INFORMATION - INFORMATIONS - INFORMATIONEN - INFORMAZIONE - INFORMACIONES

EN **OUT OF PRODUCTION MODE :**
To set TV into “**out of production mode**” (letter **P** at the screen):
- Press the **VOL -** button on the TV keyboard until the letter “P” disappears.

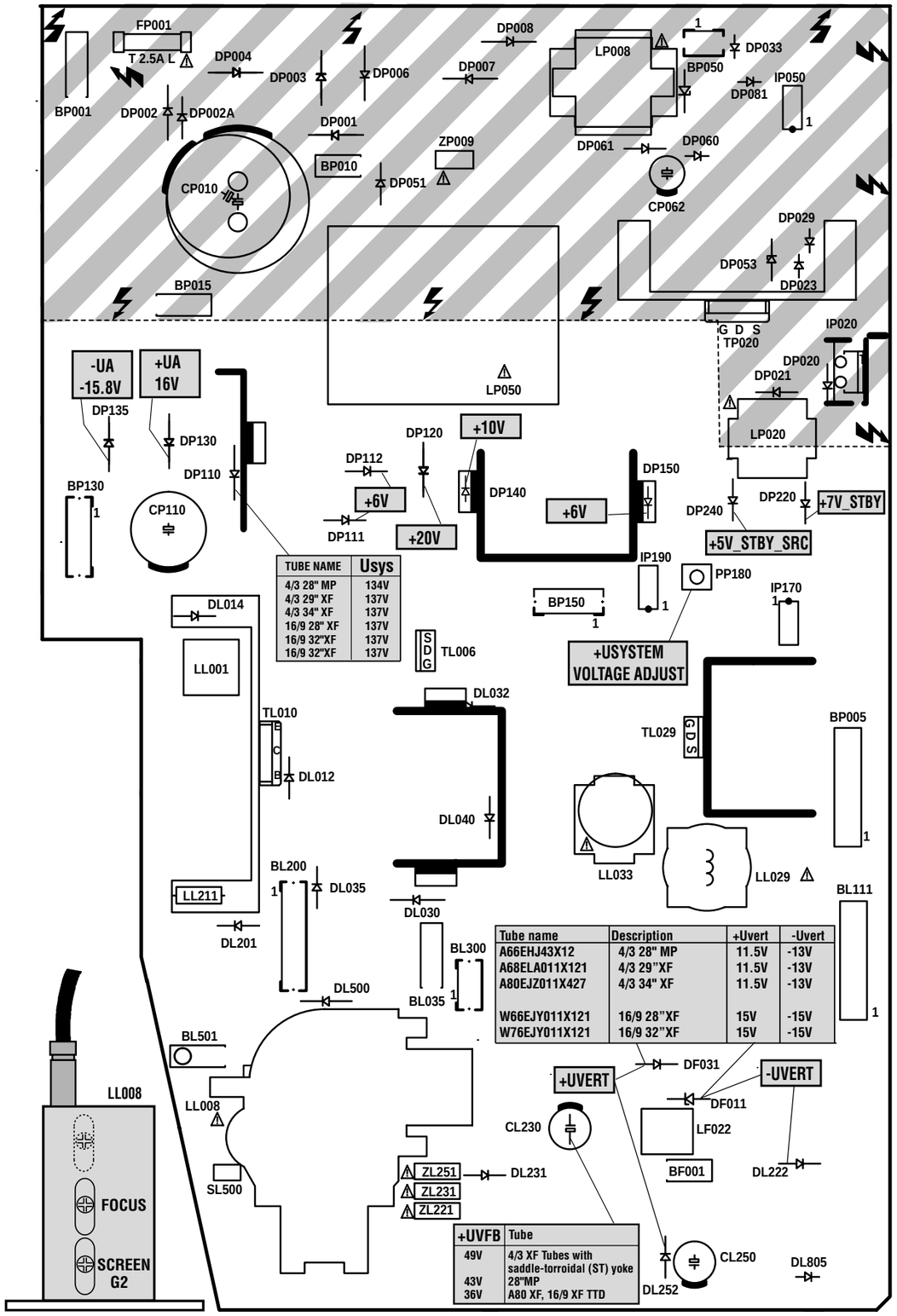
FR **SORTIE DE MODE PRODUCTION**
Pour sortir le téléviseur du mode production (lettre P à l’écran):
- Appuyer sur la touche **VOL-** du clavier du téléviseur jusqu'a la disparition de la lettre "**P**" .

DE **VERLASSEN DES PRODUKTIONSMODE:**
"Lautstärke -" am Nahbedienfeld drücken bis der Cursor am linken Anschlag ist und dann noch weitere ca. 10 s halten bis das eingeblendete "**P**" verschwindet.

IT **USCITA DA PRODUCTION MODE:**
Per uscire dalla condizione " **Production mode**" (lettera P presente suulo schermo)
- Premere il tasto-volume sulla tastiera comandi del TV fino a che la lettera "**P**" scompare.

ES **SALIDA DEL MODO PRODUCCION.**
Para salir del '**modo producción**', (aparece una letra **P** en la pantalla):
- Mantener pulsada la tecla "**Volumen -**" del teclado hasta que la letra "**P**" desaparezca.

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



TUBE NAME	Usys
4/3 28" MP	134V
4/3 29" XF	137V
4/3 34" XF	137V
16/9 28" XF	137V
16/9 32"XF	137V
16/9 32"XF	137V

Tube name	Description	+Uvert	-Uvert
A66EHJ43X12	4/3 28" MP	11.5V	-13V
A68ELA011X121	4/3 29"XF	11.5V	-13V
A80EJZ011X427	4/3 34" XF	11.5V	-13V
W66EJY011X121	16/9 28"XF	15V	-15V
W76EJY011X121	16/9 32"XF	15V	-15V

+UVFB	Tube
49V	4/3 XF Tubes with saddle-torroidal (ST) yoke
43V	28"MP
36V	A80 XF, 16/9 XF TTD

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

ETC210
First issue 07 / 03

ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONE - AJUSTES

U Sys	PP180	Standard TV - Settings : ☼+ ◔+ ◑ =50% TV to AV1 : Black test pattern	V= DP 110	See table below

Tube name	Description	Usys jumper	RP900 Usys divid.	Usys
A66EHJ13X12	4/3 28"MP	JP911	33K2	134V
A68ELA011X121	4/3 29"XF	JP912	33K2	137V
A80EJZ011X427	4/3 34"XF	JP912	33K2	137V
W66EJY011X122	16/9 28"XF	JP912	33K2	137V
W76EJY011X122	16/9 32"XF	JP912	33K2	137V

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   Sharp picture

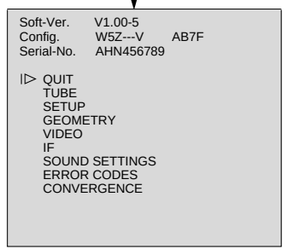
SERVICE MODE (EN) | MODE SERVICE (FR) | SERVICE - MODE (DE) | SERVICE - MODE (IT) | MODO SERVICIO (ES)

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.

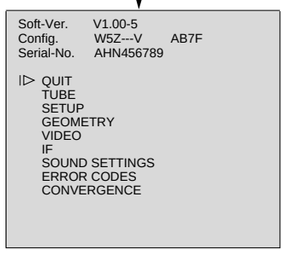


Note :
In service mode :
- The child lock function is re-initialized
- Clear any wake-up/sleep timers
- Pin 8 of the scart plug has to be ignored.
- AV- Link WSS detection and letterbox detection (autoformat) have to be disabled.
- Automatic standby functions, in case of no antenna signal have to be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

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.

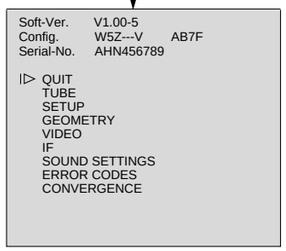


Note :
En mode service:
- Le verrouillage parental est effacé (réinitialisé).
- La programmation des heures "reveil/matin" est annulée.
- Pin 8 de la prise SCART ignorée.
- AV- Link , la détection WSS et la détection letterbox ne sont pas validées.
- La fonction de veille automatique en cas d'absence de signal d'antenne n'est pas validée.
- Contour en valeur médiane (nominale)
- Le mode d'installation n'est pas pas valide.
- Zoom et format ignorés.

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.

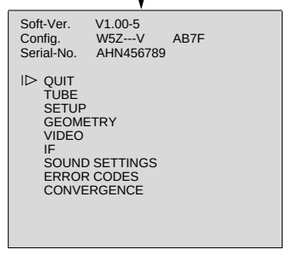


Anmerkung:
Im SERVICE MODE :
- wird die Kindersicherung gelöscht.
- werden alle Weck-, Schlummer-Timer gelöscht.
- wird die SCART - Schaltspannung nicht ausgewertet.
- AV-Link, WSS- und Letterbox-Detektion (Autoformat) sind abgeschaltet.
- wird die Automatische Abschaltung bei fehlendem Antennensignal gesperrt.
- Stellen Sie den Schärferegler in Mittelstellung.
- wird der Installations-Modus gesperrt.
- wird das Standardformat bzw. der Standard-Zoom-modus gewählt.

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.

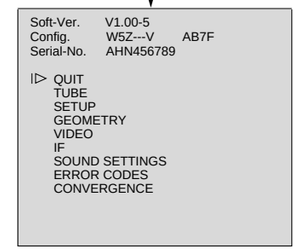


Nota :
Nel service mode:
- La funzione Blocco Bambini è reinizializzata.
- Cancella qualsiasi wake-up/sleep timers.
- Il piedino 8 della scart è ignorato.
- La rilevazione AV-Link WSS e rilevazione letterbox (formato) è statà disabilitata.
- Funzione automatica di standby, nel caso di mancanza del segnale d'antenna è disabilitata.
- Forzare Sharpness al centro (nominale)
- Il Modo Install disabilitato.
- Formato ignorati e zoom.

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
- La patilla 8 del SCART es ignorada
- La detección de AV- Link, WSS y "modo buzón" (autoformato) se desactiva.
- El apagado automático en caso de ausencia de señal de antena es desactivado.
- Situar la NITIDEZ en el punto medio (nominal)
- El Modo Instalación es desactivado.
- Zoom y formato ignorados.

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 | **TV control panel** | **on/off key or Stand-by**

- Go to the point QUIT in the Field service Mode main menu.
- Press ">" button
- Press "VOL.+" button
- TV mode.
- 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 | **clavier du téléviseur** | **Inter M/A ou Stand-by**

- Aller au point "QUIT" dans le menu principal du mode service.
- Appuyer sur ">"
- -Appuyer sur "VOL+"
- Mode TV.
- 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 | **TV-Bedienfeld** | **Netzschalter oder Standby**

- Gehen Sie im Hauptmenü des Service-Modes mit dem Cursor auf die Zeile QUIT.
- -Taste ">"drücken
- -Taste "VOL+" drücken
- TV Modus
- 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 | **Panello controllo TV** | **Tasto on/off**

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

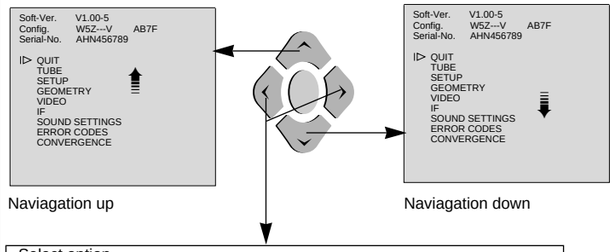
telecomando | **Panel de control TV** | **Tecla on/off de**

- Vaya al punto QUIT del menú principal de modo Servicio
- Pulse ">"
- Pulse "VOL.+"
- Modo TV.
- -Stand-by o desconexión (off) con tecla on/off.

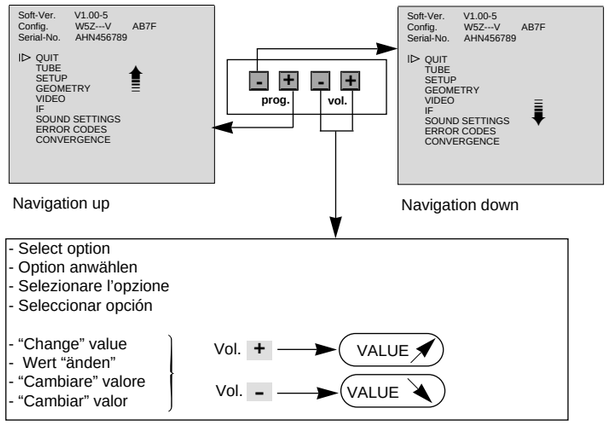
Los valores o ajustes no se guardan antes de salir del modo servicio y no se escriben en el NVM

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

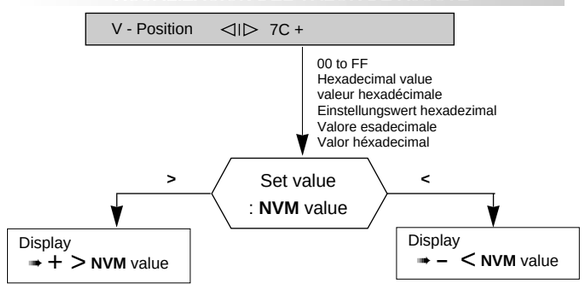
1 REMOTE CONTROL - TELECOMMANDE - FERNBEDIENUNG TELECOMANDO - MANDO A DISTANCIA



2 TV CONTROL PANEL - CLAVIER TV - TASTATUR DES FERNSEHGERÄTS - COMANDI DEL TELEVISORE -



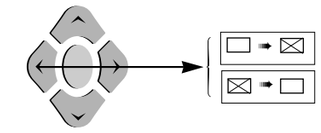
3 DISPLAYING THE VALUE OF THE SETTING - AFFICHAGE DES VALEURS - ANZEIGE DES EINSTELLUNGSWERTES VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - VISUALIZACION DEL VALOR DE AJUSTE

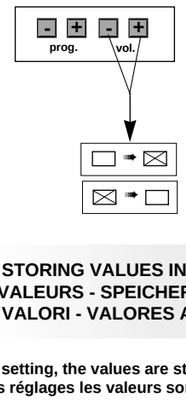


4 TOGGLE FUNCTIONS - VALIDATION DES FONCTIONS EIN-UND AUSSCHALTFUNKTIONEN - FUNZIONI DI COMMUTAZIONE - FUNCION CONMUTACION

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

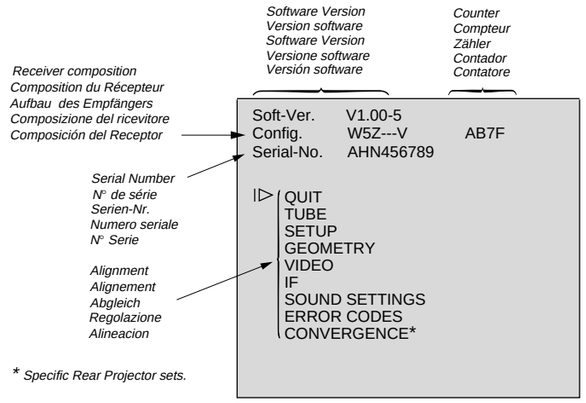
Store ➠ Copîes RAM values into NVM
Copie la valeur RAM en NVM
Kopieren des Wertes von RAM nach NVM
Copiare i valori RAM in NVM
Copiar valores RAM en NVM

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**

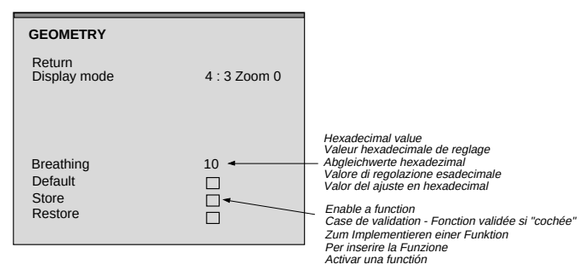
Character 1 : Tube type : "A"= 4:3 , "W" =16:9
Character 2 : Teletext external memory detected: "T"=128 page memory; "-" = not (only internal memory)
Character 3 : Ambiant Sensor : "S"= detected, "-" = not (ETC210).
Character 4 : Chassis variant : "N"=Nicam, "V" =Virtual Dolby, "D"=Dolby prologic
Character 5 : Noise reduction upconversion memory detected : "N"= detected; "-" = not
Character 6 : Not used / spare
Character 7 : Not used / spare

SERIAL-N°	**A15...**

Character 1 : Factory, A= Angers, B= Tarancon, Z= Zyrardow
Character 2 : Year :, H= 1996, J= 1997 etc. (International code UTEC90511)
Character 3 : Month, from 1= January to 9=September.... D=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
Tube type W66EGV
Store ◁ ▷ ☑
Restore ☐

SETUP

Return
Clear Progs. ☐
Std. Sound Preset ▷ ☑
Brand Thomson
Kbd. Config. Default...
Subwoofer ☐
Feature Pack ☐
Pict. Rotate ☐
Bus Quiet ☐
WSS ☐
Cyrillic Version ☐
Default ☐
Store ☐
Restore ☐

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 or Vol+/- TV keyb.

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
A66EHJ 43X12	A66EHJ	4/3 28"MP (1)
A68EGD 038X322	A68EGD	4/3 29"SF (2)
A68EJV 038X322	A68EJV	4/3 29"SF,AK (3)
A68EJZ 011X121	A68EJZ	4/3 29"XF (4)
A68ELA 011X121	A68ELA	4/3 29"XF (5)
A68QCP 893X007	A68QCP	4/3 29"XF (4)
A80EJZ 011X427 4X3 NW	A80EJZ 4X3 NW	4/3 34"XF (4)
W66EGV 023X122	W66EGV	16/9 28"SF (2)
W66EJY 011X121	W66EJY	16/9 28"XF (2)
W66EJU 011X121	W66EJU	16/9 28"SF (6)
W66 Gen2	W66Gen2	16/9 28"XF (7)
W66QDE 993X214	W66QDE	16/9 28"XF (2)
W76EGV 023X122	W76EGV	16/9 32"SF (2)
W76EJY 011X121 16X9 NW	W76EJY 16X9NW	16/9 32"SF (2)
RP 4X3	RP 4X3	4/3 42", 46"

(1) : AK, Coty M
(2) : Invar vector gun, BSVM
(3) : AK,vector gun
(4) : Invar, static focus, BSVM
(5) : Invar,static focus,BSVM Gen2
(6) : AK, vector gun, BSVM
(7) : Invar, vector gun, BSVM

After setting **Store (+)** ☑

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 or Vol+/- TV keyb. .

Clear Prog.

Clears all programms stored in memory and resets all Picture and Sound settings to the factory values and returns the TV to the "Out of factory" mode.
The selection is a long press action (2.5 seconds).

Efface tous les programmes mémorisés, initialise les valeurs SON et IMAGES aux valeurs usines et retourne le TV en mode "sortie usine".
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.Selection is a long press action (2.5 seconds).

Initialise les valeurs par défaut du son.
Fonction valide par une longue pression (>2.5s.) sur la touche de sélection </> .

Setzt die Ton-Einstellungen auf Default-Werte.
The selection is a long press action (2.5 seconds).

Regolare i valori di default per le Preregolazioni Suono Standard : pressione prolungata: 2,5 sec. su il pulsante </>.

Ajusta el valor por defecto para el Preajuste del Sonido Standard.
Selección: Presión larga igual a 2,5 s.

Factory adjusted

Brand

Set the "Brand": Thomson, Telefunken, Other
Factory adjusted

Kbd. Config.

Specifies the type of the local keyboard. (Horizontal or Vertical type) in the chassis.

Spécifie le type de clavier monté sur un chassis (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 (+)** ☑

SETUP

Subwoofer

Enable the subwoofer on equiped set.

Validation du Subwoofer sur les appareils équipés .

Einschalten des Subwoofers (wenn vorhanden).

Abilita il subwoofer negli apparecchi equipaggiati.

Validaciónde que existe el subwoofer.

☑ Subwoofer enable ☐ Subwoofer disable

Feature Pack

Enables or disables the option to decode and display EPG program data,the Graphic Equalizer, Picture Presets and Sound Presets features (in user menu).

Validation ou inhibition du décodage/affichage des données du programme EPG, de l'équalizer graphique, des pré-réglages son et image dans le menu utilisateur.

Ein- und Abschalten der Optionen Decodierung und Anzeige der EPG Programmdaten, Grafischer Equalizer, Bildvoreinstellungen und Tonvoreinstellungen (in den Benutzermenüs).

Abilita l'EPG, l'equalizzatore grafico, Ipreset Video e preset suono
(in menu suono)

Valida las funciones EPG, Ecualizador gráfico y predeterminados para imagen y sonido (en el menú "Ajustes personales")

☑ Enable ☐ Disable

Picture Rot

Enables the "Earth Field Correction" function (EFC) on ETC210 16/9 and some large screen 4/3 by adding a special bargraph in the "personal settings" menu (user menus).
It is necessary to validate this function if the EFC correction circuit is inserted.

Valide la fonction "correction de champ magnétique terrestre" (EFC) sur les chassis ETC210 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 circuits de correction "EFC" sont insérés.

Freigabe der Erdfeldkorrektur (EFC) bei ETC210 16/9 und einigen 4/3 Geräten.
Im Menü "Eigene Einstellungen"
(Menü "Installation") 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 ETC210 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 ETC210 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

After setting **Store (+)** ☑

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 (+)** ☑

SETUP

WSS

Automatic detection of DOLBY surround sound and 16/9 format pictures via Teletext line number 23.
WSS 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

Cyrillic Version

The status of this check box depends on the type of microcomputer (uC) used in the TV set (Cyrillic or greek) . It must be ticked if a cyrillic microcomputer (uC) is used and unticked if a greek version is used .
The status of this check box defines the languages available in the language selection menu. The slovacian, czech and russian languages are available with the cyrillic version and the turkish and greek languages with the other one.
It is possible to identify which uC is used to properly set this feature in the service menu by watching special (cyrillic) VT pages.

Version Cyrillique

Cette case de validation depend de la version du microprocesseur (uP) équipant le TV (Cyrillique ou grec) . Elle doit être cochée si le mocroprocesseur (uP) est une version cyrillique et vide s'il s'agit d'une version greque. L'état de cette case définit les langues disponibles dans le menu de sélection .
La version cyrillique offre les langues slovaque, tchèque et russe tandis que la version greque offre les langues turque et greque.
Il est possible d'identifier le type de uP dans le mode service en sélectionnant les pages télétextes.

Kyrillische Version

Der Status dieser Check-Box ist abgängig von der Sprachversion des eingebauten Microcontrollers.
Bei der Verwendung der kyrillischen Version muss die Box aktiviert werden, bei Verwendung der griechischen Version muss die Box gelöscht sein. Der Status der Box legt die zur Verfügung stehenden Sprachen im Sprachmenü fest.
Die kyrillische Version unterstützt Slowakisch, Tschechisch und Russisch. Die griechische Version unterstützt Griechisch und Türkisch.
Eine Identifizierung der eingebauten Microcontroller-Version kann durch Aufrufen von Videotextseiten mit kyrillischem Inhalt vorgenommen werden.

uC ST92R195B JAM
English, French, German, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Norwegian, Polish, Hungarian, **Slovacian/Czech, Russian Cyrillic.**

uC ST92R195B JAL
English, French, German, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Norwegian, Polish, Hungarian, **Turkish, Greek.**

After setting **Store (+)** ☑

SETUP

Versione Cirillica

Lo stato del controllo di queta casella dipende dal tipo di microprocessore (uP) utilizzato dal TV (Cirillico o Greco).
Tale casella deve essere selezionata se viene utillizzato un microprocessore Cirillico e non selezionata se utilizzato un microprocessore Greco.
Lo stato di questa selezione definisce l'abilitazione della selezione del linguaggio nel menu.
I linguaggi per la Slovacchia, la Reppublica Ceca e la Russia sono disponibili nella versione microprocessore Cirillico, mentre il linguaggio Turco e Greco sono disponibili nella versione Greca.
E' posibile identificare quale uC è presente nel TV e correttamente abilitato nel menu di service mode
analizzando una speciale pagina televideo (Cirillica)

Versión Cirílico

El estado de esta casilla depende del tipo del microprocesador (µP) utilizado en el TV (Cirílico o Griego). Debe ser marcada si se utiliza un µP cirílico y desmarcada si se utiliza el griego.
El estado de esta casilla define los idiomas disponibles en el menú de selección de idiomas.
Los idiomas Eslovaco, Checo y Ruso están disponibles en la versión cirílico. El Griego y el Turco en la versión Griego.
Es posible identificar el µP utilizado para seleccionar el adecuado, en modo servicio mirando en las páginas especiales (cirílico) del teletexto.

uC ST92R195B JAM
English, French, German, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Norwegian, Polish, Hungarian, **Slovacian/Czech, Russian Cyrillic.**

uC ST92R195B JAL
English, French, German, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Norwegian, Polish, Hungarian, **Turkish, Greek.**

After setting **Store (+)** ☑

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

GEOMETRY SUBMENUS : 4:3 TUBES

GEOMETRY

Return		
Display Mode	◁|▷	4 : 3 Zoom 0
V-Slope		1F+
V-Amplitude		3C-
V-Position		25-
V-Linearity		08+
H-Position		1F+
H-Amplitude		2F
EW-Amplitude		3C
EW-Trapezium		0C+
EW-Corner		0D
H-Parallel		10-
EW-Symmetry		1F
Breathing		10
Default		☐
Store		☐
Restore		☐

4 : 3 Zoom 0

GEOMETRY SUBMENUS : 16:9 TUBES

GEOMETRY

Return		
Display Mode	◁|▷	16:9 Zoom 0
V-Slope		1F+
V-Amplitude		3C-
V-Position		25-
V-Linearity		08+
H-Position		1F+
H-Amplitude		2F
EW-Amplitude		3C
EW-Trapezium		0C+
EW-Corner		0D+
H-Parallel		10-
EW-Symmetry		1F
Breathing		10
Default		☐
Store		☐
Restore		☐

16/9 picture tube, 16 : 9 Zoom 0

GEOMETRY

Return	
Display mode	4 : 3 Zoom 0
Breathing	10
Default	☐
Store	☐
Restore	☐

16/9 picture tube, 4 : 3 Zoom 0

GEOMETRY

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 or Vol+/- TV keyb. .

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 standard and 16/9
16/9 tube : 2 modes 16/9 standard,
4/3 zoom 0.

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 standard et 16/9
tube 16/9 : 2 modes 16/9 standard,
4/3 zoom 0.

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 Standard und 16/9
16/9-Röhre : 2 Bildformate 16/9 Standard,
4/3 Zoom 0.

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 Standard, 16/9
tubo 16/9 : 2 modi 16/9 standard, 4/3 Zoom 0.
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 estándar, 16/9
Tubos de 16/9: 2 modos, 16/9 estándar,
4/3 zoom 0.
El menú correspondiente mostrará sólo los ajustes a efectuar.

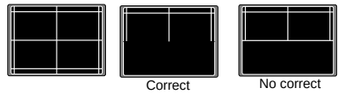
V-Slope

- 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.

- 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.

V-Slope



GEOMETRY

V-Slope
- 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		
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 (+)**

GEOMETRY MODE ALIGNMENT

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.

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.

4/3 picture tube

A ETC210 4/3 set needs a geometry alignment only in the 4/3 Zoom 0. All other formats and zoom mode are calculated.

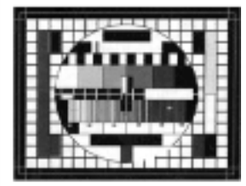
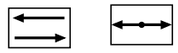
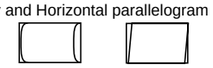
Un chassis ETC210 4/3 ne nécessite des réglages de géométrie que dans le mode 4/3 zoom 0. La géométrie des autres formats et zoom est calculée.

Beim Chassis ETC210 ist ein Geometrie-Abgleich nur im Bildformat 4:3 Zoom 0 . Alle anderen Formate und Zoomstufen werden berechnet.

I telai ETC210 4/3 richiedono la regolazione di geometria solo in formato 4/3 zoom 0. Tutti gli altri formati e modo zoom vengono calcolati.

Un TV ETC210 4/3 necesita ajuste de geometría sólo en el modo 4/3 Zoom 0. 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 

16/9 picture tube

A ETC210 16/9 set needs a geometry alignment only in the 16/9 Zoom 0 mode. All other formats and zoom mode are calculated.

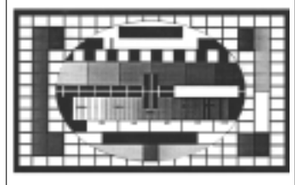
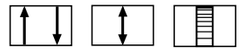
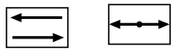
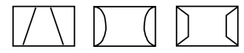
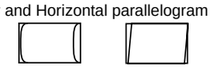
Un chassis ETC210 16/9 ne nécessite des réglages de géométrie que dans le mode 16/9 zoom 0. La géométrie des autres formats et zoom est calculée.

Beim Chassis ETC210 16:9 ist ein Geometrie-Abgleich nur im Bildformat 16:9 Zoom 0. Alle anderen Formate und Zoomstufen werden berechnet.

I telai ETC210 16/9 richiedono una regolazione di geometria solo nel formato 16/9 e modo zoom 0. tutti gli altri formati e modo zoom vengono calcolati.

Un TV ETC210 16/9 necesita ajuste de geometría sólo en 16/9 modo Zoom 0. 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 

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

VIDEO		PAL BG
Return		
Whitepoint R	◁|▷	9D+
Whitepoint G		8A-
Whitepoint B		8A
Peak White		
G2 Alignment		☐
Scale Brightness		84+
Scale Colour		90-
Full White 4/3		
Black Offset R		DC+
Black Offset G		
Drive Level		90
Scale Contrast		E0
Text Contrast		9D+
Default		☐
Store		☐
Restore		☐

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

IF	PAL BG
Return	
FFI - Bit	☐
Default	☐
Store	☐
Restore	☐

ERROR CODES

Return
Erase Error Codes I▷

Code	Time Stamp
11	00125:30
24	00090:10
78	00043:54
51	00001:43
00	00000:00

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.	
Whitepoint R*	☼+◑+◑= standard Grey scale test pattern white =50% Amplitude: 350mVBW RF-PAL (BG) RF-SECAM (L) AV1- RGB grey
Whitepoint G*	
Whitepoint B*	
Peak-White**	☼+◑+◑= standard Peak white test pattern white =100% RF-BG; RF-L; AV1 RGB AUX (TAK, DVD, Digital Mode) Colourimeter
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). ☑ G2_adjust on ☐ Reset G2-adjust and restores the video menu.

Tube Type	[Nits]
28"XF 16/9 TTD Gen.2	350
29"XF 4/3 TTD Gen.2	300
32"XF 16/9 TTD	310

Note :
***** Adjust separate for PAL RF / SECAM RF, RGB

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

VIDEO	PAL
Scale Brightness	☼+◑+◑= standard Grey scale test pattern white =100% black
Scale Colour*	☼+◑+◑= standard PAL, SECAM, AV1_RGB, 75% Colour bar test pattern via RF. Blue Cathode CRT F-H
Full White 4/3 (16/9)	Factory adjusted Réservé au réglage usine Reserviert für Fabrikeinstellungen Riservato alla regolazione di fabbrica Ajuste reservado fábricas
Black Offset R	
Black Offset G	
Drive Level	
Scale 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	

Text Contrast ◂▸ 30

V=60V

CRT Pin 11

➡ After setting ➡ Store (+) ☑

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.	
FFI - Bit	Fast Filter (IF / PLL) Filtre rapide (FI / PLL) Schnelles filter (ZF / PLL) Filtro /rapido (IF / PLL) ☑ Asia ☐ Europ

SOUND SETTINGS		
Return		
Subwoofer Freq. Medium	◁|▷	0F
Low Pass Freq. Medium		0B+
High Pass Freq. Medium		08-
Effect Strength Medium		32-
Harmonic Content Medium		00-
Amplitude Limit Medium		FD+
Subwoofer Freq. High		0D
Low Pass Freq. High		0B
High Pass Freq. High		08+
Effect Strengh High		38
Harmonic Content High		FD
Amplitud LimitHigh		
Store		
Restore		

SOUND SETTINGS

Adjust "Sound settings" registers according to the TV environments (refer to the below table) when the NVM memory has been replaced.

Règle le contenu des registres "Sound settings" selon l'environnemnt du TV en cas de remplacement de la NVM. (voir table ci-dessous)

Wurde das NVM (EEPROM) erneuert, müssen im Menü "SOUND SETTINGS" die Werte entsprechend der unten stehenden Tabelle eingestellt werden.

Quando viene sostituita la memoria NVM regolare i registri "Sound setting" in funzione all'anbientazione TV (riferirsi alla tabella sottoindicata).

Ajustar los "Parámetros de Sonido" de acuerdo a las características del modelo de TV (ver tabla),después de sustituir la memoria NVM.

TV Cabinet 28WH..., 32WH..., 34DC...	
Subwoofer Freq. Medium	05
Low Pass Freq. Medium	0A
High Pass Freq. Medium	07
Effect Strength Medium	28
Harmonic Content Medium	00
Amplitude Limit Medium	04
Subwoofer Freq. High	0C
Low Pass Freq. High	0A
High Pass Freq. High	07
Effect Strengh High	36
Harmonic Content High	00
Amplitud LimitHigh	04

➡ After setting ➡ Store (+) ☑

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 run time counter
2- If an error occurs that is already in the list the time stamp is updated .
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".
2. Si une erreur qui est déjà dans la liste survient de nouveau le temps cumulé (Time stamp) est mis à jour.
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 des Auftretens angezeigt.
2. Tritt ein Fehler auf, der schon in der Liste steht, wird nur die Laufzeitanzeige aktualisiert.
3. Der zuletzt 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 zusätzlich 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 vengono memorizzati e visualizzati con un time stamp dal run time counter.
2- Se si manifesta un errore già presente nella lista il time stamp viene aggiornato
3- Gli errori vengono visualizzati con l'errore più recente in cima alla lista.
Gli altri errori seguono con sequenza discendente del time stamp
Lampeggi LED: **Trasmissione messaggi**
1 Oltre alla memorizzazione il codice errore, deve anche essere visualizzato dal LED di standby.
2 Gli errori vengono segnalati con codici decimali da 11 a 99 (non con 0 al secondo digit)
3 Il codice errore viene visualizzato da due digit separati da una pausa,
queto viene ripetuto finchè il difetto è presente o il TV viene riparato
Per esempio il codice errore 23 sarà visualizzato:
2 lampeggi e una breve pausa
3 lampeggi lampeggi e una lunga pausa
.....
Lista Codici Errore: segue tabella

1- Los últimos 5 códigos de error son almacenados desde el contador de tiempo de vida y mostrados en la columna "time stamp"
2- Si ocurre un error que ya existe en la lista, éste se actualizará al último "time stamp"
3- Los errores más recientes son los mostrados en la parte superior de la lista. Los demás siguen en orden descendiente de "time stamp"
Códigos de error mostrados con el LED:
1- Además del almacenamiento, los codigos de error también se muestran con el LED de standby del TV. Sólo se muestra el último error ocurrido.
2- Sólo se muestran los códigos de error decimales del 11 al 99 (dígito de las decenas empezando por cero, no)
3- El código de error es mostrado como 2 dígitos separados por una pausa corta. Se repite hasta que se recupere el fallo o el TV sea reparado.
Por ejemplo, el código de error 23 se mostrará como:
2 destellos seguidos de una pausa corta
3 destellos seguidos de una pausa larga
.....
Lista de códigos de error: ver tabla

ERROR CODES

EN

10 Used to display child lock mode
11 Used to display timer mode
12 Audio MSP341X doesn't answer anymore
13 The tuner doesn't answer anymore
14 TDA9330 (HOP) doesn't answer anymore or +8V not available
15 FI tuner doesn't answer anymore
16 VSP 9402 (IU100) doesn't answer anymore
17 I2C Bus_1 data line held low
18 I2C Bus_1 clock line held low
20 Bus access is prohibited for SW
21 I2C Bus_2 data line held low
23 I2C Bus 2 clock line held low
25 Switched 5V not available
26 Tube gets not warm in time (Icut signal no correct)
27 Deflection problem. Deflection detects >3 times prot.
31 Keyboard decoder problem (SW pointer problem)
32 Keyboard decoder problem (A SW- timer has been request but isn't available yet)
34 The NVM chip doesn't answer anymore
35 The voltage +5V not available
36 Wrong address passed to the bus-handler
37 Unexpected level on NMI line found
38 There is no RAM for the requested operation
42 The POR bit of the Primus can't be reset
43 Power down detection TDA9330 (HOP)
44 NRF bit problem. TDA9330 (HOP) oscillator not locked
45 FLS bit problem on safety circuits of TDA9330 (HOP)
46 NHF bit problem (horizontal flyback) on the PHI2_REF of TDA9330 (HOP)
47 NDF bit problem on the vertical part of TDA9330 (HOP)

FR

10 Utilisation de la clef enfant
11 Utilisation du mode réveil
12 Audio MSP341X ne répond pas
13 Le tuner ne réponsd pas
14 Déviation: TDA9330 (HOP) ne répons pas ou le +8V n'est pas présent.
15 FI tuner ne réond pas
16 VSP 9402 ne répons pas (IU100)
17 I2C bus_1 data est au niveau bas
18 I2C bus_1 clock est au niveau bas
20 Pas d'accès au bus
21 I2C bus_2 data est au niveau bas
23 I2C bus 2 clock est au niveau bas
25 5V commuté absent
26 Tube froid (signal Icut non conforme)
27 Problème de balayage (après 3 tentatives)
31 Problème de décodage clavier
32 Problème de décodage clavier
34 La mémoire NVRAM ne répond pas
35 La tension 5V n'est pas disponible
36 Problème d'adressage sur le bus
37 Anomalie sur interruption non masquable
38 Pas de mémoire RAM disponible pour effectuer les opérations
42 Problème de Reset sur le Primus
43 Le HOP (TDA9330) détecte un arrêt
44 Problème sur l'oscillateur du TDA9330 (HOP)
45 Problème sur les circuits de sécurité du TDA9330 (HOP)
46 Problème sur le PHI2_REF du TDA9330 (HOP
47 Problème sur la partie trame du TDA9330 (HOP)

DE

10 Kindersicherung aktiv (Kein Fehlercode!)
11 Weckerfunktion aktiv (Kein Fehlercode !)
12 Audio-MSP 341x antwortet nicht
13 Tuner antwortet nicht
14 TDA9330H antwortet nicht (oder +8V fehlen)
15 FI-Tuner antwortet nicht
16 VSP9402 (IU100) antwortet nicht
17 I2C Bus_1 Data ist immer L
18 I2C Bus_1 Clock ist immer L
20 I2C Bus ist blockiert
21 I2C Bus_2 Data ist immer L
23 I2C Bus_2 Clock ist immer L
25 Geschaltete 5V nicht vorhanden
26 Bildrohr ist nicht rechtzeitig aufgeheizt (Signal Icut nicht korrekt)
27 Schutzschaltung Ablenkung hat dreimal ausgelöst
31 Softwarefehler Tastatur-Decoder (nur für Produktionsstätten)
32 Softwarefehler Tastatur-Decoder (nur für Produktionsstätten)
34 NVM (EEPROM) antwortet nicht
35 5V nicht vorhanden (Netzspannung zu niedrig/Power-Fail-Schaltung)
36 Softwarefehler (nur für Produktionsstätten)
37 Unerwarteter Zustand auf NMI-Leitung (z.B. durch Überschlag im Bildrohr)
38 Softwarefehler (nur für Produktionsstätten)
42 POR (Power On Reset) Flag VSP9402 wird nicht zurückgesetzt (zu geringe Betriebsspannung)
43 Power Down Detection TDA9330H (zu geringe Betriebsspannung)
44 NRF Flag TDA9330H Referenz-PLL (Clock) nicht eingerastet
45 FLS Flag TDA9330H Pin 5 ('FLASH')>2V, Ablenkschutzschaltung aktiv
46 NHF Flag TDA9330H Pin 13 H-Rückschlagimpuls fehlt
47 NDF Flag TDA9330H Pin 9 V_GUARD fehlt oder dauert zu lange

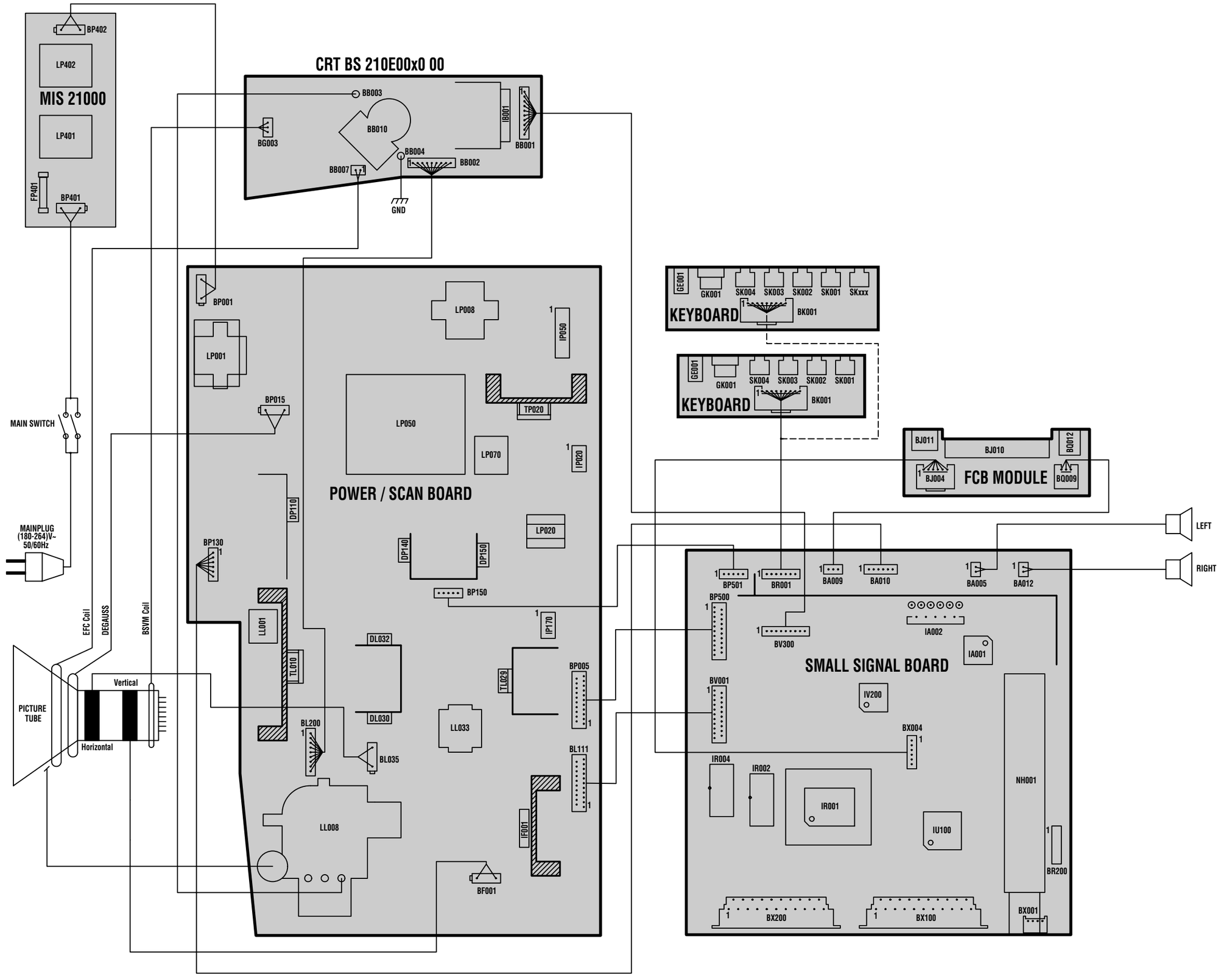
IT

10 Usato per visualizzare la sicurezza bambini
11 Usato per visualizzare il modo timer
12 L'integrato audio MSP341X non risponde
13 Il tuner non risponde
14 Il TDA9330 (HOP) non risponde oppure +8V non disponibili
15 La FI tuner non risponde
16 Il VSP9402 (IU100) non risponde
17 IICBus_1 con linea data a livello basso
18 IICBus_1 con linea clock a livello basso
20 Accesso Bus è vietato dal software
21 IICBus_2 linea data a livello basso
23 IICBus_2 linea clock a livello basso
25 5V commutati non disponibili
26 Il tubo non raggiunge la temperatura nel tempo stabilito (segnale Icut non corretto)
27 Problema di deflessione. Deflessione rlieva > 3 volte prot.
31 Problema decoder tastiera (problema SW pointer)
32 Problema decoder tastiera (A SW- timer è stato richiesto ma non ancora disponibile)
34 L'NVM chip non risponde
35 Tensione +5V non disponibile
36 Indirizzo errato trasmesso al sistema bus
37 Livello incorretto sulla linea MNI
38 Non disponibilità della RAM per l'operazione richiesa
42 IL bit POR del Primus non può essere resettato
43 Caduta di tensione di alimentazione del TDA9330(HOP)
44 Problema con il bit NRF. TDA9330 (HOP) con problema sull'oscillatore
45 Problema con il bit FLS sul circuito protezione del TDA9330(HOP)
46 Problema con il bit NHF (Horizontal flyback) sulla PHI2_REF del TDA9330 (HOP)
47 Problema con il bit NDF della parte verticale del TDA9330 (HOP).

ES

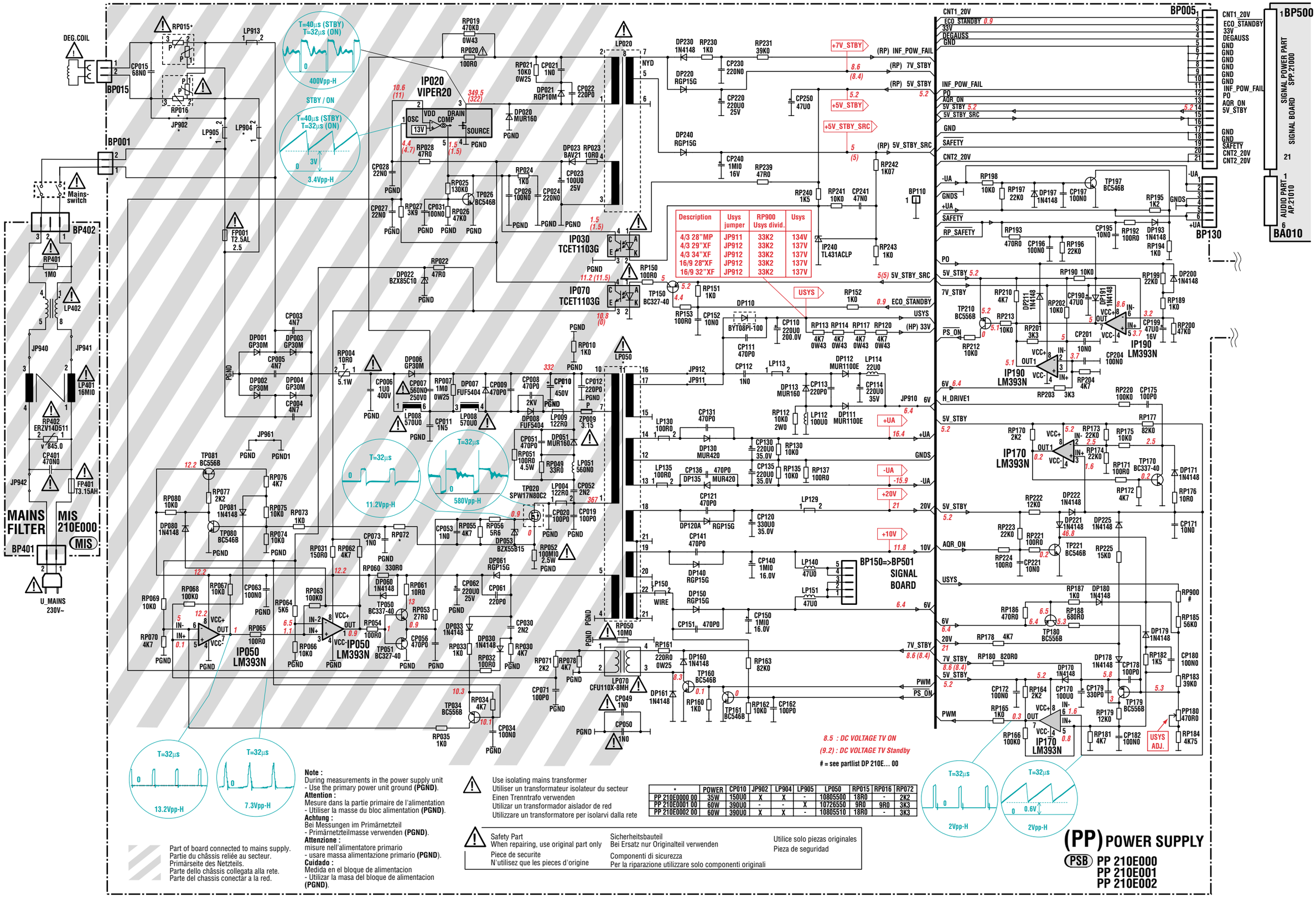
10 Utilizado para indicar el modo "seguro niños"
11 Utilizado para indicar el modo "timer"
12 El circuito de audio MSP341X no responde
13 El sintonizador no responde
14 TDA9330 (HOP) no responde o faltan los +8V
15 La F.I. no responde
16 VSP 9402 (IU100) no responde
17 La línea de datos de I2C Bus_1 forzada a nivel bajo
18 La línea de clock de I2C Bus_1 forzada a nivel bajo
20 Acceso al Bus prohibido para el software
21 La línea de datos de I2C Bus_2 forzada a nivel bajo
23 La línea de clock de I2C Bus_2 forzada a nivel bajo
25 Los 5V conmutados no disponibles
26 El TRC no se calienta en el tiempo establecido (señal Icut incorrecta)
27 Problema de deflexión. Disparada la protección más de 3 veces
28 STV2050 no responde
29 Fallo de convergencia. NVM24C32 no responde
31 Problema de teclado (problema de SW, puntero)
32 Problema de teclado (un timer ha sido solicitado pero no está disponible)
34 La NVM no responde
35 La tensión de +5V no existe
36 Dirección incorrecta al controlador de bus
37 Encontrado un nivel inesperado en la línea NMI
38 No RAM para la operación solicitada
42 El bit POR del Primus no puede ser inicializado
43 TDA9330 (HOP) detecta "apagado"
44 Problema del bit NRF. TDA9330 (HOP) oscilador no fijado
45 Problema con el bit FLS en los circuitos de seguridad de TDA9330 (HOP)
46 Problema con el bit NHF (horizontal flyback) en PHI2_REF de TDA9330 (HOP)
47 Problema en el bit NDF en la parte del vertical de TDA9330 (HOP)

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



ETC210
First issue 07 / 03

COMPLETE PCB DIAGRAM - SCHEMA PLATINE PRINCIPALE EQUIPEE - SCHALTUNG LEITERPLATTE KPL - SCHEMA PIASTRA COMPLETA - ESQUEMA PLATINA EQUIPADA
POWER SUPPLY PART - PARTIE ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓN



Description	Usys jumper	RP900 Usys divid.	Usys
4/3 28"MP	JP911	33K2	134V
4/3 29"XF	JP912	33K2	137V
4/3 34"XF	JP912	33K2	137V
16/9 28"XF	JP912	33K2	137V
16/9 32"XF	JP912	33K2	137V

*	POWER	CP010	JP902	LP904	LP905	LP050	RP015	RP016	RP072
PP 210E0000 00	35W	150U0	X	X	-	10805500	18R0	-	2K2
PP 210E0001 00	60W	390U0	-	-	X	10726550	9R0	9R0	3K3
PP 210E0002 00	60W	390U0	X	X	-	10805510	18R0	-	3K3

Note :
During measurements in the power supply unit
- Use the primary power unit ground **(PGND)**.

Attention :
Mesure dans la partie primaire de l'alimentation
- Utiliser la masse du bloc alimentation **(PGND)**.

Achtung :
Bei Messungen im Primärnetzteil
- Primärnetzteilmasse verwenden **(PGND)**.

Attenzione :
misure nell'alimentatore primario
- usare massa alimentazione primario **(PGND)**.

Cuidado :
Medida en el bloque de alimentacion
- Utilizar la masa del bloque de alimentacion **(PGND)**.

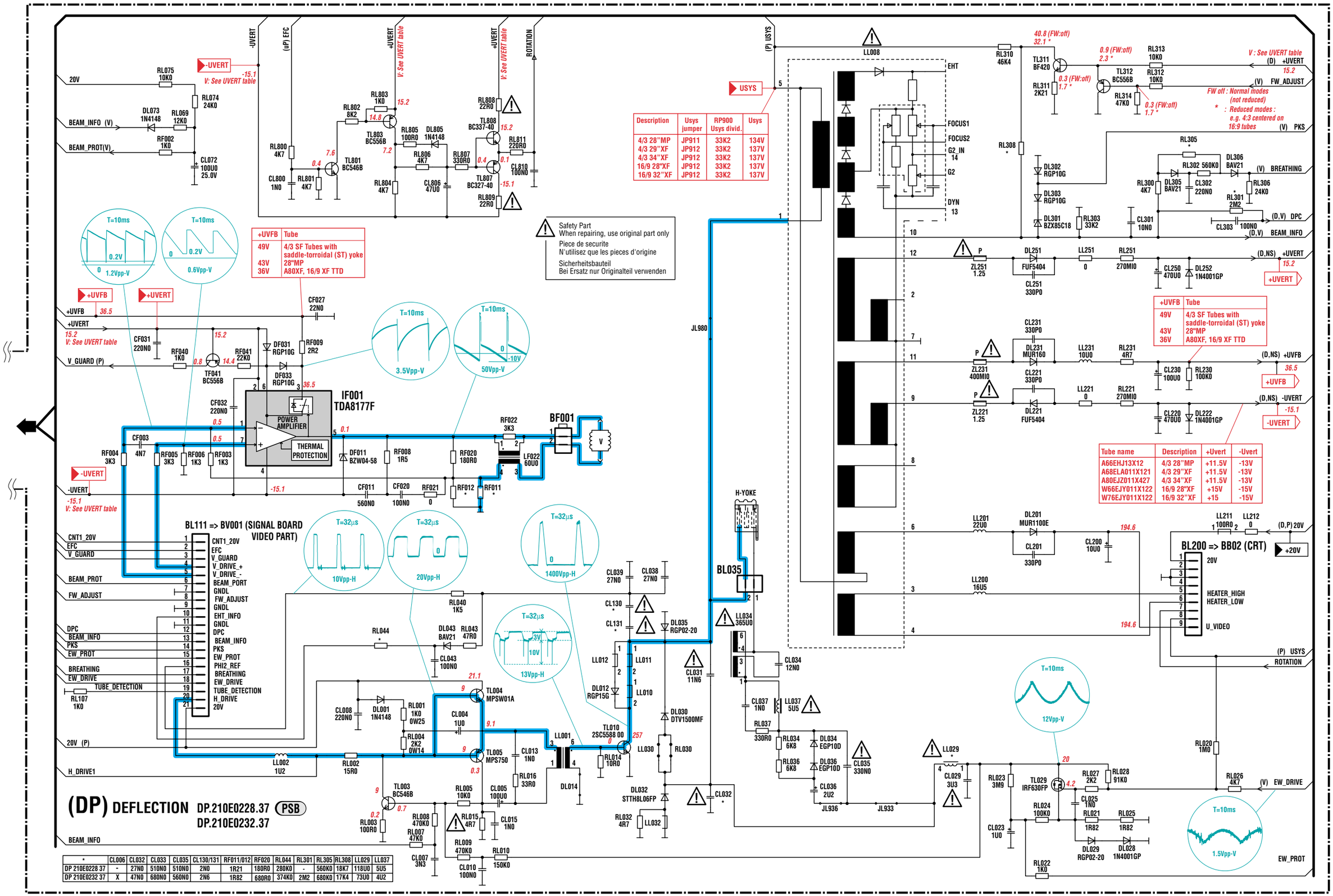
Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectar a la red.

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

Safety Part
When repairing, use original part only
Piece de securite
N'utilisez que les pieces d'origine
Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden
Componenti di sicurezza
Per la riparazione utilizzare solo componenti originali
Utilice solo piezas originales
Pieza de seguridad

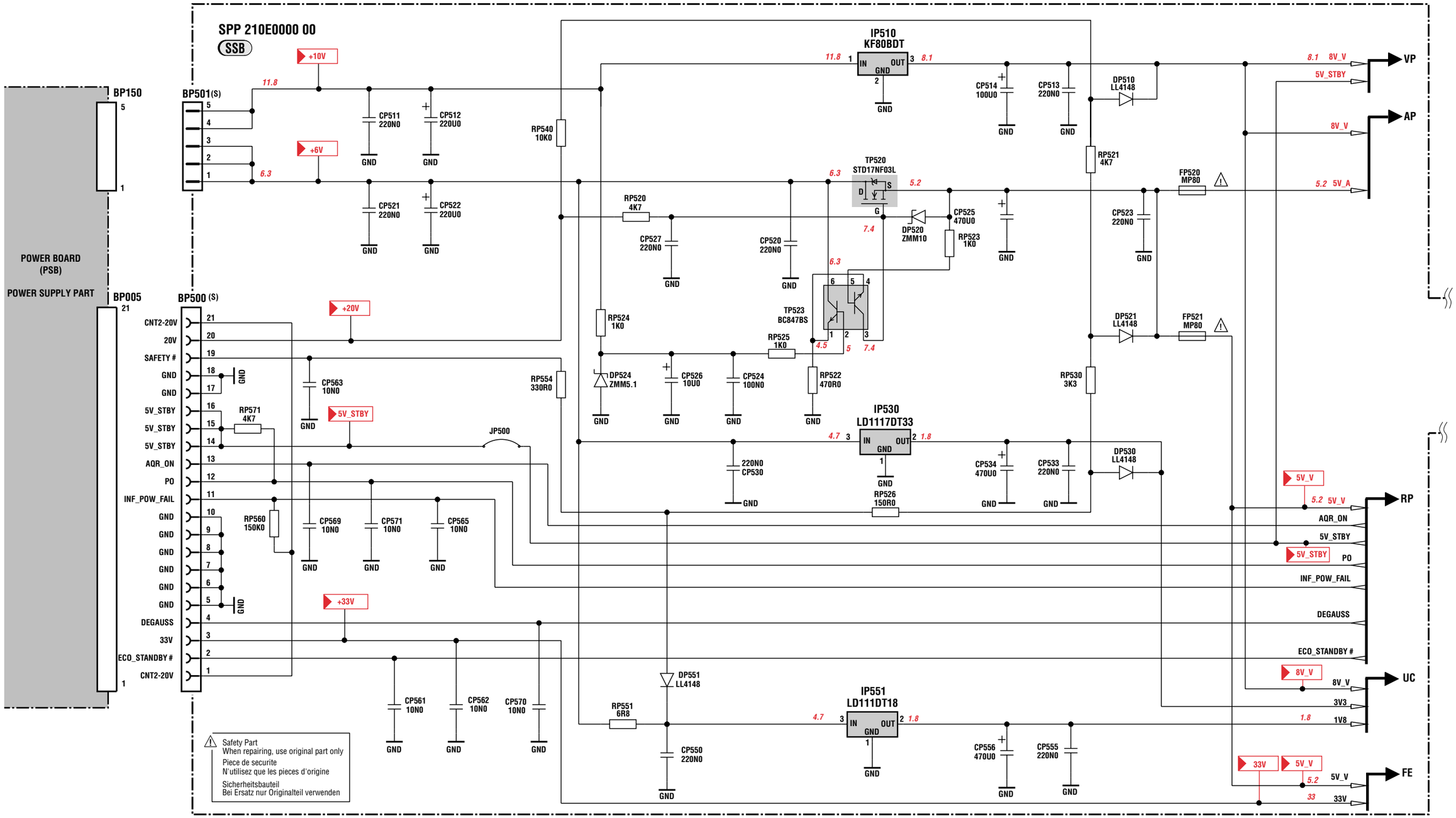
(PP) POWER SUPPLY
PSB PP 210E000
PP 210E001
PP 210E002

COMPLETE PCB DIAGRAM - SCHEMA PLATINE PRINCIPALE EQUIPEE - SCHALTUNG LEITERPLATTE KPL - SCHEMA PIASTRA COMPLETA - ESQUEMA PLATINA EQUIPADA
SCANNING - BALAYAGE - ABLENKUNG - BARRIDO - SCANSIONE - DP 210E0228 (28” XF 16:9 TTD TUBES / Gen 2) - DP 210E0232.37 (32” XF 16:9 TUBES / Gen 2)



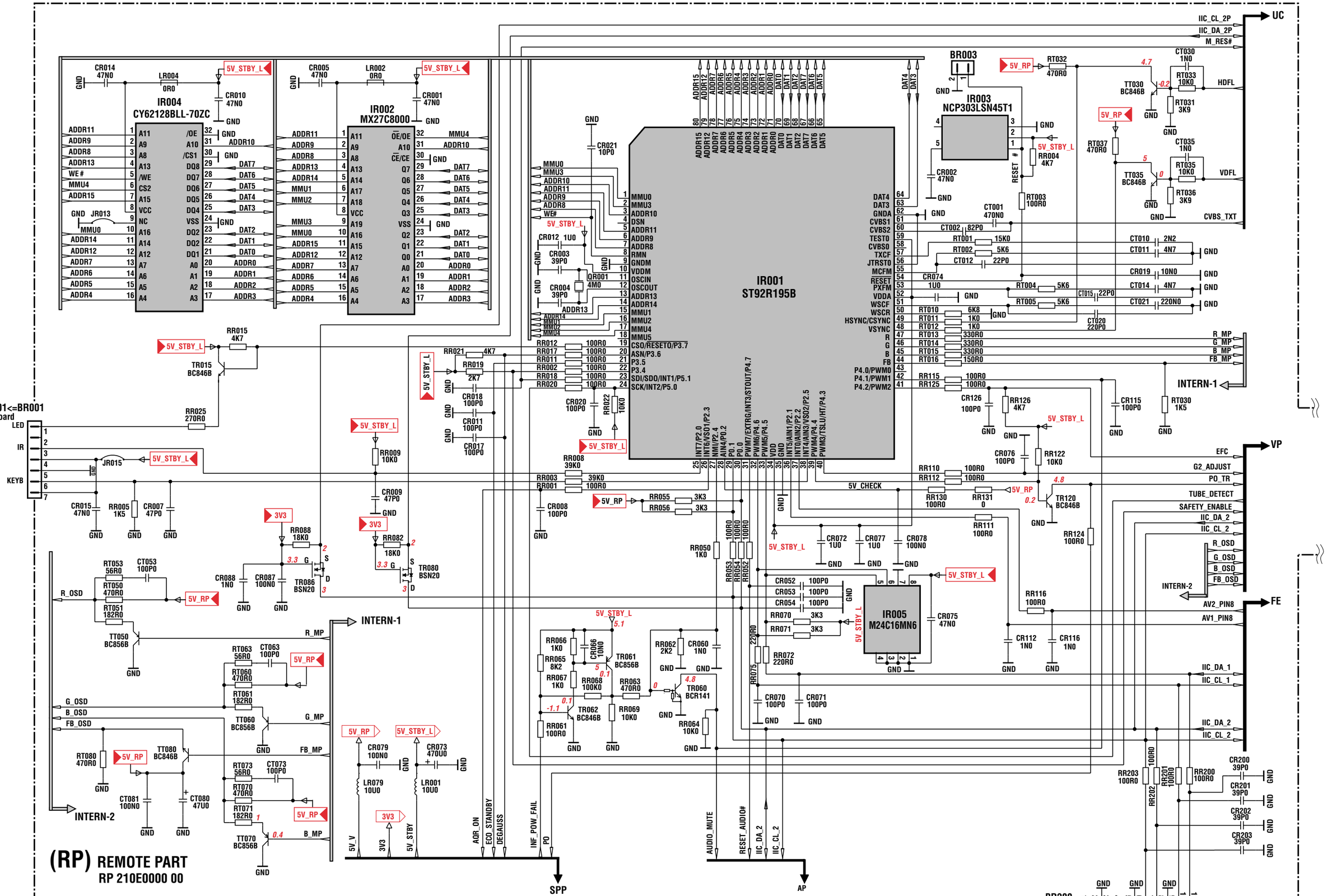
ETC210
First issue 07 / 03

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



ETC210
First issue 07 / 03

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



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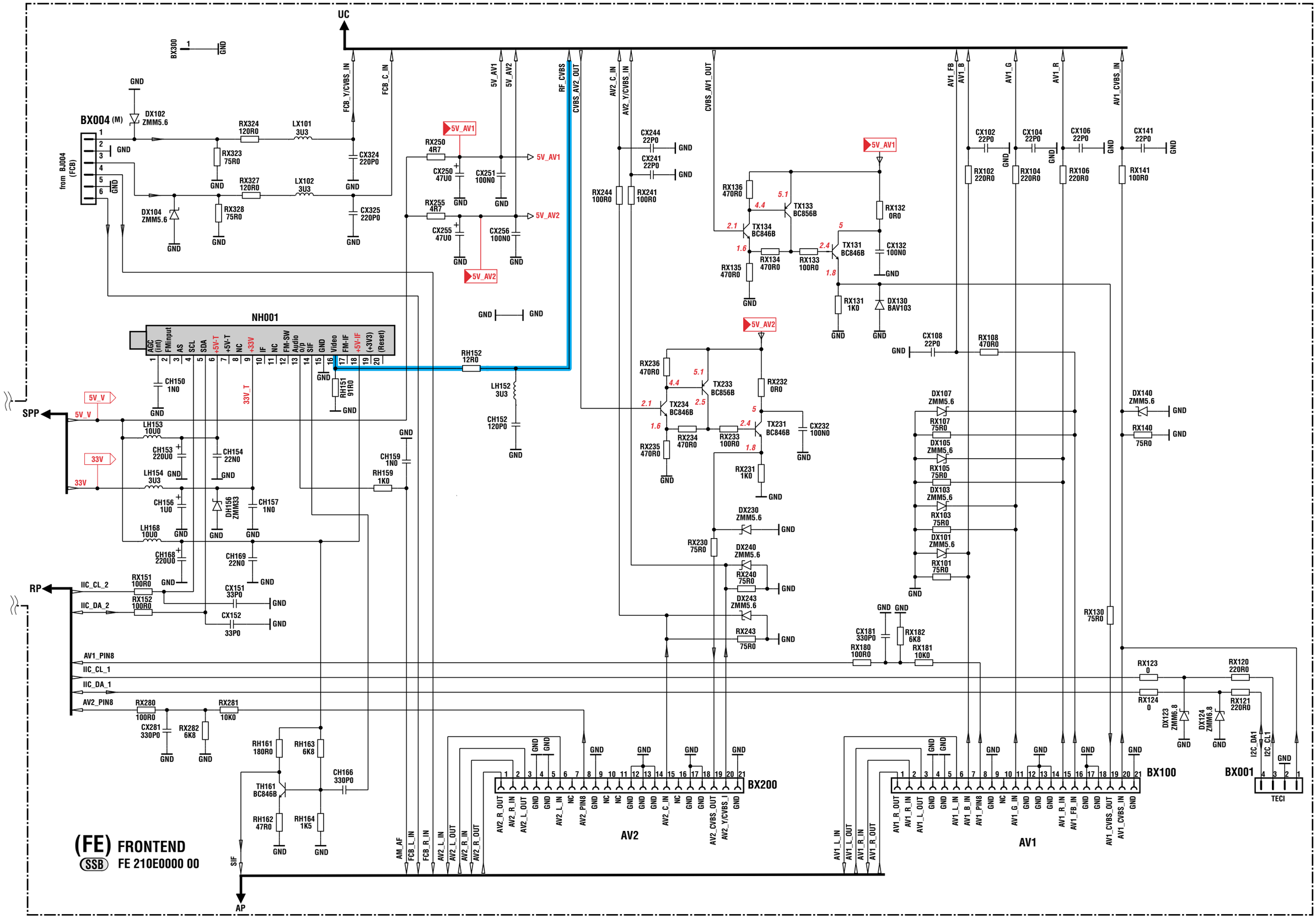
First issue 07 / 03

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
FRONTEND PART - PARTIE SIGNAUX D'ENTREE - EINGANGSSTUFEN - PRESE FRONTALI - FRONT END PART



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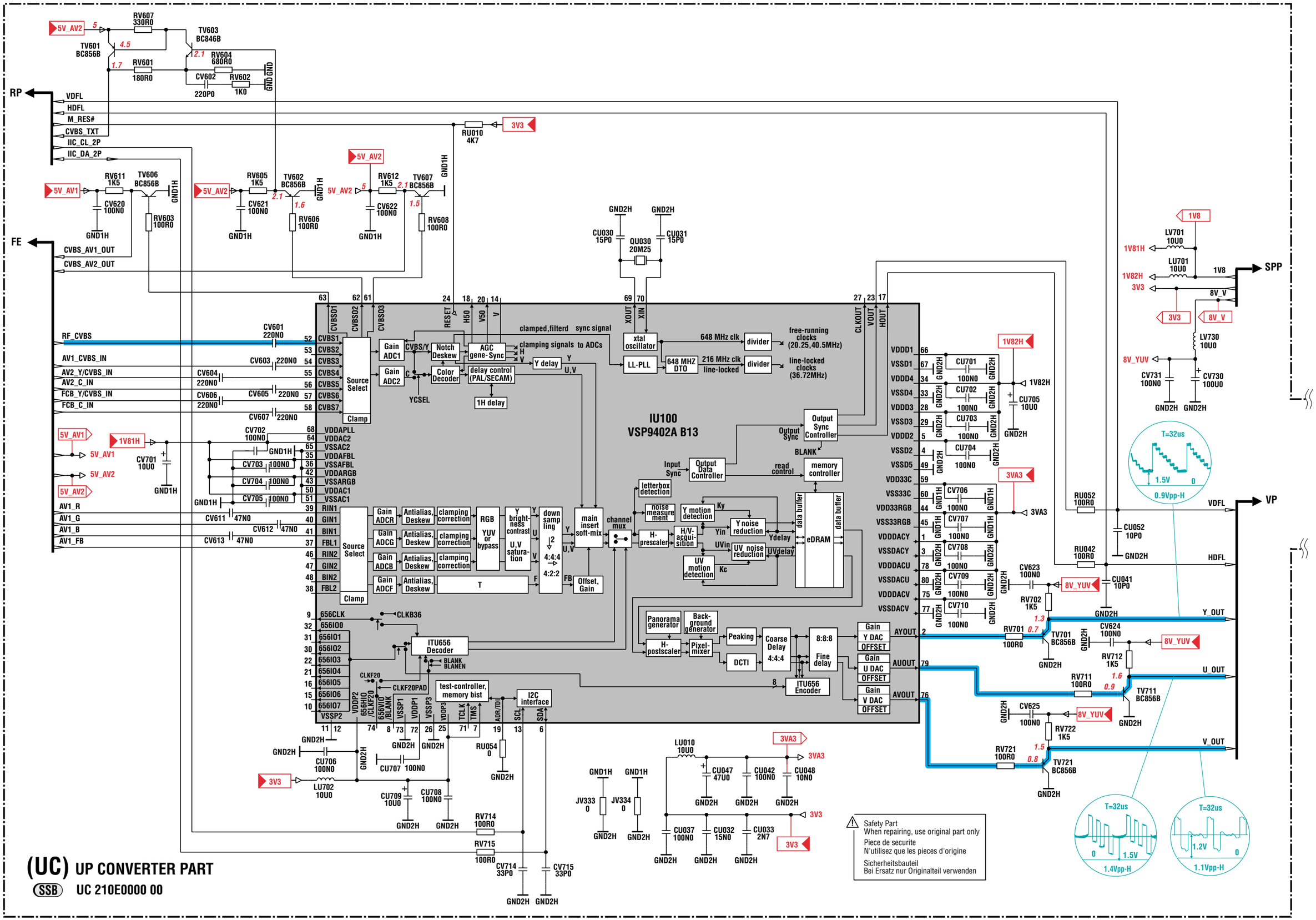
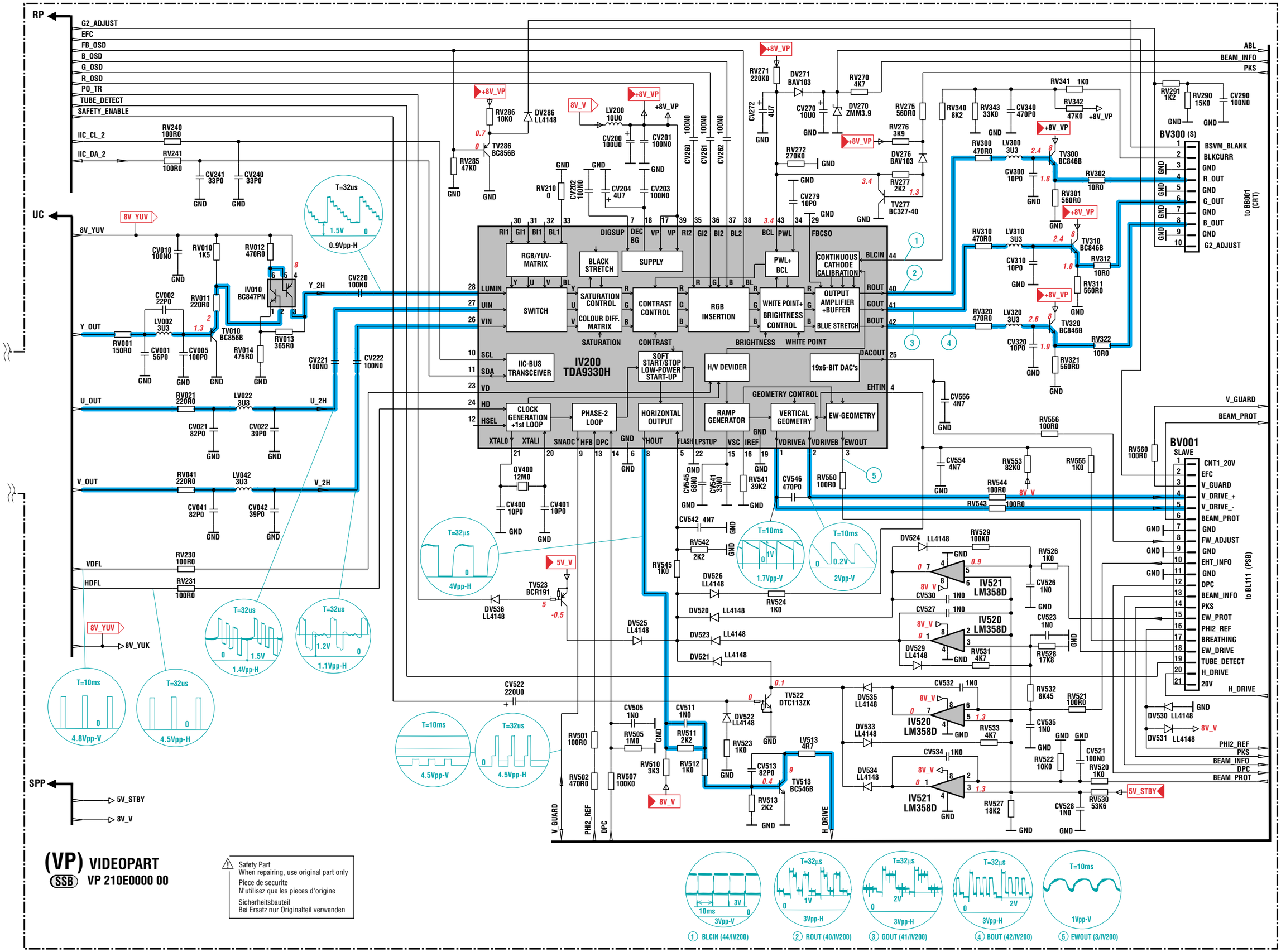
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
UPCONVERTER PART - PARTIE CONVERSION - UPCONVERTER STUFEN - CIRCUITO UPCONVERTER - SUPRACONVERSOR



(UC) UP CONVERTER PART

(SSB) **UC 210E0000 00**

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



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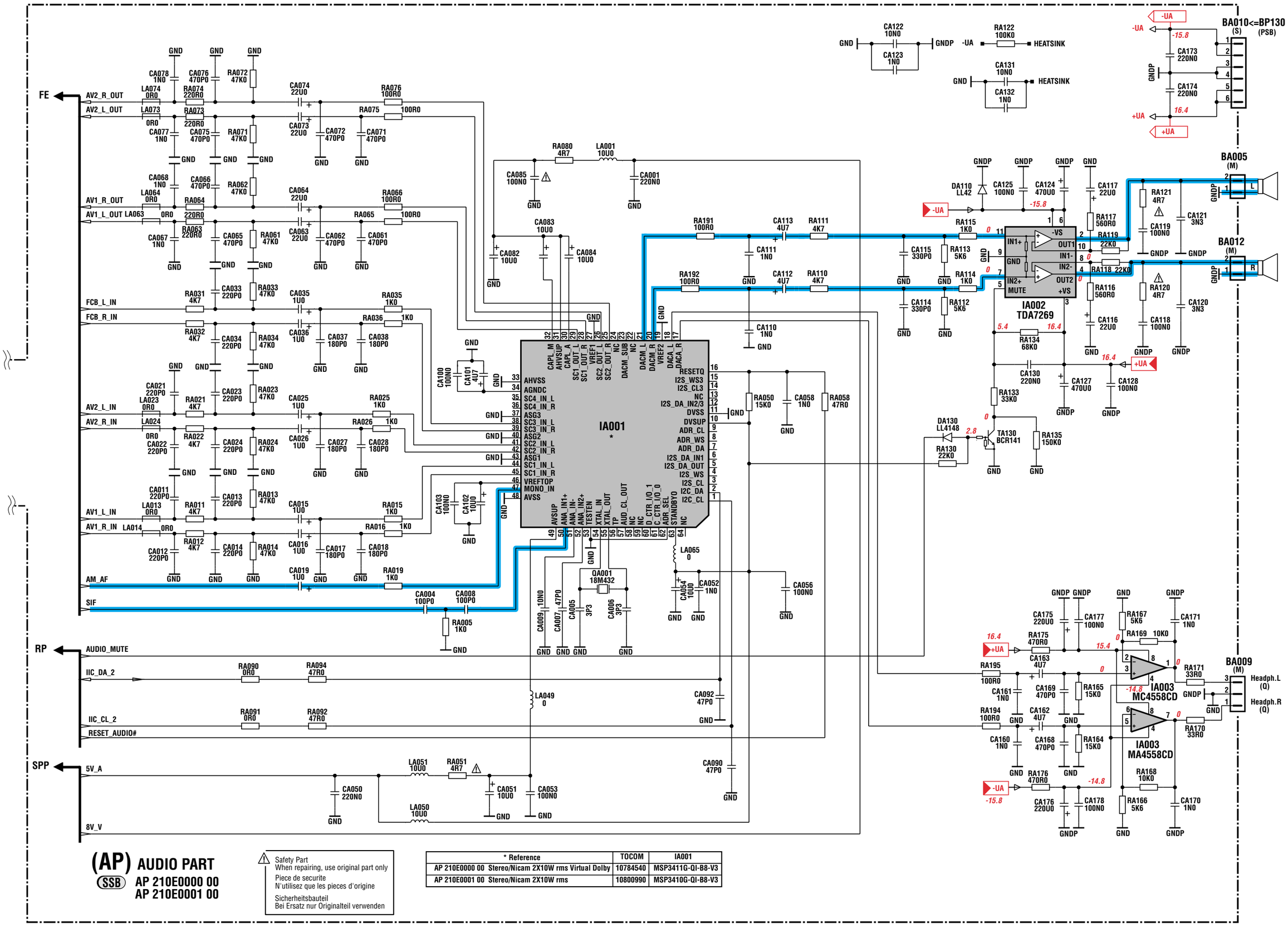
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
AUDIO PART - PARTIE AUDIO - AUDIOSTUFEN - CIRCUITO AUDIO - AUDIO

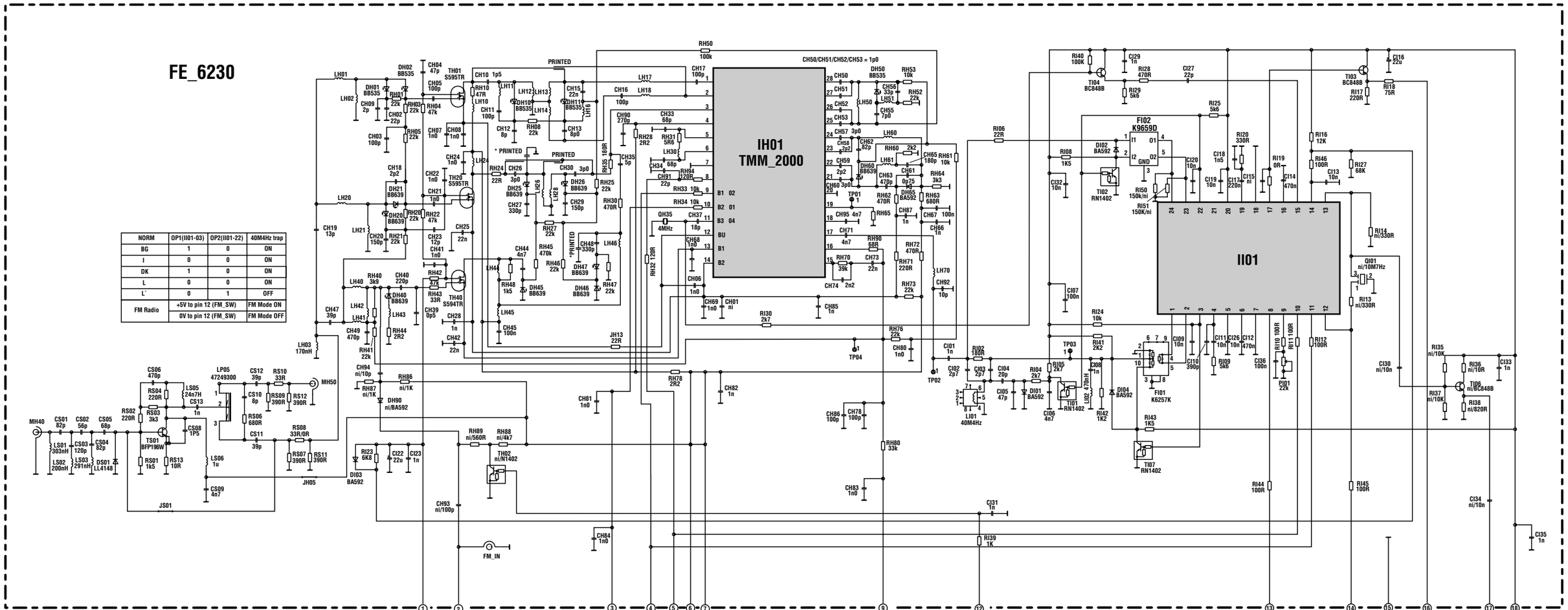


(AP) AUDIO PART
(SSB) AP 210E0000 00
AP 210E0001 00

⚠ Safety Part
When repairing, use original part only
Piece de securite
N'utilisez que les pieces d'origine
Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

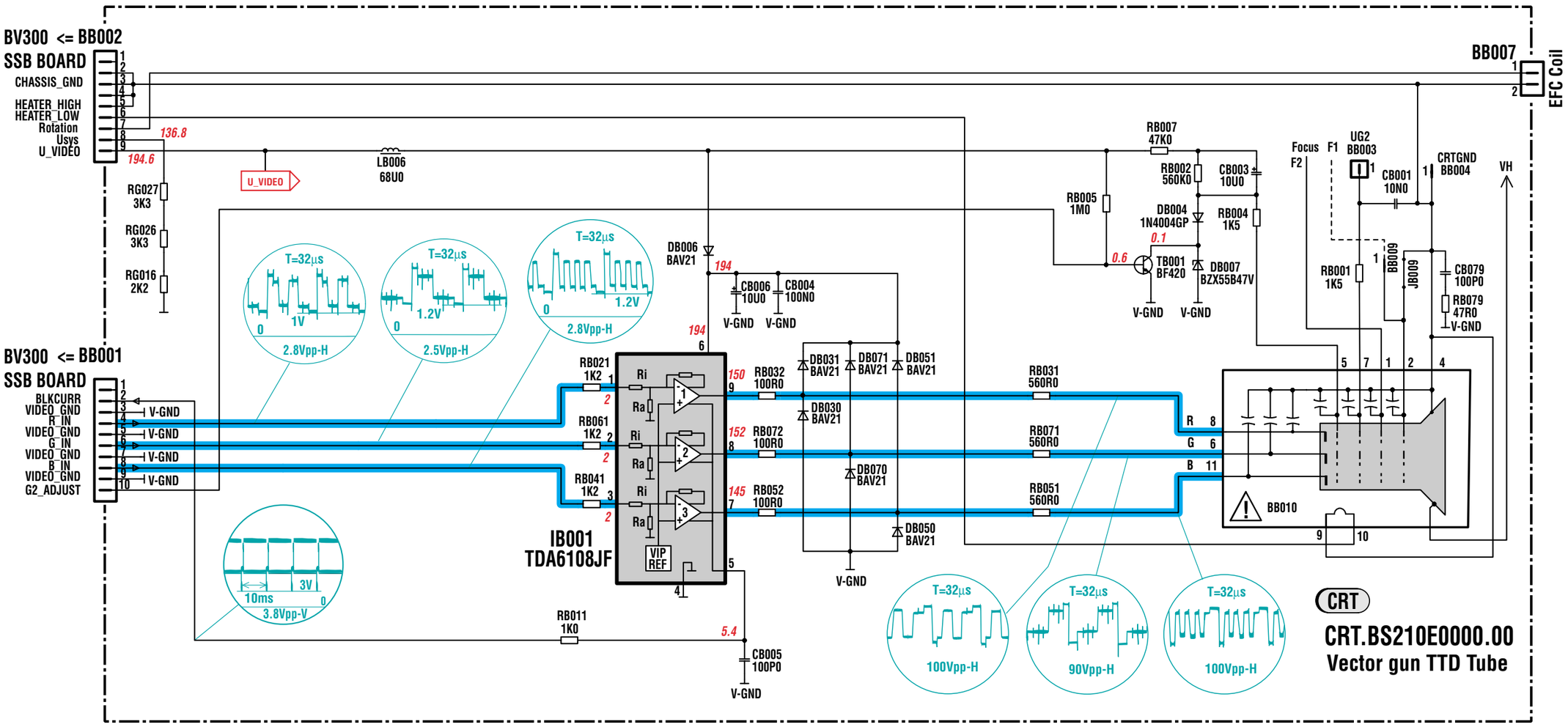
* Reference	TOCOM	IA001
AP 210E0000 00 Stereo/Nicam 2X10W rms Virtual Dolby	10784540	MSP3411G-QI-B8-V3
AP 210E0001 00 Stereo/Nicam 2X10W rms	10800990	MSP3410G-QI-B8-V3

VHF / UHF TUNER FE6230 (For information only)

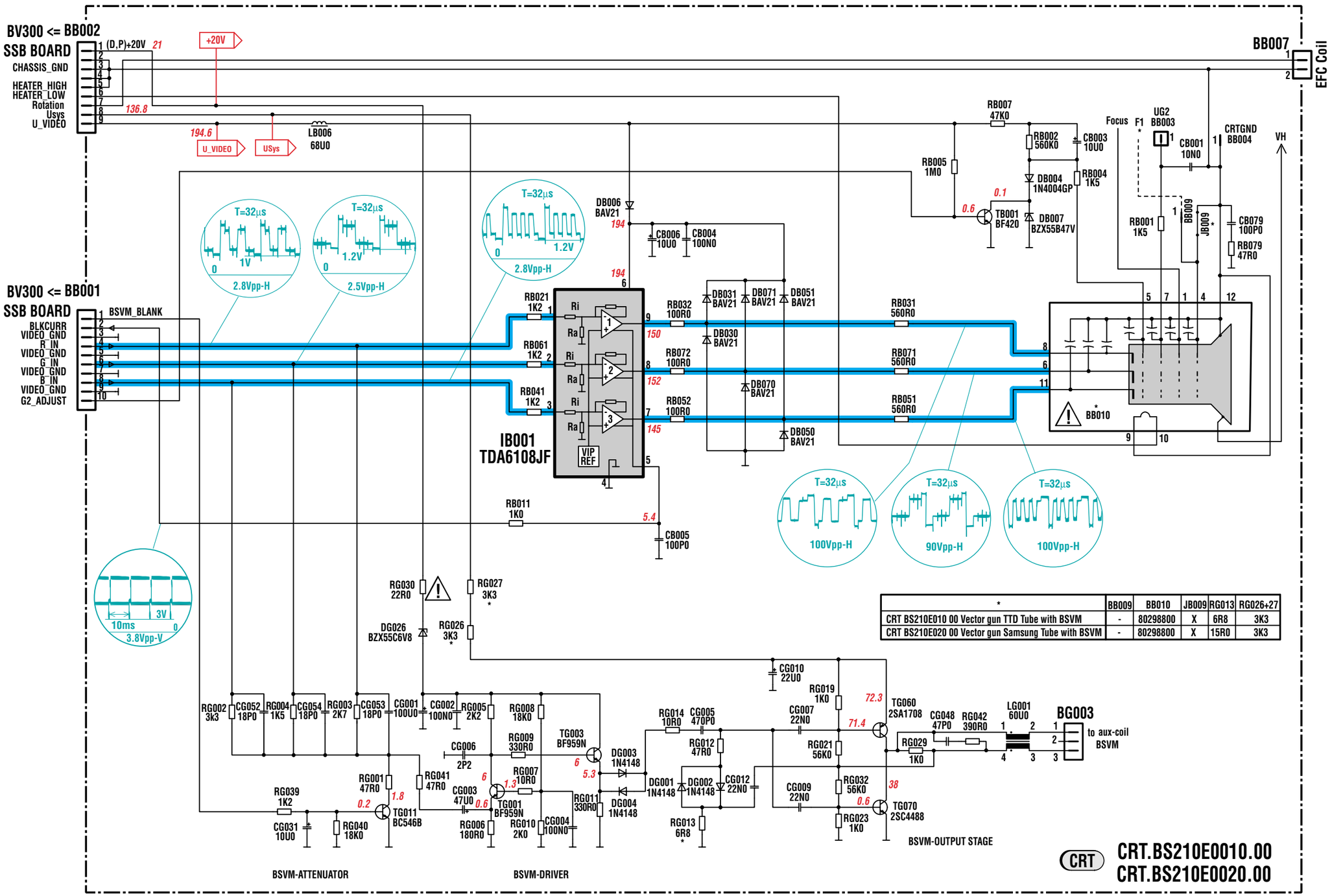


NORM	OP1(II01-03)	OP2(II01-22)	40M4Hz trap
BG	1	0	ON
I	0	0	ON
DK	1	0	ON
L	0	0	ON
L`	0	1	OFF
FM Radio	+5V to pin 12 (FM_SW)		FM Mode ON
	0V to pin 12 (FM_SW)		FM Mode OFF

VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO
CRT.BS210E0000.00



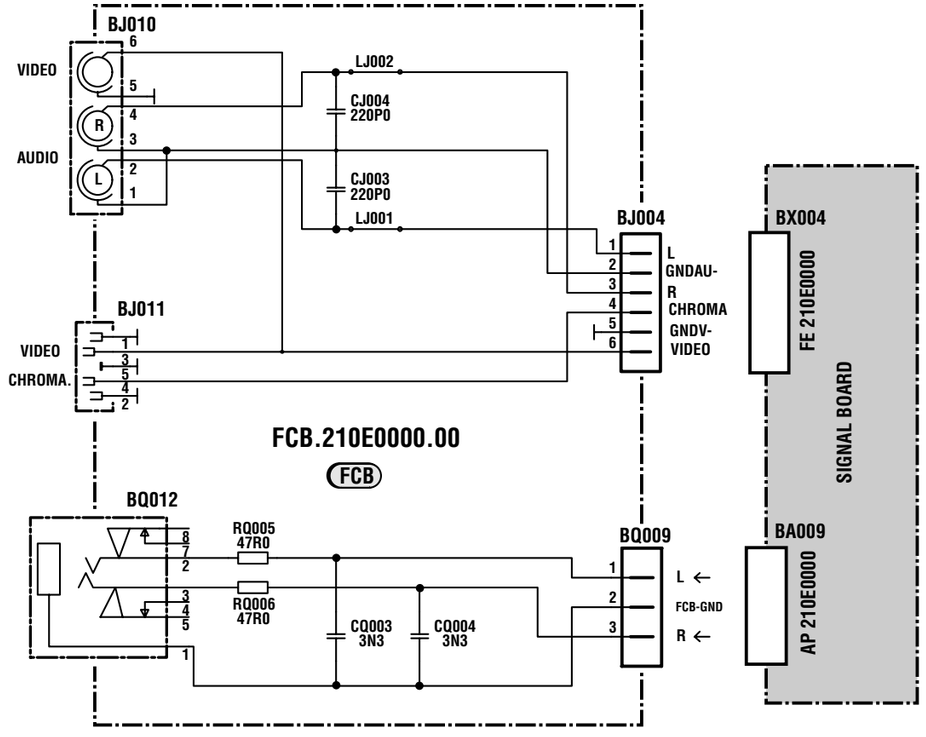
VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO
CRT.BS210E0010.00 - CRT.BS210E0020.00



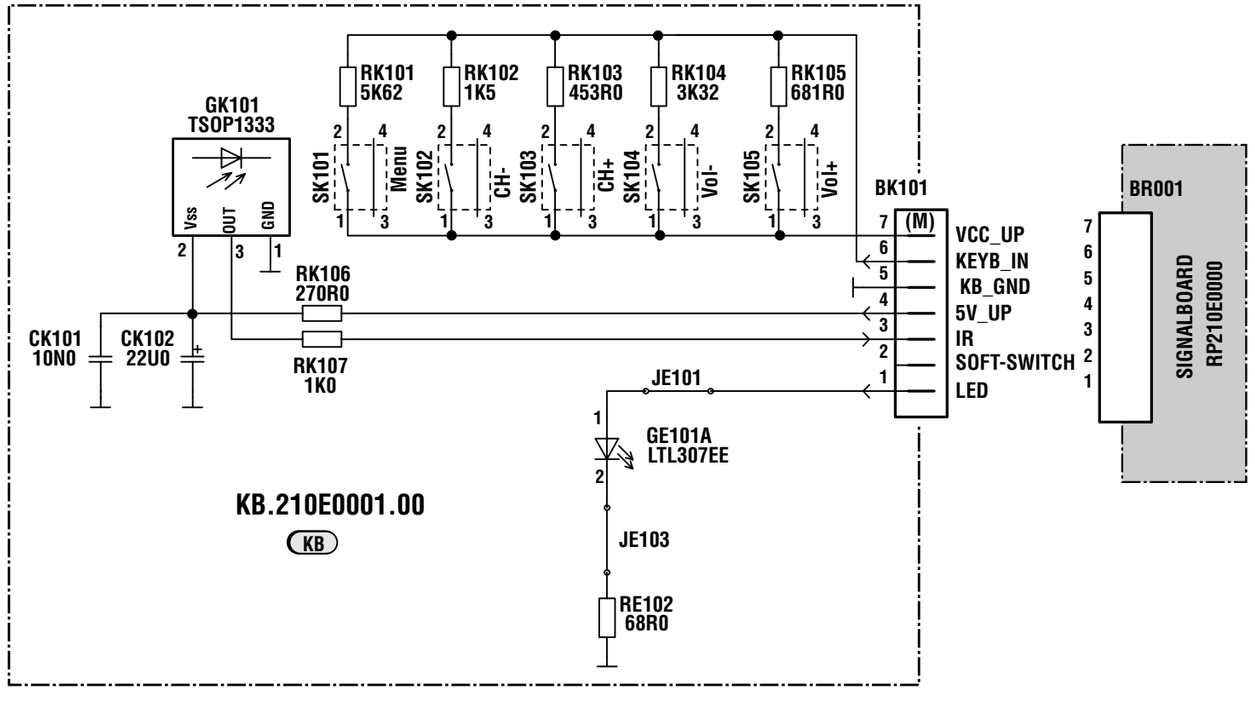
*	BB009	BB010	JB009	RG013	RG026+27
CRT BS210E010 00 Vector gun TTD Tube with BSVM	-	80298800	X	6R8	3K3
CRT BS210E020 00 Vector gun Samsung Tube with BSVM	-	80298800	X	15R0	3K3

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

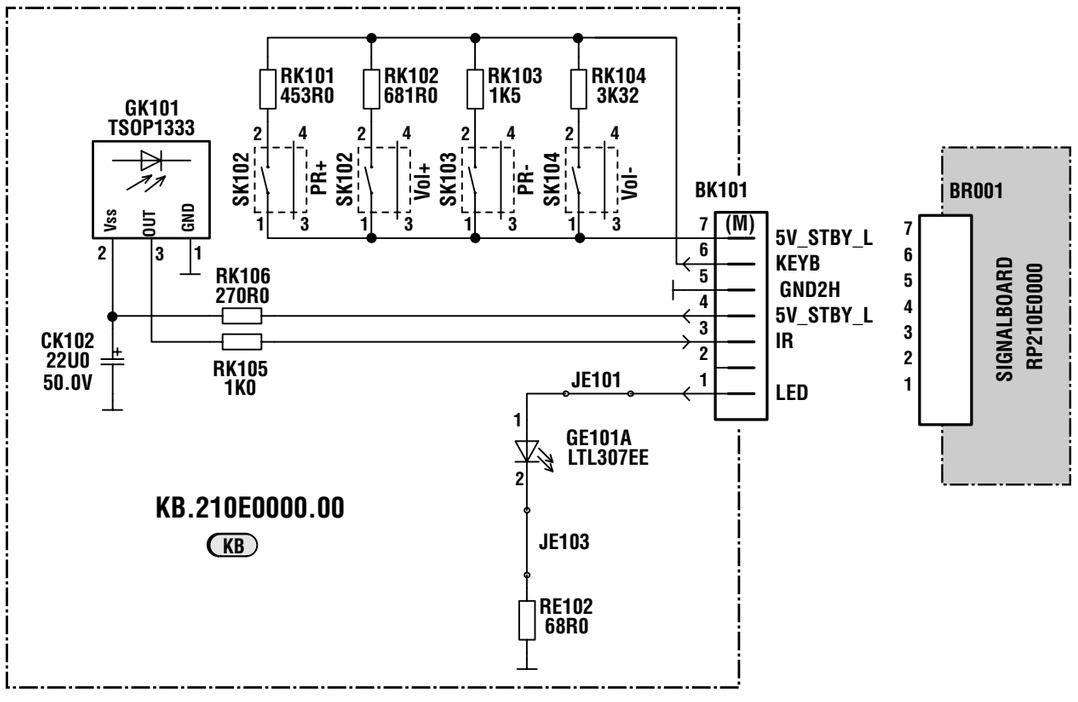
FCB.210E0000



KB.210E0000 - KEYBOARD 5 Key



KB.210E0000 - KEYBOARD 4 Key



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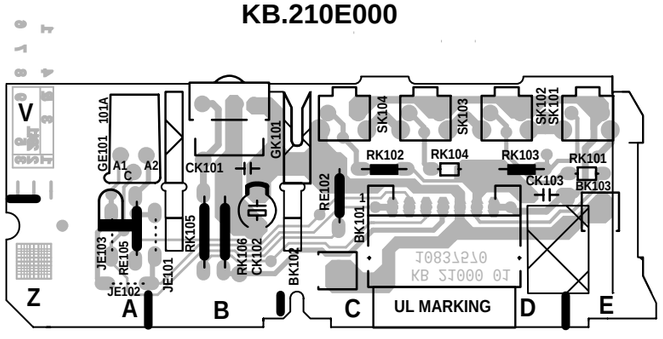

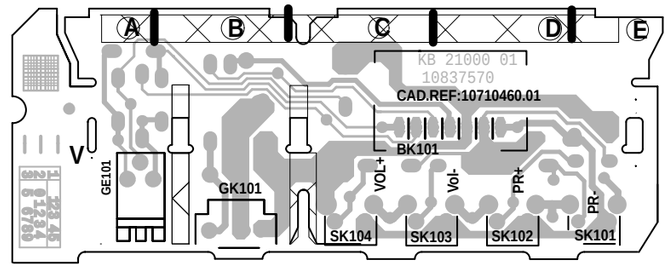

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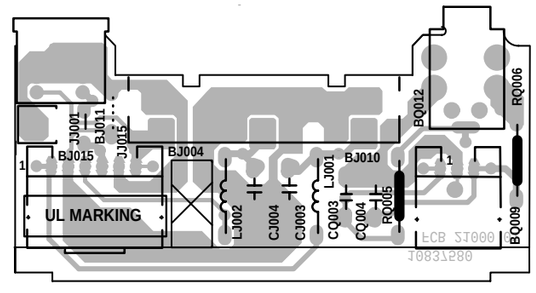

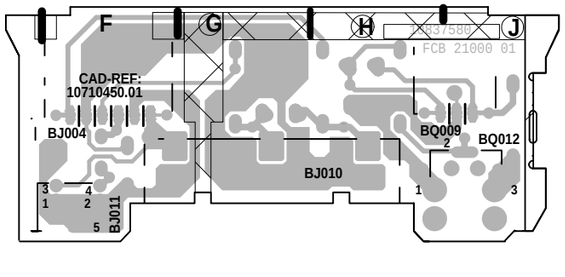

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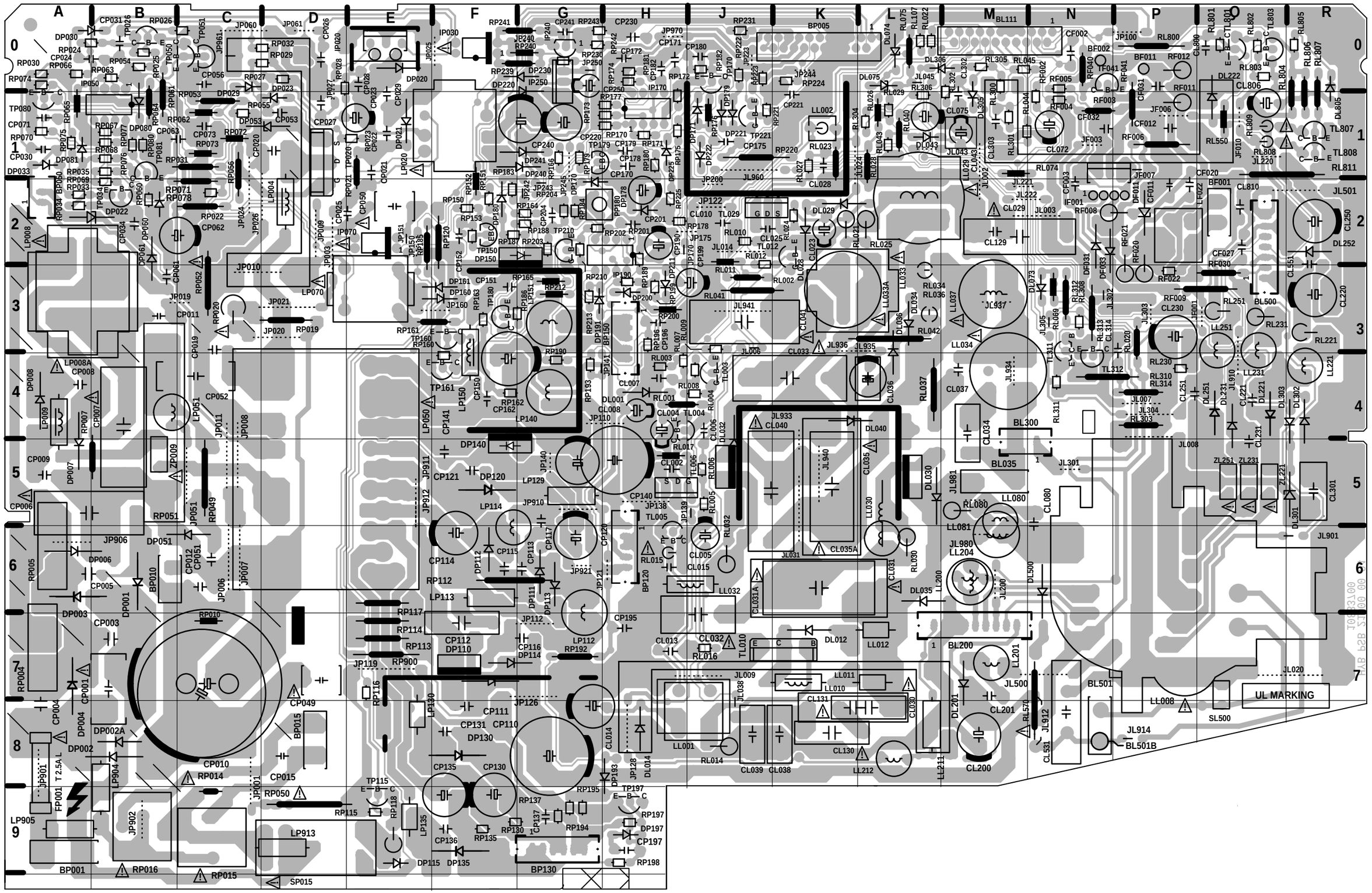
POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

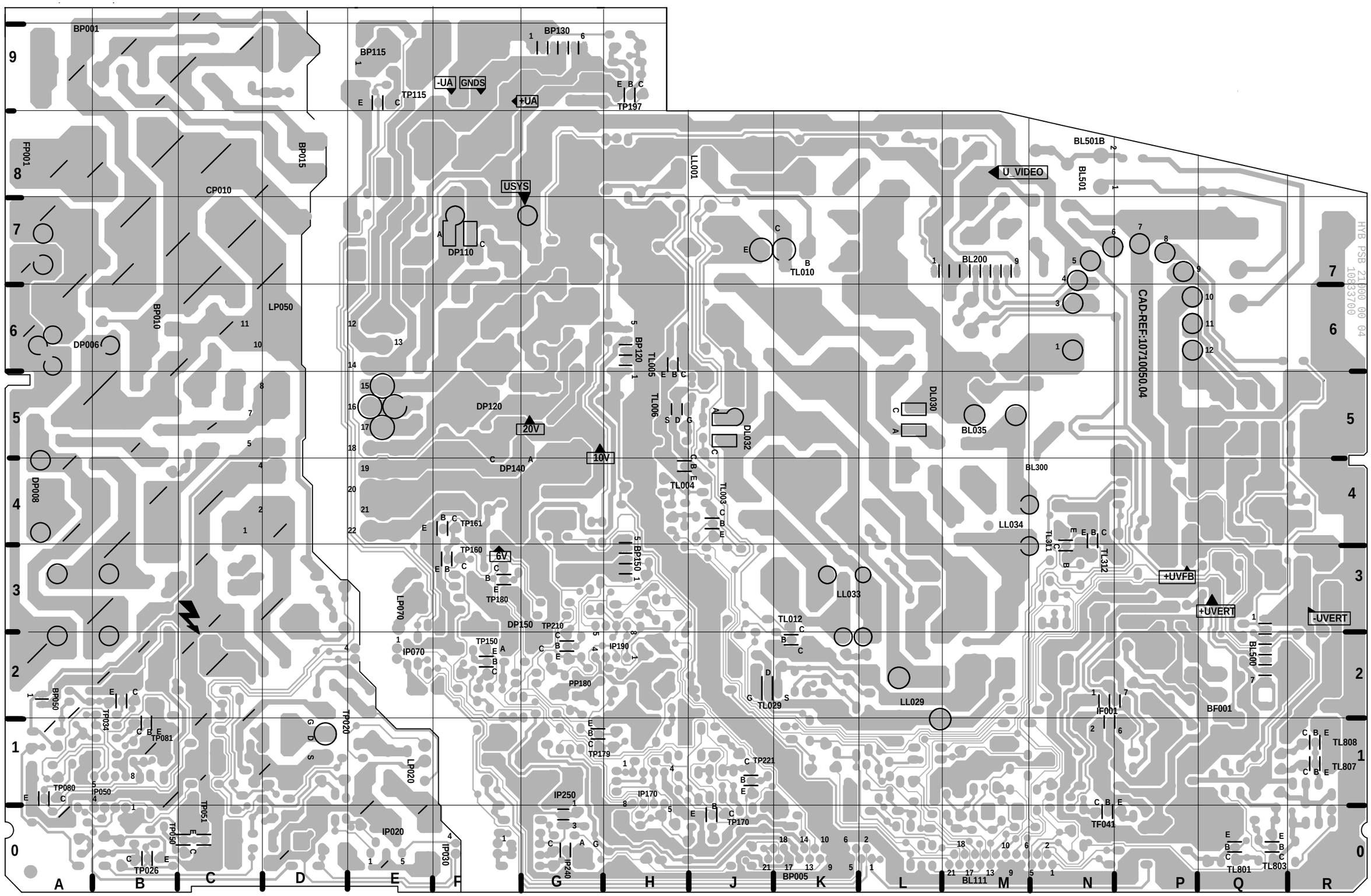
COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES



ETC210 - PTV
First issue 09 / 03

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

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



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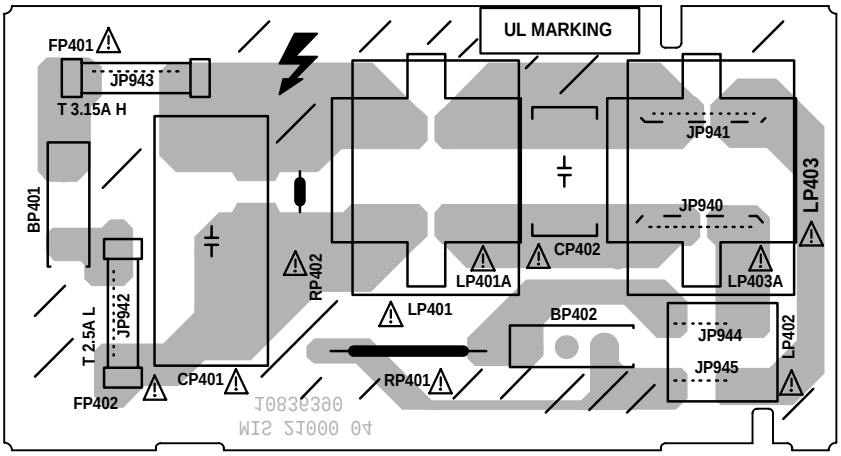
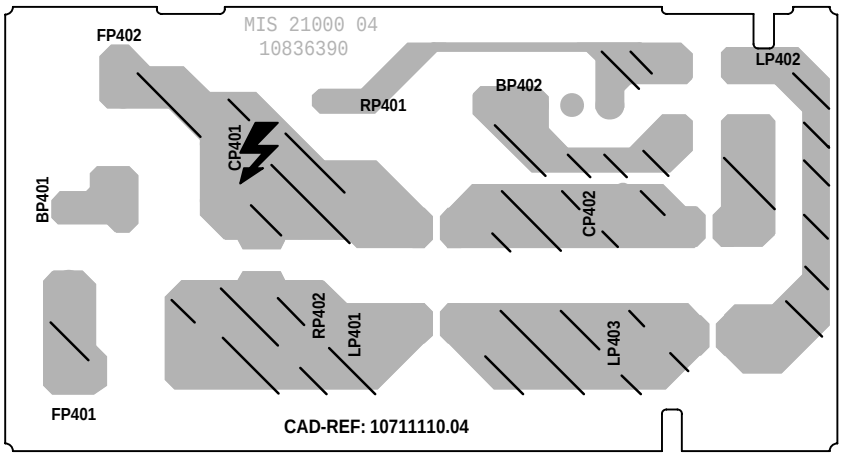
First issue 09/ 03

MAINS FILTER - FILTRE SECTEUR
MIS210E0000

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

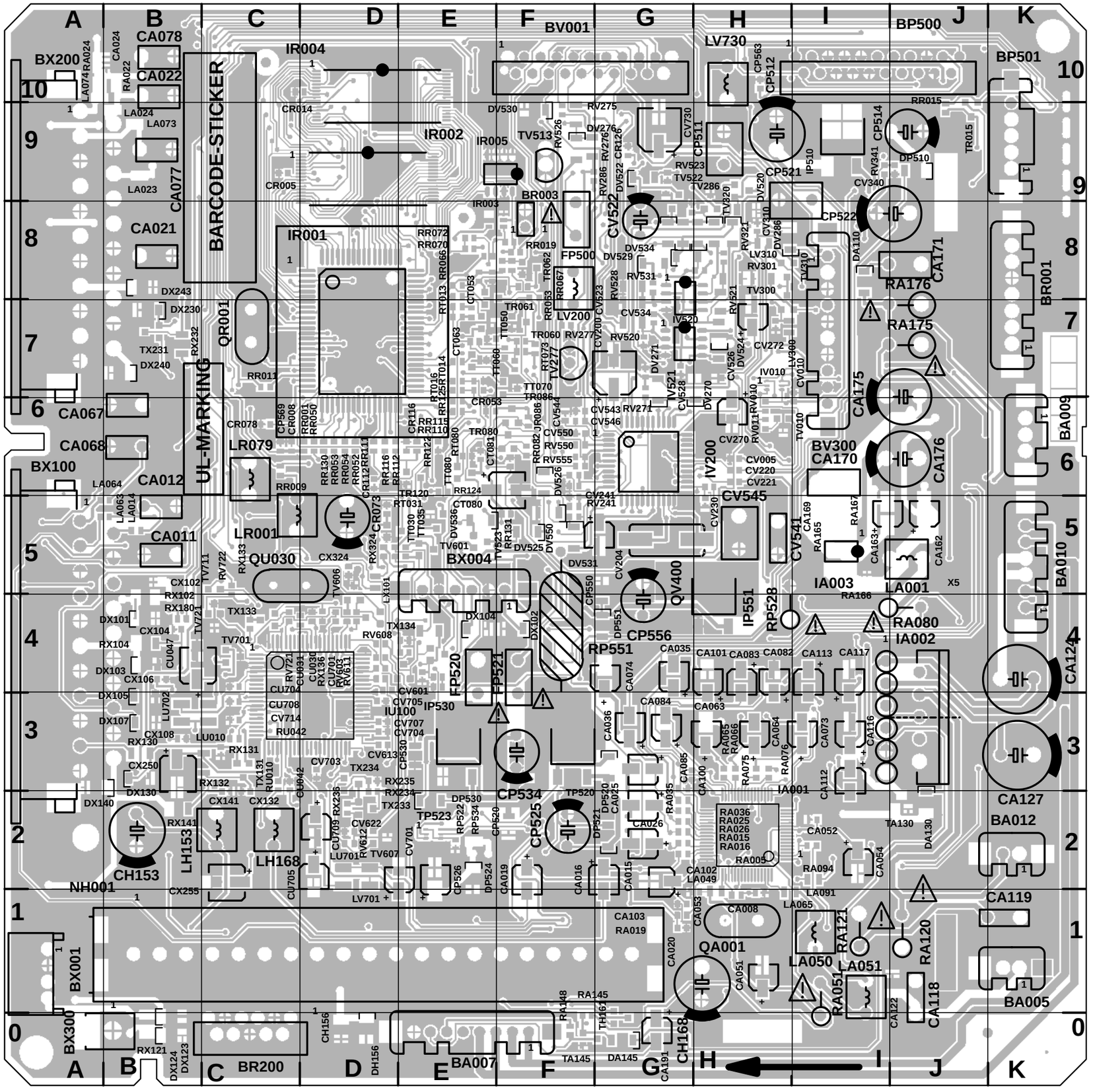


SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



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

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



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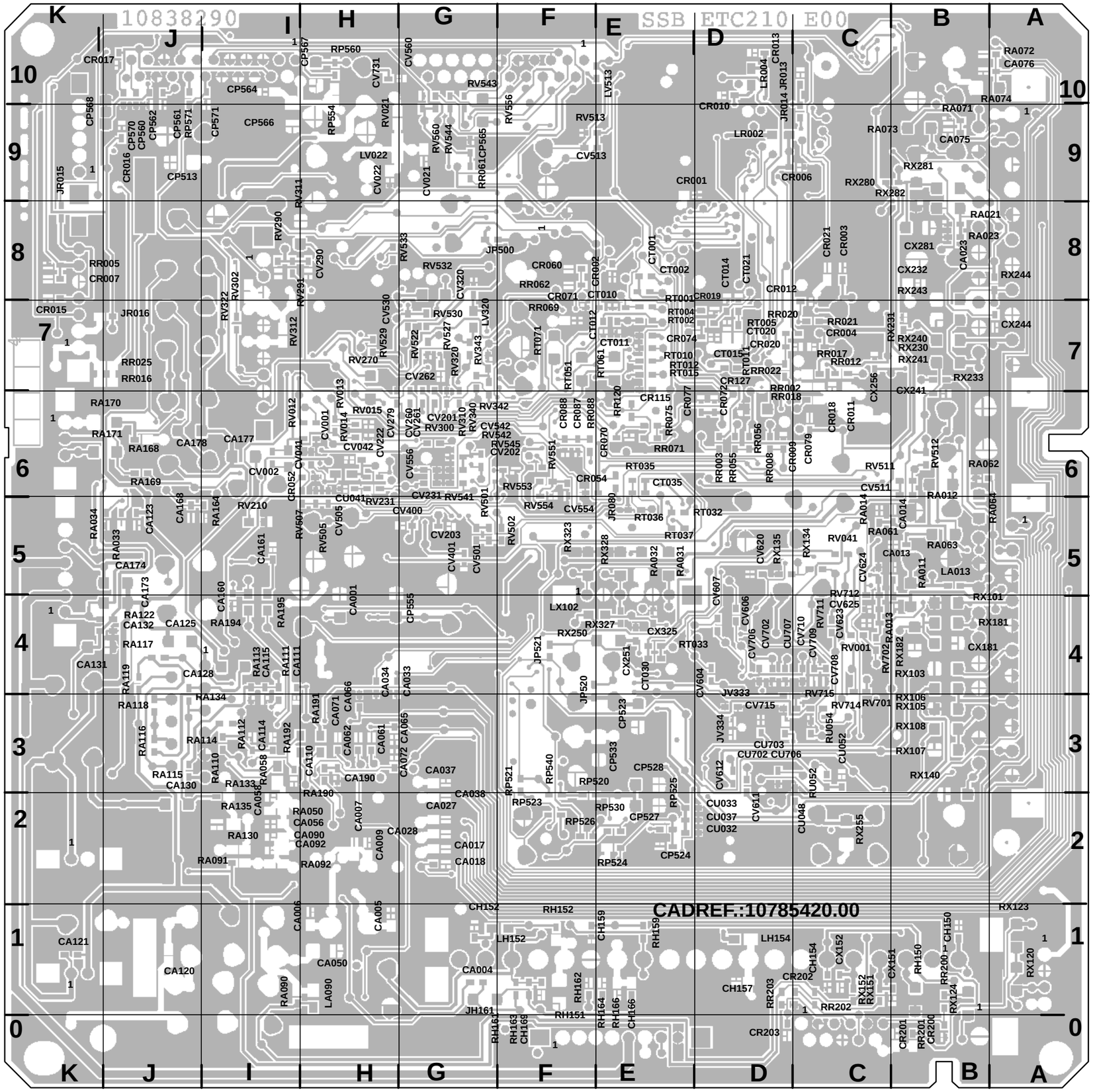
First issue 06 / 03

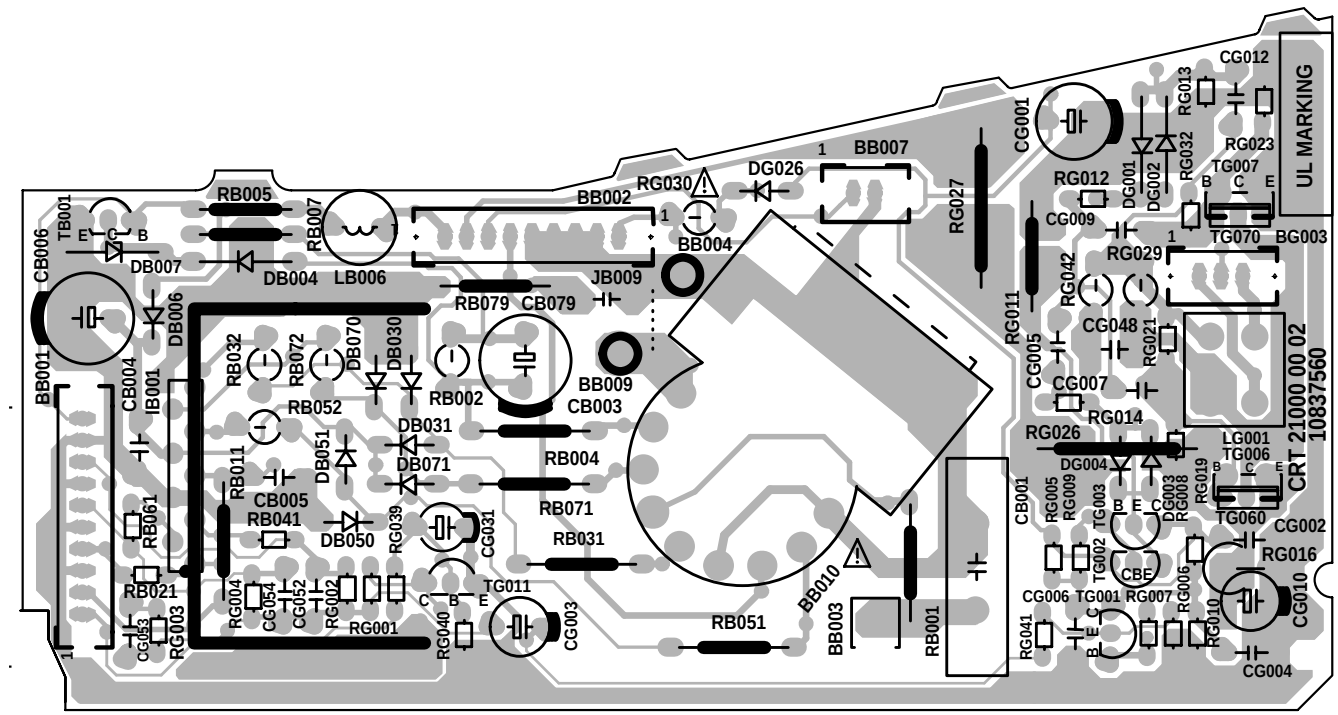
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

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

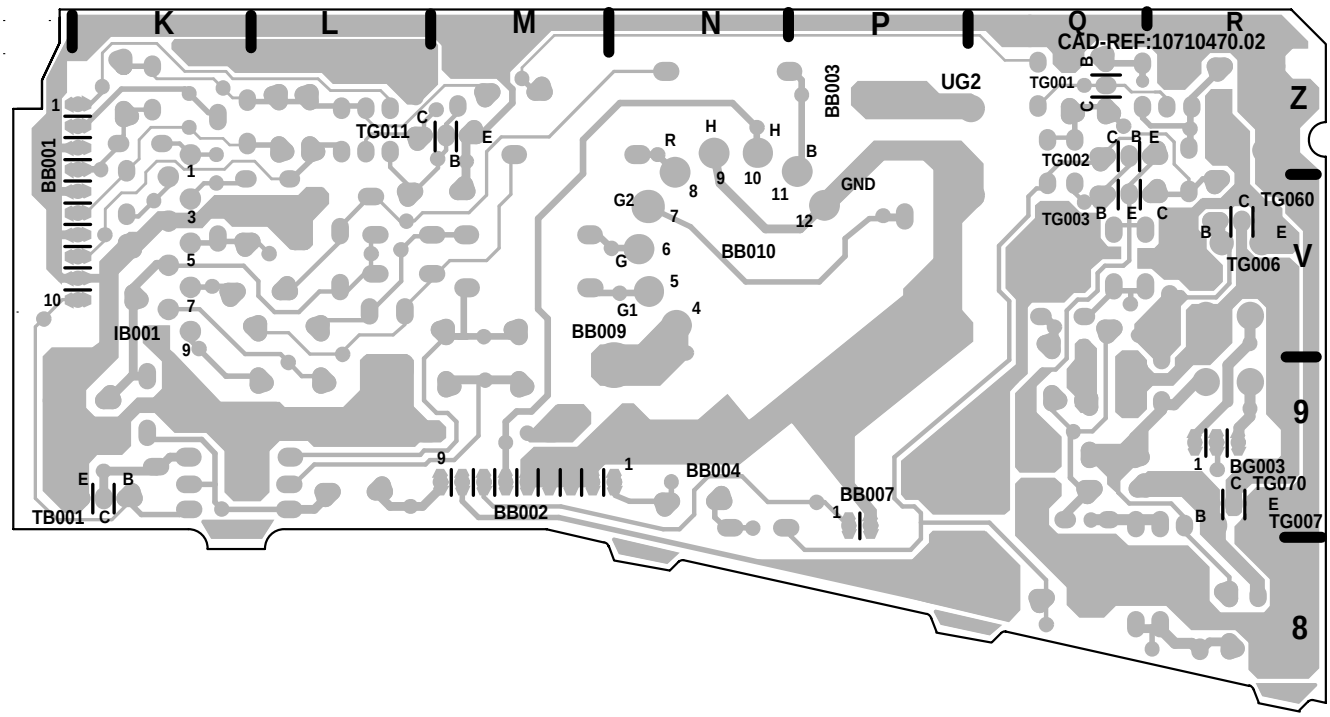


VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO

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



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



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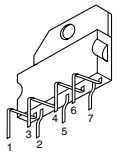
First issue 07 / 03

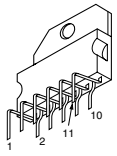
LIST OF ABBREVIATIONS - LISTE DES ABREVIATIONS - ABKÜRZUNGEN
LISTA DELLE ABBREVIAZIONI - LISTA DE ABREVIACIONES

- **AQR_ON** DISABLE AQUISITION MODE REGUL. ENABLE PWM PULSE
- **AUDIO_MUTE** MUTES AUDIO AMPLFIERS
- **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 (BP500- BP005)
- **CRT** CATHODE RAY TUBE
- **CVBS** VIDEO
- **CVBS_TXT** TEXT VIDEO
- **DEGAUSS** DEGAUSS SIGNAL
- **DPC** DYNAMIC PHASE COMPENSATION SIGNAL
- **EFC** EARTH FIELD CORRECTION
- **EHT** EXTREMELY HIGH TENSION
- **EHT INFO** HORIZONTAL DEFLECTION PROTECTION
- **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
- **IIC-CL-1** I2C CLOCK BUS 1
- **IIC-CL-2** I2C CLOCK BUS 2
- **INF_POW_FAIL** POWER FAIL INFORMATION
- **IR** INFRARED RECEIVER
- **LED** LED DISPLAY
- **M_RES#** MAIN RESET SIGNAL
- **NMI** NON MASKABLE INTERRUPT
- **PHI2_REF** PHI2 REFERENCE SIGNAL
- **PKS** PEAK SENSING
- **PO** POWER ON
- **PWM** PULSE WIDTH MODULATION
- **RESET** RESET TO MICROPROCESSOR
- **RF_CVBS** DEMODULATED TERRESTRIAL TUNER SIGNAL
- **ROTATION** OUTPUT OF EARTH FIELD CORRECTION STAGE
- **R_OUT** RED SIGNAL TO VIDEO AMPLIFIER
- **R_TXT** RED SIGNAL OUTPUT (TEXT)
- **SIF** SOUND IF OUTPUT
- **SSC_V_GUARD** SAFETY DATA GENERATED BY THE VERTICAL AMPLIFIER TDA8177F
- **+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_OUT** U TO VIDEO PART
- **V_OUT** V TO VIDEO PART
- **V_DRIVE** VERTICAL DEFLECTION DRIVE SIGNAL
- **Y_OUT** Y TO VIDEO PART
- **+UVFB** POSITIVE SUPPLY VOLTAGE FOR VERTICAL POWER STAGE
- **1V8** SUPPLIES 1V81H / 1V82H POWER SUPPLY UP CONVERTER PART OF SIGNAL BOARD
- **3V3** 3V3 POWER SUPLY UP CONVERTER PART OF SIGNAL BOARD
- **5 V_A / 5V_V** 5V POWER SUPPLY SIGNAL BOARD
- **5V_STBYL / 5V_RP** MICROPROCESSOR SUPPLY VOLTAGE
- **5V_STBY** 5V STANDBY
- **6 V** SUPPLIES THE 5V REGULATION AND 3V3 AND 1V8 REGULATORS ON THE SIGNAL BOARD.
- **10 V** SUPPLIES THE 8V_V REGULATORS ON SIGNAL BOARD
- **8 V_V** 8V SUPPLY SIGNAL BOARD
- **7V_STBY** 7V STANDBY
- **33V** 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



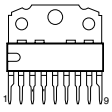
TDA 8177F



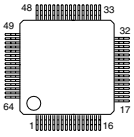
TDA7269

LM393
NJM2903D
VIPER20DIP

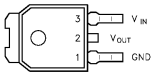
MC4558CD
LM358D
TL431ACLP
M24C16MN6



TDA6108JF



MSP3410G



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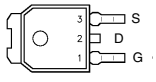

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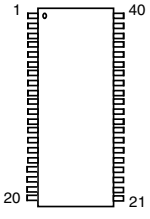

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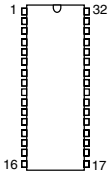

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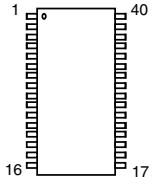

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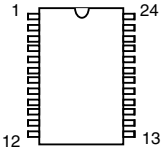

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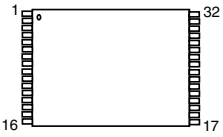

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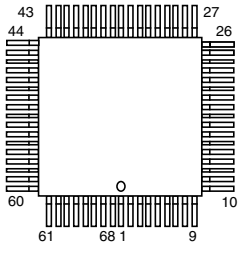

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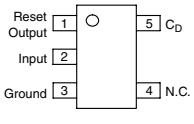

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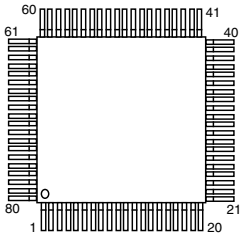

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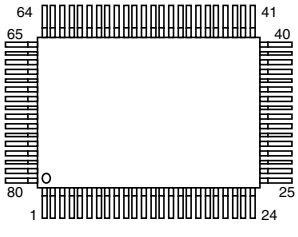

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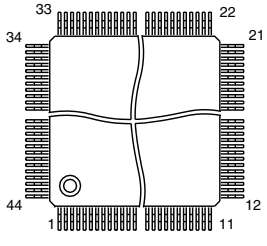

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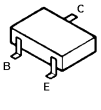

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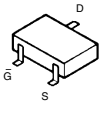

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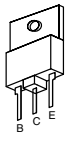

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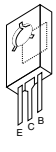

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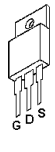

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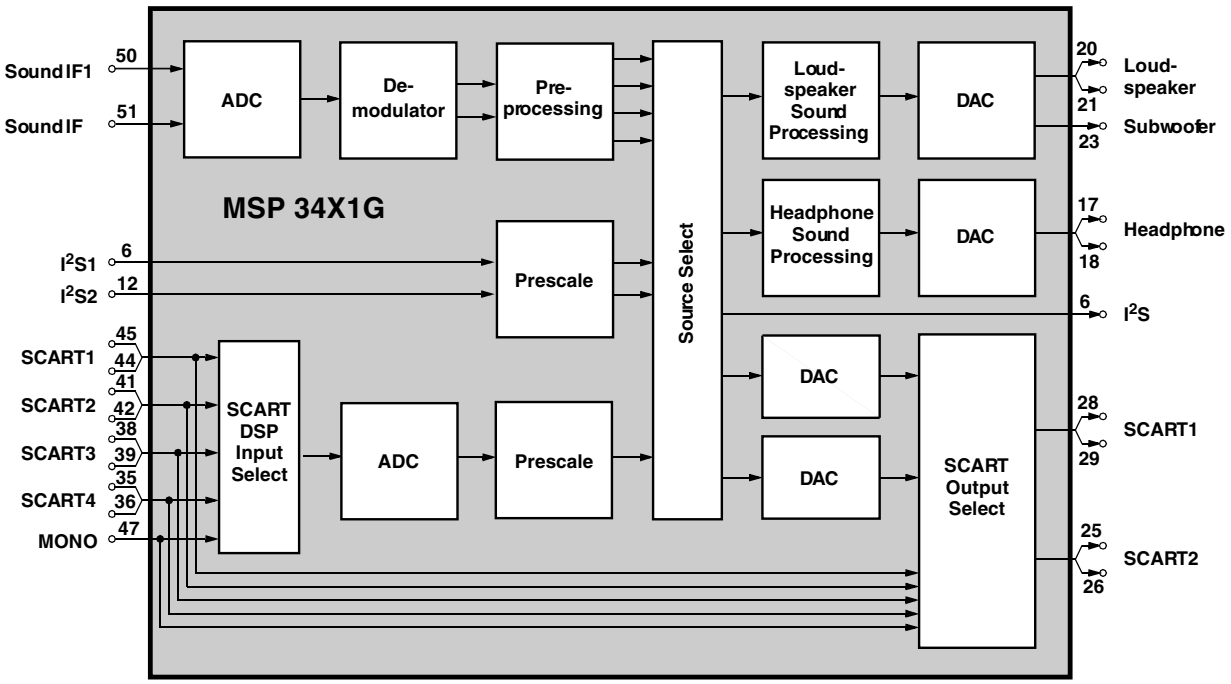
INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER - SCHEMA A BLOCCHI DEI CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

IA001- MSP34X0 / X1G



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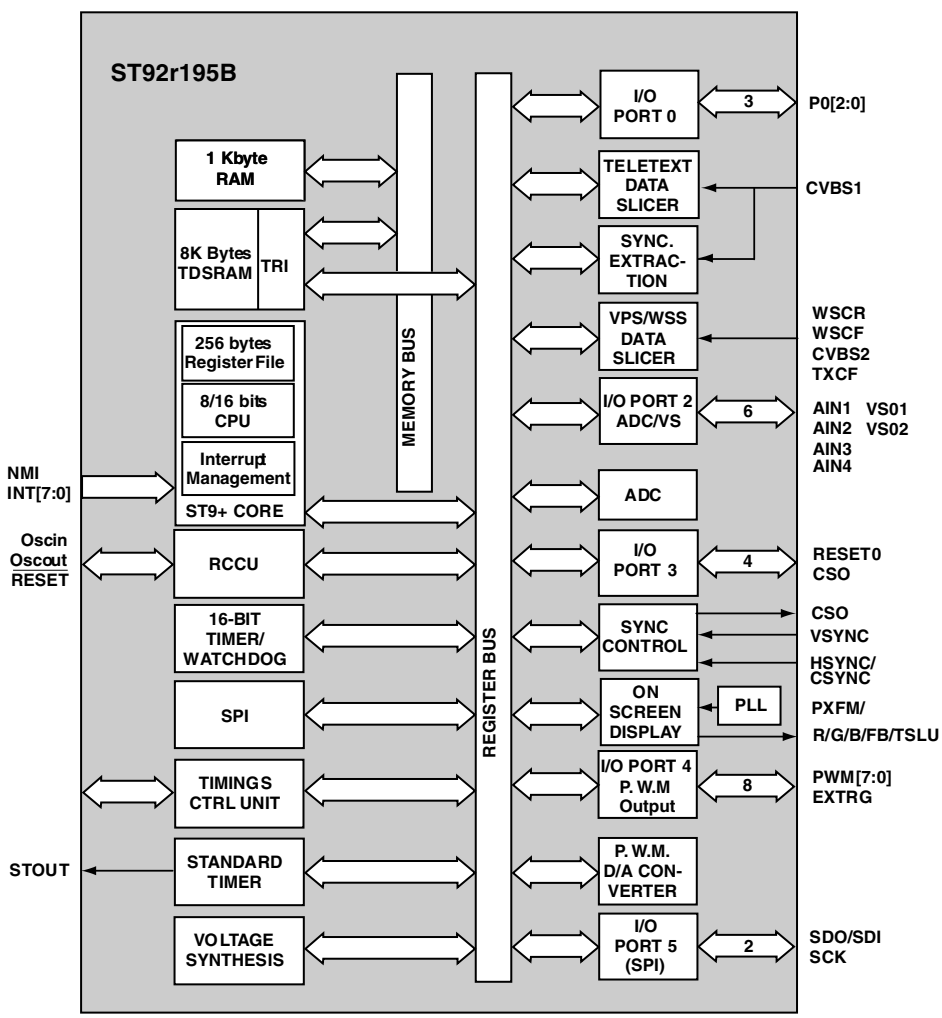

CONDITION CODE — MAIN SYMPTOM CODE — EXTENDED SYMPTOM CODE (*1)

EACEM-IRIS REPAIR CODING SYSTEM

SYMPTOM CODE TABLE

EACEM IRIS

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

	5 UNSTABLE	6 RECORDING & PHYSICAL PROBLEMS	7 SPECIAL FUNCTIONS	8 OTHER CONDITIONS
1	**150 REMOTE CONTROL PROBLEM** 151 NO REMOTE CONTROL OPERATION 152 INCORRECT REMOTE CONTROL OPERATION 153 REMOTE CONTROL PROGRAMMING/ LEARNING MODE PROBLEM 154 POOR REMOTE CONTROL SENSITIVITY 15X OTHER 'REMOTE CONTROL' PROBLEM	**160 PHYSICAL DAMAGE** 161 DAMAGED/DEFORMED CABINET/PANEL 162 DAMAGED HANDLE/CLIP 163 DAMAGED CONTROL KNOB(S)/BUTTON(S)/KEYPAD 164 DAMAGED DOOR/COVER 165 DAMAGED SEAL 166 DAMAGED PLUG/SOCKET/TERMINAL/CONNECTOR 167 DAMAGED LENS 168 DAMAGED CARTRIDGE OR STYLUS 169 DAMAGED ANTENNA 16A DAMAGED CRT OR VIEWFINDER/LCD DISPLAY 16B MISSING COMPONENT(S) OR ORNAMENTAL PARTS 16C PRINTED MARKINGS ERASED/PEELED OFF 16D SET BURNING/EMITS SMOKE 16E EXTERNAL SURFACE DAMAGE (BUBBLING/PEELING/RUSTING/SCRATCHED) 16F SMELL 16G WEAK/DAMAGED STAND 16H DAMAGED SPEAKER 16J SET GETS VERY HOT / PARTS MELTING 16K FOREIGN SUBSTANCE ON/IN UNIT 16L BURNING MARKS 16M INTERNAL SURFACE DAMAGE (BUBBLING/PEELING/RUSTING/SCRATCHED) 16N DAMAGED POWER CABLE 16P DAMAGED ACCESSORY 16R DISCOLOURATION 16X OTHER PHYSICAL DAMAGE	**170 GENERAL FUNCTION PROBLEM** 171 FAULTY CLOCK FUNCTION 172 FAULTY SLEEP FUNCTION 173 FAULTY TIMER PROGRAMMING 174 FAULTY TIMER OPERATION 175 PROGRAMMING/USER ADJUSTMENT PROBLEM 176 FAULTY RECORD MUTE OPERATION 177 FAULTY PROGRAMMED PLAYBACK OPERATION 178 FAULTY MEMORY FUNCTION 179 FAULTY INPUT SWITCHING 17A FAULTY OUTPUT SWITCHING 17B ELECTRIC SHOCK/STATIC DISCHARGE 17C FAULTY SEARCH FUNCTION (INDEX/VIEW/TITLE/CHAPTER/TRACK...) 17D WRONG LANGUAGE/CHARACTER SET 17E ERROR CODE APPEARS IN DISPLAY 17F SWITCH NOT OPERATING 17G PEDAL NOT OPERATING 17H FAULTY STANDBY MODE 17J FAULTY HIBERNATION MODE 17K NO AUDIBLE WARNING SIGNAL 17L FAULTY OPERATION OF PARENTAL LOCK/KEYLOCK FUNCTION 17M FAULTY MODE SWITCHING 17N MENU FUNCTION PROBLEM 17X OTHER 'GENERAL FUNCTION' PROBLEM	**180 SPECIAL REQUIREMENTS** 181 TEST AND CHECK 182 GENERAL OVERHAUL 183 SYSTEM/FREQUENCY CONVERSION 184 INITIAL SETUP/INSTALLATION REQUESTED 185 MODIFICATION/CIRCUIT/INSTALLATION CHANGE 186 WRONG PRODUCT IN CARTON 187 ACCESSORY MISSING 188 UNABLE TO CONNECT PARTS/-TO ASSEMBLE 189 WRONG COLOUR 18B BATTERY MOUNTING PROBLEM 18X OTHER SPECIAL REQUIREMENTS 18Z SYMPTOM NOT AVAILABLE
2	**250 UNSTABLE RECEPTION/TRANSMISSION** 251 TUNING DRIFT 252 FADING 253 INTERMITTENT LINE/LINE BREAKING OFF 254 NO OR UNSTABLE CONNECTION COMBINED WITH 'WEAK SIGNAL STRENGTH' INDICATION 25X OTHER 'UNSTABLE RECEPTION/ TRANSMISSION' PROBLEM	**260 TUNING PROBLEM** 261 MANUAL TUNING PROBLEM 262 AUTOMATIC TUNING PROBLEM 263 INCORRECT TUNING 264 TUNING MEMORY PROBLEM 26X OTHER 'TUNING' PROBLEM	**270 SPECIAL COMMUNICATION PROBLEM** 271 FAULTY DIALLING 272 FAULTY CHANNEL SELECTION 273 FAULTY AUTO-ANSWER OPERATION 274 FAULTY MESSAGE READ-OUT FUNCTION 275 FAULTY AUTODIAL/REDIAL MEMORY 276 FAULTY SPEECH PROCESSING 277 NO RINGING TONE 278 LOUD/WEAK RINGING TONE 279 MODEM STUCK OFF HOOK 27A FAX DOES NOT WORK PROPERLY 27B MODEM CAUSES PROBLEM WITH PHONE 27C NO MODEM DIAL TONE 27X OTHER 'SPECIAL COMMUNICATION' PROBLEM	**280 SPECIAL RECEPTION PROBLEM** 281 FAULTY STEREO RECEPTION 282 FAULTY MAIN CHANNEL (A) FUNCTION 283 FAULTY SUB-CHANNEL (B) FUNCTION 284 FAULTY SSB RECEPTION 285 FAULTY RDS/VPS/PDC/XDS OPERATION 286 FAULTY TELETEXT/CLOSE CAPTION/EPG RECEPTION 287 FAULTY SATELLITE/RTTY RECEPTION 288 FAULTY FAX OPERATION 289 MODEM NOT RECOGNIZED BY SYSTEM 28A FAULTY CALL CHARGE DISPLAY 28B FAULTY HANDS-FREE OPERATION 28C SET LOCKED 28X OTHER 'SPECIAL RECEPTION' PROBLEM
3	**350 UNSTABLE PICTURE** 351 SYNC PROBLEM 352 PICTURE PUMPING 353 PICTURE JITTER 354 PICTURE SHAKING (HORIZONTAL OR VERTICAL) 355 FLICKERING PICTURE 356 FLASHING PICTURE 357 CYCLIC PICTURE MUTING 358 HEAD IMPACT ERROR CAUSING UNSTABLE PICTURE 359 VCR SKEW/H-SHIFT ERROR 35A FROZEN PICTURE 35B JUMPING/REPEATING PICTURE 35X OTHER 'UNSTABLE PICTURE' PROBLEM	**360 POOR PICTURE RECORDING** 361 NO PICTURE RECORDING 362 NO ERASURE PROTECTION FOR VIDEO 363 PREVIOUS VIDEO RECORDING NOT BEING ERASED 364 UNWANTED ERASURE OF PICTURE 365 NO CAMERA RECORDING 366 ONLY ONE FIELD PER FRAME BEING RECORDED 367 RECORDS ONLY A FEW PICTURES 36X OTHER 'PICTURE RECORDING' PROBLEM	**370 SPECIAL PICTURE FUNCTION PROBLEM** 371 EDITING PROBLEM 372 FAULTY FADING/WIPER OPERATION 373 FAULTY NEGATIVE/POSITIVE SWITCHING FUNCTION 374 FAULTY SUPERIMPOSE/TELOP OPERATION 375 FAULTY PICTURE IN PICTURE/DIGITAL PICTURE OPERATION 376 FAULTY PICTURE TRANSMISSION 377 FAULTY DIGITAL SHUTTER FUNCTION 378 FAULTY GENLOCK FUNCTION 379 FAULTY FLASH/STROBE FUNCTION 37A FAULTY DIGITAL PICTURE/ZOOMING FUNCTION 37B FAULTY AUTO-EDIT FUNCTION 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	**380 PICTURE DISPLAY/PICKUP PROBLEM** 381 BURN MARK ON DISPLAY/PICKUP 382 SCRATCH ON DISPLAY/PICKUP 383 DUST/DIRT ON DISPLAY/PICKUP 384 PHOSPHOR/PIXEL MISSING ON DISPLAY/PICKUP 385 BRIGHT POINT(S) IN PHOSPHOR/PIXEL 386 LINES ACROSS/DOWN IMAGE 387 OUT OF SPECS PIXEL DEFAULTS 388 BACKGROUND BURNT IN 38X OTHER 'PICTURE DISPLAY/PICKUP' PROBLEM
4	**450 UNSTABLE COLOUR** 451 COLOUR FLASHING 452 HUE CONSTANTLY CHANGING 453 FLICKERING COLOUR 454 COLOUR NOT LOCKED 45X OTHER 'UNSTABLE COLOUR' PROBLEM	**460 POOR COLOUR RECORDING** 461 NO COLOUR RECORDING 462 NOISY COLOUR RECORDING 46X OTHER 'COLOUR RECORDING' PROBLEM	**470 SPECIAL COLOUR FUNCTION PROBLEM** 471 FAULTY AUTOMATIC WHITE BALANCE 472 FAULTY COLOUR EFFECTS FUNCTION 47X OTHER 'SPECIAL COLOUR FUNCTION" PROBLEM	**480**
5	**550 UNSTABLE AUDIO** 551 JUMPING OR REPEATING AUDIO 552 AUDIO PUMPING OR BREATHING 553 AUDIO DROPOUTS 554 CYCLIC AUDIO MUTING 555 WOW AND FLUTTER 556 HOWLING/ACOUSTIC FEEDBACK 557 ECHO IN SOUND 55X OTHER 'UNSTABLE AUDIO' PROBLEM	**560 POOR AUDIO RECORDING** 561 AUDIO NOT BEING RECORDED 562 NO ERASURE PROTECTION FOR AUDIO 563 PREVIOUS AUDIO RECORDING NOT BEING ERASED 564 UNWANTED ERASURE OF AUDIO 565 MESSAGE NOT BEING RECORDED 566 DISTORTED AUDIO RECORDING 56X OTHER 'AUDIO RECORDING' PROBLEM	**570 POOR SPECIAL AUDIO FUNCTION** 571 FAULTY FADE OPERATION 572 FAULTY ECHO OPERATION 573 FAULTY MIXING OPERATION 574 FAULTY REPEAT MODE OPERATION 575 FAULTY AUDIO PROCESSING 576 FAULTY SYNC RECORDING OPERATION 577 FAULTY DBB/DOL OPERATION 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	**580 STEREO/MULTI MODE OPERATION PROBLEM** 581 NO STEREO OPERATION 582 POOR CHANNEL SEPARATION 583 DIFFERENCE IN PHASE BETWEEN CHANNELS 584 PROBLEM WITH SURROUND SOUND MODE 585 PROBLEM WITH PCM AUDIO MODE 58X OTHER 'STEREO/MULTI MODE' PROBLEM
6	**650 MECHANICAL INSTABILITY** 651 UNEVEN FEET 652 FAULTY HINGE 653 VIBRATING/JUMPING 654 PARTS LOOSE 655 DAMAGED WHEEL(S) 65X OTHER 'MECHANICAL INSTABILITY' PROBLEM	**660 DAMAGE TO MEDIA** 661 TAPE GETS SCRATCHED 662 DISC GETS SCRATCHED 663 TAPE GETS CHEWED/WRINKLED 664 TAPE JAMMED OR BROKEN 665 TAPE GETS CURLED 666 SLACK TAPE 667 TAPE STICKING 66X OTHER 'SOFTWARE DAMAGE' PROBLEM	**670 MECHANICAL OPERATION PROBLEM** 671 FAULTY START/STOP OPERATION 672 FAULTY PAUSE OPERATION 673 FAULTY AUTOMATIC PROGRAM SEARCH 674 FAULTY CUE/REVIEW MODE 675 FAULTY SLOW MOTION OPERATION 676 FAULTY HIGH-SPEED SCANNING MODE 677 FAULTY SPEED COPY FUNCTION 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	**680 LENS PROBLEM** 681 FOCUS PROBLEM 682 ZOOM PROBLEM 683 IRIS PROBLEM 684 MACRO PROBLEM 68X OTHER 'LENS' PROBLEM
7	**750 PERIPHERAL PROBLEM (NON-STORAGE)** 751 PERIPHERAL DOES NOT INITIALISE 752 COMMUNICATION FAILURE WITH PERIPHERAL 753 INTERNAL PERIPHERALS FAILURE 754 EXTERNAL PERIPHERALS FAILURE 755 NETWORK CARD ERROR 756 PERIPHERAL FAILS SELF TEST 75X OTHER PERIPHERAL PROBLEM	**760 DATA STORAGE PROBLEM** 761 FORMATTING PROBLEM 762 DATA ON STORAGE MEDIUM BEING LOST 763 FRAME MEMORY PROBLEM 764 READ/WRITE ERRORS 765 HARD- OR OPTICAL DRIVE PROBLEM 766 FLOPPY DRIVE PROBLEM 767 CD/DVD-ROM DRIVE PROBLEM 768 TAPE PROBLEM 769 DRIVE WILL NOT MOUNT/CANNOT ACCESS DRIVE 76A DISCS EXCHANGE PROBLEM 76B READ/WRITE OPERATION VERY SLOW 76X OTHER 'DATA READ/WRITE' PROBLEM	**770 SPECIAL DATA PROCESSING FUNCTION PROBLEM** 771 FAULTY SELF-DIAGNOSTIC MODE 772 FAULTY WORD PROCESSING FUNCTION 773 FAULTY GRAPHIC EDIT FUNCTION 774 PROGRAM CANNOT BE INSTALLED 775 PRE-LOADED PROGRAM CANNOT BE STARTED UP 776 NOT PRE-LOADED PROGRAM CANNOT BE STARTED UP 777 VIRUS ALARM 77X OTHER 'SPECIAL DATA FUNCTION' PROBLEM	**780 INTERFACE PROBLEM** 781 USB INTERFACE PROBLEM 782 PARALLEL INTERFACE PROBLEM 783 SCSI INTERFACE PROBLEM 784 SERIAL INTERFACE PROBLEM 785 INCOMPATIBLE WITH OTHER SYSTEMS 786 AUDIO/VIDEO INTERFACE PROBLEM 787 i.LINK/FIREWIRE/IEEE1394 INTERFACE PROBLEM 78X OTHER 'INTERFACE' PROBLEM
8	**850 UNSTABLE PRINTER OPERATION** 851 UNSTABLE PAPER LOADING 852 UNSTABLE MULTI-PAPER LOADING 853 INCORRECT LINE-UP OF CHARACTERS 85X OTHER 'UNSTABLE PRINTER OPERATION' PROBLEM	**860 RIBBON/PAPER PROBLEMS** 861 RIBBON BROKEN 862 RIBBON STUCK/STICKING 863 RIBBON DERAILED 864 PAPER STUCK/STICKING TO MECHANISM 865 PAPER JAM 866 DOCUMENT JAM 867 ERRONEOUS 'NO INKT/TONER' MESSAGE 86X OTHER 'RIBBON/PAPER' PROBLEM	**870**	**880 FAULTY FONT/CHARACTER FUNCTIONS** 881 INCORRECT CHARACTERS OR IMAGE 882 INCORRECT CHARACTER SIZE 883 FONT LOADING PROBLEM 88X OTHER 'FAULTY FONT/CHARACTER FUNCTION' PROBLEM

(*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

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	1 4 1 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	R 1 2 3	T D M	Y A 2 2 . . .	C 1	Z 1	. .
.	3 6 4 1	3 4 5 6 7 8 9 X X X X X X X X X	1 1 1					. .

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)

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