TELEFUNKEN DF452E

Fernsehgerät Format 4/3 Nicam

Chassis ICC20
100 Hz - Technik
70 cm
FST Bildröhre
METAL-Maske
BLACK MATRIX
NAVILIGHT system
Stereoton
NICAM 2 x 20W
Videotext
Standard : PAL / SECAM
NTSC Video
Normen : PanEuro-LL'BGIDKK'

Bild
Ton
Besonderheiten
Anschlüsse / Allgemeines

Bild

70 cm FST Bildröhre - 4/3 Format
METAL-Maske
BLACK MATRIX für besseren Kontrast
SVH-S
Bildschirmdiagonale : 70 cm
sichtbar: 66 cm
Standard : PAL / SECAM / NTSC Video
Normen : PanEuro-LL'BGIDKK'
Videotext/Fastext/Toptext: 128 Seiten

Ton

Stereoton NICAM L/BG(DKK')/I
Leistung : max. 2 x 20 Watt Musik
4 Lautsprecher : 2 mediums, 2 tweeters
Raumeffekt/Pseudo

Besonderheiten

Schaltet automatisch in den Standby-Modus, wenn 5 Minuten lang kein Signal mehr empfangen wird
Kindersicherung
Optionale Anzeige des Programmplatzes
NAVILIGHT system
99 speicherbare Programme + 3 AV-Programme
Autoprogrammierung
Frequenzsynthesetuner
Kabeltuner
Hyperband 8 MHz
Fernbedienung RC2100

Anschlüsse/Allgemeines

1 Antennenbuchse
Frontseite : Kopfhörerbuchse (Klinke 3,5 mm)
2 AUDIO-cinch-Eingänge /
1 CVBS-cinch-Eingänge /
1 S-VIDEO-cinch-Eingänge
Rückseite : 3 Scartbuchsen
2 AUDIO-cinch-Ausgänge
Stromversorgung : 220 - 240 V ; 50/60 Hz
Stromverbrauch : 115 W/h - Stanby < 6 W/
Gewicht : 36 kg
Abmessungen (BxHxT) : 713 x 560 x 500 mm

SERVICE POSITION - POSITION SERVICE - SERVICESTELLUNG - POSIZIONE SERVIZIO - POSICIÓN SERVICIO

A - CHASSIS - CHASIS

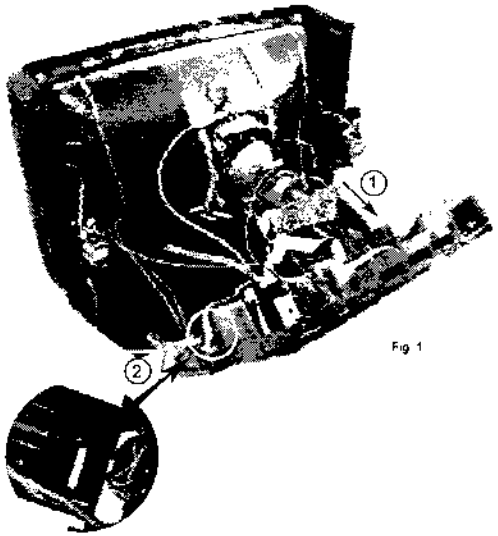


Fig. 1

1- Raise lightly the chassis, pull it (1) up to an intermediate position to get free.
2- Tip the chassis and insert the small tongue (2) in extremity of the maintain rail to fix the chassis in service position (Fig.1).

1- Soulever légèrement le chassis et le tirer (1) jusqu'à une position intermédiaire pour le dégager
2- Basculer le chassis et engager les languettes (2) en extémité des réglettes de maintien pour fixer le chassis en position de service (Fig 1).

1- Heben Sie das Chassis leicht an und ziehen es nach hinten halb heraus. Heben Sie das Chassis aus den Führungsschienen
2- Kippen Sie das Chassis und hängen es mit den Laschen (2) am Chassisrahmen in die sich am Ende der Führungsschienen befindlichen Ösen (Fig.1) ein.

1- Sollevare leggermente il telaio e tirarlo (1) fino ad una posizione intermedia per poterlo estrarre
2- Inclinare e inserire le linguette (2) nelle apposite guide per mantenere il telaio fisso nella posizione servizio(Fig.1)

1- Alzar ligeramente el chasis, y dejarlo en una posición intermedia (1)
2- Bascular el chasis e insertar las lengüetas (2) en los extremos, para mantener el chasis fijo en la posición de servicio (Fig. 1).

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

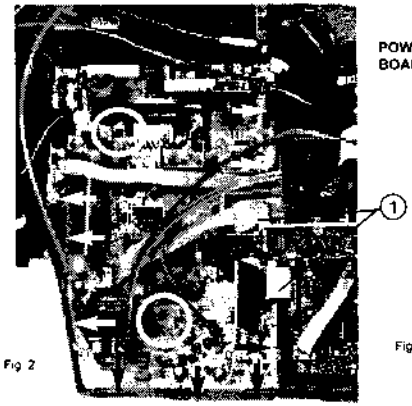


Fig. 2

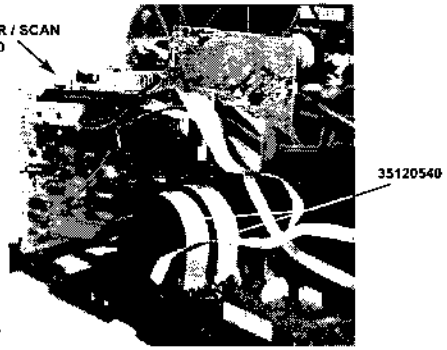


Fig. 3

1 - Remove the two connection cable PSB/SSB (1) (Fig 2) and get free the "PSB" board from the chassis in pressing the maintain longue (9 in periphery and 2 in the board) (Fig 2) Put the two extension cable PSB/SSB (35120540) (Fig 3)
2 - Put the PSB board in service position (Fig. 3)

1 - Retirer les cordons de raccordement PSB/SSB (1) (Fig.2) et dégager la platine "PSB" du chassis en appuyant sur les languettes de maintien (9 en périphérie et 2 en interne) (Fig.2) Mettre les cordons prolongateurs de raccordement PSB/SSB (35120540) (Fig.3).
2 - Mettre la platine PSB en position de service (Fig. 3)

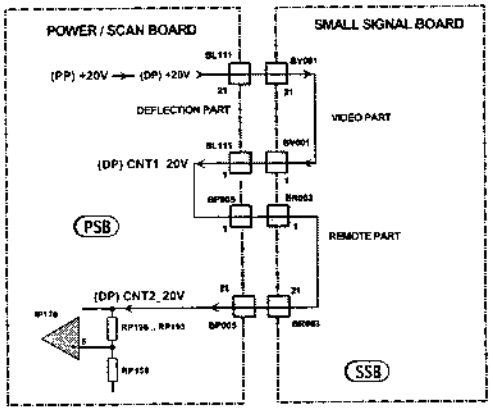
1 - Entfernen Sie die beiden Verbindungskabel PSB/SSB (1) (Fig.2). Zum Ausbau der PSB-Platine lösen Sie die 9 Halteklammern um die Platine herum und die 2 Klammern in der Platine wie (Fig.2) dargestellt. Stecken Sie die Verlängerungskabel PSB/SSB (35120540) (Fig 3) ein.
2 - Bringen Sie die PSB-Platine in die Service-Position (Fig. 3).

1 - Togliere idue cavi di collegamento PSB/SSB (1) (Fig 2) e liberare la piastra "PSB" dal telaio premendo le linguetto di fissaggio (9 periferiche e due interne) collegare le prolunghe PSB/SSB (35120540) (Fig.3)
2 - Sistemare la piastra PSB in posizione di servizio (Fig. 3)

1 – Retirar los dos cables de conexión PSB/SSB (1) (Fig.2) y soltar la placa "PSB" del chasis presionando las lengüetas (9 en la periferia y 2 en la placa) (Fig. 2) Enchufar los dos cables prolongadores PSB/SSB (35120540) (Fig.3).
2 – Poner la placa PSB en la posición de servicio (Fig. 3)

ICC20
First issue 05 / 00

CONNECTING SAFETY POWER BOARD / SIGNAL BOARD
SECURITE DE CONNEXION PLATINES PUISSANCE / PETITS SIGNAUX
VERBINDER ZWISCHEN NETZTEIL/ABLENK-PLATINE UND SIGNAL-PLATINE
COLLEGAMENTI DI SICUREZZA DELLA PIASTRA POTENZA/PIASTRA SEGNALI
CONEXIONES DE LA SEGURIDAD ENTRE LA PLACA ALIMENTACIÓN / SEÑAL



GB

The 20V voltage which is fed in a loop **CNT1_20V => CNT2_20V** through the connectors going to the signal processing boarder in order to insure a good connection between both boards and to protect the PSB and the SSB boards
CNT1_20V => safety of the sheet BL111 / BV001
CNT2_20V => safety of the sheet BP005 / BR003
If one of these voltage does not exist (20V comprise) the IP170 output will be 0 and the phototransistor IP070 is blocked and the set will be in standby.

F

Le cheminement de la tension 20V par la platine petits signaux est effectué sous forme de boucle **CNT1_20V => CNT2_20V** afin de protéger les platines PSB et SSB en cas de mauvaise connexion des nappes BR003 et BV003.
CNT1_20V => sécurité de la nappe BL111 / BV001
CNT2_20V => sécurité de la nappe BP005 / BR003
Si l'une de ces tensions (20V inclu) n'est pas présente la sortie de IP170 passe à 0 entraînant le blocage du photo-transistor IP070 et par suite le passage en standby

D

Um die PSB- und die SSB-Platinen zu schützen und um eine sichere Betriebsspannungsversorgung dieser Platinen zu gewährleisten, ist die **«20V-Versorgungsschiene (CNT1_20V => CNT2_20V)** über die Verbinder BV001 und BR003 durchgeschleift.
CNT1_20V => Schutz über Flachbandkabel BL111 / BV001
CNT2_20V => Schutz über Flachbandkabel BP005 / BR003
Sollte eine dieser Betriebspannungen fehlen, wird der Ausgang des IC IP170 (Pin 7) 0V, der Fototransistor im Optokoppler IP070 sperrt und das Gerät schaltet in Standby.

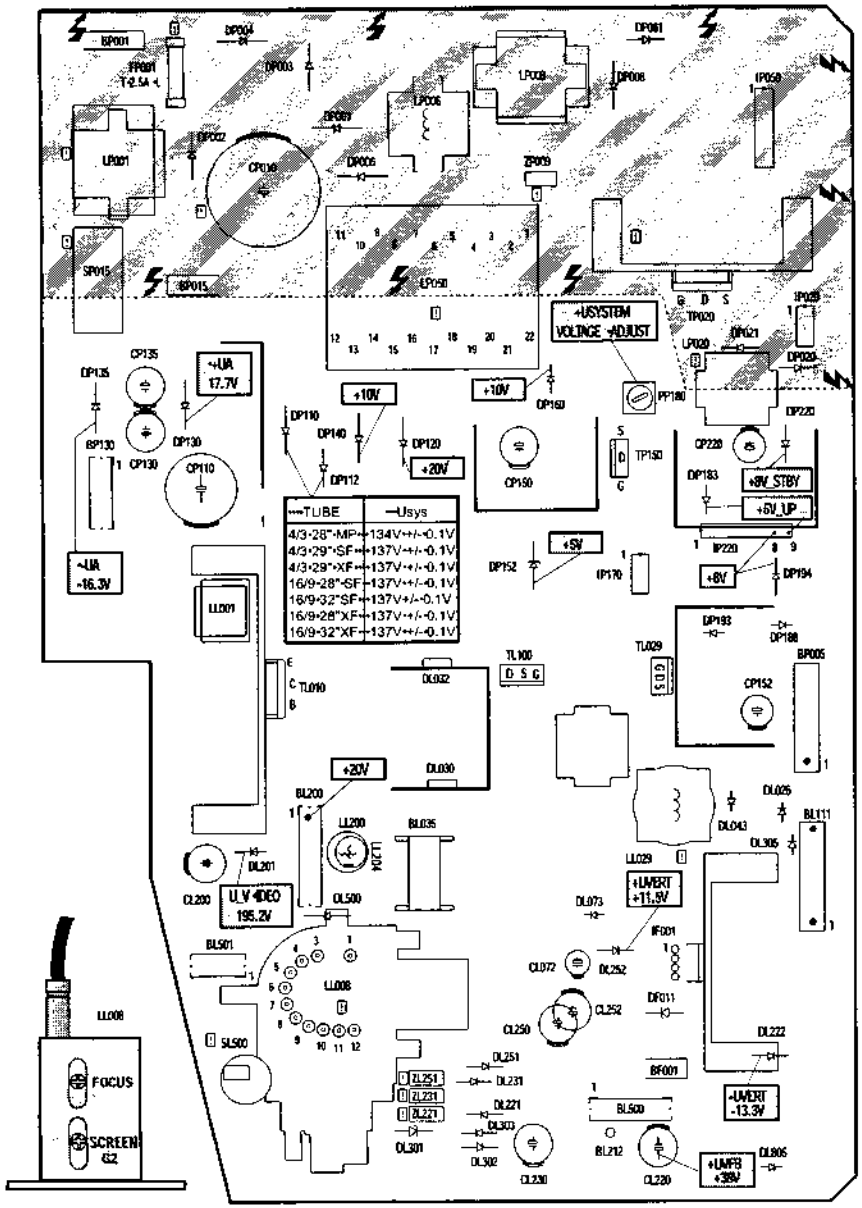
I

L'alimentazione di **20V** alla piastra elaborazione segnali viene fornita dai connettori **CNT1 20V => CNT2_20V** in modo da assicurare une protezione delle piastre **PSB e SSB** nel caso che si manifesta se un cattivo collegamento
CNT1 20V => protezione BL111 / BV001
CNT2 20V => protezione BP005 / BR003
Se una de queste tensioni 20V non fosse presente l'uscita di IP170 passa a 0V determinando il blocco del phototransistor IP070 e il successivo passaggio in standby.

E

El recorrido de la tensión de **20V** por la placa SSB se efectua en forma de bucle **CNT1 20V => CNT2_20V** con el fin de proteger las placas **PSB** y **SSB** en el caso de un fallo de los conectores
CNT1 20V => seguridad del mazo BL111 / BV001
CNT2_20V => seguridad del mazo BP005 / BR003
Si una de estas tensiones faltan (incluidos los 20 V), la salida de IP70 será 0, el fototransistor IP070 se bloques y el TV pasará a Standby (modo espera)

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



Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello chassis 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 trasformatore per isolarvi dalla rete

ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONE - AJUSTES

U-Sys	PP180	Standard TV Settings ☼ + ◑ + ◑ = 50% TV to AV1 : Black test pattern	V= PP180	TUBE NAME / DESCRIPTION / Usys jumper / Usys A68EHJ403X12 / 4/3-28"-MP / JP912 / 134V +/-0.1V A68EGD038X322 / 4/3-29"-SF / JP912 / 137V +/-0.1V A68EJ2011X121 / 4/3-29"-XF / JP912 / 137V +/-0.1V W68EGV023X522 / 16/9-28"-SF / JP912 / 137V +/-0.1V W76EGV023X522 / 16/9-32"SF / JP912 / 137V +/-0.1V W68EJV011X121 / 16/9-28"XF / JP912 / 137V +/-0.1V W76EJV011X121 / 16/9-32"XF / JP912 / 137V +/-0.1V
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 adjustments 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 26 (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. Noter : En cas de réglage G2 trop faible le chassis passe en code panne 26 (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 26 (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 tracce sullo schermo Regolare il potenziometro **SCREEN** per eliminare le tracce sullo schermo Premere un tasto del telecomando per abbandonare G2 alignment. NOTA. se la regolazione della tensione G2 è troppo bassa il telaio visualizzerà il codice 26 (il tubo non raggiunge la temperatura al 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 potenciometro **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 26 (TRC no se calienta en el tiempo establecido)		
FOCUS	FOCUS	Test pattern (standard values)		Sharp picture

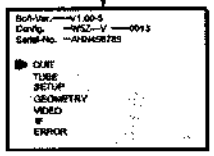
1 - ENTER/EXIT SERVICE MODE - ENTREE/SORTIE DU MODE SERVICE - EIN-AUSTIEG SERVICE MODE - ACCESSO/USCITA ALLA/DALLA FUNZIONE - ENTRADA/SALIDA MODO SERVICIO

SERVICE MODE (GB)

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 the mdown for more than 6 seconds.
- After the normal switch on time, when the 6 seconds have elapsed, the main service menu appears on the screen.



Note :

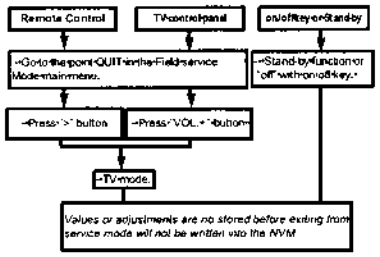
In service mode :
- *The child lock function is re-initialized*
- *Clear any wake-up/sleep timers*
- *Pin 8 of the scart plug has to be ignored.*
- *AV- Link WSS selection and letterbox detection (autoformat) have to be disabled*
- *Automatic standby functions in case of no antenna signal have to be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

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-entered via Blue button.

3 EXITING FROM SERVICE MODE

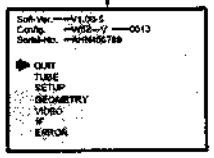


MODE SERVICE (F)

1 ACCES AU MODE SERVICE

Acces 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 6 secondes.
- Après le temps normal de mise en fonctionnement et lorsque les 6 secondes sont écoulées, le menu principal du Mode Service apparaît.



Note :

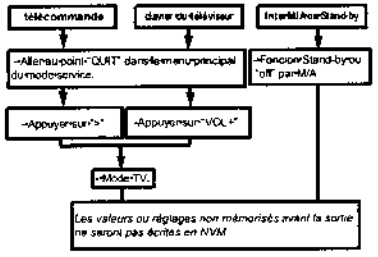
En mode service:
- *Le verrouillage parental est effacé (réinitialisé)*
- *La programmation des heures "réveil/matin" est annulée.*
- *Pin 8 de la prise SCART ignorée.*
- *AV- Link , la détection WSS et la détection letterbox ne sont pas validées*
- *La fonction de veille automatique en cas d'absence de signal d'antenne n'est pas validée.*
- *Le contour est appelé à sa valeur moyenne.*
- *Le mode d'installation n'est pas pas valide.*
- *Zoom et format ignorés.*
- *Le type de chassis est contrôlé et mémorisé*

2 SORTIE TEMPORAIRE DU MODE SERVICE

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

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

3 SORTIE DEFINITIVE DU MODE SERVICE

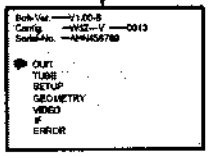


SERVICE MODE (D)

1 EINSTIEG IN DEN SERVICE MODE

Zugriff über die Tastatur des Fernsehgeräts

- Schalten Sie das Gerät mit der Fernbedienung in Stand by.
- Drücken Sie die VOL- Taste und dann die PR- Taste am Nahbedienteil des Gerätes. Halten Sie beide Tasten für länger als 6 Sekunden gedrückt.
- Nach der normalen Einschaltverzögerung erscheint auf dem Bildschirm das Menü des Service-Modus.



Anmerkung :

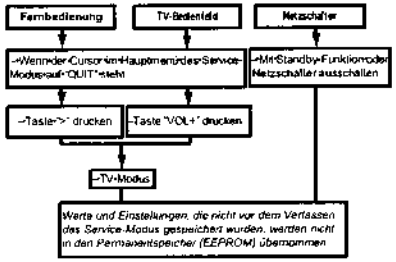
Im SERVICE MODE
- *wird die Kindersicherung gelöscht.*
- *werden alle Ein- und Ausschaltzeitgeber gelöscht.*
- *wird die SCART - Schaltspannung nicht ausgewertet*
- *AV- Link WSS Detektion and Letterbox Detektion (Autoformat) sind abgeschaltet*
- *wird die Automatische Abschaltung bei fehlendem Antennensignal gesperrt*
- *wird die Bildschärfe auf Mittelstellung (nominal) gesetzt.*
- *wird der installations-Modus gesperrt.*
- *wird das Standardformat bzw. der Standard-Zoom-modus gewählt*
- *die Chassis-Variante wird überprüft und gespeichert*

2 VORÜBERGEHENDES VERLASSEN DES SERVICE MODE

- Auf der Fernbedienung EXIT drücken.
- Mit der Taste Menügelangen Sie zum Menu "Übersicht". (Videotext und EPG sind nicht verfügbar).

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

3 ENDGÜLTIGES VERLASSEN DES SERVICE MODES

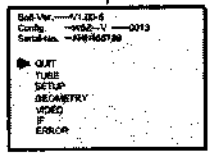


SERVICE MODE (I)

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 premuti i due tasti per più di 6 secondi.
- Dopo circa 6 secondi il TV si accenderà mostrando sullo schermo il menu service.



Nota :

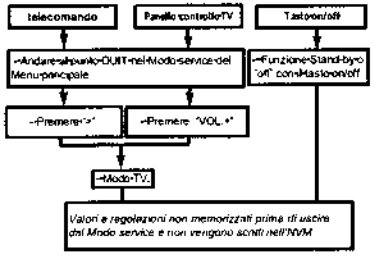
Nel service mode.
- *La funzione Blocco Bambini è reinizializzata*
- *La programmazione sveglia è cancellata.*
- *Il piedino 8 della scart è ignorato.*
- *La rilevazione AV-Link WSS e rilevazione letterbox (formato) è stata disabilitata*
- *Funzione automatica di standby nel caso di mancanza del segnale d'antenna è disabilitata.*
- *Nitidezza: media (nominale)*
- *Il Modo Install disabilitato*
- *Formato ignorati e zoom.*
- *La variante del telaio verranno controllate e memorizzate.*

2 USCITA TEMPORANEA DAL SERVICE MODE

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

- È possibile entrare nel Menu Service tramite il pulsante Blue.

3 USCIRE DAL SERVICE MODE

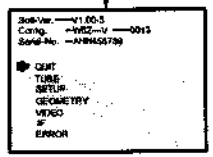


MODO SERVICIO (E)

1 ACCESO AL MODO SERVICIO

Acceso panel control TV

- Con el TV encendido, apagarlo con la tecla "Standby" del teclado. 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 6 segundos
- Después del arranque normal cuando ha yan pasado los 6 segundos aparecerá el menú principal del Modo Servicio



Nota :

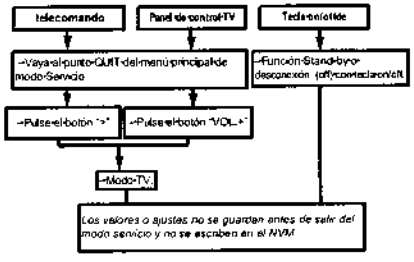
En modo servicio:
- *La función "Bloqueo niños" es reinicializada.*
- *Anula todas las horas programadas*
- *La patilla 8 del SCART es ignorada*
- *La detección de AV- Link, WSS y "modo burzón" (autoformato) se desactiva.*
- *El apagado automático en caso de ausencia de señal de antena es desactivado.*
- *La nitidez se puesta al punto medio.*
- *El Modo Instalación es desactivado.*
- *Zoom y formato ignorados.*
- *El tipo de chassis será comprobado y memorizado*

2 SALIDA TEMPORAL DEL MODO SERVICIO

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

- Puede entrar al Menu Servicio con el botón azul.

3 SALIDA DEL MODO SERVICIO



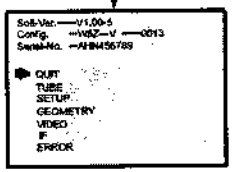
MODO SERVICIO (E)

O-SERVICIO

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 :

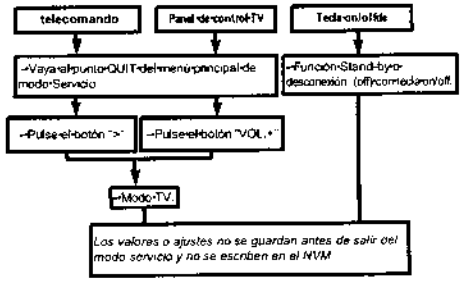
En modo servicio
- *La función "Bloqueo niños" es reinicializada.*
- *Anula todas las horas programadas*
- *La patilla 8 del SCART es ignorada*
- *La detección de AV- Link, WSS y "modo buzón" (autoformato) se desactiva.*
- *El apagado automático en caso de ausencia de señal de antena es desactivado.*
- *la nitidez es puesta al punto medio.*
- *El Modo instalación es desactivado.*
- *Zoom y formato ignorados.*
- *El tipo de chasis será comprobado y memorizado.*

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).

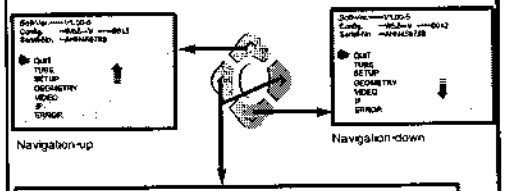
Puede entrar al Menú Servicio con el botón azul.

3 SALIDA DEL MODO SERVICIO



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

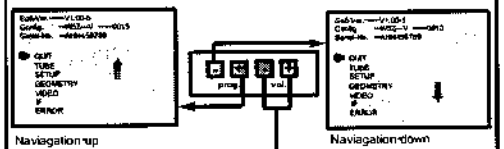


Select option
Option anwählen
Selezionare l'opzione
Seleccionar opción

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

> VALUE
< VALUE

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

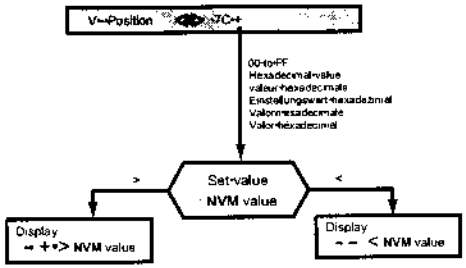


Select option
Option anwählen
Selezionare l'opzione
Seleccionar opción

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

Vol. + VALUE
Vol. - VALUE

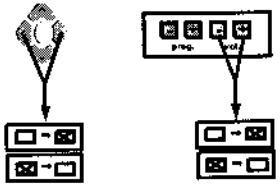
3 DISPLAYING THE VALUE OF THE SETTING - AFFICHAGE DES VALEURS - ANZEIGE DES EINSTELLUNGSWERTES - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - VISUALIZACION DEL VALOR DE AJUSTE



4 TOGGLE FUNCTIONS - VALIDATION DES FONCTIONS - EIN-UND-AUSSCHALT-FUNKTIONEN - 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 - MEMORIZZAEZI 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 temporaly 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 alineamiento los valores son almacenados temporalmente en RAM

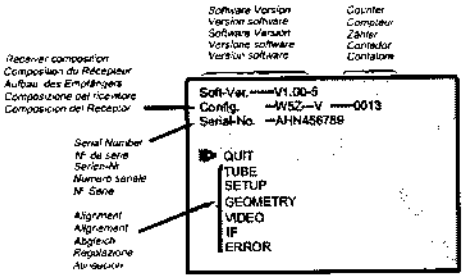
Store ➡ Copies RAM values into NVM
Copie la valeur RAM en NVM
Kopieren des Wertes von RAM nach NVM
Copiare i valori RAM in NVM
Copiar valores RAM en NVM

Restore ➡ Copies all values from NVM into RAM.
Copie toutes les valeurs des données NVM en RAM
Kopiert alle NVM-Datenwerte in das 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



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

Config.— W5Z....V—

Character 1: Tubetype: "A"=4/3-, "W"=16/9
Character 2: Teletext external memory detected:
"T"=128-page, "-"=not (only internal memory)
Character 3: Ambiant Sensor: "S"=detected, "-"=not (not ambiant sensor on CC20 step 1)
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

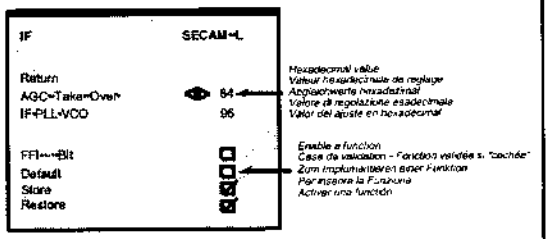
SERIAL-N° A15...

Character 1: Factory, A=Angers, B=Tarancon, Z=Zyrardow
Character 2: Year: J=1996, J=1997 etc. (International code UTEC90511)
Character 3: Month, from 1=January to 9=September, O=October, N=November D=December.
Character 4-9: Serial N°.

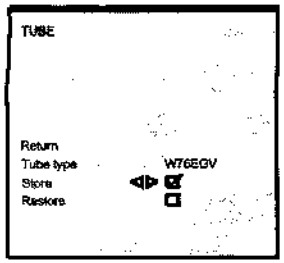
TIME COUNTER - COMPTEUR DE TEMPS - ZÄHLER - CONTATORE - CONTADOR

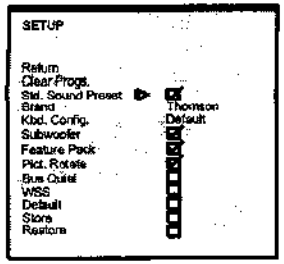
The counter indicates the TV's number of service hours. It counts from to 0 to 65535 hours
The display is hexadecimal.
Le compteur du temps indique le nombre d'heures de service du TV. Il compte de 0 a 65535 heures. L'affichage est en hexadécimal.
Der Zähler zeigt an, wieviele Stunden der Fernseher in 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

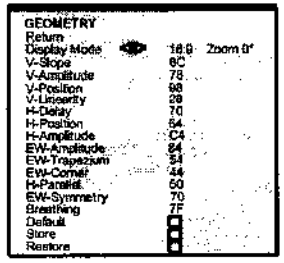
2 SUBMENU - SOUS-MENU



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







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

Mire de barre utilisée : 4/3 avec cercle de géométrie, les réglages complets de geométrie sont faits dans le format du tube equipé à l'appareil : mode 4/3-zoom-0 pour les tubes 4/3, 16/9-zoom-0 pour les appareils équipés detubes 16/9 : voir ci-après

Verwendetes Testbild : 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 Testa utilizzato : 4/3 con cerchio geometrico. La regolazione viene effettuata nel formato del tubo del ricevitore : 4/3-zoom-0 tubo 4/3, 16/9-zoom-0, tubo 16/9 : see annexed

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 See annexed

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; 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.

Definir le tube exact après changement de NVM.
Les nouvelles valeurs de tubes (avec video et géometrie) sont activés 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) muß 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 video y la geometria por defecto) se activan inmediatamente.
Los parámetros variables de geometria y video se graban en el NVM al seleccionar la función Store. Vea más abajo la lista de tubos.

TUBE NAME	LIST	DESCRIPTION
A66EHJ43X12	A66EHJ	4/3 28" MP(1)
A68EGD038X322	A68EGD	4/3 29" SF(2)
A68EJZ011X121	A68EJZ	4/3 29" XF(2)
A68LPQ356X99	A68LPQ	4/3 29" XF (3)
A80EJA16X120	A80EJA	4/3 33" MP(2)
A90AFX14X12	A90AFX	4/3 37" MP(2)
W66EGV023X522	W66EGV	16/9 28" SF(2)
W66LPQ356X99	W66LPQ	16/9 28" SF(3)
W68EJY011X121	W68EJY	16/9 28" XF(2)
W76EGV023X522	W76EGV	16/9 32"SF(1)
W76EJY011X121	W76EJY	16/9 32"XF(2)
W76LPF350X99	W76LPF	16/9 32"SF(4)

(1) : AK, Coty-M
(2) : Invar vertical gun, BSVM, Extra Flat
(3) : Invar, DF-II gun, BSVM,NS, Extra Flat
(4) : Invar, DF-II gun, BSVM,NS

➡ 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; Vol. +/- . TV keyb.

Clear Prog.

Clears all programs stored in memory and resets all Picture and Sound settings to the factory defaults. The AUTOINSTALL (out of factory) mode can be initialised by a long press (>2.5s.) on the «touche de sélection».

Efface tous les programmes mémorisés.
Valeurs ISO et IMAGES : valeurs usines.
Fonctionnalité par une longue pression (>2.5s.) sur la «touche de sélection».

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

Clear Prog.
Cancella tutti i programmi in memoria e regola i Valori analogici e SUONO IMMAGINE ai livelli di fabbrica. Riportare la TV al modo di Selezione premendo a lungo (>2,5 sec.) sul pulsante «».

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

Std.Sound Preset

Sets the default values for the Standard Sound Preset.

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

Brand

Set the "Brand". Thomson, Telefunken, Other
Factory adjusted
Réservé au réglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas

Kbd. Config.

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

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.

Validacónde que existe el subwoofer.

☑ Subwoofer enable ☐ Subwoofer disable

SETUP

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 dépodage/affichage des données du programme EPG, de l'equalizer 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, l'preset 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 ICC20 16/9 and some large screen 4/3 by adding a special bargraph in the "personal settings" menu (user menus). If 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 ICC20 16/9 et les appareils 4/3 grand ecran 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 ICC20 16/9 und einigen 4/3 Geräten. Im Menü "Eigene Einstellungen" (Menü Treppelabon) 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 ICC20 16/9 e alcuni grandi schermi 4/3 , aggiungendo una speciale barra grafica nel menu di "Menu Principale". Se il circuito di correzione è montato, è necessario abilitare questa funzione.

Valida la función "corrección del campo magnético terrestre" (EFC) en los chasis ICC20 and some large screen 4/3 añadiendo una barra gráfica en el menu "Ajustes personales". Es necesario validar ésta función si el circuito de corrección EFC está montado.

☑ Rotation bargraph available menu. EFC function active.

☐ Rotation bargraph suppressed from personal settings, EFC circuit disactivated

WSS

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

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

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

Identificazione "auto-Dolby" e "formal 16/9" via televideo alla riga 23.La sélezione di WSS Processing valé per tutti i programmi.

Detección "auto-surround" y "formal" a través de la línea 23 de Teletext.La selección del processamiento WSS es valida para todos los programas.

☑ Detection enable ☐ Detection desable

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 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 Giu 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 (+)

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-Modes erscheint.

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

Cierra el submenú. El menú Field Service Mode aparece.

Press </>, remote control; Vol. +/- . TV keyb.

Display-Mode

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

The available display modes depend on the picture tube format.
4/3 tube : 2 modes 4/3 and 16/9
16/9 tube : 3 modes 16/9 standard, 4/3 Zoom 0, Cinerama

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

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

Différents types d'affichage disponibles :

tube 4/3 : 2 modes 4/3 et 16/9
tube 16/9 : 3 modes 16/9 standard, 4/3 Zoom 0, Cinerama

Le menu correspondant montre seulement les registres à régler.

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

Die verfügbaren Bildformate sind abhängig vom Bildrohr-Format.
4/3-Röhre : 2 Bildformate 4/3 und 16/9
16/9-Röhre : 3 Bildformate 16/9 Standard, 4/3 Zoom 0 und Cinerama

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

La disponibilità dei modi display dipende dal formato del tubo:
tubo 4/3 : 2 modi 4/3 , 16/9
tubo 16/9 : 3 modi 16/9 standard, 4/3 zoom0 cinerama
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 cambiare formato senza uscire da service mode

GEOMETRY

Display-Mode

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

Los formatos que se pueden visualizar, dependen del tipo de tubo.
Tubos de 4/3 : 2 modos, 4/3 y 16/9
Tubos de 16/9: 3 modos, 16/9 estándar, 4/3 Zoom 0 y Cinerama.

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.

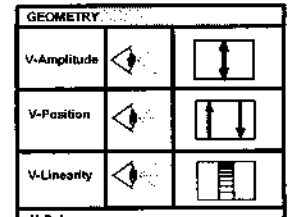
- Appliquer une mire de barres avec seulement une ligne blanche horizontale en milieu de l'écran.
- Sélectionner la ligne "V-Slope". La moitié basse de l'écran devient noire.
- Aligner "V_Slope" pour que la ligne médiane soit à peine non visible.
- Commuter la mire en mode de réglage de géométrie (quadrillage).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

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

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

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

GEOMETRY



H-Delay
Horizontal-Delay

Increase/decrease value to center the image inside the displayed curtains.
Adjust H-Delay before "H-Position"

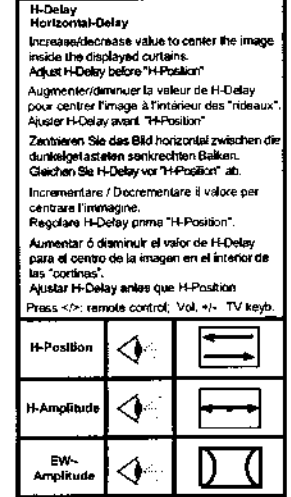
Augmenter/diminuer la valeur de H-Delay pour centrer l'image à l'intérieur des "rideaux".
Ajuster H-Delay avant "H-Position"

Zentrieren Sie das Bild horizontal zwischen die dunkelgetasteten senkrechten Balken.
Gleichen Sie H-Delay vor "H-Position" ab.

Incrementare / Decrementare il valore per centrare l'immagine.
Regolare H-Delay prima "H-Position".

Aumentar ó disminuir el valor de H-Delay para el centro de la imagen en el interior de las "cortinas".
Ajustar H-Delay antes que H-Position

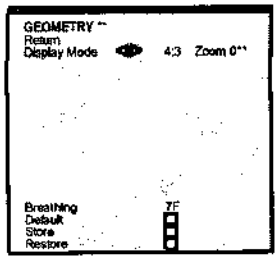
Press </>: remote control; Vol. +/- TV keyb.

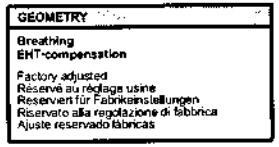


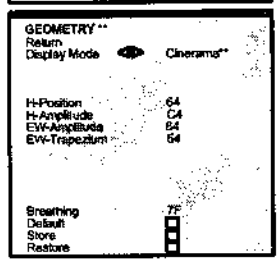
Breathing
EHT-compensation

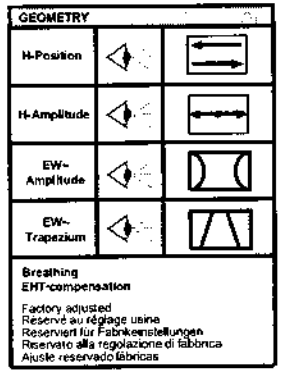
Factory adjusted
Réservé au réglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas

➡ After setting ➡ Store (+)

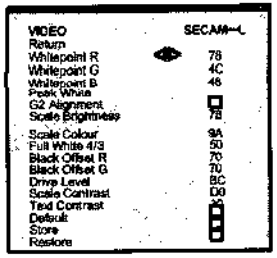


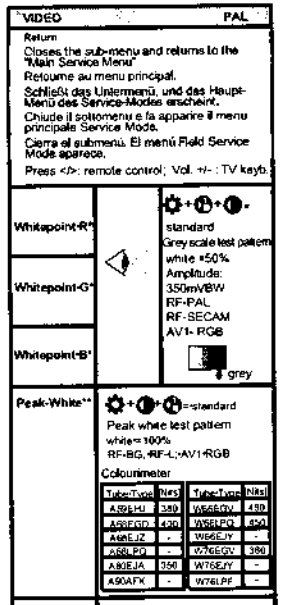






Note:
**=Specific menu: 16/9 set
**=Menú específico: aparatos 16/9

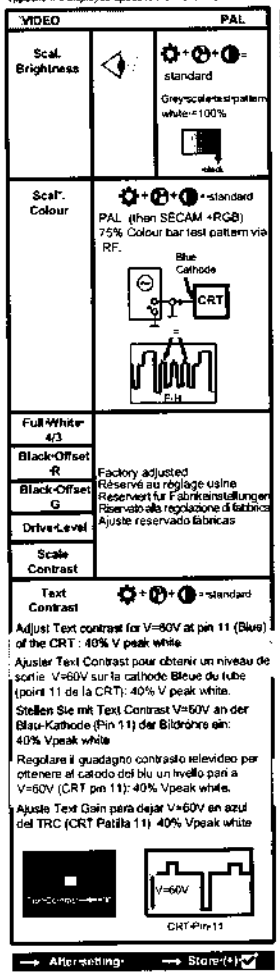


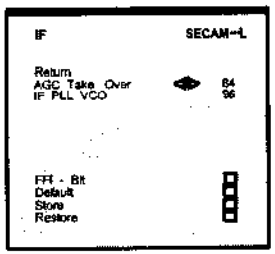


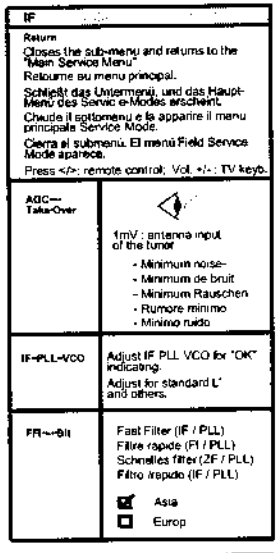
Note:
*=Adjust separately for PAL-RF/SECAM-RF and RGB-AV
Whitepoints cannot be aligned with PAL.

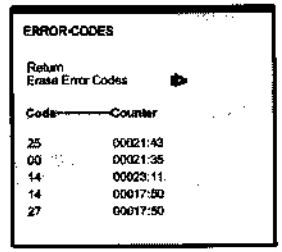
**=After PEAK-white adjustment control whitepoints setting.
Repeat the adjustments if necessary.

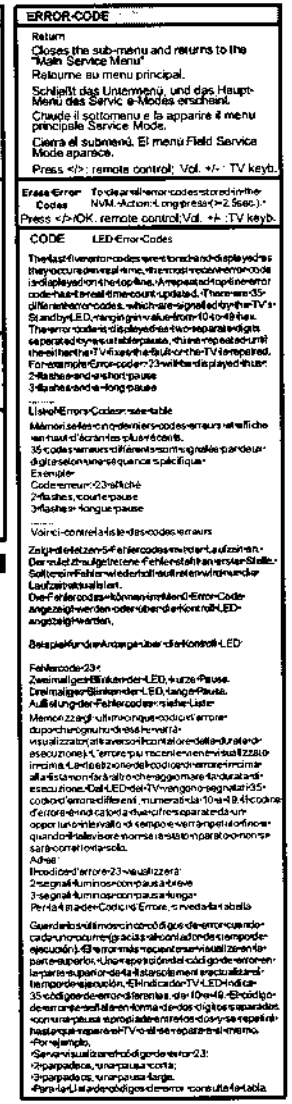
Color standard de RGB is autodetected and displayed opposite the displayed opposite the menu title











ERROR CODES

GB

10 Display effective child lock mode
11 Display timer mode
12 Audio-MSP doesn't answer anymore
13 Audio-Dpl doesn't answer anymore
14 TDA9330H doesn't answer anymore
15 TDA9321 doesn t answer anymore
16 DMU0 doesn't answer anymore
17 SAA4956 doesn't answer anymore
18 TDA9178 doesn't answer anymore
19 Tuner doesn't answer anymore
20 I2C Bus is locked
21 I2C Bus data line held low
23 I2C Bus clock line held low
25 Switched 5V not available
26 Tube gets not warm in time
27 Deflection detects >3 times prot
28 Vertical deflection safety is effective
29 Horizontal deflection safety is effective
31 Call with pointer that was not allocated
32 A software-timer has been requested but isn't available yet
34 The NVM chip doesn't answer anymore
35 5V and 8V not available
36 Wrong address passed to the bus-handler
37 Unexpected level on NMI line found
38 Heap full - There is no RAM available for the requested operation
39 I2C Bus data line not recoverable
41 Power down detection TDA9178 (PSI)
42 Power on reset error TDA9320 (HIP)
43 Power on reset error TDA9330 (HOP)
44 NRF bit problem (only factory information)
45 FLS bit problem (only factory information)
46 NHF bit problem (only factory information)
47 NDF bit problem (only factory information)
48 XPR bit problem (only factory information)
49 Problem with bits SXA...D (factory information)

F

10 Fonction clef enfant active
11 Mode timer
12 Audio MSP ne répond plus
13 Audio-Dpl ne répond plus
14 TDA9330H ne répond plus
15 TDA9321 ne répond plus
16 DMU0 ne répond plus
17 SAA4956 ne répond plus
18 TDA9178 ne répond plus
19 Tuner ne répond plus
20 I2C-bus bloqué
21 I2C-bus data forcé au niveau bas
23 I2C-bus clock forcé au niveau bas
25 Le "5V commuté" n'est pas disponible
26 Tube ne chauffe pas a temps
27 Plus que 3-fois la déflection a détecté une "protection"
28 Sécurité déviation verticale active
29 Sécurité déviation horizontale active
31 Appel par pointeur non alloué
32 Logiciel-timer non disponible
34 NVM (mémoire) ne répond plus
35 5V et 8V non disponibles
36 NVM adresse erronée
37 Niveau incorrect sur la ligne NMI
38 Pile pleine - Il n'y a plus de RAM disponible pour l'opération requise
39 I2C-bus data non récupérable
41 Détection mauvaise alimentation TDA9178
42 Erreur de reset TDA9320
43 Erreur de reset TDA9330
44 Problème bit NRF (information usine seulement)
45 Problème bit FLS (information usine seulement)
46 Problème bit NHF (information usine seulement)
47 Problème bit NDF (information usine seulement)
48 Problème bit XPR (information usine seulement)
49 Problème avec les bits SXA...D (information usine seulement)

D

10 Kindersicherung aktiv
11 Weckerfunktion aktiv
12 Audio-MSP antwortet nicht
13 Audio-Dpl antwortet nicht
14 TDA9330H antwortet nicht
15 TDA9321 antwortet nicht
16 DMU0 antwortet nicht
17 SAA4956 antwortet nicht
18 TDA9178 antwortet nicht
19 Tuner antwortet nicht
20 I2C Bus ist blockiert
21 I2C Bus Data ist immer L
23 I2C Bus Clock ist immer L
25 Geschaltete 5V nicht vorhanden
26 Bildrohr ist nicht rechtzeitig aufgeheizt
27 Schutzschaltung hat dreimal ausgelöst
28 Vertikal-Schutzschaltung ist aktiv
29 Horizontal-Schutzschaltung ist aktiv
31 Softwarefehler (nur für Produktionsstätten)
32 Softwarefehler (nur für Produktionsstätten)
34 NVM (EEPROM) antwortet nicht
35 5V und 8V nicht vorhanden
36 Softwarefehler (nur für Produktionsstätten)
37 Unerwarteter Zustand auf NMI-Leitung
38 Softwarefehler (nur für Produktionsstätten)
39 I2C Bus Data-Leitung nicht reaktivierbar
41 Power down detection TDA9178 (PSI)
42 Problem während des Resets TDA9320 (HIP)
43 Problem während des ResetsTDA9330 (HOP)
44 NRF Bit Problem (nur für Produktionsstätten)
45 FLS Bit Problem (nur für Produktionsstätten)
46 NHF Bit Problem (nur für Produktionsstätten)
47 NDF Bit Problem (nur für Produktionsstätten)
48 XPR Bit Problem (nur für Produktionsstätten)
49 Problem mit Bits SXA...D (nur für Produktionsst.)

I

10 Funzione child lock attiva
11 Modo timer
12 MSP-Audio non risponde
13 DPL-Audio non risponde
14 TDA9330H non risponde
15 TDA9321 non risponde
16 DMU0 non risponde
17 SAA4956 non risponde
18 TDA9178 non risponde
19 Tuner non risponde
20 I2C Bus è bloccato
21 I2C Bus data forzata bassa
23 I2C Bus clock forzata bassa
25 Tensione 5V commutata non disponibile
26 Tubo non trasmette informazione caldo entro il tempo stabilito
27 Deflessione rileva>3 volte protezione
28 Protezione deflessione verticale attiva
29 Protezione deflessione orizzontale attiva
31 Chiamate al pointer non assegnata
32 Logica timer non disponibile
34 L'integrato NVM non risponde
35 5V e 8V non disponibili
36 Indirizzamento NVM errato
37 Livello incorretto sulla linea NMI
38 Pile piena - RAM non disponibile per l'operazione richiesta
39 Linea I2C Bus non recuperabile
41 Rilevazione mancata alimentazione el TDA9178 (PSI)
42 Errore di reset TDA9320 (HIP)
43 Errore di reset TDA9330 (HOP)
44 Problema di bit NRF (informazione solo per fabrica)
45 Problema di bit FLS (informazione solo per fabrica)
47 Problema di bit NDF (informazione solo per fabrica)
48 Problema di bit XPR (informazione solo per fabrica)
49 Problema con bit SXA. .D (informazione di fabrica)

E

10 Función "bloqueo niños" activa
11 Modo "timer" activado
12 El procesador de audio MSP no responde
13 El DPL de audio no responde
14 El TDA9330H no responde
15 El TDA9321 no responde
16 El DMU 0 no responde
17 El SAA4956 no responde
18 El TDA9178 no responde
19 El sintonizador no responde
20 El bus I2C está bloqueado
21 La línea de datos del bus I2C forzada a nivel bajo
23 La línea clock del bus I2C forzada a nivel bajo
25 Faltan los +5V conmutados
26 El TRC no se calienta en el tiempo establecido
27 La deflexión detecta una protección > de 3 veces
28 Seguridad de la deflexión vertical activada
29 Seguridad de la deflexión horizontal activada
31 El puntero no puede encontrar la posición solicitada
32 Una solicitud de "timer" no está disponible
34 La NVM no responde
35 Faltan los 5V y los 8V
36 Dirección errónea soliotada por el bus
37 Encontrado un nivel inesperado en la línea NMI
38 Pila llena. No queda RAM disponible para la operación solicitada
39 Línea de datos del bus I2C no recuperable
41 Detección de fallo en alimentación TDA9178 (PSI)
42 Error de reset en el encendido TDA9320 (HIP)
43 Error de reset en el encendido TDA9330 (HOP)
44 Fallo en el bit NRF (información sólo para fábrica)
45 Fallo en el bit FLS (información sólo para fábrica)
46 Fallo en el bit NHF (información sólo para fábrica)
48 Fallo en el bit NDF (información sólo para fábrica)
49 Fallo en los bits SXA...D (información sólo para fábrica)

GEOMETRY-MODE-ALIGNMENT

4/3-picture-tube

A ICC20 4/3 set needs a geometry alignment only in the 4/3 Zoom 0 mode. All other formats and zoom mode are calculated.

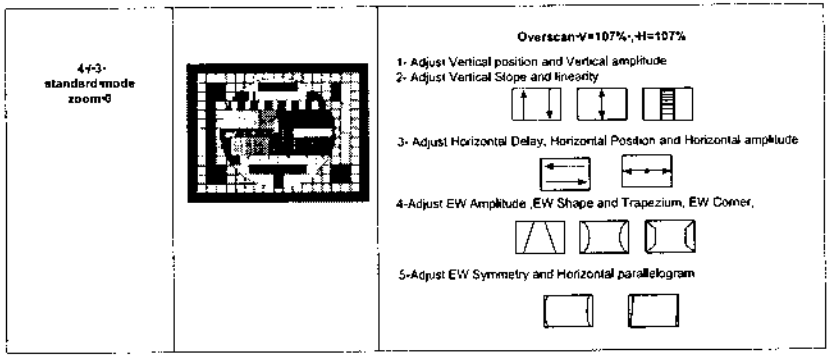
Un chassis ICC20 4/3 ne nécessite des réglages de géométrie que dans le mode 4/3 zoom 0. La géométrie des autres formats et zoom est calculée.

Beim Chassis ICC20 4/3 ist ein Geometrie-Abgleich nur im Bildformat 4/3 Zoom 0 notwendig. Die Werte für alle weiteren Formate und Zoomstufen werden berechnet.

Il telaio ICC20 4/3 richiede l'allineamento solo nel formato 4/3 zoom 0. Tutti gli altri formati zoom sono calcolati.

Un TV ICC20 4/3 sólo necesita ajustar la geometria en modo 4/3 Zoom 0. Todos los otros formatos y modos de zoom, son calculados.

Signal: 4/3 test pattern



16/9-picture-tube

A ICC20 16/9 set needs a complete geometry alignment in the 16/9 Zoom 0 mode and additionnaly an alignment of H-amplitude (104%), EW-Amplitude, H-position and EW-trapezium in Cinerama mode (if fitted). All others formats all others formats and zoom mode are calculated.

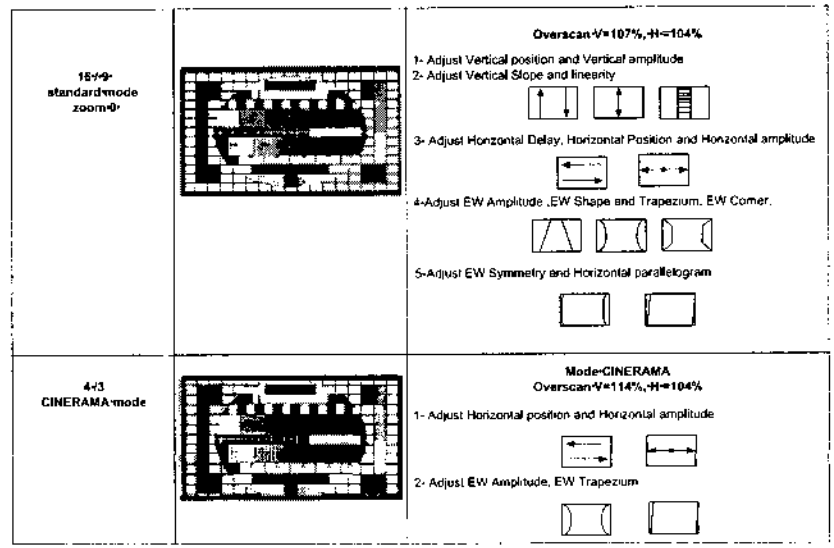
Un chassis ICC20 16/9 ne nécessite un alignement complet des réglages de géométrie que dans le mode 16/9 zoom 0 et en outre des réglages de H-amplitude (104%), EW-Amplitude, H-position et EW-trapèze en mode Cinérama (si les circuits correspondants sont insérés). La géométrie des autres formats et zoom est calculée.

Beim Chassis ICC20 16/9 ist ein vollständiger Geometrie-Abgleich nur im Bildformat 16/9 Zoom 0 notwendig. Wenn das Bildformat Cinerama verfügbar ist, müssen für diesen H-Amplitude (104%),EW-Amplitude, H-Position und EW-Trapezium abgeglichen werden. Die Werte für alle weiteren Formate und Zoomstufen werden berechnet.

Il telaio ICC20 16/9 richiede l'allineamento nel formato 16/9 zoom 0 e un allineamento supplementare dell' Ampiezza H (104%), Ampiezza EW Posizione H e Trapezio EW nel modo Cinerama. Tutte le regolazioni negli altri formati zoom sono calcolate.

Un TV ICC20 16/9 necesita un ajuste completo de geometria en el modo 16/9 zoom 0 y además un ajuste de la anchura horizontal (104%), posición horizontal y amplitud / trapecio EW en modo "Cinerama" (si está incorporado). Todos los otros formatos y modos de zoom, son calculados.

Signal: 4/3 test pattern



ALLGEMEINE INFORMATIONEN

FEHLERSUCH-METHODIK

1 - EINSCHALTEN DES GERÄTES:

- Beobachten Sie beim Einschalten des Gerätes die Standby-LED. Abweichungen vom "normalen" Einschaltverhalten des Gerätes können Hinweise auf eventuelle Fehler im Gerät und deren möglichen Ursachen geben.

2 - FEHLERSUCHE : VERHALTEN DER LED :

In bestimmten Fällen bedeutet ein Blinken der LED die Anzeige eines Fehlercodes:

- Zählen Sie die Anzahl des Aufblinkens mit. Der zweistellige Fehlercode wird in zwei Gruppen von Blinkimpulsen, getrennt von einer 0,7s Pause, dargestellt.
  Die Anzeige des Fehlercodes wird mehrere Male wiederholt.

Siehe ***TABELLE DER FEHLERCODES.***

3 - FEHLERSUCHE :

Das Chassis ICC20 besteht im Wesentlichen aus zwei Platinen. Zuerst sollte festgestellt werden, welche Platine defekt ist und ob eine der Schutzschaltungen abgesprochen hat.

ÜBERPRÜFEN SIE ZUERST DEN KORREKTEN SITZ DIE BEIDEN PLATINEN VERBINDENDEN **FLACHBANDKABEL**

a - Das Chassis arbeitet ganz oder teilweise :
- Beobachten Sie die LED benutzen Sie die die Fehlersuchmethoden 1 und 2.
- Schauen Sie auch bei "***Symptom*** " nach ähnlichen Fehlererscheinungen nach.

b - Das Chassis geht ständig oder periodisch in Schutzzustand :
b.1- Beobachten Sie das Verhalten der LED (Blinken rot, ständig orange gefolgt von Blinken usw.)
-Wählen Sie die entsprechende Box: " ***Fehlersuche über das Verhalten der LED*** ".

Siehe Tabelle der Fehlercodes.
Beispiel :
Das Gerät macht drei Startversuche ehe es in Standby geht :

- Fehlercode 25 : +5V nicht verfügbar
- Fehlercode 35 : +5V and +8V nicht verfügbar.
- Fehlercode 37 : Unerwarteter Zustand auf der NMI (POWER FAIL)-Leitung

Dieses deutet auf ein Fehler auf der "***NETZTEIL- UND ABLENKPLATINE*** " hin.
Bitte beachten Sie :
Diese Informationen sind nur Hinweise ! Die Anzeige der Fehlercodes und die Reaktion des Gerätes ist stark davonabhängig, wie der Fehler beschaffen ist und dem Zeitpunkt, wann er festgestellt wird. (Betriebszustand des Gerätes).

Wird ein Fehler während der Warmstarroutine dreimal festgestellt, wird im EEPROM zusätzlich zum Code der Fehlerursache auch der Fehlercode 27 mit abgespeichert

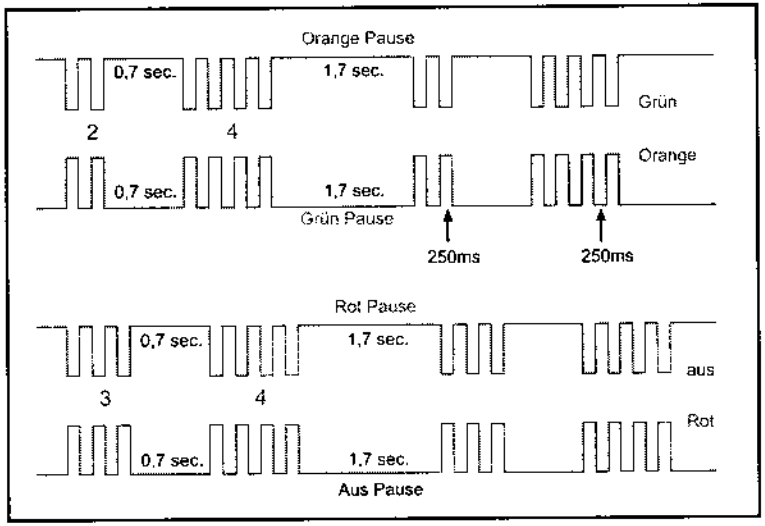
b.2- Die LED bleibt aus:
Überprüfen Sie zuerst die "***NETZTEIL- UND ABLENKPLATINE*** ".

ALLGEMEINE INFORMATIONEN - VERHALTEN DER LED

Blinken der LED

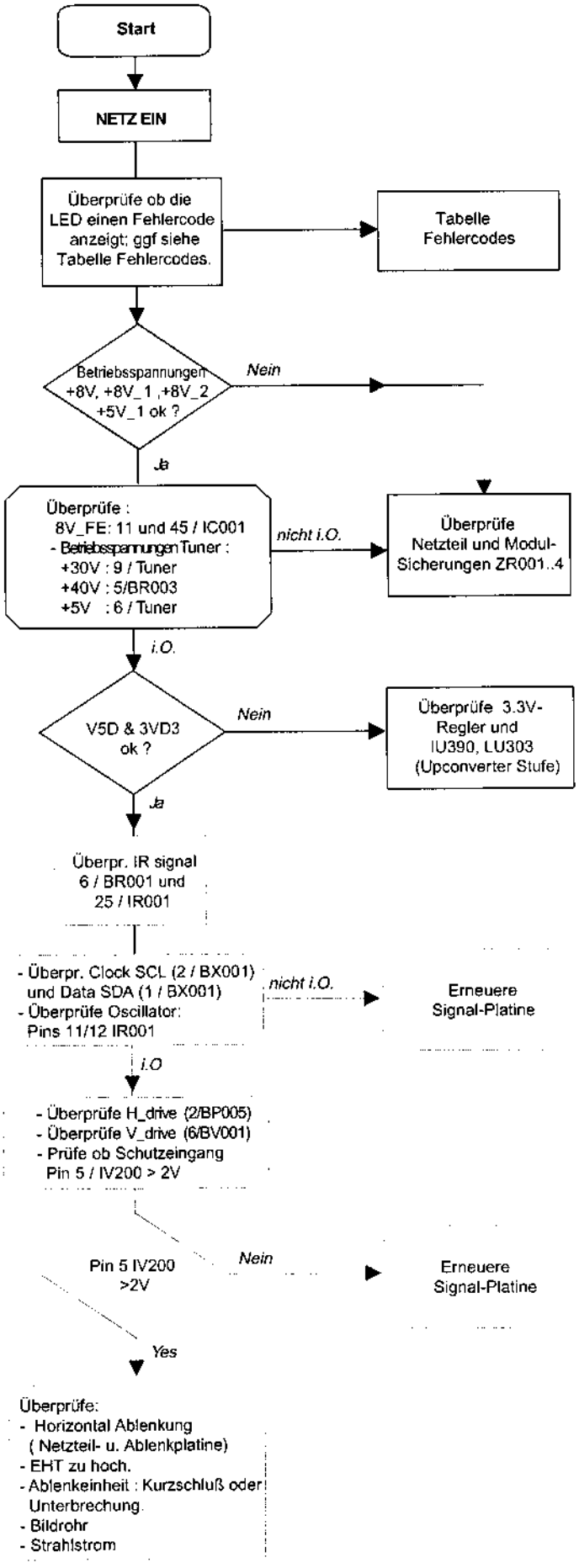
Anzeige eines Fehlercodes
Die Fehlercodes werden durch ein Blinken der roten

Zählen Sie die Anzahl der Blinkimpulse: der Fehlercode wird in zwei Gruppenn, getrennt von einer 0,7s Pause übertragen. Zwischen der Anzeige von zwei Fehlercodes ist eine Pause von 1.7 s.



CODES	FEHLER
10	Kindersicherung aktiv (Kein Fehlercode!)
11	Weckerfunktion aktiv (Kein Fehlercode !)
12	Erster Audio- MSP antwortet nicht
13	(Audio- DPL antwortet nicht)
14	TDA9330H antwortet nicht (oder +8V fehlen)
15	TDA9321 antwortet nicht (oder +8V fehlen)
16	DMU0 antwortet nicht
17	SAA4956 antwortet nicht
18	TDA9178 antwortet nicht
19	(Tuner antwortet nicht)
20	(I2C Bus ist blockiert)
21	I2C Bus Data ist immer L
23	I2C Bus Clock ist immer L
25	Geschaltete 5V nicht vorhanden
26	Bildrohr ist nicht rechtzeitig aufgeheizt
27	Schutzschaltung hat dreimal ausgelöst (wird nur im Service- Mode angezeigt)
28	Vertikal- Schutzschaltung ist aktiv
29	Horizontal- Schutzschaltung ist aktiv
31	Softwarefehler (nur für Produktionsstätten)
32	Softwarefehler (nur für Produktionsstätten)
34	NVM (EEPROM) antwortet nicht
35	5V und 8V 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)
39	I2C Bus Data- Leitung nicht reaktivierbar
41	PDD Flag TDA9178 zu geringe Betriebsspannung
42	POR Flag TDA9321 zu geringe Betriebsspannung
43	POR Flag 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 VERTICAL_ GUARD fehlt oder dauert zu lange
48	XPR Flag TDA9330H Pin 4 Überspannung (> 4V)
49	PSX Flag TDA9321H Quarz (Clock) nicht vorhanden

ÜBERPRÜFUNG SIGNAL-PLATINE



WARNING : *Before servicing this chassis read the safety recommendations.*
ATTENTION : *Avant toute intervention sur ce châssis, lire les recommandations de sécurité.*
ACHTUNG : *Vor jedem Eingriff auf diesem Chassis, die Sicherheitsvorschriften lesen.*
ATTENZIONE : *Prima di intervenire sullo chassis, leggere le norme di sicurezza.*
IMPORTANTE : *Antes de cualquier intervención, leer las recomendaciones de seguridad.*

Do not disconnect modules when they are enregized! Repairs on power supply section are to be carried out only with isolating transformer.
Ne pas retirer les modules lorsqu'ils sont sous tension. N'effectuer les travaux de maintenance sur la partie reliée au secteur (Switch Mode) qu'au travers d'un transformateur d'isolement.
Module nicht bei eingeschaltetem Gerät entfernen ! Servicearbeiten am Netzteil nur unter Verwendung eines Regeltrenntrafos durchführen.
Non scollegare i moduli quando sono alimentati! Intraprendere riparazioni sulla sezione alimentatore solo con trasformatore isolante.
No desconectar los módulos cuando están activados. Las reparaciones en la sección de alimentación de energía deben ser ejecutadas solamente con un transformador de separación.

⚠ Indicates critical safety components, and identical components should be used for replacement. Only then can the operational safety be garanteed.
Le remplacement des éléments de sécurité (repérés avec le symbole ⚠) par des composants non homologués selon la Norme CEI 65 entraine la non-conformité de l'appareil. Dans ce cas, la responsabilité du fabricant n'est plus engagée.
Wenn Sicherheitsteile (mit dem Symbol⚠ gekennzeichnet) nicht durch Original - Ersatzteile ersetzt werden, erlischt die Haftung des Herstellers.
La sostituzione degli elementi di sicurezza (marcati con il segno⚠) con componenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio. In tal caso è "esclusa la responsabilità " del costruttore.
La sustitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato. En ese caso, el fabricante cesa de ser responsable.

Note : During measurements in the power supply unit, use the primary power unit ground (Emit. TP060).
Attention : Mesures dans le bloc alimentation. Utiliser la masse du bloc alimentation (Emet. TP060).
Achtung : Bei Messungen im Primärnetzteil. Primärnetzteilmasse verwenden (Emit. TP060).
Attentionze : Misure nell'alimentatore primario. Usare massa alimentazione primario (Emet. TP060).
Cuidado : Medida en el bloque de alimentación. Utilizar la masa del bloque de alimentación (Emet. TP060).

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

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

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

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

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

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

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

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

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

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

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

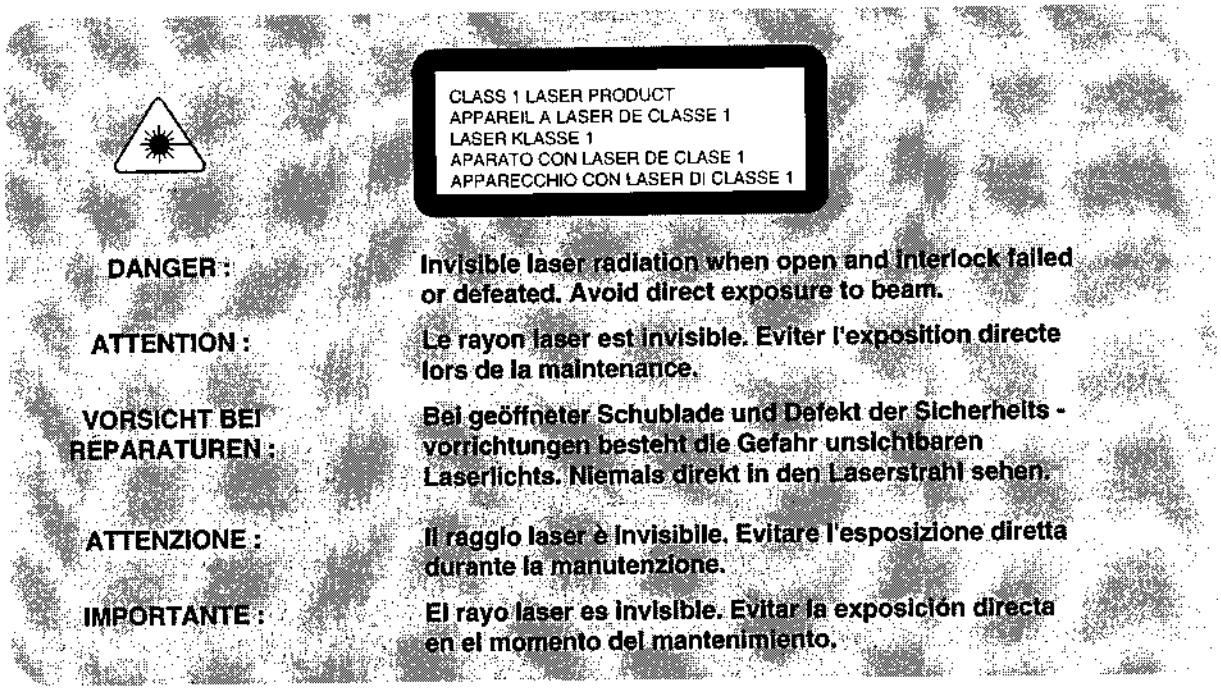
- In UHF, livello d'entrata 1 mV,
- Per la presa SCART, livello d'entrata 1 Vcc.

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

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

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

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



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

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

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

IMPORTANT SAFETY NOTICE

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

DVD PLAYER REMOVAL - DEPOSE DU LECTEUR DVD -
AUSBAU DES DVD-SPIELERS
RIMOZIONE DEL DVD - RETIRADA DEL REPRODUCTOR DVD

GB

1 - Carefully remove the connexion cable between the TV chassis and the DVD player
2 - Disengage the TV chassis.
3 - Remove the screws (1) and lift off the DVD player (2) (Fig.1).

F

1 - Déconnecter les cables de liaison entre le chassis TV et le lecteur de DVD player.
2 - Dégager le TV chassis.
3 - Retirer les trois vis de fixation (1) et déposer le lecteur de DVD (2) (Fig.1).

D

1 - Entfernen Sie vorsichtig das Verbindungskabel zwi schen dem TV-Chassis und dem DVD-Player
2 - Nehmen Sie das TV-Chassis aus dem Gehäuse.
3 - Entfernen Sie die Schrauben (1) und heben Sie den DVD-Spieler heraus (2) (Fig.1).

I

1 - Rimuovere con cura il cavo di connessione tra il telaio e il DVD.
2 - Sfilare il telaio TV.
3 - Tolgliere le viti (1) e estrarre il DVD (Fig.1).

E

1 - Retirar con cuidado el cable de conexión entre el chasis TV y el reproductor DVD.
2 - Desenganchar el chasis TV.
3 - Retirar los tornillos (1) y leventar verticalmente el reproductor DVD (2) (Fig.1).

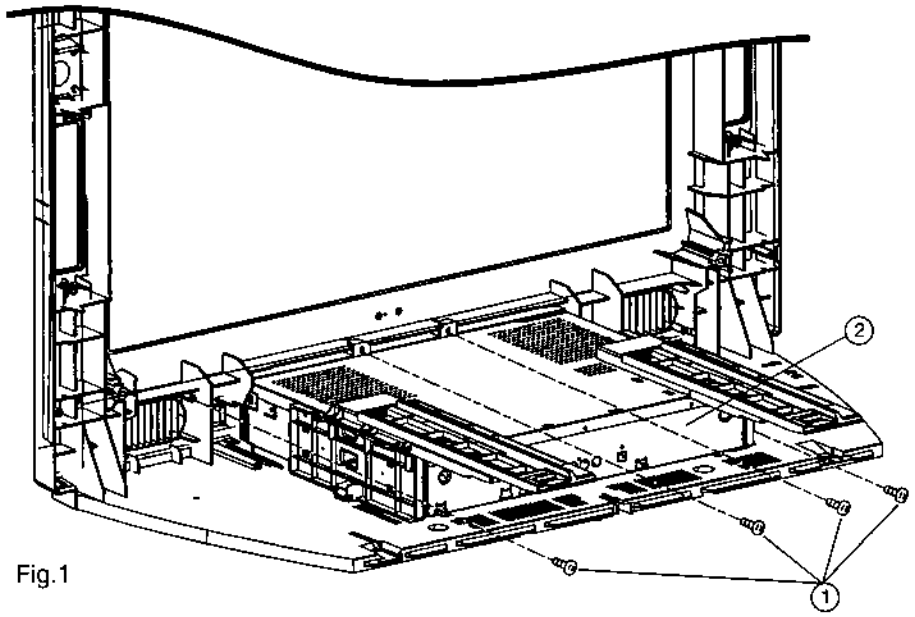


Fig.1

ADJUSTMENT PROCEDURES

Note: for the maintenance, it is possible to activate the DVD module as a standalone unit, see page 5.

1. Handling the optical pickup

The laser diode used in the optical pickup may break down due to potential differences caused by electricity produced by clothing or the human body, care should therefore be taken to prevent electrostatic discharge whilst repairing the optical pickup.

The following method is recommended.

1) Place a conductive sheet on the work bench (The black sheet used for wrapping repair parts.)
2) Place the set on the conductive sheet so that the chassis is grounded to the sheet.
3) Place your hands on the conductive sheet (doing this gives them the same ground as the sheet.
4) Remove the optical pickup block
5) Perform work on top of the conductive sheet. Be careful not to let your clothes or any other static sources to touch the unit.

* Grounding the Human Body, use an antistatic wrist strap to discharge static electricity from your body.
* Grounding the work place, use either an antistatic matt or a sheet of steel on the area where the optical pickup is to be placed and ground the matt/sheet.

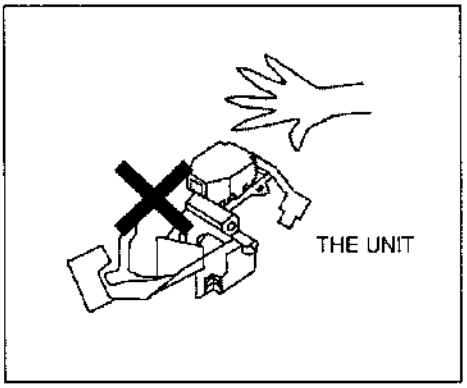


Fig. 1-1

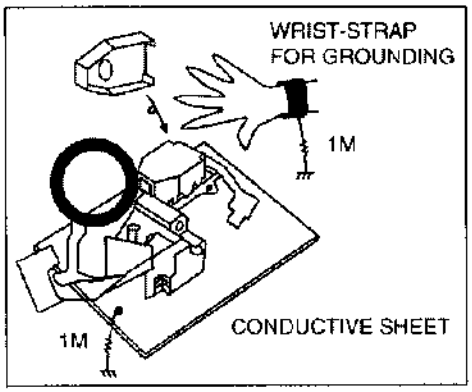


Fig. 1-2

6) Short the short terminal Ⓐ on the PCB, which is in-side the Pickup Assembly, before deconnecting the flexible cable Ⓑ for replacing the Pickup. (The short terminal is shorted when the Pickup Assembly is being lifted or moved.)

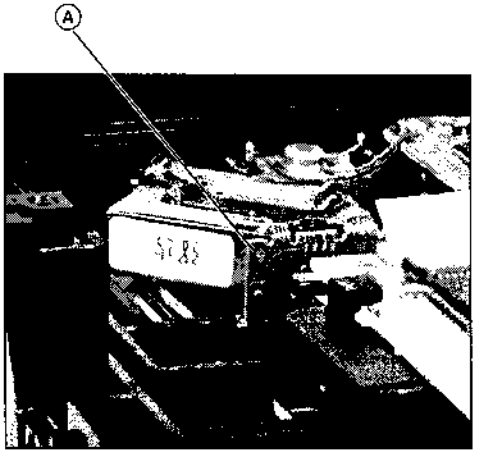


Fig. 1-3

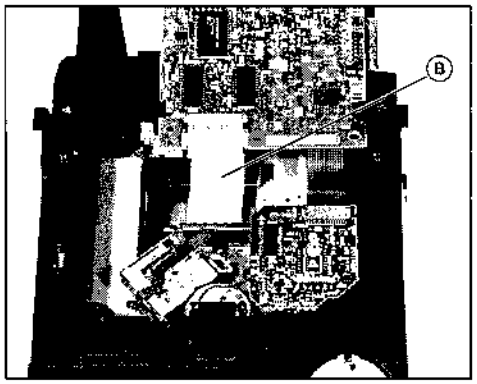


Fig. 1-4

(7) After replacing the Pickup, open the short terminal on the PCB.

2. Disassembly and assembly

Note : Reassemble in reverse order.

2.1 Removing the top cabinet

1) Remove the 3 screws of the right bracket. Pull the clip Ⓓ1 in the direction of arrow Ⓒ, then push the bracket in the direction of arrow Ⓓ.
2) Perform the same operation for the left bracket.
3) Remove the screw on the back of the top cabinet
4) Lift the top cabinet up.

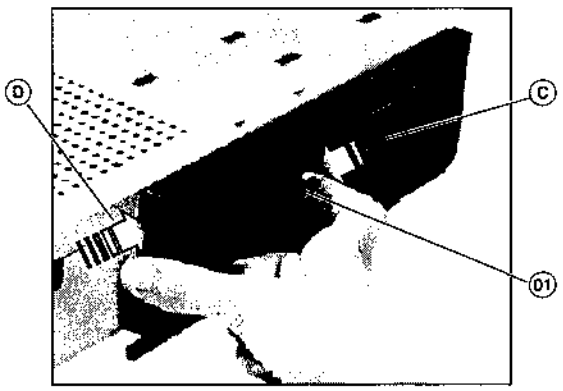


fig 2.1

2-2 Removing the door-tray

1) Switch the power on and open the tray.
2) Remove the door-tray.
3) Close tray and switch the power off.

Note : If the tray cannot be opened, insert a screw driver into the plastic slot accessible through emergency hole ⑫ (as shown below) and push it in the direction of arrow Ⓔ Open the tray manually.

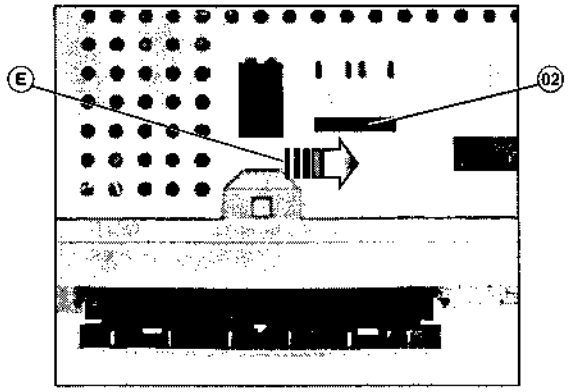


fig 2.2

2-3 Removing the front panel

1) Disengage the 3 clips located under the set and the 2 clips located on both sides of the front panel.
2) Remove connector BK225 between the main board and KDB1.
3) Dismount the Front panel.

2-4 Removing the tray

1) Remove two screws ⑬ .
2) Disengage 4 clips ⑭ .
3) Remove cover ⑮ .
4) Open and pull the tray.

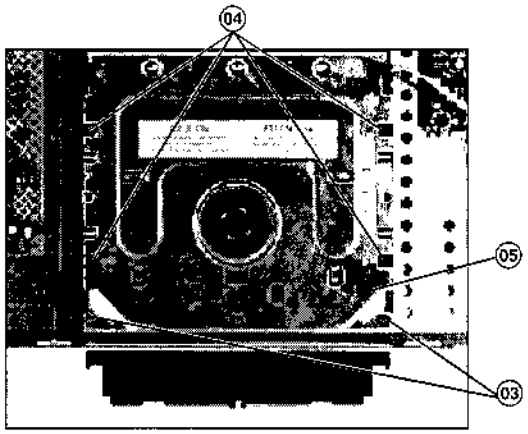


fig 2.4.1

2-5 Removing the mechanical assembly

1) Disconnect BU702 ⑯ and ground cable ⑰ .

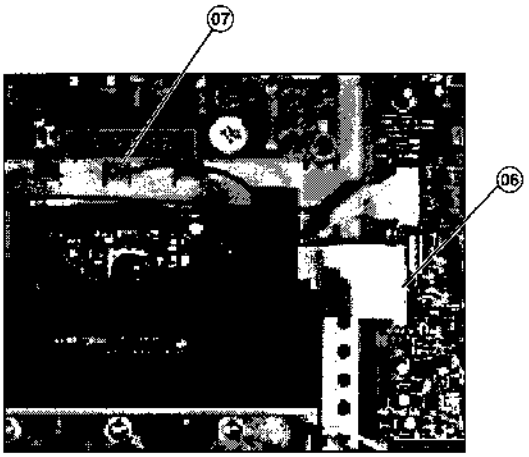


fig 2.5.1

2) Remove two screws ⑱ .
3) Disengage clip ⑲ .

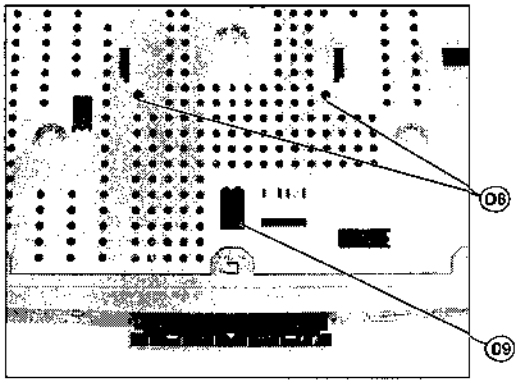


fig 2.5.2

4) Disengage 2 clips ⑳ .

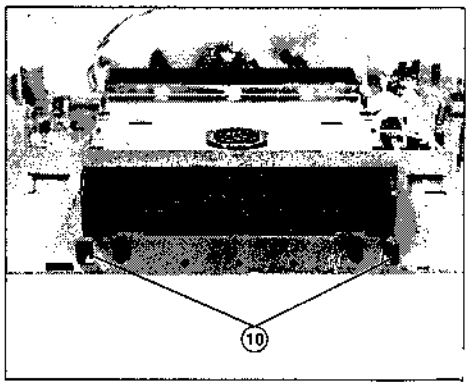
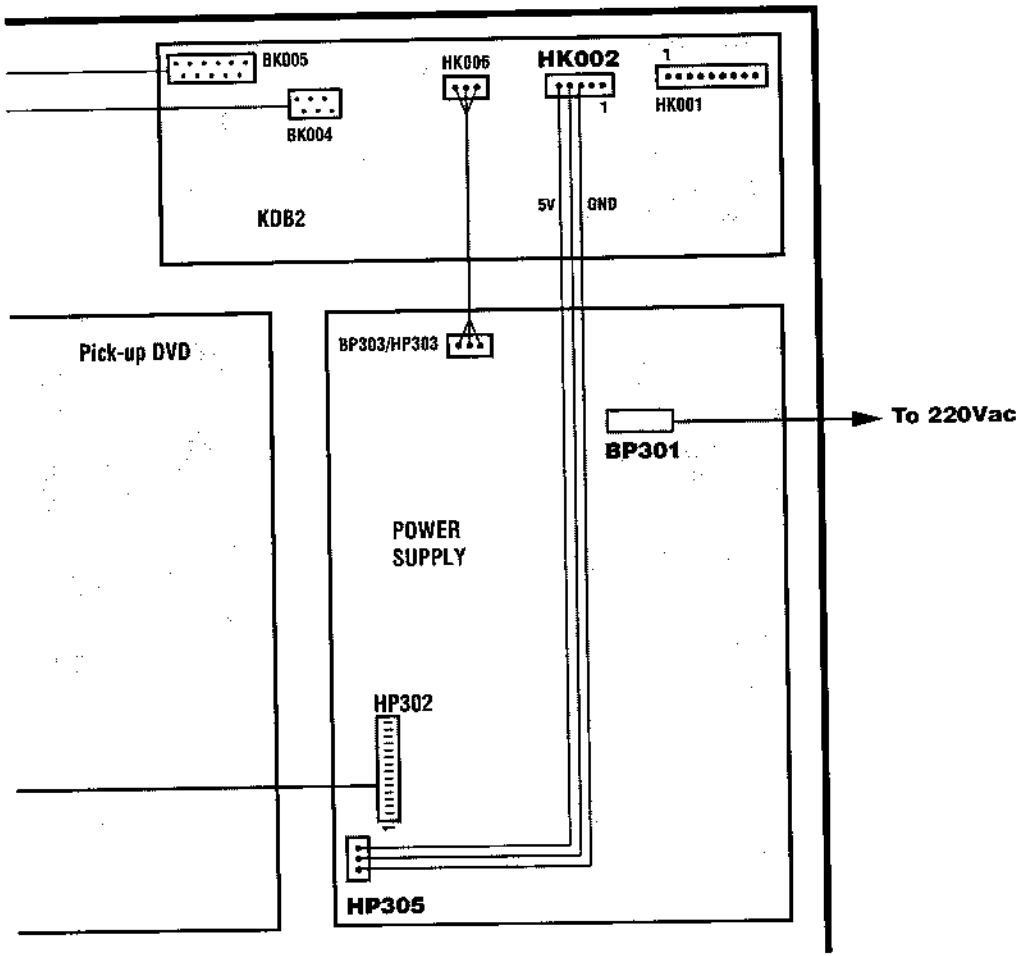


fig 2.5.3

5) Push the mechanical assembly backward and lift it up.

1) Connect BP301 to the mains (220Vac),
2) Connect HP305 (three wires cable with female connector from DVD power board) to HK002 (Three wires cable with male connector from KDB2 board) to supply 5V and GND to the KDB board (see diagram below),
3) To activate the DVD module as a standalone unit, press on the front keyboard, the three keys "MENU", "STOP" and "OK", simultaneously during at least 5 seconds. Then the DVD module can be controlled by the front keyboard or the RCU.

Note: the step 3 must be repeated each time the mains is switched off and switched on.



RUNNING POWER SUPPLY IN STAND ALONE CONDITION

⚠ All of the following tests must be carried out with the MAINS switched OFF.

Any operations carried out with the MAINS switched ON may lead to components being destroyed.

With the following configuration it is possible to start the power supply in stand alone function.

- Disconnect mains.
- Remove connector BP005 and BL111.
- Make a connection between pin 18 (PO) of BP005 to GND .
- Connect pin 21 (CNT2_20V) of BP005 to cathode of DP120 (+20V).
- Connect a resistor 12R0/5W between +5V and GND.
- Connect a resistor 18R0/5W between +8V and GND.
- Connect a resistor 4k0/10W between USYS and GND.
  ONLY NECESSARY IF NO CRT BOARD CONNECTED

↓

- Connect mains .
- Switch «ON».
- Remove connection between pin 18 (PO) of BP005 and GND.

↓

- Measure the following voltages :

Voltage	Value
Usyst (C / DP110) (G/7)*	185V +/-10V
+20V (C / DP120) (G/5)*	25.5V =/- 1V
+10V (C / DP140) (G/6)*	11.5V +/-0.6V
+8V (C / DP194) (H/1)*	8.15V +/-0.25V
+6V (C / DP150) (F/5)*	6.1V +/-0.2V
+5V (A / DP152) (H/3)*	5.1V +/-0.15V
+UA (C / DP130) (F/9)*	22V +/2V
-UA (A / DP135 (J/8)*	-20V+/-2V

(*) Components location reference

NOTE : Don't forget to remove all additionnal loads, the connection between pin 21 of BP005 and +20V and reconnect BP005, BL111 after stand alone function.

GENERAL INFORMATION

METHODOLOGY

1 - SWITCHING "ON" THE TV:

- Observe the behaviour of the two-coloured LED: note the various stages and compare them with the normal cycle of events.
By watching this, the point at which the problem arises and the part of the circuit which needs to be investigated cab be identified.

2 - TROUBLESHOOTING PROCEDURE : LED BEHAVIOUR :

In certain cases a flashing LED signifies the transmission of an error code message:

LED flashes : Message transmission.
- Count the flashes : coded into bursts separated by a pause of 0.7s and repeated several times.
répétées plusieurs fois.

See the ***ERROR CODE TABLE***.

3 - FAULT FINDING :

The ICC20 chassis being equiped with two main boards it is necessary to identify in a first time the defective board and what security is available.

After the check of the ***GOOD CONNECTION BETWEEN THE TWO MAIN BOARDS***

- Operation stages 1 and 2:

a - The chassis set operates fully or partially:
- Use LED message observation fault finding methods 1 and 2.
see also the fault related to fault finding by "***Symptom***".

b - **The chassis set goes into permanent or cyclical security mode** :
b.1- **Observe LED behaviour** (flashing red, stable orange followed by flashing, etc...)
Select the relevant box in the column : " ***LED behavior fault finding***".

See the Error Code Table information.
For example :
Three attemps to switch on the power supply before standby :

- Error code 25 : +5V not available
- Error Code 35 : +5V and +8V not available.
- error Code 37 : No correct level on the NMI (POWER FAIL) line

indicate a problem of "***POWER / SCAN BOARD***".
Please Note :
These information give only an indication because, they don't display all the cases : since various fault generates the same error code or signale a secondary effect relative to the "***SMALL SIGNAL BOARD***" for example.

In the service mode, it is possible to consult a record of the latest error codes which have occured in the television set.

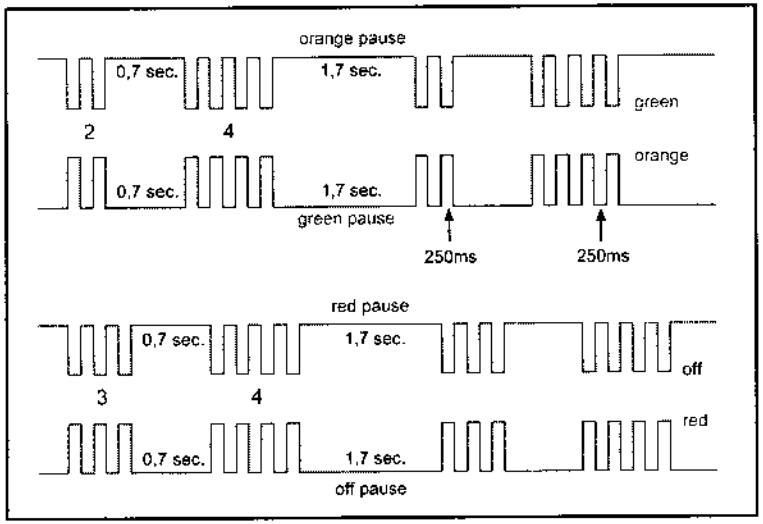
b.2- **LED stays off** :
Make beforehand the diagnosis of the "***POWER / SCAN BOARD***" .

GENERAL INFORMATION - LED BEHAVIOUR

LED FLASHES

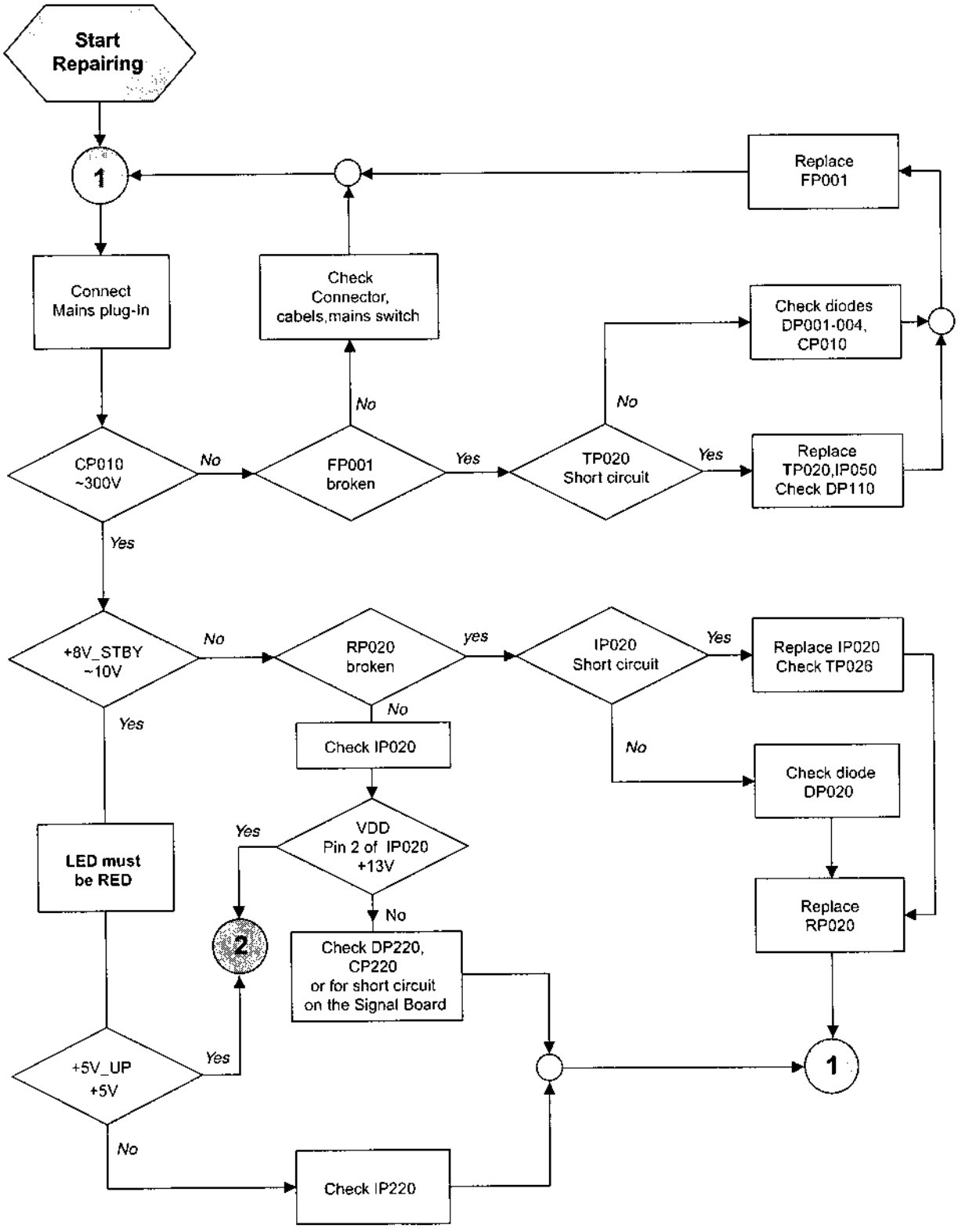
Message transmission.
The Error codes are signalled by the RED Standby LED.

Count number of flashes : error code is signalled in two burst separated by a 0.7 s pause and repeated several times.
There is 1.7 s between each code sequence .

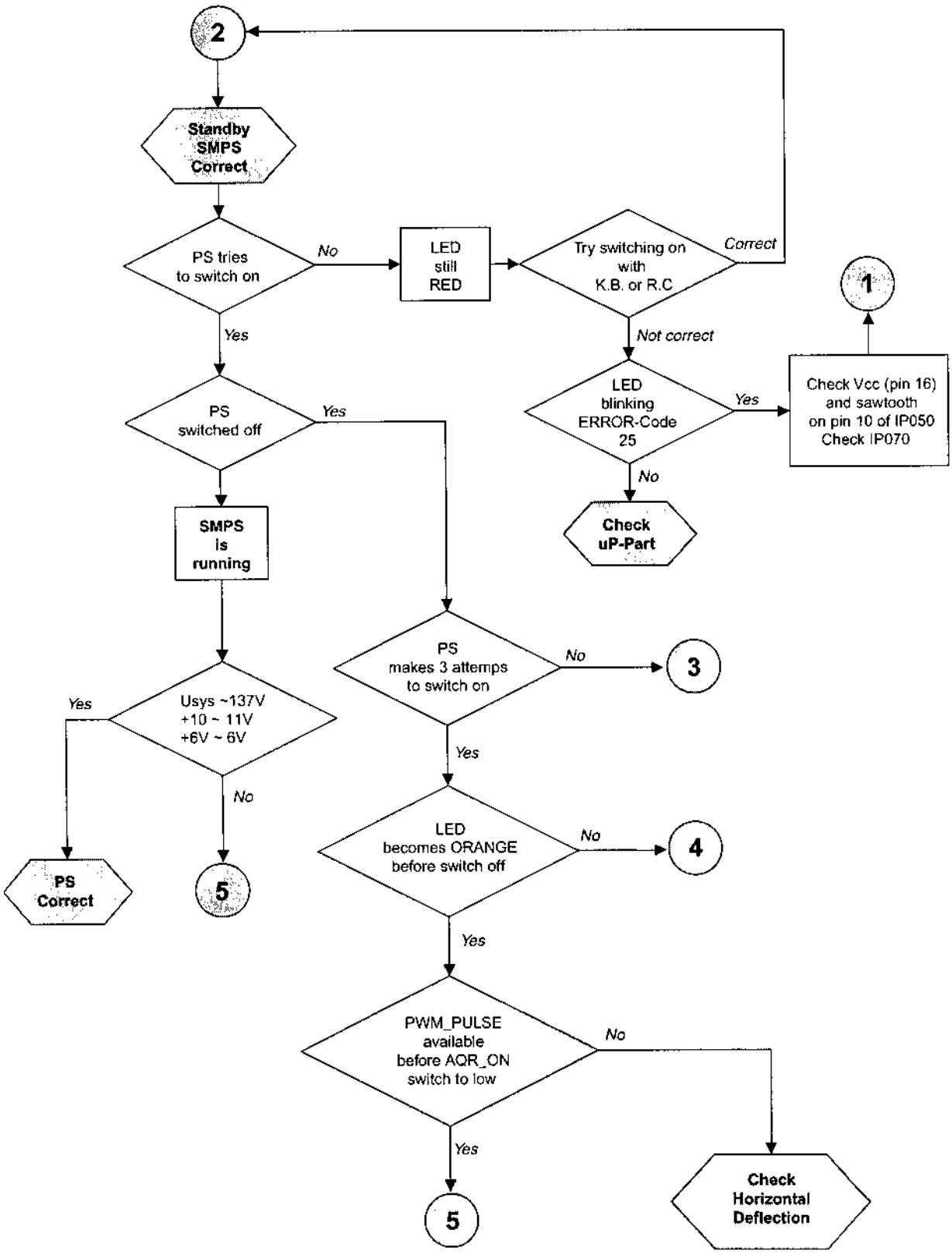


CODES	DEFAULT
10	Display effective child lock mode
11	Display timer mode
12	Audio-MSP doesn't answer anymore
13	Audio-Dpl doesn't answer anymore
14	TDA9330H doesn't answer anymore
15	TDA9321 doesn't answer anymore
16	DMU0 doesn't answer anymore
17	SAA4956 doesn't answer anymore
18	TDA9178 doesn't answer anymore
19	Tuner doesn't answer anymore
20	I2C Bus is loocked
21	I2C Bus data line held low
23	I2C Bus clock line held low
25	Switched 5V not available
26	Tube gets not warm in time
27	Deflection detects >3 times prot
28	Vertical deflection safety is effective
29	Horizontal deflection safety is effective
31	Call with pointer that was not allocated
32	A software-timer has been requested but isn't available yet
34	The NVM chip doesn't answer anymore
35	5V and 8V not available
36	Wrong address passed to the bus-handler
37	Unexpected level on NMI line found
38	Heap full - There is no RAM available for the requested operation
39	I2C Bus data line not recoverable
41	Power down detection TDA9178 (PSI)
42	Power on reset error TDA9320 (HIP)
43	Power on reset error TDA9330 (HOP)
44	NRF bit problem (only factory information)
45	FLS bit problem (only factory information)
46	NHF bit problem (only factory information)
47	NDF bit problem (only factory information)
48	XPR bit problem (only factory information)
49	Problem with bits SXA...D (factory information)

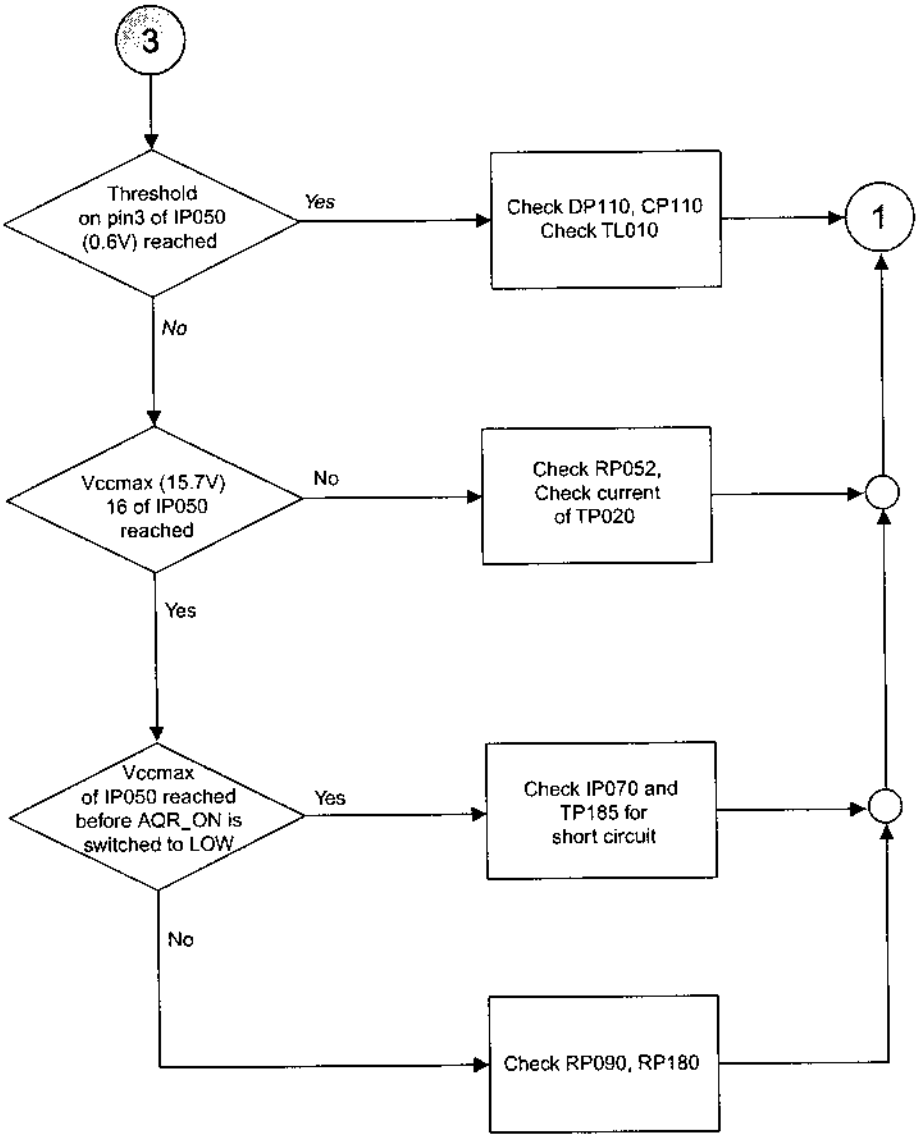
MAIN POWER SUPPLY CHECK



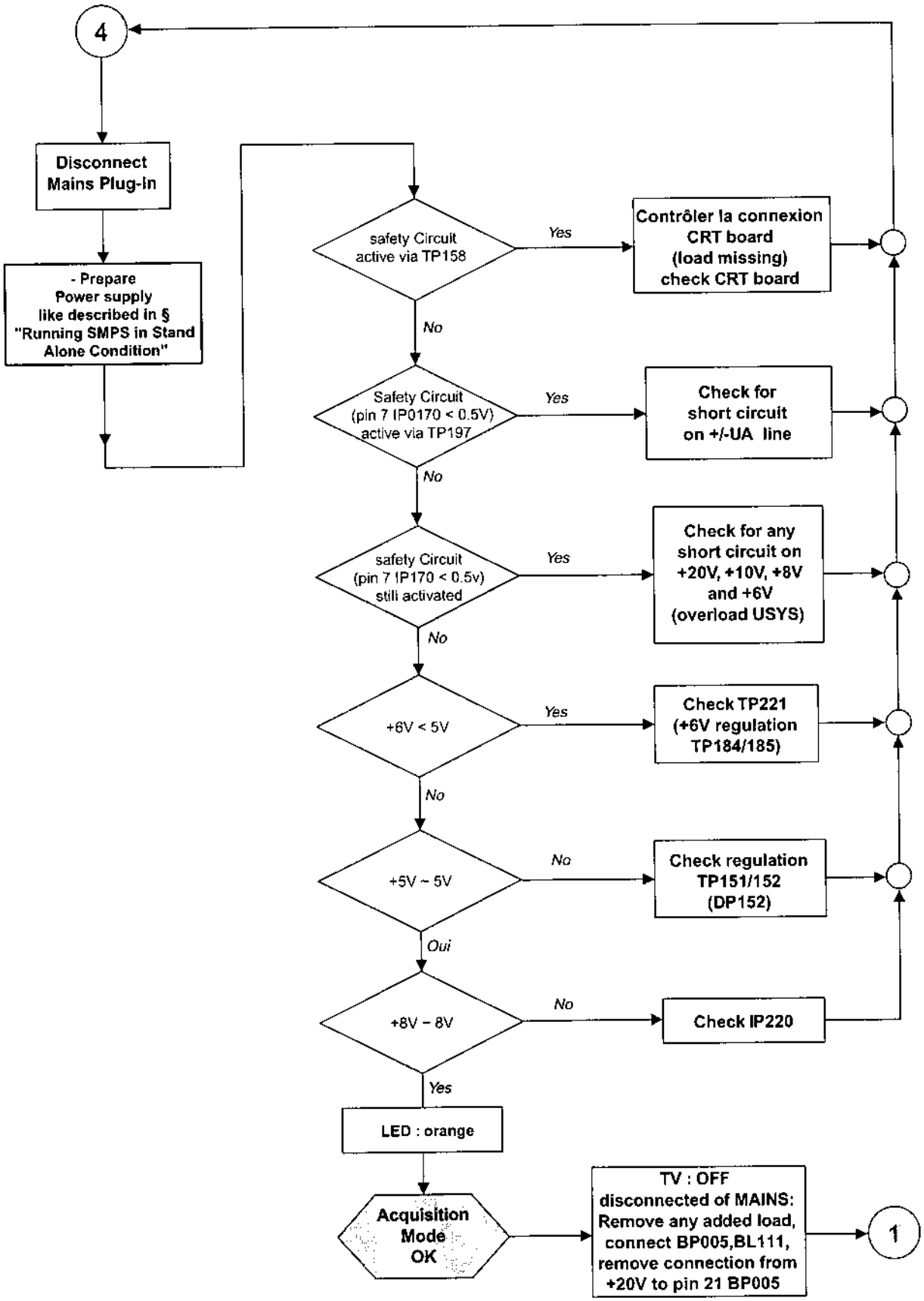
MAIN POWER SUPPLY CHECK



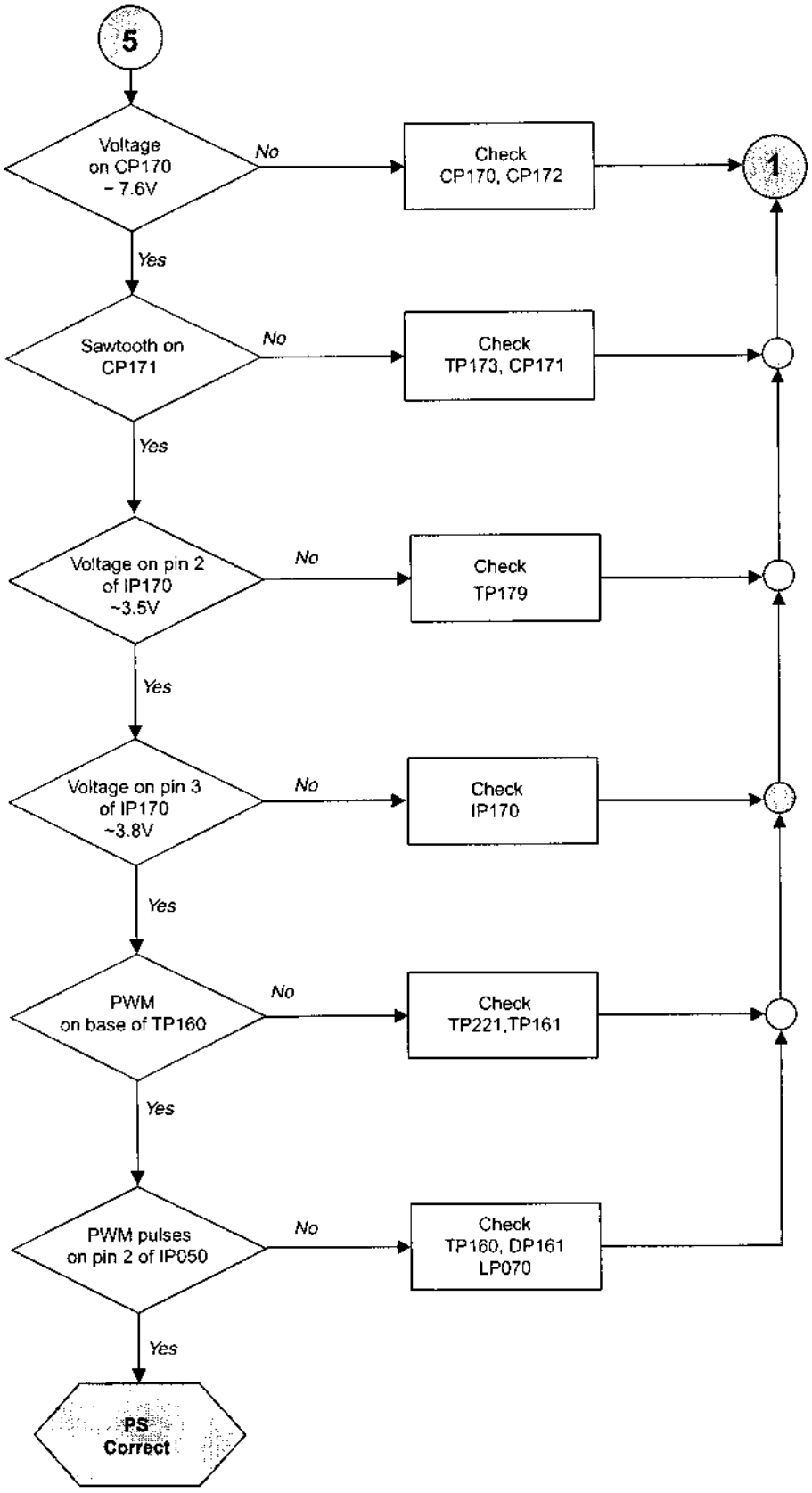
MAIN POWER SUPPLY CHECK



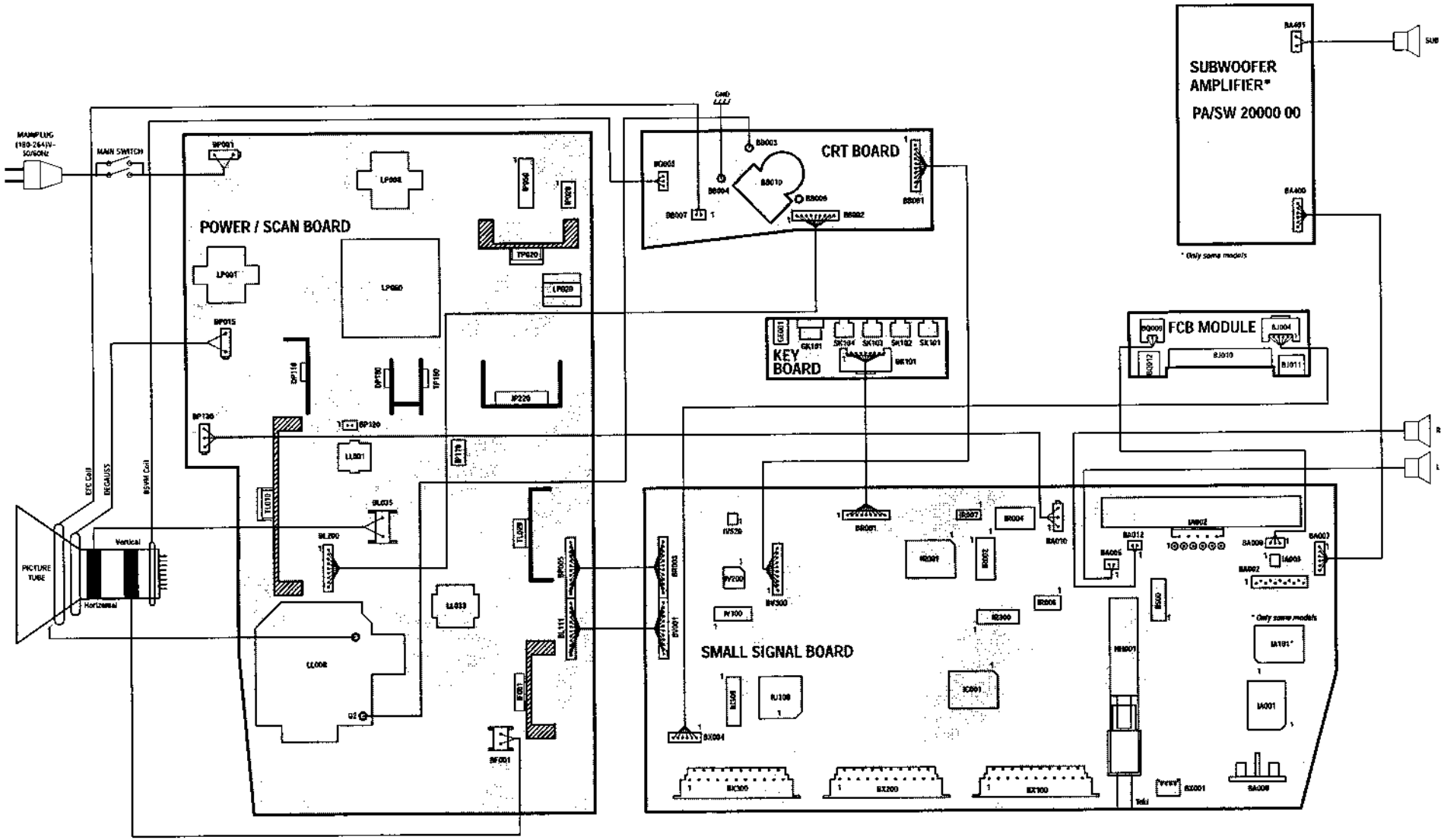
MAIN POWER SUPPLY CHECK



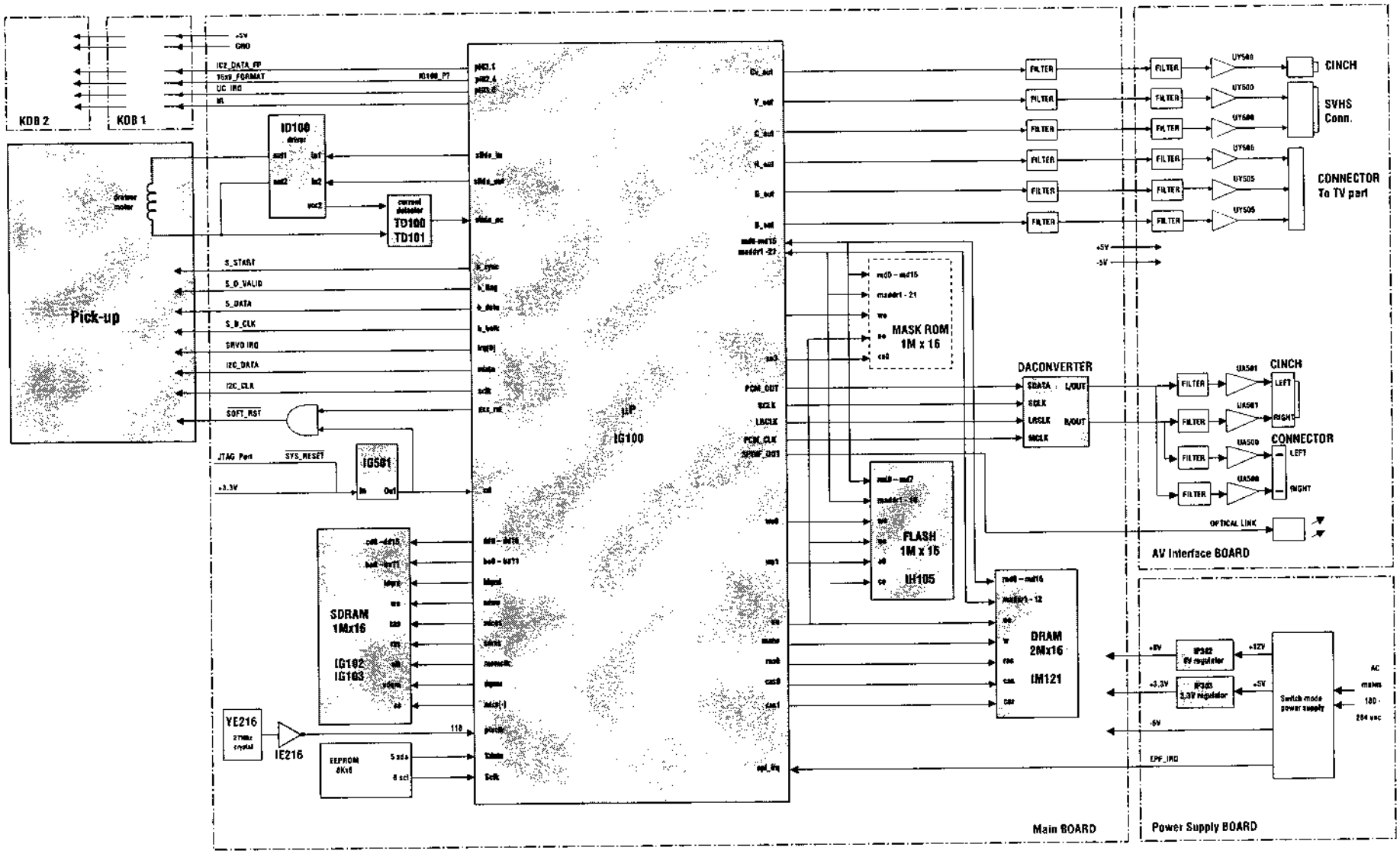
MAIN POWER SUPPLY CHECK



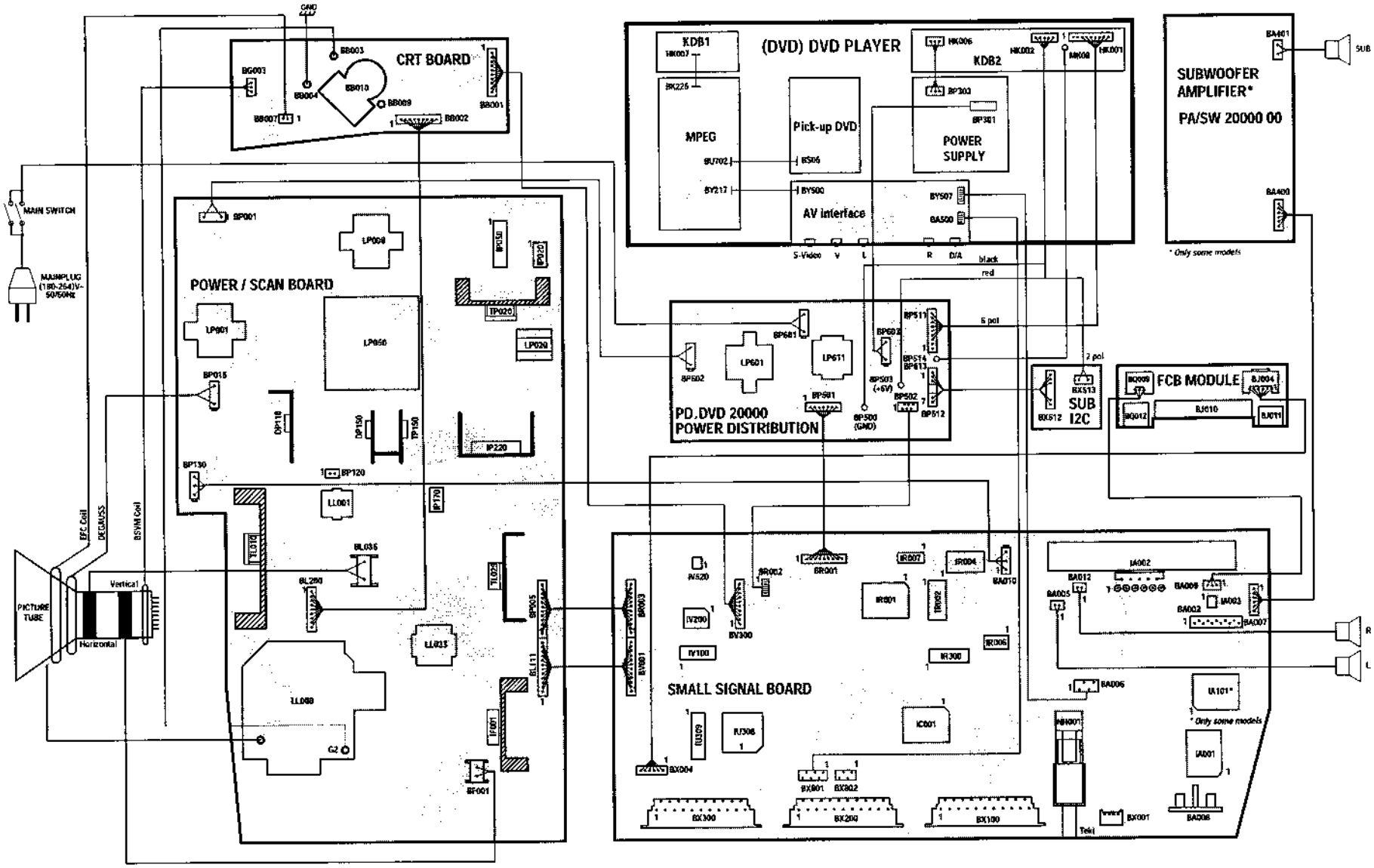
WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES



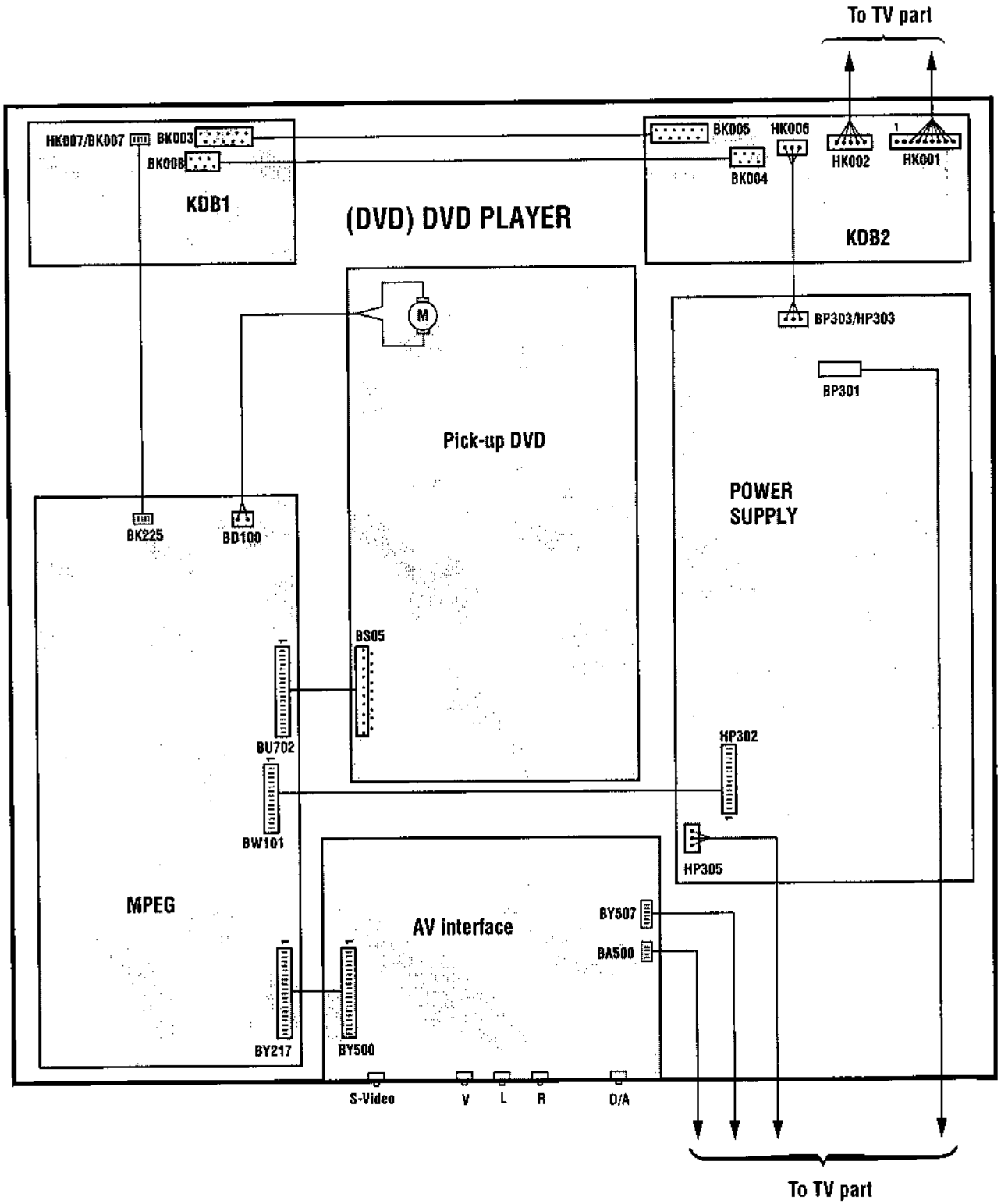
GENERAL BLOCK DIAGRAM - SYNOPTIQUE GÉNÉRAL - BLOCKSCHALTBILD ALLGEMEIN - SCHEMA A BLOCCHI GENERALE - ESQUEMA DE BLOQUES GENERAL



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



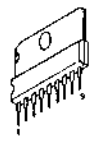
WIRING DIAGRAM - SCHÉMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES



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

- **ABL** AVERAGE BEAM CURRENT LIMITING
- **AQR_ON** DISABLE AQUISITION MODE REGUL. ENABLE PWM PULSE
- **AV1_8** PIN_8 DETECTOR
- **AV_LINK** AV_LINK DATAS VCR/TV
- **AV_R_ OUT** AUDIO RIGHT-OUT
- **AV_L_ OUT** AUDIO LEFT-OUT
- **AV_R_ IN** AUDIO RIGHT-IN
- **AV_L_ IN** AUDIO LEFT-IN
- **AV_B** BLUE SIGNAL FROM AV
- **AV_G** GREEN SIGNAL FROM AV
- **AV_R** RED SIGNAL FROM AV
- **AV_C_ IN** CHROMA-IN
- **AV_FB** FAST BLANK SIGNAL FROM AV SCART
- **AV_Y_ IN** VIDEO-IN
- **BEAM_INFO** BEAM CURRENT INFORMATION
- **BLKCURR** CUT OFF CURRENT
- **B_TXT** BLUE SIGNAL OUTPUT (TEXT)
- **B_OUT** BLUE SIGNAL TO VIDEO AMPLIFIER
- **BREATHING** COMPENSATE BREATHING PICTURE SIGNAL
- **BSVM** BEAM SCAN VELOCITY MODULATION
- **CNT1_20V** SAFETY SIGNAL TO INSURE A GOOD CONNECTION BETWEEN SIGNAL BOARD AND POWER BOARD (BV001- BL111)
- **CNT2_20V** SAFETY SIGNAL TO INSURE A GOOD CONNECTION BETWEEN SIGNAL BOARD AND POWER BOARD (BR003- BP005)
- **CRT** CATHODE RAY TUBE
- **CVBS** VIDEO
- **CVBS_LB_DET** LETTERBOX VIDEO DETECTION
- **DEFL_SAFETY** SAFETY INFORMATION FROM DEFLECTION
- **DEGAUSS** DEGAUSS SIGNAL
- **DPC** DYNAMIC PHASE COMPENSATION SIGNAL
- **EFC** EARTH FIELD CORRECTION
- **EHT** EXTREMELY HIGH TENSION
- **E.W_DRIVE** EAST - WEST DRIVE SIGNAL
- **EW_PROT** SAFETY SIGNAL FROM DIODE MODULATOR
- **FB DETEC** FAST BLANKING DETECT
- **FB_TXT** FAST BLANKING (TEXT)
- **FW ADJ.** FULL WHITE ADJUSTMENT
- **G_OUT** GREEN SIGNAL TO VIDEO AMPLIFIER
- **G_TXT** GREEN SIGNAL OUTPUT (TEXT)
- **H_DRIVE** DRIVE SIGNAL FOR HORIZONTAL DEFLECTION
- **HEATER** HEATER OUTPUT FROM THE DST TO CRT
- **H DEFL. PROT.** HORIZONTAL DEFLECTION PROTECTION
- **IIC-CL-1** I2C CLOCK BUS 1
- **IIC-CL-2** I2C CLOCK BUS 2
- **INF_POW_FAIL** POWER FAIL INFORMATION
- **IR** INFRARED RECEIVER
- **LDR** LED DISPLAY
- **MUTE** MUTES AUDIO AMPLFIERS
- **NMI** NON MASKABLE INTERRUPT
- **PAN_SWITCH** SIGNAL FOR PANORAMA CIRCUIT
- **PHI2_REF** PHI2 REFERENCE SIGNAL
- **PIF** PICTURE IF SIGNAL
- **PKS** PEAK SENSING
- **PO** POWER ON
- **PWM** PULSE WIDTH MODULATION
- **RES_MSP** MSP RESET
- **RESET** RESET TO MICROPROCESSOR
- **ROTATION** OUTPUT OF EARTH FIELD CORRECTION STAGE
- **R_OUT** RED SIGNAL TO VIDEO AMPLIFIER
- **R_TXT** RED SIGNAL OUTPUT (TEXT)
- **PIF** PICTURE IF SIGNAL
- **SIF** SOUND IF SIGNAL
- **SSC** SUPER SAND CASTLE
- **SSC_V_GUARD** SAFETY DATA GENERATED BY THE VERTICAL AMPLIFIER TDA8177F
- **TRAP_INFO** BG/L,L',D/K K' I SWITCH
- **+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_IN** U FROM CHROMA DECODER
- **V_IN** V FROM CHROMA DECODER
- **V_DRIVE** VERTICAL DEFLECTION DRIVE SIGNAL
- **Y_IN** Y FROM CHROMA DECODER
- **5 V** 5V POWER SUPPLY SIGNAL BOARD
- **6 V** 6V POWER SUPPLY
- **5V_UP** MICROPROCESSOR SUPPLY VOLTAGE
- **10 V** 10V POWER SUPPLY
- **8 V** 8V SUPPLY SIGNAL BOARD
- **8V_STBY** 8V STANDBY
- **40V** SUPPLY VOLTAGE TUNER
- **20V** SUPPLY VOLTAGE HORIZONTAL DRIVER AND BSVM CRT

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



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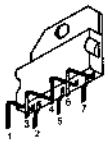

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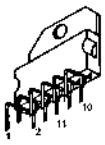

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4N25TV

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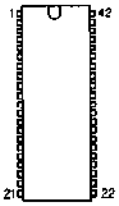
M24C32BNI
MC7805CT
MC7812CT
MC33076/P1
ST24C04-B1
TDA4605
X24164

TL084C

STV2145

TEA6415C



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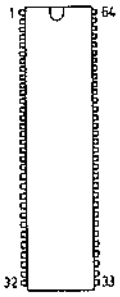

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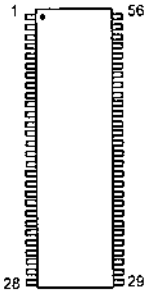

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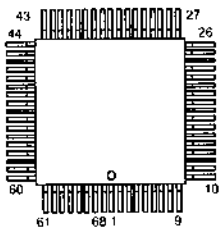

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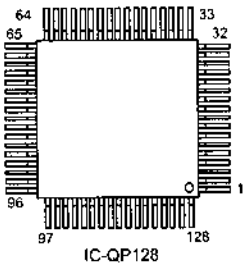
ST90R92



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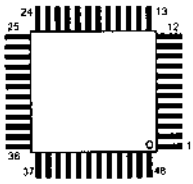

MC141627

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BC 847B-BC856B
BC857B-BF 799
BC 848 A/B/C

BC368
BC639
BF421
BF 422
BF423

BC327
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BC547B
BC557B
BC 548B
BC 558B

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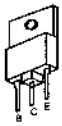

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7805
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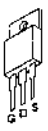
BT806 -600C



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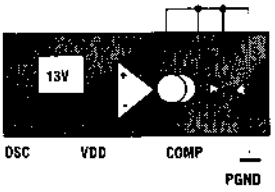
STP22NE03L
2SK1460

TR03-400T

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

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

IP020 - VIPER20DIP



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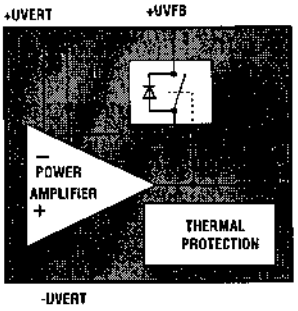

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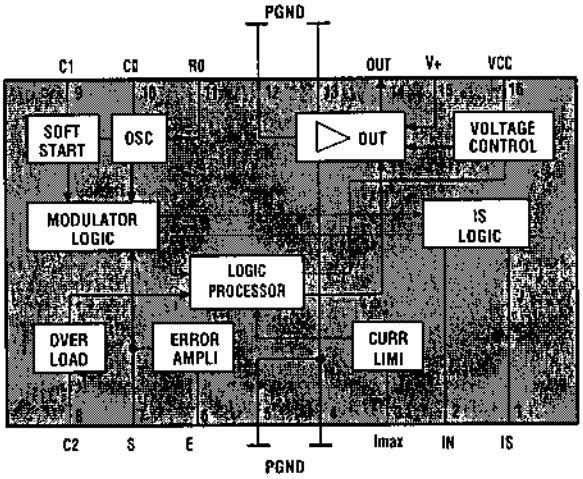

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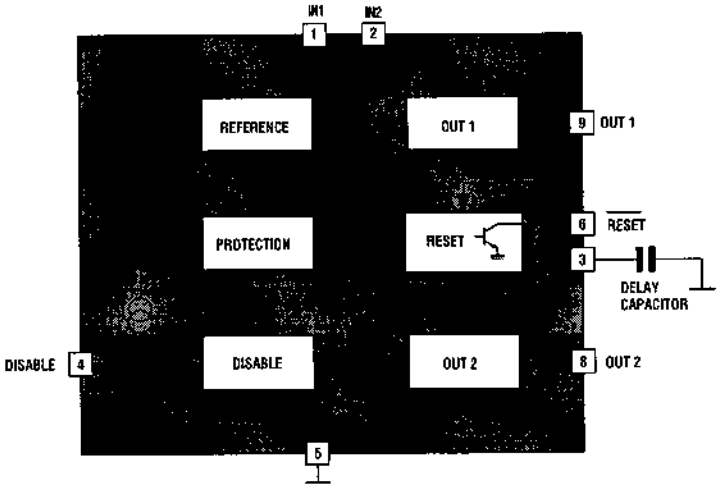

INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER
SCHEMA A BLOCCHI DEL CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

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

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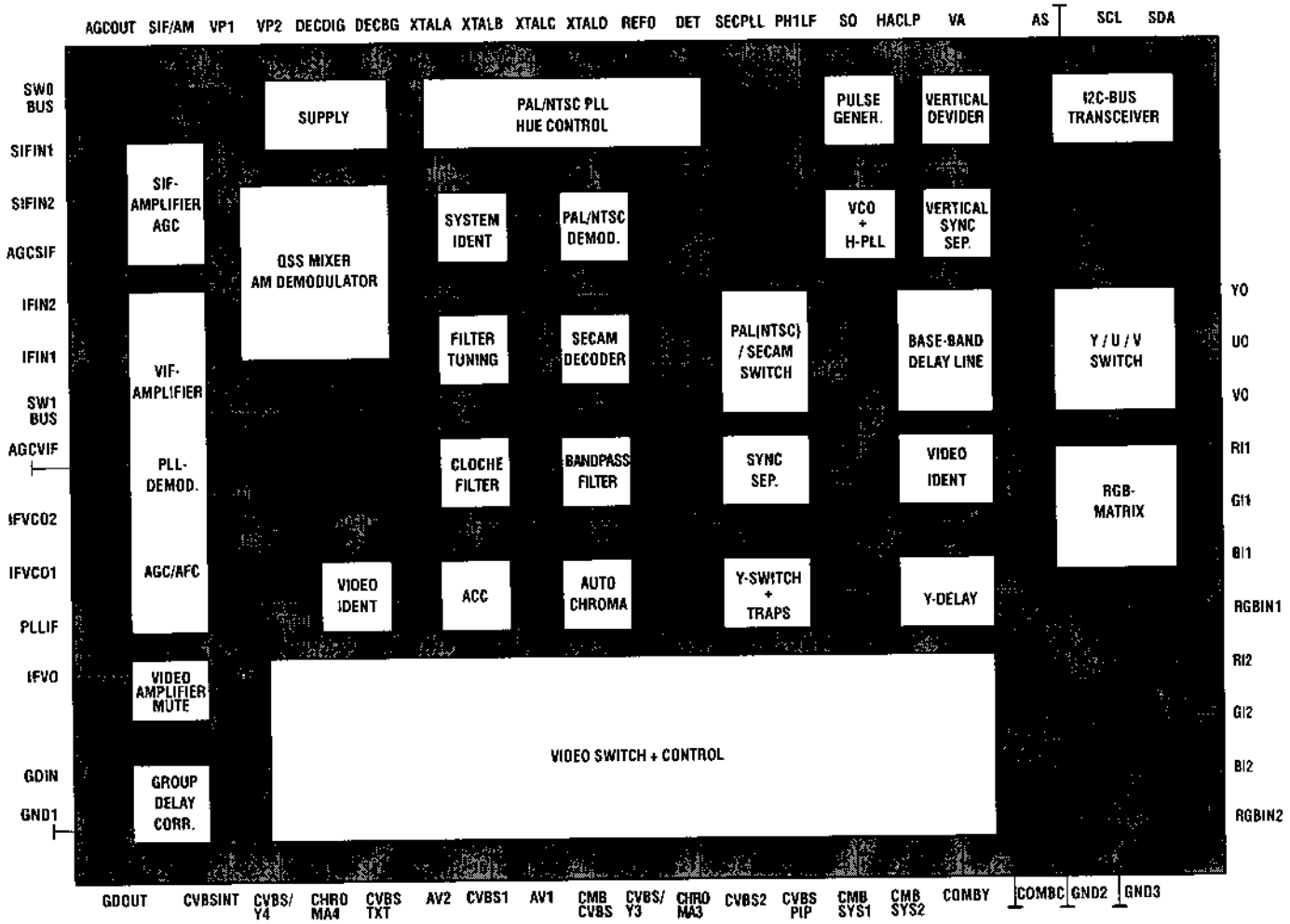

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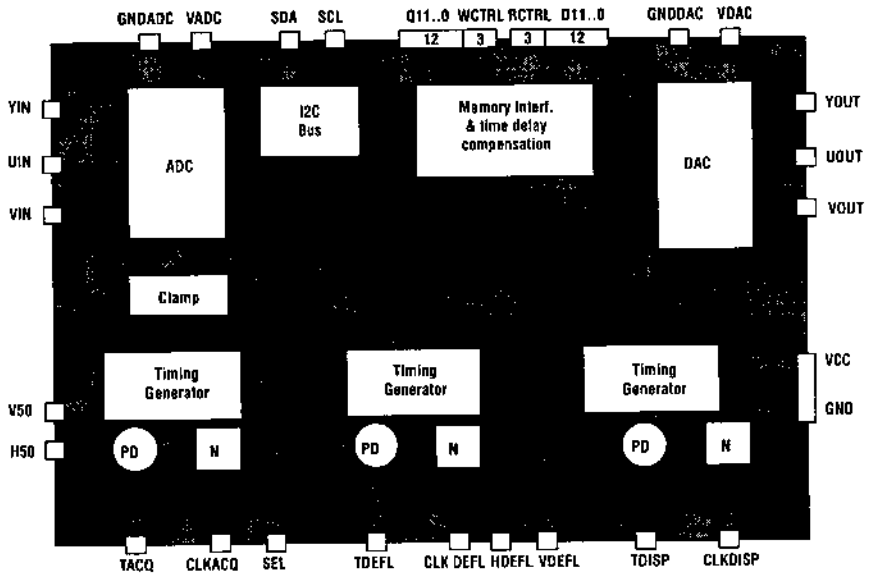
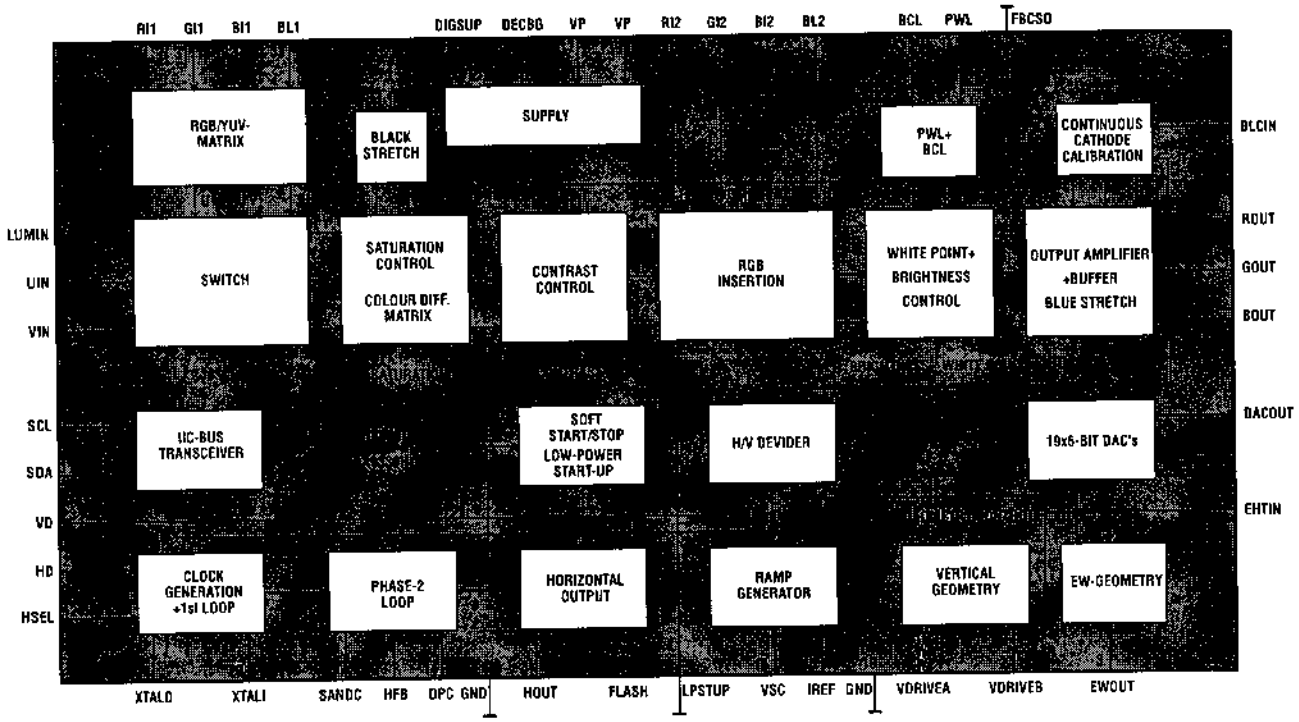


INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER
SCHEMA A BLOCCHI DEL CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

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

IV200 - TDA9330H



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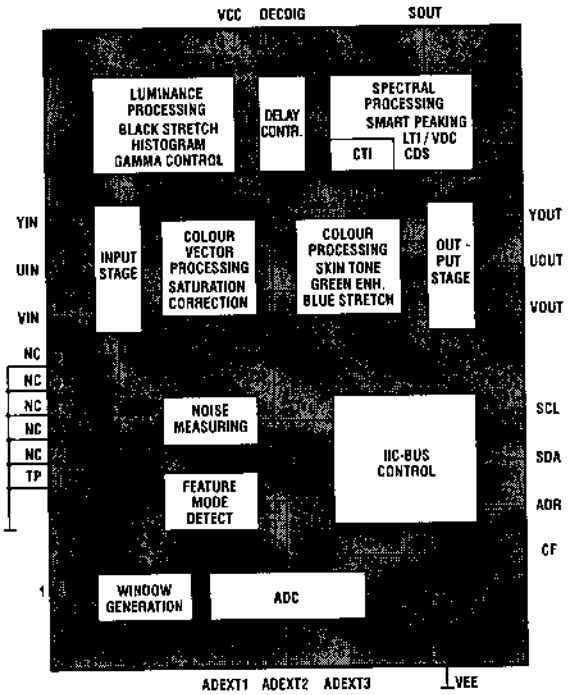

INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER
SCHEMA A BLOCCHI DEL CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

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

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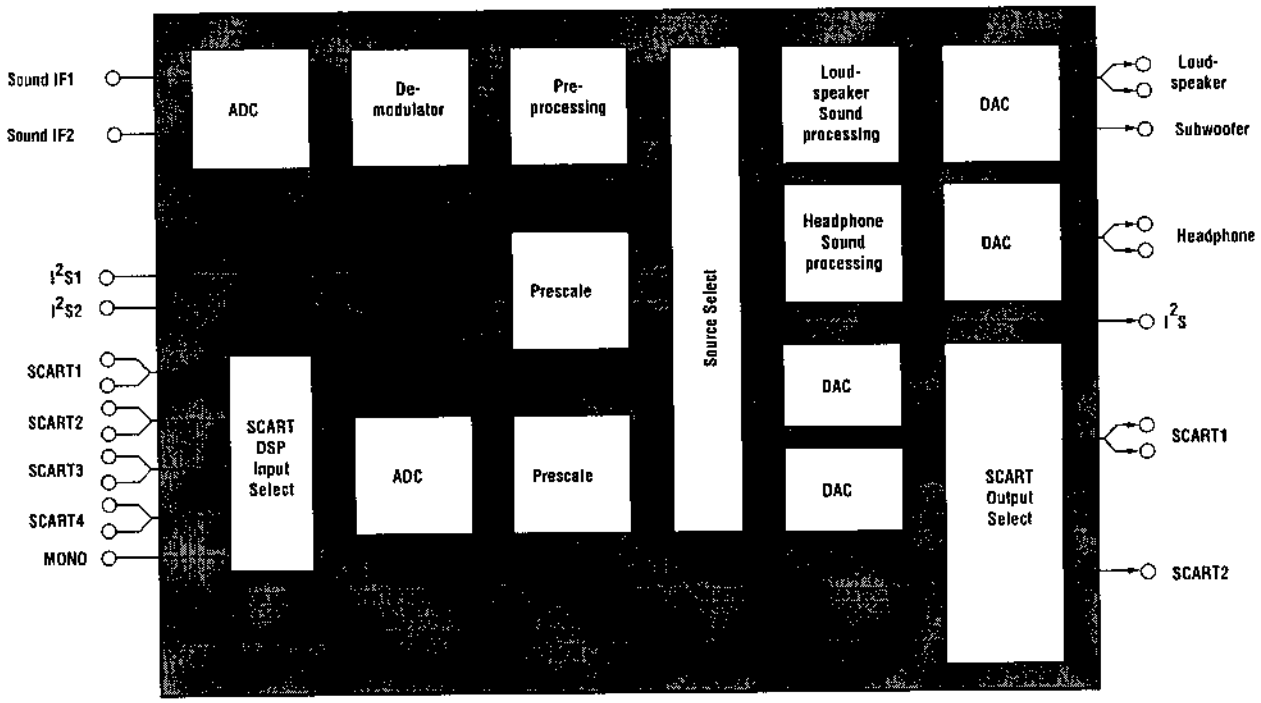
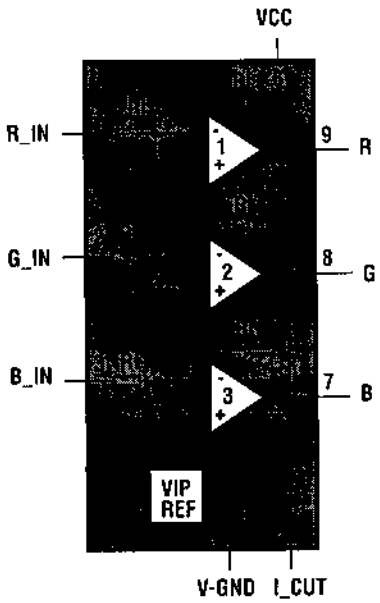


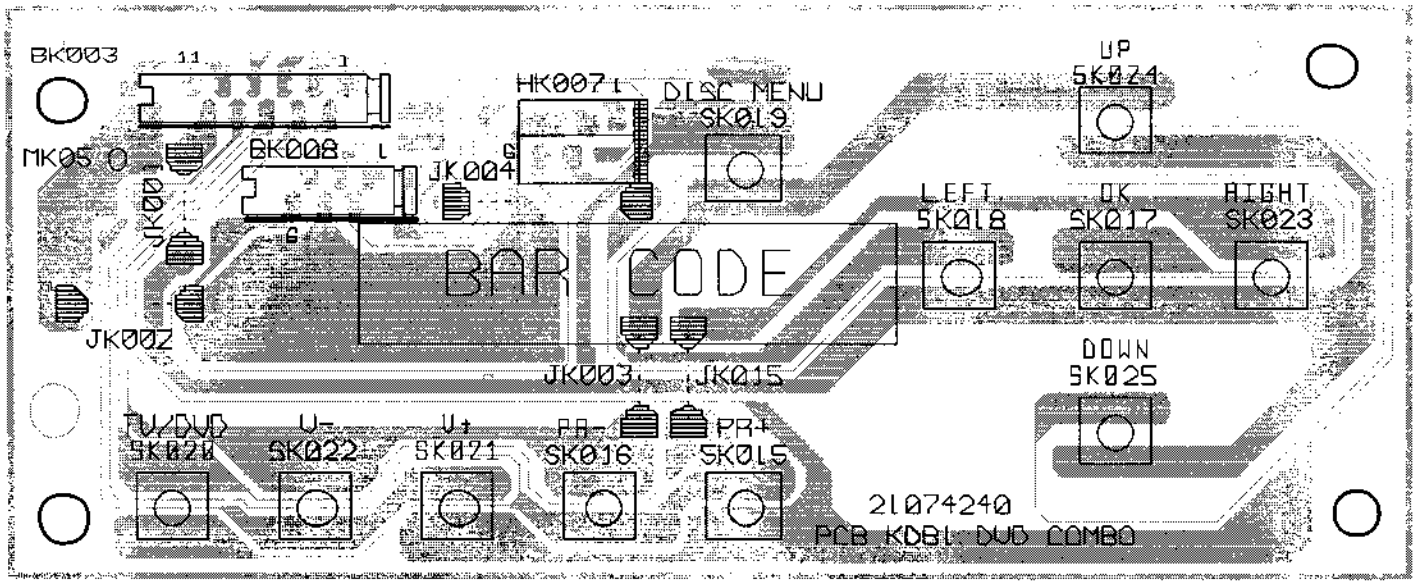
VIDEO PART - PARTIE VIDEO - VIDEO-SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMENTO VIDEO

IB001 - TDA6108JF

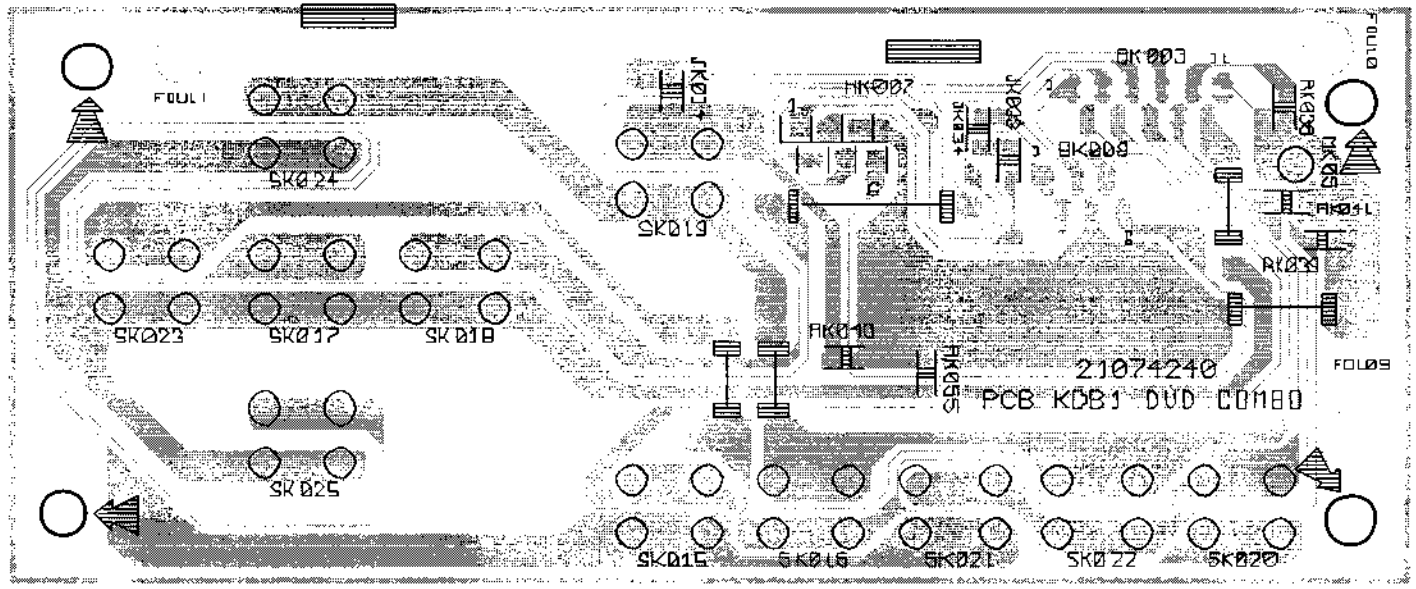


KEYBOARD CIRCUIT BOARDS - CIRCUITS IMPRIMES PLATINES COMMANDES - LEITERPLATTE BEDIENTEIL - PIASTRE TASTIERA - PLATINAS MANDOS

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

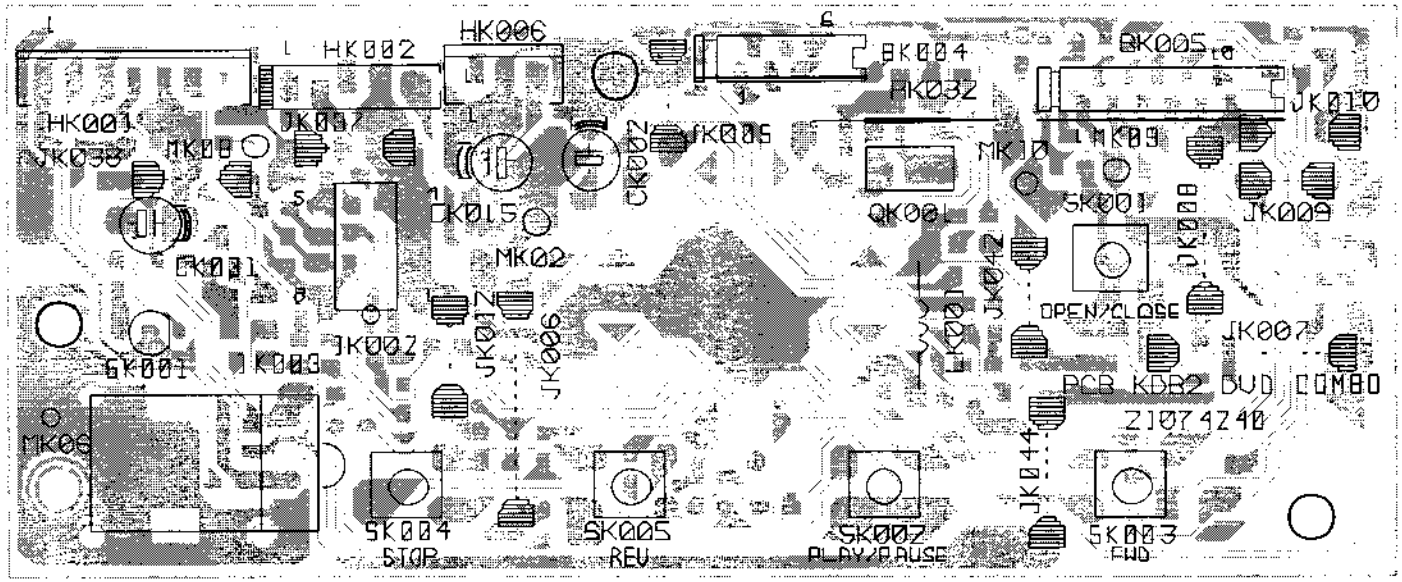


SOLDER SIDE - COTÉ CUIVRE - LÖTSEITE - LATO SALDATURE - LADO DEL COBRE

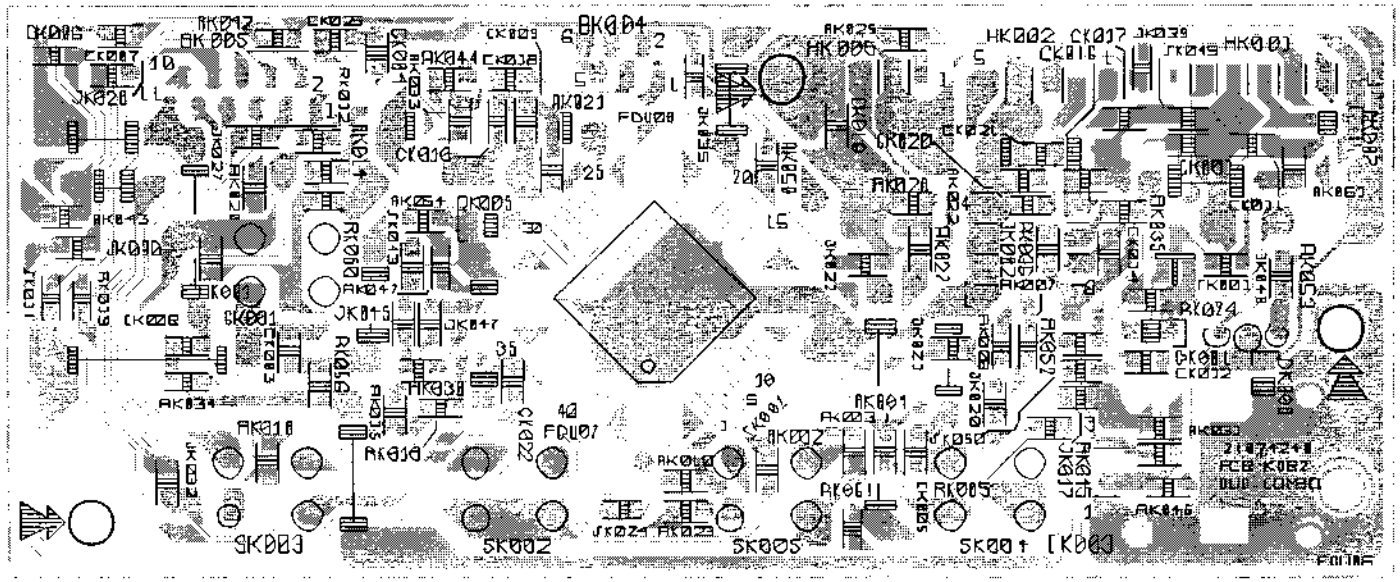


KEYBOARD CIRCUIT BOARDS - CIRCUITS IMPRIMES PLATINES COMMANDES - LEITERPLATTE BEDIENTEIL - PIASTRE TASTIERA - PLATINAS MANDOS

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

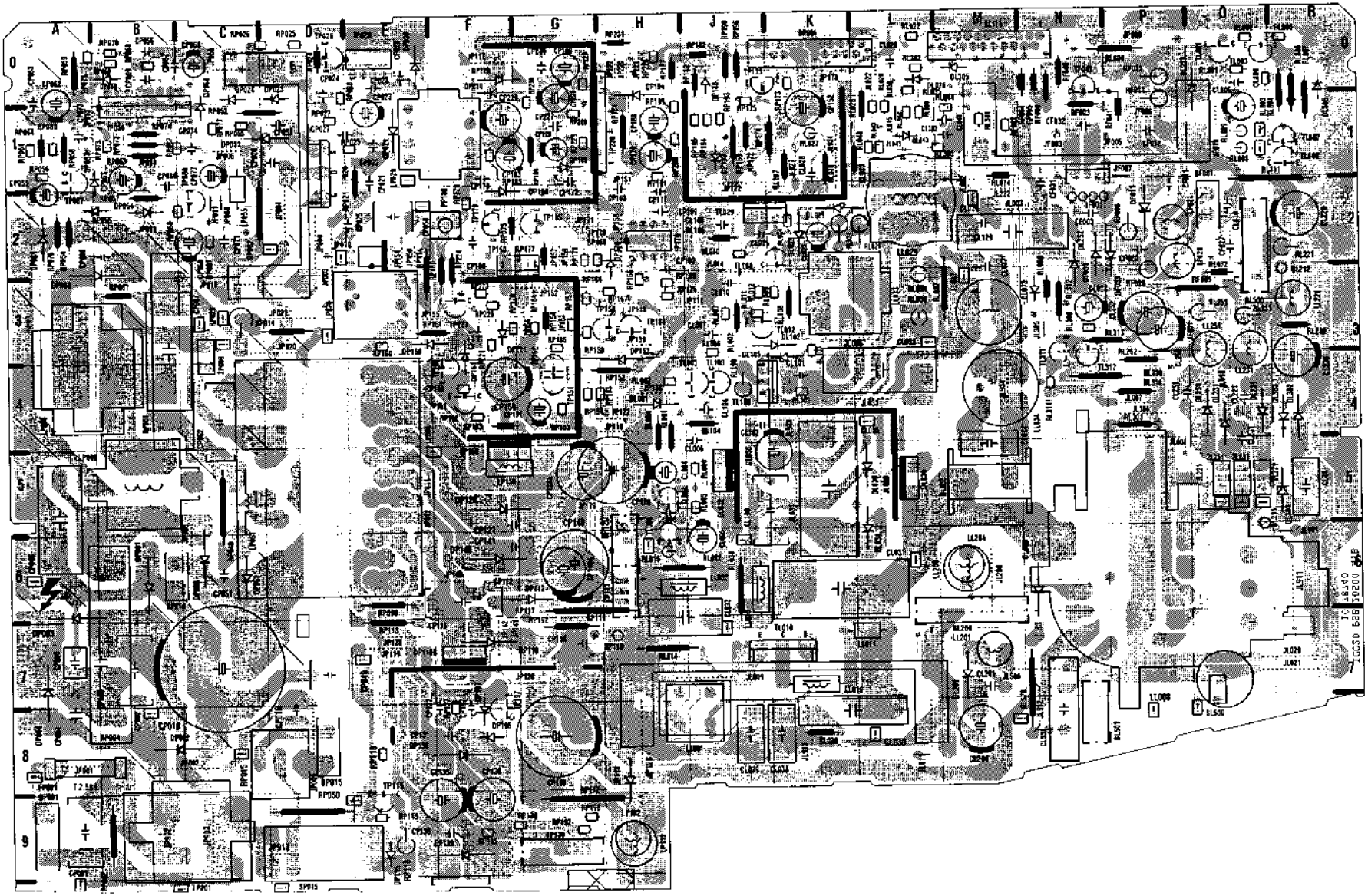


SOLDER SIDE - COTÉ CUIVRE - LÖTSEITE - LATO SALDATURE - LADO DEL COBRE



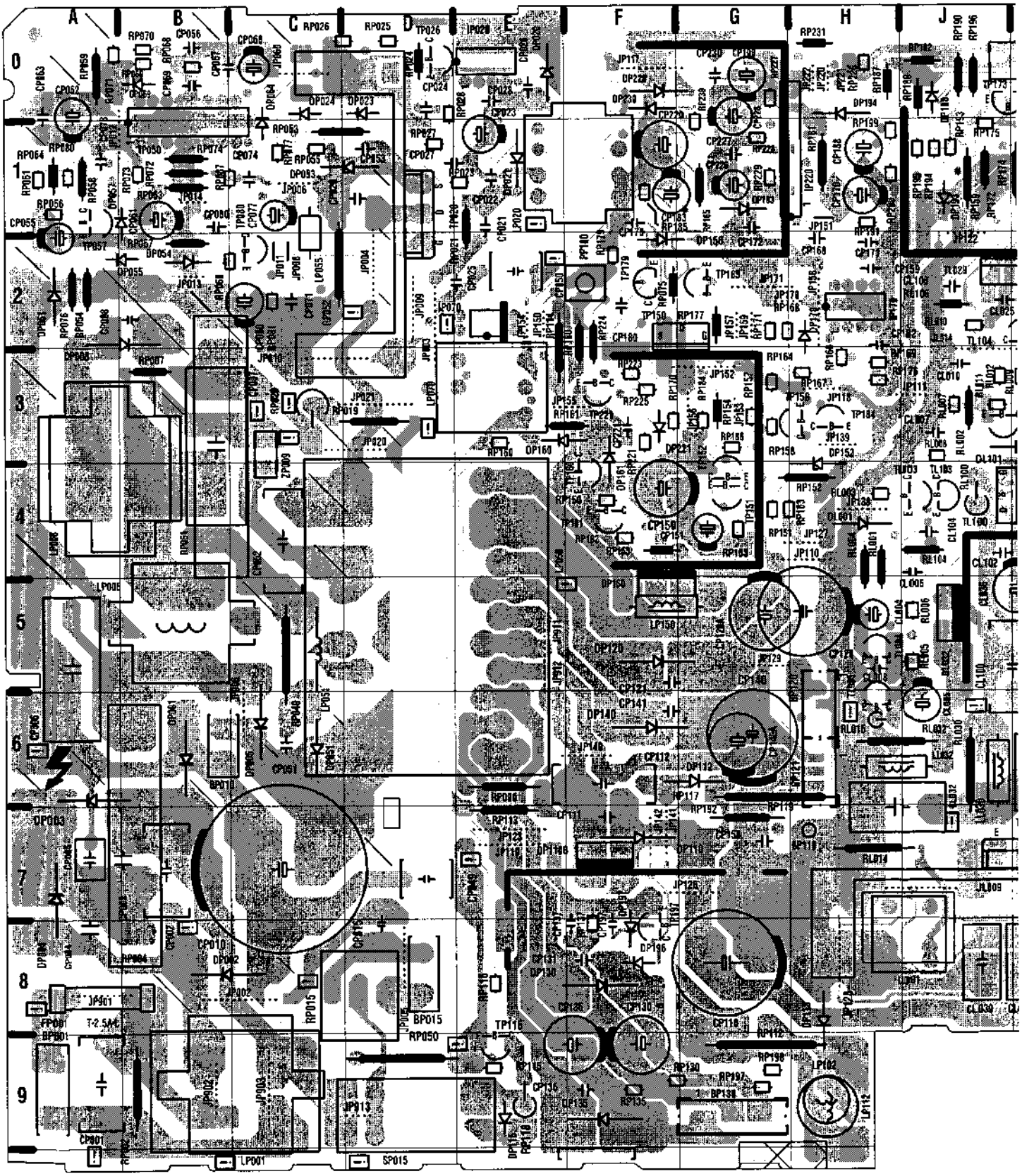
POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

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



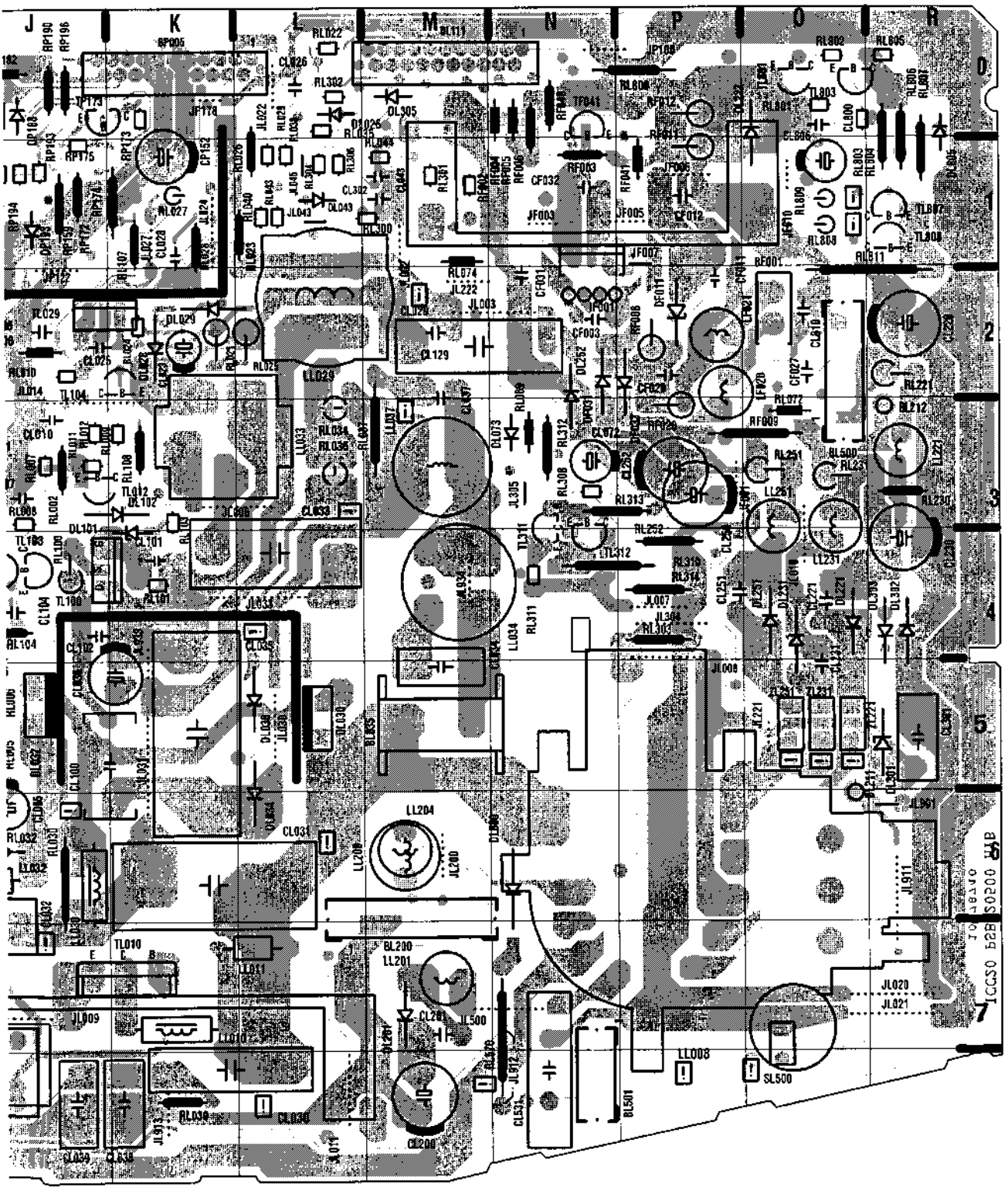
POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PI

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



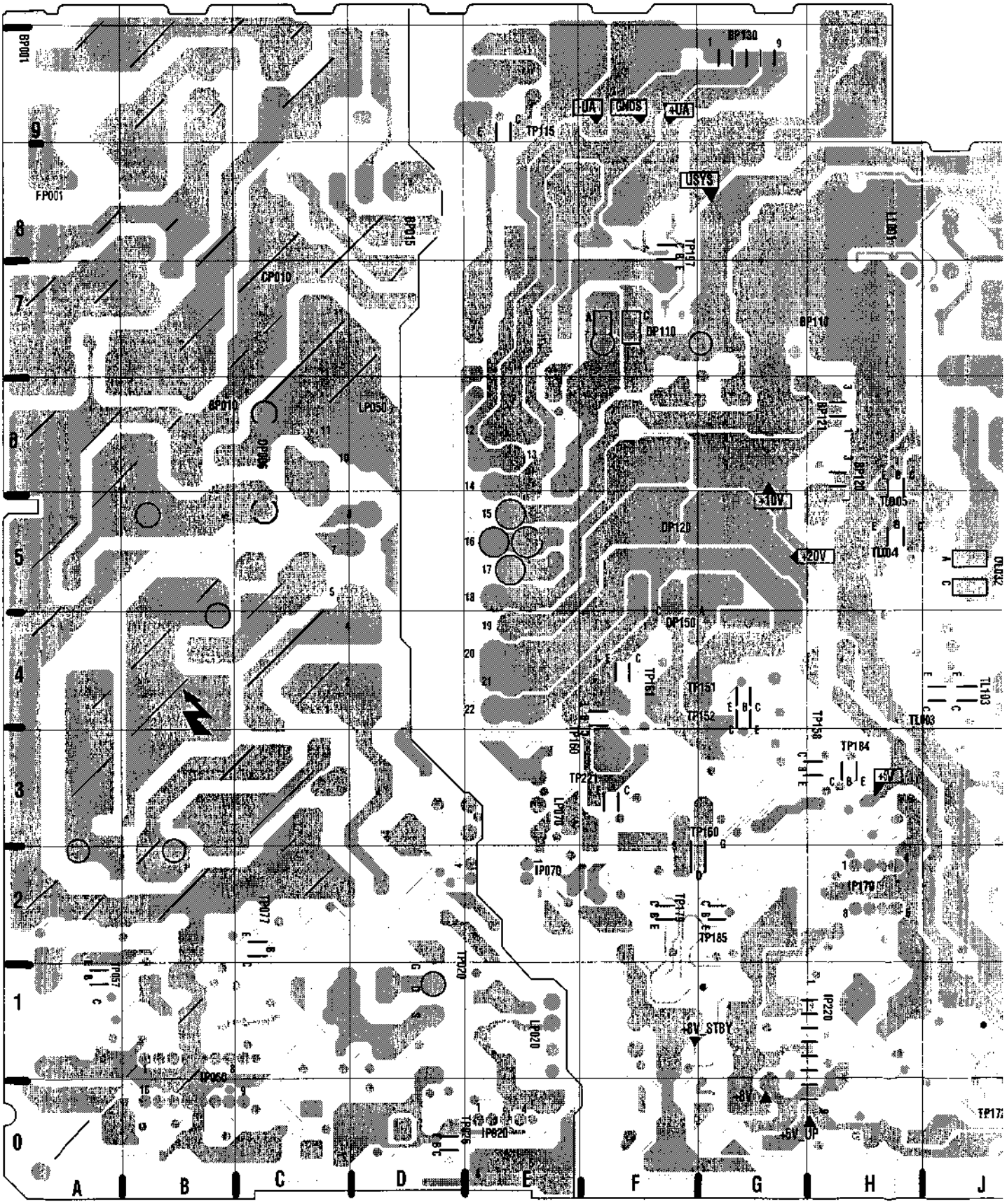
ıTINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

S



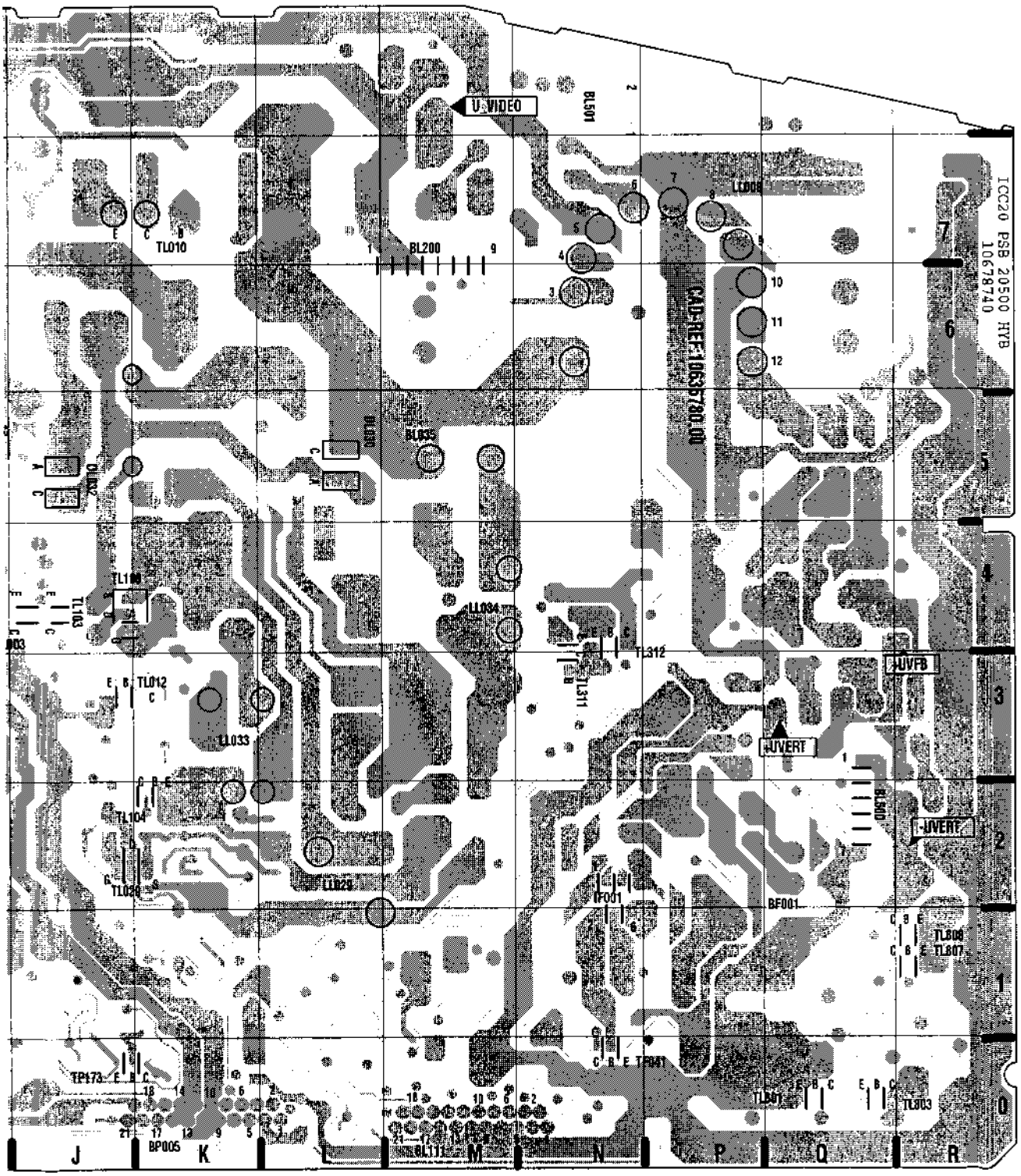
POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE

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



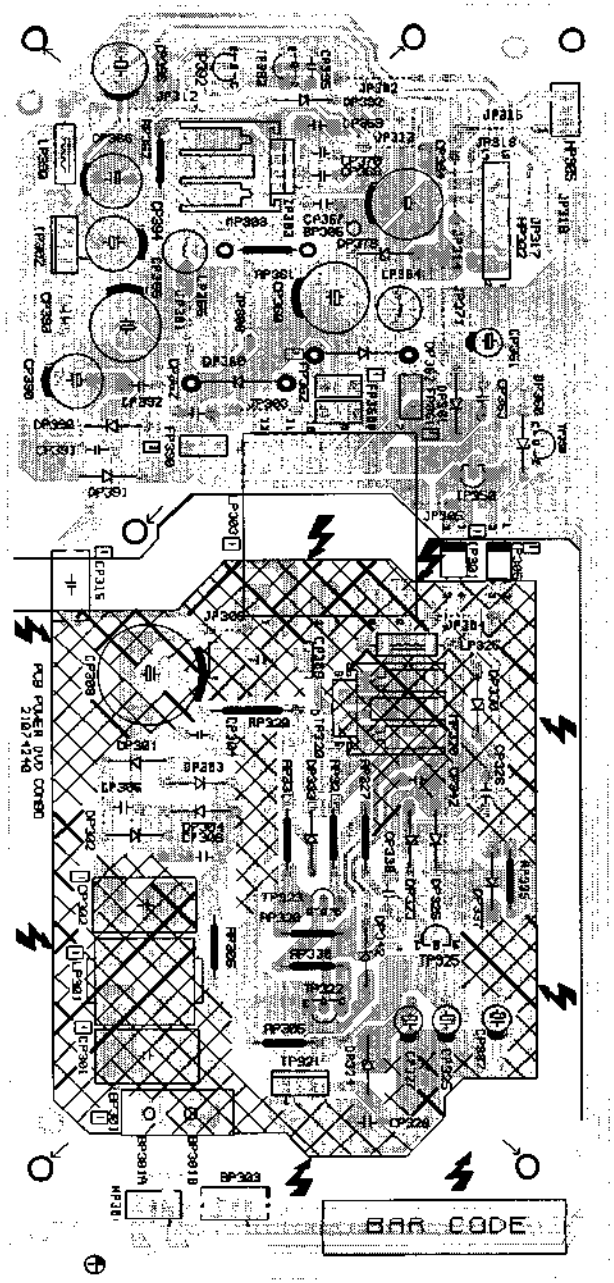
ICC20
First issue 05/00

PLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

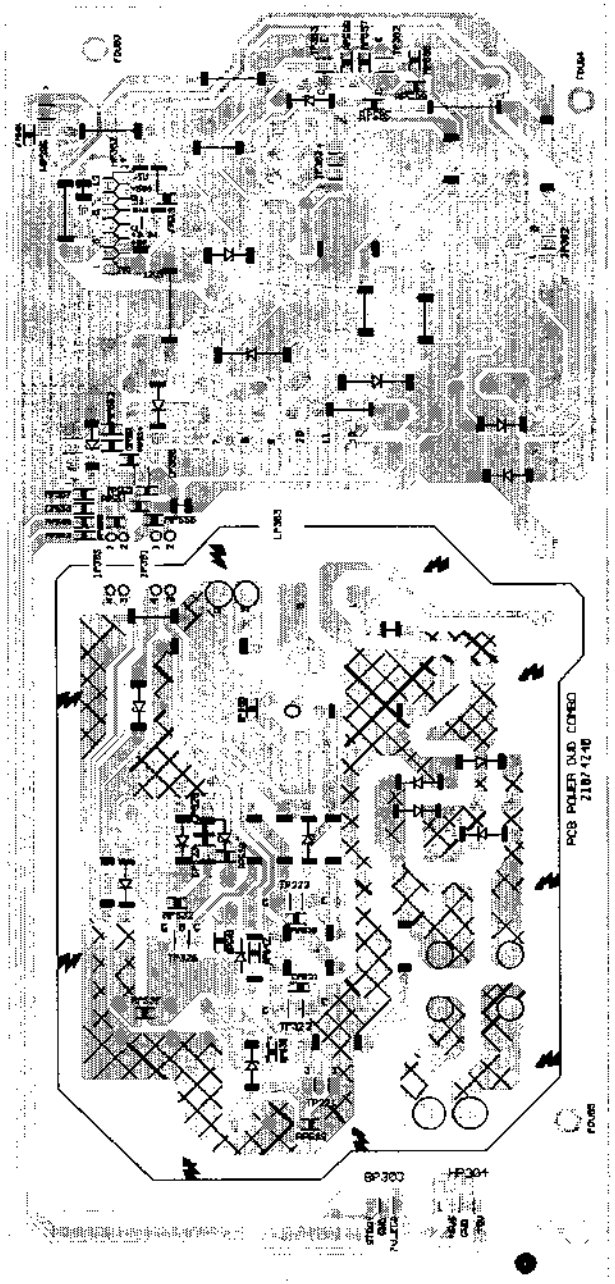


POWER SUPPLY CIRCUIT BOARD - CIRCUIT IMPRIME DE L'ALIMENTATION - LEITERPLATTE NETZTEIL - PIASTRA DEI CIRCUITI DI ALIMENTAZIONE - PLATINA ALIMENTACIÓN

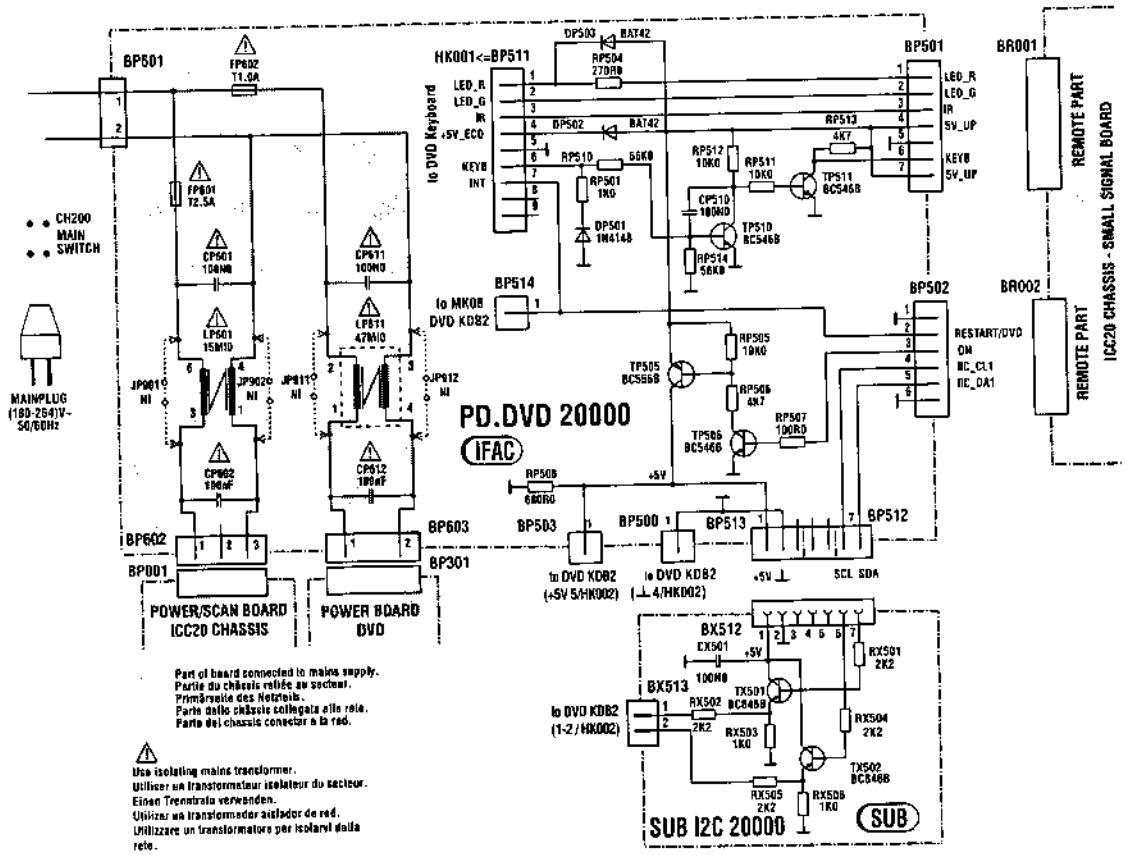
COMPONENT SIDE - COTÉ COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES



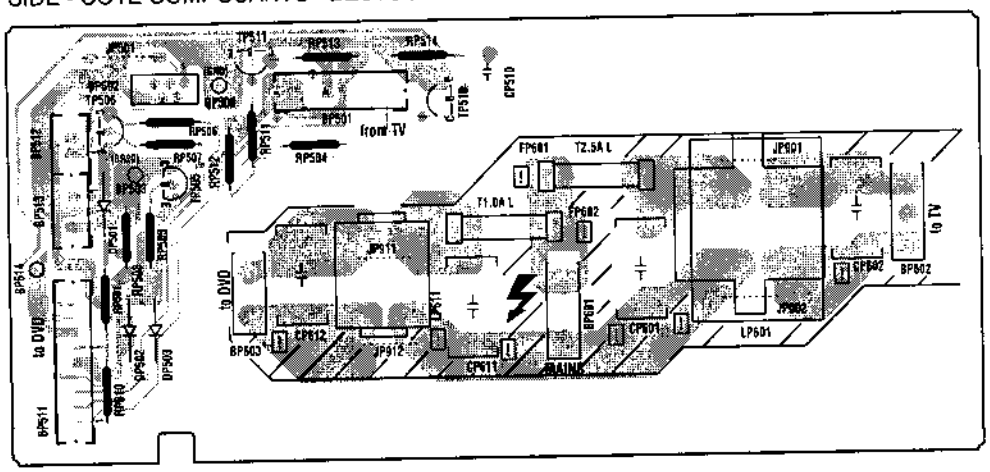
SOLDER SIDE - COTÉ CUIVRE - LÖTSEITE - LATO SALDATURE - LADO DEL COBRE



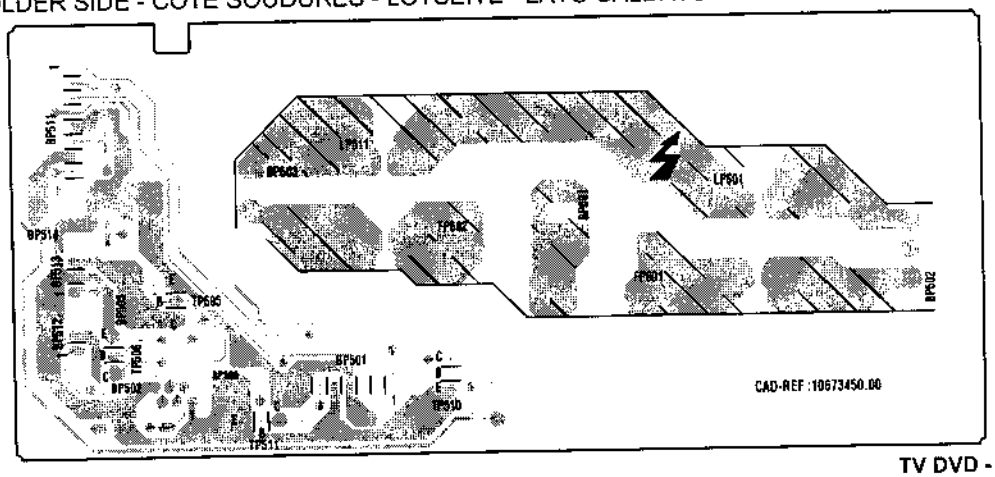
POWER DISTRIBUTION BOARD - INTERFACE SECTEUR - LEITERPLATTE SPANNUNGSVERTEILUNG
PIASTRA DISTRIBUZIONE ALIMENTAZIONI - PLACA DE DISTRIBUCION DE LA ALIMENTACION



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

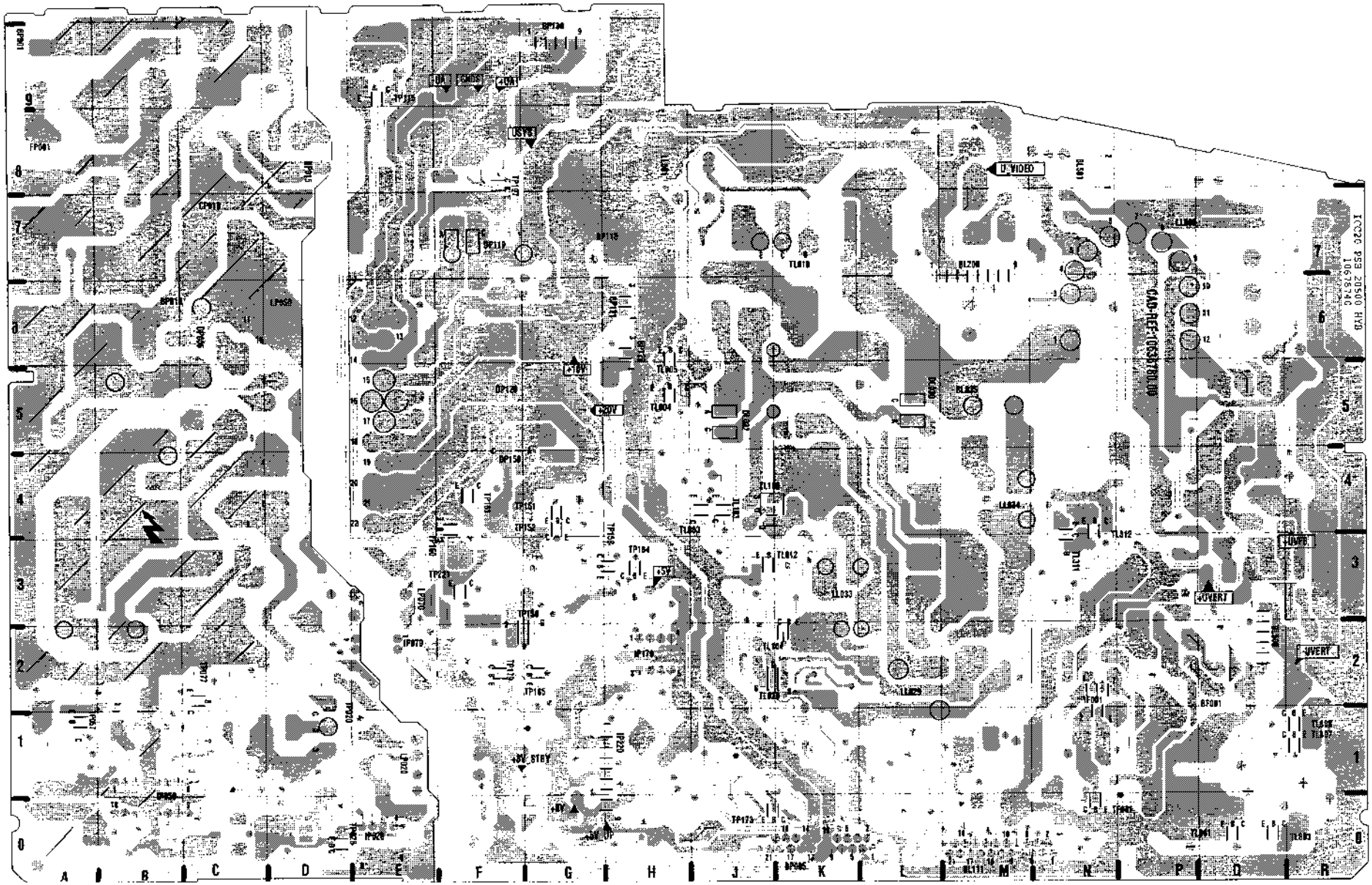


SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



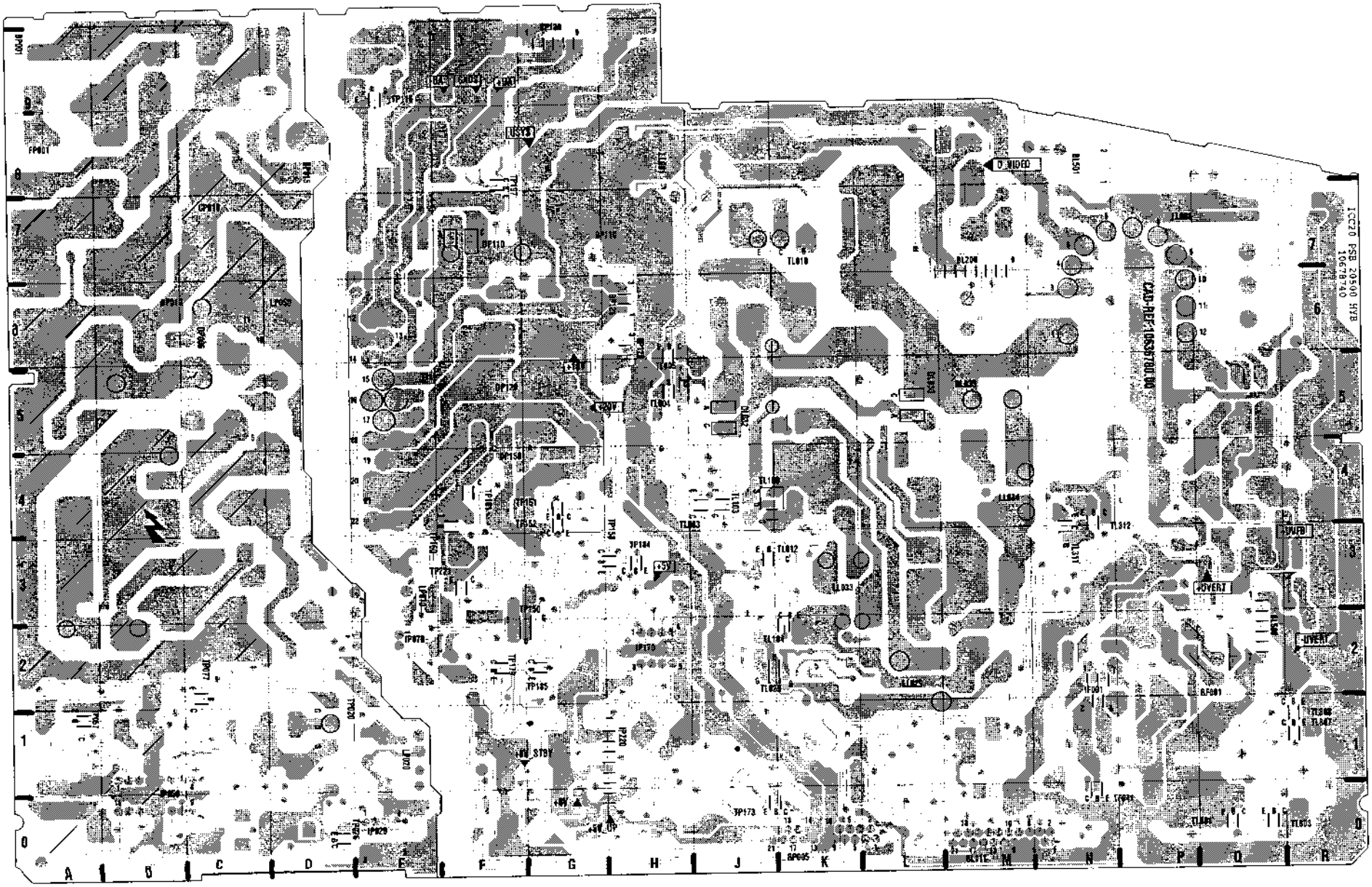
POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

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



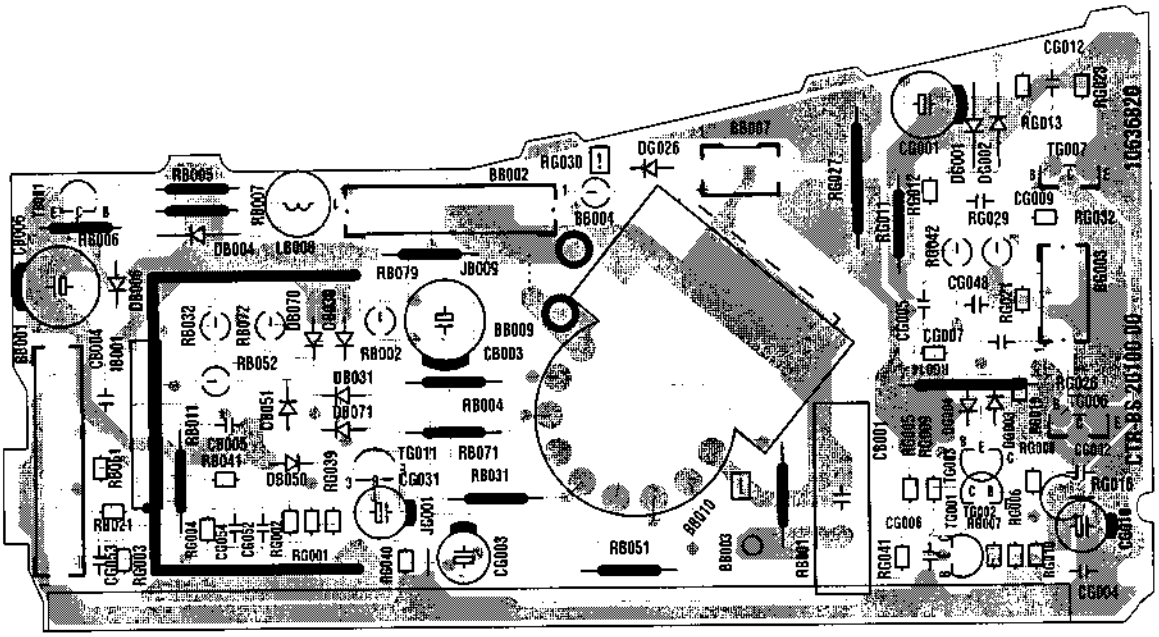
POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

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



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

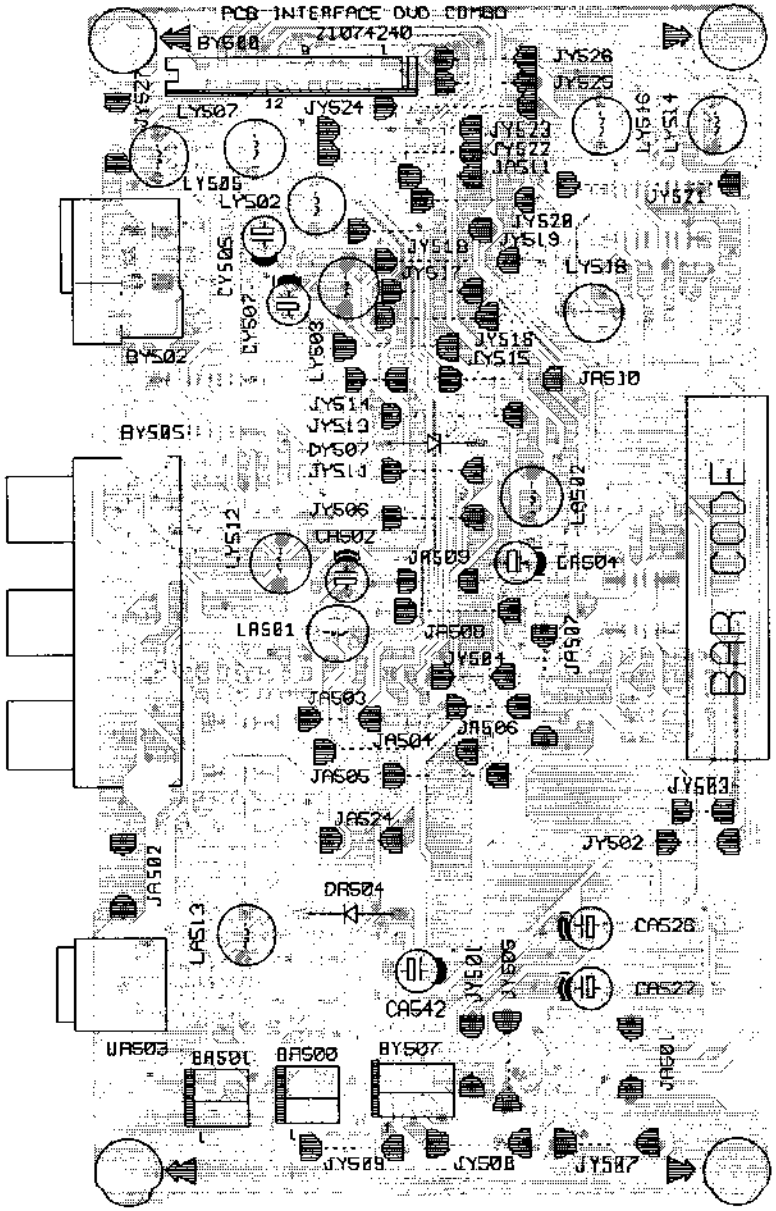
COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES



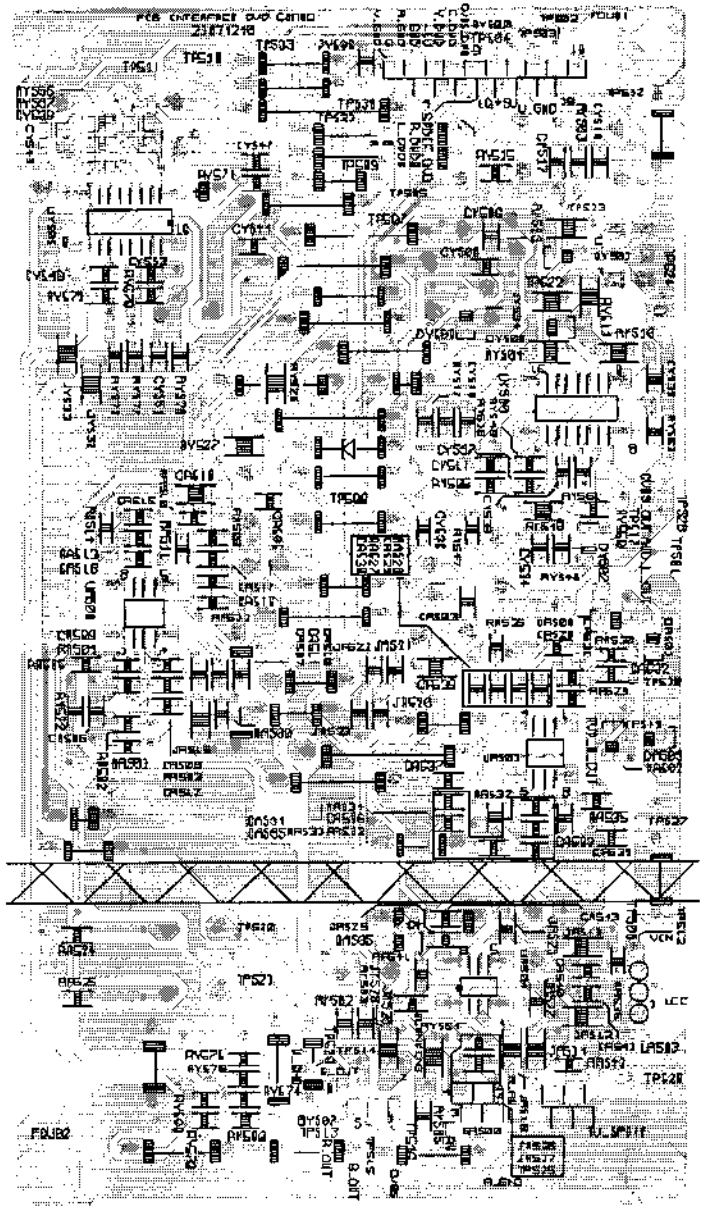
SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS

AV INTERFACE PRINTED CIRCUIT BOARD - CIRCUIT IMPRIME DE LA PLATINE INTERFACE AV - LEITERPLATTE INTERFACE AV - PIASTRA INTERFACE AV - PLATINA INTERFACE AV

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

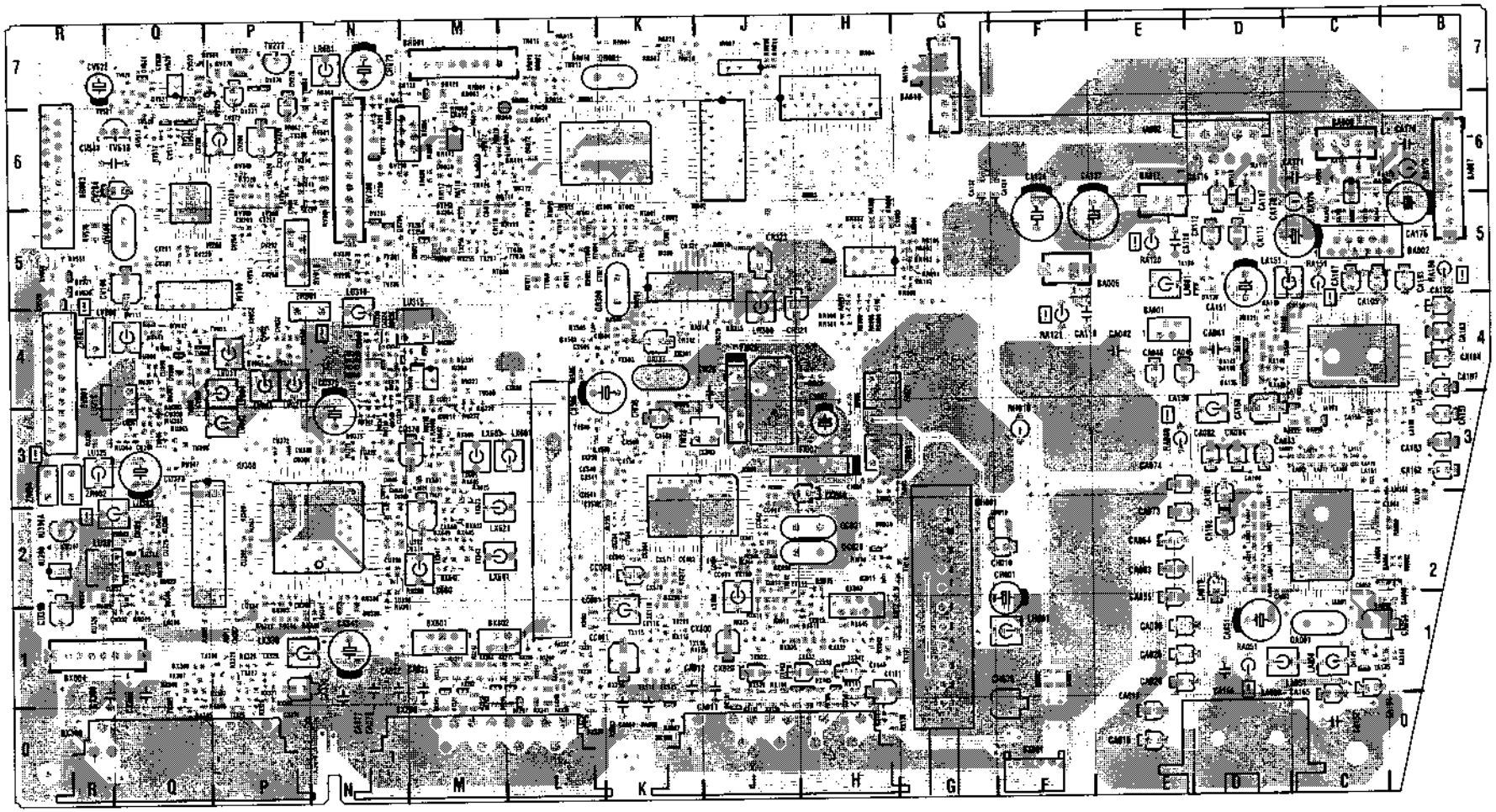


SOLDER SIDE - COTÉ CUIVRE - LÖTSEITE - LATO SALDATURE - LADO DEL COBRE



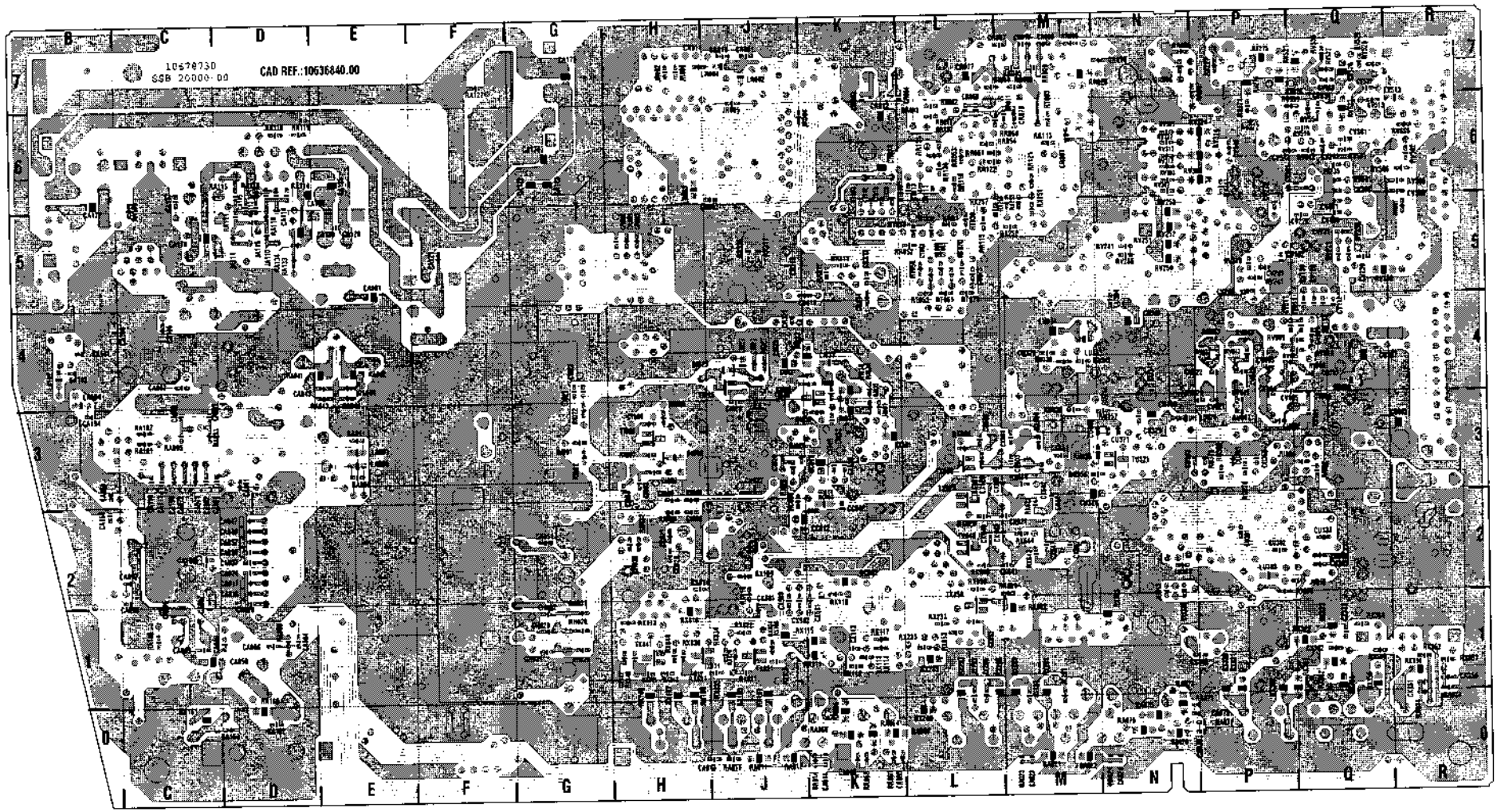
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

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



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

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



THOMSON MULTI MEDIA

ICC20 Small Signal Board (SSB) exchange method

Escaping production mode

The replacement board will be delivered in the production mode; this can be easily switched to normal operation once the television has been switch ON by pressing and holding the VOL – (minus) button for approximately 5-seconds.

Setting the language

The board will be delivered with its menus in French.

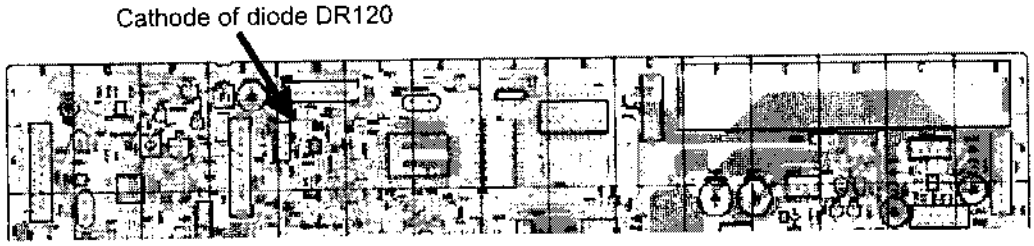
If you want to select another language proceed as follows: -

- Press the "Menu" key on the remote control unit (RCU)
- In the "Sommaire" menu select the "Installation" sub-menu, and then select "Reglages personnels".
- In the "Reglages personnels"menu select "Langues des menus".
- Now select the menu language you require, once selected press the "Exit" key on the RCU.

Saving the NVM data

Once fitted, the board has to be aligned and adjusted in the Service Mode, however it is possible to save time by copying the contents of the NVM onto a computer without de-soldering it from the board as follow: -

1. Force the microprocessor into the reset mode by connecting the **reset** pin to ground. The best point to pull down the **reset line** is at the cathode of diode DR120 (not fitted).
2. Temporally re-connect the faulty SSB board.
3. Switch "ON" the television.
4. Now the contents of the NVM can be saved to a PC via the TECI bus, an interface kit for copy the NVM content is available from After Sales under Part No. **10613570**

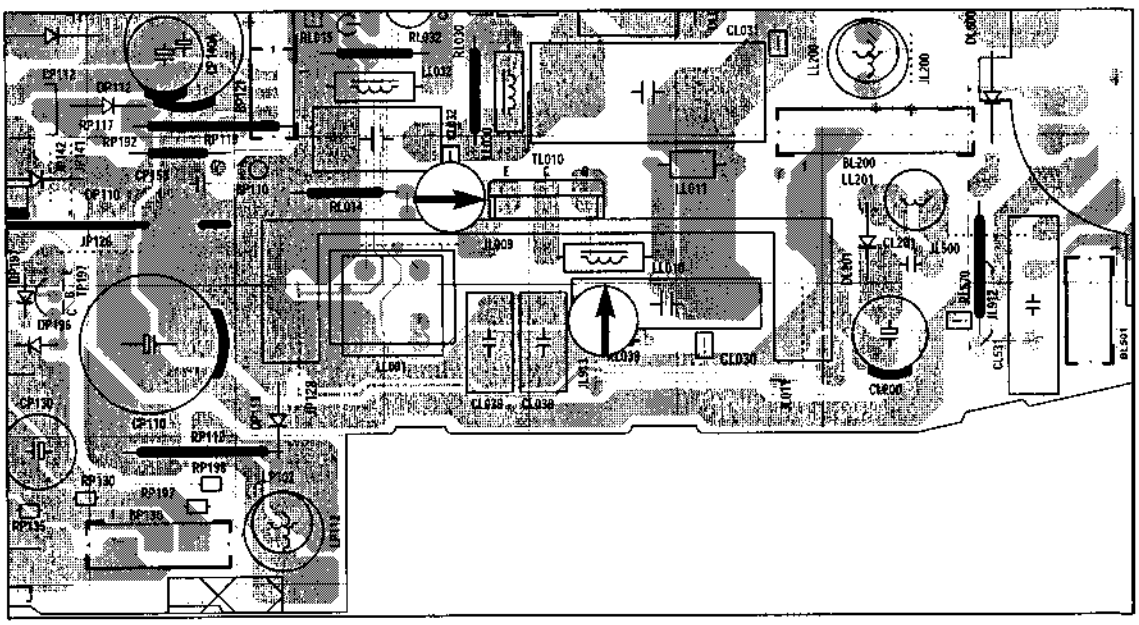


Service Mitteilungen

Betroffene Geräte/Chassis : ICC20

Symptom :
Heller vertikaler Streifen in der Mitte des Bildes.

Abhilfe :
Parallel zur Spule LL010 eine Diode RGP15G, ET-Nr. 102 728 00, löten. Die Kathode an den Kollektor des Transistors TL010.



IRIS CODE: Der Code, wie unten beschrieben, wird gebraucht um die Fehler im Garntiepapier aufzuführen.Es wird damit beabsichtigt Ihnen den Bericht leichter und zuverlässiger zu machen.

Zustand/ Symptom	Teilenummer	Menge	Position	Sektion	F.Code	R. Code
1 3 2 x	1 0 2 7 2 8 0 0	0 1	T L 0 1 0	D F L	Z	K

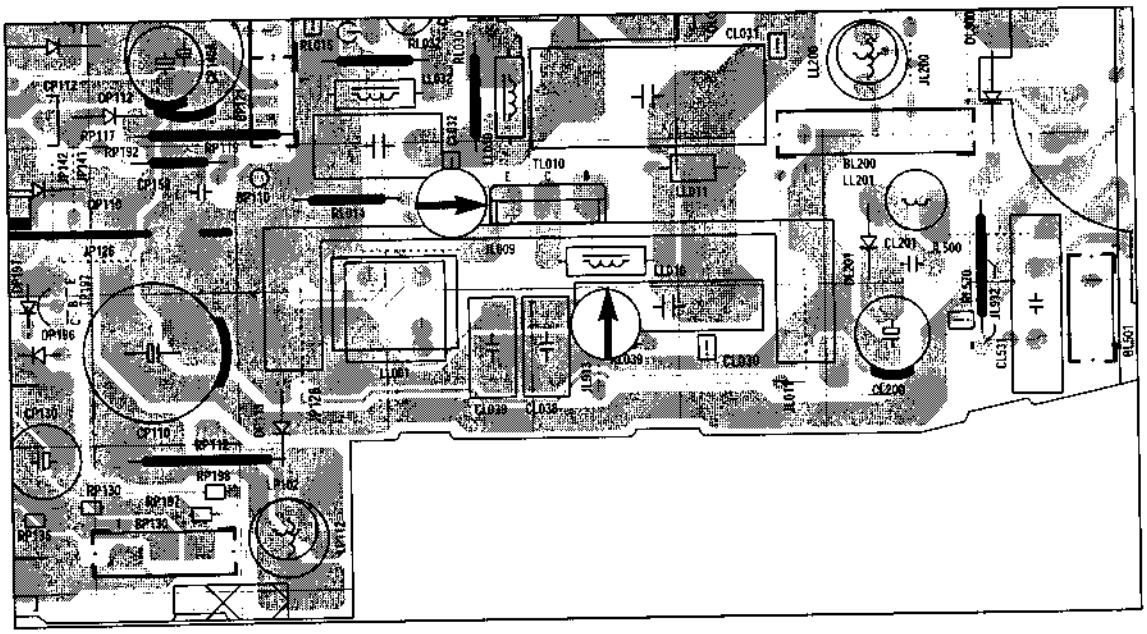
Die weißen Kästchen müssen nicht ausgefüllt werden. ☐

TECHNICAL INFORMATION

Finished products / Chassis concerned : ICC20

Symptom / Problem observed :
Light vertical band down the centre of the screen.

Solution :
Add an RGP15G diode **(Part No. 10272800)** in parallel with inductor LL010 on copper side of the power and deflection printed circuit board. (diodes cathode to the collector of TL010)



IRIS CODE : The code mentioned below must be used to report the failure in the warranty sheet. It is proposed to make your report easier and more reliable.

Condition/ Symptom/	Part Code Number	Qty	Position	Section	Fault Code	Repair Code
1 3 2 X	1 0 2 7 2 8 0 0	0 1	D L 0 1 2	D F L	Z	K

You do not need to write anything in the white boxes

TECHNICAL INFORMATION

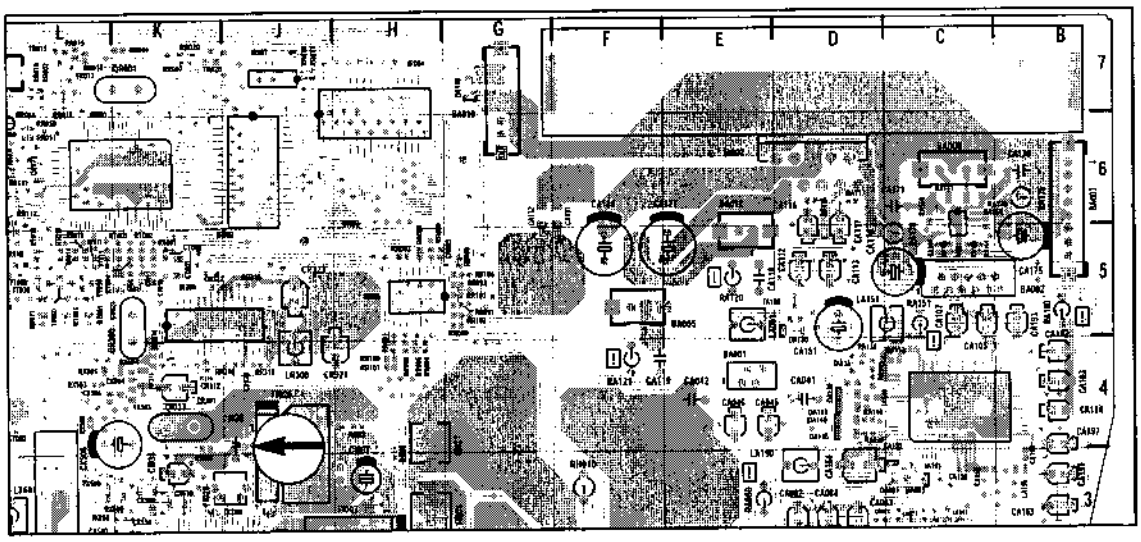
Finished products / Chassis concerned : ICC20

Object / Improvement of the demodulated picture in L standard (France only)

Symptom / Problem observed :
Light horizontal band at the top of the picture, mainly visible on programme 5. (la 5 & Arte)

Cause :
AGC too time constant too fast.

Solution :
Replace metalised polyester capacitor in position CI028 (1µF) by 2.2µF 50V. **(Part N° 13085600)**



IRIS CODE : The code mentioned below must be used to report the failure in the warranty sheet. It is proposed to make your report easier and more reliable.

Condition/ Symptom/	Part Code Number	Qty	Position	Section	Fault Code	Repair Code
1 3 2 X	1 3 0 8 5 6 0 0	0 1	C I 0 2 8	I F C	Y	A

You do not need to write anything in the white boxes

THOMSON MULTI MEDIA

TV - DVD

Brandt FERGUSON SABA TELEFUNKEN THOMSON

PARTS LIST
LISTE PIECES DETACHEES
ERSATZTEILLISTE
LISTA PARTI DI RICAMBIO
LISTA DE PIEZAS DE REPUESTO

THOMSON
32WT45ES
Chassis ICC20 TV / DVD

MODULES

PSB	C20PB20 B*PW****0* 00	10675420
SSB	C20SB20 B5**08RD31	10684580
AUDI	PA/SW20000	10626290
IFAC	POWER DISTRIBUTION	10673240
MPEG	MPEG	21054290
SMPS	SMPS	21049990
IFAC	AV INTERFACE	21054300
KB	KDB1-2	21049130

FP360,362, ZP009	MP315	⚠ 10575090
FP361	RXE025	⚠ 10529720
FP390	RXE090	⚠ 10529790
GK101	TSOP1333	25358570
IA000	TDA7298	10348810
IB001	TDA6108JF	10616240
IF001	TDA8177F	10352880
IK001	TMP87PS38F OTP S2.0 FLAT	21055500
IK003	TFMS5330B	20627780
IP020	VIPER20DIP	25408950
IP050	TEA2262	10495720
IP070,301,305	TLP621 GR(D4-LF2 T)	⚠ 20827900
IP170	LM393/NJM2903D	46069900
IP220	TDA8139	10044580
IP302	MC7808CT	10263430
IP303	P03RD13	15168930
IP350	TL431	15069010
UA500,501	MC33078D FLAT	10319560
UY500,505	TSH94D FLAT	15282180
ZL221,251	MP125	⚠ 10469180
ZL231	MP40	⚠ 10469170

TA401,TF041, TL103,312,803, TP173,179,505	BC556B	16001020
TB001,TL311	BF422	16003090
TG001	BF199	16002950
TG002	BF370	25420830
TG006	BD140-16	25425020
TG007	BD139-16	16001760
TG011,TL003, 104,801,TP026, 080,115,151, 152,158,160, 161,184,185, 197,221,506, 510,511	BC546B	45001866
TK001	BC848B SMD	16006290
TL004	MPSW01A	70436520
TL005	MPS750	16001340
TL010	ON4977/BU2525AX	10461310
TL029,100	STP10NB20FP	25414550
TL807	BC327-40	16000450
TL808,TP057	BC337-40	45001466
TP020	STH13NB60FI	25381050
TP150	STP22NE03L (TO220)	25341950
TP320	2SK2605	⚠ 20880040
TP321	MCR106-6 400V 4A	20813760
TP322,393	BC548B	16000930
TP323	KTC8550D	21039270
TP325,350,392	BC558B	16001110

DA400,DG001, 002,003,004, DL001,073,805, DP024,054,055, 057,064,069, 115,158,160, 161,170,183, 188,193,194, 196,197,221, 230,501	1N4148	44009209
DA500,501,502, 503,DY500,501, 502	BZT55C15 SMD	15187290
DB004	1N4004	44009009
DB006,030,031, 050,051,070, 071,DL043,305, DP023,342	BAV21	44044407
DF011	BZW04-58	10368210
DF031,033, DL302,303, DP061,220,361	RGP10G	10459090
DG026	BZX55C6V8	50890650
DK005	LL4148 SMD	16012450
DK006	BZT55C5V1 SMD	15196090
DK007	ZMM2,7 SMD	16030100
DL028,222,252	1N4001	16008160
DL029	RGP02-20	10472330
DL030	DTV32F-1500	10452490
DL032	STTA806DI	25422190
DL034,036,102	EGP10D	20953640
DL101	BZX55C13	70438310
DL201,DP112	MUR1100E	10360280
DL221,251	FUF5402	10458530
DL231,DP029, 051,113	FUF4005/MUR160	16009580
DL301	BZX85C18	50890010
DP001,002,003, 004,006	GP30M	10455410
DP008	FUF5404	20150190
DP021	RGP10M	10455320
DP053,333	BZX55B15/ZPD15 2%	80444020
DP110	BYT08PI-1000	25442210
DP120,140	S410D	10527250
DP130,135	MUR420	16009630
DP150	BYW29-150	16009140
DP152	ZPD10 2%	80444160
DP301,302,303, 304	BYW27-1000	10455390
DP323,330	ZPD8,2	44021504
DP324	ZPD24	44016504
DP325,337,390, 391	RGP15G	10272800
DP350	ZPD4,7/BZX55C4V7	20475400
DP360,362	1N5822	44058204
DP392	BZX55B5V1/ZPD5V1 2%	44035702
DP502	BAT42	16007410
GE101	TLUV5300 LED	11137650
GK001	LTL-1BEHJ OG/P-GN	21085280

R : RECYCLED PART
: PIECE RECYCLEE
: AUSTAUSCHTEILE
: RICAMBIO RICICLATO
: MODULO REPROCESADO

For any requests, please contact THOMSON multimedia after sales service area
Pour toutes précisions, contactez votre service après vente local THOMSON multimedia
Für weitere Auskünfte, wenden Sie sich bitte an die THOMSON multimedia Kundendienste
Per precisazioni, contattare l'assistenza tecnica THOMSON multimedia
Para cualquier pregunta, por favor contactar con el responsable de zona del servicio postventa de THOMSON multimedia

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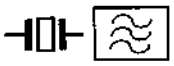

QK001	8MOHZ	21063030

LF021	22U0H 10% 1,6A	10470180
LL029	OST-WEST SPULE	10347650
LL034		10679870

PP180	1K0 OHM	70434550

RA407	4R7 OHM 5% 0,35W	⚠ 10226310
RB001,004	1K5 OHM 5% 0,50W	10121880
RB031,051,071	560R0 OHM 10% 0,50W	10257590
RB032,052,072, RE102,RP181	100R0 OHM 5% 0,25W	30943330
RF003,006	1K3 OHM 1% 0,40W	15012810
RF008	1R5 OHM 1% 0,70W	10451140
RF011,012	1R82 OHM 1% 0,70W	10451420
RG026,027	3K3 OHM 5% 3W	30941170
RG030,RL808, 809	22R0 OHM 5% 0,25W	⚠ 35031220
RK101	453R0 OHM 1% 0,250W	15018140
RK102	681R0 OHM 1% 0,25W	15020310
RK103	1K5 OHM 1% 0,25W	80437630
RK104	3K32 OHM 1% 0,25W	15017270
RL015	6R8 OHM 5% 0,25W	⚠ 41023309
RL021	1R21 OHM 1% 0,70W	13010820
RL022,RP228	1K0 OHM 1% 0,25W	15012570
RL023	3M9 OHM 2% 0,40W	13057750
RL024	100K0 OHM 1% 0,25W	15010160
RL025	1R0 OHM 1% 0,70W	10254220
RL027	2K2 OHM 5% 0,50W	⚠ 10239310
RL037	330R0 OHM 10% 0,50W	14050190
RL044	536K0 OHM 1% 0,25W	15019140
RL100,221,251	0R27 OHM 5% 2,50W	10263600
RL231	4R7 OHM 5% 2,5W	10471330
RL303	33K2 OHM 1% 0,25W	15016530
RL308	15K0 OHM 1% 0,25W	15011700
RL310	46K4 OHM 1% 0,70W	10403710
RL311	2K21 OHM 1% 0,25W	15015480
RP004	2R7 OHM 5% 4,50W	10379110
RP015	18R0 OHM 220V PTC	⚠ 41398800
RP020	100R0 OHM 5% 0,75W	⚠ 10230030
RP049	33R0 OHM 5% 2W	50888890
RP050	10M0 OHM 5% 0,70W	⚠ 20564520
RP051	100R0 OHM 5% 4,50W	10379830
RP052	0R1 OHM 5% 2,50W	⚠ 10288160
RP090	22K1 OHM 1% 0,25W	60442350
RP179	8K25 OHM 1% 0,25W	15021830
RP180	205K0 OHM 1% 0,40W	15013970
RP227	2K26 OHM 1% 0,25W	15015500
RP320,361	1R0 OHM 5% 2,50W	10383240

CB001	10N0F 3K0V	14036450
CB004,CL043	100N0F 20% 250V	13072860
CF020	100N0F 10% 100V	20467110
CL030	1N9F 2,5% 2K0V	10532420
CL031	11N6F 2,5% 2K0V	40406501
CL032	33N0F 5% 400V	10076920
CL033	680N0F 5% 400,0V	⚠ 10552180
CL034	12N0F 2% 400V	10672180
CL035	410N0F 5% 400V	10180780
CL038,039	27N0F 5% 250V	50895120
CL100	150N0F 5% 250V	10647360
CL201,221,231, 251	330P0F 20% 1K0V	14035270
CL301	10N0F 5% 400V	10588870
CP001,002,601, 602,611,612	100N0F 20% 275V	⚠ 10331520
CP003,004,005, 304	4N7F 1K0V	10058740
CP006	470N0F 10% 400V	10469630
CP007	560N0F 5% 250V	10376360
CP008,051,121, 131,136,141	470P0F 10% 2K0V	10099390
CP010	390U0F 20% 400V	25444380
CP015	68N0F 20% 250V	10256210
CP020,022	220P0F 10% 1K0V	25460410
CP021	1N0F 5% 400V	13055520
CP049	1N5F 20% 400V	⚠ 10442770
CP050	150P0F 20% 400V	⚠ 20738090
CP052,112	2N2F 10% 1K0V	13090980
CP111	470P0F 10% 2K0V	25392030
CP301,302	100N0F 20% 275V	⚠ 40404090
CP305,306	1N5F 10% 1K0V	20338740
CP308	47U0F 20% 385V	⚠ 50844400
CP309	2N2F 20% 1K0V	43325400
CP315	1N0F 20% 400V	⚠ 43106800
CP362,363,392	1N0F 20% 1K0V	20388780

LL001		10669660
LL008	DSTFBT 1372.0054	⚠ 10675710
LL033		10347660
LL037		⚠ 10518250
LP001,601		⚠ 10203560
LP020	STAND-BY	⚠ 25425970
LP050	SMT7LZ	⚠ 10643540
LP070	DRIVER	⚠ 60412091
LP301,611		⚠ 20247580
LP303	TFSMT	⚠ 2105993A

OTHER PARTS
AUTRES PIECES
SONSTIGE TEILE
ALTRE PARTI
OTRAS PIEZAS

BB010	CATHODE RAY TUBE SOCKET SUPPORT TUBE CATHODIQUE BILDROEHRENFASSUNG SUPPORTO TUBO CATODICO SOPORTE T.R.C	⚠ 80298800
BJ010	CINCH SOCKET PRISE CINCH CINCH-BUCHSE PRESA CINCH TOMA CINCH	10037440
BJ011	SVHS SOCKET PRISE SVHS S-VHS-BUCHSE PRESA SVHS TOMA SVHS	20392900
BK004	CABLE 6X 255MM CABLE NAPPE 6X 255MM FOLIENKABEL 6X 255MM CAVO DI COLLEGAMENTO 6X 255MM CABLE 6X 255MM	⚠ 21089390
BK005	CABLE 11X 340MM CABLE NAPPE 11X 340MM FOLIENKABEL 11X 340MM CAVO DI COLLEGAMENTO 11X 340MM CABLE 11X 340MM	21082290
BQ012	JACK SOCKET PRISE JACK BUCHSE PRESA JACK TOMA JACK	10539510
BU702	CABLE 19X 70MM CABLE NAPPE 19X 70MM FOLIENKABEL 19X 70MM CAVO DI COLLEGAMENTO 19X 70MM CABLE 19X 70MM	21067570
BY500	CABLE 19X 70MM CABLE NAPPE 19X 70MM FOLIENKABEL 19X 70MM CAVO DI COLLEGAMENTO 19X 70MM CABLE 19X 70MM	21063420
BY502	SVHS SOCKET PRISE SVHS S-VHS-BUCHSE PRESA SVHS TOMA SVHS	20862120
BY505	CINCH SOCKET 3 ASSY ENSEMBLE 3 PRISES CINCH CINCH 3 BUCHSEN-EINHEIT ASSIEME 3 PRESA CINCH CONJUNTO 3 TOMA CINCH	21063440
CH200	ON/OFF SWITCH CONTACTEUR MARCHE/ARRET EIN-AUS SCHALTER CONTATTORE ACCESO/SPENTO CONTACTOR MARCHA/PARADA	⚠ 10276500
CJ015	CABLE WITH CONNECTOR 9 PINS 340MM CABLE AVEC CONNECTEUR 9 VOIES 340MM KABEL MIT VERBINDER 9 PINS 340MM CAVO CON CONNETTORE 9 SPINOTTI 340MM CABLE CON CONECTOR 9 PUNTOS 340MM	10231790

CJ016	CABLE WITH CONNECTOR 3 PINS 220MM CABLE AVEC CONNECTEUR 3 VOIES 220MM KABEL MIT VERBINDER 3 PINS 220MM CAVO CON CONNETTORE 3 SPINOTTI 220MM CABLE CON CONECTOR 3 PUNTOS 220MM	25459200
CJ020	CABLE WITH CONNECTOR 10 PINS 340MM CABLE AVEC CONNECTEUR 10 VOIES 340MM KABEL MIT VERBINDER 10 PINS 340MM CAVO CON CONNETTORE 10 SPINOTTI 340MM CABLE CON CONECTOR 10 PUNTOS 340MM	10526610
CJ030	CABLE WITH CONNECTOR 6 PINS 500MM CABLE AVEC CONNECTEUR 6 VOIES 500MM KABEL MIT VERBINDER 6 PINS 500MM CAVO CON CONNETTORE 6 SPINOTTI 500MM CABLE CON CONECTOR 6 PUNTOS 500MM	25460570
CJ035	CABLE WITH CONNECTOR 3 PINS 580MM CABLE AVEC CONNECTEUR 3 VOIES 580MM KABEL MIT VERBINDER 3 PINS 580MM CAVO CON CONNETTORE 3 SPINOTTI 580MM CABLE CON CONECTOR 3 PUNTOS 580MM	30020170
CJ075	CABLE WITH CONNECTOR 3 PINS 460MM CABLE AVEC CONNECTEUR 3 VOIES 460MM KABEL MIT VERBINDER 3 PINS 460MM CAVO CON CONNETTORE 3 SPINOTTI 460MM CABLE CON CONECTOR 3 PUNTOS 460MM	25443770
CJ076	CABLE WITH CONNECTOR 2 PINS 460MM CABLE AVEC CONNECTEUR 2 VOIES 460MM KABEL MIT VERBINDER 2 PINS 460MM CABLE CON CONNETTORE 2 SPINOTTI 460MM CABLE CON CONECTOR 2 PUNTOS 460MM	25443810
CJ081,143	CABLE WITH CONNECTOR 2 PINS 580MM GREEN CABLE AVEC CONNECTEUR 2 VOIES 580MM VERT CABLE MIT VERBINDER 2 PINS 580MM GRUEN CAVO CON CONNECTOR 2 SPINOTTI 580MM VERD CABLE CON CONECTOR 2 PUNTOS 580MM VERDE	10327420
CJ100	THT CABLE CABLE THT KABEL THT CAVO THT CABLE THT	⚠ 10664300
CJ105	CABLE 460MM 20KV HT CABLE 460MM 20KV HT KABEL 460MM 20KV HT CAVO 460MM 20KV HT CABLE 460MM 20KV HT	⚠ 10369650

CJ145	CABLE WITH CONNECTOR 8 PINS 300MM CABLE AVEC CONNECTEUR 8 VOIES 300MM KABEL MIT VERBINDER 8 PINS 300MM CABLE CON CONNETTORE 8 SPINOTTI 300MM CABLE CON CONECTOR 8 PUNTOS 300MM	25019130
CJ490	CABLE WITH CONNECTOR 7 PINS 260MM CABLE AVEC CONNECTEUR 7 VOIES 260MM KABEL MIT VERBINDER 7 PINS 260MM CAVO CON CONNETTORE 7 SPINOTTI 260MM CABLE CON CONECTOR 7 PUNTOS 260MM	25348010
FP001,601,602	2A5T TIME-LAG FUSE 2A5T FUSIBLE TEMPORISE 2A5T THERMISCHE SICHERUNG 2A5T FUSIBLE TEMPORIZZATO 2A5T FUSIBLE TEMPORIZADO	⚠ 10246750
SK001,002, 003,004,005, 015,016,017, 018,019,020, 021,022,023, 024,025	MICROSWITCH MICRO CONTACTEUR MIKROSCHALTER MICROINTERRUTTORE MICROCONTACTOR	20540300
SK101,102, 103,104	MICROSWITCH MICRO CONTACTEUR MIKROSCHALTER MICROINTERRUTTORE MICROCONTACTOR	30011100
SP015	RELAY 12V RELAIS 12V RELAIS 12V RELE 12V RELE 12V	⚠ 90294100
UA503	OPTICAL SOCKET PRISE OPTIQUE OPTICAL-BUCHSE PRESA OTTICA TOMA OPTICO	15293550

EQUIPMENT/PRESENTATION
EQUIPEMENT/PRESENTATION
AUSSTATTUNG/GEHAEUSE
PARTI VARIE
EQUIPO/PRESENTACION

FRONT PANEL DVD FACADE DVD FRONTPLATTE DVD PANNELLO FRONTALE DVD PANEL FRONTAL DVD	21050580
COVER TRAY CD CACHE TIROIR CD ABDECKUNG SCHUBLADE CD COPERCHIO CASSETTO CD CUBIERTA CORREDERA CD	21050770
LABEL (COVER TRAY CD) ETIQUETTE (CACHE TIROIR CD) ETIKETT (ABDECKUNG SCHUBLADE CD) ETICHETTA (COPERCHIO CASSETTO CD) ROTULO (CUBIERTA CORREDERA CD)	2110522A
BUTTON STRIP DVD CONTROL BARRETTE DE TOUCHES DVD CONTROL TASTENLEISTE DVD CONTROL PIATTINA TASTI DVD CONTROL PLACA DE TECLAS DVD CONTROL	21050610
KNOB OPEN/CLOSE TOUCHE OPEN/CLOSE TASTE OPEN/CLOSE TASTO OPEN/CLOSE TECLA OPEN/CLOSE	21050650
BUTTON STRIP TV CONTROL BARRETTE DE TOUCHES TV CONTROL TASTENLEISTE TV CONTROL PIATTINA TASTI TV CONTROL PLACA DE TECLAS TV CONTROL	21050800
BUTTON STRIP NAVIGATION BARRETTE DE TOUCHES NAVIGATION TASTENLEISTE NAVIGATION PIATTINA TASTI NAVIGAZIONE PLACA DE TECLAS NAVEGACION	21050710
KNOB GUIDE OK TOUCHE GUIDE OK TASTE GUIDE OK TASTO GUIDE OK TECLA GUIDE OK	21050680
TVM502A OPTICAL PLAYER TVM502A LECTEUR OPTIQUE TVM502A CD-LAUFWERK TVM502A ASSIEME OTTICA TVM502A MECANISMO OPTICO	10669590
FRONT PANEL TV FACADE TV FRONTPLATTE TV PANNELLO FRONTALE TV PANEL FRONTAL TV	25455470
REAR PANEL DOS RUECKWAND PANNELLO POSTERIORE TAPA POSTERIOR	⚠ 25465780
JACK PANEL BE15TH TABLEAU DE PRISES BE15TH JACK FRONTPLATTE BE15TH QUADRO DI PRESA JACK BE15TH TABLERO DE TOMA JACK BE15TH	⚠ 25467140
LOGO THOMSON LOGO THOMSON SCHRIFTZUG THOMSON MARCHIO THOMSON LOGOTIPO THOMSON	25376750
CHASSIS SLIDE SECURING GLISSIERE FIXATION CHASSIS SCHIEBER BEFESTIGUNG CHASSIS SVIVOLO DI FISSAGGIO CHASSIS CORREDERA DE SUJECION CHASIS	25413960
LOUDSPEAKER GRID BOOMER BE15TH GRILLE HAUT PARLEUR GRAVES BE15TH LAUTSPRECHER GITTER TIEFTOENER BE15TH GRIGLIA ALTOPARLANTE SUPERIOR BE15TH REJILLA ALTAVOZ GRAVES BE15TH	25465810
8R OHM 12W LOUDSPEAKER 60X160MM 8R OHM 12W HAUT PARLEUR 60X160MM 8R OHM 12W LAUTSPRECHER 60X160MM 8R OHM 12W ALTOPARLANTE 60X160MM 8R OHM 12W ALTAVOZ 60X160MM	25481710
8R OHM 20W LOUDSPEAKER 51X51MM 8R OHM 20W HAUT PARLEUR 51X51MM 8R OHM 20W LAUTSPRECHER 51X51MM 8R OHM 20W ALTOPARLANTE 51X51MM 8R OHM 20W ALTAVOZ 51X51MM	25461220
4R OHM 30W LOUDSPEAKER 130MM 4R OHM 30W HAUT PARLEUR 130MM 4R OHM 30W LAUTSPRECHER 130MM 4R OHM 30W ALTOPARLANTE 130MM 4R OHM 30W ALTAVOZ 130MM	10517870
ON/OFF BUTTON SI01TH TOUCHE MARCHE/ARRET SI01TH EIN-AUS TASTE SI01TH TASTA ACCESSO/SPENTO SI01TH TECLA MARCHA/PARADA SI01TH	25462910

POWER SUPPLY LEAD CORDON D'ALIMENTZATION NETZKABEL CAVO DI ALIMENTAZIONE CABLE DE ALIMENTACION	⚠ 25420360
CORD STOPPER ATTACHE CORDON SECTEUR ZUGENTLASTUNG BRIDA CORDONE DI ALIMENTAZIONE SUJECION CABLE DE ALIMENTACION	25071420
W76EJY011X121 CATHODE RAY TUBE W76EJY011X121 TUBE CATHODIQUE W76EJY011X121 FARBBILDROEHRE W76EJY011X121 TUBO CATODICO W76EJY011X121 T.R.C	⚠ 10670260
DOUBLE DEGAUSSING COIL BOBINE DE DEMAGNETISATION DOUBLE DOPPE ENTMAGNETISIERUNGSSPULE BOBINA DI SMAGNETIZZAZIONE DOPPIA BOBINA DE DESIMANTACION DOBLE	⚠ 10669680
EFC COIL BOBINE EFC EFC-SPULE BOBINA EFC BOBINA EFC	10542150
RCV400 REMOTE CONTROL RCV400 TELECOMMANDE RCV400 FERNBEDIENUNG RCV400 TELECOMANDO RCV400 TELEMANDO	21074280
FOLDING BOX EMBALLAGE CARTON KARTON IMBALLAGGIO CARTONE EMBALAJE CARTON	25417300
FITTING DOWNER CALE INFERIEURE POLSTER UNTEN DISTANZIATORE INFERIORE CALZO INFERIOR	25451020
FITTING UPPER CALE SUPERIEURE POLSTER OBEN DISTANZIATORE SUPERIORE CALZO SUPERIOR	25451030

ICC20 SERVICE MANUAL EUROPE ICC20 DOC TECHNIQUE EUROPE ICC20 TECHNISCHE DOKUMENTATION EUROPE ICC20 DOCUMENTAZIONE TECNICA EUROPE ICC20 DOCUMENTACION TECNICA EUROPE	35118540
DVD17/20 SERVICE MANUAL DVD17/20 DOC TECHNIQUE DVD17/20 TECHNISCHE DOKUMENTATION DVD17/20 DOCUMENTAZIONE TECNICA DVD17/20 DOCUMENTACION TECNICA	35127160
ICC20 TV/DVD SERVICE MANUAL SUPPLEM. ICC20 TV/DVD DOC TECHNIQUE ADDITIF ICC20 TV/DVD TECHNISCHE DOKUMENT. ZUSATZ ICC20 TV/DVD DOCUMENTAZIONE ADDITIVO ICC20 TV/DVD DOCUMENTACION ADICCIONAL	35130200
32WT45ES PARTS LIST 32WT45ES LISTE PIECES DETACHEES 32WT45ES ERSATZTEILLISTE 32WT45ES LISTA PARTI DI RICAMBIO 32WT45ES LISTA PIEZAS DE REPUESTO	35130210
32WT45ES UM NL/DK/S/RU/CS/PL/H/SK 32WT45ES NU NL/DK/S/RU/CS/PL/H/SK 32WT45ES BA NL/DK/S/RU/CS/PL/H/SK 32WT45ES IU NL/DK/S/RU/CS/PL/H/SK 32WT45ES IU NL/DK/S/RU/CS/PL/H/SK	25473580
32WT45ES UM F/D/I/GB/GR/E/P 32WT45ES NU F/D/I/GB/GR/E/P 32WT45ES BA F/D/I/GB/GR/E/P 32WT45ES IU F/D/I/GB/GR/E/P 32WT45ES IU F/D/I/GB/GR/E/P	25466870

32WT45ES

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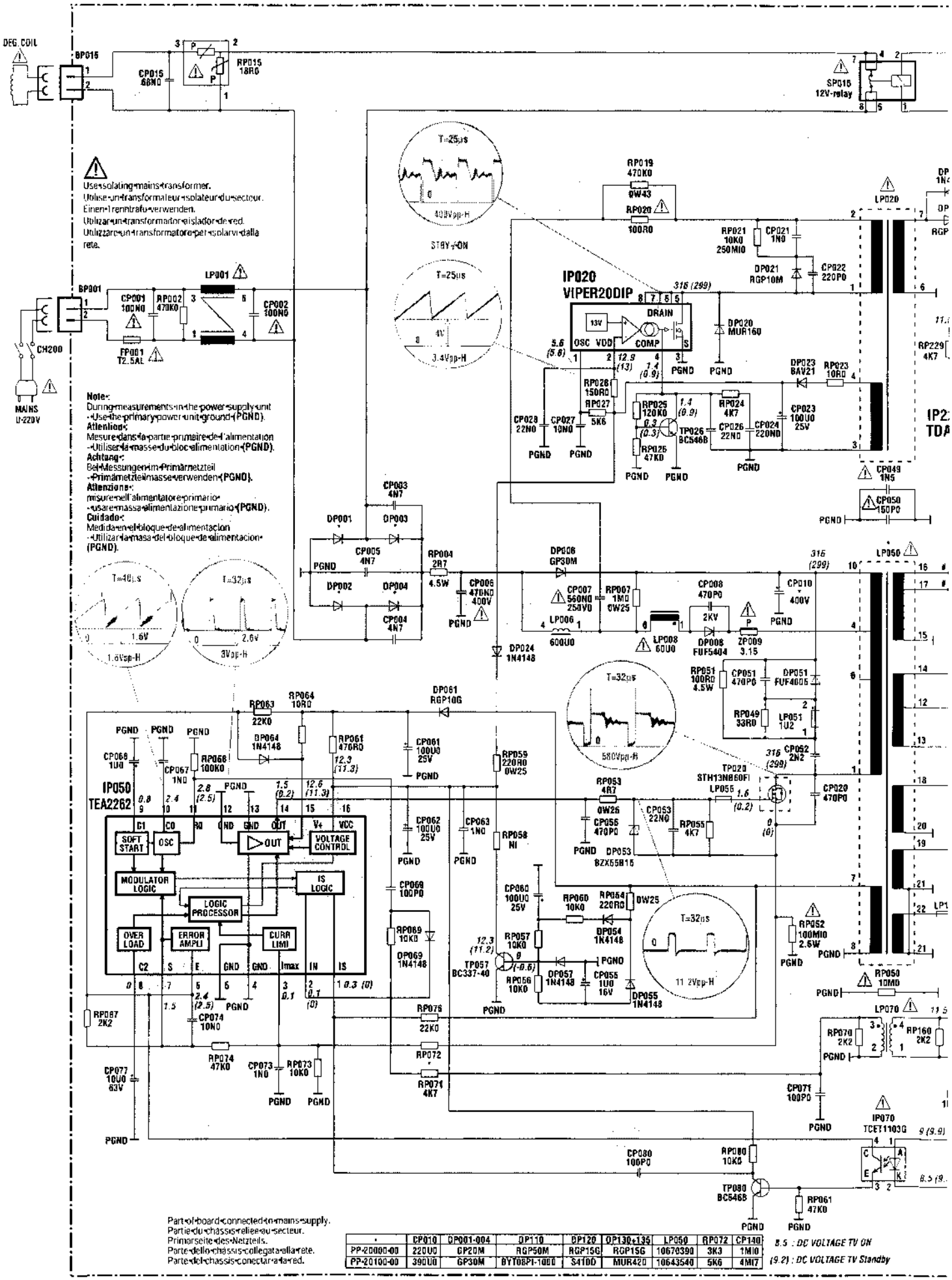
POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLA
POWER SUPPLY PART - PARTIE ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓ

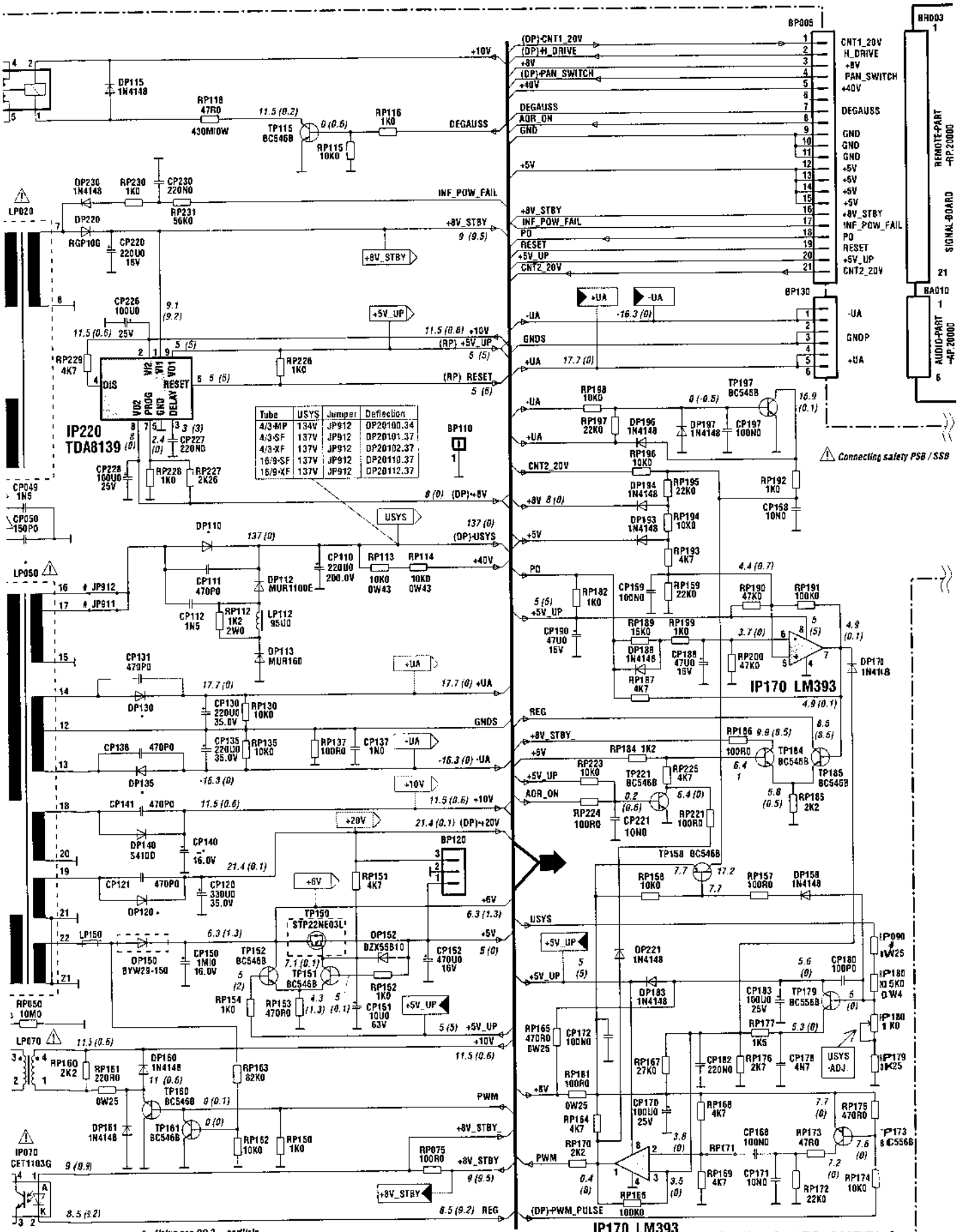


Part of board connected to mains supply.
Partie du chassis reliee au secteur.
Primarseite des Netzteils.
Parte dello chassis collegata alla rete.
Parte del chassis conectar a la red.

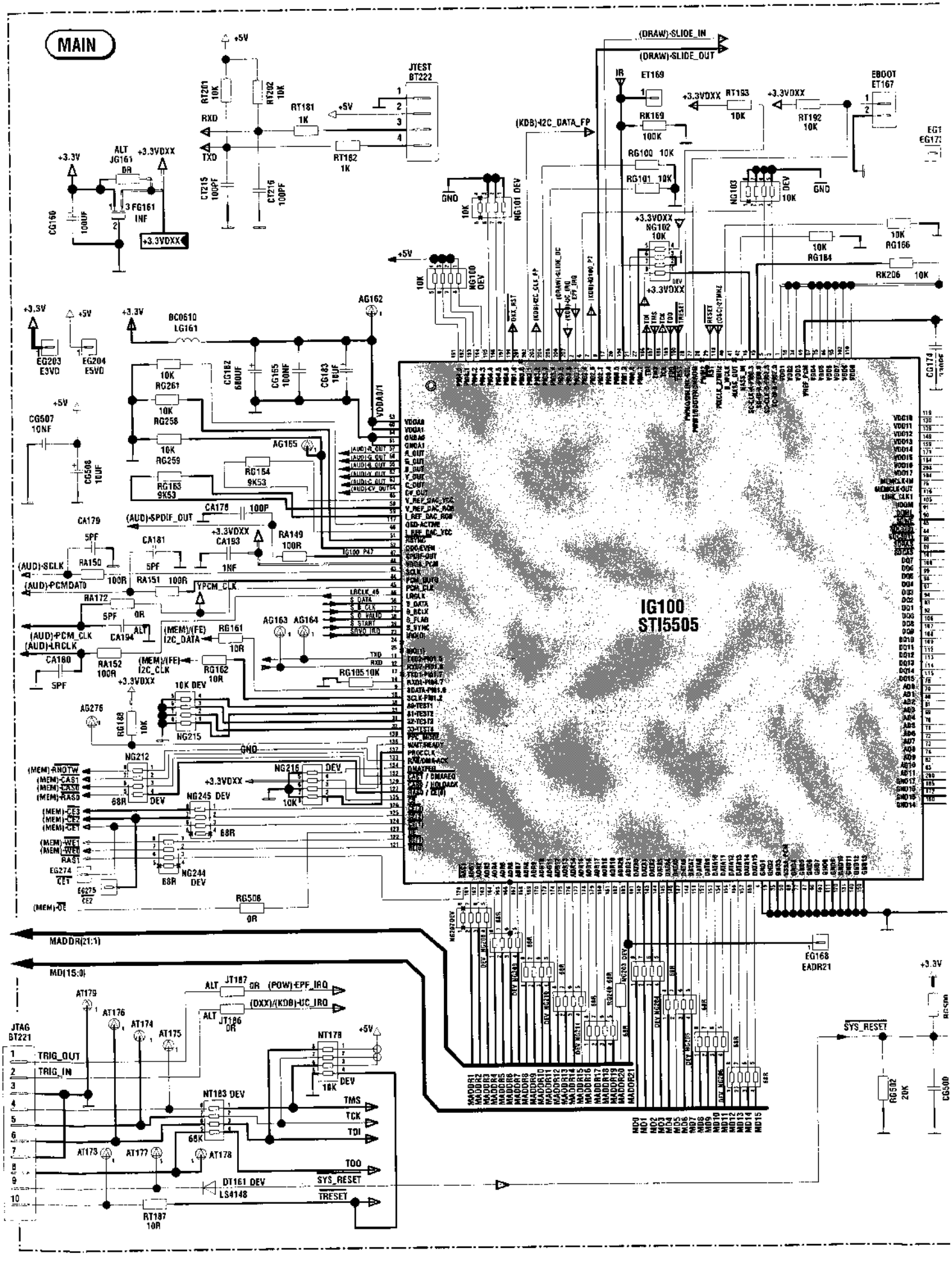
.	CP010	CP001-004	DP110	DP120	DP130-135	LP050	RP072	CP140
PP-20000-00	220U0	GP20M	RGP50M	RGP15G	RGP15G	10670390	3K3	1MI0
PP-20100-00	390U0	GP30M	BYT08PI-1000	S4100	MUR420	10643540	5K6	4MI7

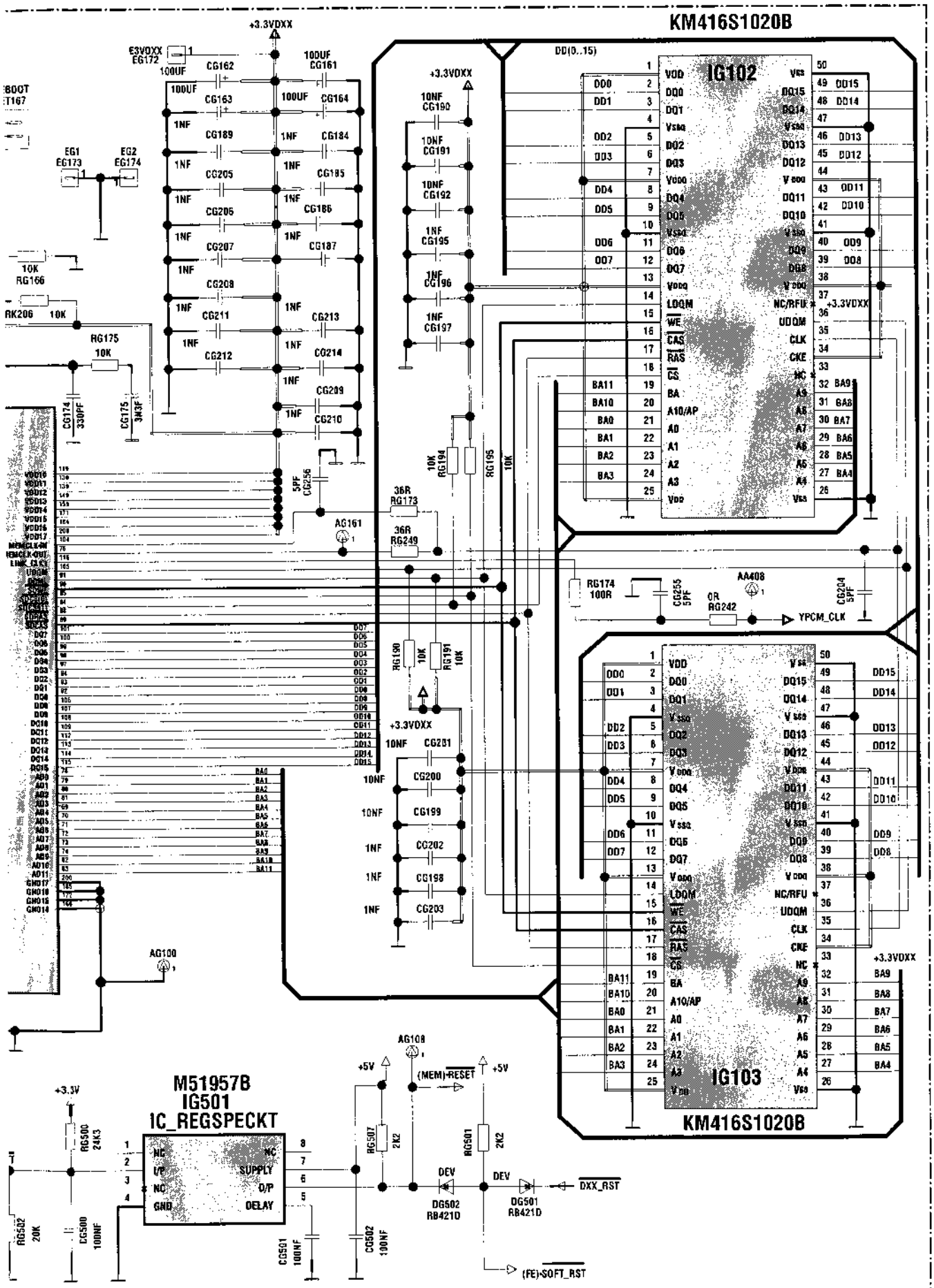
8.5 : DC VOLTAGE TV ON
(9.2) : DC VOLTAGE TV Standby

ENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS
ENTACIÓN

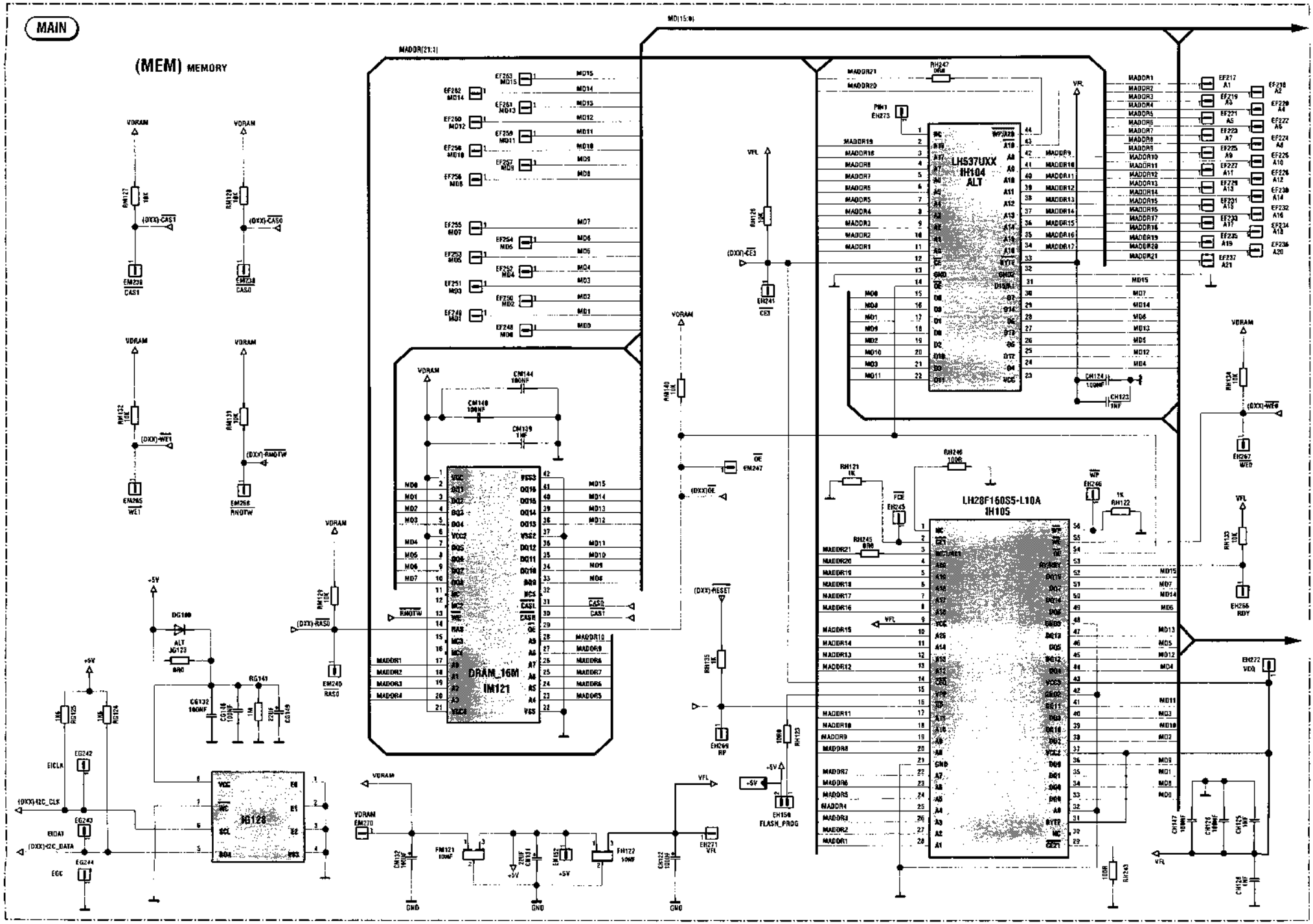


MAIN·SCHEMATIC·DIAGRAM·-·SCHEMA·DE·LA·PLATINE·PRINCIPALE·-·SCHALTBILD·HAUPTPLATINE·

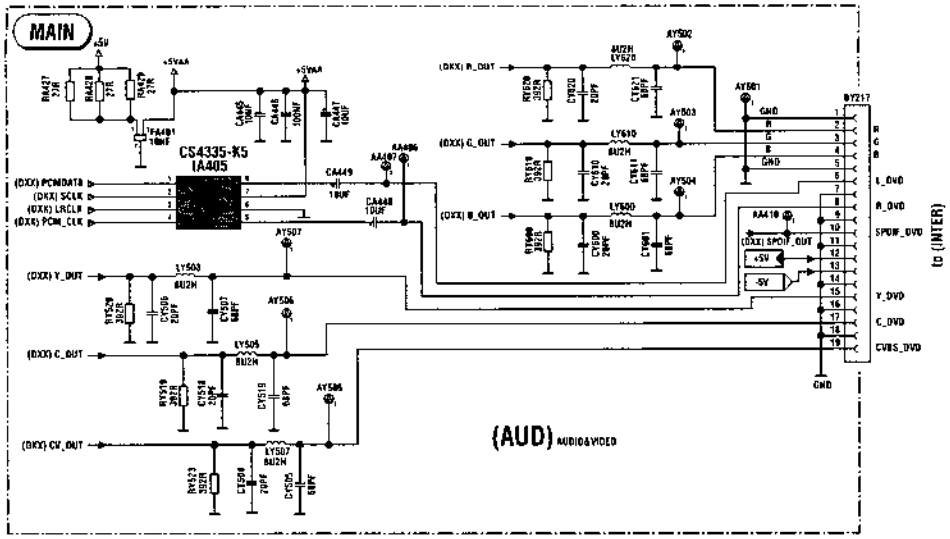


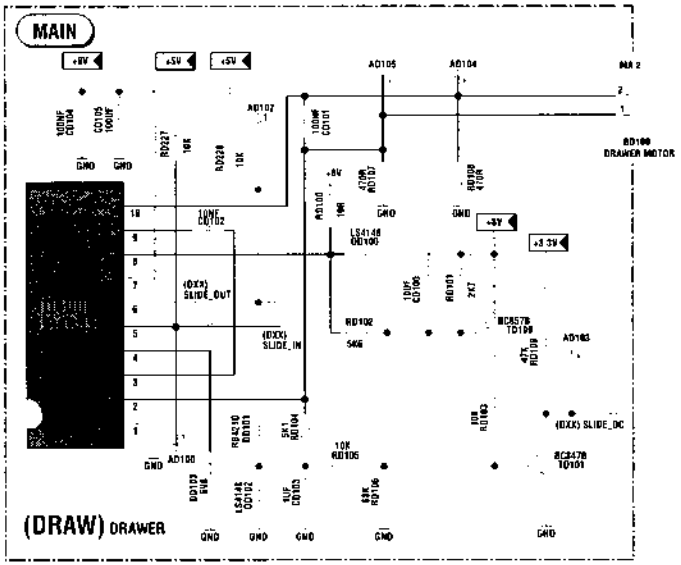

KM416S1020B
IG102
IG103
KM416S1020B
M51957B
IG501
IC_REGSPECKT
+3.3VDXX
+5V
(MEM)-RESET
DXX_RST
(FE)-SOFT_RST
YPCM_CLK
DD(0..15)
(DXX)

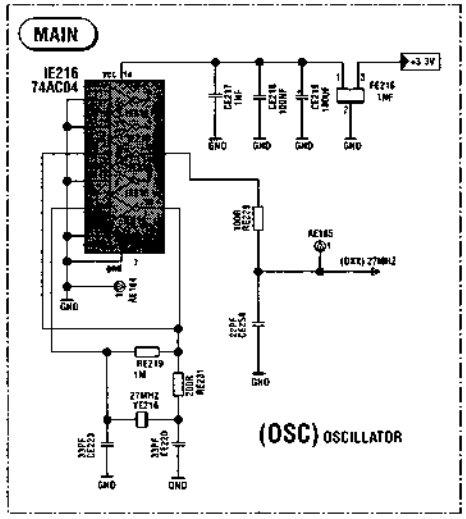
MAIN•SCHEMATIC•DIAGRAM•-•SCHEMA•DE•LA•PLATINE•PRINCIPALE•-•SCHALTBILD•HAUPTPLATINE•-•SCHEMA•DELLA•PIASTRA•PRINCIPALE•-•ESQUEMA•DE•LA•PLATINA•PRINCIPAL•••

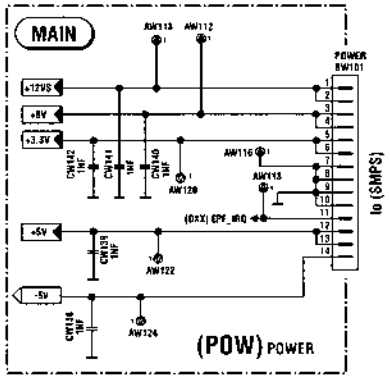


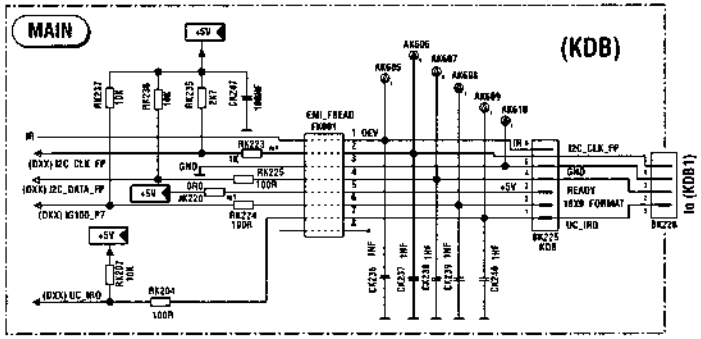
MAIN SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE PRINCIPALE - SCHALTBILD HAUPTPLATINE - SCHEMA DELLA PIASTRA PRINCIPALE- ESQUEMA DE LA PLATINA PRINCIPAL



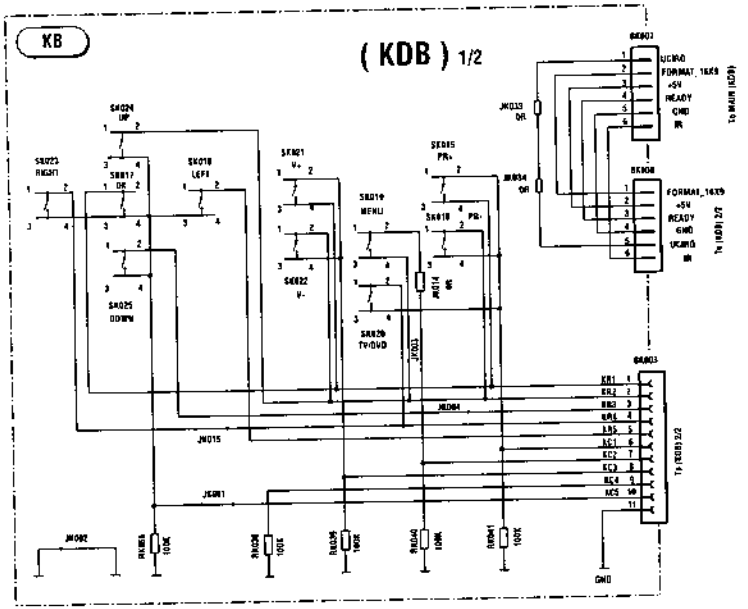


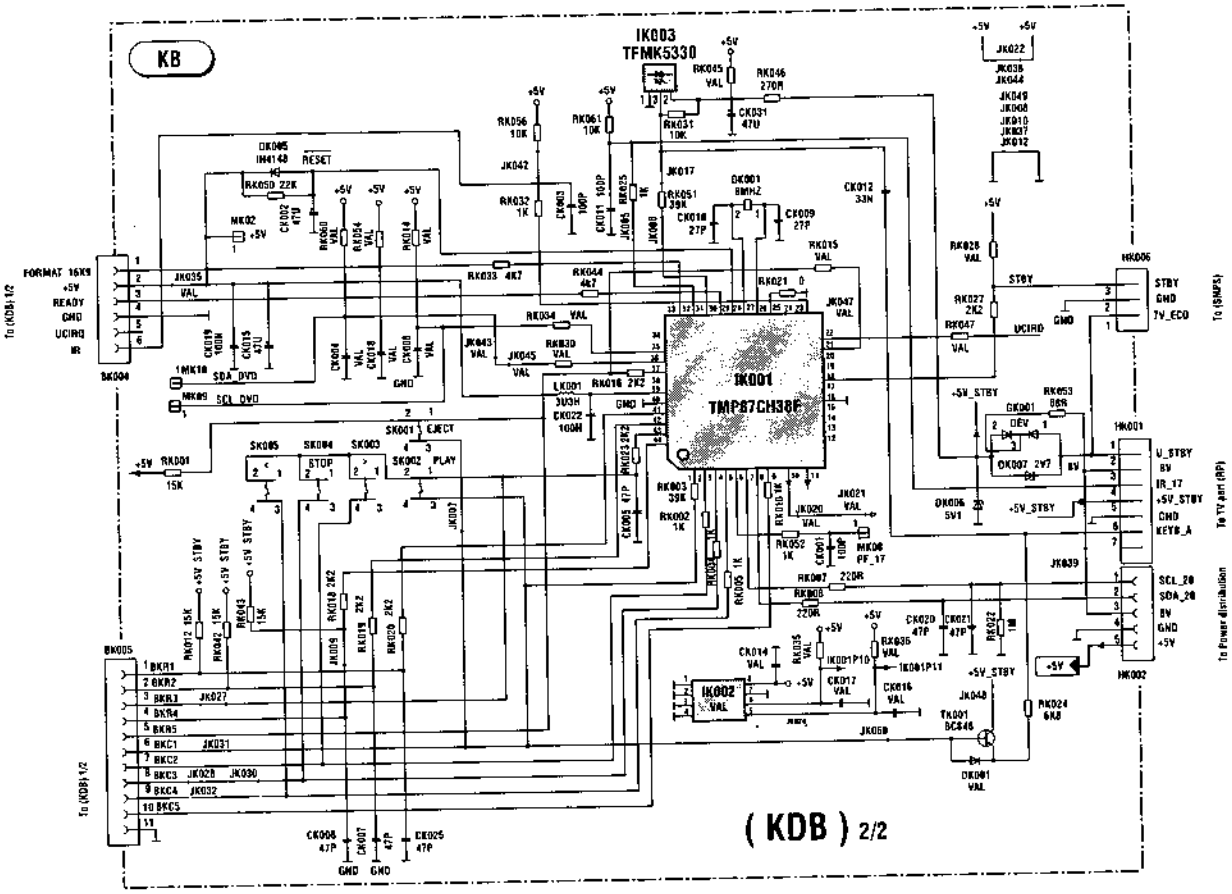




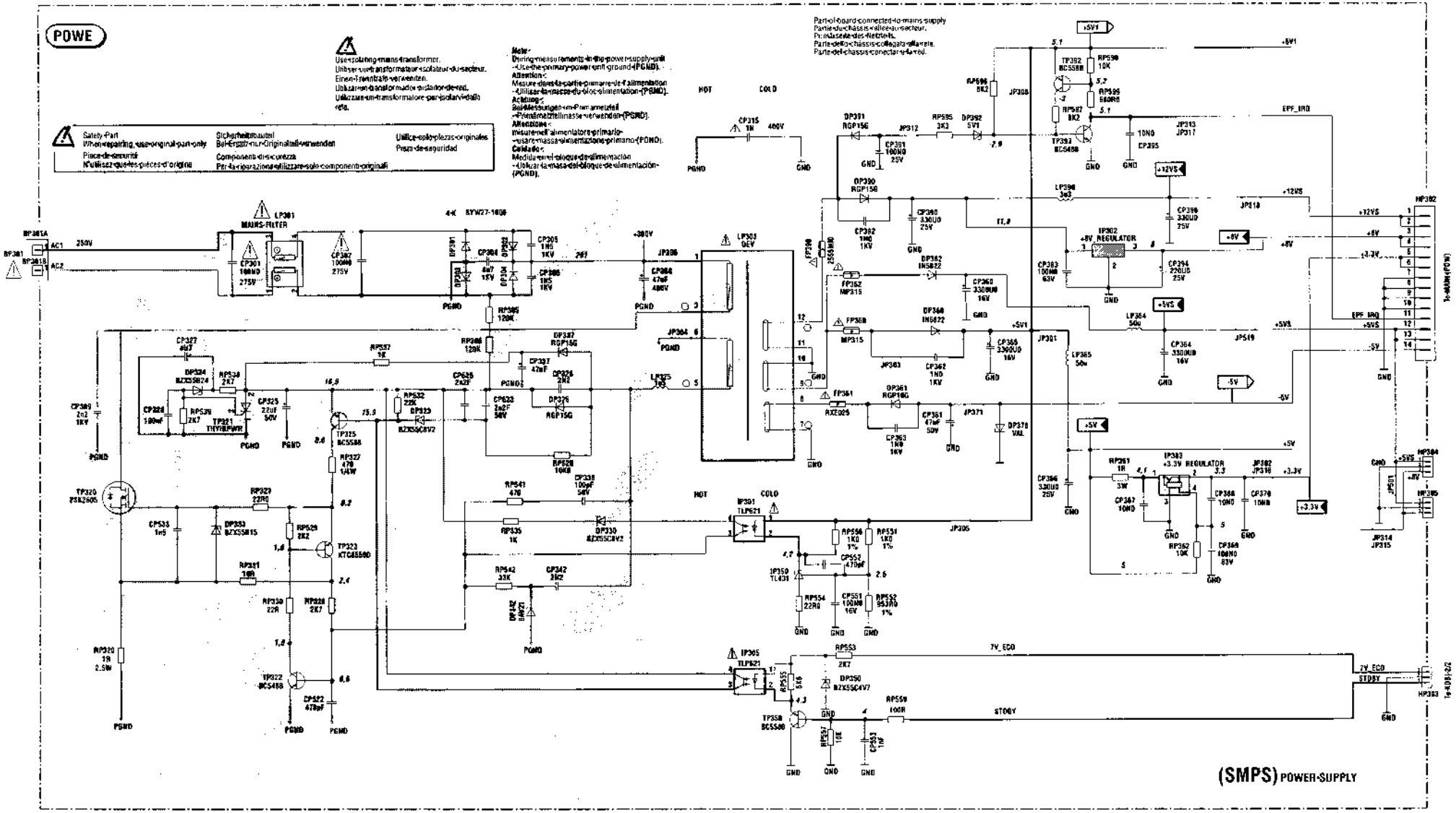


KEYBOARD SCHEMATIC DIAGRAM - SCHEMA DES CIRCUITS COMMANDES - SCHALTBILD BEDIENTEIL - SCHEMA DEI CIRCUITI TASTIERA - ESQUEMA DE LOS CIRCUITOS MANDOS

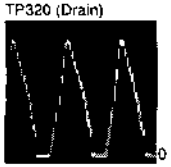




POWER SUPPLY SCHEMATIC DIADIAGRAM SCHEMA DES CIRCUITS D'ALIMENTATIONS - SCHALTBILD NETZTEIL - SCHEMA DEI CIRCUITI DI ALIMENTAZIONE - ESQUEMA DE LOS CIRCUITOS DE ALIMENTACIÓN

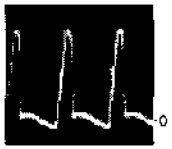


TP320 (Drain)



T=15µs 680Vpp

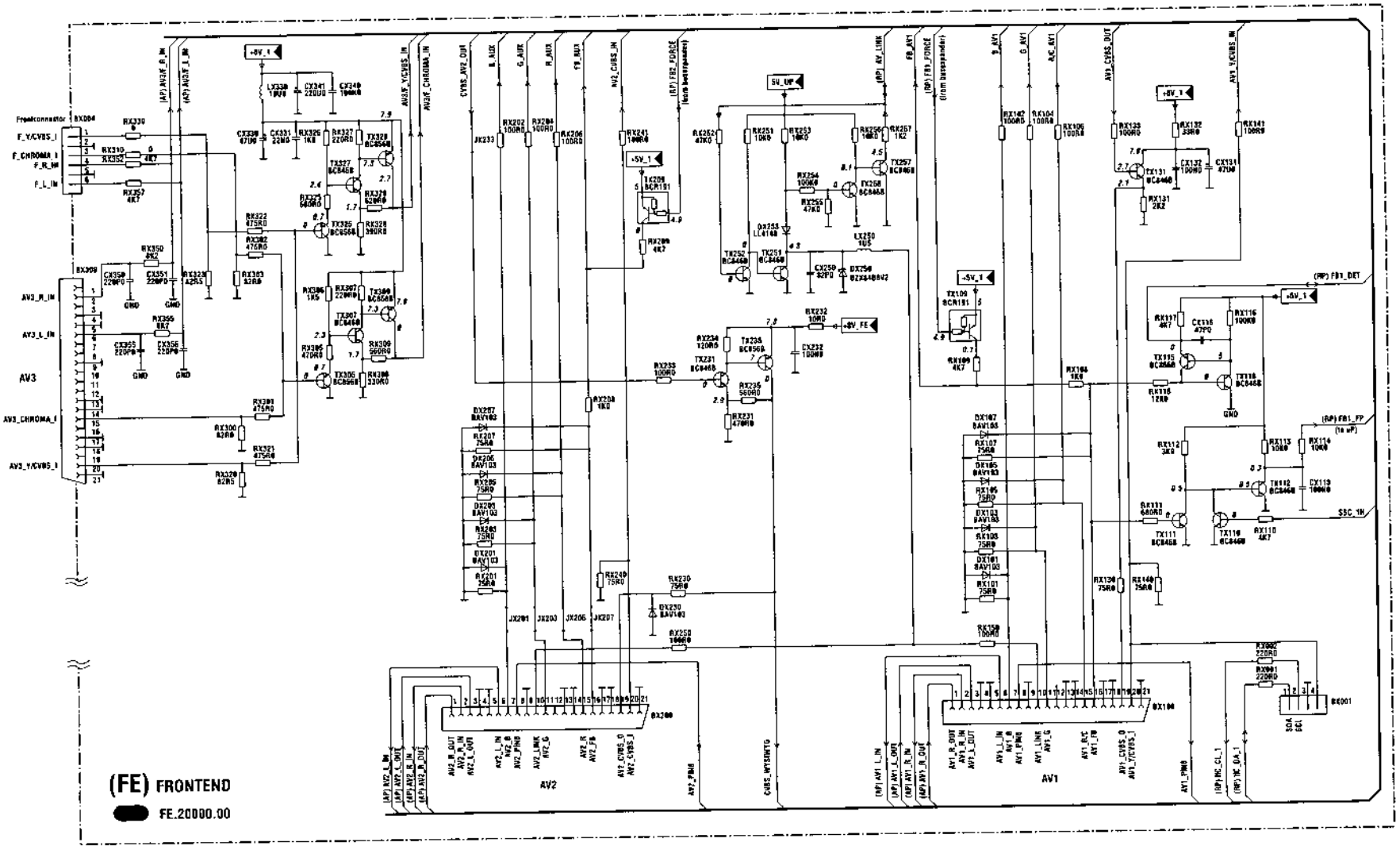
TP320 (Gate)



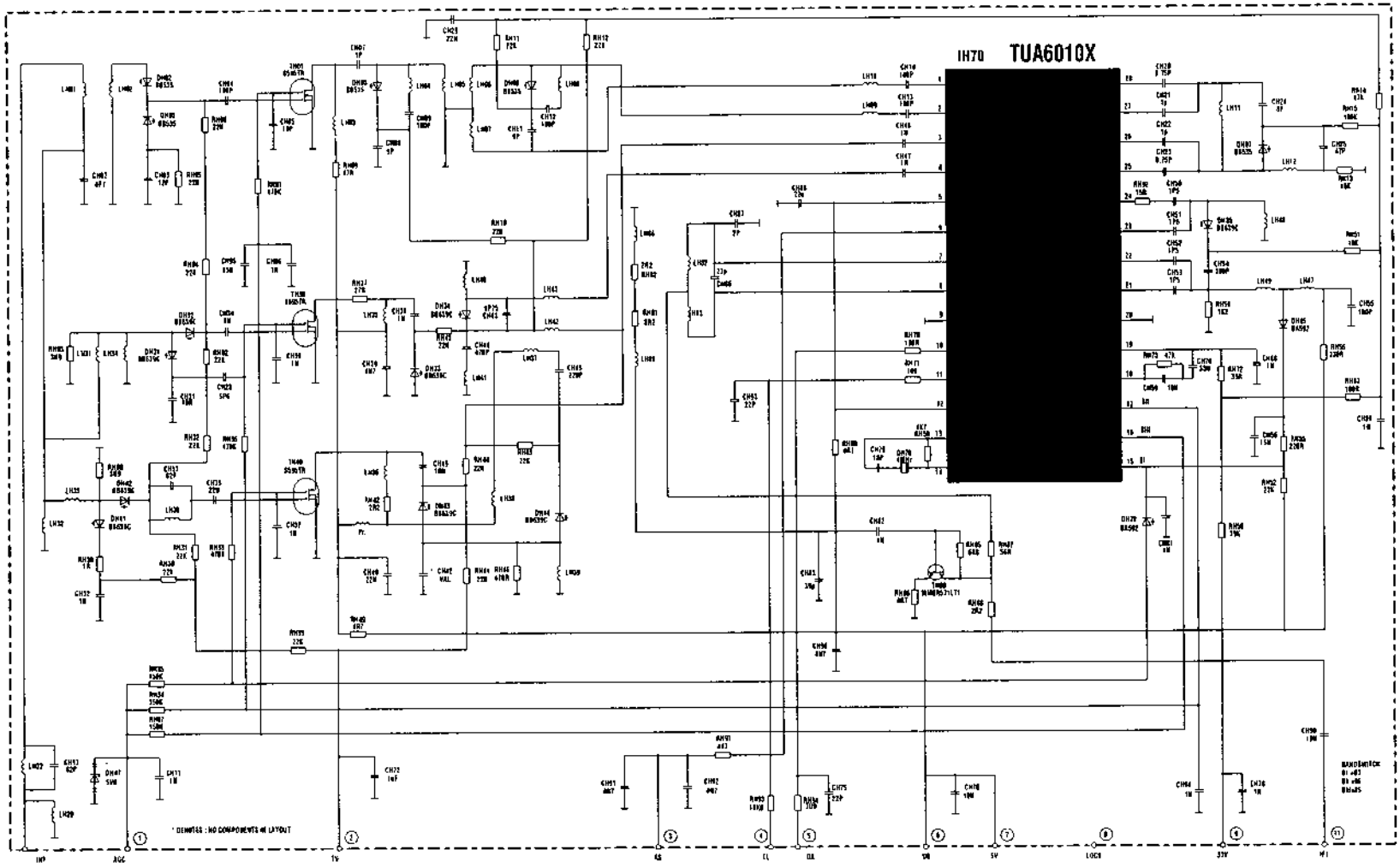
T=15µs 12Vpp

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
FRONTEND PART (2) - EINGANGSSTUFEN (2) - PRESE FRONTALI (2) - FRONT END PART (2)

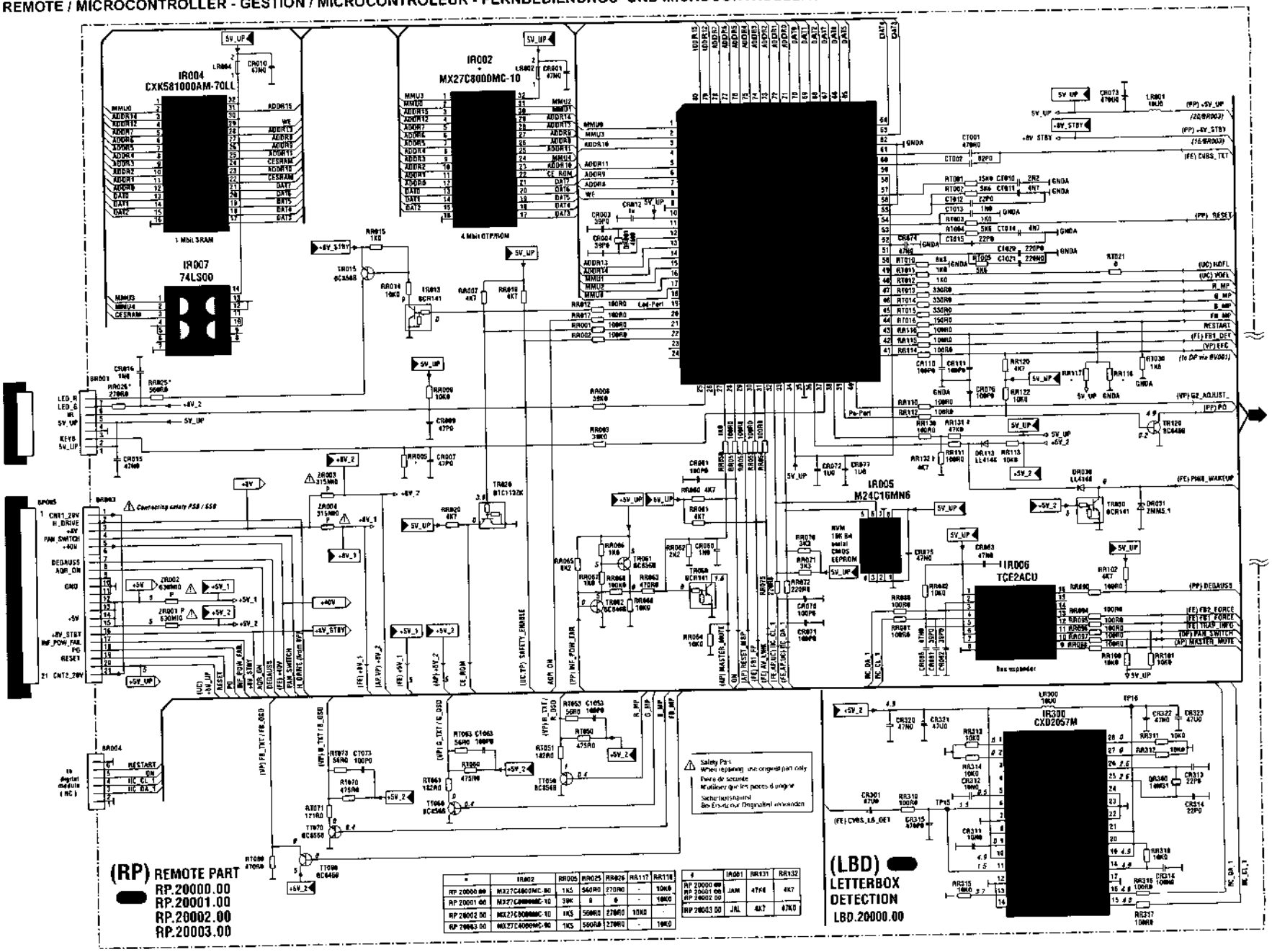
SCART INTERFACE - INTERFACE PERITELEVISION - SCART INTERFACE - PRESA PERITEL- EUROCONECTOR



VHF / UHF TUNER CTT5010 (For information only)



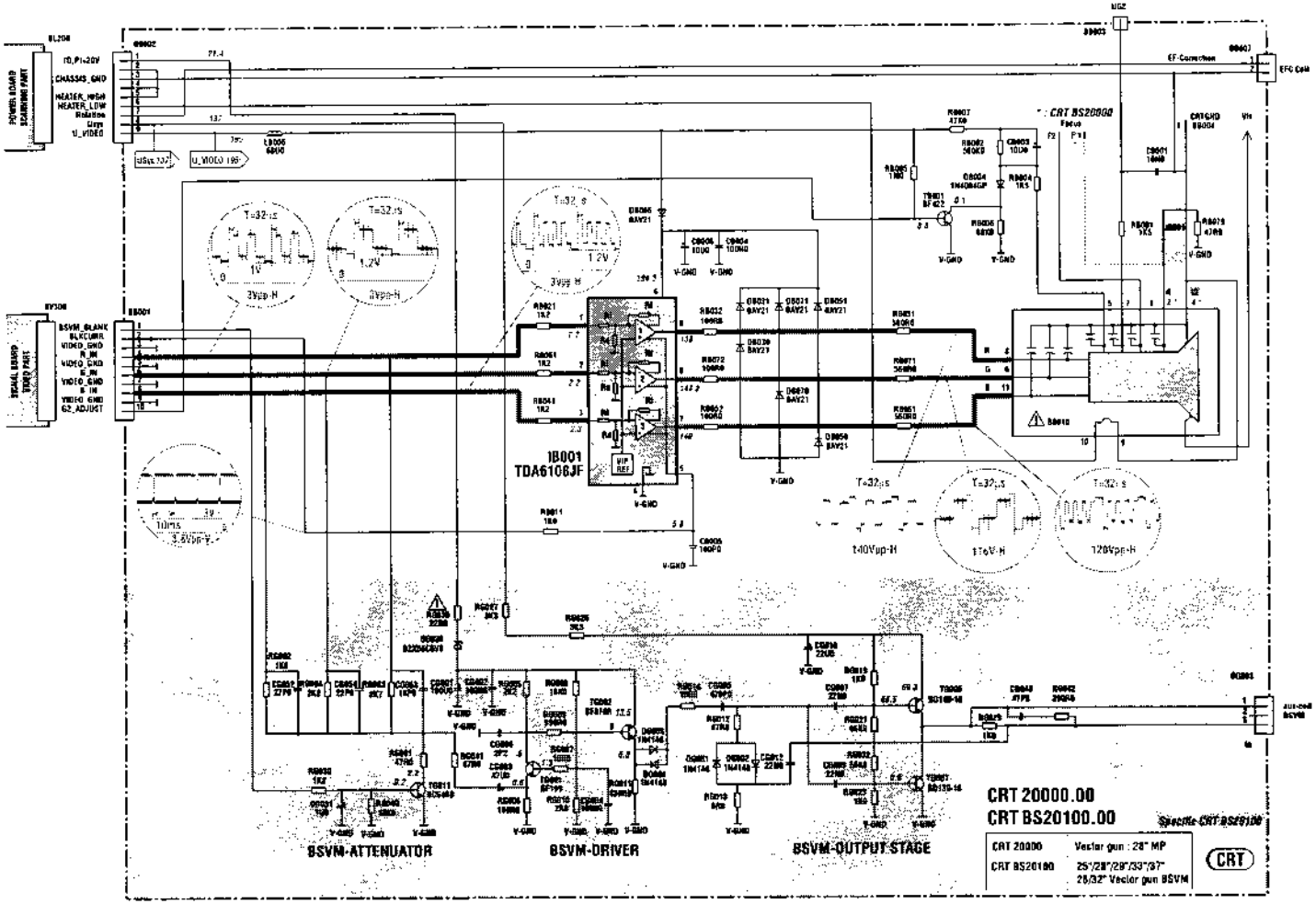
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
REMOTE / MICROCONTROLLER - GESTION / MICROCONTROLEUR - FERNBEDIENUNGS- UND MICROCONTROLLERSTUFEN - MICROPROCESSORE - REMOTO / MICROCONTROLADOR



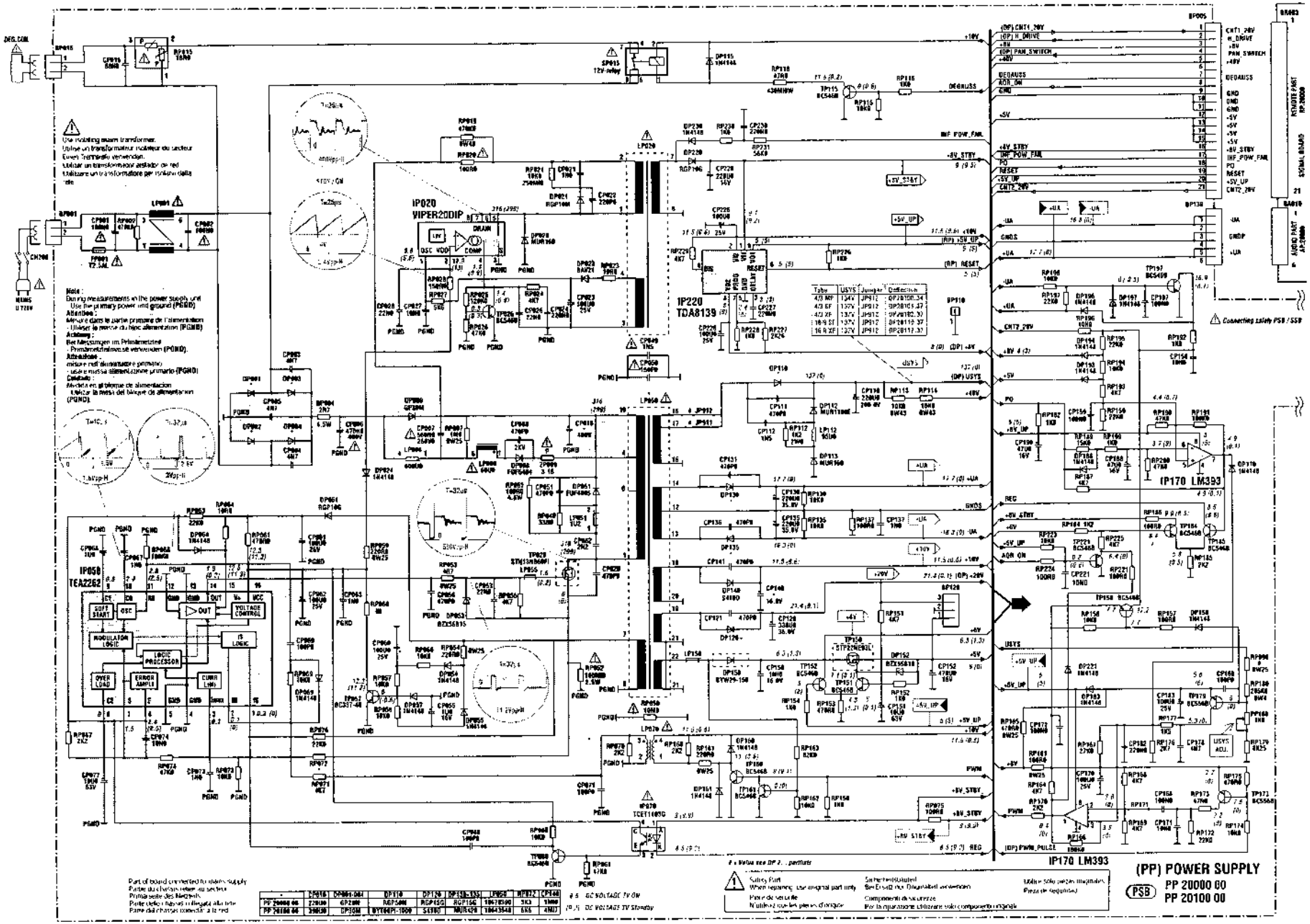
*	IR002	RR005	RR025	RR026	RR117	RR118
RP.20000.00	MX27C4000MC-80	1K5	560R0	270R0	-	10K0
RP.20001.00	MX27C4000MC-10	39K	0	0	-	10K0
RP.20002.00	MX27C8000MC-10	1K5	560R0	270R0	10K0	-
RP.20003.00	MX27C4000MC-90	1K5	560R0	270R0	-	10K0

*	IR001	RR131	RR132
RP.20000.00 RP.20001.00 RP.20002.00	JAM	47K0	4K7
RP.20003.00	JAL	4K7	47K0

VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO
CRT 20000.00 - CRT BS20100.00

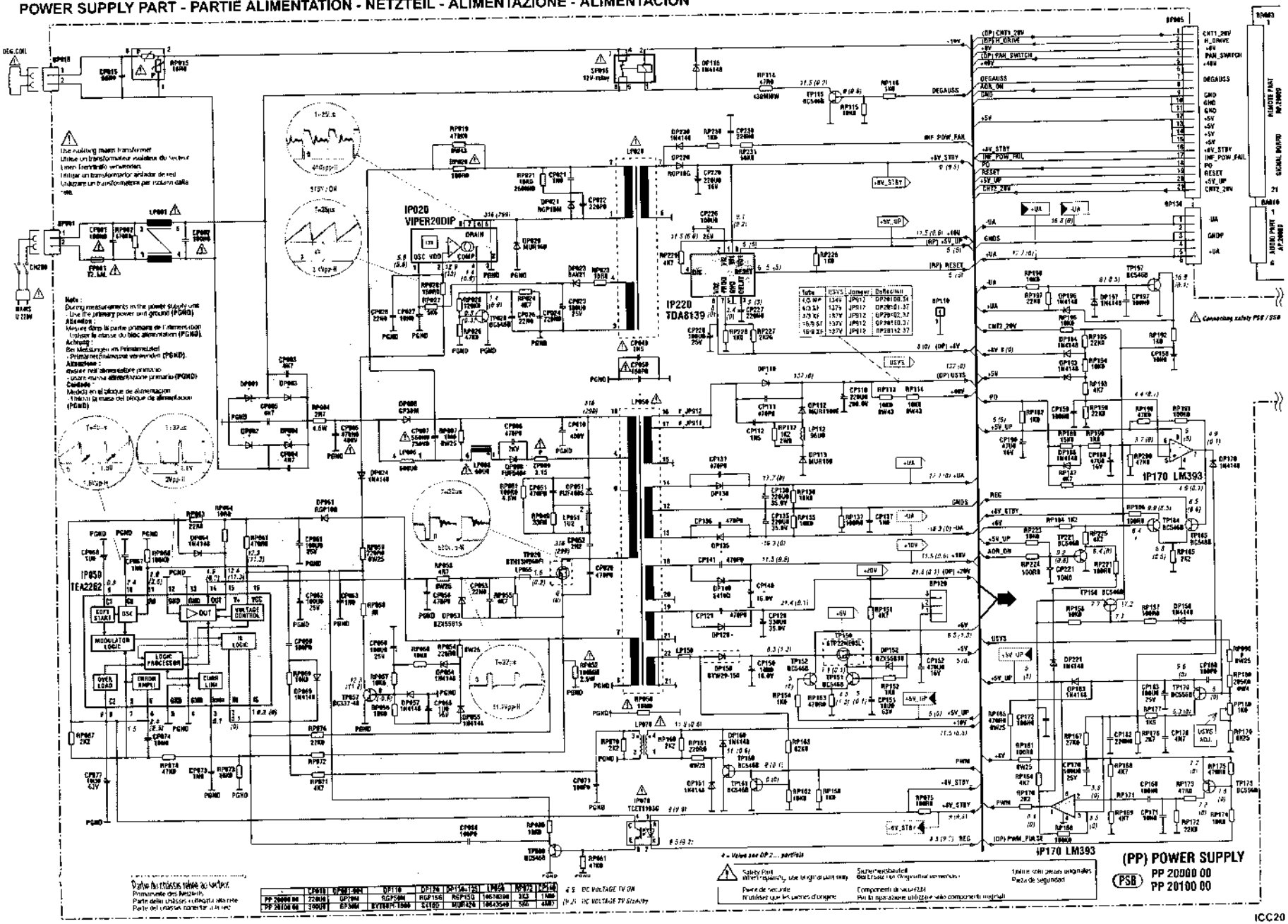


POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS
POWER SUPPLY PART - PARTIE ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓN

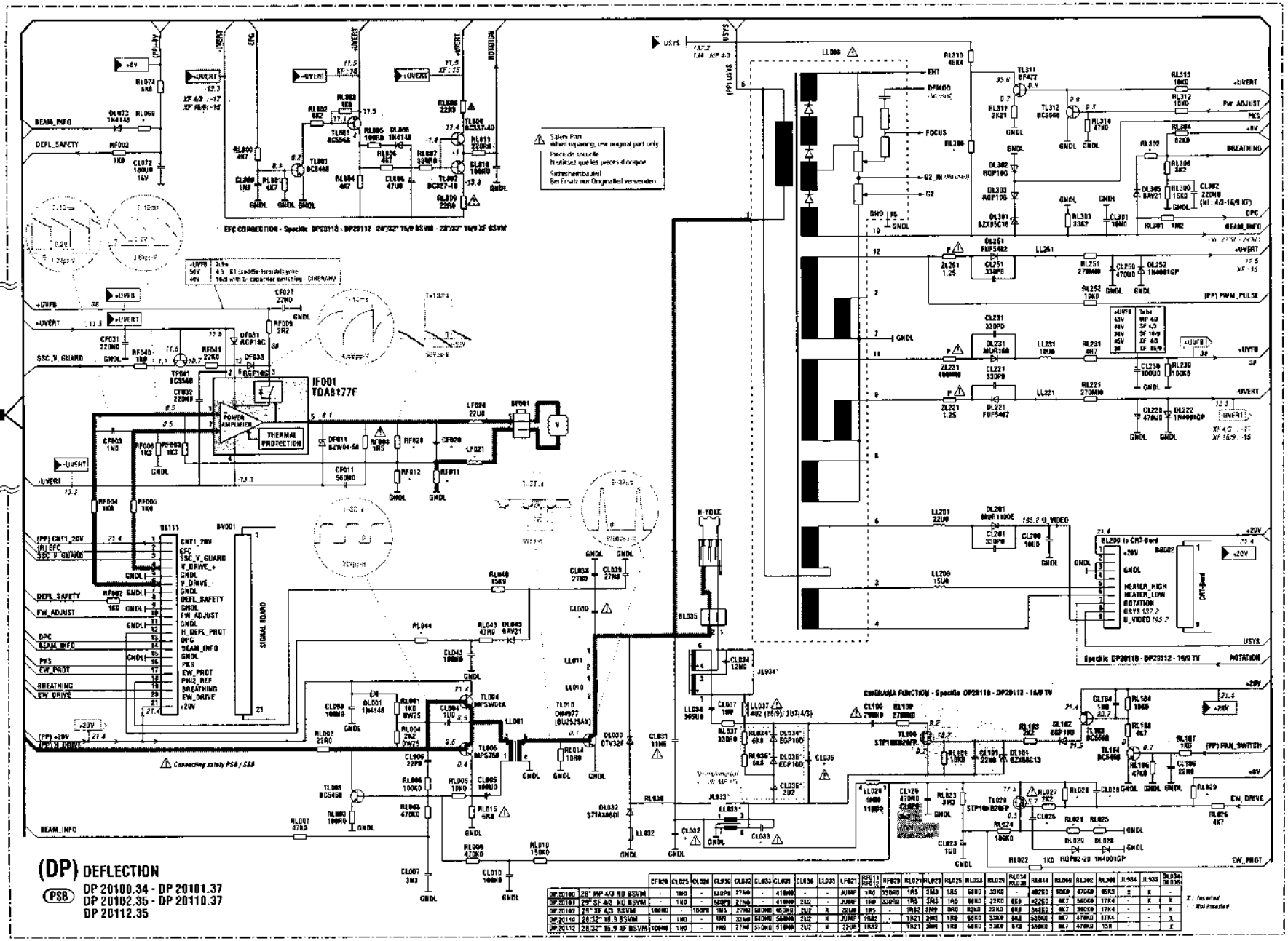


POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

POWER SUPPLY PART - PARTIE ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓN

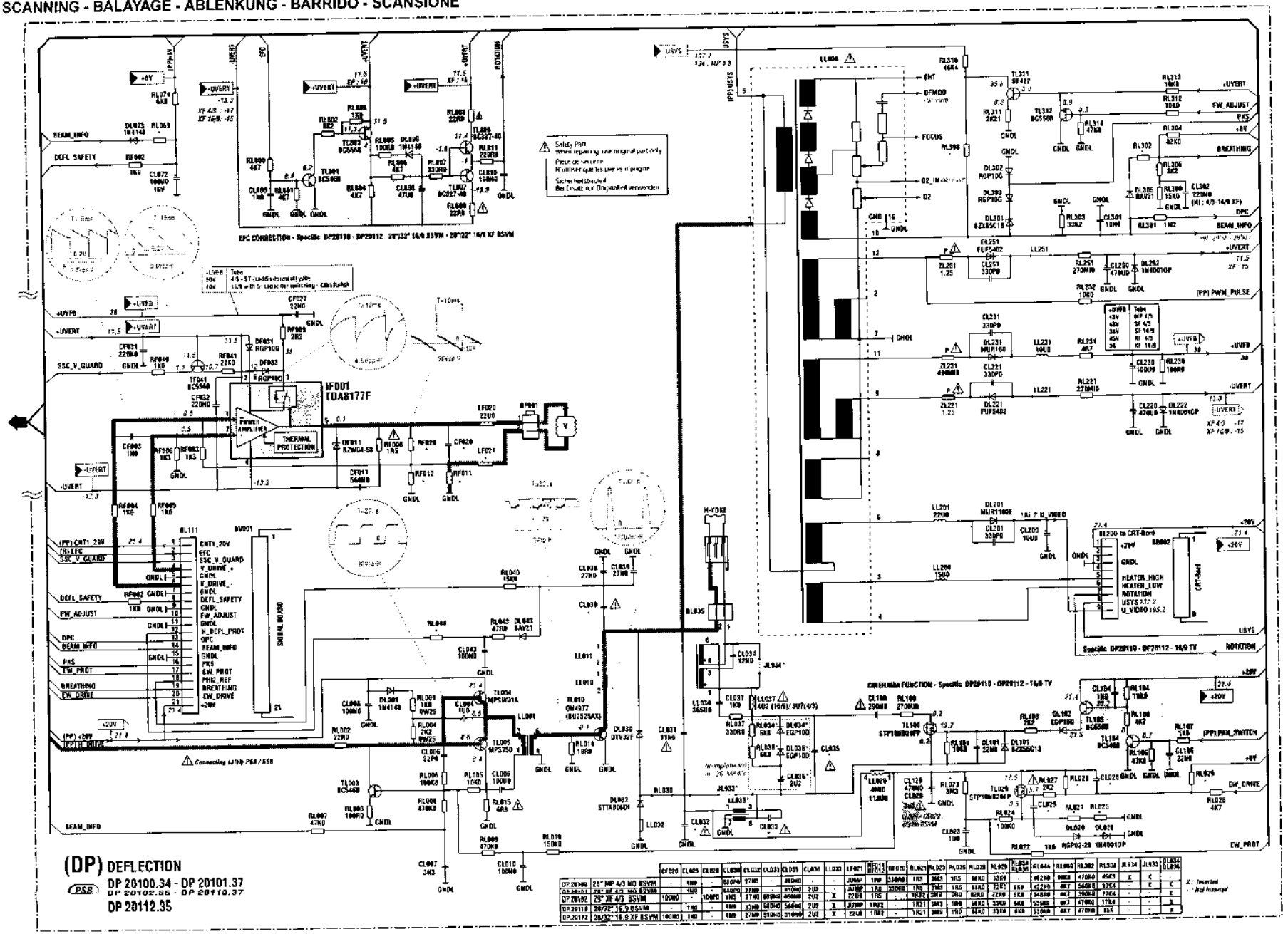


POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS
SCANNING - BALAYAGE - ABLENKUNG - BARRIDO - SCANSIONE



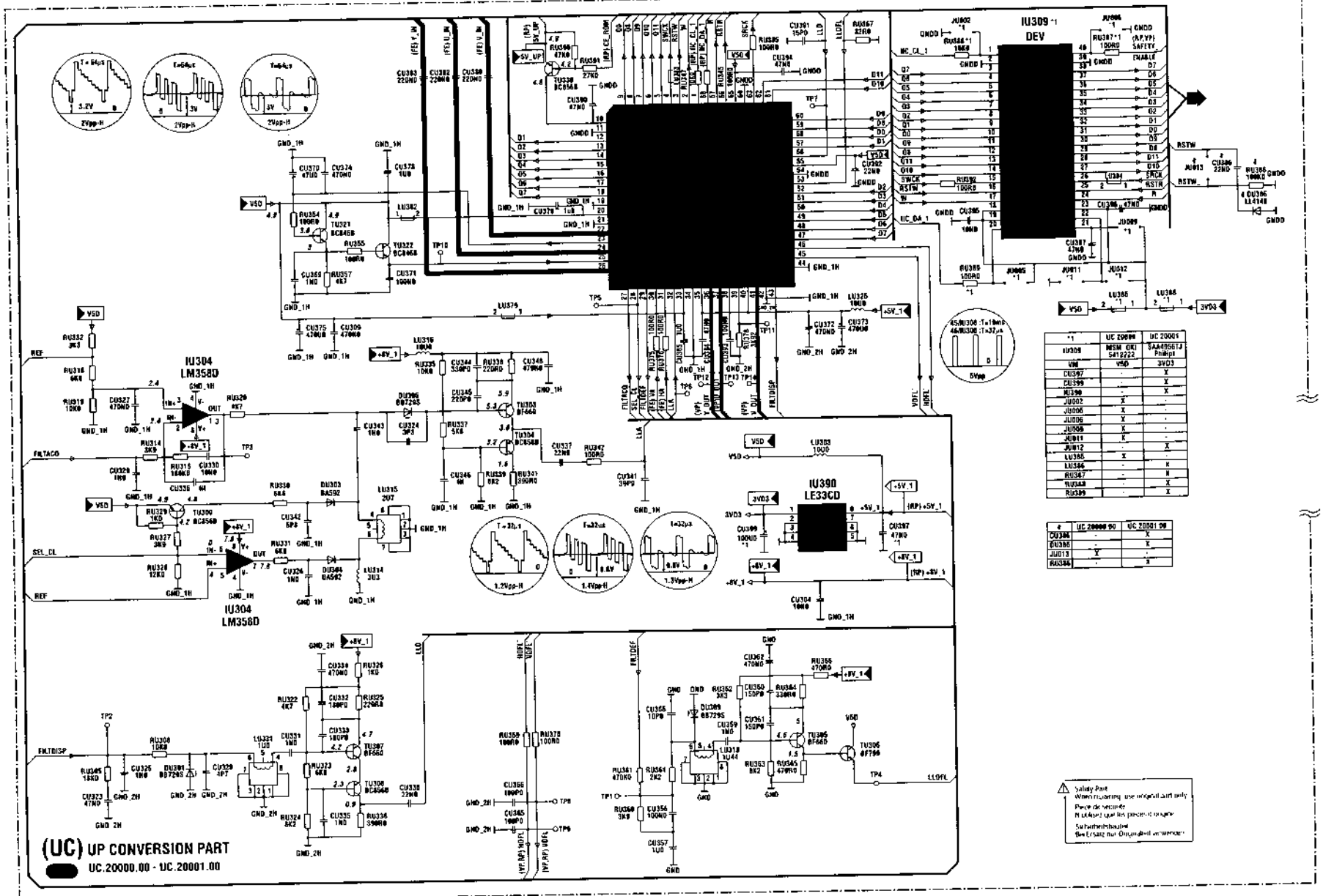
ICC20
First issue 05 / 00

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



ICC20
First issue 05 / 00

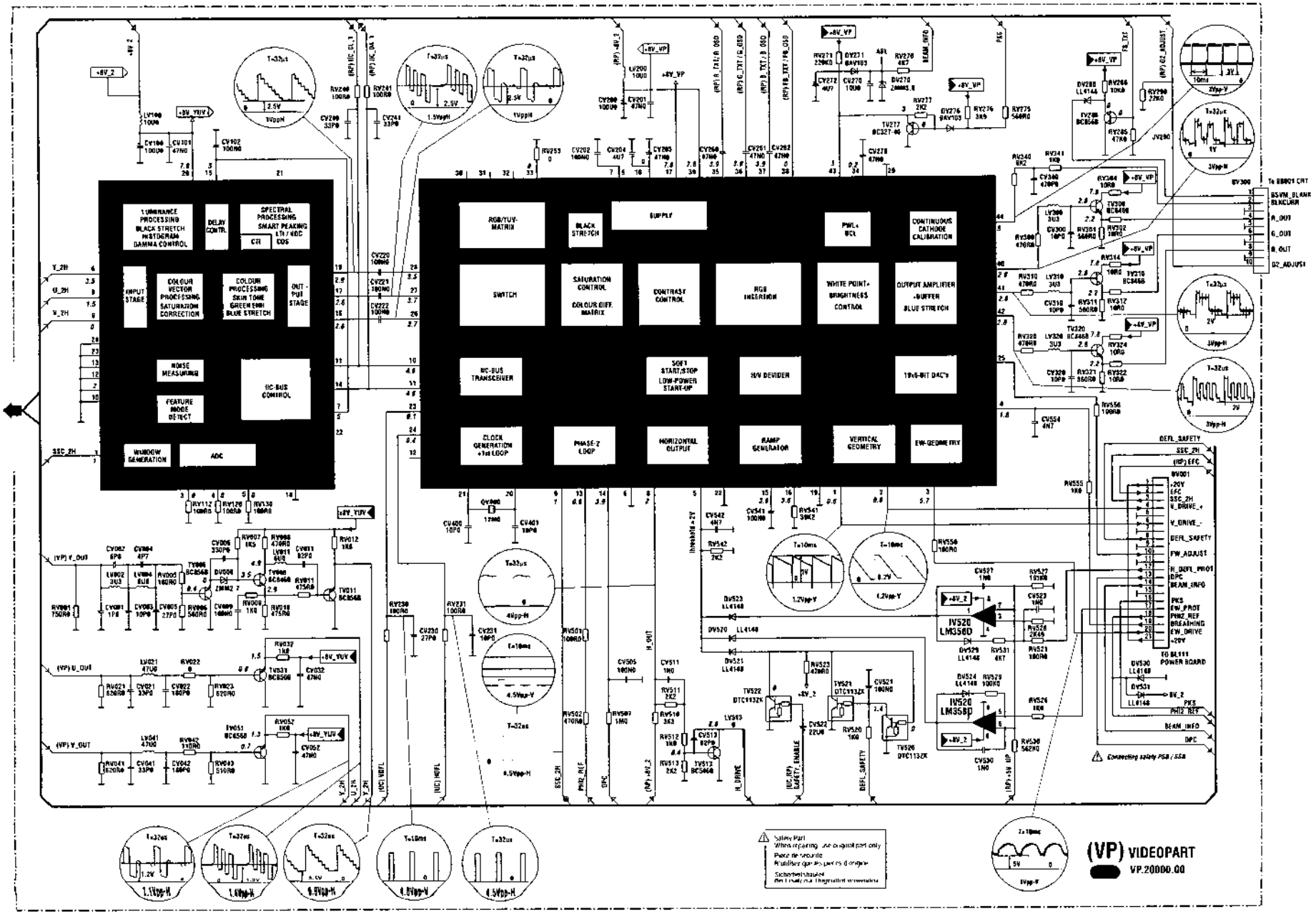
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
UPCONVERTER PART - PARTIE CONVERSION - UPCONVERTER STUFEN - CIRCUITO UPCONVERTER - SUPRACONVERSOR



*1 IU309	UC 20000 MSM OKI 5412222	UC 20001 SAA4956TJ Philips
VM	V5D	3VD3
CU397	-	X
CU399	-	X
RU390	-	X
JU002	X	-
JU006	X	-
JU006	X	-
JU009	X	-
JU011	X	-
JU012	-	X
LU385	X	-
LU386	-	X
RU347	-	X
RU348	-	X
RU389	-	X

#	UC 20000 00	UC 20001 00
CU384	-	X
CU385	-	X
JU013	X	-
RU386	-	X

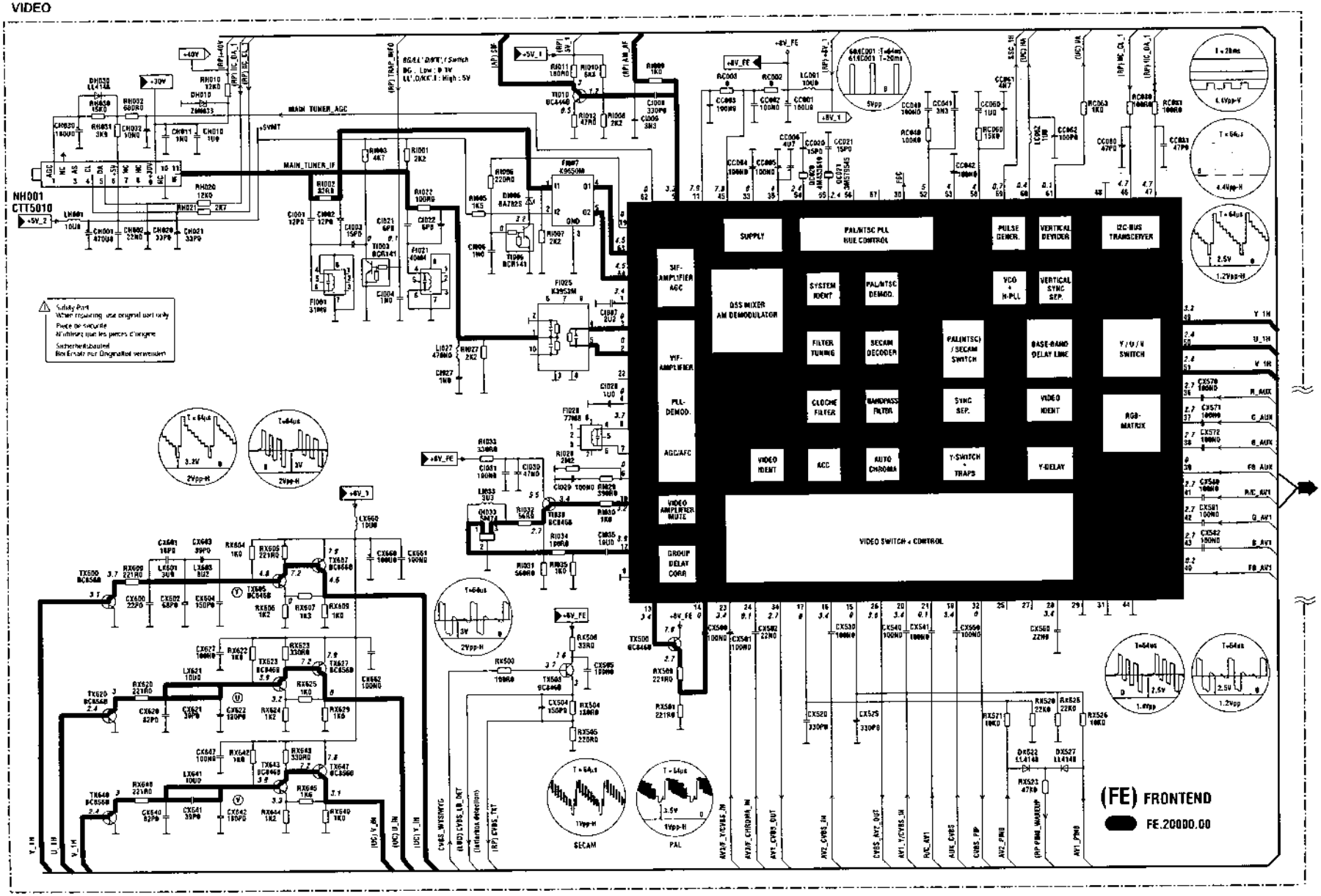
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
VIDEO PART - PARTIE VIDEO - VIDEO-SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMENTO VIDEO



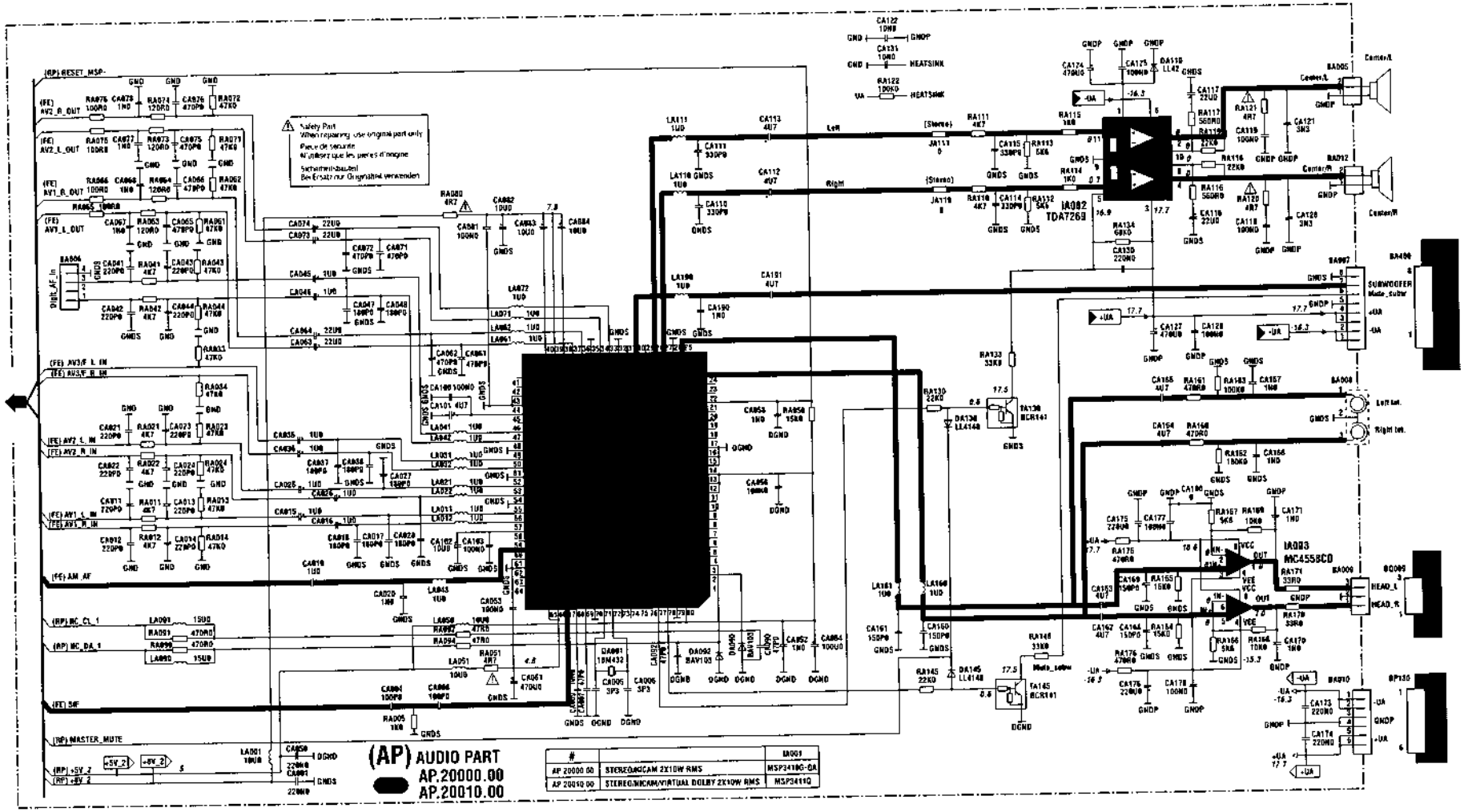
ICC20
First issue 05 / 00

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
FRONTEND PART (1) - EINGANGSSTUFEN (1) - PRESE FRONTALI (1) - FRONT END PART (1)

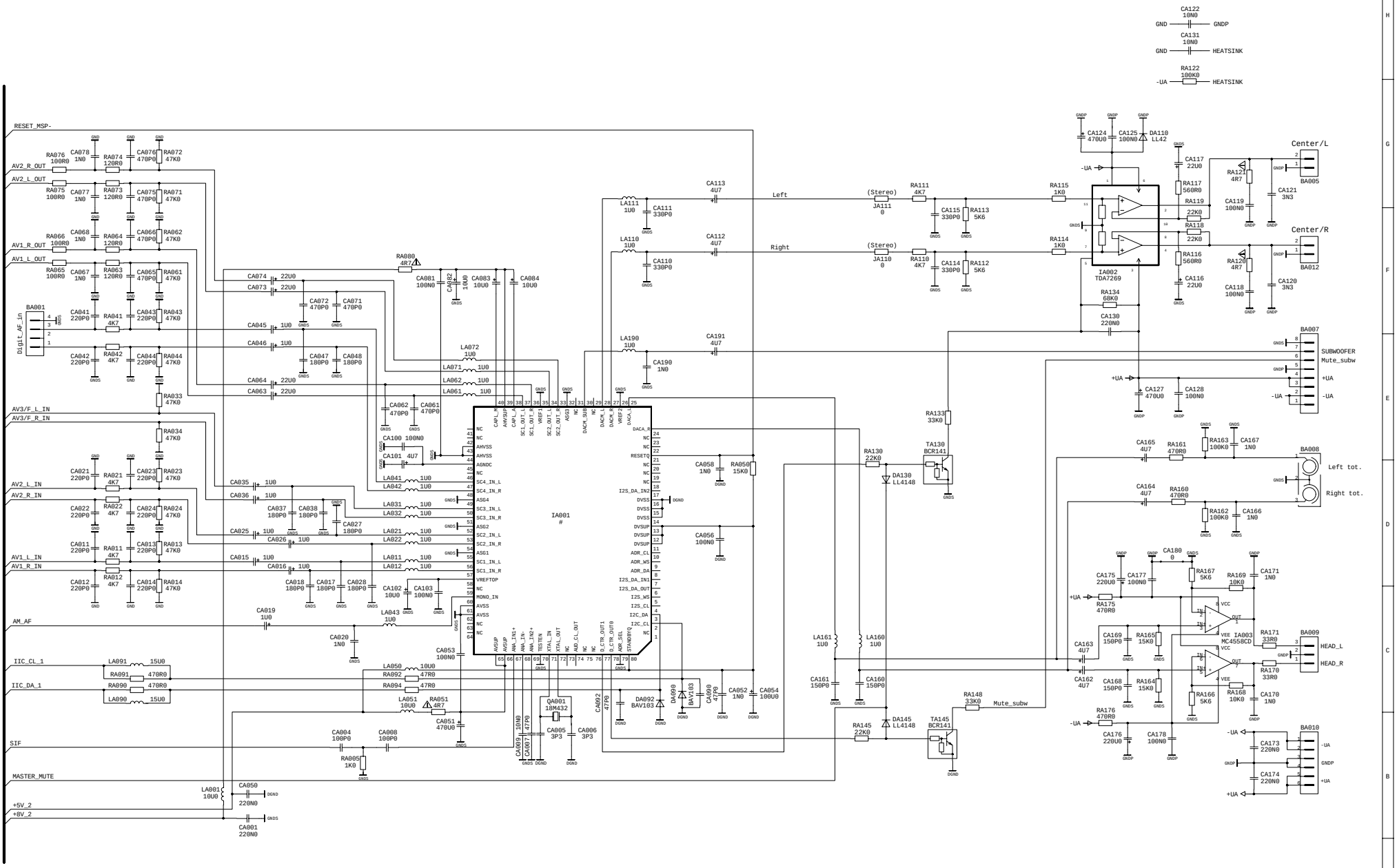
RF/FI / VIDEO SIGNAL PROCESSING - HF/FI / TRAITEMENT LUMINANCE CHROMINANCE - HF-, ZF- UND VIDEO-SIGNALVERARBEITUNG - RF/FI / ELABORAZIONE SEGNALE VIDEO - RF/FI / TRATAMENTO SEÑAL VIDEO



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



#		IA001
AP.20000.00	STEREO/NICAM 2X10W RMS	MSP3410G-QA
AP.20010.00	STEREO/NICAM/VIRTUAL DOLBY 2X10W RMS	MSP3410G



#	IA001
AP 20000 00	MSP3410G-QA
AP 20010 00	MSP3451G

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

THOMSON MULTIMEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CTA_PEDUZZI

	INDEX	DATE	NAME	DESCRIPTION
E		26.03.99	J.David	C36930
D		01.12.98	RIEDM.	CORRECTION
C		19.11.98	RIEDM.	C20630/29900 R50/30229/278 NR.ADDED
B		22.08.98	RIEDM.	BGL2-CORR.
A		11.06.98	RIEDM.	BGL1-CORR.

DRAWN
ON: 10.03.99
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER
AP.20000.00	10623730
AP.20010.00	10623930

TV IC20
PAGE: 1
OF : 1

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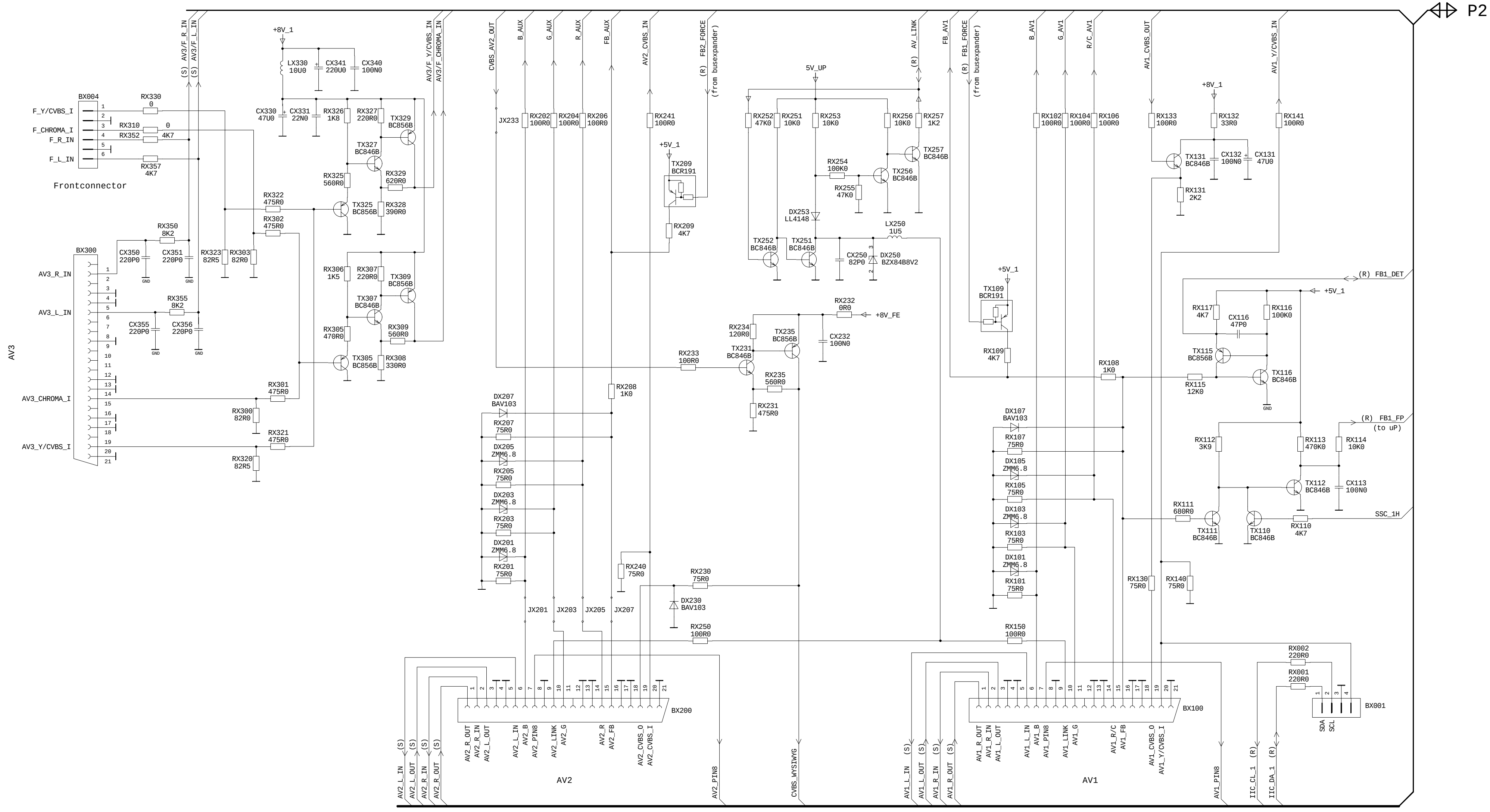
PCAD FORMAT DIN A1



P2
Frontconnector
BX004
F_Y/CVBS_I
F_CHROMA_I
F_R_IN
F_L_IN
AV3
BX300
AV3_R_IN
AV3_L_IN
AV3_CHROMA_I
AV3_Y/CVBS_I
(S) AV3/F_R_IN
(S) AV3/F_L_IN
AV3/F_Y/CVBS_IN
AV3/F_CHROMA_IN
+8V_1
CVBS_AV2_OUT
B_AUX
G_AUX
R_AUX
FB_AUX
AV2_CVBS_IN
(R) FB2_FORCE (from busexpander)
5V_UP
(R) AV_LINK
FB_AV1
(R) FB1_FORCE (from busexpander)
B_AV1
G_AV1
R/C_AV1
AV1_CVBS_OUT
AV1_Y/CVBS_IN
+5V_1
+8V_FE
(R) FB1_DET
(R) FB1_FP (to uP)
SSC_1H
BX200
AV2
BX100
AV1
BX001
SDA
SCL
(S) AV2_L_IN
(S) AV2_L_OUT
(S) AV2_R_IN
(S) AV2_R_OUT
AV2_PIN8
CVBS_WYSIWYG
(S) AV1_L_IN
(S) AV1_L_OUT
(S) AV1_R_IN
(S) AV1_R_OUT
AV1_PIN8
(R) IIC_CL_1
(R) IIC_DA_1

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P.O.Box 1307 D-78003 Villingen Germany
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DEVELOPMENT DEPT: CTV_MIKA

INDEX	DATE	NAME	DESCRIPTION
E	07.02.00	RIEDM.	C31330/34500
D	18.11.99	RIEDM.	C28630/29200
H	04.04.00	J.David	C34650
G	31.03.00	J.David	C37700
F	27.03.00	J.David	C37100

DRAWN ON: 11.03.99 BY: RIEDM.
CHECKED ON: BY:

DESIGNATION	TOCOM-NUMBER		TV
FE.20000.00	10624110	00	IC20

PAGE: 1 OF : 3

PCAD FORMAT DIN A1

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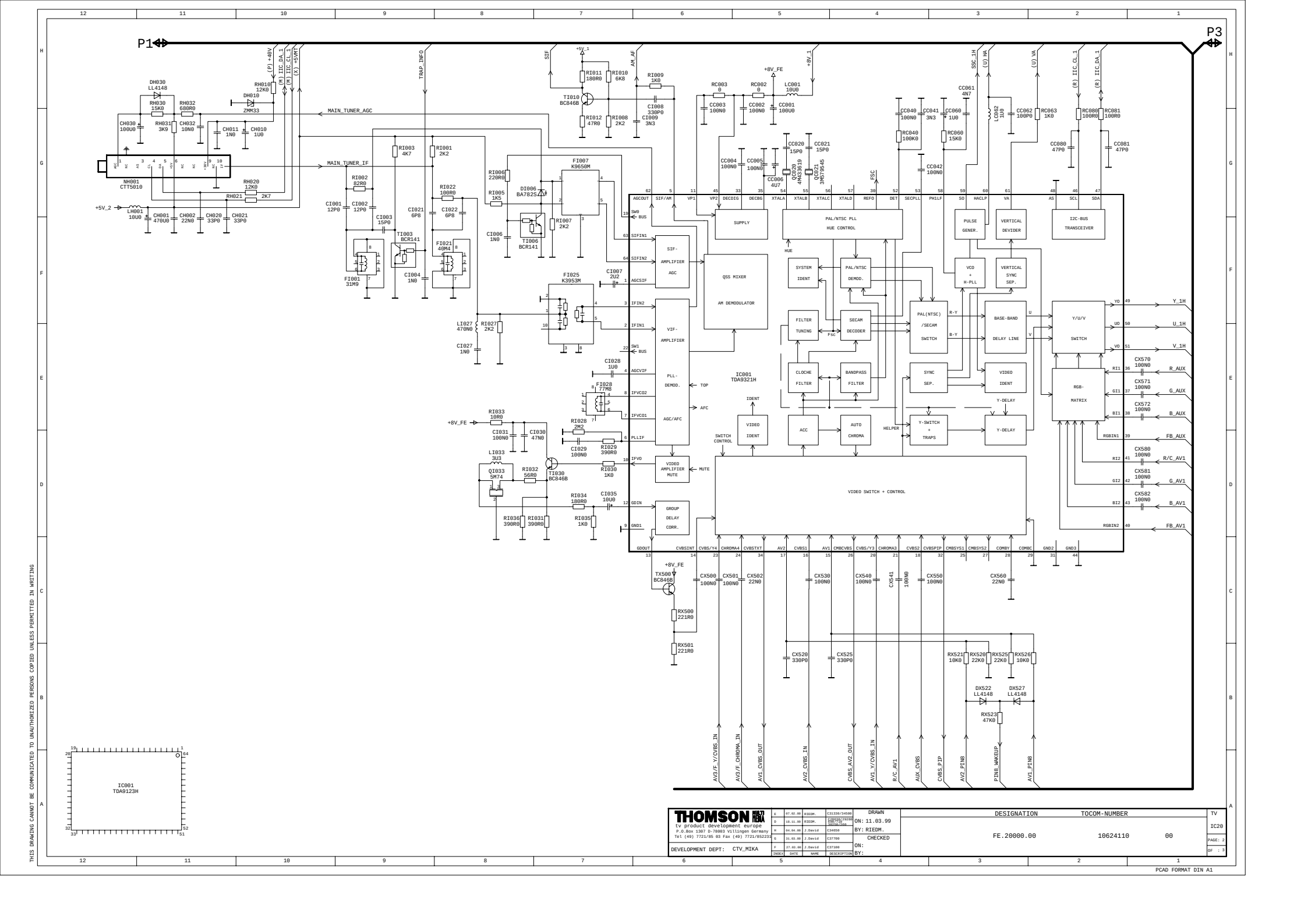
P1
P3
MAIN_TUNER_AGC
MAIN_TUNER_IF
TRAP_INFO
SIF
AM_AF
+5V_2
+8V_FE
+8V_1
FSC
HUE
IC001
TDA9321H
SUPPLY
PAL/NTSC PLL
HUE CONTROL
QSS MIXER
AM DEMODULATOR
SIF-
AMPLIFIER
AGC
VIF-
AMPLIFIER
PLL-
DEMOD.
AGC/AFC
VIDEO
AMPLIFIER
MUTE
GROUP
DELAY
CORR.
SYSTEM
IDENT
PAL/NTSC
DEMOD.
FILTER
TUNING
SECAM
DECODER
CLOCHE
FILTER
BANDPASS
FILTER
ACC
AUTO
CHROMA
VIDEO
IDENT
SYNC
SEP.
PAL(NTSC)
/SECAM
SWITCH
BASE-BAND
DELAY LINE
Y-SWITCH
+
TRAPS
Y-DELAY
VIDEO
IDENT
Y/U/V
SWITCH
RGB-
MATRIX
PULSE
GENER.
VCO
+
H-PLL
VERTICAL
DEVIDER
VERTICAL
SYNC
SEP.
I2C-BUS
TRANSCEIVER
VIDEO SWITCH + CONTROL
SWITCH
CONTROL
HELPER
IDENT
AGCOUT
SIF/AM
VP1
VP2
DECDIG
DECBG
XTALA
XTALB
XTALC
XTALD
REFO
DET
SECPLL
PH1LF
SO
HACLP
VA
AS
SCL
SDA
SW0 BUS
SW1 BUS
SIFIN1
SIFIN2
AGCSIF
IFIN2
IFIN1
AGCVIF
IFVCO2
IFVCO1
PLLIF
IFVO
GDIN
GND1
TOP
AFC
MUTE
GDOUT
CVBSINT
CVBS/Y4
CHROMA4
CVBSTXT
AV2
CVBS1
AV1
CMBCVBS
CVBS/Y3
CHROMA3
CVBS2
CVBSPIP
CMBSYS1
CMBSYS2
COMBY
COMBC
GND2
GND3
Y_1H
U_1H
V_1H
R_AUX
G_AUX
B_AUX
FB_AUX
R/C_AV1
G_AV1
B_AV1
FB_AV1
AV3/F_Y/CVBS_IN
AV3/F_CHROMA_IN
AV1_CVBS_OUT
AV2_CVBS_IN
CVBS_AV2_OUT
AV1_Y/CVBS_IN
R/C_AV1
AUX_CVBS
CVBS_PIP
AV2_PIN8
PIN8_WAKEUP
AV1_PIN8
IC001
TDA9123H
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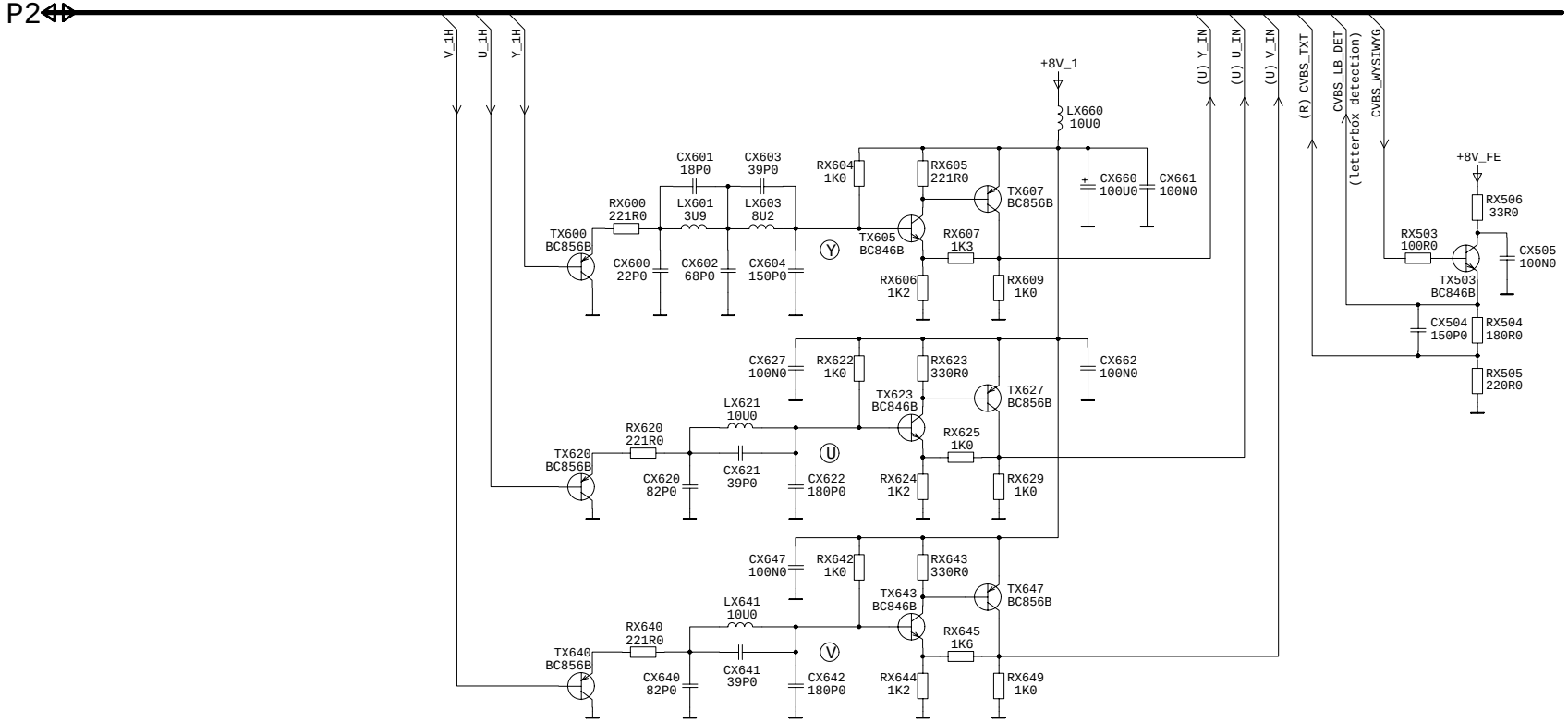
PCAD FORMAT DIN A1
THOMSON MULTIMEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231
DEVELOPMENT DEPT: CTV_MIKA
DESIGNATION
TOCOM-NUMBER
FE.20000.00
10624110
00
TV
IC20
PAGE: 2
OF : 3
DRAWN
ON: 11.03.99
BY: RIEDM.
CHECKED
ON:
BY:



THOMSON MULTI MEDIA	INDEX	DATE	NAME	DESCRIPTION
tv product development europe P.O.Box 1307 D-78003 Villingen Germany Tel (49) 7721/85 03 Fax (49) 7721/852231	E	07.02.00	RIEDM.	C31330/34500
	D	18.11.99	RIEDM.	C28630/29280 S99/710 30240/760
	H	04.04.00	J.David	C34650
	G	31.03.00	J.David	C37700
DEVELOPMENT DEPT: CTV_MIKA	F	27.03.00	J.David	C37100

DRAWN ON: 11.03.99 BY: RIEDM.
CHECKED ON: BY:

DESIGNATION	TOCOM-NUMBER	
FE.20000.00	10624110	00

TV IC20 PAGE: 3 OF : 3

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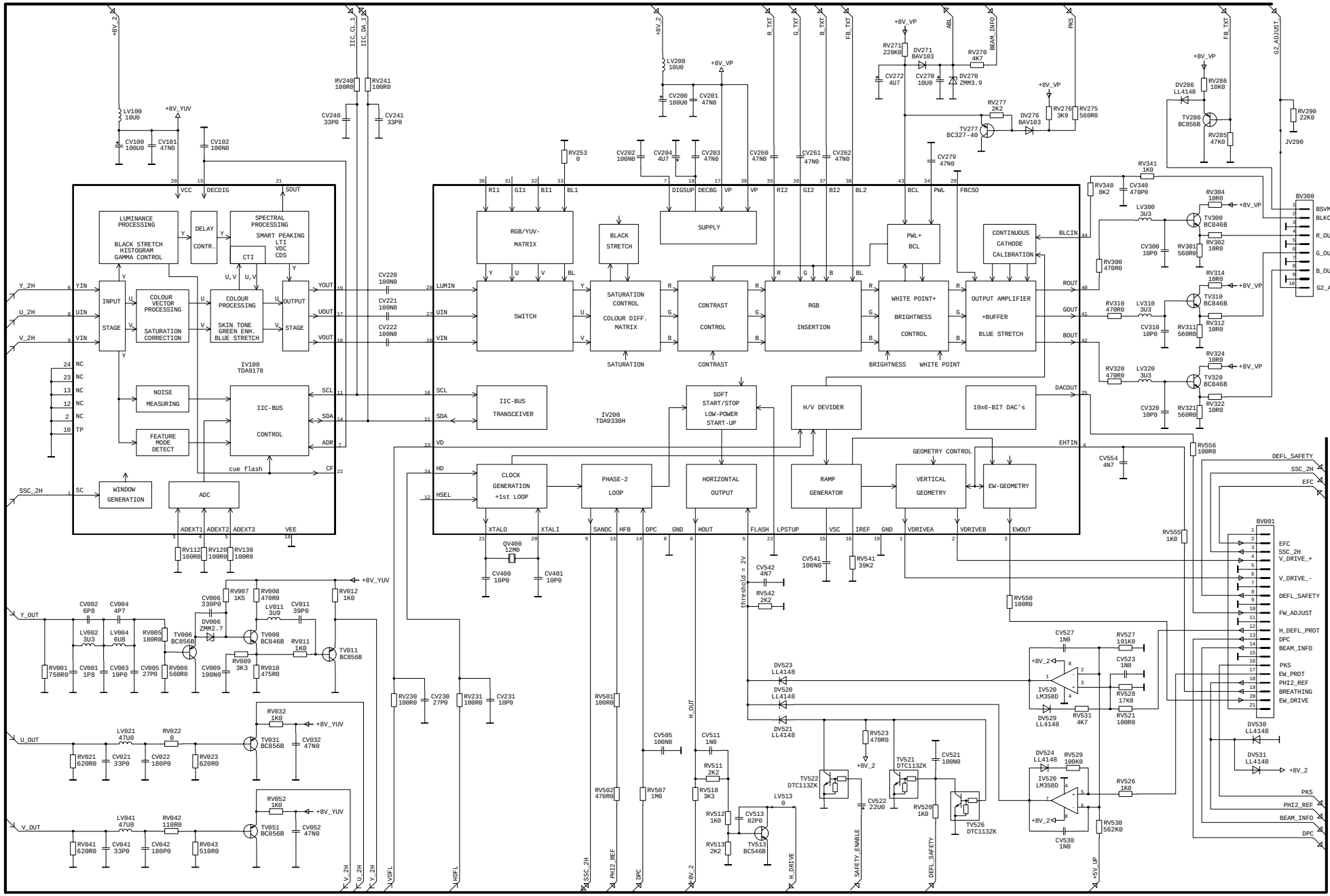
PCAD FORMAT DIN A2


IV100 TDA9178
IV200 TDA9330H
LUMINANCE PROCESSING
BLACK STRETCH HISTOGRAM GAMMA CONTROL
DELAY
CONTR.
SPECTRAL PROCESSING
SMART PEAKING
LTI
VDC
CDS
CTI
INPUT STAGE
COLOUR VECTOR PROCESSING
SATURATION CORRECTION
COLOUR PROCESSING
SKIN TONE
GREEN ENH.
BLUE STRETCH
OUTPUT STAGE
NOISE MEASURING
FEATURE MODE DETECT
IIC-BUS CONTROL
WINDOW GENERATION
ADC
cue flash
RGB/YUV-MATRIX
BLACK STRETCH
SUPPLY
PWL+ BCL
CONTINUOUS CATHODE CALIBRATION
SWITCH
SATURATION CONTROL
COLOUR DIFF. MATRIX
CONTRAST CONTROL
RGB INSERTION
WHITE POINT+ BRIGHTNESS CONTROL
OUTPUT AMPLIFIER +BUFFER
BLUE STRETCH
SATURATION
CONTRAST
BRIGHTNESS
WHITE POINT
IIC-BUS TRANSCEIVER
SOFT START/STOP LOW-POWER START-UP
H/V DEVIDER
19x6-BIT DAC's
CLOCK GENERATION +1st LOOP
PHASE-2 LOOP
HORIZONTAL OUTPUT
RAMP GENERATOR
VERTICAL GEOMETRY
EW-GEOMETRY
GEOMETRY CONTROL
threshold = 2V
BSVM_BLANK
BLKCURR
R_OUT
G_OUT
B_OUT
G2_ADJUST
DEFL_SAFETY
SSC_2H
EFC
V_DRIVE_+
V_DRIVE_-
FW_ADJUST
H_DEFL_PROT
DPC
BEAM_INFO
PKS
EW_PROT
PHI2_REF
BREATHING
EW_DRIVE
BEAM_INFO
H_OUT
SAFETY_ENABLE
DEFL_SAFETY
+5V_UP
THOMSON MULTIMEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231
DEVELOPMENT DEPT: CTV_LUEBCKE
DRAWN
ON: 04.11.98
BY: RIEDM.
CHECKED
ON:
BY:
DESIGNATION
VP.20000.00
TOCOM-NUMBER
10626010
TV IC20
PAGE: 1
OF : 1
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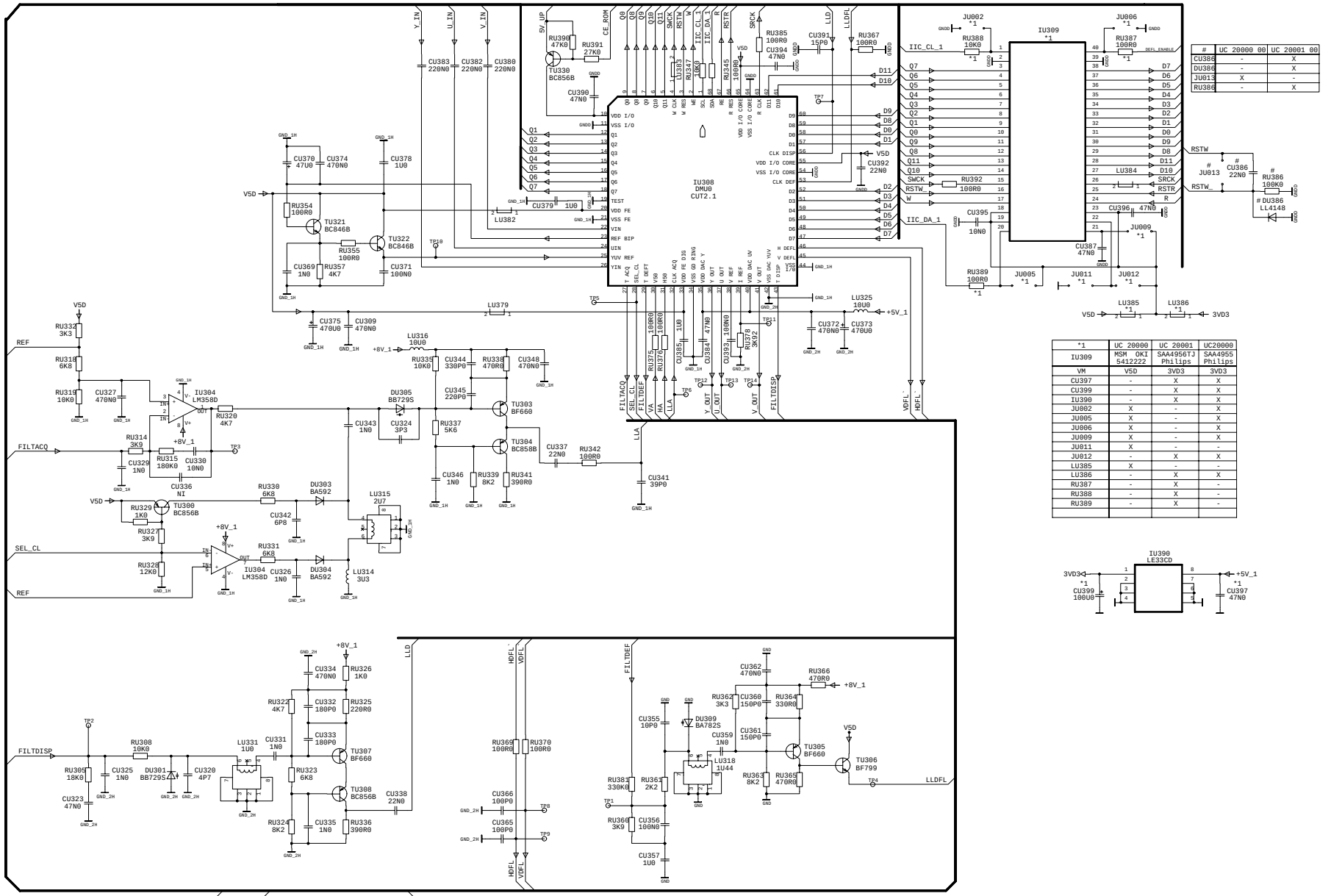
PCAD FORMAT DIN A1



#	UC 20000 00	UC 20001 00
CU386	-	X
DU386	-	X
JU013	X	-
RU386	-	X

*1	UC 20000	UC 20001	UC20000
IU309	MSM OKI 5412222	SAA4956TJ Philips	SAA4955 Philips
VM	V5D	3VD3	3VD3
CU397	-	X	X
CU399	-	X	X
IU390	-	X	X
JU002	X	-	X
JU005	X	-	X
JU006	X	-	X
JU009	X	-	X
JU011	X	-	-
JU012	-	X	X
LU385	X	-	-
LU386	-	X	X
RU387	-	X	-
RU388	-	X	-
RU389	-	X	-

⚠ Sicherheitsbauteil
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THOMSON MULTI MEDIA
tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CDH_SEEBURGER

INDEX	DATE	NAME	DESCRIPTION
E	16.11.98	RIEDM.	C29710/720 30150/80L3-C
I	05.04.00	J.David	CORRECTION
H	27.03.00	J.David	C37190
G	08.03.00	RIEDM.	C35590
F	24.02.00	RIEDM.	C30010/33010 34040/34740

DRAWN ON: 03.11.98 BY: RIEDM.
CHECKED ON: BY:

DESIGNATION	TOCOM-NUMBER	
UC.20000.00	10626020	TV
UC.20001.00	10649920	IC20
	00	PAGE: 1
		OF : 1

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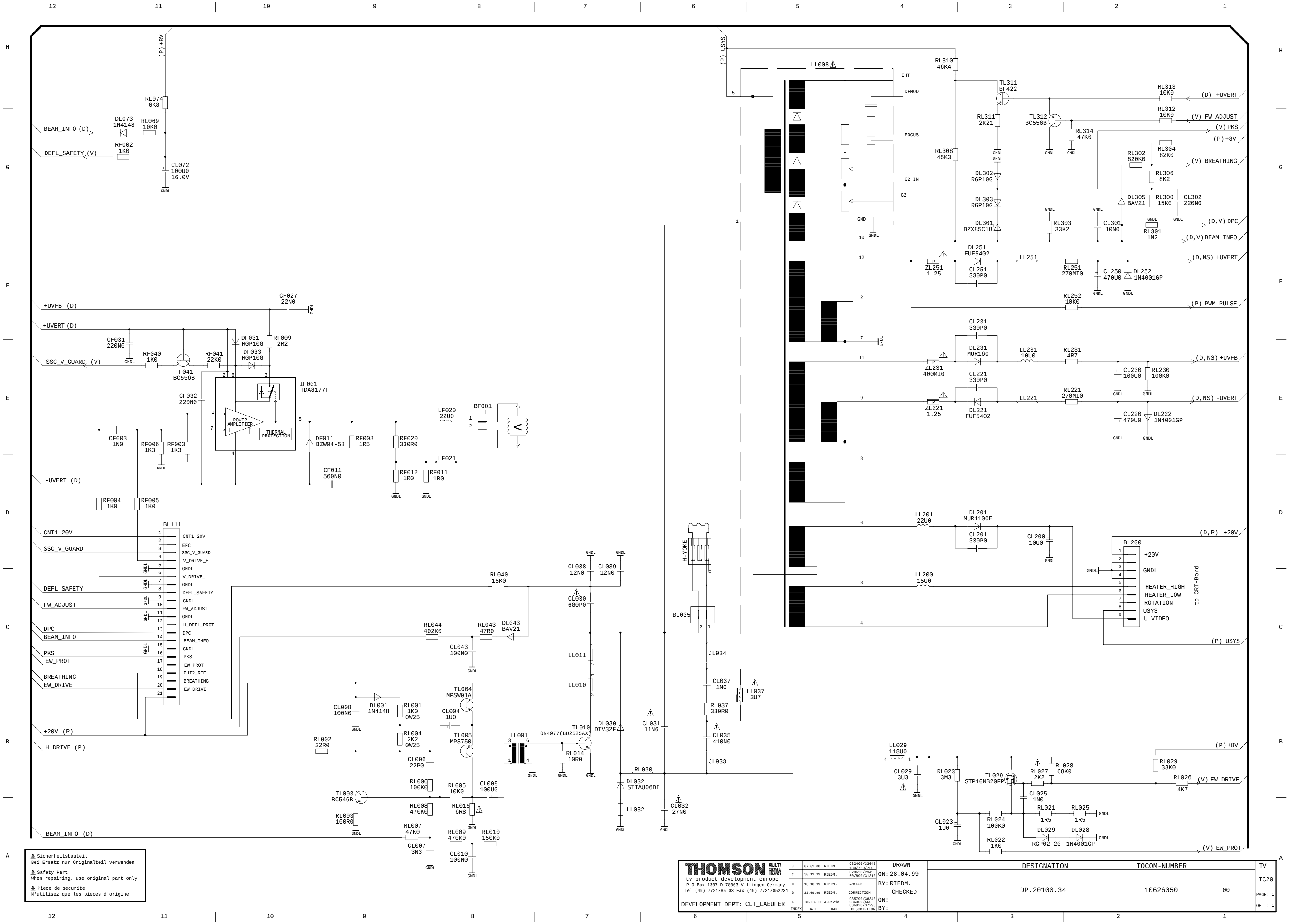
PCAD FORMAT DIN A1



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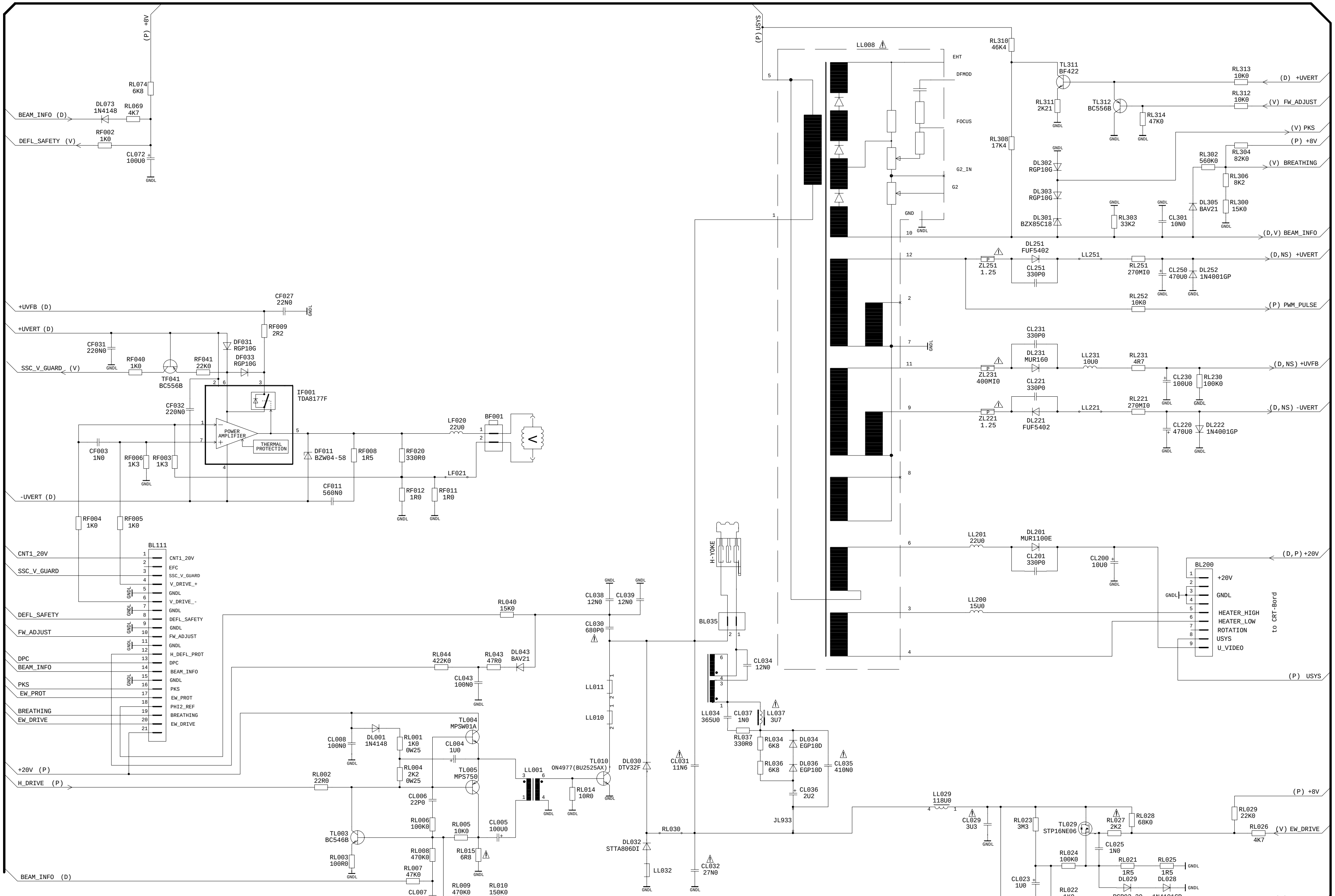
PCAD FORMAT DIN A1



(P) +8V
RL074 6K8
DL073 1N4148
RL069 4K7
BEAM_INFO (D)
RF002 1K0
DEFL_SAFETY (V)
CL072 100U0
+UVFB (D)
CF027 22N0
+UVERT (D)
RF009 2R2
CF031 220N0
DF031 RGP10G
DF033 RGP10G
SSC_V_GUARD (V)
RF040 1K0
TF041 BC556B
RF041 22K0
IF001 TDA8177F
POWER AMPLIFIER
THERMAL PROTECTION
CF032 220N0
LF020 22U0
BF001
CF003 1N0
RF006 1K3
RF003 1K3
DF011 BZW04-58
RF008 1R5
RF020 330R0
LF021
-UVERT (D)
CF011 560N0
RF012 1R0
RF011 1R0
RF004 1K0
RF005 1K0
BL111
CNT1_20V
SSC_V_GUARD
DEFL_SAFETY
FW_ADJUST
DPC
BEAM_INFO
PKS
EW_PROT
BREATHING
EW_DRIVE
EFC
V_DRIVE_+
GNDL
V_DRIVE_-
H_DEFL_PROT
PHI2_REF
RL040 15K0
CL038 12N0
CL039 12N0
CL030 680P0
RL044 422K0
RL043 47R0
DL043 BAV21
CL043 100N0
LL011
LL010
TL004 MPSW01A
CL008 100N0
DL001 1N4148
RL001 1K0 0W25
CL004 1U0
RL004 2K2 0W25
TL005 MPS750
LL001
TL010 ON4977(BU2525AX)
RL014 10R0
DL030 DTV32F
CL031 11N6
+20V (P)
H_DRIVE (P)
RL002 22R0
CL006 22P0
RL006 100K0
RL005 10K0
CL005 100U0
RL030
TL003 BC546B
RL008 470K0
RL015 6R8
DL032 STTA806DI
LL032
CL032 27N0
RL003 100R0
RL007 47K0
CL007 3N3
RL009 470K0
RL010 150K0
CL010 100N0
(P) USYS
LL008
EHT
DFMOD
FOCUS
G2_IN
G2
GND
H-YOKE
BL035
CL034 12N0
LL034 365U0
CL037 1N0
LL037 3U7
RL037 330R0
RL034 6K8
DL034 EGP10D
RL036 6K8
DL036 EGP10D
CL035 410N0
CL036 2U2
JL933
RL310 46K4
TL311 BF422
RL313 10K0
(D) +UVERT
RL311 2K21
TL312 BC556B
RL312 10K0
(V) FW_ADJUST
RL314 47K0
(V) PKS
RL308 17K4
(P) +8V
RL304 82K0
RL302 560K0
(V) BREATHING
DL302 RGP10G
DL303 RGP10G
RL306 8K2
DL305 BAV21
RL300 15K0
DL301 BZX85C18
RL303 33K2
CL301 10N0
(D,V) BEAM_INFO
DL251 FUF5402
LL251
(D,NS) +UVERT
ZL251 1.25
CL251 330P0
RL251 270MI0
CL250 470U0
DL252 1N4001GP
RL252 10K0
(P) PWM_PULSE
CL231 330P0
DL231 MUR160
LL231 10U0
RL231 4R7
(D,NS) +UVFB
ZL231 400MI0
CL230 100U0
RL230 100K0
CL221 330P0
RL221 270MI0
(D,NS) -UVERT
ZL221 1.25
DL221 FUF5402
LL221
CL220 470U0
DL222 1N4001GP
LL201 22U0
DL201 MUR1100E
(D,P) +20V
CL201 330P0
CL200 10U0
BL200
+20V
GNDL
LL200 15U0
HEATER_HIGH
HEATER_LOW
ROTATION
USYS
U_VIDEO
to CRT-Bord
(P) USYS
LL029 118U0
(P) +8V
CL029 3U3
RL023 3M3
TL029 STP16NE06
RL027 2K2
RL028 68K0
RL029 22K0
RL026 4K7
(V) EW_DRIVE
CL025 1N0
RL024 100K0
RL021 1R5
RL025 1R5
DL029 RGP02-20
DL028 1N4101GP
CL023 1U0
RL022 1K0
(V) EW_PROT

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

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tv product development europe
P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CLT_LAEUFER

INDEX	DATE	NAME	DESCRIPTION
J	22.09.99	RIEDM.	CORRECTION
N	30.03.00	J.David	
M	07.02.00	RIEDM.	
L	30.11.99	RIEDM.	
K	18.10.99	RIEDM.	C28140

DRAWN ON: 22.01.99 BY: RIEDM.
CHECKED ON: BY:

DESIGNATION	TOCOM-NUMBER		TV
DP.20101.37	10626060	00	IC20
			PAGE: 1 OF : 1

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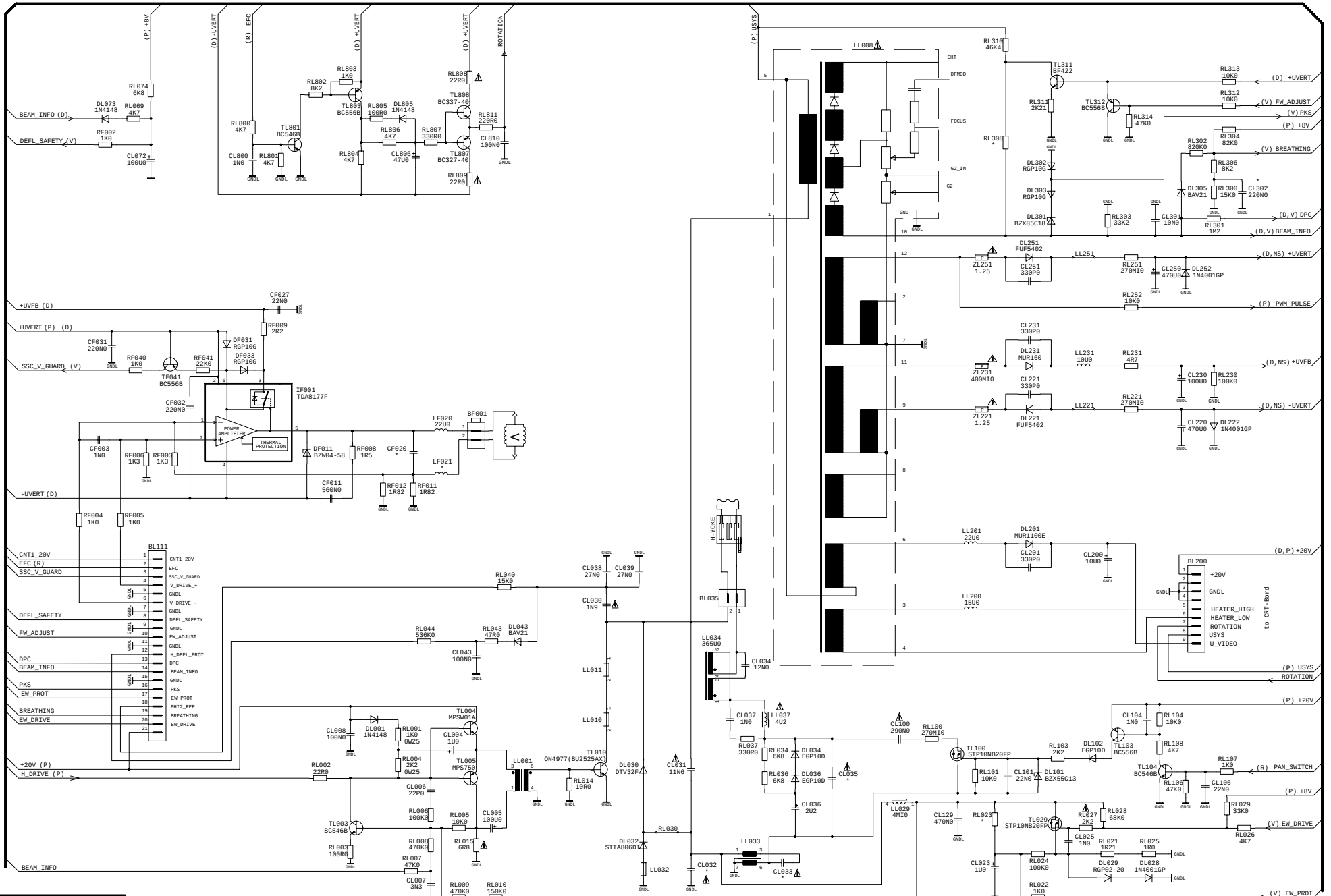
PCAD FORMAT DIN A1



*	CF020	CL032	CL033	CL035	CL302	LF021	LL008	RL023	RL308
DP 20110 37	-	33N0	680N0	560N0	X	JUMP	10649030	3M3	17K4
DP 20112 37	100N0	27N0	510N0	510N0	-	22U0	10675710	3M9	15K0

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

INDEX	DATE	NAME	DESCRIPTION
J	07.02.00	RIEDM.	
I	30.11.99	RIEDM.	
M	02.05.00	RIEDM.	
L	14.04.00	RIEDM.	CJB1220
K	31.03.00	J.David	

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DEVELOPMENT DEPT: CPS_LAEUFER LOESLE

DRAWN ON: 28.04.99 BY: RIEDM.
CHECKED ON: BY:

DESIGNATION	TOCOM-NUMBER
DP.20110.37	10626070
DP.20112.37	10675120

TV IC20 00 PAGE: 1 OF : 1

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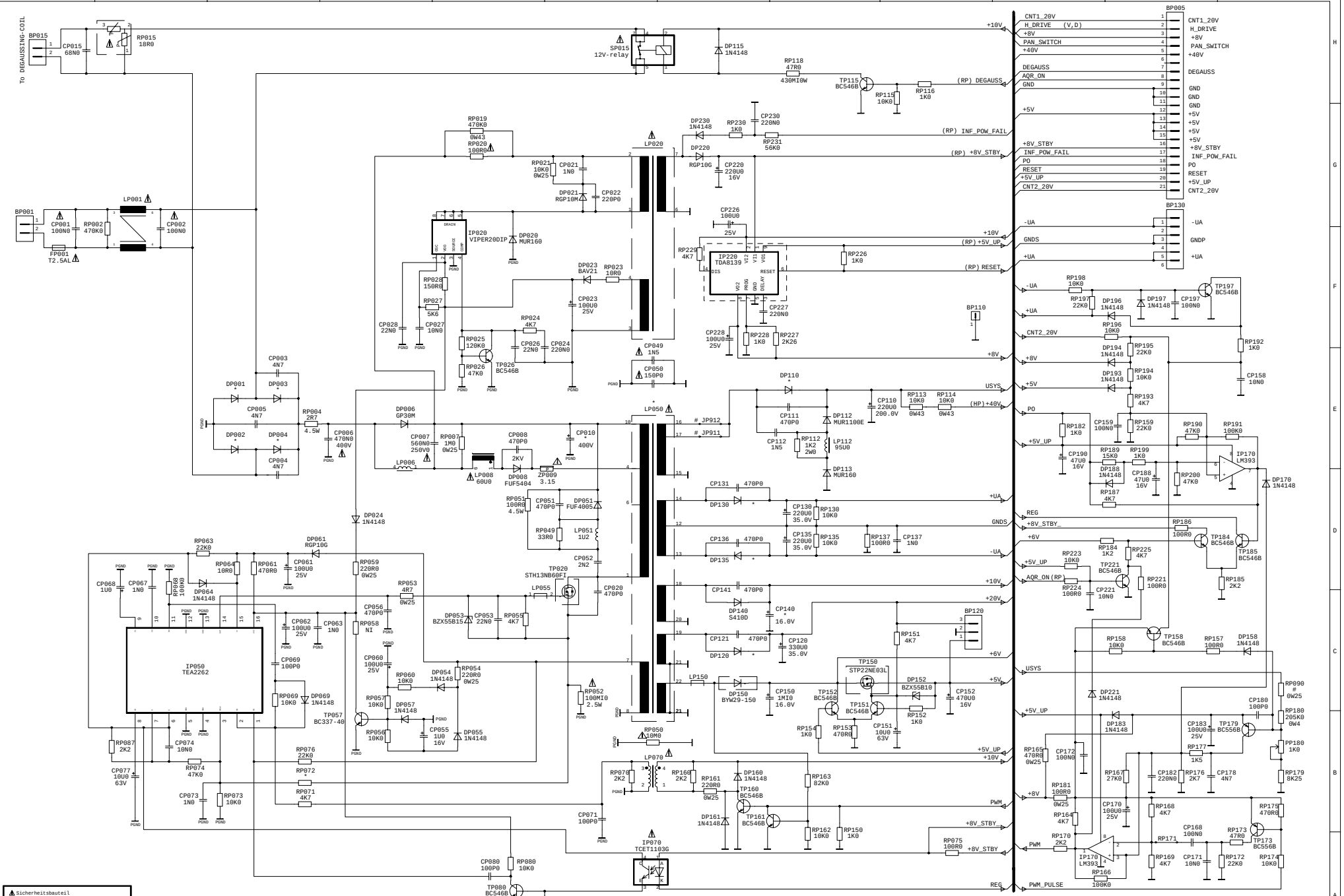
PCAD FORMAT DIN A1



*	CP010	DP001-004	DP110	DP120	DP130+135	LP050	RP072	CP140
PP 20000 00	220U0	GP20M	RGP50M	RGP15G	RGP15G	10670390	3K3	1MI0
PP 20100 00	390U0	GP30M	BYT08PI-1000	S410D	MUR420	10643540	5K6	4MI7

= value see DP 2.... partlists

Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

Safety Part
When repairing, use original part only

Piece de securite
N'utilisez que les pieces d'origine

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DEVELOPMENT DEPT: CPS_RIEDLINGER ELGERT

	DATE	NAME	DESCRIPTION
O	04.04.00	J.David	C35670
N	31.03.00	J.David	
M	07.02.00	RIEDM.	
L	20.11.99	RIEDM.	C30760
K	10.11.99	RIEDM.	

DRAWN
ON: 09.03.99
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	TV
PP.20000.00	10626080	IC20
PP.20100.00	10626090	00

PAGE: 1
OF : 1

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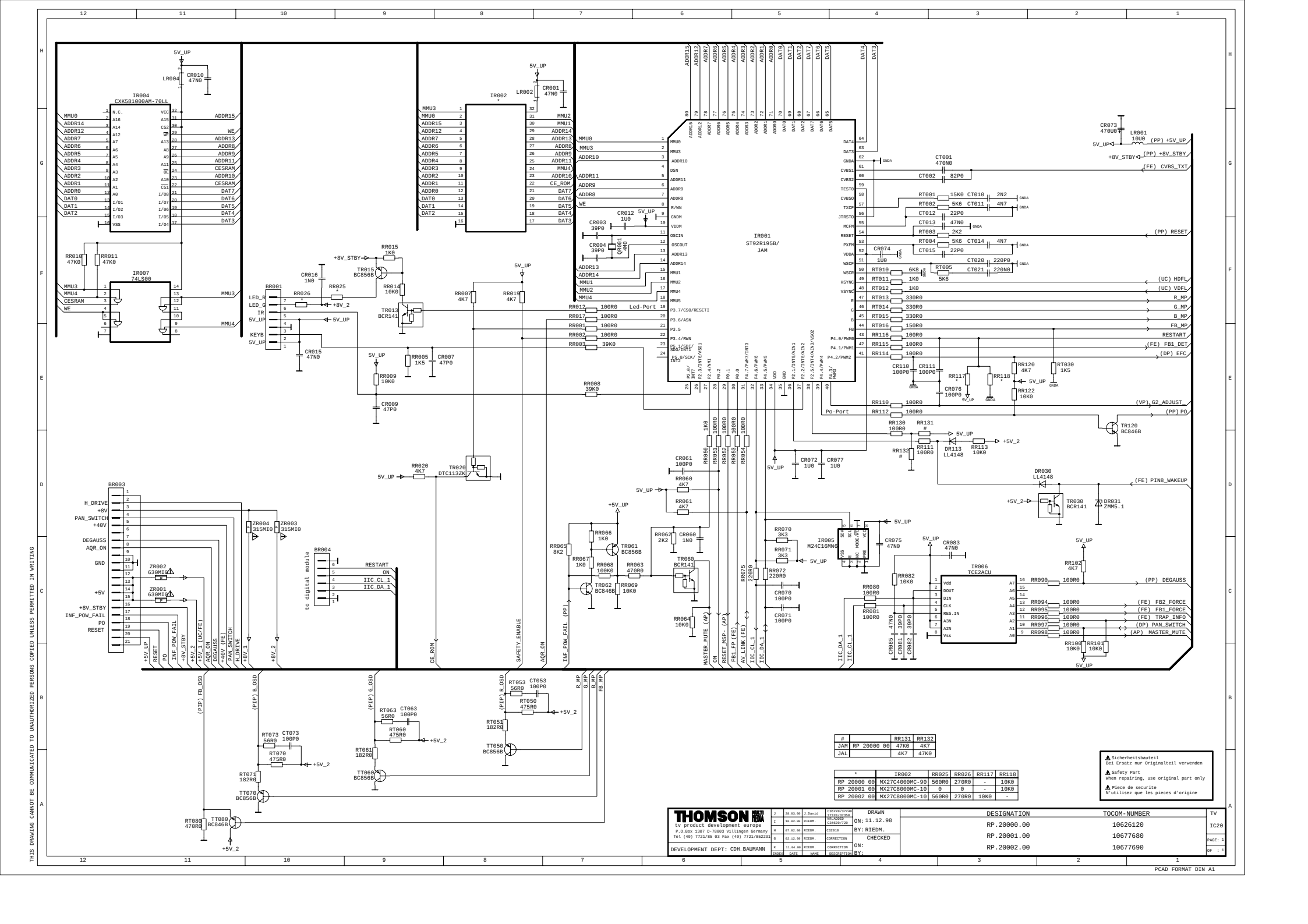
PCAD FORMAT DIN A1



#		RR131	RR132
JAM	RP 20000 00	47K0	4K7
JAL		4K7	47K0

*	IR002	RR025	RR026	RR117	RR118
RP 20000 00	MX27C4000MC-90	560R0	270R0	-	10K0
RP 20001 00	MX27C8000MC-10	0	0	-	10K0
RP 20002 00	MX27C8000MC-10	560R0	270R0	10K0	-

⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

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DEVELOPMENT DEPT: CDH_BAUMANN

INDEX	DATE	NAME	DESCRIPTION
J	20.03.98	J.David	CS6220/37240 37250/37255
I	16.02.98	RIEDM.	CS6220/37240 CS4628/728
H	07.02.98	RIEDM.	C32010
G	02.12.98	RIEDM.	CORRECTION
K	11.04.98	RIEDM.	CORRECTION

DRAWN ON: 11.12.98 BY: RIEDM.
CHECKED ON: BY:

DESIGNATION	TOCOM-NUMBER
RP.20000.00	10626120
RP.20001.00	10677680
RP.20002.00	10677690

TV IC20 PAGE: 1 OF : 1

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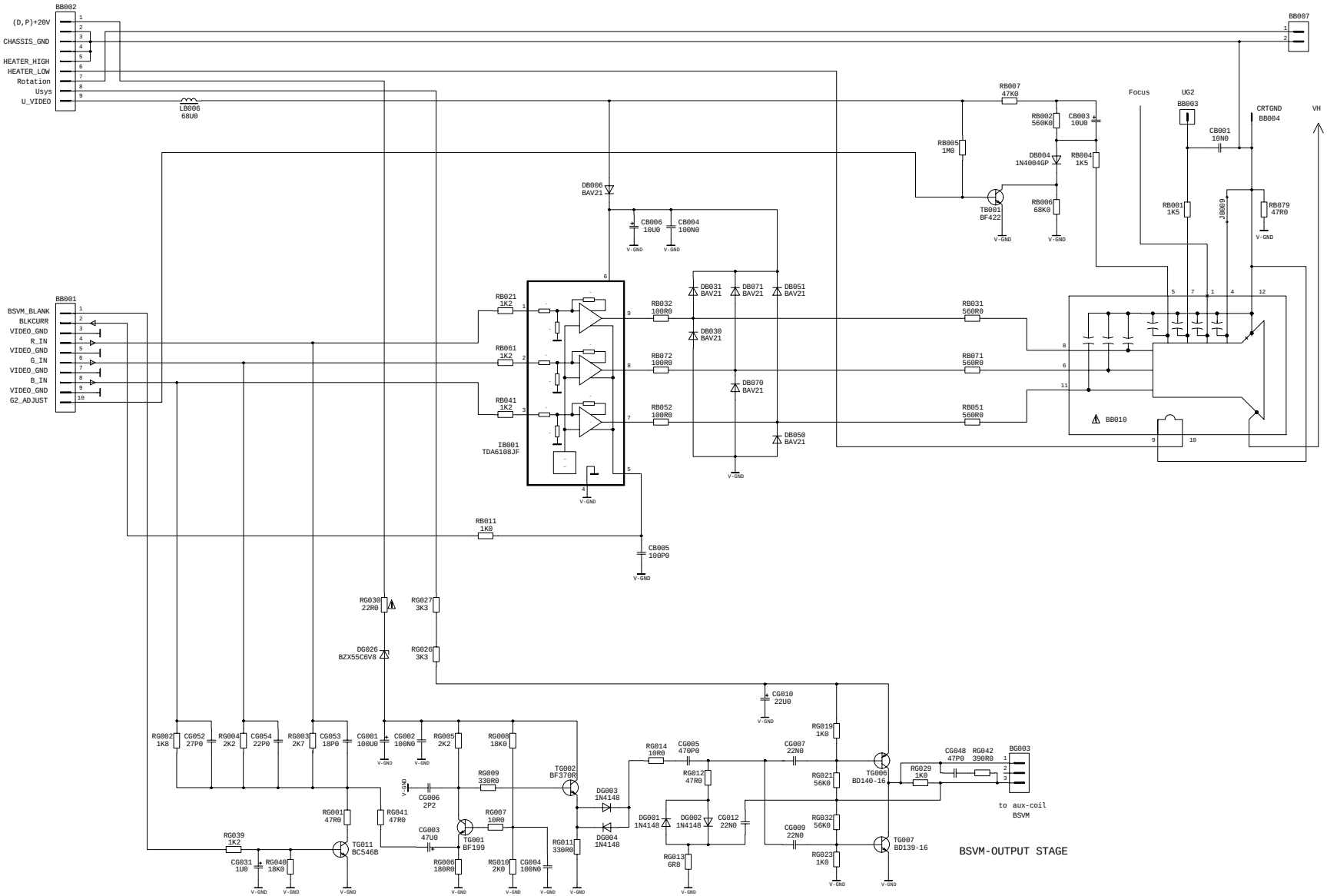
PCAD FORMAT DIN A1



⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

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DEVELOPMENT DEPT: CTV_FEY

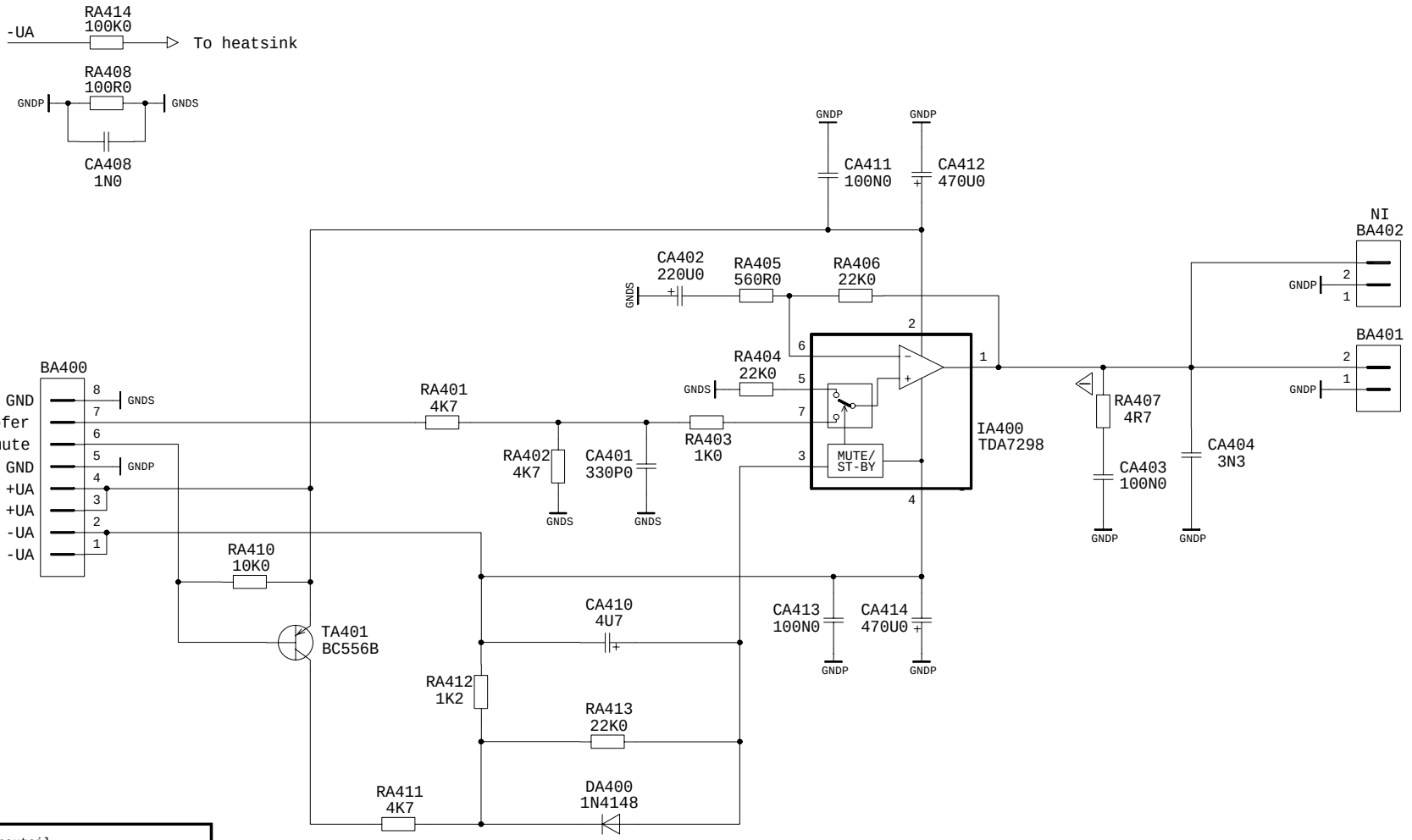
INDEX	DATE	NAME	DESCRIPTION
E	17.08.98	RIEDM.	CORRECTION
I	24.03.98	J.David	C36468
H	09.02.98	RIEDM.	C33180
G	02.12.96	RIEDM.	CORRECTION
F	10.11.95	RIEDM.	C28630/10200

DRAWN ON: 23.12.98 BY: RIEDM.
CHECKED ON: BY:

DESIGNATION	TOCOM-NUMBER	
CRT.BS20100.00	10626280	TV ICC20

PAGE: 1 OF : 1

PCAD FORMAT DIN A1



⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
When repairing, use original part only

⚠ Piece de securite
N'utilisez que les pieces d'origine

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DEVELOPMENT DEPT: CTA_PEDUZZI

INDEX	DATE	NAME	DESCRIPTION
E	16.03.00	J.David	CORRECTION
D	30.11.99	RIEDM.	CORRECTION
C	15.11.99	RIEDM.	C28630/29920
B	11.06.99	LM	CORRECTION
A	06.05.99	RIEDM.	CORRECTION

DRAWN
ON: 26.04.99
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	TV
PA/SW.20000.00	10626290	IC20
		PAGE: 1
		OF : 1

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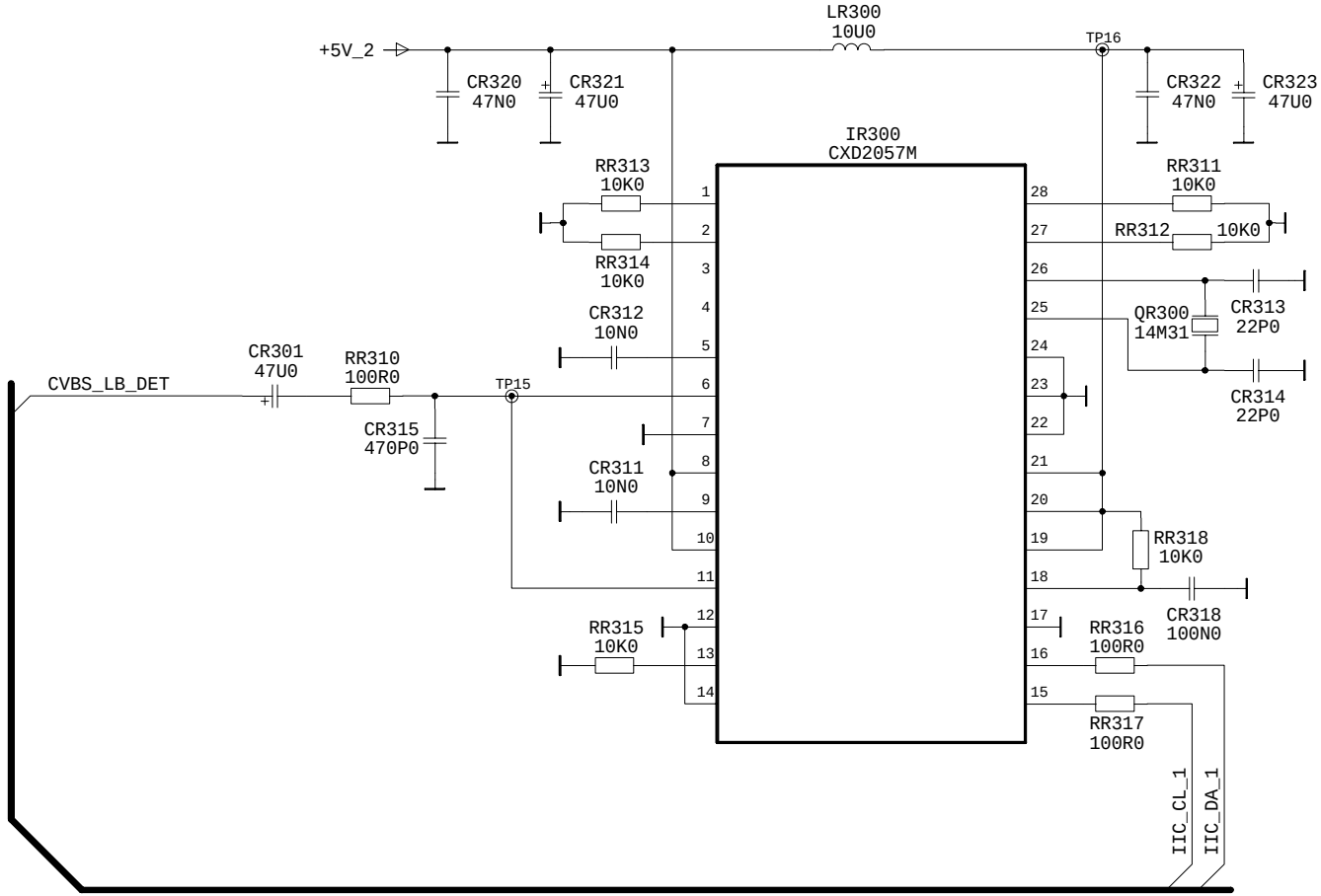
PCAD FORMAT DIN A3



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DEVELOPMENT DEPT: CDH_WEHRLEIN

INDEX	DATE	NAME	DESCRIPTION
...	..._..._..	.....	.....
D	16.11.99	RIEDM.	00L3-CORR. C29710
C	27.05.99	RIEDM.	CORRECTION
B	10.05.99	RIEDM.	CORRECTION
A	22.04.99	RIEDM.	00L1-CORR.

DRAWN
ON: 11.12.98
BY: RIEDM.

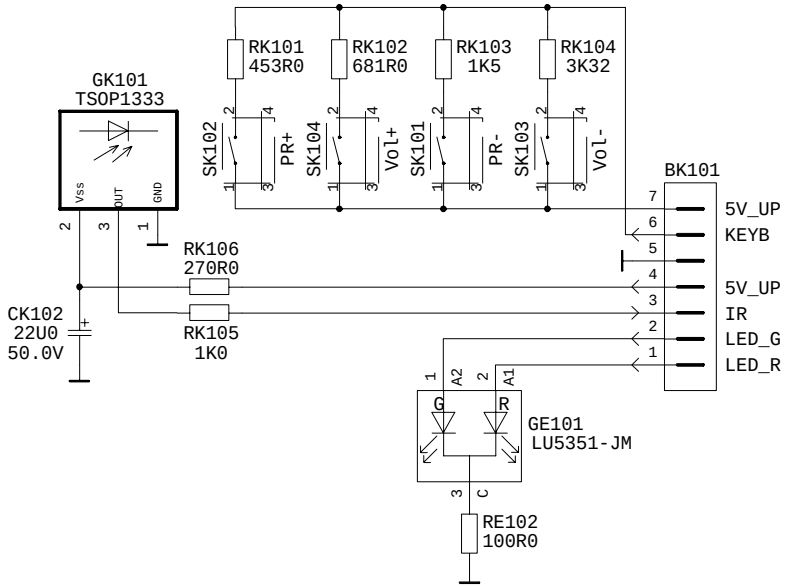
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	
LBD.20000.00	10628350	00L3

TV
IC20
PAGE: 1
OF : 1

PCAD FORMAT DIN A3

Breakable



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DEVELOPMENT DEPT: CDH_BAUMANN

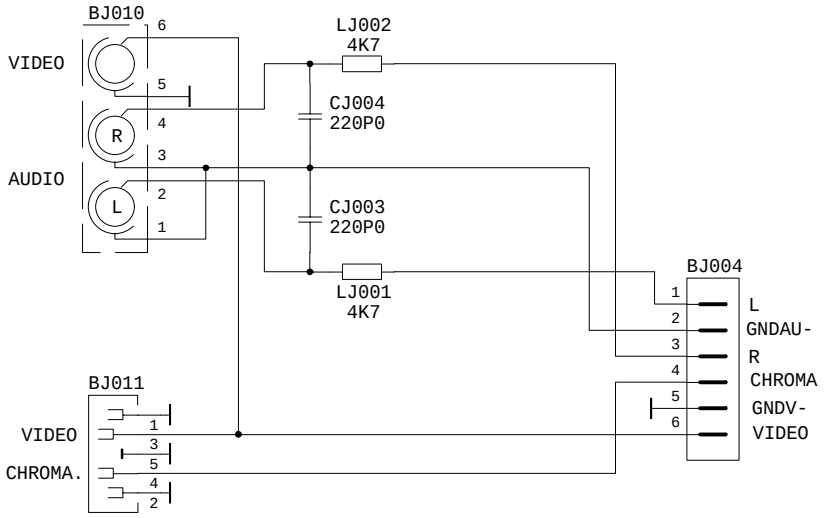
INDEX	DATE	NAME	DESCRIPTION
...	..._..._..	.....	.....
...	..._..._..	.....	.....
C	03.12.99	RIEDM.	CORRECTION
B	01.09.99	RIEDM.	00L2-CORR.
A	20.04.99	H.RUF	CORRECTION

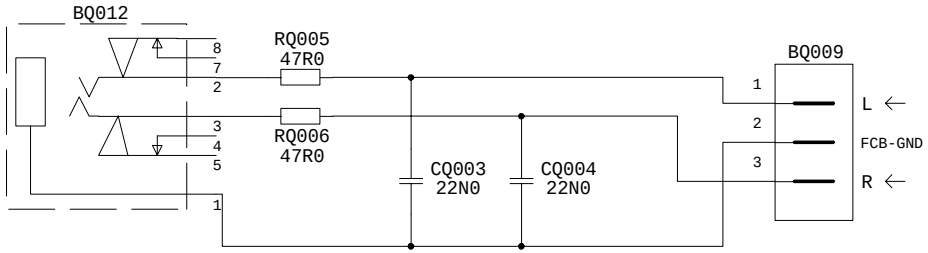
DRAWN
ON: 15.04.99
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	
KB.20000.00	10636860	TV IC20
		PAGE: 1
		OF : 1

PCAD FORMAT DIN A3

Breakable





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DEVELOPMENT DEPT: CTA-PEDUZZI
CTV-MIKA

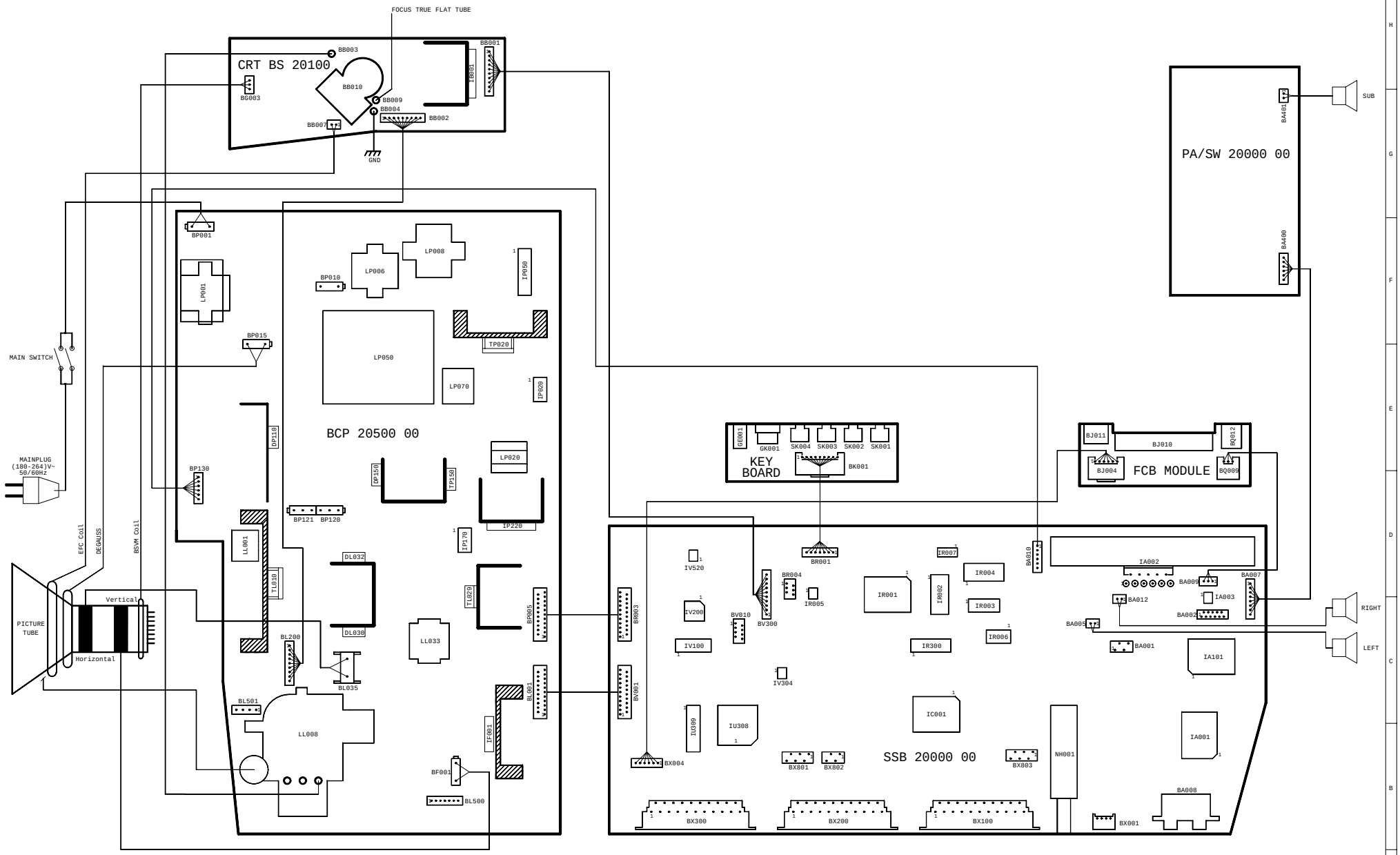
INDEX	DATE	NAME	DESCRIPTION
...	..-..-..	.....	.....
...	..-..-..	.....	.....
C	25.02.00	RIEDM.	C31330
B	05.08.99	RIEDM.	00L2-CORR.
A	07.04.99	RIEDM.	CORRECTION

DRAWN
ON: 22.12.98
BY: J.DAVID
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER
FCB.20000.00	10636870

TV
ICC20
PAGE: 1
OF : 1

PCAD FORMAT DIN A3



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DEVELOPMENT DEPT: CAT_DUFFNER

INDEX	DATE	NAME	DESCRIPTION
B	03.05.00	J.David	CORRECTION
A	14-03-00	J.David	

DRAWN ON: 22.02.00 BY: RIEDM.
CHECKED ON: BY:

DESIGNATION	TOCOM-NUMBER	TV
ICC20_TV_WIRING_DIAGRAM	10638090	IC20

PAGE: 1 OF : 2

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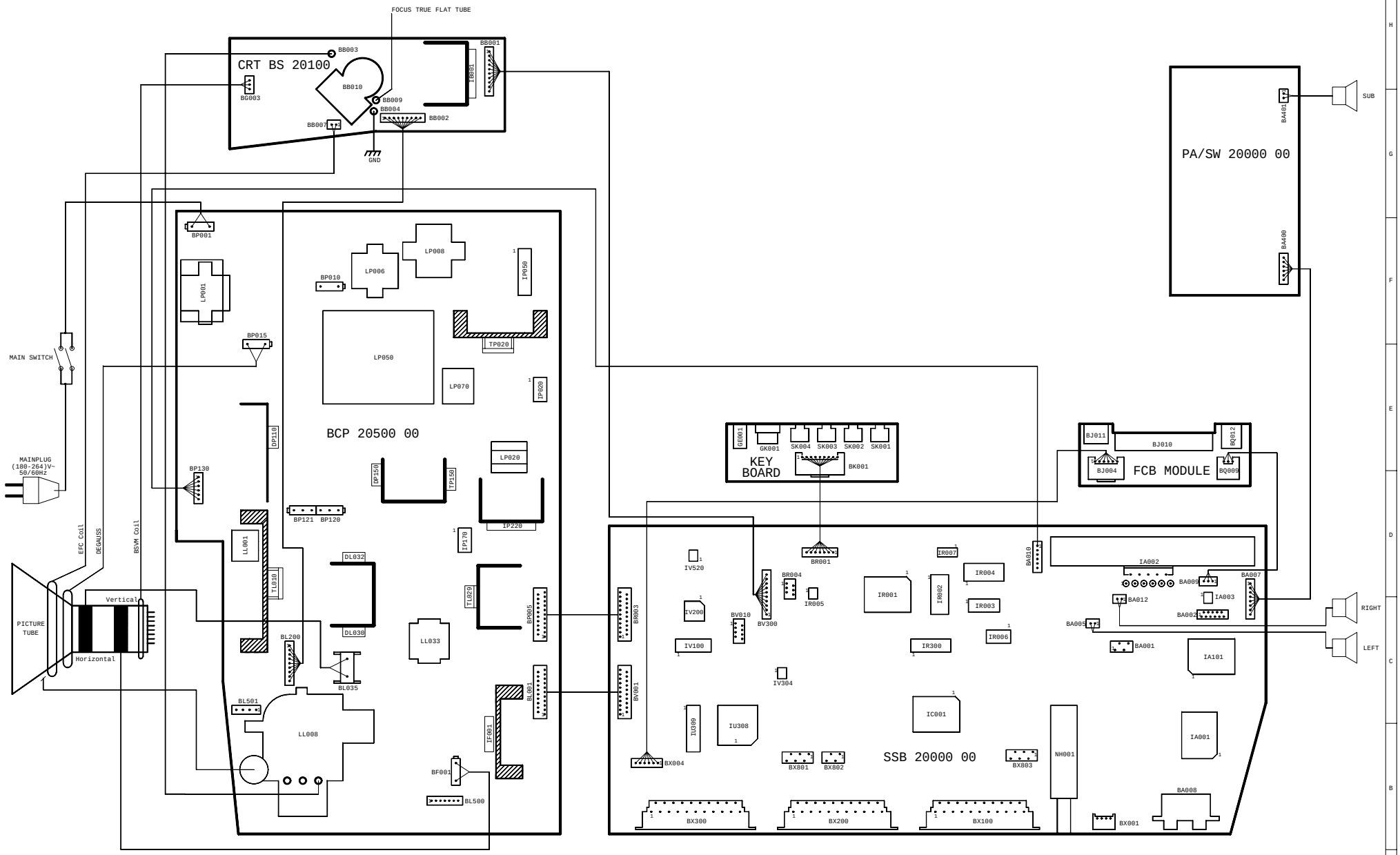
PCAD FORMAT DIN A1



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Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CAT_DUFFNER

INDEX	DATE	NAME	DESCRIPTION
B	03.05.00	J.David	CORRECTION
A	14-03-00	J.David	

DRAWN ON: 22.02.00 BY: RIEDM.
CHECKED ON: BY:

DESIGNATION	TOCOM-NUMBER	TV
ICC20_TV_WIRING_DIAGRAM	10638090	IC20

PAGE: 1 OF : 2

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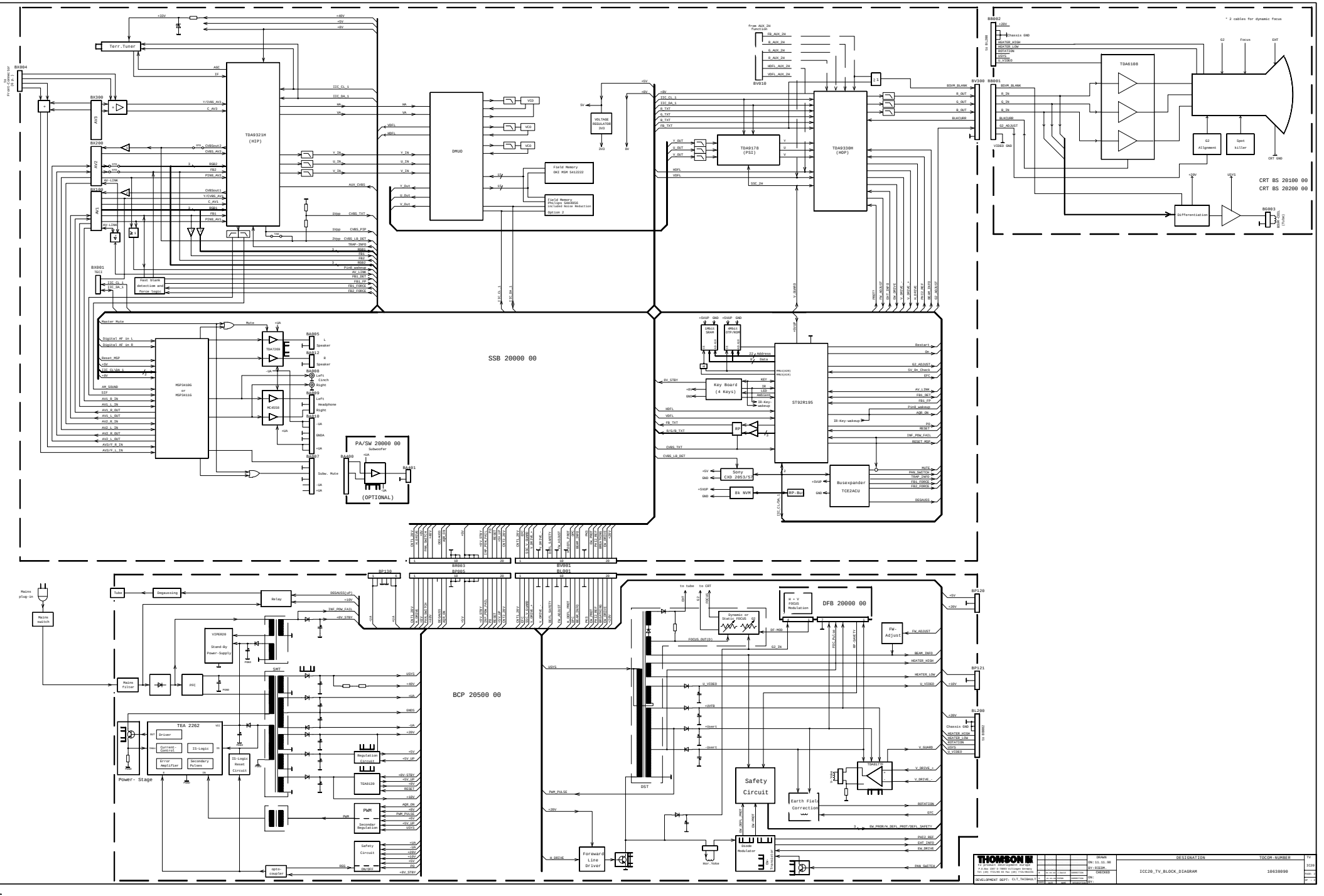
PCAD FORMAT DIN A1



						DRAWN	DESIGNATION
						DW: 11.11.98	ICC20_TV_BLOCK_DIAGRAM
						BY:RIEDM.	
						CHECKED	
						DW:	
						BY:	

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TV product development europe
P.O.Box 1007 D-78003 Villingen Germany
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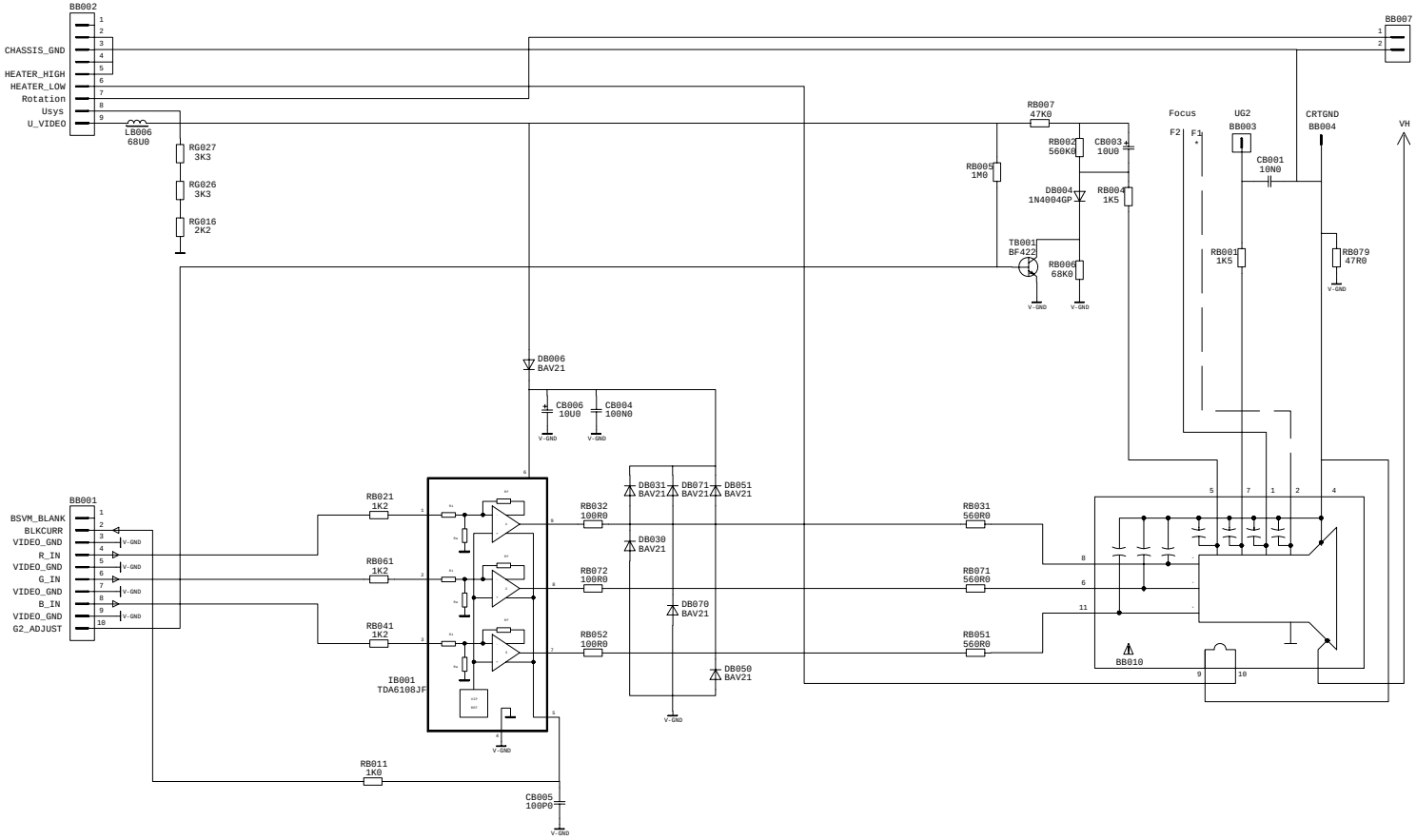
DEVELOPMENT DEPT: CLT_TVEBAU1

TOCOM-NUMBER: 10638090

TV: ICC20

Sheet: 1

Rev: 1



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Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

Safety Part
When repairing, use original part only

Piece de securite
N'utilisez que les pieces d'origine

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DEVELOPMENT DEPT: CTV_FEY

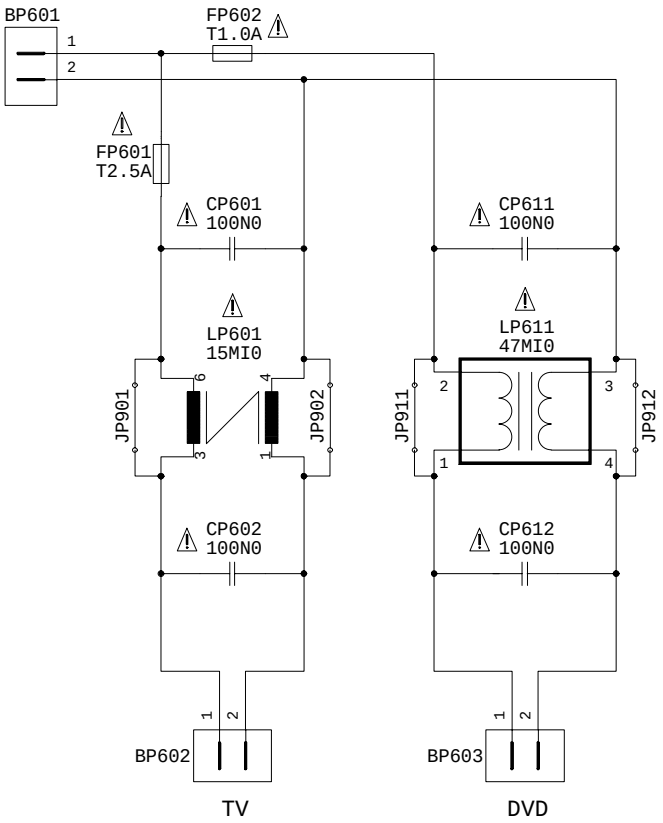
INDEX	DATE	NAME	DESCRIPTION
C	18.11.99	RIEDM.	C30290
D	17.09.99	RIEDM.	CORRECTION
H	04.04.00	J.David	C34730
G	08.02.00	RIEDM.	C33100/680
F	02.12.99	RIEDM.	CORRECTION

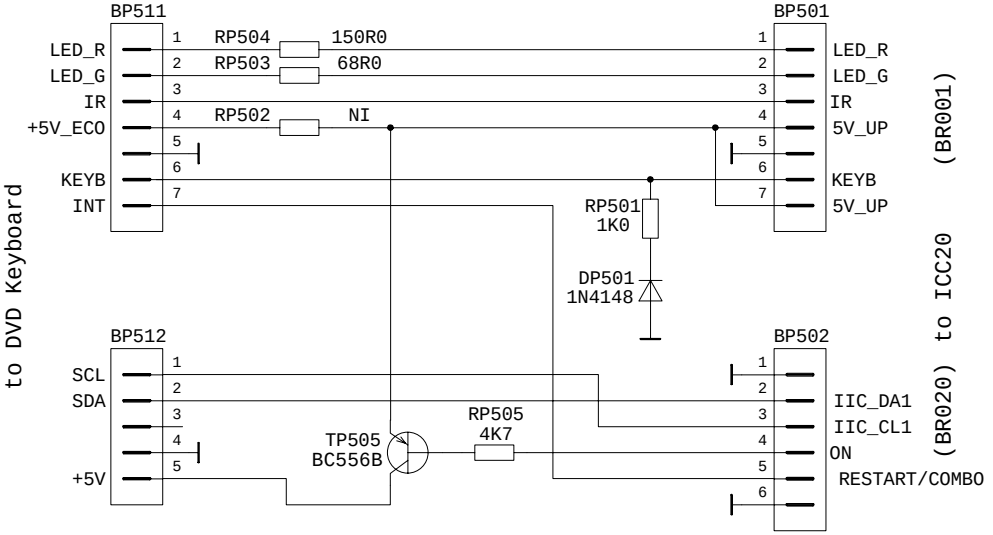
DRAWN
ON: 23.12.98
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	
CRT.20000.00	10638180	TV ICC20

PAGE: 1
OF : 1

PCAD FORMAT DIN A1





⚠ Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

⚠ Safety Part
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⚠ Piece de securite
N'utilisez que les pieces d'origine

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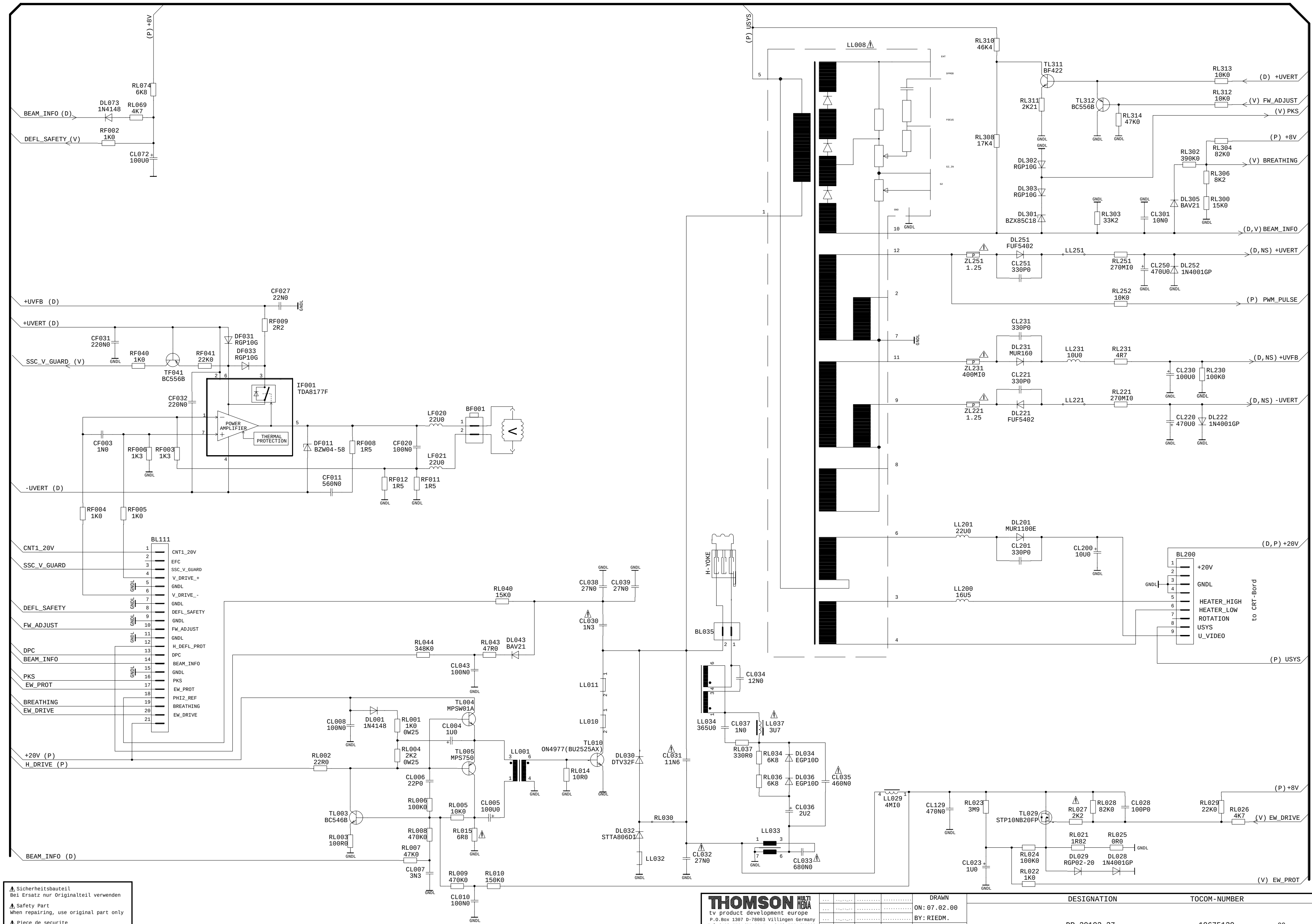
DEVELOPMENT DEPT: CPS_THIBAULT

INDEX	DATE	NAME	DESCRIPTION
...	..-..-..	.....	.....
...	..-..-..	.....	.....
...	..-..-..	.....	.....
...	..-..-..	.....	.....
...	..-..-..	.....	.....

DRAWN
ON: 24.01.00
BY: RIEDM.
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	
PD.DVD.20000.00	10673240	TV IC20 PAGE: 1 OF : 1

PCAD FORMAT DIN A3


BEAM_INFO (D)
DEFL_SAFETY (V)
+UVFB (D)
+UVERT (D)
SSC_V_GUARD (V)
-UVERT (D)
IF001
TDA8177F
POWER AMPLIFIER
THERMAL PROTECTION
BL111
CNT1_20V
SSC_V_GUARD
DEFL_SAFETY
FW_ADJUST
DPC
BEAM_INFO
PKS
EW_PROT
BREATHING
EW_DRIVE
+20V (P)
H_DRIVE (P)
(P) +8V
(P) USYS
LL008
TL311
BF422
TL312
BC556B
(D) +UVERT
(V) FW_ADJUST
(V) PKS
(P) +8V
(V) BREATHING
(D,V) BEAM_INFO
(D,NS) +UVERT
(P) PWM_PULSE
(D,NS) +UVFB
(D,NS) -UVERT
(D,P) +20V
BL200
+20V
GNDL
HEATER_HIGH
HEATER_LOW
ROTATION
USYS
U_VIDEO
to CRT-Bord
(P) USYS
H-YOKE
BL035
TL010
ON4977(BU2525AX)
TL004
MPSW01A
TL005
MPS750
TL003
BC546B
LL001
LL034
LL037
LL033
TL029
STP10NB20FP
(P) +8V
(V) EW_DRIVE
(V) EW_PROT

Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

Safety Part
When repairing, use original part only

Piece de securite
N'utilisez que les pieces d'origine

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Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CPS_LOESLE LAEUFER

INDEX	DATE	NAME	DESCRIPTION
B	02.05.00	RIEDM.	C39120
A	31.03.00	J.David	

DRAWN ON: 07.02.00 BY: RIEDM.
CHECKED ON: BY:

DESIGNATION	TOCOM-NUMBER		TV
DP.20102.37	10675130	00	IC20

PAGE: 1 OF : 1

PCAD FORMAT DIN A1

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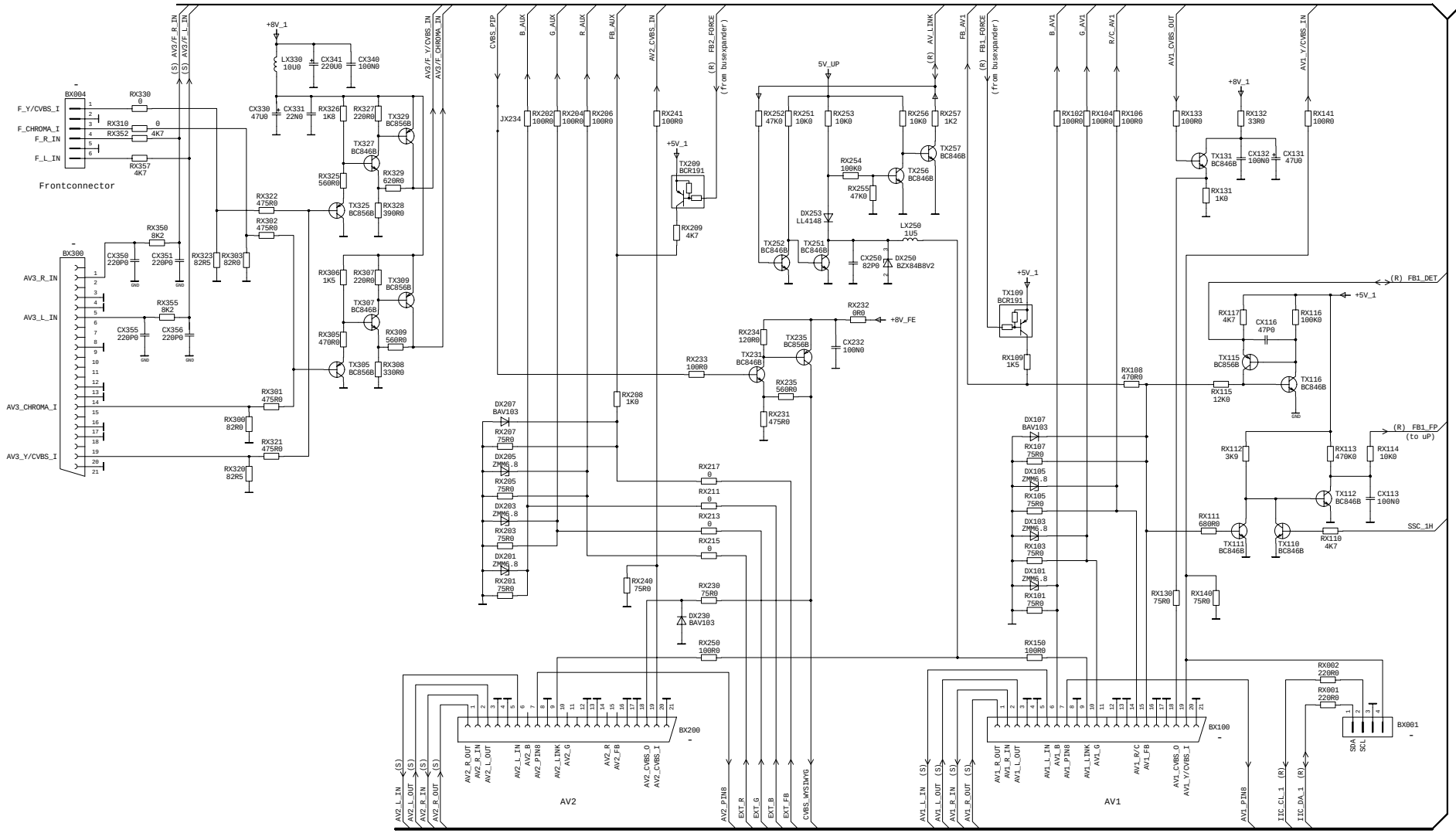

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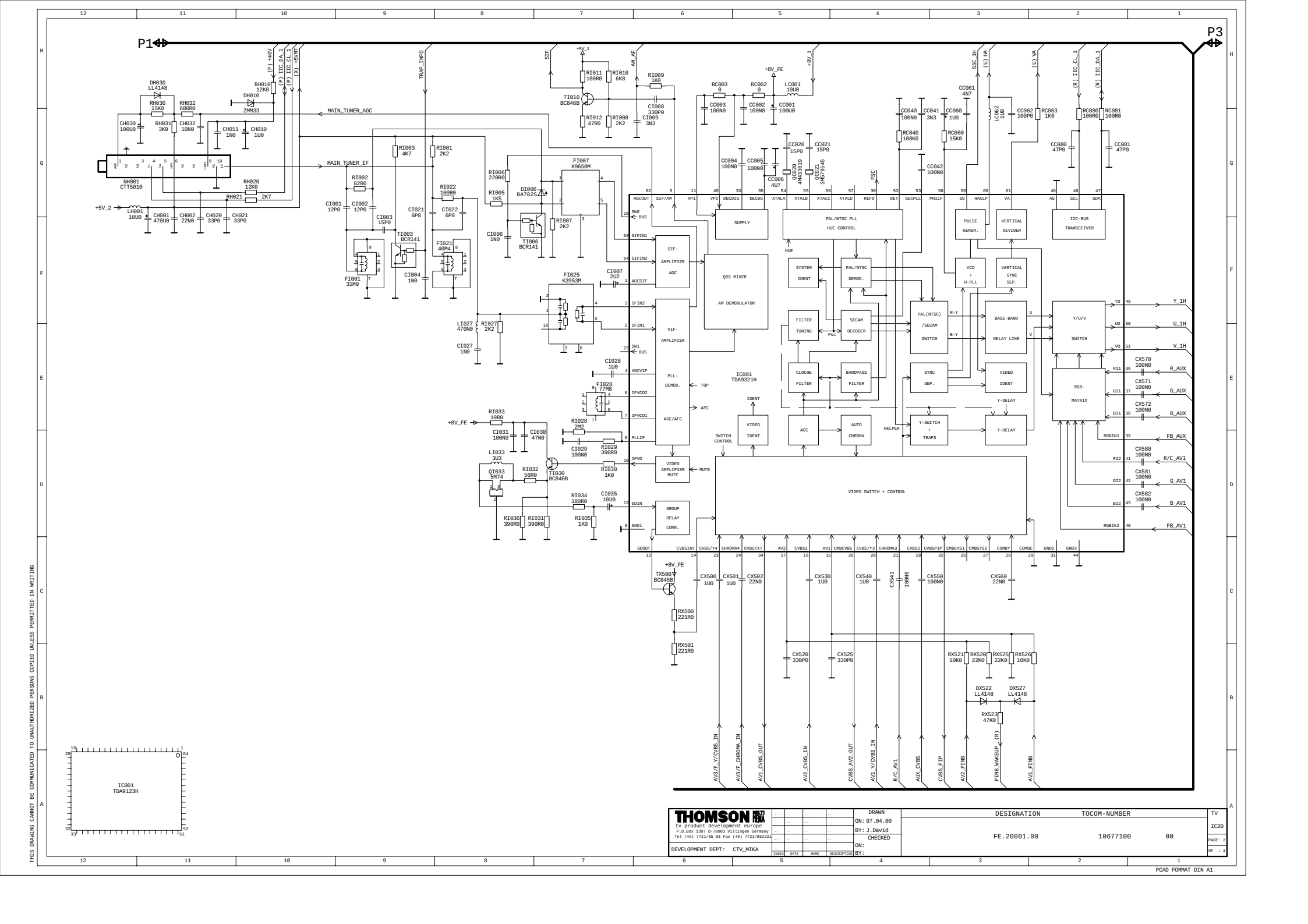

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P.O.Box 1307 D-78003 Villingen Germany
Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CTV_MIKA	INDEX	DATE	NAME	DESCRIPTION

DRAWN	DESIGNATION	TOCOM-NUMBER	TV
ON: 07.04.00	FE.20001.00	10677100 00	IC20
BY: J.David			PAGE: 2
CHECKED			OF : 3
ON:			
BY:			

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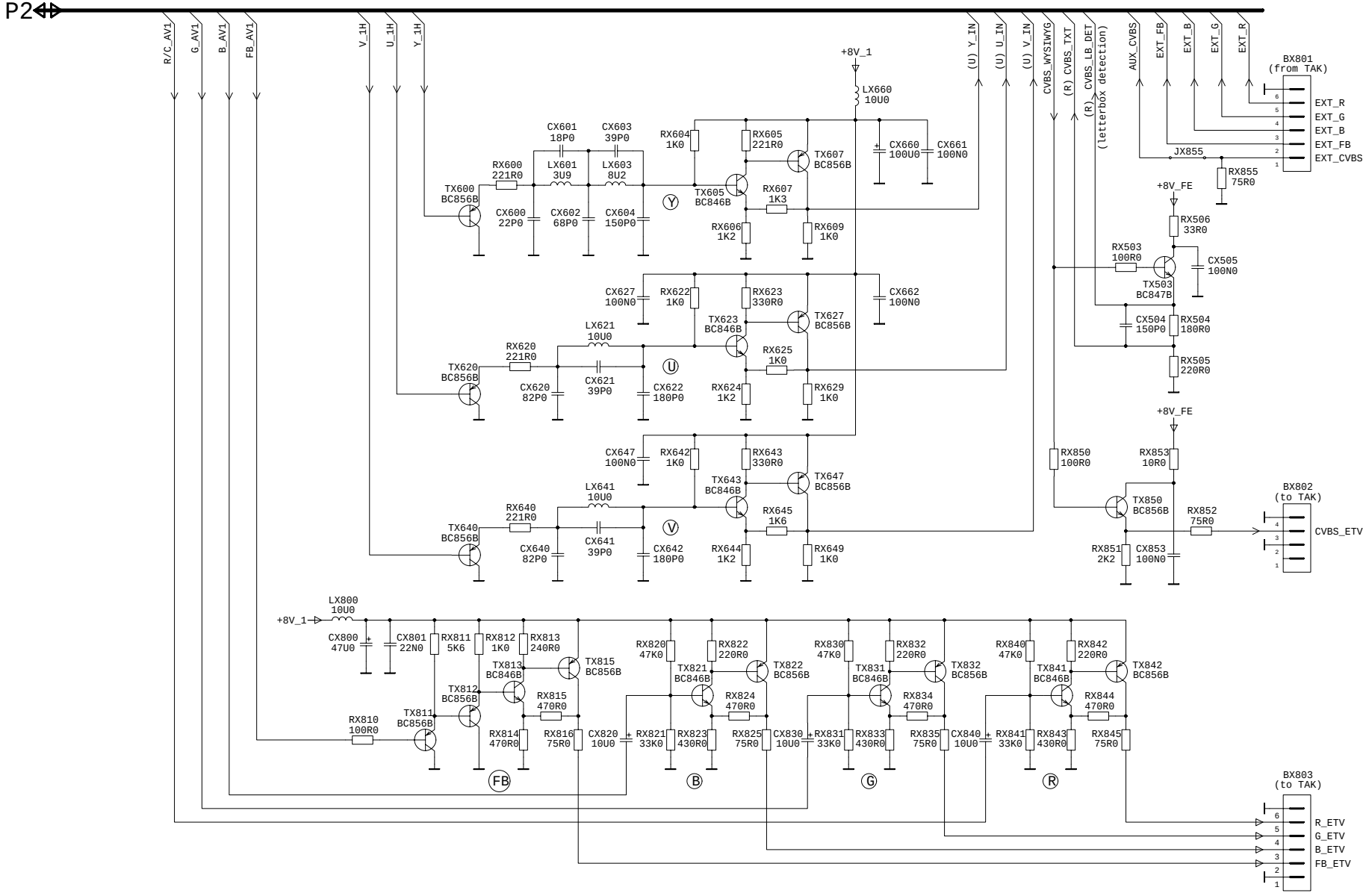
PCAD FORMAT DIN A1



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Tel (49) 7721/85 03 Fax (49) 7721/852231

DEVELOPMENT DEPT: CTV_MIKA

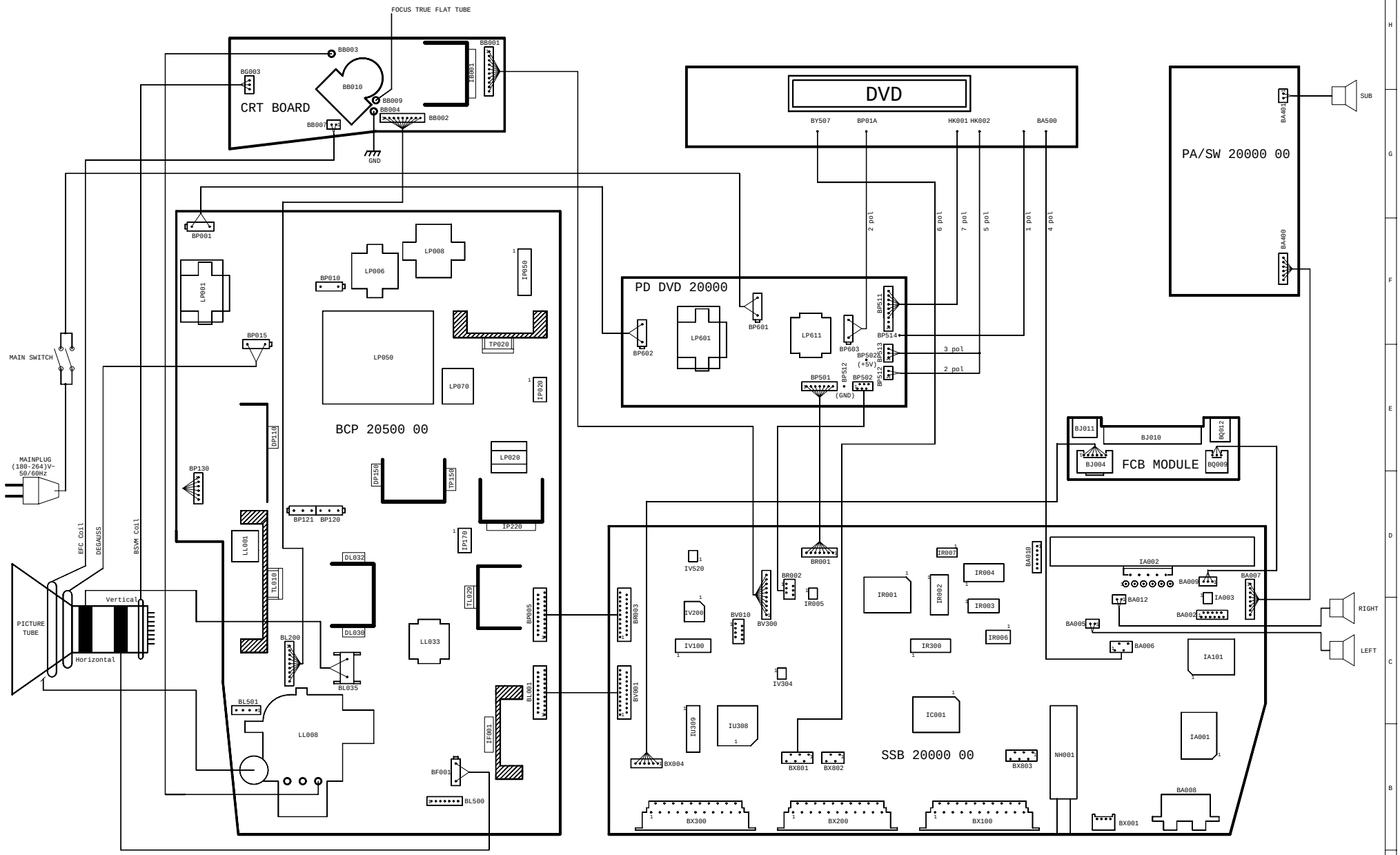
INDEX	DATE	NAME	DESCRIPTION
..	..	..	..

DRAWN
ON: 07.04.00
BY: J.David
CHECKED
ON:
BY:

DESIGNATION	TOCOM-NUMBER	
FE.20001.00	10677100	00

TV
IC20
PAGE: 3
OF : 3

PCAD FORMAT DIN A2



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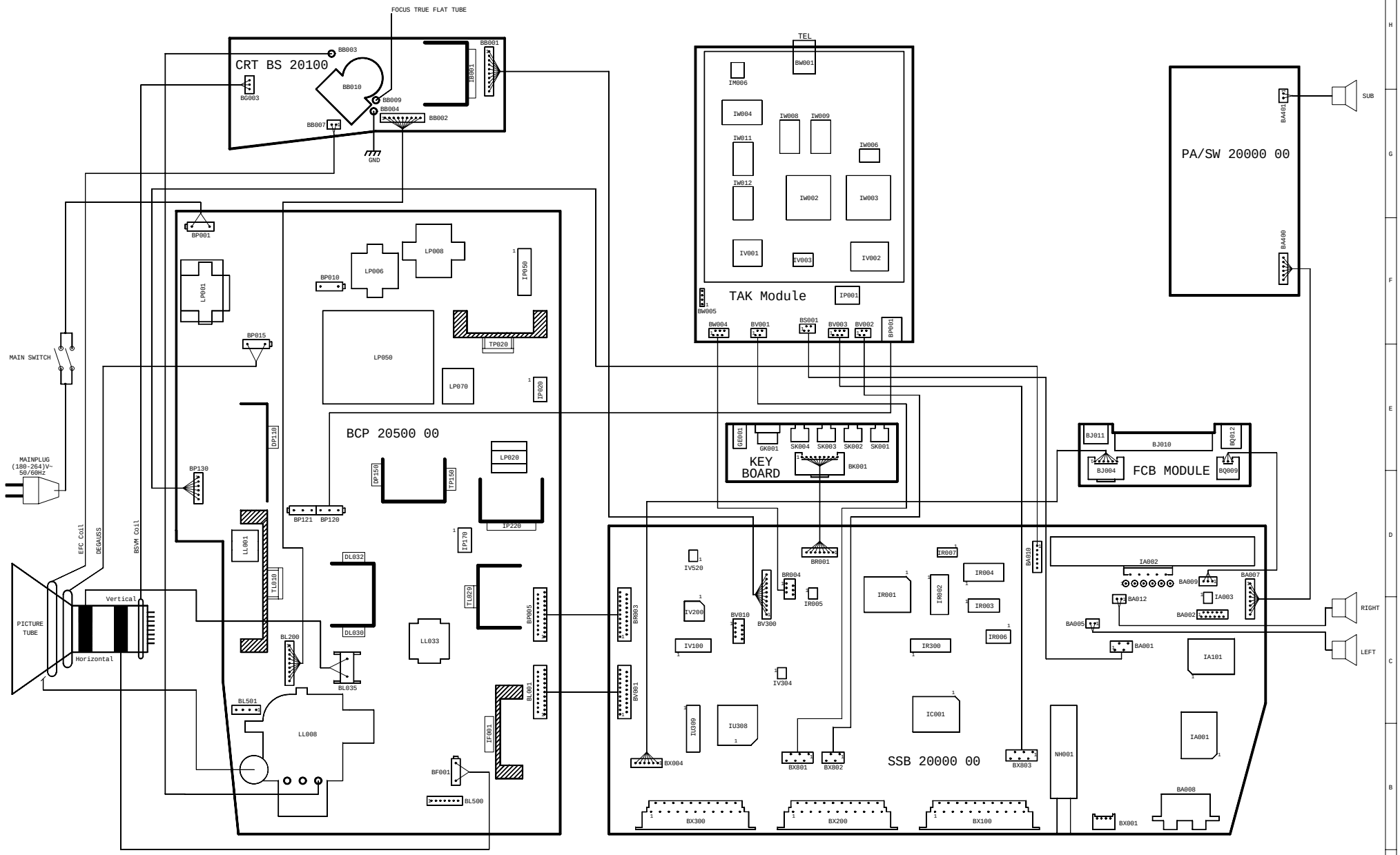
THOMSON multimedia tv product development europe P.O.Box 1307 D-78003 Villingen Germany Tel (49) 7721/85 03 Fax (49) 7721/852231					DRAWN ON: 14-03-00 BY: J.David	DESIGNATION	TOCOM-NUMBER	TV IC20
					CHECKED ON: BY:	ICC20_DVD_WIRING_DIAGRAM	10684580	PAGE: 1 OF : 2
DEVELOPMENT DEPT: CAT_DUFFNER	A	03.05.00	J.David	CORRECTION				
	INDEX	DATE	NAME	DESCRIPTION				

PCAD FORMAT DIN A1



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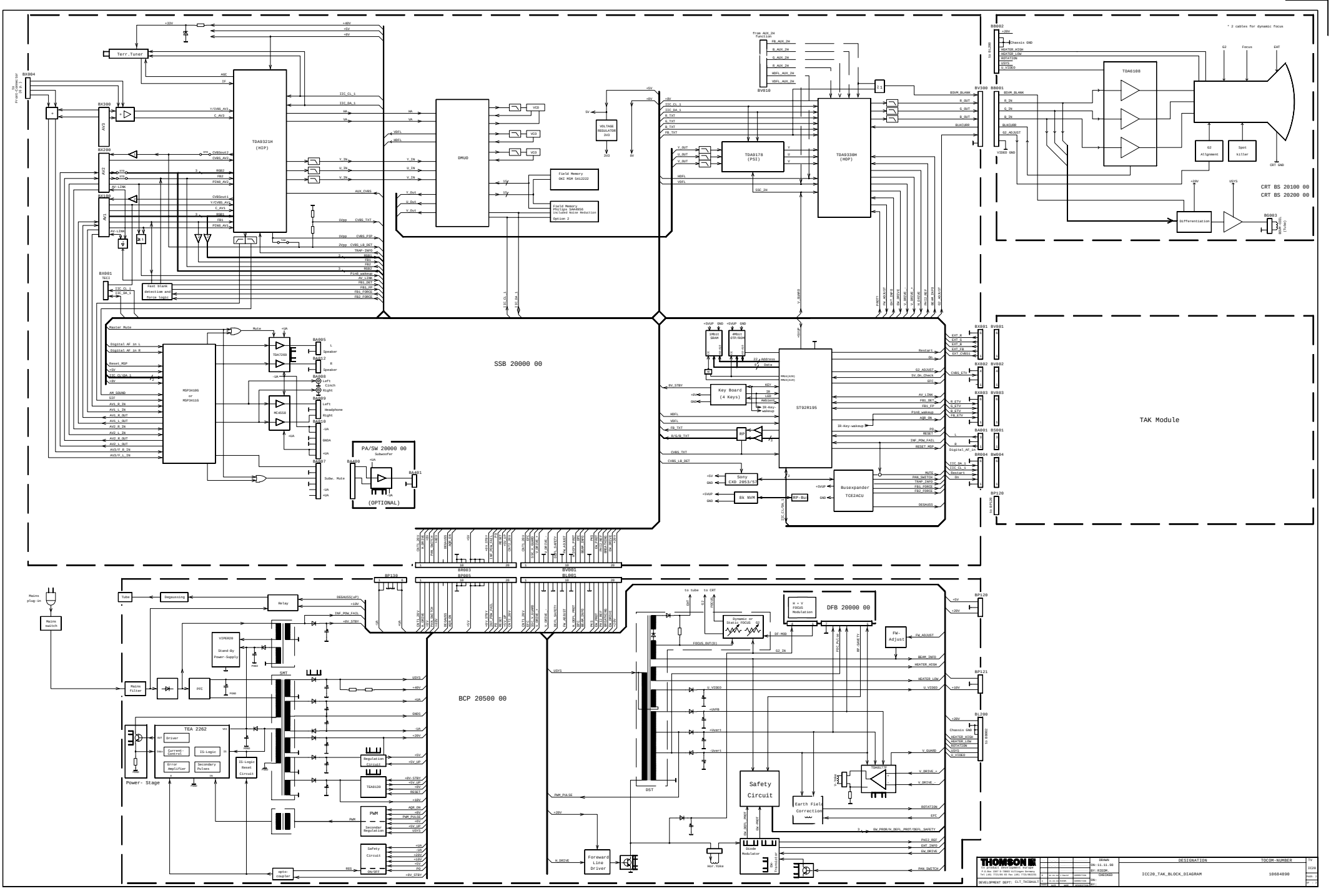
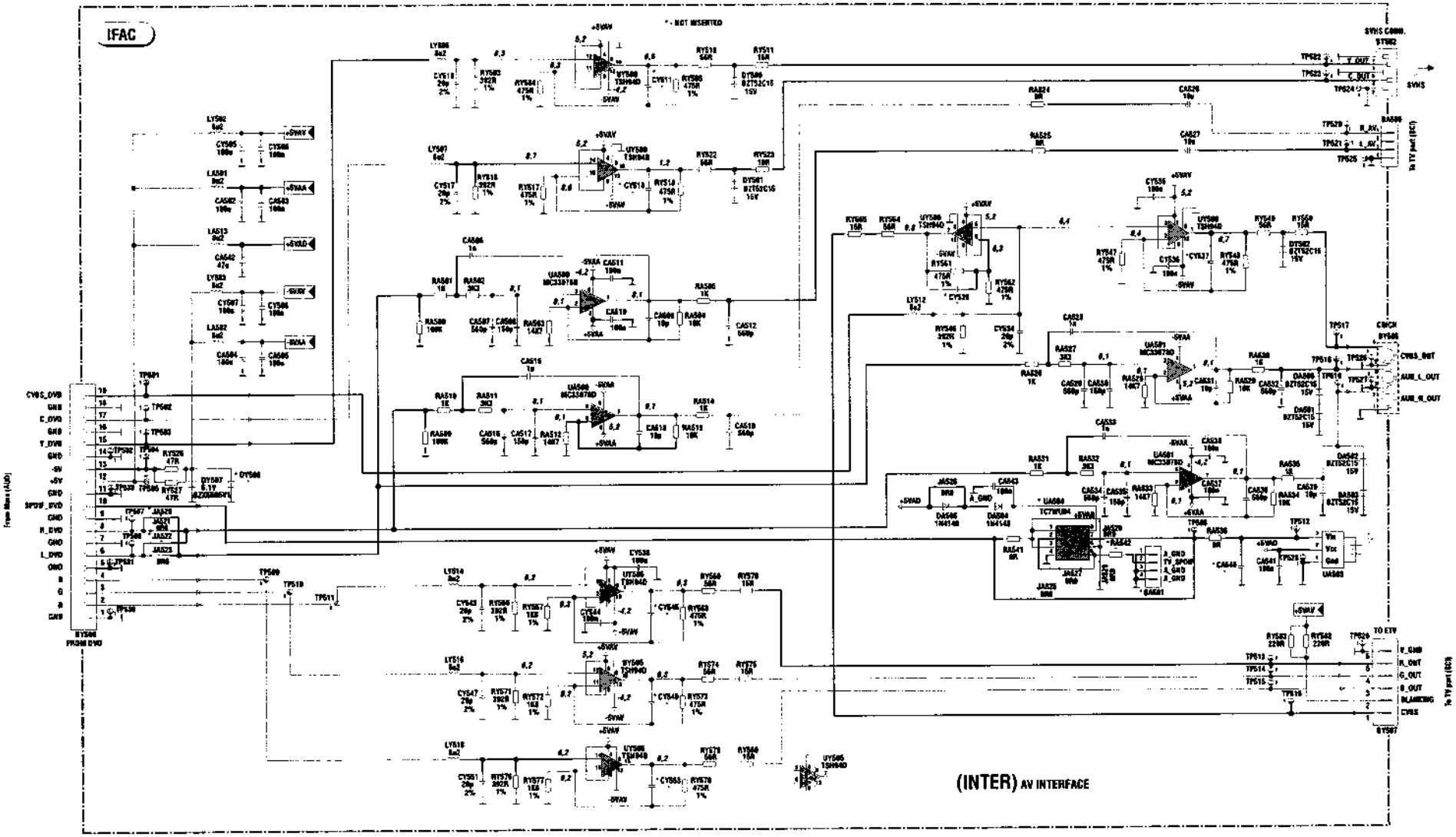
THOMSON MULTIMEDIA					DRAWN	DESIGNATION	TOCOM-NUMBER
tv product development europe P.O.Box 1307 D-78003 Villingen Germany Tel (49) 7721/85 03 Fax (49) 7721/852231					ON: 22.02.00 BY: RIEDM.	ICC20_TAK_WIRING_DIAGRAM	10684890
	B	03.05.00	J.David	CORRECTION	CHECKED		
DEVELOPMENT DEPT: CAT_DUFFNER	A	14-02-00	J.David		ON: BY:		
	INDEX	DATE	NAME	DESCRIPTION			

TV IC20 PAGE: 1 OF : 2

PCAD FORMAT DIN A1

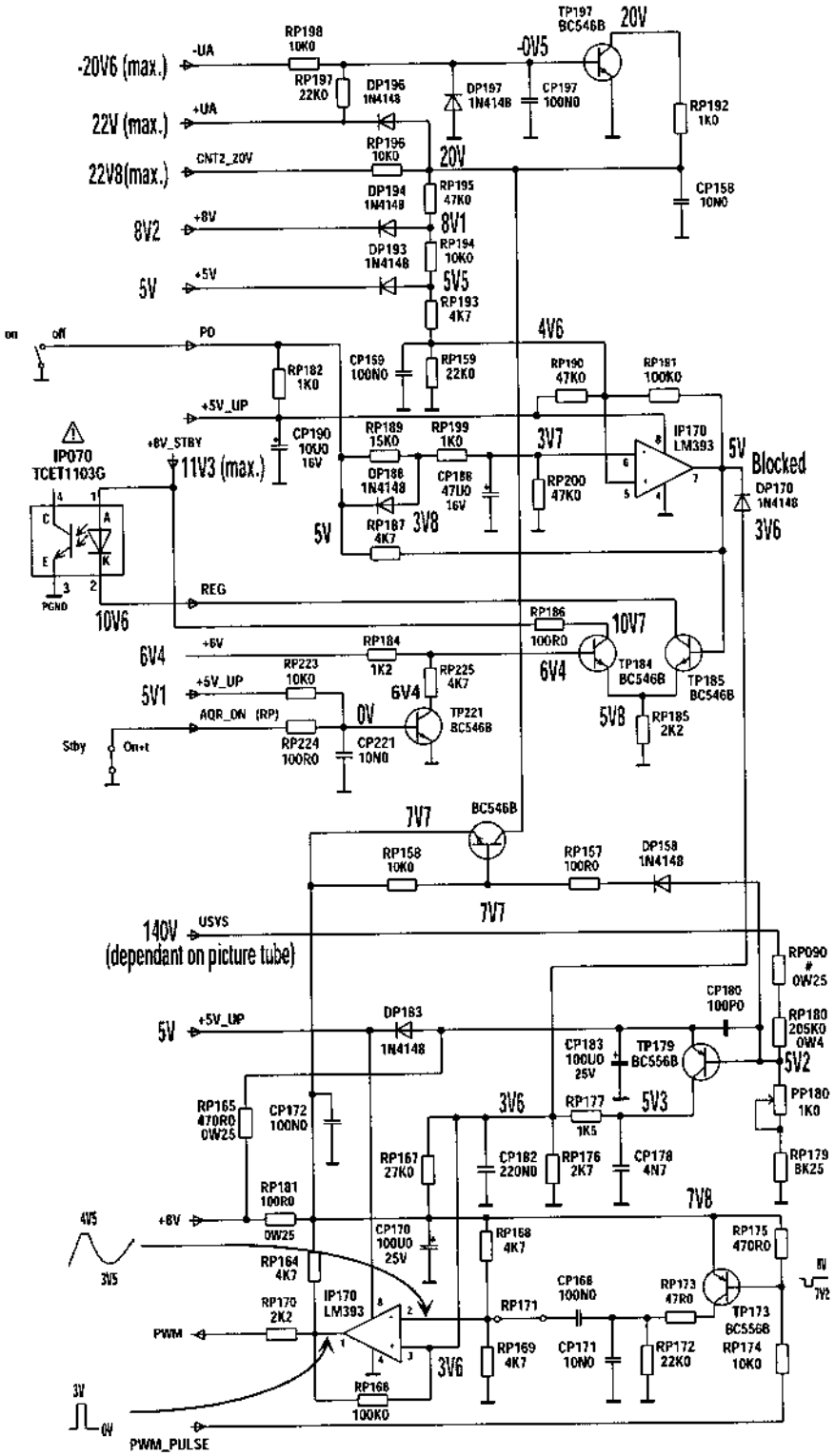

SSB 20000 00
PA/SW 20000 00
(OPTIONAL)
BCP 20500 00
DFB 20000 00
TAK Module
CRT BS 20100 00
CRT BS 20200 00
* 2 cables for dynamic focus
TDA9321H (HIP)
TDA9178 (PSI)
TDA9330H (HOP)
TDA6108
DMU0
Field Memory OKI MSM 5412222
Field Memory Philips SAA4956 included Noise Reduction Option 2
MSP3410G or MSP3411G
TDA7268
MC4558
ST92R195
Key Board (4 Keys)
Sony CXD 2053/57
8k NVM
Busexpander TCE2ACU
TEA 2262
Power- Stage
Stand-By Power-Supply
Mains filter
PFC
Relay
Degaussing
Regulation Circuit
TEA8120
PWM
Secondary Regulation
Safety Circuit
Reset Circuit
Dynamic or Static FOCUS
R + V FOCUS Modulation
Safety Circuit
Earth Field Correction
Forward Line Driver
Diode Modulator
Hor.Yoke
Differentiation
Alignment
Spot killer
THOMSON
DESIGNATION
ICC20_TAK_BLOCK_DIAGRAM
TOCOM-NUMBER
10684890

AV INTERFACE SCHEMATIC DIAGRAM - SCHEMA DE LA PLATINE INTERFACE AV - SCHALTBILD INTERFACE AV - SCHEMA DEI CIRCUITI INTERFACE AV - ESQUEMA DE LOS CIRCUITOS INTERFACE AV



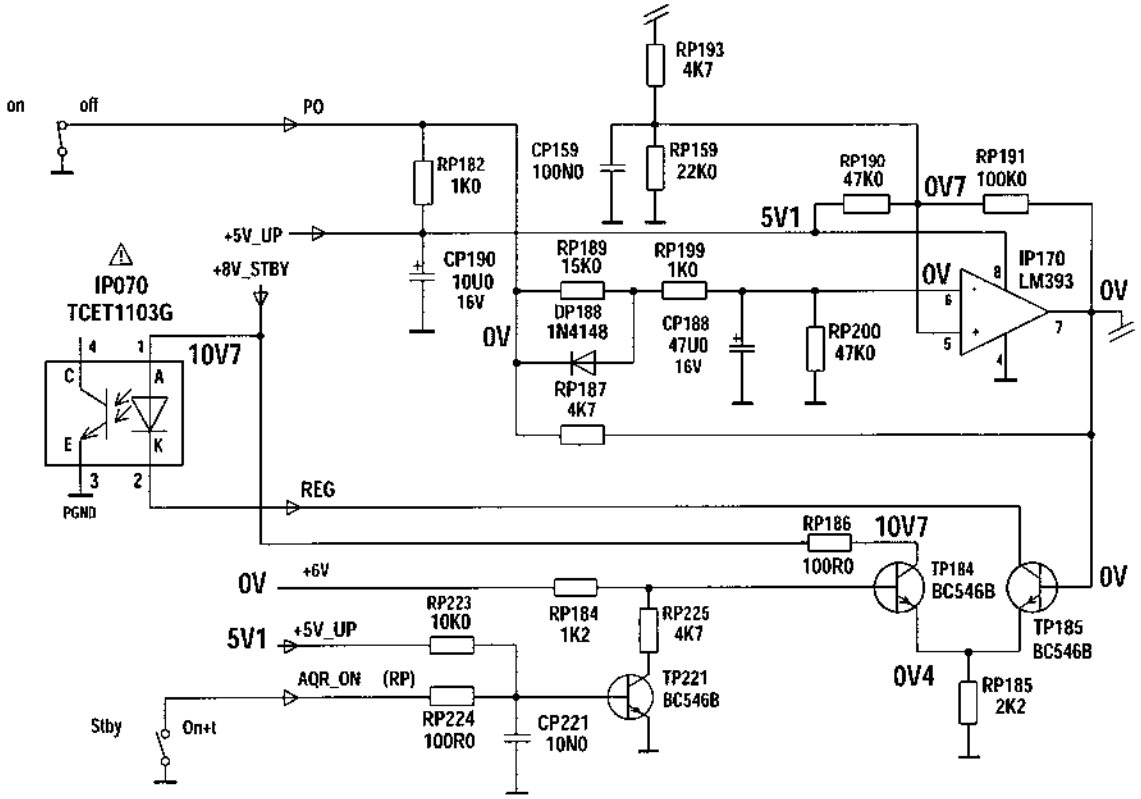
SECONDARY SAFETY VOLTAGES MEASUREMENTS

ON MODE

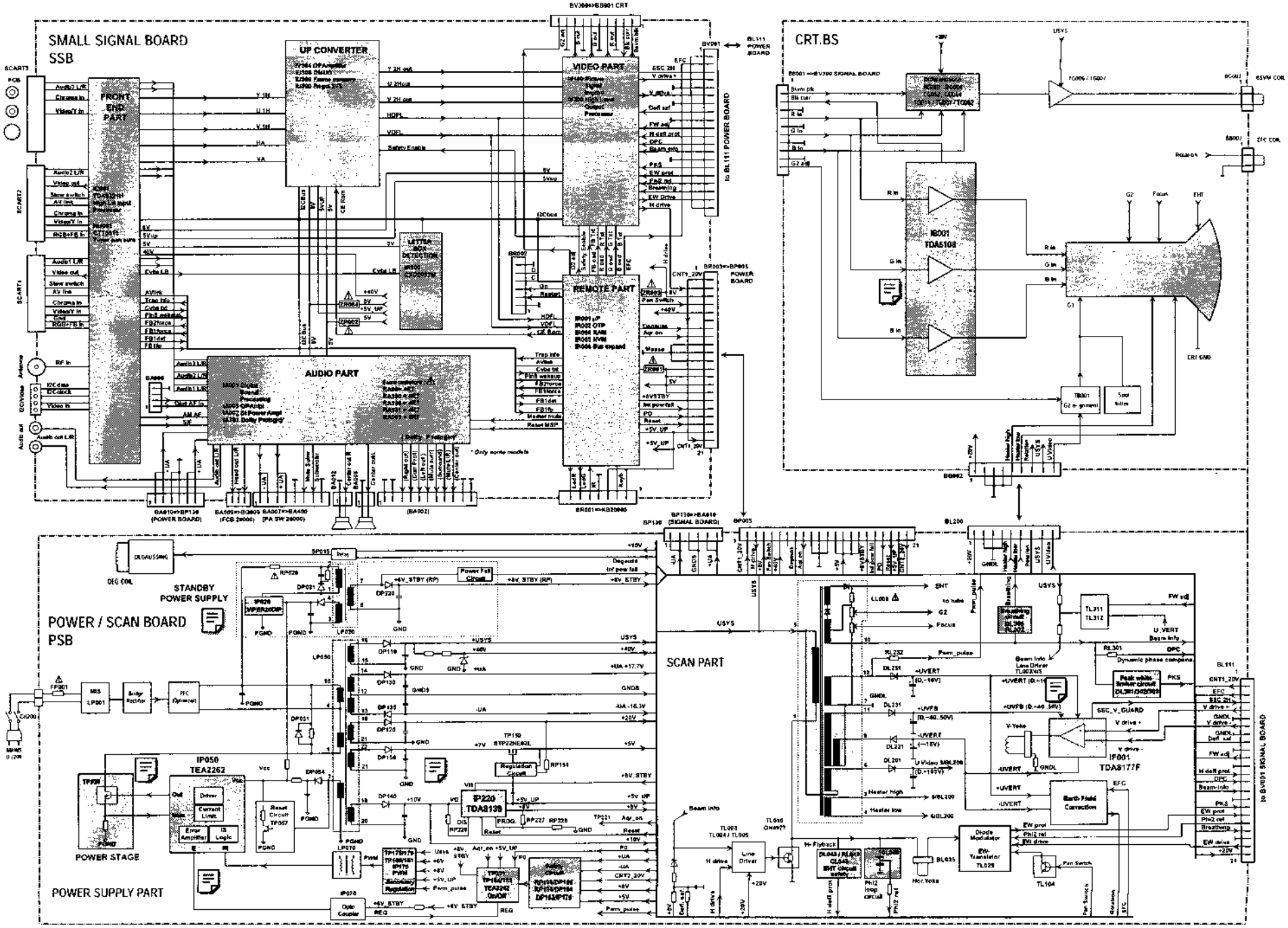


SECONDARY SAFETY VOLTAGES MEASUREMENTS

STANDBY MODE



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



ICC20
First issue 05 / 00