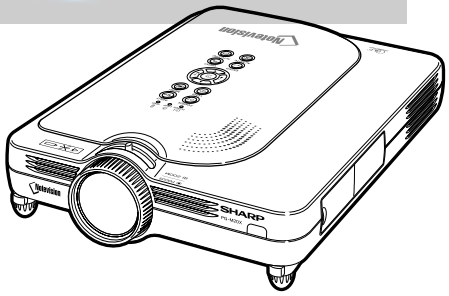
SHARP SERVICE MANUAL
SERVICE-ANLEITUNG

S72N3PG-M20XU



DIGITAL MULTIMEDIA PROJECTOR
DIGITALER MULTIMEDIA PROJEKTOR

PG-M20S
PG-M20X

MODELS
MODELLE **AN-60KT**

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

Im Interesse der Benutzersicherheit (erforderliche Sicherheitsregeln in einigen Ländern) muß das Gerät in seinen Originalzustand gebracht werden. Außerdem dürfen für die spezifizierten Bauteile nur identische Teile verwendet werden.

CONTENTS

INHALT

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

Specifications

Product type	Digital Multimedia Projector
Model	PG-M20X/PG-M20S
Video system	NTSC 3.58/NTSC 4.43/PAL/PAL-M/PAL-N/PAL 60/SECAM/ DTV480I/DTV480P/DTV720P/DTV1080I
Display method	Single Chip Digital Micromirror Device™ (DMD™) by Texas Instruments
DMD panel	Panel size: 0.7" (17.8 mm), 1 chip XGA DMD(PG-M20X)/0.55"(14.0mm)",1 chip SVGA DMD(PG-M20S) No. of dots: 786,432 dots (1,024 [H] × 768 [V])(PG-M20X)/480.000 dots (800[H] × 600[V])(PG-M20S)
Lens	1–1.2 × zoom lens, F1.75–2.04, f = 28.0–33.5 mm
Projection lamp	High Intensity Discharge Lamp (HID Lamp), DC 210 W
Component input signal	29-pin connector
(INPUT1)	DVI input signal: Digital 250–1,000 mV 50 Ω Analog 0.7 Vp-p 75 Ω Y: 1.0 Vp-p, sync negative, 75 Ω terminated P_B: 0.7 Vp-p, 75 Ω terminated P_R: 0.7 Vp-p, 75 Ω terminated
Horizontal resolution	700 TV lines (DTV720P)(PG-M20X)/500TV Lines (S-Video[NTSC3.58])(PG-M20S)
Computer RGB input signal	29-pin connector
(INPUT 1)	RGB separate/sync on green type analog input: 0–0.7 Vp-p, positive, 75 Ω terminated HORIZONTAL SYNC. SIGNAL: TTL level (positive/negative) VERTICAL SYNC. SIGNAL: Same as above
S-video input signal	4-pin Mini DIN connector
(INPUT 2)	Y (luminance signal): 1.0 Vp-p, sync negative, 75 Ω terminated C (chrominance signal): Burst 0.286 Vp-p, 75 Ω terminated
Video input signal	RCA connector: VIDEO, composite video, 1.0 Vp-p, sync negative, 75 Ω
(INPUT 3)	terminated
Pixel clock	12–230 MHz(PG-20X)/12-120MHz(PG-M20S)
Vertical frequency	43–100 Hz
Horizontal frequency	15–126 kHz(PG-20X)/15-102kHz(PG-M20S)
Audio input signal	ø3.5 mm MINIJACK: AUDIO, 0.5 Vrms, more than 47 kΩ (stereo)
Audio output	2.0 W (monaural)
Speaker system	4 cm × 3 cm
Rated voltage	AC 100–240 V
Input current	3.2 A
Rated frequency	50/60 Hz
Power consumption	290 W
Power dissipation	<1,090 BTU/hour
Operating temperature	41°F to 95°F (+5°C to +35°C)
Storage temperature	–4°F to 140°F (–20°C to +60°C)
Cabinet	Plastic
I/R carrier frequency	38 kHz
Dimensions (approx.)	8 5/8" × 3" × 11 15/16" (219 (W) × 76 (H) × 303 (D) mm) (main body only) 8 3/4" × 3 1/4" × 12 1/2" (223 (W) × 83 (H) × 318 (D) mm) (including adjustment feet and projecting parts)
Weight (approx.)	5.8 lbs. (2.6 kg)
Supplied accessories	Remote control, Two R-03 batteries, Power cord for U.S., Canada etc. (6', 1.8 m), Power cord for Europe, except U.K. (6', 1.8 m), Power cord for U.K., Hong Kong and Singapore (6', 1.8 m), Power cord for Australia, New Zealand and Oceania (6', 1.8 m), DVI to 15-pin D-sub cable (6', 1.8 m), USB cable (6', 1.8 m), Carrying case, Lens cap (attached), Lens cap strap, Terminal cover (attached), CD-ROM, Operation manual, Quick reference guides
Replacement parts	Lamp unit (Lamp/cage module) (BQC-PGM20X//1), Remote control (RRMCGA013WJSA), Two R-03 batteries (“AAA” size, UM/SUM-4, HP-16, or similar), Power cord for U.S., Canada etc. (QACCDA007WJPZ), Power cord for Europe, except U.K. (QACCV4002CEZZ), Power cord for U.K., Hong Kong and Singapore (QACCB5024CENA[PG-M20X]/QACCBA012WJPZ [PG-M20S]), New Power cord for Australia, Zealand and Oceania(QACCL3022CEZZ), DVI to 15-pin D-sub cable (QCNWGA010WJZZ), USB cable (QCNWG0001WJPZ), Carrying case (GCASN0005CESA), Lens cap (CCAPHA001WJ01), Lens cap strap (UBNDT0013CEZZ),Terminal cover (GCOVD0103CESA), CD-ROM (UDSKA0058CEN1 [PG-M20X]/UDSKAA009WJZZ[PG-M20S]),Operation manual (TINS-7609CEZZ[PG-M20X] /TINS-A209WJZZ[PG-M20S]), Quick reference guides

This SHARP projector uses a DMD panel. This very sophisticated panel contains 786,432(PG-M20X)/480,000(PG-M20-S) pixels. As with any high technology electronic equipment such as large screen TVs, video systems and video cameras, there are certain acceptable tolerances that the equipment must conform to.

This unit has some inactive pixels within acceptable tolerances which may result in inactive dots on the picture screen. This will not affect the picture quality or the life expectancy of the unit.

Specifications are subject to change without notice.

IMPORTANT SERVICE SAFETY NOTES (for USA)

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and servicing guidelines as follows:**

WARNING

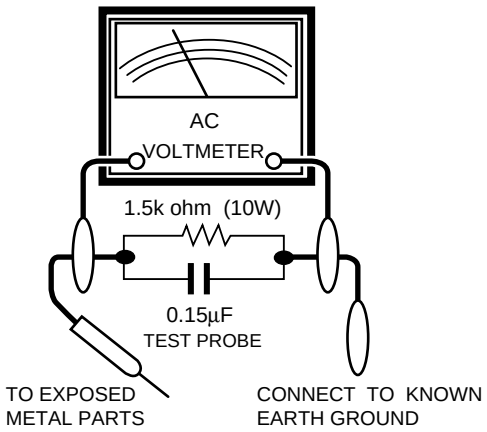
1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.

BEFORE RETURNING THE PROJECTOR: (Fire & Shock Hazard)

Before returning the projector to the user, perform the following safety checks:

1. Inspect lead wires are not pinched between the chassis and other metal parts of the projector.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for current leakage in the following manner:

- Plug the AC cord directly into a 120-volt AC outlet, (Do not use an isolation transformer for this test).
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in parallel between all exposed metal cabinet parts and earth ground.
- Use an AC voltmeter with sensitivity of 5000 ohm per volt., or higher, sensitivity to measure the AC voltage drop across the resistor (See Diagram).
- All checks must be repeated with the AC plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these checks.)
  Any reading of 0.3 volts RMS (this corresponds to 0.2 milliamp. AC.) or more is excessive and indicates a potential shock hazard which must be corrected before returning the unit to the owner.



SAFETY NOTICE

Many electrical and mechanical parts in Projector have special safety-related characteristics.
These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.
Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the Replacement Parts Lists and Schematic Diagrams. For continued protection, replacement parts must be identical to those used in the original circuit. The use of a substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire or other hazards.

WARNING: The bimetallic component has the primary conductive side exposed. Be very careful in handling this component when the power is on.

AVIS POUR LA SECURITE

De nombreuses pièces, électriques et mécaniques, dans les projecteur à présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue.
Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.
Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont identifiées par la marque "⚠" et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques. Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine. L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies ou autres accidents.

AVERTISSEMENT: La composante bimétallique dispose du conducteur primaire dénudé. Faire attention lors de la manipulation de cette composante sous tension.

NOTE TO SERVICE PERSONNEL

UV-RADIATION PRECAUTION

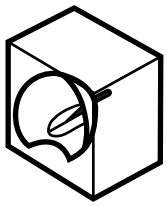
The light source, metal halide lamp, in the projector emits small amounts of UV-Radiation.

AVOID DIRECT EYE AND SKIN EXPOSURE.

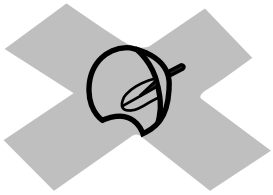
To ensure safety please adhere to the following:

1. Be sure to wear sun-glasses when servicing the projector with the lamp turned “on” and the top enclosure removed.

2. Do not operate the lamp outside of the lamp housing.



3. Do not operate for more than 2 hours with the enclosure removed.



UV-Radiation and Medium Pressure Lamp Precautions

1. Be sure to disconnect the AC plug when replacing the lamp.
2. Allow one hour for the unit to cool down before servicing.
3. Replace only with same type lamp. Type BQC-PGM20X//1 rated 85V/210W.
4. The lamp emits small amounts of UV-Radiation, avoid direct-eye contact.
5. The medium pressure lamp involves a risk of explosion. Be sure to follow installation instructions described below and handle the lamp with care.

NOTE POUR LE PERSONNEL D’ENTRETIEN

PRECAUTION POUR LES RADIATIONS UV

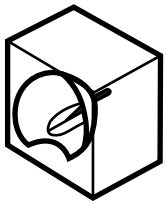
La source de lumière, la lampe métal halide, dans le projecteur émet de petites quantités de radiation UV.

EVITEZ TOUTE EXPOSITION DIRECTE DES YEUX ET DE LA PEAU.

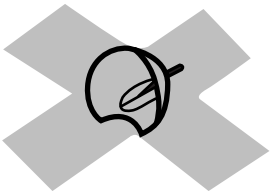
Pour votre sécurité, nous vous prions de respecter les points suivants:

1. Toujours porter des lunettes de soleil lors d’un entretien du projecteur avec la lampe allumée et le haut du coffret retiré.

2. Ne pas faire fonctionner la lampe à l’extérieur du boîtier de lampe.



3. Ne pas faire fonctionner plus de 2 heures avec le coffret retiré.



Précautions pour les radiations UV et la lampe moyenne pression

1. Toujours débrancher la fiche AC lors du remplacement de la lampe.
2. Laisser l’unité refroidir pendant une heure avant de procéder à l’entretien.
3. Ne remplacer qu’avec une lampe du même type. Type BQC-PGM20X//1 caractéristique 85V/210W.
4. La lampe émet de petites quantités de radiation UV- éviter tout contact direct avec les yeux.
5. La lampe moyenne pression implique un risque d’explosion. Toujours suivre les instructions d’installation décrites ci-dessous et manipuler la lampe avec soin.

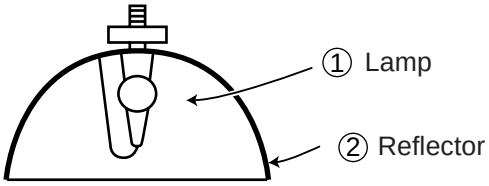
UV-RADIATION PRECAUTION (Continued)

■ Lamp Replacement

Note:

Since the lamp reaches a very high temperature during units operation replacement of the lamp should be done at least one hour after the power has been turned off. (to allow the lamp to cool off.) Installing the new lamp, make sure not to touch the lamp (bulb) replace the lamp by holding its reflector ②.

[Use original replacement only.]



DANGER ! — Never turn the power on without the lamp to avoid electric-shock or damage of the devices since the stabilizer generates high voltages at its start.

Since small amounts of UV-Radiation are emitted from an opening between the duct cover and the lamp housing, it is recommended to place the LENS CAP on the opening during servicing to avoid eye and skin exposure.

Note: Please obtain a lens cap before servicing a models PG-M20X/PG-M20S that is received without one.

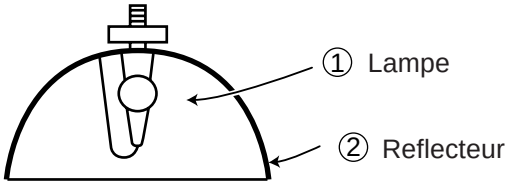
PRECAUTION POUR LES RADIATIONS UV (Suite)

■ Remplacement de la lampe

Remarque:

Comme la lampe devient très chaude pendant le fonctionnement de l'unité, son remplacement ne doit être effectué au moins une heure après avoir coupé l'alimentation (pour permettre à la lampe de refroidir). En installant la nouvelle lampe, s'assurer de ne pas toucher la lampe (ampoule). Remplacer la lampe en tenant son réflecteur ②.

[N'utiliser qu'un remplacement d'origine.]



DANGER ! — Ne jamais mettre sous tension sans la lampe pour éviter un choc électrique ou des dommages des appareils car le stabilisateur génère de hautes tensions à sa mise en route.

Comme de petites quantités de radiation UV sont émises par une ouverture entre le couvercle du conduit et le botier de la lampe,il est recommandé de placer le CAPUCHON D'OPTIQUE sur l'ouverture pendant l'entretien pour éviter une exposition des yeux et la peau.

Remarque: Priére de se procurer un capuchon d'optique acant d'entretien un modéle PG-M20X/PG-M20S qui est livré sans.

WARNING: High brightness light source, do not stare into the beam of light, or view directly. Be especially careful that children do not stare directly in to the beam of light.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO MOISTURE OR WET LOCATIONS.

CAUTION

RISK OF ELECTRIC SHOCK.
DO NOT REMOVE SCREWS
EXCEPT SPECIFIED USER
SERVICE SCREWS

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE CABINET.
NO USER-SERVICEABLE PARTS EXCEPT LAMP UNIT.
REFER SERVICING TO QUALIFIED SERVICE
PERSONNEL.

The lighting flash with arrowhead within a triangle is intended to tell the user that parts inside the product are risk of electric shock to persons.

The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the manual with the projector.

AVERTISSEMENT: Source lumineuse de grande intensité. Ne pas fixer le faisceau lumineux ou le regarder directement. Veiller particulièrement à éviter que les enfants ne fixent directement le faisceau lumineux.

AVERTISSEMENT: AFIN D'EVITER TOUT RISQUE D'INCENDIE OU D'ELECTROCUTION, NE PAS PLACER CET APPAREIL DANS UN ENDROIT HUMIDE OU MOUILLE.

ATTENTION

RISQUE
D'ELECTROCUTION NE
PASRETIRER LES VIS, A
L'EXCEPTION DES VIS DE
REPARATION UTILISATEUR
SPECIFIEES

ATTENTION: POUR EVITER TOUT RISQUE
D'ELECTROCUTION, NE PAS RETIRER LE CAPOT.
AUCUNE DES PIECES INTERIEURES N'EST REPARABLE
PAR L'UTILISATEUR, A L'EXCEPTION DE L'UNITE DE
LAMPE. POUR TOUTE REPARATION, S'ADRESSER A UN
TECHNICIEN D'ENTRETIEN QUALIFIE.

L'éclair terminé d'une flèche à l'intérieur d'un triangle indique à l'utilisateur que les pi'eces se trouvant dans l'appareil sont susceptibles de provoquer une décharge électrique.

Le point d'exclamation à l'intérieur d'un triangle indique à l'utilisateur que les instructions de fonctionnement et d'entretien sont détaillées dans les documents fournis avec le projecteur.

Precautions for using lead-free solder

1 Employing lead-free solder

"Input and key PWBs" of this model employs lead-free solder. The LF symbol indicates lead-free solder, and is attached on the PWBs and service manuals. The alphabetical character following LF shows the type of lead-free solder.

Example:

Sn-Ag-Cu Indicates lead-free solder of tin, silver and copper.

2 Using lead-free wire solder

When fixing the PWB soldered with the lead-free solder, apply lead-free wire solder. Repairing with conventional lead wire solder may cause damage or accident due to cracks.

As the melting point of lead-free solder (Sn-Ag-Cu) is higher than the lead wire solder by 40°C, we recommend you to use a dedicated soldering bit, if you are not familiar with how to obtain lead-free wire solder or soldening bit, contact our service station or service ranch in your area.

3 Soldering

As the melting point of lead-free solder (Sn-Ag-Cu) is about 220°C which is higher than the conventional lead solder by 40°C, and as it has poor solder wettabillty, you may be apt to keep the soldering bit in contact with the PWB for extended period of time. However, Since the land may be peeled off or the maximum heat-resistance temperature of parts may be excoeded, remove the bit from the PWB as soon as you conurm the steady soldering condition.

Lead-free solder contains more tin, and the end of the soldering bit may be easily corroded. Make sure to tum on and off the power of the bit as required.

if a different type of solder stays on the tip of the soldering bit, it is alloyed with lead-free solder. Clean the bit after every use of it.

When the tip of the soldering bit is blackened during use, file it with steel wool or fine sandpaper.

Becareful when replacing parts with polarity indication on the PWB silk.

Lead-free wire solder for servicing

Part No.	★	Description		Code
ZHNDAi123250E	J	ϕ0.3mm	250g(1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm	500g(1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm	1kg(1roll)	BM

Location of Controls

Projector (Front and Top View)

LAMP REPLACEMENT indicator
Illuminates in green normally. Replace the lamp when the indicator illuminates in red.

POWER indicator
Illuminates in red, when the projector is in standby. When the power is turned on, this indicator will illuminate in green.

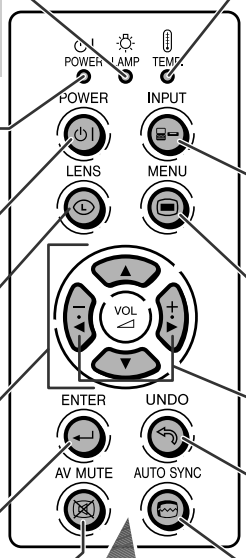
POWER button
Turns the power on or off.

LENS button
For adjusting Keystone or Digital Shift setting.

Adjustment buttons (▽ △ ◁ ▷)
For selecting menu items.

ENTER button
For setting items selected or adjusted on the menu.

AV MUTE button
For temporarily turning off the sound and picture.



TEMPERATURE WARNING indicator
Illuminates in green normally. When the internal temperature rises, this indicator will illuminate in red.

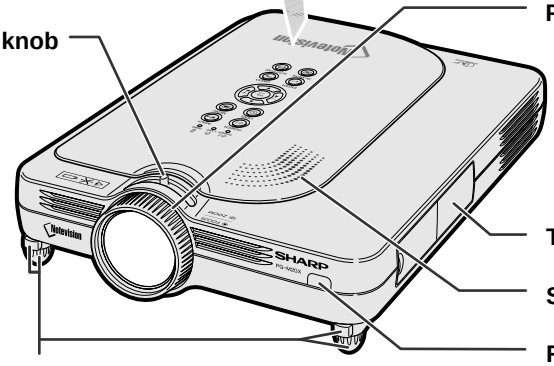
INPUT button
For switching input mode 1, 2 or 3.

MENU button
For displaying adjustment and setting screens.

VOLUME buttons
For adjusting the speaker sound level.

UNDO button
For undoing an operation or returning to the default settings.

AUTO SYNC button
For automatically adjusting images when connected to a computer.



Zoom knob

Focus ring

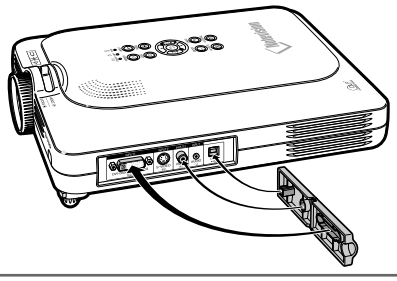
Terminal cover

Speaker

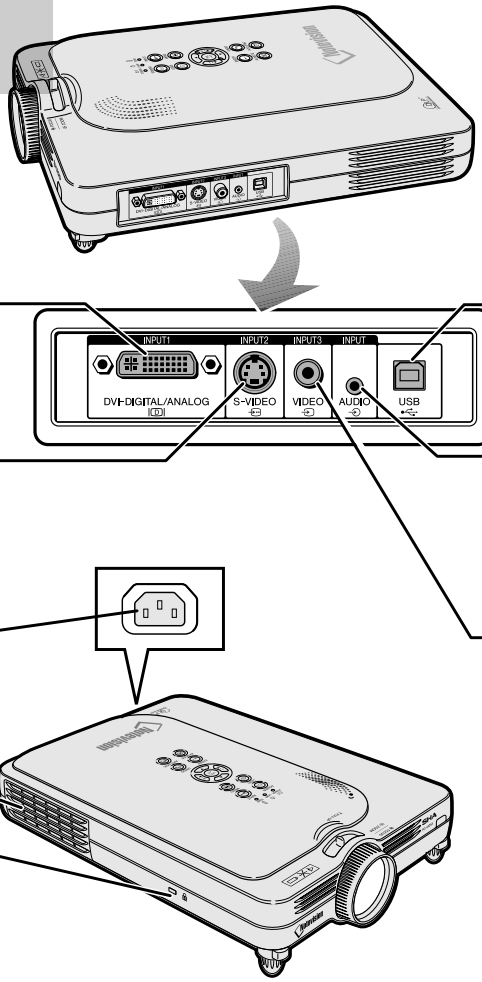
Remote control sensor

Foot releases/Adjustment feet
For adjusting the projector's height.

Attaching the terminal cover
Attach the terminal cover by placing it on the side panel of the projector and pressing it into place, as shown in the illustration.



Projector (Side View)



INPUT 1 terminal
Port for DVI digital, computer RGB, and COMPONENT signals.

INPUT 2 terminal
Terminal for connecting video equipment with an S-VIDEO terminal.

USB terminal
For connecting a computer using a USB cable.

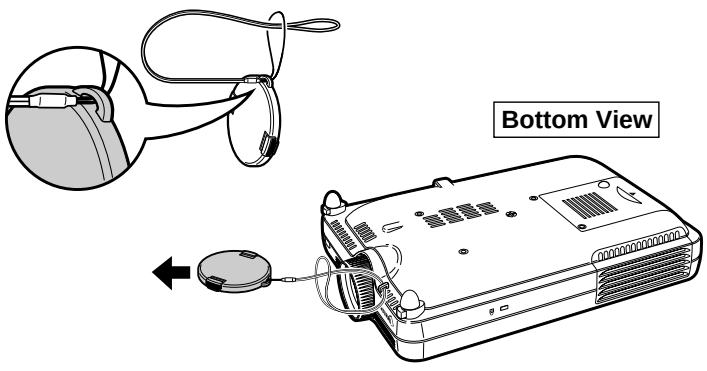
INPUT AUDIO terminal
Shared audio terminal for INPUT 1, INPUT 2, and INPUT 3.

INPUT 3 terminal
For connecting video equipment.

Using the Kensington Lock

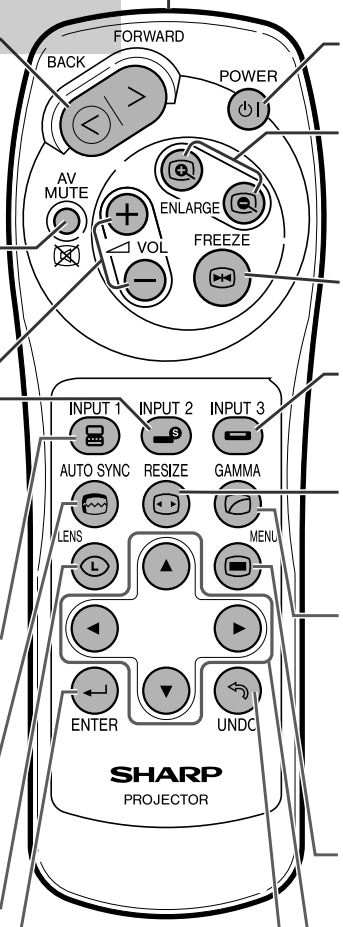
- This projector has a Kensington Security Standard connector for use with a Kensington MicroSaver Security System. Refer to the information that came with the system for instructions on how to use it to secure the projector.

Attaching the lens cap
After putting the lens cap strap on the lens cap, pass the other end of the strap through the hole under the projector, next to the lens, as shown in the illustration.



Remote Control

Remote control signal transmitter



FORWARD/BACK button
Moves forward or backwards when connected to a computer using a USB cable. Same as the [Page Down] and [Page Up] keys on a computer keyboard.

AV MUTE button
For temporarily turning off the sound and picture.

VOLUME buttons
For adjusting the speaker sound level.

INPUT 2 button
For switching the input mode to INPUT 2.

INPUT 1 button
For switching the input mode to INPUT 1.

AUTO SYNC button
For automatically adjusting images when connected to a computer.

LENS button
For adjusting Keystone or Digital Shift setting.

ENTER button
For setting items selected or adjusted on the menu.

POWER button
Turns the power on or off.

ENLARGE (Enlarge/Reduce) buttons
For enlarging or reducing part of the image.

FREEZE button
For freezing images.

INPUT 3 button
For switching the input mode to INPUT 3.

RESIZE button
For switching the screen size (NORMAL, BORDER, etc).

GAMMA button
For correcting the brightness of an image, when the images displayed are hard to see because of the brightness of the room. Four gamma modes are available to choose from.

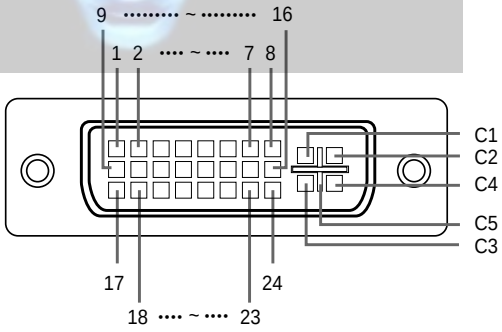
MENU button
For displaying adjustment and setting screens.

Adjustment buttons (▼ ▲ ◀ ▶)
For selecting menu items.

UNDO button
For undoing an operation or returning to the default settings.

Connection Pin Assignments

DVI Digital / Analog INPUT 1 port : 29 pin connector



• DVI Digital INPUT

Pin No.	Signal	Pin No.	Signal
1	T.M.D.S data 2–	16	Hot plug detection
2	T.M.D.S data 2+	17	T.M.D.S data 0–
3	T.M.D.S data 2 shield	18	T.M.D.S data 0+
4	Not connected	19	T.M.D.S data 0 shield
5	Not connected	20	Not connected
6	DDC clock	21	Not connected
7	DDC data	22	T.M.D.S clock shield
8	Not connected	23	T.M.D.S clock+
9	T.M.D.S data 1–	24	T.M.D.S clock–
10	T.M.D.S data 1+	C1	Not connected
11	T.M.D.S data 1 shield	C2	Not connected
12	Not connected	C3	Not connected
13	Not connected	C4	Not connected
14	+5V current	C5	Ground
15	Ground		

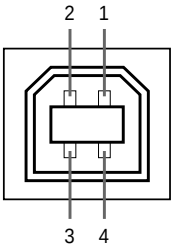
• DVI Analog RGB Input

Pin No.	Signal	Pin No.	Signal
1	Not connected	16	Hot plug detection
2	Not connected	17	Not connected
3	Not connected	18	Not connected
4	Not connected	19	Not connected
5	Not connected	20	Not connected
6	DDC clock	21	Not connected
7	DDC data	22	Not connected
8	Vertical sync	23	Not connected
9	Not connected	24	Not connected
10	Not connected	C1	Analog input Red
11	Not connected	C2	Analog input Green
12	Not connected	C3	Analog input Blue
13	Not connected	C4	Horizontal sync
14	+5V current	C5	Ground
15	Ground		

• DVI Analog Component Input

Pin No.	Signal	Pin No.	Signal
1	Not connected	16	Not connected
2	Not connected	17	Not connected
3	Not connected	18	Not connected
4	Not connected	19	Not connected
5	Not connected	20	Not connected
6	Not connected	21	Not connected
7	Not connected	22	Not connected
8	Not connected	23	Not connected
9	Not connected	24	Not connected
10	Not connected	C1	Analog input Pr/Cr
11	Not connected	C2	Analog input Y
12	Not connected	C3	Analog input Pb/Cb
13	Not connected	C4	Not connected
14	Not connected	C5	Ground
15	Ground		

4-pin USB connector

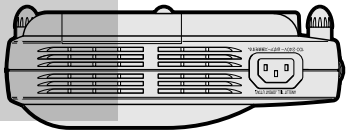


• USB connector: 4 pin B-type USB connector

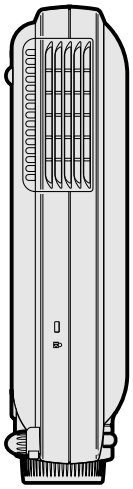
Pin no.	Signal	Name
1	VCC	USB current
2	USB–	USB data–
3	USB+	USB data+
4	SG	Signal Ground

Dimensions

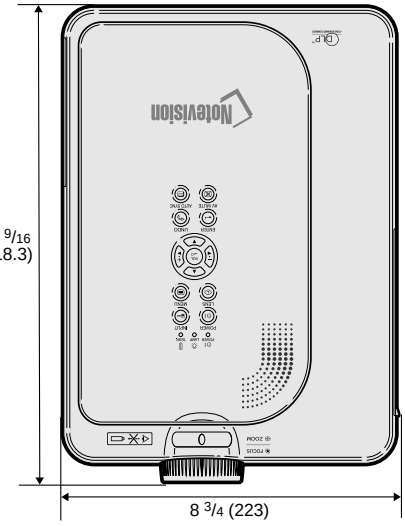
Rear View



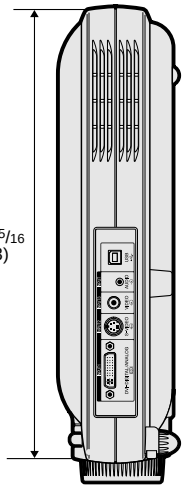
Side View



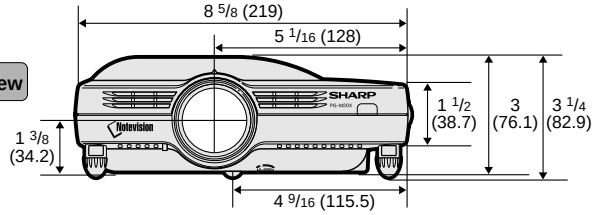
Top View



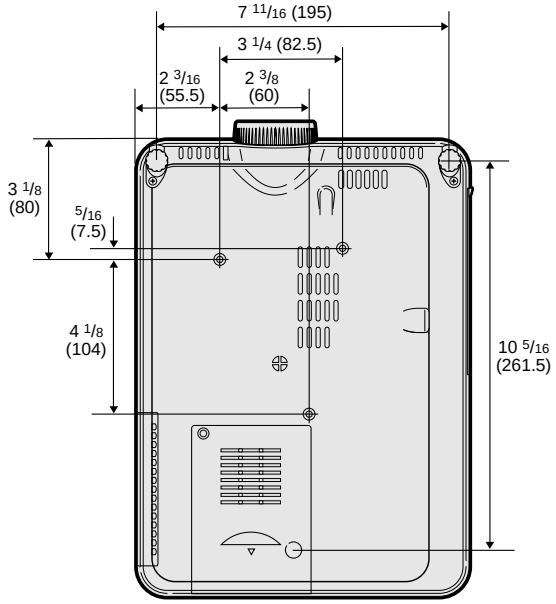
Side View



Front View



Bottom View



Units: inches (mm)

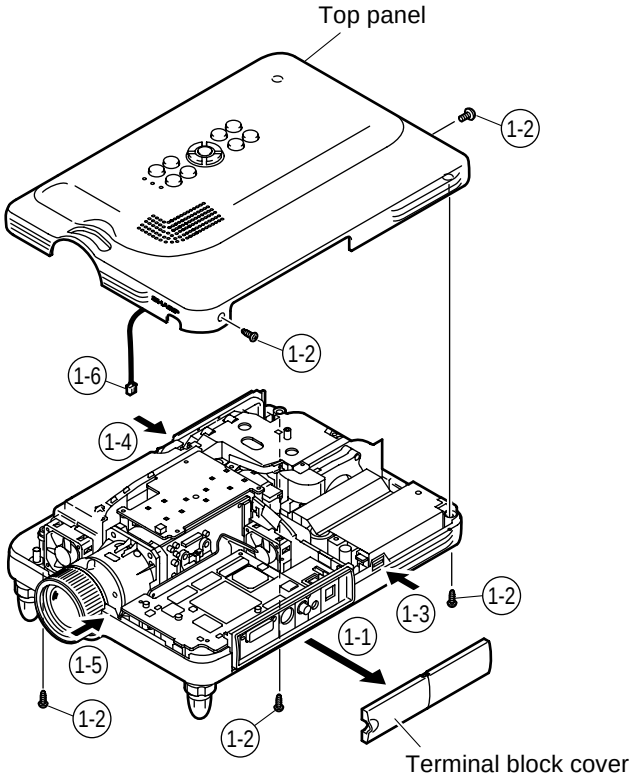
REMOVING OF MAJOR PARTS

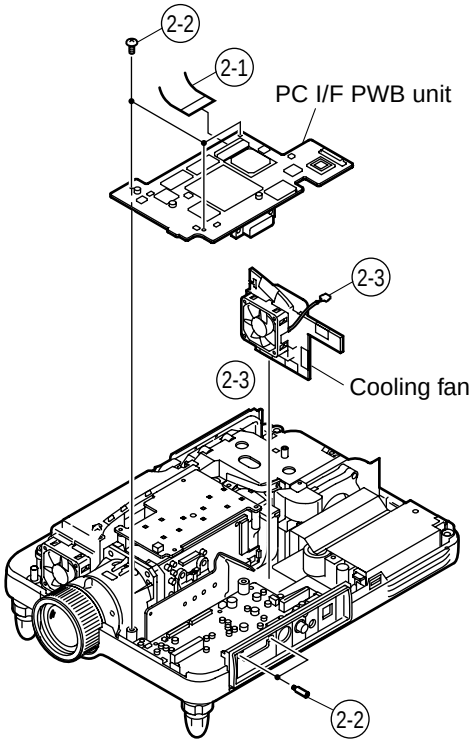
1. Removing the top panel

1-1. Detach the terminal block cover.
1-2. Remove the five lock screws from the top panel.
1-3. Press the right side of the bottom body to undo the hook.
1-4. Press the left side of the bottom body to undo the hook.
1-5. Press the front of the bottom body to undo the hook. Get the top panel loose from the bottom body.
1-6. Slightly raise the front of the top panel and disconnect the speaker connector.

2. Removing the PC I/F PWB and cooling fan

2-1. Disconnect the connector.
2-2. Remove the three lock screws from the PC I/F PWB and then the two hex support screws.
2-3. Disconnect the connector and take out the cooling fan.



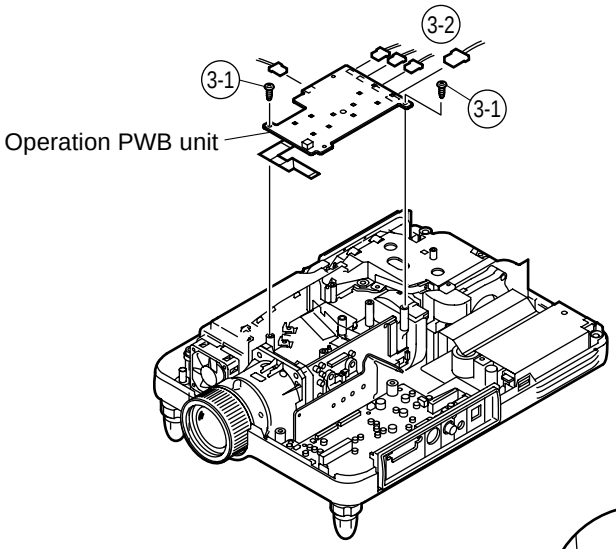


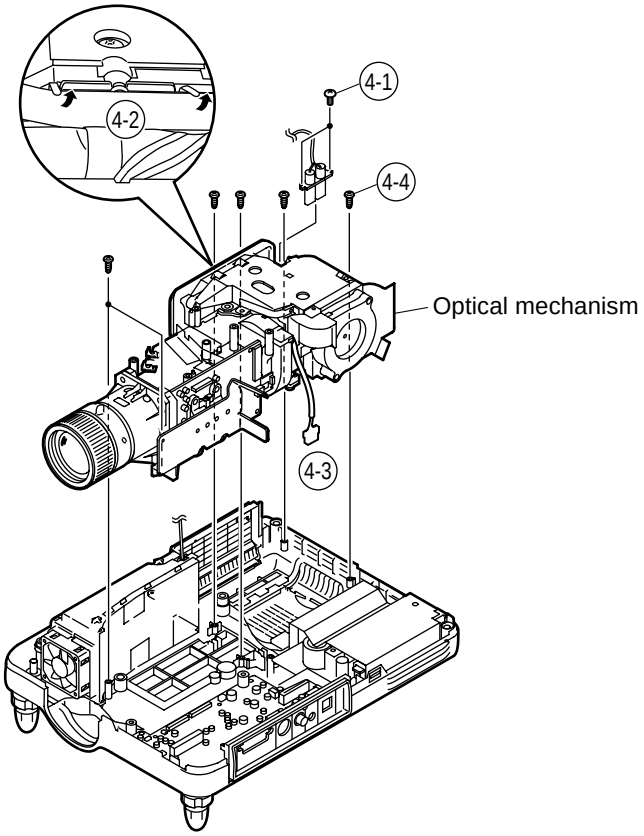
3. Removing the operation PWB

3-1. Remove the two lock screws from the operation PWB and slightly raise this PWB.
3-2. Disconnect the connectors.

4. Removing the optical mechanism

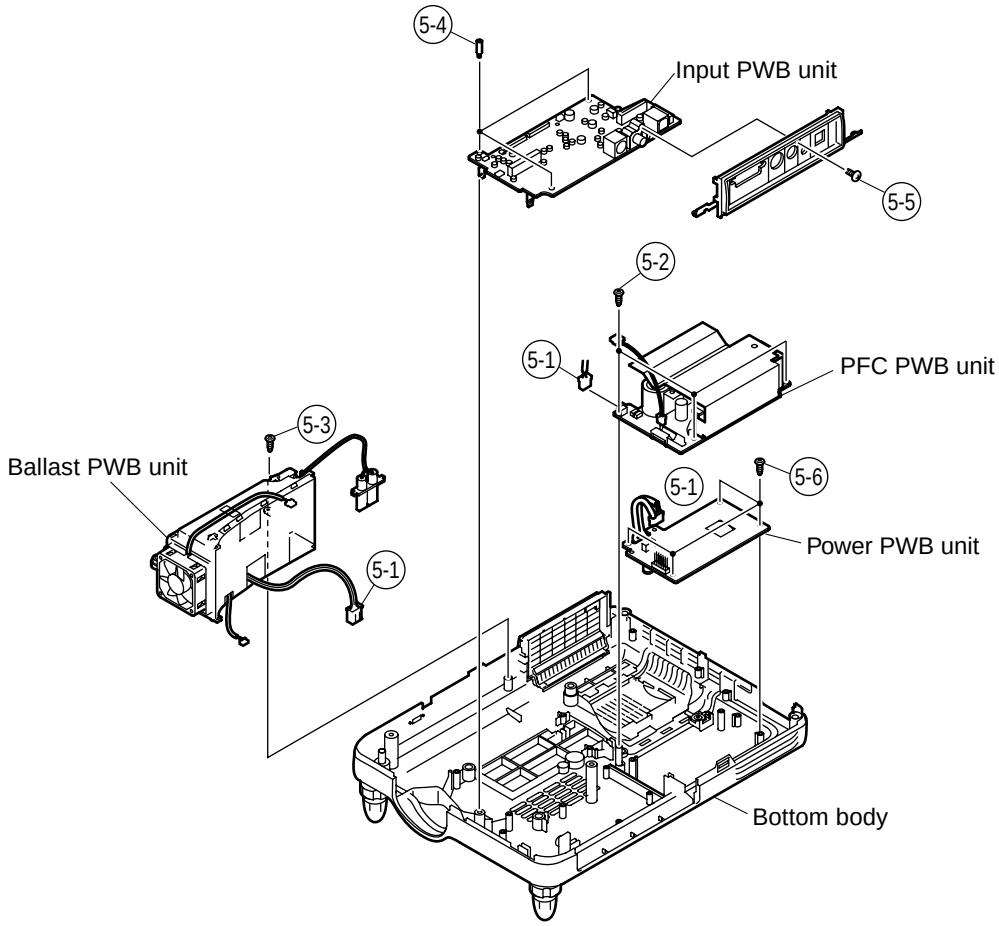
4-1. Remove the two lock screws from the lamp socket.
4-2. Raise the two lamp socket lead fixtures.
4-3. Disconnect the connectors.
4-4. Remove the six lock screws from the optical mechanism.





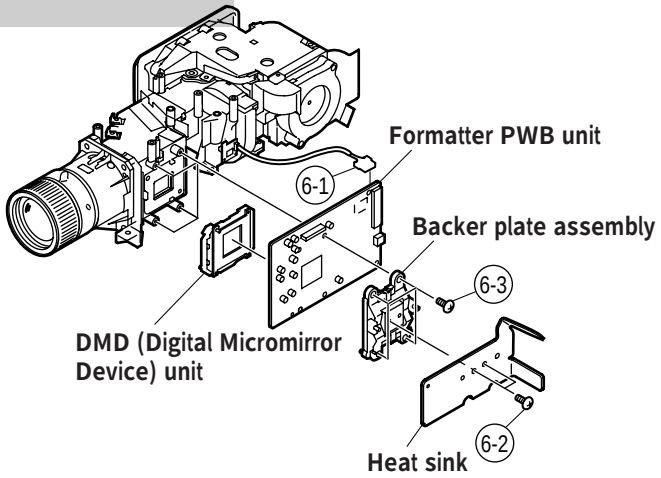
5. Removing the other PWBs

5-1. Disconnect the connectors.
5-2. Remove the four lock screws from the power PWB.
5-3. Remove the lock screw from the ballast PWB unit.
5-4. Remove the three hex support screws from the input PWB.
5-5. Remove the lock screw from the terminal block cover.
5-6. Remove the three lock screws from the PFC PWB.



6. Removing the formatter PWB

6-1. Disconnect the connector.
6-2. Remove the two lock screws from the heat sink.
6-3. Remove the four lock screws from the backer plate assembly, and detach the formatter PWB.
Note: The DMD (Digital Micromirror Device) unit is easily affected by static electricity. In handling this unit, be sure to wear a wristband or take other anti-static measure.



Precautions in replacing the DMD chip

Note: Be careful not to allow dust and fingerprint on the cover glass of DMD chip and prism surface of optical engine.

1. When you fix 4screws of backer plate assembly, press backer plate to formatter PWB and fix by cross multiply step by step.
2. If something shade appears on the projection screen like Fig1, release 2 screws on mirror adjusting plate and move that plate to adjust illumination area of DMD chip.

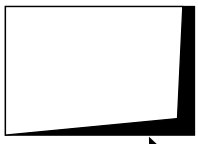
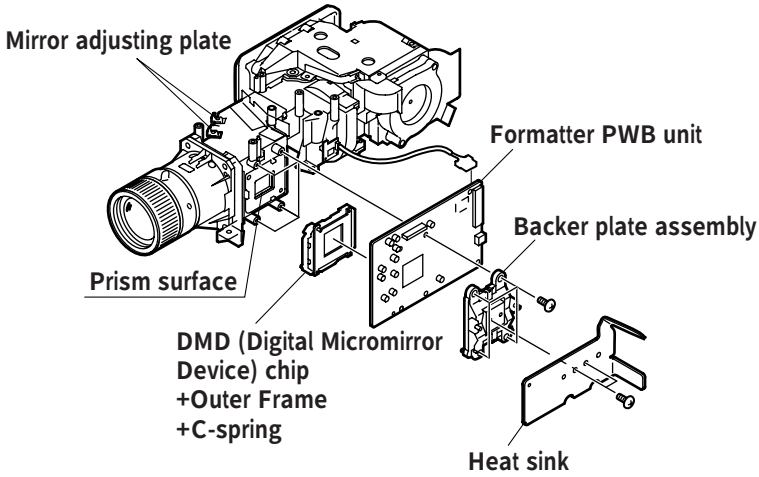
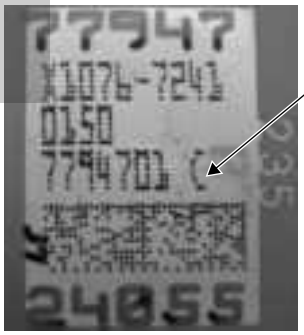


Fig.1 Shade

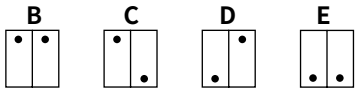


*** Precautions in setting up the DMD (Digital Micromirror Device) unit**

Before connecting the formatter PWB to the optical engine, take the following steps. Look at the voltage rank marking that is on the DMD itself. Referring to this marking, set the DIP switches on the formatter PWB. And connect this PWB to the optical engine. Wrong settings will adversely affect the system performance.

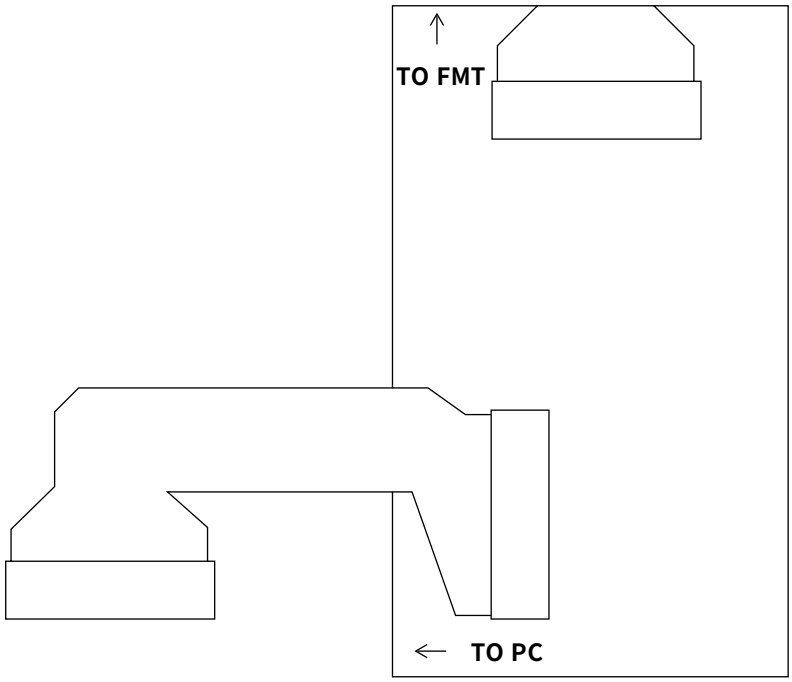


Voltage ranking system with the DIP switches on formatter PWB



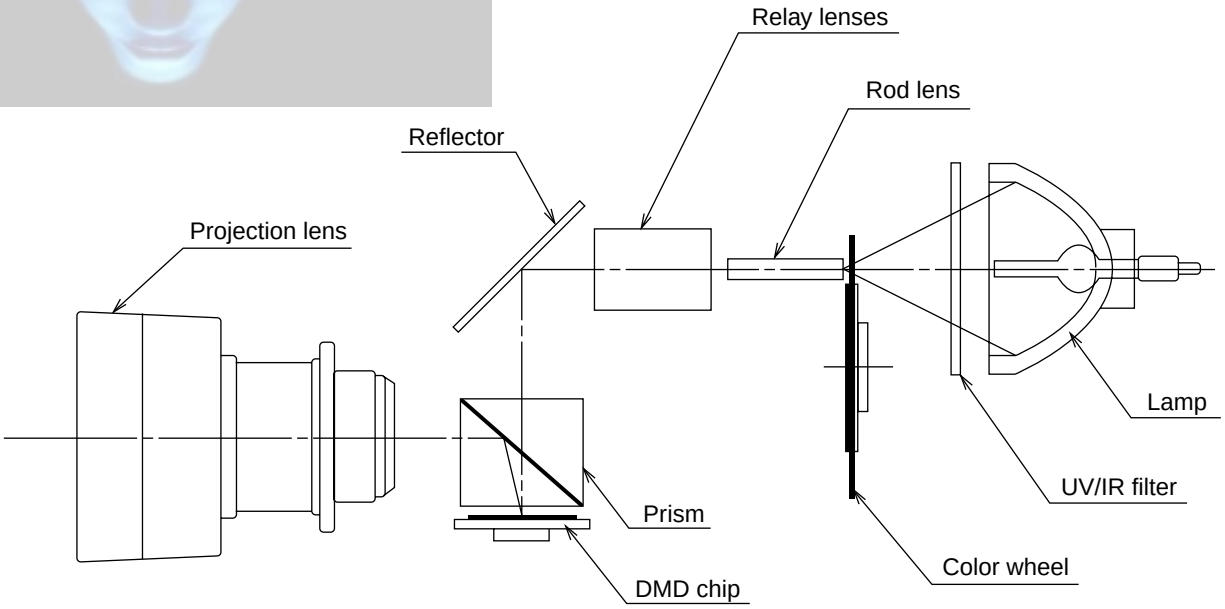
*** Connecting the FPC extension cables (QCNW-A298WJZZ)**

Connect the cables to the formatter PWB (TO FMT) and the PC I/F PWB (TO PC), referring to the silk-screen-printed markings. See the sketch below. (The FPC is already connected at TO PC.)



Outline of the optical unit

<Layout>



Item	Function
Lamp	Light source. DC-driven high-pressure mercury vapor lamp.
UV/IR filter	Used to absorb ultraviolet and infrared rays.
Color wheel	Used to let the source light through the color filter and to separate it into R, G and B colors.
Rod lens	Used to make for uniform light beams.
Relay lenses	Used to collect the light from the rod lens into the DMD chip.
Reflector	Used to reflect the light from the relay lenses against the DMD chip.
Prism	Used to introduce the light from the reflector over the effective surface of the DMD chip. When the micromirror gets tilted (ON) as specified, the reflected light is guided to the projection lens.
DMD chip	Used to turn on and off the micromirror in response to the ratio of color components at each dot and thus to reflect the incoming light accordingly.
Projection lens	Used to enlarge the light from the DMD chip and to get the light projected on the screen.

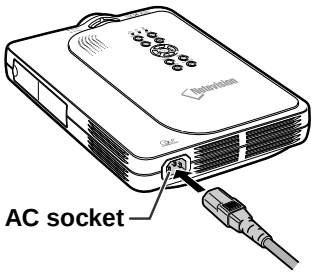
RESETTING THE TOTAL LAMP TIMER

Resetting the Lamp Timer

Reset the lamp timer after replacing the lamp.

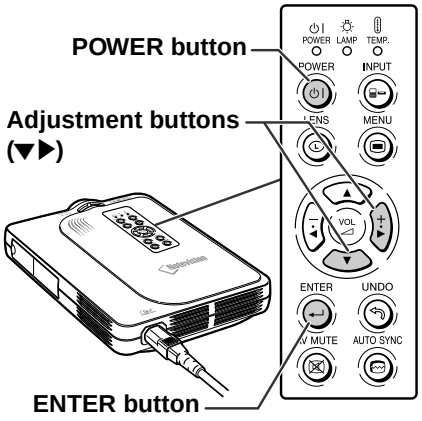
1 Connect the power cord.

- Plug the power cord into the AC socket of the projector.



2 Reset the lamp timer.

- While pressing simultaneously ▼, ▶, and ENTER on the projector, press POWER on the projector.
- "LAMP 0000H" is displayed, indicating that the lamp timer is reset.

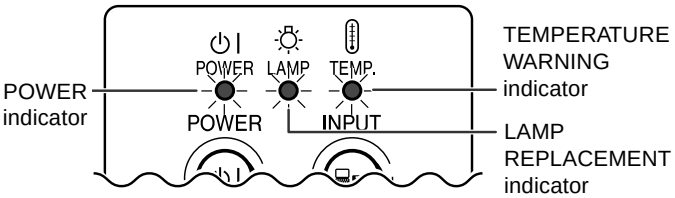


Info

- Make sure to reset the lamp timer only when replacing the lamp. If you reset the lamp timer and continue to use the same lamp, this may cause the lamp to become damaged or explode.

■ **The warning lights on the projector indicate problems inside the projector.**

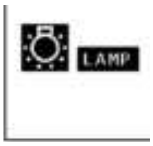
■ **If a problem occurs, either the TEMPERATURE WARNING indicator or the LAMP REPLACEMENT indicator will illuminate red, and the power will turn off. After the power has been turned off, follow the procedures given below.**



About the TEMPERATURE WARNING indicator

If the temperature inside the projector increases, due to blockage of the air vents, or the setting location, TEMP. will blink in the lower left corner of the picture. If the temperature keeps on rising, the lamp will turn off and the TEMPERATURE WARNING indicator will blink, the cooling fan will run for further 90 seconds, then the power will be shut off. After TEMP. appears, be sure to perform the following measures.

About the LAMP REPLACEMENT indicator



■ When the lamp exceeds 1,900 cumulative hours of use, LAMP will be displayed on the screen in yellow. When the cumulative hours of use reach 2,000, LAMP will change to red, the lamp will automatically turn off and then the projector as well. At this time, the LAMP REPLACEMENT indicator will illuminate in red.

■ If you try to turn on the projector a fourth time without replacing the lamp, the projector will not turn on.

Maintenance indicator			Condition	Problem	Possible Solution
TEMPERATURE WARNING indicator	Normal	**Abnormal**	The internal temperature is abnormally high.	• Blocked air intake	• Relocate the projector to an area with proper ventilation.
	Off	Red on/ Power off		• Cooling fan breakdown • Internal circuit failure • Clogged air intake	• Take the projector to your nearest Sharp Authorized Projector Dealer or Service Center for repair.
LAMP REPLACEMENT indicator	Green on (Green blinks when the lamp is active.)	Red blinks	Time to change the lamp	• Lamp usage time exceeded 1,900 hours	• Take the projector to your nearest Sharp Authorized Projector Dealer or Service Center for repair or lamp replacement. • Please exercise care when replacing the lamp.
		Red on/ Power off	The lamp does not illuminate.	• Burnt-out lamp • Lamp circuit failure	

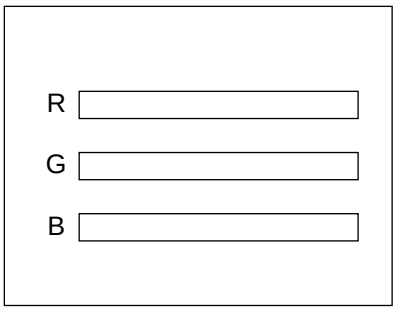
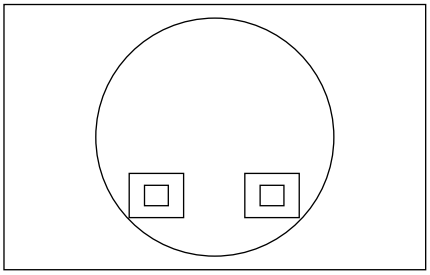
How to Release the System Lock

Turn on the power. If the system lock is applied, the system-resetting screen appears. Press the following keys in this order.

MENU → ENTER → ENTER → MENU → UNDO → UNDO → MENU

After pressing the MENU key first, press the remaining six keys within 10 seconds.

ELECTRICAL ADJUSTMENT

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
1	Initialization of EEPROM	1. Turn on the power (the lamp lights up) and warm up the system for 15 minutes.	1. Carry out the following setting. Press SW2001 to enter the process mode, and execute S2 on SSS menu.
2	Adjustment of CW index	1. Signal input: 64-step color bar 2. Select the following group and subject. Group: DLP Subject: Select CW-INDEX.	1. Feed the signal to INPUT 1. 2. Select subject and make adjustment so that the lamp gradation patterns of R, G and B should be smooth without noise. 
3	Adjustment of RGB gradation reproduction	1. Feed the SMPTE pattern signal. 2. Select the following group and subject. Group: DLP Subject: G1-GAIN	1. Confirm that 100% and 95% white gradation, and 0% and 5% black gradation are discernible. 2. If the white gradation looks differently, do fine adjustment by G1-GAIN. 
4	Adjustment of video brightness/ contrast	1. Feed the NTSC100% window patter signal. (Burst signal) 2. Select the following group and subject. Group: VIDEO Subject: AUTO	1. After signal input, select AUTO using the set's switch or the remote controller's button for automatic adjustment.
5	Adjustment of video tint	1. Feed the split color bar signal. 2. Select the following group and subject. Group: VIDEO Subject: TINT	1. Confirm the fixed value. Fixed value: 128

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
6	Adjustment of NTSC color saturation	1. Feed the internal 8ch (split color bar) signal. 2. Select the following group and subject. Group: VIDEO Subject: N-COLOR	1. Confirm the fixed value. Fixed value: 59
7	Adjustment of PAL color saturation	1. Feed the PAL color bar signal. 2. Select the following group and subject. Group: VIDEO Subject: P-COLOR	1. Confirm the fixed value. Fixed value: 59
8	Adjustment of SECAM color saturation	1. Feed the SECAM color bar signal. 2. Select the following group and subject. Group: VIDEO Subject: S-COLOR	1. Confirm the fixed value. Fixed value: 59
9	Adjustment of COMPO G brightness	1. Input signal: 0% gray pattern signal (480I) 2. Select the following group and subject. Group: COMPO Subject: G-BRIGHT	1. Feed the signal to INPUT 1. Make adjustment so that some bits should be missing in the picture.
10	Adjustment of COMP CR-Offset	1. Feed the color difference signal (480I): Y 0% brightness, Cb and Cr 0% white patterns. Group: COMPO Subject: AUTO	1. After signal input, select AUTO using the set's switch or the remote controller's button for automatic adjustment.
11	Automatic Adjustment of RGB white balance	1. Feed the 50% gray pattern signal (XGA, 60 Hz [PG-M20X]/SVGA,60 Hz [PG-M20S]). 2. Select the following group and subject. Group: DLP Subjects: R1-GAIN (Red) B1-GAIN (Blue)	1. Adjust R-1 GAIN and B1-GAIN so that x-value should be 266±3 and y-value 320±3.
12	Automatic Adjustment of SRGB white balance	1. Feed the 50% gray pattern signal (XGA, 60 Hz [PG-M20X]/SVGA,60 Hz [PG-M20S]). 2. Select the following group and subject. Group: DLP Subjects: S-R1-GAIN (Red) S-G1-GAIN (Green) S-B1-GAIN (Blue)	1. Set the value of S-R1-GAIN to 34. 2. Adjust S-G1-GAIN and S-B1-GAIN so that x-value should be 310±3 and y-value 335±3.

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
13	Automatic adjustment of video white balance	1. Feed the 50% gray pattern signal (NTSC, burst signal). 2. Select the following group and subject. Group: DLP Subjects: V-R1-GAIN (Red) V-B1-GAIN (Blue)	1. Adjust V-R1-GAIN and V-B1-GAIN so that x-value should be 265±3 and y-value should be 298±3.
14	Automatic adjustment of DTV white balance	1. Feed the 50% gray pattern signal (480I, color difference signal). 2. Select the following group and subject. Group: DLP Subjects: C-R1-GAIN C-B1-GAIN	1. Adjust C-R1-GAIN and C-B1-GAIN so that x-value should be 263±3 and y-value should be 295±3.
15	Adjustment of DLP voltage (For reference)	1. Read voltage rank of DLP description. 2. Set the switch corresponding to the rank which has been read. (on the formatter PWB)	1. Carry out adjustment when DLP chip has been replaced or combination of chip and formatter has been changed. 2. Rank: B C D E Setting value: 1 2 3 4
16	Confirmation and re-adjustment of white balance	1. The adjusting conditions for each item are as follows: For RGB input, see Item 11 For SRGB input, see Item 13 For video input, see Item 14 For DVT input, see Item 12	Confirm that there is no deviation in white balance from that of the monitoring equipment. For readjustment, proceed in the order of RGB input, video input and DTV input.
17	Confirmation of color-related operation	1. Receive the color bar signal.	1. Select L1 in the process mode. Check the performance of color and tint.
18	Confirmation of picture-related operation	1. Receive monoscope pattern signal.	1. Select L2 in the process mode. Check Picture, Brightness and Sharpness.
19	Confirmation of RGB	1. Receive the RGB signal.	1. Select L4 on the process mode. Check Picture, Brightness, Red, Blue, Clock, Phase, H-POS and V-POS.
20	Confirmation of off-timer operation		1. Select OFF in the process mode. Confirm that the off-timer starts with 5-minute display, counts 1 minute for 1 second, and turns off when 0 minute is displayed.
21	Confirmation of thermistor operation	1. Heat the thermistor by dryer.	1. Confirm that the temperature is displayed.

No.	Adjustment Items	Adjustment Conditions	Adjustment Procedures
22	Automatic sync operation	1. Receive the phase checking pattern signal.	1. Confirm that Clock, Phase, H-POS and V-POS can be automatically adjusted in the VGA/S-VGA/XGA mode.
23	Confirmation of USB operation	Connect the set to a personal computer by USB cable.	Using the remote controller, make sure that feed and return operations are effective on the display of the personal computer.
24	Factory settings		1. Make the following settings. Process adjustment: S4 Remote controller settings: "Factory Setting 4"

How to Adjust the PC I/F unit

1. Initialization of EEPROM
   1) Press SW2002 to enter the process mode.
   2) Execute S1 on the SSS menu. (By S1, all the contents of EEPROM are initialized.)
   3) Confirm that the program version "Ver. XXX" has become the latest one
2. Adjusting items
   1) Adjustment of RGB drive/gain
      (1) feed the window pattern signal that has 100% and 0% signals.
      (2) Select AUTO among the A/D items in the process mode and carry out adjustment.

● Entering the adjustment process mode

There are follwing two methods.

- Press the SW2001 on the KEY PWB unit.
- Press the follwing keys in this order.

AV MUTE→AV MUTE→Adj up→Adj down→ENTER→ENTER→MENU

● Adjustment mode process menu

Group	Sub Group	Subject
Adjust PC Image	A/D	R-BRIGHT G-BRIGHT B-BRIGHT R-D B-D G-D AD-AUTO
Adjust DLP Image	DLP	R1-BLK R1-GAIN G1-BLK G1-GAIN B1-GAIN CW-INDEX S-R1-GAIN S-G1-GAIN S-B1-GAIN C-R1-GAIN C-B1-GAIN V-R1-GAIN V-B1-GAIN
Adjust VIDEO Image	VIDEO	PICTURE BRIGHT TINT N-COLOR P-COLOR S-COLOR STAT-GAIN VIDEO-AUTO
Adjust Component Image	DTV	G-BRIGHT CB-OFFSET CR-OFFSET COMPO-AUTO
Process mode	LINE	L1 L2 L3 OFF TEMP OFF SENSOR CHECK
INTIAL SETTING	SSS	TIME S1 S2 S3 S4 S5

Group	Sub Group	Subject
Sample Pattern	PATTERN	RGB RGB(50) CROSS FOCUS SETP COLOR CHR
Adjust CVIC	CVIC-PROGRSSIVE	MODE IP MDSW PTGSW C-TESTSW C-ILG-LY C-MOD-LY C-VE-LV
	CVIC-ENHANCE-VIDE	ENH-PLUS ENH-MINUS DFC
	CVIC-ENHANCE-HTTV	ENH-PLUS ENH-MINUS DFC
	CVIC-ENHANCE-RGB	MODE ENH-GAIN ENH-PLUS
	CVIC-SCREEN	CUBIC-RGB CUBIC-VEDEO
	CVIC-NR	YNR-LEVEL YNR-K YNR-FSEL CNR-LEVEL CNR-K CNR-FSEL CNR-FILSW
	CVIC-PTG	TESTSW ENABLE MV-F VDDTP
	CVIC-CMS	RED YELLOW GREEN CYAN BLUE MAGENTA
	CVIC-DEGAMMA	TABLE
Version Check etc	Special	IPL IPL2 E2PROM ADR RD/WR USB-MODE

How to write in a Serial number

Install the new program for the software into your PC
a.This software is downloaded from home page of SHARP intranet.
http://172.24.145.13/tcg-qrc/prj/prj-e.asp
NAME:USB to Sirial Driver program.

STEP 1

Set-up for USB Serial Driver
(Refer to "Installation Process and advice.doc" file.)

STEP 2

Call the adjustment process mode, and select the sub-group "SPECIAL" and the adjustment item "USB-MODE". Change the USB MODE value from 0 to 1.
(With this change, input of a 232C command becomes possible.)

STEP 3

Please connect the USB cable between the PC and the projector.

STEP 4

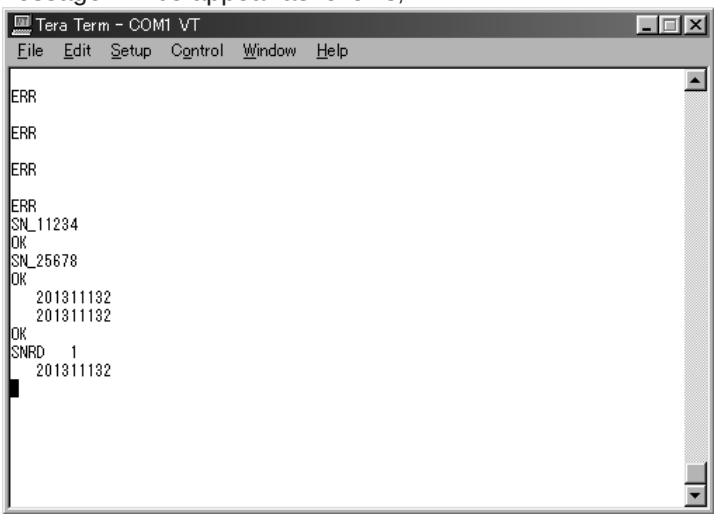
Please execute the program "TeraTerm".
(configuration file is to use attached Teraterm.ini.)

STEP 5

You write it by using the attached macro-file (serial_write.ttl).
A serial number is described in this macro-file. Enter this number.

STEP 6

Message will be appear as follows,



STEP 7

Please finish TeraTerm.

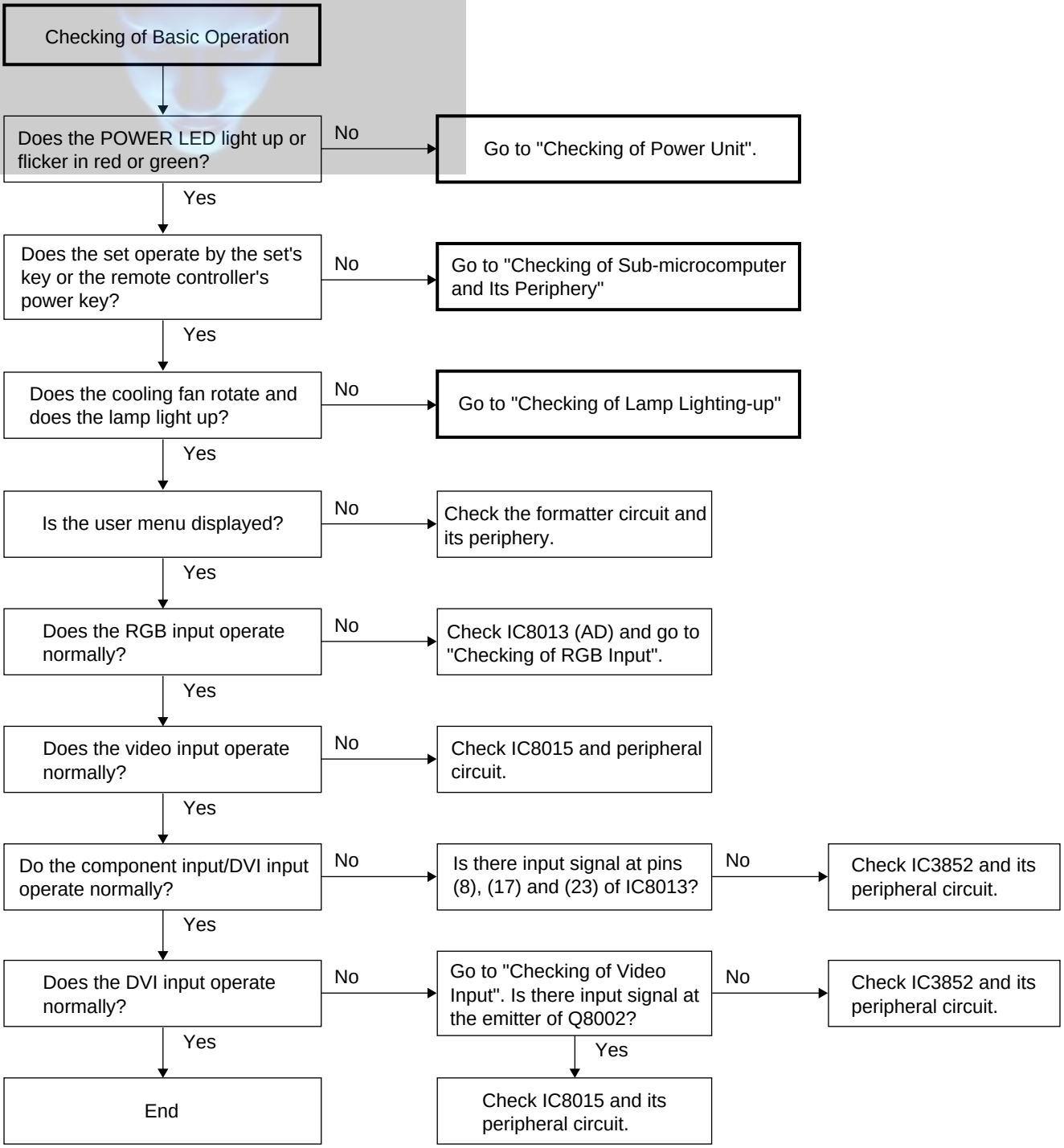
STEP 8

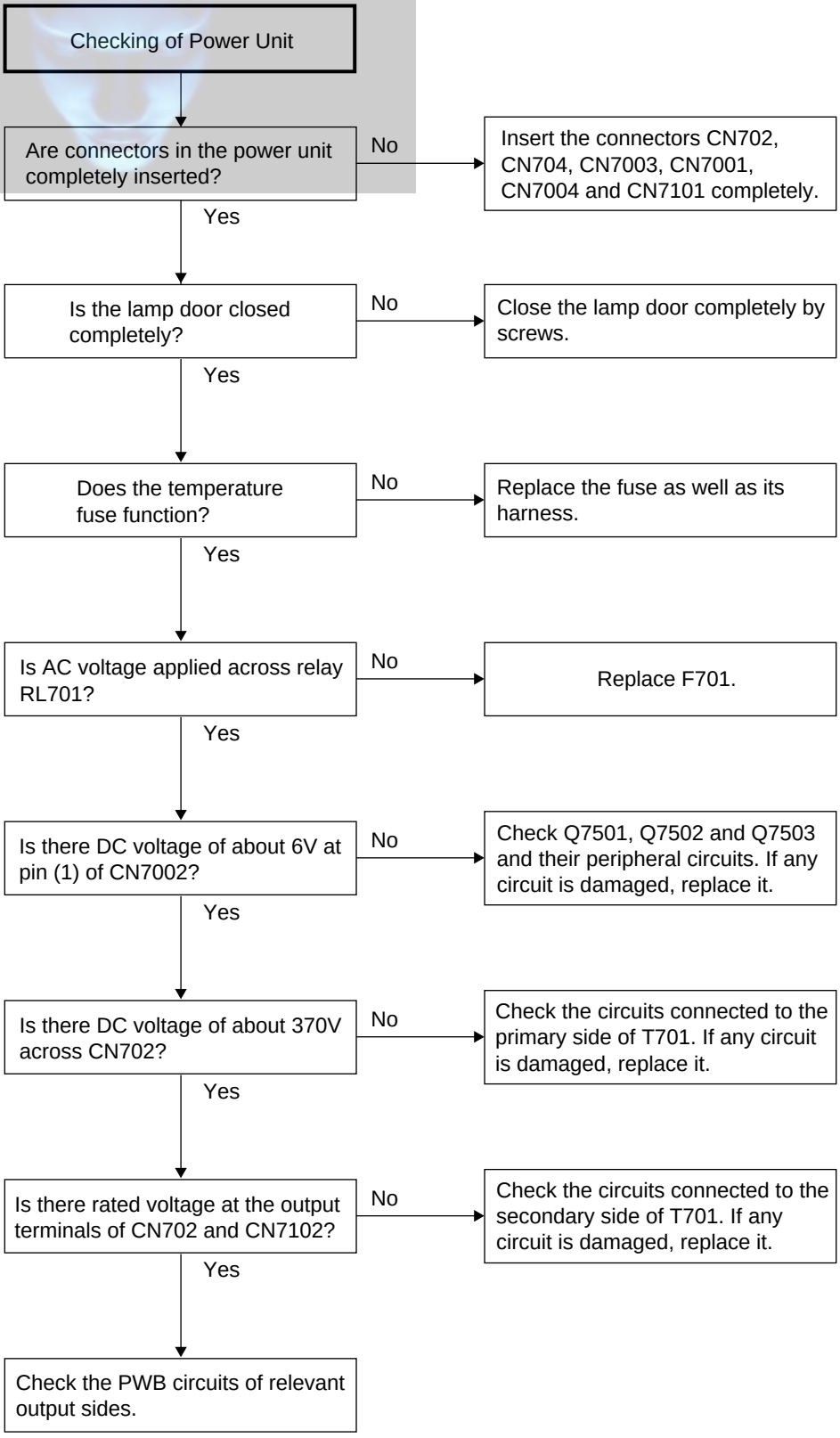
Please change the value from 1 to 0 for USB MODE in Special (Factory mode).
(For this change, input of a 232C command becomes invalid.)

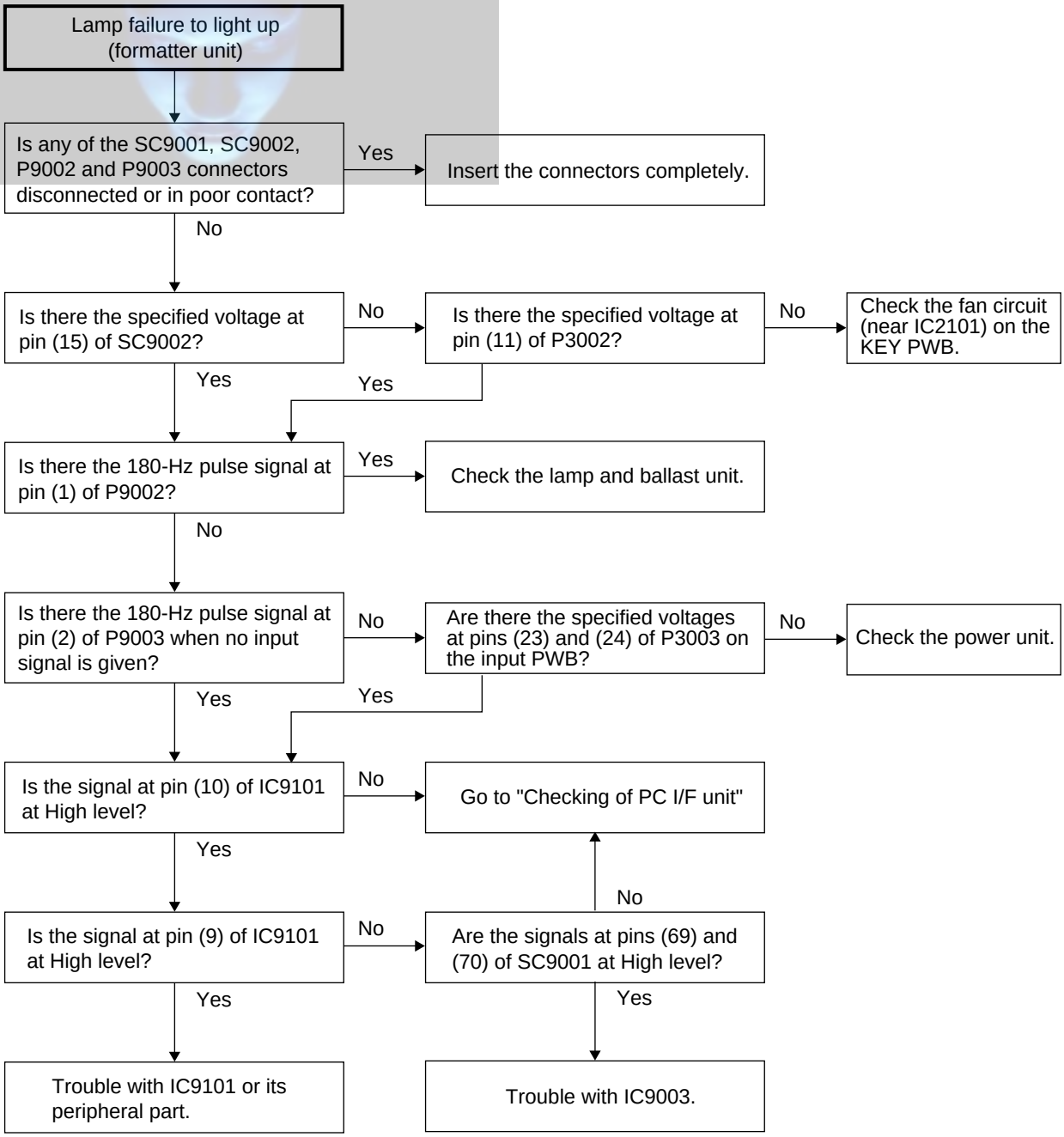
<Attention >

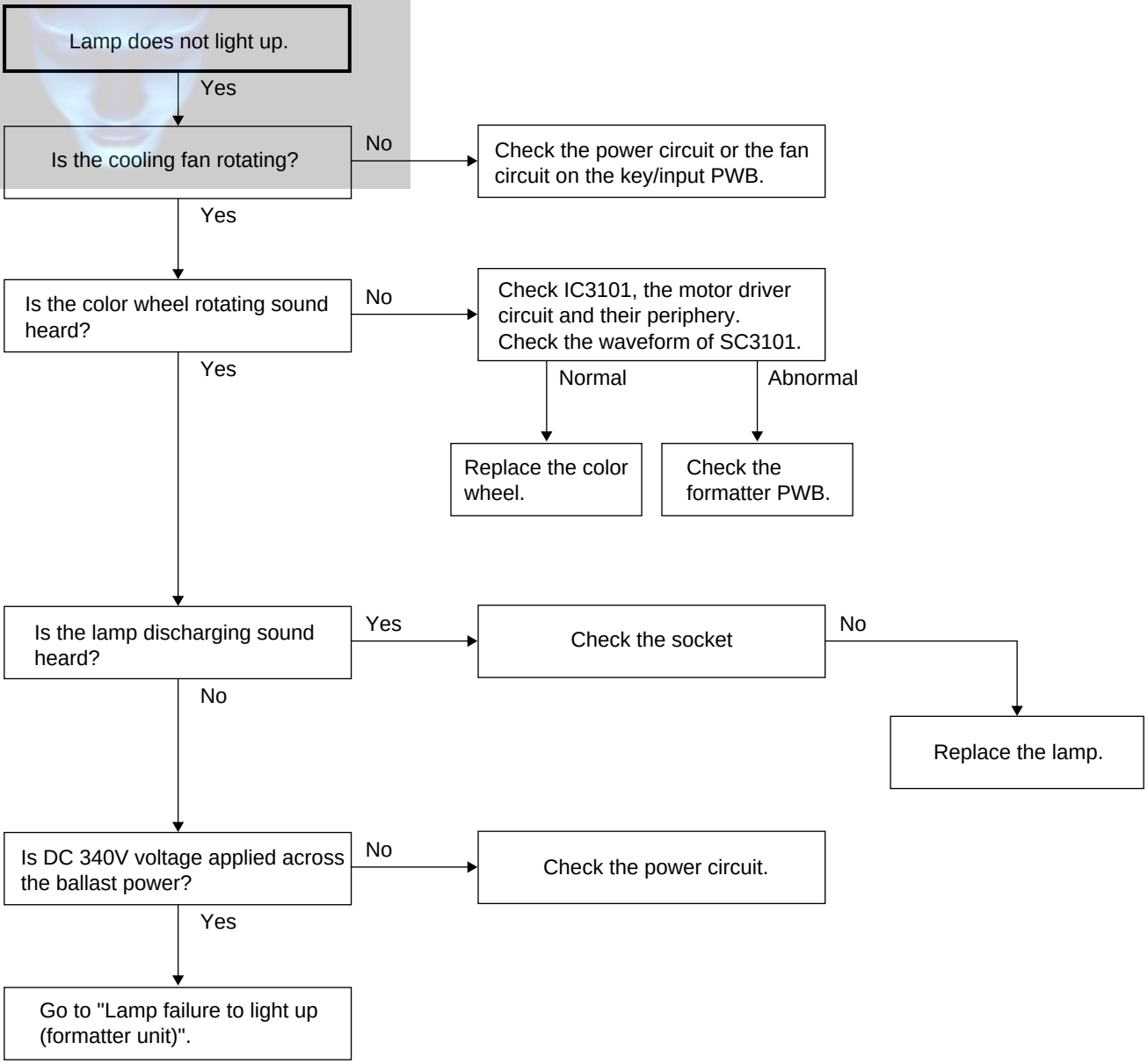
After the installation for USB to 232C driver, select the 232C with SW2002 on the KEY unit.
Connect the USB cable, and change COM2 for teraterm(setup-serial port) then push "Enter" key and confirm "ERR" message comes back.
If "ERR" comes back setting is correct. In case of "ERR" does not come back, COM2 is incorrect.
Please try COM3, COM4 by turn, and find correct COM port.

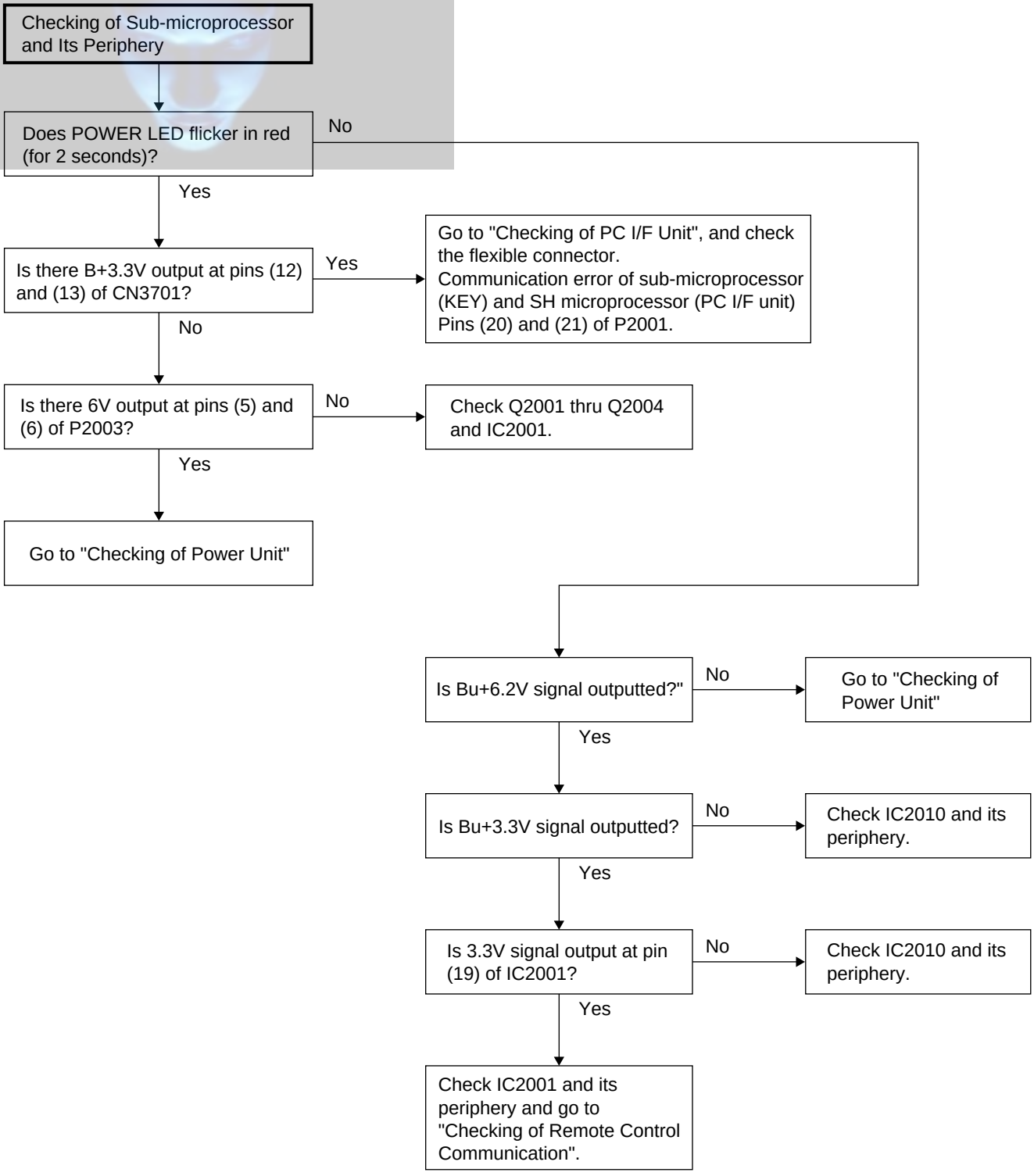
TROUBLE SHOOTING TABLE

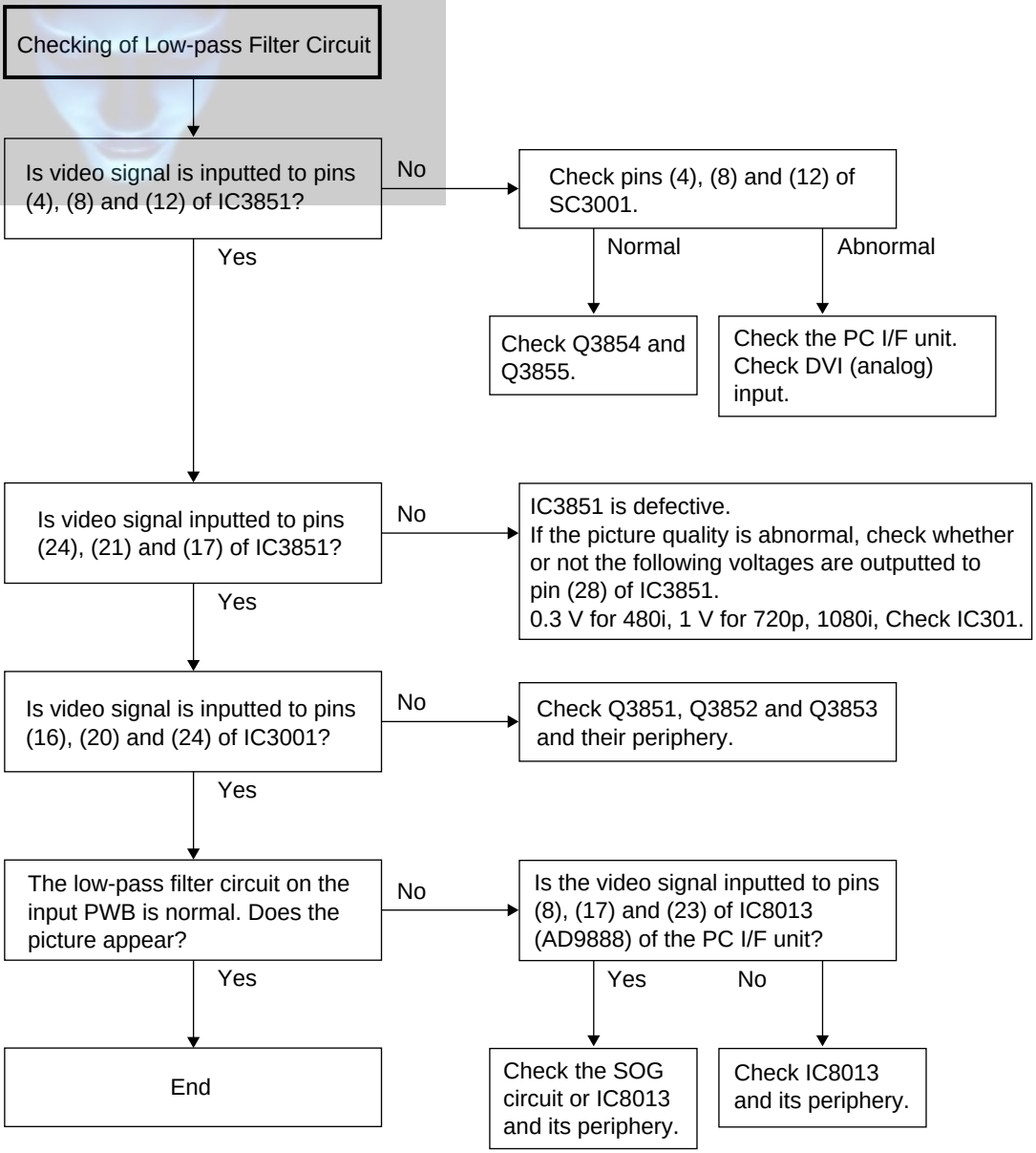


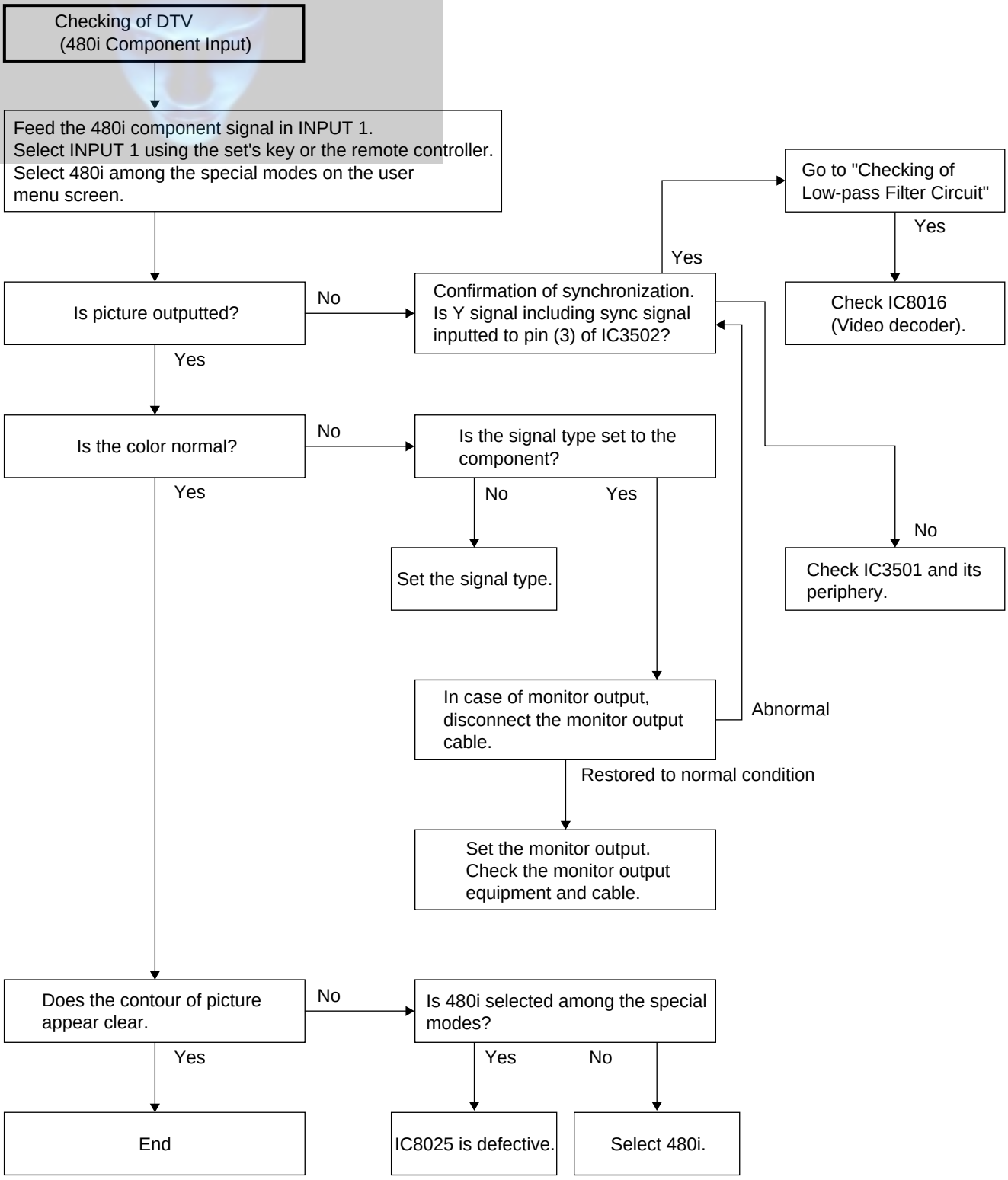

Checking of Power Unit
Are connectors in the power unit completely inserted?
No
Insert the connectors CN702, CN704, CN7003, CN7001, CN7004 and CN7101 completely.
Yes
Is the lamp door closed completely?
No
Close the lamp door completely by screws.
Yes
Does the temperature fuse function?
No
Replace the fuse as well as its harness.
Yes
Is AC voltage applied across relay RL701?
No
Replace F701.
Yes
Is there DC voltage of about 6V at pin (1) of CN7002?
No
Check Q7501, Q7502 and Q7503 and their peripheral circuits. If any circuit is damaged, replace it.
Yes
Is there DC voltage of about 370V across CN702?
No
Check the circuits connected to the primary side of T701. If any circuit is damaged, replace it.
Yes
Is there rated voltage at the output terminals of CN702 and CN7102?
No
Check the circuits connected to the secondary side of T701. If any circuit is damaged, replace it.
Yes
Check the PWB circuits of relevant output sides.

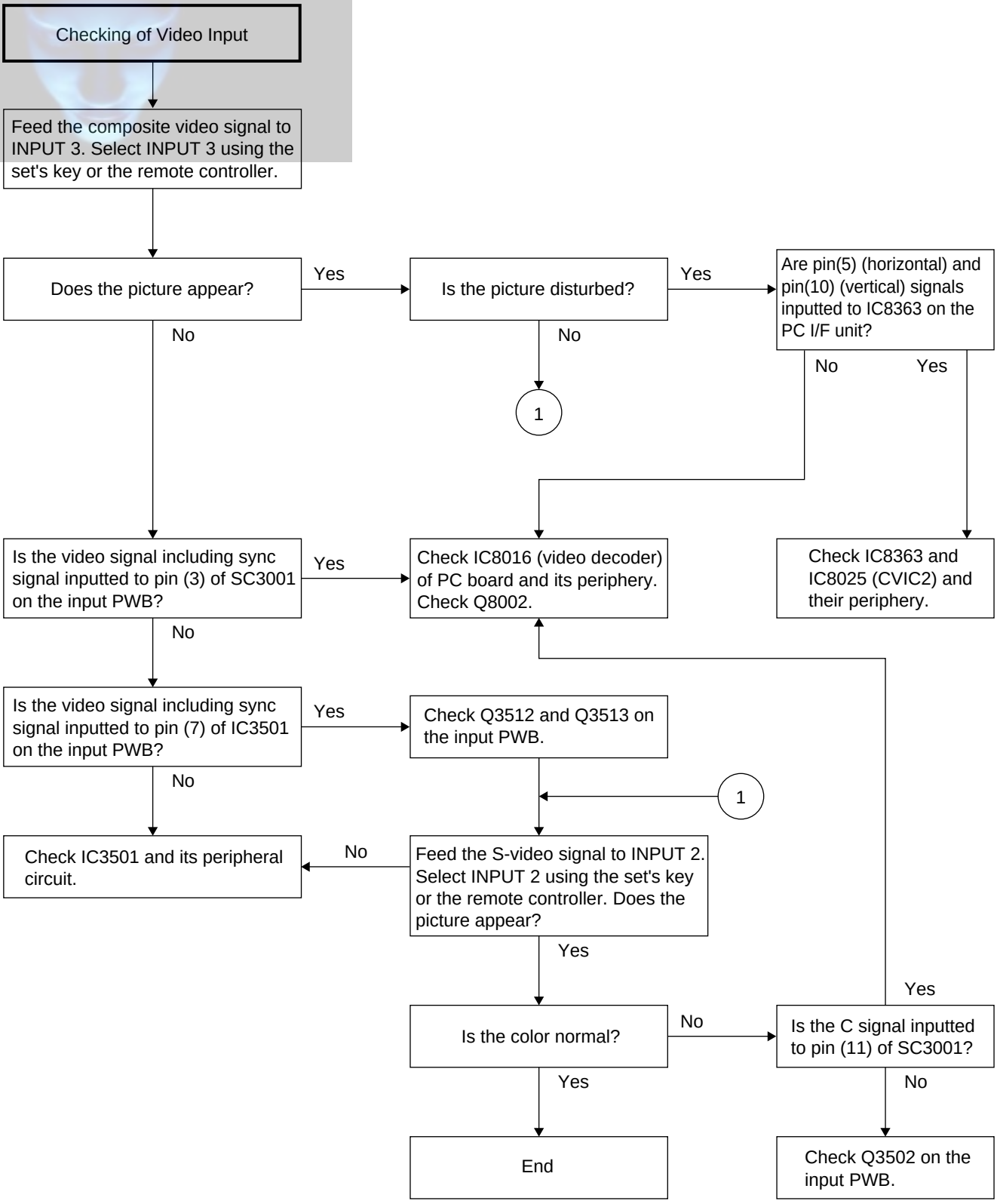

Lamp failure to light up (formatter unit)
Is any of the SC9001, SC9002, P9002 and P9003 connectors disconnected or in poor contact?
Yes
Insert the connectors completely.
No
Is there the specified voltage at pin (15) of SC9002?
No
Is there the specified voltage at pin (11) of P3002?
No
Check the fan circuit (near IC2101) on the KEY PWB.
Yes
Yes
Is there the 180-Hz pulse signal at pin (1) of P9002?
Yes
Check the lamp and ballast unit.
No
Is there the 180-Hz pulse signal at pin (2) of P9003 when no input signal is given?
No
Are there the specified voltages at pins (23) and (24) of P3003 on the input PWB?
No
Check the power unit.
Yes
Yes
Is the signal at pin (10) of IC9101 at High level?
No
Go to "Checking of PC I/F unit"
Yes
No
Is the signal at pin (9) of IC9101 at High level?
No
Are the signals at pins (69) and (70) of SC9001 at High level?
Yes
Yes
Trouble with IC9101 or its peripheral part.
Trouble with IC9003.


Lamp does not light up.
Yes
Is the cooling fan rotating?
No
Check the power circuit or the fan circuit on the key/input PWB.
Yes
Is the color wheel rotating sound heard?
No
Check IC3101, the motor driver circuit and their periphery.
Check the waveform of SC3101.
Yes
Normal
Abnormal
Replace the color wheel.
Check the formatter PWB.
Is the lamp discharging sound heard?
Yes
Check the socket
No
Replace the lamp.
No
Is DC 340V voltage applied across the ballast power?
No
Check the power circuit.
Yes
Go to "Lamp failure to light up (formatter unit)".

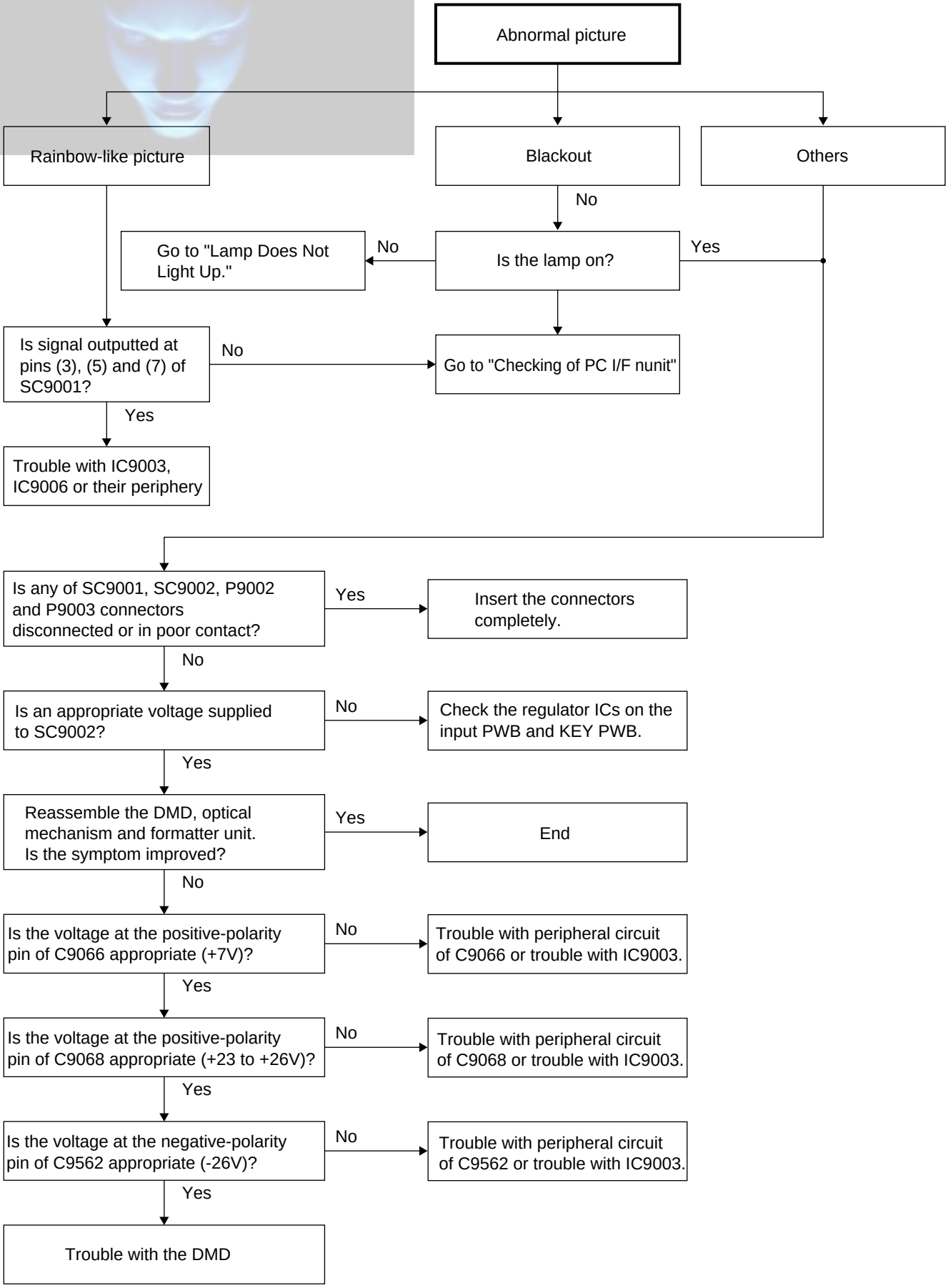

Checking of Sub-microprocessor and Its Periphery
Does POWER LED flicker in red (for 2 seconds)?
No
Yes
Is there B+3.3V output at pins (12) and (13) of CN3701?
Yes
Go to "Checking of PC I/F Unit", and check the flexible connector.
Communication error of sub-microprocessor (KEY) and SH microprocessor (PC I/F unit)
Pins (20) and (21) of P2001.
No
Is there 6V output at pins (5) and (6) of P2003?
No
Check Q2001 thru Q2004 and IC2001.
Yes
Go to "Checking of Power Unit"
Is Bu+6.2V signal outputted?"
No
Go to "Checking of Power Unit"
Yes
Is Bu+3.3V signal outputted?
No
Check IC2010 and its periphery.
Yes
Is 3.3V signal output at pin (19) of IC2001?
No
Check IC2010 and its periphery.
Yes
Check IC2001 and its periphery and go to "Checking of Remote Control Communication".


Checking of Low-pass Filter Circuit
Is video signal is inputted to pins (4), (8) and (12) of IC3851?
No
Check pins (4), (8) and (12) of SC3001.
Normal
Abnormal
Check Q3854 and Q3855.
Check the PC I/F unit. Check DVI (analog) input.
Yes
Is video signal inputted to pins (24), (21) and (17) of IC3851?
No
IC3851 is defective.
If the picture quality is abnormal, check whether or not the following voltages are outputted to pin (28) of IC3851.
0.3 V for 480i, 1 V for 720p, 1080i, Check IC301.
Yes
Is video signal is inputted to pins (16), (20) and (24) of IC3001?
No
Check Q3851, Q3852 and Q3853 and their periphery.
Yes
The low-pass filter circuit on the input PWB is normal. Does the picture appear?
No
Is the video signal inputted to pins (8), (17) and (23) of IC8013 (AD9888) of the PC I/F unit?
Yes
Yes
No
End
Check the SOG circuit or IC8013 and its periphery.
Check IC8013 and its periphery.

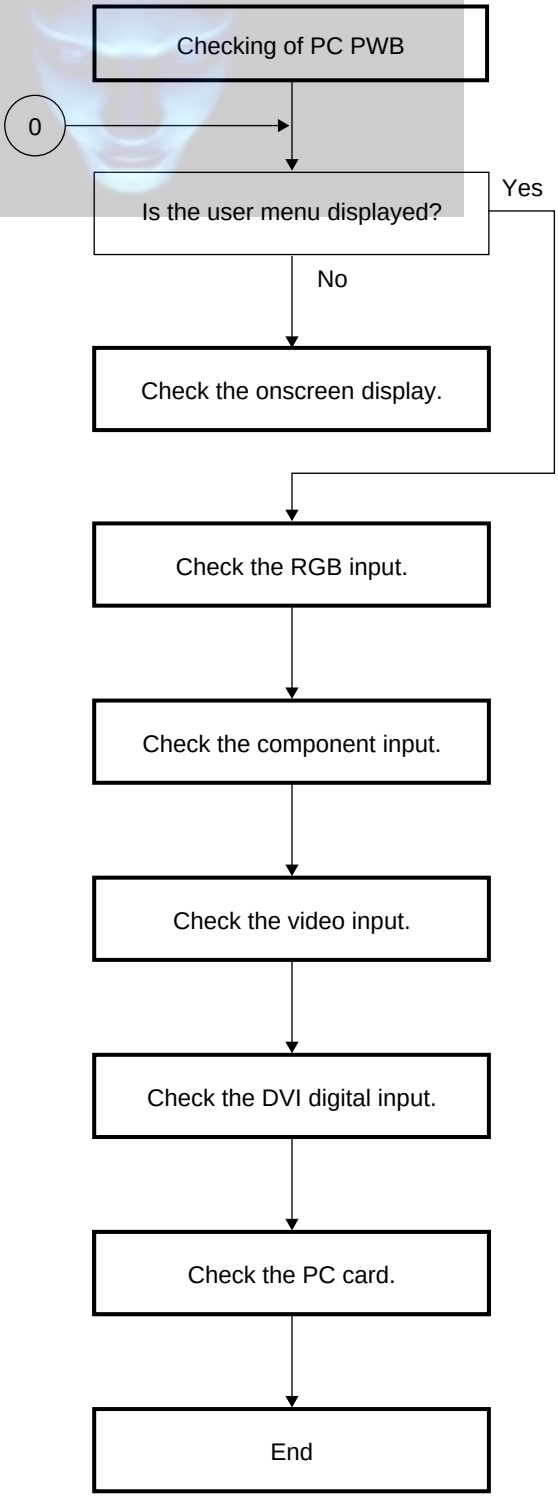

Checking of DTV
(480i Component Input)
Feed the 480i component signal in INPUT 1.
Select INPUT 1 using the set's key or the remote controller.
Select 480i among the special modes on the user menu screen.
Is picture outputted?
No
Yes
Confirmation of synchronization.
Is Y signal including sync signal inputted to pin (3) of IC3502?
Yes
Go to "Checking of Low-pass Filter Circuit"
Yes
Check IC8016
(Video decoder).
No
Is the color normal?
No
Yes
Is the signal type set to the component?
No
Yes
Set the signal type.
No
Check IC3501 and its periphery.
In case of monitor output, disconnect the monitor output cable.
Abnormal
Restored to normal condition
Set the monitor output.
Check the monitor output equipment and cable.
Does the contour of picture appear clear.
No
Yes
Is 480i selected among the special modes?
Yes
No
End
IC8025 is defective.
Select 480i.


Checking of Video Input
Feed the composite video signal to INPUT 3. Select INPUT 3 using the set's key or the remote controller.
Does the picture appear?
Yes
No
Is the picture disturbed?
Yes
No
Are pin(5) (horizontal) and pin(10) (vertical) signals inputted to IC8363 on the PC I/F unit?
No
Yes
1
Is the video signal including sync signal inputted to pin (3) of SC3001 on the input PWB?
Yes
No
Check IC8016 (video decoder) of PC board and its periphery. Check Q8002.
Check IC8363 and IC8025 (CVIC2) and their periphery.
Is the video signal including sync signal inputted to pin (7) of IC3501 on the input PWB?
Yes
No
Check Q3512 and Q3513 on the input PWB.
1
Check IC3501 and its peripheral circuit.
No
Feed the S-video signal to INPUT 2. Select INPUT 2 using the set's key or the remote controller. Does the picture appear?
Yes
Is the color normal?
No
Yes
Is the C signal inputted to pin (11) of SC3001?
Yes
No
End
Check Q3502 on the input PWB.

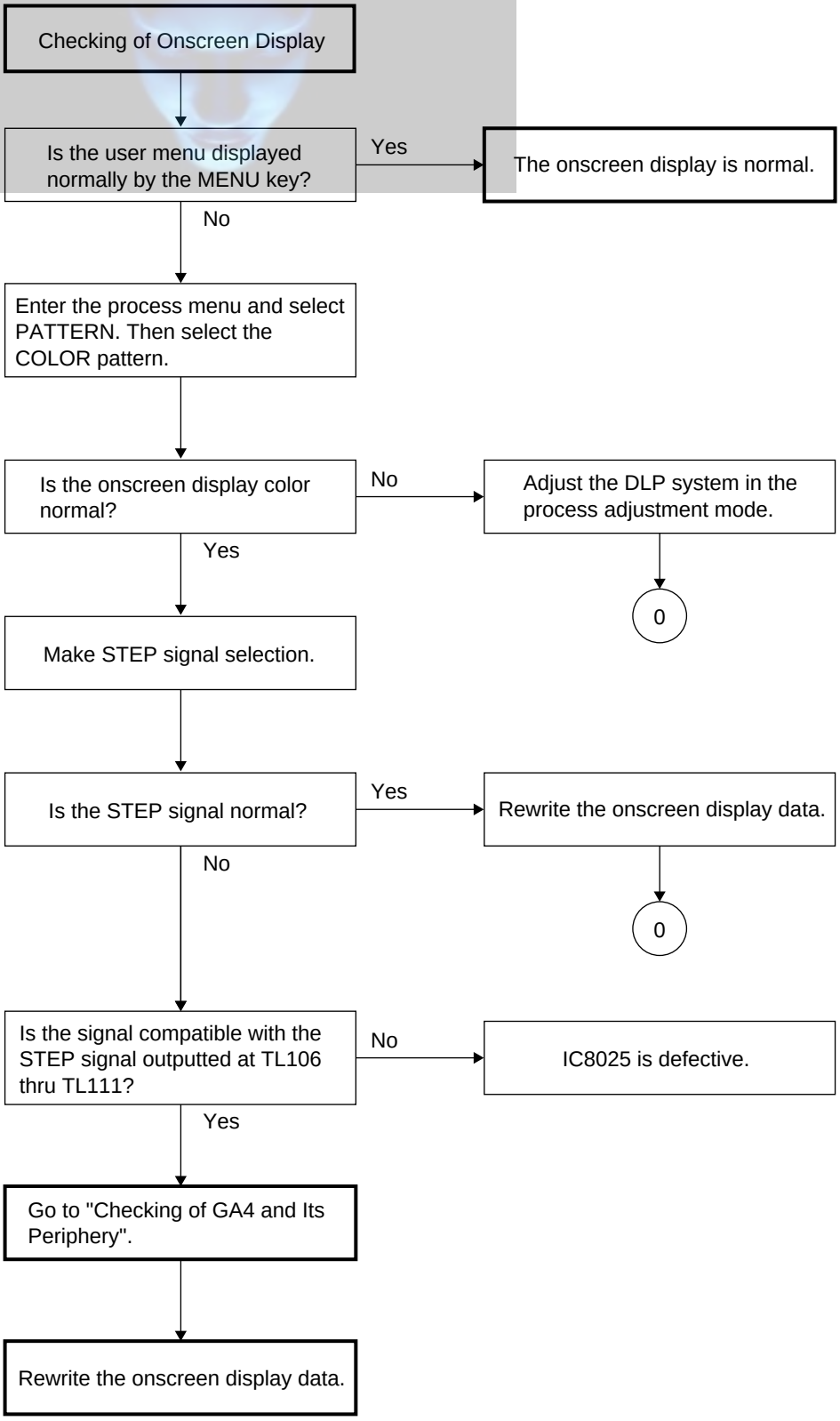
- FORMATTER Unit



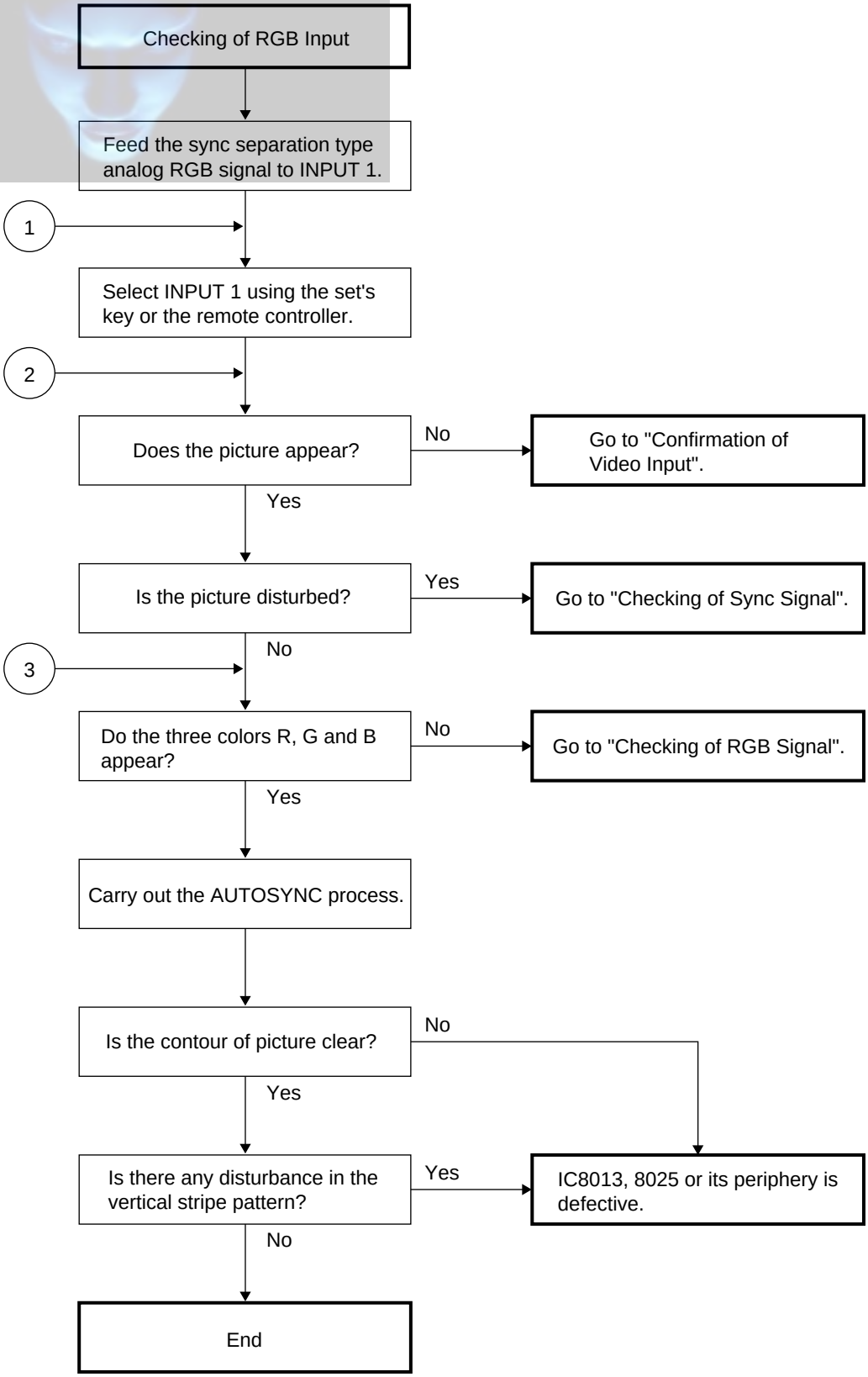
- PC I/F Unit-1/12



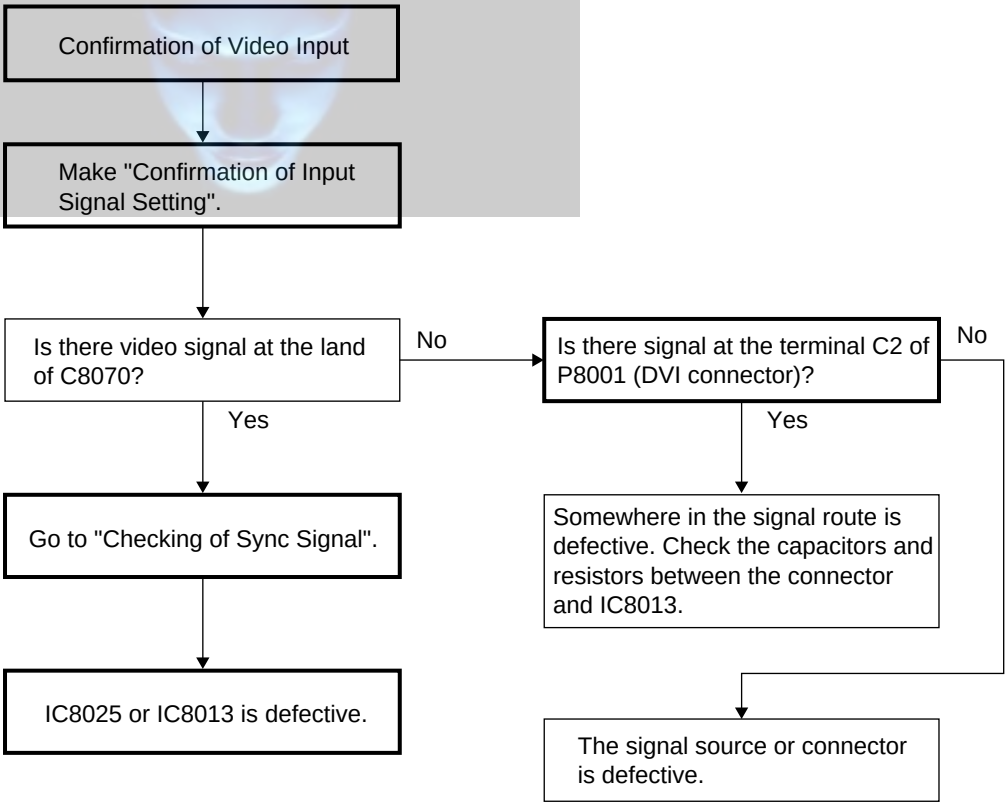
- PC I/F Unit-2/12

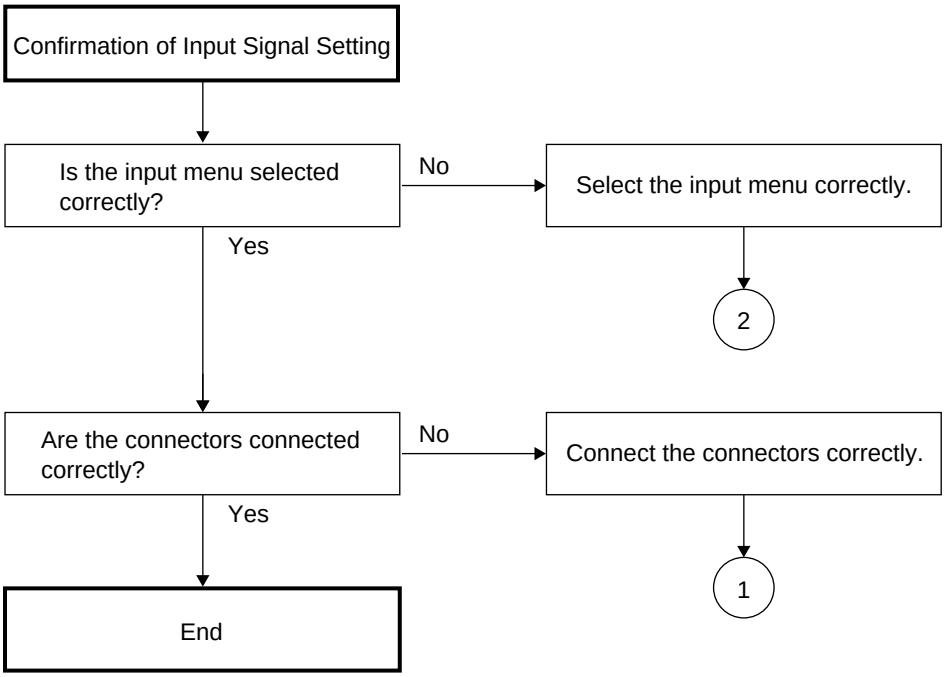


- PC I/F Unit-3/12

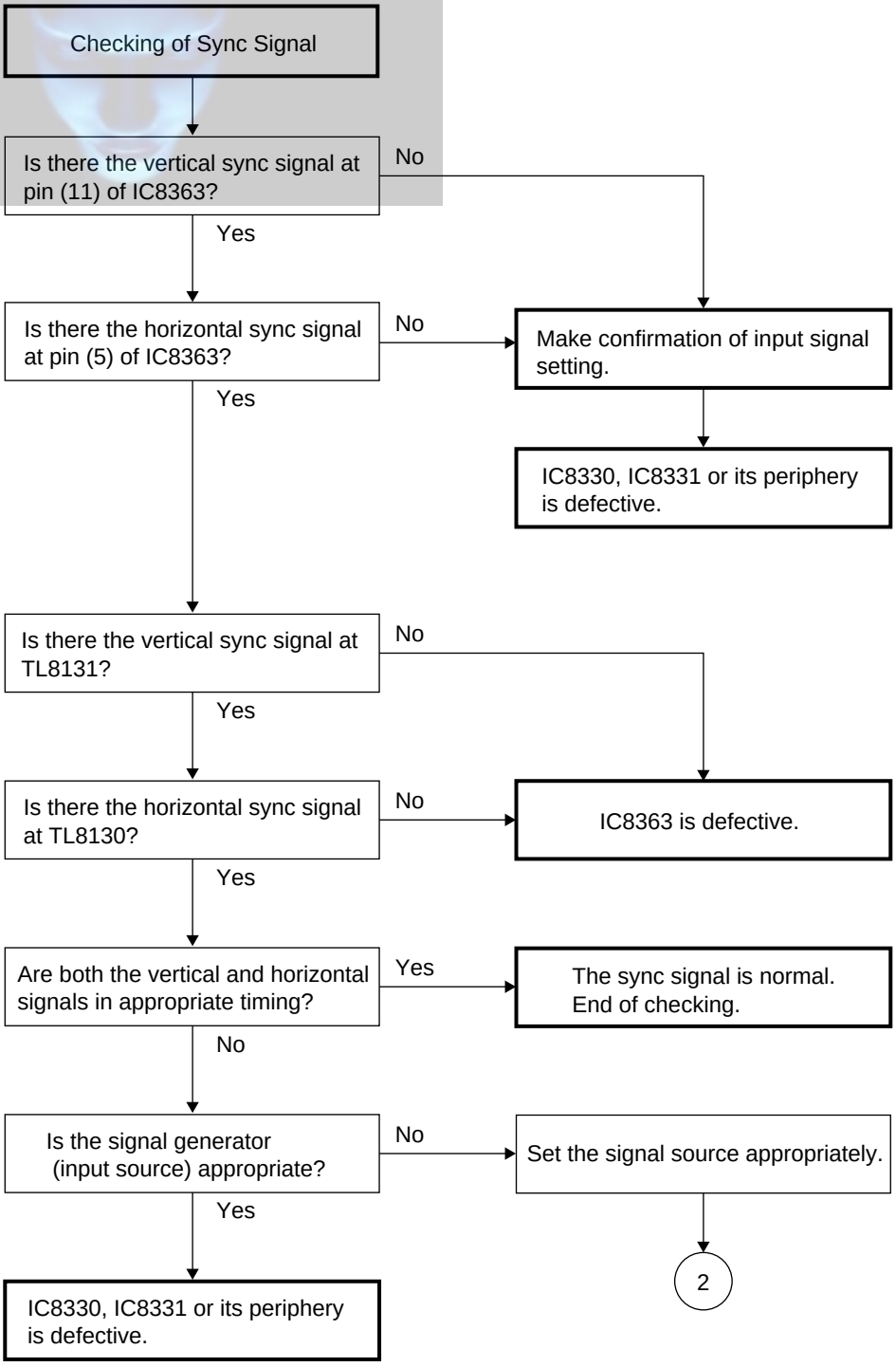


- PC I/F Unit-4/12

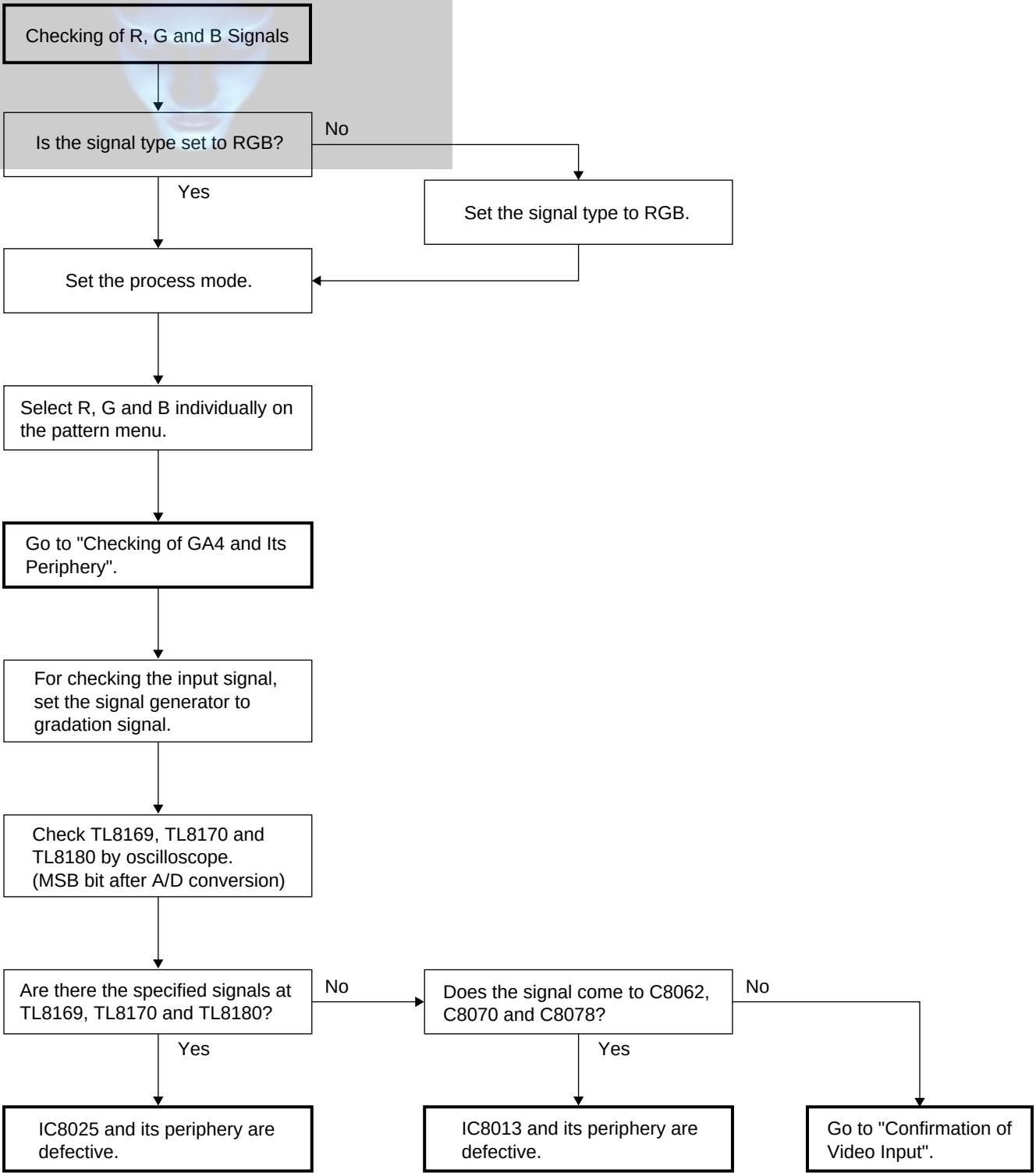




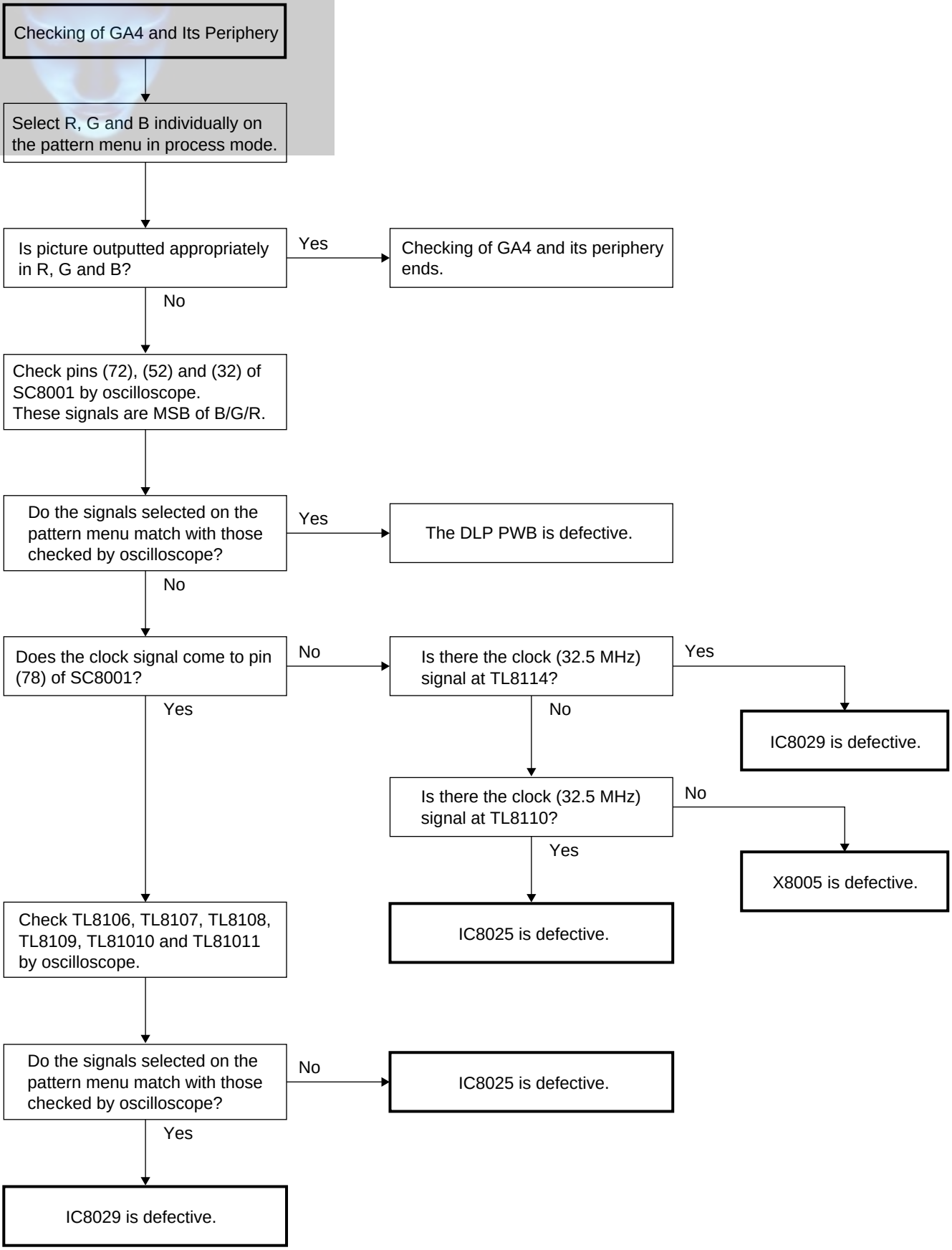
- PC I/F Unit-5/12



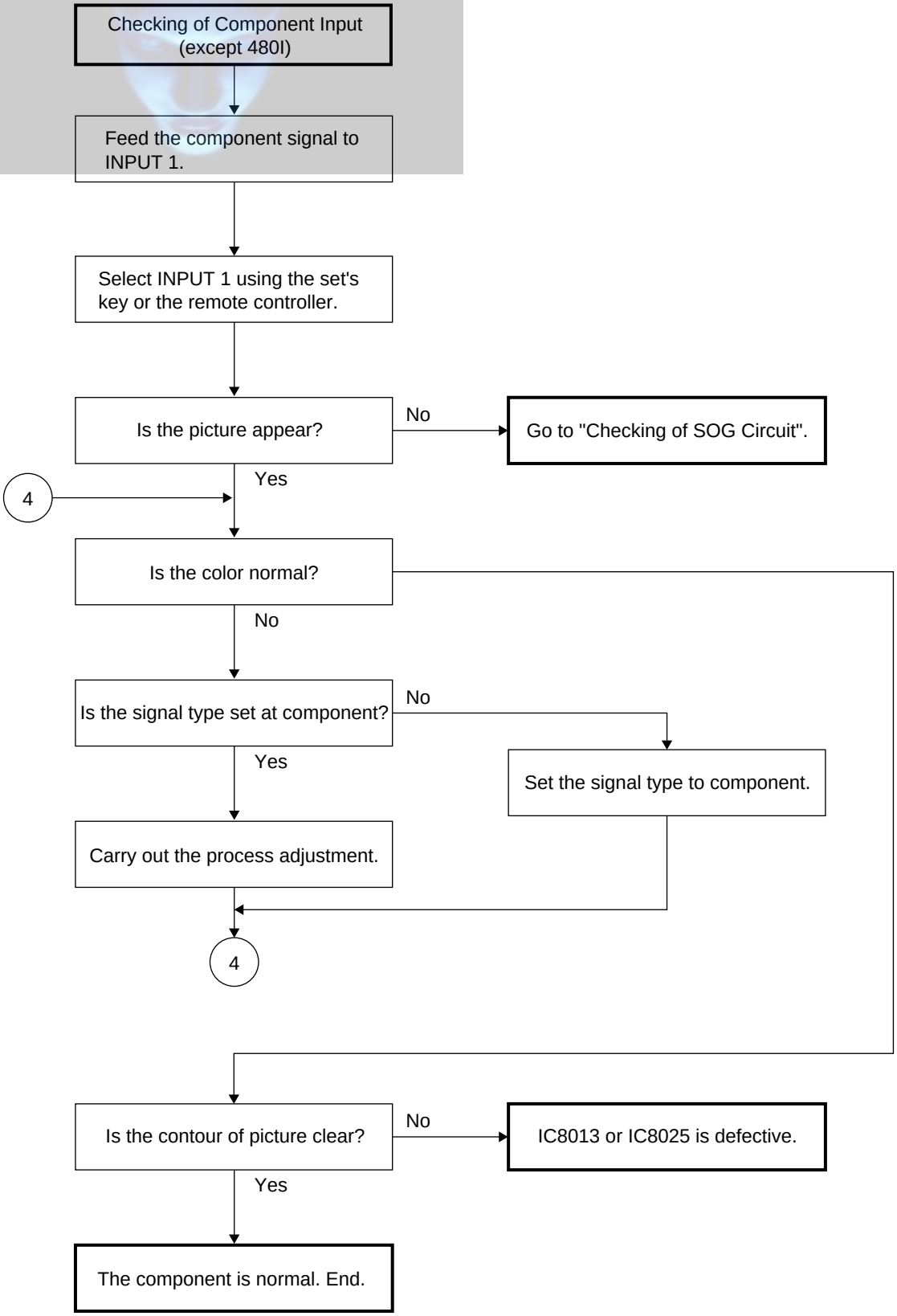
- PC I/F Unit-6/12



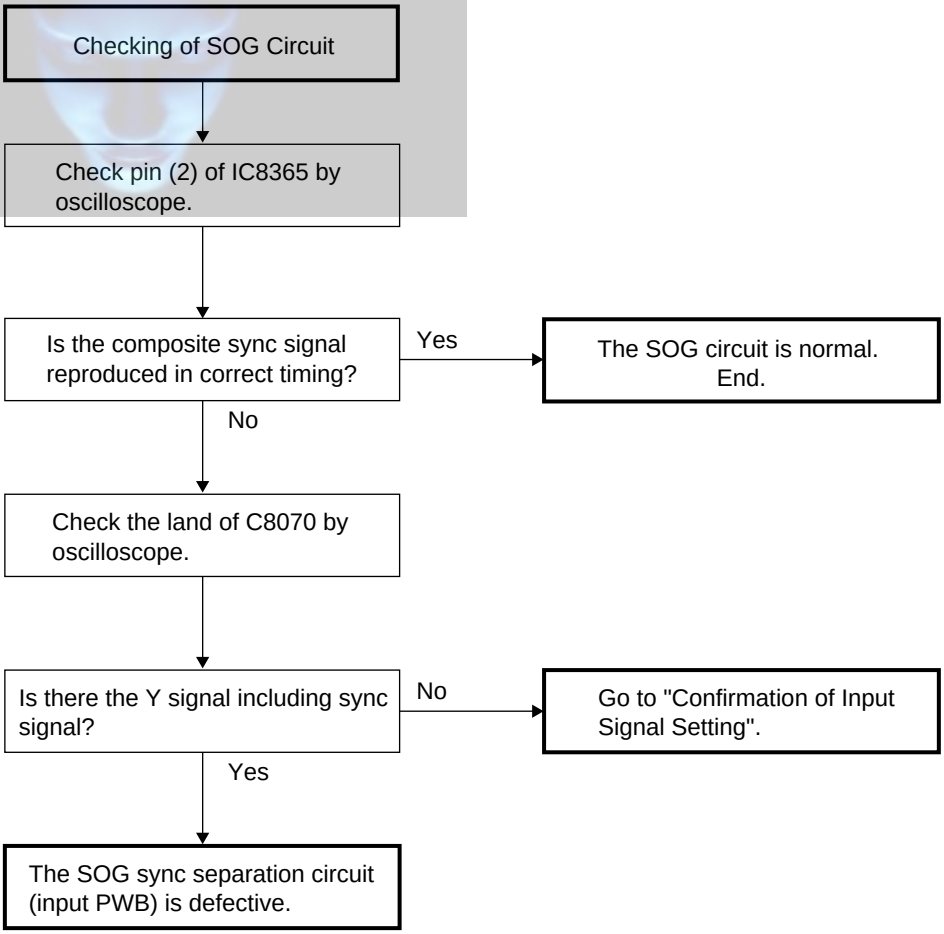
- PC I/F Unit-7/12



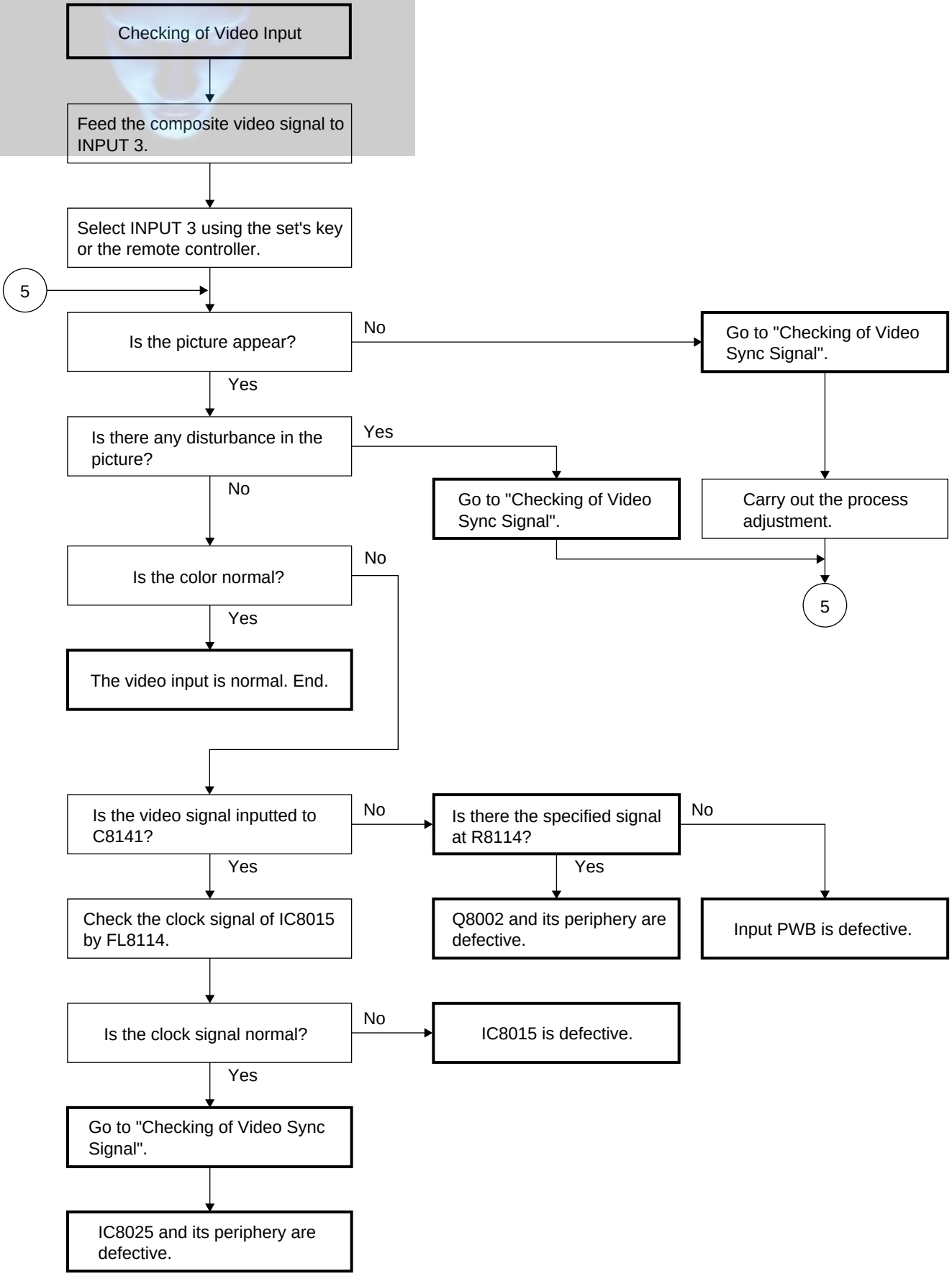
- PC I/F Unit-8/12



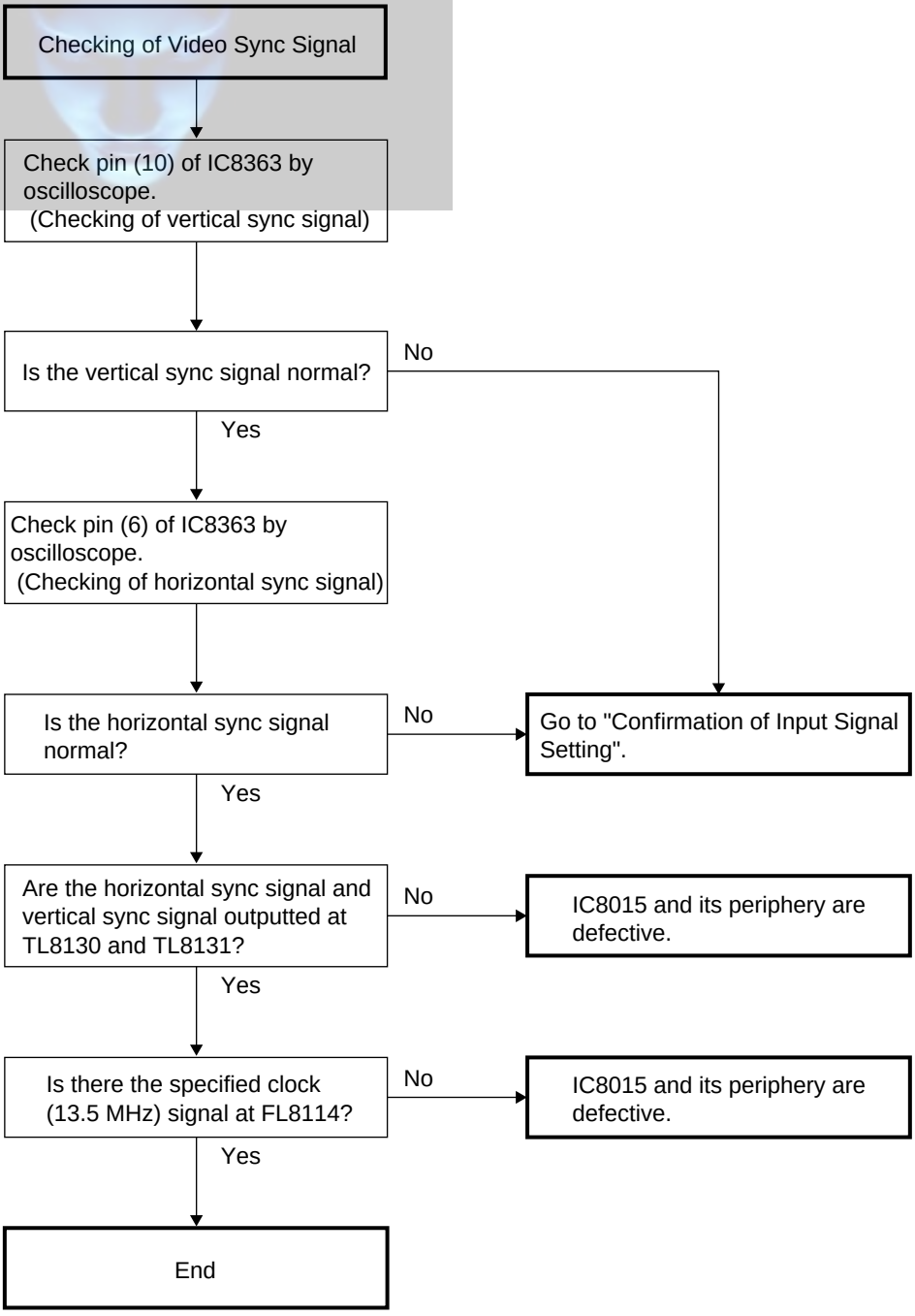
- PC I/F Unit-9/12



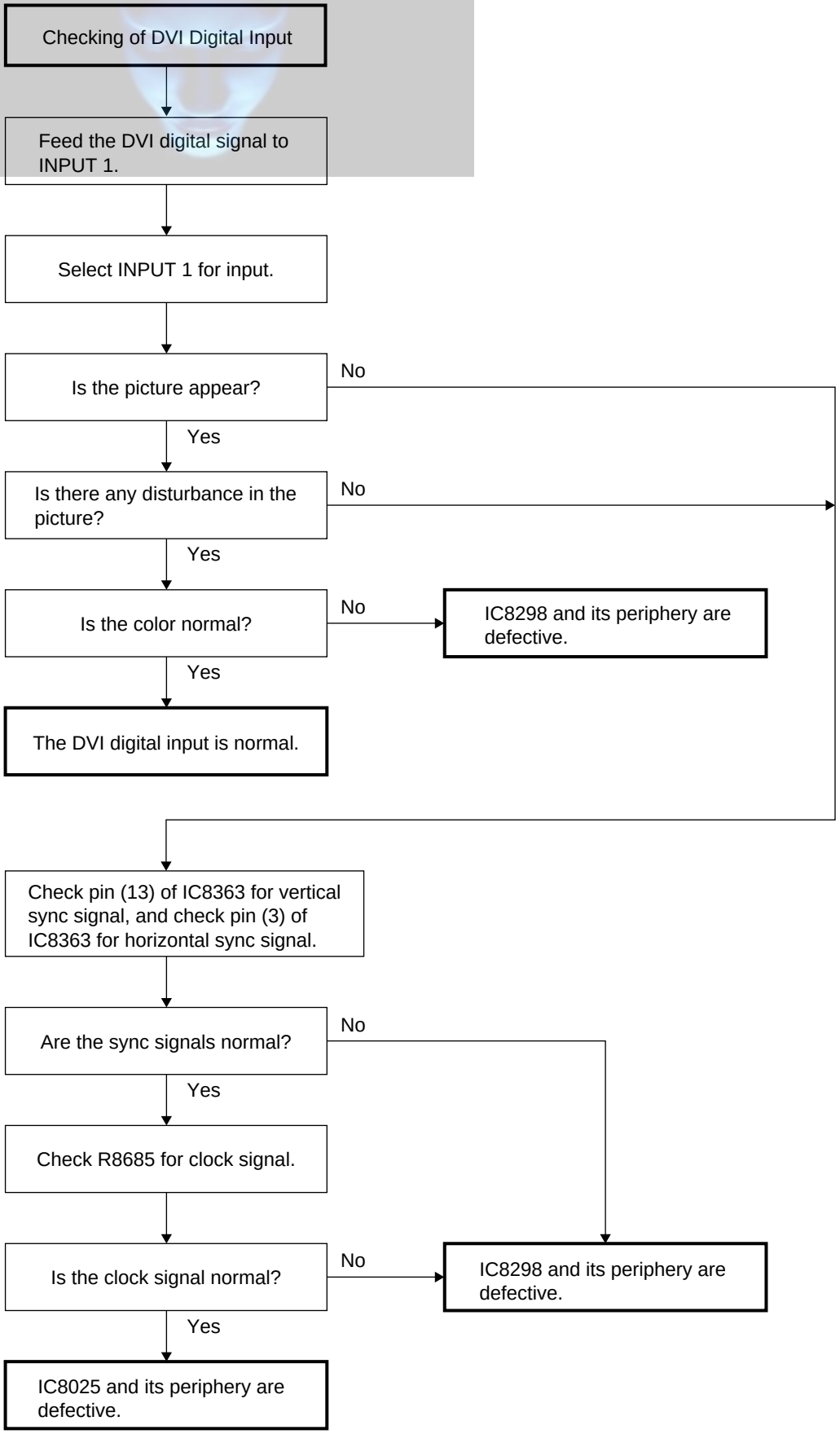
- PC I/F Unit-10/12



- PC I/F Unit-11/12



- PC I/F Unit-12/12



Technische Daten

Produkttyp	Digitaler Multimedia-Projektor
Modell	PG-M20X/PG-M20S
Videosystem	NTSC 3.58/NTSC 4.43/PAL/PAL-M/PAL-N/PAL 60/SECAM/ DTV480I/DTV480P/DTV720P/DTV1080I
Wiedergabeverfahren	Single Chip Digital Micromirror Device™ (DMD™) von Texas Instruments
DMD-Panel	Panel-Größe: 0,7" (17,8 mm), 1 Chip XGA DMD(PG-M20X)/ 0.55"(140.0mm), 1 chip SVGA DMD(PG-M20S) Anzahl der Bildpunkte: 786.432 Bildpunkte (1.024 [H] × 768 [V])(PG-M20X) 480.000 Bildpunkte (800 [H] × 600 [V])(PG-M20S)
Objektiv	1–1.2 × Zoom-Objektiv, F1,75–2,04, f = 28,0–33,5 mm
Projektionslampe	Hochleistungslampe (HID-Lampe), DC 210 W
Komponenten-Eingangssignale	29-pol. Anschluss
(INPUT 1)	DVI-Eingangssignal: Digital 250–1.000 mV 50 Ω Analog 0,7 Vs-s 75 Ω Y: 1,0 Vs-s, negatives Sync., 75 Ω terminiert P_B: 0,7 Vs-s, 75 Ω terminiert P_R: 0,7 Vs-s, 75 Ω terminiert
Horizontale Auflösung	700 Fernsehzeilen (DTV720P)(PG-M20X)/500 Fernsehzeilen (S-Video[NTSC3.58])(PG-M20S)
Computer-RGB-Eingangssignal	29-pol. Anshluss
(INPUT 1)	RGB getrennt/Sync auf Grün-Typ analoger Eingang: 0-0,7 Vs-s, positiv, 75 Ω terminiert HORIZONTALES SYNC.-SIGNAL: TTL-Pegel (positiv/negativ) VERTIKALES SYNC.-SIGNAL: Wie oben
S-Videoeingangssignal	4-pol. Mini DIN-Anschluss
(INPUT 2)	Y (Luminanzsignal): 1,0 Vs-s, negatives Sync., 75 Ω terminiert C (Chrominanzsignal): Stoß 0,286 Vs-s, 75 Ω terminiert
Videoeingangssignal	RCA-Anschluss: VIDEO, gemischtes Video, 1,0 Vs-s, negatives Sync.,
(INPUT 3)	75 Ω terminiert
Pixeltakt	12-230 MHz(PG-M20X)/12-120MHz(PG-M20S)
Vertikale Frequenz	43-100 Hz
Horizontale Frequenz	15-126 kHz(PG-M20X)/15-102kHz(PG-M20S)
Audioeingangssignal	ø 3,5 mm Minibuchse: AUDIO, 0,5 Vrms, mehr als 47 kΩ (Stereo)
Audioausgang	2,0 W (Mono)
Lautsprechersystem	4 cm × 3 cm
Nennspannung	100-240 V Wechselstromspannung
Eingangsspannung	3,2 A
Nennfrequenz	50/60 Hz
Leistungsaufnahme	290 W
Stromverlust	<1.090 kWh
Betriebstemperatur	41°F bis 95°F (+5°C bis +35°C)
Lagertemperatur	–4°F bis 140°F (–20°C bis +60°C)
Gehäuse	Plastik
I/R-Trägerfrequenz	38 kHz
Abmessungen (ca.)	8 5/8" × 3" × 11 15/16" (219 (B) × 76 (H) × 303 (T) mm) (nur Hauptgerät) 8 3/4" × 3 1/4" × 12 1/2" (223 (B) × 83 (H) × 318 (T) mm) (einschließlich Drehfüße und Projektionsteile)
Gewicht (ca.)	5,8 lbs. (2,6 kg)
Mitgeliefertes Zubehör	Fernbedienung, zwei R-03-Batterien, Netzkabel für USA, Kanada usw. (6', 1,8 m), Netzkabel für Europa, ausgenommen Großbritannien (6', 1,8 m), Netzkabel für Großbritannien, Hongkong und Singapur (6', 1,8 m), Netzkabel für Australien, Neuseeland und Ozeanien (6', 1,8 m), DVI an 15-Pin D-Sub-Kabel (6', 1,8 m), USB-Kabel (6', 1,8 m), Tragetasche, Objektivkappe (befestigt), Riemen für Objektivkappe, Anschlussabdeckung (befestigt), CD-ROM, Bedienungsanleitung, Kurzanleitung
Ersatzteile	Lampeneinheit (Lampen-/Gehäusemodul) (BQC-PGM20X//1) Fernbedienung (RRMCGA013WJSA), zwei R-03-Batterien (“AAA”, UM/SUM-4, HP-16 oder ähnlich), Netzkabel für USA, Kanada usw. (QACCDA007WJPZ), Netzkabel für Europa, ausgenommen Großbritannien (QACCV4002CEZZ), Netzkabel für Großbritannien, Hongkong und Singapur (QACCB5024CENA[PG-M20X]/QACCBA012 WJPZ[PG-M20S]), Netzkabel für Australien, Neuseeland und Ozeanien (QACCL3022CEZZ), DVI an 15-Pin D-Sub-Kabel (QCNWGA010WJZZ), USB-Kabel (QCNWG0001WJPZ), Tragetasche (GCASN0005CESA), Objektivkappe (CCAPHA001WJ01), Riemen für Objektivkappe (UBNDT0013CEZZ), Anschlussabdeckung (GCOVD0103CESA), CD-ROM (UDSKA0058CEN1 [PG-M20X]UDSKAA009WJZZ{PG-M20S}),Bedienungsanleitung (TINS-7609CEZZ[PG-M20X]/ TiNS-A209WJZZ[PG-M20S]),Kurzanleitung

Dieser Projektor von SHARP ist mit einem DMD-Panel ausgestattet. Diese neuartigen Panel enthalten 786.432 (PG-M20X)/480.000(PG-M20S) Bildpunkte.Bei allen technologisch fortschrittlichen, elektronischen Geräten, z. B. Großbild-Fernsehern, Videosystemen bzw. Videokameras, sind bestimmte Toleranzgrenzen für die Funktionen gegeben.

Dieses Gerät hat einige inaktive, innerhalb akzeptierter Toleranzgrenzen liegende Bildpunkte, die als leuchtende oder als nicht aktive Punkte auf der Bildwand wiedergegeben werden. Dies hat keinen Einfluss auf die Bildqualität oder die Lebensdauer des Gerätes.

Änderungen der technischen Daten ohne vorherige Ankündigung vorbehalten.

HINWEIS FÜR DAS WARTUNGSPERSONAL

ACHTUNG: UV-STRAHLUNG

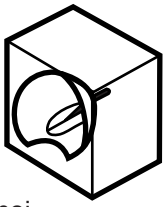
Die Lichtquelle im Projektor, eine Metall-Halogen-Lampe, gibt eine geringe UV-Strahlung ab.

DIREKTE BESTRAHLUNG AUF AUGEN UND HAUT MUSS VERMIEDEN WERDEN.

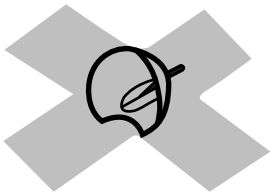
Zur Gewährleistung der Sicherheit muß folgendes beachtet werden:

1. Bei Arbeiten am Projektor bei eingeschalteter Lampe und abgenommenem oberen Gehäuse muß unbedingt eine Sonnenbrille getragen werden.

2. Die Lampe darf nicht außerhalb des Lampengehäuses eingeschaltet werden.



3. Betrieb für länger als 2 Stunden bei abgenommenem Gehäuse ist nicht zulässig.



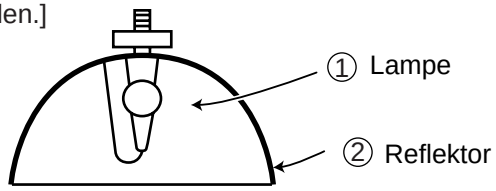
Zur Beachtung bei UV-Strahlung und Mitteldruck-Lampen

1. Vor dem Auswechseln der Lampe muß der Netzstecker gezogen werden.
2. Vor Durchführung von Wartungsarbeiten muß das Gerät eine Stunde abkühlen.
3. Nur mit dem gleichen Lampentyp ersetzen Typ BQC-PGM20X//1; Nennleistung 85 V/210 W.
4. Die Lampe gibt eine geringe UV-Strahlung ab, daher muß direkter Augenkontakt vermieden werden.
5. Die Mitteldruck-Lampe weist ein Explosionsrisiko auf. Daher müssen die nachstehenden Installationsanweisungen beachtet werden, und die Lampe muß vorsichtig behandelt werden.

■ Auswechseln der Lampe

Hinweis:

Da die Lampe während des Betriebs sehr heiß wird, sollte die Lampe erst ausgewechselt werden, nachdem das Gerät mindestens eine Stunde ausgeschaltet war, damit die Lampe ausreichend abkühlen kann.
Beim Installieren der neuen Lampe muß darauf geachtet werden, die Lampe selbst (Glaskolben) nicht zu berühren. Vielmehr muß die Lampe am Reflektor ② gehalten werden.
[Es darf nur ein Original-Ersatzteil verwendet werden.]



GEFAHR! — Niemals die Spannungsversorgung einschalten, ohne daß eine Lampe vorhanden ist, um elektrische Schläge und Schäden am Gerät zu vermeiden, da der Stabilisator anfangs hohe Spannungen erzeugt.

Da eine geringe UV-Strahlung aus einer Öffnung zwischen der Schachtabdeckung und dem Lampengehäuse austritt, sollte der Objektivdeckel bei Wartungsarbeiten auf die Öffnung gesetzt werden, um die Bestrahlung von Augen und Haut zu vermeiden (Abb. 1).

Hinweis: Besorgen Sie sich einen Objektivdeckel, bevor Sie Arbeiten an einem Modelle PG-M20X/PG-M20S durchführen, das keinen Objektivdeckel aufweist.

Abbildung 1.

Vorsichtsmaßregeln für bleifreien Lötzinn

1 Verwendung von bleifreiem Lötzinn

Die "Eingangs-und Schlüssel-Platine" dieses Modells verwendet bleifreien Lötzinn. Das LF-Symbol zeigt bleifreien Lötzinn an und ist an den Platinen und Wartungsanleitungen angebracht. Der Buchstabe nach LF zeigt den Typ des bleifreien Lötzinns an.

Beispiel:

Zeigt bleifreien Lötzinn aus Zinn, Silber und Kupfer an.

2 Bei Reparatur der mit bleifreiem Lötzinn gelöteten Platine immer bleifreien Lötzinn verwenden. Reparatur mit herkömmlichem Lötzinn kann zu Schäden oder Unfällen aufgrund von Rissen führen.

Da der Schmelzpunkt bleifreien Lvtzinns (Sn-Ag-Cu) um 40°C höher als der von Bleidraht-Lötzinn ist, empfehlen wir die Verwendung einer speziellen Lötspitze. Wenn Fragen über den Beschaffung leitfreien Lötzinns oder spezieller Lötspitzen bestehen, wenden Sie sich an unsere Kundendienstvertretung in Ihrem Gebiet.

3 Löten

Da der Schmelzpunkt bleifreien Lötzinns (Sn-Ag-Cu) etwa 220°C beträgt, was um 40°C höher als der von bleihaltigem Lötzinn ist, und außerdem schlechte Löt-Benetzbarkeit aufweist, kann es erforderlich werden, die Lötspitze längere Zeit in Kontakt mit der Platine zu halten. Da die Lötlauge abfliessen kann oder der maximale Hitzewiderstand von Teilen überschritten werden kann, die Lötspitze sofort von der Platine nehmen, sobald eine gute Lötung erzielt ist. Bleifreier Lötzinn enth_lt mehr Zinn, und das Ende der Lötspitze kann leicht angegriffen werden. Immer sicherstellen, dass der Lötkolben nur bei Bedarf eingeschaltet wird.

Wenn ein anderer Typ von Lötzinn an der Lötspitze haften bleibt, verschmilzt er mit dem bleifreien Lötzinn. Die Lötspitze nach jeder Verwendung reinigen.

Wenn die Lötspitze bei der Verwendung geschwärzt wird, die Spitze mit Stahlwolle oder feinem Sandpapier abschmirgeln.

Immer beim Austausch von Teilen vorsichtig sein, und die Polaritätsanzeige auf der Platinenbeschriftung beachten.

Bleifreier Lötzinn zur Wartung

Teile-Nr.	★	Beschreibung		Code
ZHNDAi123250E	J	ϕ0.3mm	250g(1roll)	BL
ZHNDAi126500E	J	ϕ0.6mm	500g(1roll)	BK
ZHNDAi12801KE	J	ϕ1.0mm	1 Rolle	BM

Bedienelemente

Projektor (Vorder- und Draufsicht)

LAMP-Anzeige (Lampenaustausch)
Leuchtet normalerweise grün. Die Lampe austauschen, wenn die Anzeige rot leuchtet.

POWER-Anzeige (Netz)
Leuchtet rot, wenn sich der Projektor im Bereitschaftsbetrieb befindet. Wenn die Stromversorgung eingeschaltet ist, leuchtet diese Anzeige grün.

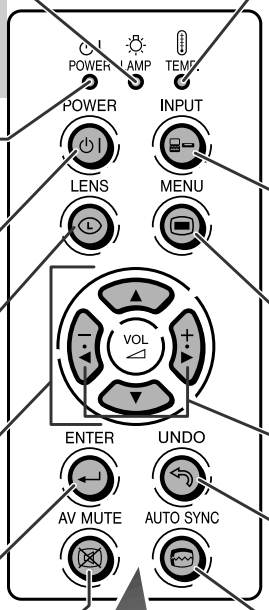
POWER-Taste
Schaltet die Stromversorgung ein oder aus.

LENS-Taste
Für das Einstellen der Trapezverzerrungs- oder Digitalen Verschiebungs-Einstellung.

Einstelltasten (▼ ▲ ◀ ▶)
Für die Wahl der Menüpunkte.

ENTER-Taste
Für die Einstellung der gewählten oder eingestellten Menüpunkte.

AV MUTE-Taste
Für das vorübergehende Ausschalten des Tons und des Bildes.



TEMP.-Anzeige (Temperaturwarn)
Leuchtet normalerweise grün. Wenn die interne Temperatur ansteigt, leuchtet diese Anzeige rot.

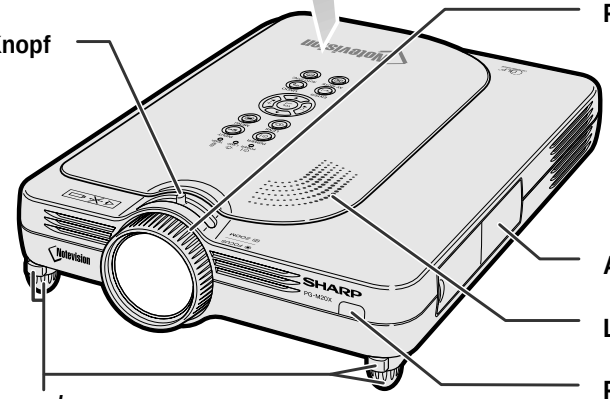
INPUT-Taste
Für das Umschalten zwischen Eingangsmodus 1, 2 und 3.

MENU-Taste
Für die Anzeige des Justierungs- und Einstellungsbildschirms.

VOL-Tasten
Für das Einstellen des Lautsprecher-Tonpegels.

UNDO-Taste
Für das Rückgängigmachen eines Bedienschrittes oder für die Rückkehr zu den Grundeinstellungen.

AUTO SYNC-Taste
Für das automatische Einstellen von Bildern, wenn ein Computer angeschlossen ist.



Zoom-Knopf

Fokusring

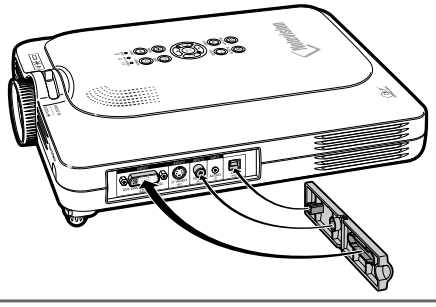
Anschlussabdeckung

Lautsprecher

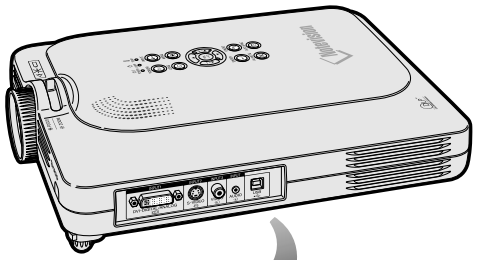
Fernbedienungssensor

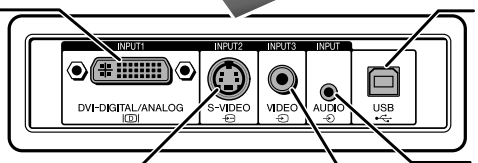
Fußentriegelungen/ Einstellfuß
Für das Einstellen der Projektorhöhe.

Befestigen der Anschlussabdeckung
Die Anschlussabdeckung an der Projektorseite befestigen und eindrücken, wie in der Abbildung gezeigt.



Projektor (Seitenansicht)





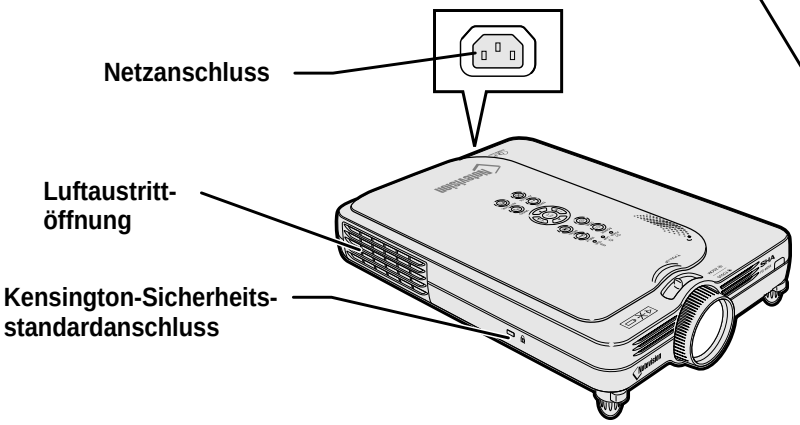
INPUT 1-Anschluss
Schnittstelle für DVI Digital-, Computer RGB- und COMPONENT-Signale.

INPUT 2-Anschluss
Anschluss für ein Videogerät mit einem S-VIDEO-Anschluss.

USB-Anschluss
Für den Anschluss eines Computers mittels USB-Kabel.

INPUT AUDIO-Anschluss
Gemeinsam genutzter Audioanschluss für INPUT 1, INPUT 2 und INPUT 3.

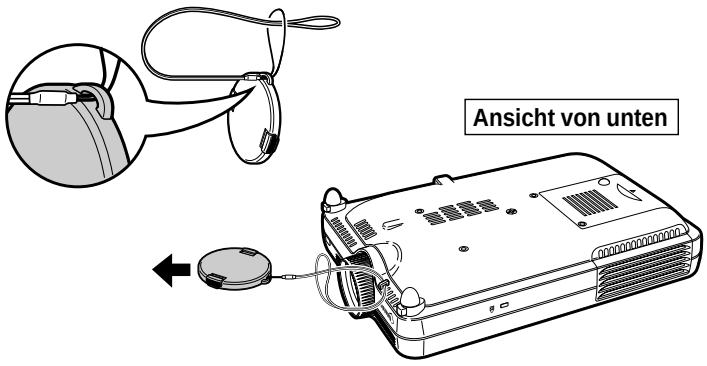
INPUT 3-Anschluss
Für den Anschluss eines Videogerätes.



Verwendung der Kensington-Sperre

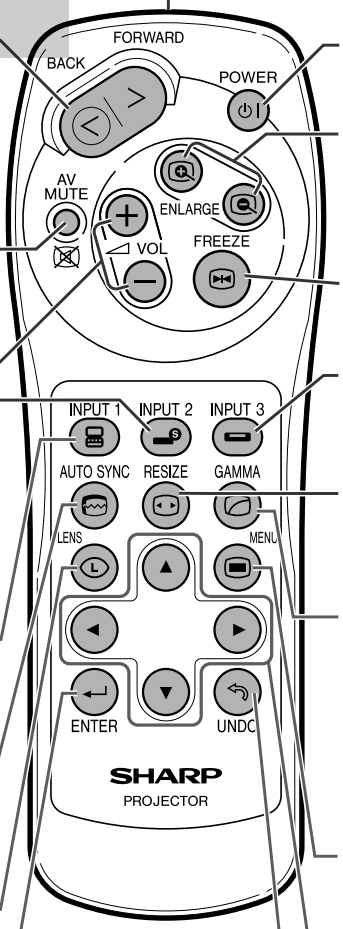
- Dieser Projektor ist mit einem Kensington-Sicherheitsstandardanschluss für die Verwendung des Kensington MicroSaver-Sicherheitssystem ausgestattet. Lesen Sie hinsichtlich der Verwendung die Informationen, die dem System beiliegen, um den Projektor zu sichern.

Befestigen der Objektivkappe
Nach dem Befestigen des Riemens an der Objektivkappe das andere Ende des Riemens durch das Loch unter dem Projektor neben dem Objektiv hindurch führen, wie in der Abbildung gezeigt.



Fernbedienung

Fernbedienungssignal-Sender



FORWARD/BACK-Taste
Schaltet nach vorne oder hinten, wenn ein Computer mittels eines USB-Kabels angeschlossen ist. Wie die [Page Up]- und [Page Down]-Tasten auf der Computer-Tastatur.

AV MUTE-Taste
Für das vorübergehende Ausschalten des Tons und des Bildes.

VOLUME-Tasten
Für das Einstellen des Lautsprecher-Tonpegels.

INPUT 2-Taste
Für das Umschalten des Eingangsmodus zu EINGANG 2.

INPUT 1-Taste
Für das Umschalten des Eingangsmodus zu EINGANG 1.

AUTO SYNC-Taste
Für das automatische Einstellen von Bildern, wenn ein Computer angeschlossen ist.

LENS-Taste
Für das Einstellen der Trapezverzerrungs- oder Digitalen Verschiebungs-Einstellung.

ENTER-Taste
Für die Einstellung der gewählten oder eingestellten Menüpunkte.

POWER-Taste
Schaltet die Stromversorgung ein oder aus.

ENLARGE-Tasten (Vergrößern/ Verkleinern)
Für das Vergrößern oder Verkleinern eines Bildteils.

FREEZE-Taste
Für das Einfrieren von Bildern.

INPUT 3-Taste
Für das Umschalten des Eingangsmodus zu EINGANG 3.

RESIZE-Taste
Für das Umschalten der Bildwandgröße (NORMAL, UMRANDLING usw).

GAMMA-Taste
Für das Korrigieren der Helligkeit eines Bildes, wenn das angezeigte Bild aufgrund der Raumhelligkeit schwierig zu sehen ist. Sie können aus vier verfügbaren Gamma-Modi auswählen.

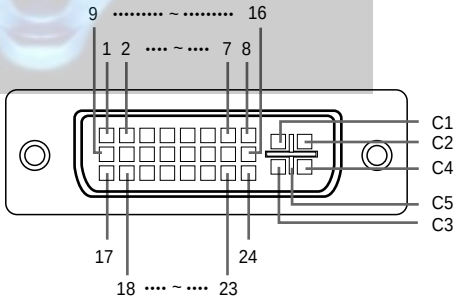
MENU-Taste
Für die Anzeige des Justierungs- und Einstellungsbildschirms.

Einstelltasten (▼ ▲ ◀ ▶)
Für die Wahl der Menüpunkte.

UNDO-Taste
Für das Rückgängigmachen eines Bedienschrittes oder für die Rückkehr zu den Grundeinstellungen.

Pin-Belegung

DVI Digital-/Analog-EINGANG 1-Port: 29 Pin-Anschluss



• DVI-Digital-EINGANG

Pin-Nr.	Signal	Pin-Nr.	Signal
1	T.M.D.S-Daten 2–	16	Hot Plug festgestellt
2	T.M.D.S-Daten 2+	17	T.M.D.S-Daten 0–
3	T.M.D.S-Daten 2 Abschirmung	18	T.M.D.S-Daten 0+
4	Nicht angeschlossen	19	T.M.D.S-Daten 0 Abschirmung
5	Nicht angeschlossen	20	Nicht angeschlossen
6	DDC-Taktgeber	21	Nicht angeschlossen
7	DDC-Daten	22	T.M.D.S-Taktgeber Abschirmung
8	Nicht angeschlossen	23	T.M.D.S-Taktgeber+
9	T.M.D.S-Daten 1–	24	T.M.D.S-Taktgeber–
10	T.M.D.S-Daten 1+	C1	Nicht angeschlossen
11	T.M.D.S-Daten 1 Abschirmung	C2	Nicht angeschlossen
12	Nicht angeschlossen	C3	Nicht angeschlossen
13	Nicht angeschlossen	C4	Nicht angeschlossen
14	+5V-Stromversorgung	C5	Masse
15	Masse		

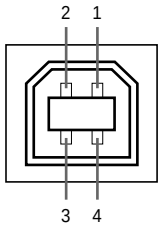
• DVI-Analog-RGB-Eingang

Pin-Nr.	Signal	Pin-Nr.	Signal
1	Nicht angeschlossen	16	Hot Plug festgestellt
2	Nicht angeschlossen	17	Nicht angeschlossen
3	Nicht angeschlossen	18	Nicht angeschlossen
4	Nicht angeschlossen	19	Nicht angeschlossen
5	Nicht angeschlossen	20	Nicht angeschlossen
6	DDC-Taktgeber	21	Nicht angeschlossen
7	DDC-Daten	22	Nicht angeschlossen
8	Vertikales Sync.	23	Nicht angeschlossen
9	Nicht angeschlossen	24	Nicht angeschlossen
10	Nicht angeschlossen	C1	Analogeingang Rot
11	Nicht angeschlossen	C2	Analogeingang Grün
12	Nicht angeschlossen	C3	Analogeingang Blau
13	Nicht angeschlossen	C4	Horizontales Sync.
14	+5V-Stromversorgung	C5	Masse
15	Masse		

• DVI-Analog-Komponenten-Eingang

Pin-Nr.	Signal	Pin-Nr.	Signal
1	Nicht angeschlossen	16	Nicht angeschlossen
2	Nicht angeschlossen	17	Nicht angeschlossen
3	Nicht angeschlossen	18	Nicht angeschlossen
4	Nicht angeschlossen	19	Nicht angeschlossen
5	Nicht angeschlossen	20	Nicht angeschlossen
6	Nicht angeschlossen	21	Nicht angeschlossen
7	Nicht angeschlossen	22	Nicht angeschlossen
8	Nicht angeschlossen	23	Nicht angeschlossen
9	Nicht angeschlossen	24	Nicht angeschlossen
10	Nicht angeschlossen	C1	Analogeingang Pr/Cr
11	Nicht angeschlossen	C2	Analogeingang Y
12	Nicht angeschlossen	C3	Analogeingang Pb/Cb
13	Nicht angeschlossen	C4	Nicht angeschlossen
14	Nicht angeschlossen	C5	Masse
15	Masse		

4-Pin-USB-Anschluss



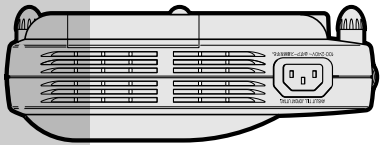
• USB-Anschluss: 4 Pin B-Typ USB-Anschluss

Pin Nr.	Signal	Bezeichnung
1	VCC	USB-Strom
2	USB–	USB-Daten–
3	USB+	USB-Daten+
4	SG	Signal-Masse

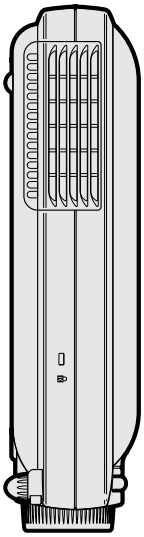
Abmessungen

Einheiten: Zoll (mm)

Ansicht von hinten

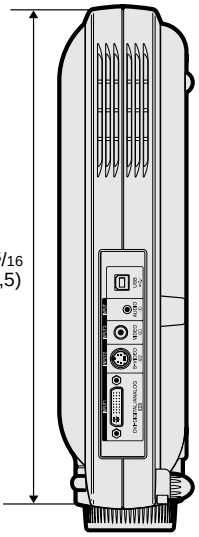


Ansicht von der Seite

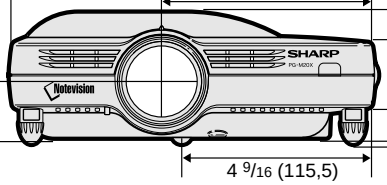


Ansicht von oben

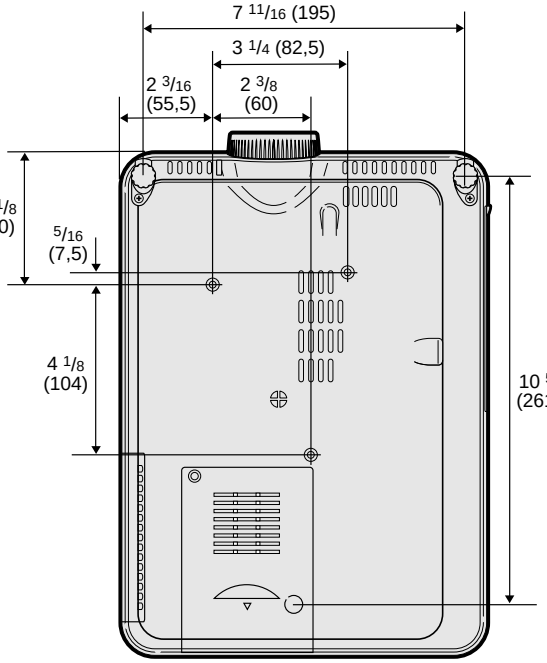
Ansicht von der Seite



Ansicht von vorne



Ansicht von unten



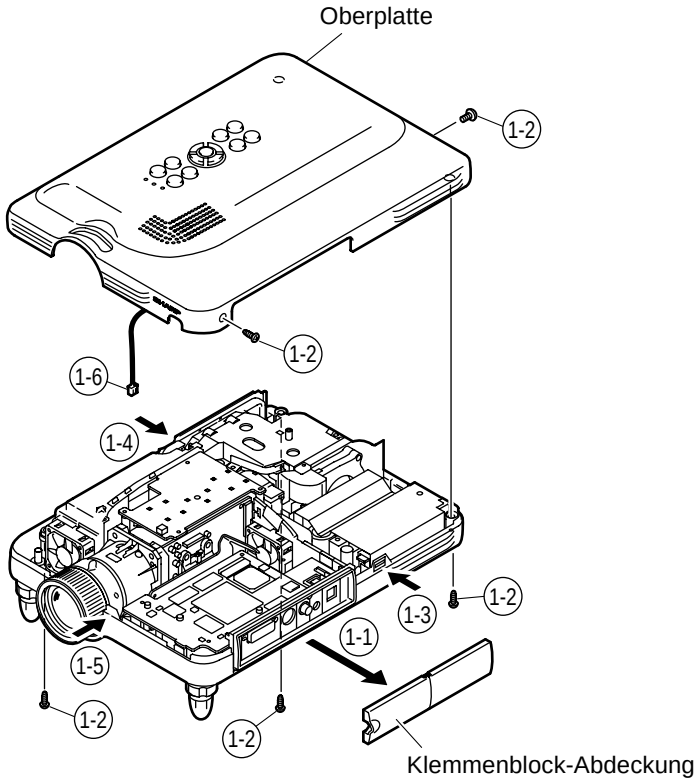
ENTFERNEN DER HAUPTTEILE

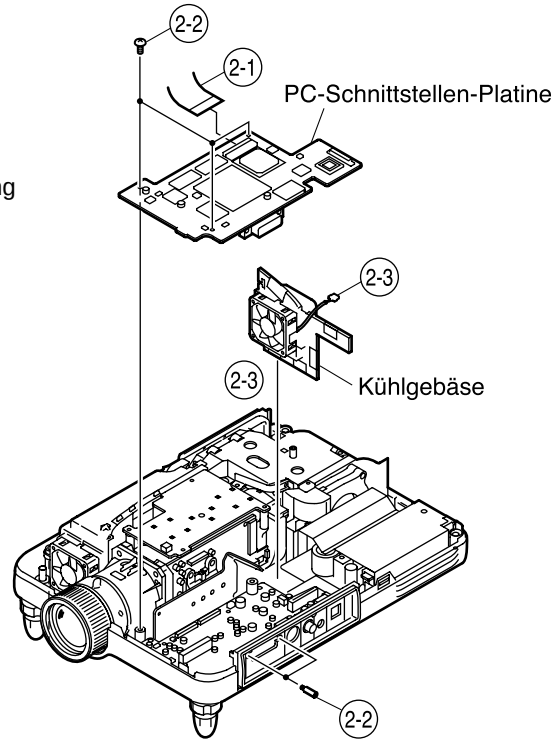
1. Ausbau der Oberabdeckung

1-1. Die Klemmenblock-Abdeckung entfernen.
1-2. Die fünf Sperrschrauben von der Oberabdeckung entfernen.
1-3. Die rechte Seite des Unterteils drücken, um den Haken zu lösen.
1-4. Die linke Seite des Unterteils drücken, um den Haken zu lösen.
1-5. Die vordere Seite des Unterteils drücken, um den Haken zu lösen. Die Oberplatte vom Unterteil lösen.
1-6. Leicht die Vorderseite der Oberplatte anheben, und den Lautsprecher-Steckverbinder abtrennen.

2. Ausbau der PC-Schnittstellen-Platine und des Kühlgeblöses

2-1. Den Steckverbinder abtrennen.
2-2. Die drei Sperrschrauben von der PC-Schnittstellen-Platine entfernen, und dann die beiden Sechskant-Halteschrauben entfernen.
2-3. Den Steckverbinder abtrennen, und das Kühlgeblöse herausnehmen.



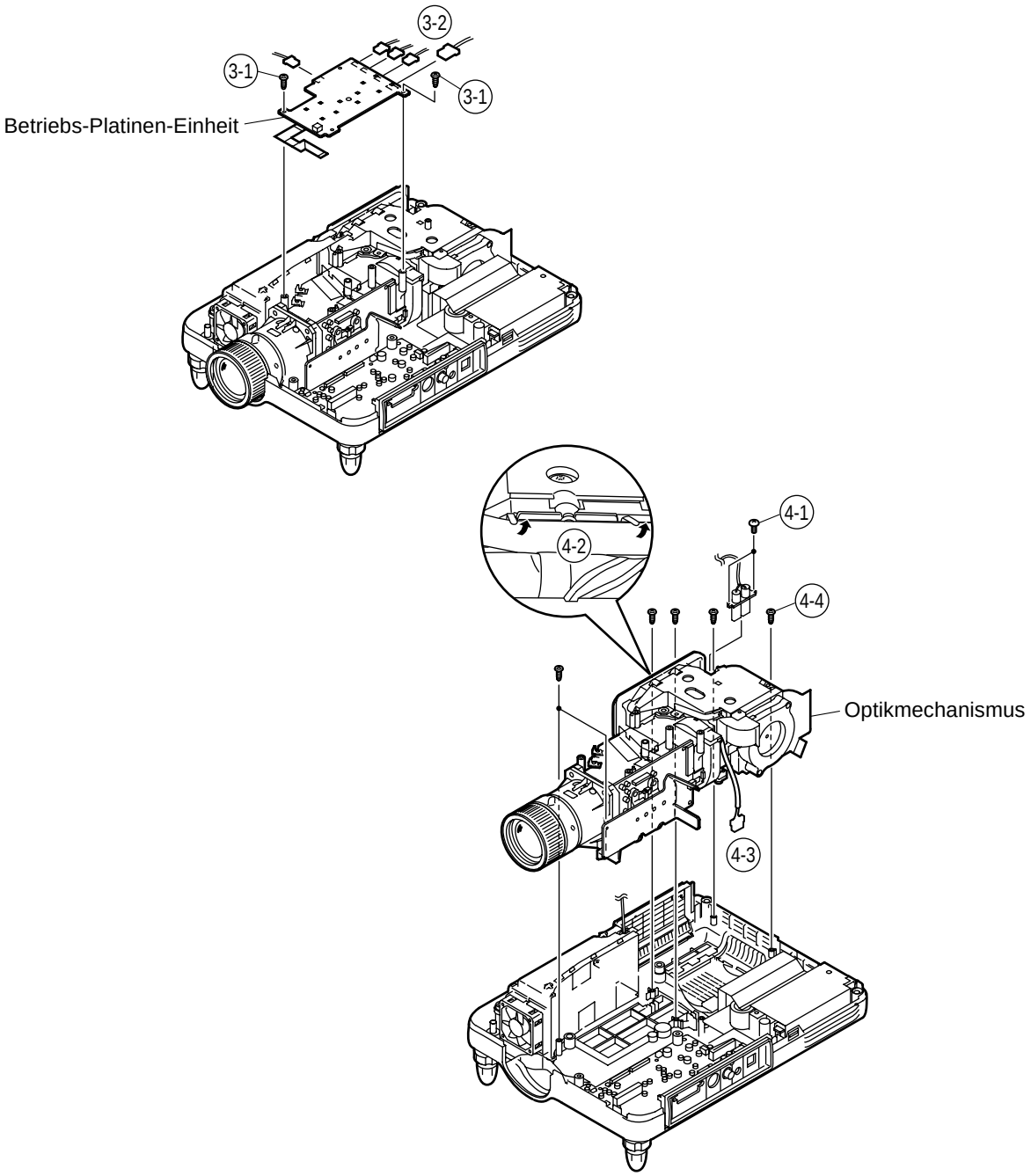


3. Ausbau der Betriebs-Platine

3-1. Die zwei Sperrschrauben von der Betriebs-Platine entfernen, und dann die Platine leicht anheben.
3-2. Die Steckverbinder abtrennen.

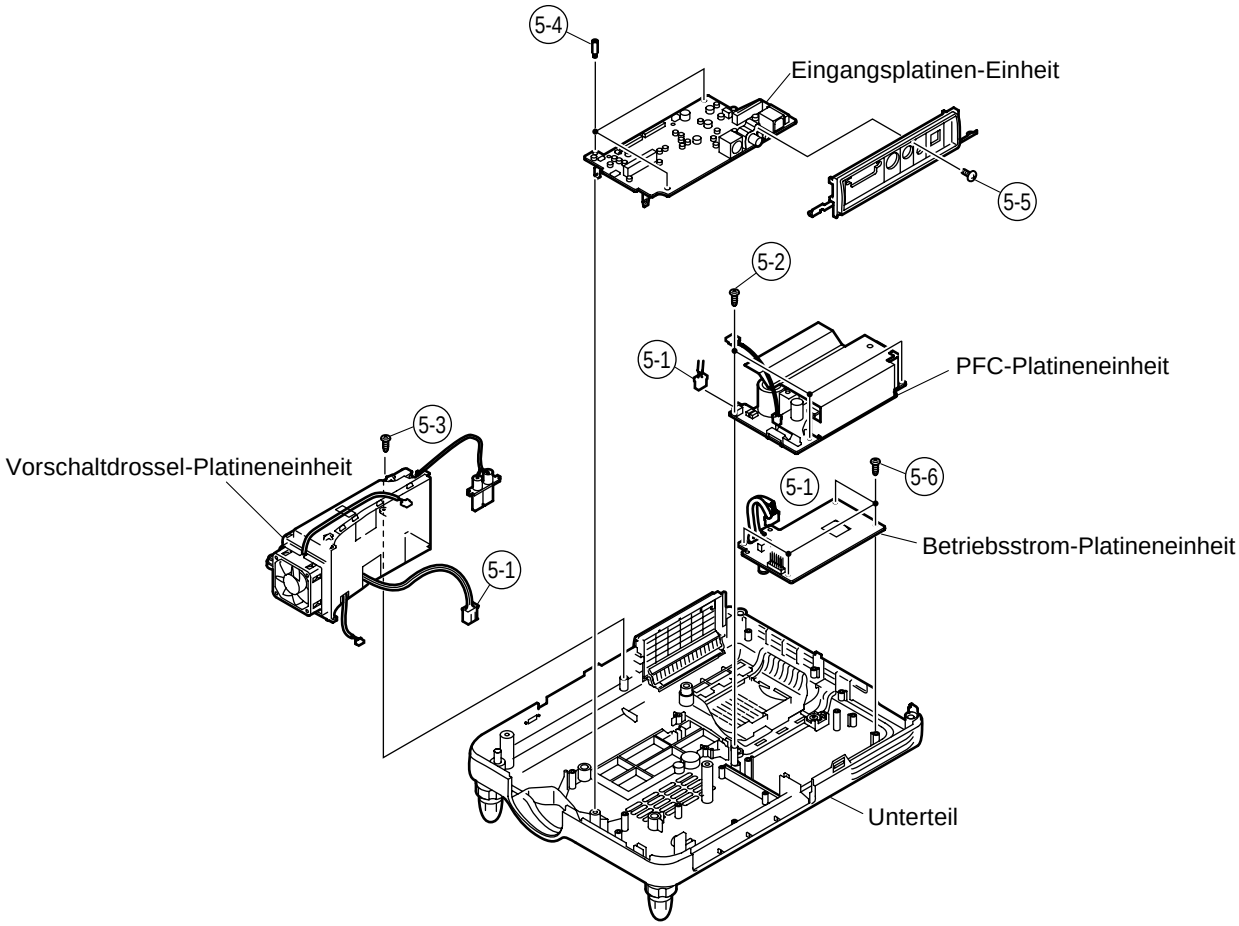
4. Ausbau des Optikmechanismus

4-1. Die beiden Sperrschrauben von der Lampenfassung entfernen.
4-2. Die beiden Lampenfassungs-Leitungsbefestigungen anheben.
4-3. Die Steckverbinder abtrennen.
4-4. Die sechs Sperrschrauben vom Optikmechanismus entfernen.



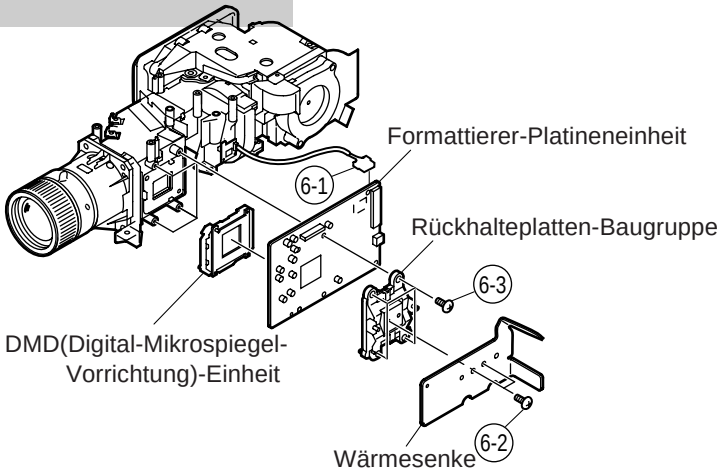
5. Ausbau der anderen Platinen

5-1. Die Steckverbinder abtrennen.
5-2. Die vier Sperrschrauben von der Betriebsstrom-Platine entfernen.
5-3. Die Sperrschraube von der Vorschaltdrossel-Platineneinheit entfernen.
5-4. Die drei Sechskant-Halteschrauben von der Eingangsplatine entfernen.
5-5. Die Sperrschraube von der Klemmenblock-Abdeckung entfernen.
5-6. Die drei Sperrschrauben von der PFC-Platine entfernen.



6. Ausbau der Formatierer-Platine

6-1. Die Steckverbinder abtrennen.
6-2. Die beiden Sperrschrauben von der Wärmesenke entfernen.
6-3. Die vier Sperrschrauben von der Rückhalteplatten-Bügel entfernen, und die Formatierer-Platine abnehmen.
Hinweis: Die DMD(Digital-Mikrospiegel-Vorrichtung)-Einheit wird leicht durch statische Elektrizität beeinflusst. Beim Umgang mit diesem Gerät immer ein statikableitendes Armband tragen oder andere Maßnahmen gegen Statik treffen.



Vorsichtsmaßregeln zur Auswechslung des DMD (Digital-Mikrospiegel-Vorrichtung) -Chips

Hinweis: Sicherstellen, daß sich keine Staube und Fingerabdrücke auf dem Deckglas des DMD-Chips und der Prismen-Oberfläche des Optikapparats zurücklassen.

1. Beim Festziehen der 4 Schrauben der Rückhalteplatten-Baugruppe die Rückhalteplatte auf die Formatier-Platine niederdrücken und die Schrauben diagonal festziehen.
2. Falls ein Schatten auf dem Projektionsschirm erscheint, wie in der Abbidlung 1, die beide Schrauben von der Spiegeleinstellplatte lockern und diese Platte bewegen, um das Leuchtfeld des DMD-Chips einzustellen.

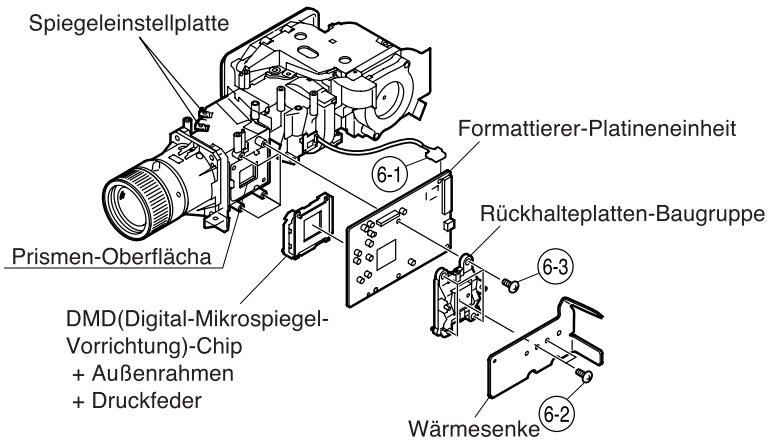
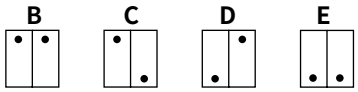


Abbildung 1 — Schatten

*** Vorsichtsmaßregeln zur Einrichtung der DMD(Digital-Mikrospiegel-Vorrichtung)-Einheit**

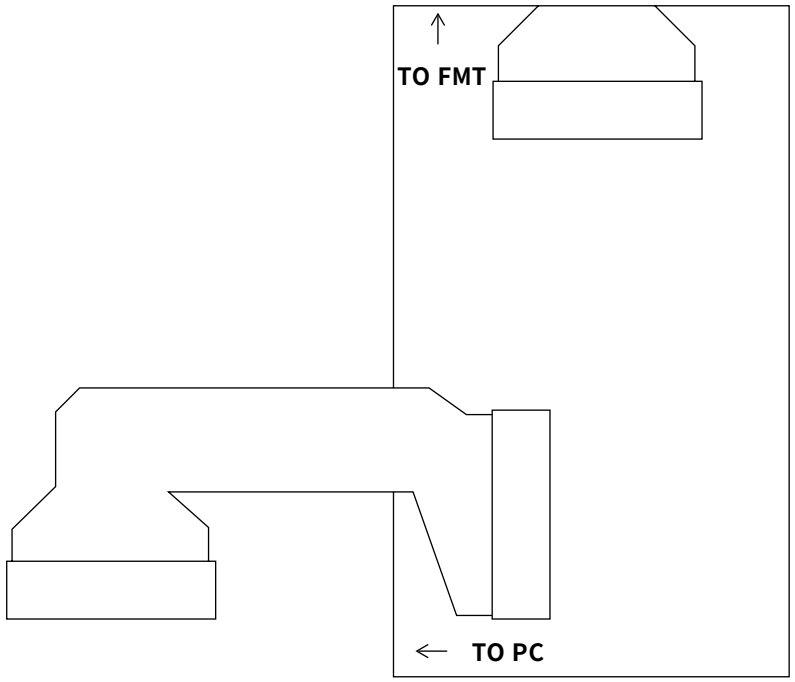
Vor dem Anschließen der Formatierer-Platine an den Optikapparat die folgenden Schritte ausführen. Die Spannngsrang-Markierung am DMD selber prüfen. Entsprechend dieser Markierung die DIP-Schalter an der Formatier-Platine einstellen. Danach diese Platine an den Optikapparat anschließen. Falsche Einstellungen beeinträchtigen die Systemleistung.

Spannungsrangsystem mit den DIP-Schaltern an der Formatier-Platine



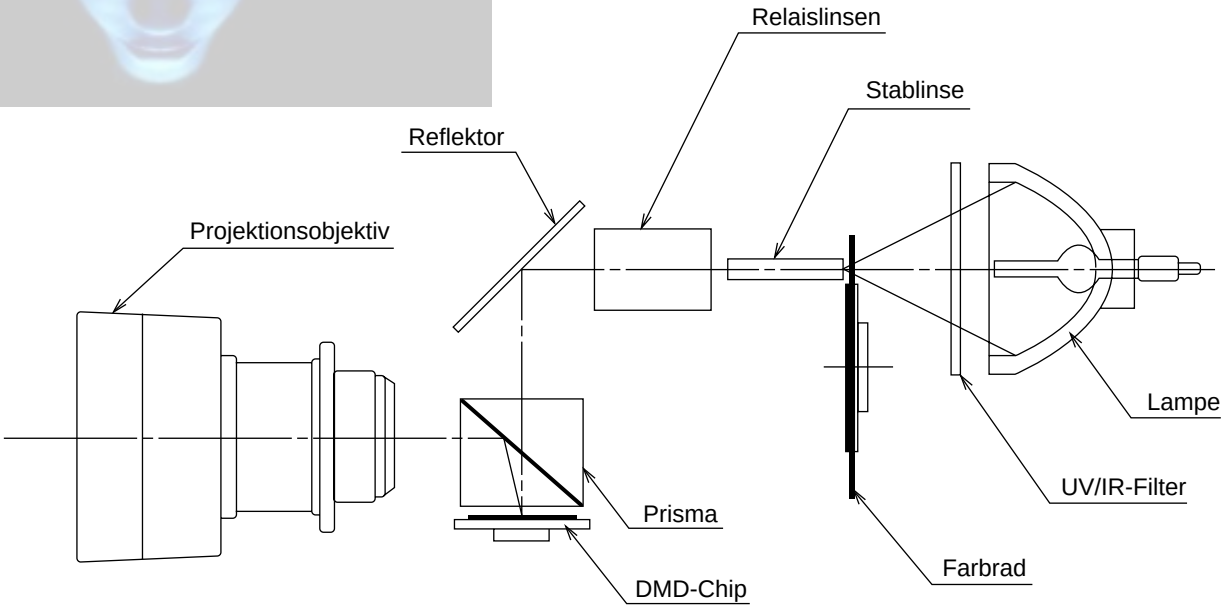
*** Anschluss der FPC-Verlängerungskabel (QCNW-A298WJZZ)**

Die Kabel an die Formatierer-Platine (TO FMT) und die PC-Schnittstellenplatine (TO PC) entsprechend den Schablonendruck-Markierungen anschließen. Siehe Skizze unten. (Die FPC ist bereits an TO PC angeschlossen.)



Kurzbeschreibung des Optikapparats

<Layout>



Gegenstand	Funktion
Lampe	Lichtquelle. Gleichstrombetriebene Hochdruck-Quecksilberdampflampe.
UV/IR-Filter	Zur Absorption von Ultraviolett- und Infrarotstrahlen.
Farbrad	Dient zum Durchlassen der Lichtquelle durch den Farbfilter und Aufspalten in die Farben R, G und B.
Stablinse	Dient zur Erzeugung uniformer Lichtstrahlen.
Relaislinsen	Dienen zum Sammeln des Lichts von der Stablinse in den DMD-Chip.
Reflektor	Dient zum Reflektieren des Lichts von der Relaislinse gegen den DMD-Chip.
Prism	Dient zum Einführen des Lichts vom Reflektor über die Effektivoberfläche des DMD-Chips. Wenn der Mikrospiegel gekippt wird (EIN) wie vorgeschrieben, wird das reflektierte Licht zur Projektionslinse geführt.
DMD-Chip	Dient zum Einschalten und Ausschalten des Mikrospiegels als Reaktion auf das Verhältnis der Farbkomponenten bei jedem Punkt und deshalb zur entsprechenden Reflektion des einfallenden Lichts.
Projektionsobjektiv	Dient zum Vergrößern des Lichts vom DMD-Chip und zur Projektion des Lichts auf den Schirm.

RÜCKSTELLUNG DES LAMPEN-TIMERS

Den Lampen-Timer nach dem Lampenaustausch zurückzustellen.

1 Das Netzkabel anschließen.

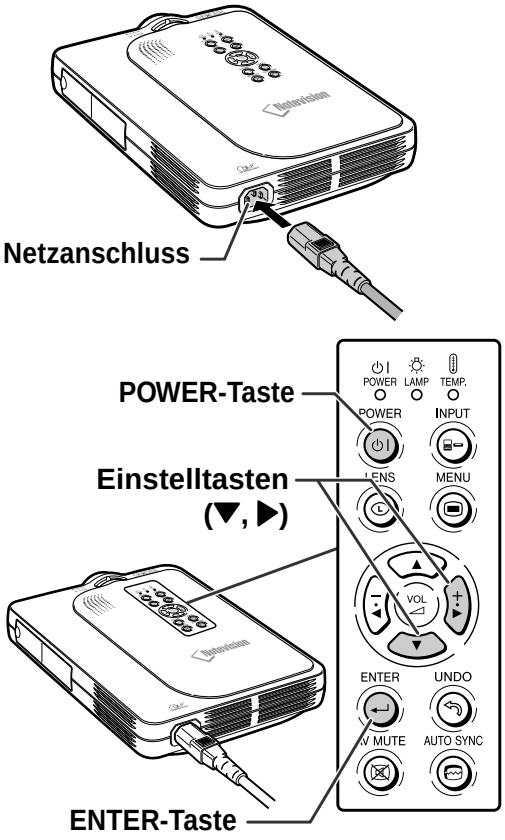
- Das Netzkabel am Netzanschluss des Projektors anschließen.

2 Den Lampen-Timer zurückstellen.

- Während ▼, ▶ und ENTER auf dem Projektor gleichzeitig gedrückt wird, POWER auf dem Projektor drücken.
- "LAMPE 0000H" erscheint und zeigt damit an, dass der Lampen-Timer zurückgestellt ist.

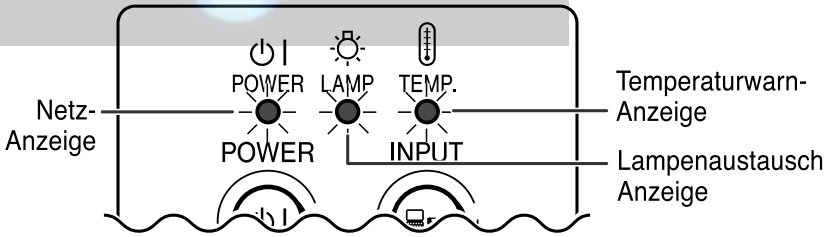
Info

- Stellen Sie sicher, dass Sie den Lampen-Timer nur nach dem Austausch der Lampe zurücksetzen. Wenn Sie den Lampen-Timer zurücksetzen und dieselbe Lampe weiterhin verwenden, könnte die Lampe beschädigt werden oder explodieren.



WARTUNGSANZEIGEN

- **Die Warnleuchten auf dem Projektor weisen auf Fehlfunktionen im Projektor hin.**
- **Falls ein Problem auftritt, leuchtet entweder die Temperaturwarn-Anzeige oder die Lampenaustausch-Anzeige rot auf und die Stromversorgung wird ausgeschaltet. Nach dem Ausschalten des Gerätes den unten aufgeführten Schritten folgen.**



Über die Temperaturwarn-Anzeige

Wenn der Projektor wegen Problemen bei der Aufstellung oder wegen Blockierens der Luftöffnungen zu warm wird, blinkt "TEMP." in der unteren linken Ecke des Bildes. Wenn die Temperatur weiter ansteigt, schaltet sich die Lampe aus und die Temperaturwarn-Anzeige blinkt; der Kühlventilator dreht sich für weitere 90 Sekunden und anschließend wird die Stromversorgung ausgeschaltet. Nachdem "TEMP." angezeigt wird, unbedingt die folgenden Maßnahmen durchführen.

Über die Lampenaustausch-Anzeige

■Wenn die Lampe 1.900 Betriebsstunden überschreitet, blinkt "LAMP." auf der Bildwand gelb auf. Wenn 2.000 Betriebsstunden erreicht werden, wird "LAMP." rot angezeigt, und die Lampe sowie der Projektor werden automatisch ausgeschaltet. Gleichzeitig leuchtet die Lampenaustausch-Anzeige rot auf.

■Nachdem Sie zum vierten Mal versucht haben den Projektor einzuschalten, ohne dass die Lampe ausgetauscht wurde, kann der Projektor nicht mehr eingeschaltet werden.

Wartungsanzeige			Symptom	Problem	Abhilfe
Temperaturwarn-Anzeige	Normal	Unnormal	Die Temperatur im Inneren des Gerätes ist zu hoch.	• Belüftungsöffnungen blockiert.	• Den Projektor an einem besser belüfteten Ort aufstellen.
	Aus	Rot ein/ Strom aus		• Kühlventilator beschädigt • Interne Schaltkreise beschädigt • Luftfilter verstopft	• Den Projektor einem von Sharp autorisierten Händler für Projektoren oder dem Kundendienst zur Reparatur geben.
Lampenaustausch-Anzeige	Grün ein (Grün blinkt, wenn die Lampe aktiviert ist)	Rot blinkt	Die Lampe muss ausgetauscht werden	• Die Lampenbetriebsdauer liegt bei über 1900 Stunden.	• Den Projektor einem von Sharp autorisierten Händler für Projektoren oder dem Kundendienst zur Reparatur oder zum Lampenaustausch geben. • Lassen Sie beim Austausch der Lampe bitte die nötige Vorsicht walten.
		Rot ein/ Strom aus	Die Lampe leuchtet nicht.	• Ausgebrannte Lampe • Lampen-Schaltkreis beschädigt	

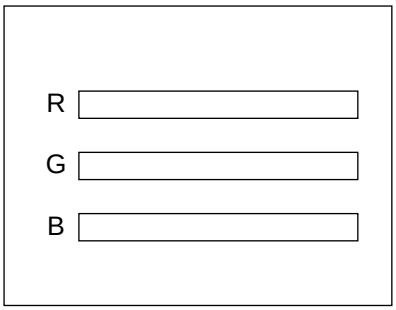
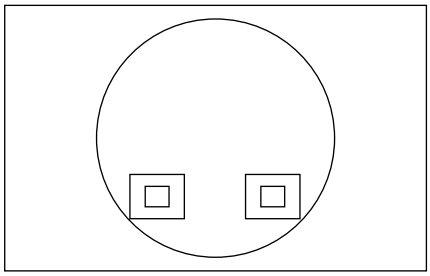
Freigabe der Systemsperre

Das Gerät einschalten. Wenn die Systemsperre aktiviert wird, erscheint die System-Nullstellungsanzeige. Danach sind die folgenden Tasten in der vorgeschriebenen Reihenfolge zu betätigen.

MENU → ENTER → ENTER → MENU → UNDO → UNDO → MENU

Zuerst die MENU-Taste drücken, dann die verbleibenden Tasten innerhalb von 10 Sekunden betätigen.

ELEKTRISCH EINSTELLUNG

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
1	Initialisierung des EEPROM	1. Das Gerät einschalten (Lampe leuchtet auf) und das System für 15 Minuten aufwärmen lassen.	1. Folgende Einstellungen ausführen. SW200 drücken, um in den Prozeßmodus einzutreten, dann S2 im SSS-Menü ausführen.
2	Einstellung für CW-Index	1. Signaleingang: Farbbalken mit 64 Abstufungen 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: CW-INDEX anwählen.	1. Das Signal zu INPUT 1 leiten. 2. Den Posten anwählen und Einstellungen vornehmen, so daß die Lampen-Abstufungsmuster von R, G und B weich und störungsfrei erscheinen. 
3	Einstellung der Reproduktion für die RGB-Abstufung	1. Das SMPTE-Mustersignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: G1-GAIN	1. Sicherstellen, daß 100% und 95% Weißabstufung sowie 0% und 5% Schwarzabstufung erkennbar sind. 2. Falls die Weißabstufung unterschiedlich erscheint, muß die Feineinstellung durch G1-GAIN erfolgen. 
4	Einstellung für Video/ Helligkeitskontrast	1. Das Fenster-Mustersignal (NTSC100%) zuführen (Burst-Signal) 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: AUTO	1. Nach der Signalzuführung ist “AUTO” mit dem Geräteschalter oder der Taste für die automatische Einstellung auf der Fernbedienung anzuwählen.
5	Einstellung auf Video-Farbton	1. Das Farb-Trennsignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: TINT	1. Den festgelegten Wert bestätigen. Festgelegter Wert: 128

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
6	Einstellung der NTSC-Farbsättigung	1. Das interne 8-Kanal-Trennsignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: N-COLOR	1. Den festgelegten Wert bestätigen. Festgelegter Wert: 59
7	Einstellung der PAL-Farbsättigung	1. Das PAL-Farbbalkensignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: P-COLOR	1. Den festgelegten Wert bestätigen. Festgelegter Wert: 59
8	Einstellung der SECAM-Farbsättigung	1. Das SECAM-Farbbalkensignal zuführen. 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: VIDEO Posten: S-COLOR	1. Den festgelegten Wert bestätigen. Festgelegter Wert: 59
9	Einstellung der COMPO G-Helligkeit	1. Eingangssignal: 0% Graumustersignal (480I) 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: COMPO Posten: G-BRIGHT	1. Das Signal zu INPUT 1 leiten. Die Einstellung so vornehmen, daß einige Bits im Bild fehlen.
10	Einstellung für COMPO CR-Offset	1. Das Farbdifferenzsignal (480I) zuführen: Y 0% Helligkeit, Cb und Cr 0% Helligkeit Gruppe: COMPO Posten: AUTO	1. Nach der Signalzuführung ist “AUTO” mit dem Geräteschalter oder der Taste für die automatische Einstellung auf der Fernbedienung anzuwählen.
11	Automatische Einstellung der RGB-Weißbalance	1. Das Grau-Mustersignal (50%) zuführen (XGA, 60 Hz:PG-M20X/ SVGA,60 Hz:PG-M20S). 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: R1-GAIN (Rot) B1-GAIN (Blau)	1. R-1 GAIN und B1-GAIN so einstellen, daß der x-Wert 266±3 und der y-Wert 320±3 beträgt.
12	Automatische Einstellung der SRGB-Weißbalance	1. Das Grau-Mustersignal (50%) zuführen (XGA, 60 Hz:PG-M20X/ SVGA,60 Hz:PG-M20S). 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: S-R1-GAIN (Rot) S-G1-GAIN (Grün) S-B1-GAIN (Blau)	1. Den Wert S-R1-GAIN auf 34 einstellen. 2. S-G1-1 GAIN und S-B1-GAIN so einstellen, daß der x-Wert 310±3 und der y-Wert 335±3 beträgt.

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
13	Automatische Einstellung der Video-Weißbalance	1. Das Grau-Mustersignal (50%) zuführen (NTSC, Burst-Signal). 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: V-R1-GAIN (Rot) V-B1-GAIN (Blau)	1. V-G1-1 GAIN und V-B1-GAIN so einstellen, daß der x-Wert 265±3 und der y-Wert 298±3 beträgt.
14	Automatische Einstellung der DTV-Weißbalance	1. Das Grau-Mustersignal (50%) zuführen (480I, Farbdifferenzsignal). 2. Die nachfolgende Gruppe bzw. die Position wählen. Gruppe: DLP Posten: C-R1-GAIN C-B1-GAIN	1. C-R1-GAIN und C-B1-GAIN so einstellen, daß der x-Wert 263±3 und der y-Wert 295±3 beträgt.
15	Einstellung der DLP-Spannung (für Referenz)	1. Den Spannungsbereich der DLP-Beschreibung lesen. 2. Den Schalter gemäß dem abgelesenen Bereich einstellen (auf der Formatierungsplatine).	1. Die Einstellung durchführen, wenn der DLP-Chip ausgewechselt oder die Chip-/Formatiererkombination verändert wurde. 2. Reihe: B C D E Einstellwert: 1 2 3 4
16	Bestätigung und Neueinstellung der Weißbalance	1. Die Einstellbedingungen für jeden einzelnen Posten sind wie folgt: Für RGB-Eingang auf Posten 13-1 Bezug nehmen. Für SRGB-Eingang auf Posten 13-2 Bezug nehmen. Für Videoeingang auf Posten 13-3 Bezug nehmen Für DVT-Eingang auf Posten 13-1 Bezug nehmen.	Sicherstellen, daß keine Abweichung in der Weißbalance auftritt (verglichen mit der Überwachungseinrichtung). Für die Neueinstellung in der folgenden Reihenfolge vorgehen: RGB-Eingang, Videoeingang und DTV-Eingang.
17	Bestätigung der farbbezogenen Operation	1. Das Farbbildsignal empfangen.	1. L1 im Prozeßmodus empfangen. Die Leistung von Farbe und Tönung überprüfen.
18	Bestätigung der farbbezogenen Operation	1. Das Monoskop-Mustersignal empfangen.	1. L2 im Prozeßmodus empfangen. Das Bild, die Bildhelligkeit und die Bildschärfe überprüfen.
19	Bestätigung von RGB	1. Das RGB-Signal empfangen.	1. L4 im Prozeßmodus anwählen. Folgendes überprüfen: Bild, Bildhelligkeit, Rot, Blau, Takt, Phase, H-POS und V-POS.
20	Bestätigung des Off-Timer-Betriebs		1. OFF im Prozeßmodus anwählen. Sicherstellen, daß der Off-Timer mit einer 5minütigen Anzeige beginnt, 1 Minute für 1 Sekunde zählt und dann ausschaltet, nachdem die Minute “0” angezeigt wird.
21	Bestätigung des Thermistorbetriebs	1. Den Thermistor mit einem Haarfön erwärmen.	1. Sicherstellen, daß die Temperatur angezeigt wird.

Nr.	Einstellposten	Einstellbedingungen	Einstellverfahren
22	Automatischer Synchronisationsbetrieb	1. Das Phasen-Prüfmustersignal empfangen.	1. Sicherstellen, daß Takt, Phase, H-POS und V-POS automatisch im VGA/S-VGA/XGA-Modus eingestellt werden können.
23	Den USB-Betrieb bestätigen.	Das Gerät via ein USB-Kabel an einen PVC anschließen.	Die Fernbedienung benutzen und sicherstellen, daß der Zuführungs- und Rückführungsbetrieb am Computermonitor effektvoll ist.
24	Werkseinstellungen		1. Die folgenden Einstellungen durchführen. Prozeß-Einstellung: S4 Fernbedienungseinstellungen: "Werkseinstellung 4"

Einstellung der PC-Platine

1. Initialisierung des EEPROM
   1) SW2001 drücken, um in den Prozeßmodus einzutreten.
   2) S1 auf dem SSS-Menü ausführen. (Wenn S1 auf dem SSS-Menü ausgeführt wird, wird der Inhalt des EEPROMs initialisiert.)
   3) Sicherstellen, daß es sich bei der Version des Programms (Ver. XXX) um die neueste Version handelt.
2. Einstellposten
   1) Einstellung für RGB-Betriebs-/Verstärkungsspannung
      (1) Das Fenster-Mustersignal zuführen, welches 100%- und 0%-Signale aufweist.
      (2) AUTO unter den Analog-/Digitalposten im Prozeßmodus anwählen und die Einstellung durchführen.

● Eingabe des Einstellprozeßmodus

Es gibt die folgenden zwei Verfahren.

- Den SW2001 an der Tastenplatinen-Einheit drücken.
- Die folgenden Tasten in der vorgeschriebenen Reihenfolge betätigen.

AV MUTE→AV MUTE→Einstell oben→Einstell unten→ENTER→ENTER→MENU

● Einstellmodus-Prozessmenü

Gruppe	Untergruppe	Gegenstand
APC-Bild einstellen	A/D	R-BRIGHT G-BRIGHT B-BRIGHT R-D B-D G-D AD-AUTO
DLP-Bild einstellen	DLP	R1-BLK R1-GAIN G1-BLK G1-GAIN B1-GAIN CW-INDEX S-R1-GAIN S-G1-GAIN S-B1-GAIN C-R1-GAIN C-B1-GAIN V-R1-GAIN V-B1-GAIN
VIDEO-Bild einstellen	VIDEO	PICTURE BRIGHT TINT N-COLOR P-COLOR S-COLOR STAT-GAIN VIDEO-AUTO
Komponenten-Bild einstellen	DTV	G-BRIGHT CB-OFFSET CR-OFFSET COMPO-AUTO
Prozessmodus	LINE	L1 L2 L3 OFF TEMP OFF SENSOR CHECK
ANFANGSEINSTELLUNG	SSS	TIME S1 S2 S3 S4 S5

Gruppe	Untergruppe	Gegenstand
Beispielmuster	PATTERN	RGB RGB(50) CROSS FOCUS SETP COLOR CHR
CVIC einstellen	CVIC-PROGRSSIVE	MODE IP MDSW PTGSW C-TESTSW C-ILG-LY C-MOD-LY C-VE-LV
	CVIC-ENHANCE-VIDE	ENH-PLUS ENH-MINUS DFC
	CVIC-ENHANCE-HTTV	ENH-PLUS ENH-MINUS DFC
	CVIC-ENHANCE-RGB	MODE ENH-GAIN ENH-PLUS
	CVIC-SCREEN	CUBIC-RGB CUBIC-VEDEO
	CVIC-NR	YNR-LEVEL YNR-K YNR-FSEL CNR-LEVEL CNR-K CNR-FSEL CNR-FILSW
	CVIC-PTG	TBL-NO TESTSW ENABLE MV-F VDDTP
	CVIC-CMS	RED YELLOW GREEN CYAN BLUE MAGENTA
	CVIC-DEGAMMA	TABLE
Versionsprüfung usw.	SPECIAL	IPL IPL2 E2PROM ADR RD/WR USB MODE

Wie eine seiriennummer zu schreiben.

Die neueste Version dieses Programms (USB-Seriell-Treiberprogramm) von der Homepage des SHARPs “http://172.24.145.13/tcg-qrc/prj/prj-e.asp” herunterladen.

Name:USB to Sirial Driver program.

SCHRITT 1

Einrichtung für seriellen USB-Treiber

(Siehe Datei "Treiberinstallationsverfahren und Rat.doc")

SCHRITT 2

Den Einstellprozeßmodus anrufen, und die Untergruppe “SPECIAL” sowie den Einstellposten “USB-MODE” wählen. Den USB MODE-Wert von 0 auf 1 umstellen.

(Für diese Änderung wird Eingabe eines 232C-Befehls möglich.)

SCHRITT 3

Das USB-Kabel zwischen PC und Projektor anschließen.

SCHRITT 4

Das Parameter "TeraTerm" ausführen.

(Die Konfigurationsdatei dient zur Verwendung des beiliegenden Teraterm.ini.)

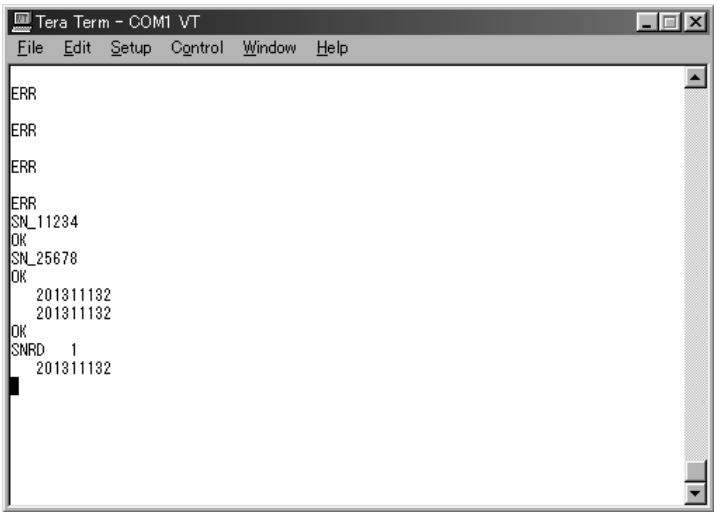
SCHRITT 5

Mit Hilfe der beiliegenden Macro-Datei (serial_write.ttl) beschreiben.

Eine Seriennummer ist in dieser Macro-Datei beschrieben. Diese Nummer eingeben.

SCHRITT 6

Die Meldung erscheint wie folgt.



SCHRITT 7

Bitte TeraTerm beenden.

SCHRITT 8

Den Wert von 1 auf 0 für USB MODE in Special (Werksmodus) umstellen.

(Für diese Änderung wird Eingabe eines 232C-Befehls unmöglich.)

<Achtung>

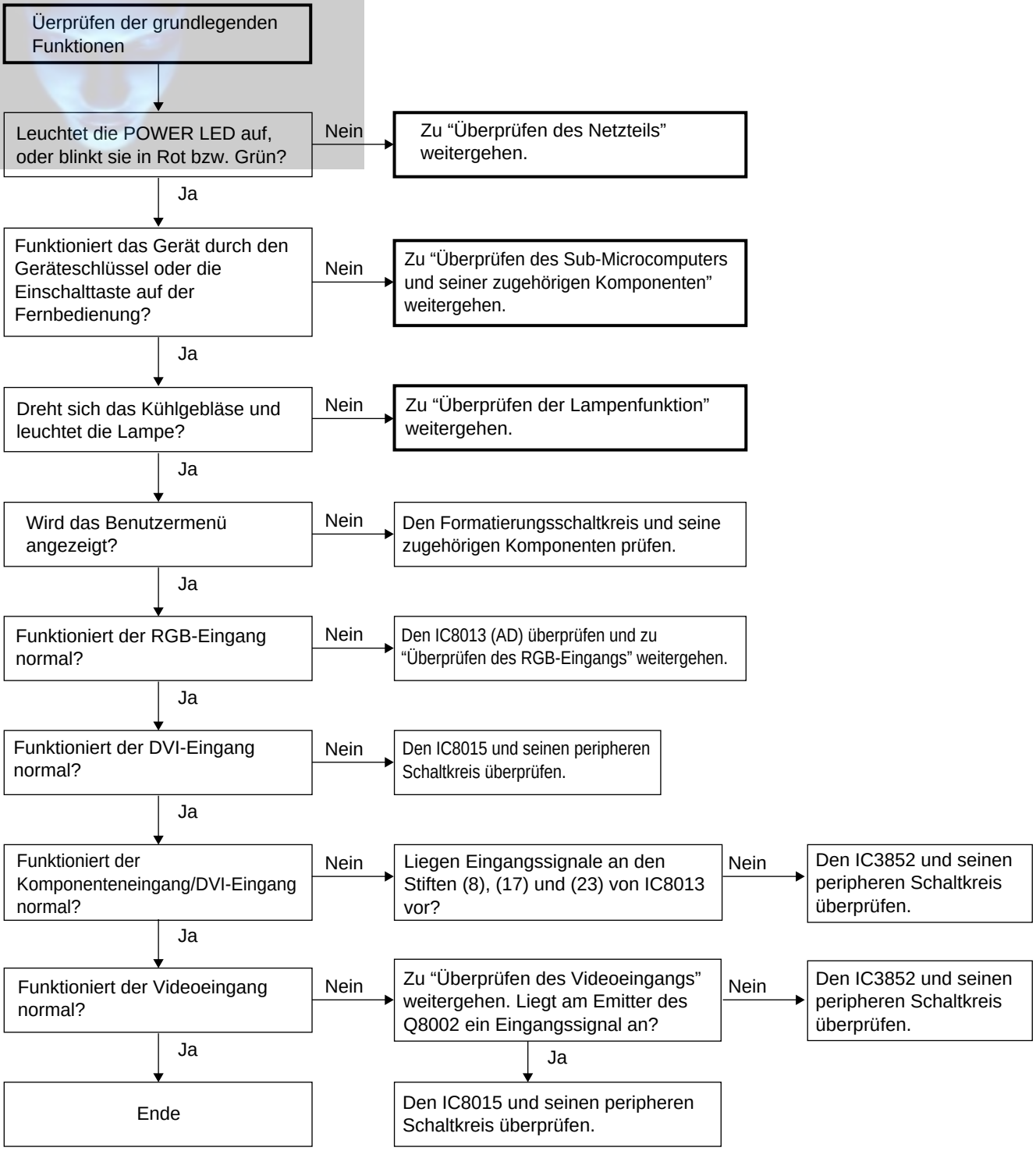
Nach der Installation für USB zum 232C Treiber soll 232C mit SW2002 am Tasten-PC gewählt werden.

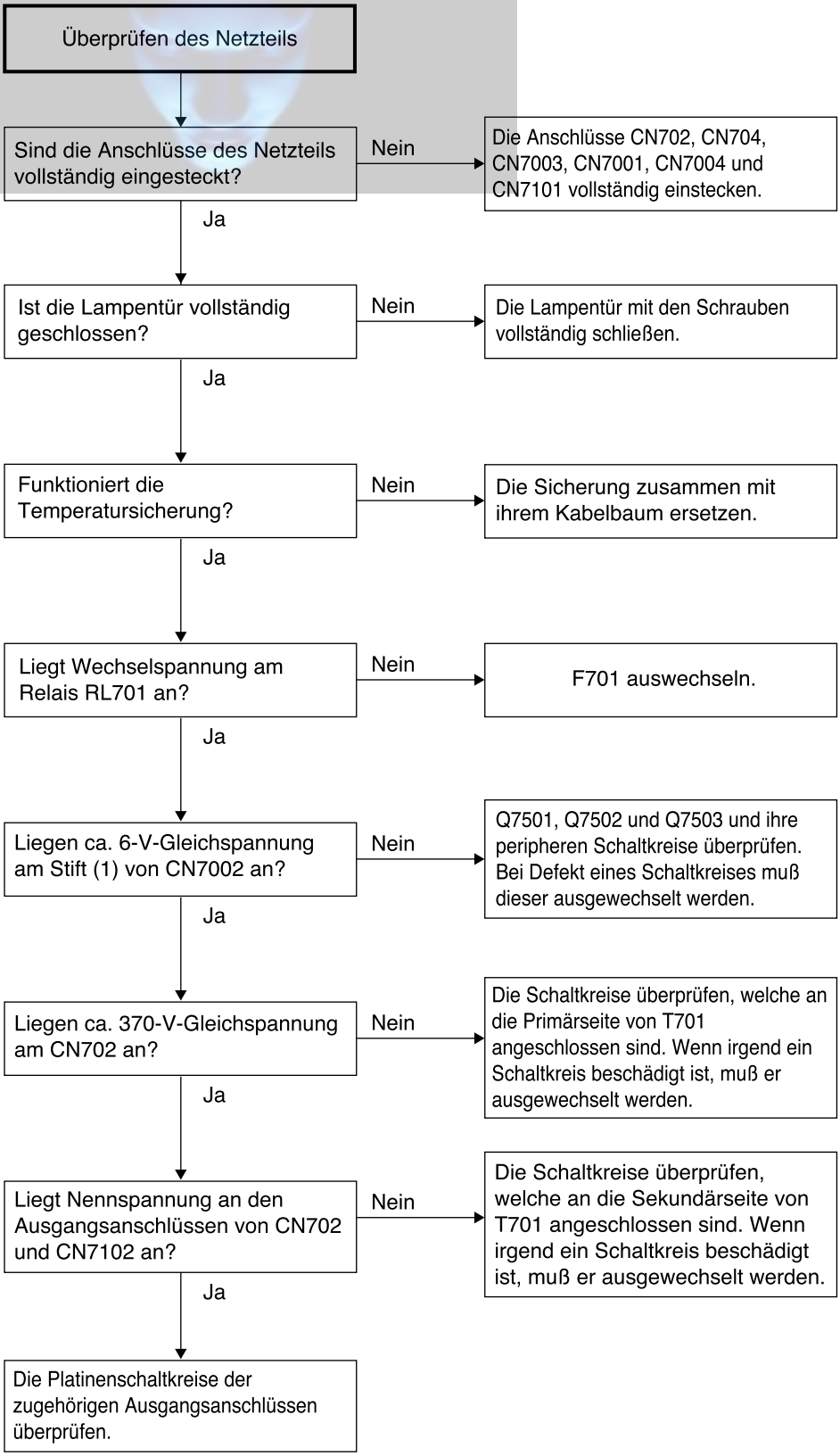
Das USB-Kabel anschließen, und COM2 für TeraTerm ändern (Seriell-Anschluss einrichten), und dann die "ENTER"-Taste drücken und bestätigen, dass die Meldung "ERR" zurückkommt.

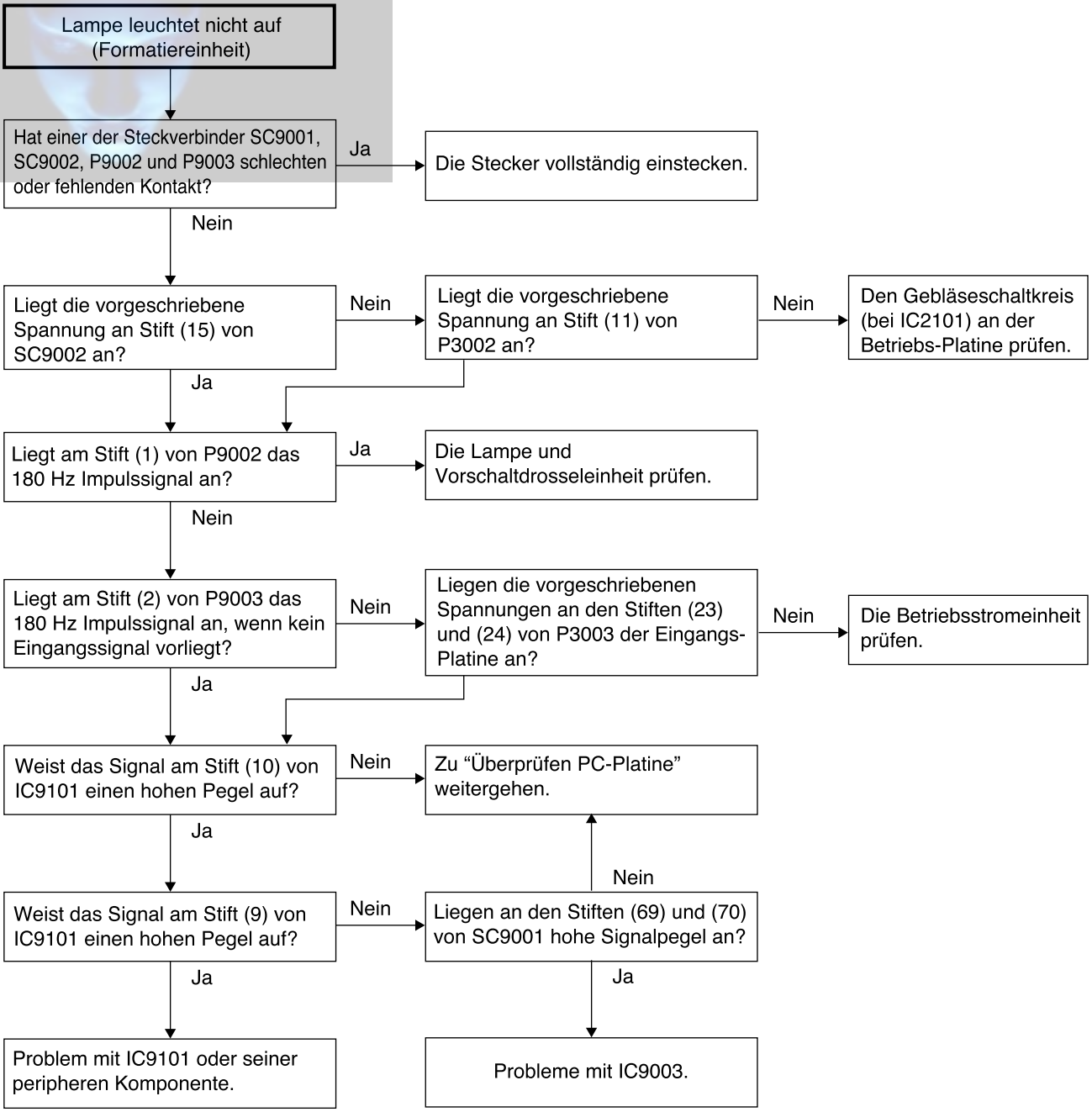
Wenn "ERR" zurückkommt, ist die Einstellung korrekt. Wenn "ERR" nicht zurückkommt, ist COM2 falsch.

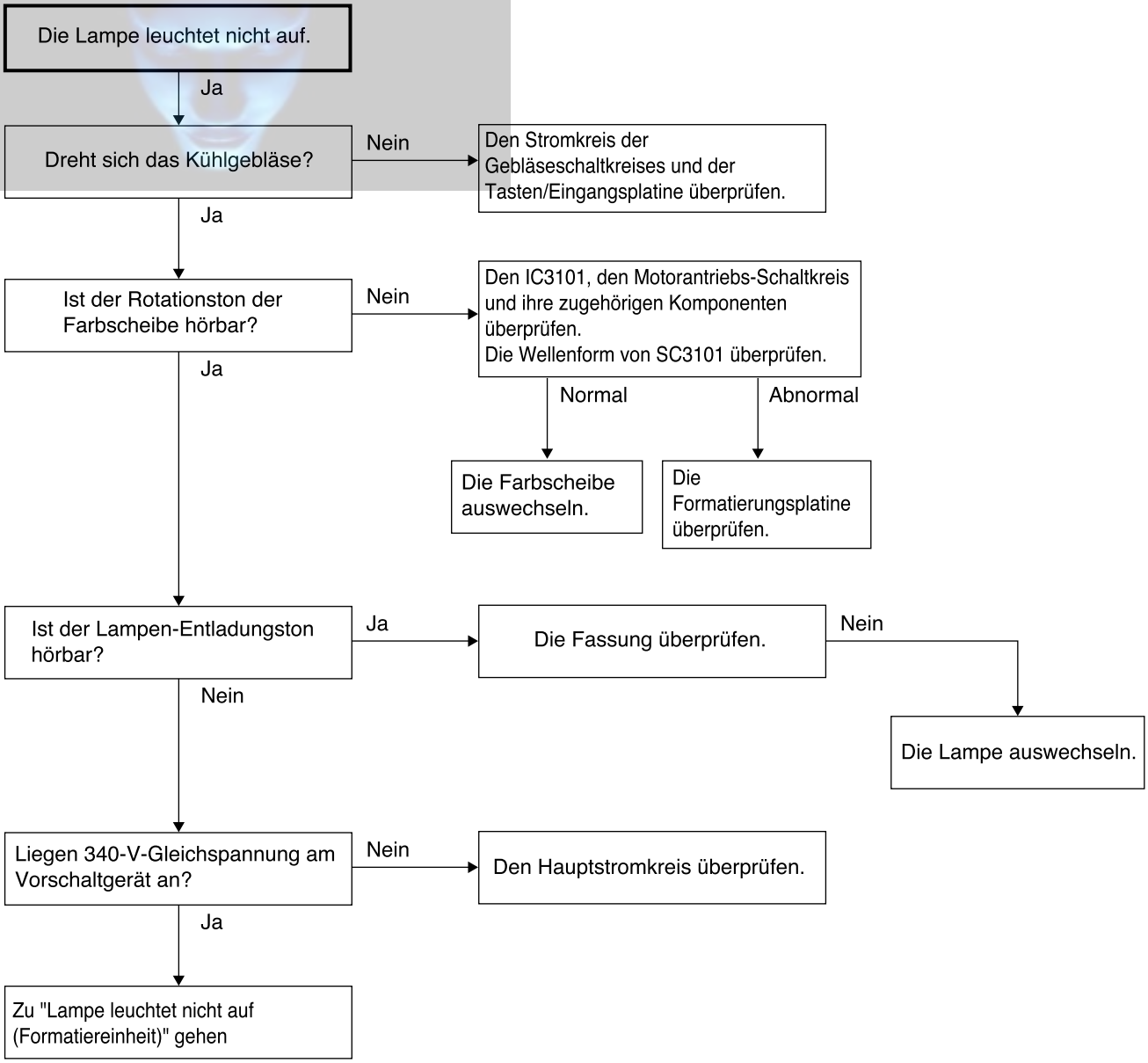
Bitte nacheinander COM3 und COM4 probieren, und den richtigen COM-Anschluss finden.

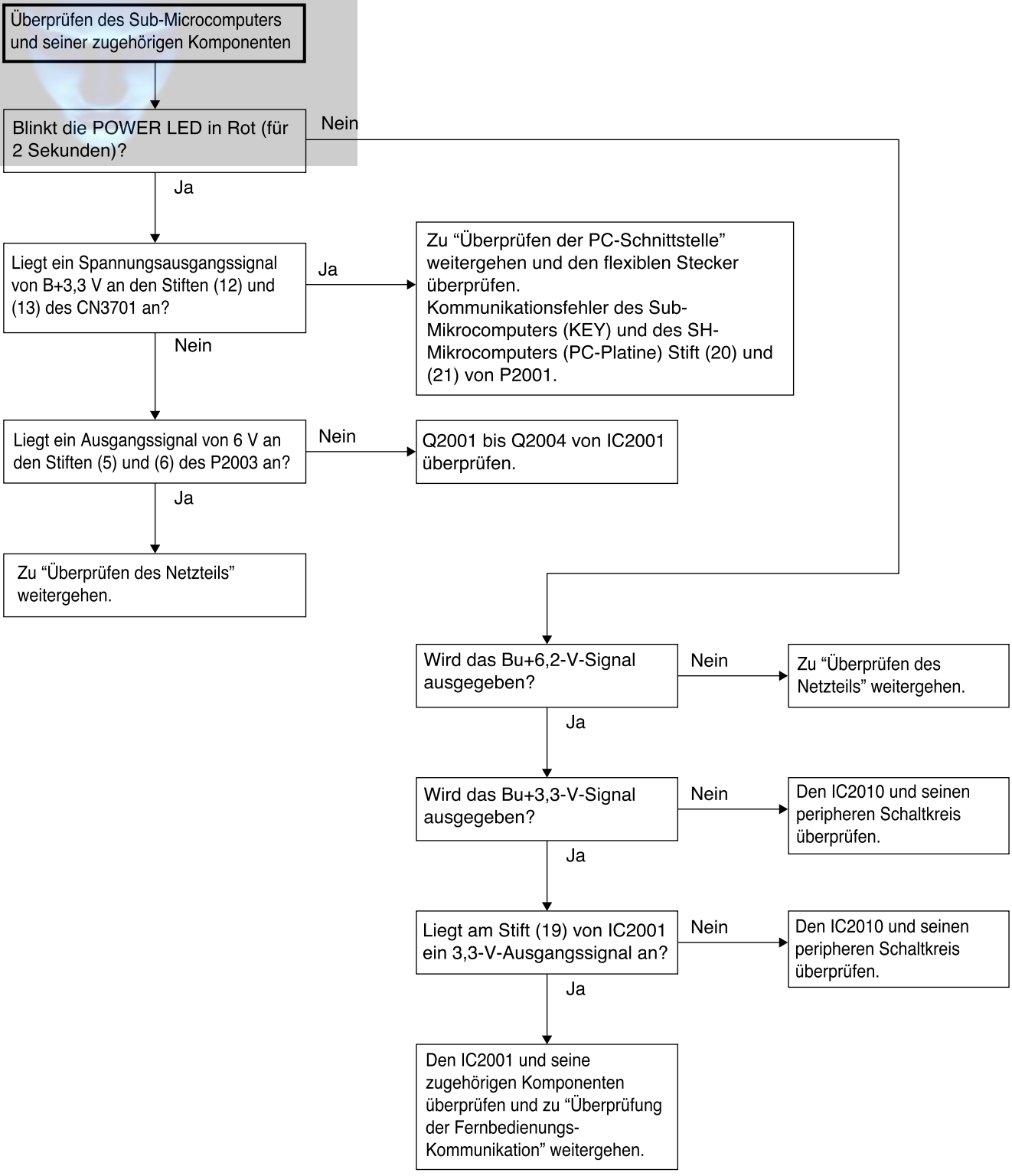
FEHLERSUCHTABELLE

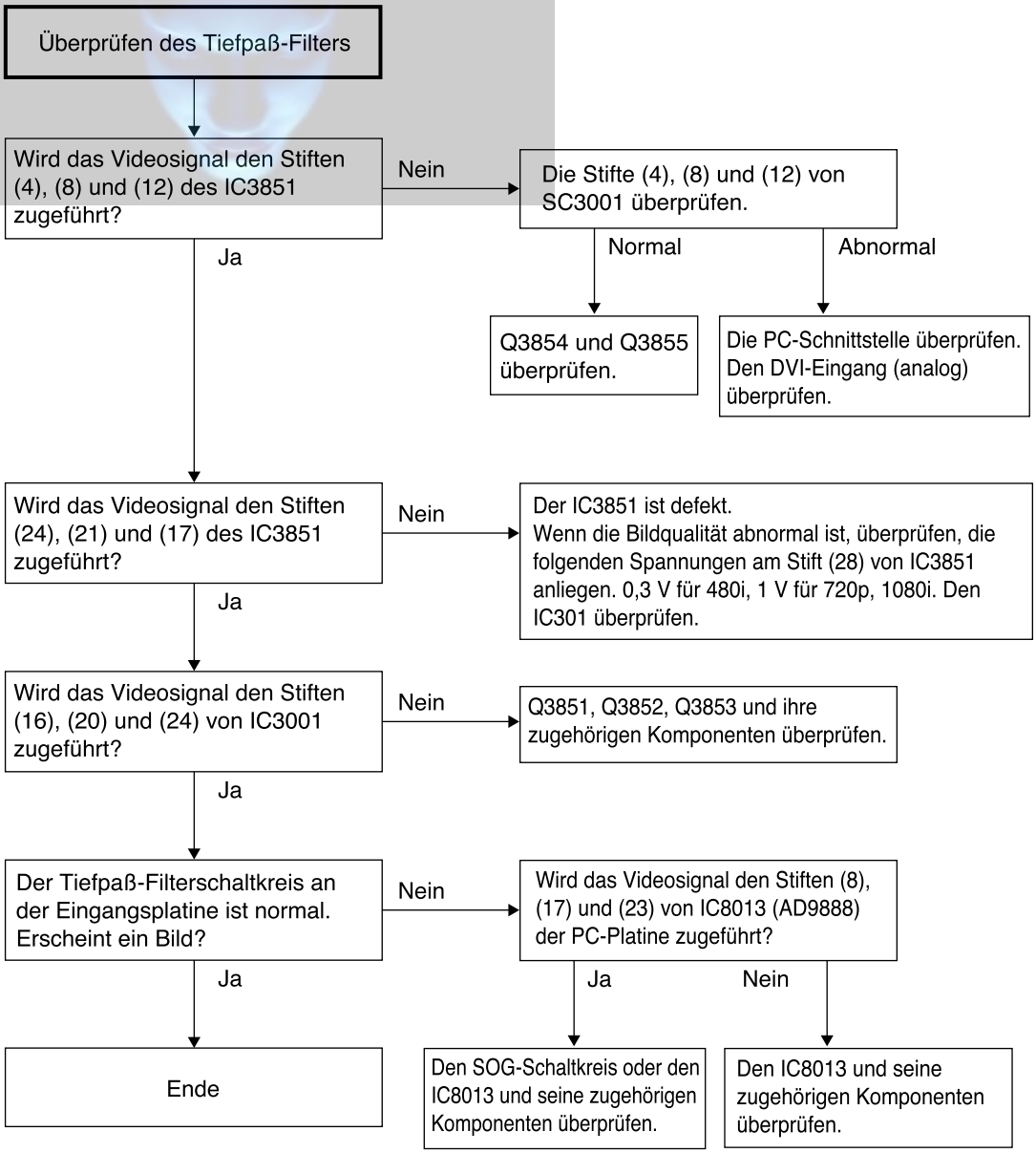


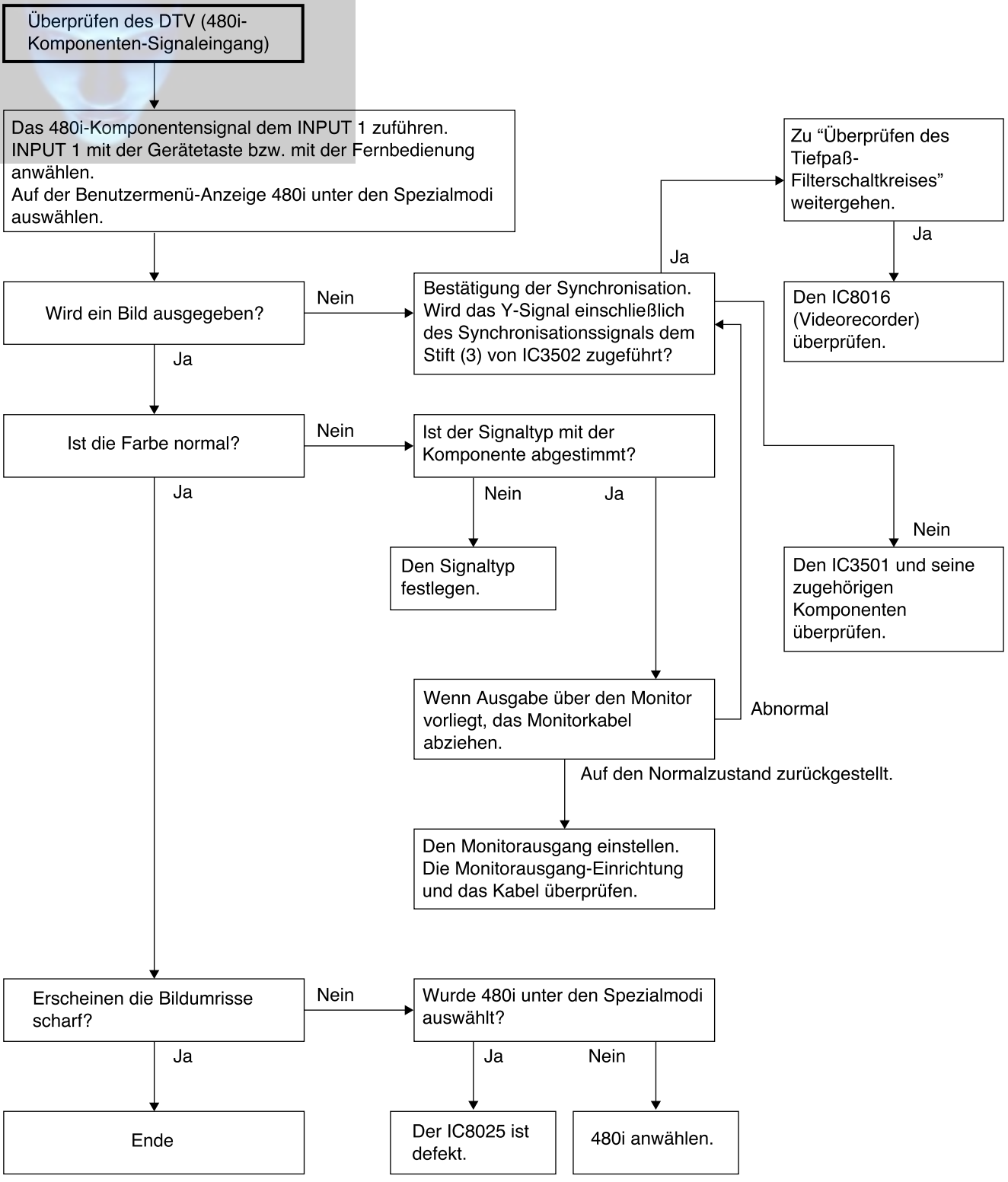

Überprüfen des Netzteils
Sind die Anschlüsse des Netzteils vollständig eingesteckt?
Nein
Die Anschlüsse CN702, CN704, CN7003, CN7001, CN7004 und CN7101 vollständig einstecken.
Ja
Ist die Lampentür vollständig geschlossen?
Nein
Die Lampentür mit den Schrauben vollständig schließen.
Ja
Funktioniert die Temperatursicherung?
Nein
Die Sicherung zusammen mit ihrem Kabelbaum ersetzen.
Ja
Liegt Wechselspannung am Relais RL701 an?
Nein
F701 auswechseln.
Ja
Liegen ca. 6-V-Gleichspannung am Stift (1) von CN7002 an?
Nein
Q7501, Q7502 und Q7503 und ihre peripheren Schaltkreise überprüfen. Bei Defekt eines Schaltkreises muß dieser ausgewechselt werden.
Ja
Liegen ca. 370-V-Gleichspannung am CN702 an?
Nein
Die Schaltkreise überprüfen, welche an die Primärseite von T701 angeschlossen sind. Wenn irgend ein Schaltkreis beschädigt ist, muß er ausgewechselt werden.
Ja
Liegt Nennspannung an den Ausgangsanschlüssen von CN702 und CN7102 an?
Nein
Die Schaltkreise überprüfen, welche an die Sekundärseite von T701 angeschlossen sind. Wenn irgend ein Schaltkreis beschädigt ist, muß er ausgewechselt werden.
Ja
Die Platinenschaltkreise der zugehörigen Ausgangsanschlüssen überprüfen.

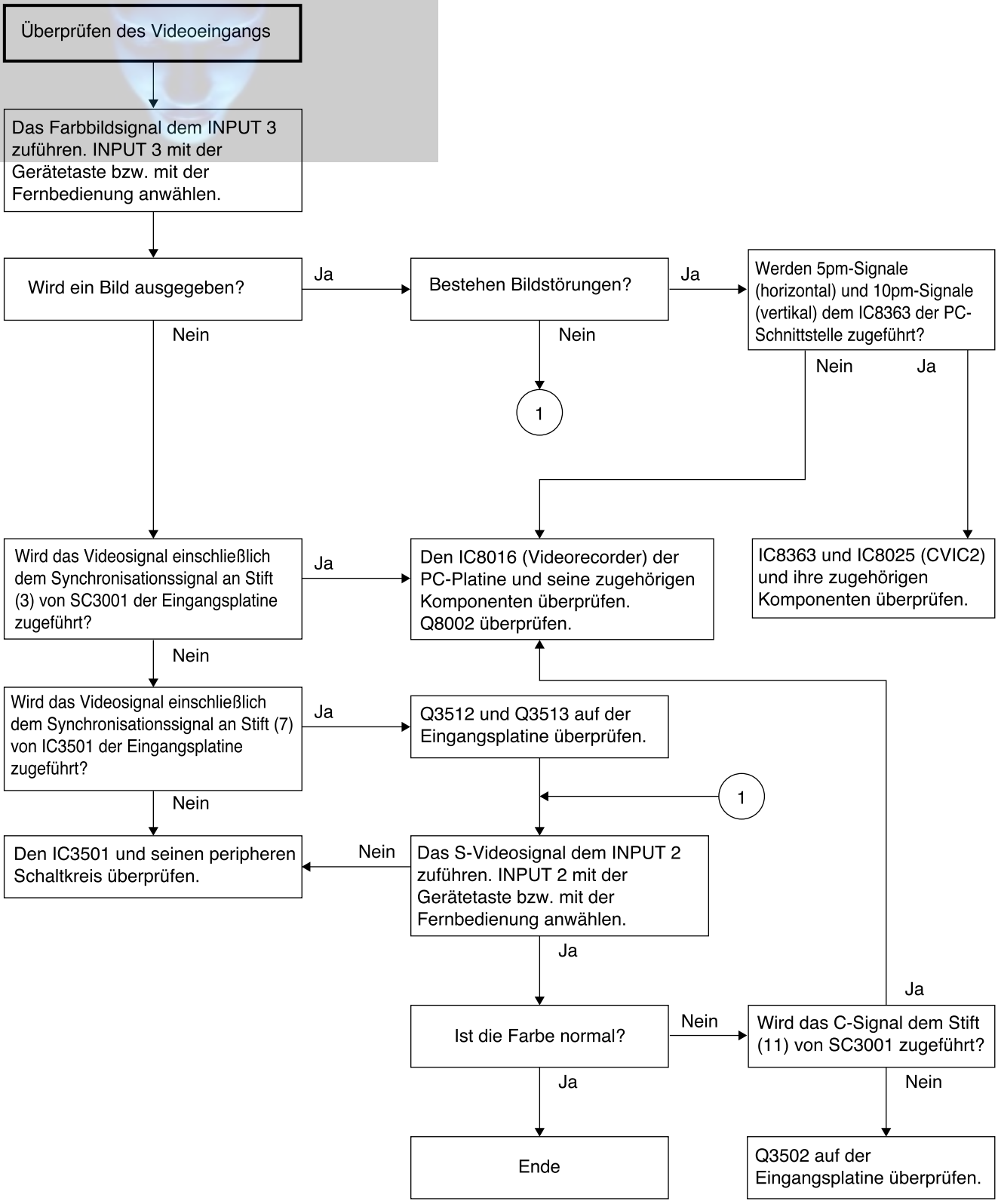

Lampe leuchtet nicht auf (Formatiereinheit)
Hat einer der Steckverbinder SC9001, SC9002, P9002 und P9003 schlechten oder fehlenden Kontakt?
Ja
Die Stecker vollständig einstecken.
Nein
Liegt die vorgeschriebene Spannung an Stift (15) von SC9002 an?
Nein
Liegt die vorgeschriebene Spannung an Stift (11) von P3002 an?
Nein
Den Gebläseschaltkreis (bei IC2101) an der Betriebs-Platine prüfen.
Ja
Liegt am Stift (1) von P9002 das 180 Hz Impulssignal an?
Ja
Die Lampe und Vorschaltdrosseleinheit prüfen.
Nein
Liegt am Stift (2) von P9003 das 180 Hz Impulssignal an, wenn kein Eingangssignal vorliegt?
Nein
Liegen die vorgeschriebenen Spannungen an den Stiften (23) und (24) von P3003 der Eingangs-Platine an?
Nein
Die Betriebsstromeinheit prüfen.
Ja
Weist das Signal am Stift (10) von IC9101 einen hohen Pegel auf?
Nein
Zu “Überprüfen PC-Platine” weitergehen.
Ja
Nein
Weist das Signal am Stift (9) von IC9101 einen hohen Pegel auf?
Nein
Liegen an den Stiften (69) und (70) von SC9001 hohe Signalpegel an?
Ja
Ja
Problem mit IC9101 oder seiner peripheren Komponente.
Probleme mit IC9003.


Die Lampe leuchtet nicht auf.
Ja
Dreht sich das Kühlgebläse?
Nein
Den Stromkreis der Gebläseschaltkreises und der Tasten/Eingangsplatine überprüfen.
Ja
Ist der Rotationston der Farbscheibe hörbar?
Nein
Den IC3101, den Motorantriebs-Schaltkreis und ihre zugehörigen Komponenten überprüfen.
Die Wellenform von SC3101 überprüfen.
Normal
Abnormal
Die Farbscheibe auswechseln.
Die Formatierungsplatine überprüfen.
Ja
Ist der Lampen-Entladungston hörbar?
Ja
Die Fassung überprüfen.
Nein
Die Lampe auswechseln.
Nein
Liegen 340-V-Gleichspannung am Vorschaltgerät an?
Nein
Den Hauptstromkreis überprüfen.
Ja
Zu "Lampe leuchtet nicht auf (Formatiereinheit)" gehen

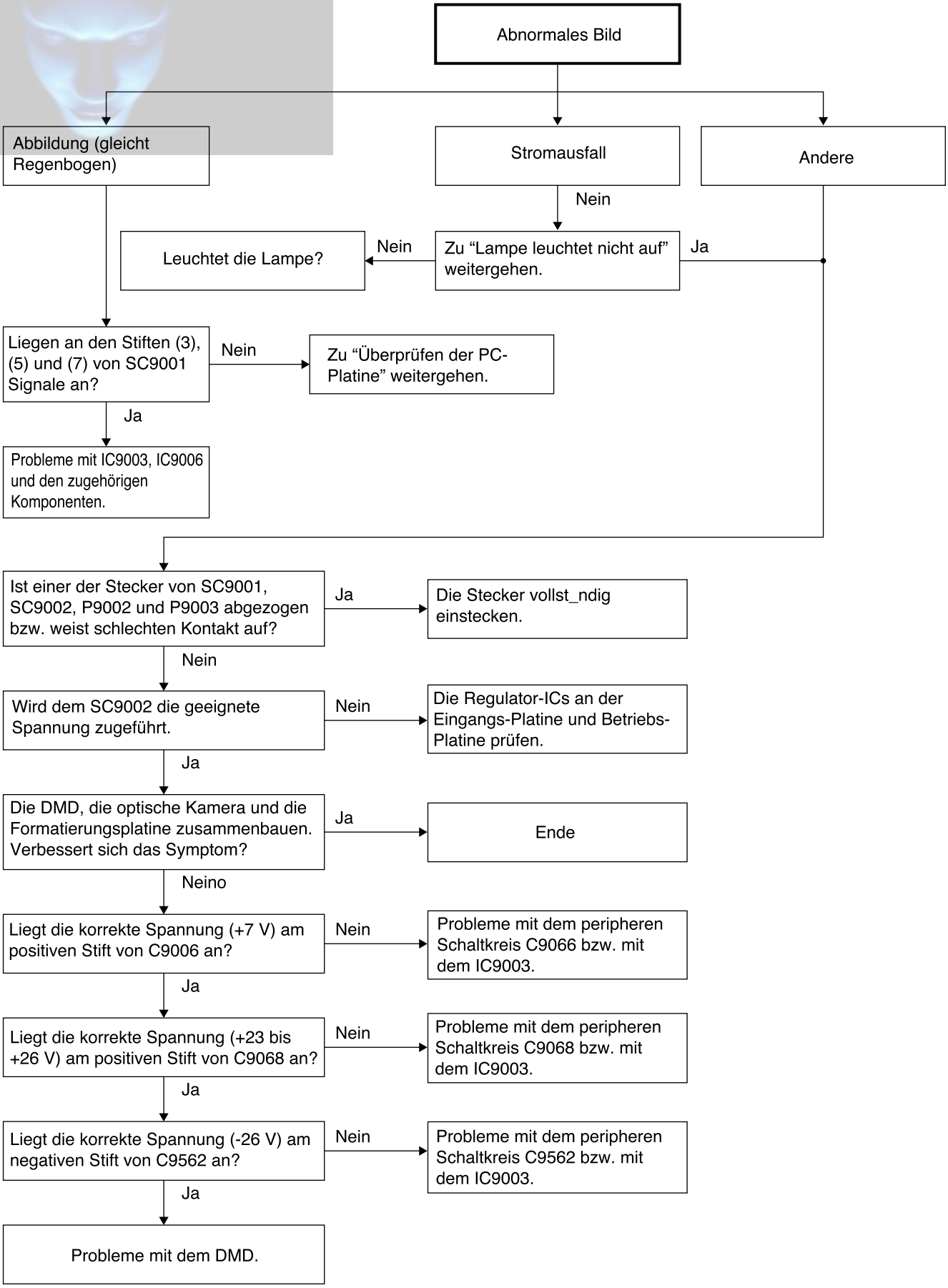

Überprüfen des Sub-Microcomputers und seiner zugehörigen Komponenten
Blinkt die POWER LED in Rot (für 2 Sekunden)?
Nein
Ja
Liegt ein Spannungsausgangssignal von B+3,3 V an den Stiften (12) und (13) des CN3701 an?
Ja
Zu "Überprüfen der PC-Schnittstelle" weitergehen und den flexiblen Stecker überprüfen. Kommunikationsfehler des Sub-Mikrocomputers (KEY) und des SH-Mikrocomputers (PC-Platine) Stift (20) und (21) von P2001.
Nein
Liegt ein Ausgangssignal von 6 V an den Stiften (5) und (6) des P2003 an?
Nein
Q2001 bis Q2004 von IC2001 überprüfen.
Ja
Zu "Überprüfen des Netzteils" weitergehen.
Wird das Bu+6,2-V-Signal ausgegeben?
Nein
Zu "Überprüfen des Netzteils" weitergehen.
Ja
Wird das Bu+3,3-V-Signal ausgegeben?
Nein
Den IC2010 und seinen peripheren Schaltkreis überprüfen.
Ja
Liegt am Stift (19) von IC2001 ein 3,3-V-Ausgangssignal an?
Nein
Den IC2010 und seinen peripheren Schaltkreis überprüfen.
Ja
Den IC2001 und seine zugehörigen Komponenten überprüfen und zu "Überprüfung der Fernbedienungs-Kommunikation" weitergehen.


Überprüfen des Tiefpaß-Filters
Wird das Videosignal den Stiften (4), (8) und (12) des IC3851 zugeführt?
Nein
Die Stifte (4), (8) und (12) von SC3001 überprüfen.
Normal
Abnormal
Q3854 und Q3855 überprüfen.
Die PC-Schnittstelle überprüfen. Den DVI-Eingang (analog) überprüfen.
Ja
Wird das Videosignal den Stiften (24), (21) und (17) des IC3851 zugeführt?
Nein
Der IC3851 ist defekt.
Wenn die Bildqualität abnormal ist, überprüfen, die folgenden Spannungen am Stift (28) von IC3851 anliegen. 0,3 V für 480i, 1 V für 720p, 1080i. Den IC301 überprüfen.
Ja
Wird das Videosignal den Stiften (16), (20) und (24) von IC3001 zugeführt?
Nein
Q3851, Q3852, Q3853 und ihre zugehörigen Komponenten überprüfen.
Ja
Der Tiefpaß-Filterschaltkreis an der Eingangsplatine ist normal. Erscheint ein Bild?
Nein
Wird das Videosignal den Stiften (8), (17) und (23) von IC8013 (AD9888) der PC-Platine zugeführt?
Ja
Ja
Nein
Ende
Den SOG-Schaltkreis oder den IC8013 und seine zugehörigen Komponenten überprüfen.
Den IC8013 und seine zugehörigen Komponenten überprüfen.

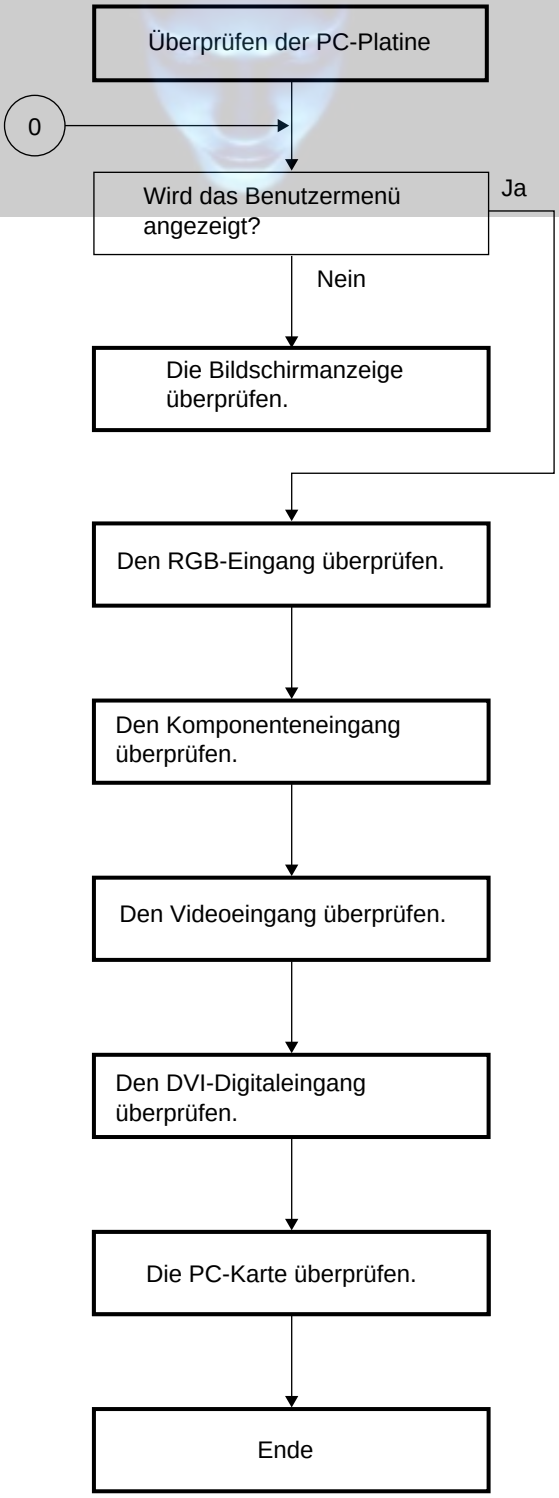

Überprüfen des DTV (480i-Komponenten-Signaleingang)
Das 480i-Komponentensignal dem INPUT 1 zuführen.
INPUT 1 mit der Gerätetaste bzw. mit der Fernbedienung anwählen.
Auf der Benutzermenü-Anzeige 480i unter den Spezialmodi auswählen.
Wird ein Bild ausgegeben?
Nein
Ja
Bestätigung der Synchronisation.
Wird das Y-Signal einschließlich des Synchronisationssignals dem Stift (3) von IC3502 zugeführt?
Ja
Zu “Überprüfen des Tiefpaß-Filterschaltkreises” weitergehen.
Ja
Den IC8016 (Videorecorder) überprüfen.
Ist die Farbe normal?
Nein
Ist der Signaltyp mit der Komponente abgestimmt?
Ja
Nein
Ja
Nein
Den Signaltyp festlegen.
Den IC3501 und seine zugehörigen Komponenten überprüfen.
Wenn Ausgabe über den Monitor vorliegt, das Monitorkabel abziehen.
Abnormal
Auf den Normalzustand zurückgestellt.
Den Monitorausgang einstellen.
Die Monitorausgang-Einrichtung und das Kabel überprüfen.
Erscheinen die Bildumrisse scharf?
Nein
Ja
Wurde 480i unter den Spezialmodi auswählt?
Ja
Nein
Ende
Der IC8025 ist defekt.
480i anwählen.


Überprüfen des Videoeingangs
Das Farbbildsignal dem INPUT 3 zuführen. INPUT 3 mit der Gerätetaste bzw. mit der Fernbedienung anwählen.
Wird ein Bild ausgegeben?
Ja
Bestehen Bildstörungen?
Ja
Werden 5pm-Signale (horizontal) und 10pm-Signale (vertikal) dem IC8363 der PC-Schnittstelle zugeführt?
Nein
Nein
Nein
Ja
1
Wird das Videosignal einschließlich dem Synchronisationssignal an Stift (3) von SC3001 der Eingangsplatine zugeführt?
Ja
Den IC8016 (Videorecorder) der PC-Platine und seine zugehörigen Komponenten überprüfen. Q8002 überprüfen.
IC8363 und IC8025 (CVIC2) und ihre zugehörigen Komponenten überprüfen.
Nein
Wird das Videosignal einschließlich dem Synchronisationssignal an Stift (7) von IC3501 der Eingangsplatine zugeführt?
Ja
Q3512 und Q3513 auf der Eingangsplatine überprüfen.
Nein
1
Den IC3501 und seinen peripheren Schaltkreis überprüfen.
Nein
Das S-Videosignal dem INPUT 2 zuführen. INPUT 2 mit der Gerätetaste bzw. mit der Fernbedienung anwählen.
Ja
Ja
Ist die Farbe normal?
Nein
Wird das C-Signal dem Stift (11) von SC3001 zugeführt?
Ja
Nein
Ende
Q3502 auf der Eingangsplatine überprüfen.

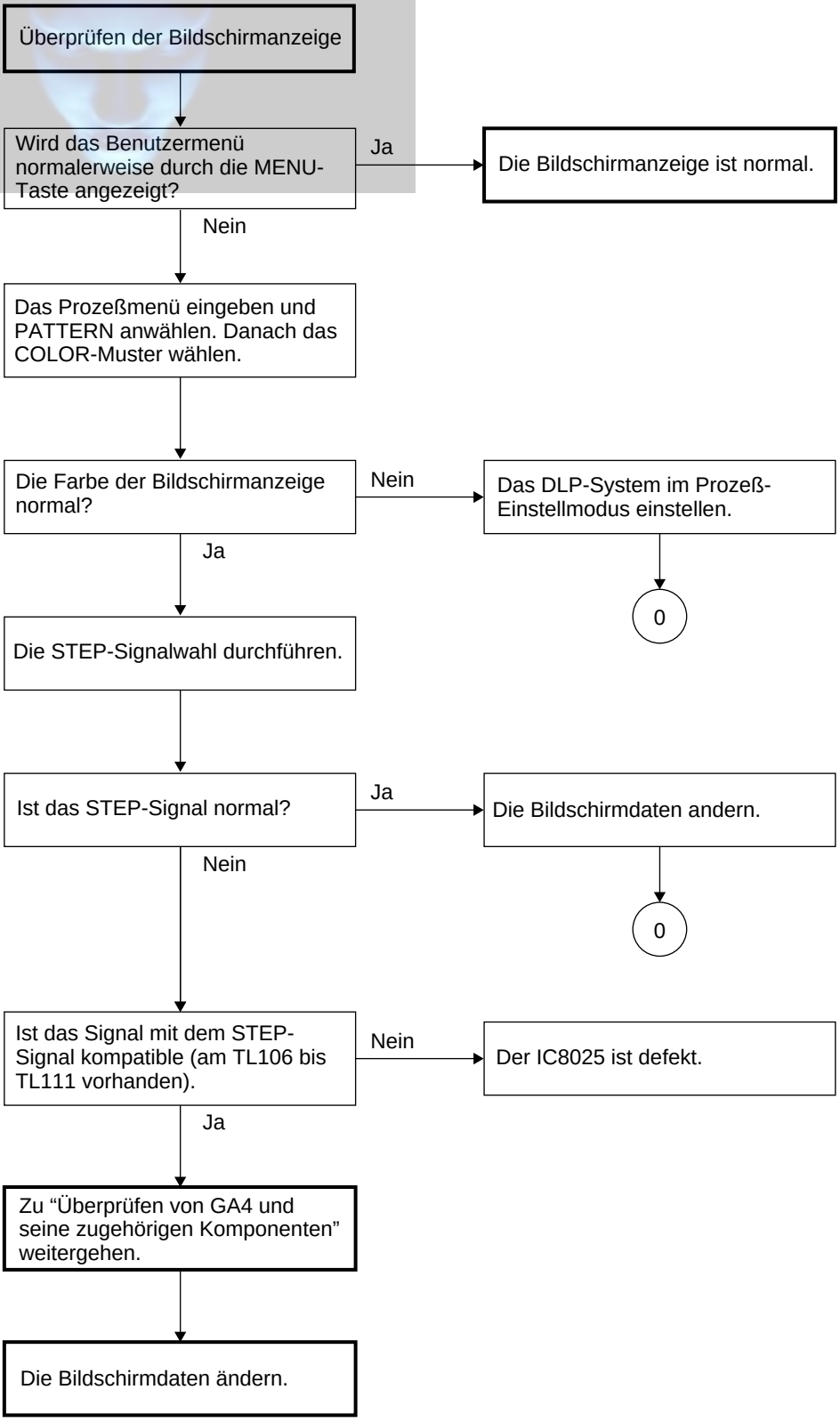
- FORMATTER Unit



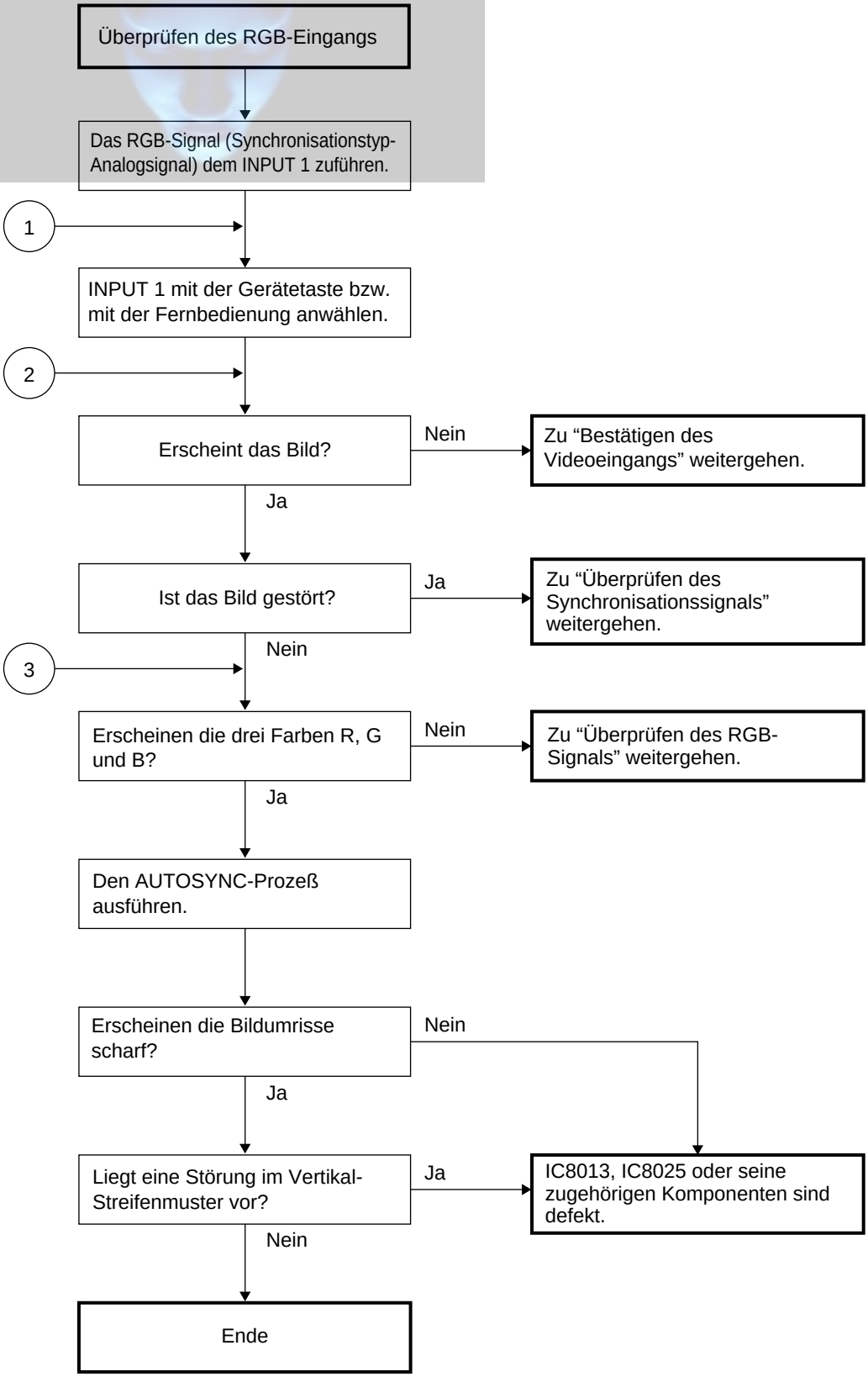
- PC I/F Unit-1/12



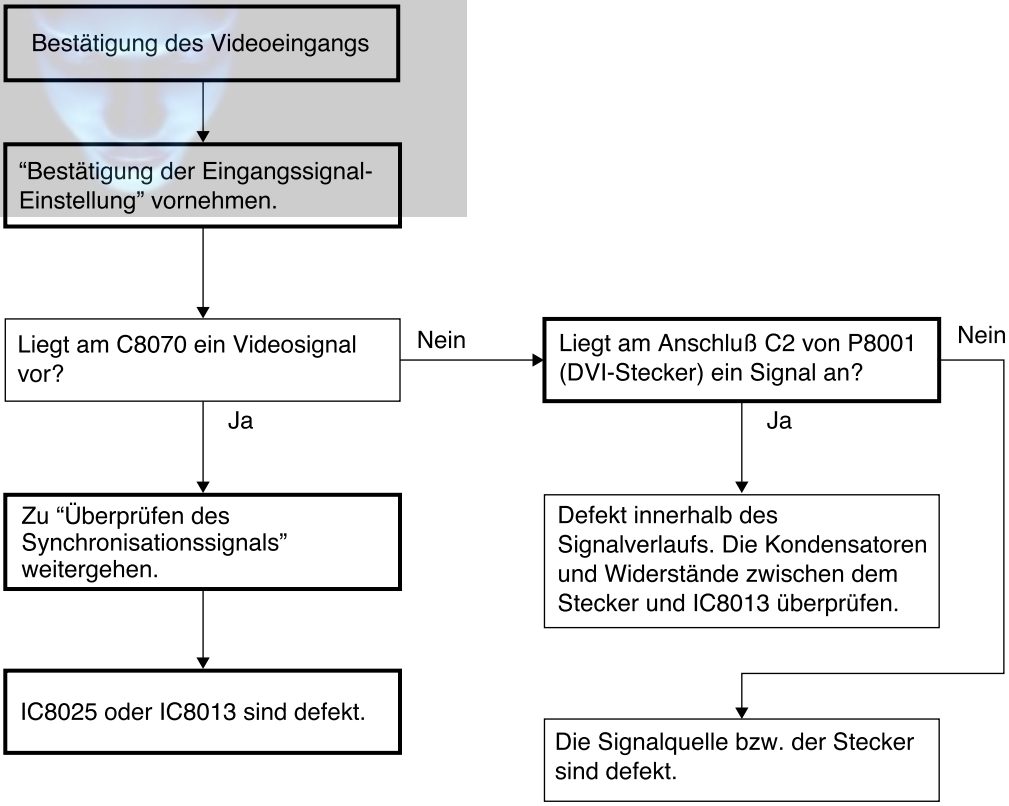
- PC I/F Unit-2/12

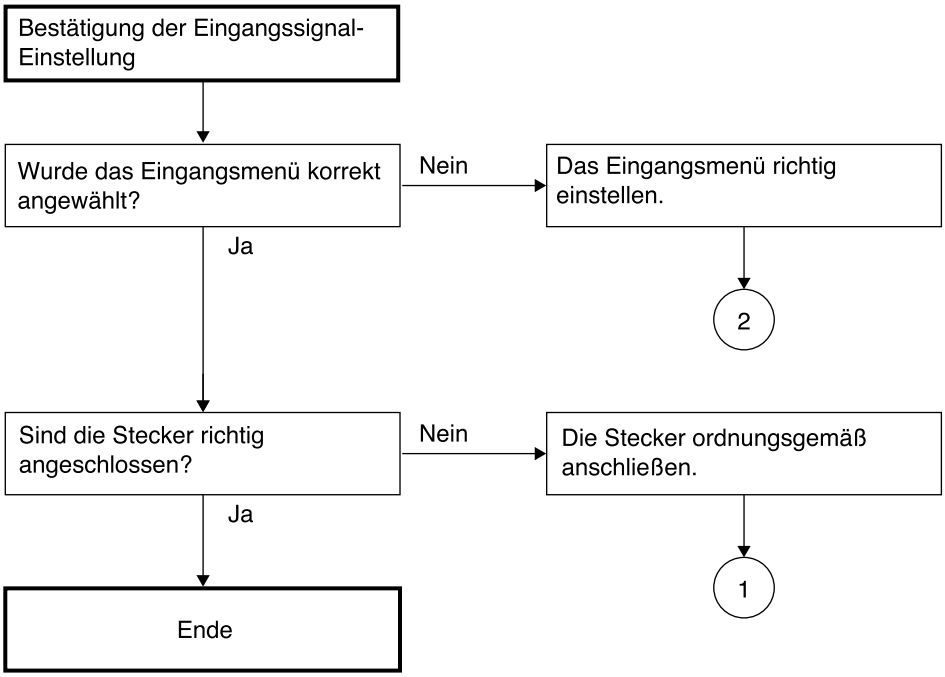


- PC I/F Unit-3/12

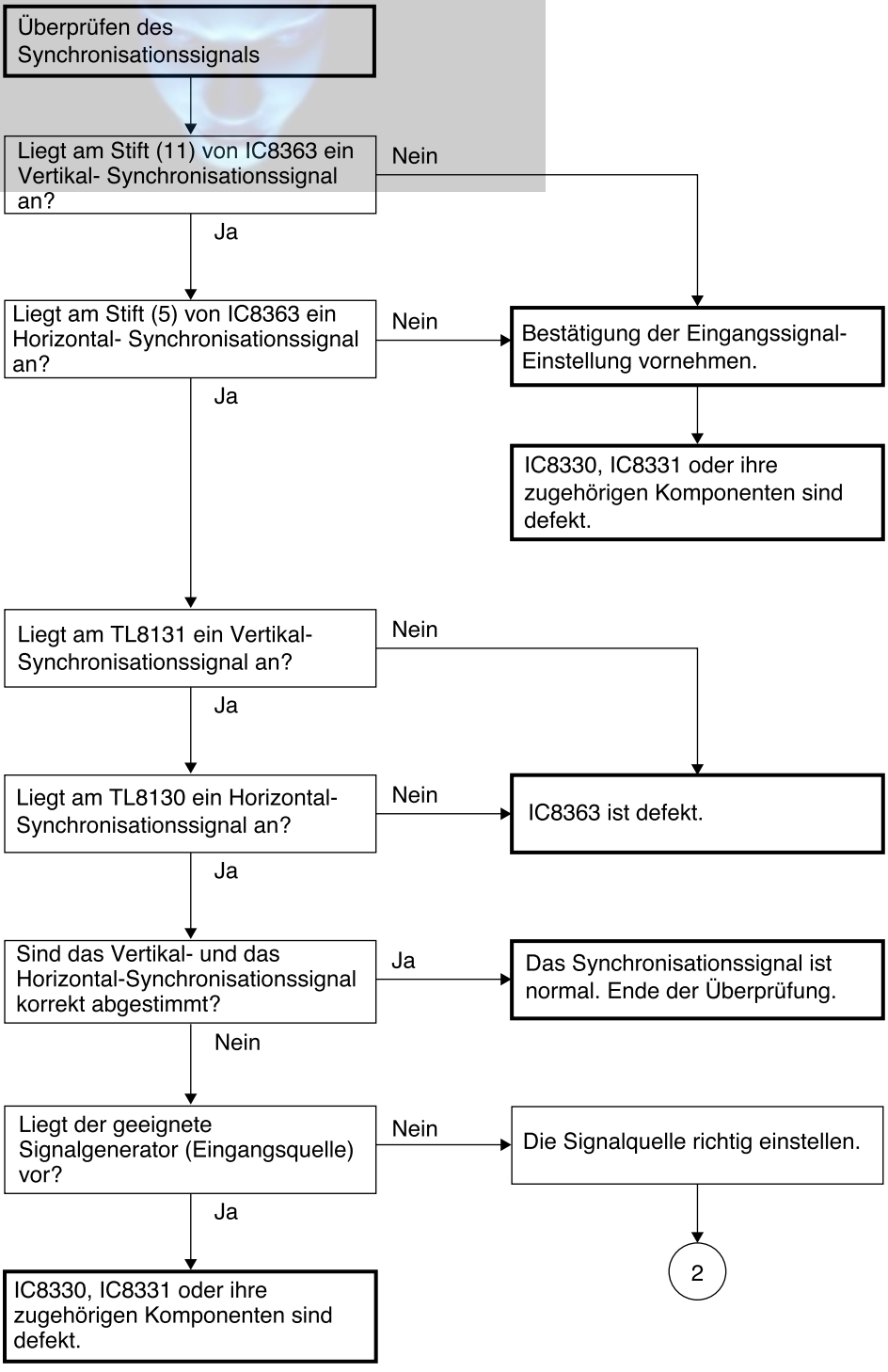


- PC I/F Unit-4/12

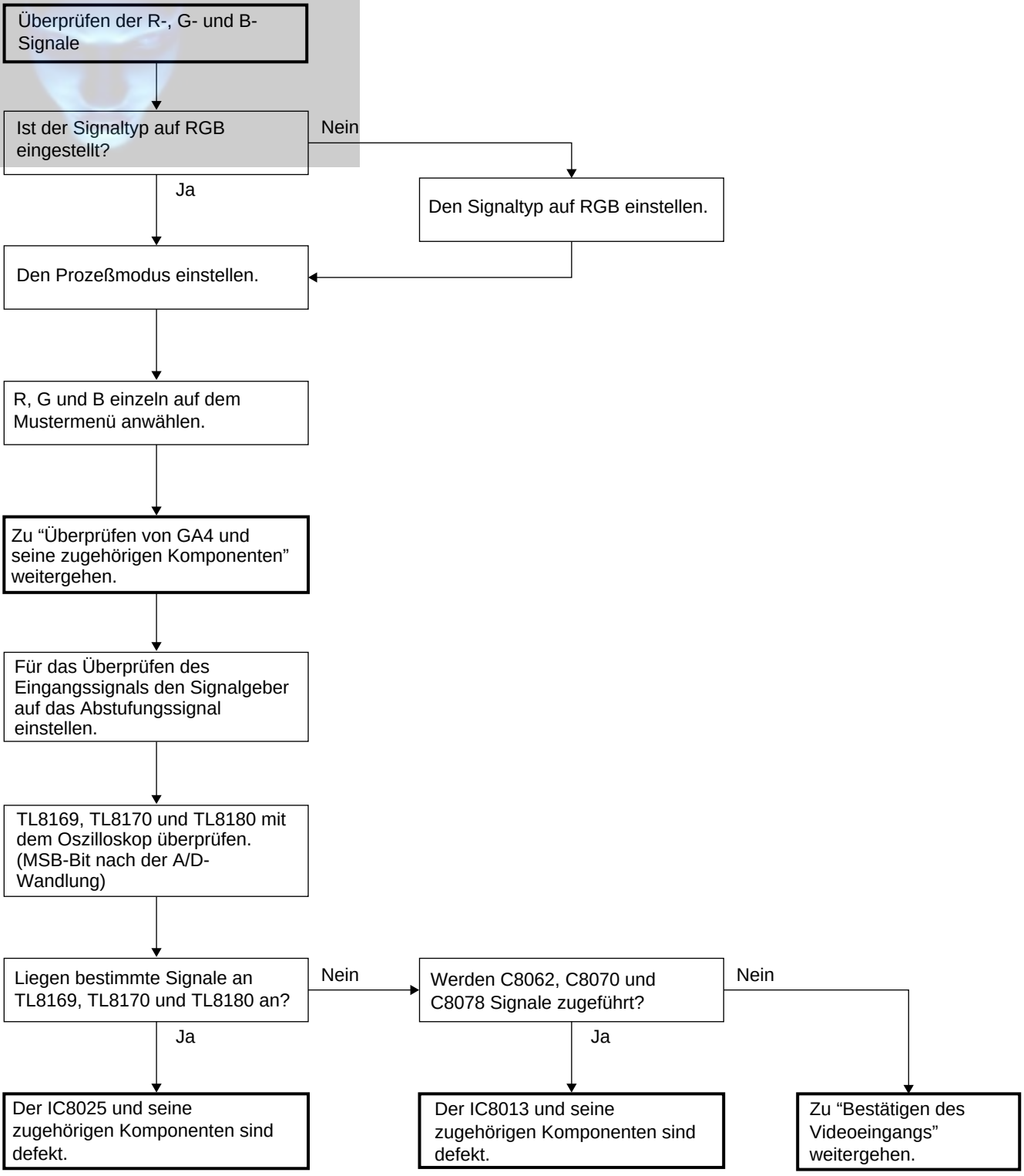




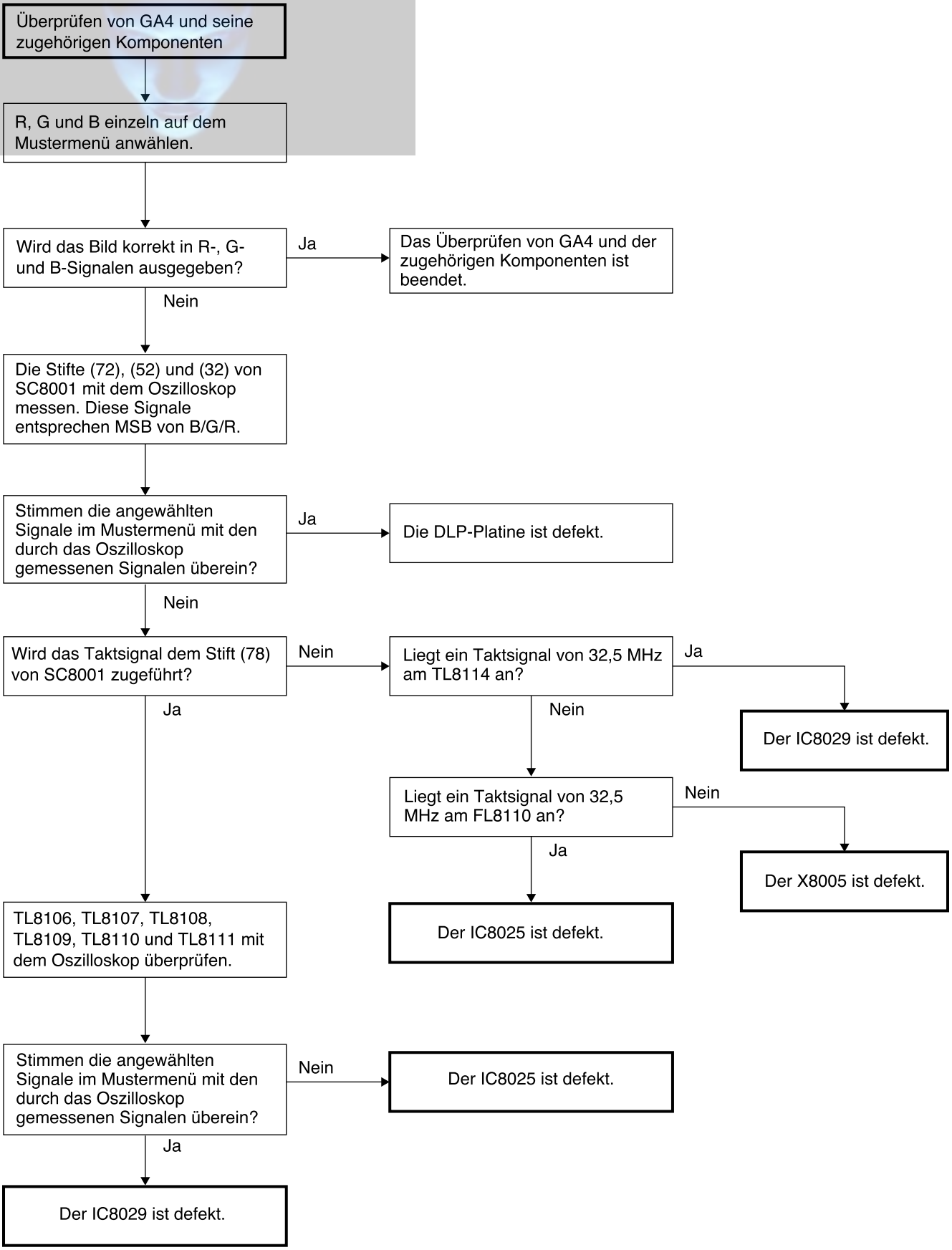
- PC I/F Unit-5/12



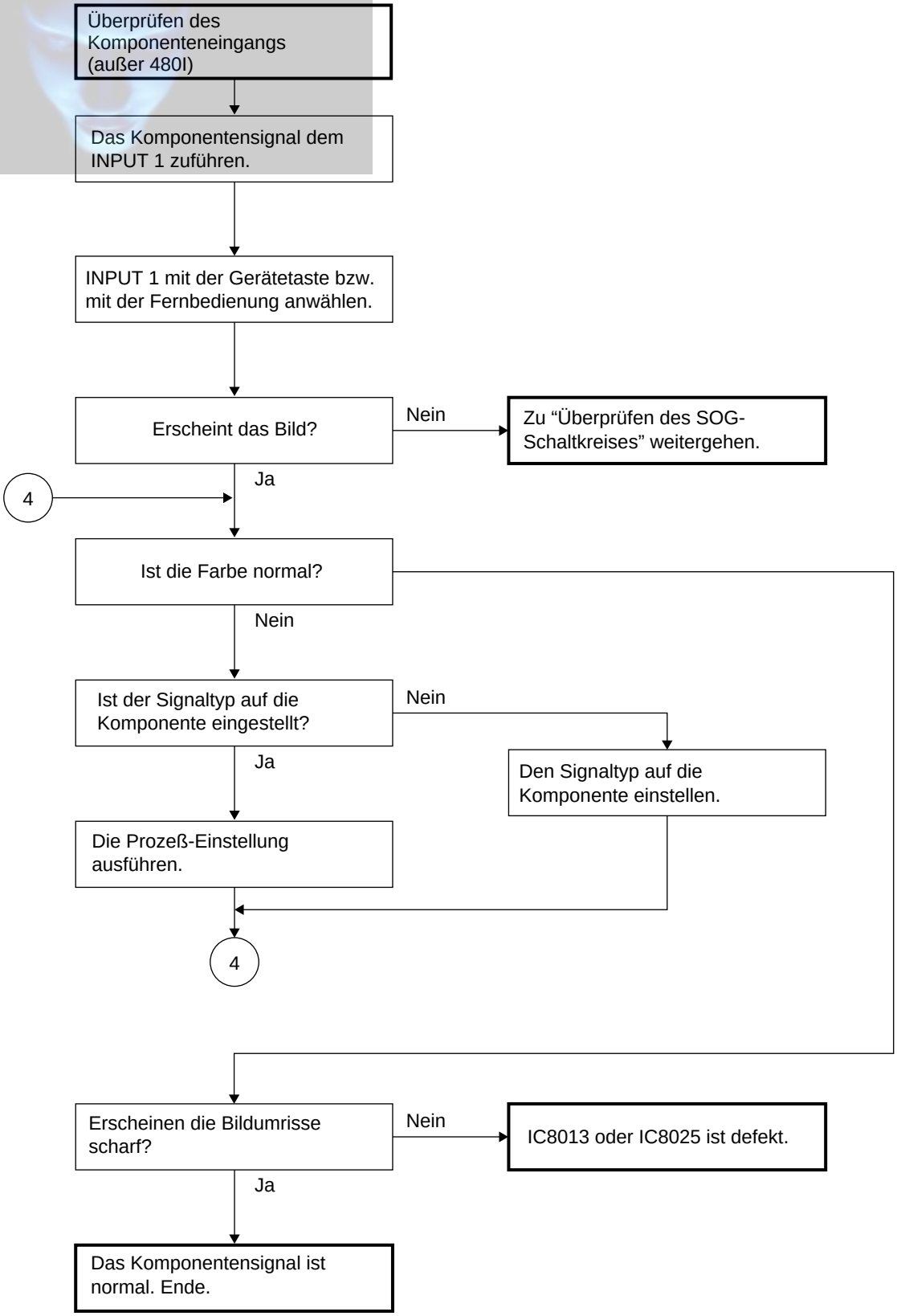
- PC I/F Unit-6/12



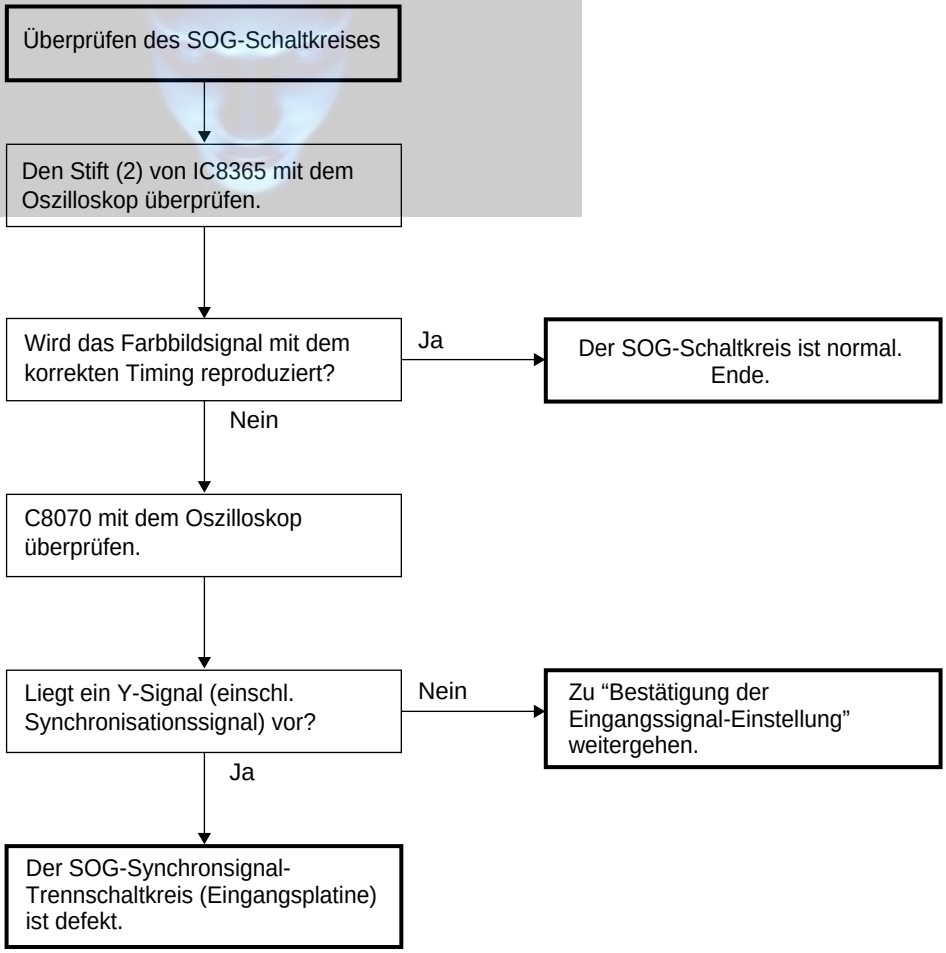
- PC I/F Unit-7/12



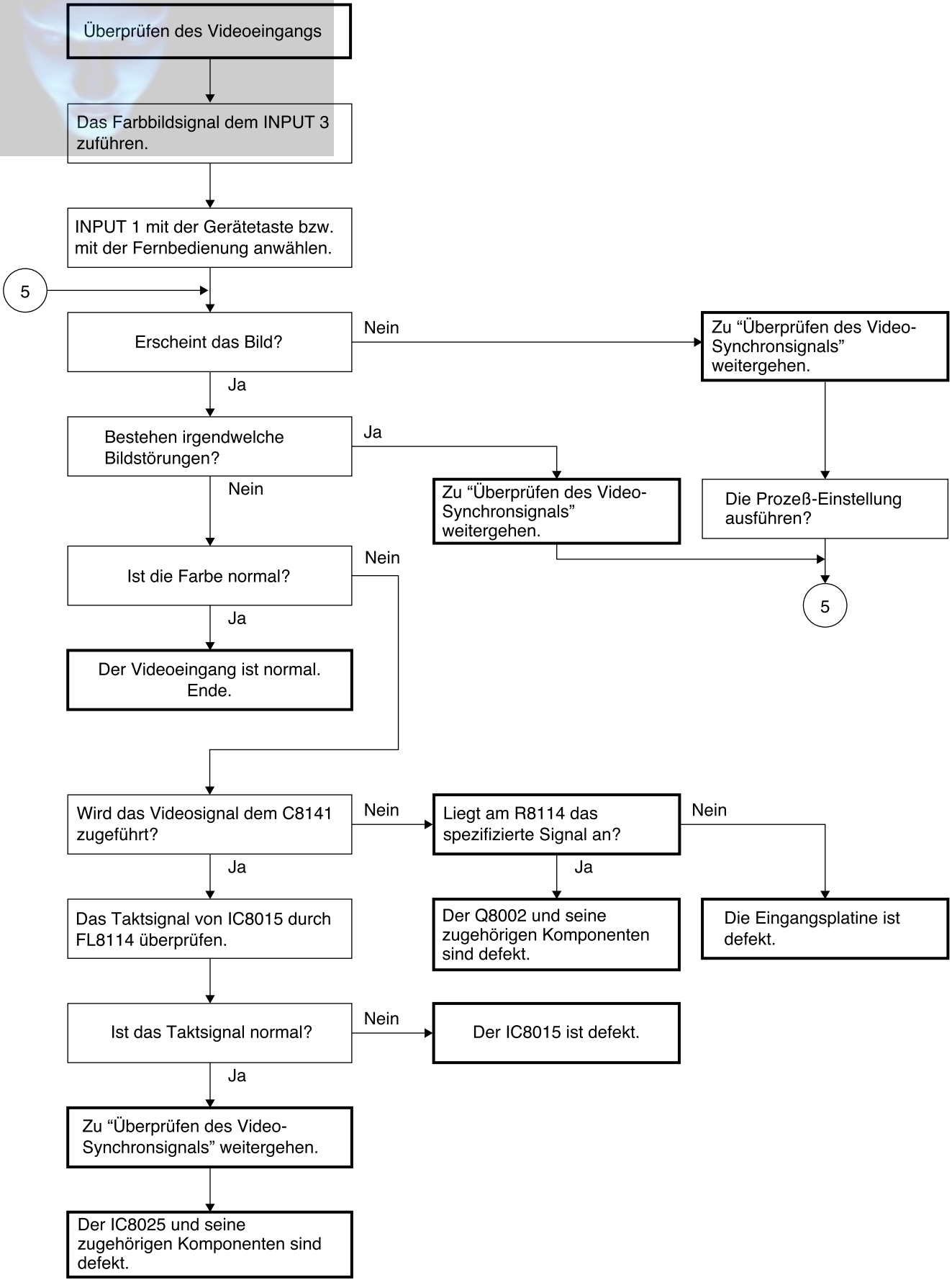
- PC I/F Unit-8/12



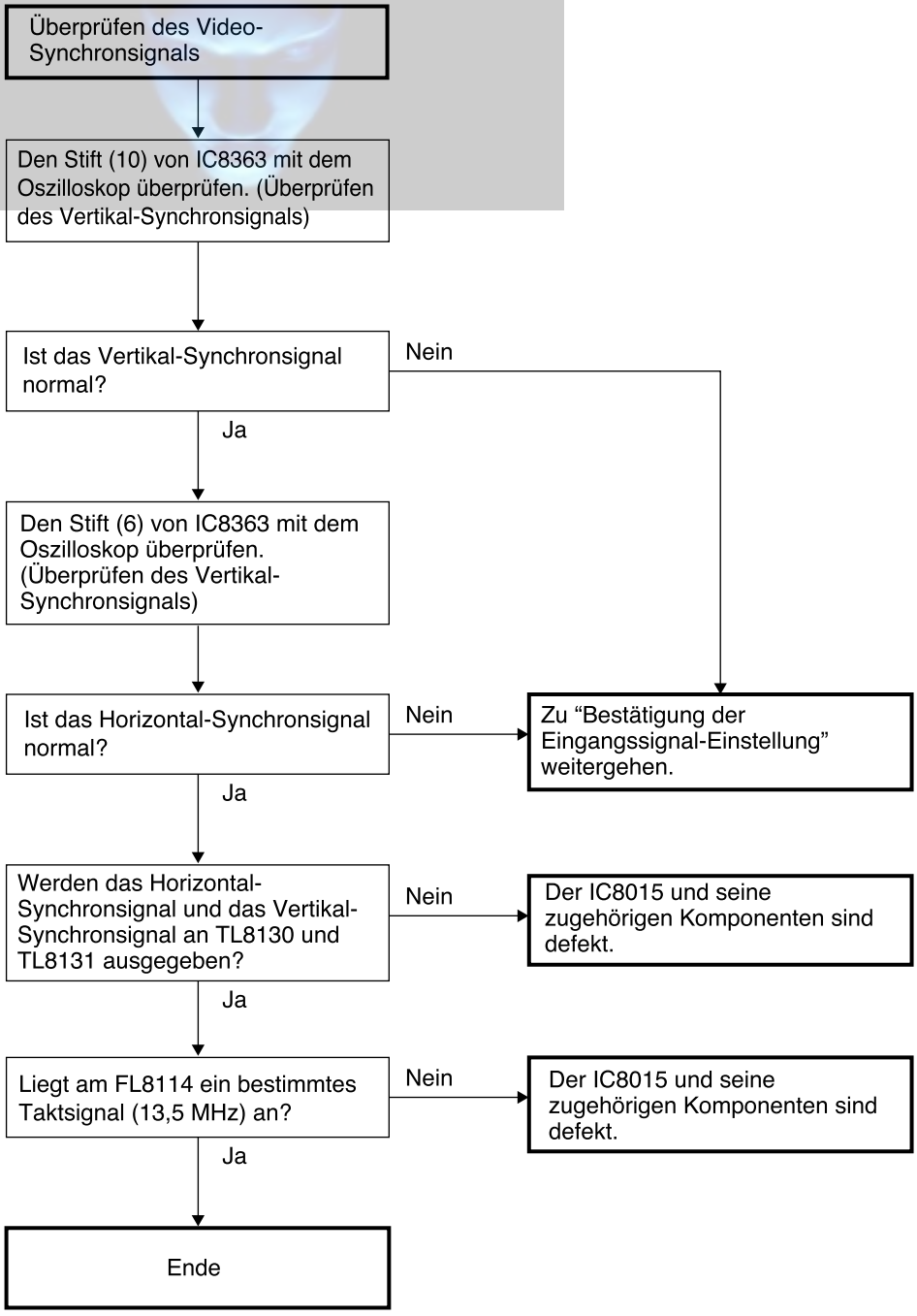
- PC I/F Unit-9/12



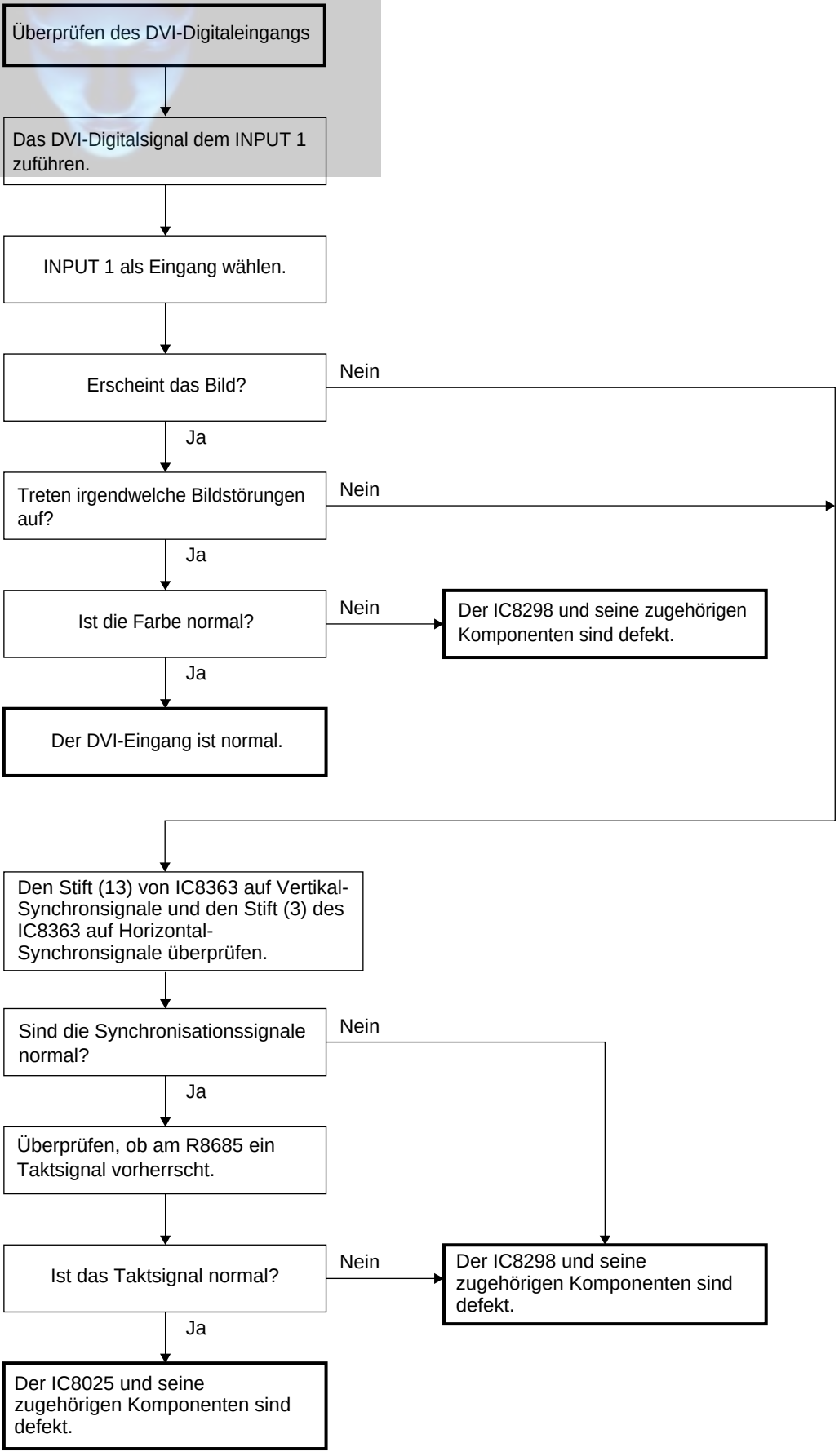
- PC I/F Unit-10/12



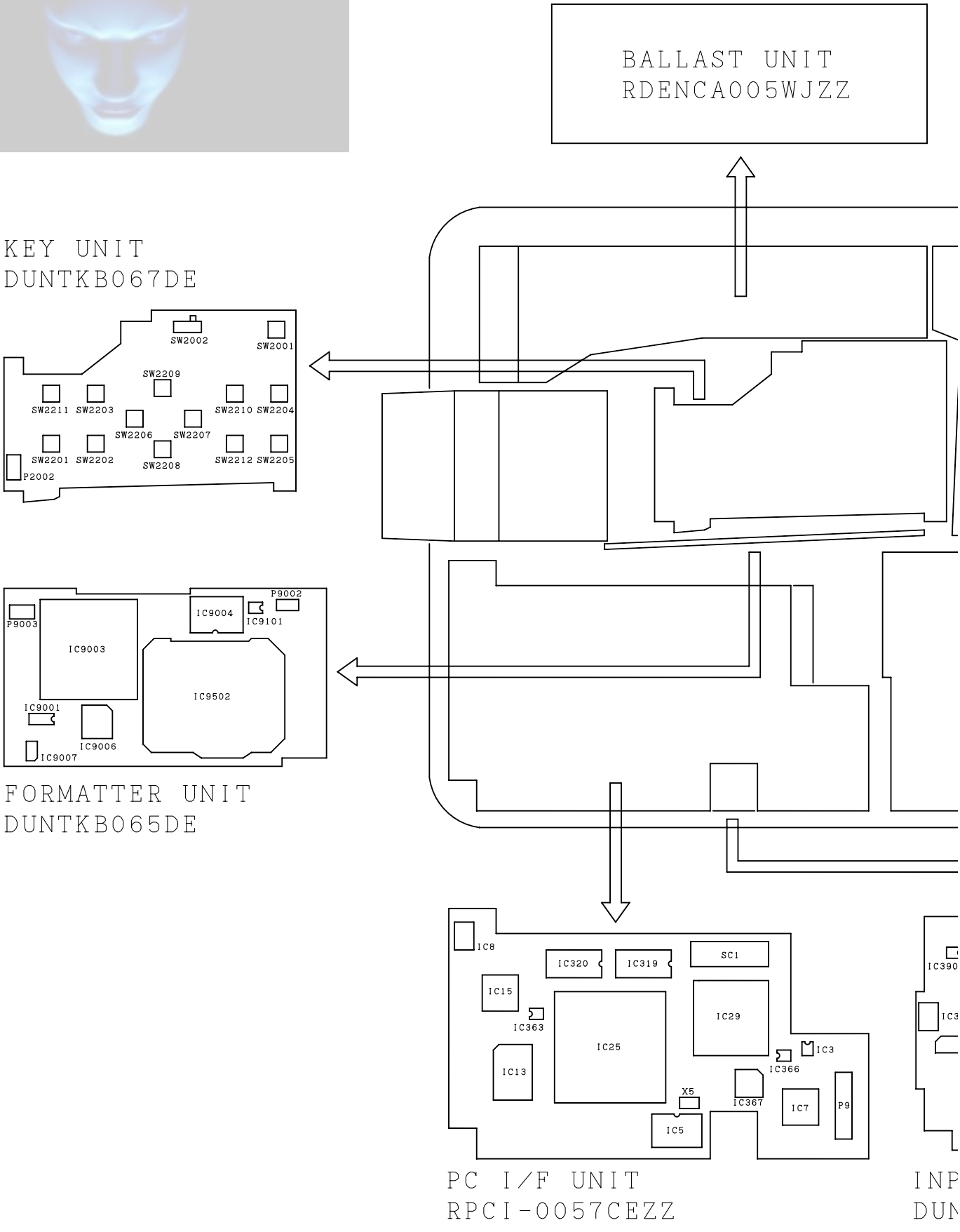
- PC I/F Unit-11/12

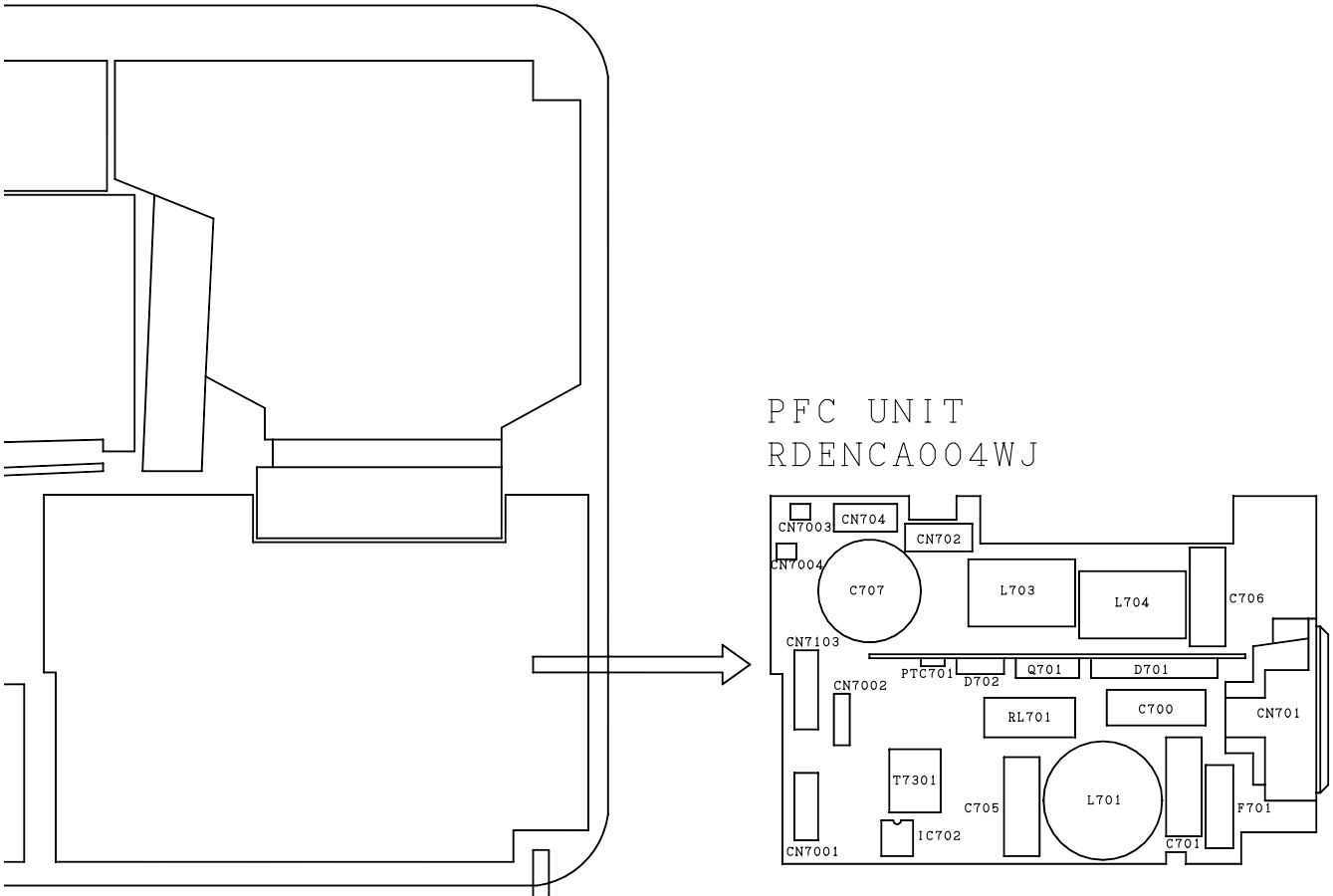


- PC I/F Unit-12/12



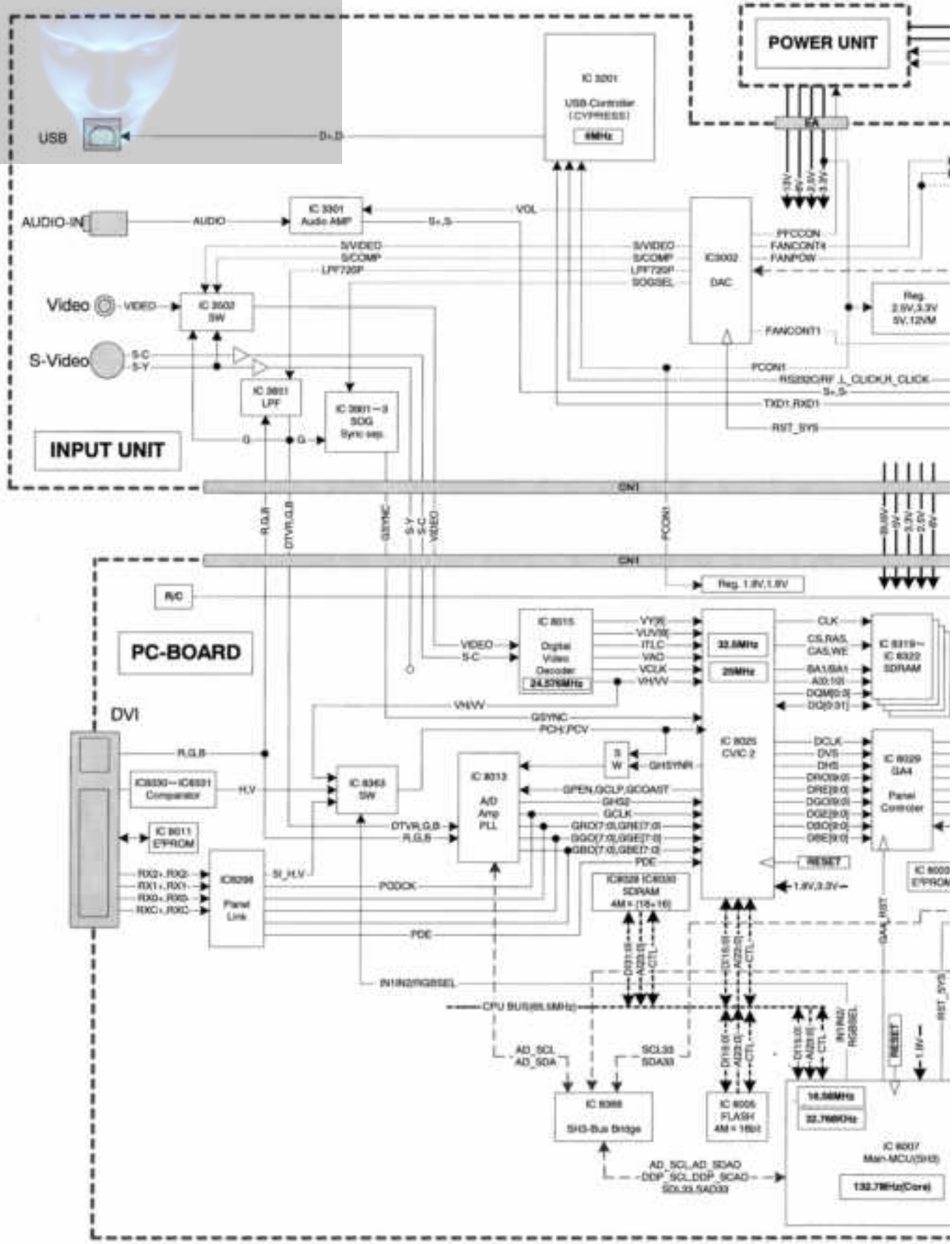
CHASSIS LAYOUT/CHASSIS-ANORDNUNG

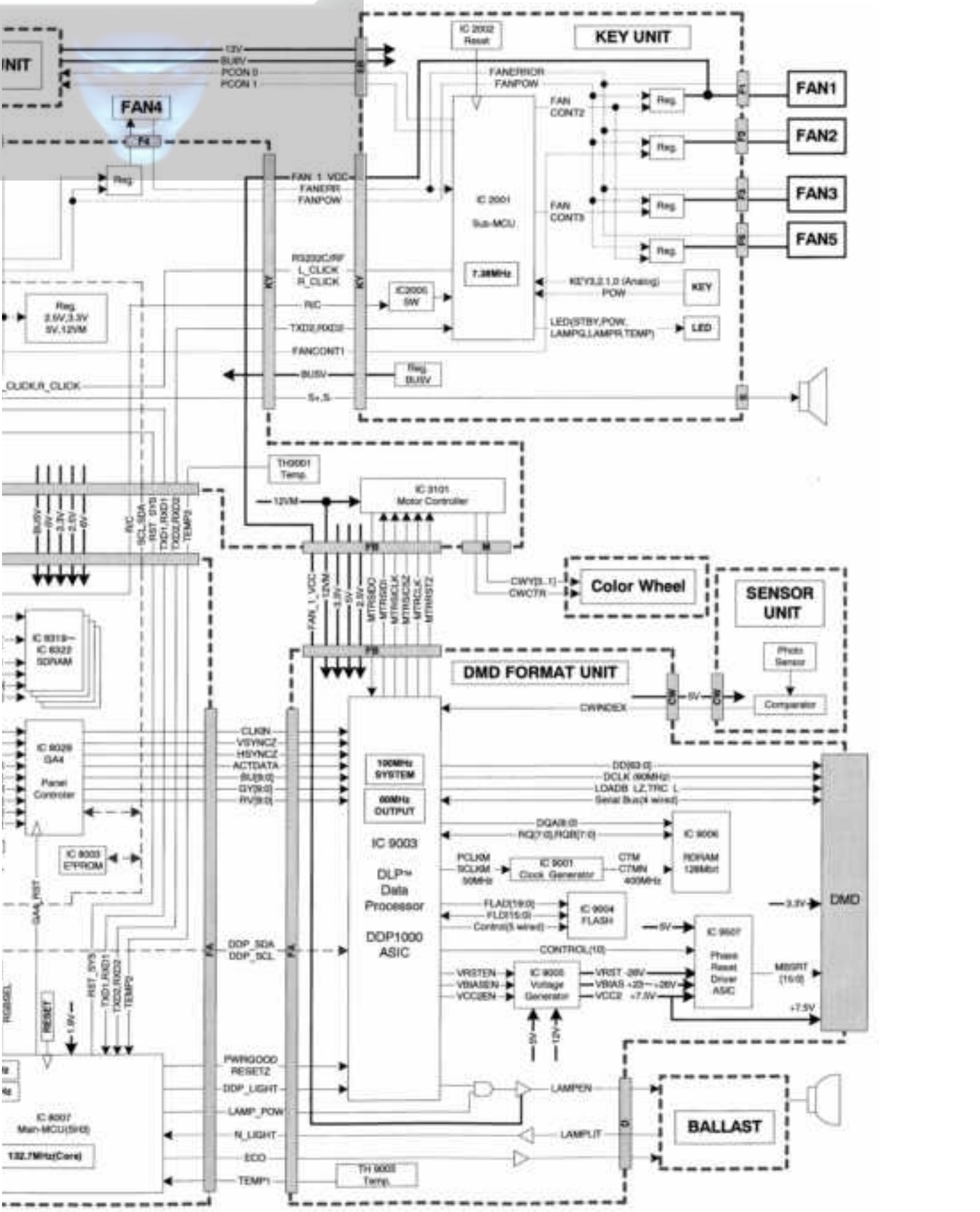




10	11	12	13	14	15	16	17	18	19

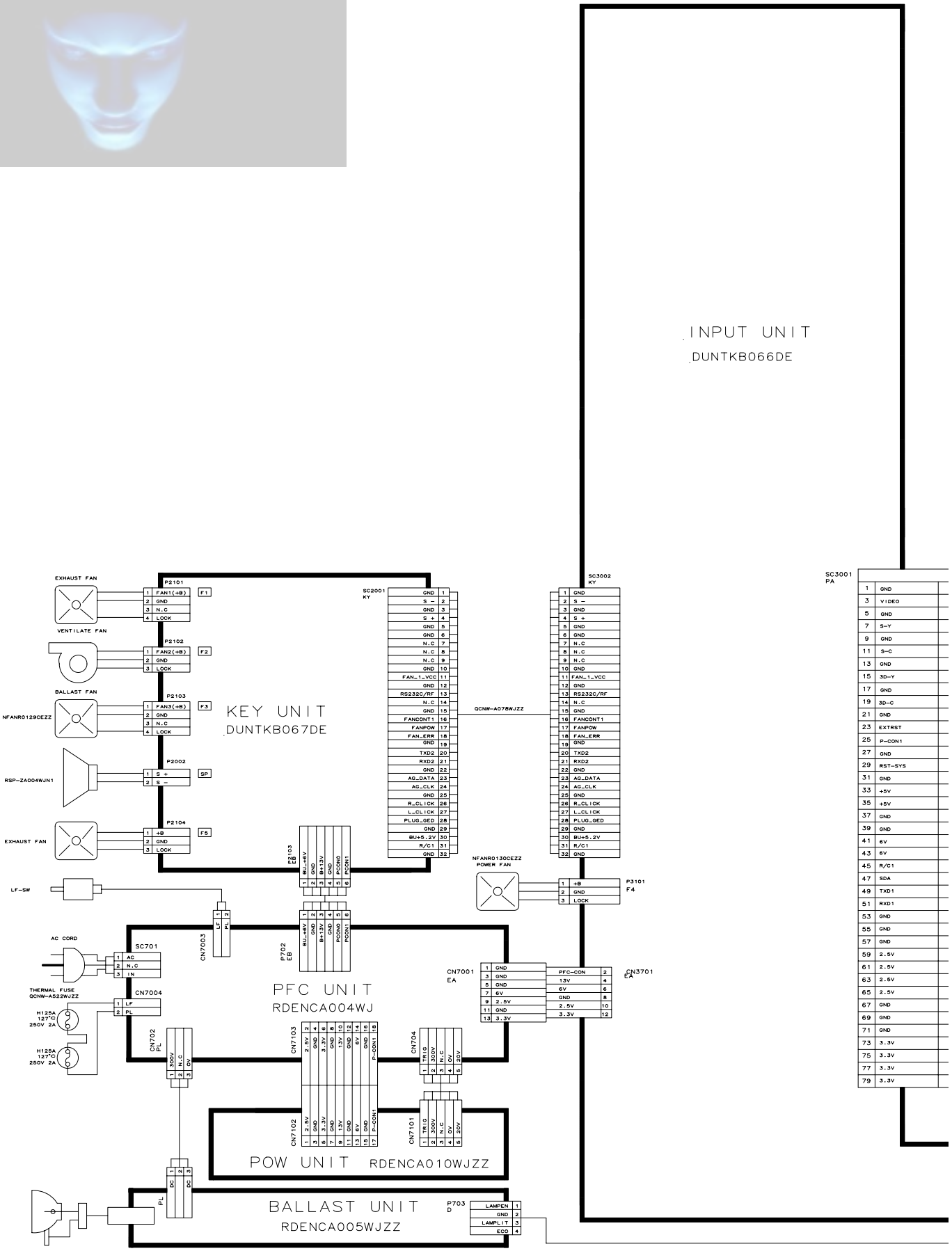
BLOCK DIAGRAM/BLOCKCHALTBILD

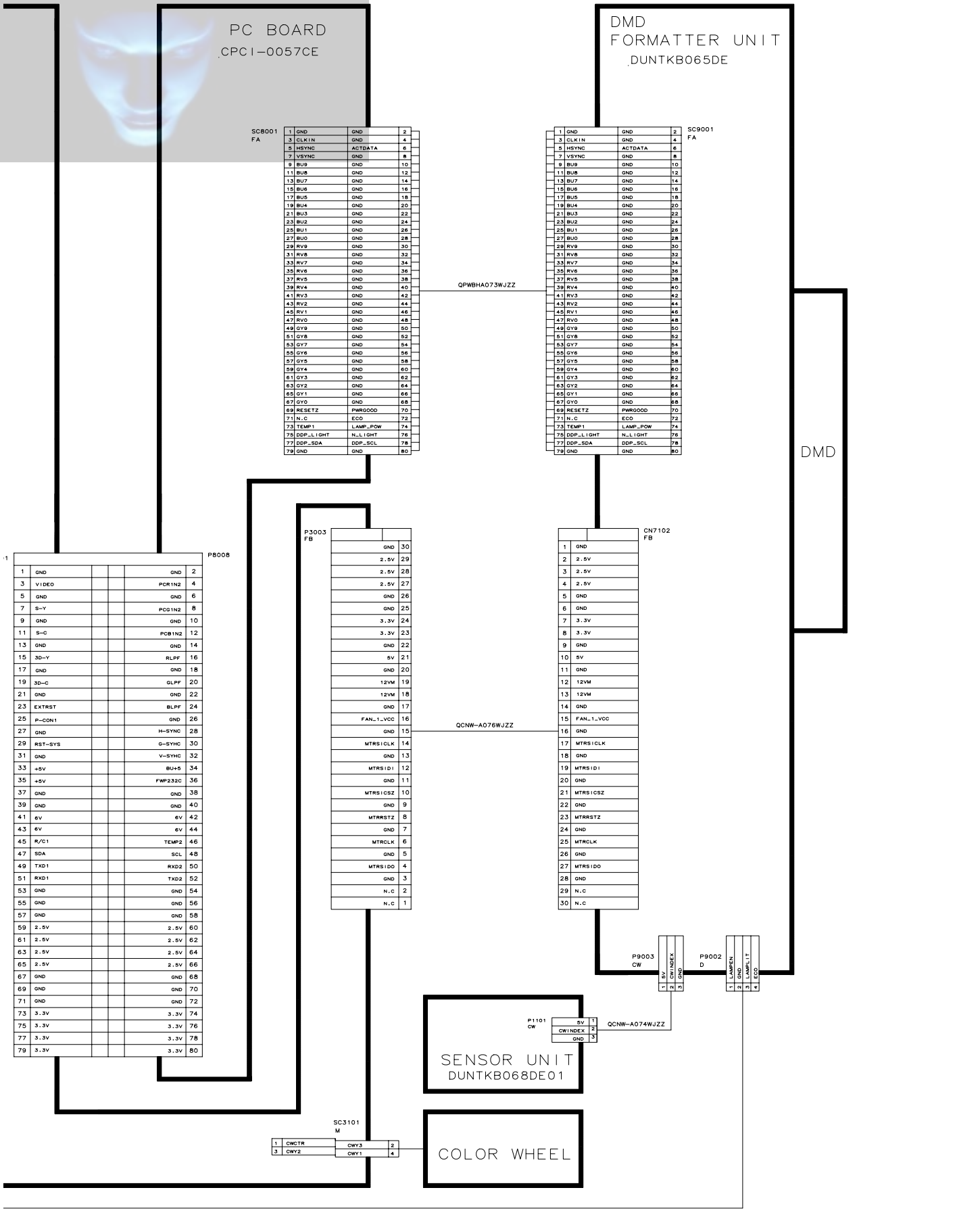




10	11	12	13	14	15	16	17	18	19

OVERALL WIRING DIAGRAM/GESAMTSCHALTPLAN





10	11	12	13	14	15	16	17	18	19

DESCRIPTION OF SCHEMATIC DIAGRAM

VOLTAGE MEASUREMENT CONDITION:

1. Voltages at test points are measured at the supply voltage of AC 230V. Signals are fed by a colour bar signal generator for servicing purpose and the above voltages are measured with a 20k ohm/V tester.

WAVEFORM MEASUREMENT CONDITION:

1. Waveforms at test points are observed at the supply voltage of AC 230V. Signals are fed by a colour bar signal generator for servicing purpose.

INDICATION OF RESISTOR & CAPACITOR:

RESISTOR

1. The unit of resistance "Ω" is omitted. (K=kΩ=1000 Ω, M=MΩ).
2. All resistors are ± 5%, unless otherwise noted. (J= ± 5%, F= ± 1%, D= ± 0.5%)
3. All resistors are 1/16W, unless otherwise noted.
4. All resistors are Carbon type, unless otherwise noted.
   Ⓒ: Solid Ⓦ: Cement
   Ⓢ: Oxide Film Ⓣ: Special
   Ⓝ: Metal Coating

CAPACITOR

1. All capacitors are μF, unless otherwise noted. (P=pF=μμF).
2. All capacitors are 50V, unless otherwise noted.
3. All capacitors are Ceramic type, unless otherwise noted.
   (ML): Mylar (TA): Tantalum
   (PF): Polypro Film (ST): Styrol

CAUTION:
This circuit diagram is original one, therefore there may be a slight difference from yours.

SAFETY NOTES:

1. ***DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACEING PARTS.***
2. ***SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.***

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH " ⚠ ( ) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

BESCHREIBUNG DES SCHEMATISCHEN SCHALTPLANS

SPANNUNGSMESSUNGEN:

1. Spannungen an den Prüfpunkten werden bei einer Netzspannung von 230V gemessen, Signale werden für die Wartung mit einem Farbbalken-Signal generator zugeführt, und Spannungen werden mit einem Meßinstrument (20 kΩ/V) ermittelt.

SIGNALFORMMESSUNGEN:

1. Die Wellenformen an den Testpunkten werden bei einer Netzspannung von 230V verfolgt. Signale werden für die Wartung mit einem Farbbalken-Signal generator zugeführt.

BEZEICHNUNG DES WIDERSTANDS UND KONDENSATORS:

WIDERSTAND

1. Die Widerstandseinheit "Ω" wird weggelassen. (K=kΩ=1000 Ω, M=MΩ).
2. Alle Widerstände haben ± 5%, sofern nicht anders angegeben. (J= ± 5%, F= ± 1%, D= ± 0.5%)
3. Alle Widerstände haben 1/16W, sofern nicht anders angegeben.
4. Alle Widerstände sind Kohletyp, sofern nicht anders angegeben.
   Ⓒ: Fest Ⓦ: Zement
   Ⓢ: Oxidefilm Ⓣ: Spezial
   Ⓝ: Metallüberzug

KONDENSATOR

1. Die Kapazitätseinheit ist μF, sofern nicht anders angegeben. (P=pF=μμF).
2. Alle Kondensatoren haben 50V, sofern nicht anders angegeben.
3. Alle Kondensatoren sind Keramiktyp, sofern nicht anders angegeben.
   (ML): Mylar (TA): Tantal
   (PF): Polyprofilm (ST): Styrol

ACHTUNG:
bei diesem Schaltplan handelt es sich um den ursprünglichen. Esönnen daher geringfügige Unterschiede zu dem Ihrem bestehen.

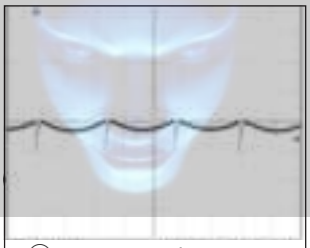
SICHERHEITSANMERKUNGEN:

1. ***VOR DEM AUSWECHSELN VON TEILEN MUSS UNBEDINGT NETZSTECKER AUS DER NETZSTECKDOSE GEZOGEN WERDEN.***
2. ***DIE WARMEABLEITER DER HALBLEITER SOLLTEN BEIM BETRIEB DES CHASSIS ALS MÖGLICHE URSACHEN VON GEFÄHRLICHEN ELEKTRISCHEN SCHLÄGEN BETRACHTET WERDEN.***

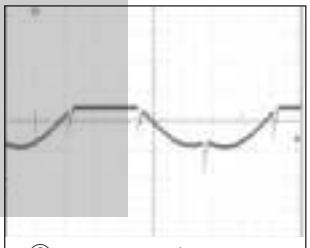
WICHTIGE SICHERHEITSANMERKUNGEN:

MIT "⚠ ( )BEZEICHNETEN TEILE SIND BESONDERS WICHTIG FÜR DIE AUFRECHTERHALTUNG DER SICHERHEIT . BEIM WECHDIESER TEILE SOLLTEN DIE VORGESCHRIEBENEN TEILE IMMER VERWENDET WERDEN, UM SOWOHL DIE SICHERHEIT ALS AUCH DIE LEISTUNG DES GERÄTES AUFRECHTZUERHALTEN.

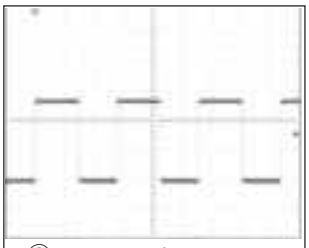
WAVEFORMS/WELLENFORMEN



① SC3101 1-pin
(INPUT CWCTR)
H : 200µ sec/div
V : 6.90V/div

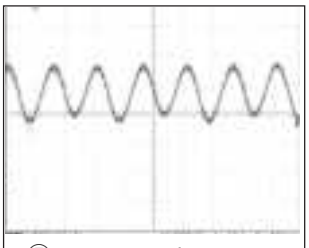


② SC3101 3-pin
(INPUT CWY2)
H : 200µ sec/div
V : 6.90V/div

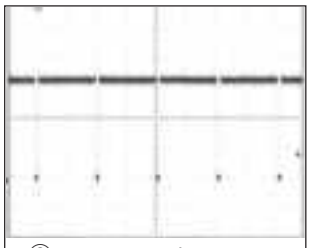


③ P9002 1-pin
(FORMAT LAMPEN)
H : 2m sec/div
V : 1.64V/div

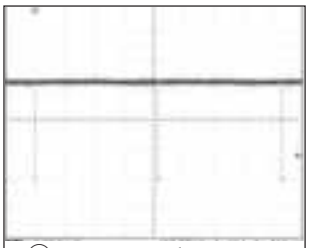
④ P9003 2-pin
(FORMAT CWINDEX)
H : 2m sec/div
V : 1.64V/div



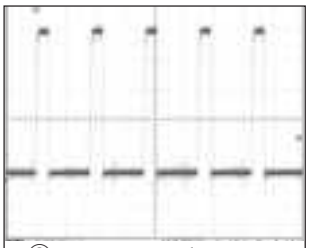
⑤ SC9001 3-pin
(FORMAT CLKIN)
H : 400µ sec/div
V : 870mV/div



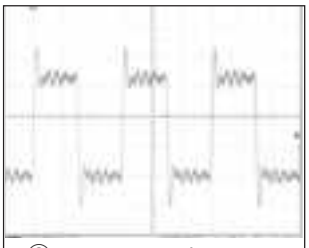
⑥ SC9001 5-pin
(FORMAT HSYNC)
H : 10µ sec/div
V : 880mV/div



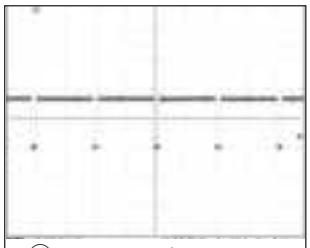
⑦ SC9001 7-pin
(FORMAT VSYNC)
H : 4m sec/div
V : 880mV/div



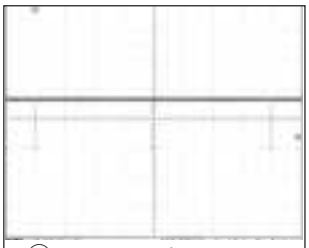
⑧ SC9002 17-pin
(FORMAT MTRSICLK)
H : 2µ sec/div
V : 1.44V/div



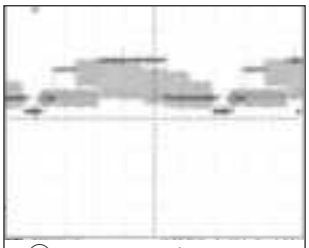
⑨ SC9002 25-pin
(FORMAT MTRCLK)
H : 40m sec/div
V : 1.44V/div



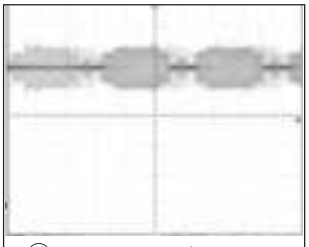
⑩ IC8363 7-pin
(PC-BOARD PCH)
H : 10µ sec/div
V : 840mV/div



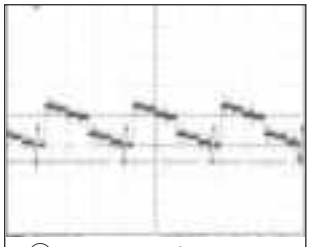
⑪ IC8363 1-pin
(PC-BOARD PCV)
H : 4m sec/div
V : 840mV/div



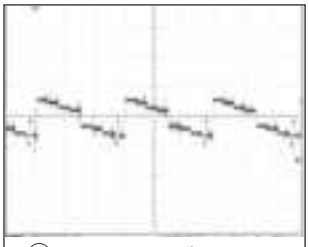
⑫ SC3001 3-pin
(INPUT VIDEO)
H : 10µ sec/div
V : 180mV/div



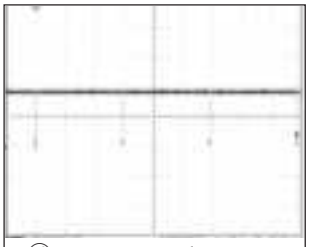
⑬ SC3001 11-pin
(INPUT S-C)
H : 20µ sec/div
V : 1.44V/div



⑭ SC3001 8-pin
(INPUT PCGIN2)
H : 10µ sec/div
V : 180mV/div



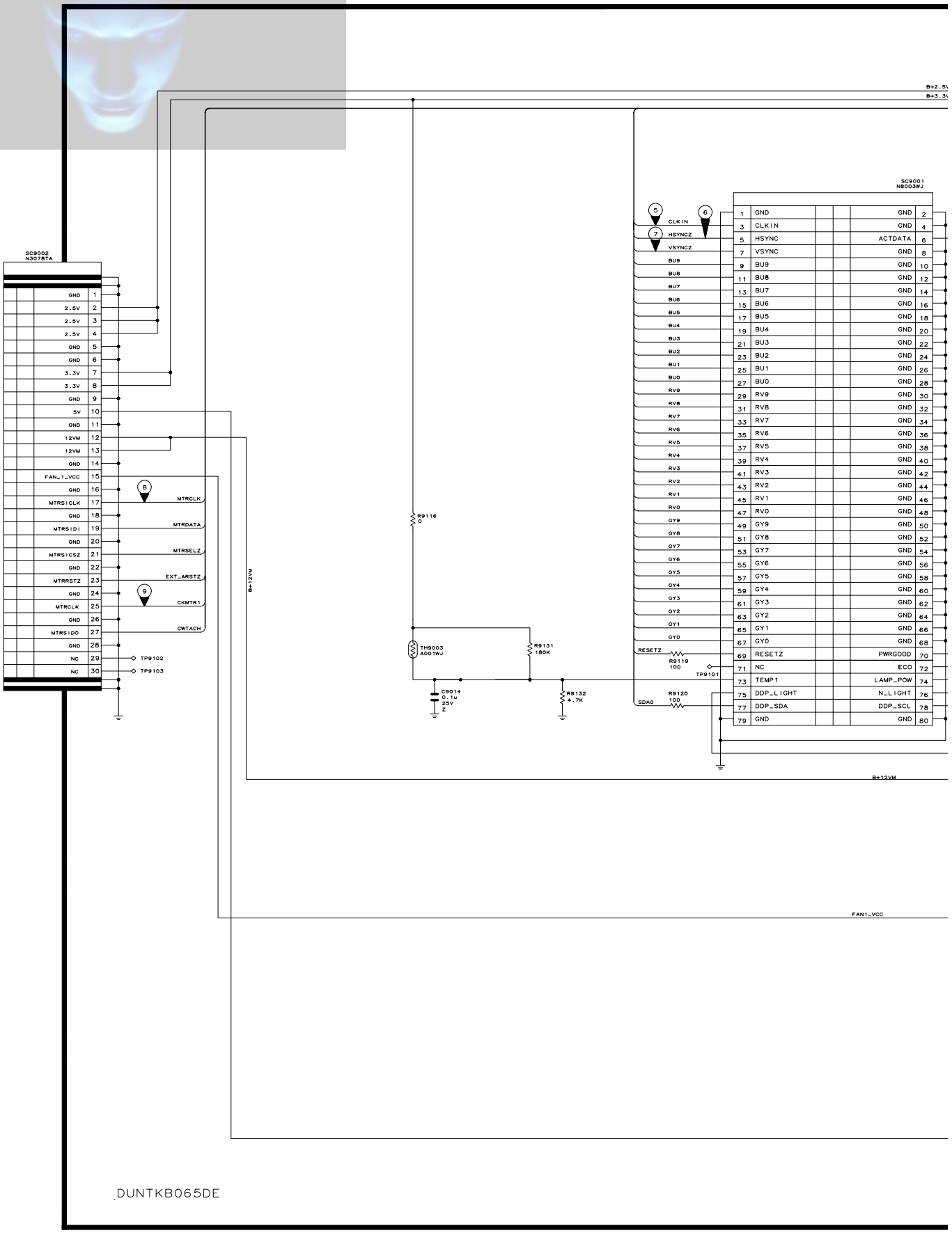
⑮ SC3001 20-pin
(INPUT GLPF)
H : 10µ sec/div
V : 230mV/div

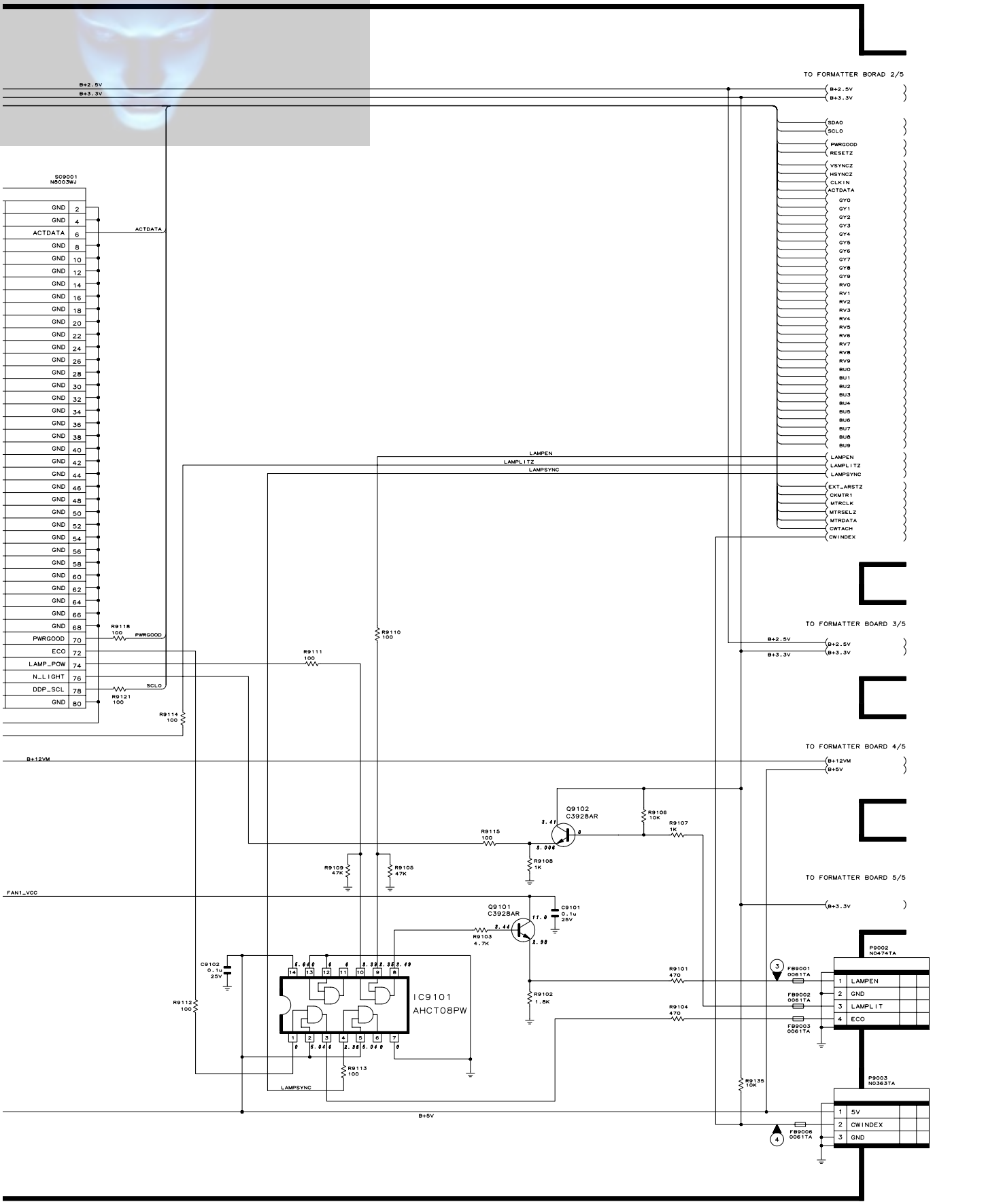


⑯ SC3001 30-pin
(INPUT C-SYNC)
H : 10µ sec/div
V : 840mV/div

■ FORMATTER UNIT-1/5 / FORMATIERER EINHEIT-1/5

FORMATTER BOARD (1/5)

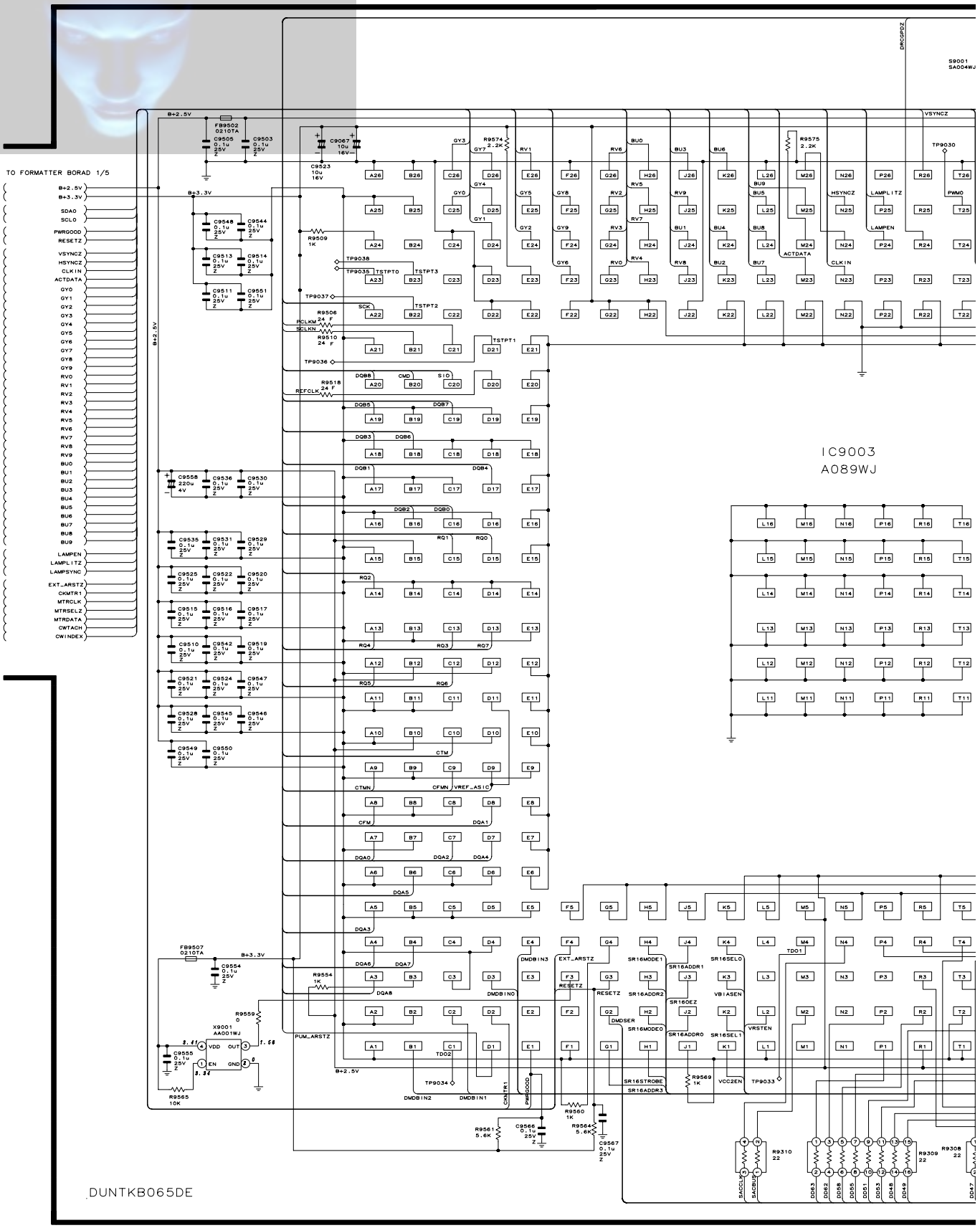


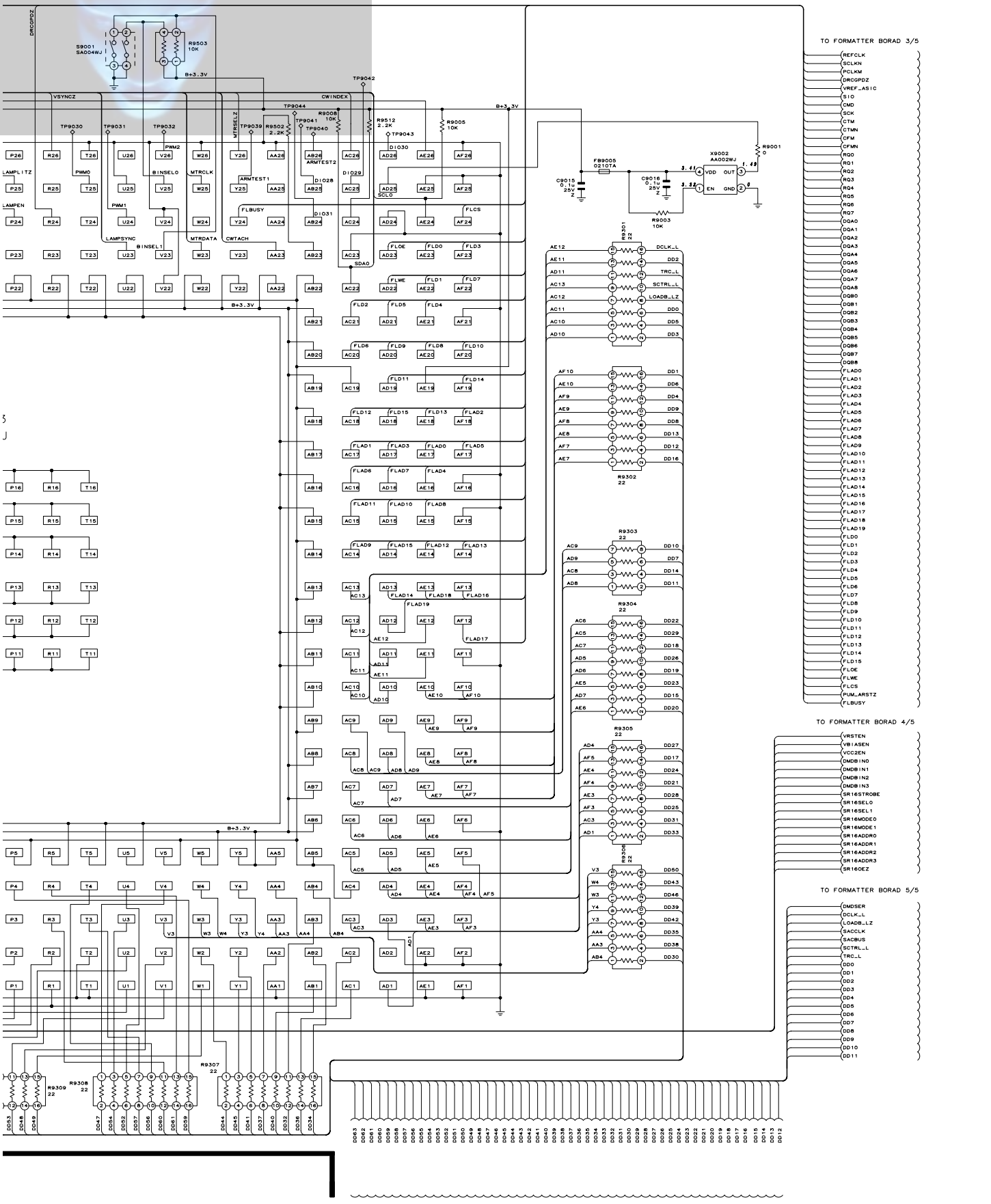


10	11	12	13	14	15	16	17	18	19

■ FORMATTER UNIT-2/5 / FORMATIERER EINHEIT-2/5

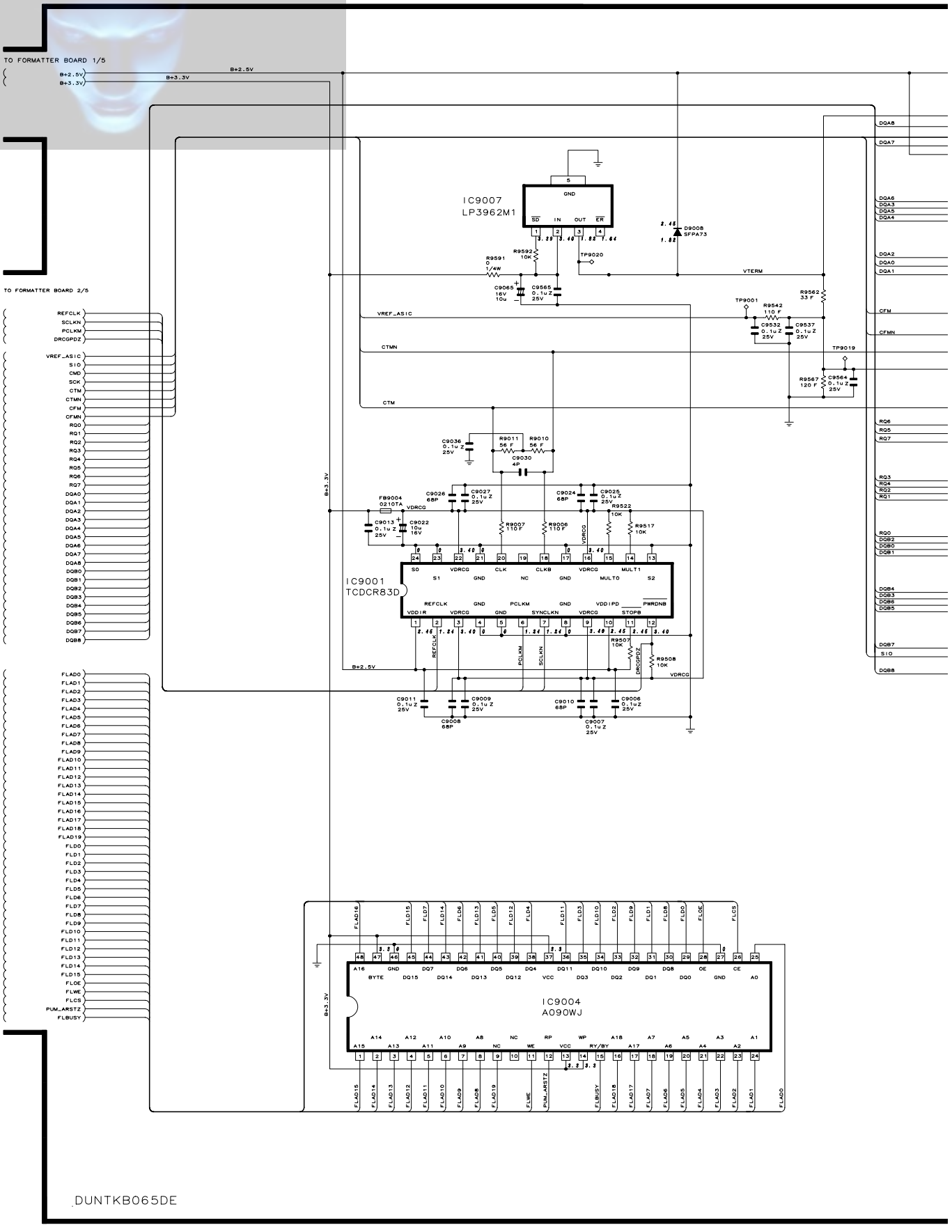
FORMATTER BOARD (2/5)

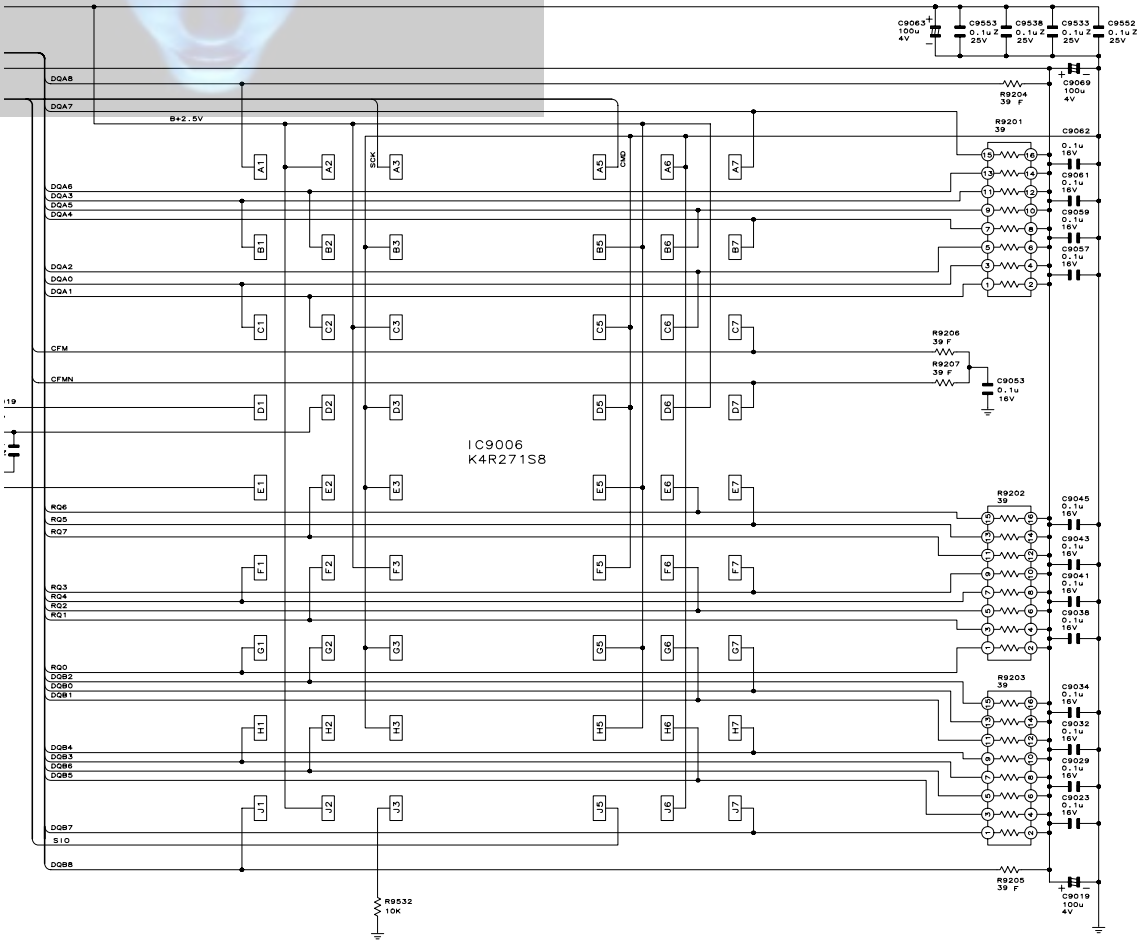



TO FORMATTER BORAD 3/5
TO FORMATTER BORAD 4/5
TO FORMATTER BORAD 5/5
B+3.3V
S9001
SA004WJ
R9503
10K
X9002
AA002WJ
FB9005
0210TA
C9015
0.1u
25V
Z
C9016
0.1u
25V
Z
R9003
10K
R9001
0
R9301
22
R9302
22
R9303
22
R9304
22
R9305
22
R9306
22
R9307
22
R9308
22
R9309
22
R9512
2.2K
R9005
10K
R9008
10K
R9502
2.2K
TP9030
TP9031
TP9032
TP9039
TP9040
TP9041
TP9042
TP9043
TP9044
VSYNCZ
CWINDEX
LAMPLITZ
LAMPEN
LAMPSYNC
BINSEL0
BINSEL1
MTRCLK
MTRDATA
CWTACH
MTRSELZ
PWM0
PWM1
PWM2
ARMTEST1
ARMTEST2
FLBUSY
SCLO
SDAO
DRCGPDZ
REFCLK
SCLKN
PCLKM
DRCGPDZ
VREF_ASIC
SIO
CMD
SCK
CTM
CTMN
CFM
CFMN
RQ0
RQ1
RQ2
RQ3
RQ4
RQ5
RQ6
RQ7
DQA0
DQA1
DQA2
DQA3
DQA4
DQA5
DQA6
DQA7
DQA8
DQB0
DQB1
DQB2
DQB3
DQB4
DQB5
DQB6
DQB7
DQB8
FLAD0
FLAD1
FLAD2
FLAD3
FLAD4
FLAD5
FLAD6
FLAD7
FLAD8
FLAD9
FLAD10
FLAD11
FLAD12
FLAD13
FLAD14
FLAD15
FLAD16
FLAD17
FLAD18
FLAD19
FLD0
FLD1
FLD2
FLD3
FLD4
FLD5
FLD6
FLD7
FLD8
FLD9
FLD10
FLD11
FLD12
FLD13
FLD14
FLD15
FLOE
FLWE
FLCS
PUM_ARSTZ
FLBUSY
VRSTEN
VBIASEN
VCC2EN
DMDBIN0
DMDBIN1
DMDBIN2
DMDBIN3
SR16STROBE
SR16SEL0
SR16SEL1
SR16MODE0
SR16MODE1
SR16ADDR1
SR16ADDR2
SR16ADDR3
SR16OEZ
DMDSER
DCLK_L
LOADB_LZ
SACCLK
SACBUS
SCTRL_L
TRC_L
DD0
DD1
DD2
DD3
DD4
DD5
DD6
DD7
DD8
DD9
DD10
DD11

■ FORMATTER UNIT-3/5 / FORMATIERER EINHEIT-3/5

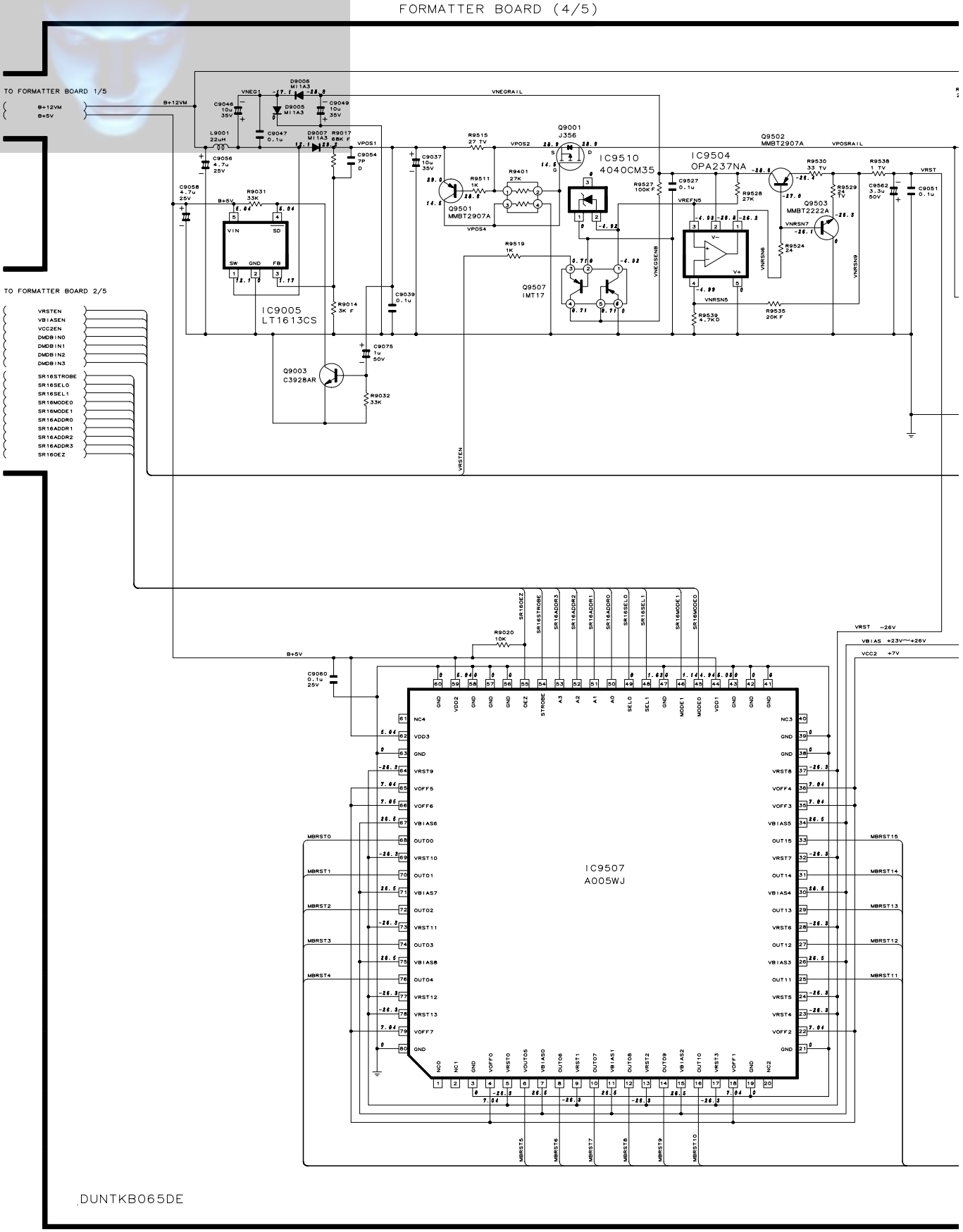
FORMATTER BOARD (3/5)

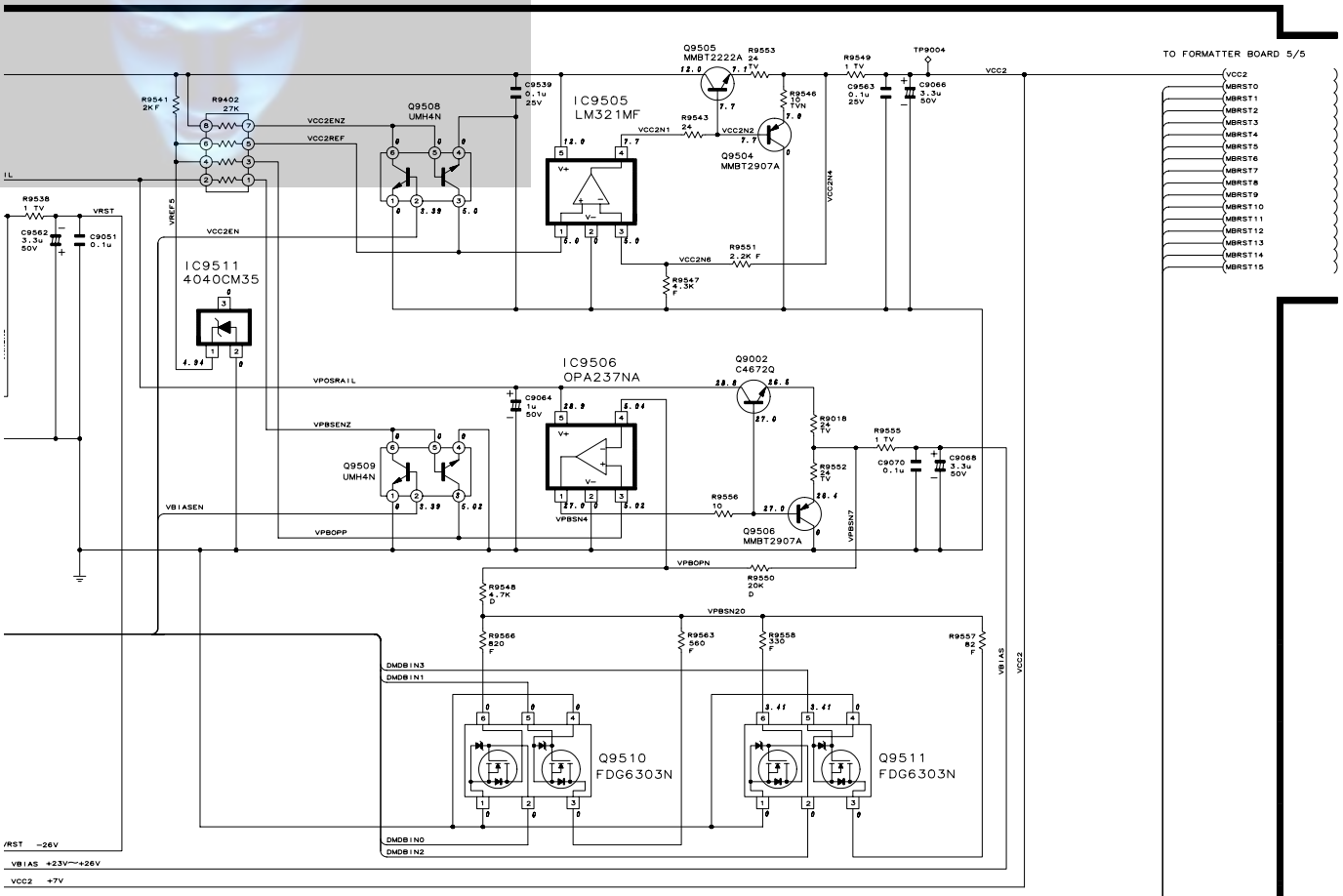


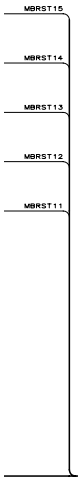


10	11	12	13	14	15	16	17	18	19

■ FORMATTER UNIT-4/5 / FORMATIERER EINHEIT-4/5

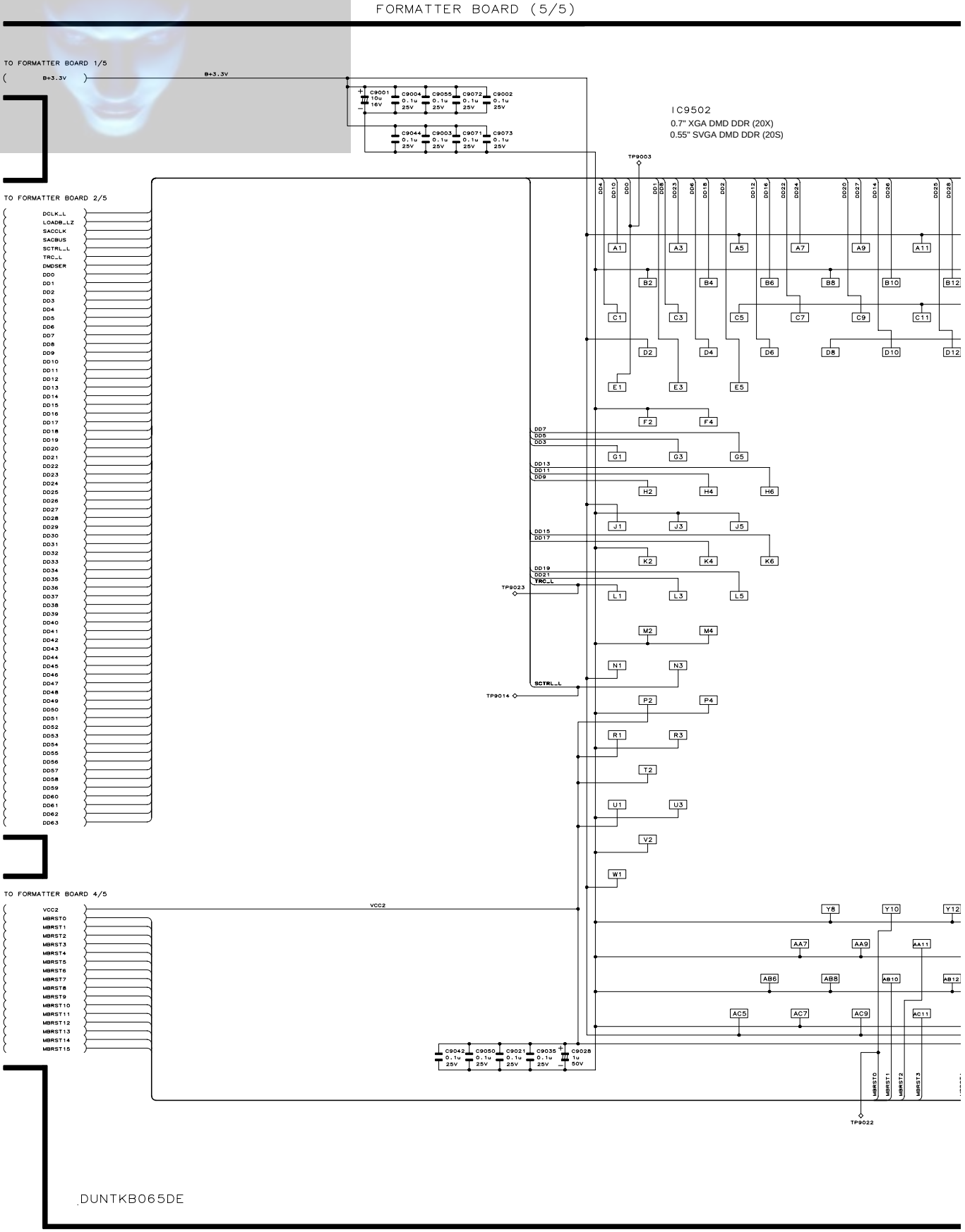


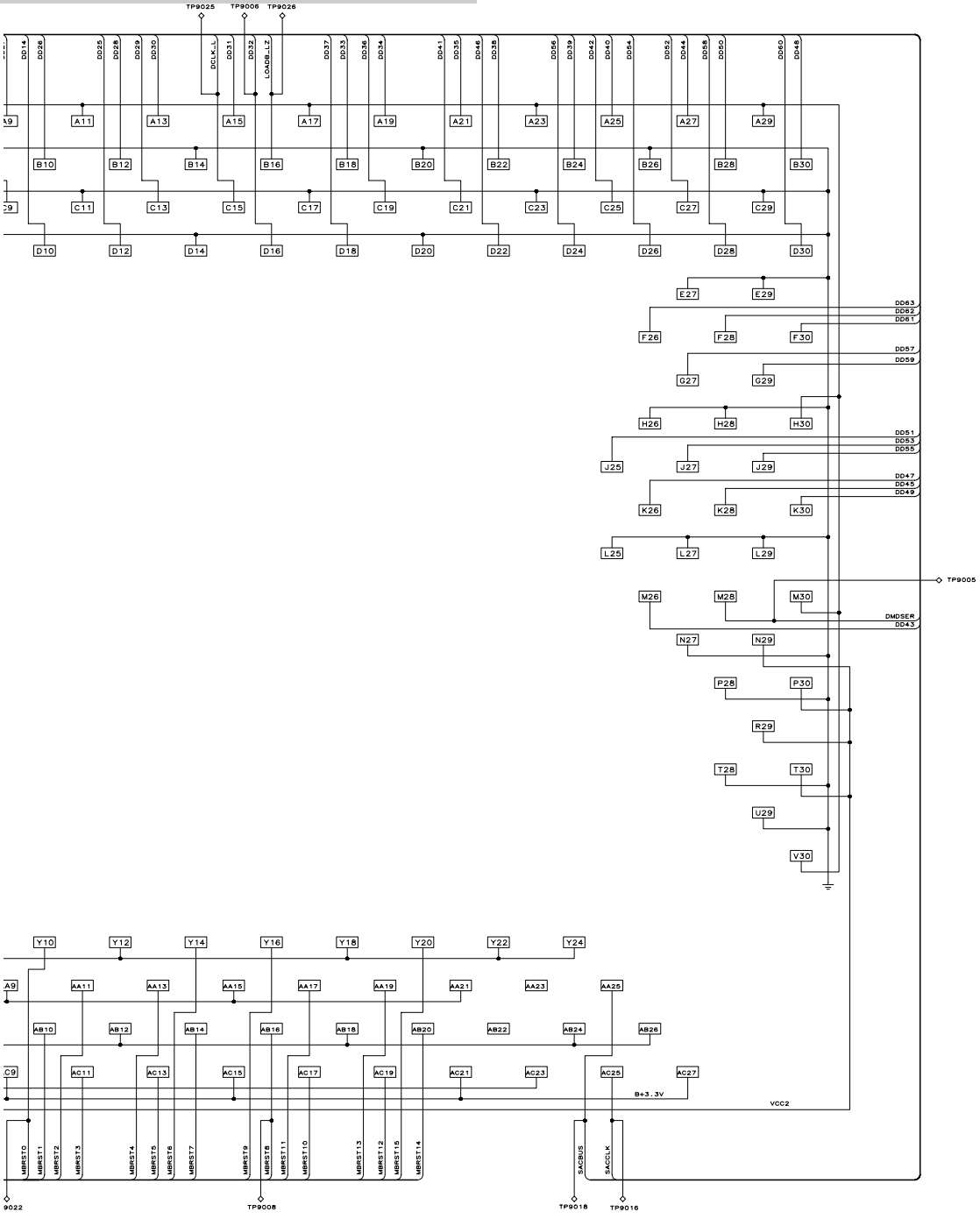




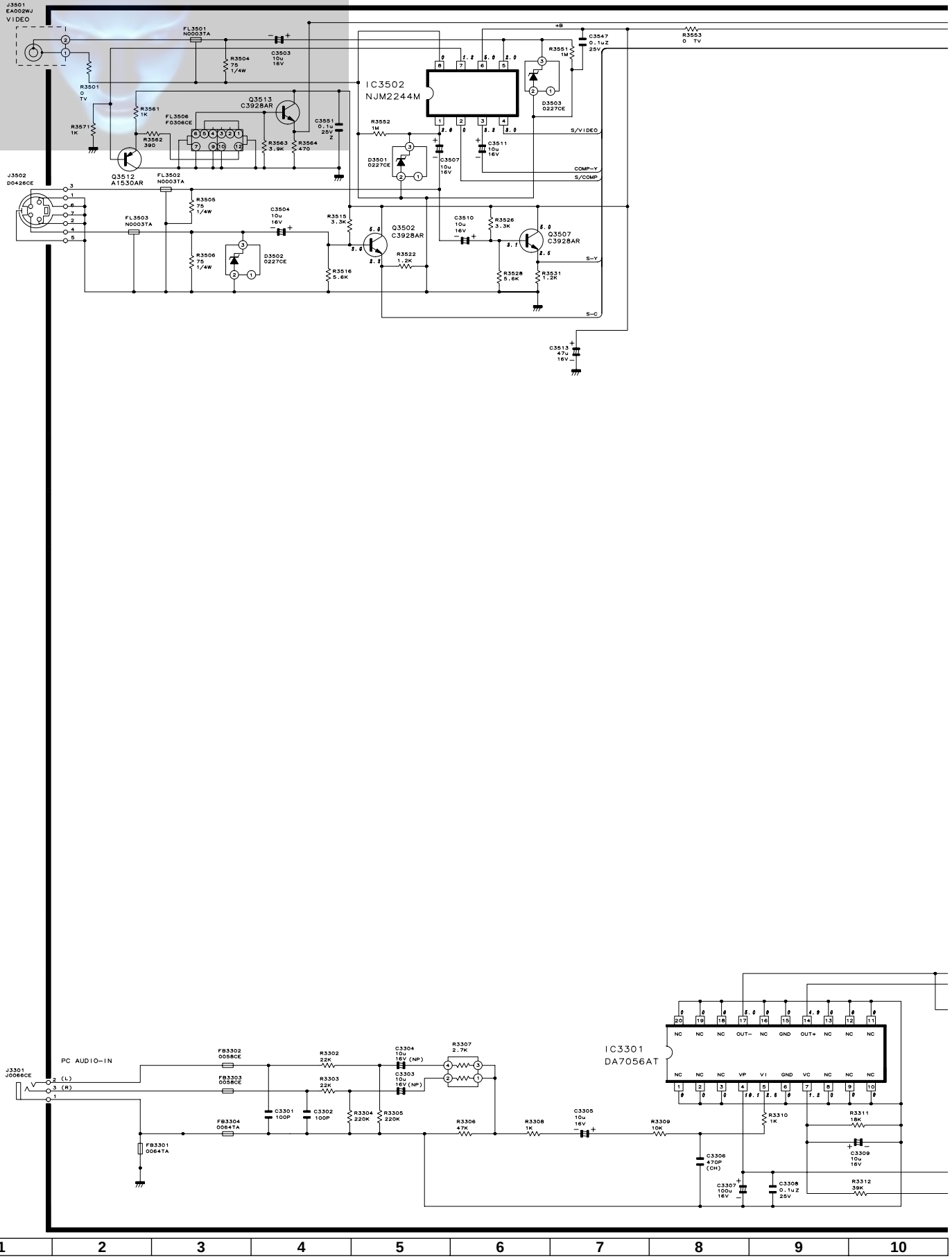
10	11	12	13	14	15	16	17	18	19

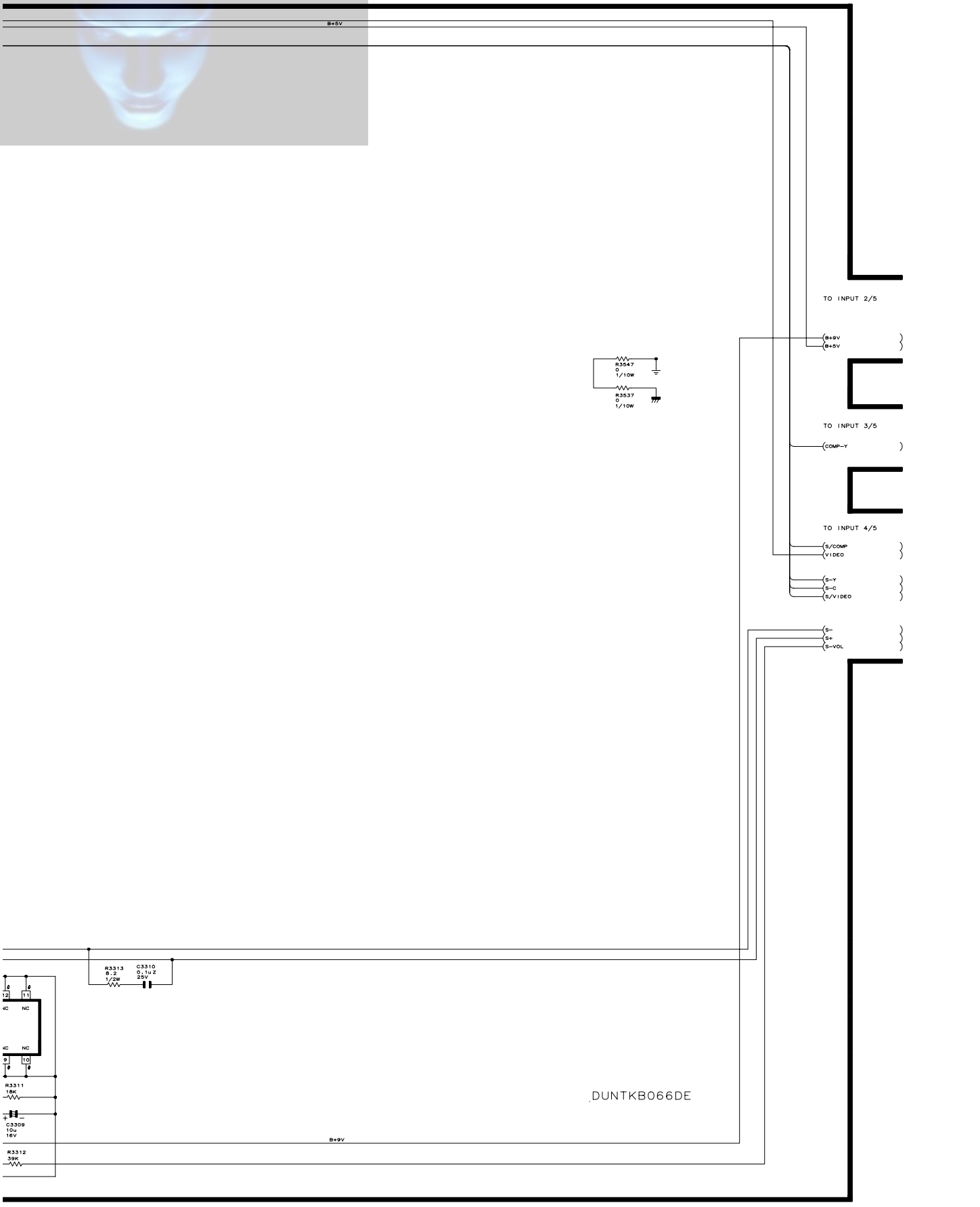
■ FORMATTER UNIT-5/5 / FORMATIERER EINHEIT-5/5




TP9025
TP9006
TP9026
DCLK_L
LOADB_LZ
DMDSER
TP9005
B+3.3V
VCC2
SACBUS
SACCLK
TP9022
TP9008
TP9018
TP9016

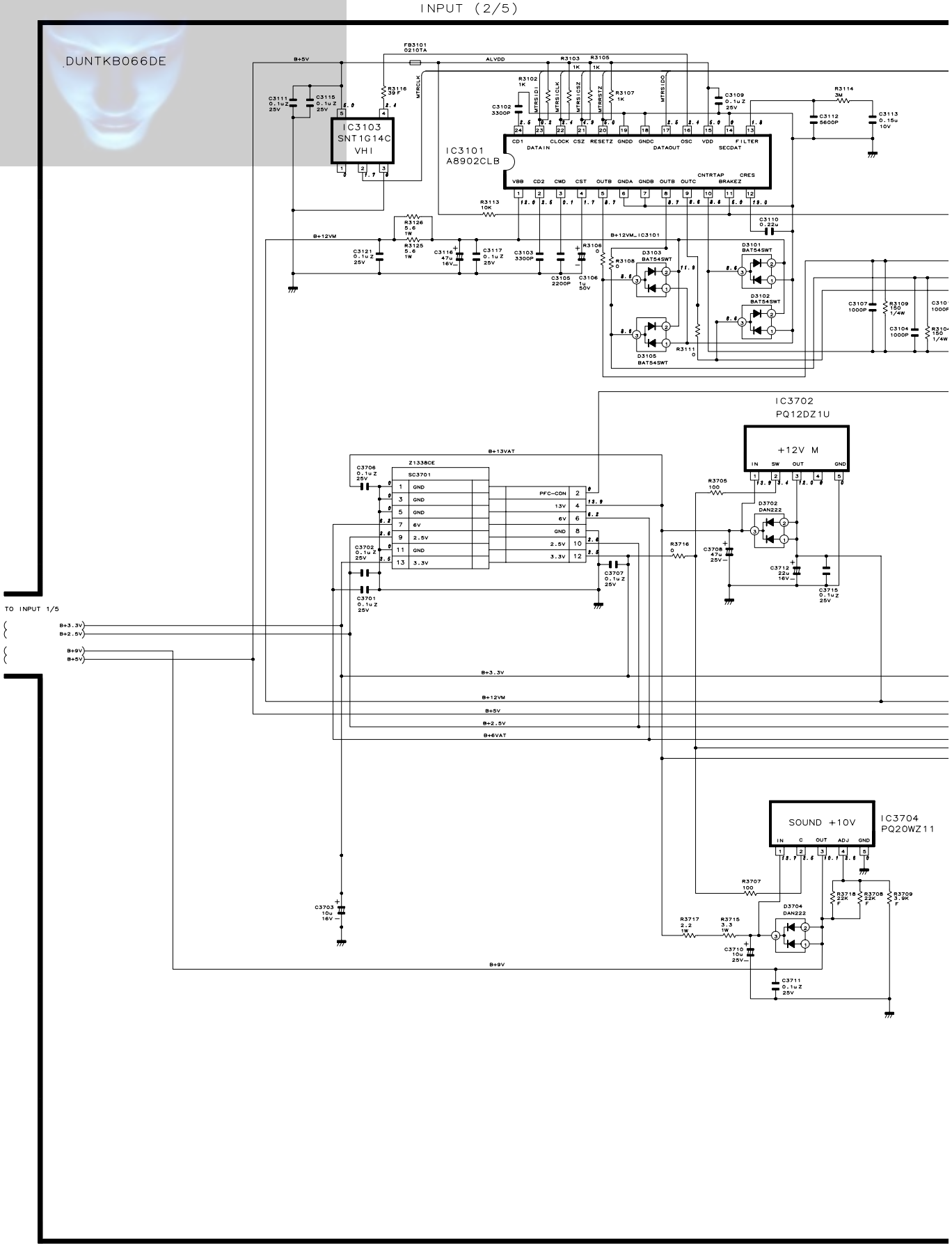
■ INPUT UNIT-1/5 / EINGANGSEINHEIT-1/5

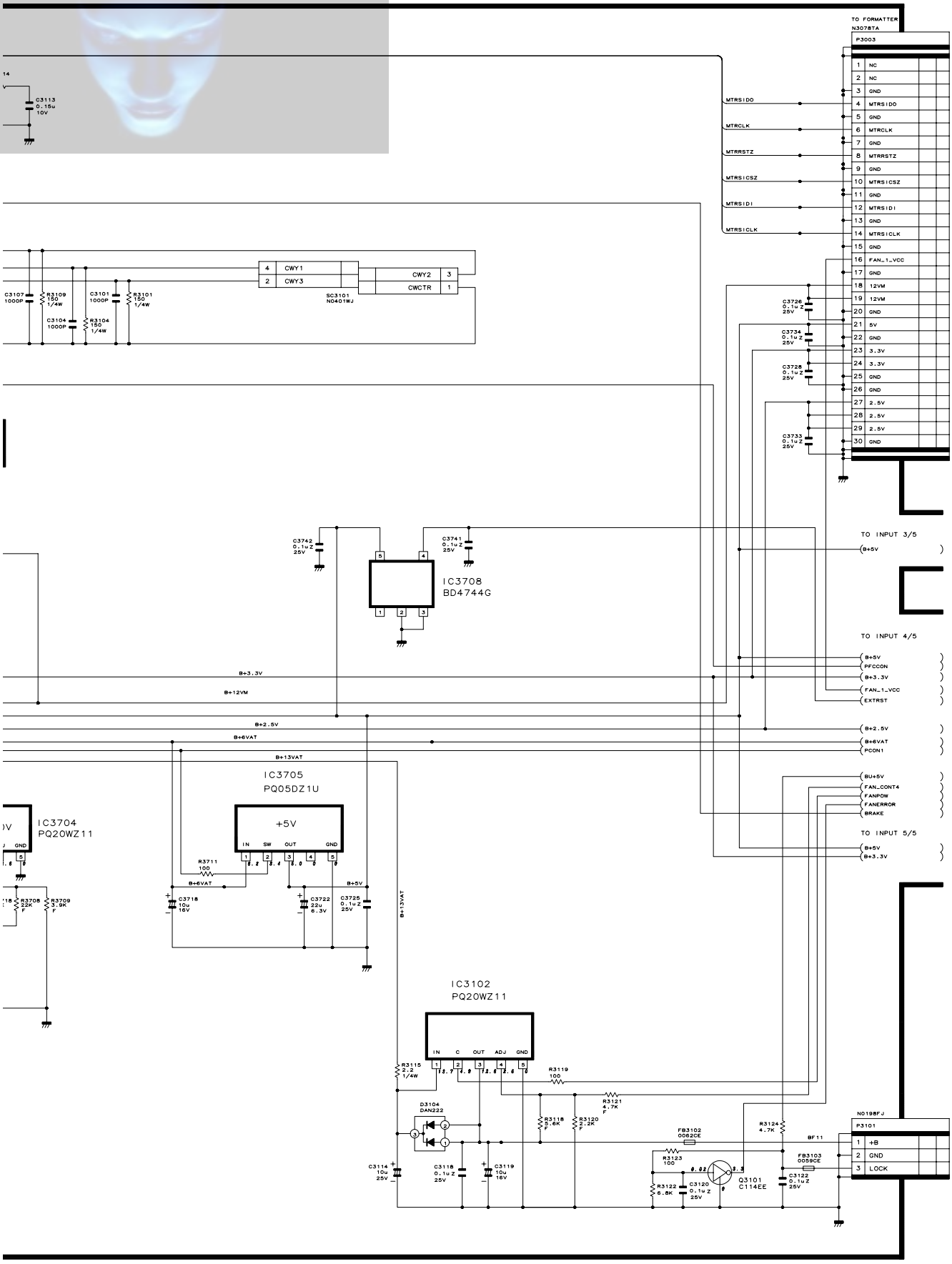




10	11	12	13	14	15	16	17	18	19

■ INPUT UNIT-2/5 / EINGANGSEINHEIT-2/5

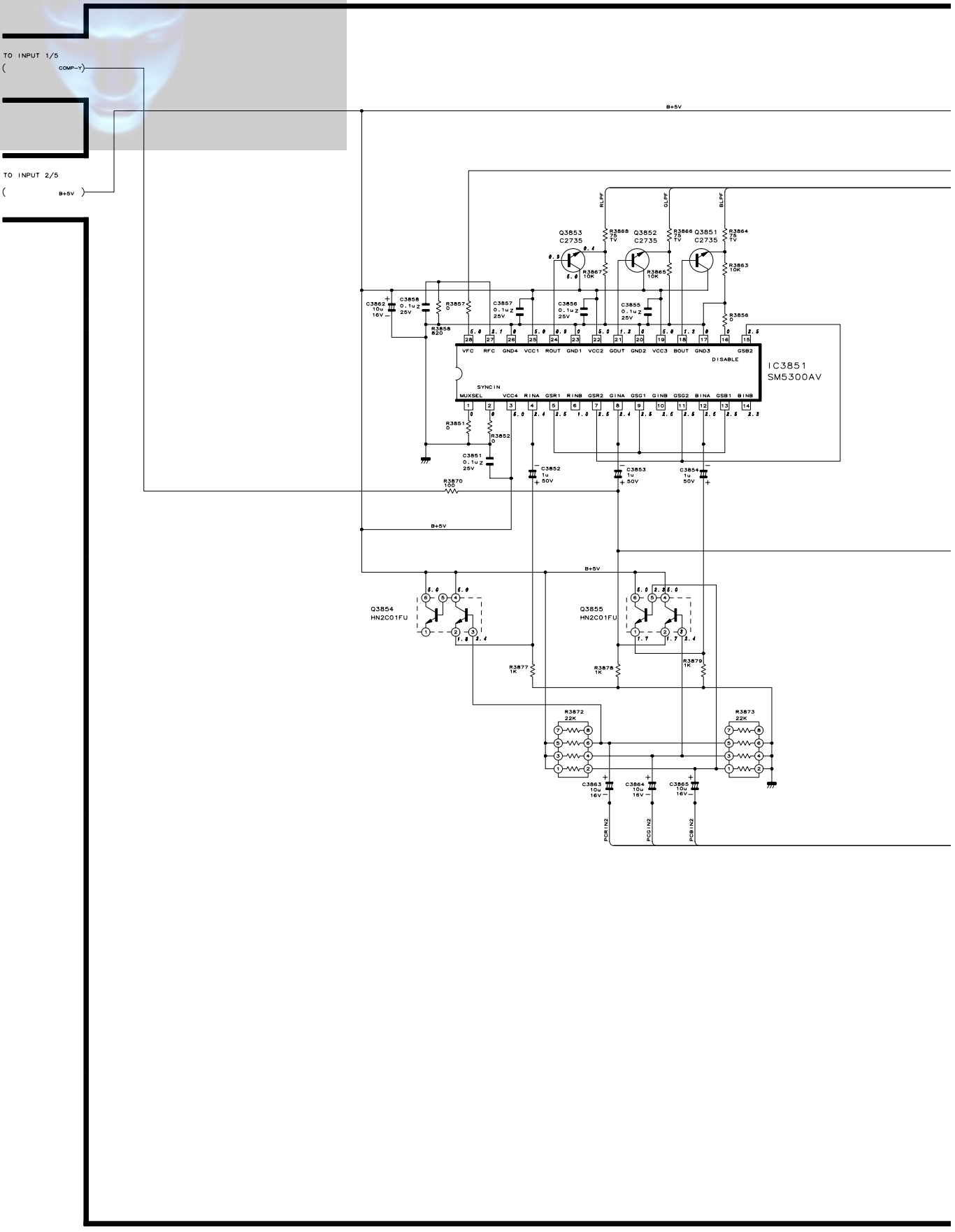


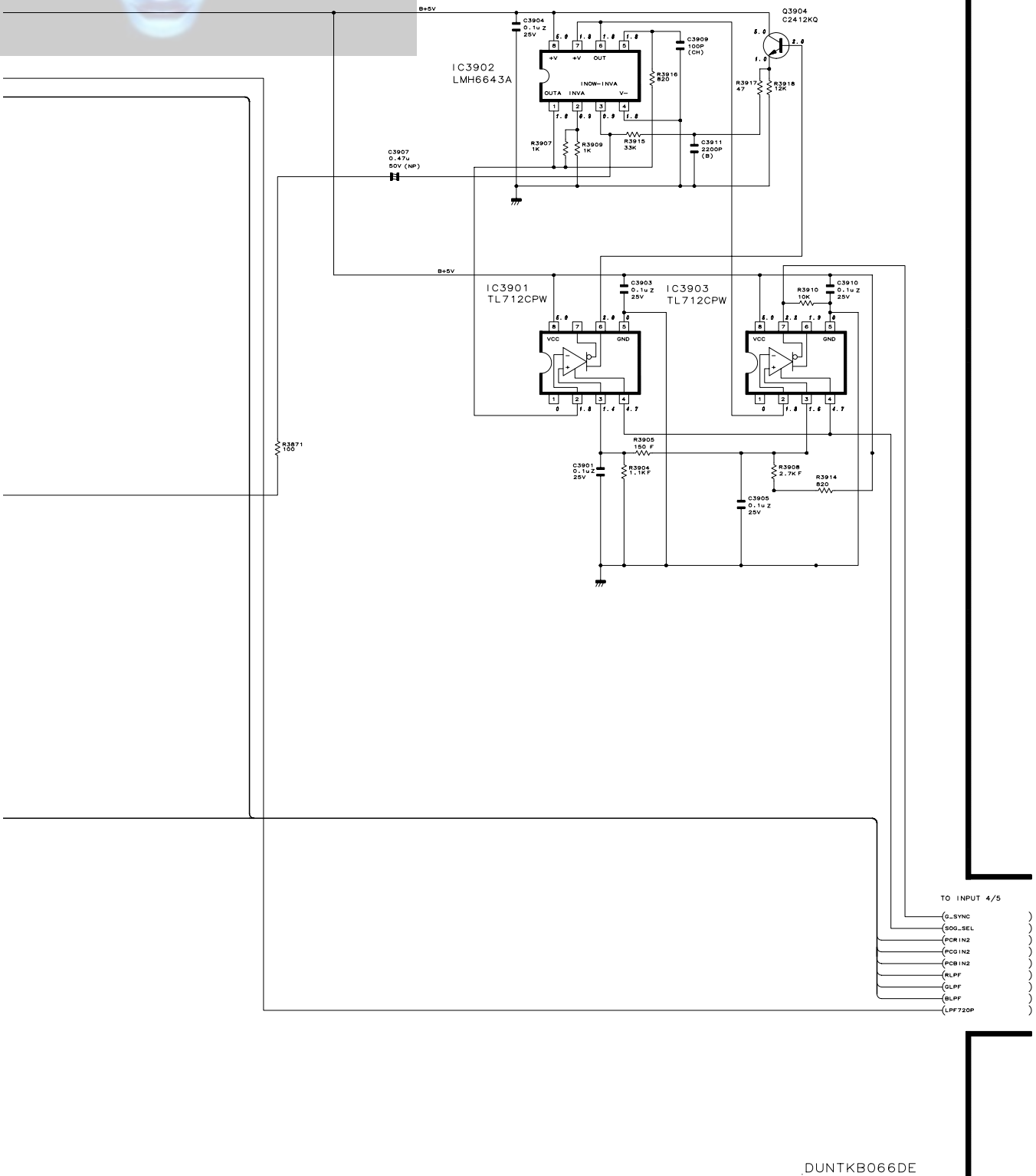


10	11	12	13	14	15	16	17	18	19

■ INPUT UNIT-3/5 / EINGANGSEINHEIT-3/5

INPUT (3/5)



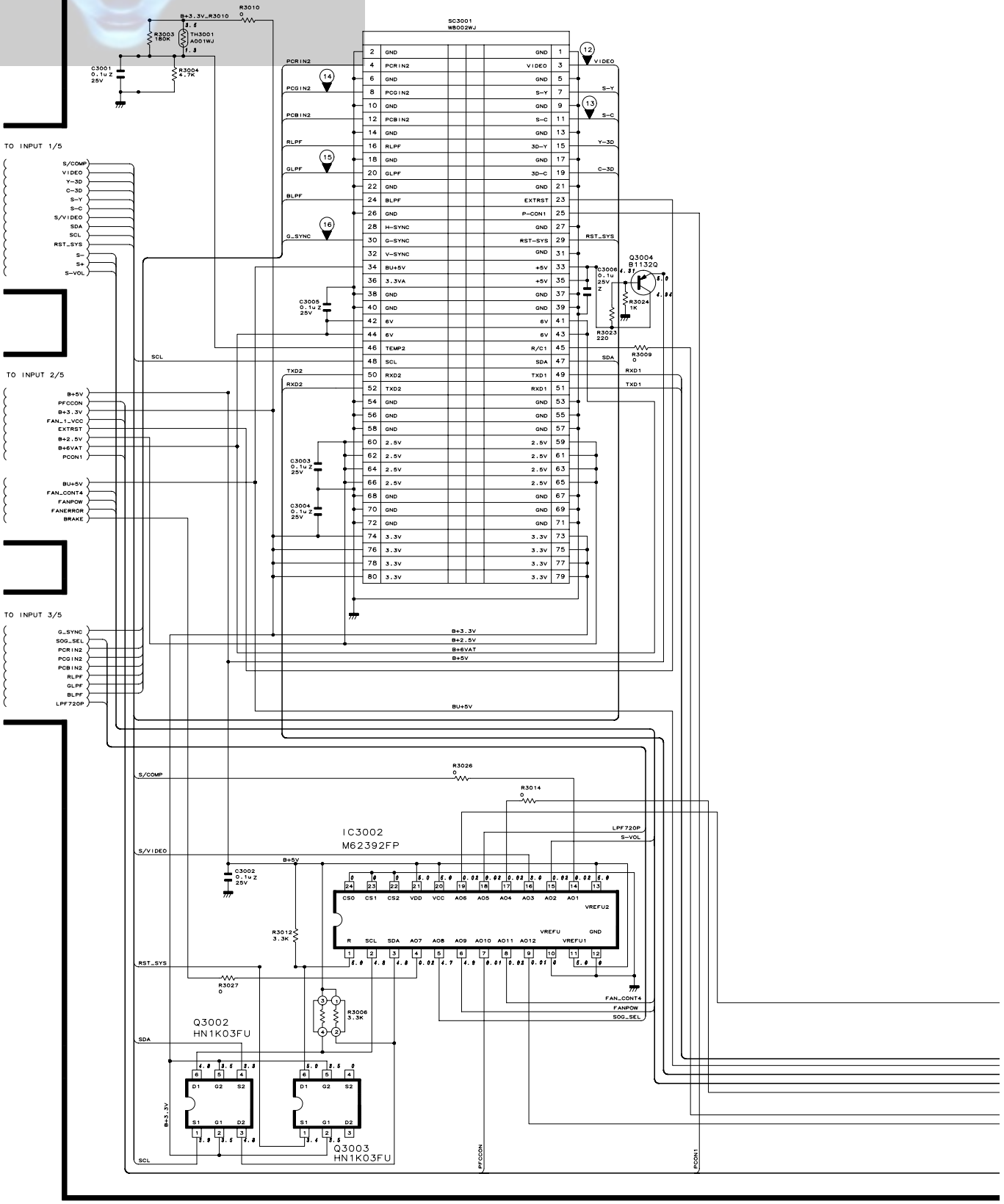


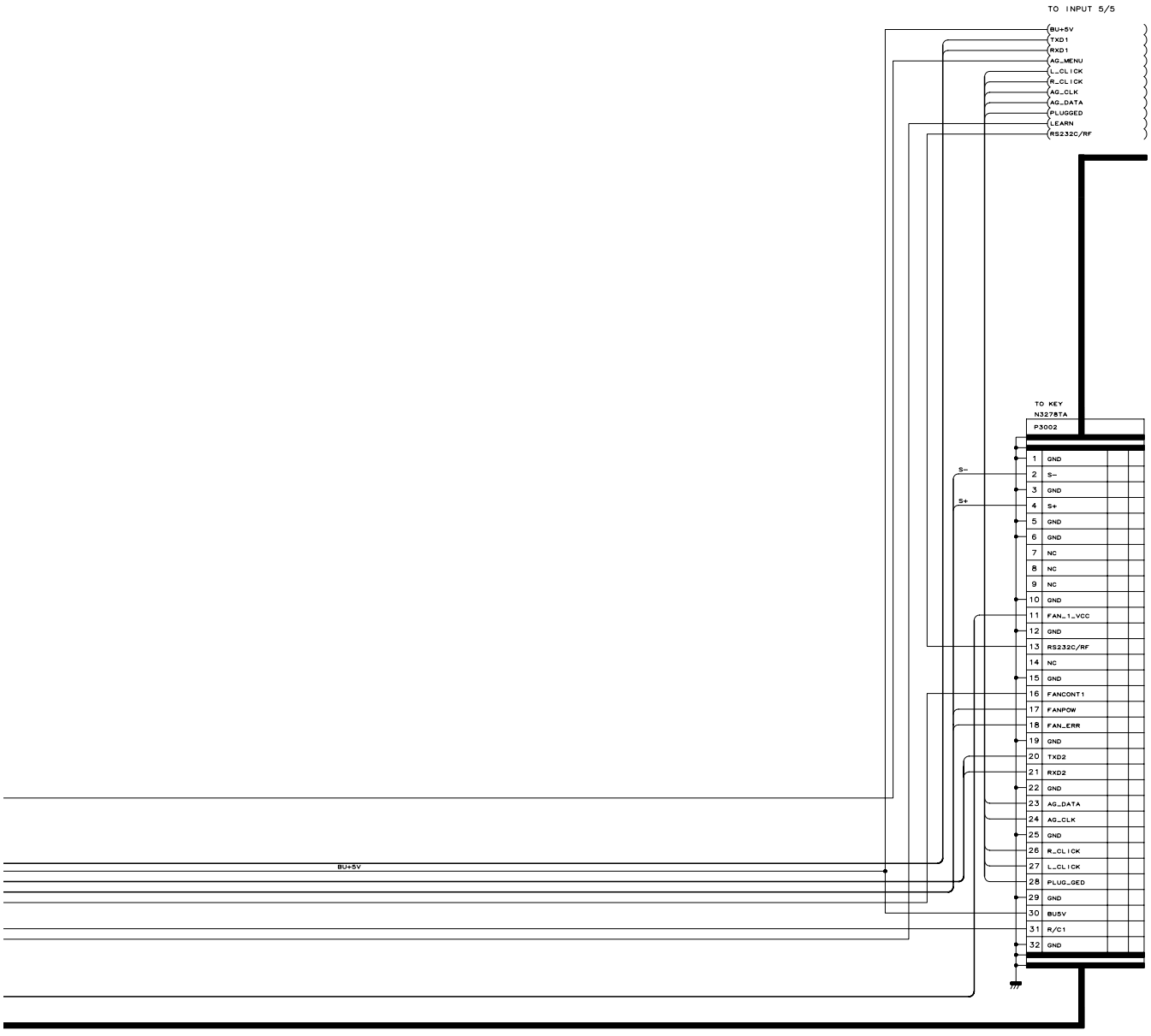
10	11	12	13	14	15	16	17	18	19

■ INPUT UNIT-4/5 / EINGANGSEINHEIT-4/5

INPUT (4/5)

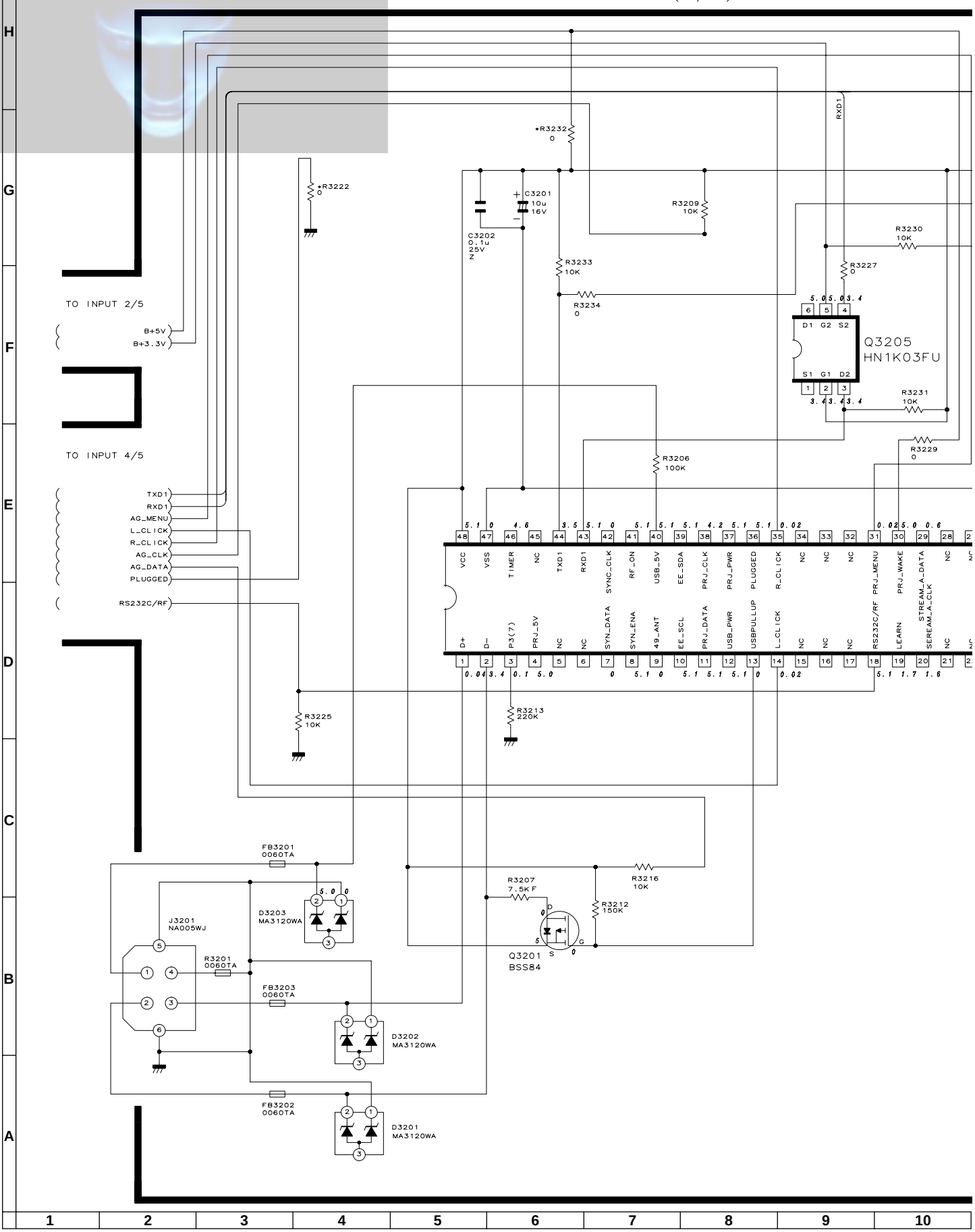
DUNTKB066DE

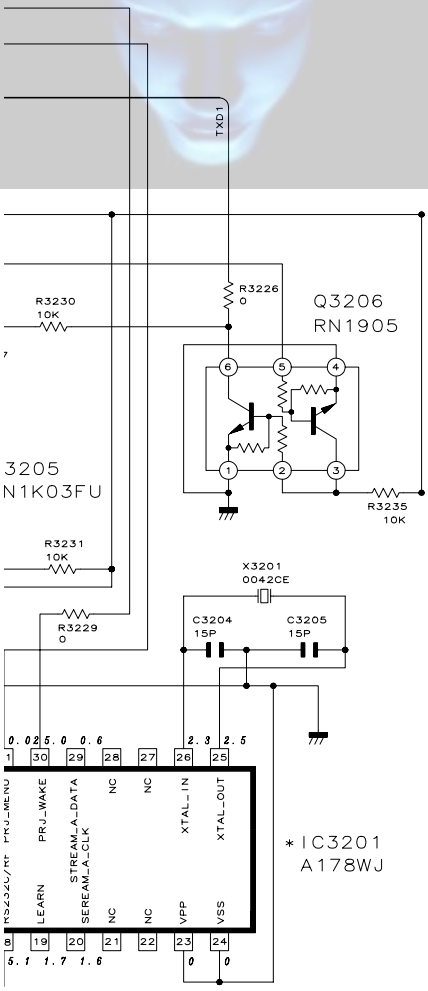




10	11	12	13	14	15	16	17	18	19

■ INPUT UNIT-5/5 / EINGANGSEINHEIT-5/5



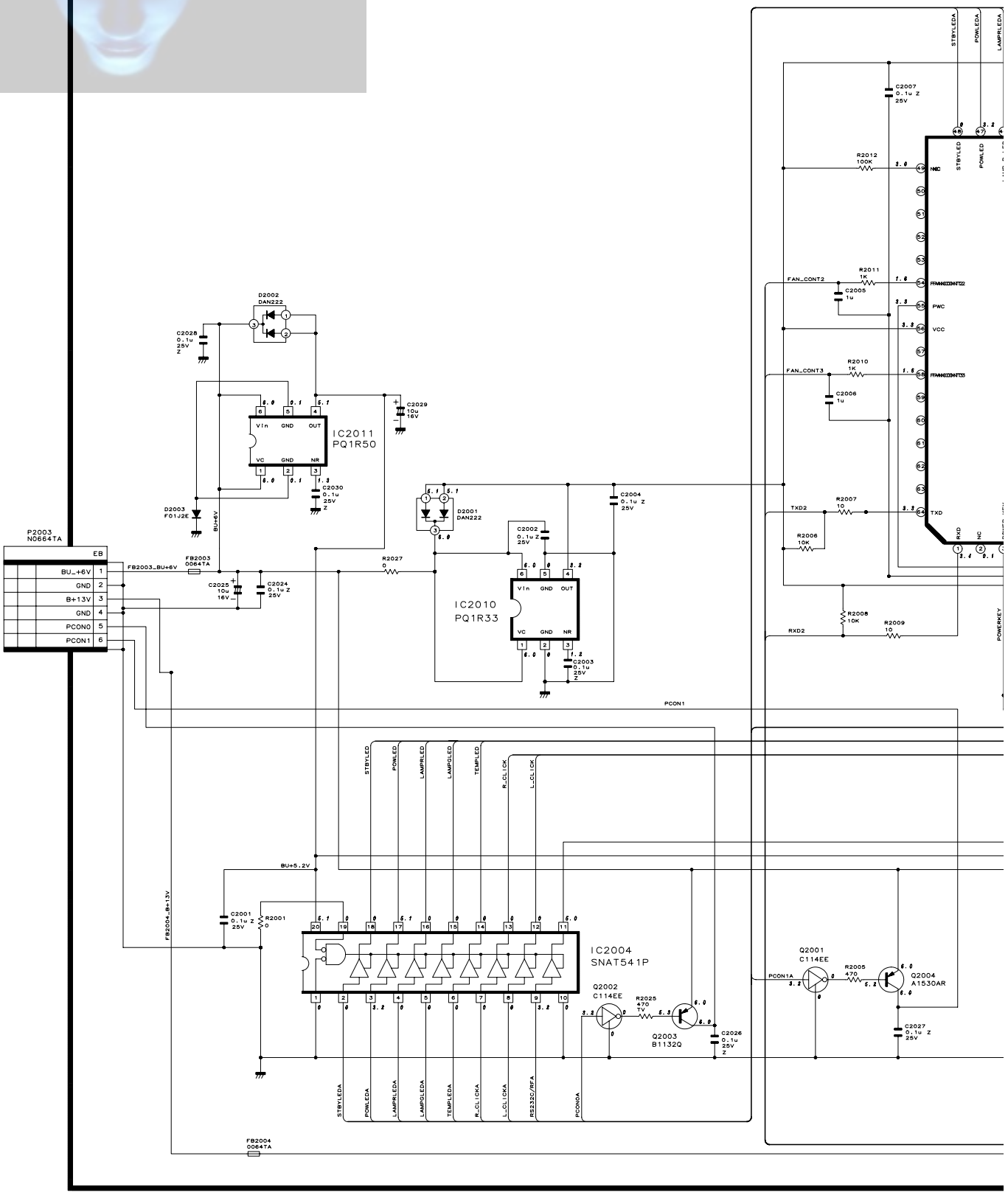


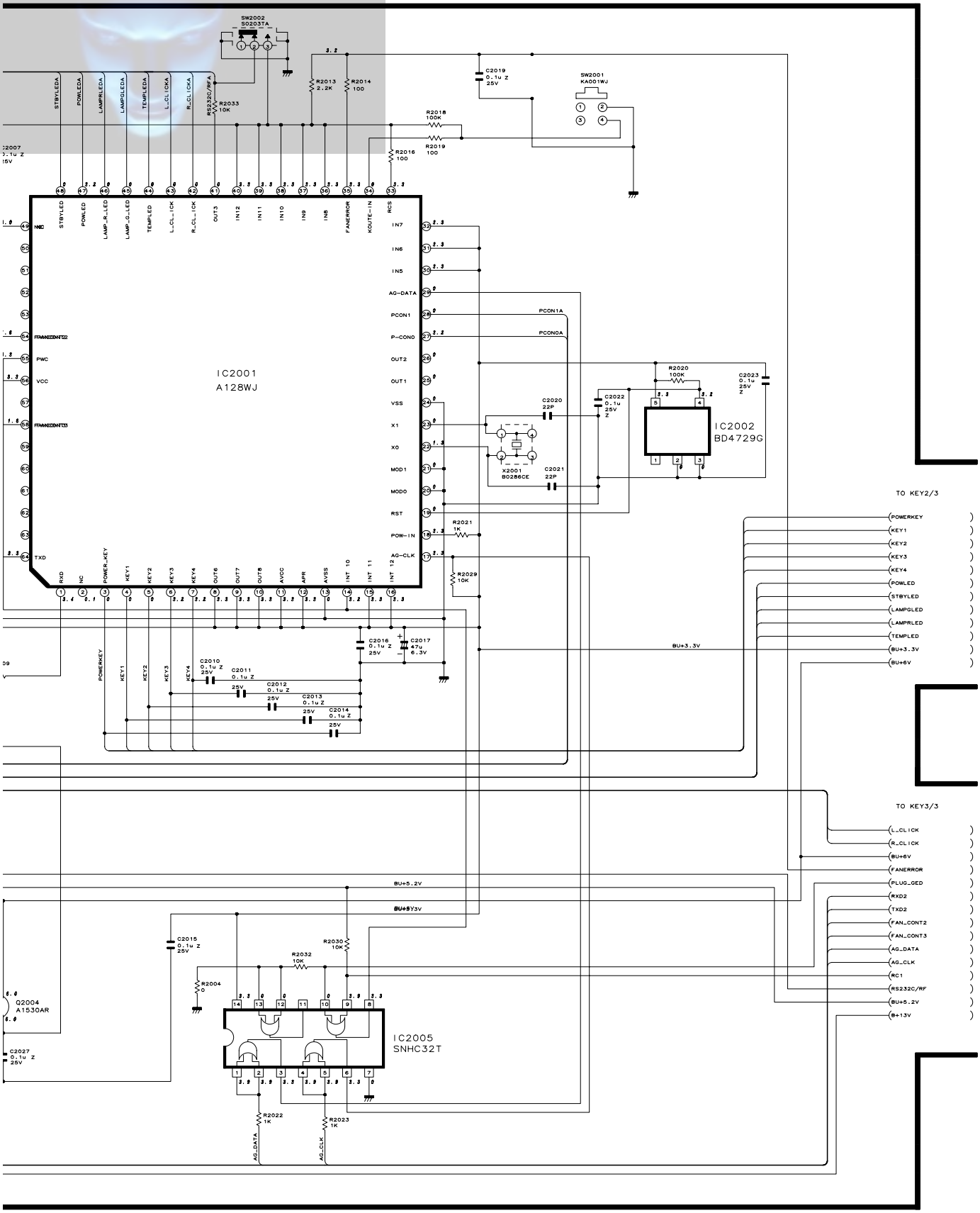
DUNTKB066DE

■ KEY UNIT-1/3 / SCHLÜSSELEINHEIT-1/3

KEY (1/3)

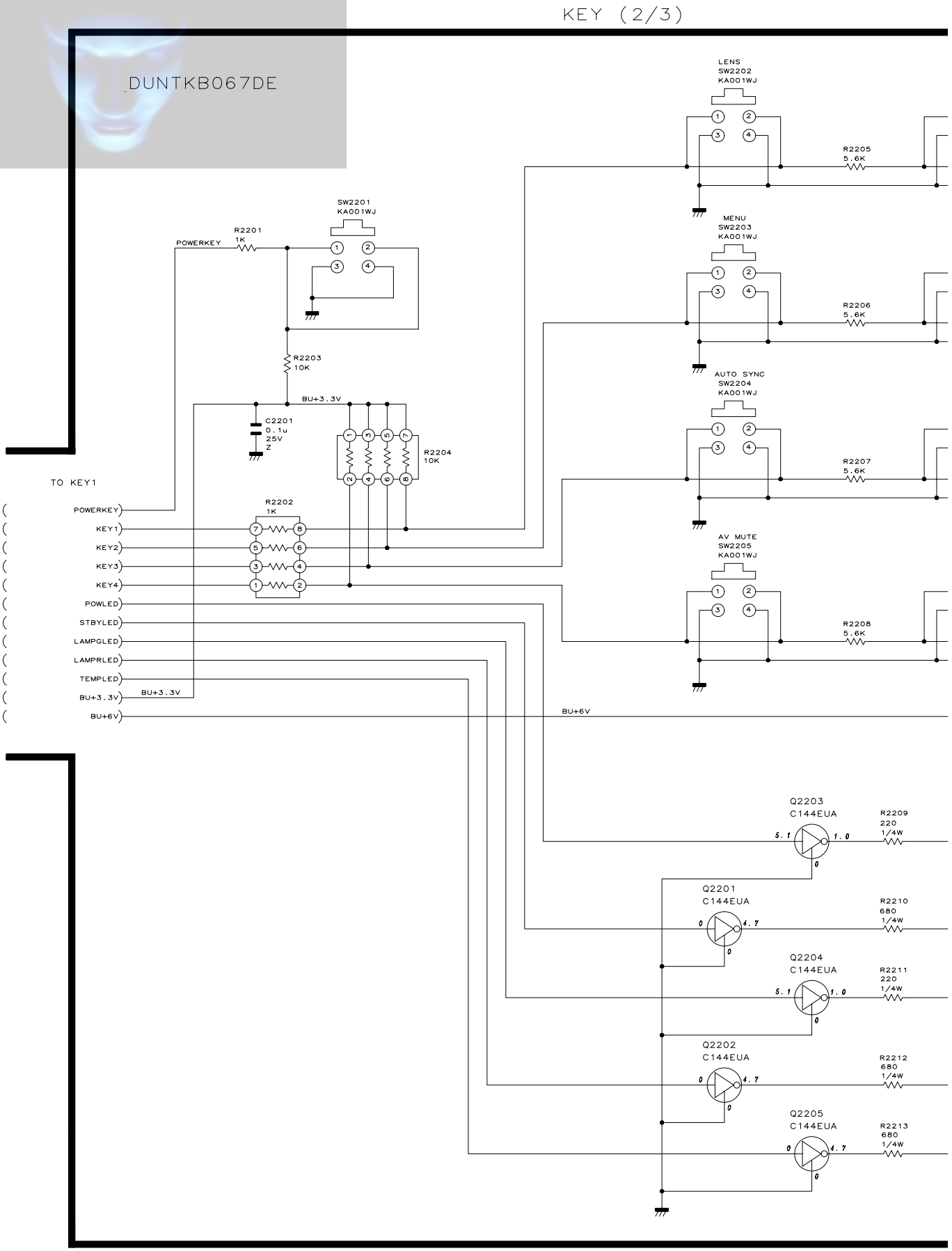
DUNTKB067DE

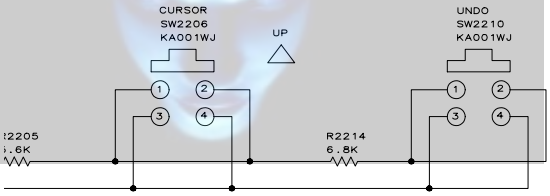


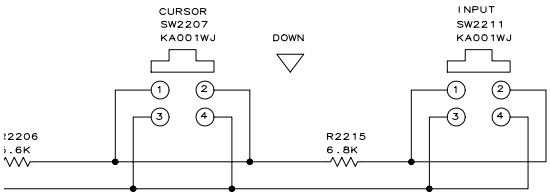


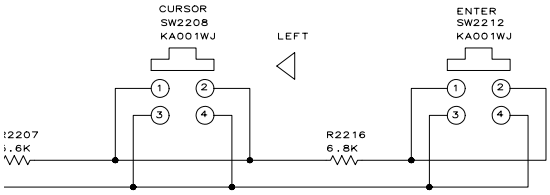
10	11	12	13	14	15	16	17	18	19

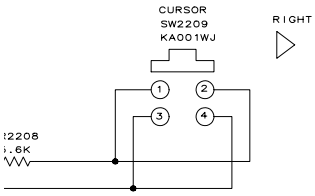
■ KEY UNIT-2/3 / SCHLÜSSELEINHEIT-2/3

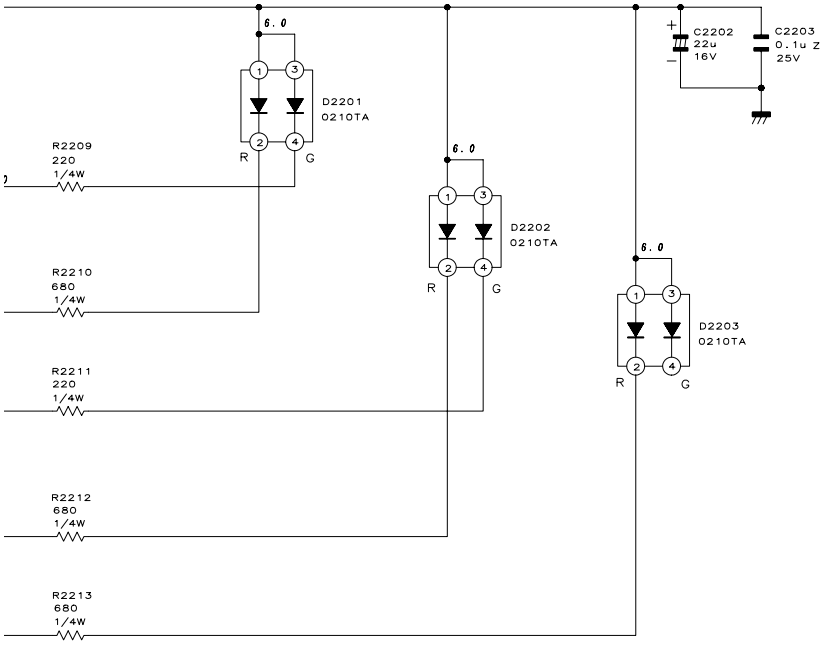






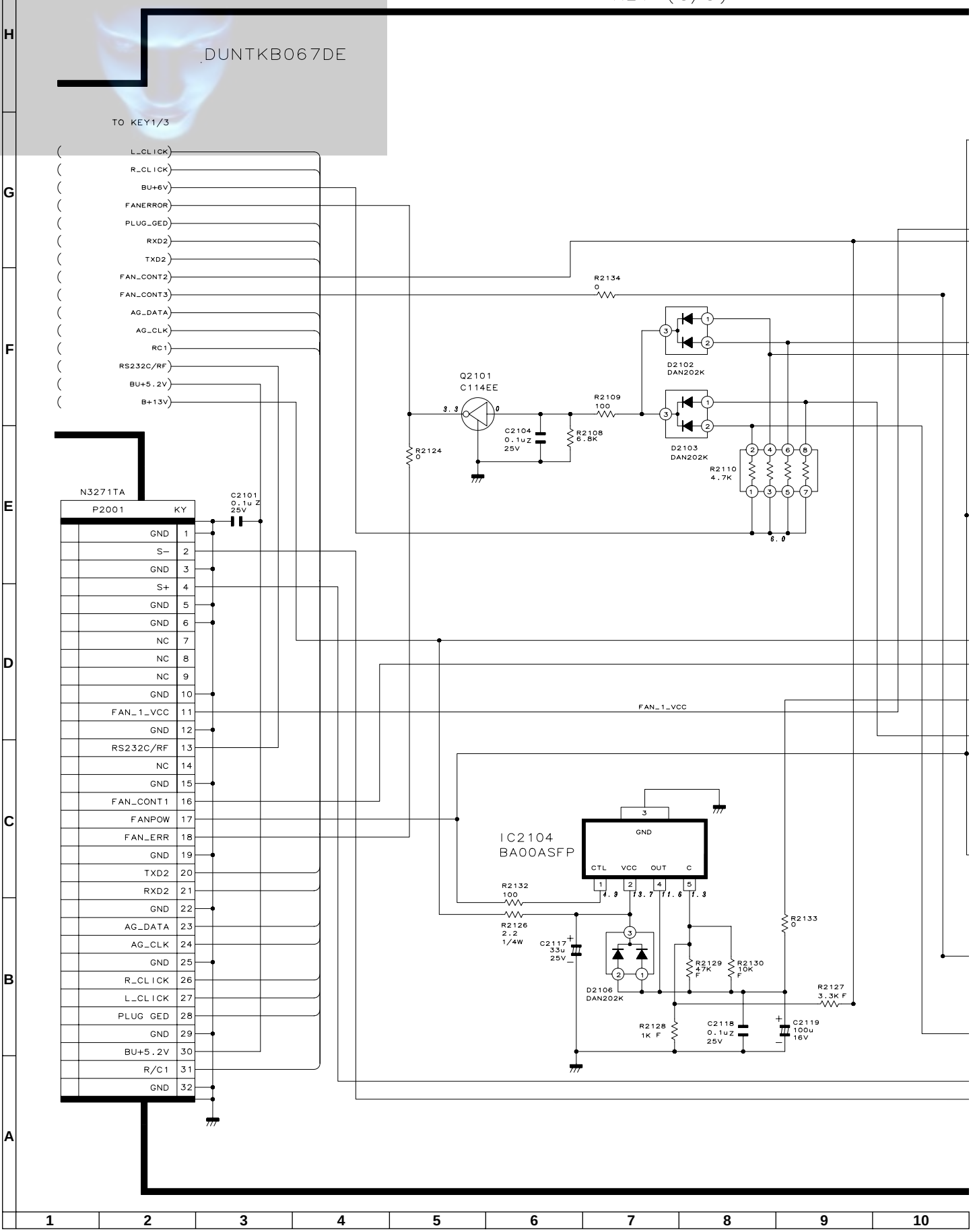


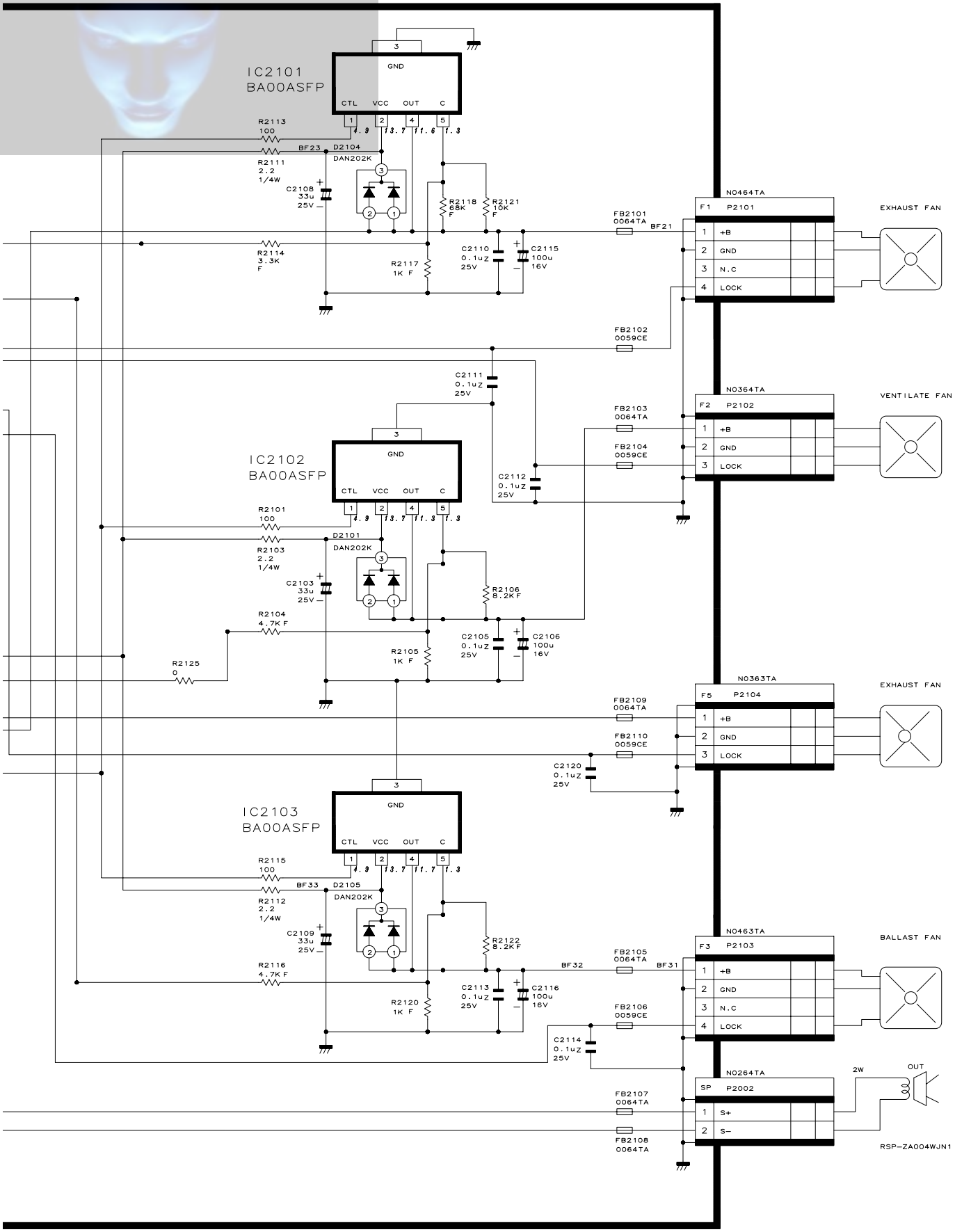




10	11	12	13	14	15	16	17	18	19

■ KEY UNIT-3/3 / SCHLÜSSELEINHEIT-3/3

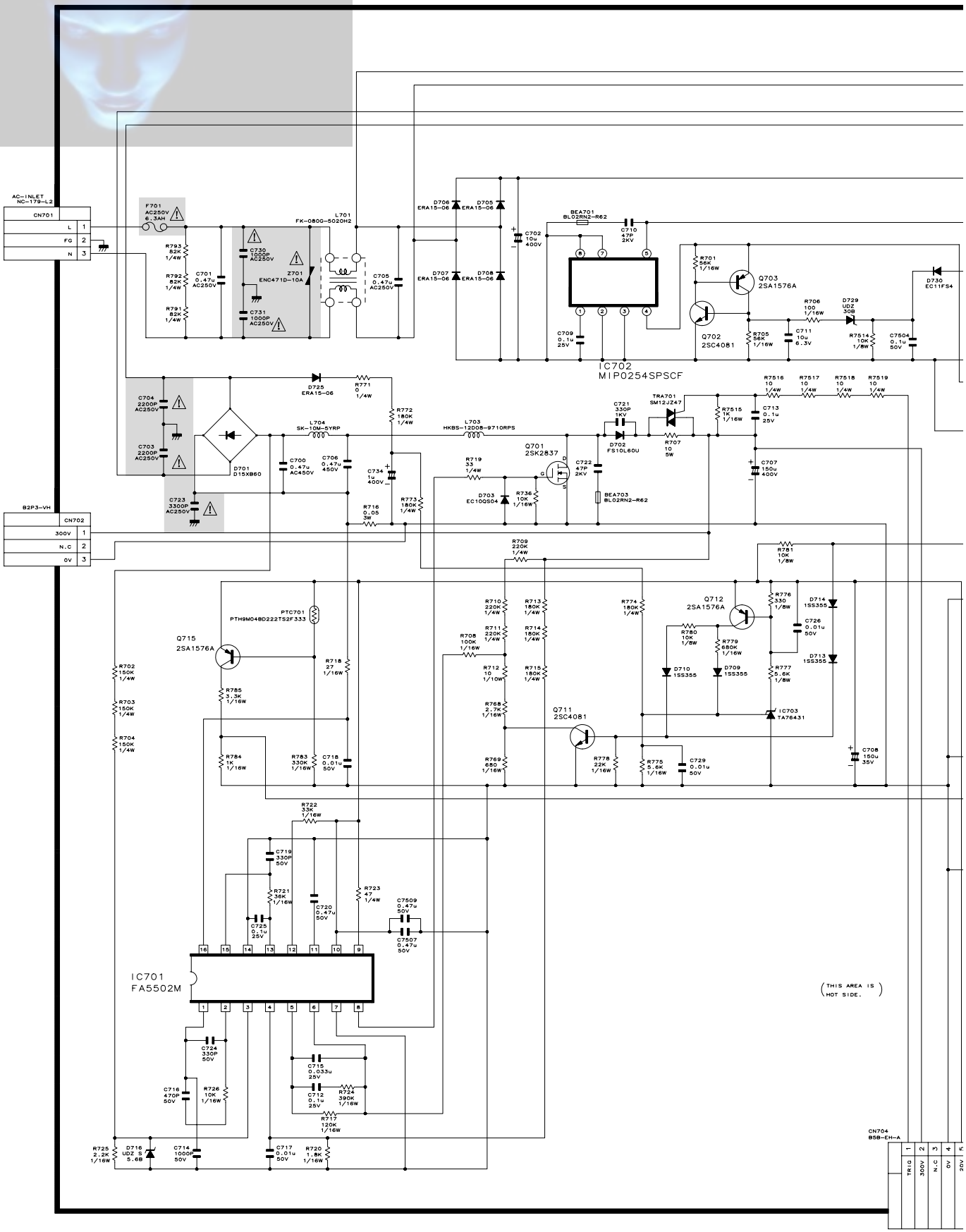


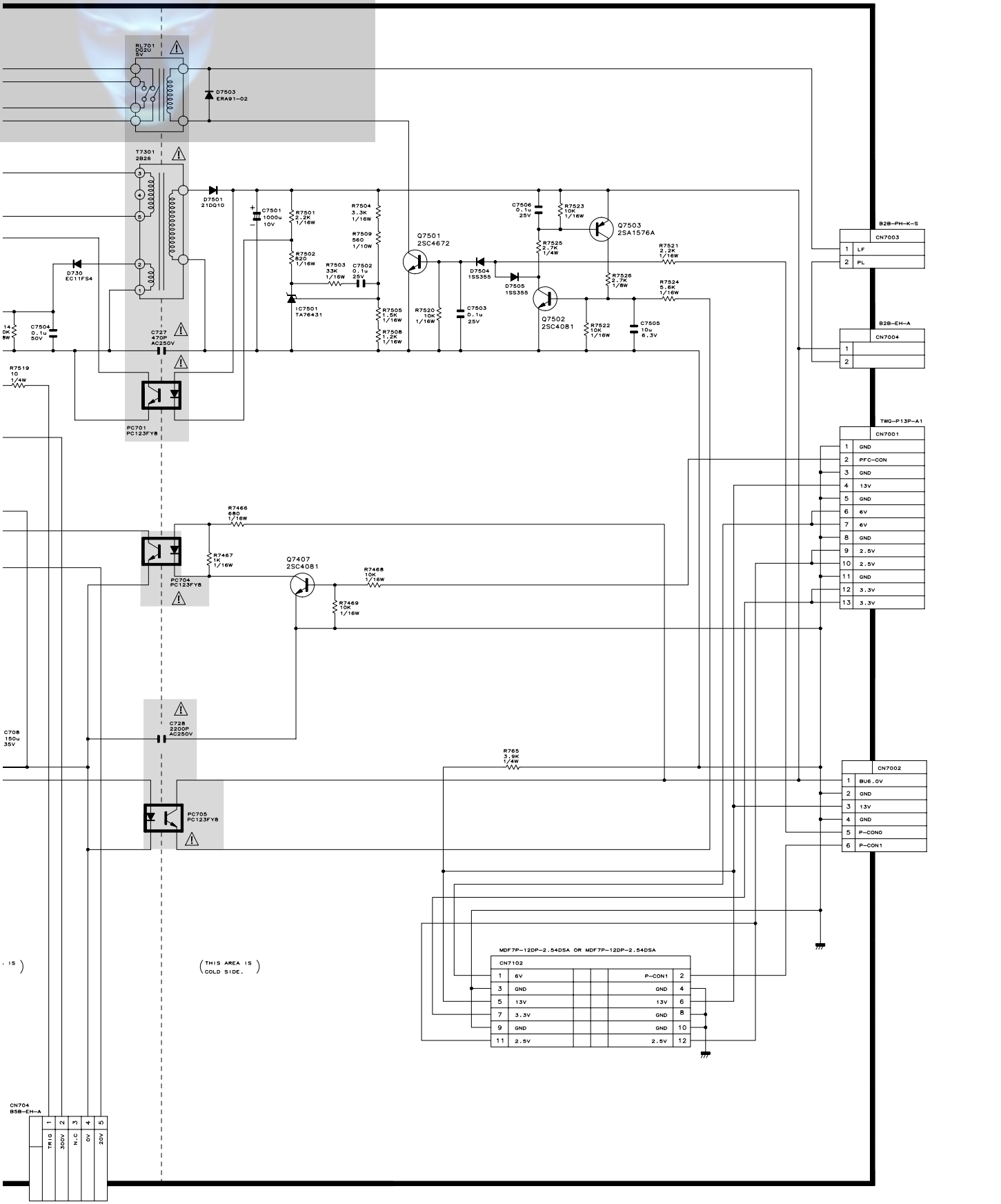


10	11	12	13	14	15	16	17	18	19

■ PFC UNIT / PFC-EINHEIT

DEN(1/2) RDENCA004WJ

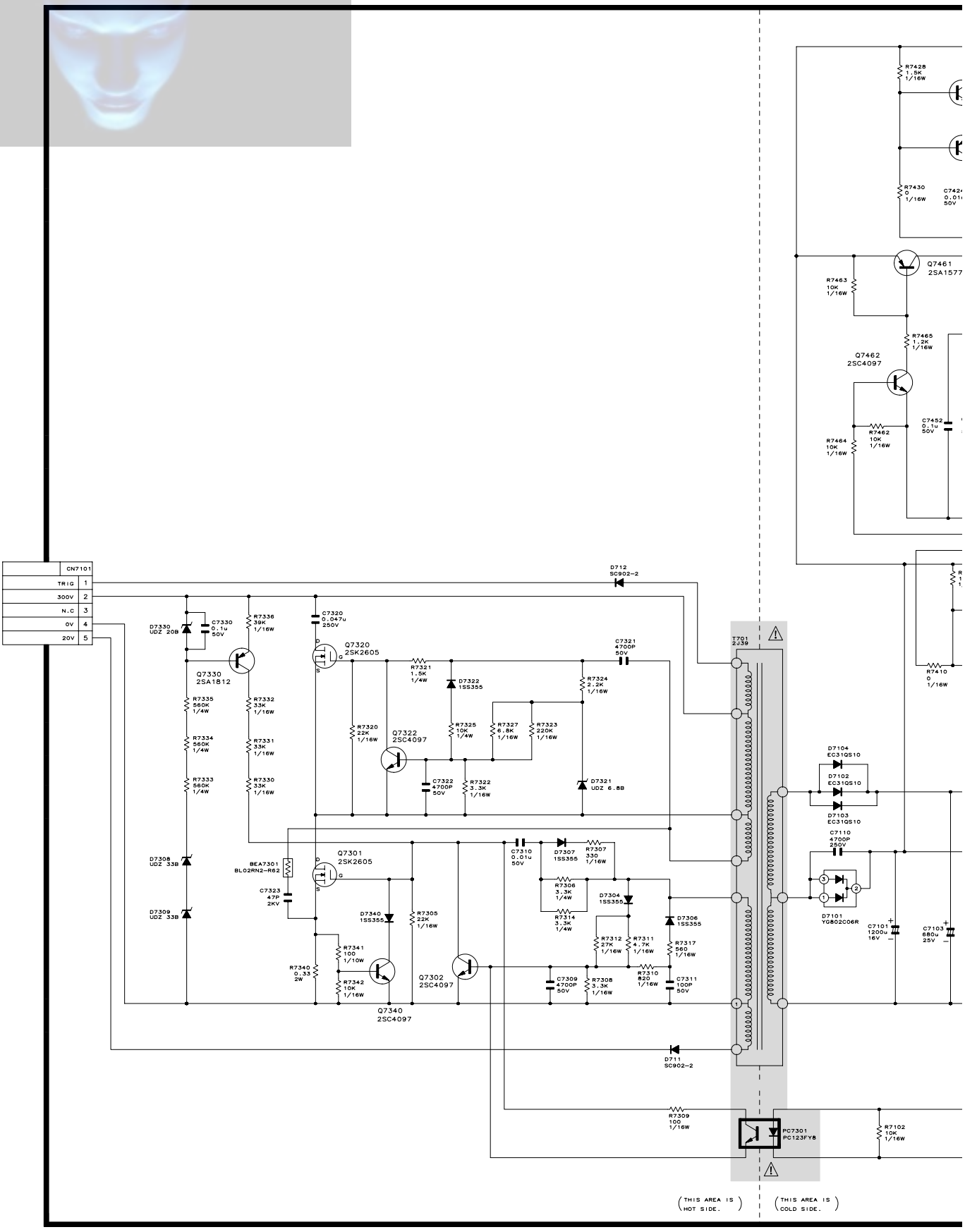


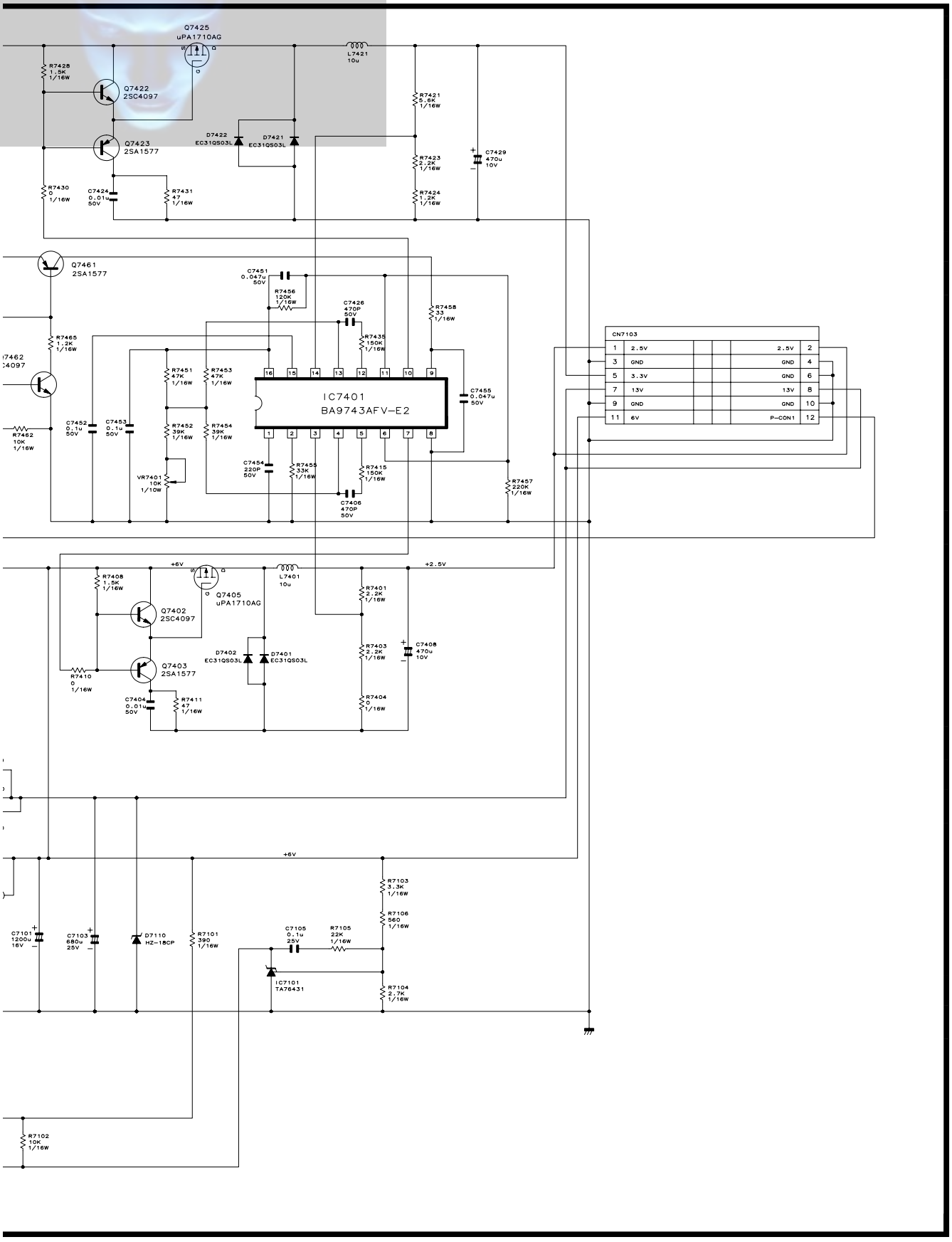


10	11	12	13	14	15	16	17	18	19

■ POWER UNIT / NETZEINHEIT

DEN (2/2) RDENCA010WJZZ

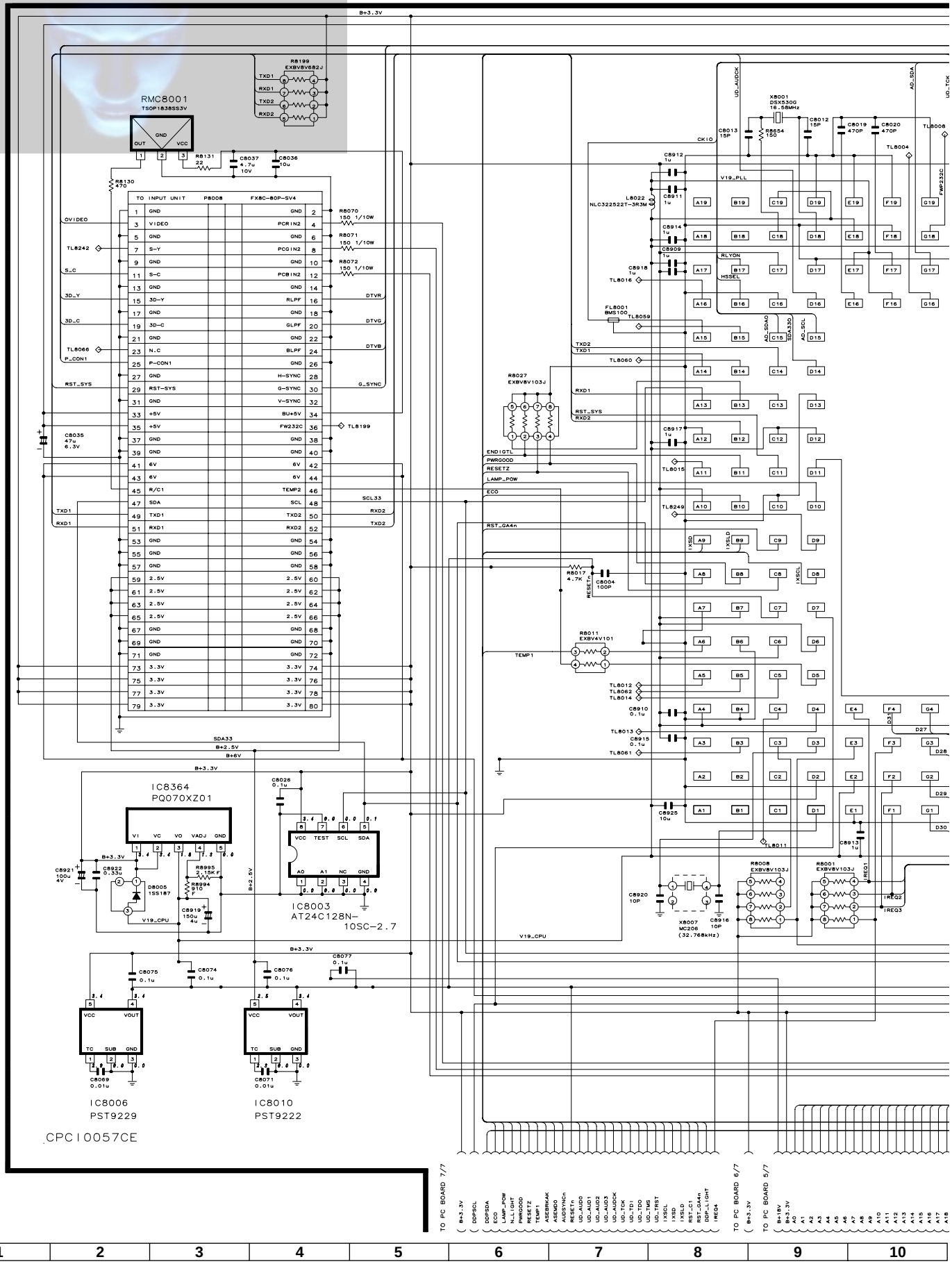


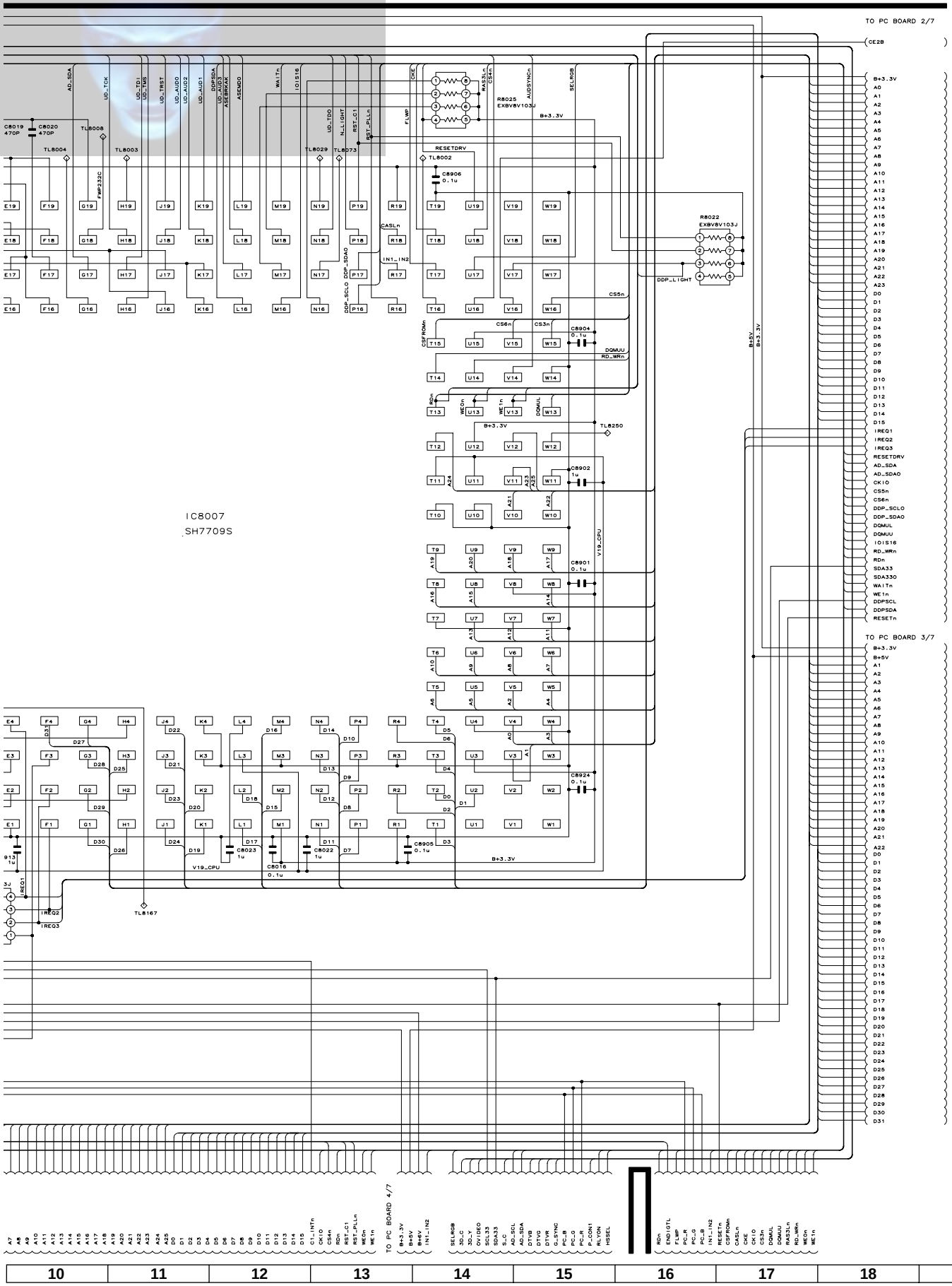


10	11	12	13	14	15	16	17	18	19

■ PC I/F UNIT-1/7 / PC-I/F-EINHEIT-1/7

PC BOARD (1/7)



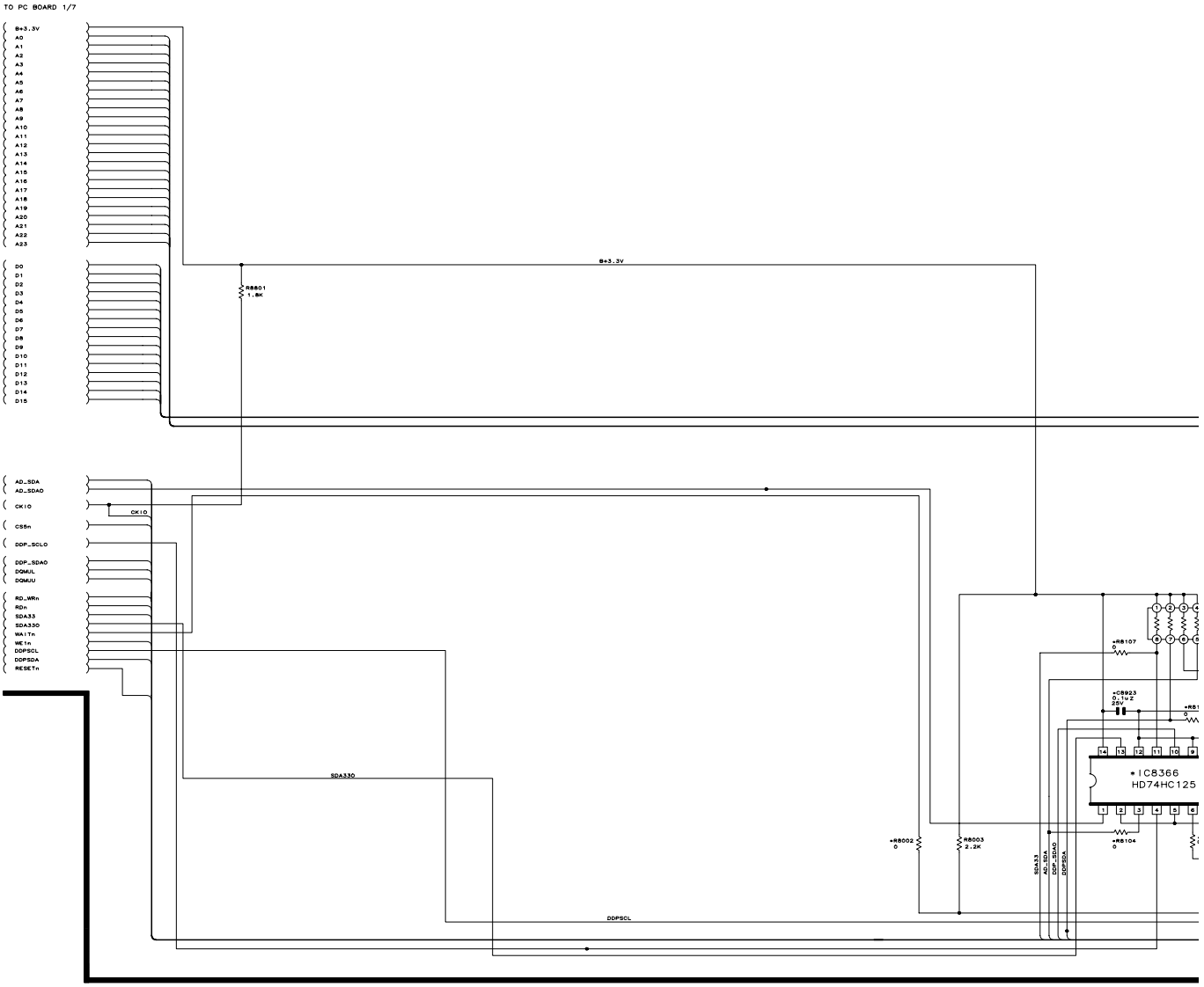


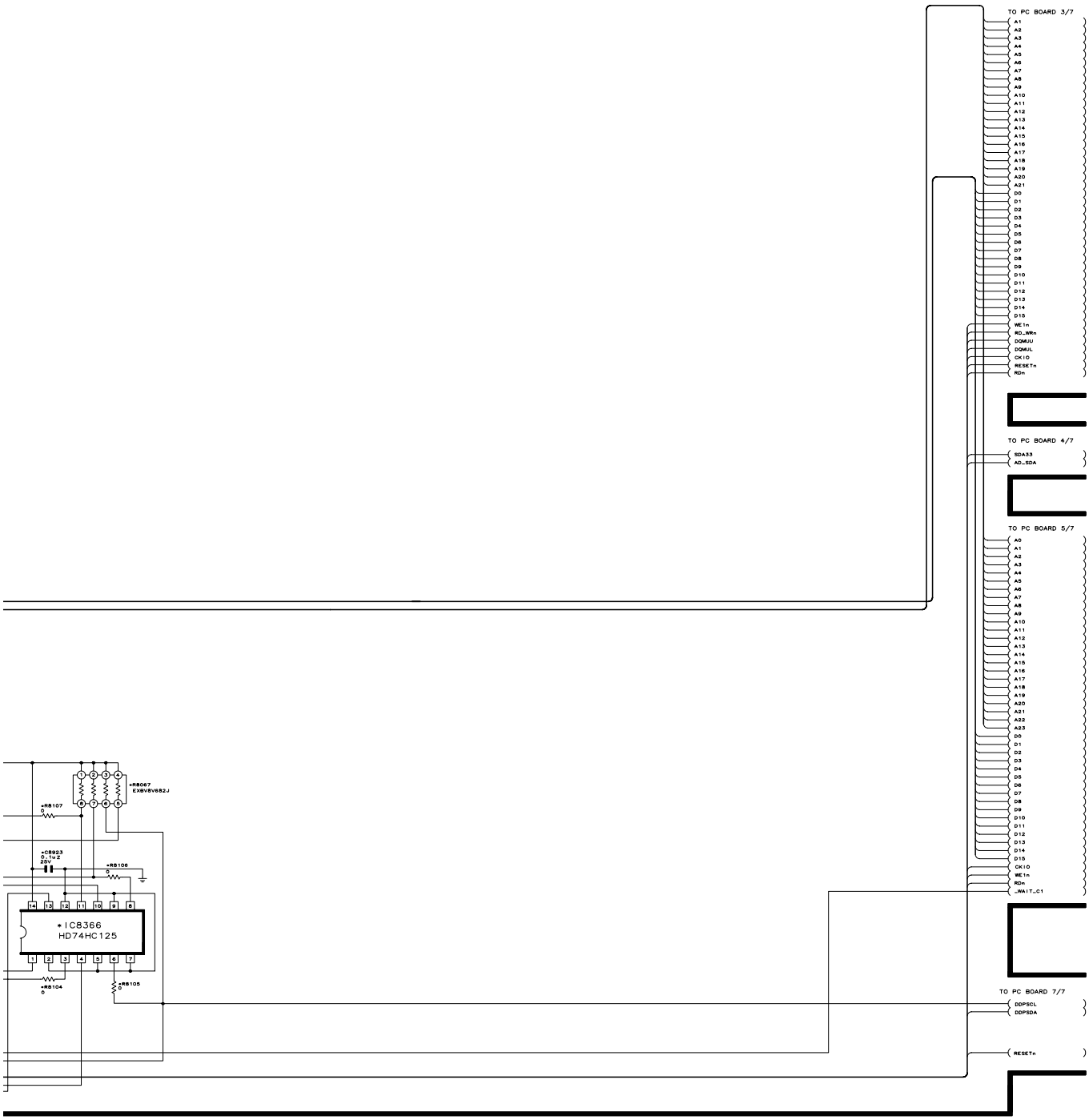
10	11	12	13	14	15	16	17	18	19

■ PC I/F UNIT-2/7 / PC-I/F-EINHEIT-2/7

PC BOARD (2/7)

CPCI-0057CE

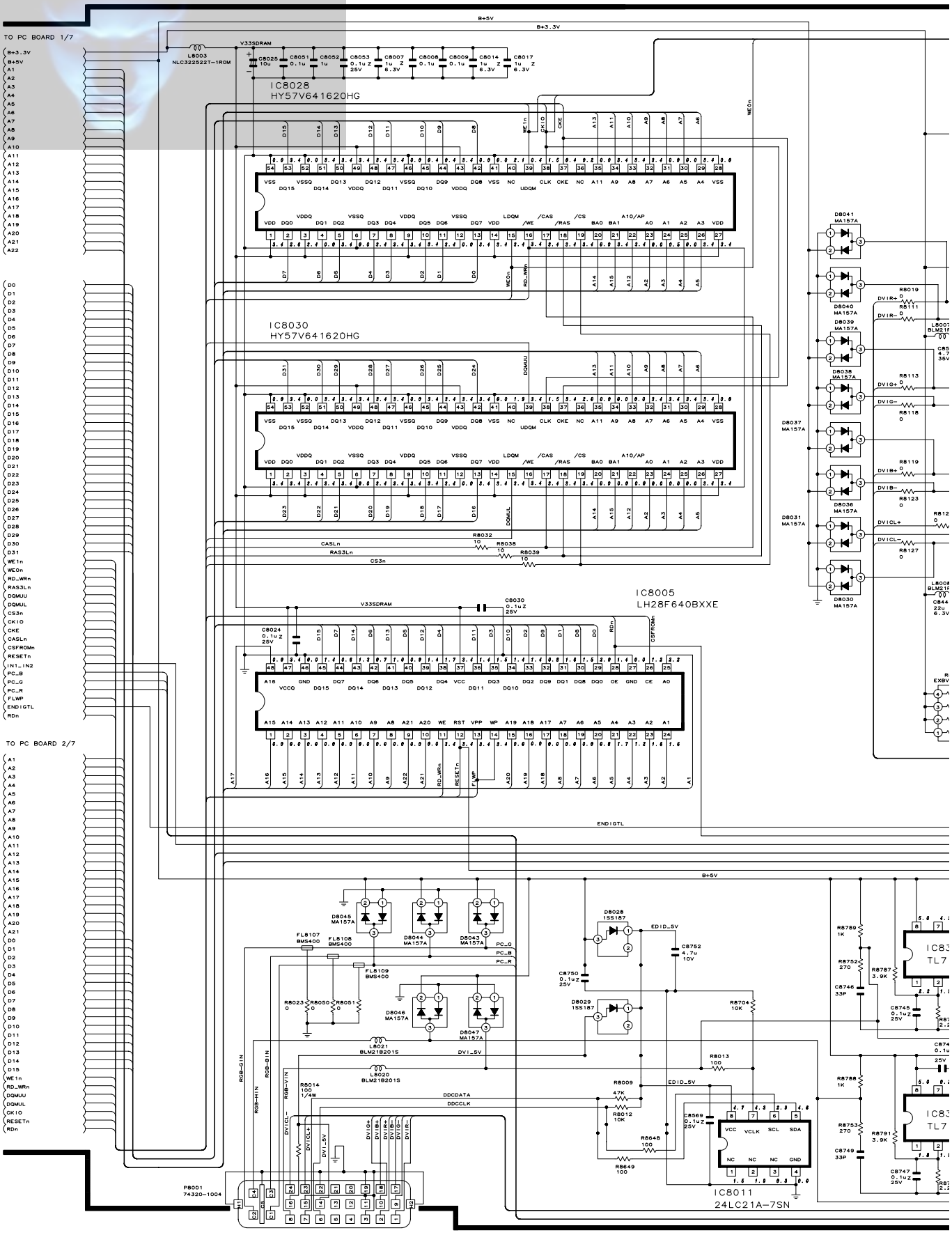


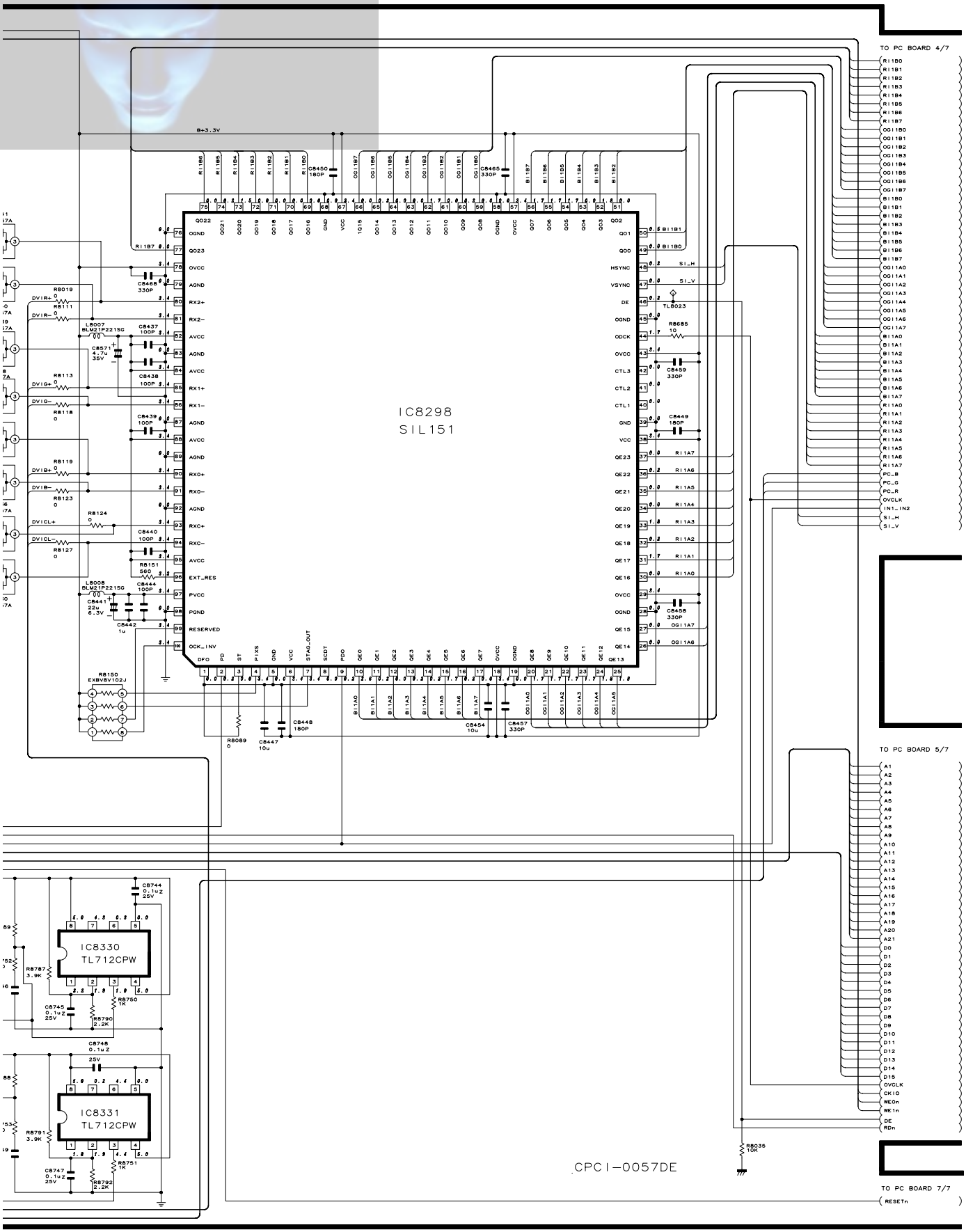


10	11	12	13	14	15	16	17	18	19

■ PC I/F UNIT-3/7 / PC-I/F-EINHEIT-3/7

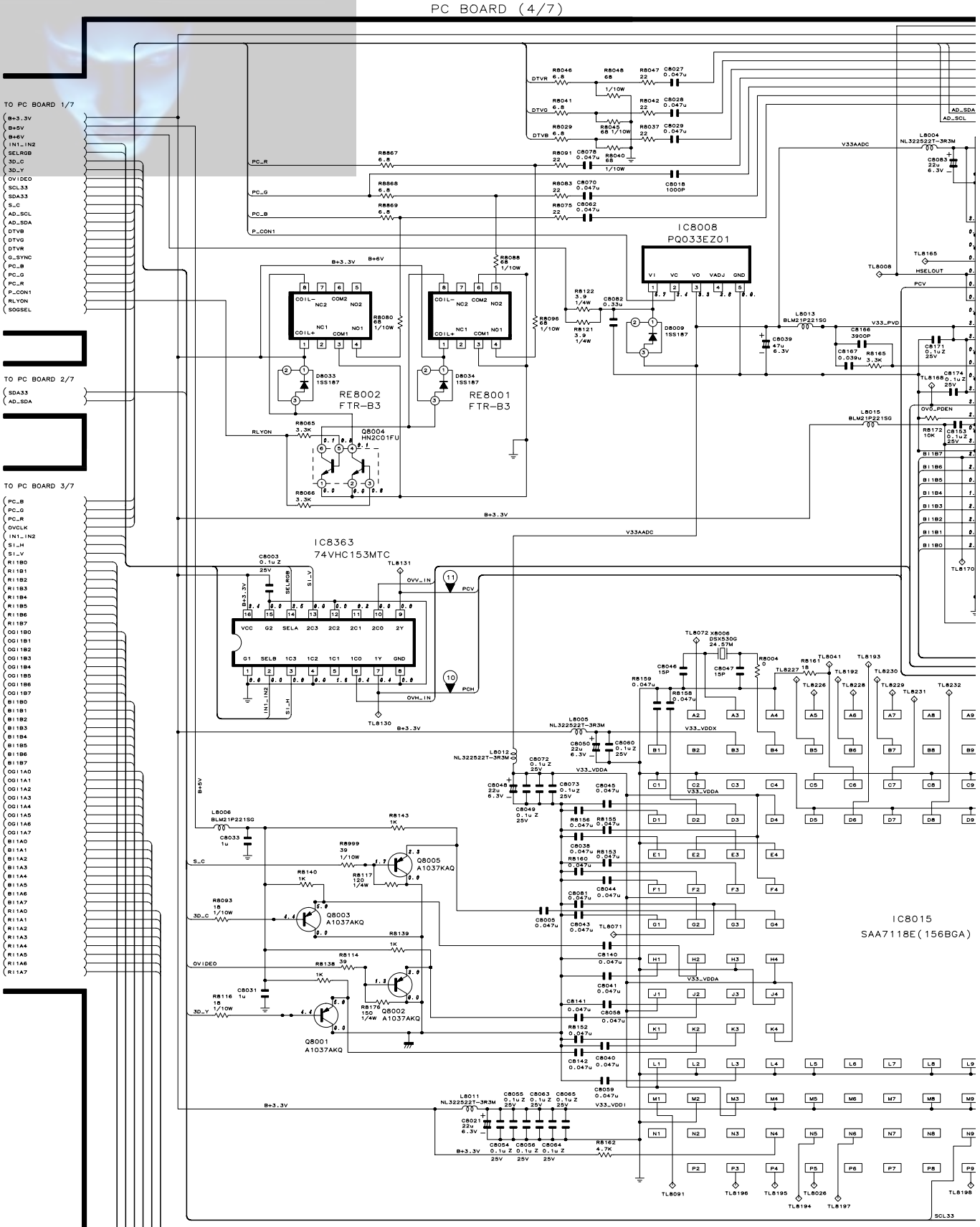
PC BOARD (3/7)

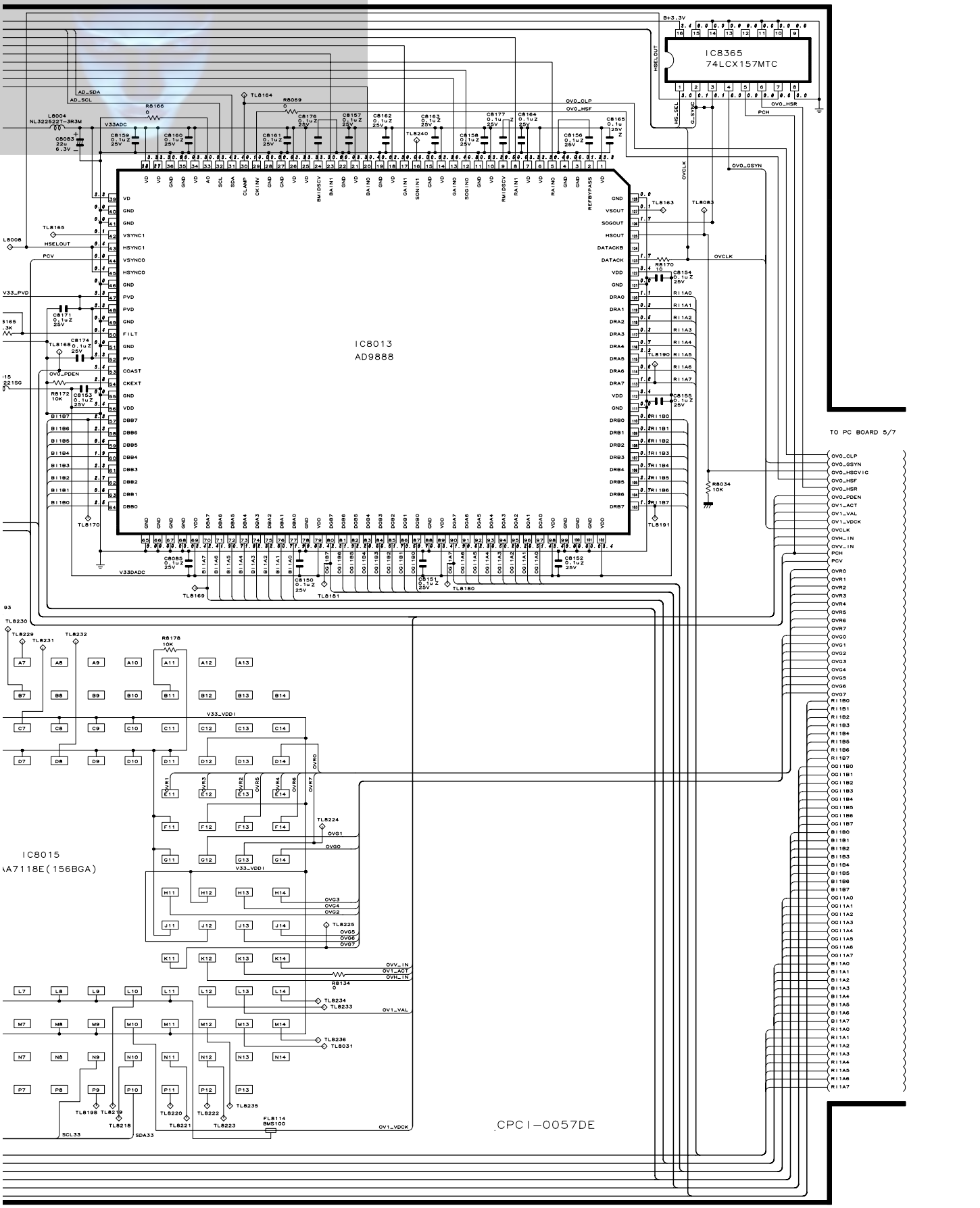



IC8298
SIL151
IC8330
TL712CPW
IC8331
TL712CPW
TO PC BOARD 4/7
TO PC BOARD 5/7
TO PC BOARD 7/7
CPCI-0057DE

■ PC I/F UNIT-4/7 / PC-I/F-EINHEIT-4/7

PC BOARD (4/7)

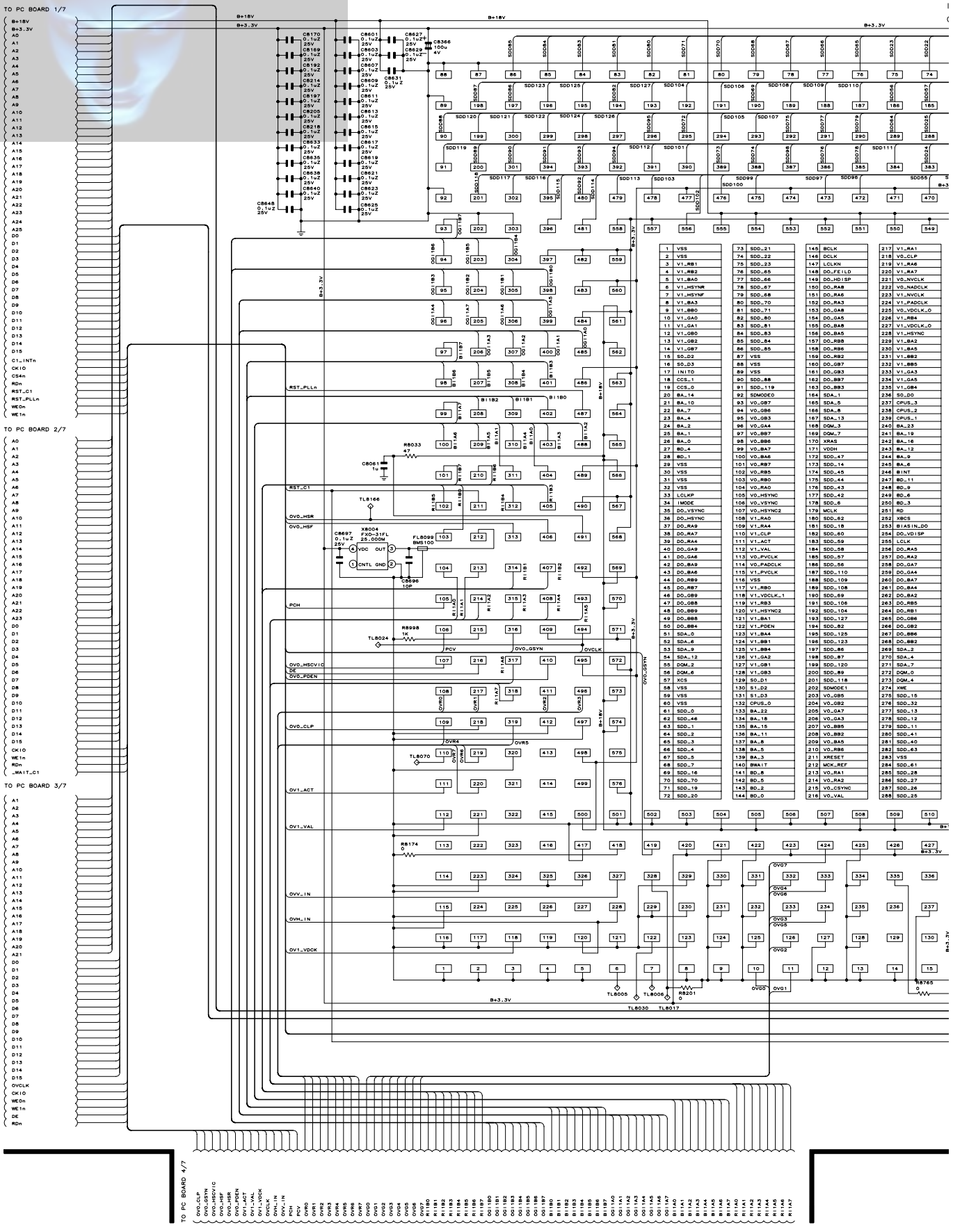


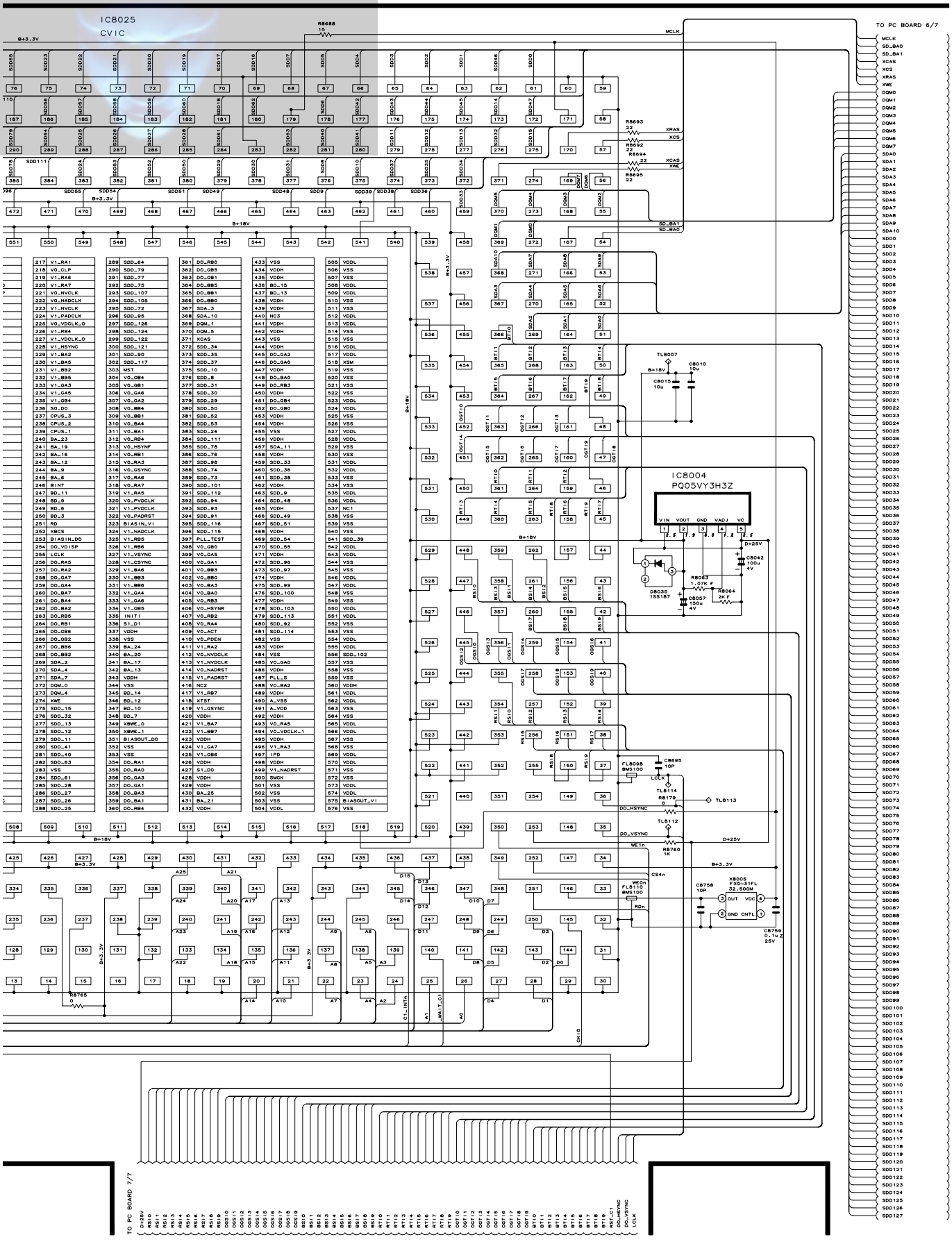


10	11	12	13	14	15	16	17	18	19

■ PC I/F UNIT-5/7 / PC-I/F-EINHEIT-5/7

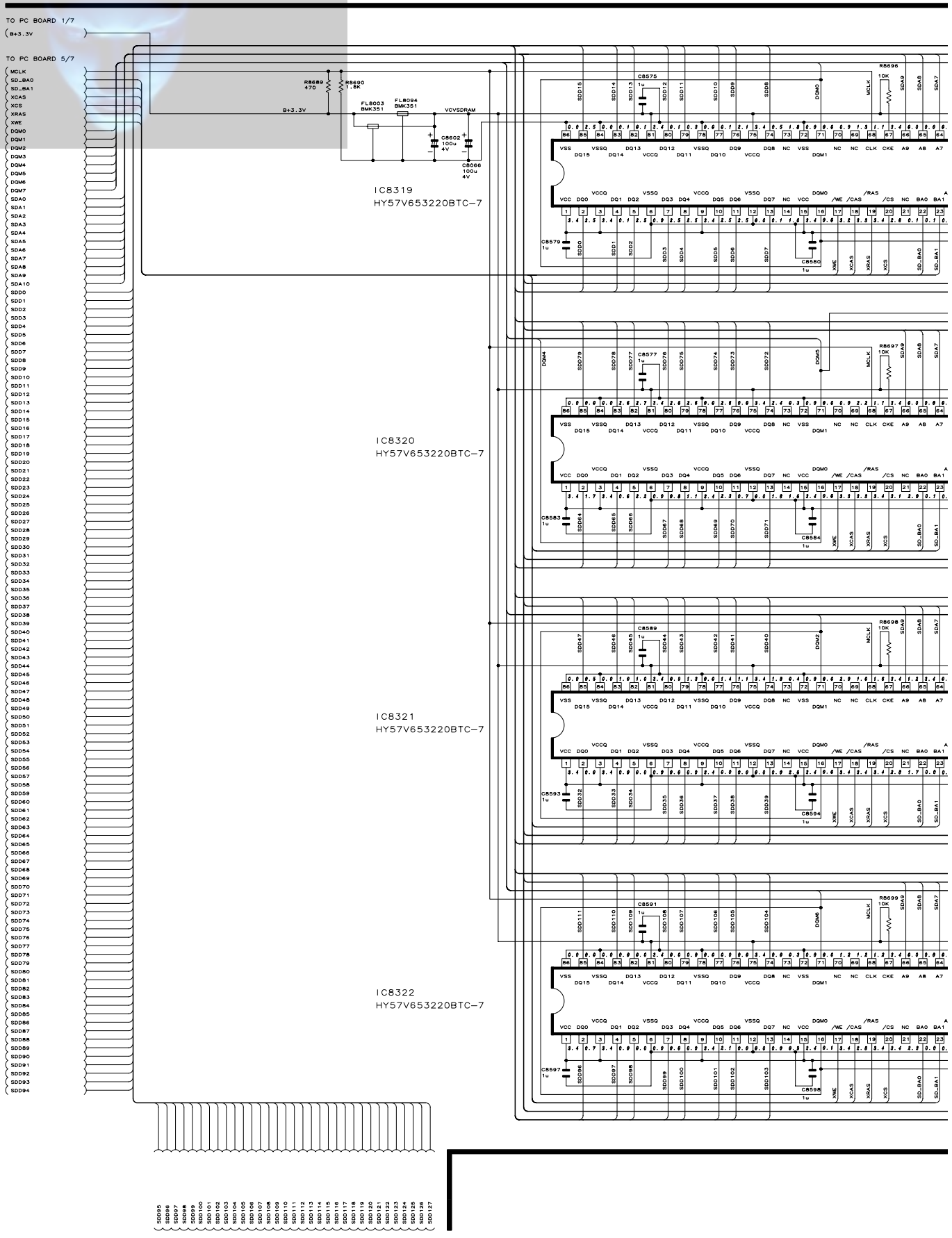
PC BOARD (5/7)

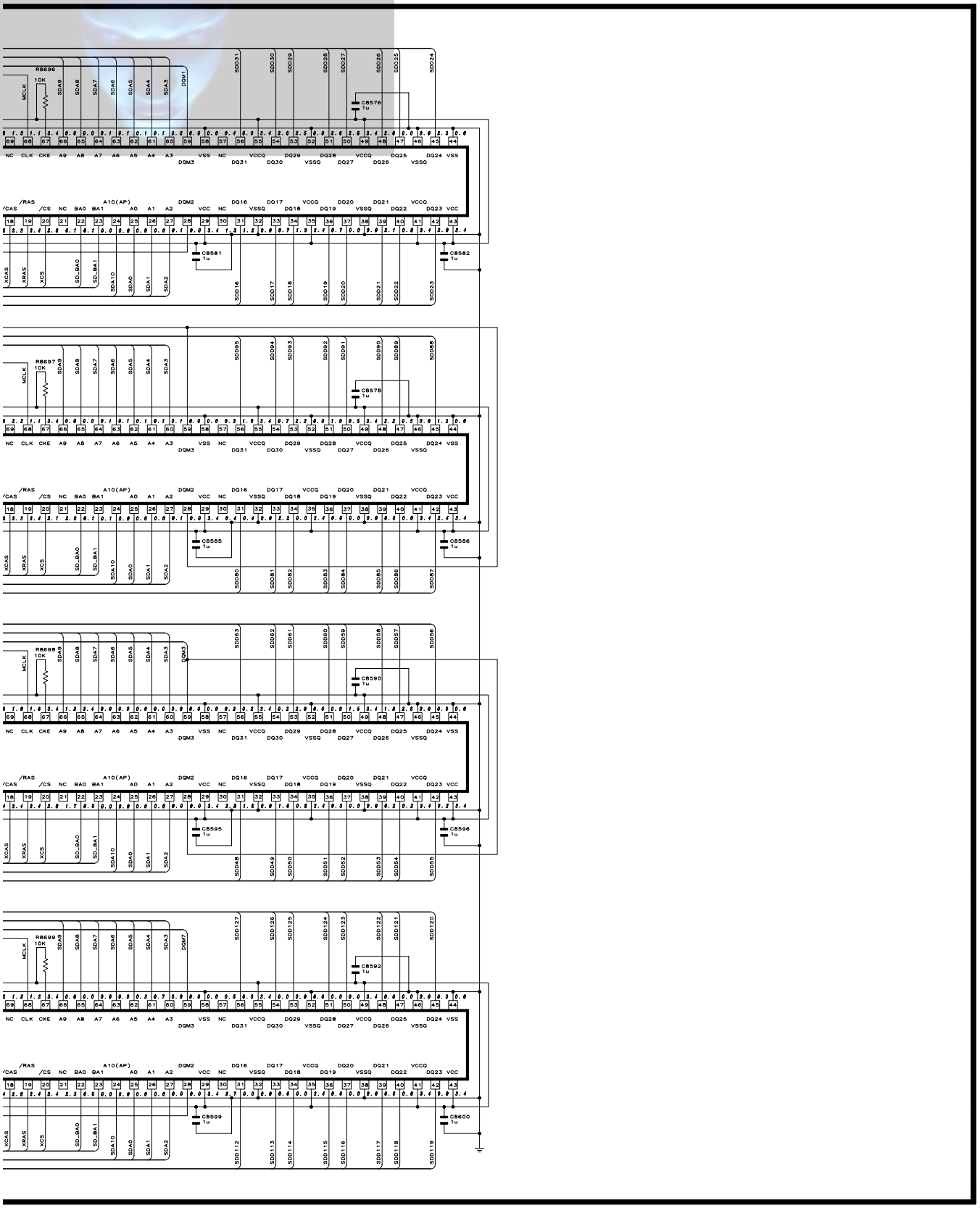



IC8025
CVIC
IC8004
PQ05VY3H3Z
TO PC BOARD 6/7
TO PC BOARD 7/7

■ PC I/F UNIT-6/7 / PC-I/F-EINHEIT-6/7

PC BOARD (6/7)

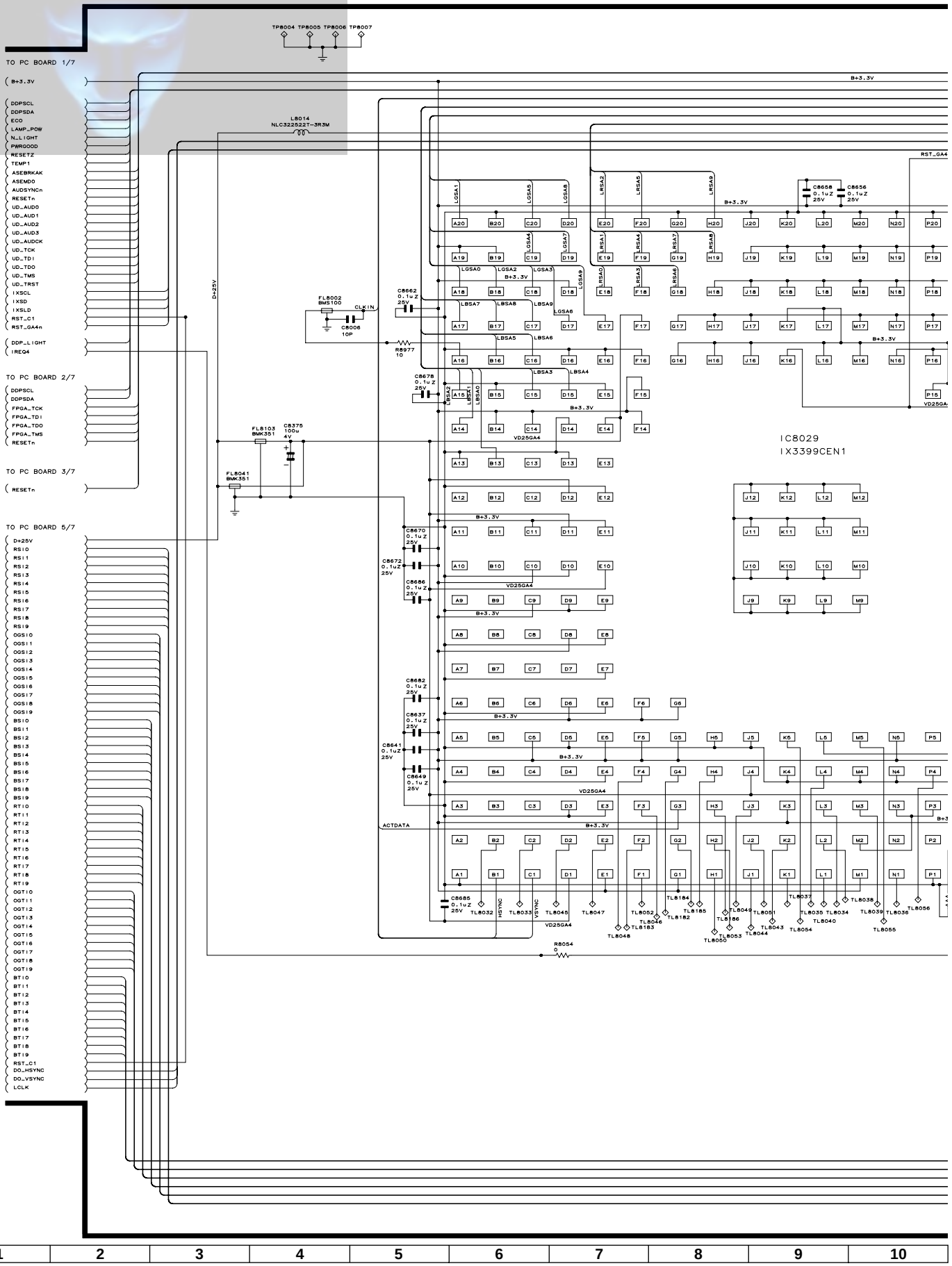


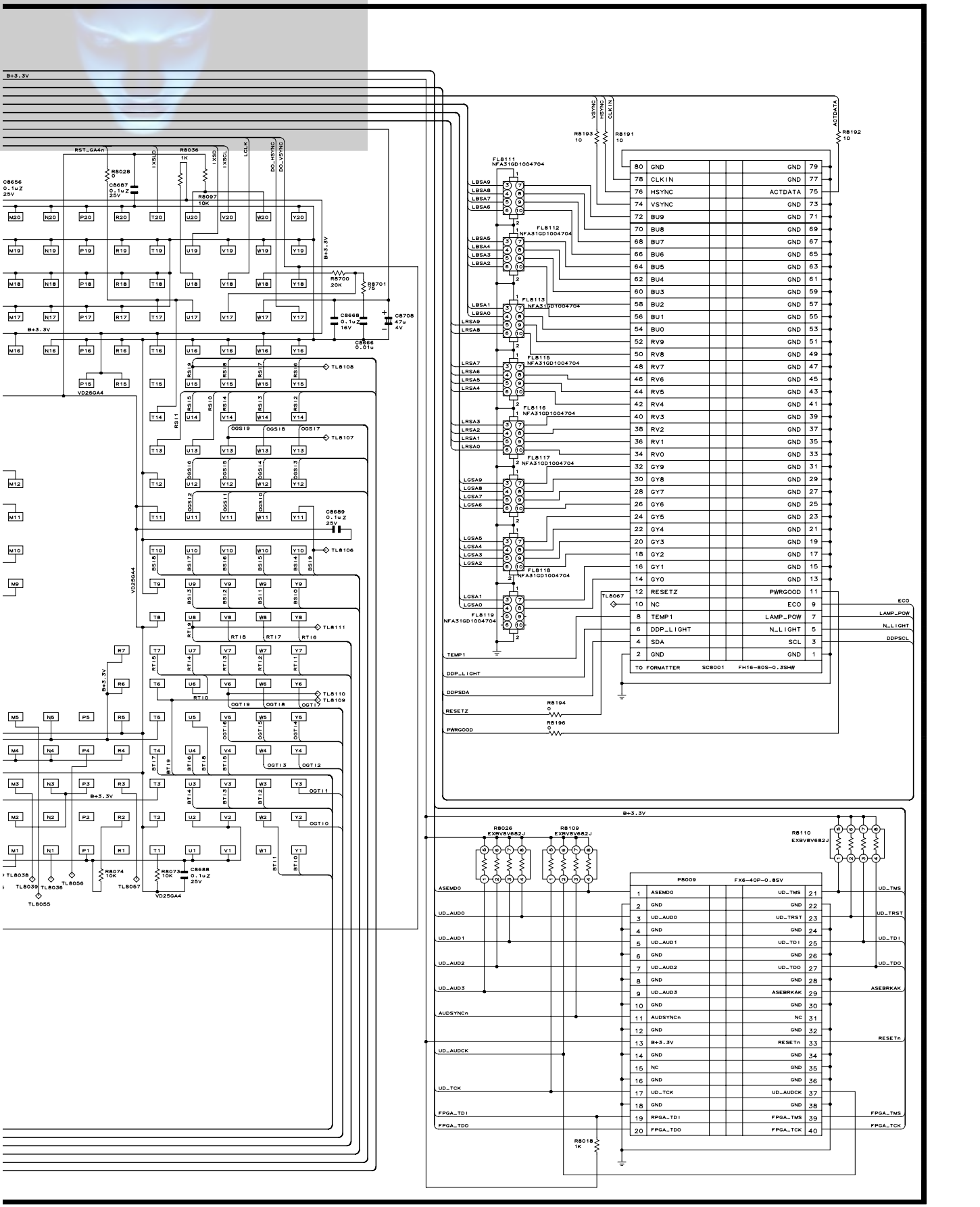


10	11	12	13	14	15	16	17	18	19

■ PC I/F UNIT-7/7 / PC-I/F-EINHEIT-7/7

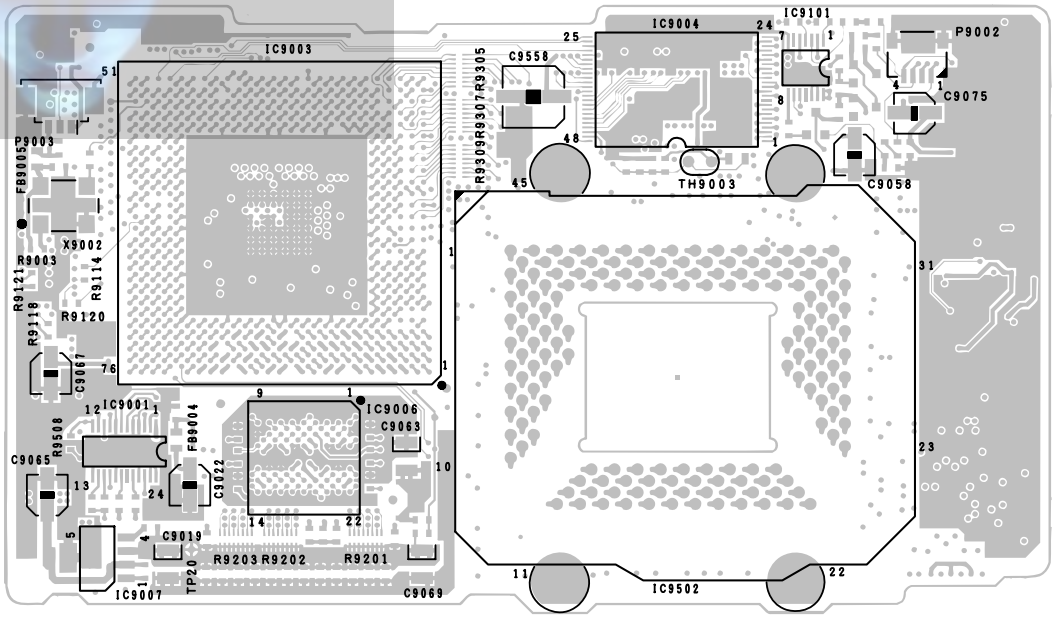
PC BOARD (7/7)



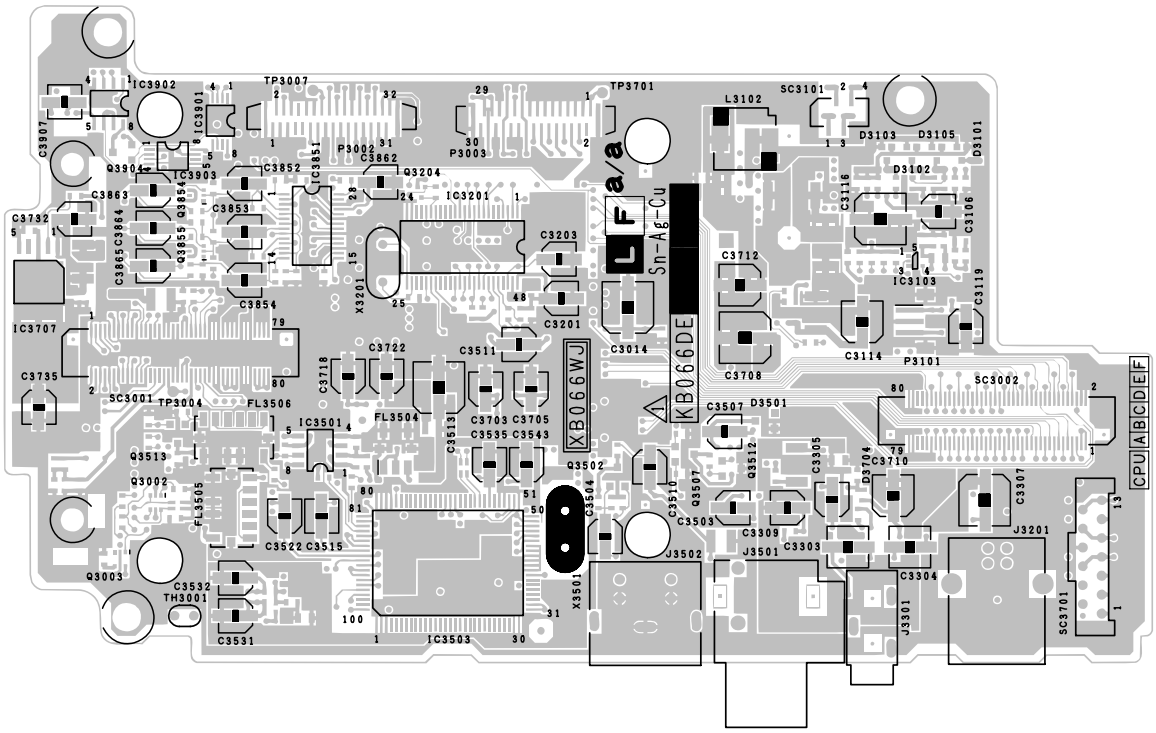


10	11	12	13	14	15	16	17	18	19

PRINTED WIRING ASSEMBLIES/
LEITERPLTTENEINHEITEN

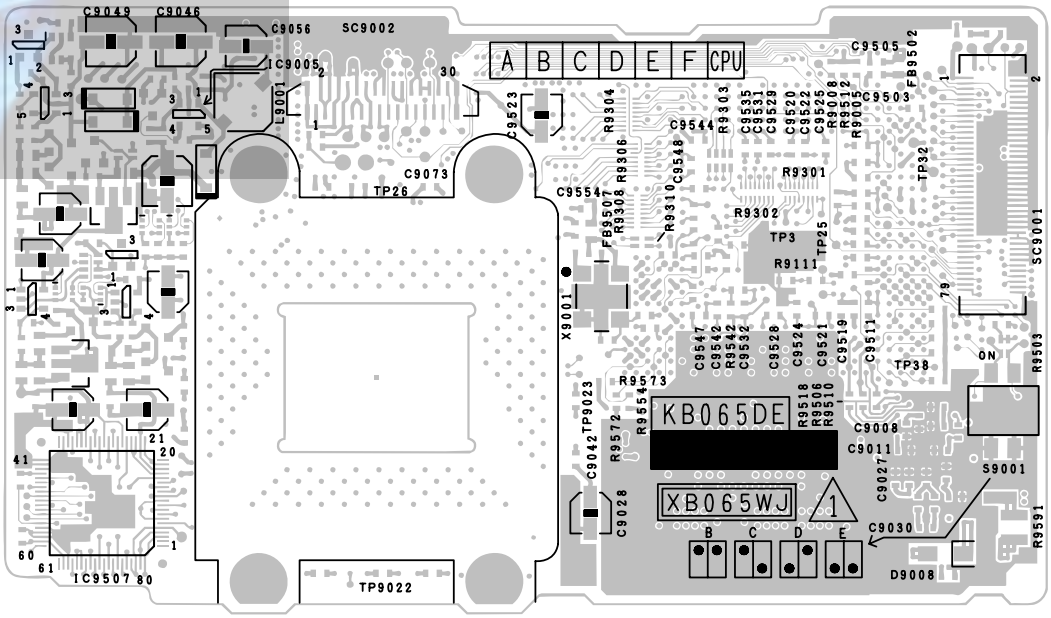


FORMATTER Unit (Side-A)
FORMATIERER Einheit (Seite-A)

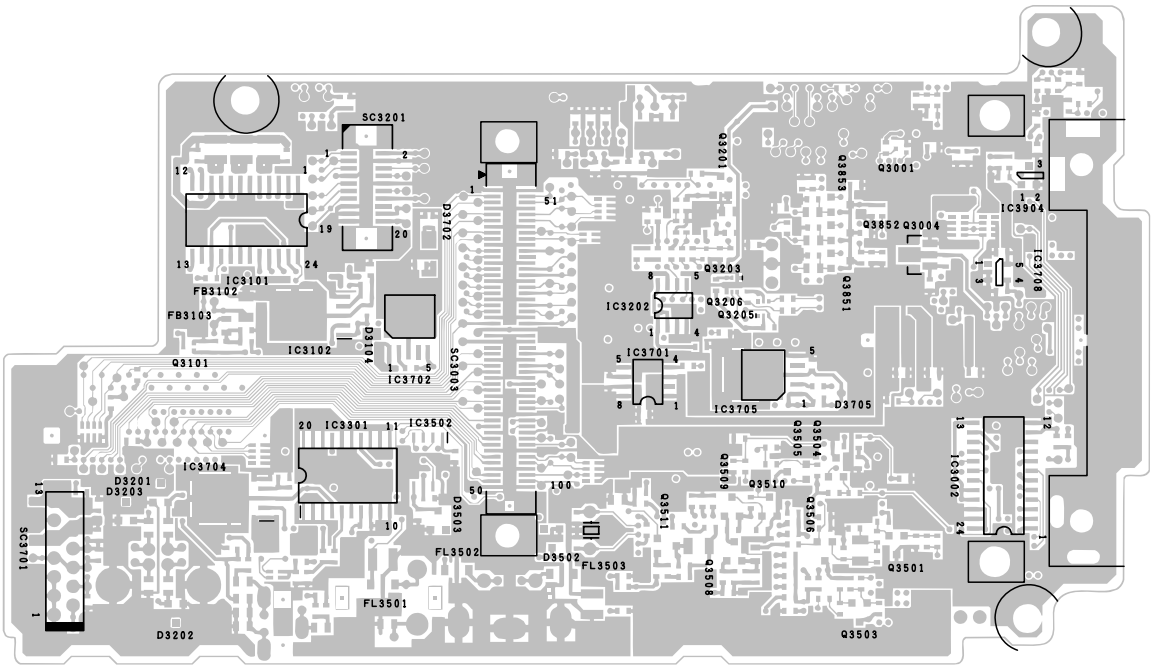


INPUT Unit (Side-A)
EINGANGS Einheit (Seite-A)

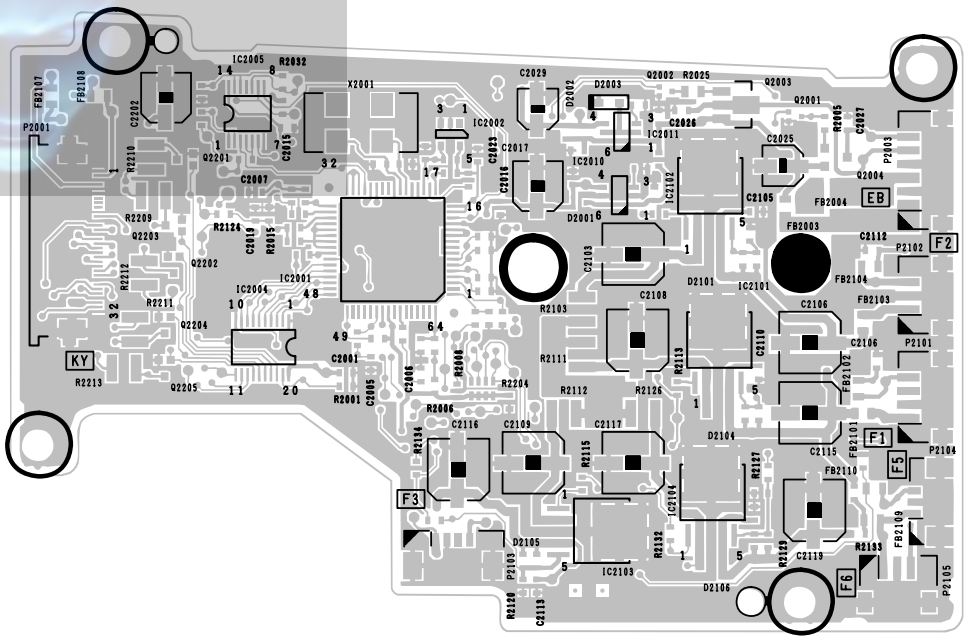
1	2	3	4	5	6



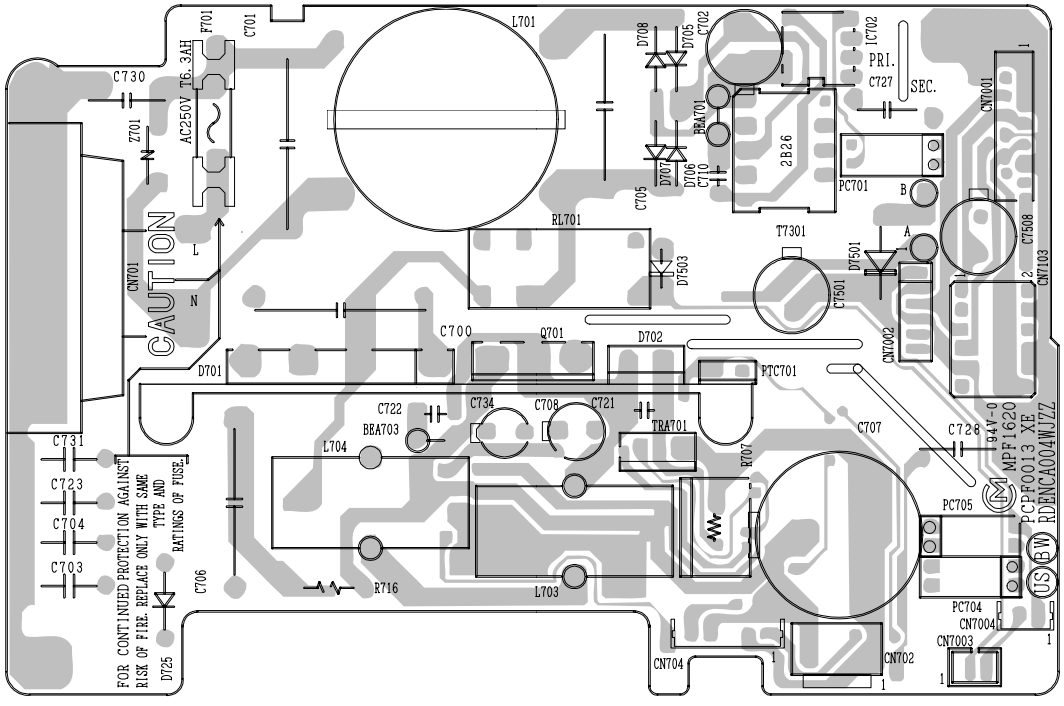
FORMATTER Unit (Side-B)
FORMATIERER Einheit (Seite-B)



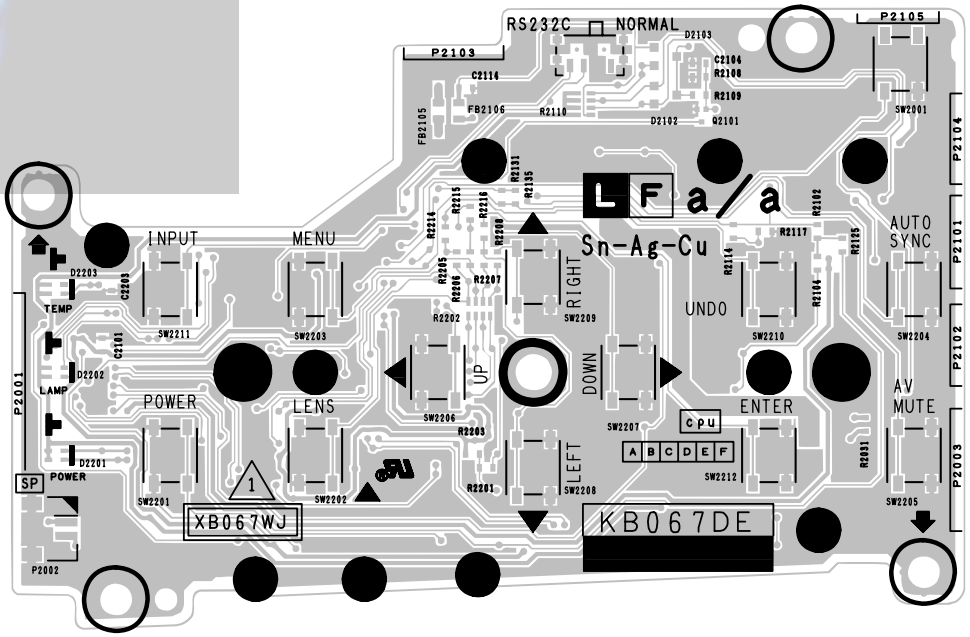
INPUT Unit (Side-B)
EINGANGS Einheit (Seite-B)



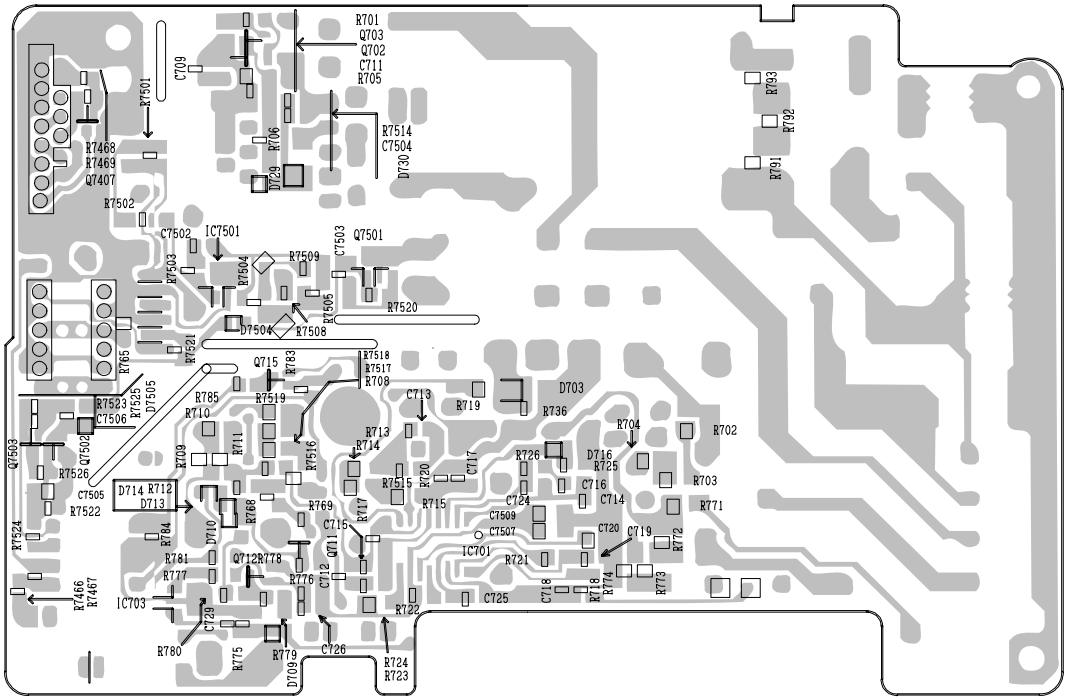
KEY Unit (Side-A)
SCHLÜSSEL Einheit (Seite-A)



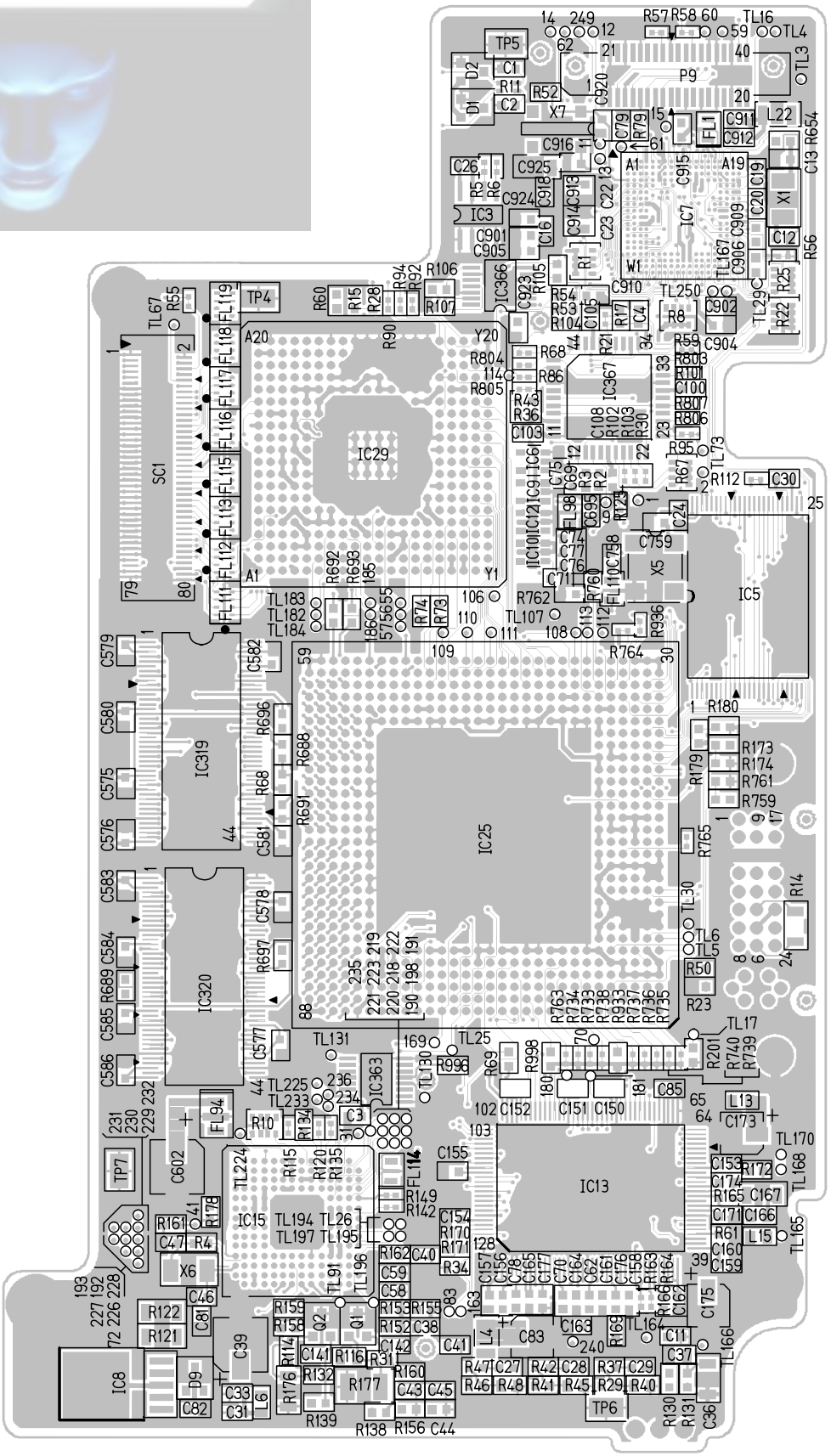
PFC Unit (Side-A)
PFC-Einheit (Seite-A)



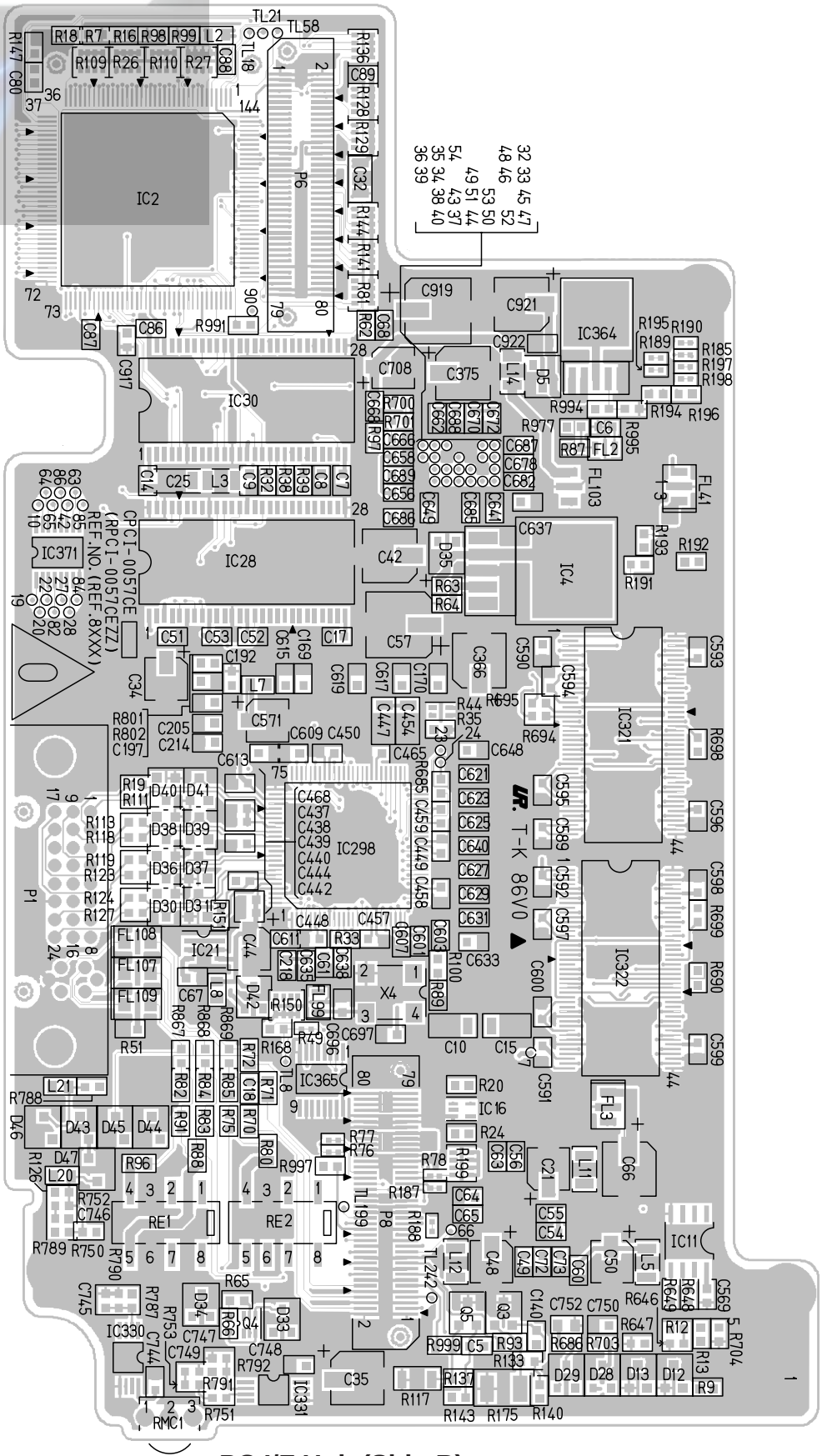
KEY Unit (Side-B)
SCHLÜSSEL Einheit (Seite-B)



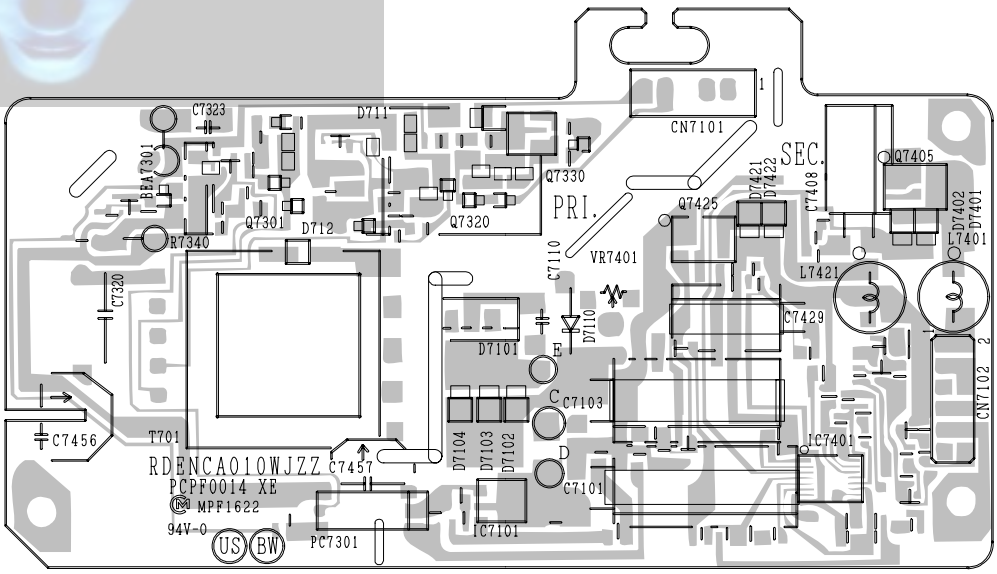
PFC Unit (Side-B)
PFC-Einheit (Seite-B)



PC I/F Unit (Side-A)
PC-I/F Einheit (Seite-A)



PC I/F Unit (Side-B)
PC-I/F Einheit (Seite-B)



POWER Unit (Component Side)
NETZ Einheit (Bestückugsseite)

PARTS LIST

PARTS REPLACEMENT

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION
5. CODE
6. QUANTITY

in **USA**: Contact your nearest SHARP Parts Distributor.
For location of SHARP Parts Distributor,
Please call Toll-Free; 1-800-BE-SHARP

in **CANADA**: Contact SHARP Electronics of Canada Limited
Phone (416) 890-2100.

★ MARK: SPARE PARTS-DELIVERY SECTION

ERSATZTEILLISTE

AUSTAUSCH VON TEILEN

Ersatzteile, die besondere Sicherheitseigenschften haben, sind in dieser Anleitung markiert. Elektrische Komponenten mit solchen Eigenshaften sind in den Ersatzteil durch "⚠" gekenn-zeichnet.
Der Gebrauch von Ersatzteilen, die nicht deselben Sicherheits-eigenschaften haben wie die vom Hersteller empfohlenen ud in der Bedienungsanleitung angegebenen, können zur Ursache von Blitzeinschlägen, Bränden und anderen Gefahren werden.

"WIE MAN ERSATSTEILE BESTELLT"

Damit Ihre Bestellung promt und korrekt ausgeführt wird, geben Sie bitte folgende Informationen.

1. MODELL NR.
2. REF. NR.
3. ERSATZTEIL NR.
4. BESCHREIBUNG
5. KODE
6. QUANTITÄT

★ MARKIERUNG : ERSATZTEILE-LIEFERUNG

Ref. No.	Part No.	★	Description	Code

PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

PG-M20X

DUNTKB065DE01		J	FORMATTER Unit	CP
DUNTKB066DE01		–	INPUT Unit	—
DUNTKB067DE01		–	KEY UNIT	—
RDENCA004WJZZ		–	PFC Unit	—
RDENCA010WJZZ		–	POWER Unit	—
CPCi-0057CE01		J	PC I/F Unit	CW
RDENCA005WJZZ		J	BALLAST Unit (Unit Replacement)	BZ

PG-M20S

DUNTKB065DE03		J	FORMATTER Unit	
DUNTKB066DE03		–	INPUT Unit	—
DUNTKB067DE03		–	KEY UNIT	—
RDENCA004WJN1		–	PFC Unit	—
RDENCA010WJZZ		–	POWER Unit	—
CPCi-0057CE31		J	PC I/F Unit	
RDENCA005WJZZ		J	BALLAST Unit (Unit Replacement)	BZ

DUNTKB065DE01 (PG-M20X) DUNTKB065DE03 (PG-M20S) FORMATTER UNIT

INTEGRATED CIRCUITS

IC9001	VHiTCDCR83D-1Y	J	TCDCR83D	AR
IC9004	RH-iXA090WJZZQ	J	IC (PG-M20X)	AU
IC9004	RH-iXA343WJZZ	J	IC (PG-M20S)	
IC9005	VHiLT1613CS-1Y	J	LT1613CS	AS
IC9007	VHiLP3962M1-1Y	J	LP3962M1	AM
IC9101	VHiAHCT08PW-1Y	J	AHCT08PW	AD
IC9504	VHiOPA237NA-1Y	J	OPA237NA	AH
IC9505	VHiLM321MF+-1Y	J	LM321MF	AE
IC9506	VHiOPA237NA-1Y	J	OPA237NA	AH
IC9510	VHi4040CM35-1Y	J	4040CM35	AH
IC9511	VHi4040CM35-1Y	J	4040CM35	AH

Note: When exchanging the following parts, it becomes unit replacement correspondence.

IC9003	—	–	DDP1000	—
IC9006	—	–	RAMBUS	—

TRANSISTORS

Q9001	VS2SJ356+++-1Y	J	2SJ356	AE
Q9002	VS2SC4672Q/-1	J	2SC4672Q	AE
Q9003	VS2SC3928AR-1	J	2SC3928AR	AB
Q9101	VS2SC3928AR-1	J	2SC3928AR	AB
Q9102	VS2SC3928AR-1	J	2SC3928AR	AB
Q9501	VSMMBT2907A-1Y	J	MMBT2907A	AB
Q9502	VSMMBT2907A-1Y	J	MMBT2907A	AB
Q9503	VSMMBT2222A-1Y	J	MMBT2222A	AB
Q9504	VSMMBT2907A-1Y	J	MMBT2907A	AB
Q9505	VSMMBT2222A-1Y	J	MMBT2222A	AB
Q9506	VSMMBT2907A-1Y	J	MMBT2907A	AB
Q9507	VSiMT17++++-1Y	J	IMT17	AC
Q9508	VSUMH4N++++-1Y	J	UMH4N	AC
Q9509	VSUMH4N++++-1Y	J	UMH4N	AC
Q9510	VSFDG6303N+-1Y	J	FDG6303N	AE
Q9511	VSFDG6303N+-1Y	J	FDG6303N	AE

DIODES AND THERMISTER

D9005	VHDMi1A3///2E	J	Diode	AC
D9006	VHDMi1A3///2E	J	Diode	AC
D9007	VHDMi1A3///2E	J	Diode	AC
D9008	VHDSFPA73//2EY	J	Diode	AD
TH9003	RH-HXA001WJZZ	J	Thermister	AD

DUNTKB065DE01 (PG-M20X)
DUNTKB065DE03 (PG-M20S)
FORMATTER UNIT (Continued)

PACKAGED CIRCUITS AND COIL

Ref. No.	Part No.	★	Description	Code
X9001	RCRUAA001WJZZY	J	Crystal	AN
X9002	RCRUAA002WJZZY	J	Crystal	AN
L9001	RCiLP0191GEZZY	J	Peaking Coil	AD

CAPACITORS

Ref. No.	Part No.	★			Description	Code
C9001	VCEAPF1CW106M	J	10	16V	Electrolytic	AB
C9002	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9003	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9004	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9006	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9007	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9008	VCCCCY1HH680J	J	68p	50V	Ceramic	AA
C9009	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9010	VCCCCY1HH680J	J	68p	50V	Ceramic	AA
C9011	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9013	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9014	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9015	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9016	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9019	VCSNDE0GP107MY	J	100	4V	Chip	AF
C9021	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9022	VCEAPF1CW106M	J	10	16V	Electrolytic	AB
C9023	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9024	VCCCCY1HH680J	J	68p	50V	Ceramic	AA
C9025	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9026	VCCCCY1HH680J	J	68p	50V	Ceramic	AA
C9027	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9028	VCEAPF1HW105M	J	1.0	50V	Electrolytic	AB
C9029	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9030	VCCCCY1HH4R0C	J	4p	50V	Ceramic	AA
C9032	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9034	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9035	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9036	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9037	VCEASH1VN106MY	J	10	35V	Electrolytic	AC
C9038	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9039	VCKYCY1HF104ZY	J	0.1	50V	Ceramic	AA
C9041	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9042	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9043	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9044	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9045	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9046	VCEASH1VN106MY	J	10	35V	Electrolytic	AC
C9047	VCKYCY1HF104ZY	J	0.1	50V	Ceramic	AA
C9049	VCEASH1VN106MY	J	10	35V	Electrolytic	AC
C9050	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9051	VCKYCY1HF104ZY	J	0.1	50V	Ceramic	AA
C9053	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9054	VCCCCY1HH7R0D	J	7p	50V	Ceramic	AA
C9055	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9056	VCEAPV1EW475M	J	4.7	25V	Electrolytic	AC
C9057	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9058	VCEAPF1EW475M	J	4.7	25V	Electrolytic	AB
C9059	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9060	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9061	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9062	VCKYCY1CB104K	J	0.1	16V	Ceramic	AB
C9063	VCSNDE0GP107MY	J	100	4V	Chip	AF
C9064	VCEAPF1HW105M	J	1.0	50V	Electrolytic	AB
C9065	VCEAPF1CW106M	J	10	16V	Electrolytic	AB
C9066	VCEAPF1HW335M	J	3.3	50V	Electrolytic	AB
C9067	VCEAPF1CW106M	J	10	16V	Electrolytic	AB
C9068	VCEAPF1HW335M	J	3.3	50V	Electrolytic	AB
C9069	VCSNDE0GP107MY	J	100	4V	Chip	AF
C9070	VCKYCY1HF104ZY	J	0.1	50V	Ceramic	AA
C9071	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9072	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9073	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9075	VCEAPF1HW105M	J	1.0	50V	Electrolytic	AB
C9101	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9102	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9503	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9505	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9510	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9511	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9513	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9514	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9515	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9516	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9517	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9519	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9520	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9521	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9522	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9523	VCEAPF1CW106M	J	10	16V	Electrolytic	AB
C9524	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9525	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9527	VCKYCY1HF104ZY	J	0.1	50V	Ceramic	AA
C9528	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9529	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9530	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9531	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9532	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9533	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9535	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9536	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9537	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9538	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9539	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9542	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9544	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9545	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9546	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9547	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9548	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9549	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9550	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9551	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9552	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9553	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9554	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9555	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9558	VCEAPF0GW227M	J	220	4V	Electrolytic	AB
C9562	VCEAPF1HW335M	J	3.3	50V	Electrolytic	AB
C9563	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9564	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9565	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9566	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C9567	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA

RESISTORS

Ref. No.	Part No.	★			Description	Code
R9001	VRS-CY1JF000J	J	0	1/16W	Metal Oxide	AA
R9003	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9005	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9006	VRS-CY1JF111F	J	110	1/16W	Metal Oxide	AA
R9007	VRS-CY1JF111F	J	110	1/16W	Metal Oxide	AA
R9008	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9010	VRS-CY1JF560F	J	56	1/16W	Metal Oxide	AA
R9011	VRS-CY1JF560F	J	56	1/16W	Metal Oxide	AA
R9014	VRS-CY1JF302F	J	3k	1/16W	Metal Oxide	AA
R9017	VRS-CY1JF683F	J	68k	1/16W	Metal Oxide	AA
R9018	VRS-TV1JD240J	J	24	1/16W	Metal Oxide	AA
R9020	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9031	VRS-CY1JF333J	J	33k	1/16W	Metal Oxide	AA
R9032	VRS-CY1JF333J	J	33k	1/16W	Metal Oxide	AA
R9101	VRS-CY1JF471J	J	470	1/16W	Metal Oxide	AA
R9102	VRS-CY1JF182J	J	1.8k	1/16W	Metal Oxide	AA
R9103	VRS-CY1JF472J	J	4.7k	1/16W	Metal Oxide	AA
R9104	VRS-CY1JF471J	J	470	1/16W	Metal Oxide	AA
R9105	VRS-CY1JF473J	J	47k	1/16W	Metal Oxide	AA
R9106	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9107	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R9108	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R9109	VRS-CY1JF473J	J	47k	1/16W	Metal Oxide	AA
R9110	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R9111	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R9112	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA

DUNTKB065DE01 (PG-M20X)
DUNTKB065DE03 (PG-M20S)
FORMATTER UNIT (Continued)

Ref. No.	Part No.	★	Description			Code
R9113	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R9114	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R9115	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R9116	VRS-CY1JF000J	J	0	1/16W	Metal Oxide	AA
R9118	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R9119	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R9120	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R9121	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R9131	VRS-CY1JF184J	J	180k	1/16W	Metal Oxide	AA
R9132	VRN-CY1JF472D	J	4.7k	1/16W	Metal Film	AA
R9135	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9201	VRK-CD1JJ390FY	J	39	1/16W	Metal Compo	AC
R9202	VRK-CD1JJ390FY	J	39	1/16W	Metal Compo	AC
R9203	VRK-CD1JJ390FY	J	39	1/16W	Metal Compo	AC
R9204	VRS-CY1JF390FY	J	39	1/16W	Metal Oxide	AA
R9205	VRS-CY1JF390FY	J	39	1/16W	Metal Oxide	AA
R9206	VRS-CY1JF390FY	J	39	1/16W	Metal Oxide	AA
R9207	VRS-CY1JF390FY	J	39	1/16W	Metal Oxide	AA
R9301	VRK-CC1JJ220JY	J	22	1/16W	Metal Compo	AC
R9302	VRK-CC1JJ220JY	J	22	1/16W	Metal Compo	AC
R9303	VRS-CB1JF220J	J	22	1/16W	Metal Oxide	AC
R9304	VRK-CC1JJ220JY	J	22	1/16W	Metal Compo	AC
R9305	VRK-CC1JJ220JY	J	22	1/16W	Metal Compo	AC
R9306	VRK-CC1JJ220JY	J	22	1/16W	Metal Compo	AC
R9307	VRK-CC1JJ220JY	J	22	1/16W	Metal Compo	AC
R9308	VRK-CC1JJ220JY	J	22	1/16W	Metal Compo	AC
R9309	VRK-CC1JJ220JY	J	22	1/16W	Metal Compo	AC
R9310	VRS-CA1JF220J	J	22	1/16W	Metal Oxide	AA
R9401	VRS-CA1JF273J	J	27k	1/16W	Metal Oxide	AA
R9402	VRS-CB1JF273J	J	27k	1/16W	Metal Oxide	AC
R9502	VRS-CY1JF222J	J	2.2k	1/16W	Metal Oxide	AA
R9503	VRS-CA1JF103J	J	10k	1/16W	Metal Oxide	AA
R9506	VRS-CY1JF240FY	J	24	1/16W	Metal Oxide	AA
R9507	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9508	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9509	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R9510	VRS-CY1JF240FY	J	24	1/16W	Metal Oxide	AA
R9511	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R9512	VRS-CY1JF222J	J	2.2k	1/16W	Metal Oxide	AA
R9515	VRS-TV1JD270J	J	27	1/16W	Metal Oxide	AA
R9517	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9518	VRS-CY1JF240FY	J	24	1/16W	Metal Oxide	AA
R9519	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R9522	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9524	VRS-CY1JF240JY	J	24	1/16W	Metal Oxide	AA
R9527	VRS-CY1JF104F	J	100k	1/16W	Metal Oxide	AA
R9528	VRS-CY1JF273J	J	27k	1/16W	Metal Oxide	AA
R9529	VRS-TV1JD240J	J	24	1/16W	Metal Oxide	AA
R9530	VRS-TV1JD330J	J	33	1/16W	Metal Oxide	AA
R9532	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9535	VRS-CY1JF203F	J	20k	1/16W	Metal Oxide	AA
R9538	VRS-TV1JD1R0J	J	1	1/16W	Metal Oxide	AA
R9539	VRN-CY1JF472D	J	4.7k	1/16W	Metal Film	AA
R9541	VRS-CY1JF202F	J	2k	1/16W	Metal Oxide	AA
R9542	VRS-CY1JF111F	J	110	1/16W	Metal Oxide	AA
R9543	VRS-CY1JF240JY	J	24	1/16W	Metal Oxide	AA
R9546	VRS-TV1JD100J	J	10	1/16W	Metal Oxide	AA
R9547	VRS-CY1JF432F	J	4.3k	1/16W	Metal Oxide	AA
R9548	VRN-CY1JF472D	J	4.7k	1/16W	Metal Film	AA
R9549	VRS-TV1JD1R0J	J	1	1/16W	Metal Oxide	AA
R9550	VRN-CY1JF203D	J	20k	1/16W	Metal Film	AB
R9551	VRS-CY1JF222F	J	2.2k	1/16W	Metal Oxide	AA
R9552	VRS-TV1JD240J	J	24	1/16W	Metal Oxide	AA
R9553	VRS-TV1JD240J	J	24	1/16W	Metal Oxide	AA
R9554	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R9555	VRS-TV1JD1R0J	J	1	1/16W	Metal Oxide	AA
R9556	VRS-CY1JF100J	J	10	1/16W	Metal Oxide	AA
R9557	VRS-CY1JF820F	J	82	1/16W	Metal Oxide	AA
R9558	VRS-CY1JF331F	J	330	1/16W	Metal Oxide	AA
R9559	VRS-CY1JF000J	J	0	1/16W	Metal Oxide	AA
R9560	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R9561	VRS-CY1JF562J	J	5.6k	1/16W	Metal Oxide	AA
R9562	VRS-CY1JF330FY	J	33	1/16W	Metal Oxide	AA
R9563	VRS-CY1JF561F	J	560	1/16W	Metal Oxide	AA
R9564	VRS-CY1JF562J	J	5.6k	1/16W	Metal Oxide	AA
R9565	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R9566	VRS-CY1JF821F	J	820	1/16W	Metal Oxide	AA
R9567	VRS-CY1JF121F	J	120	1/16W	Metal Oxide	AA
R9569	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R9574	VRS-CY1JF222J	J	2.2k	1/16W	Metal Oxide	AA
R9575	VRS-CY1JF222J	J	2.2k	1/16W	Metal Oxide	AA
R9591	VRS-TW2ED000J	J	0	1/4W	Metal Oxide	AB
R9592	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA

SWITCH

S9001	QSW-SA004WJZZY	J	Slide Switch	AG

MISCELLANEOUS PARTS

FB9001	RBLN-0061TAZZ	J	Ferrite Bead	AD
FB9002	RBLN-0061TAZZ	J	Ferrite Bead	AD
FB9003	RBLN-0061TAZZ	J	Ferrite Bead	AD
FB9004	RBLN-0210TAZZ	J	Ferrite Bead	AB
FB9005	RBLN-0210TAZZ	J	Ferrite Bead	AB
FB9006	RBLN-0061TAZZ	J	Ferrite Bead	AD
FB9502	RBLN-0210TAZZ	J	Ferrite Bead	AB
FB9507	RBLN-0210TAZZ	J	Ferrite Bead	AB
P9002	QPLGN0474TAZZ	J	Plug, 4-pin	AD
P9003	QPLGN0363TAZZ	J	Plug, 3-pin	AC
SC9001	QSOCN8003WJZZY	J	Socket, 80-pin	AM
SC9002	QSOCN3078TAZZ	J	Socket, 30-pin	AE

DUNTKB066DE01 (PG-M20X)
DUNTKB066DE03 (PG-M20S)
INPUT UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC3002	VHiM62392FP-1	J	M62392FP	AM
IC3101	VHiA8902CLB-1Y	J	A8902CLB	BA
IC3102	VHiPQ20WZ11-1	J	PQ20WZ1U	AG
IC3103	VHiSNT1G14C-1Y	J	SNT1G14C	AD
IC3201	RH-iXA178WJZZY	J	IC	AW
IC3301	VHiDA7056AT-1Y	J	TDA7056AT/N2	AM
IC3502	VHiNJM2244M-1	J	NJM2244M	AG
IC3702	VHiPQ12DZ1U-1Y	J	PQ12DZ1U	AG
IC3704	VHiPQ20WZ11-1	J	PQ20WZ1U	AG
IC3705	VHiPQ05DZ1U-1Y	J	PQ05DZ1U	AG
IC3708	VHiBD4744G+-1Y	J	BD4744G-TR	AD
IC3851	VHiSM5300AV-1Y	J	SM5300AV	AR
IC3901	VHiTL712CPW-1	J	T1712CPWR	AL
IC3902	VHiLMH6643A-1Y	J	LMH6643A	AP
IC3903	VHiTL712CPW-1	J	T1712CPWR	AL

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q3002	VSHN1K03FU+-1Y	J	HN1K03FU	AD
Q3003	VSHN1K03FU+-1Y	J	HN1K03FU	AD
Q3004	VS2SB1132Q/-1	J	2SB1132Q	AC
Q3101	VSDTC114EE/-1	J	DTC114EE	AB
Q3201	VSBSS84++++-1Y	J	BSS84	AE
Q3205	VSHN1K03FU+-1Y	J	HN1K03FU	AD
Q3206	VSRN1905///-1	J	RN1905	AB
Q3502	VS2SC3928AR-1	J	2SC3928AR	AB
Q3507	VS2SC3928AR-1	J	2SC3928AR	AB
Q3512	VS2SA1530AR-1	J	2SA1530AR	AB
Q3513	VS2SC3928AR-1	J	2SC3928AR	AB
Q3851	VS2SC2735//-1	J	2SC2735	AB
Q3852	VS2SC2735//-1	J	2SC2735	AB
Q3853	VS2SC2735//-1	J	2SC2735	AB
Q3854	VSHN2C01FU/-1	J	HN2C01FU	AC
Q3855	VSHN2C01FU/-1	J	HN2C01FU	AC
Q3904	VS2SC2412KQ-1	J	2SC2412KQ	AA

DIODES AND THERMISTER

Ref. No.	Part No.	★	Description	Code
D3101	VHDBAT54SWT-1Y	J	Diode	AC
D3102	VHDBAT54SWT-1Y	J	Diode	AC
D3103	VHDBAT54SWT-1Y	J	Diode	AC
D3104	VHDDAN222//-1	J	Diode	AA
D3105	VHDBAT54SWT-1Y	J	Diode	AC
D3201	VHDMA3120WA-1	J	Diode	AK
D3202	VHDMA3120WA-1	J	Diode	AK
D3203	VHDMA3120WA-1	J	Diode	AK
D3501	RH-EX0227CEZZ	J	Zener Diode	AB
D3502	RH-EX0227CEZZ	J	Zener Diode	AB
D3503	RH-EX0227CEZZ	J	Zener Diode	AB
D3702	VHDDAN222//-1	J	Diode	AA
D3704	VHDDAN222//-1	J	Diode	AA
TH3001	RH-HXA001WJZZ	J	Thermister	AD

PACKAGED CIRCUIT AND FILTERS

Ref. No.	Part No.	★	Description	Code
X3201	RFiLA0042CEZZ	J	Filter, 454kHz	AD
FL3501	RFiLN0003TAZZ	J	Filter	AD
FL3502	RFiLN0003TAZZ	J	Filter	AD
FL3503	RFiLN0003TAZZ	J	Filter	AD
FL3506	RCiLF0306CEZZ	J	Filter	AH

CAPACITORS

Ref. No.	Part No.	★				Code
C3001	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3002	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3003	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3004	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3005	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3006	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3101	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C3102	VCKYCY1HB332K	J	3300p	50V	Ceramic	AA
C3103	VCKYCY1HB332K	J	3300p	50V	Ceramic	AA
C3104	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C3105	VCKYCY1HB222K	J	2200p	50V	Ceramic	AA
C3106	VCEASM1HW105MYJ		1	50V	Electrolytic	AC
C3107	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C3109	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3110	VCKYCY1HF224ZY	J	0.22	50V	Ceramic	AA
C3111	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3112	VCKYCY1HB562K	J	5600p	50V	Ceramic	AA
C3113	VCKYCY1AB154KY	J	0.15	10V	Ceramic	AB
C3114	VCEASM1EW106MYJ		10	25V	Electrolytic	AC
C3115	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3116	VCEASM1CW476MYJ		47	16V	Electrolytic	AC
C3117	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3118	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3119	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3120	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3121	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3122	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3201	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3202	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3204	VCCCCY1HH150J	J	15p	50V	Ceramic	AA
C3205	VCCCCY1HH150J	J	15p	50V	Ceramic	AA
C3301	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
C3302	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
C3303	VCE9PF1CW106M	J	10	16V	Elect.(N.P)	AC
C3304	VCE9PF1CW106M	J	10	16V	Elect.(N.P)	AC
C3305	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3306	VCCCCY1HH471J	J	470p	50V	Ceramic	AA
C3307	VCEASM1CW107MYJ		100	16V	Electrolytic	AD
C3308	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3309	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3310	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3503	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3504	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3507	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3510	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3511	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3513	VCEASM1CW476MYJ		47	16V	Electrolytic	AC
C3547	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3551	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3701	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3702	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3703	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3706	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3707	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3708	VCEASM1EW476MYJ		47	25V	Electrolytic	AD
C3710	VCEASM1EW106MYJ		10	25V	Electrolytic	AC
C3711	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3712	VCEASM1CW226MYJ		22	16V	Electrolytic	AC
C3715	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3718	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3722	VCEASM0JW226MY	J	22	6.3V	Electrolytic	AC
C3725	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3726	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3728	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3733	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3734	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3741	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3742	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3851	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3852	VCEASM1HW105MYJ		1	50V	Electrolytic	AC
C3853	VCEASM1HW105MYJ		1	50V	Electrolytic	AC
C3854	VCEASM1HW105MYJ		1	50V	Electrolytic	AC
C3855	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3856	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3857	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3858	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3862	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3863	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3864	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3865	VCEASM1CW106MYJ		10	16V	Electrolytic	AC
C3901	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3903	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3904	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3905	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C3907	VCE9PF1HW474M	J	0.47	50V	Elect.(N.P)	AD
C3909	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
C3910	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA

DUNTKB066DE01 (PG-M20X)
DUNTKB066DE03 (PG-M20S)
INPUT UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
C3911	VCKYCY1HB222K	J	2200p 50V Ceramic	AA

RESISTORS

Ref. No.	Part No.	★	Description	Code
R3003	VRS-CY1JF184J	J	180k 1/16W Metal Oxide	AA
R3004	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R3006	VRS-CA1JF332JY	J	3.3k 1/16W Metal Oxide	AB
R3009	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3010	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3012	VRS-CY1JF332J	J	3.3k 1/16W Metal Oxide	AA
R3014	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3023	VRS-CY1JF221J	J	220 1/16W Metal Oxide	AA
R3024	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3026	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3027	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3101	VRS-TW2ED151J	J	150 1/4W Metal Oxide	AA
R3102	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3103	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3104	VRS-TW2ED151J	J	150 1/4W Metal Oxide	AA
R3105	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3106	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3107	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3108	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3109	VRS-TW2ED151J	J	150 1/4W Metal Oxide	AA
R3111	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3113	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3114	VRS-CY1JF305JY	J	3M 1/16W Metal Oxide	AA
R3115	VRS-TX2HF2R2J	J	2.2 1/2W Metal Oxide	AB
R3116	VRS-CY1JF390FY	J	39 1/16W Metal Oxide	AA
R3118	VRS-CY1JF562F	J	5.6k 1/16W Metal Oxide	AA
R3119	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3120	VRS-CY1JF222F	J	2.2k 1/16W Metal Oxide	AA
R3121	VRS-CY1JF472F	J	4.7k 1/16W Metal Oxide	AA
R3122	VRS-CY1JF682J	J	6.8k 1/16W Metal Oxide	AA
R3123	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3124	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R3125	VRS-CE3AF5R6JY	J	5.6 1W Metal Oxide	AC
R3126	VRS-CE3AF5R6JY	J	5.6 1W Metal Oxide	AC
R3201	RBLN-0060TAZZ	J	Ferrite Bead	AB
R3206	VRS-CY1JF104J	J	100k 1/16W Metal Oxide	AA
R3207	VRS-CY1JF752F	J	7.5k 1/16W Metal Oxide	AA
R3209	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3212	VRS-CY1JF154J	J	150k 1/16W Metal Oxide	AA
R3213	VRS-CY1JF224J	J	220k 1/16W Metal Oxide	AA
R3216	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3222	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3225	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3226	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3227	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3229	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3230	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3231	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3232	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3233	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3234	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3235	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3302	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R3303	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R3304	VRS-CY1JF224J	J	220k 1/16W Metal Oxide	AA
R3305	VRS-CY1JF224J	J	220k 1/16W Metal Oxide	AA
R3306	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R3307	VRS-CA1JF272J	J	2.7k 1/16W Metal Oxide	AA
R3308	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3309	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3310	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3311	VRS-CY1JF393J	J	39k 1/16W Metal Oxide	AA
R3312	VRS-CY1JF823J	J	82k 1/16W Metal Oxide	AA
R3313	VRS-TX2HF8R2J	J	8.2 1/2W Metal Oxide	AA
R3501	VRS-TV1JD000J	J	0 1/16W Metal Oxide	AA
R3504	VRS-TW2ED750J	J	75 1/4W Metal Oxide	AA
R3505	VRS-TW2ED750J	J	75 1/4W Metal Oxide	AA
R3506	VRS-TW2ED750J	J	75 1/4W Metal Oxide	AA
R3515	VRS-CY1JF332J	J	3.3k 1/16W Metal Oxide	AA
R3516	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide	AA
R3522	VRS-CY1JF122J	J	1.2k 1/16W Metal Oxide	AA
R3526	VRS-CY1JF332J	J	3.3k 1/16W Metal Oxide	AA
R3528	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide	AA
R3531	VRS-CY1JF122J	J	1.2k 1/16W Metal Oxide	AA
R3537	VRS-TV1JD000J	J	0 1/16W Metal Oxide	AA
R3547	VRS-TV1JD000J	J	0 1/16W Metal Oxide	AA
R3551	VRS-CY1JF105J	J	1M 1/16W Metal Oxide	AA
R3552	VRS-CY1JF105J	J	1M 1/16W Metal Oxide	AA
R3553	VRS-TV1JD000J	J	0 1/16W Metal Oxide	AA
R3561	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3562	VRS-CY1JF391J	J	390 1/16W Metal Oxide	AA
R3563	VRS-CY1JF392J	J	3.9k 1/16W Metal Oxide	AA
R3564	VRS-CY1JF471J	J	470 1/16W Metal Oxide	AA
R3705	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3707	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3708	VRS-CY1JF223F	J	22k 1/16W Metal Oxide	AA
R3709	VRS-CY1JF392F	J	3.9k 1/16W Metal Oxide	AA
R3711	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3715	VRS-CE3AF3R3JY	J	3.3 1W Metal Oxide	AC
R3716	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3717	VRS-CE3AF2R2JY	J	2.2 1W Metal Oxide	AC
R3718	VRS-CY1JF223F	J	22k 1/16W Metal Oxide	AA
R3851	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3852	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3856	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3857	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3858	VRS-CY1JF821J	J	820 1/16W Metal Oxide	AA
R3863	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3864	VRS-TV1JD750J	J	75 1/16W Metal Oxide	AA
R3865	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3866	VRS-TV1JD750J	J	75 1/16W Metal Oxide	AA
R3867	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3868	VRS-TV1JD750J	J	75 1/16W Metal Oxide	AA
R3870	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3871	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R3872	VRS-CB1JF223J	J	22k 1/16W Metal Oxide	AA
R3873	VRS-CB1JF223J	J	22k 1/16W Metal Oxide	AA
R3877	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3878	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3879	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3904	VRS-CY1JF112F	J	1.1k 1/16W Metal Oxide	AA
R3905	VRS-CY1JF151F	J	150 1/16W Metal Oxide	AA
R3907	VRS-CY1JF102J	J	1.0k 1/16W Metal Oxide	AA
R3908	VRS-CY1JF272F	J	2.7k 1/16W Metal Oxide	AA
R3909	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3910	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R3914	VRS-CY1JF821J	J	820 1/16W Metal Oxide	AA
R3915	VRS-CY1JF333J	J	33k 1/16W Metal Oxide	AA
R3916	VRS-CY1JF821J	J	820 1/16W Metal Oxide	AA
R3917	VRS-CY1JF470J	J	47 1/16W Metal Oxide	AA
R3918	VRS-CY1JF123J	J	12k 1/16W Metal Oxide	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
FB3101	RBLN-0210TAZZ	J	Ferrite Bead	AB
FB3102	RBLN-0062CEZZ	J	Ferrite Bead	AC
FB3103	RBLN-0059CEZZ	J	Ferrite Bead	AB
FB3201	RBLN-0060TAZZ	J	Ferrite Bead	AB
FB3202	RBLN-0060TAZZ	J	Ferrite Bead	AB
FB3203	RBLN-0060TAZZ	J	Ferrite Bead	AB
FB3301	RBLN-0064TAZZ	J	Ferrite Bead	AC
FB3302	RBLN-0058CEZZ	J	Ferrite Bead	AB
FB3303	RBLN-0058CEZZ	J	Ferrite Bead	AB
FB3304	RBLN-0064TAZZ	J	Ferrite Bead	AC
J3201	QSOCNA005WJZZ	J	Jack, 4-pin	AE
J3301	QJAKJ0066CEZZ	J	Jack , PC Audio IN	AE
J3501	QJAKEA002WJZZ	J	Jack, Video IN	AD
J3502	QSOCD0426CEZZ	J	Din Jack Socket	AE
P3002	QSOCN3278TAZZY	J	Plug, 32-pin	AF
P3003	QSOCN3078TAZZ	J	Plug, 30-pin	AE
P3101	QPLGN0198FJZZ	J	Plug, 3-pin	AD
SC3001	QCNCW8002WJZZY	J	Socket, 80-pin	AL
SC3101	QSOCN0401WJZZY	J	Socket, 4-pin	AC
SC3701	QSOCZ1338CEZZ	J	Socket, 13-pin	AD
	LANGF9661CEFW	J	Angle	AF
	XBBSD20P03000	J	Screw	AA

DUNTKB067DE01 (PG-M20X)
DUNTKB067DE03 (PG-M20S)
KEY UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC2001	RH-iXA128WJZZQ	J	IC	AQ
IC2002	VHiBD4729G+-1Y	J	BD4729G-TR	AD
IC2004	VHiSNAT541P-1Y	J	SNAT541P	AF
IC2005	VHiSNHC32T/-1	J	SN74HC32PW	AG
IC2010	VHiPQ1R33//-1	J	PQ1R33	AE
IC2011	VHiPQ1R50//-1	J	PQ1R50	AF
IC2101	VHiBA00ASFP-1	J	BA00ASFP-E2	AG
IC2102	VHiBA00ASFP-1	J	BA00ASFP-E2	AG
IC2103	VHiBA00ASFP-1	J	BA00ASFP-E2	AG
IC2104	VHiBA00ASFP-1	J	BA00ASFP-E2	AG

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q2001	VSDTC114EE/-1	J	DTC114EE	AB
Q2002	VSDTC114EE/-1	J	DTC114EE	AB
Q2003	VS2SB1132Q/-1	J	2SB1132Q	AC
Q2004	VS2SA1530AR-1	J	2SA1530AR	AB
Q2101	VSDTC114EE/-1	J	DTC114EE	AB
Q2201	VSDTC144EUA-1	J	DTC144EUA	AB
Q2202	VSDTC144EUA-1	J	DTC144EUA	AB
Q2203	VSDTC144EUA-1	J	DTC144EUA	AB
Q2204	VSDTC144EUA-1	J	DTC144EUA	AB
Q2205	VSDTC144EUA-1	J	DTC144EUA	AB

DIODES

Ref. No.	Part No.	★	Description	Code
D2001	VHDDAN222//-1	J	Diode	AA
D2002	VHDDAN222//-1	J	Diode	AA
D2003	VHDF01J2E//-1	J	Diode	AC
D2101	VHDDAN202K/-1	J	Diode	AB
D2102	VHDDAN202K/-1	J	Diode	AB
D2103	VHDDAN202K/-1	J	Diode	AB
D2104	VHDDAN202K/-1	J	Diode	AB
D2105	VHDDAN202K/-1	J	Diode	AB
D2106	VHDDAN202K/-1	J	Diode	AB
D2201	RH-PX0210TAZZY	J	Diode	AC
D2202	RH-PX0210TAZZY	J	Diode	AC
D2203	RH-PX0210TAZZY	J	Diode	AC

PACKAGED CIRCUIT

Ref. No.	Part No.	★	Description	Code
X2001	RCRSB0286CEZZ	J	Crystal	AH

CAPACITORS

Ref. No.	Part No.	★				Code
C2001	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2002	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2003	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2004	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2005	VCKYCY1AF105Z	J	1	10V	Ceramic	AC
C2006	VCKYCY1AF105Z	J	1	10V	Ceramic	AC
C2007	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2010	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2011	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2012	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2013	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2014	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2015	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2016	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2017	VCEASM0JW476MY	J	47	6.3V	Electrolytic	AC
C2019	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2020	VCCCCY1HH220J	J	22p	50V	Ceramic	AA
C2021	VCCCCY1HH220J	J	22p	50V	Ceramic	AA
C2022	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2023	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2024	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2025	VCEASM1CW106MY	J	10	16V	Electrolytic	AC
C2026	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2027	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2028	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2029	VCEASM1CW106MY	J	10	16V	Electrolytic	AC
C2030	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2101	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2103	VCEASM1EW336MY	J	33	25V	Electrolytic	AC
C2104	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2105	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2106	VCEASM1CW107MY	J	100	16V	Electrolytic	AD
C2108	VCEASM1EW336MY	J	33	25V	Electrolytic	AC
C2109	VCEASM1EW336MY	J	33	25V	Electrolytic	AC
C2110	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2111	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2112	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2113	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2114	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2115	VCEASM1CW107MY	J	100	16V	Electrolytic	AD
C2116	VCEASM1CW107MY	J	100	16V	Electrolytic	AD
C2117	VCEASM1EW336MY	J	33	25V	Electrolytic	AC
C2118	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2119	VCEASM1CW107MY	J	100	16V	Electrolytic	AD
C2120	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2201	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2202	VCEASM1CW226MY	J	22	16V	Electrolytic	AC
C2203	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA

RESISTORS

Ref. No.	Part No.	★				Code
R2001	VRS-CY1JF000J	J	0	1/16W	Metal Oxide	AA
R2004	VRS-CY1JF000J	J	0	1/16W	Metal Oxide	AA
R2005	VRS-CY1JF471J	J	470	1/16W	Metal Oxide	AA
R2006	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R2007	VRS-CY1JF100J	J	10	1/16W	Metal Oxide	AA
R2008	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R2009	VRS-CY1JF100J	J	10	1/16W	Metal Oxide	AA
R2010	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R2011	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R2012	VRS-CY1JF104J	J	100k	1/16W	Metal Oxide	AA
R2013	VRS-CY1JF222J	J	2.2k	1/16W	Metal Oxide	AA
R2014	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R2016	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R2018	VRS-CY1JF104J	J	100k	1/16W	Metal Oxide	AA
R2019	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R2020	VRS-CY1JF104J	J	100k	1/16W	Metal Oxide	AA
R2021	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R2022	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R2023	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA
R2025	VRS-TV1JD471J	J	470	1/16W	Metal Oxide	AA
R2027	VRS-CY1JF000J	J	0	1/16W	Metal Oxide	AA
R2029	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R2030	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R2032	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R2033	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R2101	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R2103	VRS-TW2ED2R2J	J	2.2	1/4W	Metal Oxide	AB
R2104	VRS-CY1JF472F	J	4.7k	1/16W	Metal Oxide	AA
R2105	VRS-CY1JF102F	J	1k	1/16W	Metal Oxide	AA
R2106	VRS-CY1JF822F	J	8.2k	1/16W	Metal Oxide	AA
R2108	VRS-CY1JF682J	J	6.8k	1/16W	Metal Oxide	AA
R2109	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R2110	VRS-CB1JF472J	J	4.7k	1/16W	Metal Oxide	AC
R2111	VRS-TW2ED2R2J	J	2.2	1/4W	Metal Oxide	AB
R2112	VRS-TW2ED2R2J	J	2.2	1/4W	Metal Oxide	AB
R2113	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R2114	VRS-CY1JF332F	J	3.3k	1/16W	Metal Oxide	AA
R2115	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R2116	VRS-CY1JF472F	J	4.7k	1/16W	Metal Oxide	AA
R2117	VRS-CY1JF102F	J	1k	1/16W	Metal Oxide	AA
R2118	VRS-CY1JF683F	J	68k	1/16W	Metal Oxide	AA
R2120	VRS-CY1JF102F	J	1k	1/16W	Metal Oxide	AA
R2121	VRS-CY1JF103F	J	10k	1/16W	Metal Oxide	AA
R2122	VRS-CY1JF822F	J	8.2k	1/16W	Metal Oxide	AA
R2124	VRS-CY1JF000J	J	0	1/16W	Metal Oxide	AA
R2125	VRS-CY1JF000J	J	0	1/16W	Metal Oxide	AA
R2126	VRS-TW2ED2R2J	J	2.2	1/4W	Metal Oxide	AB
R2127	VRS-CY1JF332F	J	3.3k	1/16W	Metal Oxide	AA
R2128	VRS-CY1JF102F	J	1k	1/16W	Metal Oxide	AA
R2129	VRS-CY1JF473F	J	47k	1/16W	Metal Oxide	AA
R2130	VRS-CY1JF103F	J	10k	1/16W	Metal Oxide	AA
R2132	VRS-CY1JF101J	J	100	1/16W	Metal Oxide	AA
R2133	VRS-CY1JF000J	J	0	1/16W	Metal Oxide	AA
R2134	VRS-CY1JF000J	J	0	1/16W	Metal Oxide	AA
R2201	VRS-CY1JF102J	J	1k	1/16W	Metal Oxide	AA

DUNTKB067DE01 (PG-M20X)
DUNTKB067DE03 (PG-M20S)
KEY UNIT (Continued)

Ref. No.	Part No.	★	Description			Code
R2202	VRS-CB1JF102J	J	1k	1/16W	Metal Oxide	AA
R2203	VRS-CY1JF103J	J	10k	1/16W	Metal Oxide	AA
R2204	VRS-CB1JF103J	J	10k	1/16W	Metal Oxide	AA
R2205	VRS-CY1JF562J	J	5.6k	1/16W	Metal Oxide	AA
R2206	VRS-CY1JF562J	J	5.6k	1/16W	Metal Oxide	AA
R2207	VRS-CY1JF562J	J	5.6k	1/16W	Metal Oxide	AA
R2208	VRS-CY1JF562J	J	5.6k	1/16W	Metal Oxide	AA
R2209	VRS-TW2ED221J	J	220	1/4W	Metal Oxide	AA
R2210	VRS-TW2ED681J	J	680	1/4W	Metal Oxide	AA
R2211	VRS-TW2ED221J	J	220	1/4W	Metal Oxide	AA
R2212	VRS-TW2ED681J	J	680	1/4W	Metal Oxide	AA
R2213	VRS-TW2ED681J	J	680	1/4W	Metal Oxide	AA
R2214	VRS-CY1JF682J	J	6.8k	1/16W	Metal Oxide	AA
R2215	VRS-CY1JF682J	J	6.8k	1/16W	Metal Oxide	AA
R2216	VRS-CY1JF682J	J	6.8k	1/16W	Metal Oxide	AA

SWITCHES

SW2001	QSW-KA001WJZZY	J	Switch	AD
SW2002	QSW-S0203TAZZ	J	Switch	AD
SW2201	QSW-KA001WJZZY	J	Switch	AD
SW2202	QSW-KA001WJZZY	J	Switch Lens	AD
SW2203	QSW-KA001WJZZY	J	Switch Menu	AD
SW2204	QSW-KA001WJZZY	J	Switch Auto Sync	AD
SW2205	QSW-KA001WJZZY	J	Switch AV Mute	AD
SW2206	QSW-KA001WJZZY	J	Switch Cursor Up	AD
SW2207	QSW-KA001WJZZY	J	Switch Cursor Down	AD
SW2208	QSW-KA001WJZZY	J	Switch Cursor Left	AD
SW2209	QSW-KA001WJZZY	J	Switch Cursor Right	AD
SW2210	QSW-KA001WJZZY	J	Switch Undo	AD
SW2211	QSW-KA001WJZZY	J	Switch Input	AD
SW2212	QSW-KA001WJZZY	J	Switch Enter	AD

MISCELLANEOUS PARTS

FB2003	RBLN-0064TAZZ	J	Ferrite Bead	AC
FB2004	RBLN-0064TAZZ	J	Ferrite Bead	AC
FB2101	RBLN-0064TAZZ	J	Ferrite Bead	AC
FB2102	RBLN-0059CEZZ	J	Ferrite Bead	AB
FB2103	RBLN-0064TAZZ	J	Ferrite Bead	AC
FB2104	RBLN-0059CEZZ	J	Ferrite Bead	AB
FB2105	RBLN-0064TAZZ	J	Ferrite Bead	AC
FB2106	RBLN-0059CEZZ	J	Ferrite Bead	AB
FB2107	RBLN-0064TAZZ	J	Ferrite Bead	AC
FB2108	RBLN-0064TAZZ	J	Ferrite Bead	AC
FB2109	RBLN-0064TAZZ	J	Ferrite Bead	AC
FB2110	RBLN-0059CEZZ	J	Ferrite Bead	AB
P2001	QSOCN3271TAZZ	J	Plug, 32-pin(KY)	AE
P2002	QPLGN0264TAZZ	J	Plug, 2-pin(SP)	AC
P2003	QPLGN0664TAZZ	J	Plug, 6-pin(EB)	AD
P2101	QPLGN0464TAZZ	J	Plug, 4-pin(F1)	AC
P2102	QPLGN0364TAZZ	J	Plug, 3-pin(F2)	AC
P2103	QPLGN0463TAZZ	J	Plug, 4-pin(F3)	AC
P2104	QPLGN0363TAZZ	J	Plug, 3-pin(F5)	AC

RDENCA004WJZZ (PG-M20X)
RDENCA004WJN1 (PG-M20S)
PFC UNIT

INTEGRATED CIRCUITS

IC701	95CH3151AC001	J	FA5502M	
IC702	95C0H1R1A0010	J	MIP0254SPSCF	
IC703	95C0H1Q3A0010	J	TA76431	AQ
IC7501	95C0H1Q3A0010	J	TA76431	AQ

TRANSISTORS

Q701	95CT2837KL001	J	2SK2837	
Q702	95C0T394A0010	J	2SC4081	AH
Q703	95C0T192A0010	J	2SA1576A	AH
Q711	95C0T394A0010	J	2SC4081	AH
Q712	95C0T192A0010	J	2SA1576A	AH
Q715	95C0T192A0010	J	2SA1576A	AH
Q7407	95C0T394A0010	J	2SC4081	AH
Q7501	95C0T397A0010	J	2SC4672K	AM
Q7502	95C0T394A0010	J	2SC4081	AH
Q7503	95C0T192A0010	J	2SA1576A	AH

DIODES

D701	95CD1132AL006	J	D25XB60	AU
D702	95CD2172AL006	J	FS10L60U	AR
D703	95C0D2Q3A0040	J	EC10QS04	AM
D705	95C0D157A0060	J	ERA15-06	AE
D706	95C0D157A0060	J	ERA15-06	AE
D707	95C0D157A0060	J	ERA15-06	AE
D708	95C0D157A0060	J	ERA15-06	AE
D709	95C0D295A0080	J	1SS355	AE
D710	95C0D295A0080	J	1SS355	AE
D713	95C0D295A0080	J	1SS355	AE
D714	95C0D295A0080	J	1SS355	AE
D716	95C0D492A0020	J	UDZS 5.6B	AK
D725	95C0D157A0060	J	ERA15-06	AE
D729	95C0D491A0290	J	UDZ 30B	AM
D730	95C0D291A0010	J	EC11FS4	
D7501	95C0D279A0100	J	21DQ10 TA2B1	
D7503	95C0D265A0020	J	ERA91-02	AL
D7504	95C0D295A0080	J	1SS355	AE
D7505	95C0D295A0080	J	1SS355	AE
TRA701	95C0D513A6120	J	SM12JZ47	AT
⚠ Z701	95C0D758A4710	J	ENC471	AK

PACKAGED CIRCUITS

⚠ PC701	95C0H723A0010	J	PC123FY8	AM
⚠ PC704	95C0H723A0010	J	PC123FY8	AM
⚠ PC705	95C0H723A0010	J	PC123FY8	AM
PTC701	95C0D802A1010	J	PTH9M04BD222TS2F333	AP

COILS

L701	95CL1107RL502	J	FK-080G-5020H2	
L704	95C0L115R1110	J	SK-10M-5YRP	
L703	95CL1109RL401	J	HKBS-12D080-9710RS	

TRANSFORMERS

⚠ T7301	95CL2000BS026	J	2B26	

CAPACITORS

C700	95C0C247M4740	J	0.47	AC450V	Film		AV
C701	95C0C245Q4740	J	0.47	AC250V	Film		AS
C702	95CC3105MR100	J	10	400V	Electrolytic		
⚠ C703	95C0C1H8Q2220	J	2200p	AC250V	Ceramic		AH
⚠ C704	95C0C1H8Q2220	J	2200p	AC250V	Ceramic		AH
C705	95C0C245Q4740	J	0.47	AC250V	Film		AS
C706	95C0C247M4740	J	0.47	AC450V	Film		AV
C707	95CC3124ML151	J	150	400V	Electrolytic		
C708	95C0C3A0D1510	J	150	35V	Electrolytic		AM
C709	95C0C195C1040	J	0.1	25V	Ceramic		AD
C710	95C0C1B2S4700	J	47p	2kV	Ceramic		
C711	95C0C1Q0A1060	J	10	6.3V	Ceramic		AQ
C712	95C0C195C1040	J	0.1	25V	Ceramic		AD
C713	95C0C195C1040	J	0.1	25V	Ceramic		AD
C714	95CC1102EC102	J	1000p	50V	Ceramic		

RDENCA004WJZZ (PG-M20X)
RDENCA004WJN1 (PG-M20S)
PFC UNIT (Continued)

Ref. No.	Part No.	★	Description			Code
C715	95C0C195C3330	J	0.033	25V	Ceramic	
C716	95C0C194E1010	J	100p	50V	Ceramic	AC
C717	95C0C195E1030	J	0.01	50V	Ceramic	AC
C718	95C0C195E1030	J	0.01	50V	Ceramic	AC
C719	95C0C194E3310	J	330p	50V	Ceramic	AC
C720	95C0C198E4740	J	0.47	50V	Ceramic	
C721	95C0C1A9R3310	J	330p	1kV	Ceramic	AH
C722	95C0C1B2S4700	J	47p	2kV	Ceramic	
C723	95C0C1H8Q3320	J	3300p	AC250V	Ceramic	AS
C724	95C0C194E1020	J	1000p	50V	Ceramic	AK
C725	95C0C195C1040	J	0.1	25V	Ceramic	AD
C726	95C0C195E1030	J	0.01	50V	Ceramic	AC
⚠ C727	95C0C1H8Q4710	J	470p	AC250V	Ceramic	AG
⚠ C728	95C0C1H8Q2220	J	2200p	AC250V	Ceramic	AH
C729	95C0C195E1030	J	0.01	50V	Ceramic	AC
⚠ C730	95C0C1H8Q1020	J	1000p	AC250V	Ceramic	AH
⚠ C731	95C0C1H8Q1020	J	1000p	AC250V	Ceramic	AH
C734	95C0C377M1R00	J	1	400V	Electrolytic	AM
C7501	95C0C3A0A1020	J	1000	10V	Electrolytic	
C7502	95C0C195C1040	J	0.1	25V	Ceramic	AD
C7503	95C0C195C1040	J	0.1	25V	Ceramic	AD
C7504	95C0C195E1040	J	0.1	50V	Ceramic	AF
C7505	95C0C1Q0A1060	J	10	6.3V	Ceramic	AQ
C7506	95C0C195C1040	J	0.1	25V	Ceramic	AD
C7507	95C0C198E4740	J	0.47	50V	Ceramic	
C7508	95C0C3A0B4710	J	470	16V	Electrolytic	
C7509	95C0C198E4740	J	0.47	50V	Ceramic	

RESISTORS

R701	95CR3107SC563	J	56K	1/16W		
R702	95C0R390T1540	J	150k	1/4W	Chip3216	AC
R703	95C0R390T1540	J	150k	1/4W	Chip3216	AC
R704	95C0R390T1540	J	150k	1/4W	Chip3216	AC
R705	95CR3107SC563	J	56K	1/16W		
R706	95C0R3Q4S1010	J	100	1/16W	Chip1608	AH
R707	95C0R522F1000	J	10	5W	Fuse Resistor	AQ
R708	95C0R3Q4S1040	J	100k	1/16W		AH
R709	95C0R391T2240	J	220k	1/4W	Chip3216	AH
R710	95C0R391T2240	J	220k	1/4W	Chip3216	AH
R711	95C0R391T2240	J	220k	1/4W	Chip3216	AH
R712	95C0R3Q3V1000	J	10	1/10W	Chip2012	
R713	95C0R391T1840	J	180k	1/4W		AC
R714	95C0R391T1840	J	180k	1/4W		AC
R715	95C0R391T1840	J	180k	1/4W		AC
R716	95C0R516FR050	J	0.05	3W		AQ
R717	95C0R3Q4S1240	J	120k	1/16W	Chip1608	
R718	95C0R3Q0V2700	J	27	1/8W		
R719	95C0R390T3300	J	33	1/4W	Chip3216	AC
R720	95C0R3Q8S1820	J	1.8k	1/16W	Chip1608	
R721	95C0R3Q8S3630	J	36k	1/16W	Chip1608	
R722	95C0R3Q4S3330	J	33k	1/16W	Chip1608	AH
R723	95C0R390T4700	J	47	1/4W	Chip3216	AH
R724	95C0R3Q4S3940	J	390k	1/16W	Chip1608	
R725	95C0R3Q8S2220	J	2.2k	1/16W	Chip1608	AH
R726	95C0R3Q4S1030	J	10k	1/16W	Chip1608	AH
R736	95C0R3Q8S1030	J	10k	1/16W	Chip1608	AH
R765	95C0R390T3920	J	3.9k	1/4W		
R768	95C0R3Q4S2720	J	2.7k	1/16W	Chip1608	
R769	95C0R3Q8S6810	J	680	1/16W	Chip1608	
R771	95C0R390T0000	J	0	1/4W	Chip3216	AC
R772	95C0R391T1840	J	180k	1/4W		AC
R773	95C0R391T1840	J	180k	1/4W		AC
R774	95C0R391T1840	J	180k	1/4W		AC
R775	95C0R3Q8S5620	J	5.6k	1/16W	Chip1608	
R776	95C0R3Q0V3310	J	330	1/8W	Chip2012	
R777	95C0R3Q0V5620	J	5.6k	1/8W	Chip2012	AB
R778	95C0R3Q4S2230	J	22k	1/16W	Chip1608	AH
R779	95C0R3Q4S6840	J	680k	1/16W	Chip1608	
R780	95C0R3Q0V1030	J	10k	1/8W	Chip2012	AB
R781	95C0R3Q0V1030	J	10k	1/8W	Chip2012	AB
R783	95C0R3Q4S3340	J	330k	1/16W	Chip1608	AH
R784	95C0R3Q4S1020	J	1k	1/16W	Chip1608	AH
R785	95C0R3Q4S3320	J	3.3k	1/16W	Chip1608	AH
R791	95C0R390T8230	J	82k	1/4W	Chip3216	AC
R792	95C0R390T8230	J	82k	1/4W	Chip3216	AC
R793	95C0R390T8230	J	82k	1/4W	Chip3216	AC
R7466	95C0R3Q4S6810	J	680	1/16W	Chip1608	AH
R7467	95C0R3Q4S1020	J	1k	1/16W	Chip1608	AH
R7468	95C0R3Q4S1030	J	10k	1/16W	Chip1608	AH
R7469	95C0R3Q4S1030	J	10k	1/16W	Chip1608	AH
R7501	95C0R3Q4S2220	J	2.2k	1/16W	Chip1608	AH
R7502	95C0R3Q0V8210	J	820	1/8W		
R7503	95C0R3Q4S3330	J	33k	1/16W	Chip1608	AH
R7504	95C0R3Q8S3320	J	3.3k	1/16W	Chip1608	
R7505	95C0R3Q8S1520	J	1.5k	1/16W	Chip1608	
R7508	95C0R3Q8S1220	J	1.2k	1/16W	Chip1608	
R7509	95C0R3Q3V5610	J	560	1/10W	Chip2012	
R7514	95C0R3Q0V1030	J	10k	1/8W	Chip2012	AB
R7515	95C0R3Q4S1020	J	1k	1/16W	Chip1608	AH
R7516	95C0R390T1000	J	10	1/4W	Chip3216	AC
R7517	95C0R390T1000	J	10	1/4W	Chip3216	AC
R7518	95C0R390T1000	J	10	1/4W	Chip3216	AC
R7519	95C0R390T1000	J	10	1/4W	Chip3216	AC
R7520	95C0R3Q4S1030	J	10k	1/16W	Chip1608	AH
R7521	95C0R3Q4S2220	J	2.2k	1/16W	Chip1608	AH
R7522	95C0R3Q4S1030	J	10k	1/16W	Chip1608	AH
R7523	95C0R3Q4S1030	J	10k	1/16W	Chip1608	AH
R7524	95C0R3Q0V5620	J	5.6k	1/8W		AB
R7525	95C0R3Q0V2720	J	2.7k	1/8W		
R7526	95C0R3Q0V2720	J	2.7k	1/8W		

MISCELLANEOU PARTS

⚠ RL701	95CK3102AL001	J	DG5D2-0(M)		
BEA701	95C0L551A0020	J	BL02RN2-R62 T2		AE
BEA703	95C0L551A0010	J	BL02RN1-R62 T2		AD
BEA704	95CBPR53RA035	J	BPR53RA035013030M		
⚠ F701	95C0K718A6R30	J	Fuse, AC250V 6.3AH 215		AN
FH1	95C0M850A0010	J	TP00351-51		AK
FH2	95C0M850A0010	J	TP00351-51		AK
CN701	95CK2105SL001	J	NC-179-L2		
CN702	95C0K251A0020	J	B2P3-VH		AF
CN704	95C0K248A0050	J	B5B-EH-A		
CN7001	95CK2102FS013	J	TWG-P13P-A1		
CN7002	95C0WPF2014A0	J	CONNECTOR		
CN7003	95C0K202B0020	J	B2B-PH-K-S		AK
CN7004	95C0K248A0020	J	B2B-EH-A		
CN7103	95CK2106KS012	J	MDF7-12D-2.54DSA(01)		
HS1	95C0MPF002800	J	Shield		
HS2	95C0MPF002900	J	Shield		

RDENCA010WJZZ
POWER UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC7101	95C0H1Q3A0010	J	TA76431	AQ
IC7401	95C0H1R3A0010	J	BA9743AFV-E2	

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q7301	95C0T601B0010	J	2SK2605	
Q7302	95C0T395A0010	J	2SC4097	
Q7320	95C0T601B0010	J	2SK2605	
Q7322	95C0T395A0010	J	2SC4097	
Q7330	95C0T196A0010	J	2SA1812	AS
Q7340	95C0T395A0010	J	2SC4097	
Q7402	95C0T395A0010	J	2SC4097	
Q7403	95C0T193A0010	J	2SA1577	AK
Q7405	95C0T593A0010	J	UPA1710AG	
Q7422	95C0T395A0010	J	2SC4097	
Q7423	95C0T193A0010	J	2SA1577	AK
Q7425	95C0T593A0010	J	UPA1710AG	
Q7461	95C0T193A0010	J	2SA1577	AK
Q7462	95C0T395A0010	J	2SC4097	

DIODES

Ref. No.	Part No.	★	Description	Code
D711	95C0D292A0020	J	SC902-2	AM
D712	95C0D292A0020	J	SC902-2	AM
D7101	95C0D224B0060	J	YG802C06R	AR
D7102	95C0D2Q0A0100	J	EC31QS10	
D7103	95C0D2Q0A0100	J	EC31QS10	
D7104	95C0D2Q0A0100	J	EC31QS10	
D7110	95C0D461A1900	J	HZ-18	AH
D7304	95C0D295A0080	J	1SS355	AE
D7306	95C0D295A0080	J	1SS355	AE
D7307	95C0D295A0080	J	1SS355	AE
D7308	95C0D491A0300	J	UDZ 33B	
D7309	95C0D491A0300	J	UDZ 33B	
D9321	95C0D492A0040	J	UDZS 6.8B	
D7322	95C0D295A0080	J	1SS355	AE
D7330	95C0D491A0250	J	UDZ 20B	AM
D7340	95C0D295A0080	J	1SS355	AE
D7401	95C0D2Q0A0030	J	EC31QS03L	
D7402	95C0D2Q0A0030	J	EC31QS03L	
D7421	95C0D2Q0A0030	J	EC31QS03L	
D7422	95C0D2Q0A0030	J	EC31QS03L	

COILS AND TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
L7401	95C0L150S1000	J	18261A(10uH)	AN
L7421	95C0L150S1000	J	18261A(10uH)	AN
⚠ T701	95CL2000JS039	J	2J39	

PACKAGED CIRCUIT

Ref. No.	Part No.	★	Description	Code
⚠ PC7301	95C0H723A0010	J	PC123FY8	AM

CONTROL

Ref. No.	Part No.	★	Description	Code
VR7401	95C0R854E1030	J	10k 1/10W	

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C7101	95CC3128B5122	J	1200 16V Electrolytic	
C7103	95CC3128CS681	J	680 25V Electrolytic	
C7105	95C0C195C1040	J	0.1 25V Ceramic	AD
C7110	95C0C1A9L4720	J	4700p 250V Ceramic	
C7309	95C0C193A4720	J	4700p 50V Ceramic	AM
C7310	95C0C1Q2E1030	J	0.01 50V Ceramic	AH
C7311	95C0C1Q1E1010	J	100p 50V Ceramic	AH
C7320	95C0C2X5L4730	J	0.047 250V	
C7321	95C0C1Q2E4720	J	4700p 50V Ceramic	AH
C7322	95C0C193A4720	J	4700p 50V Ceramic	AM
C7323	95C0C1B2S4700	J	47p 2kV Ceramic	
C7330	95C0C195E1040	J	0.1 50V Ceramic	AF
C7404	95C0C195E1030	J	0.01 50V Ceramic	AC
C7406	95C0C195E4710	J	470p 50V Ceramic	
C7408	95CC3128AS471	J	470 10V Electrolytic	
C7424	95C0C195E1030	J	0.01 50V Ceramic	AC
C7426	95C0C195E4710	J	470p 50V Ceramic	
C7429	95CC3128AS471	J	470 10V Electrolytic	
C7451	95C0C195E4730	J	0.047 50V Ceramic	
C7452	95C0C195E1040	J	0.1 50V Ceramic	AF
C7453	95C0C195E1040	J	0.1 50V Ceramic	AF
C7454	95C0C1Q1E2210	J	220p 50V Ceramic	AH
C7455	95C0C195E4730	J	0.047 50V Ceramic	

RESISTORS

Ref. No.	Part No.	★	Description	Code
R7101	95C0R3Q4S3910	J	390 1/16W	AH
R7102	95C0R3Q4S1030	J	10k 1/16W	AH
R7103	95C0R3Q8S3320	J	3.3k 1/16W	
R7104	95C0R3Q8S2720	J	2.7k 1/16W	AH
R7105	95C0R3Q4S2220	J	2.2k 1/16W	AH
R7106	95C0R3Q3V5610	J	560 1/10W	
R7305	95C0R3Q4S2230	J	22k 1/16W	AH
R7306	95C0R390T3320	J	3.3k 1/4W	AC
R7307	95C0R3Q4S3310	J	330 1/16W	
R7308	95C0R3Q4S3320	J	3.3k 1/16W	AH
R7309	95C0R3Q4S1010	J	100 1/16W	AH
R7310	95C0R3Q8S8210	J	820 1/16W	AH
R7311	95C0R3Q8S4720	J	4.7k 1/16W	AH
R7312	95C0R3Q8S4730	J	47k 1/16W	
R7314	95C0R390T3320	J	3.3k 1/4W	AC
R7317	95C0R3Q3V5610	J	560 1/10W	
R7320	95C0R3Q4S2230	J	22k 1/16W	AH
R7321	95C0R390T1520	J	1.5k 1/4W	
R7322	95C0R3Q4S3320	J	3.3k 1/16W	AH
R7323	95C0R3Q4S2240	J	220k 1/16W	AH
R7324	95C0R3Q8S2220	J	2.2k 1/16W	AH
R7325	95C0R390T1030	J	10k 1/4W	
R7327	95C0R3Q4S6820	J	6.8k 1/16W	AH
R7330	95C0R3Q4S3330	J	33k 1/16W	AH
R7331	95C0R3Q4S3330	J	33k 1/16W	AH
R7332	95C0R3Q4S3330	J	33k 1/16W	AH
R7333	95C0R390T5640	J	560k 1/4W	AH
R7334	95C0R390T5640	J	560k 1/4W	AH
R7335	95C0R390T5640	J	560k 1/4W	AH
R7336	95C0R3Q4S3930	J	39k 1/16W	
R7340	95C0R375DR330	J	0.33 2W	
R7341	95C0R3Q3V1010	J	100 1/10W	
R7342	95C0R3Q8S1030	J	10k 1/16W	AH
R7401	95C0R3Q8S2220	J	2.2k 1/16W	AH
R7403	95C0R3Q8S2220	J	2.2k 1/16W	AH
R7404	95C0R3Q4S0000	J	0 1/16W	AH
R7408	95C0R3Q4S1520	J	1.5k 1/16W	
R7410	95C0R3Q4S0000	J	0 1/16W	AH
R7411	95C0R3Q4S4700	J	47 1/16W	
R7415	95C0R3Q4S1540	J	150k 1/16W	
R7421	95C0R3Q8S5620	J	5.6k 1/16W	
R7423	95C0R3Q8S2220	J	2.2k 1/16W	AH
R7424	95C0R3Q8S1220	J	1.2k 1/16W	
R7428	95C0R3Q4S1520	J	1.5k 1/16W	
R7430	95C0R3Q4S0000	J	0 1/16W	AH
R7431	95C0R3Q4S4700	J	47 1/16W	
R7435	95C0R3Q4S1540	J	150k 1/16W	
R7451	95C0R3Q8S4730	J	47k 1/16W	
R7452	95C0R3Q8S3930	J	39k 1/16W	AH
R7453	95C0R3Q8S4730	J	47k 1/16W	
R7454	95C0R3Q8S3930	J	39k 1/16W	AH
R7455	95C0R3Q4S3330	J	33k 1/16W	AH
R7456	95C0R3Q4S1240	J	120k 1/16W	
R7457	95C0R3Q4S2240	J	220k 1/16W	AH
R7458	95C0R3Q4S3300	J	33 1/16W	
R7462	95C0R3Q4S1030	J	10k 1/16W	AH
R7463	95C0R3Q4S1030	J	10k 1/16W	AH
R7464	95C0R3Q4S1030	J	10k 1/16W	AH
R7465	95C0R3Q4S1220	J	1.2k 1/16W	

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
BEA7301	95C0L551A0020	J	BL02RN2-R62 T2	AE
CN7102	95CK2107KS012	J	MDF7P-12DP-2.54DSA	
CN7101	95C0WPF2013B0	J	Plug, 5-pin	

CPCi-0057CE01 (PG-M20X)
CPCi-0057CE31 (PG-M20S)
PC I/F UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC3	9DK001-11020	J	AT24C128N-10SC-1.8	AS
IC4	9DK001-15115	J	PQ05VY3H3Z	AM
IC5	RH-iXA148WJZZQ	J	LH28F640BXXE(PG-M20X)	BG
IC5	RH-iXA348WJZZ	J	IC (PG-M20S)	
IC6	9DK001-15118	J	PST9229	AL
IC7	RH-iXA147WJZZQ	J	HD6417709SBP133V	BK
IC8	9DK001-15112	J	PQ033EZ01	AM
IC10	9DK001-15117	J	PST9222	AK
IC11	9DK001-11023	J	24LC21A7SN	AS
IC13	9DK001-15113	J	AD9888	BT
IC15	9DK001-15119	J	SAA7118E	BM
IC25	RH-iXA091WJZZQ	J	CVIC2	BX
IC28	9KD001-11028	J	HY57V641620HGT-H	AY
IC29	RH-iX3399CEN1Q	J	IX3399	BM
IC30	9DK001-11028	J	HY57V641620HGT-H	AY
IC319	9DK001-11024	J	HY57V653220BTC-7	BN
IC320	9DK001-11024	J	HY57V653220BTC-7	BN
IC321	9DK001-11024	J	HY57V653220BTC-7	BN
IC322	9DK001-11024	J	HY57V653220BTC-7	BN
IC330	9DK001-15089	J	TL712CPW	AR
IC331	9DK001-15089	J	TL712CPW	AR
IC298	9DK001-15090	J	SiL151A	BP
IC363	9DK001-12107	J	74VHC153MTC	AK
IC364	9DK001-15114	J	PQ070XZ01	AN
IC365	9DK001-12103	J	74LCX157MTC	AK
IC366	9DK001-12105	J	74LVX125MTC	AK

Note: When exchanging the following parts, it becomes unit replacement correspondence.

IC7, IC15, IC25, IC29

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q1	9DK001-20012	J	2SA1037AKQ	AE
Q2	9DK001-20012	J	2SA1037AKQ	AE
Q3	9DK001-20012	J	2SA1037AKQ	AE
Q4	9DK001-20037	J	HN2C01FU	AG
Q5	9DK001-20012	J	2SA1037AKQ	AE

DIODES

Ref. No.	Part No.	★	Description	Code
D5	9DK001-30018	J	1SS187	AD
D9	9DK001-30018	J	1SS187	AD
D28	9DK001-30018	J	1SS187	AD
D29	9DK001-30018	J	1SS187	AD
D30	9DK001-30015	J	MA157A	AE
D31	9DK001-30015	J	MA157A	AE
D33	9DK001-30018	J	1SS187	AD
D34	9DK001-30018	J	1SS187	AD
D35	9DK001-30018	J	1SS187	AD
D36	9DK001-30015	J	MA157A	AE
D37	9DK001-30015	J	MA157A	AE
D38	9DK001-30015	J	MA157A	AE
D39	9DK001-30015	J	MA157A	AE
D40	9DK001-30015	J	MA157A	AE
D41	9DK001-30015	J	MA157A	AE
D43	9DK001-30015	J	MA157A	AE
D44	9DK001-30015	J	MA157A	AE
D45	9DK001-30015	J	MA157A	AE
D46	9DK001-30015	J	MA157A	AE
D47	9DK001-30015	J	MA157A	AE

PACKAGED CIRCUITS

Ref. No.	Part No.	★	Description	Code
X1	9DK001-80038	J	CX-53F(16.588MHz)	AN
X4	9DK001-80018	J	FXO-31FL(25.000MHz)	AV
X5	9DK001-80024	J	FXO-31FL(32.500MHz)	AT
X6	9DK001-80034	J	CX-53F(24.576MHz)	AN
X7	9DK001-80015	J	MC-206(32.768kHz)	AS
RMC1	9DK001-15121	J	TSOP1838SS3V	AM

COILS AND FILTERS

Ref. No.	Part No.	★	Description	Code
L3	9DK001-81059	J	NLC322522T-1R0M 1.0µH	AE
L4	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG
L5	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG
L6	9DK001-81062	J	BLM21P221SG	AE
L7	9DK001-81062	J	BLM21P221SG	AE
L8	9DK001-81062	J	BLM21P221SG	AE
L11	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG
L12	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG
L13	9DK001-81062	J	BLM21P221SG	AE
L14	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG
L15	9DK001-81062	J	BLM21P221SG	AE
L20	9DK001-81044	J	BLM21B201S	AE
L21	9DK001-81044	J	BLM21B201S	AE
L22	9DK001-81052	J	NLC322522T-3R3M 3.3µH	AG
FL1	9DK001-82021	J	BMS100	AH
FL2	9DK001-82021	J	BMS100	AH
FL3	9DK001-81020	J	BMK351	AG
FL41	9DK001-81020	J	BMK351	AG
FL94	9DK001-81020	J	BMK351	AG
FL98	9DK001-82021	J	BMS100	AH
FL99	9DK001-82021	J	BMS100	AH
FL103	9DK001-81020	J	BMK351	AG
FL107	9DK001-82021	J	BMS100	AH
FL108	9DK001-82021	J	BMS100	AH
FL109	9DK001-82021	J	BMS100	AH
FL110	9DK001-82021	J	BMS100	AH
FL111	9DK001-82028	J	NFA31GD1004704	AM
FL112	9DK001-82028	J	NFA31GD1004704	AM
FL113	9DK001-82028	J	NFA31GD1004704	AM
FL114	9DK001-82021	J	BMS100	AH
FL115	9DK001-82028	J	NFA31GD1004704	AM
FL116	9DK001-82028	J	NFA31GD1004704	AM
FL117	9DK001-82028	J	NFA31GD1004704	AM
FL118	9DK001-82028	J	NFA31GD1004704	AM
FL119	9DK001-82028		NFA31GD1004704	AM

CAPACITORS

Ref. No.	Part No.	★				Code
C3	9DK001-42157	J	0.1	25V	Ceramic	AC
C4	9DK001-42099	J	100p	50V	Ceramic	AC
C5	9DK001-42105	J	0.047	50V	Ceramic	AC
C6	9DK001-42115	J	10p	50V	Ceramic	AC
C7	9DK001-42156	J	1	6.3V	Ceramic	AC
C8	9DK001-42157	J	0.1	25V	Ceramic	AC
C9	9DK001-42157	J	0.1	25V	Ceramic	AC
C10	9DK001-42131	J	10	10V	Ceramic	AE
C12	9DK001-42103	J	15p	50V	Ceramic	AC
C13	9DK001-42103	J	15p	50V	Ceramic	AC
C14	9DK001-42156	J	1	6.3V	Ceramic	AC
C15	9DK001-42131	J	10	10V	Ceramic	AE
C16	9DK001-42157	J	0.1	25V	Ceramic	AC
C17	9DK001-42156	J	1	6.3V	Ceramic	AC
C18	9DK001-42128	J	1000p		Ceramic	AC
C19	9DK001-42104	J	470p	50V	Ceramic	AC
C20	9DK001-42104	J	470p	50V	Ceramic	AC
C21	9DK001-40081	J	22	6.3V	Electrolytic	AF
C22	9DK001-42156	J	1	6.3V	Ceramic	AC
C23	9DK001-42156	J	1	6.3V	Ceramic	AC
C24	9DK001-42157	J	0.1	25V	Ceramic	AC
C25	9DK001-42131	J	10	10V	Electrolytic	AE
C26	9DK001-42157	J	0.1	25V	Ceramic	AC
C27	9DK001-42105	J	0.047	50V	Ceramic	AC
C28	9DK001-42105	J	0.047	50V	Ceramic	AC
C29	9DK001-42105	J	0.047	50V	Ceramic	AC
C30	9DK001-42157	J	0.1	25V	Ceramic	AC
C31	9DK001-42156	J	1	6.3V	Ceramic	AC
C33	9DK001-42156	J	1	6.3V	Ceramic	AC
C35	9DK001-40089	J	47	6.3V	Electrolytic	AE
C36	9DK001-42131	J	10	10V	Ceramic	AE
C37	9DK001-42113	J	4.7	10V	Ceramic	AB
C38	9DK001-42105	J	0.047	50V	Ceramic	AC
C39	9DK001-40089	J	47	6.3V	Electrolytic	AE
C40	9DK001-42105	J	0.047	50V	Ceramic	AC
C41	9DK001-42105	J	0.047	50V	Ceramic	AC
C42	9DK001-40091	J	100	4V	Electrolytic	AF
C43	9DK001-42105	J	0.047	50V	Ceramic	AC
C44	9DK001-42105	J	0.047	50V	Ceramic	AC
C45	9DK001-42105	J	0.047	50V	Ceramic	AC
C46	9DK001-42103	J	15p	50V	Ceramic	AC

CPCi-0057CE01 (PG-M20X)
CPCi-0057CE31 (PG-M20S)
PC I/F UNIT (Continued)

Ref. No.	Part No.	★			Description	Code
C47	9DK001-42103	J	15p	50V	Ceramic	AC
C48	9DK001-40081	J	22	6.3V	Electrolytic	AF
C49	9DK001-42157	J	0.1	25V	Ceramic	AC
C50	9DK001-40081	J	22	6.3V	Electrolytic	AF
C51	9DK001-42156	J	1	6.3V	Ceramic	AC
C52	9DK001-42157	J	0.1	25V	Ceramic	AC
C53	9DK001-42157	J	0.1	25V	Ceramic	AC
C54	9DK001-42157	J	0.1	25V	Ceramic	AC
C55	9DK001-42157	J	0.1	25V	Ceramic	AC
C56	9DK001-42157	J	0.1	25V	Ceramic	AC
C57	9DK001-40109	J	150	4V	Electrolytic	AC
C58	9DK001-42105	J	0.047	50V	Ceramic	AC
C59	9DK001-42105	J	0.047	50V	Ceramic	AC
C60	9DK001-42157	J	0.1	25V	Ceramic	AC
C61	9DK001-42156	J	1	6.3V	Ceramic	AC
C62	9DK001-42105	J	0.047	50V	Ceramic	AC
C63	9DK001-42157	J	0.1	25V	Ceramic	AC
C64	9DK001-42157	J	0.1	25V	Ceramic	AC
C65	9DK001-42157	J	0.1	25V	Ceramic	AC
C66	9DK001-40091	J	100	4V	Electrolytic	AF
C69	9DK001-42096	J	0.01	50V	Ceramic	AC
C70	9DK001-42105	J	0.047	50V	Ceramic	AC
C71	9DK001-42096	J	0.01	50V	Ceramic	AC
C72	9DK001-42157	J	0.1	25V	Ceramic	AC
C73	9DK001-42157	J	0.1	25V	Ceramic	AC
C74	9DK001-42157	J	0.1	25V	Ceramic	AC
C75	9DK001-42157	J	0.1	25V	Ceramic	AC
C76	9DK001-42157	J	0.1	25V	Ceramic	AC
C77	9DK001-42157	J	0.1	25V	Ceramic	AC
C78	9DK001-42105	J	0.047	50V	Ceramic	AC
C81	9DK001-42105	J	0.047	50V	Ceramic	AC
C82	9DK001-42154	J	0.33	10V	Ceramic	AB
C83	9DK001-40081	J	22	6.3V	Electrolytic	AF
C85	9DK001-42157	J	0.1	25V	Ceramic	AC
C140	9DK001-42105	J	0.047	50V	Ceramic	AC
C141	9DK001-42105	J	0.047	50V	Ceramic	AC
C142	9DK001-42105	J	0.047	50V	Ceramic	AC
C150	9DK001-42157	J	0.1	25V	Ceramic	AC
C151	9DK001-42157	J	0.1	25V	Ceramic	AC
C152	9DK001-42157	J	0.1	25V	Ceramic	AC
C153	9DK001-42157	J	0.1	25V	Ceramic	AC
C154	9DK001-42157	J	0.1	25V	Ceramic	AC
C155	9DK001-42157	J	0.1	25V	Ceramic	AC
C156	9DK001-42157	J	0.1	25V	Ceramic	AC
C157	9DK001-42157	J	0.1	25V	Ceramic	AC
C158	9DK001-42157	J	0.1	25V	Ceramic	AC
C159	9DK001-42157	J	0.1	25V	Ceramic	AC
C160	9DK001-42157	J	0.1	25V	Ceramic	AC
C161	9DK001-42157	J	0.1	25V	Ceramic	AC
C162	9DK001-42157	J	0.1	25V	Ceramic	AC
C163	9DK001-42157	J	0.1	25V	Ceramic	AC
C164	9DK001-42157	J	0.1	25V	Ceramic	AC
C165	9DK001-42157	J	0.1	25V	Ceramic	AC
C166	9DK001-42158	J	3900p	16V	Film	AL
C167	9DK001-42155	J	0.039	16V	Film	AL
C169	9DK001-42157	J	0.1	25V	Ceramic	AC
C170	9DK001-42157	J	0.1	25V	Ceramic	AC
C171	9DK001-42157	J	0.1	25V	Ceramic	AC
C174	9DK001-42157	J	0.1	25V	Ceramic	AC
C176	9DK001-42157	J	0.1	25V	Ceramic	AC
C177	9DK001-42157	J	0.1	25V	Ceramic	AC
C192	9DK001-42157	J	0.1	25V	Ceramic	AC
C197	9DK001-42157	J	0.1	25V	Ceramic	AC
C205	9DK001-42157	J	0.1	25V	Ceramic	AC
C214	9DK001-42157	J	0.1	25V	Ceramic	AC
C218	9DK001-42157	J	0.1	25V	Ceramic	AC
C366	9DK001-40091	J	100	4V	Electrolytic	AF
C375	9DK001-40091	J	100	4V	Electrolytic	AF
C437	9DK001-42099	J	100p	50V	Ceramic	AC
C438	9DK001-42099	J	100p	50V	Ceramic	AC
C439	9DK001-42099	J	100p	50V	Ceramic	AC
C440	9DK001-42099	J	100p	50V	Ceramic	AC
C441	9DK001-40081	J	22	6.3V	Electrolytic	AF
C442	9DK001-42156	J	1	6.3V	Ceramic	AC
C444	9DK001-42099	J	100p	50V	Ceramic	AC
C447	9DK001-42131	J	10	10V	Ceramic	AE
C448	9DK001-42122	J	180p	50V	Ceramic	AC
C449	9DK001-42122	J	180p	50V	Ceramic	AC
C450	9DK001-42122	J	180p	50V	Ceramic	AC
C454	9DK001-42131	J	10	10V	Ceramic	AE
C457	9DK001-42123	J	330p	50V	Ceramic	AC
C458	9DK001-42123	J	330p	50V	Ceramic	AC
C459	9DK001-42123	J	330p	50V	Ceramic	AC
C465	9DK001-42123	J	330p	50V	Ceramic	AC
C468	9DK001-42123	J	330p	50V	Ceramic	AC
C569	9DK001-42157	J	0.1	25V	Ceramic	AC
C571	9DK001-40076	J	4.7	35V	Electrolytic	AF
C575	9DK001-42157	J	0.1	25V	Ceramic	AC
C576	9DK001-42156	J	1	6.3V	Ceramic	AC
C577	9DK001-42156	J	1	6.3V	Ceramic	AC
C578	9DK001-42156	J	1	6.3V	Ceramic	AC
C579	9DK001-42156	J	1	6.3V	Ceramic	AC
C580	9DK001-42157	J	0.1	25V	Ceramic	AC
C581	9DK001-42156	J	1	6.3V	Ceramic	AC
C582	9DK001-42156	J	1	6.3V	Ceramic	AC
C583	9DK001-42156	J	1	6.3V	Ceramic	AC
C584	9DK001-42157	J	0.1	25V	Ceramic	AC
C585	9DK001-42157	J	0.1	25V	Ceramic	AC
C586	9DK001-42156	J	1	6.3V	Ceramic	AC
C589	9DK001-42156	J	1	6.3V	Ceramic	AC
C590	9DK001-42156	J	1	6.3V	Ceramic	AC
C591	9DK001-42156	J	1	6.3V	Ceramic	AC
C592	9DK001-42156	J	1	6.3V	Ceramic	AC
C593	9DK001-42156	J	1	6.3V	Ceramic	AC
C594	9DK001-42157	J	0.1	25V	Ceramic	AC
C595	9DK001-42157	J	0.1	25V	Ceramic	AC
C596	9DK001-42156	J	1	6.3V	Ceramic	AC
C597	9DK001-42157	J	0.1	25V	Ceramic	AC
C598	9DK001-42156	J	1	6.3V	Ceramic	AC
C599	9DK001-42156	J	1	6.3V	Ceramic	AC
C600	9DK001-42157	J	0.1	25V	Ceramic	AC
C601	9DK001-42157	J	0.1	25V	Ceramic	AC
C602	9DK001-40091	J	100	4V	Electrolytic	AF
C603	9DK001-42157	J	0.1	25V	Ceramic	AC
C607	9DK001-42157	J	0.1	25V	Ceramic	AC
C609	9DK001-42157	J	0.1	25V	Ceramic	AC
C611	9DK001-42157	J	0.1	25V	Ceramic	AC
C613	9DK001-42157	J	0.1	25V	Ceramic	AC
C615	9DK001-42157	J	0.1	25V	Ceramic	AC
C617	9DK001-42157	J	0.1	25V	Ceramic	AC
C619	9DK001-42157	J	0.1	25V	Ceramic	AC
C621	9DK001-42157	J	0.1	25V	Ceramic	AC
C623	9DK001-42157	J	0.1	25V	Ceramic	AC
C625	9DK001-42157	J	0.1	25V	Ceramic	AC
C627	9DK001-42157	J	0.1	25V	Ceramic	AC
C629	9DK001-42157	J	0.1	25V	Ceramic	AC
C631	9DK001-42157	J	0.1	25V	Ceramic	AC
C633	9DK001-42157	J	0.1	25V	Ceramic	AC
C635	9DK001-42157	J	0.1	25V	Ceramic	AC
C637	9DK001-42157	J	0.1	25V	Ceramic	AC
C638	9DK001-42157	J	0.1	25V	Ceramic	AC
C640	9DK001-42157	J	0.1	25V	Ceramic	AC
C641	9DK001-42157	J	0.1	25V	Ceramic	AC
C648	9DK001-42157	J	0.1	25V	Ceramic	AC
C649	9DK001-42157	J	0.1	25V	Ceramic	AC
C656	9DK001-42157	J	0.1	25V	Ceramic	AC
C658	9DK001-42157	J	0.1	25V	Ceramic	AC
C662	9DK001-42157	J	0.1	25V	Ceramic	AC
C666	9DK001-42096	J	0.01	50V	Ceramic	AC
C668	9DK001-42157	J	0.1	25V	Ceramic	AC
C670	9DK001-42157	J	0.1	25V	Ceramic	AC
C672	9DK001-42157	J	0.1	25V	Ceramic	AC
C678	9DK001-42157	J	0.1	25V	Ceramic	AC
C682	9DK001-42157	J	0.1	25V	Ceramic	AC
C685	9DK001-42157	J	0.1	25V	Ceramic	AC
C686	9DK001-42157	J	0.1	25V	Ceramic	AC
C687	9DK001-42157	J	0.1	25V	Ceramic	AC
C688	9DK001-42157	J	0.1	25V	Ceramic	AC

CPCi-0057CE01 (PG-M20X)
CPCi-0057CE31 (PG-M20S)
PC I/F UNIT (Continued)

Ref. No.	Part No.	★				Code
C689	9DK001-42157	J	0.1	25V	Ceramic	AC
C695	9DK001-42115	J	10p	50V	Ceramic	AC
C696	9DK001-42115	J	10p	50V	Ceramic	AC
C697	9DK001-42157	J	0.1	25V	Ceramic	AC
C708	9DK001-40090	J	47	4V	Electrolytic	AF
C744	9DK001-42157	J	0.1	25V	Ceramic	AC
C745	9DK001-42157	J	0.1	25V	Ceramic	AC
C746	9DK001-42112	J	33p	50V	Ceramic	AB
C747	9DK001-42157	J	0.1	25V	Ceramic	AC
C748	9DK001-42157	J	0.1	25V	Ceramic	AC
C749	9DK001-42112	J	33p	50V	Ceramic	AB
C750	9DK001-42157	J	0.1	25V	Ceramic	AC
C752	9DK001-42113	J	4.7	10V	Ceramic	AB
C758	9DK001-42115	J	10p	50V	Ceramic	AC
C759	9DK001-42157	J	0.1	25V	Ceramic	AC
C901	9DK001-42157	J	0.1	25V	Ceramic	AC
C902	9DK001-42156	J	1	6.3V	Ceramic	AC
C904	9DK001-42157	J	0.1	25V	Ceramic	AC
C905	9DK001-42157	J	0.1	25V	Ceramic	AC
C906	9DK001-42157	J	0.1	25V	Ceramic	AC
C909	9DK001-42156	J	1	6.3V	Ceramic	AC
C910	9DK001-42157	J	0.1	25V	Ceramic	AC
C911	9DK001-42156	J	1	6.3V	Ceramic	AC
C912	9DK001-42156	J	1	6.3V	Ceramic	AC
C913	9DK001-42156	J	1	6.3V	Ceramic	AC
C914	9DK001-42156	J	1	6.3V	Ceramic	AC
C915	9DK001-42157	J	0.1	25V	Ceramic	AC
C916	9DK001-42115	J	10p	50V	Ceramic	AC
C917	9DK001-42156	J	1	6.3VC	eramic	AC
C918	9DK001-42157	J	0.1	25V	Ceramic	AC
C919	9DK001-40109	J	150	4V	Electrolytic	
C920	9DK001-42115	J	10p	50V	Ceramic	AC
C921	9DK001-40091	J	100	4V	Electrolytic	AF
C922	9DK001-42154	J	0.33	10V	Ceramic	AB
C923	9DK001-42157	J	0.1	25V	Ceramic	AC
C924	9DK001-42157	J	0.1	25V	Ceramic	AC
C925	9DK001-42131	J	10	10V	Ceramic	AE

RESISTORS

Ref. No.	Part No.	★				Code
R1	9DK001-51030	J	10k	1/16W		AD
R2	9DK001-50149	J	0	1/16W	Chip	AB
R3	9DK001-50179	J	2.2k	1/16W	Chip1608	AA
R4	9DK001-50149	J	0	1/16W	Chip	AB
R8	9DK001-51030	J	10k	1/16W		AD
R9	9DK001-50219	J	47k	1/16W	Chip1608	AA
R11	9DK001-51045	J	100	1/16W	Chip	AA
R12	9DK001-50185	J	10k	1/16W	Chip1608	AA
R13	9DK001-50165	J	100	1/16W	Chip1608	AA
R14	9DK001-50074	J	100	1/4W	Chip3216	AA
R17	9DK001-50183	J	4.7k	1/16W	Chip1608	AA
R18	9DK001-50177	J	1k	1/16W	Chip1608	AB
R19	9DK001-50149	J	0	1/16W	Chip	AD
R22	9DK001-51030	J	10k	1/16W		AB
R23	9DK001-50149	J	0	1/16W	Chip	AD
R25	9DK001-51030	J	10k	1/16W		AD
R26	9DK001-51037	J	6.8k	1/16W	Chip	AD
R27	9DK001-51030	J	10k	1/16W		AB
R28	9DK001-50149	J	0	1/16W	Chip	AB
R29	9DK001-50275	J	6.8	1/16W	Chip1608	AA
R32	9DK001-50150	J	10	1/16W	Chip1608	AA
R33	9DK001-50161	J	47	1/16W	Chip1608	AA
R34	9DK001-50185	J	10k	1/16W	Chip1608	AA
R35	9DK001-50185	J	10k	1/16W	Chip1608	AA
R36	9DK001-50177	J	1k	1/16W	Chip1608	AA
R37	9DK001-50159	J	22	1/16W	Chip1608	AA
R38	9DK001-50150	J	10	1/16W	Chip1608	AA
R39	9DK001-50150	J	10	1/16W	Chip1608	AA
R40	9DK001-50044	J	68	1/10W	Chip2125	AB
R41	9DK001-50275	J	6.8	1/16W	Chip1608	AB
R42	9DK001-50159	J	22	1/16W	Chip1608	AA
R45	9DK001-50044	J	68	1/10W	Chip2125	AB
R46	9DK001-50275	J	6.8	1/16W	Chip1608	AB
R47	9DK001-50159	J	22	1/16W	Chip1608	AA
R48	9DK001-50044	J	68	1/10W	Chip2125	AB
R50	9DK001-50149	J	0	1/16W	Chip	AB
R51	9DK001-50149	J	0	1/16W	Chip	AB
R54	9DK001-50149	J	0	1/16W	Chip	AB
R63	9DK001-50236	J	910	1/16W	Chip1608	AB
R64	9DK001-50213	J	2.0k	1/16W	Chip1608	AB
R65	9DK001-50181	J	3.3k	1/16W	Chip1608	AA
R66	9DK001-50181	J	3.3k	1/16W	Chip1608	AA
R67	9DK001-51037	J	6.8k	1/16W	Chip	AD
R69	9DK001-50149	J	0	1/16W	Chip	AB
R70	9DK001-50119	J	150	1/10W	Chip2125	AB
R71	9DK001-50119	J	150	1/10W	Chip2125	AB
R72	9DK001-50119	J	150	1/10W	Chip2125	AA
R73	9DK001-50185	J	10k	1/16W	Chip1608	AA
R74	9DK001-50185	J	10k	1/16W	Chip1608	AA
R75	9DK001-50159	J	22	1/16W	Chip1608	AA
R80	9DK001-50044	J	68	1/10W	Chip2125	AB
R83	9DK001-50159	J	22	1/16W	Chip1608	AA
R88	9DK001-50044	J	68	1/10W	Chip2125	AB
R89	9DK001-50149	J	0	1/16W	Chip	AB
R91	9DK001-50159	J	22	1/16W	Chip1608	AA
R93	9DK001-50300	J	18	1/10W	Chip2125	AA
R96	9DK001-50044	J	68	1/10W	Chip2125	AB
R97	9DK001-50185	J	10k	1/16W	Chip1608	AA
R104	9DK001-50149	J	0	1/16W	Chip	AB
R105	9DK001-50149	J	0	1/16W	Chip	AB
R106	9DK001-50149	J	0	1/16W	Chip	AB
R107	9DK001-50149	J	0	1/16W	Chip	AB
R109	9DK001-51037	J	6.8k	1/16W	Chip	AD
R110	9DK001-51037	J	6.8k	1/16W	Chip	AD
R111	9DK001-50149	J	0	1/16W	Chip	AB
R113	9DK001-50149	J	0	1/16W	Chip	AB
R114	9DK001-50297	J	39	1/16W	Chip1608	AA
R116	9DK001-50300	J	18	1/10W	Chip2125	AA
R117	9DK001-50298	J	120	1/4W	Chip3216	AB
R118	9DK001-50149	J	0	1/16W	Chip	AB
R119	9DK001-50149	J	0	1/16W	Chip	AB
R121	9DK001-50292	J	3.9	1/4W	Chip3216	AA
R122	9DK001-50292	J	3.9	1/4W	Chip3216	AA
R123	9DK001-50149	J	0	1/16W	Chip	AB
R124	9DK001-50149	J	0	1/16W	Chip	AB
R127	9DK001-50149	J	0	1/16W	Chip	AB
R130	9DK001-50173	J	470	1/16W	Chip1608	AA
R131	9DK001-50159	J	22	1/16W	Chip1608	AA
R134	9DK001-50149	J	0	1/16W	Chip	AB
R138	9DK001-50177	J	1k	1/16W	Chip1608	AA
R139	9DK001-50177	J	1k	1/16W	Chip1608	AA
R140	9DK001-50177	J	1k	1/16W	Chip1608	AA
R143	9DK001-50177	J	1k	1/16W	Chip1608	AA
R150	9DK001-51046	J	1k	1/16W	Chip	AA
R151	9DK001-50302	J	560	1/16W	Chip1608	AA
R152	9DK001-42105	J	0.047	50V	Ceramic	AC
R153	9DK001-42105	J	0.047	50V	Ceramic	AC
R155	9DK001-42105	J	0.047	50V	Ceramic	AC
R156	9DK001-42105	J	0.047	50V	Ceramic	AC
R158	9DK001-42105	J	0.047	50V	Ceramic	AC
R159	9DK001-42105	J	0.047	50V	Ceramic	AC
R160	9DK001-42105	J	0.047	50V	Ceramic	AC
R161	9DK001-50201	J	18	1/16W	Chip1608	AA
R162	9DK001-50183	J	4.7k	1/16W	Chip1608	AA
R165	9DK001-50181	J	3.3k	1/16W	Chip1608	AA
R166	9DK001-50149	J	0	1/16W	Chip	AB
R170	9DK001-50150	J	10	1/16W	Chip1608	AA
R172	9DK001-50185	J	10k	1/16W	Chip1608	AA
R174	9DK001-50149	J	0	1/16W	Chip	AB
R176	9DK001-50224	J	150	1/4W	Chip3216	AB
R178	9DK001-50185	J	10k	1/16W	Chip1608	AA
R180	9DK001-50149	J	0	1/16W	Chip	AB
R191	9DK001-50150	J	10	1/16W	Chip1608	AA
R192	9DK001-50150	J	10	1/16W	Chip1608	AA
R193	9DK001-50150	J	10	1/16W	Chip1608	AA
R194	9DK001-50149	J	0	1/16W	Chip	AB
R196	9DK001-50149	J	0	1/16W	Chip	AB
R199	9DK001-51037	J	6.8k	1/16W	Chip	AD

Ref. No.	Part No.	★	Description	Code

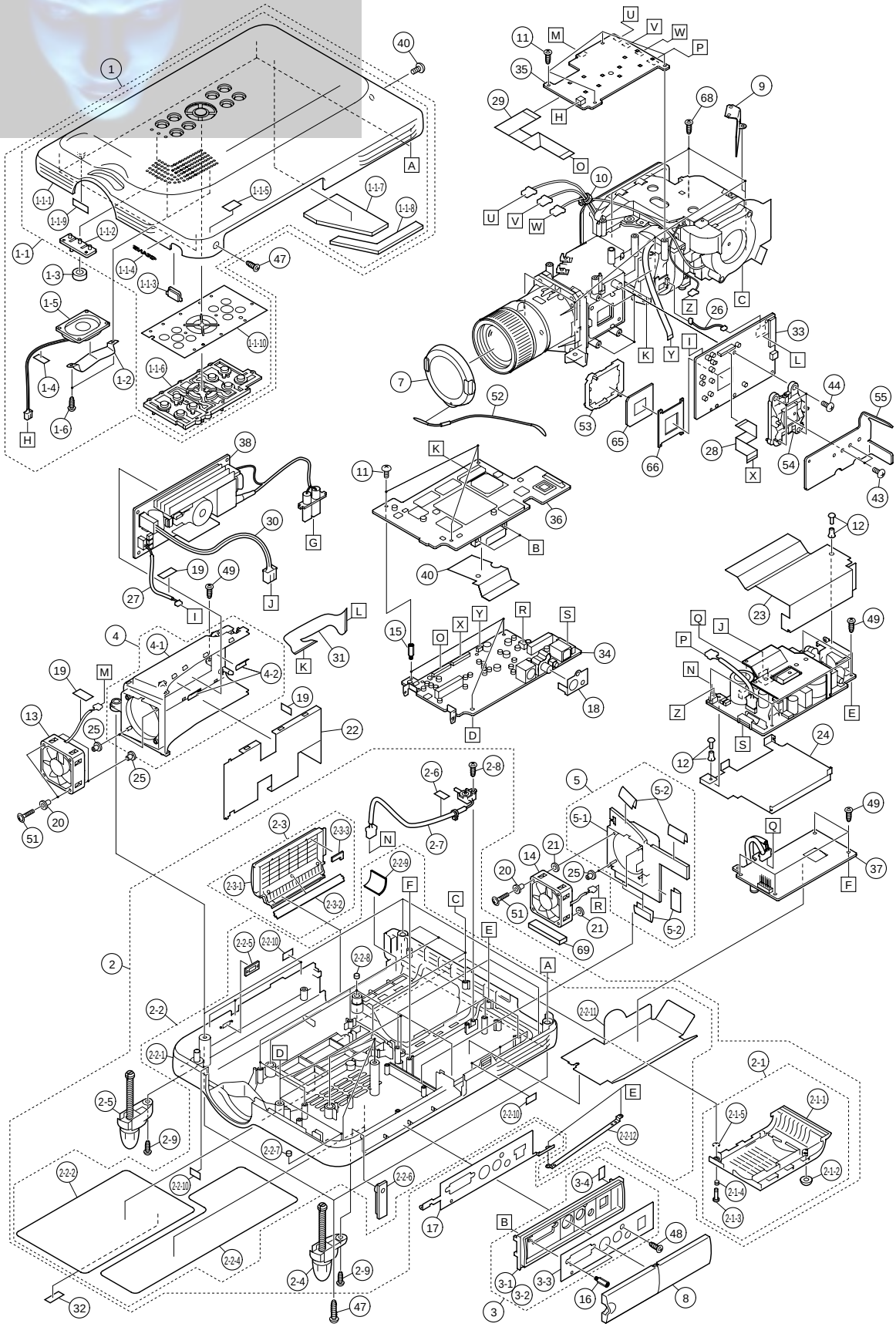
CPCi-0057CE01 (PG-M20X)
CPCi-0057CE31 (PG-M20S)
PC I/F UNIT (Continued)

R201	9DK001-50149	J	0	1/16W	Chip	AB
R648	9DK001-50165	J	100	1/16W	Chip1608	AA
R649	9DK001-50165	J	100	1/16W	Chip1608	AA
R654	9DK001-50204	J	150	1/16W	Chip1608	AA
R685	9DK001-50150	J	10	1/16W	Chip1608	AA
R688	9DK001-50201	J	15	1/16W	Chip1608	AA
R689	9DK001-50173	J	470	1/16W	Chip1608	AA
R690	9DK001-50205	J	1.8k	1/16W	Chip1608	AA
R692	9DK001-50159	J	22	1/16W	Chip1608	AA
R693	9DK001-50159	J	22	1/16W	Chip1608	AA
R694	9DK001-50159	J	22	1/16W	Chip1608	AA
R695	9DK001-50159	J	22	1/16W	Chip1608	AA
R696	9DK001-50185	J	10k	1/16W	Chip1608	AA
R697	9DK001-50185	J	10k	1/16W	Chip1608	AA
R698	9DK001-50185	J	10k	1/16W	Chip1608	AA
R699	9DK001-50185	J	10k	1/16W	Chip1608	AA
R700	9DK001-50218	J	20k	1/16W	Chip1608	AA
R701	9DK001-50257	J	75	1/16W	Chip1608	AA
R704	9DK001-50185	J	10k	1/16W	Chip1608	AA
R750	9DK001-50177	J	1k	1/16W	Chip1608	AA
R751	9DK001-50177	J	1k	1/16W	Chip1608	AA
R752	9DK001-50170	J	270	1/16W	Chip1608	AA
R753	9DK001-50170	J	270	1/16W	Chip1608	AA
R787	9DK001-50244	J	3.9k	1/16W	Chip1608	AA
R788	9DK001-50177	J	1k	1/16W	Chip1608	AA
R789	9DK001-50177	J	1k	1/16W	Chip1608	AA
R790	9DK001-50179	J	2.2k	1/16W	Chip1608	AA
R791	9DK001-50244	J	3.9k	1/16W	Chip1608	AA
R792	9DK001-50179	J	2.2k	1/16W	Chip1608	AA
R801	9DK001-50205	J	1.8k	1/16W	Chip1608	AA
R867	9DK001-50275	J	6.8	1/16W	Chip1608	AB
R868	9DK001-50275	J	6.8	1/16W	Chip1608	AB
R869	9DK001-50275	J	6.8	1/16W	Chip1608	AB
R977	9DK001-50150	J	10	1/16W	Chip1608	AA
R994	9DK001-50236	J	910	1/16W	Chip1608	AB
R995	9DK001-50199	J	2.15k	1/16W	Chip1608	AB
R998	9DK001-50177	J	1k	1/16W	Chip1608	AA
R999	9DK001-50303	J	39	1/10W	Chip2125	AA
RE1	9DK001-94001	J	FTR-B3 GA 003Z-B10			AV
RE2	9DK001-94001	J	FTR-B3 GA 003Z-B10			AV

MISCELLANEOUS PARTS

P1	9DK001-60053	J	74320-1004	AZ
P8	9DK001-60077	J	FX8C-80P-SV4	AT
P9	9DK001-60075	J	FX6-40P-0.8SV	AP
SC1	9DK001-60076	J	FH16-80S-0.3SHW	AV
	PSLDCA002WJZZ	J	Shield	AN

CABINET AND MECHANICAL PARTS/
GEHÄUSE UND MACHANISCHE BAUTEILE



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CABINET AND MECHANICAL PARTS

Ref. No.	Part No.	★	Description	Code
1	*Not Available*	–	Top Body Unit	—
1-1	DBDYT1210CE01	J	Top Body Ass'y (PG-M20X)	BL
1-1	DBDYTA004WJ01	J	Top Body Ass'y (PG-M20S)	
1-1-1	*Not Available*	–	Top Body	—
1-1-2	*Not Available*	–	LED Cover	—
1-1-3	*Not Available*	–	RC Cover	—
1-1-4	*Not Available*	–	Badge, "SHARP"	—
1-1-5	HiNDPA057WJSA	J	IQ Label	
1-1-6	*Not Available*	–	Operation Button	—
1-1-7	PSLDHA006WJK0	J	Heat Shield	AG
1-1-8	PSLDHA007WJK0	J	Heat Shielding Sheet	AM
1-1-9	PSPAZA025WJZZ	J	Tape	AB
1-1-10	QEARPA021WJFW	J	Earth Angle	AE
1-2	LANGS0127CEFW	J	Speaker Fixing Angle	AF
1-3	PMLT-A006WJZZ	J	Spacer	AB
1-4	PSPAT0013CEZZ	J	Spacer	AC
1-5	RSP-ZA004WJN1	J	Speaker	AQ
1-6	XEPSD26P06000	J	Screw, x2	AA
2	CBDYU1143CE01	J	Bottom Body Unit (PG-M20X)	BQ
2	CBDYU1143CE03	J	Bottom Body Unit (PG-M20S)	
2-1	*Not Available*	–	Lamp Door Unit	—
2-1-1	DDORU1019CE01	J	Lamp Door Ass'y	BQ
2-1-2	GLEGP9135CESA	J	Leg(Rear)	AD
2-1-3	LX-BZ3449CEFF	J	Screw, x1	AC
2-1-4	MSPRC0215CEFW	J	Spring	AC
2-1-5	XREUW20-04000	J	E-Ring	AA
2-2	DBDYU1143CE01	J	Bottom Body Ass'y (PG-M20X)	BM
2-2	DBDYU1143CE03	J	Bottom Body Ass'y (PG-M20S)	
2-2-1	*Not Available*	–	Bottom Body	—
2-2-2	HiNDP5957CEZZ	J	Model Label (PG-M20X)	AK
2-2-2	HiNDPA113WJZZ	J	Model Label (PG-M20S)	
2-2-3	HiNDP5958CEZZ	J	Caution Label	AL
2-2-4	HiNDPA050WJSA	J	Heat Caution Label (PG-M20S)	AD
2-2-4	HiNDPA114WJSA	J	Heat Caution Label (PG-M20X)	AD
2-2-5	*Not Available*	–	Kensington Security Standard Connector	—
2-2-6	LHLDZ2193CEK0	J	Holder	AD
2-2-7	*Not Available*	–	Insert Nut, x3	—
2-2-8	*Not Available*	–	Insert Nut, x4	—
2-2-9	PSLDHA008WJKZ	J	Heak Sink Spacer	AD
2-2-10	PSPAT0013CEZZ	J	Tape, x7	AC
2-2-11	PZETK0146CEKZ	J	Cover	AK
2-2-12	*Not Available*	–	Earth Angle	—
2-3	DCOVA2092CE01	J	Exhaust Cover Ass'y	AQ
2-3-1	*Not Available*	–	Exhaust Cover	—
2-3-2	*Not Available*	–	Spacer, Heat Shielding	—
2-3-3	*Not Available*	–	Exhaust Cover	—
2-4	GLEGP1034CESA	J	Leg, Right	AM
2-5	GLEGP3034CESA	J	Leg, Left	AM
2-6	PSPAT0013CEZZ	J	Tape	AC
2-7	QCNW-A317WJZZ	J	Leaf SW	AF
2-8	XEBSD26P08000	J	Screw, x1	AA
2-9	XEBSN26P08000	J	Screw, x2	AA
3	*Not Available*	–	Terminal Cover Unit	—
3-1	DCOVA2091CE01	J	Terminal Cover Ass'y	AT
3-3	HiNDP5954CESA	J	Indication Label	AD
4	CHLDZ2191CE01	J	Ballast Unit Holder Ass'y	AM
4-1	*Not Available*	–	Ballast Unit Holder	—
4-2	PSPAT0013CEZZ	J	Tape, x2	AC
5	CHLDZ2200CE01	J	Fan Holder Ass'y	AK
5-1	*Not Available*	–	Fan Holder	—
5-2	PMLT-A007WJZZ	J	Spacer, x5	AB

Ref. No.	Part No.	★	Description	Code
6	Refer to Optical Mechanism Parts			
7	CCAPHA001WJ01	J	Lens Cap	AH
8	GCOVD0103CESA	J	Terminal Cover	AK
9	LANGHA001WJFW	J	Cover Angle	AF
10	LHLDW0106CEZZ	J	Wire Holder	AF
11	LX-BZ3248CEFD	J	Screw, x5	AA
12	LX-LZ1011GE00	J	Clip Screw, x2	AC
13	NFANR0129CEZZ	J	Cooling Fan	AU
14	NFANR0130CEZZ	J	Cooling Fan	AU
15	NSFTZ0170CEFW	J	Hexagon Screw, x3	AD
16	NSFTZ0183CEFW	J	Hexagon Screw, x2	AD
17	PSLDM4719CEFW	J	Terminal Shield	AF
18	QEARPA033WJFW	J	Earth Angle	AD
19	PSPAT0013CEZZ	J	Tape, x14	AC
20	PSPAZA034WJZZ	J	Spacer for Fan, x7	AD
21	PSPAZA035WJZZ	J	Spacer for Fan, x4	AB
22	PZETK0143CEKZ	J	Ballast Unit Cover	AL
23	PZETK0144CEKZ	J	Cover(Top)	AM
24	PZETK0145CEKZ	J	Cover(Bottom)	AL
25	PSPAGA036WJZZ	J	Spacer for Fan, x4	AE
26	QCNW-A074WJZZ	J	Connecting Cord(CW)	AD
27	QCNW-A075WJZZ	J	Connecting Cord(BA)	AF
28	QCNW-A076WJZZ	J	Connecting Cord(FB)	AD
29	QCNW-A078WJZZ	J	Connecting Cord(KY)	AE
30	QCNW-A515WJZZ	J	Connecting Cord(DE)	AP
31	QPWBHA073WJZZ	J	Connecting Cord	AE
32	TLABN0433CEZZ	J	Serial No. Label (PG-M20XU)	AE
32	TLABN0458CEZZ	J	Serial No. Label (PG-M20XE)	AE
32	TLABNA002WJZZ	J	Serial No. Label (PG-M20XX)	AF
32	TLABNA090WJZZ	J	Serial No. Labe (PG-M20SU)	
32	TLABNA091WJZZ	J	Serial No. Labe (PG-M20SE)	
32	TLABNA092WJZZ	J	Serial No. Labe (PG-M20SK)	
33	DUNTKB065DE01	J	Formatter Unit (PG-M20X)	CP
33	DUNTKB065DE03	J	Formatter Unit (PG-M20S)	
34	DUNTKB066DE01	–	Input Unit (PG-M20X)	—
34	DUNTKB066DE01	–	Input Unit (PG-M20S)	—
35	DUNTKB067DE01	–	Operation Unit (PG-M20X)	—
35	DUNTKB067DE01	–	Operation Unit (PG-M20S)	—
36	CPCi-0057CE01	J	PC I/F Unit (PG-M20X)	CW
36	CPCi-0057CE31	J	PC I/F Unit (PG-M20S)	
37	RDENCA004WJZZ	–	PFC Unit (PG-M20X)	—
37	RDENCA004WJN1	–	PFC Unit (PG-M20S)	—
38	RDENCA005WJZZ	J	Ballast Unit	BZ
39	RDENCA010WJZZ	–	Power Unit	—
40	PSLDCA002WJZZ	J	Noise Shield	AN
41	XBBSN26P06000	J	Screw	AA
42	XBPSD26P06JS0	J	Screw	AA
43	XBPSD30P08KS0	J	Screw	AA
44	XBPSD30P12JS0	J	Screw	AA
45	XBPSF30P06000	J	Screw	AA
46	XEBSD26P08000	J	Screw	AA
47	XEBSN26P08000	J	Screw	AA
48	XEBSN30P06000	J	Screw	AA
49	XEPSD26P09WS0	J	Screw	AB
50	XEPSF26P06000	J	Screw	AA
51	XEPSF30P25XS0	J	Screw	AB
52	UBNDT0013CEZZ	J	Lens Cap Strap	AF
53	LHLDZ0140CEKZ	J	Outer Flame	AE
54	CHLDZ0141CE01	J	Backer Plate Ass'y (PG-M20XE)	AV
55	PRDARA042WJFW	J	Heat Sink	
56	XBPSD30P08KS0	J	Screw, x2	AA
57	LANGQA004WJ00	J	Thermistor Fixing Angle	AG
58	LANGQA006WJFW	J	Thermistor Fixing Angle	AE
59	PSPAKA006WJZZ	J	Spacer for Thermistor	AC
60	XBBSF26P05000	J	Screw, x3	AA
61	PSPAZA051WJZZ	J	Spacer for Exhaust Duct	AL
62	PSPAZA058WJZZ	J	Spacer fot Exhaust Duct(Lower)	AD
63	XBPSF30P06000	J	Screw, x1	AA

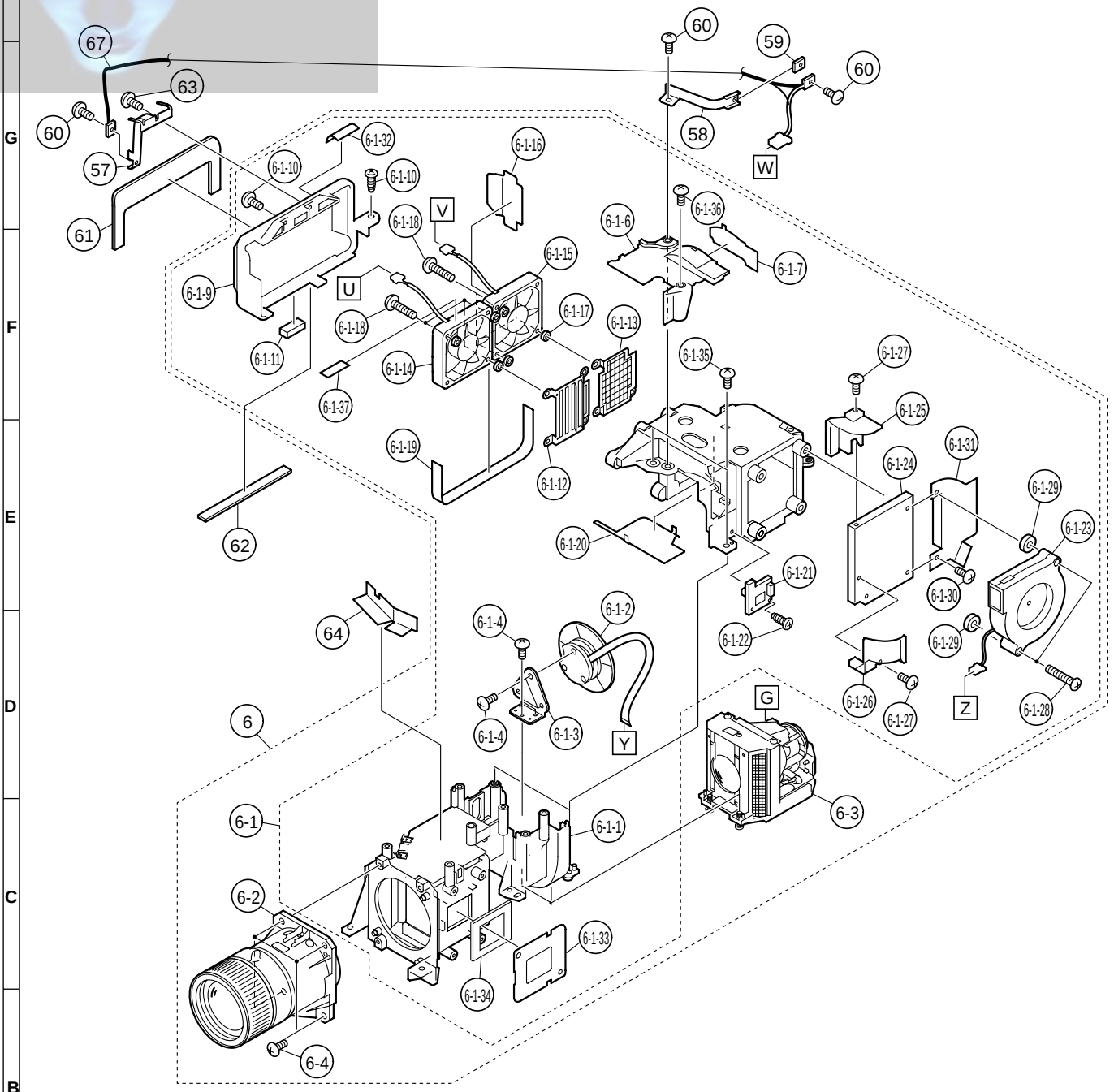
CABINET AND MECHANICAL PARTS (Continued)

Ref. No.	Part No.	★	Description	Code
64	PCOVNA002WJK0	J	Exhaust Guide Plate	AE
65	RDMDPA002WJZZ	J	DMD Unit (PG-M20X)	
65	RDMDPA003WJZZ	J	DMD Unit (PG-M20S)	
66	QSOCZA015WJZZ	J	C-spring (PG-M20X)	BK
66	QSOCZA038WJZZ	J	C-spring (PG-M20S)	
67	QCNW-A522WJZZ	J	Thermistor	AF
68	XEBSD26P10000	J	Screw, x6	AA
69	PSPAZA099WJZZ	J	Spacer for Cooling Fan	

OPTICS MECHANISM PARTS

Ref. No.	Part No.	★	Description	Code
6	CCHSK0106CE01	J	Optics Engine Ass'y (PG-M20X)	DK
6	CCHSKA004WJ01	J	Optics Engine Ass'y (PG-M20S)	
6-1	95U10A1018602	J	Optics Engine Unit	
6-1-1	*Not Available*	–	Optics Engine	—
6-1-2	RMOTBA001WJZZ	J	Color Wheel	
6-1-3	95U41B1018017	J	Color Wheel Fixing Angle	
6-1-4	95U110M200353M	J	Screw, x3	
6-1-5	XBBSF26P05000	J	Screw, x3	AA
6-1-6	95U11B1018812	J	Color Wheel Fixing Cover	
6-1-7	95U49B1019446	J	Heat Shielding Plate	
6-1-8	95U12B1018810	J	Lamp Box	
6-1-9	95U71B1018838	J	Duct	
6-1-10	XBPSF30P06000	J	Screw, x1	AA
6-1-11	95U60B1035321	J	Spacer	
6-1-12	95U72B1018840	J	Exhaust Punching	
6-1-13	95U72B1019698	J	Exhaust Punching	
6-1-14	NFANR0140CEZZ	J	Cooling Fan(Front)	
6-1-15	NFANR0139CEZZ	J	Cooling Fan(rear)	
6-1-16	95U60B1035437	J	Partition Plate	
6-1-17	95U55B1035320	J	Oscillation Prevent Rubber, x6	
6-1-18	95U53B1019321	J	Screw, x6	
6-1-19	95U187B1019601	J	Tape	
6-1-20	95U72B1018837	J	Shield(Top)	
6-1-21	95U110A1018253	J	Sensor Unit Ass'y	
6-1-22	95U53K108340	J	Screw	
6-1-23	NFANSA001WJZZ	J	Blow Fan	
6-1-24	95U41B1019319	J	Lamp Fixing Plate	
6-1-25	95U71B1019323	J	Lamp Cooling Duct(Upper)	
6-1-26	95U71B1019327	J	Lamp Cooling Duct(Lower)	
6-1-27	XBBSF26P05000	J	Screw, x2	AA
6-1-28	95U110M302000N	J	Screw, x2	
6-1-29	95U55B994086	J	Oscillation Prevent Washer, x2	
6-1-30	XBPSF30P06000	J	Screw, x1	AA
6-1-31	95U39B1035436	J	Exhaust Guide Plate	
6-1-32	95U187B1035323	J	Tape	
6-1-33	95U27B1018652	J	DMD Aperture	
6-1-34	95U60B1018653	J	DMD Sealing Sapcer	
6-1-35	XBPSD30P06J00	J	Screw, x2	AA
6-1-36	XBBSF26P05000	J	Screw, x1	AA
6-1-37	95U187B1035566	J	Tape	
6-2	PLNS-0243CEZZ	J	Projection Lens	CE
6-3	BQC-PGM20X//1	J	Lamp Case Ass'y	
6-4	95U280M30107K	J	Screw, x4	

OPTICS MECHANISM PARTS



1	2	3	4	5	6

SUPPLIED ACCESSORIES

Ref. No.	Part No.	★	Description	Code
	CCAPHA001WJ01	J	Lens Cap	AH
	GCASN0005CESA	J	Carrying Bag	BC
	GCOVD0103CESA	J	Terminal Cover	AK
⚠	QACCB5024CENA	J	Power Cord (PG-M20X) (for U.K.,Hong Kong and Singapore)	AZ
⚠	QACCBA012WJPZ	J	Power Cord (PG-M20SA) (for U.K.,Hong Kong and Singapore)	
⚠	QACCDA007WJPZ	J	Power Cord(for U.S., Canada)	AR
⚠	QACCL3022CEZZ	J	Power Cord(for Australia, New Zealand and Oceania)	AZ
⚠	QACCV4002CEZZ	J	Power Cord(for Europe)	AZ
	QCNWG0001WJPZ	J	USB Cable	AL
	QCNWGA010WJZZ	J	DVI to 15-pin D-sub Cable	AU
	RRMCGA013WJSA	J	Remote Control	AW
	TCADE3018CEZZ	J	Questionnaire Card (PG-M20X)	AF
	TCADEA013WJZZ	J	Questionnaire Card (PG-M20S)	
	TGAN-1710CEZZ	J	Guarantee Card(for U.S.) (PG-M20X)	
	TGAN-A018WJZZ	J	Guarantee Card(for U.S.)	
	TGAN-A019WJZZ	J	Guarantee Card(for Canada)	
	TGAN-A020WJZZ	J	Guarantee Card(for Canada)	
	TGAN-A037WJZZ	J	Guarantee Card(for U.S.) (PG-M20S)	
	TGANE0050TAZZ	J	Guarantee Card (PG-M20XX, PG-M20SK)	AE
	TiNS-7609CEZZ	J	Operation Manual (PG-M20X)	AQ
	TiNS-7610CEZZ	J	Quick Reference Guides	AG
	TiNS-7612CEZZ	J	Quick Reference Guides (for Europe) (PG-M20X)	AG
	TiNS-7614CEZZ	J	Quick Reference Guides (for Europe) (PG-M20X)	AG
	TiNS-A209WJZZ	J	Operation Manual (PG-M20S)	
	TiNS-A210WJZZ	J	Quick Reference Guides (PG-M20S)	
	TiNS-A211WJZZ	J	Quick Reference Guides (PG-M20SE)	
	TiNS-A212WJZZ	J	Quick Reference Guides (PG-M20SE/SK)	
	UBNDT0013CEZZ	J	Lens Cap Strap	AF
	UDSKA0058CEN1	J	CD-ROM (PG-M20X)	AM
	UDSKAA009WJZZ	J	CD-ROM (PG-M20S)	

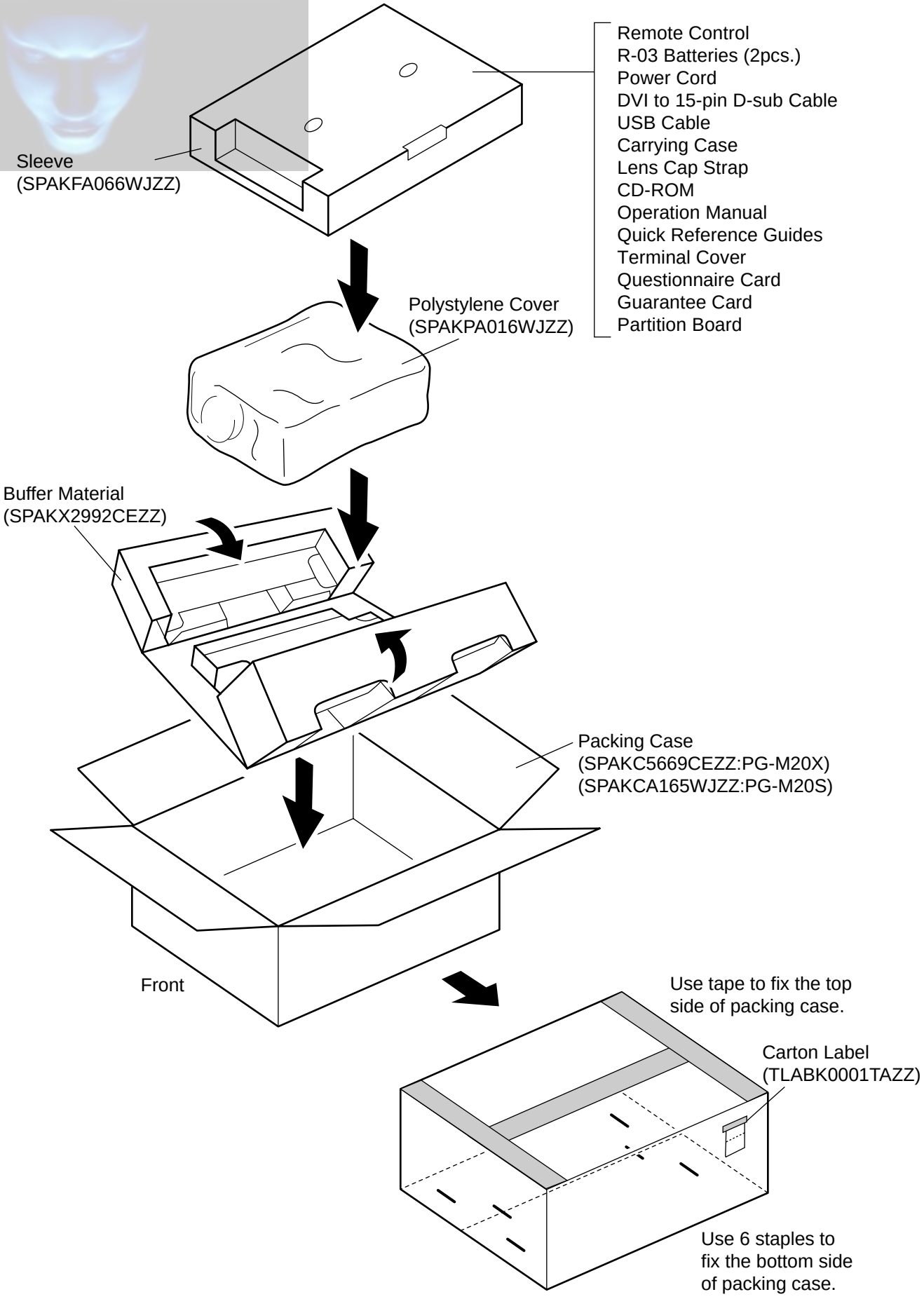
PACKING PARTS
(NOT REPLACEMENT ITEM)

Ref. No.	Part No.	★	Description	Code
	SPAKAA015WJZZ	–	Partation Board	—
	SPAKC5669CEZZ	–	Packing Case (PG-M20X)	—
	SPAKCA165WJZZ	–	Packing Case (PG-M20S)	—
	SPAKF0552CEZZ	–	Sleeve	—
	SPAKPA016WJZZ	–	Polystylene Cover	—
	SPAKX2992CEZZ	–	Buffer Material	—
	SSAKA0170CEZZ	–	Polystylene Cover, for Accessories	—
	TLABK0001TAZZ	–	Carton Label	—

SERVICE JIGS
(Use for servicing)

QCNW-A294WJZZ	J	Extension Cable 80-pin INPUT-PC I/F
QCNW-A295WJZZ	J	Extension Cable 13-pin PFC-INPUT
QCNW-A296WJZZ	J	Extension Cable 32-pin INPUT-KEY
QCNW-A297WJZZ	J	Extension Cable 30-pin INPUT-FORMATTER
QCNW-A298WJZZ	J	Extension Cable 80-pin FORMATTER-PC I/F
QCNW-A521WJZZ	J	Extension Cable 20-pin INPUT-Gyro

PACKING OF THE SET/VERPACKEN DES GERÄTS



PARTS LIST

PARTS REPLACEMENT

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

Les pieces marquées "⚠" sont importantes pour maintenir la sécurité de l'appareil. Ne remplacer ces pieces que par des pieces dont le numéro est spécifié pour maintenir la sécurité et protéger le bon fonctinnement de l'appareil.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION
5. CODE
6. QUANTITY

in **USA**: Contact your nearest SHARP Parts Distributor.
For location of SHARP Parts Distributor,
Please call Toll-Free; 1-800-BE-SHARP

in **CANADA**: Contact SHARP Electronics of Canada Limited
Phone (416) 890-2100.

ERSATZTEILLISTE

AUSTAUSCH VON TEILEN

Ersatzteile, die besondere Sicherheitseigenschften haben, sind in dieser Anleitung markiert. Elektrische Komponenten mit solchen Eigenshaften sind in den Ersatzteil durch "⚠" gekenn-zeichnet.
Der Gebrauch von Ersatzteilen, die nicht deselben Sicherheits-eigenschaften haben wie die vom Hersteller empfohlenen ud in der Bedienungsanleitung angegebenen, können zur Ursache von Blitzeinschlägen, Bränden und anderen Gefahren werden.

"WIE MAN ERSATSTEILE BESTELLT"

Damit Ihre Bestellung promt und korrekt ausgeführt wird, geben Sie bitte folgende Informationen.

1. MODELL NR.
2. REF. NR.
3. ERSATZTEIL NR.
4. BESCHREIBUNG
5. KODE
6. QUANTITÄT

★ MARK: SPARE PARTS-DELIVERY SECTION

★ MARKIERUNG : ERSATZTEILE-LIEFERUNG

Ref. No.	Part No.	★	Description	Code

AN-60KT

1	9AQAN-60KT-01	J	Installation Adapter	
2	9AQAN-60KT-02	J	Model Label	

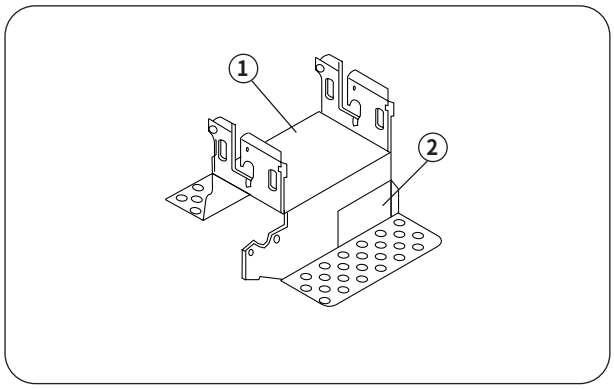
SUPPLIED ACCESSORIES

3	9AQAN-Z7T-13	J	Screw M3x10	AM
4	9AQAN-NV4T-15	J	Screw M4x12	
	9AQAN-60KT-03	J	Operation Manual	
	9AQAN-15AG2-08	J	Polystyrene Bag	AN
	9AQAN-NV4T-16	J	Polystyrene Bag	AM

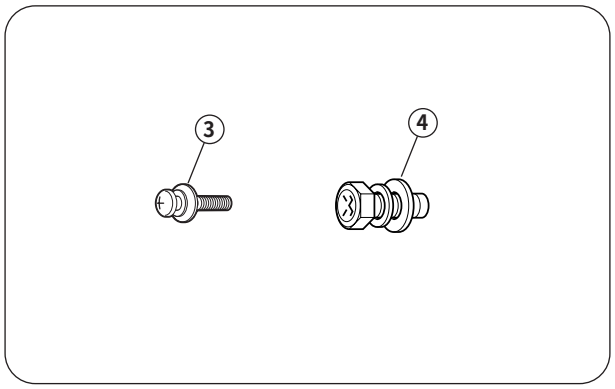
PACKING PARTS
(NOT REPLACEMENT ITEM)

	9AQAN-60KT-K01	–	Packing Case	—
	9AQAN-60KT-K02	–	Pad (Bottom)	—
	9AQAN-60KT-K03	–	Pad (Top)	—
	9AQAN-60KT-K04	–	Mirror Mat	—

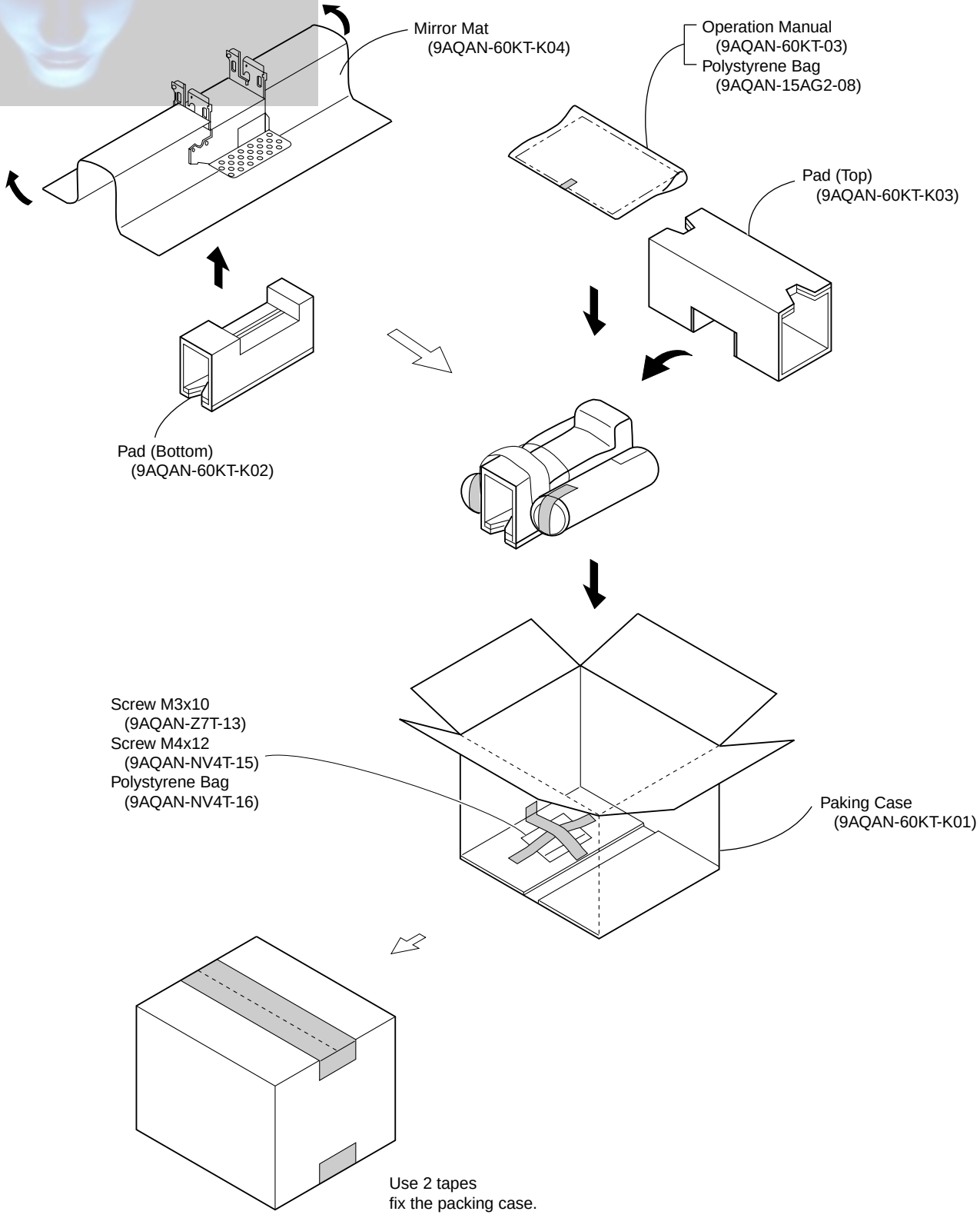
AN-60KT

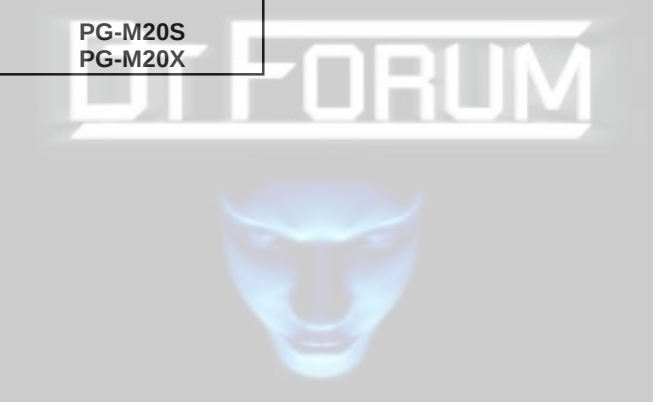


ACCESSORIES



PACKING OF THE SET/VERPACKEN DES GERÄTS





SHARP

ⒹJapan ⓅJapan TQ1354-S
Aug. 2002 Printed in Japan
In Japan gedruckt
SY. KG

SHARP CORPORATION
AV Systems Group
Quality & Reliability Control Center
Yaita, Tochigi 329-2193, Japan