





Video Recorders

Magnétoscopes - Videorecorders - Videoregistratori - Los Videos

 Setup Value	 Setup Value
<u>R8000</u>	<u>R9000</u>
EV210	EV620
EV30	M9950
EV30F	M9960
EV410	VK861PS
FV401LV	VPH6910C
V4910C	VTH6000C
VK260PS	VTH6000F
VK461PS	VTH6000G
VP2920G	VTH6020C
VP4920G	VTH6020F
EV220	VTH6020G
EV420	VTH6020U
M9920	VTH6050F
V2910G	VTH6050G
VT2020F	VTH6081
VT2020G	VTH6081U
VT4020F	VTH7090
VT4020G	VTH7090U


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 energized! 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 guaranteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ) par des composants non homologués selon la Norme CEI 65 entraîne 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 conformità 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 según 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 (Emit. TP060).

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

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

Cuidado : Medida en el bloque de alimentación. Utilizar la masa del bloque de alimentación (Emit. 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 metà corsa, Suono minimo.

Programma designato PR 01.

Tensioni continue rilevate rispetto alla massa con un voltmetro 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.

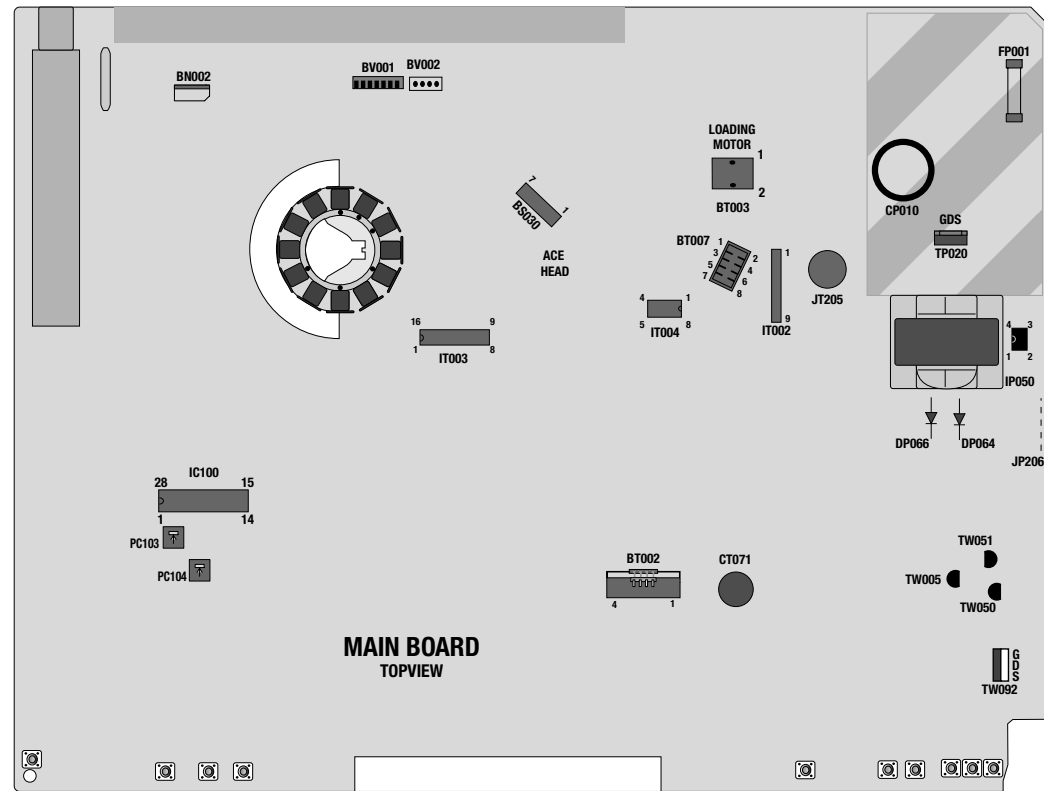
Color, Contraste, luz a mitad de carrera, Sonido minimo.

Programa afectado PR 01.

Tensiones continuas marcadas en relacion a la masa con un voltmetro digital.

2. Electrical adjustments - Réglages électriques - Elektrische Einstellungen - Regolazioni elettriche - Ajustes eléctricos

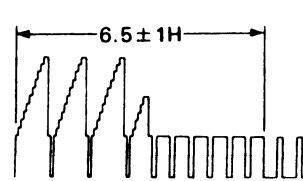
2.1. Test points and adjustment overview - Emplacement des points test et des réglages - Testpunkte und Abgleich-Übersicht - Punti test e panoramica generale delle regolazioni - Punto de prueba y emplazamientos de los ajustes



2.2. On screen display (Main board) - OSD : Affichage sur l'écran (platine principale) - OSD : Hauptleiterplatte - OSD : Visualizzazione su Schermo - OSD : Visualización en la pantalla

N°	Item	Mode & Signal	Test equipment	Test point	Description
2.2.1	OSD chroma oscillator		Frequency counter	RT103	Check for 17.734475MHz±650Hz

2.3. Measurements Servo Section (Main Board) - Vérifications sur les circuits d'asservissements - Messungen Servoteil - Controlli parte Servo - Verificaciones para parte Servo

N°	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.3.1	Oscillator frequency		Frequency counter	IT001 pin 63	None	Confirm $f = 8.0\text{MHz} \pm 1250\text{Hz}$
2.3.2	Drum FF (Flip Flop)	PB / REC	Oscilloscope	IT001 pin 89	None	Check for $40\text{ms} \pm 10\mu\text{s}$
2.3.3	Capstan FG frequency	PB / REC (SP)	Frequency counter	IT001 pin 44	None	Check for $f = 757\text{Hz} \pm 10\text{Hz}$
2.3.4	Head switching	PB	Dual trace Oscilloscope Trigger ext. BW002/3 (Drum FF)	Scart BX001 pin 19	by software setup	<ol style="list-style-type: none"> 1. Insert alignment test cassette. 2. Go to playback mode 3. Press simultaneously the Prog+, Prog-, and Play keys on front panel. 4. Press any mecha key after a short while 5. Confirm that head switching Point is $6.5\text{H} \pm 1\text{H}$ before vert. synchro. 6. Terminal adjustment by pressing the Play key on the front panel. 

2.4. Tuners/IF Alignments

Alignment Traps

N°	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.4.1	31,9 MHz Trap	Standard PAL/BG Signal 31,9 MHz 30mV to TP35	Spectrum Analyser or similar equipment	TP38	F1202	Minimum 31,9 MHz signal
2.4.2	40,4 MHz Trap	Standard PAL/BG Signal 40,4 MHz 30mV To TP35		TP38	F1202	Minimum 40,4 MHz signal

Video Reference Filter

N°	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.4.3	Video Filter	Standard PAL/BG Signal 38,9 MHz 30mV to TP35		TP33 (pin 17/250)	F1201	2,5V DC (+/- 0,1V)

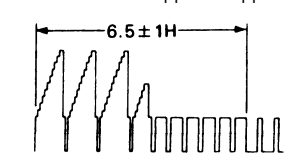
AFT Function Test

- Repeat 2.2.3.
- Change the input frequency to 38,8 MHz; check AFT output voltage : > 3V.
- Change the input frequency to 39,0 MHz; check AFT output voltage : < 2V.

AGC

N°	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.4.4	AGC	<ul style="list-style-type: none"> - Apply a RF signal 3mVrms without modulation to power <p>Models BGLL' & BGDKK'</p> <ul style="list-style-type: none"> - RF signal : 203.25MHz (CH 09, BG) <p>Models BGLL' & BGDKK'</p> <ul style="list-style-type: none"> - RF signal : 215.25MHz (CH 09, I) 			PI250	<ul style="list-style-type: none"> - PI250 to maximum Tuner gain - Adjust PI250 for -10 dB (-1dB, +2dB) attenuation from the maximum IF output level.

2.5. Video signal processing - Traitement video - Video Signalteil - Elaborazione segnale video - Tratamiento video

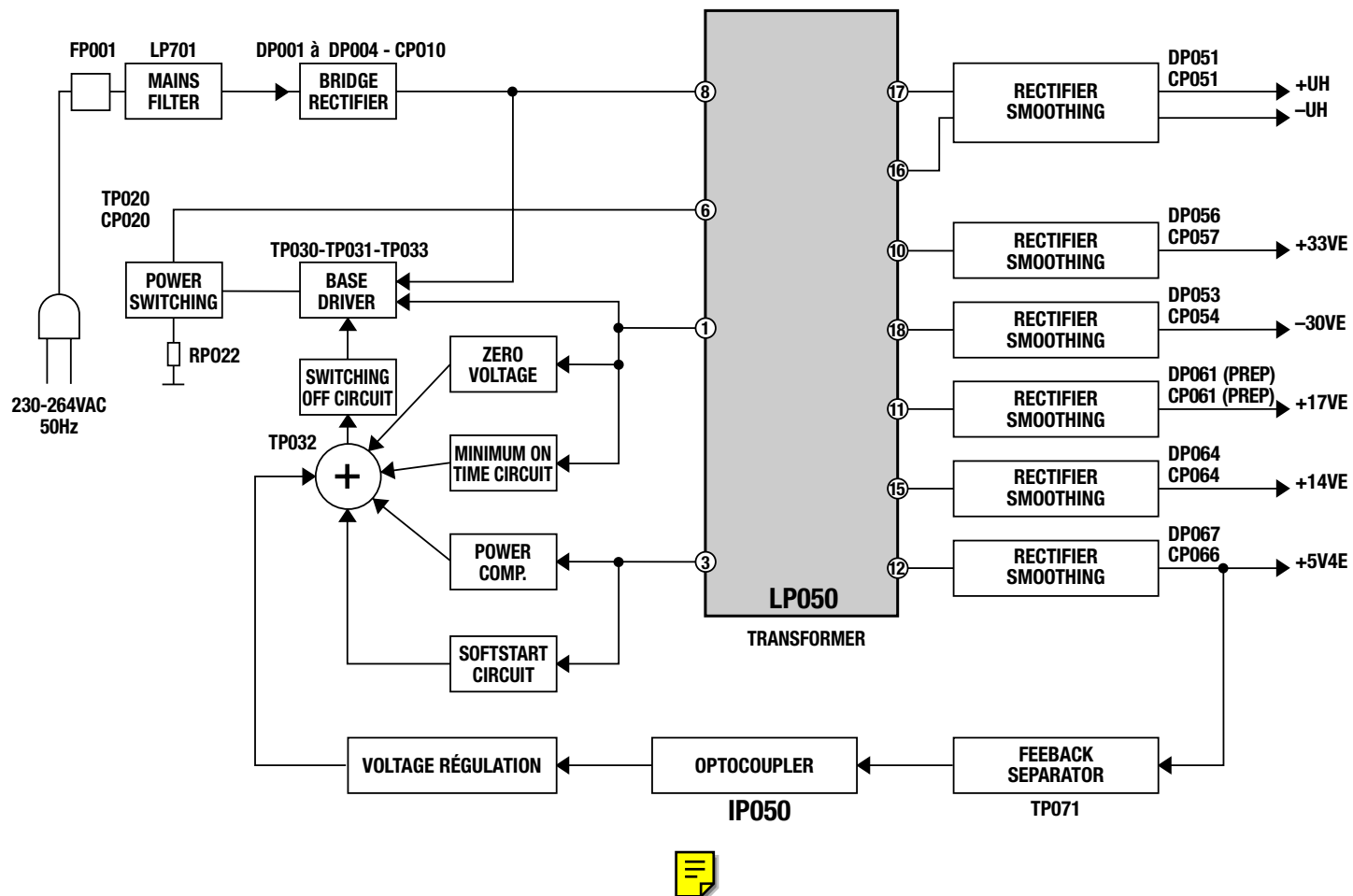
N°	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.5.1	CVBS EE level	Select AV1 REC PAL PAL grey scale 1Vpp AV1 pin20	Oscilloscope	AV 1 pin 19	None	<p>Chek for VBS = $1\text{Vpp} \pm 0,1\text{Vpp}$ Burst = $300\text{mVpp} \pm 70\text{mVpp}$</p> 
2.5.2	CVBS EE level	REC SECAM Colour bar 1Vpp AV 1 pin20	Oscilloscope	AV 1 pin 19	None	Magenta bar = $210\text{mVpp} \pm 20\text{mVpp}$
2.5.3	FM REC level	REC without signal	Oscilloscope	TY008 (emitter)	None	Check for 230mVpp

2.6. Audio signal processing - Traitement audio - Audio Signalverarbeitung - Elaborazione segnale audio - Procesamiento audio

N°	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.6.1	Bias oscillator frequency & level	REC (without signal)	Oscilloscope	BS030 pin 1	None	Chk for $70\text{KHz} \pm 4\text{KHz}$ $40\text{Vpp} \pm 4\text{Vpp}$
2.6.2	Bias Current Chek	REC (without signal)	Oscilloscope (high impedance scope probe)	IY001 pin3	None	Bias level : $V = 1,1\text{Vpp} - 0,2\text{V}$

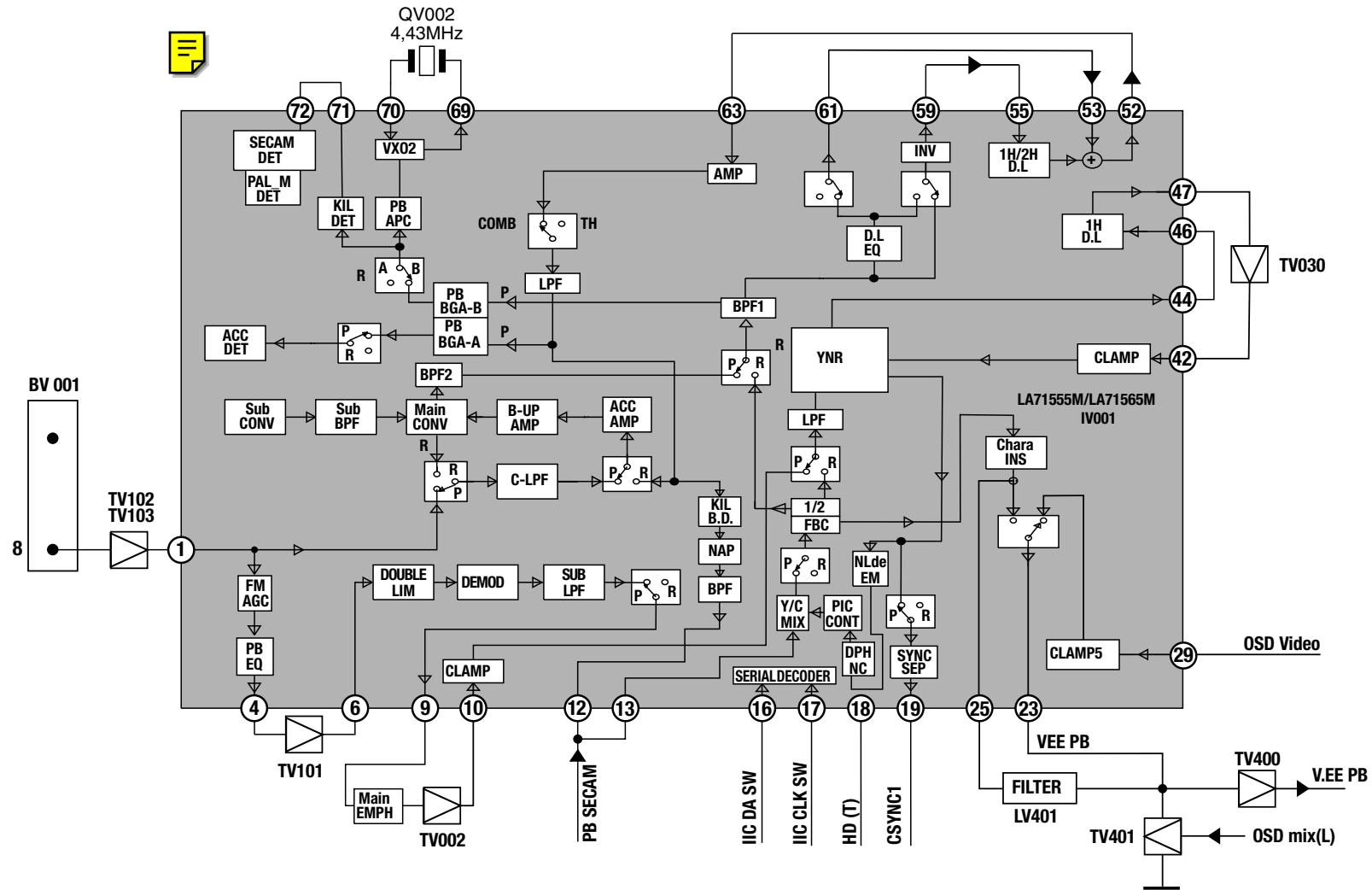
POWER SUPPLY INTERFACE - INTERFACE ALIMENTATION - NETZEIL - INTERFACCIA ALIMENTAZIONE - INTERFAZ ALIMENTACIÓN

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



VIDEO SIGNAL PROCESSING - TRAITEMENT VIDEO - VIDEO SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMIENTO VIDEO

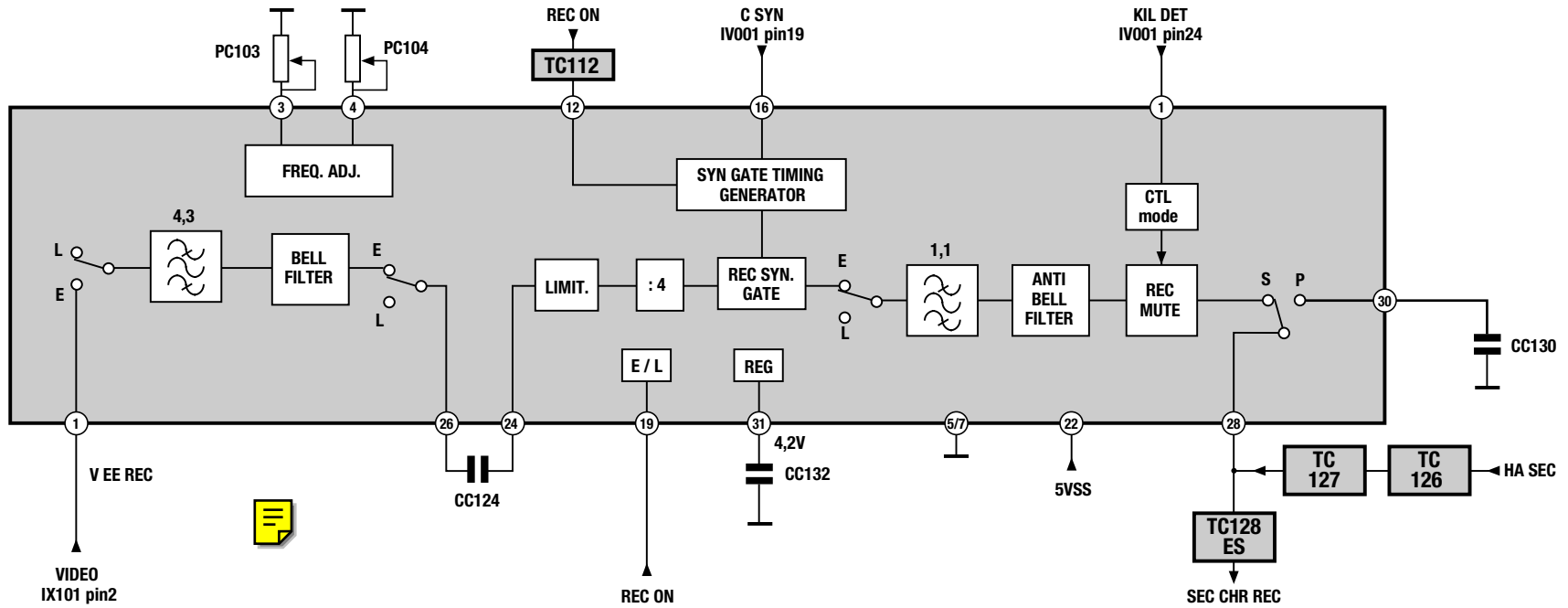
BLOCK DIAGRAM - SCHEMA SYNOPTIQUE - BLOCKSCHALTBIID - SCHEMA A BLOCCHI - ESQUEMA DE BLOQUES



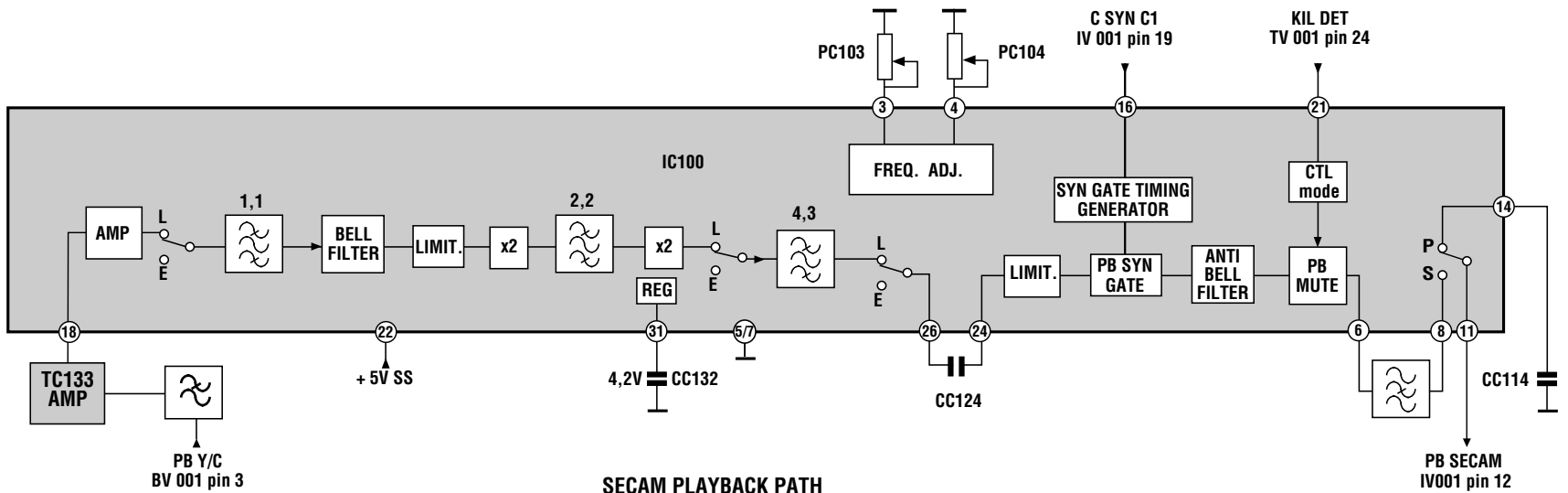
LUMINANCE PLAYBACK PATH
PAL PLAYBACK PATH

VIDEO SIGNAL PROCESSING - TRAITEMENT VIDEO - VIDEO SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMIENTO VIDEO

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



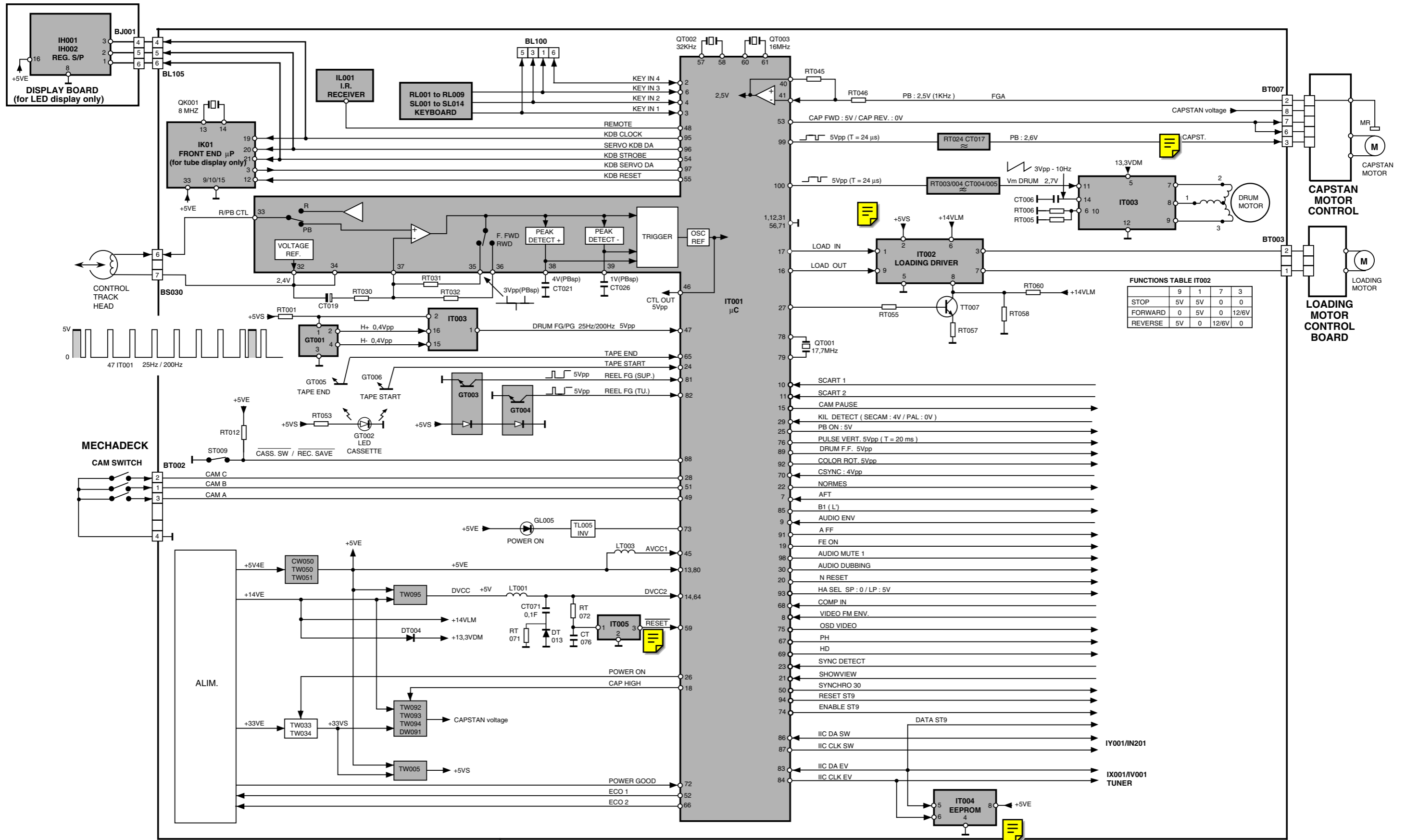
SECAM RECORD PATH



SECAM PLAYBACK PATH

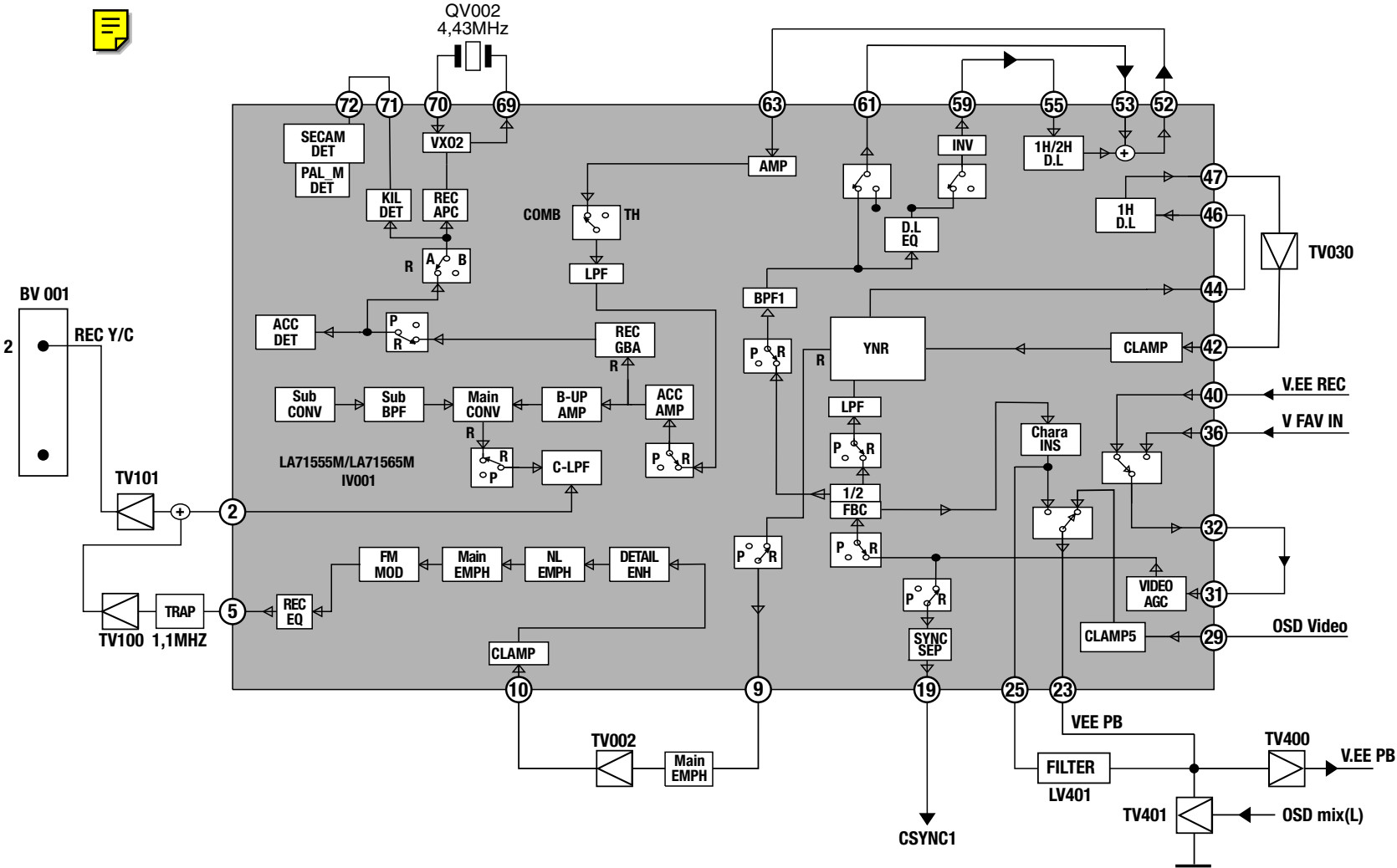
MECHA DECK CONTROL / SERVO CONTROL - GESTION / ASSERVISSEMENTS - MECHANIKSTEUERUNG / SERVO - CONTROLLO MECCANICA / SERVO - SERVOMECANISMO / GESTIÒN

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



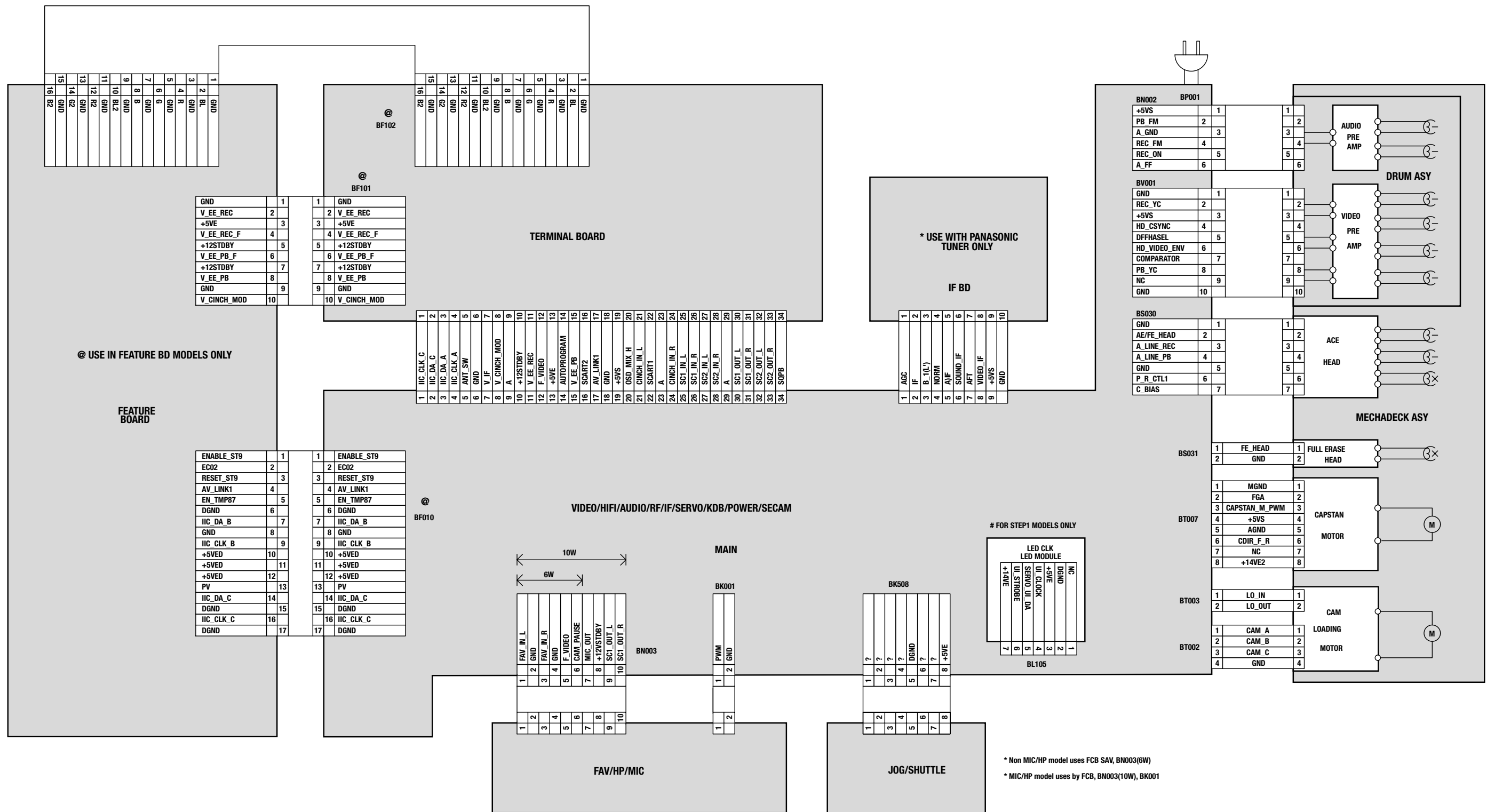
VIDEO SIGNAL PROCESSING - TRAITEMENT VIDEO - VIDEO SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMIENTO VIDEO

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



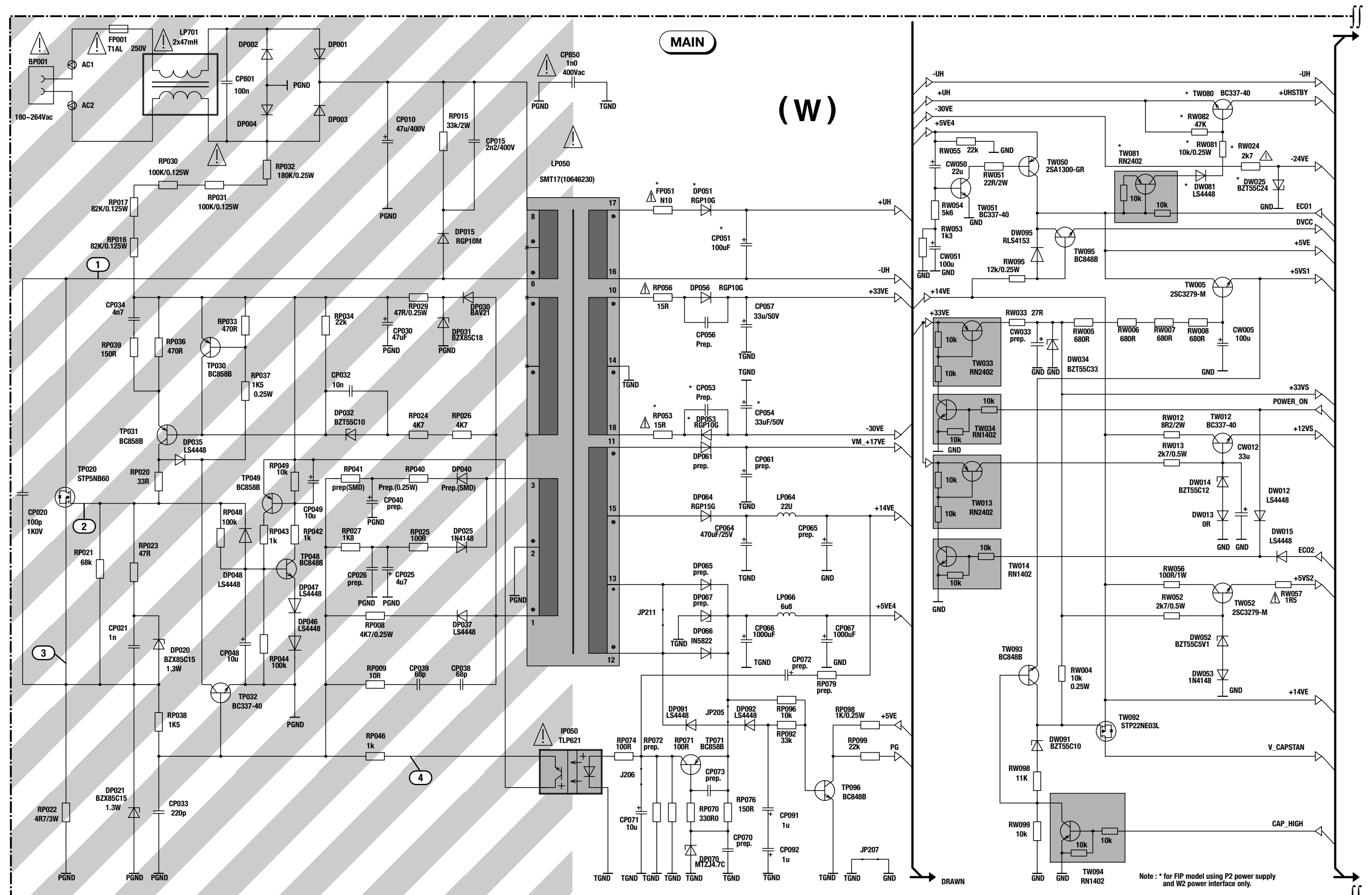
**LUMINANCE RECORD PATH
PAL RECORD PATH**

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



POWER SUPPLY INTERFACE - INTERFACE ALIMENTATION - NETZTEIL - ALIMENTAZIONE - INTERFAZ ALIMENTACIÓN

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA



Part of board connected to mains supply.
Partie du châssis relié au secteur.
Primärseite des Netzteils.
Parte del telaio collegato alla rete.
Parte del chassis conecta a la red.

Note :
During measurements in the power supply unit
- Use the primary power unit ground (PGND ⊥).
Attention :
Mesure dans le bloc alimentation
- Utiliser la masse du bloc alimentation (PGND ⊥).
Achtung :
Bei Messungen im Primärnetzteil
- Primärnetzteilmasse verwenden (PGND ⊥).

Attenzione :
misure nell'alimentatore primario
- usare massa alimentazione primario (PGND ⊥).
Cuidado :
Medida en el bloque de alimentación
- Utilizar la masa del bloque de alimentación (PGND ⊥).

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

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

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

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

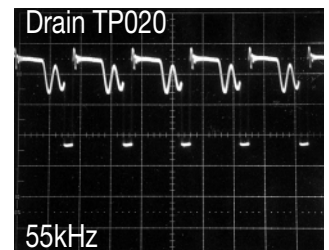
La substitución de elementos de seguridad
(marcados con el símbolo ⚠) por
componentes no homologados según la
norma CEI 65, provoca la no conformidad
del aparato. En ese caso, el fabricante cesa
de ser responsable.

Note : * for FIP model using P2 power supply
and W2 power interface only.

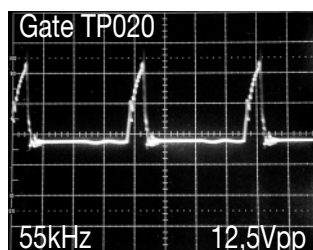
MEASUREMENTS POWER SUPPLY INTERFACE - MESURES INTERFACE ALIMENTATION -
 MESSUNGEN NETZTEIL INTERFACE - MISURE INTERFACCIA ALIMENTAZIONE -
 MEDIDAS INTERFAZ ALIMENTACIÓN

POWER		MODE		
LOC	PIN	EE	PLAY	REC.
IP050	1	0	1	1
	2	0	0	0
	3	4,3	3,4	3,4
	4	9,8	10,4	10,4
TW005	E	0	5,1	5,
	B	0	5,9	5,9
	C	5,4	5,2	5,2
TW012	E	11,6	11,5	11,5
	B	12,3	12,3	12,3
	C	12,3	11,6	11,6
TW013	E	43,6	43,6	43,6
	B	0	0	0
	C	43,5	43,5	43,5
TW014	E	0	0	0
	B	4,9	4,9	4,9
	C	0	0	0
TW033	E	36	34	34
	B	35,9	0	0
	C	0	34	34
TW034	E	0	0	0
	B	0	4,1	4,1
	C	35,8	0	0
TW050	E	5,4	5,3	5,3
	B	4,6	4,5	4,5
	C	5,4	5,2	5,2
TW051	E	0	0	0
	B	0,6	0,6	0,6
	C	1,1	1,1	1,1
TW052	E	0	5,3	5,3
	B	0	5,9	5,9
	C	14,2	8	8,1
TW092	G	0	14,5	14,5
	D	14,2	14,1	14,1
	S	0	12,2	12,2
TW093	E	0	5,2	5,2
	B	0	5,8	5,8
	C	0	14,5	14,5
TW094	E	0	0	0
	B	0	0	0
	C	0	5,8	5,8
TW095	E	5,1	5	5
	B	5,9	5,8	5,8
	C	5,4	5,2	5,2

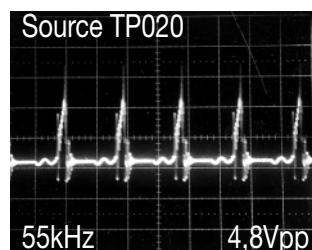
POWER		MODE		
LOC	PIN	ON	STBY	V/ECO
TP030	E	15,6	11,8	11,8
	B	14,8	11,1	11
	C	14,6	11,4	11,4
TP031	E	14,7	11,4	11,4
	B	14,6	11,4	11,4
	C	0,8	0,3	0,3
TP032	E	0	0	0
	B	0,5	0,6	0,6
	C	2,8	2,3	2,3
TP048	E	-0,5	0	0
	B	-0,4	0	0
	C	15,5	11,8	11,8
TP071	E	5,3	5,4	5,4
	B	4,7	4,7	4,7
	C	1,1	1,2	1,2
TP096	E	0	0	0
	B	0,9	1	1
	C	5,2	5,2	5,2



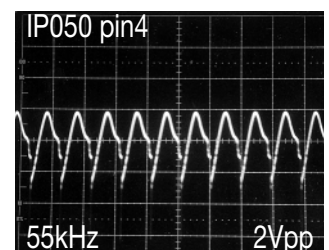
1



2



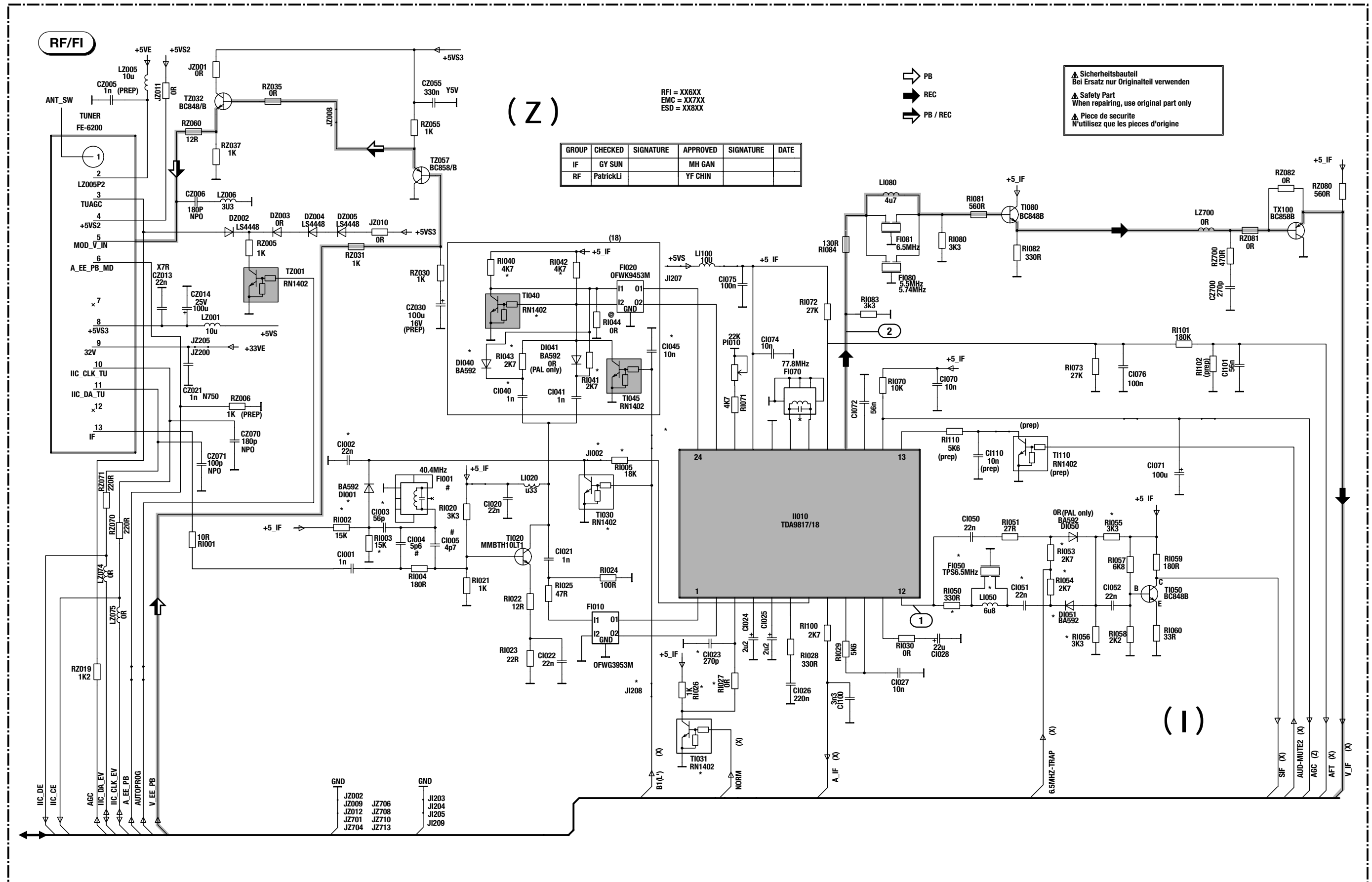
3



4

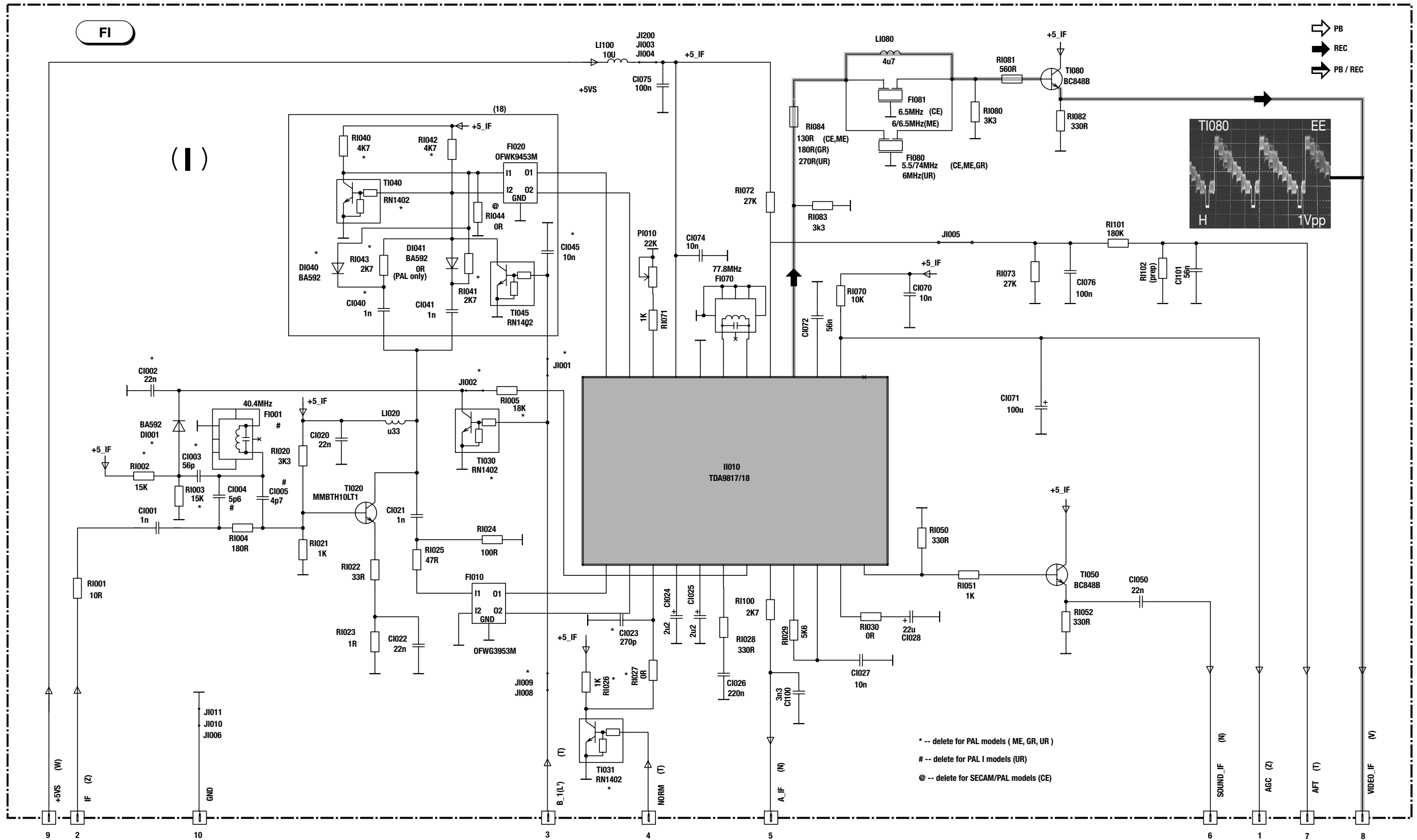
TUNER / IF SECTION - INTERFACE TUNER / FI - TUNER / ZF - TUNER / IF - INTERFAZ TUNER / IF

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA



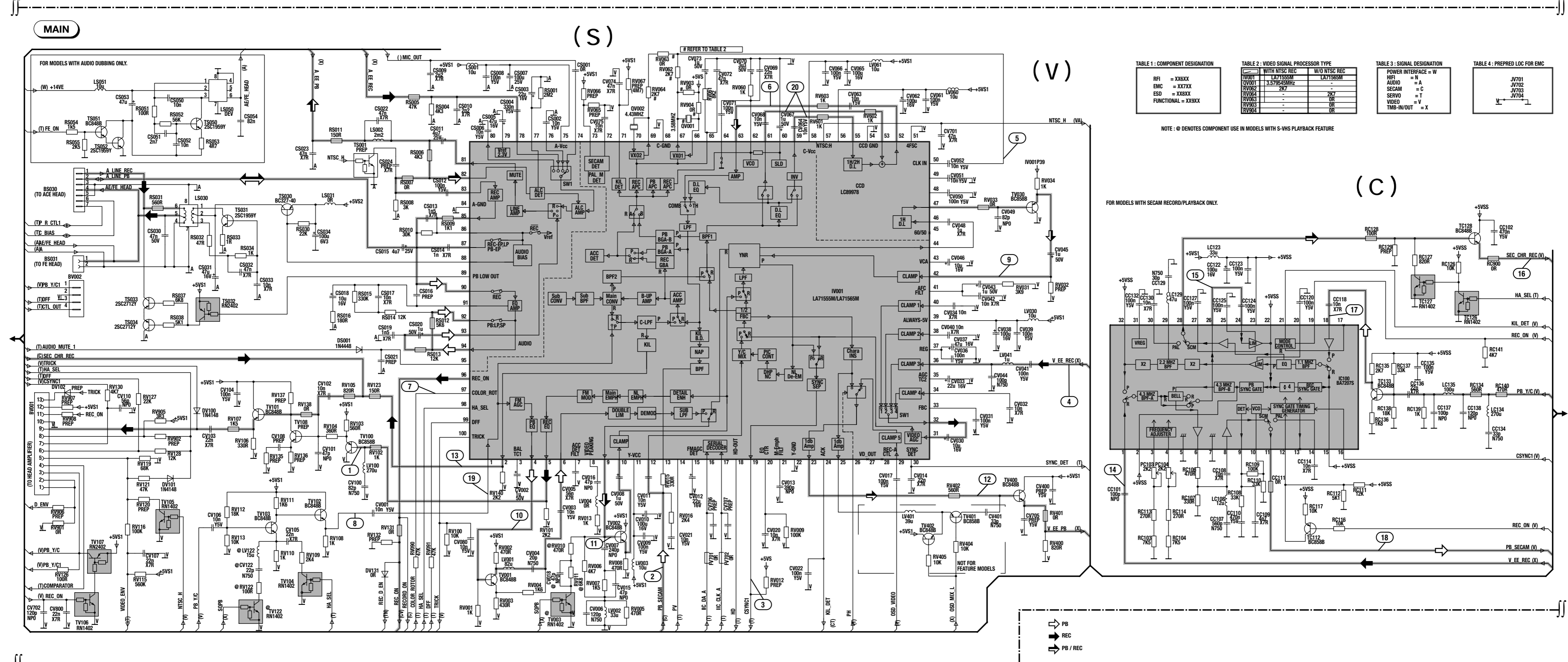
IF AMPLIFIER - AMPLIFICATEUR FI - ZF VERSTÄRKER - AMPLIFICATORE FI - AMPLIFICADOR FI

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA



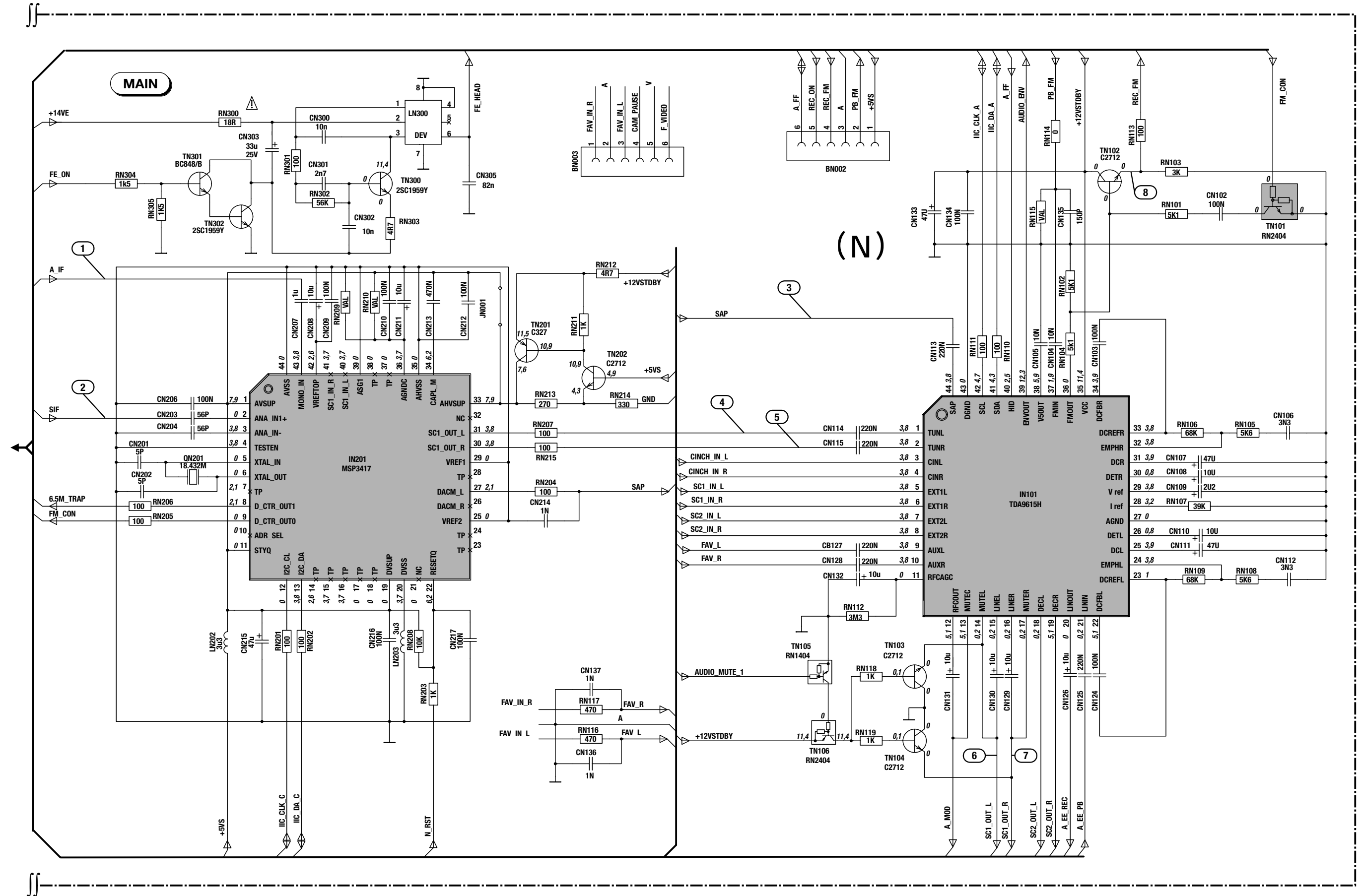
AUDIO/VIDEO SIGNAL PROCESSING - TRAITEMENT AUDIO/VIDEO - AUDIO/VIDEO SIGNALVERARBEITUNG - ELABORAZIONE AUDIO/VIDEO - TRATAMIENTO AUDIO/VIDEO

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

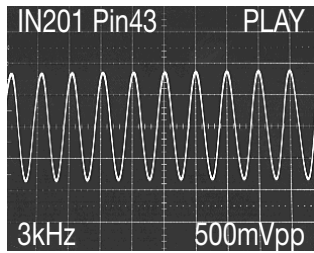


AUDIO SIGNAL PROCESSING - TRAITEMENT AUDIO - AUDIO SIGNALVERARBEITUNG - ELABORAZIONE AUDIO - TRATAMIENTO AUDIO

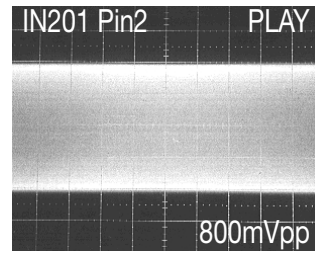
SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA



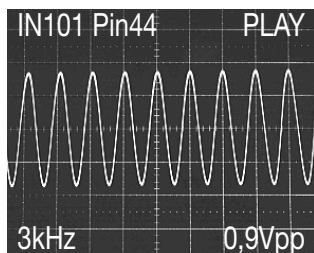
MEASUREMENTS AUDIO SIGNAL PROCESSING - MESURES TRAITEMENT AUDIO -
MESSUNGEN AUDIO SIGNALVERARBEITUNG - MISURE ELABORAZIONE AUDIO -
MEDIDAS TRATAMIENTO AUDIO



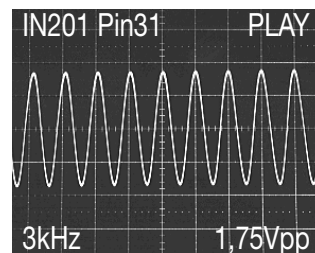
1



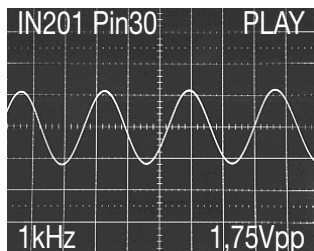
2



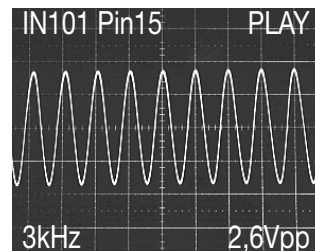
3



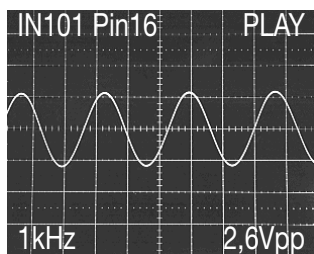
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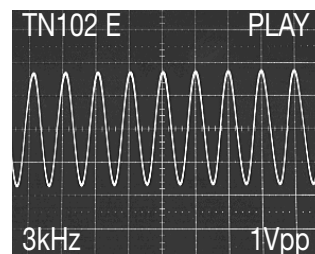
5



6



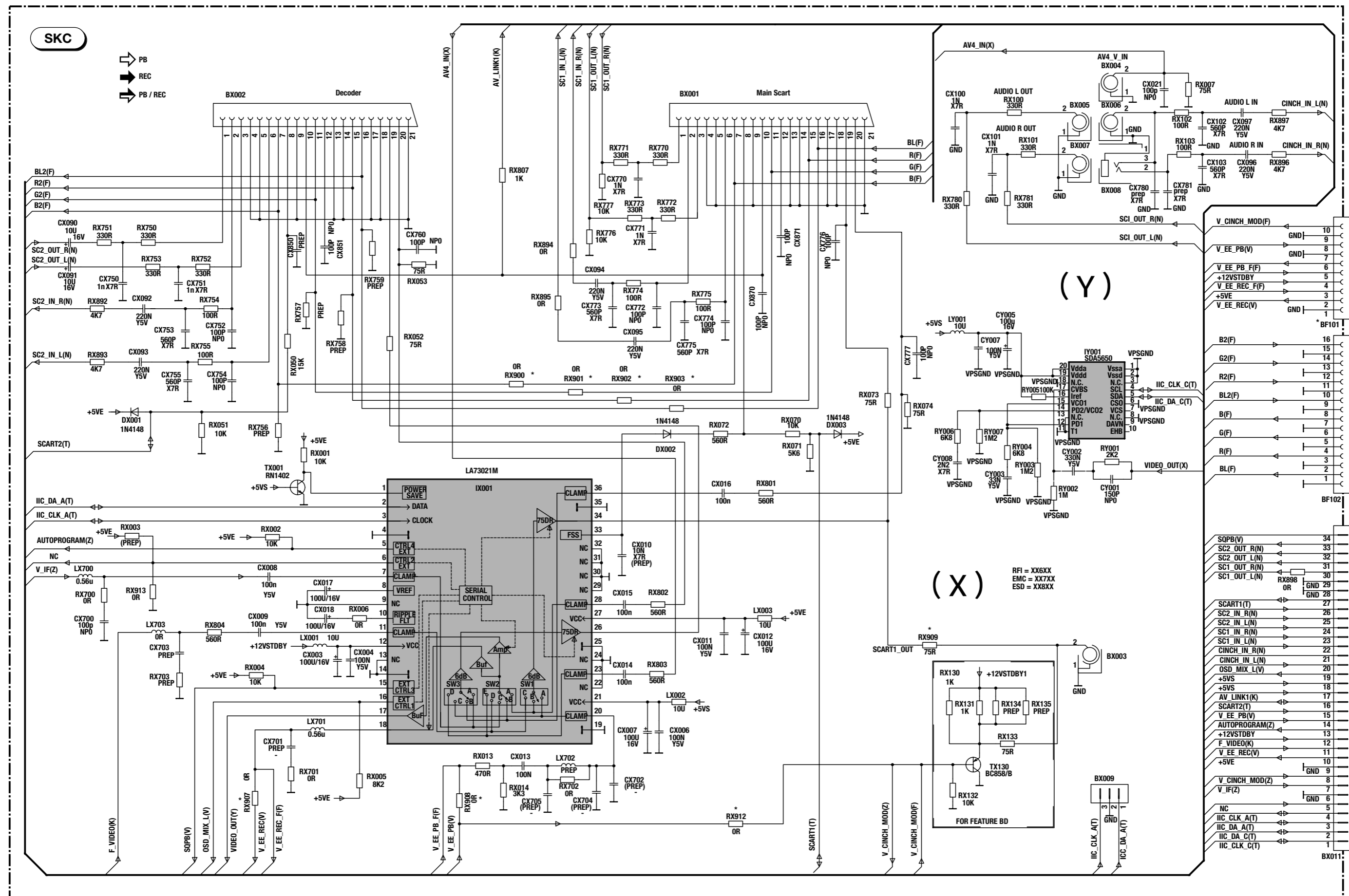
7



8

AUDIO HIIFI / SCART CONNECTION BOARD - PLATINE AUDIO HIIFI / PRISES SCART - LEITERPLATTE AUDIO HIIFI / SCART - PIASTRA AUDIO HIIFI / SCART - PLATINE AUDIO HIIFI / SCART

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

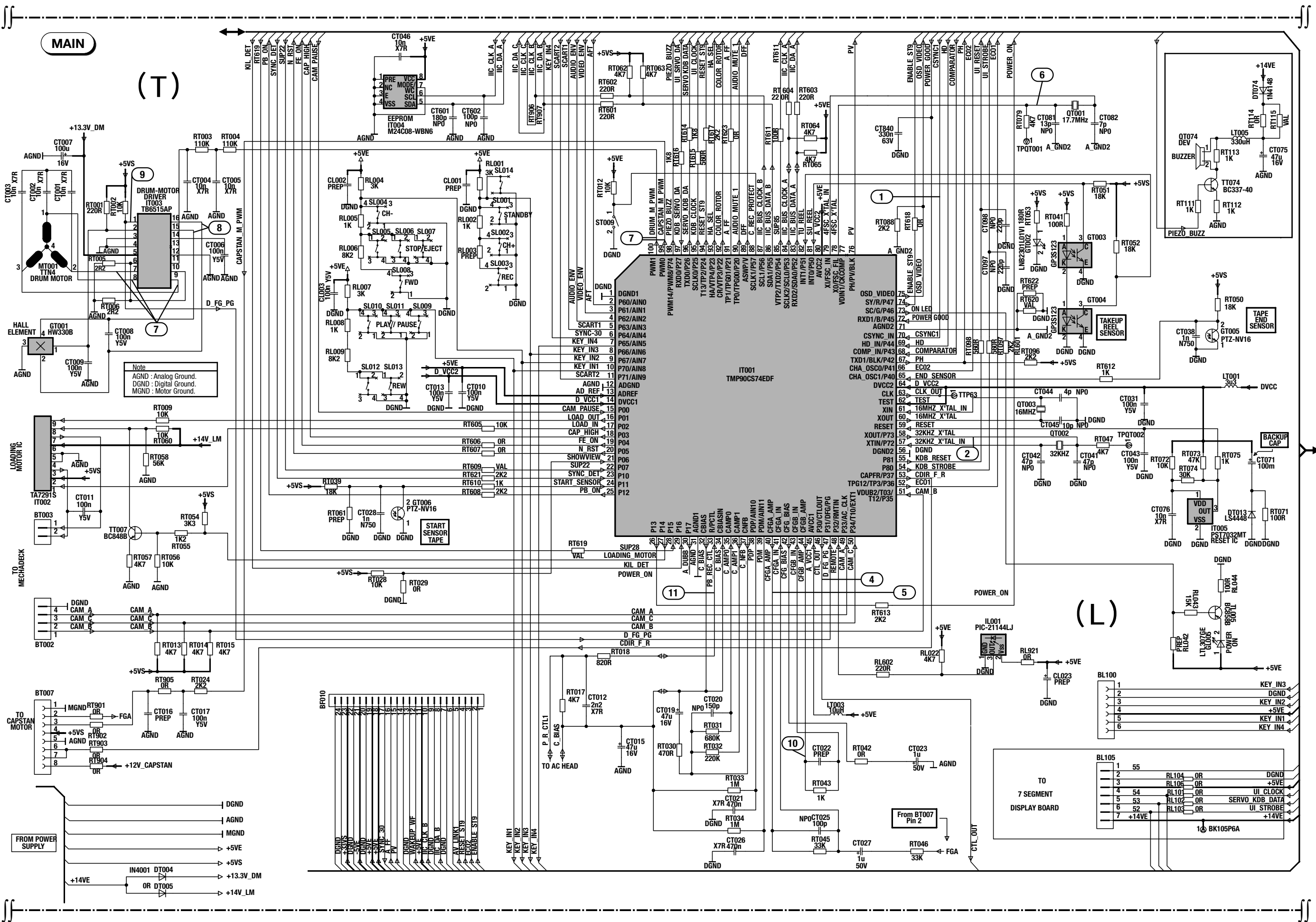


MEASUREMENTS VIDEO SIGNAL PROCESSING -
 MESURES TRAITEMENT VIDEO -
 MESSUNGEN VIDEO SIGNALVERARBEITUNG -
 MISURE ELABORAZIONE VIDEO -
 MEDIDAS TRATAMIENTO VIDEO

SCART		MODE		
LOC	PIN	EE	PLAY	REC.
IX001	1	5,8	5,8	5,8
	2	0,6	0,6	0,6
	3	0	11,3	11,4
	4	0	11,3	11,4
	5	5,8	5,8	5,8
	6	0,6	0,6	0,6
	7	11,6	11,5	11,6
	8	11,6	11,6	11,6
	9	5,8	5,8	5,8
	10	11,6	11,5	11,6
	11	0	0	0
	12	5,2	5,2	5,2
	13	0	0	0
	14	1,8	1,8	1,8
	15	5,1	5,1	5,1
	16	2,1	2,1	2,1
	17	5,1	5,1	5,1
	18	1,7	1,7	1,7
	19	2,1	2,2	2,1
	20	2,1	2,1	2,1
	21	1,4	1,4	1,4
	22	1,4	1,4	1,4
	23	1,5	1,5	1,5
	24	0	0	0
	25	4,7	5	5
	26	5	5,1	5,1
	27	0	0	0
	28	0	0	0
	29	5,2	5,2	5,2
	30	0	0	0
	31	5,2	5,2	5,2
	32	0	0	0
	33	0	0	0
	34	6	6	6
	35	5,2	5,2	5,2
	36	5,8	5,8	5,8
TX100	E	2	2	2
	B	1,3	1,3	1,3
	C	0	0	0

MECHA DECK CONTROL / SERVO CONTROL - GESTION / ASSERVISSEMENTS - MECHANIKSTEUERUNG / SERVO - CONTROLLO MECCANICA / SERVO - SERVOMECHANISMO / GESTIÓN

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

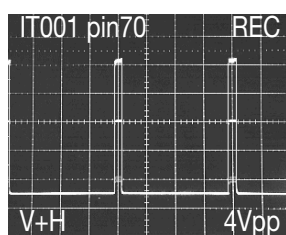


MECHA DECK CONTROL / SERVO CONTROL MEASUREMENTS - MESURES GESTION / ASSERVISSEMENTS -
 MESSUNGEN MECHANIKSTEUERUNG / SERVO - MISURE CONTROLLO MECCANISMO / SERVO -
 MEDIDAS SERVOMECANISMO / GESTION

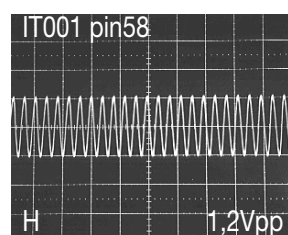
DECK/SERVO	MODE				
	LOC	PIN	EE	PLAY	REC.
GT001	1	1,5	1,5	1,5	1,5
	2	0,8	0,8	0,8	0,8
	3	0	0	0	0
	4	0,7	0,7	0,7	0,7
GT003	1	2,4	2,4	2,4	2,4
	2	1,2	1,2	1,2	1,2
	3	5,1	5,1	5,1	5,1
	4	0	0	0	0
GT004	1	1,2	1,2	1,2	1,2
	2	0	0	0	0
	3	5,1	5,1	5,1	5,1
	4	0	0	0	0
IT001	1	0	0	0	0
	2	5,3	5,3	5,3	5,3
	3	5,3	5,3	5,3	5,3
IT002	1	4,8	4,8	4,8	4,8
	2	5,1	5,1	5,1	5,1
	3	0,5	0,5	0,5	0,5
	4	0	0	0	0
	5	0	0	0	0
	6	14,5	14,5	14,5	14,5
	7	0,5	0,5	0,5	0,5
	8	12,3	12,3	12,3	12,3
	9	4,8	4,8	4,8	4,8
IT003	1	1,2	1,2	1,2	1,2
	2	1,5	1,5	1,5	1,5
	3	0	0	0	0
	4	0	0	0	0
	5	13,8	13,5	13,5	13,5
	6	0	0	0	0
	7	10,5	10	10	10
	8	10	10	10	10
	9	10,5	9,9	9,9	9,9
	10	0	0	0	0
	11	2,7	2,7	2,7	2,7
	12	0	0	0	0
	13	5,2	5,2	5,2	5,2
	14	3,3	3,3	3,3	3,3
	15	0,7	0,7	0,7	0,7
	16	0,7	0,7	0,7	0,7
IT004	1	0	0	0	0
	2	0	0	0	0
	3	0	0	0	0
	4	0	0	0	0
	5	5	5	5	5
	6	5,1	5,1	5,1	5,1
	7	0	0	0	0
	8	5,3	5,3	5,3	5,3
IT005	1	5	5	5	5
	2	0	0	0	0
	3	5	5	5	5

DECK/SERVO	MODE				
	LOC	PIN	EE	PLAY	REC.
IT001	1	0	0	0	0
	2	2,8	2,6	2,8	2,8
	3	1,9	2,8	2,8	2,8
	4	5	5	5	5
	5	4,1	4,1	4,1	4,1
	6	5,2	5,2	5,2	5,2
	7	0	0	0	0
	8	5,2	5,3	5,2	5,2
	9	5,2	5,2	5,2	5,2
	10	5,2	5,2	5,2	5,2
	11	0	0	0	0
	12	0	0	0	0
	13	5,2	5,2	5,2	5,2
	14	5	5	5	5
	15	0	0	0	0
	16	5	5	5	5
	17	5	5	5	5
	18	0	0	0	0
	19	0	0	0	0
	20	0	0	0	0
	21	0	0	0	0
	22	5	5	5	5
	23	0	0	0	0
	24	4,9	4,9	4,8	4,8
	25	0	4,9	0	0
	26	5	5	5	5
	27	0,1	0,1	0,1	0,1
	28	4,6	4,6	4,6	4,6
	29	0	0	0	0
	30	0	0	0	0
	31	0	0	0	0
	32	2,6	2,6	2,6	2,6
	33	2,6	2,6	2,3	2,3
	34	2,6	2,6	2,6	2,6
	35	2,6	2,6	2,6	2,6
	36	2,5	2,5	2,5	2,5
	37	2,6	2,6	2,6	2,6
	38	2,6	2,6	2,6	2,6
	39	2,4	2,4	2,4	2,4
	40	2,6	2,6	2,6	2,6
	41	2,6	2,6	2,6	2,6
	42	2,6	2,6	2,6	2,6
	43	2,6	2,6	2,6	2,6
	44	2,6	2,6	2,6	2,6
	45	5,2	5,2	5,2	5,2
	46	5	5	5	5
	47	1,3	1,2	1,2	1,2
	48	4,6	5,2	5,2	5,2
	49	0	0	0	0
	50	5,1	5,1	5,1	5,1

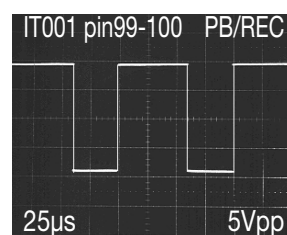
DECK/SERVO	MODE				
	LOC	PIN	EE	PLAY	REC.
	51	0	5,1	5,1	5,1
	52	0	0	0	0
	53	5	5	5	5
	54	0	0	0	0
	55	0	0	0	0
	56	0	0	0	0
	57	2	2	1,9	1,9
	58	2,4	2,4	2,4	2,4
	59	5	5	5	5
	60	2,3	2,3	2,3	2,3
	61	-	-	-	-
	62	5	5	5	5
	63	0,6	0,3	0,7	0,7
	64	5	5	5	5
	65	4,5	4,7	4,7	4,7
	66	0	0	0	0
	67	0,1	0,1	0,1	0,1
	68	4,5	0,1	0,2	0,2
	69	0,3	0,3	0,3	0,3
	70	0,3	0,3	0,3	0,3
	71	0	0	0	0
	72	5,2	5,2	5,2	5,2
	73	0	0	0	0
	74	0	0	0	0
	75	1,7	1,7	1,7	1,7
	76	0	0	0	0
	77	0,1	0,3	0,3	0,3
	78	2,5	2,4	2,4	2,4
	79	2,2	2,2	2,2	2,2
	80	5,2	5,2	5,2	5,2
	81	-	-	-	-
	82	-	-	-	-
	83	5,1	5	5	5
	84	5,1	5	5	5
	85	0	0	0	0
	86	5	5	5	5
	87	5,1	5,1	5,1	5,1
	88	0	0	0	0
	89	2,5	2,5	2,4	2,4
	90	0	0	0	0
	91	0,1	0,3	0,3	0,3
	92	0,1	2,5	2,5	2,5
	93	2,4	0,1	0	0
	94	0,3	4,9	5	5
	95	5	4,9	4,9	4,9
	96	0,5	1,5	0,5	0,5
	97	0,1	0,3	0,4	0,4
	98	5	4,9	4,9	4,9
	99	0	2,6	2,6	2,6
	100	2,8	2,8	2,8	2,8



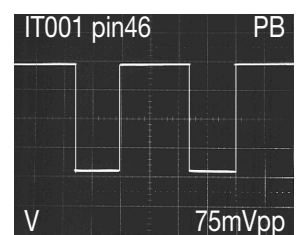
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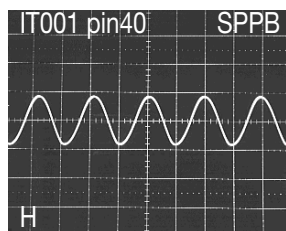
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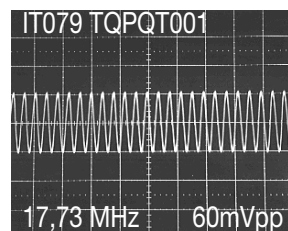
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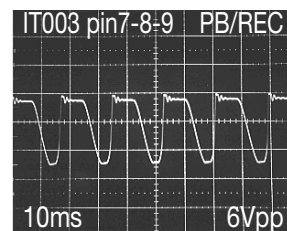
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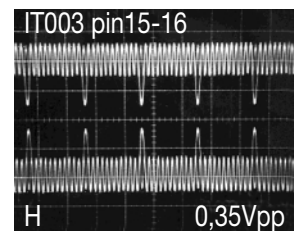
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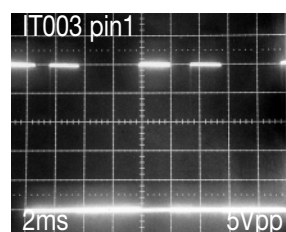
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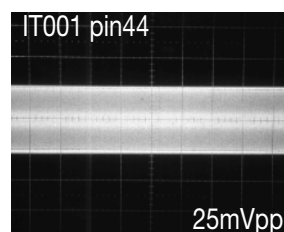
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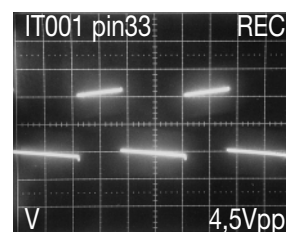
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⑨



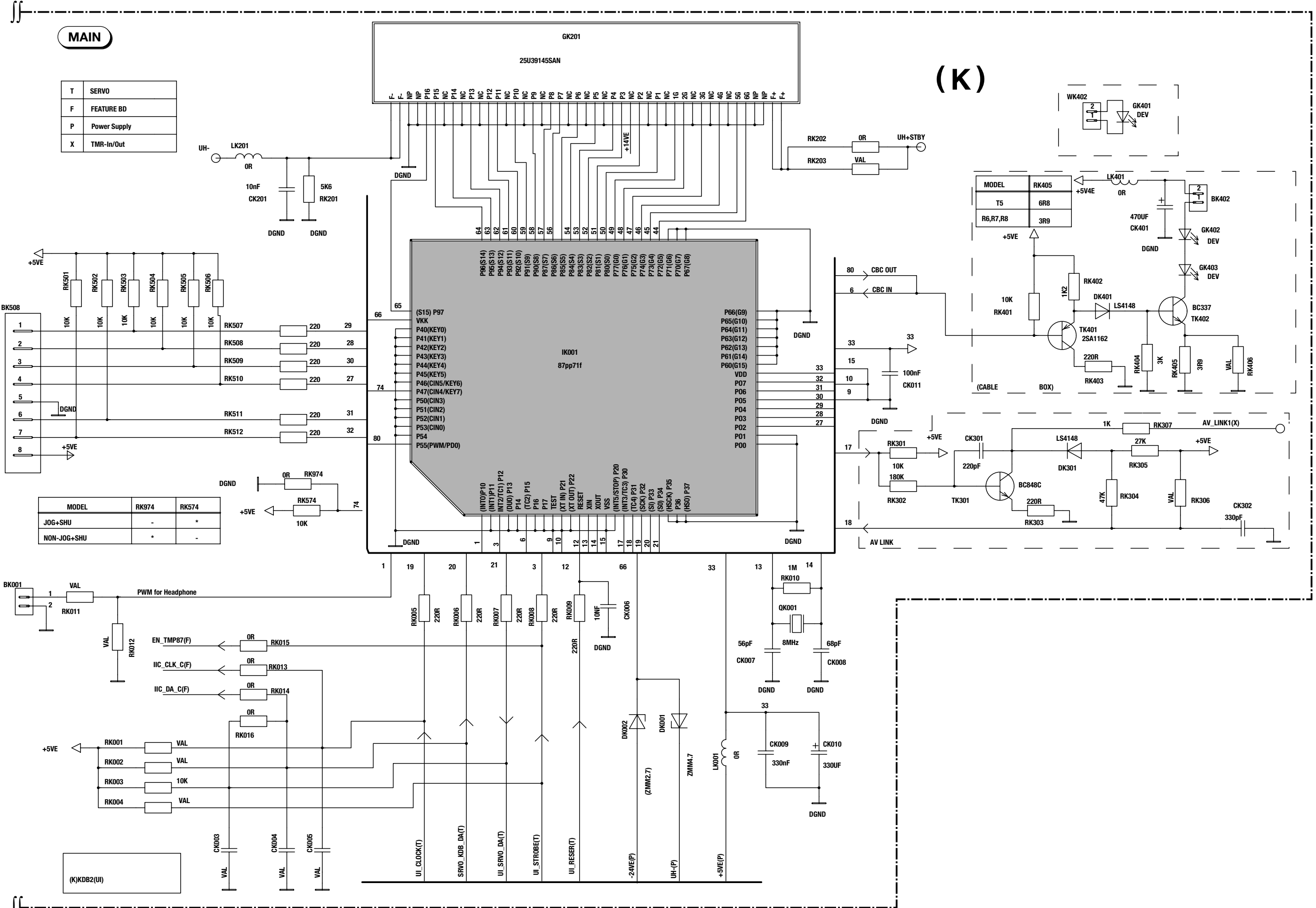
⑩



⑪

KEYBOARD WITH DISPLAY - PLATINE DE COMMANDES AVEC AFFICHEUR - BEDIENITEIL MIT DISPLAY - TASTIERA CON DISPLAY - PLATINA MANDOS CON VISUALIZADOR

SCHEMATIC DIAGRAM - SCHEMA DE PRINCIPE - SCHALTBILD - SCHEMA - ESQUEMA

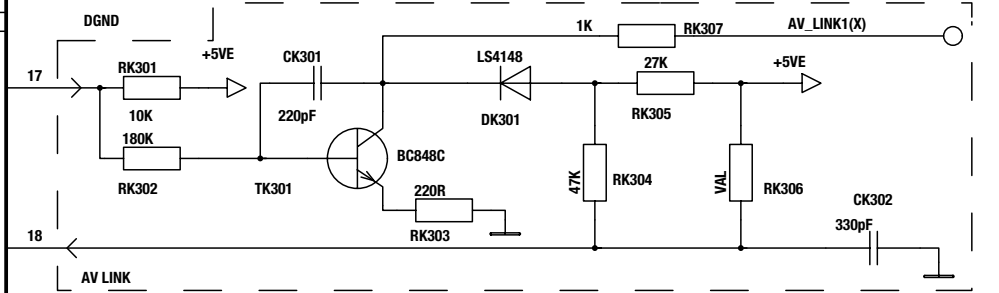
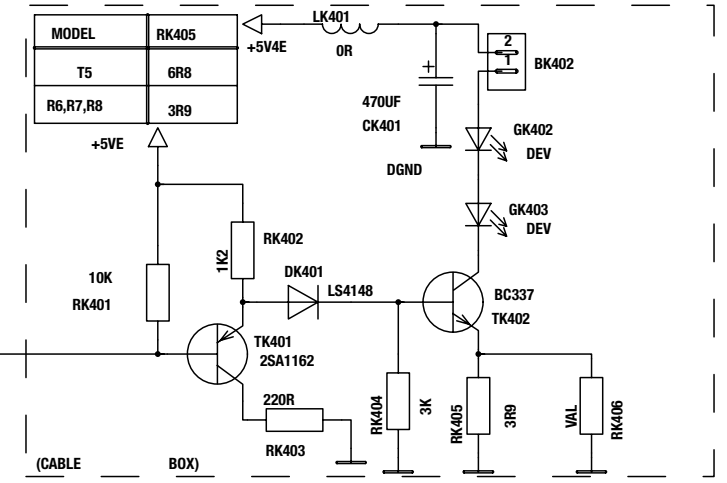


MAIN

T	SERVO
F	FEATURE BD
P	Power Supply
X	TMR-In/Out

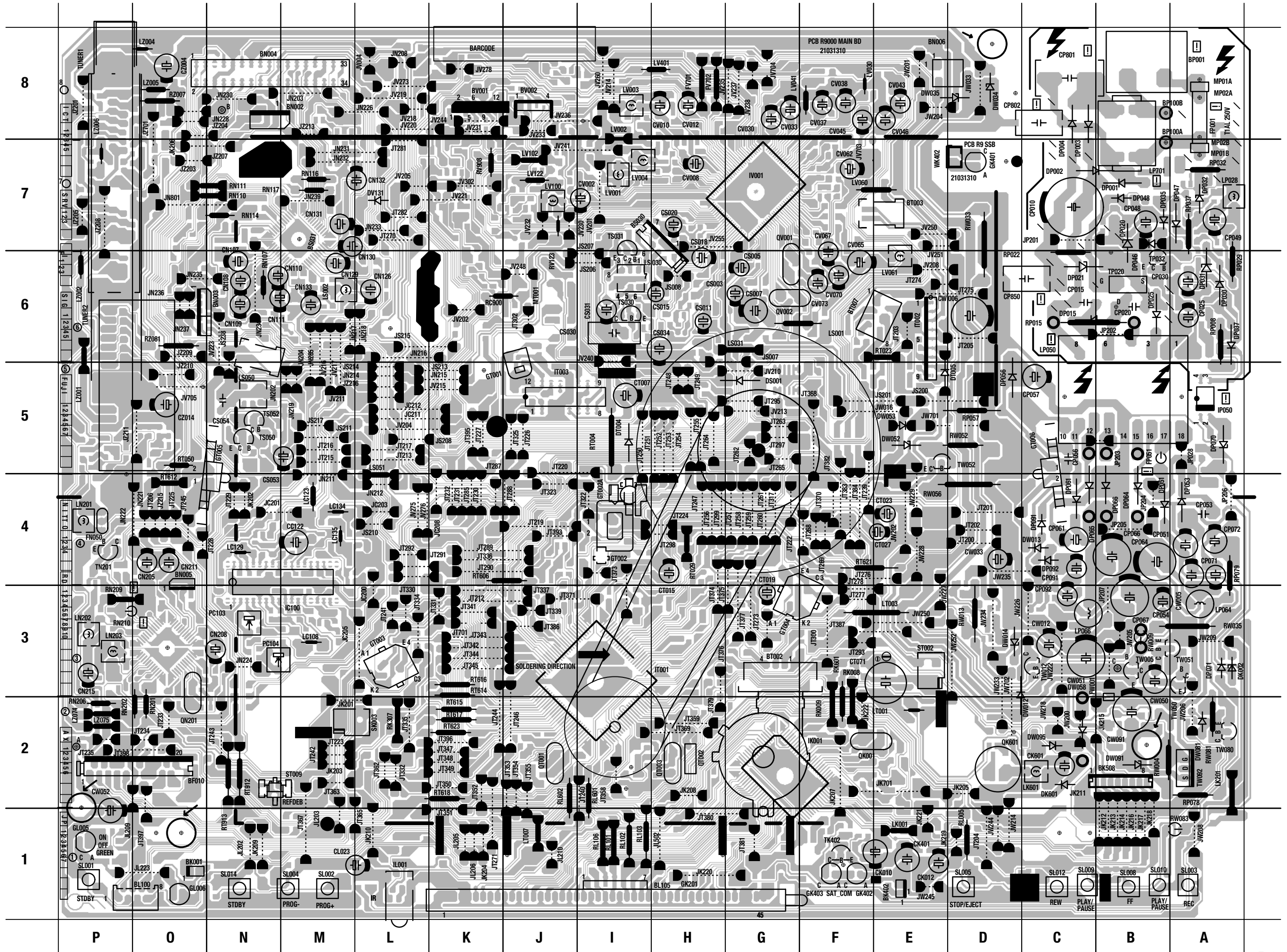
(K)

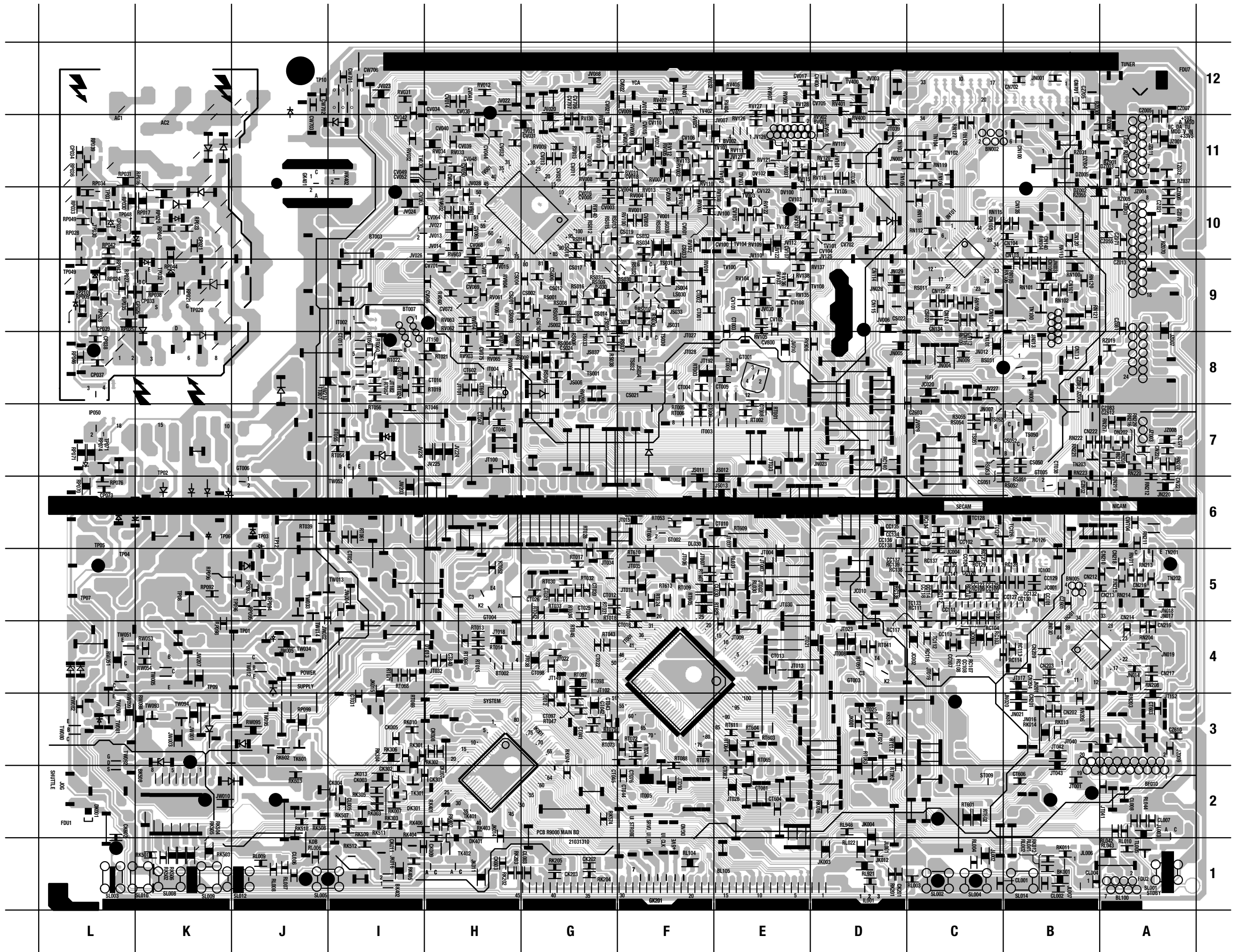
MODEL	RK974	RK574
JOG+SHU	-	*
NON-JOG+SHU	*	-



(K)KDB2(U)

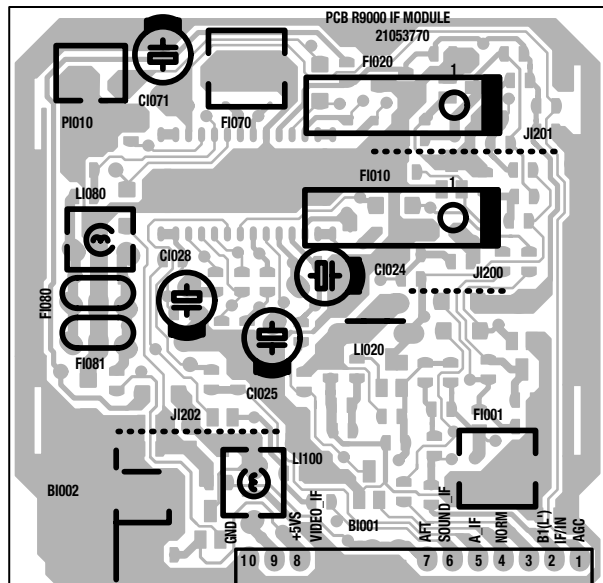
Main P.C.B. Components Side - Circuit imprimé de la platine principale côté composants - Hauptleiterplatte Bestückungsseite - Piastra principale lato componenti - Platina principal lado componentes



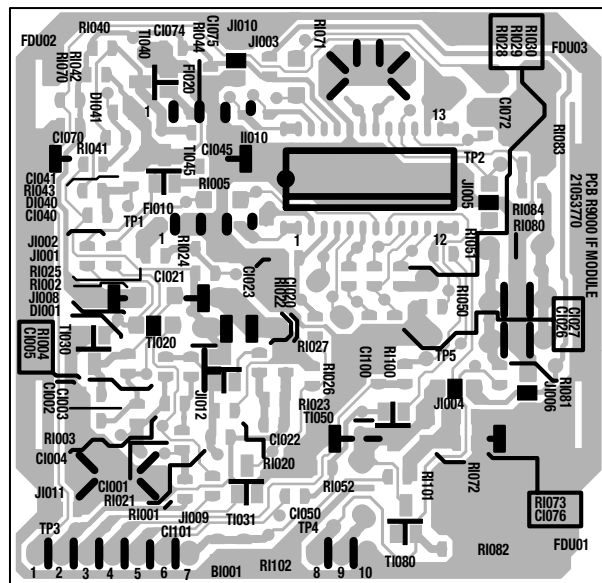


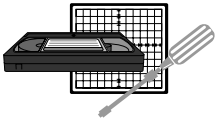
IF AMPLIFIER - AMPLIFICATEUR FI - ZF VERSTÄRKER - AMPLIFICATORE FI - AMPLIFICADOR FI

Component side - Côté composants - Bestückungsseite -
Lato componenti - Lado componentes



Solder side - Côté cuivre - Lötseite - Lato saldature -
Lado del cobre





INTRODUCTION TO THE MECHANISM - PRÉSENTATION DE LA MECANIQUE - BESCHREIBUNG DES LAUFWERKS - PRESENTAZIONE DELLA MECCANICA - INTRODUCCION AL MECANISMO

GB

List of the main parts :

005 - Tape guide
006 - Full Erase head
021 - Supply mobile tape guide
026 - Take-up mobile tape guide
043 - Pinch roller assembly
052 - Audio / CTL Head
058 - Mode control motor
064 - Drive cam
071 - Drive slide
074 - Tape back tension arm
086 - Capstan motor
088 - Reel drive belt
089 - Intermediate pulley
103 - Supply reel hub
104 - Take-up reel hub
129 - Record safety lock

F

Liste des principales pièces :

005 - Guide-bande
006 - Tête d'effacement général
021 - Guide-bande mobile débiteur
026 - Guide-bande mobile récepteur
043 - Ensemble galet presseur
052 - Tête Audio / Asservissements
058 - Moteur contrôle fonctions
064 - Came de commande
071 - Glissière de commande
074 - Bras de tension de bande
086 - Moteur cabestan
088 - Courroie porte-bobine
089 - Poulie intermédiaire
103 - Porte-bobine débiteur
104 - Porte-bobine récepteur
129 - Sécurité enregistrement

D

Liste der wichtigsten Teile:

005 - Bandführung
006 - Löschkopf
021 - Bewegliche Abwickelführungsbolzen
026 - Bewegliche Aufwickelführungsbolzen
043 - Andruckrolle
052 - Ton- / Kontrollkopf
058 - Lademotor
064 - Kurvenrad
071 - Funktionsschieber
074 - Bandrückspannscheibel
086 - Capstan
088 - Antriebsriemen
089 - Zwischenrad
103 - Abwickelteller
104 - Aufwickelteller
129 - Aufnahmesperre

I

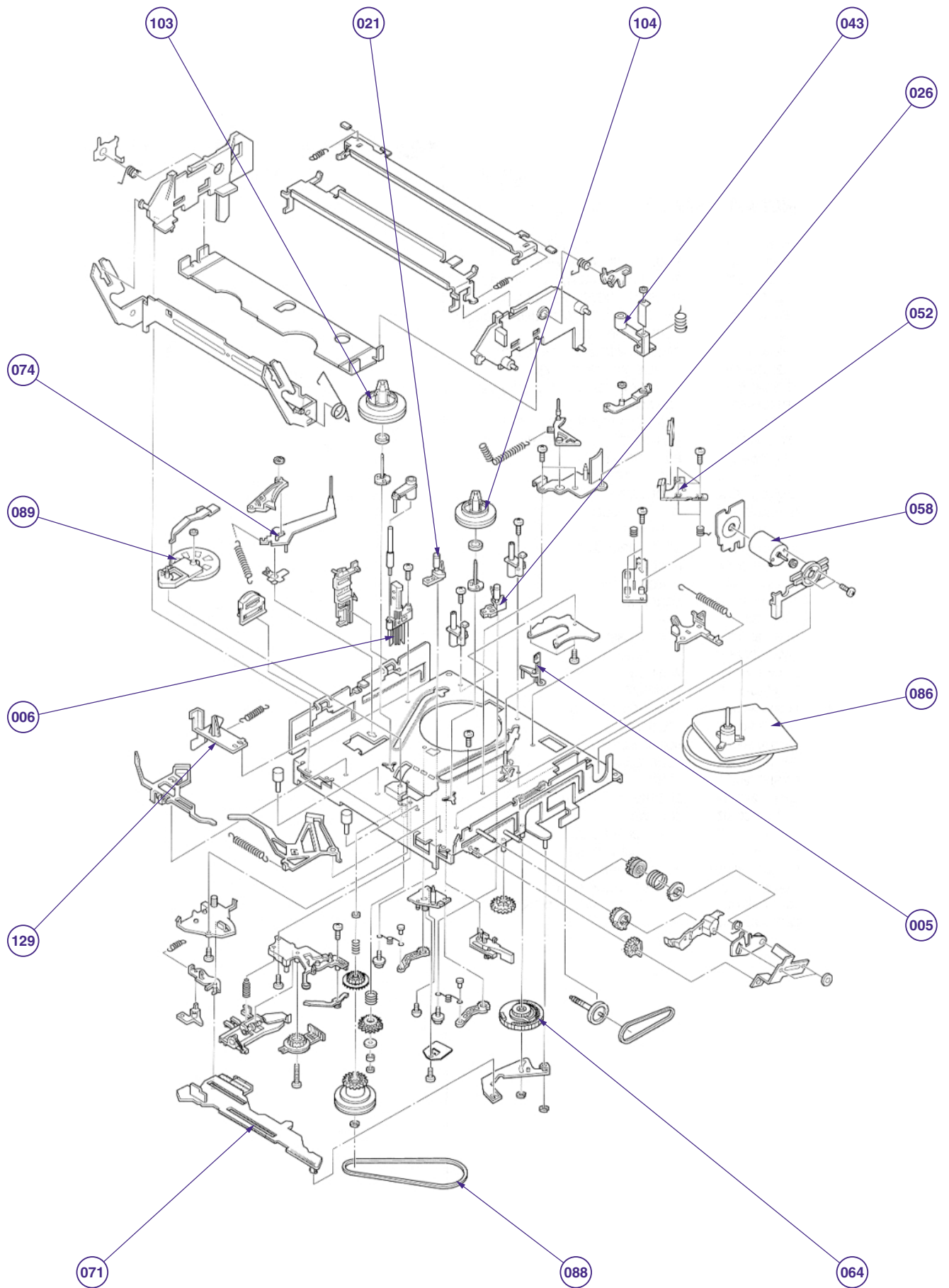
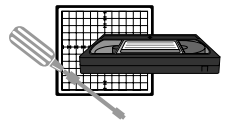
Lista dei principali elementi :

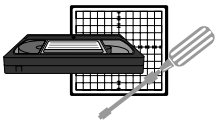
005 - Guidanastro
006 - Testina di cancellazione totale
021 - Guidanastro svolgimento
026 - Guidanastro avvolgimento
043 - Rullo pressore
052 - Testina Audio / CTL
058 - Motore controllo funzioni
064 - Cam di comando
071 - Guida di scorrimento
074 - Braccio tendinastro
086 - Motore capstan
088 - Cinghia reel
089 - Puleggia intermedia
103 - Portabobina svolgimento
104 - Portabobina avvolgimento
129 - Dispositivo di sicurezza registrazione

E

Lista de las piezas principales :

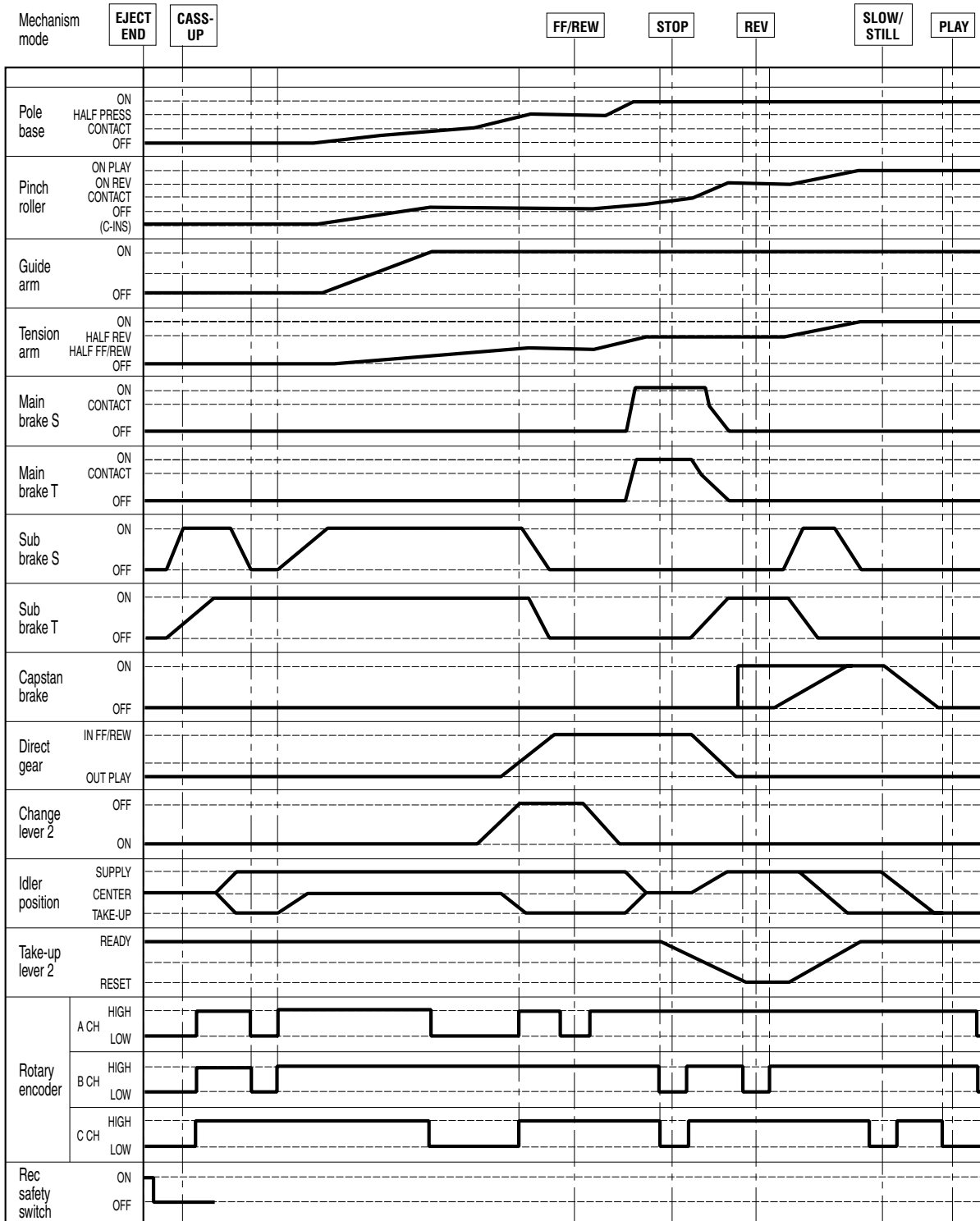
005 - Guía de cinta
006 - Cabezal de borrado completo
021 - Guía de cinta móvil lado alimentación
026 - Guía de cinta móvil lado arrollamiento
043 - Conjunto de rodillo de presión
052 - Cabezal audio/CTL
058 - Motor de control de funciones
064 - Leva de comando
071 - Corredera de control de funciones
074 - Brazo de tensión de la cinta
086 - Motor de cabrestante
088 - Correa de accionamiento del carrete
089 - Polea intermedia
103 - Portacarrete alimentador
104 - Portacarrete receptor
129 - Dispositivo de seguridad de grabación



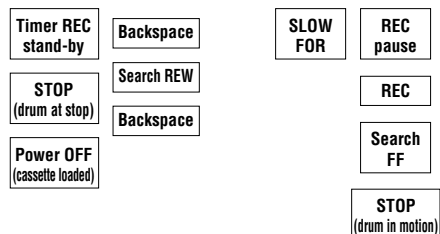


DESCRIPTION OF THE OPERATION - DESCRIPTION DU FONCTIONNEMENT - FUNKTIONSBESCHREIBUNG - DESCRIZIONE DEL FUNZIONAMENTO - DESCRIPCION DE LA OPERACION

1/ CHECKING FUNCTION SEQUENCE - CONTROLE DE L'ENCHAINEMENT DES FONCTIONS - STEUERUNG DER FUNKTIONSBÄUFE - CONTROLLO DELLA SEQUENZA DELLE FUNZIONI - VERIFICACION DE LA SECUENCIA DE LAS FUNCIONES



Operation mode



PARTS LIST

LISTE PIECES DETACHEES

ERSATZTEILLISTE

LISTA PARTI DI RICAMBIO

LISTA DE PIEZAS DE REPUESTO

Chassis R8000

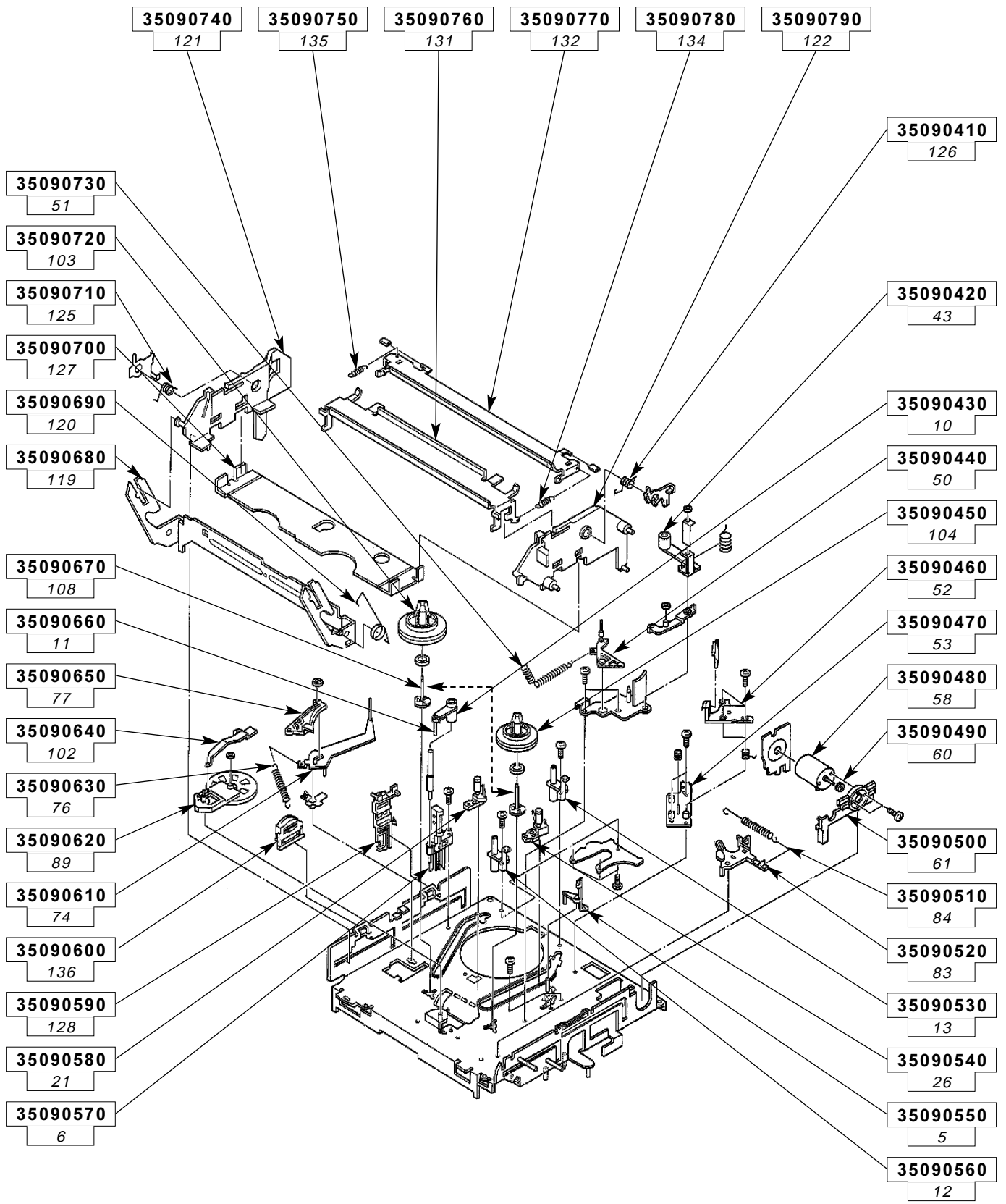
MECHANISM 1					
MECANIQUE 1					
LAUFWERK 1					
MECCANICA 1					
MECANISMO 1					
10	TENSION STUD BASE TENSION STUD BASE TENSION STUD BASE TENSION STUD BASE TENSION STUD BASE	35090430	122	SIDE HOLDER (R) SIDE HOLDER (R) SIDE HOLDER (R) SIDE HOLDER (R) SIDE HOLDER (R)	35090790
102	IDLER LEVER IDLER LEVER IDLER LEVER IDLER LEVER IDLER LEVER	35090640	125	TORSION SPRING (L) RESSORT (L) FEDER (L) MOLLA (L) RESORTE (L)	35090710
103	SUPPLY REEL DISK PORTE BOBINE DEBITEUR BANDTELLER ABWICKELSEITE PORTABOBINA DI SVOLGIMENTO PORTABOBINA DE CARGA	35090720	126	TORSION SPRING (R) TORSION SPRING (R) TORSION SPRING (R) TORSION SPRING (R) TORSION SPRING (R)	35090410
104	TAKE UP REEL DISK PORTE BOBINE RECEPT BANDTELLER AUFWICKELSEITE PORTABOBINA AVVOLGIMENTO PORTABOBINA RECEPTOR	35090450	127	CASSETTE HOLDER CASSETTE HOLDER CASSETTE HOLDER CASSETTE HOLDER CASSETTE HOLDER	35090700
108	REEL SHAFT REEL SHAFT REEL SHAFT REEL SHAFT REEL SHAFT	35090670	128	GUIDE RAIL GUIDE RAIL GUIDE RAIL GUIDE RAIL GUIDE RAIL	35090590
11	TENSION STUD TENSION STUD TENSION STUD TENSION STUD TENSION STUD	35090660	13	UV CATCHER ASSY (TAKE UP) UV CATCHER ASSY (TAKE UP) UV CATCHER ASSY (TAKE UP) UV CATCHER ASSY (TAKE UP) UV CATCHER ASSY (TAKE UP)	35090530
119	DRIVE ARM DRIVE ARM DRIVE ARM DRIVE ARM DRIVE ARM	35090680	131	TOP GUIDE TOP GUIDE TOP GUIDE TOP GUIDE TOP GUIDE	35090760
12	UV CATCHER (SUPPLY) UV CATCHER (SUPPLY) UV CATCHER (SUPPLY) UV CATCHER (SUPPLY) UV CATCHER (SUPPLY)	35090560	132	HOLD PLATE HOLD PLATE HOLD PLATE HOLD PLATE HOLD PLATE	35090770
120	TORSION SPRING RESSORT A EPINGLE FEDER MOLLA DI TORSIONE RESORTE HORQUILLA	35090690	134	TENSION SPRING RESSORT FEDER MOLLA RESORTE	35090780
121	SIDE HOLDER (L) SIDE HOLDER (L) SIDE HOLDER (L) SIDE HOLDER (L) SIDE HOLDER (L)	35090740	135	TENSION SPRING RESSORT FEDER MOLLA RESORTE	35090750
			136	ROLLER CAM ASSY ROLLER CAM ASSY ROLLER CAM ASSY ROLLER CAM ASSY ROLLER CAM ASSY	35090600
			21	POLE BASE ASSY (SUPPLY) POLE BASE ASSY (SUPPLY) POLE BASE ASSY (SUPPLY) POLE BASE ASSY (SUPPLY) POLE BASE ASSY (SUPPLY) POLE BASE ASSY (SUPPLY)	35090580
			26	POLE BASE ASSY (TAKE UP) POLE BASE ASSY (TAKE UP) POLE BASE ASSY (TAKE UP) POLE BASE ASSY (TAKE UP) POLE BASE ASSY (TAKE UP)	35090540
			43	PINCH ROLLER ARM ASSY GALET PRESSEUR EQUIPE ANDRUCKROLLE KPL. RULLO DI PRESSIONE COMPLETO RODILLO PRENSOR EQUIPADO	35090420
			5	GUIDE POLE GUARD GUIDE POLE GUARD GUIDE POLE GUARD GUIDE POLE GUARD GUIDE POLE GUARD	35090550
			50	GUIDE ARM ASSY GUIDE ARM ASSY GUIDE ARM ASSY GUIDE ARM ASSY GUIDE ARM ASSY	35090440
			51	TENSION SPRING RESSORT FEDER MOLLA RESORTE	35090730
			52	A/C HEAD UNIT TETE AUDIO/ASSERVISSEMENT AUDIO/SERVO KOPF TESTINA AUDIO/ASSERVIMENT CABEZA AUDIO/SERVO	35090460
			53	HEAD BASE HEAD BASE HEAD BASE HEAD BASE HEAD BASE	35090470
			58	LOADING MOTOR MOTEUR CONTROLE FONCTIONS LADEMOTOR MOTORE MOTOR	35090480
			6	FULL ERASE HEAD TETE D'EFFACEMENT LOESCHKOPF TESTINA DI CANCELLAZIONE CABEZA DE BORRADO	35090570
			60	MOTOR PULLEY POULIE MOTEUR CONTROLE FONCTIONS MOTORROLLE PULEGGIA DEL MOTORE POLEA DE MOTOR	35090490

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

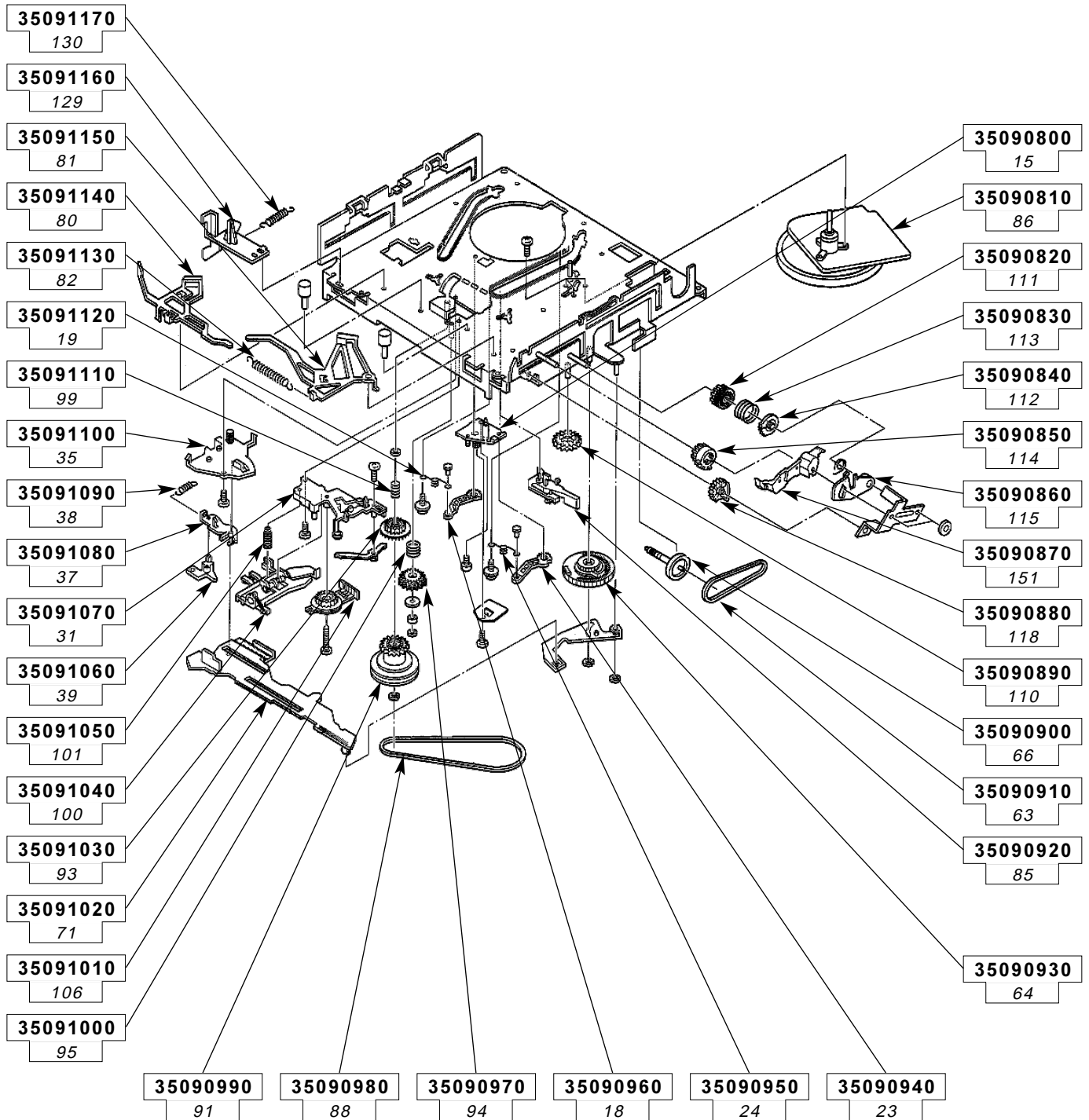
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61	MOTOR GUIDE GUIDE MOTEUR MOTOR GUIDE MOTOR GUIDE MOTOR GUIDE	35090500	114	RELAY GEAR RELAY GEAR RELAY GEAR RELAY GEAR RELAY GEAR	35090850	63	BELT,LOADING MOTOR COURROIE CAOUTCHOUC ANTRIEBSRIEMEN CINGHIA DI GOMMA CORREA DE GOMA	35090910
74	TENSION ARM ASSY TENSION ARM ASSY TENSION ARM ASSY TENSION ARM ASSY TENSION ARM ASSY	35090610	115	OPENER GUIDE OPENER GUIDE OPENER GUIDE OPENER GUIDE OPENER GUIDE	35090860	64	CAM GEAR CONTROL CAME CDE FONCTIONS NOCKENZAHNRAD CAMMA RUOTA DENTATA LEVA DENTADA	35090930
76	TENSION SPRING RESSORT FEDER MOLLA RESORTE	35090630	118	DRIVE GEAR DRIVE GEAR DRIVE GEAR DRIVE GEAR DRIVE GEAR	35090880	66	WORM GEAR WORM GEAR WORM GEAR WORM GEAR WORM GEAR	35090900
77	TENSION BRAKE ASSY TENSION BRAKE ASSY TENSION BRAKE ASSY TENSION BRAKE ASSY TENSION BRAKE ASSY	35090650	129	REG SAFTY LEVER REG SAFTY LEVER REG SAFTY LEVER REG SAFTY LEVER REG SAFTY LEVER	35091160	71	CONTROL PLATE CONTROL PLATE CONTROL PLATE CONTROL PLATE CONTROL PLATE	35091020
83	SUB BRAKE ASSY (TAKE UP) SUB BRAKE ASSY (TAKE UP) SUB BRAKE ASSY (TAKE UP) SUB BRAKE ASSY (TAKE UP) SUB BRAKE ASSY (TAKE UP)	35090520	130	TENSION SPRING RESSORT FEDER MOLLA RESORTE	35091170	80	MAIN BRAKE ASSY (SUPPLY) MAIN BRAKE ASSY (SUPPLY) MAIN BRAKE ASSY (SUPPLY) MAIN BRAKE ASSY (SUPPLY) MAIN BRAKE ASSY (SUPPLY)	35091140
84	TENSION SPRING RESSORT FEDER MOLLA RESORTE	35090510	15	LOADING ARM GEAR SHAFT LOADING ARM GEAR SHAFT LOADING ARM GEAR SHAFT LOADING ARM GEAR SHAFT LOADING ARM GEAR SHAFT	35090800	81	MAIN BRAKE ASSY (TAKE-UP) MAIN BRAKE ASSY (TAKE-UP) MAIN BRAKE ASSY (TAKE-UP) MAIN BRAKE ASSY (TAKE-UP) MAIN BRAKE ASSY (TAKE-UP)	35091150
89	IDLER ARM ASSY IDLER ARM ASSY IDLER ARM ASSY IDLER ARM ASSY IDLER ARM ASSY	35090620	151	DOOR OPENER DOOR OPENER DOOR OPENER DOOR OPENER DOOR OPENER	35090870	82	TENSION SPRING RESSORT FEDER MOLLA RESORTE	35091130
MECHANISM 2 MECANIQUE 2 LAUFWERK 2 MECCANICA 2 MECANISMO 2			18	LOADING ARM GEAR (SPPLY) LOADING ARM GEAR (SPPLY) LOADING ARM GEAR (SPPLY) LOADING ARM GEAR (SPPLY) LOADING ARM GEAR (SPPLY)	35090960	85	CAPSTAN BRAKE ASSY CAPSTAN BRAKE ASSY CAPSTAN BRAKE ASSY CAPSTAN BRAKE ASSY CAPSTAN BRAKE ASSY	35090920
			19	TORSION ARM RESSORT A EPINGLE FEDER MOLLA DI TORSIONE RESORTE HORQUILLA	35091120	86	CAPSTAN MOTOR MOTEUR CABESTAN CAPSTAN MOTOR MOTORE CABESTANO MOTOR CABESTANO	35090810
			23	LOADING ARM GEAR (TAKE UP) LOADING ARM GEAR (TAKE UP) LOADING ARM GEAR (TAKE UP) LOADING ARM GEAR (TAKE UP) LOADING ARM GEAR (TAKE UP)	35090940	88	RUBBER BELT,CAPSTAN MOTOR COURROIE CAOUTCHOUC ANTRIEBSRIEMEN CINGHIA DI GOMMA CORREA DE GOMA	35090980
			24	SPRING TORSION ARM RESSORT A EPINGLE FEDER MOLLA DI TORSIONE RESORTE HORQUILLA	35090950	91	SUPPLY CLUTCH UNIT ROUE PLASTIQUE EMBRAYAGE ABWICKELKUPPLUNG INNESTO SVOLGERE EMBRAGUE DESARROLLAR	35090990
			31	ROTARY ENCODER GUIDE ROTARY ENCODER GUIDE ROTARY ENCODER GUIDE ROTARY ENCODER GUIDE ROTARY ENCODER GUIDE	35091070	93	CLUTCH GEAR 1 CLUTCH GEAR 1 CLUTCH GEAR 1 CLUTCH GEAR 1 CLUTCH GEAR 1	35091030
			35	CONTROL PLATE GUIDE CONTROL PLATE GUIDE CONTROL PLATE GUIDE CONTROL PLATE GUIDE CONTROL PLATE GUIDE	35091100	94	DIRECT GEAR DIRECT GEAR DIRECT GEAR DIRECT GEAR DIRECT GEAR	35090970
			37	TAKE UP LEVER TAKE UP LEVER TAKE UP LEVER TAKE UP LEVER TAKE UP LEVER	35091080	95	COMPRESSION SPRING RESSORT FEDER MOLLA RESORTE	35091000
			38	TENSION SPRING RESSORT FEDER MOLLA RESORTE	35091090	99	COMPRESSION SPRING,C.GEAR 1 RESSORT FEDER MOLLA RESORTE	35091110
			39	T.UP HEAD T.UP HEAD T.UP HEAD T.UP HEAD T.UP HEAD	35091060			
			100	CHANGE LEVER ASSY CHANGE LEVER ASSY CHANGE LEVER ASSY CHANGE LEVER ASSY CHANGE LEVER ASSY	35091040			
101	COMPRESSION SPRING RESSORT FEDER MOLLA RESORTE	35091050						
106	ROTARY ENCODER ROTARY ENCODER ROTARY ENCODER ROTARY ENCODER ROTARY ENCODER	35091010						
110	CASSETTE GEAR CASSETTE GEAR CASSETTE GEAR CASSETTE GEAR CASSETTE GEAR	35090890						
111	LIMIT GEAR (1) LIMIT GEAR (1) LIMIT GEAR (1) LIMIT GEAR (1) LIMIT GEAR (1)	35090820						
112	LIMIT GEAR (2) LIMIT GEAR (2) LIMIT GEAR (2) LIMIT GEAR (2) LIMIT GEAR (2)	35090840						
113	TORSION SPRING RESSORT FEDER MOLLA RESORTE	35090830						



MECHANISM 1 / MECANIQUE 1 / LAUFWERK 1 / MECCANICA 1 / MECANISMO 1



MECHANISM 2 / MECANIQUE 2 / LAUFWERK 2 / MECCANICA 2 / MECANISMO 2

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Abbreviations - Abréviations - Abkürzungen - Abbreviazioni - Abreviaciones

AC	Alternating Current	FWD	Forward
ACC	Automatic Colour Control	GND	Ground
ACK	Automatic Colour Killer	GCA	Gain Controlled Amplifier
AD.REF	Analog/Digital Converter Reference	HASEL	Head Amplifier Select
AE	Audio Erase	HAB	Head Amplifier Board
AFC	Automatic Frequency Control	HD	Horizontal Synch Pulse
AGC	Automatic Gain Control	HPF	High Pass Filter
A_IF	Audio IF	I.R	Infra Red
ALC	Automatic Level Control	ID	Identification
AMP	Amplifier	INP/IN	Input
APC	Automatic Phase Control	KDB	Key Display Board
AP.CONT	Aperture Control	LIM	Limiter
AV	Audio-Video	LP	Long Play
A/V SWP	Audio/Video Switching Point (DRUM FF)	LPF	Low Pass Filter
B.EMPH	Burst Emphasis	MESECAM	Middle East Secam
B.DEEMPH	Burst Deemphasis	NC	Noise Canceller
BG	Burst Gate	OSD	On Screen Display
BID	Burst Identification	PB	Play Back
BLK	Blanking	PB_C	Play Back Chroma
BPF	Band Pass Filter	PCB	Printed Circuit Board
CAP	Capstan	PDC	Program Delivery Control
CBC	Cable Box Control (Satellite Control)	PG	Pulse Generator
CCD	Charge Coupled Device	PH	Pseudo Horizontal Synch
CH	Channel	PIF	Picture IF
CFG	Capstan Frequency Generator	PLL	Phase Locked Loop
CLK	Clock	PS	Phase Switch
COMP	Comparator	PV	Pseudo Vertical Synch
CONV	Converter	PWM	Pulse Width Modulation
CPWM	Capstan Pulse Width Modulation	REC	Record
C-REG	Capstan Regulation	REC_C	Record Chroma
CR	Color Rotary	REW	Rewind
CS	Chip Select	REV	Reverse
CSYNC	Composite Synch	SCL	Serial Clock
CTL	Control	SDA	Serial Data
DC	Direct Current	SEC	SECAM
D.LIM	Double Limiter	SU REEL	Supply Reel
DEEMPH	Deemphasis	SMPS	Switch Mode Power Supply
DET	Detector	SP	Standard Play
D-FG	Drum Frequency Generator	SS	Synch Separator
DFF	Drum Flip Flop	SW	Switch
DIF.EQ	Differential Equalizer	TU REEL	Take Up Reel
DIG	Digital	TMB	Terminal Board
DLY	Delay	VAL	Components without value and not on the PCB
DOC	Drop Out Compensation	VCA	Voltage Controlled Amplifier
E-E	Electronic-Electronic	VCO	Voltage Controlled Oscillator
EMPH	Emphasis	VCR	Video Cassette Recorder
ENV	Envelope	VD	Supply Voltage Digital
EP	Extended Play	VE	Voltage (Ever)
EQ	Equalizer	V_ENV	Video Envelope
F.E	Full Erase	V_IF	Video IF
F.REW	Fast Rewind	VS	Voltage (Switched)
F.FWD	Fast Forward	VM	Motor Voltage (Drum & Loading motor)
F/R	Forward/Rewind	VMC	Motor Voltage (Capstan motor)
FCB	Front Connection Board	VPS	Video Program System
FF	Fast Forward	W/D	White/Dark
FG	Frequency Generator	Y/C	Luminance/Chrominance
FMCI	FM Carrier Interleave		



EACEM-IRIS REPAIR CODING SYSTEM

SYMPTOM CODE TABLE



CONDITION CODE	MAIN SYMPTOM CODE	EXTENDED SYMPTOM CODE (*1)
1	1	NO ACTION
2	2	LEVEL
3	3	QUALITY
4	4	NOISE
5	5	UNSTABLE
6	6	RECORDING & PHYSICAL PROBLEMS
7	7	SPECIAL FUNCTIONS
8	8	OTHER CONDITIONS
1	GENERAL	110 POWER PROBLEM OR NOT OPERATING 111 NO POWER 112 NO POWER WHEN USING AC-ADAPTER 113 NO POWER WHEN USING DRY BATTERIES 114 NO POWER WHEN USING RECHARGEABLE BATTERIES 115 NO POWER FROM SOLAR CELL 116 NO POWER WHEN USING A CAR BATTERY 117 SHORT OPERATION TIME/SHORT BATTERY LIFE 118 POWER-OFF FUNCTION NOT WORKING 119 NO SWITCH-ON FROM STANDBY 11A POWERS UP, BUT NO OPERATION 11B CYCLIC POWER OFF 11C BLOWING EXTERNAL (MAINS) FUSE 11D SET SWITCHES OFF BY ITSELF 11E BACKUP BATTERY PROBLEM 11F NOT OPERATING 11G NO AUTOMATIC SWITCH ON/OFF 11H PROTECTION SWITCH/FUSE IN SET TRIGGERS 11J RECHARGEABLE BATTERY NOT RECOGNIZED 11X OTHER 'POWER' PROBLEM
1	COMMUNICATION	210 NO RECEPTION OR CONNECTION 211 NO AM RECEPTION 212 NO FM RECEPTION 213 NO SW RECEPTION 214 NO UHF RECEPTION 215 NO UHF RECEPTION 216 NO BS RECEPTION 217 NO CS RECEPTION 218 NO HDTV RECEPTION 219 NO GPS/OPS RECEPTION 21A NO RECEPTION OF DIGITAL BROADCASTING 21B NO IR RECEPTION 21C NO DIAL TONE 21D NO MODEM/FAX CONNECTION 21E MODEM NOT ANSWERING/NO CARRIER 21F NO NETWORK CONNECTION/NETWORK INITIALIZATION FAILS 21X OTHER 'NO RECEPTION' PROBLEM
2	PICTURE	310 NO PICTURE 311 NO PICTURE IN E TO E MODE 312 NO PICTURE IN PLAYBACK MODE 313 NO PICTURE IN VIEWFINDER 314 NO PICTURE, ONLY RASTER 315 NO RASTER, BLACK PICTURE 316 ONLY HORIZONTAL LINE 317 ONLY VERTICAL LINE 318 NO PICTURE IN LCD 319 NO 2nd (OR HIGHER) MONITOR DISPLAY 31X OTHER 'NO PICTURE' PROBLEM
3	COLOUR	410 NO COLOUR 411 NO COLOUR IN E TO E MODE 412 NO COLOUR IN PLAYBACK MODE 413 NO COLOUR IN VIEWFINDER 414 NO COLOUR IN PART OF PICTURE 41X OTHER 'NO COLOUR' PROBLEM
4	AUDIO	510 NO AUDIO 511 NO SOUND IN E TO E MODE 512 NO PLAYBACK OF OUTGOING MESSAGE(S) 513 NO PLAYBACK OF INCOMING MESSAGE(S) 514 NO AUDIO PLAYBACK 515 NO SOUND FROM HANDSET 516 NO SOUND FROM SPEAKER 517 NO SOUND FROM EARPHONE/HEADPHONE 518 NO MICROPHONE SOUND 519 NO SOUND FROM DIGITAL OUTPUT 51X OTHER 'NO AUDIO' PROBLEM
5	MECHANISM	610 NO MECHANICAL OPERATION 611 NO ROTATION OF MOTOR/DISC 612 NO FORWARD OPERATION 613 NO OPERATION FROM PCK MODE 614 NO FAST FORWARD OR REWIND FUNCTION 615 NO LOADING 616 NO UNLOADING OR EJECTING 617 NO AUTO SHUT-OFF OPERATION 618 TONEARM DOES NOT MOVE 619 DISC NOT BEING EJECTED 61A MAGAZINE OR MODULE LOADING/UNLOADING 61B CONTROL/SWITCH NOT WORKING 61X OTHER 'NO MECHANICAL OPERATION' PROBLEM
6	DATA PROCESSING	710 NO DATA PROCESSING OPERATION 711 NO INITIAL SCREEN 712 SYSTEM DOES NOT RESET 713 SYSTEM DOES NOT BOOT UP 714 NO OPERATION FROM PLUG-IN MODULE/PERIPHERAL 715 NO KEYBOARD OPERATION 716 NO OPERATION FROM OTHER INPUT/OUTPUT DEVICE 717 NO DATA STORAGE OPERATION 718 NO DATA COMMUNICATION ERROR 719 ERROR MESSAGE DISPLAY 71A HDD BOOT FAILURE 71B FDD BOOT FAILURE 71X OTHER 'NO DATA PROCESSING' PROBLEM
7	PRINT/COPY/SCAN	810 NO PRINT/COPY/SCAN OPERATION 811 NOT PRINTING 812 NO COMMUNICATION WITH PRINTER 813 PAPER NOT LOADING 814 NO PAPER FEED 815 NO IMAGE FIXATION 816 NO DOCUMENT FEEDING 817 SCANNER NOT WORKING 81X OTHER 'NO PRINT/COPY/SCAN OPERATION' PROBLEM

150	REMOTE CONTROL PROBLEM 151 NO REMOTE CONTROL OPERATION 152 INCORRECT REMOTE CONTROL OPERATION 153 REMOTE CONTROL PROGRAMMING/LEARNING MODE PROBLEM 154 POOR REMOTE CONTROL SENSITIVITY 15X OTHER 'REMOTE CONTROL' PROBLEM	160	PHYSICAL DAMAGE 161 DAMAGED/DEFORMED CABINET/PANEL 162 DAMAGED HANDLE/CLIP 163 DAMAGED CONTROL KNOB(S)/BUTTON(S)/KEYPAD 164 DAMAGED DOOR/COVER 165 DAMAGED SEAL 166 DAMAGED PLUG/SOCKET/TERMINAL/CONNECTOR 167 DAMAGED LENS 168 DAMAGED CARTRIDGE OR STYLUS 169 DAMAGED ANTENNA 16A DAMAGED CRT OR VIEWFINDER/LCD DISPLAY 16B MISSING COMPONENT(S) OR ORNAMENTAL PARTS 16C PRINTED MARKINGS ERASED/PEELED OFF 16D SET BURNING/EMITS SMOKE 16E EXTERNAL SURFACE DAMAGE (BUBBLING/PEELING/RUSTING/SCRATCHED) 16F SMELL 16G WEAK/DAMAGED STAND 16H DAMAGED SPEAKER 16J SET GETS VERY HOT / PARTS MELTING 16K FOREIGN SUBSTANCE ON/IN UNIT 16L BURNING MARKS 16M INTERNAL SURFACE DAMAGE (BUBBLING/PEELING/RUSTING/SCRATCHED) 16N DAMAGED POWER CABLE 16P DAMAGED ACCESSORY 16R DISCOLOURATION 16X OTHER 'PHYSICAL DAMAGE'	170	GENERAL FUNCTION PROBLEM 171 FAULTY CLOCK FUNCTION 172 FAULTY DISPLAY 173 FAULTY TIMER PROGRAMMING 174 FAULTY TIMER OPERATION 175 PROGRAMMING/USER ADJUSTMENT PROBLEM 176 FAULTY RECORD MUTE OPERATION 177 FAULTY PROGRAMMED CARBACK OPERATION 178 FAULTY MEMORY FUNCTION 179 FAULTY INPUT SWITCHING 17A FAULTY OUTPUT SWITCHING 17B ELECTRIC SHOCK/STATIC DISCHARGE 17C FAULTY SEARCH FUNCTION 17D (INDEX/VIEW/TITLE/CHAPTER/TRACK...) INDEXING 17E WRONG LANGUAGE/CHARACTER SET 17F ERROR CODE APPEARS IN DISPLAY 17G SWITCH NOT OPERATING 17H PEDAL NOT OPERATING 17I FAULTY STANDBY MODE 17J FAULTY HIBERNATION MODE 17K NO AUDIBLE WARNING SIGNAL 17L FAULTY OPERATION OF PARENTAL LOCK/KEYLOCK FUNCTION 17M FAULTY MODE SWITCHING 17N MENU FUNCTION PROBLEM 17X OTHER 'GENERAL FUNCTION' PROBLEM	180	SPECIAL REQUIREMENTS 181 TEST AND CHECK 182 GENERAL OVERHAUL 183 SYSTEM/FREQUENCY CONVERSION 184 INITIAL SETUP/INSTALLATION REQUESTED 185 MODIFICATION/CIRCUIT/INSTALLATION CHANGE 186 WRONG PRODUCT IN CARTON 187 ACCESSORY MISSING 188 UNABLE TO CONNECT PARTS-TO-ASSEMBLE 189 WRONG COLOUR 18B BATTERY MOUNTING PROBLEM 18C OTHER 'SPECIAL REQUIREMENTS' SYMPTOM NOT AVAILABLE
250	UNSTABLE RECEPTION/TRANSMISSION 251 TUNING DRIFT 252 FADING 253 INTERMITTENT LINE/LINE BREAKING OFF 254 NO OR UNSTABLE CONNECTION COMBINED WITH 'WEAK SIGNAL STRENGTH' INDICATION 25X OTHER 'UNSTABLE RECEPTION/TRANSMISSION' PROBLEM	260	TUNING PROBLEM 261 MANUAL TUNING PROBLEM 262 AUTOMATIC TUNING PROBLEM 263 INCORRECT TUNING CHANNEL 264 TUNING MEMORY PROBLEM 26X OTHER 'TUNING' PROBLEM	270	SPECIAL COMMUNICATION PROBLEM 271 FAULTY DIALLING 272 FAULTY CHANNEL SELECTION 273 FAULTY AUTO-ANSWER OPERATION 274 FAULTY MESSAGE READ-OUT FUNCTION 275 FAULTY AUTODIAL/REDIAL MEMORY 276 FAULTY TELETEXT/PROCESSING 277 NO RINGING TONE 278 LOUD/WEAK RINGING TONE 279 MODEM STUCK OFF HOOK 27A FAX DOES NOT WORK PROPERLY 27B MODEM CAUSES PROBLEM WITH PHONE 27C NO MODEM DIAL TONE 27X OTHER 'SPECIAL COMMUNICATION' PROBLEM	280	SPECIAL RECEPTION PROBLEM 281 FAULTY STEREO RECEPTION 282 FAULTY MAIN CHANNEL (A) FUNCTION 283 FAULTY SUB-CHANNEL (B) FUNCTION 284 FAULTY SSB RECEPTION 285 FAULTY RDS/VPS/PDC/XDS OPERATION 286 FAULTY TELETEXT/CLOSE CAPTION/EPG RECEPTION 287 FAULTY SATELLITE/RTTY RECEPTION 288 FAULTY FAX OPERATION 289 MODEM NOT RECOGNIZED BY SYSTEM 28A FAULTY CALL CHARGE DISPLAY 28B FAULTY HANDS-FREE OPERATION 28C SET LOCKED 28X OTHER 'SPECIAL RECEPTION' PROBLEM
350	UNSTABLE PICTURE 351 SYNC PROBLEM 352 PICTURE PUMPING 353 PICTURE JITTER 354 PICTURE SHAKING (HORIZONTAL OR VERTICAL) 355 FLICKERING PICTURE 356 FLASHING PICTURE 357 CYCLIC PICTURE MUTING 358 HEAD IMPACT ERROR CAUSING UNSTABLE PICTURE 359 VCR SKEW/H-SHIFT ERROR 35A FROZEN PICTURE 35B JUMPING/REPEATING PICTURE 35X OTHER 'UNSTABLE PICTURE' PROBLEM	360	POOR PICTURE RECORDING 361 NO PICTURE RECORDING 362 NO ERASURE PROTECTION FOR VIDEO 363 PREVIOUS VIDEO RECORDING NOT BEING ERASED 364 UNWANTED ERASURE OF PICTURE 365 NO CAMERA RECORDING 366 ONLY ONE FIELD PER FRAME BEING RECORDED 367 RECORDS ONLY A FEW PICTURES 36X OTHER 'PICTURE RECORDING' PROBLEM	370	SPECIAL PICTURE FUNCTION PROBLEM 371 EDITING FUNCTION 372 FAULTY FADING/WIPER OPERATION 373 FAULTY NEGATIVE/POSITIVE SWITCHING FUNCTION 374 FAULTY SUPERIMPOSE/TELOP OPERATION 375 FAULTY PICTURE IN PICTURE/DIGITAL PICTURE OPERATION 376 FAULTY PICTURE TRANSMISSION 377 FAULTY STILL OR INDEX FUNCTION 378 FAULTY GENLOCK FUNCTION 379 FAULTY FLASH/STROBE FUNCTION 37A FAULTY DIGITAL PICTURE/ZOOMING FUNCTION 37B FAULTY AUTO-EDIT FUNCTION 37C FAULTY PICTURE STABILIZER FUNCTION 37D FAULTY STILL/INDEX FUNCTION 37E FAULTY SUBTITLING FUNCTION 37F FAULTY VARIABLE SPEED PLAYBACK 37G FAULTY VIEW-MULTI-ANGLE SWITCHING 37H FAULTY ASPECT RATIO SWITCHING 37I THUMBNAIL OR INDEX PICTURE PROBLEM 37K NO BLANKING SCREEN 37X OTHER 'SPECIAL PICTURE FUNCTION' PROBLEM	380	PICTURE DISPLAY/PICKUP PROBLEM 381 BURN MARK ON DISPLAY/PICKUP 382 SCRATCH ON DISPLAY/PICKUP 383 DUST/DIRT ON DISPLAY/PICKUP 384 PHOSPHOR/PIXEL MISSING ON DISPLAY/PICKUP 385 BRIGHT POINT(S) IN PHOSPHOR/PIXEL LINES ACROSS/DOWN IMAGE 386 OUT OF SPECS PIXEL DEFAULTS 387 BACKGROUND BURN IN 388 OTHER 'PICTURE DISPLAY/PICKUP' PROBLEM
450	UNSTABLE COLOUR 451 COLOUR FLASHING 452 HUE CONSTANTLY CHANGING 453 FLICKERING COLOUR 454 COLOUR NOT LOCKED 45X OTHER 'UNSTABLE COLOUR' PROBLEM	460	POOR COLOUR RECORDING 461 NO COLOUR RECORDING 462 NOISY COLOUR RECORDING 46X OTHER 'COLOUR RECORDING' PROBLEM	470	SPECIAL COLOUR FUNCTION PROBLEM 471 FAULTY AUTOMATIC WHITE BALANCE 472 FAULTY WHITE BALANCE FUNCTION 47X OTHER 'SPECIAL COLOUR FUNCTION' PROBLEM	480	
550	UNSTABLE AUDIO 551 JUMPING OR REPEATING AUDIO 552 AUDIO PUMPING OR BREATHING 553 AUDIO DROPOUTS 554 CYCLIC AUDIO MUTING 555 WOW AND FLUTTER 556 HOWLING/ACOUSTIC FEEDBACK 557 ECHO IN SOUND 55X OTHER 'UNSTABLE AUDIO' PROBLEM	560	POOR AUDIO RECORDING 561 AUDIO NOT BEING RECORDED 562 NO ERASURE PROTECTION FOR AUDIO 563 PREVIOUS AUDIO RECORDING NOT BEING ERASED 564 UNWANTED ERASURE OF AUDIO 565 MESSAGE NOT BEING RECORDED 566 DISTORTED AUDIO RECORDING 56X OTHER 'AUDIO RECORDING' PROBLEM	570	POOR SPECIAL AUDIO FUNCTION 571 FAULTY FADE OPERATION 572 FAULTY ECHO OPERATION 573 FAULTY MIXING OPERATION 574 FAULTY REPEAT MODE OPERATION 575 FAULTY AUDIO PROCESSING 576 FAULTY SYNC RECORDING OPERATION 577 FAULTY DBB/DOL OPERATION 578 FAULTY NOISE REDUCTION OPERATION 579 FAULTY AUDIO DUB FUNCTION 57A FAULTY TITLE PROGRAMMING 57B FAULTY MIC CONTROL 57C FAULTY FITCH CONTROL 57X OTHER 'SPECIAL AUDIO FUNCTION' PROBLEM	580	STEREO/MULTI MODE OPERATION PROBLEM 581 NO STEREO OPERATION 582 POOR CHANNEL SEPARATION 583 DIFFERENCE IN PHASE BETWEEN CHANNELS 584 PROBLEM WITH SURROUND SOUND MODE 585 PROBLEM WITH PCM AUDIO MODE 58X OTHER 'STEREO/MULTI MODE' PROBLEM
650	MECHANICAL INSTABILITY 651 UNEVEN FEET 652 FAULTY HINGE 653 VIBRATING/JUMPING 654 PARTS LOOSE 655 DAMAGED WHEEL(S) 65X OTHER 'MECHANICAL INSTABILITY' PROBLEM	660	DAMAGE TO MEDIA 661 TAPE GETS SCRATCHED 662 DISC GETS SCRATCHED 663 TAPE GETS CHEWED/WRINKLED 664 TAPE JAMMED OR BROKEN 665 TAPE GETS CURLED 666 SLACK TAPE 667 TAPE STICKING 66X OTHER 'SOFTWARE DAMAGE' PROBLEM	670	MECHANICAL OPERATION PROBLEM 671 FAULTY START/STOP OPERATION 672 FAULTY PAUSE OPERATION 673 FAULTY AUTOMATIC PROGRAM SEARCH 674 FAULTY CUE/REVIEW MODE 675 FAULTY SLOW MOTION OPERATION 676 FAULTY HIGH-SPEED SCANNING MODE 677 FAULTY SPEED COPY FUNCTION 678 FAULTY REPEAT OPERATION 679 FAULTY RECORD REVIEW MODE 67A FAULTY AMS OPERATION 67B AUTO-REVERSE MALFUNCTION 67C FAULTY END DETECTION 67D FAULTY DISC DISC (A-B SELECT) SWITCHING 67X OTHER 'MECHANICAL OPERATION' PROBLEM	680	LENS PROBLEM 681 FOCUS PROBLEM 682 ZOOM PROBLEM 683 IRIS PROBLEM 684 MACRO PROBLEM 68X OTHER 'LENS' PROBLEM
750	PERIPHERAL PROBLEM (NON-STORAGE) 751 PERIPHERAL DOES NOT INITIALISE 752 COMMUNICATION FAILURE WITH PERIPHERAL 753 INTERNAL PERIPHERALS FAILURE 754 EXTERNAL PERIPHERALS FAILURE 755 NETWORK CARD ERROR 756 PERIPHERAL FAILS SELF TEST 75X OTHER PERIPHERAL PROBLEM	760	DATA STORAGE PROBLEM 761 FORMATTING PROBLEM 762 DATA ON STORAGE MEDIUM BEING LOST 763 FRAME MEMORY PROBLEM 764 READ/WRITE ERRORS 765 HARD-OR OPTICAL DRIVE PROBLEM 766 FLOPPY DRIVE PROBLEM 767 CD/DVD-ROM DRIVE PROBLEM 768 TAPE PROBLEM 769 DRIVE WILL NOT MOUNT/CANNOT ACCESS DRIVE 76A DISCS EXCHANGE PROBLEM 76B READ/WRITE OPERATION VERY SLOW 76X OTHER 'DATA READ/WRITE' PROBLEM	770	SPECIAL DATA PROCESSING FUNCTION PROBLEM 771 FAULTY SELF-DIAGNOSTIC MODE 772 FAULTY WORD PROCESSING FUNCTION 773 FAULTY GRAPHIC EDIT FUNCTION 774 PROGRAM CANNOT BE INSTALLED 775 PRE-LOADED PROGRAM CANNOT BE STARTED UP 776 NOT PRE-LOADED PROGRAM CANNOT BE STARTED UP 777 VIRUS ALARM 77X OTHER 'SPECIAL DATA FUNCTION' PROBLEM	780	INTERFACE PROBLEM 781 USB INTERFACE PROBLEM 782 PARALLEL INTERFACE PROBLEM 783 SCSI INTERFACE PROBLEM 784 SERIAL INTERFACE PROBLEM 785 INCOMPATIBLE WITH OTHER SYSTEMS 786 AUDIO/VIDEO INTERFACE PROBLEM 787 I/LINK/FIREWIRE/IEEE1394 INTERFACE PROBLEM 78X OTHER 'INTERFACE' PROBLEM
850	UNSTABLE PRINTER OPERATION 851 UNSTABLE PAPER LOADING 852 UNSTABLE MULTI-PAPER LOADING 853 INCORRECT LINE-UP OF CHARACTERS 85X OTHER 'UNSTABLE PRINTER OPERATION' PROBLEM	860	RIBBON/PAPER PROBLEMS 861 RIBBON BROKEN 862 RIBBON STUCK/STICKING 863 RIBBON DERAILED 864 PAPER STUCK/STICKING TO MECHANISM 865 PAPER JAM 866 DOCUMENT JAM 867 ERONEOUS 'NO INK/TONER' MESSAGE 86X OTHER 'RIBBON/PAPER' PROBLEM	870		880	FAULTY FONT/CHARACTER FUNCTIONS 881 INCORRECT CHARACTERS OR IMAGE 882 INCORRECT CHARACTER SIZE 883 FONT LOADING PROBLEM 88X OTHER 'FAULTY FONT/CHARACTER FUNCTION' PROBLEM

EACEM - SECTION CODES

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

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

DEFECT CODES	
MECHANICAL	
A	WORN OUT (OR GENERAL MECHANICAL DEFECT)
A1	MISOPERATING
B	DIRTY, CLOGGED
C	MECHANICALLY MISALIGNED
D	CUT, BROKEN
E	DEFORMED
F	SNAPPED
G	SCRATCHED, DENTED, SHARP EDGES
H	CRACKED, PEELED, CORRODED, MELTED
I	LOOSE/OFF/STRIPPED
J	SHAKY, UNSTABLE
K	LEAKING (MECHANICAL)
L	DRY (NO LUBRICANT)
M	FOREIGN OBJECT
ELECTRICAL	
N	DEFECTIVE ELECTRICAL COMPONENT/MODULE
O	BURNT, ARCING, MISSING PIXELS
P	ELECTRICALLY MISALIGNED/WRONG SETTING
Q	SHORT CIRCUIT
R	OPEN CIRCUIT
S	LEAKING (ELECTRICAL)
T	BAD CONTACT, CONNECTION
T1	BAD EARTH CONNECTION
U	OPEN PATTERN
V	CRACKED PRINTED CIRCUIT BOARD
W	COLD OR NO SOLDERING
X	BRIDGED SOLDERING
Y	WRONG COMPONENT/MODULE
Z	MISSING COMPONENT/MODULE
1	SOFTWARE PROBLEM
11	LOSING DATA FROM MEMORY
12	FAULTY PROGRAM SETTING/INSTALLATION
13	SOFTWARE DEFECTIVE OR INCOMPLETE
14	SOFTWARE SETUP PROBLEM
15	NO IDENTIFICATION / AUTHENTICATION OF PRODUCT OR USER
2	EXHAUSTED, LOW EMISSION
3	NO PROBLEM FOUND (SET WITHIN SPEC)
4	NO PROBLEM FOUND - CUSTOMER MISUNDERSTANDING
5	NO PROBLEM FOUND - LOCAL CONDITIONS
51	FAULTY MAINS VOLTAGE
6	UNABLE TO DIAGNOSE FAULT
7	INCORRECTLY WIRED/ASSEMBLED
81	INCORRECT EQUIPMENT CONNECTION
9	CUSTOMER MISUSE
93	UNAUTHORISED MODIFICATION

REPAIR CODES	
A	REPLACEMENT
B	MECHANICAL ALIGNMENT
C	ELECTRICAL ALIGNMENT
D	RESOLDERING
D1	REFITTING, PUT BACK IN POSITION (CONNECTOR, TUBE...)
E	CLEANING
F	LUBRICATION
G	REPAIRED ELECTRICAL PARTS
H	REPAIRED MECHANICAL PARTS
I	MODIFICATION REQUESTED BY MANUFACTURER
J	REMOVED
K	ADDED
L	FUNCTIONAL CHECK
M	SPECIFICATION MEASUREMENT
N	MAINTENANCE
O	REFURBISHING, RECONDITIONING
P	PREVENTIVE PARTS REPLACEMENT
Q	PREVENTIVE ACTION WITHOUT PARTS REPLACEMENT
U	EXPLANATION FOR CUSTOMER
V	COST ESTIMATION REFUSED
W	COST ESTIMATION WITH PARTS
X	COST ESTIMATION WITHOUT PARTS
Y	RETURN WITHOUT REPAIR
Z	PRODUCT EXCHANGE
Z1	PRODUCT EXCHANGE (REPAIR TOO EXPENSIVE)
Z2	PRODUCT EXCHANGE (TOO MANY VISITS/REPAIRS)
Z3	PRODUCT EXCHANGE (PARTS NOT AVAILABLE)
Z4	PRODUCT EXCHANGE (IMPOSSIBLE TO REPAIR)
Z5	PRODUCT EXCHANGE (ON REQUEST OF RETAILER)
Z6	PRODUCT EXCHANGE (ON REQUEST OF MANUFACTURER)
1	SOFTWARE CORRECTION/RESET
2	SOFTWARE UPGRADE
3	PRODUCT UPGRADE (ON REQUEST)

EXAMPLE OF USE:

FLAG	SYMPTOM CODE	PART NO.	REF. NO.	SECTION	PCB	DEFECT CODE	REPAIR CODE	QTY
1	1 4 1 2 3 6 4 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	R 1 2 3 1 1 1	T D M	Y A 2 2	C 1	Z 1

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