 28"XF	15V	-15V
W76EGV023X122	16/9 32"SF	11,5V	-13,5V
W76EJY011X122	16/9 32"XF	15V	-15V
W76LTL350X97(U)	16/9 32"XF Toshiba	13V	-13,5V
W86LQQ350X97(U)	16/9 36"XF Toshiba	16V	-14V

+UVFB	Tube
48V	4/3 SF Tubes with saddle-torroidal (ST) yoke
38V	16/9 SF
45V	4/3 XFT
36V	16/9 XFT
40V	36" XFT Toshiba
31V	16/9 32" XFT Toshiba V2

Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chasis conectada a la red

Use isolating mains transformer -
Utiliser un transformateur isolateur du secteur -
Trenntrafo verwenden -
Utilizar un transformador aislador de red -
Utilizzare un transformatore per isolarvi dalla rete

ICC21
First issue 09 / 01

ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONE - AJUSTES

U Sys

PP180

Standard TV - Settings :
☼ + ◔ + ◑ =50%
TV to AV1 : Black test pattern

V= DP 110

Tube name	Description	Usys jumper	RP900 Usys divid.	Usys
A68EGD038X322	4/3 29"SF	JP912	33K2	137V
A68EJZ011X121	4/3 29"XFT	JP912	33K2	137V
W66EGV023X122	16/9 28"SF	JP912	33K2	137V
W66EJY011X122	16/9 28"XF	JP912	33K2	137V
W76EGV023X122	16/9 32"SF	JP912	33K2	137V
W76EJY011X122	16/9 32"XF	JP912	33K2	137V
W76LTL350X97(U)	16/9 32"XFT	JP911	22K1	125V
W86LQQ350X97(U)	16/9 36"XFT	JP911	2K74	106V

U G2

SERVICE MODE

SERVICE MODE

G2 potentiometer : SCREEN

-Select and enable the "G2 Alignment" item in VIDEO menu of the Service Mode : the displayed will change to a full black OSD screen.
The following adjustment is best carried in semi-darkness:
- Adjust the **SCREEN** potentiometer (LL008) so that the retrace lines are just visible.
- Now carefully adjust the **SCREEN** potentiometer until the retrace lines just become invisible.
- Press any RCU key to leave the G2 alignment.
Note: If the G2 value is set too low, the chassis will display error code 36 (tube does not get warm in time).

- Sélectionner et valider le réglage "G2 Alignment" dans le menu Vidéo de Service Mode: l'écran devient totalement noir.
En obscurité:
- Régler le potentiomètre "**SCREEN**" (LL008) pour apercevoir le retour des lignes.
- Régler ensuite le potentiomètre "**SCREEN**" pour rendre juste invisible les lignes de retour.
- Appuyer sur une des touches de la télécommande utilisateur pour sortir du mode G2 Alignment.
Note : En cas de réglage G2 trop faible le chassis passe en code panne 36 (absence de l'information tube chaud.

- Wählen Sie im Service-Mode im Menü VIDEO die Funktion "G2 Alignment" an: der Bildschirm wird schwarz.
Die folgenden Einstellungen sollten in einem abgedunkelten Raum vorgenommen werden.
- Stellen Sie den Einsteller **SCREEN** (am DST LL008) so ein, dass Rücklaufstreifen sichtbar werden.
- Stellen Sie den Einsteller SCREEN so ein, dass die Rücklaufstreifen gerade unsichtbar werden.
- Drücken Sie irgendeine Taste auf der Fernbedienung um den G2-Abgleich zu verlassen.
Achtung: Wenn die Schirmgitter- (G2-) Einstellung zu niedrig ist, kann der Fehlercode 36 (Bildrohr nicht rechtzeitig aufgeheizt) angezeigt werden.

Selezionare e abilitare"G2 Alignment" interno al menu VIDEO del Service Mode: Verrà visualizzato uno schermo nero.
In condizione con ambiente scuro.
Regolare il potenziometro **SCREEN** (LL08) per rendere visibili le ritracce sullo schermo
Regolare il potenziometro **SCREEN** per eliminare le ritracce sullo schermo
Premere un tasto del tecomando per abbandonare G2 alignment.
NOTA: se la regolazione della tensione G2 è tropppo bassa il telaio visualizzerà il codice 36 (il tubo non raggiunge la temperatura nel tempo richiesto)

- Seleccionar y validar la línea del "ajuste G2" en el menú VIDEO del Modo Servicio : La pantalla se pondrá oscura y el OSD pasará a color negro.
Cuando esté oscura:
- Ajustar el potenciómetro **SCREEN** (LL008) hasta hacer visibles las líneas de retrazado.
- Ajustar el potenciómetro **SCREEN** justo, hasta hacer invisibles las líneas de retrazado.
- Pulsar cualquier tecla del telemando para salir del ajuste de G2.
Nota: Si el valor del ajuste de G2 es muy bajo, el chasis puede indicar el código de error 36 (TRC no se calienta en el tiempo establecido)

FOCUS

FOCUS

Standard TV - Settings :
☼ + ◔ + ◑ =50%
TV to AV1
Test pattern

Single Focus Tubes

FOCUS

Sharp picture

Dynamic Focus Tube

FOCUS

FOCUS

Sharp picture

Focus adjustment for extra flat tube (XF)

Réglage focus pour les tubes extra plats (XF)

Fokus-einstellung bei extra flat-bildröhren (XF)

Regolazione fuoco per tubi extra flat (XF)

Ajuste del foco para t.r.c. extraplano (XF)

FOCUS

DFB

PL501

1 - Using "FOCUS" adjust the focus of the centre section of the top horizontal line i.e. finest line without "flare".
2 - Using PL501 adjust the focus of the vertical line at the edge of the screen i.e. finest line without "flare".

1 - Régler le potentiomètre "FOCUS" pour obtenir le centre de la ligne horizontale en haut d'écran la plus fine possible.
2 - Régler PL501 pour obtenir la ligne verticale au bord la plus fine possible.

1 - Stellen Sie mit "FOCUS" die Schärfe in der Mitte der obersten horizontalen Zeile auf Maximum (ohne Nachzieheffekte) ein.
2 - Stellen Sie mit PL501 die Schärfe der Vertikalen Linien in den Bildrändern auf Maximum (ohne Nachzieheffekte) ein.

1 - Regolare la focalizzazione centrale della linea orizzontale nella parte alta dello schermo con "FOCUS". Il più sottile possibile senza "flare".
2 - Regolare PL501 per avere le righe verticali ai lati dello schermo il più sottili possibile senza "flare".

1 - Ajustar el enfoque con "FOCUS" para obtener la parte central de línea horizontal de la parte superior de la pantalla lo más fina posible.
2 - Ajustar PL501 para obtener las líneas verticales lo más finas posible y sin rebordes.

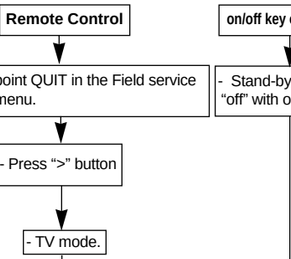
SERVICE MODE (EN) | MODE SERVICE (FR) | SERVICE - MODE (DE) | SERVICE - MODE (IT) | MODO SERVICIO (ES)

I - ENTER/EXIT SERVICE MODE - ENTREE/SORTIE DU MODE SERVICE - EIN-AUSTIEG SERVICE MODE - ACCESSO/USCITA ALLA/DALLA FUNZIONE - ENTRADA/SALIDA MODO SERVICIO

1 ACCESSING SERVICE MODE

TV Control Panel Access

- Switch the TV into "**Standby**" mode by pressing the Standby button on the RCU.
  Wait till the TV goes into the standby.
- Press the **VOL-** button and then the **PR-** button on the TV keyboard.
  Hold them down for more than 8 seconds.
- After the normal switch on time, when the 8 seconds have elapsed, the main service menu appears on the screen.

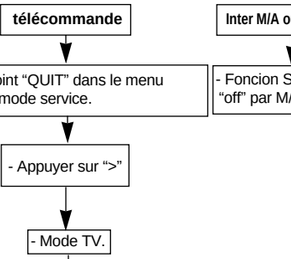


Note :
In service mode :
- The child lock function is re-initialized
- Clear any wake-up/sleep/memo/EPG timers
- Pin 8 of the scart plug has to be ignored.
- AV- Link WSS detection and letterbox detection (autoformat) have to be disabled.
- EPG and TELETEXT have to be disabled.
- Automatic standby functions, in case of no antenna signal have to be disabled.
- All passwords have to disabled.
- Installation Mode disabled.
- Default format and zoom.
- The Chassis Variant will be checked and stored.

1 ACCES AU MODE SERVICE

Accès avec le clavier du téléviseur

- Mettre le téléviseur en position "**veille**" avec la télécommande utilisateur.
- Appuyer sur la touche **VOL-** puis sur la touche **PR-** du clavier du téléviseur.
  Maintenir enfoncées ces touches ensemble plus de 8 secondes.
- Après le temps normal de mise en fonctionnement et lorsque les 8 secondes sont écoulées, le menu principal du Mode Service apparaît.

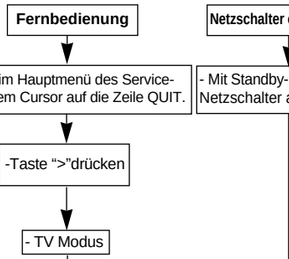


Note :
En mode service:
- Le verrouillage parental est effacé (réinitialisé).
- La programmation des heures "reveil/matin", mémoire et EPG est annulée.
- Pin 8 de la prise SCART ignorée.
- AV- Link , la détection WSS et la détection letterbox ne sont pas validées.
- Les fonctions EPG et Télétexte ne sont pas validées.
- La fonction de veille automatique en cas d'absence de signal d'antenne n'est pas validée.
- Les mots de passe ne sont pas validés.
- Le mode d'installation n'est pas pas valide.
- Zoom et format ignorés.
- Le type de chassis est contrôlé et mémorisé.

1 EINSTIEG IN DEN SERVICE MODE

Zugriff über die Tastatur des Fernsehgeräts

- Schalten Sie das Gerät mit der Fernbedienung in **Standby**.
- Drücken Sie die **VOL-** Taste und dann die **PR-**Taste am Nahbedienteil
  des Gerätes. Halten Sie beide Tasten für länger als 8 Sekunden gedrückt.
- Nach der normalen Einschaltzeit erscheint auf dem Bildschirm das Menü des Service-Modes.

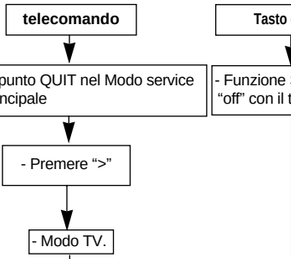


Anmerkung:
Im SERVICE MODE :
- wird die Kindersicherung gelöscht.
- werden alle Weck-, Schlummer-, Memo- und EPG-Timer gelöscht.
- wird die SCART - Schaltspannung nicht ausgewertet.
- AV-Link, WSS- und Letterbox-Detektion (Autoformat) sind abgeschaltet.
- sind Videotext und EPG abgeschaltet.
- wird die Automatische Abschaltung bei fehlendem Antennensignal gesperrt.
- werden alle Passworte gelöscht.
- wird der Installations-Modus gesperrt.
- wird das Standardformat bzw. der Standard-Zoom-modus gewählt.
- wird die Chassis-Variante überprüft und gespeichert.

1 ACCESSO AL SERVICE MODE

tramite i comandi del televisore

- Posizionare il TV nel modo "**Standby**" usando il tasto standby del telecomando.Attendere che il TV si posizioni in standby.
- Premere prima il tasto **VOL-** e poi il tasto **PR-** sulla tastiera del TV Mantenere premuto idue tasti per più di 8 secondi.
- Dopo circa 8 secondi il TV si accenderà mostrando sullo schermo il menu service.

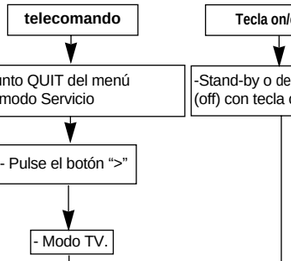


Nota :
Nel service mode:
- La funzione Blocco Bambini è reinizializzata.
- Cancella qualsiasi wake-up/sleep/EPG timers.
- Il piedino 8 della scart è ignorato.
- La rilevazione AV-Link WSS e rilevazione letterbox (formato) è statà disabilitata.
- EPG e TELEVIDEO sono stati disabilitati.
- Funzione automatica di standby, nel caso di mancanza del segnale d'antenna è disabilitata.
- Tutte le password sono state disabilitate
- Il Modo Install disabilitato.
- Formato ignorati e zoom.
- Le varianti del telaio verranno controllate e memorizzate.

1 ACCESO AL MODO SERVICIO

Acceso panel control TV

- Con el TV encendido, apagarlo con la tecla "**Standby**" del telemando. Asegurarse de que el aparato ha pasado a "Standby".
- Pulsar primero, la tecla VOL- y después PR- del teclado del TV. Mantenerlas pulsadas al mismo tiempo durante unos 8 segundos
- Después del arranque normal, cuando hayan pasado los 8 segundos, aparecerá el menú principal del Modo Servicio



Nota :
En modo servicio:
- La función "Bloqueo niños" es reinicializada.
- Borrar despertador/función sleep/memorias/temporizadores EPG
- La patilla 8 del SCART es ignorada
- La detección de AV- Link, WSS y "modo buzón" (autoformato) se desactiva.
- EPG y TELETEXTO deben ser desactivados
- El apagado automático en caso de ausencia de señal de antena es desactivado.
- Todas las contraseñas tienen que ser desactivadas
- El Modo Instalación es desactivado.
- Zoom y formato ignorados.
- El tipo de chasis será comprobado y memorizado.

2 TEMPORARY EXIT FROM SERVICE MODE

- Press Exit on the Remote control.
- Everyday use menu can be accessed via Menu button. (Text and EPG not available)

- Field Service Menu can be re-entrered via Blue button.

2 SORTIE TEMPORAIRE DU MODE SERVICE

- Utiliser la touche Exit de la télécommande.
- Le menu utilisateur peut être accessible via la touche "Menu". (Télétexte et EPG non valides).

- Pour entrer à nouveau dans le mode service utliliser la touche bleue.

2 VORÜBERGEHENDES VERLASSEN DES SERVICE MODE

- Auf der Fernbedienung EXIT drücken
- Mit der Taste MENÜ gelangen Sie zum Menü ÜBERSICHT (Videotext und EPG sind nicht verfügbar)

- Mit der blauen Taste gelangen Sie zurück in den Service-Mode.

2 USCITA TEMPORANEA DAL SERVICE MODE

- Premere Exit sul telecomando.
- Al menu di uso quotidiano si accede attraverso il pulsante Menu. (Text and EPG disabilitati).

- É possibile rientrate nel Menu Service tramite il pulsante Blue.

2 SALIDA TEMPORAL DEL MODO SERVICIO

- Pulse Salir en el mando a distancia
- Con el botón Menu puede acceder al menú de uso cotidiano. (Teletexto y EPG no disponibles).

- Puede entrar al Menú Servicio con el botón azul.

3 EXITING FROM SERVICE MODE

Remote Control
- Go to the point QUIT in the Field service Mode main menu.
- Press ">" button
- TV mode.

on/off key or Stand-by
- Stand-by function or "off" with on/off key.

Values or adjustments are no stored before exiting from service mode will not be written into the NVM

3 SORTIE DEFINITIVE DU MODE SERVICE

télécommande
- Aller au point "QUIT" dans le menu principal du mode service.
- Appuyer sur ">"
- Mode TV.

Inter M/A ou Stand-by
- Foncion Stand-by ou "off" par M/A

Les valeurs ou réglages non mémorisés avant la sortie ne seront pas écrites en NVM.

3 ENDGÜLTIGES VERLASSEN DES SERVICE MODES

Fernbedienung
- Gehen Sie im Hauptmenü des Service-Modes mit dem Cursor auf die Zeile QUIT.
- -Taste ">"drücken
- TV Modus

Netzschalter oder Standby
- Mit Standby-Funktion oder Netzschalter ausschalten

Werte und Einstellungen, die nicht vor dem Verlassen des Service-Modes gespeichert wurden, werden nicht in den Permanentspeicher (EEPROM) übernommen.

3 USCIRE DAL SERVICE MODE

telecomando
- Andare al punto QUIT nel Modo service del Menu principale
- Premere ">"
- Modo TV.

Tasto on/off
- Funzione Stand-by o "off" con il tasto on/off

Valori e regolazioni non memorizzati prima di uscire dal Modo service e non vengono scritti nell'NVM

3 SALIDA DEL MODO SERVICIO

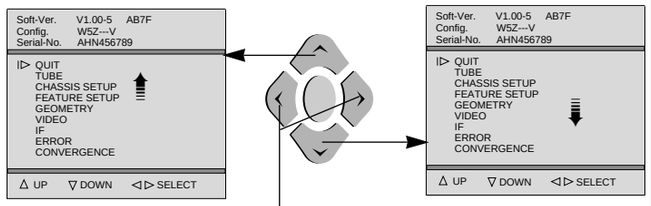
telecomando
- Vaya al punto QUIT del menú principal de modo Servicio
- Pulse el botón ">"
- Modo TV.

Tecla on/off de
-Stand-by o desconexión (off) con tecla on/off.

Los valores o ajustes no se guardan antes de salir del modo servicio y no se escriben en el NVM

II - NAVIGATION INSIDE THE SERVICE MODE - DEPLACEMENT DANS LE MODE SERVICE SUCHE IN SERVICE MODE - OPZIONI NEL SERVICE MODE - BUSQUEDA EN MODO SERVICIO

1 REMOTE CONTROL - TELECOMMANDE - FERNBEDIENUNG TELECOMANDO - MANDO A DISTANCIA



Naviagation up

Naviagation down

- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

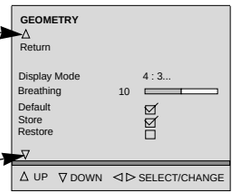
> → VALUE

< → VALUE

2 MENUS WITH MULTIPLE PAGES - MENUS A PLUSIEURS PAGES MENÜS MIT MEHREREN SEITEN

« Δ »
Indicates a preceding page
Signifie qu'une page précède.
Bedeutet, daß eine Seite vorangeht
Indica una pagina precedente
Indica una página precedente

« ∇ »
Indicates a following page
Signifie qu'une page suit.
Bedeutet, daß eine Seite folgt
Indica una pagina seguente
Indica una página siguiente



Changing page - Changement de page
Seitenwechsel - Cambiare Pagina - Cambio de página

- The menu turns the page when the cursor reaches the arrow.
- Amener le curseur sur la ligne repérée par « ∇ »ou « Δ » pour passer à la page qui précède ou qui suit.
- Cursor nach « ∇ » ,« Δ » zum Seitenwechsel
- Il cursor su « ∇ » ,« Δ » cambia pagina.
- Cursor en « ∇ » ,« Δ » cambia las páginas

3 DISPLAYING THE VALUE OF THE SETTING - AFFICHAGE DES VALEURS - ANZEIGE DES EINSTELLUNGSWERTES VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - VISUALIZACION DEL VALOR DE AJUSTE

V - Position ◁|▷ 7C +

00 to FF
Hexadecimal value
valeur hexadécimale
Einstellungswert hexadezimal
Valore esadecimale
Valor héxadecimal

> Set value : **NVM** value <

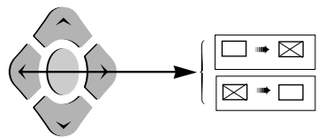
Display → + > **NVM** value

Display → – < **NVM** value

4 TOGGLE FUNCTIONS - VALIDATION DES FONCTIONS EIN-UND AUSSCHALTFUNKTIONEN - FUNZIONI DI COMMUTAZIONE - FUNCION CONMUTACION

To enable a function check (tick) ☒ the box.
Pour valider une fonction cocher ☒ la case correspondante
Zum Implementieren einer Funktion das Kontrollkästchen ☒ aktivieren (ankreuzen)
Per implementare una funzione di verifica, (vistare) ☒ la casella
Para poner en fucionamiento una función verifique (señale) ☒ la casilla

☒ : Implemented function ☐ : No implemented function



5 STORING VALUES IN MEMORY - MEMORISATION DES VALEURS - SPEICHERN DER WERTE - MEMORIZZAEZ I VALORI - VALORES ALMACENADOS EN LA MEMORIA

After setting, the values are stored in NVM.
Après réglages les valeurs sont mémorisées en NVM.
Nach dem Einstellen werden die Werte im NVM gespeichert.
Dopo la regolazione i valori vengono memorizzati in NVM.
Después del ajuste, los valores son almacenados en NVM

The box ☐ becomes ☒
During alignment, values are temporarily stored in RAM.
En cours d'alignement les valeurs sont mémorisées temporairement en RAM
Während des Abgleichs werden die Werte vorübergehend im RAM gespeichert
Durante l'allineamento i valori vengono memorizzati provvisoriamente sulla RAM
Durante el alineamento, los valores son almacenados temporalmente en RAM

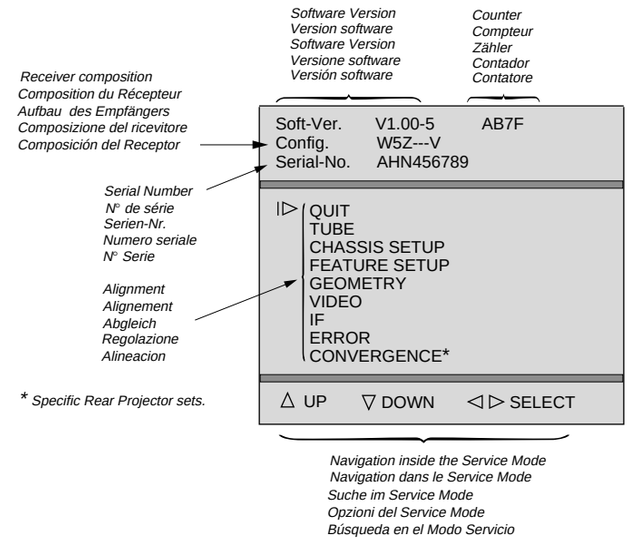
Store ➠ Copîes RAM values into NVM
Copie la valeur RAM en NVM
Kopieren des Wertes von RAM nach NVM
Copiare i valori RAM in NVM
Copiar valores RAM en NVM

Restore ➠ Copies all values from NVM into RAM.
Copie toutes les valeurs des données NVM en RAM
Kopiert alle NVM-Datenwerte in des RAM
Copiare tutti i valori da NVM sulla RAM
Copia todos los valores de NVM a RAM

Default ➠ All the default values of a page in use are stored in RAM.
L'ensemble des valeurs par défaut d'une page courante est chargé en RAM.
Sämtliche Standardwerte der aktuellen Seite werden ins RAM geladen
Tutti i valori di default di una pagina in uso vengono memorizzati sulla RAM
Todos los valores por defecto de la página en curso están almacenados en RAM.

III - LITE-MENU FOR FIELD SERVICE MODE - MENUS DU MODE SERVICE

1 MAIN MENU - MENU PRINCIPAL - HAUPTMENÜ



* *Specific Rear Projector sets.*

TV CONFIGURATION - CONFIGURATION DU TV - GERÄTEKONFIGURATION - CONFIGURAZIONE DEL TV - CONFIGURACIÓN Y TV

Config. W5Z.....V

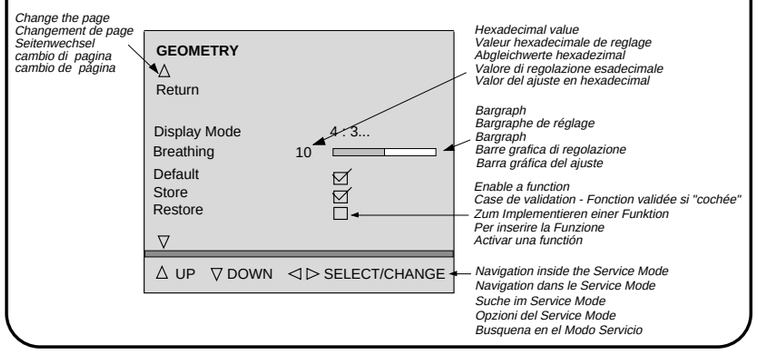
Character 1 : Tube type : "A"= 4:3 , "W" =16:9
Character 2 : Teletext external memory detected: "T"
Character 3 : Ambiant Sensor : "S"= detected, "-" = not
Character 4 : Chassis variant : "N"=Nicam, "V" =Virtual Dolby, "D"=Dolby digital
Character 5 : Subwoofer: "W" = detected, "-" = not
Character 6 : Guide module : "G" = detected, "-" = not
Character 7 : Flash memory : "F" = detected, "-" = not
Character 8 : Second Tuner (PIP) : "P" = detected, "-" = not
Character 9 : Comb filter : "C" = detected, "-" = not

SERIAL-N° A15...

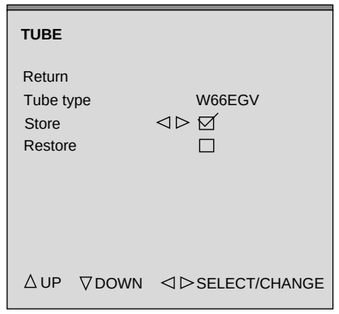
Character 1 : Factory, A= Angers, B= Tarancon, Z= Zyrardow
Character 2 : Year :, G= 1996, H= 1997 etc. (International code UTEC90511)
Character 3 : Month, from 1= January to 9=September...C=December.
Character 4-9 : Serial N° in the month (from 000000 to 999999)
Character 10-18 : Factory reserved

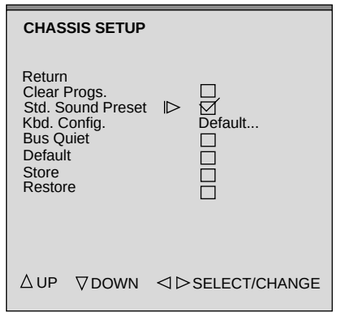
TIME COUNTER - COMPTEUR DE TEMPS - ZÄHLER - CONTATORE - CONTADOR
The counter indicates the TV's number of service hours.It counts from to 0 to 65535 hours. The display is hexadecimal.
Le compteur de temps indique le nombre d'heures de service du TV. Il compte de 0 à 65535 heures. L'affichage est en hexadécimal.
Der Zähler zeigt an, wieviele Stunden der Fernseher in Betrieb ist. Die Anzeige ist hexadezimal.
Il contatore indica il numero di ore di servizio del TV. Puo' contare da 0 a 65535. La visualizzazione è esadecimale.
El contador indica el número de horas de servicio de la TV. Cuenta de 0 a 65535 horas. El visualizador es hexadecimal.

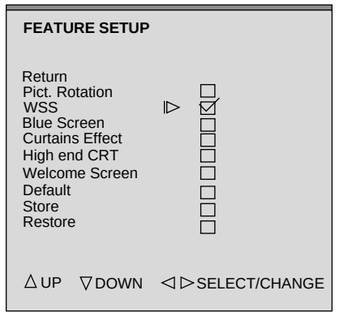
2 SUBMENU - SOUS-MENU - UNTERMENÜ



ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION







TUBE

Return

Closes the sub-menu and returns to the "Main Service Menu"

Retourne au menu principal.

Schließt das Untermenü, und das Haupt-Menü des Service-Modus erscheint.

Chiude il sottomenu e fa apparire il menu principale Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control.

Tube type

After replacing the NVM, the correct tube type number must be entered (6 characters). Once entered, the tubes geometry and video default values are immediately activated. Variable geometry and video parameters are written to the NVM when the "STORE" line is selected. See below the tube type number list.

Definit le tube exact après changement de NVM.
Les nouvelles valeurs de tubes (avec video et géometrie) sont actives de suite.
Les paramètres de vidéo et de géométrie sont chargés en NVM lorsque STORE est sélectionné. Voir liste ci-dessous.

Nach dem Tausch des NVM (EEPROM) muB der richtige Bildrohrtyp eingegeben werden. Es werden dann sofort die entsprechenden Geometrie-und Video-Defaultwerte aktiviert. Variable Geometrie-und Videowerte müssen mit "STORE" in das NVM geschrieben werden. Liste der Röhren: siehe unten.

Definire il tubo appropriato dopo aver cambiato la NVM; I valori per il nuovo tipo di tubo (con video e geometria) sono immediatamente attivi. I parametri per video e geometria variabili vengono immessi nella NVM quando viene selezionata la funzione Store. Si veda la lista dei tubi riportata sotto.

Definir el tubo correcto después de haber cambiado el NVM.Los nuevos valores de tipo de tubo (con la vídeo y la geometría por defecto) se activan inmediatamente. Los parámetros variables de geometría y vídeo se graban en el NVM al seleccionar la función Store. Vea más abajo la lista de tubos.

TUBE NAME	LIST	DESCRIPTION
A68EGD038X322	A68EGD	4/3 29"SF (1)
A68EJZ011X121	A68EJZ	4/3 29"XFT (1)
W66EGV023X122	W66EGV	16/9 28"SF (1)
W66EJY011X122	W66EJY	16/9 28"XF (1)
W76EGV023X122	W76EGV	16/9 32"SF (1)
W76EJY011X122	W76EJY	16/9 32"XF (1)
W76LTL350X97(U)	W76LTL	16/9 32"XF TOSH. (2)
W86LQQ350X97(U)	W86LQQ	16/9 36"XF TOSH. (2)

(1) : Invar vector gun, BSVM
(2) : Dynamic Focus, BSVM

➞ After setting ➞ Store (+) ☑

CHASSIS SETUP

Return

Closes the sub-menu and returns to the "Main Service Menu"

Retourne au menu principal.

Schließt das Untermenü, und das Haupt-Menü des Service-Modus erscheint.

Chiude il sottomenu e fa apparire il menu principale Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control.

Clear Prog.

Clears all programms stored in memory and resets all Picture and Sound settings to the factory defaults. The AUTO INSTALL (out of factory) mode can be initialised by a long press (>2.5s.) of the selection button.

Efface tous les programmes mémorisés.
Valeurs SON et IMAGES: valeurs usines.
Fonction valide par une longue pression (>2.5s.) sur la touche de sélection </>.

Löscht alle Programmplätze und setzt alle Bild- und Toneinstellungen auf Fabrikwerte zurück. Der AUTO-INSTALL-Modus kann durch einen langen Knopfdruck (>2,5s) initialisiert werden.

Clear Prog.
Cancella tutti i programmi in memoria e regola i Valori analogici SUONO IMMAGINE: ai livelli di fabbrica.Riportare la TV al modo Selezione: pressione prolungata: 2,5 sec. su il pulsante </>.

Programa de borrado.
Borra todos los programas almacenados en la memoria.Valores analógicos de IMAGEN y SONIDO: valores de fábrica.Regreso a la TV para "salir del modo fábrica".Selección: Presión larga igual a 2,5 s.

Std.Sound Preset

Sets the default value for the Standard Sound Preset.

Initialise les valeurs par défaut du son.

Setzt die Ton-Einstellungen auf Default-Werte.

Regolare i valori di default per le Preregolazioni Suono Standard.

Ajusta el valor por defecto para el Preajuste del Sonido Standard.

Factory adjusted
Reserve au reglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas

Kbd. Config.

Specifies the type of the local keyboard. The local keyboard can be mounted in different locations and orientations (Horizontal or Vertical type) in the chassis.

Spécifie le type de clavier monté sur un chassis selon son emplacement et son orientation (type Horizontal ou Vertical)

"Bestimmt den Typ des Nahbedienteils." "Das Nahbedienteil kann an unterschiedlichen Stellen in verschiedenen Ausrichtungen eingebaut werden."

Specificare il tipo della tastiera comandi
La tastiera comandi può essere montata in una locazione differente in funzione del telaio

Especifica el tipo de teclado local.
El teclado local puede ser montado en diferentes posición y orientación en el chasis

Default value : Horizontal version
Factory adjusted

➞ After setting ➞ Store (+) ☑

CHASSIS SETUP

Bus Quiet

In "Bus Quiet", the NVM can be read, modified and reprogrammed by means of a NVM Programmer.
To access "Bus Quiet" : Long press ">".
The TV should remain in "Bus Quiet" mode until either Exit, Left, Right, Up,Down or Standby keys on the RCU or local keyboard are pressed; at which point the TV should carry out a warmstart in order to prevent differences between the NVM and RAM contents.
After returning from Bus Quiet, the software checks the NVM content.
If it is not valid, the software perform a new default writing of the NVM content.

En mode bus quiet la NVM peut être lue, modifiée et reprogrammée.
Accès au mode Bus quiet :
Longue pression ">".
Utiliser l'une des touches Exit, Gauche, Droite Haut, Bas, standby ou une des touches du clavier pour sortir le téléviseur du mode bus quiet.
A partir de ce point de sortie le démarrage du téléviseur s'effectue à chaud pour éviter toute différence des contenus RAM et NVM.
En sortie de mode bus quiet, le logiciel contrôle le contenu de la NVM.
S'il n'est pas correct le logiciel exécute une nouvelle écriture par défaut de celle-ci.

Im "Bus Quiet"-Modus kann der Inhalt des NVM mittels eines externen NVM-Programmiergerätes ausgelesen, geändert oder neu programmiert werden. "Bus Quiet" wird durch einem längeren Druck auf ">" aktiviert. Das Gerät bleibt solange im "Bus Quiet" - Mode, bis durch Druck auf die EXIT-, LINKS-, RECHTS-, HOCH-, RUNTER- oder STANDBY-Taste (am Gerät oder auf der Fernbedienung) ein Warmstart des Gerätes veranlaßt wird, um unterschiedliche Daten in RAM und NVM zu vermeiden. Es folgt ein Software-Check des NVM-Inhaltes.
Sollte dieser nicht gültig sein, wird der Inhalt mit Default-Werten überschrieben.

In Modo Bus Quiet, la memoria NVM può essere letta, modificata o riprogrammata.
Per accedere al modo Bus Quiet premere a lungo il tasto ">".
Il TV rimane in modo Bus Quiet fino a che vengono premuti i tasti Exit, o Destro Sinistro, Su o Giù o Standby dal telecomando o dalla tastiera locale; a questo punto il TV riparte per evitare interferenze tra i contenuti della memoria NVM e della RAM.
All'uscita dal modo Bus Quiet, il software controlla il contenuto della memoria NVM. Se tale contenuto non è valido, il software provvede a una nuova programmazione della NVM con l'inserimento dei dati di default.

En bus quieto, la NVM puede ser leída, modificada y reprogramada.
Acceso a bus quieto : Larga presión en ">"
El TV permanecerá en bus quieto hasta que se pulse cualquiera de las teclas siguientes: Exit, "<", "^", "V", ">"o Standby del telemando o del teclado.
En este momento el TV arrancará para evitar cualquier diferencia entre los contenidos de la RAM y NVM.
Al salir del modo bus quieto, el software comprueba el contenido de la NVM.
Si no coincide, el software ejecuta la escritura de los datos en la NVM.

☑ Bus quiet enable ☐ Bus quiet disable

➞ After setting ➞ Store (+) ☑

FEATURE SETUP

Picture Rotation

Enables the "Earth Field Correction" function (EFC) on ICC21 16/9 and some large screen 4/3 by adding a special bargraph to the picture menu (user menus).
It is necessary to validate this function if the EFC components are fitted.

Valide la fonction "correction de champ magnétique terrestre" (EFC) sur les chassis ICC21 16/9 et les appareils 4/3 grand écran par addition d'un bargraphe spécifique dans le menu "réglages personnels" (menu utilisateur). Cette fonction doit être validée lorsque les composants "EFC"sont insérés.

Freigabe der Erdfeldkorrektur (EFC) bei ICC21 16/9 und einigen 4/3 Geräten. Im Menü "Bild" wird ein zusätzlicher Anzeigebalken eingeblendet Nach dem Einbau des EFC-Moduls ist diese Funktiozu aktivieren.

Attiva la funzione "Correzione del campo magnetico terrestre" (EFC) sul telaio ICC21 16/9 e alcuni grandi schermi 4/3 , aggiungendo una speciale barra grafica nei menu di "Menu Principale".
Se il circuito di correzione è montato, è necessario convalidare questa funzione.

Valida la función "corrección del campo magnético terrestre" (EFC) en los chasis ICC21 and some large screen 4/3 añadiendo una barra gráfica en el menú "Ajustes personales". Es necesario validar ésta función si el circuito de corrección EFC está montado.

☑ Rotation bargraph available menu, EFC function active.
☐ Rotation bargraph suppressed from personal settings, EFC circuit disactivated

WSS

Automatic detection of DOLBY surround sound and 16/9 format pictures via Teletext line number 23 is valid on all programmes.

Détection automatique du son surround DOLBY et du format 16/9 via la ligne 23 du Teletxte.
Valide pour tous programmes.

WSS (nur bei 16:9 oder Dolby)
Auswertung der Zeile 23 zur automatischen Format-und Dolbyumschaltung.

Identificazione "auto-Dolby" e "format 16/9" via televideo alla riga 23.La selezione di WSS Processing vale per tutti i programmi.

Detección "auto-surround" y "format" a través de la línea 23 de Teletext.La selección del procesamiento WSS es válida para todos los programas.

☑ Detection enable ☐ Detection disable

Blue Screen

Covers the picture with a full-screen blue OSD background when no signal is detected at the main tuner input.There will be no blue screen with AV inputs.

Affiche un fond bleu lorsque aucun signal n'est détecté en entrée du tuner principal.
Il n'y a pas de fond bleu en entrée AV.

Anzeige eines blauen Bildschirms wenn kein Sendersignal am Haupt-Tuner anliegt. Bei fehlendem Signal an den den AV-Eingängen wird der Bildschirm nicht blau.

Schermo con un sottofondo di colore blu quando non viene rilevato nessun segnale all'ingresso tuner. Non ci sarà schermo blu quando è presente un segnale agli ingressi AV.

En el fondo del OSD cubre la pantalla completa de color azul cuando no se detecta señal en la entrada del sintonizador principal. No habrá pantalla azul con entradas AV.

☑ Detection enable ☐ Detection disable

➞ After setting ➞ Store (+) ☑

FEATURE SETUP

Curtains Effect

Enables the "Curtains Effect" function in the user preferences menus.
- Default value: ON (out of factory).

Valide la fonction "Effet de rideau" dans le menu des préférences utilisateurs.
- Valeur par défaut : ON (sortie usine).

Aktiviert die Funktion "Jalousie-Effekt" im Benutzer-Menü "Präferenzen".
-Werkseinstellung: ON

Abilita "Effetto Tendina" funzione disponibile nel menu di preferenze.
Valore di Default: ON (all'uscita dalla fabbrica)

Activa la función "Efecto Cortina" en los menús de preferencia del usuario.
Valor por defecto: ON (ajuste de fábrica)

☑ Curtains Effect function active.

☐ Curtains Effect function disactivated

High end CRT

Selects the used CRT board type.
Valide le type de CRT équipant le TV.
Wählen Sie die verwendente Bildrohr-Leiterplatte (CRT-Board)
Selezionare il tipo di piastra CRT usata.
Selecciona el tipo de placa TRC utilizada.

☑
High end CRT board type selected.
Validation de CRT de type haut de gamme.
High End CRT-Board ausgewählt.
Tipo di piastra High end selezionata
Tipo de placa TRC seleccionado, high end
CRT BS 211XX, CRT BS 213XX...
☐
Standard CRT board type selected.
Validation de CRT de type standard.
Standard CRT-Board ausgewählt
Piastra CRT Standard Selezionata.
Tipo de placa TRC seleccionado, standard
CRT BS 210XX, Rearprojector...
Factory adjusted

Welcome Screen

Determines whether or not a Welcome Screen is shown during the Installation Mode.
When this checkbox is unchecked the "Contacts" user Menu will be disabled.

Valide l'écran de bienvenue durant le mode Installation.
Lorsque la case "Welcome Screen" n'est pas validée le menu utilisateur "Contacts" n'est pas valide.

Aktiviert den "Willkommen"-Bildschirm bei de Installation. Wenn diese Checkbox nicht markiert ist, wird das Benutzer-Menü "Contacts" nicht angezeigt.

Determina se lo schermo di Benvenuto viene mostrato durante il modo installazione.
Se la casella "Contacts" non viene selezionata il menu utilizzatore sarà disabilitato

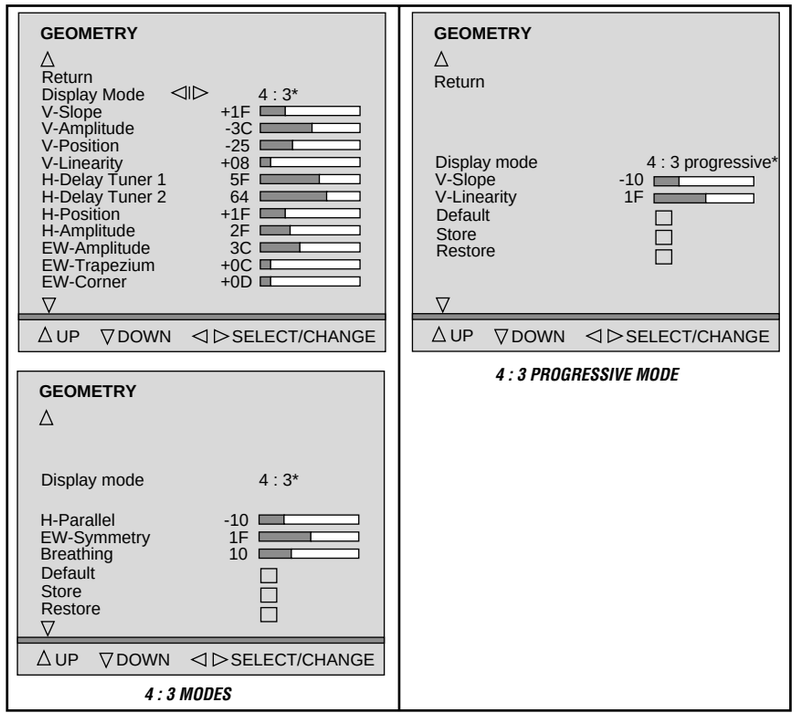
Determina si durante el modo instalación se muestra o no la pantalla de bienvenida.
Cuando no está señalada la casilla el menú del usuario "Contactos" estará desactivado.

☑ Welcome Screen enable
☐ Welcome Screen disable

➞ After setting ➞ Store (+) ☑

ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION

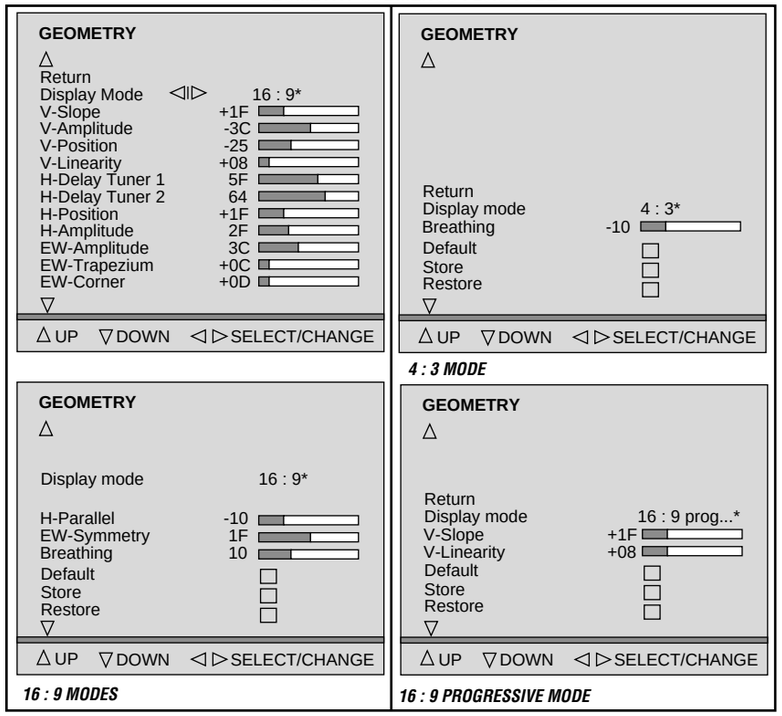
GEOMETRY SUBMENUS : 4:3 TUBES



4 : 3 MODES

4 : 3 PROGRESSIVE MODE

GEOMETRY SUBMENUS : 16:9 TUBES



4 : 3 MODE

16 : 9 MODES

16 : 9 PROGRESSIVE MODE

** Test Bar pattern used : 4/3 with a geometric circle. Complete geometry Adjustment is done according to chassis tube format : **4/3 zoom 0** mode for **4/3** tubes; **16/9 zoom 0** mode for **16/9 tubes** : see annexed .*

*Mire de barre utilisée : 4/3 avec cercle de géométrie. les réglages complets de géométrie sont faits dans le format du tube équipant l'appareil : mode **4/3 zoom 0** pour les tubes **4/3**; **16/9 zoom 0** pour les appareils équipés de **tubes 16/9***

*Verwendetes Testbid : 4/3 mit geometrischem Kreis. Ein vollständiger Geometrie-Abgleich ist nur notwendig bei: **4/3-Röhren** Zoomstufe **4/3 Zoom 0** und **16/9-Röhren** Zoomstufe **16/9 Zoom 0** (siehe unten) .*

*Formato Testo utizzato: 4/3 con cerchio geometrico. La regolazione viene effettuata nel formato del telaio del cinescopio: **4/3 zoom 0** :tubo **4/3**; **16/9 zoom 0**: tubo **16/9**.*

*Carta de ajuste utilizada : 4/3 con círculo geométrico. El ajuste completo de la geometría hay que hacerlo de acuerdo con el tipo de chasis y el formato del tubo : Modo **4/3 zoom 0** para tubos de **4/3**; modo **16/9 zoom 0** para tubos de **16/9**.*

GEOMETRY

Display Mode

Complete geometry adjustment is done according to chassis tube format :
4/3 zoom 0 mode for **4/3 tubes**, **16/9 zoom 0** mode for **16/9 tubes.**
In all other modes it is only necessary to adjust some few registers.
The actual format mode has to be displayed in the Geometry Service mode.
It has to be possible to change the format during the geometry alignment without leaving the Service mode.

The available display modes depend on the picture tube format.
4/3 tube : 2 modes 4/3 and progressive
16/9 tube : 3 modes 16/9 standard,
4/3 centered,progressive

The menu shows only the registers which have to be aligned for the actual picture format currently displayed.

Les réglages complets de géométrie sont faits dans le format du tube équipant l'appareil.
Mode **4/3 zoom 0** pour les tubes **4/3**,
16/9 zoom 0 pour les tubes **16/9**.
Dans les autres modes seuls quelques registres nécessitent un réglage.
Le format de réglage doit être affiché dans le menu de géométrie du mode service.
Il est possible de changer le format sans quitter le mode service.

Différents types d'affichage disponibles :

tube 4/3 : 2 modes 4/3 et progressif
tube 16/9 : 3 modes 16/9 standard,
4/3 centré, progressif

Le menu correspondant affiche seulement les registres spécifiques du format sélectionné à régler.

Ein vollständiger Geometrie-Abgleich ist bei **4/3-Röhren** nur in der Zoomstufe **4/3 Zoom 0** und bei **16/9-Röhren** nur in der Zoomstufe **16/9 Zoom 0** notwendig.
In allen anderen Zoomstufen sind eine geringere Anzahl von Einstellungen vorzunehmen.
Während des Geometrie-Abgleiches wird zur Kontrolle ständig das aktuelle Bildformat eingeblendet. Während des Geometrie-Abgleiches ist es möglich, das Bildformat zu ändern, ohne den Service Mode zu verlassen.

Die verfügbaren Bildformate sind abhängig vom Bildrohr-Format.
4/3-Röhre : 2 Bildformate 4/3 und progressive
16/9-Röhre : 3 Bildformate 16/9 Standard,
4/3 centered und progressive

Das Abgleich-Menü zeigt immer nur die Funktionen an, die im aktuellen Bildformat eingestellt werden müssen.

GEOMETRY

Display Mode

La disponibilita dei modi display dipende dal formato del tubo:
tubo 4/3 : 2 modi 4/3, progressif
tubo 16/9 : 3 modi 16/9 standard, 4/3 centré progressive
Il corrispondente menu mostra solo i registri di regolazione.
Le regolazioni complete di geometria vengono fare in base al tubo.
per **tubi 4/3** - 4/3 zoom 0
per **tubi 16/9** - 16/9 zoom 0

In tutti gli altri modi è necessario regolare solo alcuni registri.
Il formato di regolazione deve essere selezionato nel menu di geometria nel modo service.
E´ possibile canbiare formato senza uscire da service mode

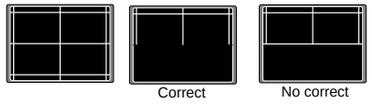
Los ajustes completos de geometría se harán de acuerdo al formato del tubo montado:
modo 4/3 para tubos de **4/3 zoom 0**,
modo 16/9 zoom 0 para tubos **de 16/9**.
En todos los otros modos, sólo será necesario ajustar unos pocos registros.
El modo de formato actual debe ser accedido desde el Modo Servicio.
Es posible cambiar el formato sin salir del Modo Servicio.

Los formatos que se pueden visualizar, dependen del tipo de tubo.
Tubos de 4/3 : 2 modos, 4/3 y progressive
Tubos de 16/9: 3 modos, 16/9 estándar,
4/3 centered y progressive.
El menú correspondiente mostrará sólo los ajustes a efectuar.

V-Slope

- Apply a test pattern signal to the TV with a single horizontal and vertical line on the screen.
- Select the "**VS**" line of the menu. The bottom half of the screen will go black.
- Adjust VS until the centre line of the pattern is just invisible.
- Leave the line "**V_Slope**".
- Switch the test pattern signal to the crosshatch geometry pattern.
- Perform the geometry adjustments described below.

V-Slope



Correct No correct

GEOMETRY

V-Slope

- Appliquer une mire de barres avec seulement une ligne blanche horizontale en milieu de l'écran.
- Sélectionner la ligne "**V-Slope**". La moitié basse de l'écran devient noire.
- Aligner "**V_Slope**" pour que la ligne médiane soit à peine non visible.
- Commuter la mire en mode de réglage de géométrie (quadrillage).
- Effectuer les reglages de geometrie.

- Speisen Sie ein Testbild mit einem horizontalen Strich in der Bildmitte ein.
- Wählen Sie im Menü die Funktion "V-Slope" an. Die untere Bildhälfte wird dunkel.
- Stellen Sie "V-Slope" so ein, daß die Mittellinie fast verschwindet.
- Verlassen Sie die Funktion "V-Slope".
- Speisen Sie ein Gittertestbild ein.
- Nehmen Sie die Geometrieeinstellungen wie nebenstehend beschrieben vor.

- Applicare un monoscopio con un'unica linea bianca orizzontale al centro dello schermo
- Selezionare la riga "**V slope**" del menu. La parte bassa dello schermo viene oscurata.
- Allineare la "Vertical Slope" in modo che la linea centrale sia appena visibile
- Abbandonare la riga "**V slope**".
- Posizionare il monoscopio
- Effettuare le regolazioni di geometria descritte in precedenza
- Memorizzare.

- Aplique una carta de ajuste con sólo una línea blanca horizontal y una vertical en el centro de la pantalla.
- Seleccionar en el menú, la línea "**V-Slope**". La mitad inferior de la pantalla se pondrá oscura.
- Ajuste "**V-Slope**" justo hasta que la línea horizontal sea invisible.
- Cambiar la carta de ajuste a "cuadrícula" y efectuar los ajustes de geometria descritos a continuación
- Antes de salir, memorizar con "Store"

V-Amplitude		
V-Position		
V-Linearity		

GEOMETRY

H-Delay Tuner 1 / H-Delay Tuner 2 Horizontal-Delay

Increase/decrease value to center the image inside the displayed curtains.
Adjust H-Delay before "H-Position"
- A second H_Delay (H-Delay Tuner 2) is needed in case a second tuner is fitted.If the second tuner is missing H-Delay Tuner 2 is not displayed.
- The main picture channel must be adjusted with input from the the main tuner; the secondary picture channel must be adjusted with input from the secondary tuner.

Augmenter/diminuer la valeur de H-Delay pour centrer l'image à l'intérieur des "rideaux".
Ajuster H-Delay avant "H-Position"
-Un second réglage (H-Delay Tuner2) est nécessaire si un secont tuner est monté.
Si le secont tuner est absent la ligne H-Delay Tuner 2 n'est pas affichée.
- Le registre principal doit être ajusté avec une image issue du tuner prncipal; le registre secondaire avec une image issue du tuner secondaire.

Zentrieren Sie das Bild horizontal zwischen die dunkelgetasteten senkrechten Balken.
Gleichen Sie H-Delay vor "H-Position" ab.
- Ein zweiter H-Delay (H-Delay Tuner 2) ist not-wendig falls ein zweiter Tuner eingebaut ist.
Ist kein zweiter Tuner eingebaut ,
wird H-Delay Tuner 2 nicht angezeigt.
-das Hauptbild muss mit einem Signal vom Haupt- Tuner eingestellt werden, das Neben (Sekundär bild muss miteinem Signal vom zweiten Tuner abgeglichen werden.

Incrementare / Decrementare il valore per centrare l'immagine.
Regolare H-Delay prima "H-Position".
- A second H_Delay (H-Delay Tuner 2) is needed in case a second tuner is fitted.If the second tuner is missing H-Delay Tuner 2 is not displayed.
- The main picture channel must be adjusted with input from the the main tuner; the secondary picture channel must be adjusted with input from the secondary tuner.

Press </>: remote control.

GEOMETRY

H-Delay Tuner 1 / H-Delay Tuner 2 Horizontal-Delay

Aumentar ó disminuir el valor de H-Delay para el centro de la imagen en el interior de las “cortinas”.
Ajustar H-Delay antes que H-Position needed in case a second tuner is fitted.If the second tuner is missing H-Delay Tuner 2 is not displayed.
- The main picture channel must be adjusted with input from the the main tuner;
the secondary picture channel must be adjusted with input from the secondary tuner.

Press </>: remote control.

H-Position		
H-Amplitude		
EW - Amplitude		
EW - Trapezium		
EW -Corner		
H-Parallel		
EW-Symmety		

Breathing
EHT compensation

Factory adjusted
Réservé au réglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas

After setting → **Store (+)** ☑

ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION

VIDEO PAL BG

△

Return
G2 Alignment
Scaling Colour -90
Peak White
Whitepoint R +9D
Whitepoint G -8A
Whitepoint B 8A
Scaling Brightness +84
Black Offset R +DC
Black Offset G 48

▽

△ UP ▽ DOWN ◁ ▷ SELECT/CHANGE

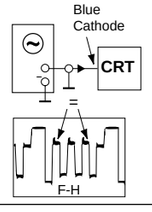
VIDEO PAL BG

△

Contrast max ☐
Drive Level ◁II▷ 90
Full White 4/3 80
Scaling Contrast E0
Text Contrast +9D
Drive Loop Disable* ☐
Default ☐
Store ☐
Restore ☐

▽

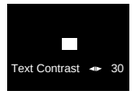
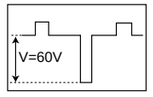
△ UP ▽ DOWN ◁ ▷ SELECT/CHANGE

VIDEO	PAL
Return	Closes the sub-menu and returns to the "Main Service Menu" Retourne au menu principal. Schließt das Untermenü, und das Haupt-Menü des Service-Modes erscheint. Chiude il sottomenu e fa apparire il menu principale Service Mode. Cierra el submenú. El menú Field Service Mode aparece. Press </>: remote control; Vol. +/- : TV keyb.
G2 Alignment	Display a full screen black OSD Adjust G2 with SCREEN potentiometer: see adjust table Ecran totalement noir. Régler G2 avec le potentiomètre SCREEN : voir tableau des réglages.(p.12). Das Bild wird dunkelgetastet Gleichen Sie G2 mit dem SCREEN-Potentiometer wie auf seite 12. beschrieben ab. Visualizzare uno schermo nero e regolar il potenziomero G2 riferendos alla tabella regolazione (p.12) Pantalla totalmente oscura sin OSD. Ajustar la G2 con el potenciómetro SCREEN: ver tabla (p.12).
Scaling Colour*	☼+◑+◑ = standard PAL, SECAM, AV1_RGB, AUX (TAK, DVD and DIGITAL) 75% Colour bar test pattern via RF. 

Note :
***** Specific rear projector

Color standard or RGB is autodetected and displayed opposite the displayed opposite the menu title.

VIDEO	PAL
Peak-White**	☼+◑+◑ = standard Peak white test pattern white =100% RF-BG; RF-L; AV1 RGB AUX (TAK, DVD, Digital Mode) Colourimeter Tube Type [Nits]: A66EHJ 380; A68EGD 400; A68EJV -; A68EJZ -; A80EJA 350 Tube Type [Nits]: W66EGV 480; W66EJY 450; W66EJY -; W76EGV 380; W76EJY -
Whitepoint R*	☼+◑+◑ = standard Grey scale test pattern white =50% Amplitude: 350mVBW RF-PAL RF-SECAM AV1- RGB AUX (TAK,DVD Digital). grey
Whitepoint G*	
Whitepoint B*	
Scalling Brightness	☼+◑+◑ = standard Grey scale test pattern white =100% black
Black Offset R	Factory adjusted Réservé au réglage usine Reserviert für Fabrikeinstellungen Riservato alla regolazione di fabbrica Ajuste reservado fábricas
Black Offset G	
Contrast max	
Set (temporary) the user contrast bargraph to max. When "Contrast max." is deselected the user contrast bargraph set back to the previous value.	
Met (temporairement) le baragraphe du réglage de contraste utilisateur au maximum. Lorsque "Contrast max." is déselectionné Le bragraphe revient à sa valeur initiale.	
Setzt (temporär) den User-Kontrast auf Max.Nach dem Abschalten von 'Contrast max' wird auf der Bar-Graph auf vorherigen Wert zurückgesetzt	
Regolare (momentaneamente) la barragrafica del contrasto al massimo.Quando "Contrasto massimo" viene disinserito la barra grafica utilizzatore viene regolata al volume precedente.	
Ajusta (temporalmente) la barra de contraste del usuario al máximo. Cuando no esté seleccionado "Contraste Máximo" la barra de contraste del usuario vuelve a su valor anterior.	
☑ Contrast max. enable ☐ Contrast max. disable	

VIDEO	PAL
Drive Level	Factory adjusted Réservé au réglage usine Reserviert für Fabrikeinstellungen Riservato alla regolazione di fabbrica Ajuste reservado fábricas
Full White 4/3	
Scalling Contrast	
Text Contrast	☼+◑+◑ = standard
Adjust Text contrast for V=60V at pin 11 (Blue) of the CRT : 40% V peak white	
Ajuster Text Contrast pour obtenir un niveau de sortie V=60V sur la cathode Bleue du tube (point 11 de la CRT): 40% V peak white.	
Stellen Sie mit Text Contrast V=60V an der Blau-Kathode (Pin 11) der Bildröhre ein: 40% Vpeak white	
Regolare il guadagno contrasto televideo per ottenere al catodo del blu un livello pari a V=60V (CRT pin 11): 40% Vpeak white.	
Ajuste Text Gain para dejar V=60V en azul del TRC (CRT Patilla 11): 40% Vpeak white	
	 CRT Pin 11
Drive loop Disable	Specific Rear Projector sets

➡ After setting ➡ Store (+) ☑

Note :

***** Adjust separate for PAL RF / SECAM RF, RGB, AUX (TAK, DVD, Digital).

** After PEAK white adjustment control white points setting.
Repeat the adjustments IF necessary.

IF PAL BG

Return
Main Tuner: AGC Take Over +2A
Main Tuner: IF PLL VCO 3F
Low
Sec. Tuner: AGC Take Over 1F
Sec. Tuner: IF PLL VCO 2E
High

FFI - Bit ☐
Default ☐
Store ☐
Restore ☐

△ UP ▽ DOWN ◁ ▷ SELECT/CHANGE

IF	
Return	Closes the sub-menu and returns to the "Main Service Menu" Retourne au menu principal. Schließt das Untermenü, und das Haupt-Menü des Servic e-Modes erscheint. Chiude il sottomenu e fa apparire il menu principale Service Mode. Cierra el submenú. El menú Field Service Mode aparece. Press </>: remote control.
Main Tuner AGC Take Over	1mV : antenna input of the Main tuner - Minimum noise- - Minimum de bruit - Minimum Rauschen - Rumore minimo - Minimo ruido
Main tuner IF PLL VCO	Adjust IF PLL VCO for "OK" indicating. Adjust for standard L' and others.
Sec. Tuner AGC Take Over	1mV : antenna input of the secondary tuner - Minimum noise- - Minimum de bruit - Minimum Rauschen - Rumore minimo - Minimo ruido
Sec. tuner IF PLL VCO	Adjust IF PLL VCO for "OK" indicating. Adjust for standard L' and others.
FFI - Bit	Fast Filter (IF / PLL) Filtre rapide (FI / PLL) Schnelles filter (ZF / PLL) Filtro /rapido (IF / PLL) ☑ Asia ☐ Europ

➡ After setting ➡ Store (+) ☑

ERROR CODES

Return
Clear Error Codes I▷

Code	Count	Time Stamp
11	001	00125:30
24	012	00090:10
78	003	00043:54
51	001	00001:43
00	000	00000:00

△ UP ▽ DOWN ◁ ▷ SELECT/CHANGE

ERROR CODE

Clear Error Codes To clear all error codes stored in the NVM. Action: Long press (> 2.5sec.).
Press </>/OK: remote control.

CODE LED Error Codes

1- The last five error codes are stored and displayed with a time stamp from the runtime counter. Each error code in this list has an error counter that counts further occurences of a particular error.
2- If an error occurs that is already in the list the time stamp is updated and the error counter is incremented. If the error counter reaches the value 255 it is not incremented anymore.
3- The errors are displayed with the most recent error on top of the list. The others follow with descending time stamps.
Displaying Error Codes with LED:
1- In addition to storing an error code it must also be displayed with the TV's Standby LED. Only the last error that occured is displayed.
2- Decimal error codes from 11 to 99 (with second digit not being 0) are signalled.
3- The error code is displayed as two separate digits separated by a suitable pause, this is repeated until the either the TV fixes the fault or the TV is repaired.
For example Error-code : 23 will be displayed thus :
2 flashes and a short pause
3 flashes and a long pause
.....
List of Errors Codes : see table

1- Mémorise les cinq derniers codes erreurs. Le cumul du temps de fonctionnement entre le démarrage initial du chassis en usine et le moment où s'est produit l'erreur est indiquée en colonne "Time stamp".Chacun de ces codes est en outre affecté d'un compteur signalant sa répétition.
2. Si une erreur qui est déjà dans la liste survient de nouveau le temps cumulé (Time stamp) est mis à jour et le compteur d'erreur est incrémenté. Le compteur d'erreurs n'est pas incrémenté au delà de 255.
3- Les erreurs les plus récentes sont affichées en tête de liste. Les autres suivent en descendant.
Affichage des Codes Erreurs par LED:
1- Les Codes erreur sont signalés par le clignotement de la LED Standby du TV .Seulement la dernière erreur survenue est affichée.
2- Les codes Erreurs décimaux vont de 11 à 99. (le second digit n'est jamais égal à 0) .
3- Le code Erreurs est signalé par deux digits selon une séquence spécifique
Exemple :
Code Erreurs : 23 affiché
2 flashes, courte pause
3 flashes : longue pause
.....
Voir ci-après la liste des codes erreurs

1. Es werden die letzten 5 Fehlercodes mit der Laufzeit angezeigt. Jeder Fehlercode dieser Liste hat einen eigenen Zähler, der das erneute Auftreten des selben Fehlers mitzählt..
2. Tritt ein Fehler auf, der schon in der Liste steht, wird nur die Laufzeitanzeige aktualisiert und der Fehlerzähler (bis auf 255 maximal) inkrementiert.
3. Der zuletzte aufgetretene Fehler steht an erster Stelle. Die vorhergegangenen Fehler werden nach abnehmender Laufzeit gelistet.
Anzeige des Fehlercodes über die Standby-LED
1- Der Fehlercode wird nach dem Auftreten des Fehlers zu-sätzlich über die Standby-LED des TV-Gerätes durch Blinken angezeigt.
2- Es können die Fehlercodes 11 bis 99 (ohne diejenigen , die eine Null als zweite Stelle haben) dargestellt werden.
3- Die beiden Dezimalstellen des Code werden durch Blinken, getrennt von einer Pause angezeigt. Dies wird wiederholt, bis der Fehler nicht mehr auftritt oder das Gerät repariert wird.
Beispiel der Anzeige für den Fehlercode 23:
Zweimaliges Blinken der LED, kurze Pause
Dreimaliges Blinken der LED, lange Pause.

Aufstellung der Fehlercodes: siehe Tabelle

ERROR CODE

CODE LED Error Codes

1- Gli ultimi cinque codici errore sono memorizzati e visualizzati attrverso il contatore della durata di esecuzione.
Ogni codice di errore in questa lista dispone di contatore di errore che aggiorna la durata di esecuzione.
2- Se si manifesta un errore già presente nella lista il tempo durata totale viene aggiornato e il contatore errore incrementato.
Se il contatore errore ha riaggiunto il valore di 255 non viene più incrementato.
3- L'errore più recente viene visualizzato in cima alla lista. Gli altri seguono nella lista.
Lampeggi LED: **Trasmissione messaggi**
1- Il codice errore memorizzato viene anche visualizzato dal diodo LED di standby del TV. Viene visualizzato solo l'ultimo errore che si è manifestato.
2- I codici errore vengono segnalati da numeri decimali da 11 a 99 (la seconda cifra del digit non è mai zero).
3- Il codice di errore viene visualizzato da due cifre separate da un intervallo di tempo è verrà ripetuto fino a quando il TV non sarà stato riparato.
Per esempio il codice di errore 23 visualizzerà:
2 flashes and a short pause
2 segnali luminosi con una pausa breve.
3 segnali luminosi con una pausa lunga.
.....
Per la lista dei codici di errore si veda la tabella:

1- Los últimos cinco códigos de error se almacenan y se visualizan durante un tiempo desde el contador. Cada código de error en esta lista tiene un contador de errores que contabiliza lo que ocurre más allá de un error determinado.
2- Si ocurre que un error ya está en esta lista el tiempo mostrado es actualizado y el contador de errores aumenta.
Si el contador de errores alcanza el valor 255 ya no puede aumentar más.
3- Los errores más recientes se muestran en la parte superior de la lista. Los otros continuan con tiempos descendentes.
Códigos de error visualizados con el LED:
1- Además de almacenar un código de error también puede ser visualizado con el LED de Standby del TV. Sólo se muestra el último error ocurrido.
2- Los códigos decimales de error desde el 11 al 99 (con segundo dígito distinto de 0) son visualizados.
3- El código de error es visualizado como dos dígitos separados por medio de una adecuada pausa; éste se repite hasta que el TV fija el defecto o es reparado
Por ejemplo el código de error 23 se verá como:
2 destellos y una pausa corta
3 destellos y una pausa larga
.....
Lista de Códigos de Error: ver tabla

GEOMETRY MODE ALIGNMENT
4/3 picture tube

A ICC21 4/3 set needs a geometry alignment only in the 4/3 Zoom 0 mode and additionally an alignment of V-slope, V-linearity in progressive mode. All other formats and zoom mode are calculated.

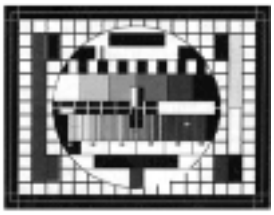
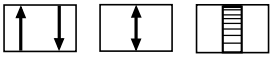
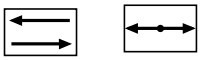
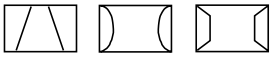
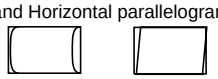
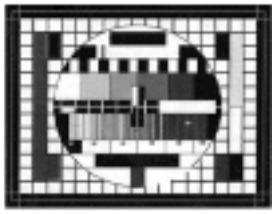
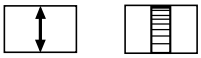
Un chassis ICC21 4/3 ne nécessite des réglages de géométrie que dans le mode 4/3 zoom 0 et additionnellement un réglage de V-slope, V-linearity en mode progressif. La géométrie des autres formats et zoom est calculée.

Beim Chassis ICC21ist ein Geometrie-Abgleich nur im Bildformat 4:3 Zoom 0 und zusätzlich der Abgleich von V-Slope und V-Linearity im Progressiv-Mode not-wendig. Alle anderen Formate und Zoomstufen werden berechnet.

I telai ICC21 4/3 richiedono la regolazione di geometria solo in formato 4/3 zoom 0 e un addizionale regolazione v-slope, v-linearity in progressive mode. tutti gli altri formati e modo zoom vengono calcolati.

Un TV ICC21 4/3 necesita ajuste de geometría sólo en el modo 4/3 Zoom 0 y adicionalmente un ajuste del V-slope y linealidad vertical en modo progresivo. Todos los demás formatos y modos de zoom se calculan automáticamente.

Signal : 4/3 test pattern

4 / 3 standard mode zoom 0		**Overscan V=107% , H=107%** 1- Adjust Vertical Slope. 2- Adjust Vertical position and Vertical amplitude 3- Adjust Vertical linearity  4- Adjust Horizontal Delay, Horizontal Position and Horizontal amplitude  5-Adjust EW Amplitude ,EW Shape and Trapezium, EW Corner,  6-Adjust EW Symmetry and Horizontal parallelogram 
4 / 3 progressive mode		**Overscan V=107% , H=107%** 1- Adjust Vertical Slope. 2- Adjust Vertical Amplitude and linearity 

16/9 picture tube

A ICC21 16/9 set needs a geometry alignment only in the 16/9 Zoom 0 mode and additionally an alignment of V-slope, V-linearity in progressive mode. All other formats and zoom mode are calculated.

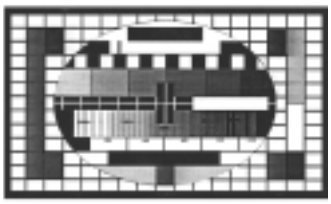
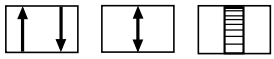
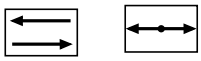
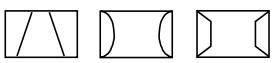
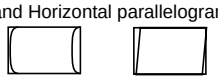
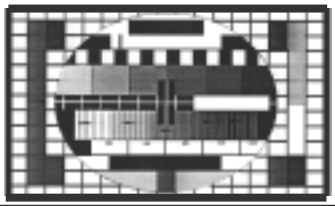
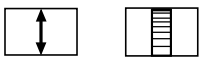
Un chassis ICC21 16/9 ne nécessite des réglages de géométrie que dans le mode 16/9 zoom 0 et additionnellement un réglage de V-slope, V-linearity en mode progressif. La géométrie des autres formats et zoom est calculée.

Beim Chassis ICC2116:9 ist ein Geometrie-Abgleich nur im Bildformat 16:9 Zoom 0 und zusätzlich der Abgleich von V-Slope und V-Linearity im Progressiv-Mode not-wendig. Alle anderen Formate und Zoomstufen werden berechnet.

I telai ICC21 16/9 richiedono una regolazione di geometria solo nel formato 16/9 e modo zoom 0 e una addizionale regolazione v-slope e v-linearity in progressive mode. tutti gli altri formati e modo zoom vengono calcolati.

Un TV ICC21 16/9 necesita ajuste de geometría sólo en 16/9 modo Zoom 0 y adicionalmente un ajuste del V-slope y linealidad vertical en modo progresivo. Todos los demás formatos y modos de zoom se calculan automáticamente.

Signal : 4/3 test pattern

16 / 9 standard mode zoom 0		**Overscan V=107%, H =104%** 1- Adjust Vertical Slope. 2- Adjust Vertical position and Vertical amplitude 3- Adjust Vertical linearity  4- Adjust Horizontal Delay, Horizontal Position and Horizontal amplitude  5-Adjust EW Amplitude ,EW Shape and Trapezium, EW Corner,  6-Adjust EW Symmetry and Horizontal parallelogram 
16 /9 progressive mode		**Overscan V=107%, H =104%** 1- Adjust Vertical Slope. 2- Adjust Vertical Amplitude and linearity 

ERROR CODES

EN

11 I2C Bus_1 Data line held low
12 I2C Bus_1 Clock line held low
13 I2C Bus_2 Data line held low
14 I2C Bus_2 Clock line held low
15 I2C Bus_3 Data line held low
16 I2C Bus_3 Clock line held low
17 I2C Bus_4 Data line held low
18 I2C Bus_4 Clock line held low
21 Video: Master-HIP 1st TDA9321 doesn‘t answer anymore
22 Video: Power down detection (Vcc 1st HIP)
23 Video: Correct Xtal. ident. (1st HIP)
24 Video: Slave-HIP 2nd TDA9321 not acknowledged
25 Video: Power down detection (Vcc 2nd HIP)
26 Video: Correct Xtal. ident. (2nd HIP)
27 Video: Switch TEA6415C doesn‘t answer anymore (or 8V_5 not available).
28 PSI: TDA9178 doesn‘t answer anymore
29 PSI: Power down detection (Vcc PSI)
31 Deflection: TDA9330 (HOP) doesn‘t answer anymore
32 Deflection: Power down detection (Vcc HOP)
33 Deflection: Safety circuit has detected a problem.
34 Deflection: Horizontal flyback problem . NHF bit problem (only factory information)
35 Deflection: Oscillator is not locked. NRF bit problem (only factory information)
36 Deflection:Tube gets not warm in time.
37 Deflection: Vertical problem.
38 Deflection: reserved
39 Deflection: reserved
41 Audio: MSP 34xx/44xx doesn't answer anymore (or 5V_A not available)
42 Audio: Dolby DPL4519 doesn't answer anymore
43 Audio: AC3 Decoder MAS3528 doesn't answer anymore
44 Audio: Centre switch TEA6422 doesn't answer anymore
45 Audio: Wrong MSP is fitted
46 Audio: Connection problem to digital Dolby board
47 Audio: reserved
48 Audio: reserved
49 Audio: reserved
51 Upconverter: SDA9410 doesn't answer anymore
52 A/D: Master ADC 1st SDA9206 doesn't answer anymore
53 A/D: Slave ADC 2nd SDA9206 doesn't answer anymore
54 The NVM chip M24C64 doesn't answer anymore
55 The Portexpander TCE2ACU doesn't answer anymore
56 No ackn. reserved
57 No ackn. reserved
58 No ackn. reserved
59 No ackn. reserved
61 HW: Switch 5V (5V_V) not available
62 HW: Switch 5V (5V_V) and 8V (8V_V) not available
63 HW: Unexpected level on Power_fail line found (Mains to low)
64 HW:
65 HW:
66 HW:
67 HW:
68 HW:
69 HW:
reserved for hardware
71 DVB unit
72 DVB unit
73 DVB unit
74 DVB unit
75 DVB unit
reserved for DVB
76 reserved
77 reserved
78 DVD doesn't answer anymore
79 DVD : reserved for DVD
81 RP
82 RP
83 RP
84 RP
86 RP
87 RP
reserved for Rearprojector
88 reserved
89 reserved

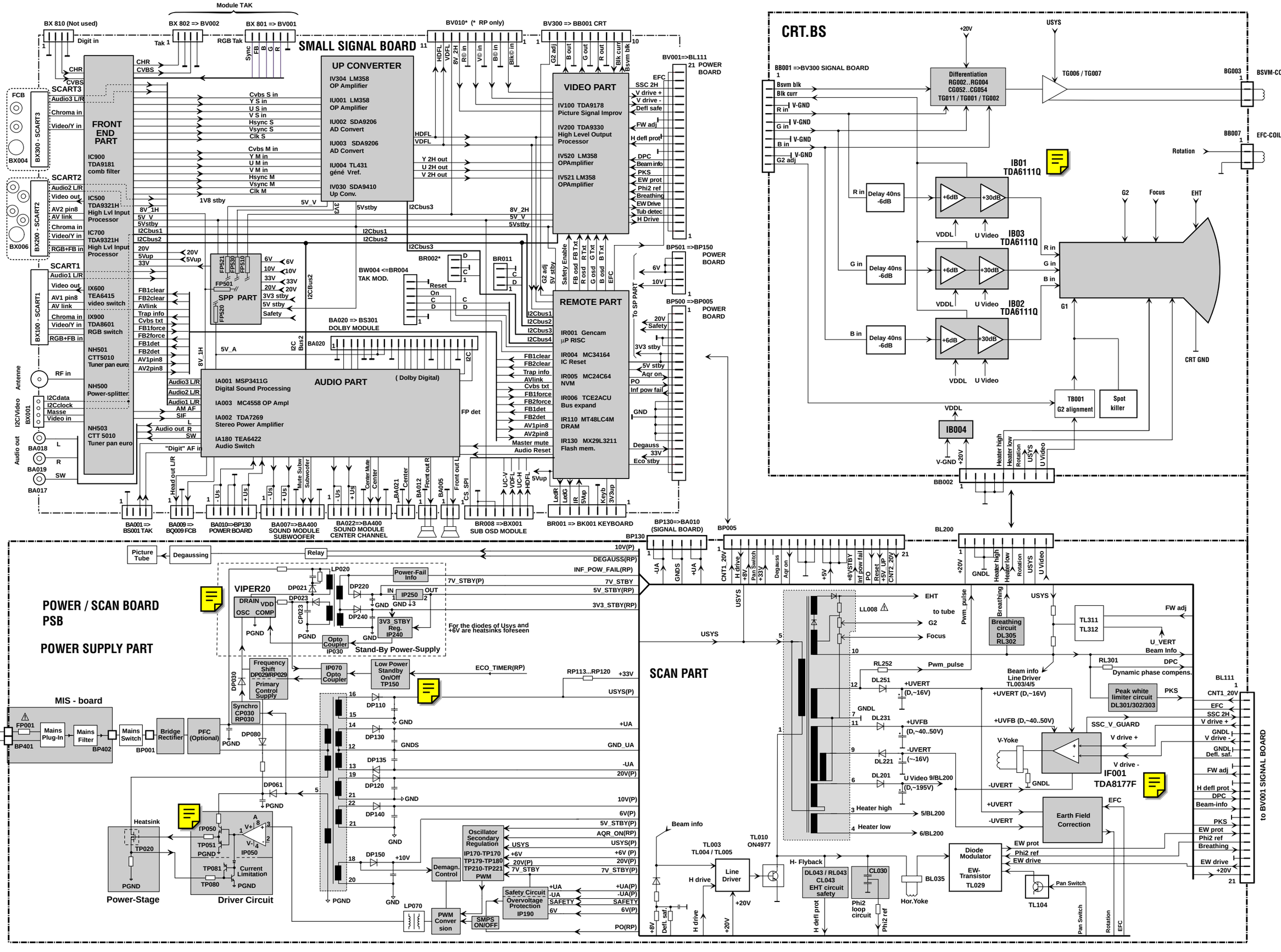
FR

11 I2C Bus_1 data forcé au niveau bas
12 I2C Bus_1 clock forcé au niveau bas
13 I2C Bus_2 data forcé au niveau bas
14 I2C Bus_2 clock forcé au niveau bas
15 I2C Bus_3 data forcé au niveau bas
16 I2C Bus_3 clock forcé au niveau bas
17 I2C Bus_4 data forcé au niveau bas
18 I2C Bus_4 clock forcé au niveau bas
21 1èr Video: Master-HIP TDA9321 ne répond plus
22 Video: Détection mauvaise alimentation (Vcc 1er HIP)
23 Video: Correct Xtal. ident. (1er HIP)
24 Video: Slave-HIP 2ème TDA9321 non reconnu
25 Video: Détection mauvaise alimentation (Vcc 2nd HIP)
26 Video: Correct Xtal. ident. (2ème) HIP
27 Video: Commut. TEA6415C ne répond plus (ou 8V_5 non disponible)
28 PSI: TDA9178 ne répond plus
29 PSI: Détection mauvaise alimentation (Vcc PSI)
31 Déviation: TDA9330 (HOP) ne répond plus
32 Déviation: Détection mauvaise alimentation (Vcc HOP)
33 Déviation: Circuit de sécurité a detecté un problème. Problème bit FLS (information usine seulement)
34 Déviation: problème retour ligne. Problème bit NHF (information usine seulement)
35 Déviation: Oscillateur n'est pas verrouillé. problème bit NRF (information usine seulement)
36 Déviation:Tube ne chauffe pas à temps
37 Déviation: Problème déviation verticale.
38 Déviation : réservé
39 Déviation : réservé
41 Audio: MSP 34xx/44xx ne répond plus (ou 5V_A non disponible)
42 Audio: Dolby DPL4519 ne répond plus
43 Audio: Décoder AC3 MAS3528 ne répond plus
44 Audio: commut. Centre TEA6422 ne répond plus
45 Audio: mauvais MSP monté
46 Audio: problème de connexion de la platine Dolby digitale
47 Audio: réservé
48 Audio: réservé
49 Audio: réservés
51 Convertisseur: SDA9410 ne répond plus
52 A/D: Master ADC 1er SDA9206 ne répond plus
53 A/D: Slave ADC 2ème SDA9206 ne répond plus
54 NVM M24C64 ne répond plus
55 Portexpander TCE2ACU ne répond plus
56 Pas d'ackn. reservé
57 Pas d'ackn. reservé
58 Pas d'ackn. reservé
59 Pas d'ackn. reservé
61 HW: 5V (5V_V) non disponible
62 HW: 5V (5V_V) et 8V (8V_V) non disponibles
63 HW: Niveau incorrect sur la ligne Power_fail (trop bas)
64 HW:
65 HW:
66 HW:
67 HW:
68 HW:
69 HW:
réservé pour matériel
71 DVB unité
72 DVB unité
73 DVB unité
74 DVB unité
75 DVB unité
réservé pour DVB
76 réservé
77 rréservé
78 DVD ne répond plus
79 DVD : réservé pour DVD
81 RP
82 RP
83 RP
84 RP
86 RP
87 RP
réservé Rétroprojecteur
88 réservé
89 réservé

WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES

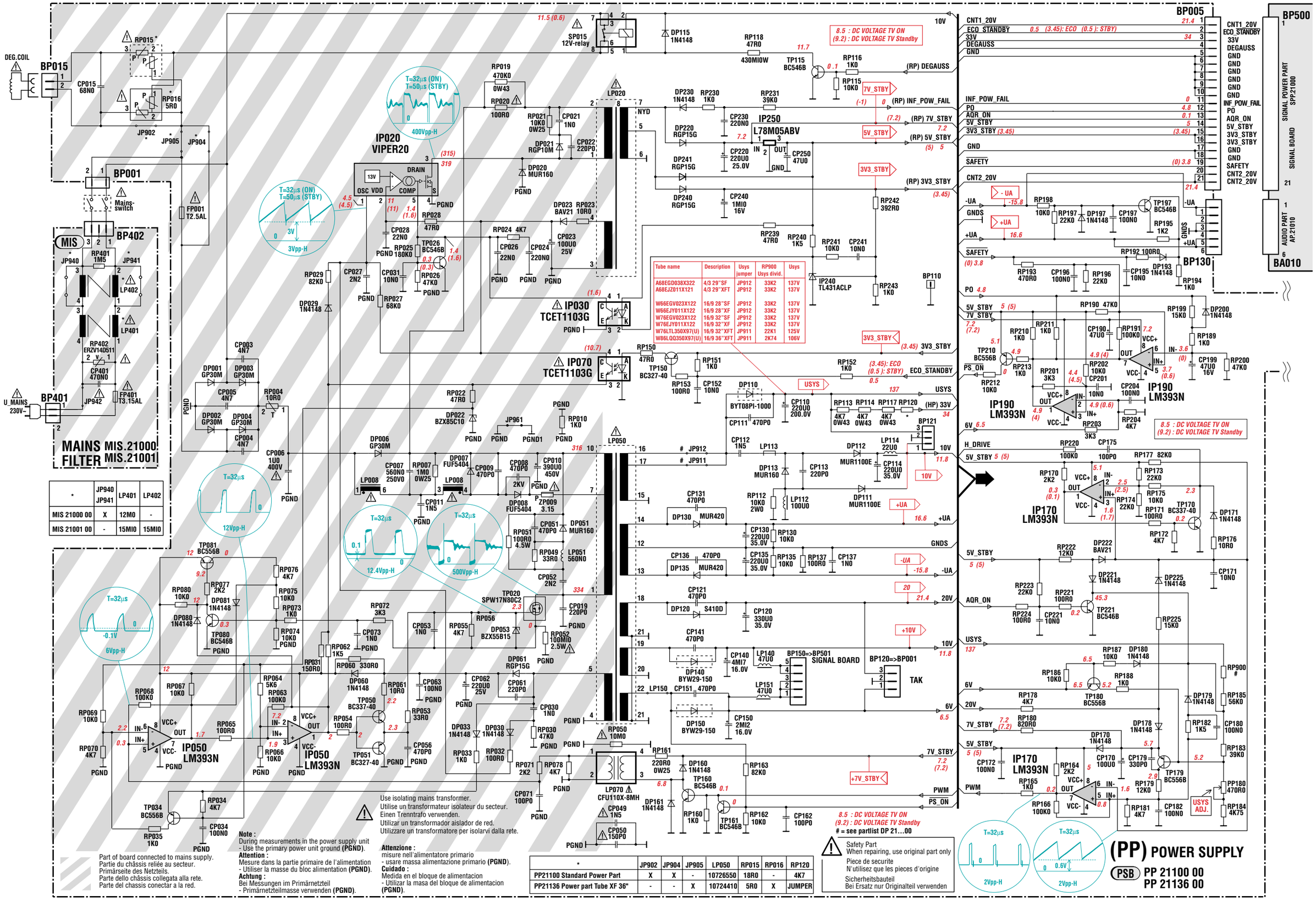
ICC21
First issue 09 / 01

BLOCK DIAGRAM - SCHEMA SYNOPTIQUE - BLOCKSCHALTBILD - SCHEMA A BLOCCHI - ESQUEMA DE BLOQUES



ICC21
First issue 09 / 01

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS
POWER SUPPLY PART - PARTIE ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓN

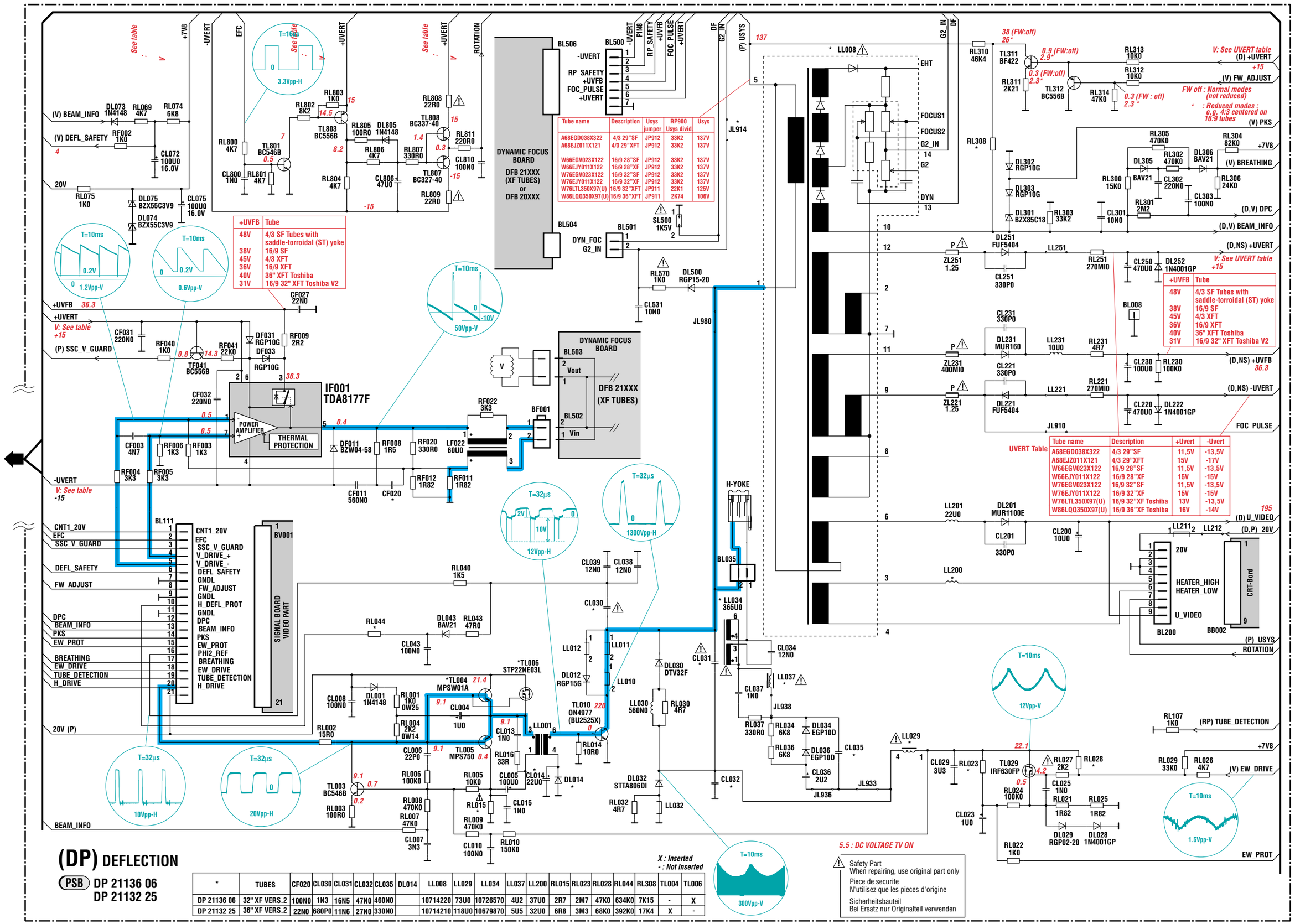


*	JP940 JP941	LP401	LP402
MIS 21000 00	X	12M0	-
MIS 21001 00	-	15MI0	15MI0

Tube name	Description	Usys jumper	RP900 Usys divid.	Usys
A68EGD038X322	4/3 29"SF	JP912	33K2	137V
A68EJZ011X121	4/3 29"XFT	JP912	33K2	137V
W66EGV023X122	16/9 28"SF	JP912	33K2	137V
W66EJY011X122	16/9 28"XF	JP912	33K2	137V
W76EGV023X122	16/9 32"SF	JP912	33K2	137V
W76EJY011X122	16/9 32"XF	JP912	33K2	137V
W76LTL350X97(U)	16/9 32"XFT	JP911	22K1	125V
W86LQQ350X97(U)	16/9 36"XFT	JP911	2K74	106V

*	JP902	JP904	JP905	LP050	RP015	RP016	RP120
PP21100 Standard Power Part	X	X	-	10726550	18R0	-	4K7
PP21136 Power part Tube XF 36"	-	-	X	10724410	5R0	X	JUMPER

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS SCANNING - BALAYAGE - ABLENKUNG - BARRIDO - SCANSIONE - 32” XF TOSH.V2 TUBES - 36” XF TOSH.V2 TUBES



+UVFB	Tube
48V	4/3 SF Tubes with saddle-torroidal (ST) yoke
38V	16/9 SF
45V	4/3 XFT
36V	16/9 XFT
40V	36" XFT Toshiba
31V	16/9 32" XFT Toshiba V2

Tube name	Description	Usys jumper	RP900 Usys divid	Usys
A68EGD038X322	4/3 29"SF	JP912	33K2	137V
A68EJZ011X121	4/3 29"XFT	JP912	33K2	137V
W66EGV023X122	16/9 28"SF	JP912	33K2	137V
W66EJY011X122	16/9 28"XF	JP912	33K2	137V
W76EGV023X122	16/9 32"SF	JP912	33K2	137V
W76EJY011X122	16/9 32"XF	JP912	33K2	137V
W76LTL350X97(U)	16/9 32"XFT	JP911	22K1	125V
W86LQG350X97(U)	16/9 36"XFT	JP911	2K74	106V

Tube name	Description	+Uvert	-Uvert
A68EGD038X322	4/3 29"SF	11,5V	-13,5V
A68EJZ011X121	4/3 29"XFT	15V	-17V
W66EGV023X122	16/9 28"SF	11,5V	-13,5V
W66EJY011X122	16/9 28"XF	15V	-15V
W76EGV023X122	16/9 32"SF	11,5V	-13,5V
W76EJY011X122	16/9 32"XF	15V	-15V
W76LTL350X97(U)	16/9 32"XF Toshiba	13V	-13,5V
W86LQG350X97(U)	16/9 36"XF Toshiba	16V	-14V

UVERT Table

(DP) DEFLECTION

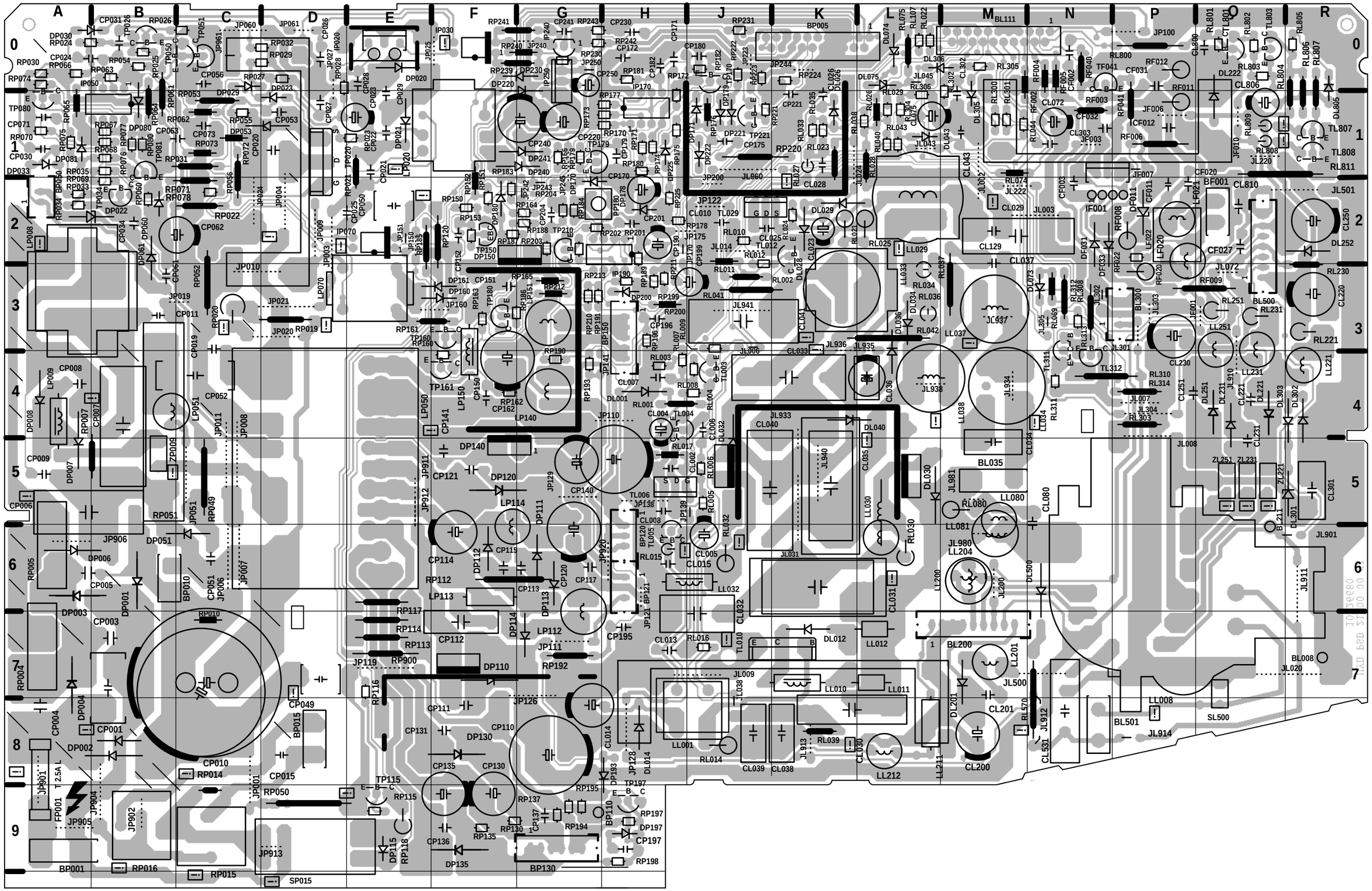
PSB DP 21136 06
DP 21132 25

X : Inserted
- : Not Inserted

*	TUBES	CF020	CL030	CL031	CL032	CL035	DL014	LL008	LL029	LL034	LL037	LL200	RL015	RL023	RL028	RL044	RL308	TL004	TL006
DP 21136 06	32" XF VERS.2	100N0	1N3	16N5	47N0	460N0		10714220	73U0	10726570	4U2	37U0	2R7	2M7	47K0	634K0	7K15	-	X
DP 21132 25	36" XF VERS.2	22N0	680P0	11N6	27N0	330N0		10714210	118U0	10679870	5U5	32U0	6R8	3M3	68K0	392K0	17K4	X	-

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

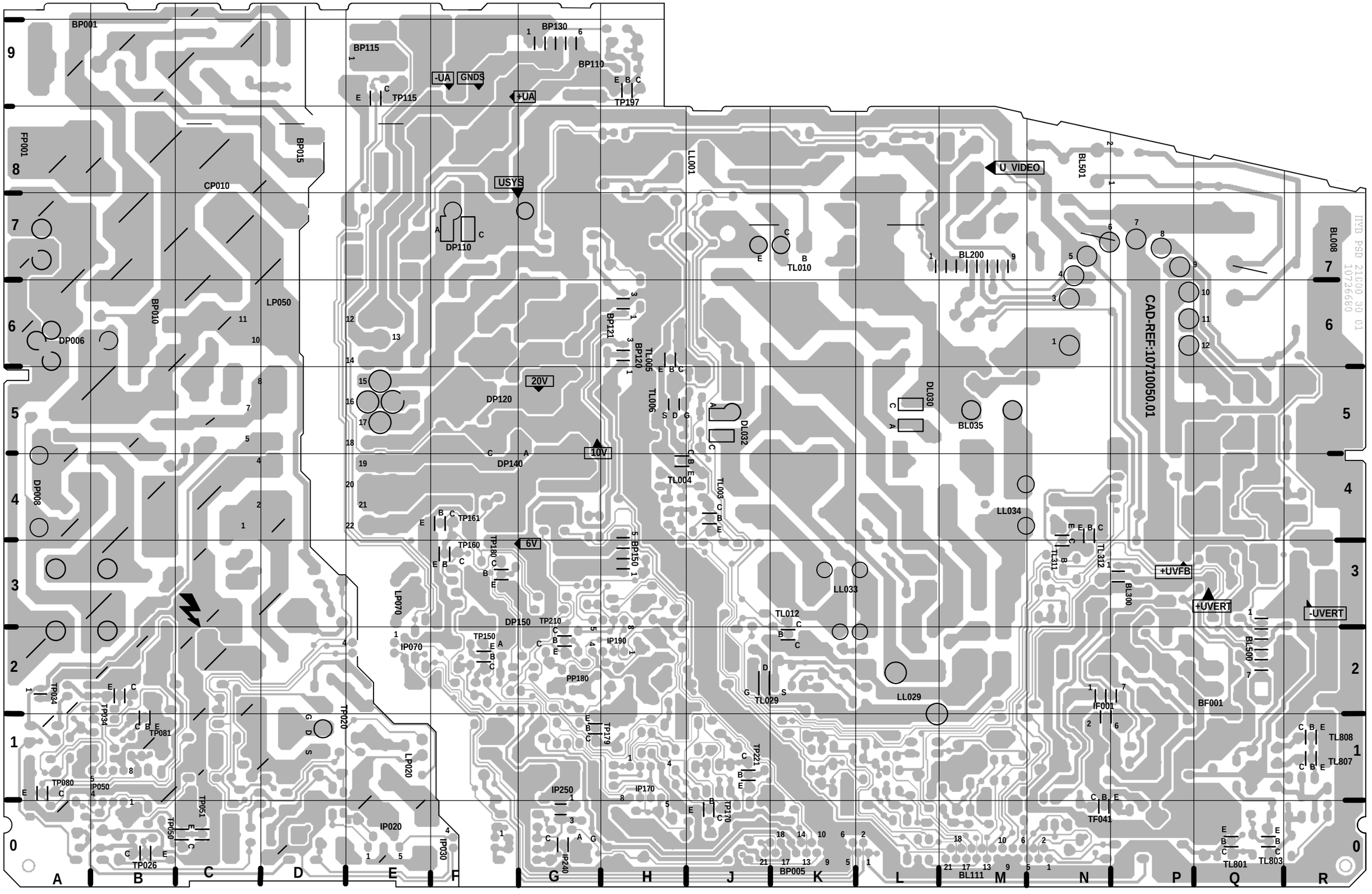
COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES



ICC21
First issue 09 / 01

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

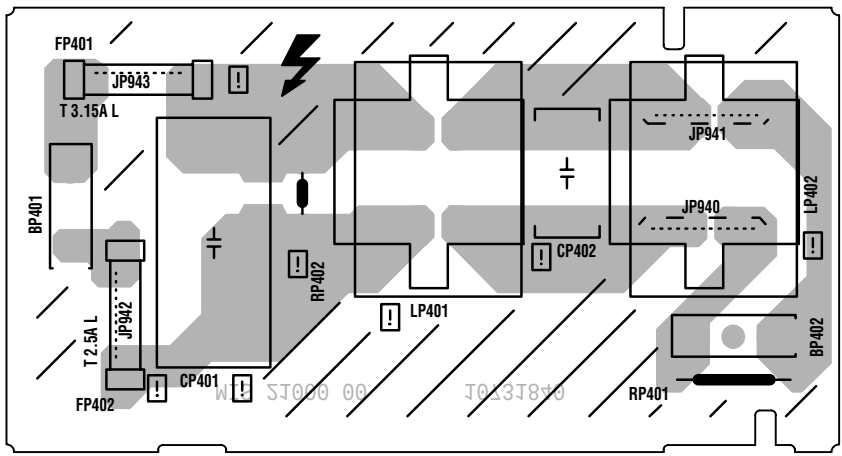
SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



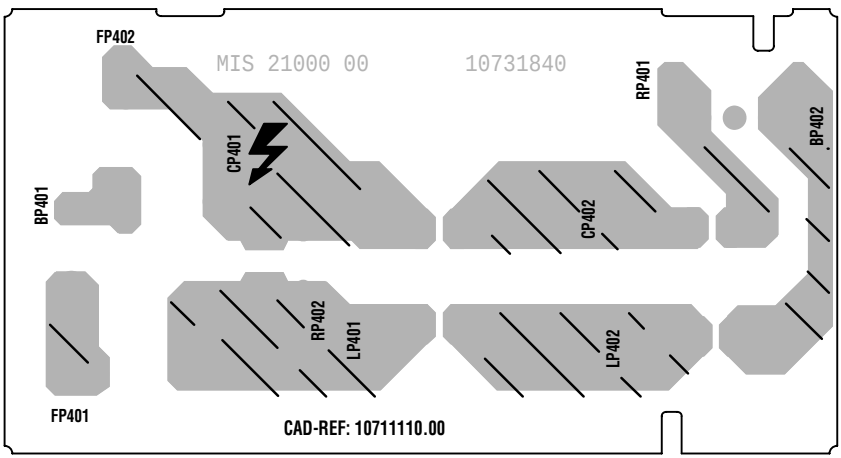
ICC21
First issue 09 / 01

MAINS FILTER - FILTRE SECTEUR
MIS21000 - MIS21001

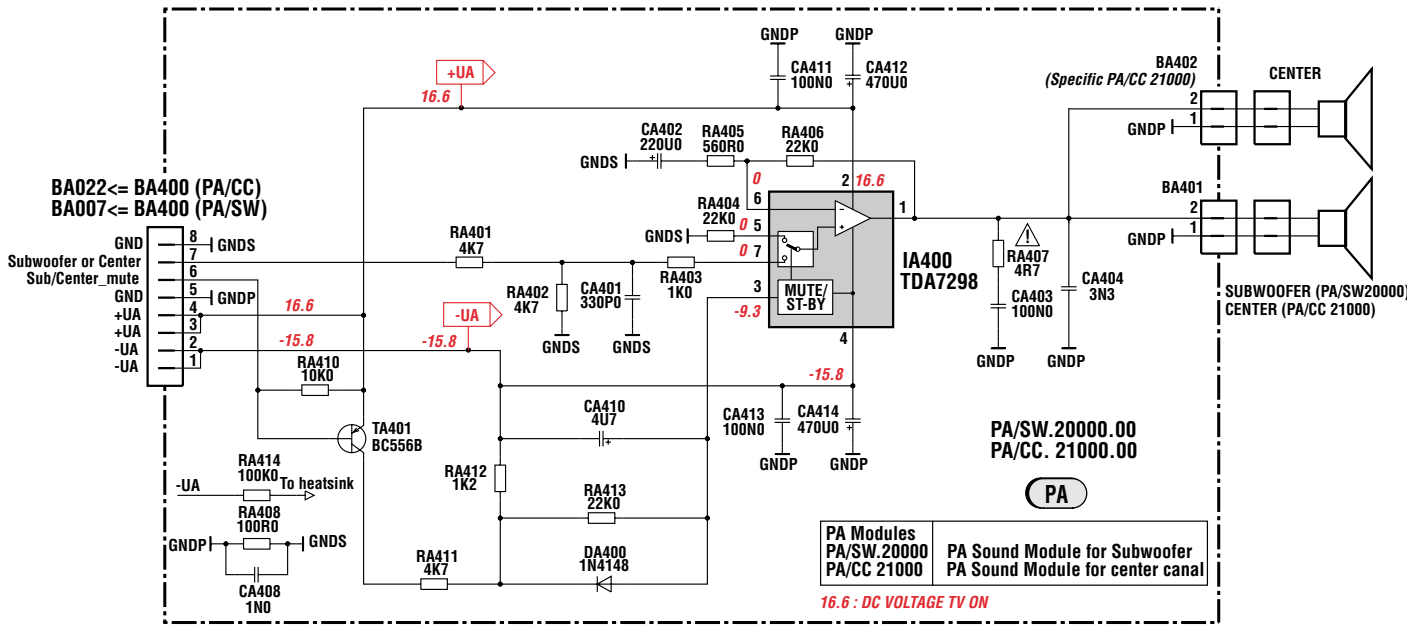
COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE -
LATO COMPONENTI - LADO COMPONENTES



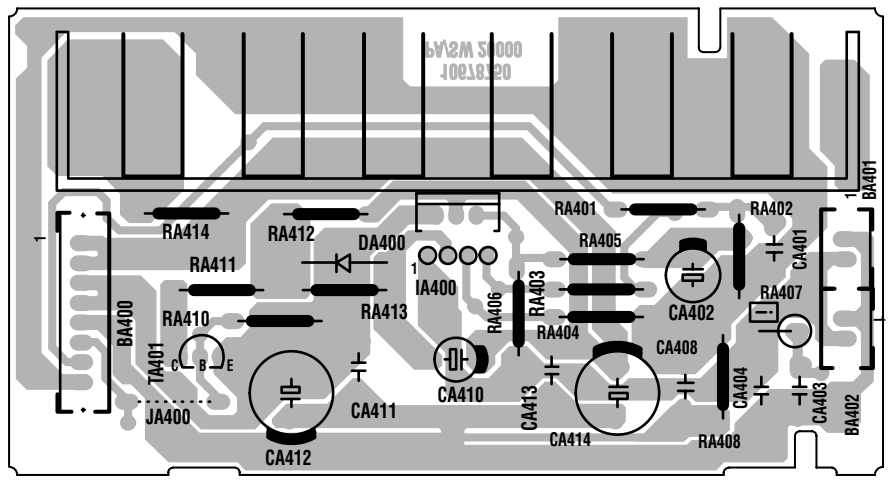
SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



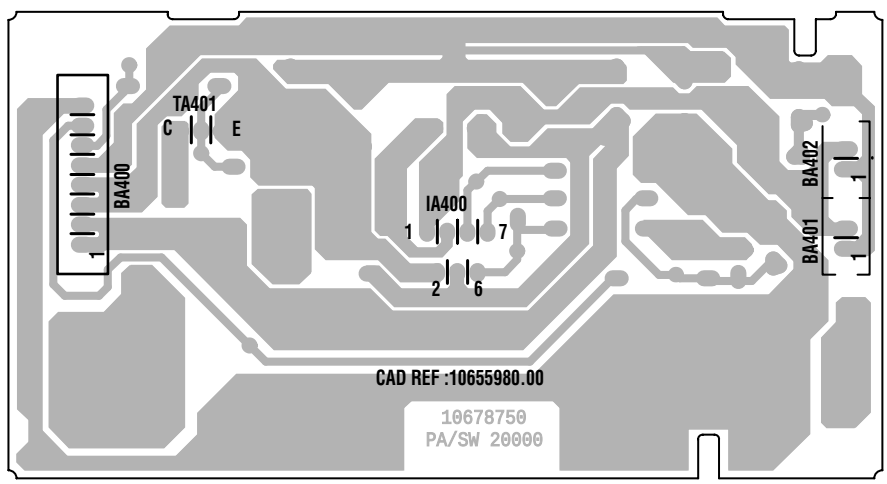
SUBWOOFER AMPLIFIER OR CENTER AMPLIFIER FOR DIGITAL DOLBY -
AMPLIFICATEUR SUBWOOFER OU AMPLIFICATEUR CENTRAL POUR DOLBY DIGITAL-
SUBWOOFER VERSTÄRKER -CENTRAL VERSTÄRKER -
AMPLIFICATORE SUBWOOFER O AMPLIFICATORE CENTRALE PER DIGITAL DOLBY
AMPLIFICADOR SUBWOOFER O AMPLIFICADOR CENTRAL PARA DOLBY DIGITAL



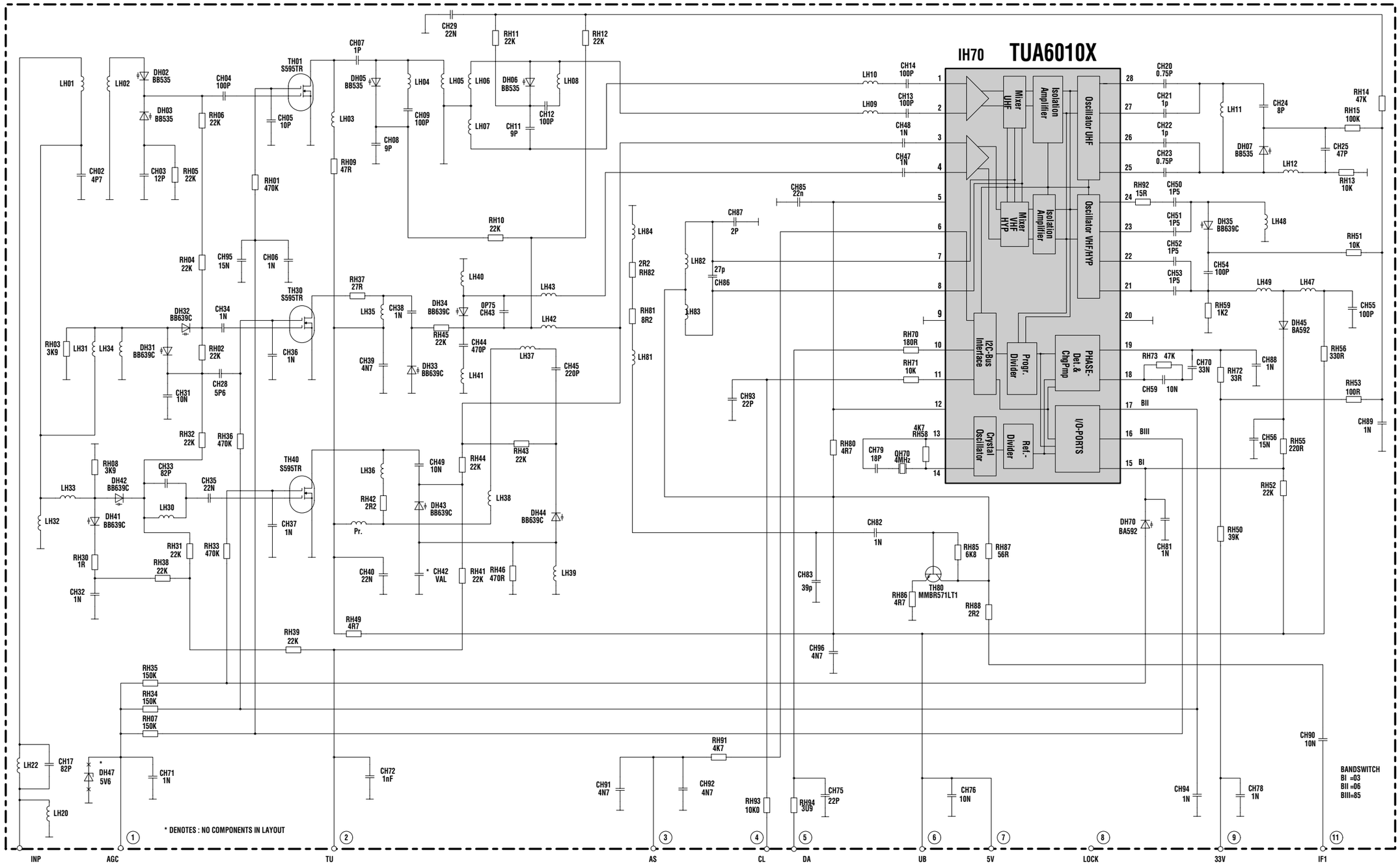
COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE -
LATO COMPONENTI - LADO COMPONENTES



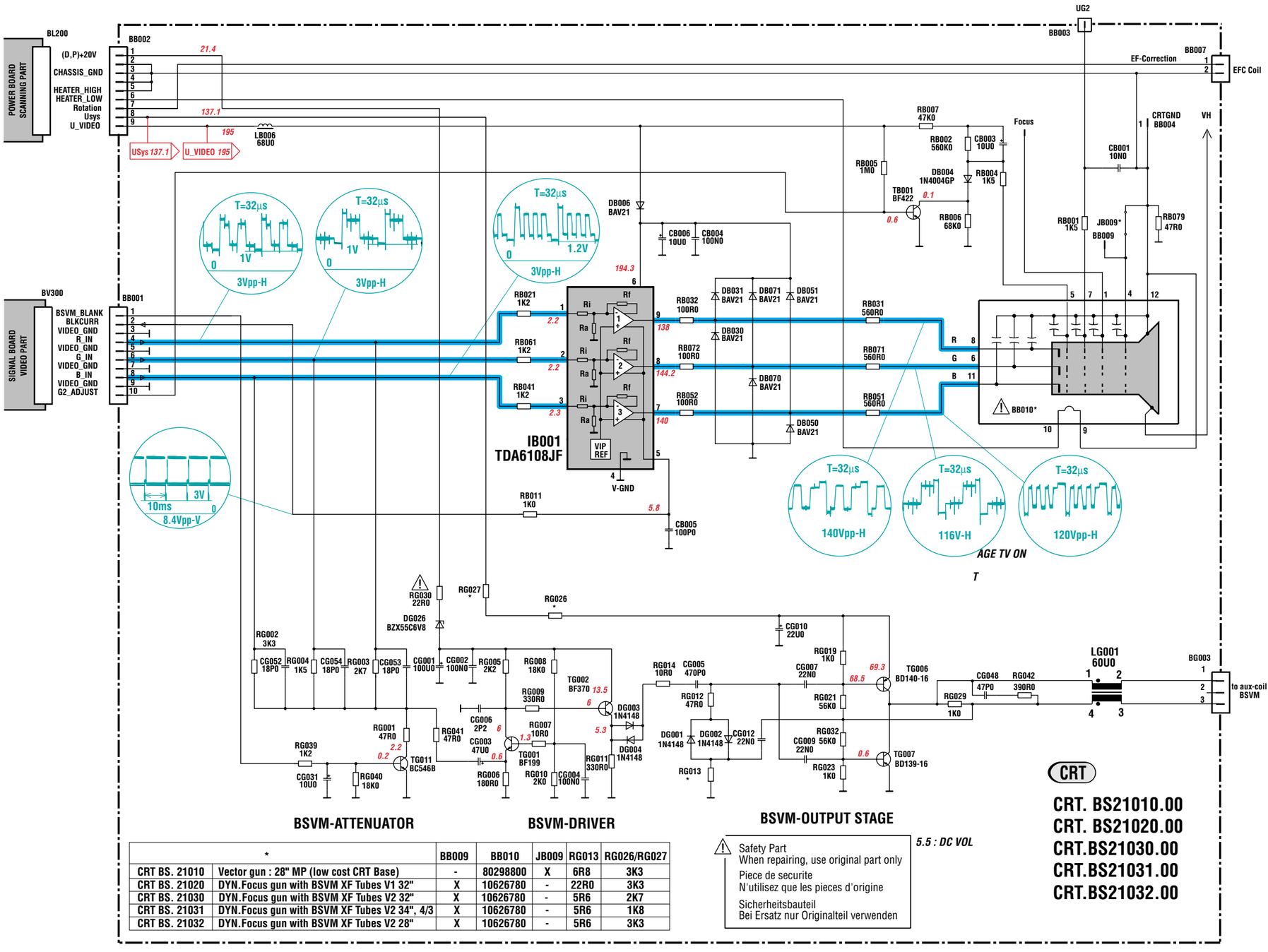
SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



ICC21
First issue 09 / 01

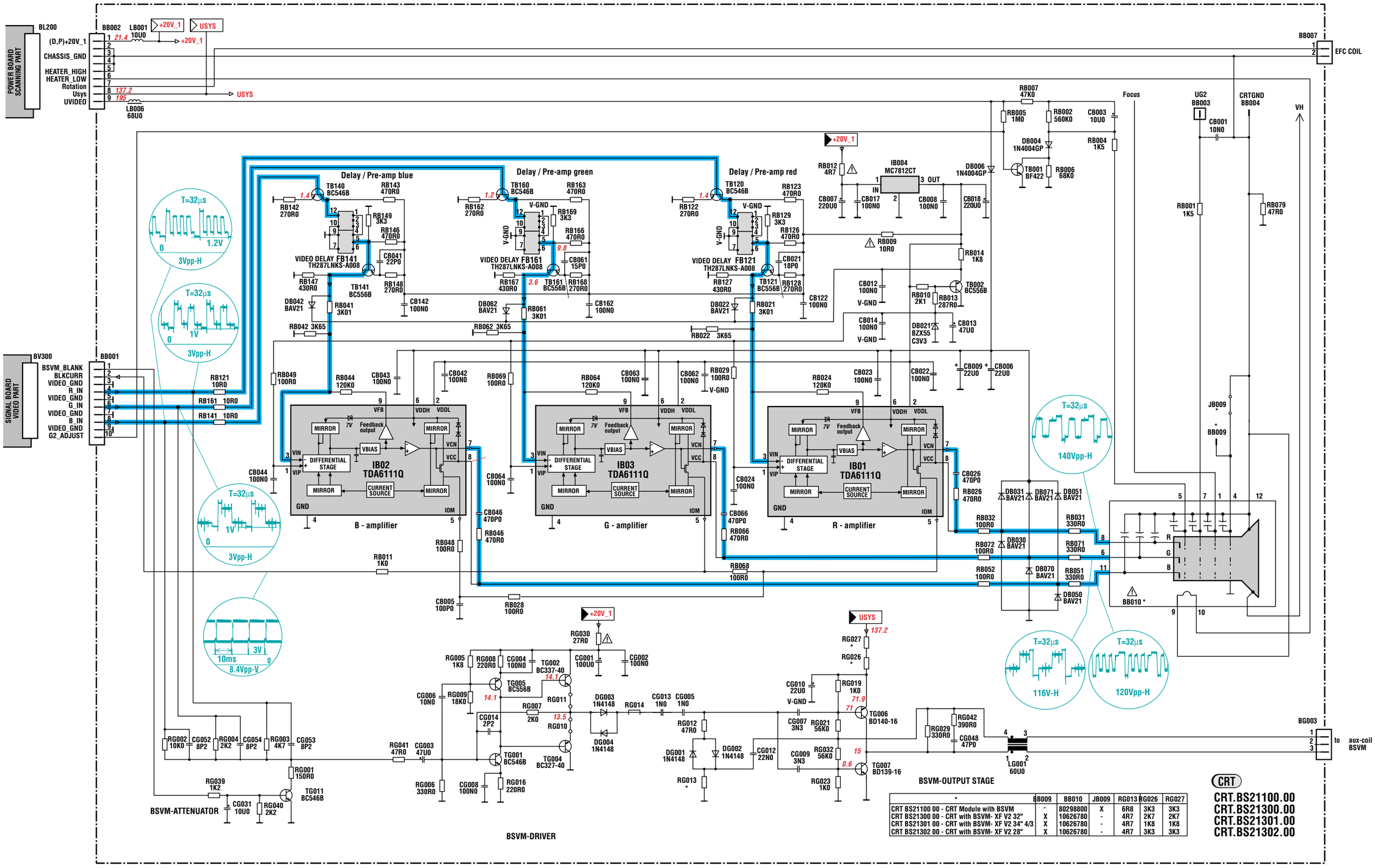

IH70 TUA6010X
Mixer UHF
Isolation Amplifier
Oscillator UHF
Mixer VHF HYP
Isolation Amplifier
Oscillator VHF/HYP
I2C-Bus Interface
Progr. Divider
PHASE-Det.& ChgPmp
Crystal Oscillator
Ref.-Divider
I/O-PORTS
* DENOTES : NO COMPONENTS IN LAYOUT
BANDSWITCH
BI =03
BII =06
BIII=85
INP
AGC
TU
AS
CL
DA
UB
5V
LOCK
33V
IF1

VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO
CRT.BS21010.00 - CRT.BS21020.00 - CRT.BS21030.00 - CRT.BS21031.00 - CRT.BS21032.00



*		BB009	BB010	JB009	RG013	RG026/RG027
CRT BS. 21010	Vector gun : 28" MP (low cost CRT Base)	-	80298800	X	6R8	3K3
CRT BS. 21020	DYN.Focus gun with BSVM XF Tubes V1 32"	X	10626780	-	22R0	3K3
CRT BS. 21030	DYN.Focus gun with BSVM XF Tubes V2 32"	X	10626780	-	5R6	2K7
CRT BS. 21031	DYN.Focus gun with BSVM XF Tubes V2 34", 4/3	X	10626780	-	5R6	1K8
CRT BS. 21032	DYN.Focus gun with BSVM XF Tubes V2 28"	X	10626780	-	5R6	3K3

VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICAD OR VIDEO
CRT.BS21100.00 - CRT.BS21300.00 - CRT.BS21301.00 - CRT.BS21302.00



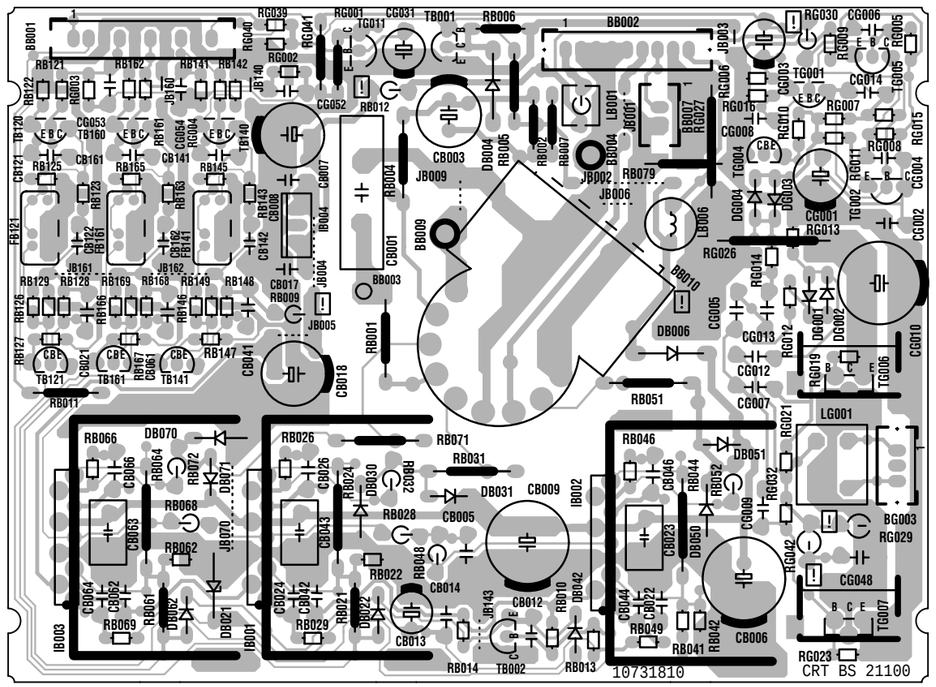
*	BB009	BB010	JB009	RG013	RG026	RG027
CRT BS21100 00 - CRT Module with BSVM	-	80298800	X	6R8	3K3	3K3
CRT BS21300 00 - CRT with BSVM- XF V2 32"	X	10626780	-	4R7	2K7	2K7
CRT BS21301 00 - CRT with BSVM- XF V2 34" 4/3	X	10626780	-	4R7	1K8	1K8
CRT BS21302 00 - CRT with BSVM- XF V2 28"	X	10626780	-	4R7	3K3	3K3

CRT
CRT.BS21100.00
CRT.BS21300.00
CRT.BS21301.00
CRT.BS21302.00

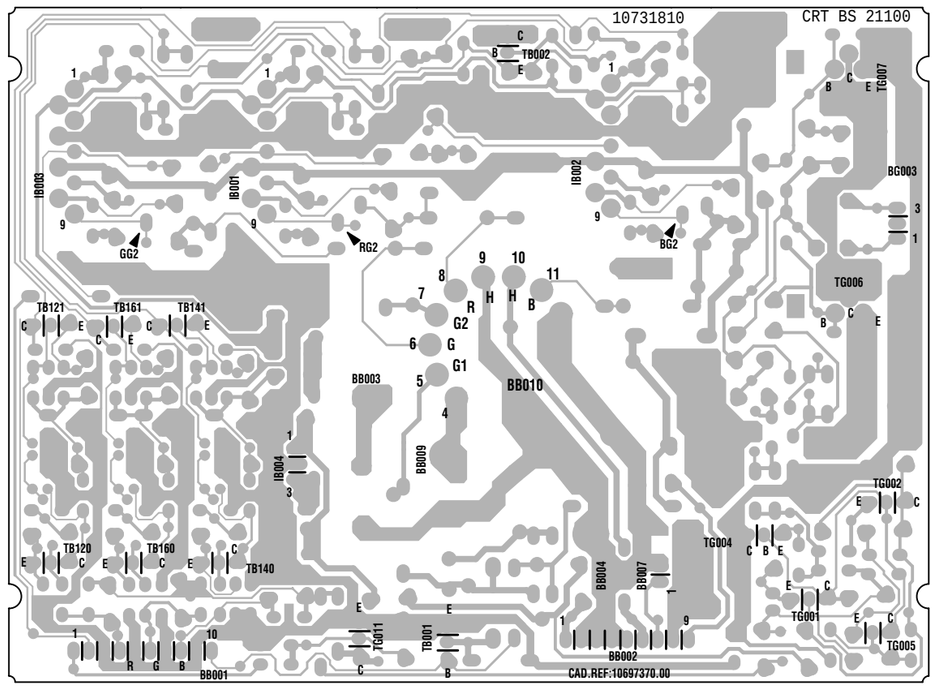
VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO

CRT.BS21100.00 - CRT.BS21300.00 - CRT.BS21301.00 - CRT.BS21302.00

COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE -
LATO COMPONENTI - LADO COMPONENTES

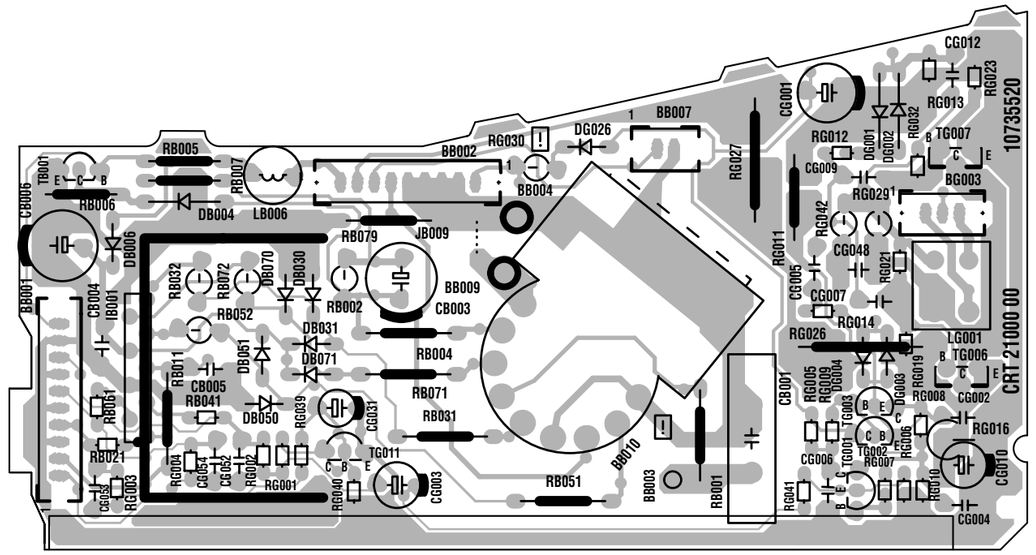


SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS

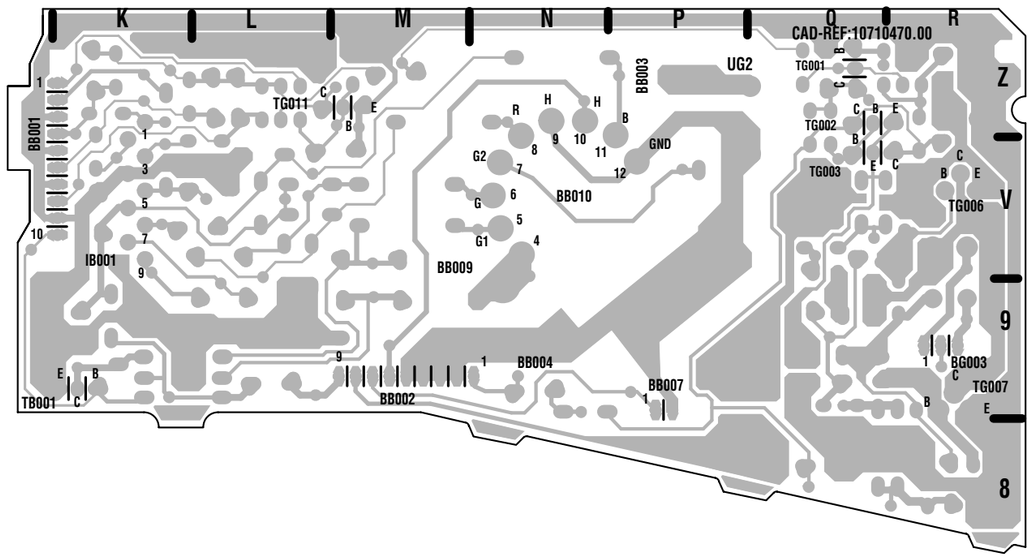


CRT.BS21010.00 - CRT.BS21020.00 - CRT.BS21030.00 - CRT.BS21031.00 - CRT.BS21032.00

COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE -
LATO COMPONENTI - LADO COMPONENTES



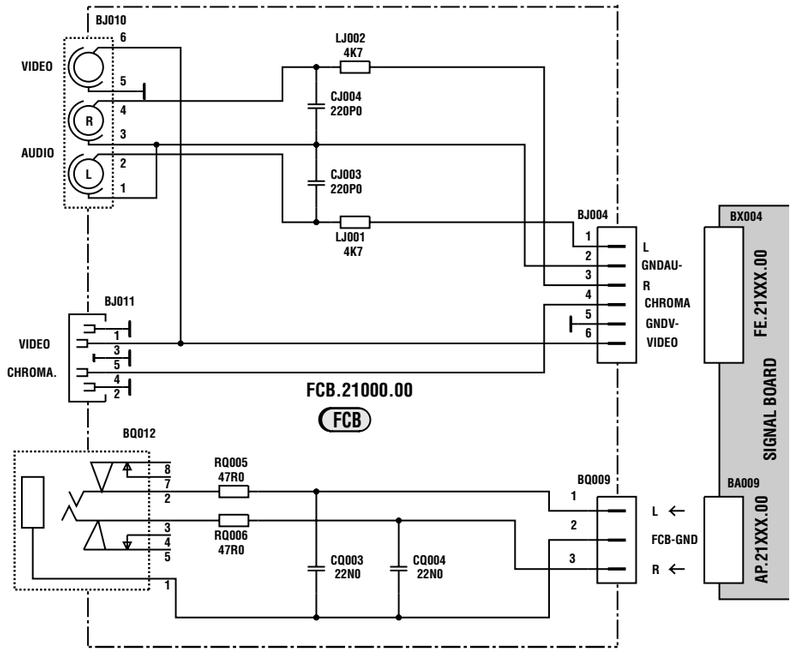
SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



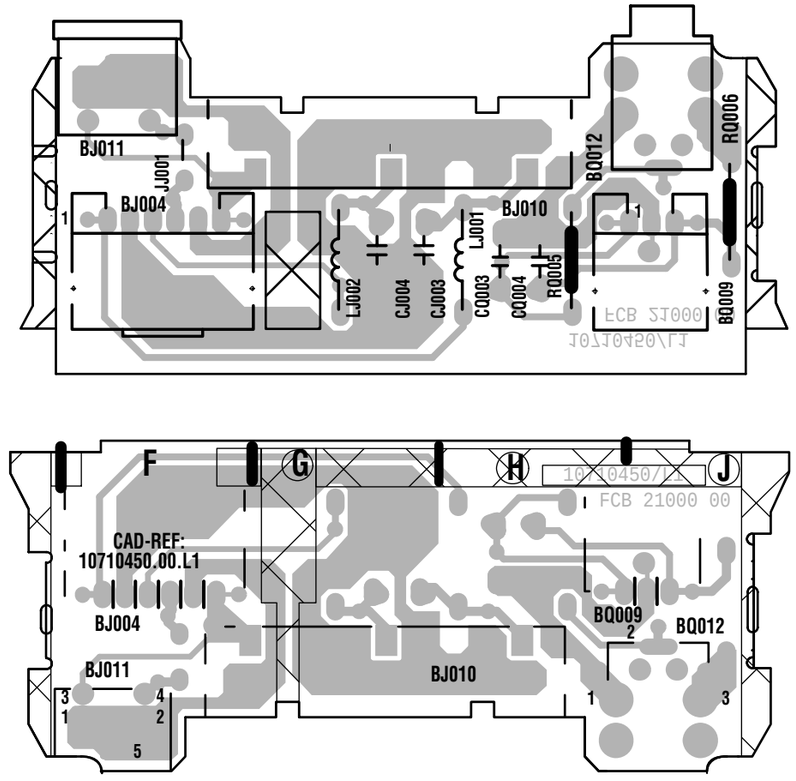
ICC21

FRONT CONNECTOR BOARD - PRISES EN FACADE ET INTERCONNEXION DU CLAVIER -FRONT ANSCHLUSSPLATTE - PIASTRA CONNESSIONE FRONTALE - PLÁTINA MANDOS FRONTAL

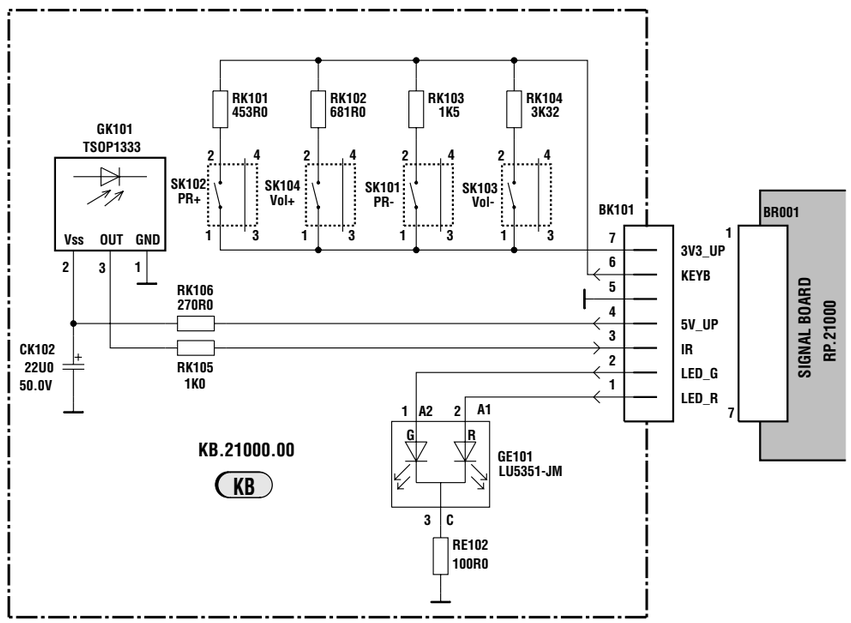
FCB.21000.00



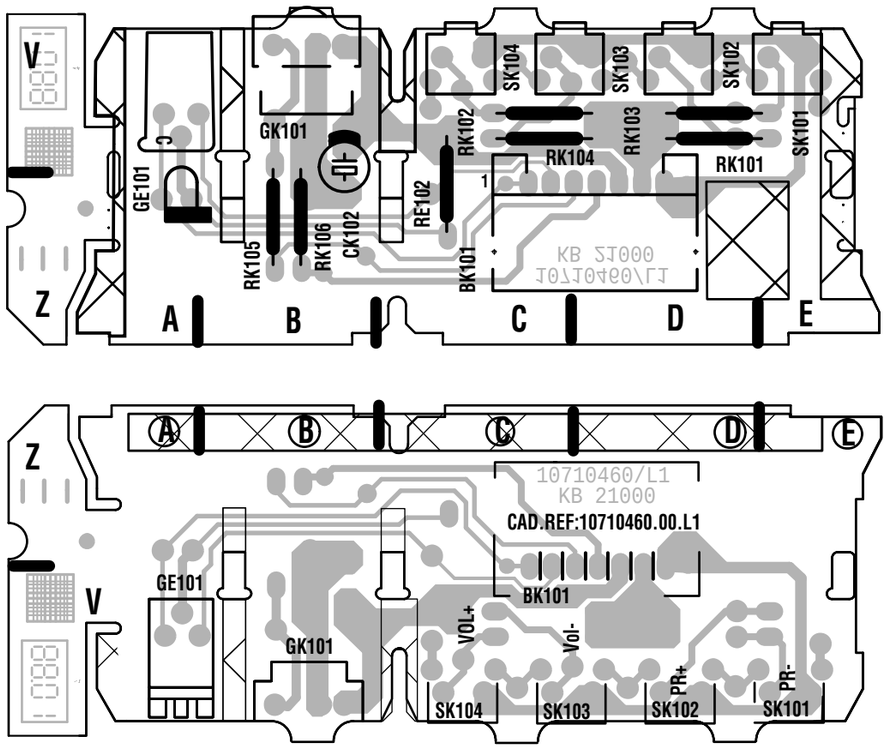
FCB.21000.00



KB.21000.00

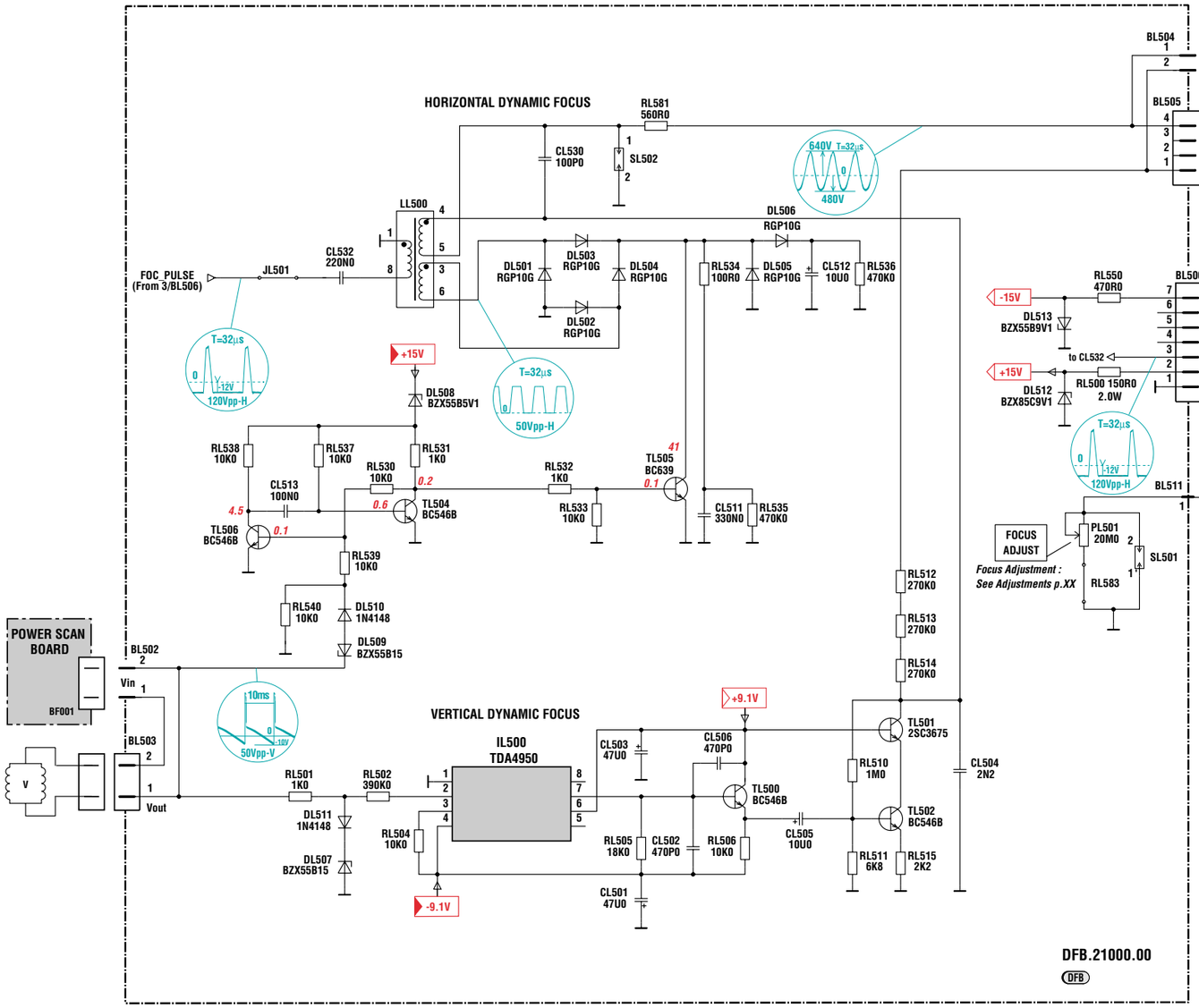


KB.21000.00

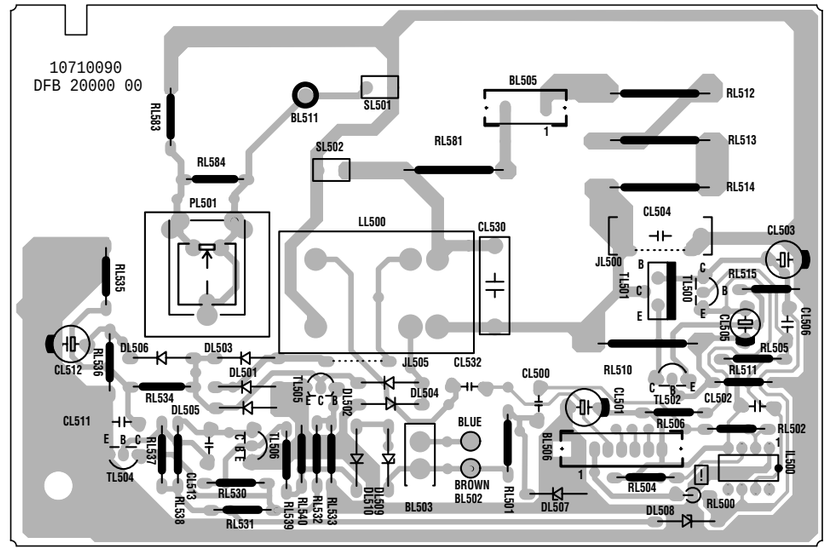


DYNAMIC FOCUS MODULE - MODULE FOCUS DYNAMIQUE - DYNAMIKFOKUS BAUSTEIN - MODULO FUOCO DINAMICO - MÓDULO FOCO DINÁMICO

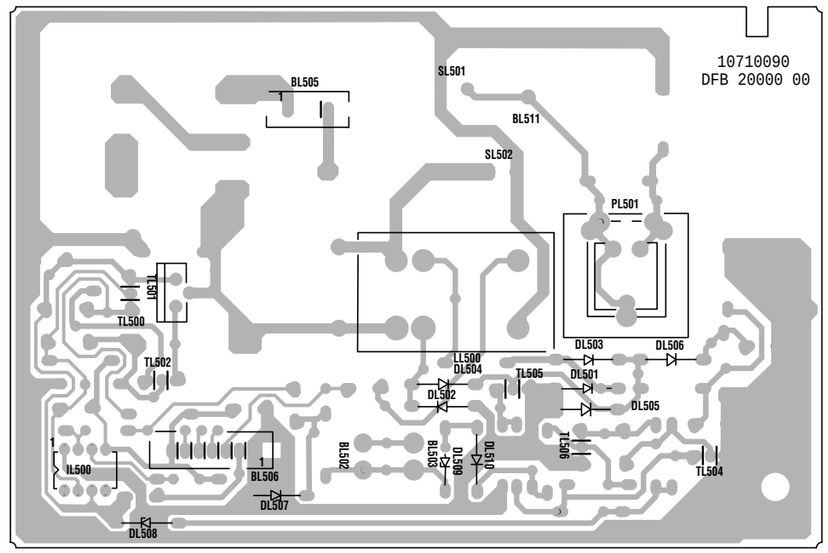
XFT TUBES 36”V2 - DFB 21000.00



COMPONENT SIDE - CÔTE COMPOSANTS - BESTÜCKUNGSSEITE -
LATO COMPONENTI - LADO COMPONENTES



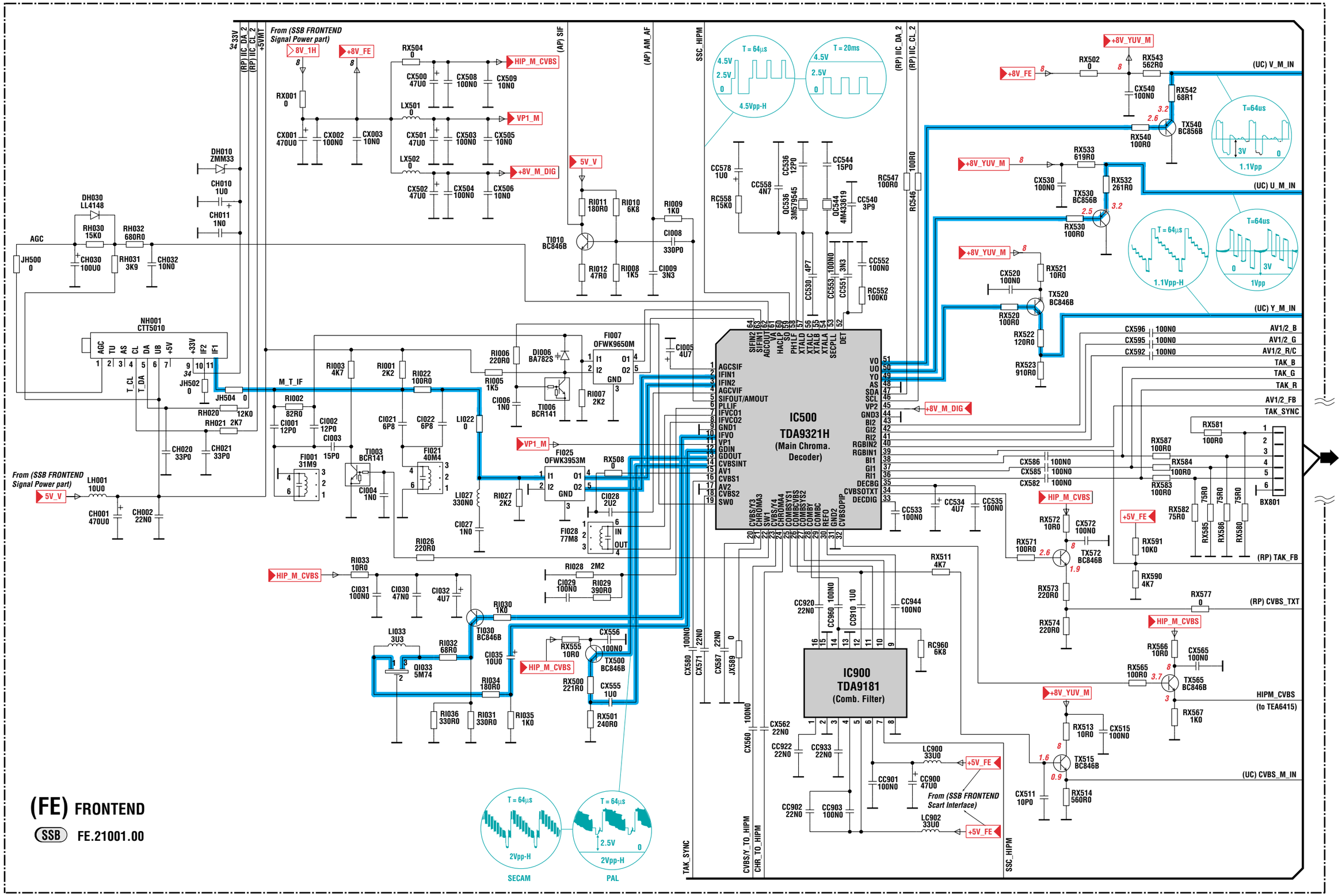
SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE -
LATO SALDATURE - LADO SOLDADURAS



ICC21
First issue 09 / 01

1 TUNER VERSION WITH COMB FILTER FRONTEND PART (1/3) - PARTIE FRONTEND VERSION 1 TUNER AVEC FILTRE EN PEIGNE (1/3) - EINGANGSSTUFEN 1 TUNER VERSION MIT KAMMFILTER (1/3) - 1 VERSIONE TUNER CON COMB FILTER FRONTEND PART (1/3) - PARTE FRONTEND VERSIÓN DE 1 SINTONIZADOR CON COMB FILTER (1/3)

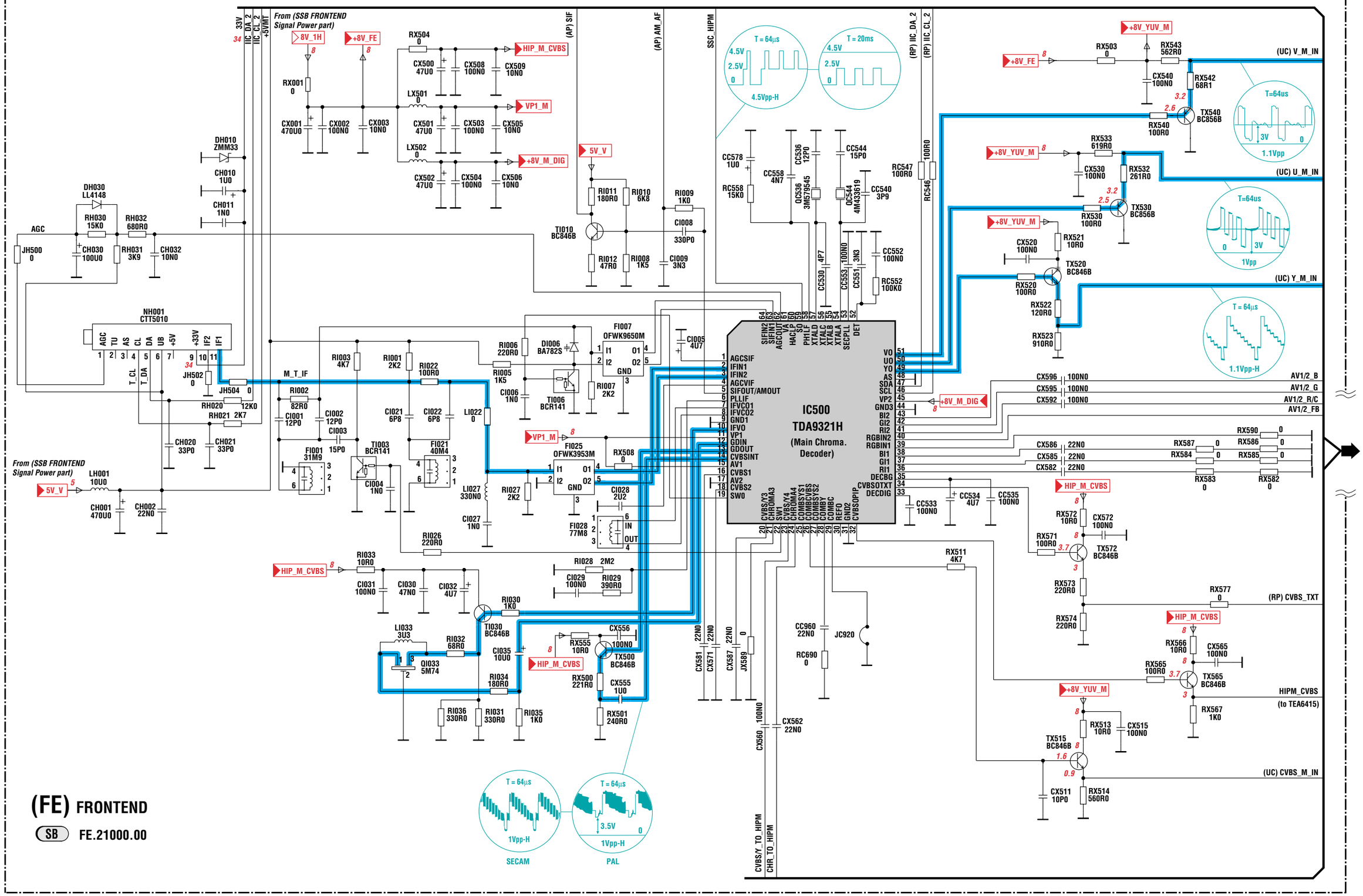
RF/FI / VIDEO SIGNAL PROCESSING - HF/FI / TRAITEMENT VIDEO - HAUPTTUNER HF/ZF UND VIDEOSIGNALVERARBEITUNG - RF/FI/ ELABORAZIONE SEGNALE VIDEO - RF/FI / PROCESAMIENTO SEÑAL VIDEO



ICC21
First issue 09 / 01

1 TUNER VERSION WITHOUT COMB FILTER FRONTEND PART (1/3) - PARTIE FRONTEND VERSION 1 TUNER SANS FILTRE EN PEIGNE (1/3) - EINGANGSSTUFEN 1 TUNER VERSION OHNE KAMMFILTER - 1 VERSIONE TUNER SENZA COMB FILTER FRONTEND PART (1/3) - PARTE FRONTEND VERSIÓN 1 SINTONIZADOR SIN COMB FILTER (1/3)

RF/FI / VIDEO SIGNAL PROCESSING - HF/FI / TRAITEMENT VIDEO - HAUPTTUNER HF/ZF UND VIDEOSIGNALVERARBEITUNG - RF/FI/ ELABORAZIONE SEGNALE VIDEO - RF/FI / PROCESAMIENTO SEÑAL VIDEO

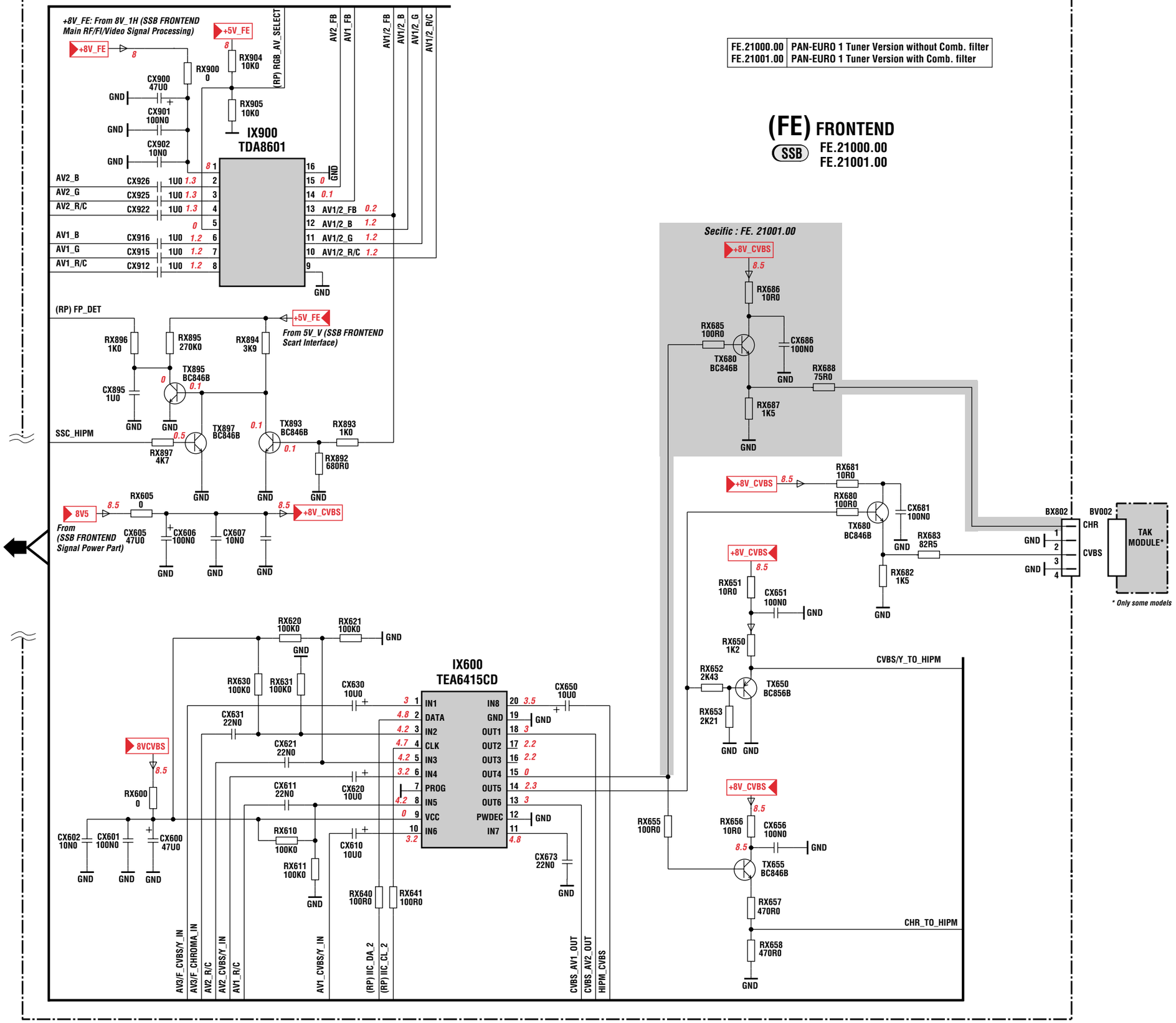


SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
1 TUNER FRONTEND PART (2/3) - EINGANGSSTUFEN 2TUNER VERSION (2/3) - 1 VERSIONE TUNER PARTE FRONTEND (2/3) - PARTE FRONTEND VERSIÓN 1 SINTONIZADOR (2/3)

VIDEO SWITCH / RGB SWITCH - COMMUTATION VIDEO/COMMUTATION RGB - VIDEO UND RGB UMSCHALTUNG - COMMUAZIONE VIDEO / COMMUTAZIONE RGB - CONMUTACION VIDEO / CONMUTACION RGB

FE.21000.00	PAN-EURO 1 Tuner Version without Comb. filter
FE.21001.00	PAN-EURO 1 Tuner Version with Comb. filter

(FE) FRONTEND
SSB FE.21000.00
FE.21001.00

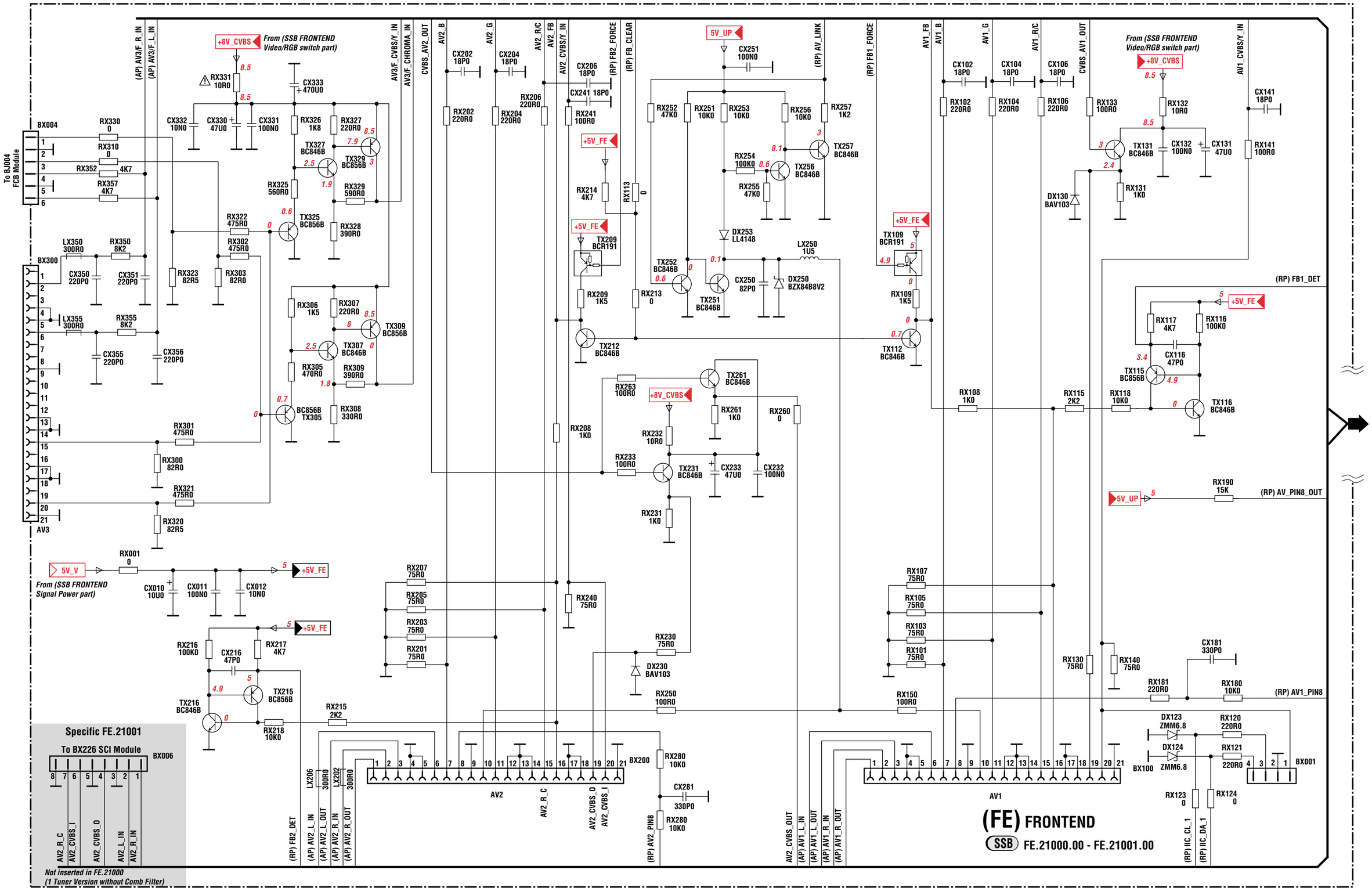


ICC21
First issue 09 / 01

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

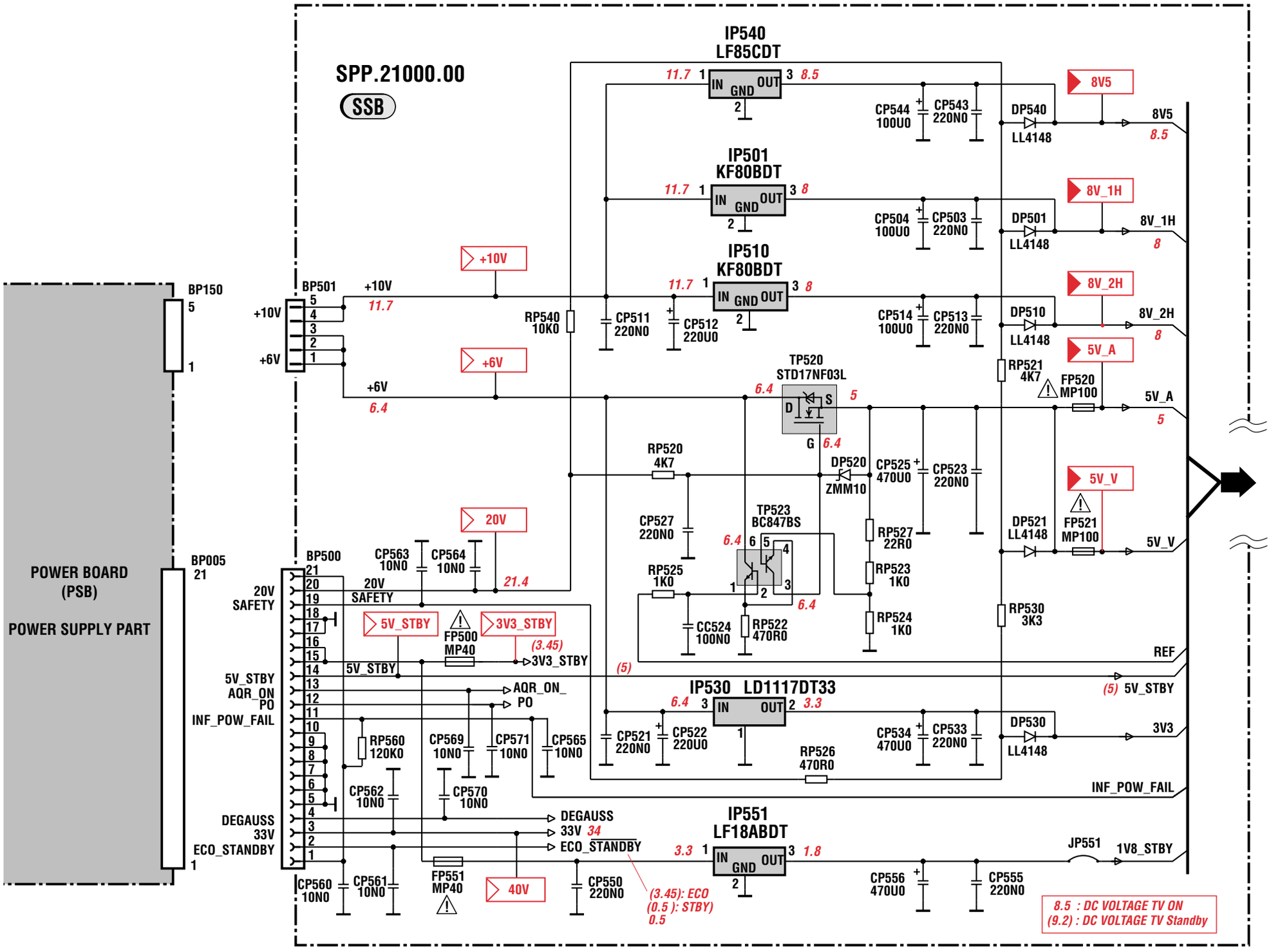
1 TUNER FRONTEND PART (3/3) - EINGANGSSTUFEN 2TUNER VERSION (3/3) - 1 VERSIONE TUNER PARTE FRONTEND (3/3) - PARTE FRONTEND VERSIÓN 1 SINTONIZADOR (3/3)

SCART INTERFACE - INTERFACE PERITELEVISION - SCART INTERFACE - PRESA PERITEL- EUROCONECTOR

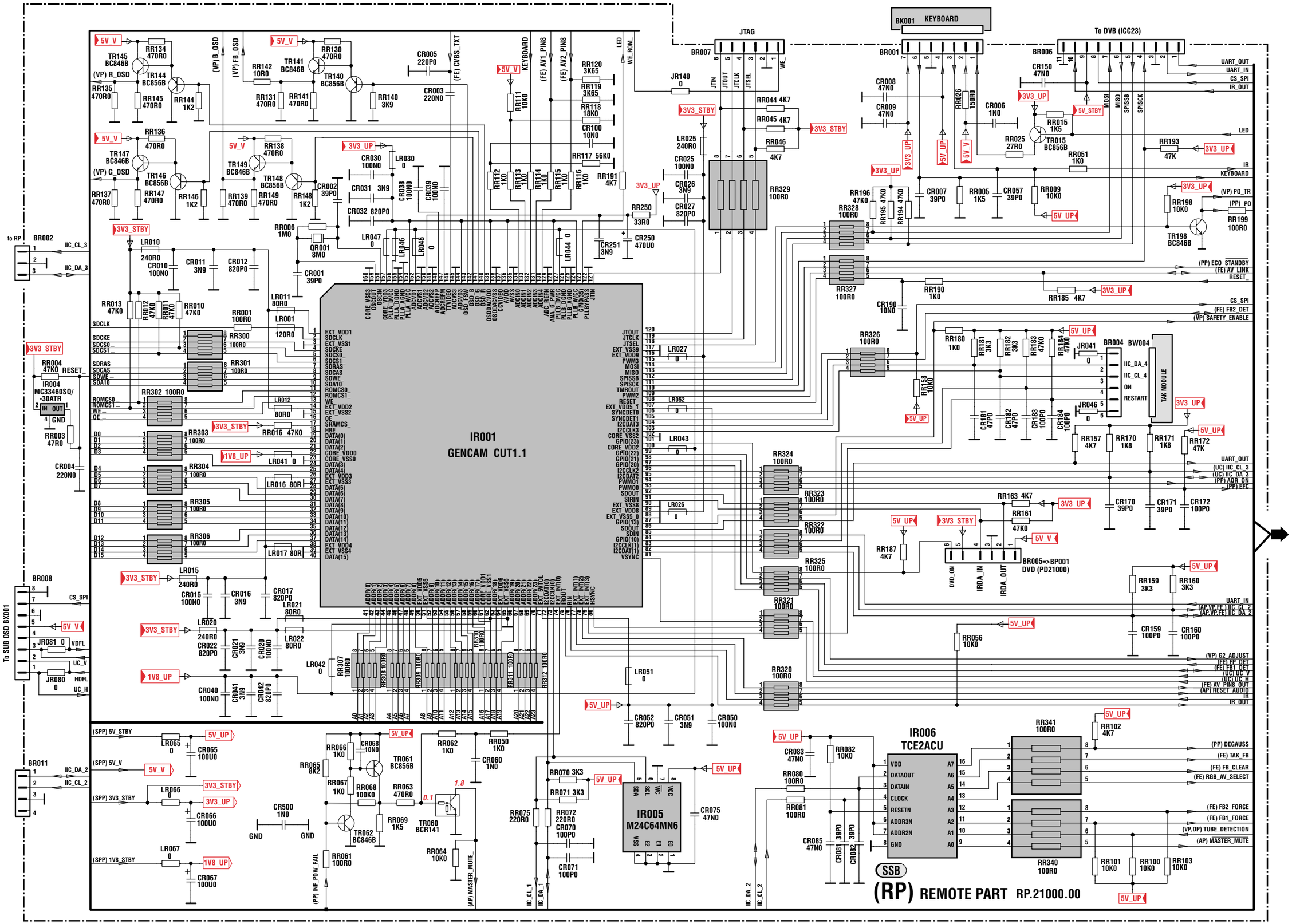


SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

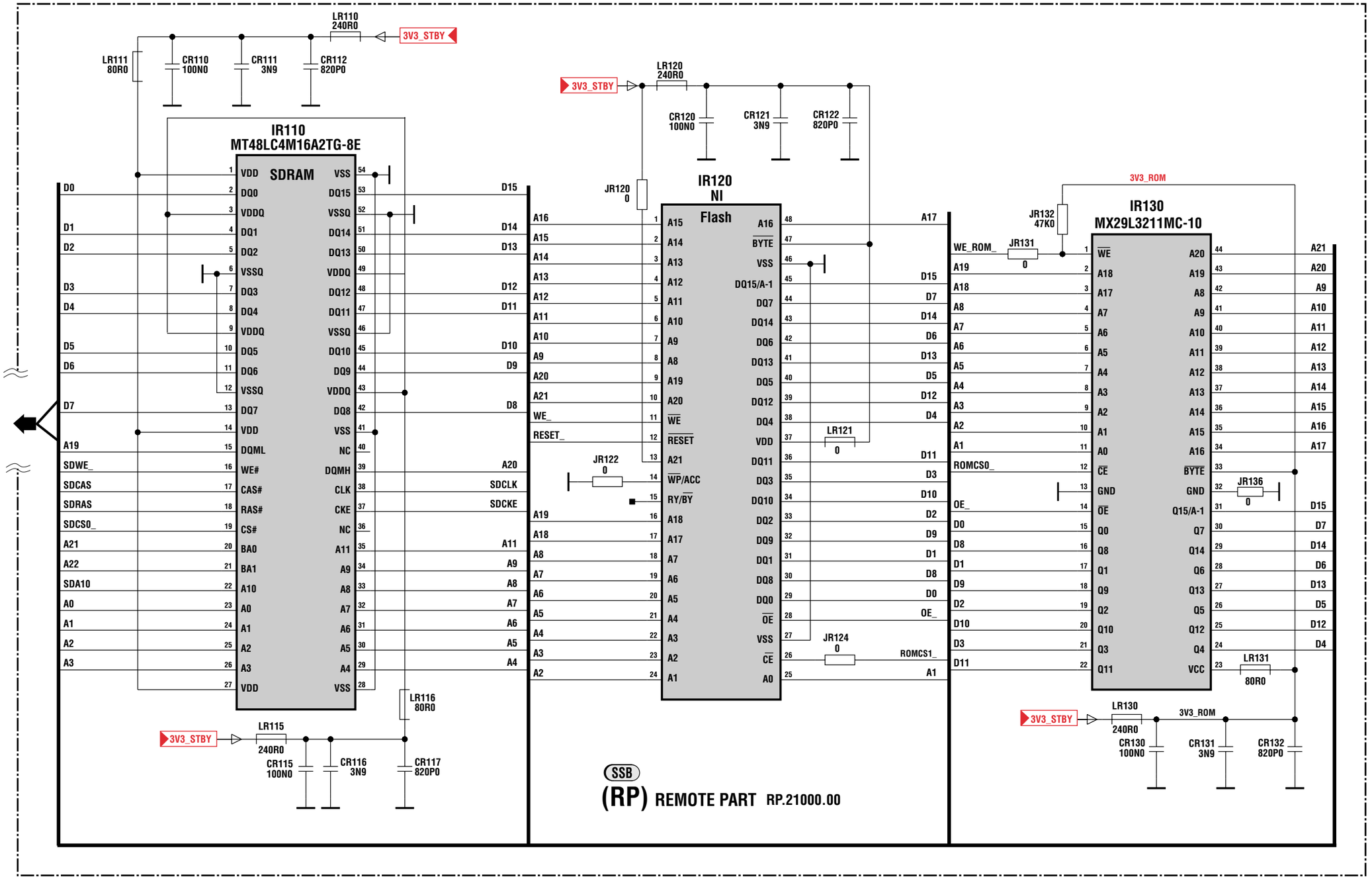
SIGNAL BOARD POWER PART - PARTIE ALIMENTATION DE LA PLATINE PETITES SIGNAUX - BETRIEBSSPANNUNGSERZEUGUNG SIGNAL PLATINE - PARTE ALIMENTAZIOEN PIASTRA SEGNALI - PARTE ALIMENTACIÓN PLACA SEÑAL



SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
REMOTE / MICROCONTROLLER - GESTION / MICROCONTROLEUR - FERNBEDIENUNGS- UND MICROCONTROLLERSTUFEN - MICROPROCESSORE - REMOTO / MICROCONTROLADOR



ICC21
First issue 09 / 01


LR110 240R0
3V3_STBY
LR111 80R0
CR110 100N0
CR111 3N9
CR112 820P0
IR110
MT48LC4M16A2TG-8E
SDRAM
VDD
DQ0
VDDQ
DQ1
DQ2
VSSQ
DQ3
DQ4
VDDQ
DQ5
DQ6
VSSQ
DQ7
VDD
DQML
WE#
CAS#
RAS#
CS#
BA0
BA1
A10
A0
A1
A2
A3
VDD
VSS
DQ15
VSSQ
DQ14
DQ13
VDDQ
DQ12
DQ11
VSSQ
DQ10
DQ9
VDDQ
DQ8
VSS
NC
DQMH
CLK
CKE
NC
A11
A9
A8
A7
A6
A5
A4
VSS
D0
D1
D2
D3
D4
D5
D6
D7
A19
SDWE_
SDCAS
SDRAS
SDCS0_
A21
A22
SDA10
A0
A1
A2
A3
D15
D14
D13
D12
D11
D10
D9
D8
A20
SDCLK
SDCKE
A11
A9
A8
A7
A6
A5
A4
LR116 80R0
LR115 240R0
CR115 100N0
CR116 3N9
CR117 820P0
LR120 240R0
CR120 100N0
CR121 3N9
CR122 820P0
JR120 0
IR120
NI
Flash
A15
A14
A13
A12
A11
A10
A9
A8
A19
A20
WE
RESET
A21
WP/ACC
RY/BY
A18
A17
A7
A6
A5
A4
A3
A2
A1
A16
BYTE
VSS
DQ15/A-1
DQ7
DQ14
DQ6
DQ13
DQ5
DQ12
DQ4
VDD
DQ11
DQ3
DQ10
DQ2
DQ9
DQ1
DQ8
DQ0
OE
VSS
CE
A0
A16
A15
A14
A13
A12
A11
A10
A9
A8
A19
A20
WE_
RESET_
JR122 0
A19
A18
A8
A7
A6
A5
A4
A3
A2
A17
D15
D7
D14
D6
D13
D5
D12
D4
D11
D3
D10
D2
D9
D1
D8
D0
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JR124 0
ROMCS1_
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3V3_ROM
JR132 47K0
IR130
MX29L3211MC-10
WE_ROM_
JR131 0
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A8
A7
A6
A5
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A3
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A1
ROMCS0_
OE_
D0
D8
D1
D9
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D11
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A17
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A6
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A3
A2
A1
A0
CE
GND
OE
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Q8
Q1
Q9
Q2
Q10
Q3
Q11
A20
A19
A8
A9
A10
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A12
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A14
A15
A16
BYTE
GND
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Q7
Q14
Q6
Q13
Q5
Q12
Q4
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A21
A20
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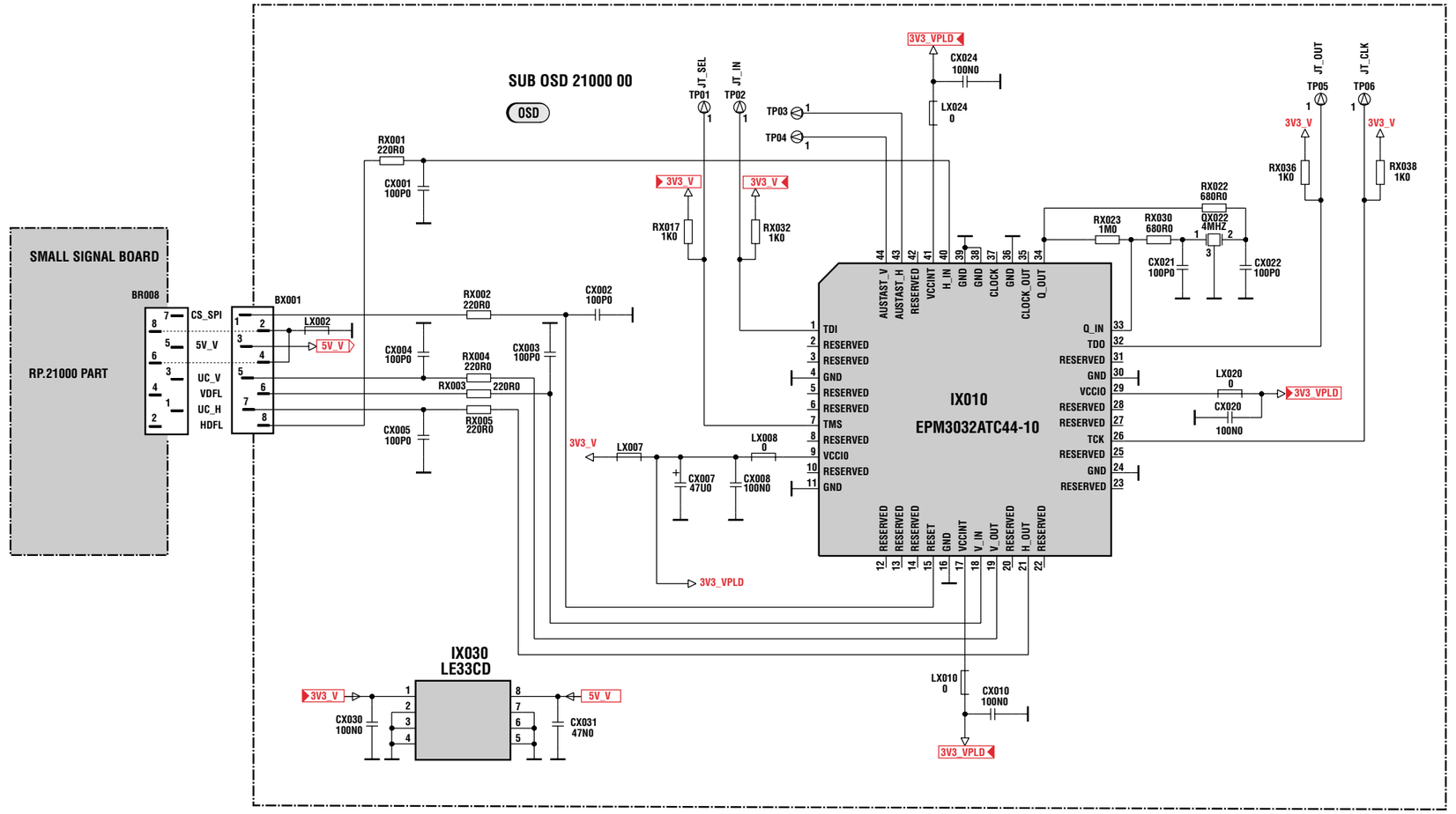
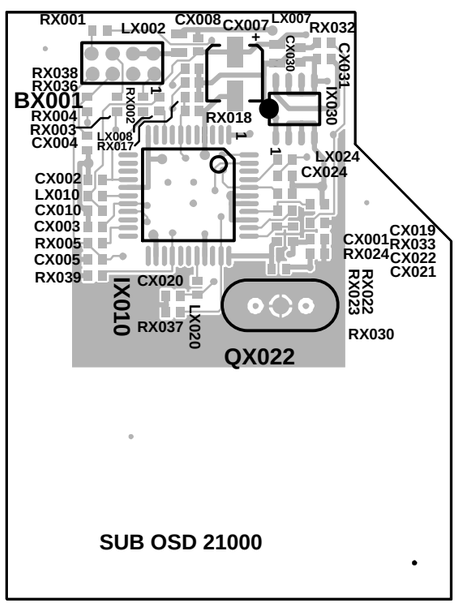
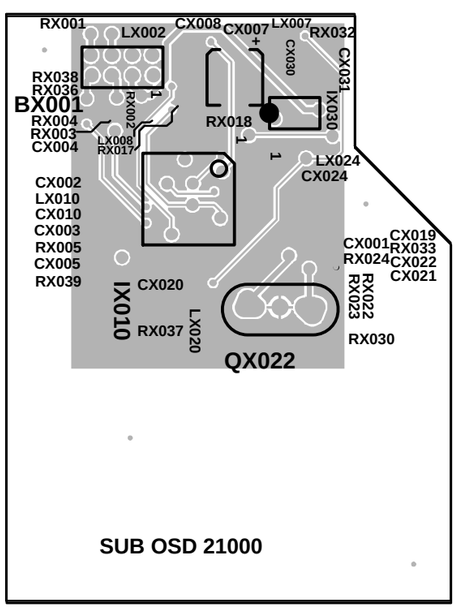
A10
A11
A12
A13
A14
A15
A16
A17
JR136 0
D15
D7
D14
D6
D13
D5
D12
D4
LR131 80R0
LR130 240R0
CR130 100N0
CR131 3N9
CR132 820P0
SSB
(RP) REMOTE PART RP.21000.00

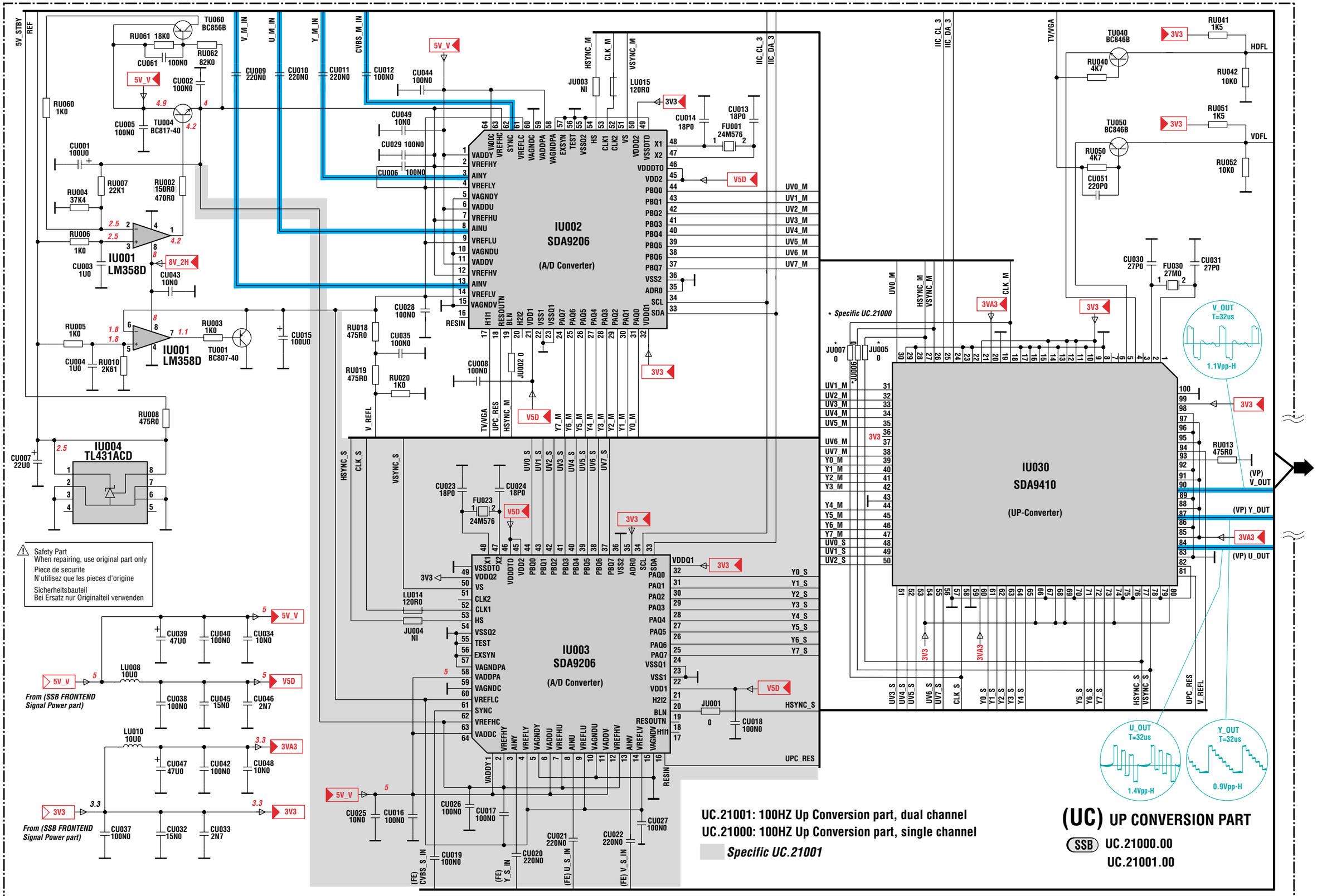
SUB OSD MODULE - MODULE SUB OSD - OSD SUBMODUL - MODULO SUB OSD - MÓDULO SUB OSD



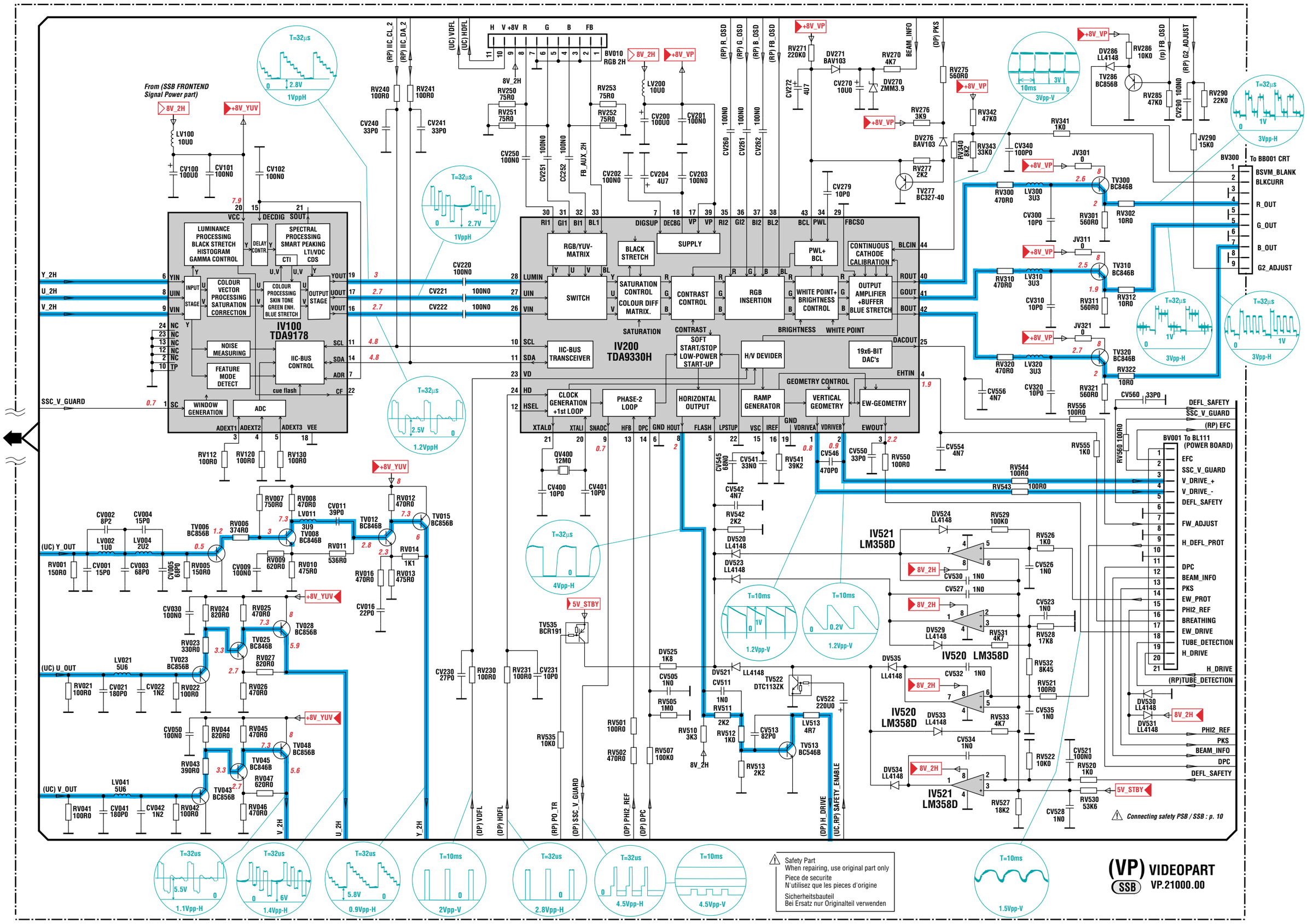




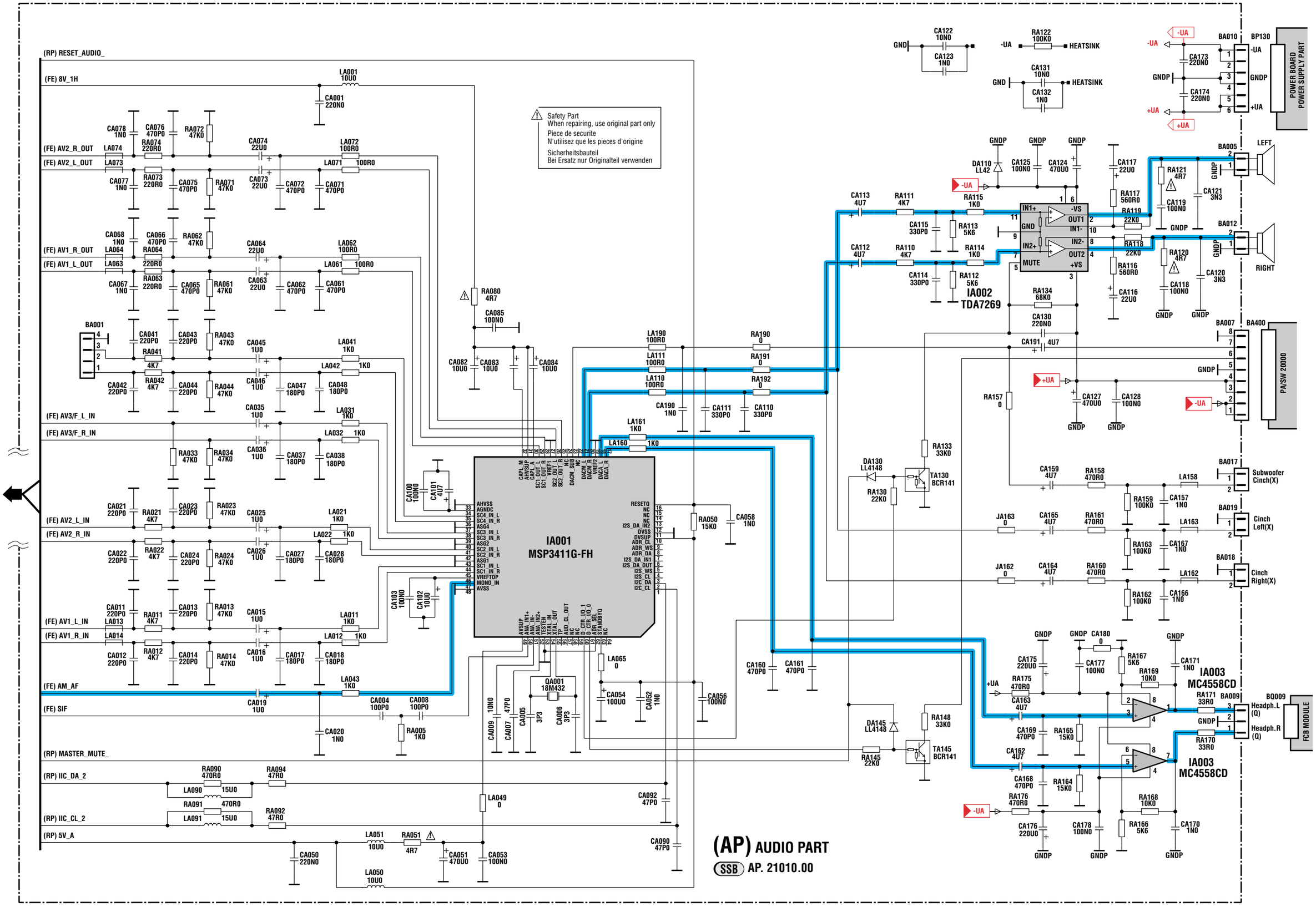
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
UPCONVERTER PART - PARTIE CONVERSION - UPCONVERTER STUFEN - CIRCUITO UPCONVERTER - SUPRACONVERSOR



SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
VIDEO PART - PARTIE VIDEO - VIDEO-SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMENTO VIDEO



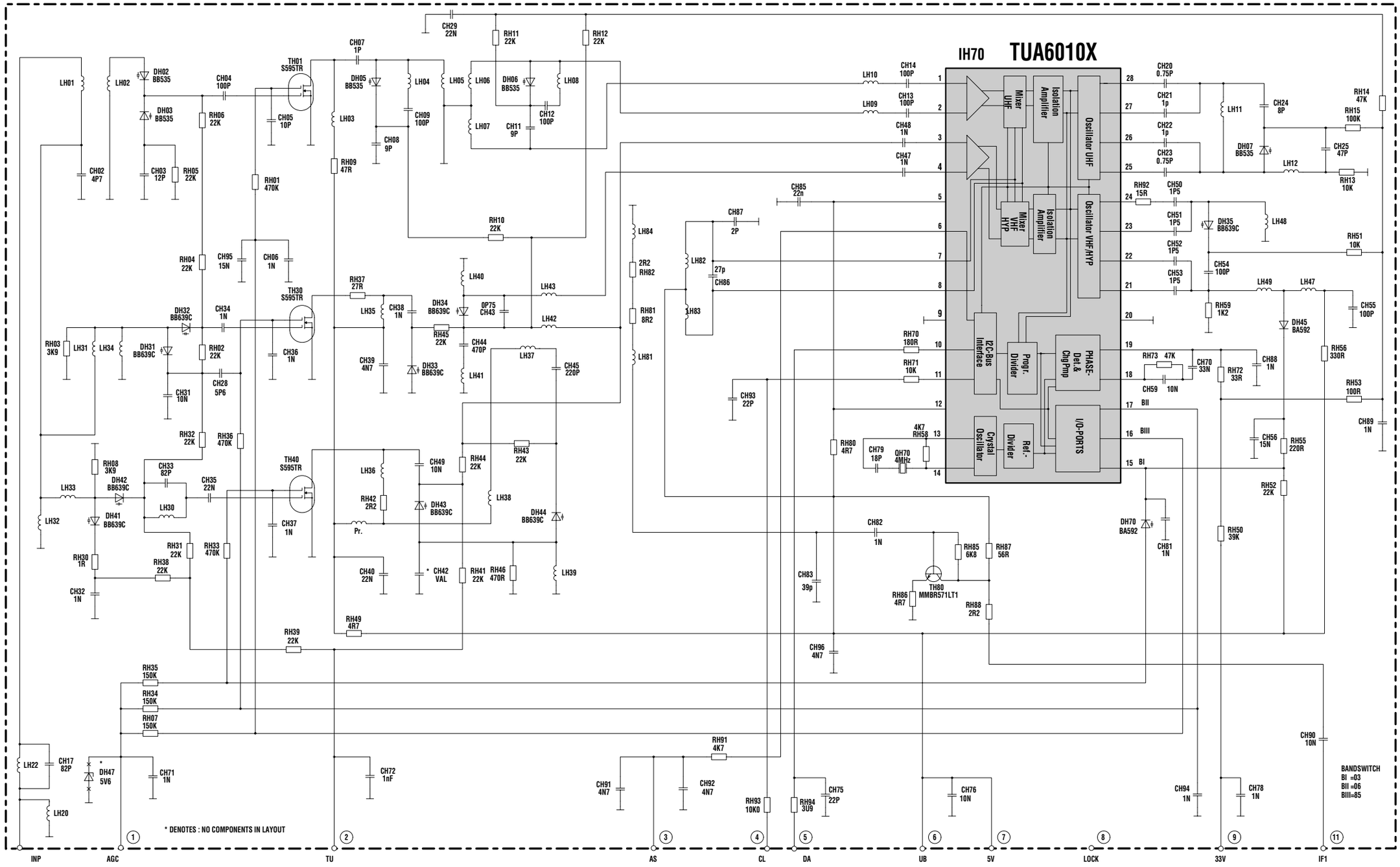
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
AUDIO PART - PARTIE AUDIO - AUDIOSTUFEN - CIRCUITO AUDIO - AUDIO
STEREO / NICAM / VIRTUAL DOLBY



(AP) AUDIO PART

SSB AP. 21010.00

VHF / UHF TUNER CTT5010 (For information only)

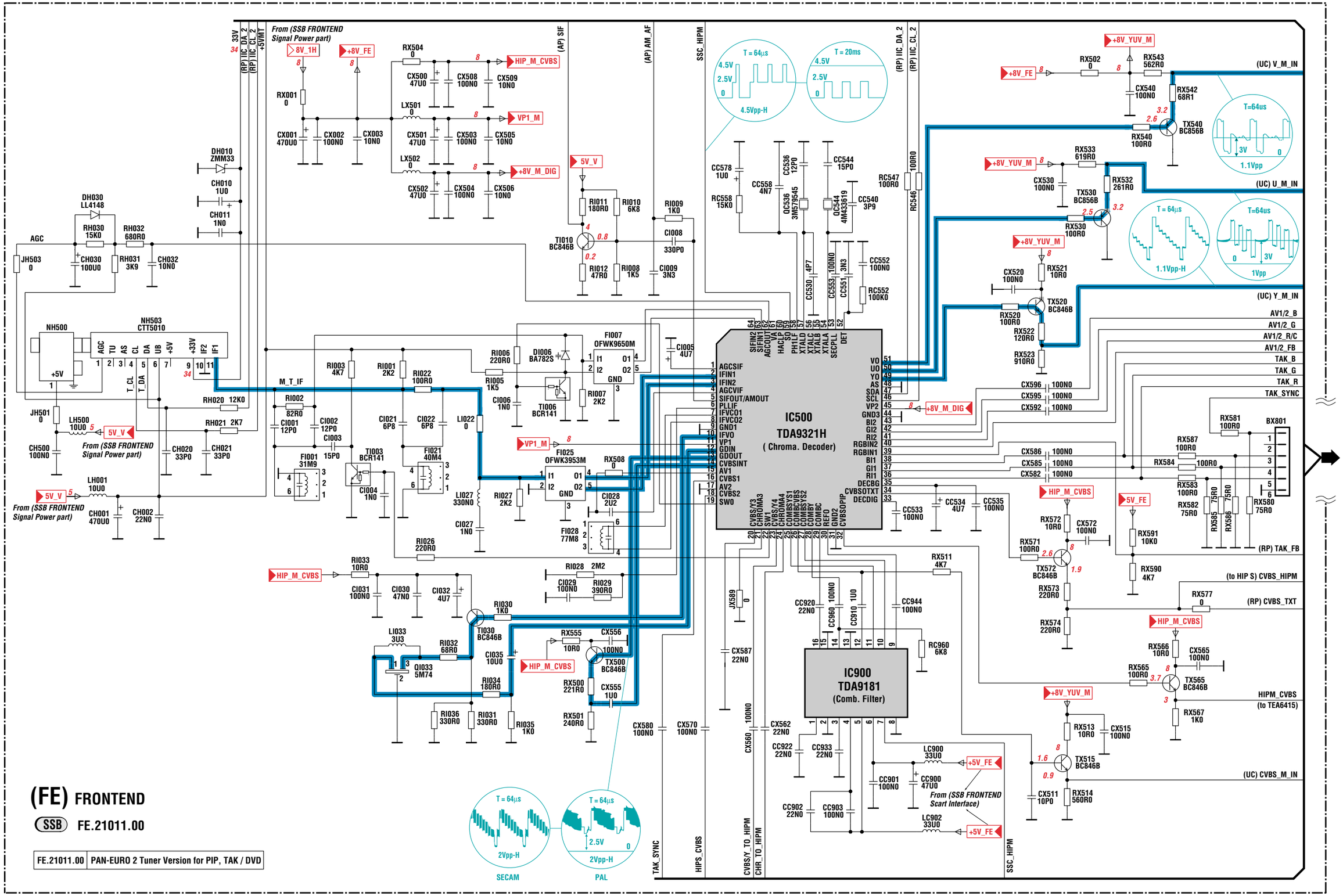


ICC20
First issue 05 / 00

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

2 TUNER VERSION FRONTEND PART (1/4) - EINGANGSTUFEN 2 TUNER VERSION (1/4) - 2 VERSIONE TUNER PARTE FRONTEND (1/4) - PARTE FRONTEND VERSIÓN DE 2 SINTONIZADORES (1/4)

MAIN RF/FI / VIDEO SIGNAL PROCESSING - HF/FI TUNER PRINCIPAL / TRAITEMENT VIDEO - HAUPTTUNER HF/ZF UND VIDEOSIGNALVERARBEITUNG - MAINRF/FI/ ELABORAZIONE SEGNALE VIDEO - RF/FI PRINCIPAL / PROCESAMIENTO SEÑAL VIDEO

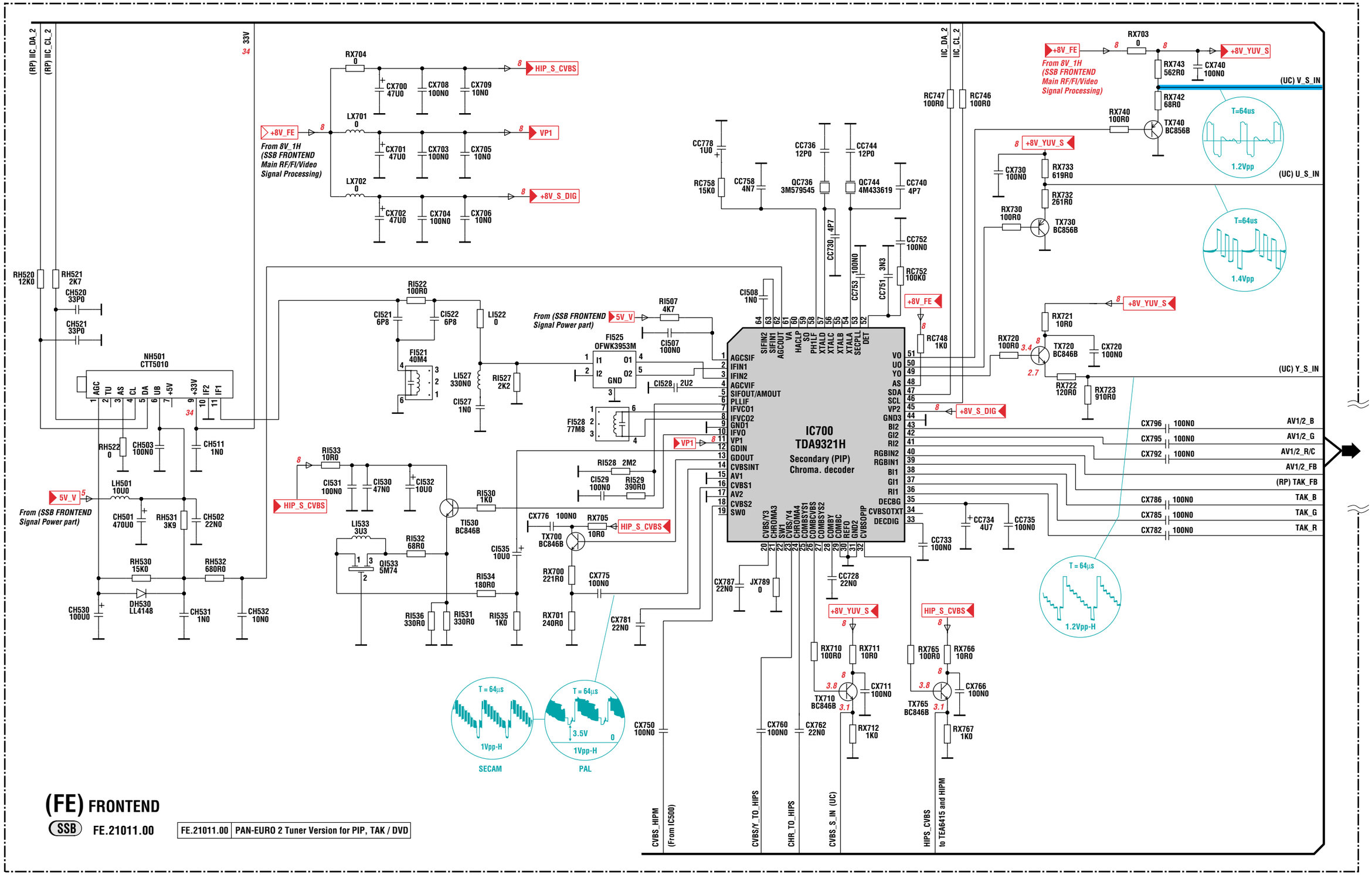


ICC21
First issue 09 / 01

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

2 TUNER VERSION FRONTEND PART (2/4) - EINGANGSSTUFEN 2 TUNER VERSION (2/4) -2 VERSIONE TUNER PARTE FRONTEND (2/4) - PARTE FRONTEND VERSIÓN DE 2 SINTONIZADORES (2/4)

PIP RF/FI / VIDEO SIGNAL PROCESSING - HF/FI PIP / TRAITEMENT VIDEO - PIP HF/ZF UND VIDEISIGNALVERARBEITUNG - PIP RF/FI / ELABORAZIONE SEGNALE VIDEO - PIP RF/FI / PROCESAMIENTO SEÑAL VIDEO



(FE) FRONTEND

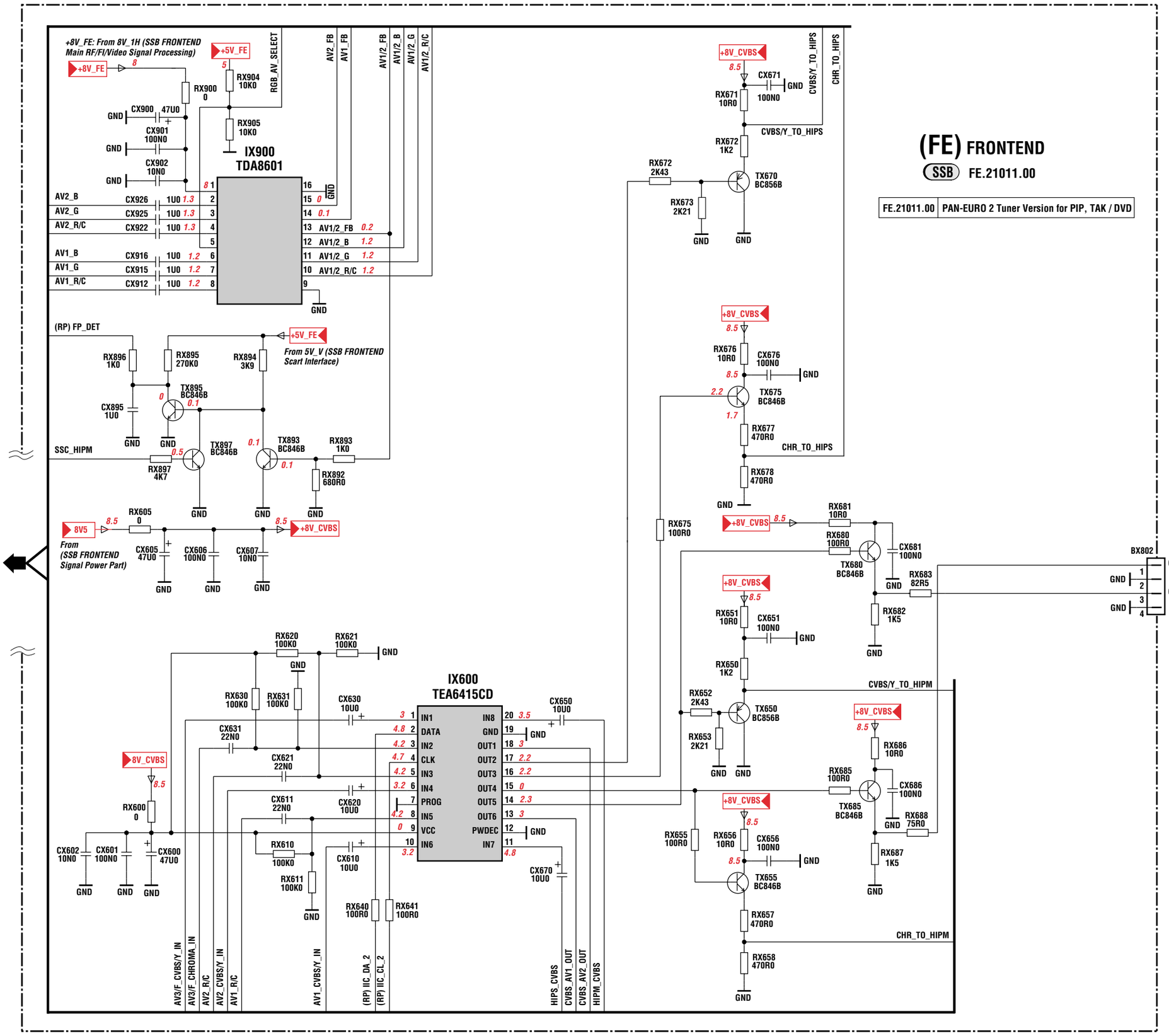
SSB **FE.21011.00**

FE.21011.00	PAN-EURO 2 Tuner Version for PIP, TAK / DVD

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

2 TUNER VERSION FRONTEND PART (3/4) - EINGANGSSTUFEN 2 TUNER VERSION (3/4) - 2 VERSIONE TUNER PARTE FRONTEND (3/4) - PARTE FRONTEND VERSIÓN DE 2 SINTONIZADORES (3/4)

VIDEO SWITCH / RGB SWITCH - COMMUTATION VIDEO/COMMUTATION RGB - VIDEO UND RGB UMSCHALTUNG - COMMUAZIONE VIDEO / COMMUTAZIONE RGB - CONMUTACION VIDEO / CONMUTACION RGB

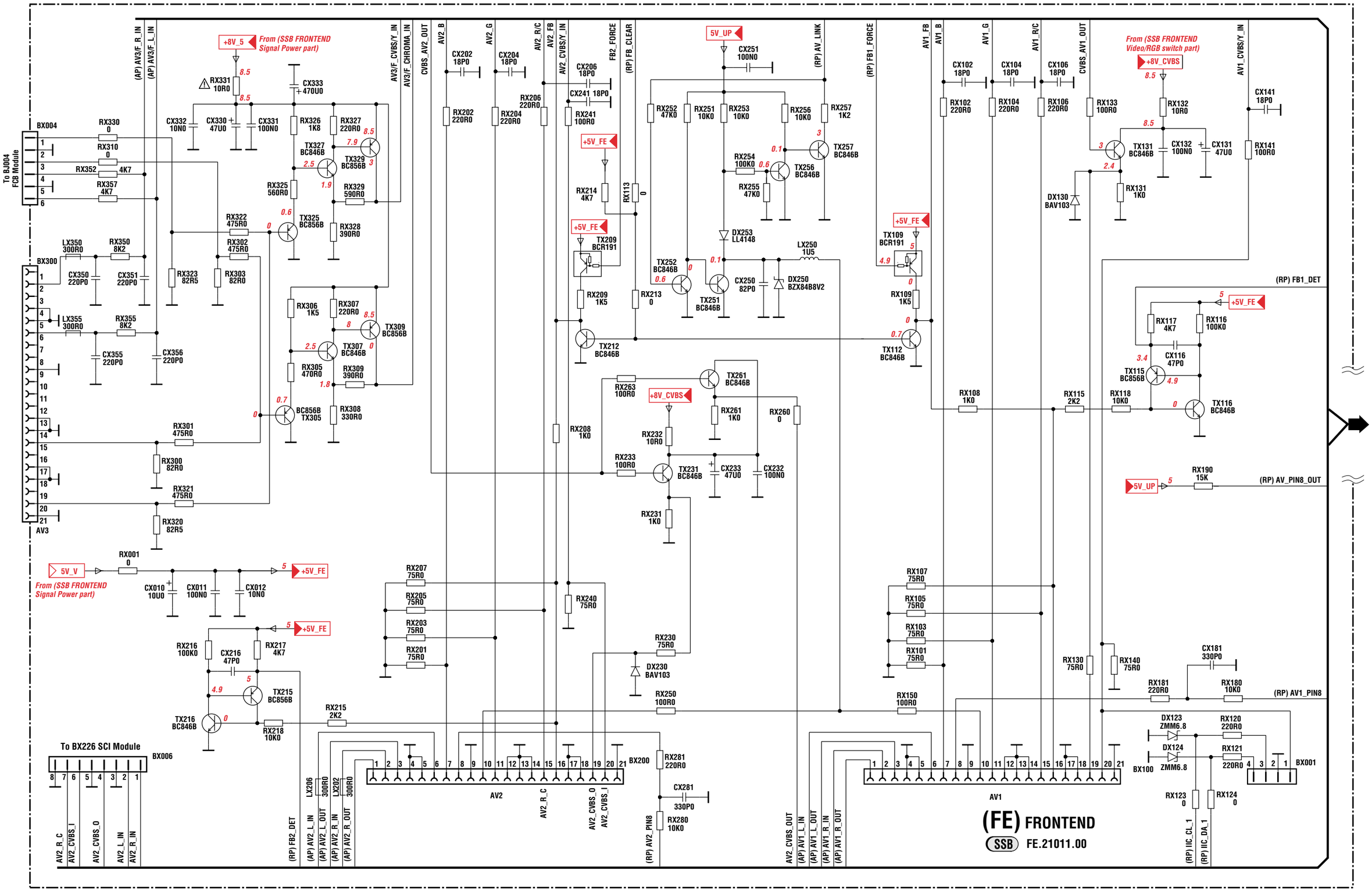


ICC21
First issue 09 / 01

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

2 TUNER VERSION FRONTEND PART (4/4) - EINGANGSSTUFEN 2TUNER VERSION (4/4) - 2 VERSIONE TUNER PARTE FRONTEND (4/4) - PARTE FRONTEND VERSIÓN DE 2 SINTONIZADORES (4/4)

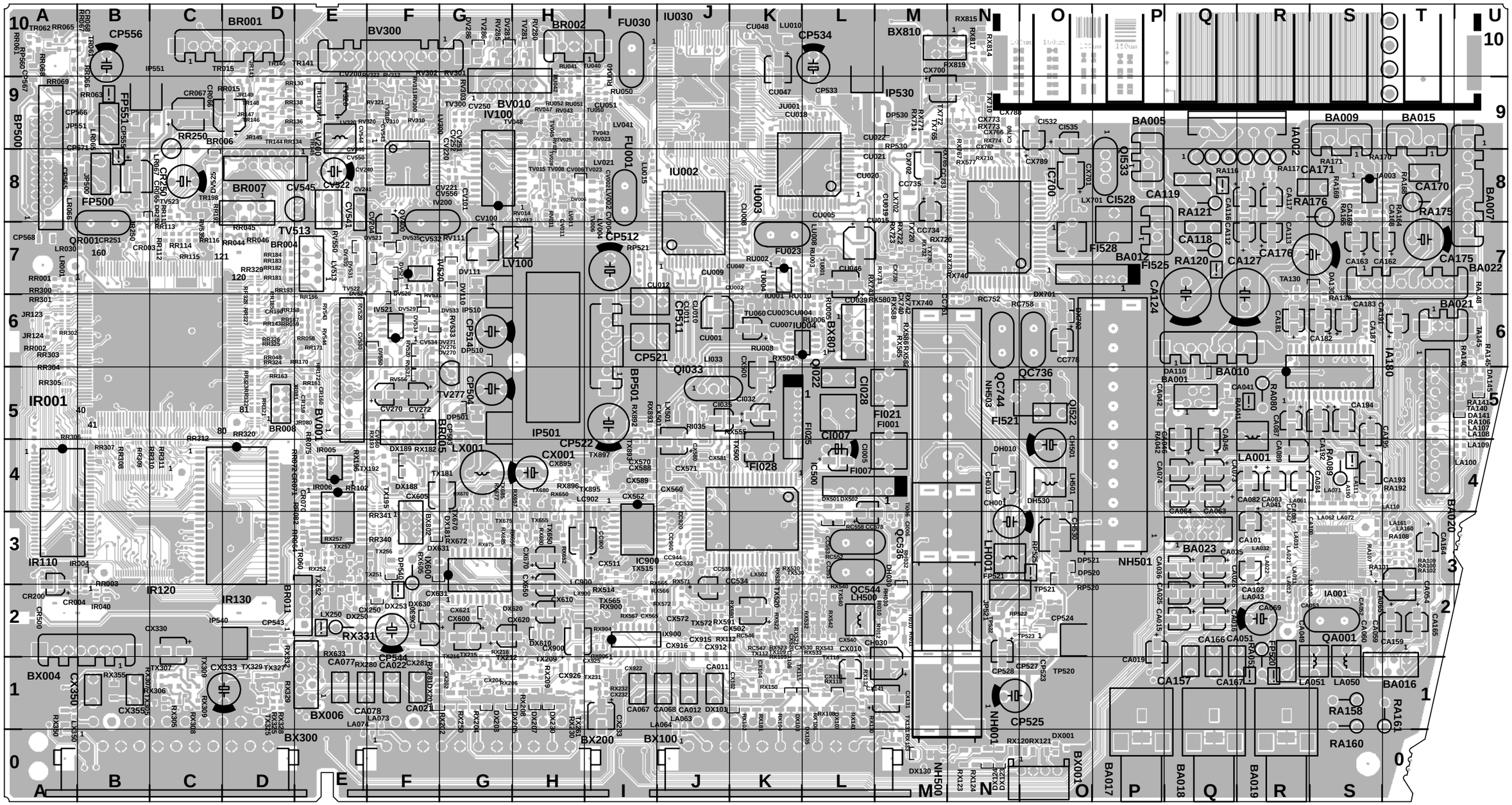
SCART INTERFACE - INTERFACE PERITELEVISION - SCART INTERFACE - PRESA PERITEL- EUROCONECTOR



ICC21
First issue 09 / 01

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

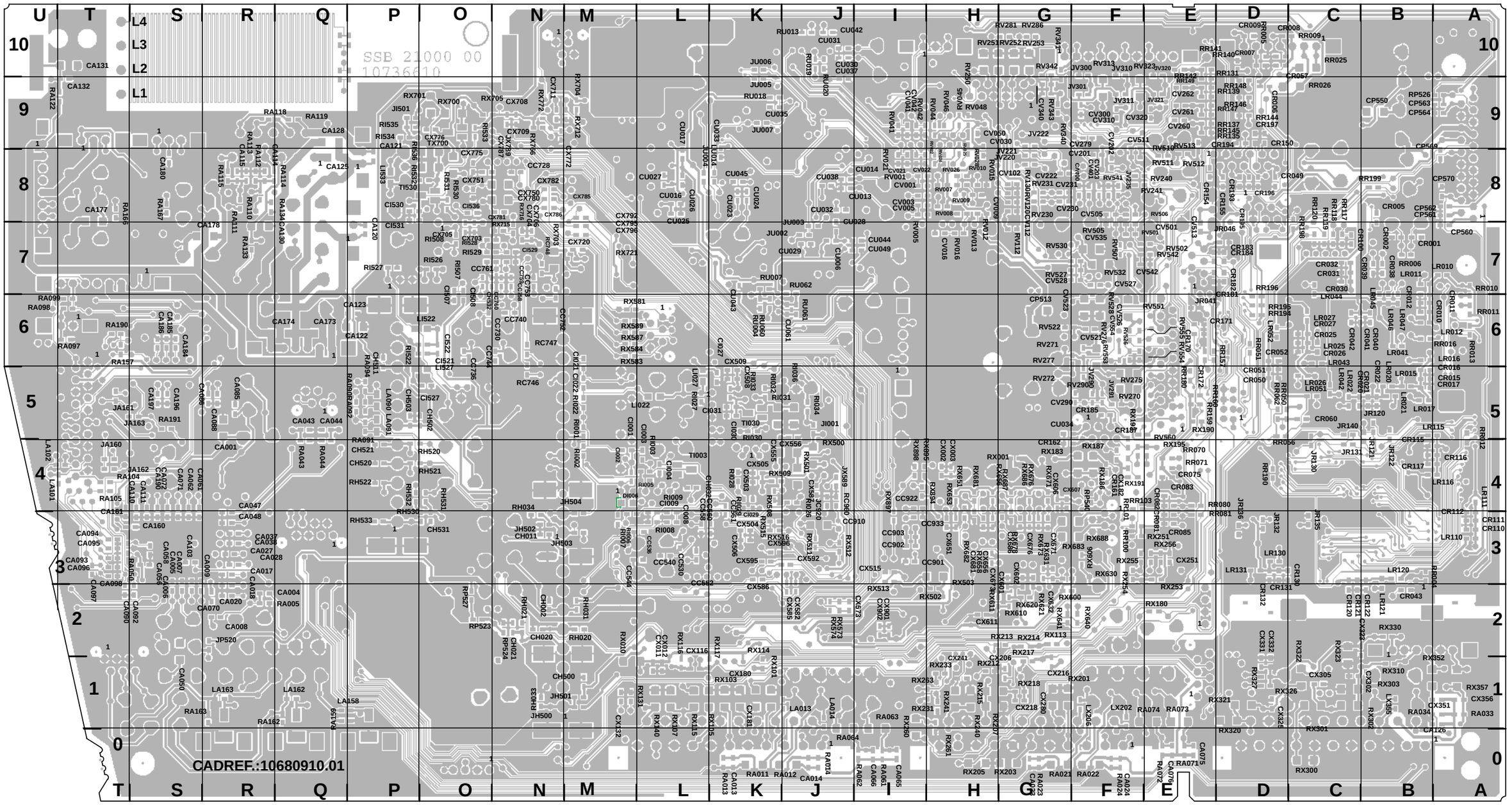
COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES



ICC21
First issue 09 / 01

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



ICC21
First issue 09 / 01