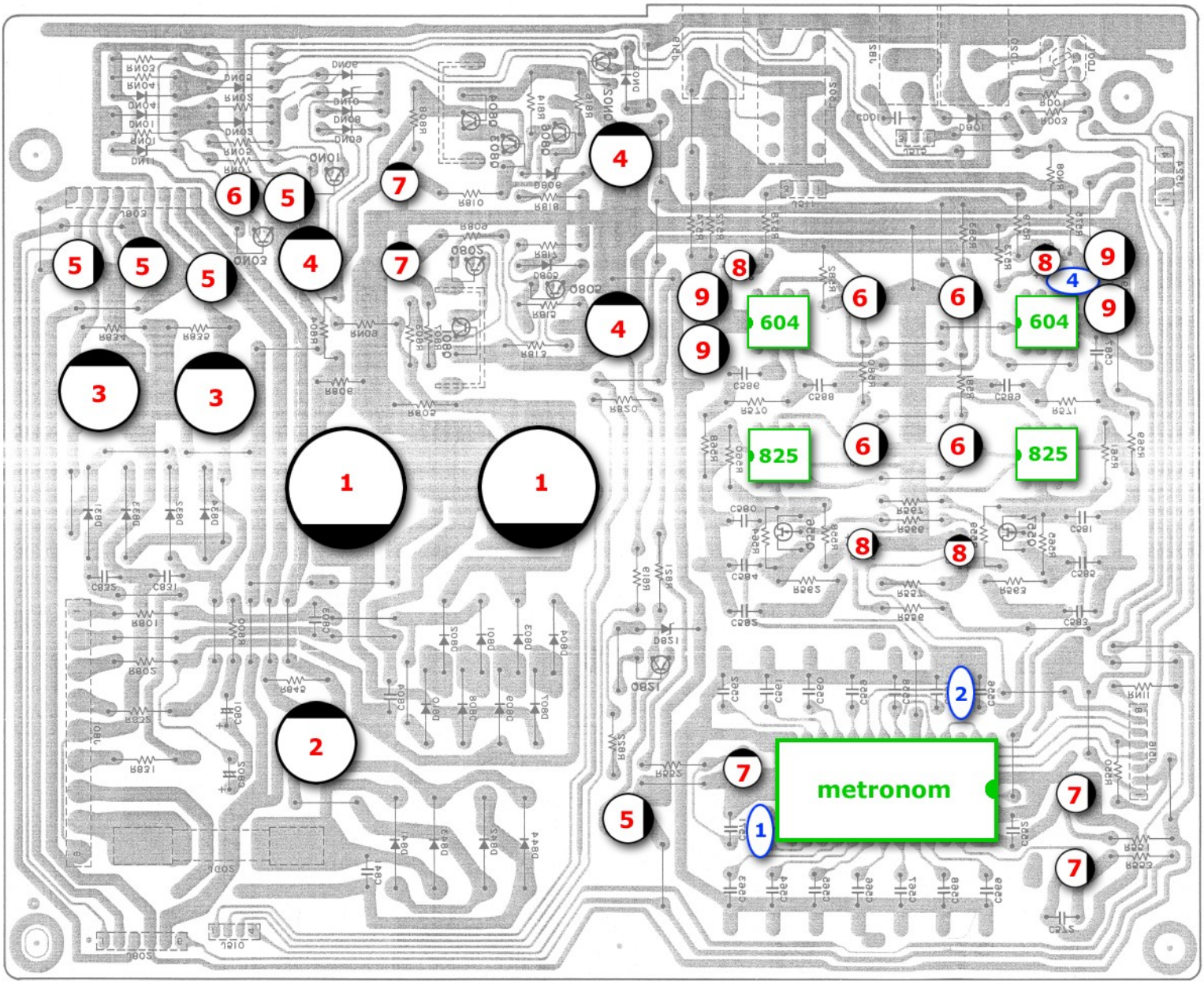
nanocamp

Workshheet Revision for Philips CD960 metronom

The worksheet revision summarizes necessary work, settings and the addition of metronom at a glance. The work is necessary in order to maintain the functional state and to develop the full performance. Do not add anything and leave nothing.The most common bugs are fixed with this worksheet. The work requires experience and equipment. Depending on the series, deviations in the assembly may occur - not all capacitors from the revision set must always be installed.

The revision set is to order at our Website:

https://dindiki.com/?revision#Philips-CD960



Analog PP16

1 2x 6800/35 nichicon "Gold Tune"
2 1x 6800/25 KH nichicon
3 2x 1000/25 FC Panasonic
4 3x 470/50 FM Panasonic
5 5x 220/25 FM Panasonic
6 5x 100/25 FM Panasonic
7 5x 47/25-35 FM/FC Panasonic
8 4x 10/50 FR/FC Panasonic
9 4x 220/25 FM Panasonic *

metronom socket

1. desolder the TDA1541
2. solder in place the metronom socket *
3. remove capacitor C570 **1**
4. remove Q537 on Demodul board PD16
5. insert TDA1541

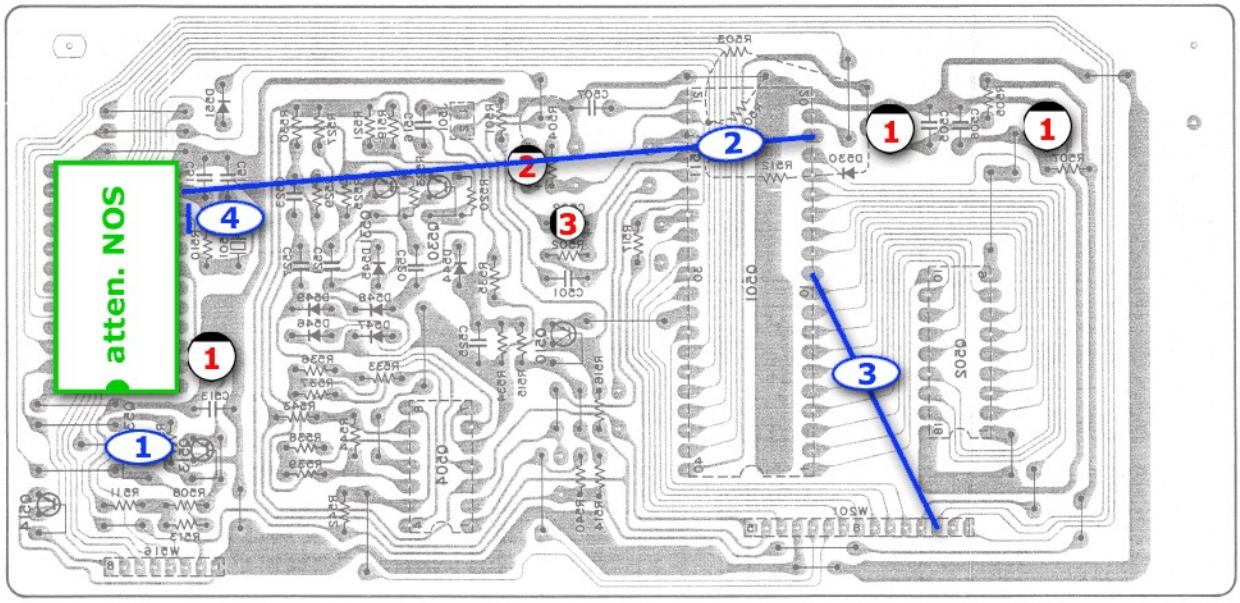
* for TDA1541 with "A" (recomended)
Place a soldering point at the bottom of the metronom before
- marked with "bridge A-type".
- interrupt the conductor path between pin 2 and pin 4 **2**

* There are two polar output capacitors per stereo channel connected in series **9**.
If desired, two polar can be exchanged for one bipolar.
The bipolar is attached to the outer poles of the two polar ones.
To reduce microphonic effects I recommend to use a 22µF bipolar
On some boards is a circuit error,
the cable bridge to the inner pins of the old polar coupling capacitors must be removed there **4**

OP-amp

2x sinle OP-amp 604
2x single OP-amp 825

OP amps for audio should always be soldered firmly, the use of sockets is not recommended.



Demodul PD16

1 3x 47/25-35 FM/FC Panasonic
2 1x 6,8/25-35 FM/FC Panasonic
3 1x 1/250 M Panasonic

metronom socket
additional to the steps on the Analog board PP16
remove Q537 **1**

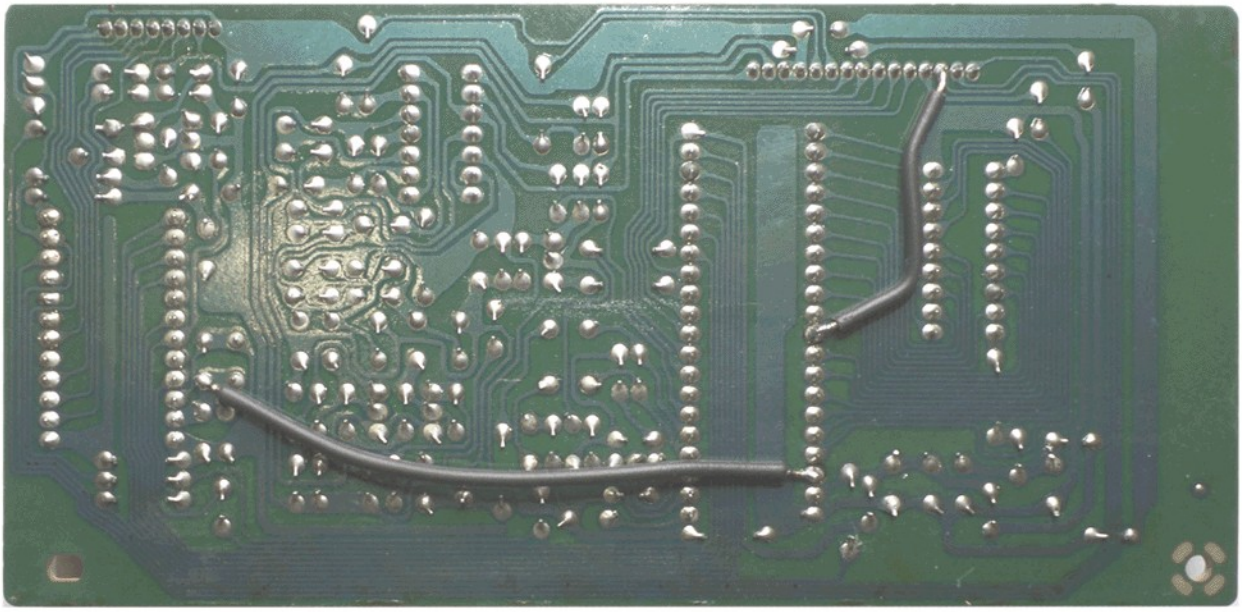
attenuated NOS module

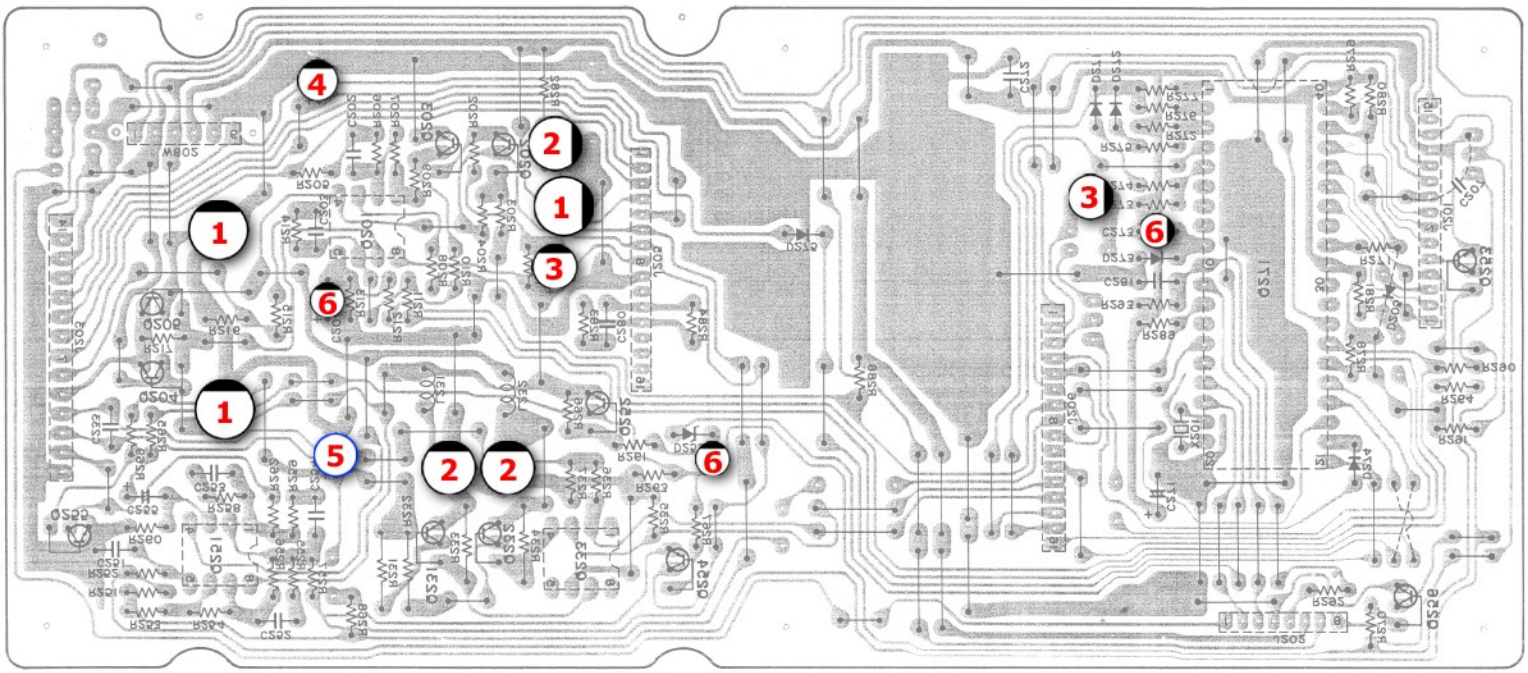
1. desolder SAA7220 Digitalfilter
2. solder in place the attenuated NOS module
3. Make a cable connection from attenuated NOS module
   pin11 (XSYS) to SAA7210 pin18 **2**

* to use digital muting, you can connect another cable
from SAA7210 pin11 to connector W201 **3**

** if the USB-in streaming module is used instead of the attenuated NOS module,
an additional cable connection from PIN9 to Pin10 must be made **4**

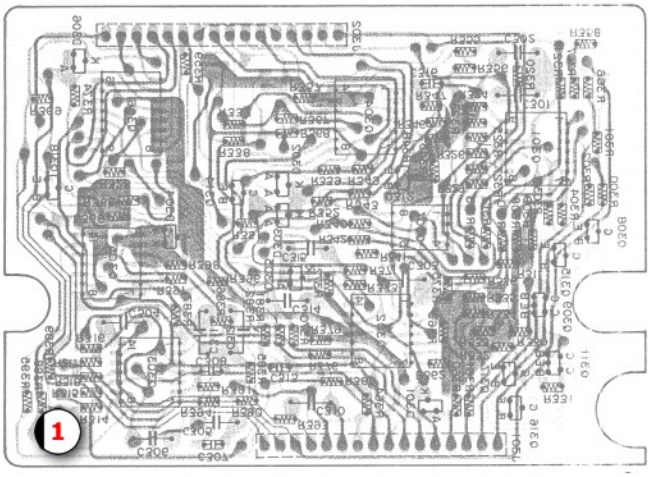
Without SAA7220 the digital output is switched off.
More sensible than a digital output is a digital input
to feed one of the best analog converters also externally.
USB-in module available at: https://dindiki.com/?streaming





Servo PV16

1 3x 220/25 FM Panasonic
2 3x 100/25 FM Panasonic
3 2x 47/25-35 FM/FC Panasonic
4 1x 10/50 FR/FC Panasonic
5 1x 4,7/35 bipolar Panasonic
6 3x 1/250 M Panasonic



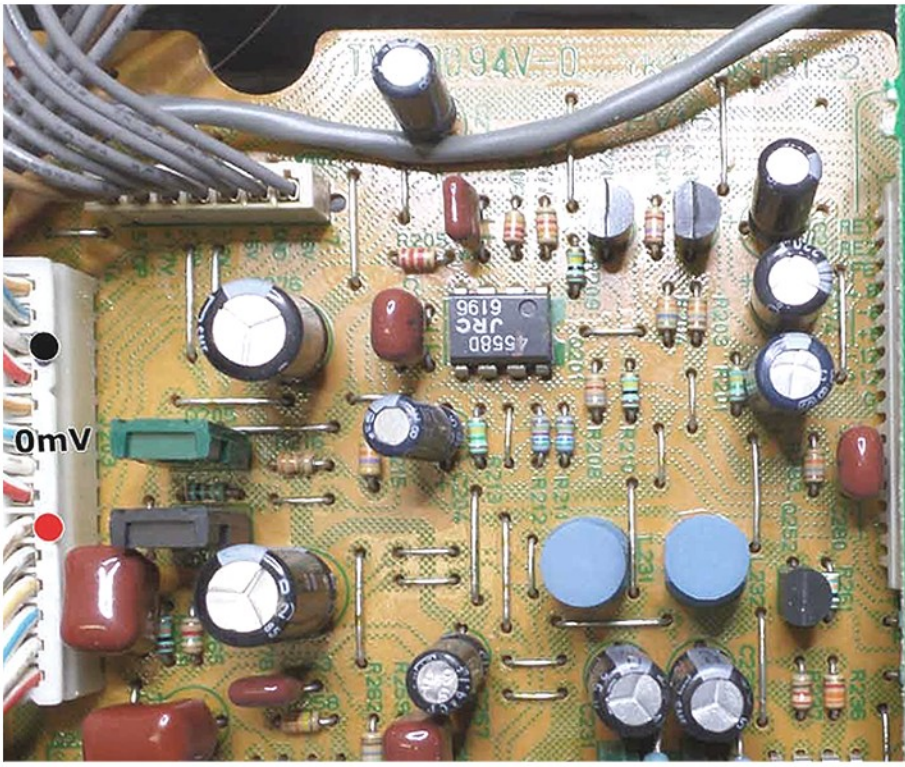
Servo sub PV26

1 1x 33/50 FC Panasonic

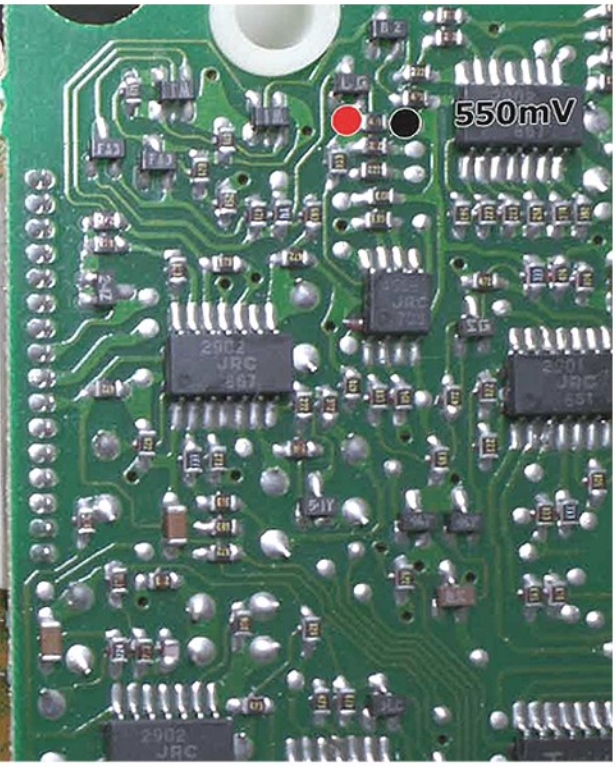
Settings

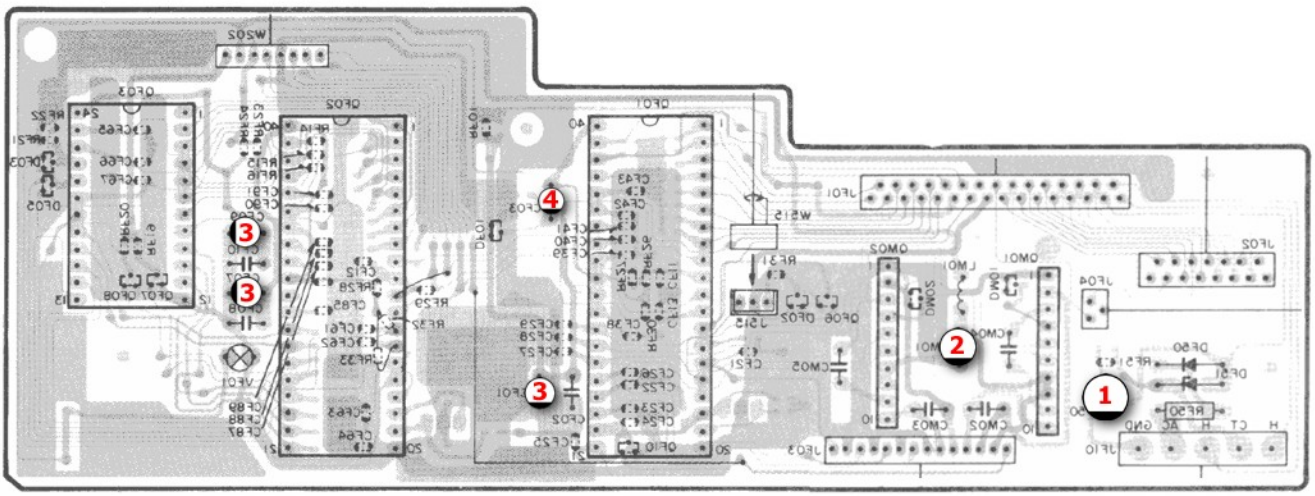
The following settings are made when playing the first song from CD.
I recommend an original CD that is not overdriven, such as a classical CD from a renowned label.

Measuring points focus height: 0 mV



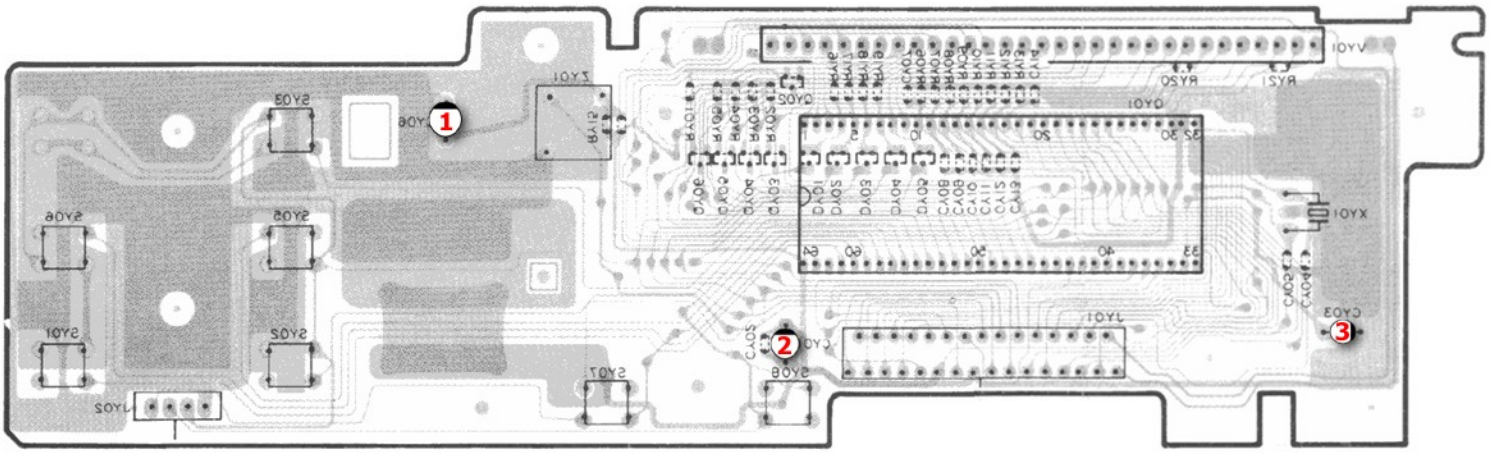
Measuring points laser voltage: 550 mV





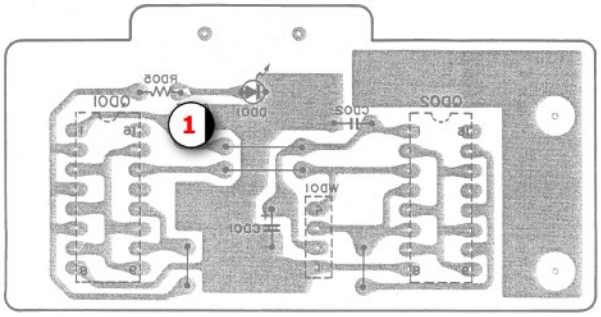
Feature PM16

1 1x 100/25 FM Panasonic
2 1x 47/25-35 FM/FC Panasonic
3 3x 10/50 FR/FC Panasonic
4 1x 1/250 M Panasonic



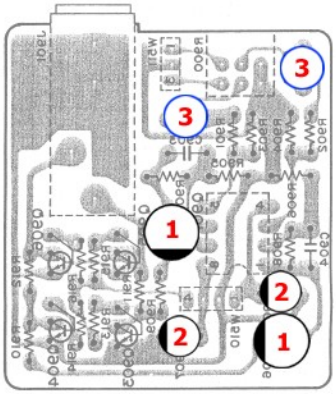
Display PY16 CD960

1 1x 47/25-35 FM/FC Panasonic
2 1x 10/50 FR/FC Panasonic
3 1x 1/250 M Panasonic



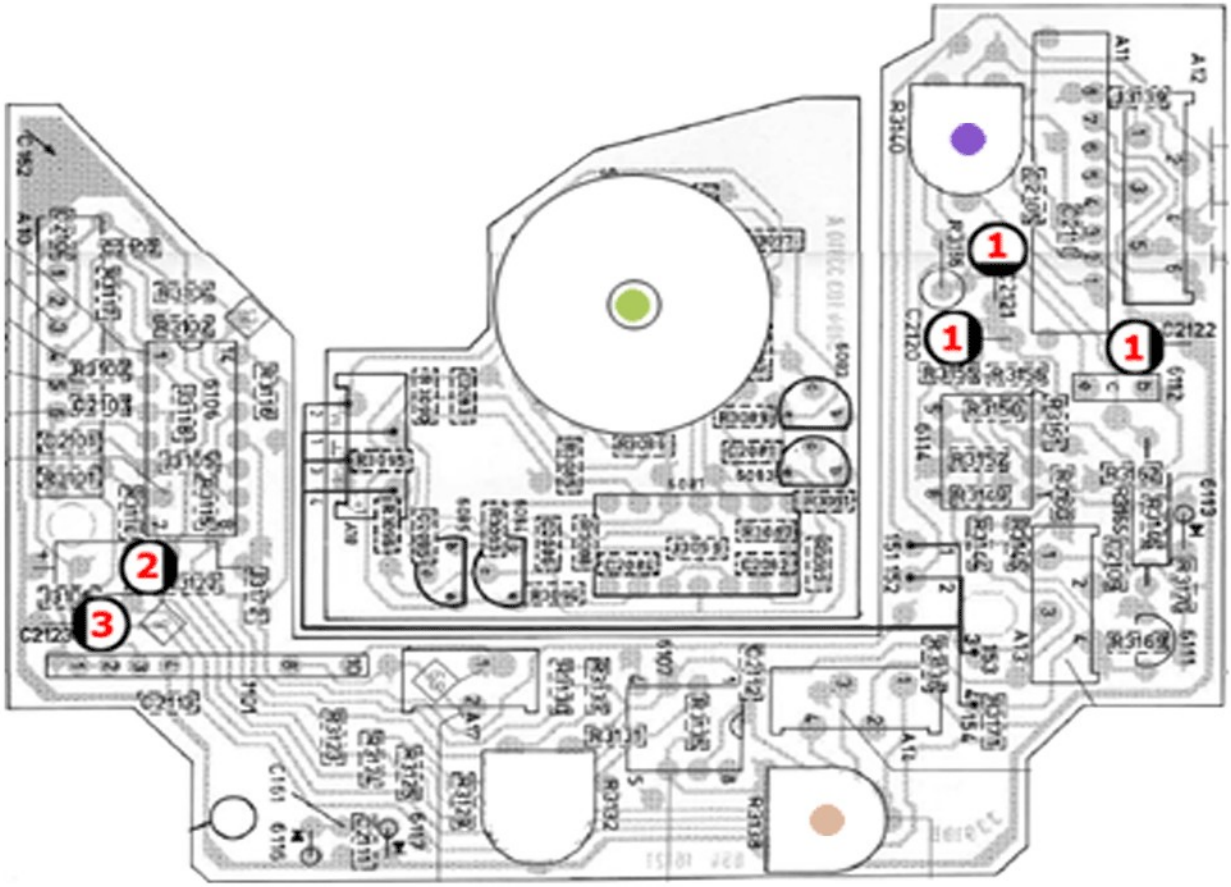
Optical out PF16

1 1x 10/50 FR/FC Panasonic



Headphone PR16

1 2x 100/25 FM Panasonic
2 2x 47/25-35 FM/FC Panasonic
3 2x 4,7/35 bipolar Panasonic



6. Laserprint

1 3x 33µF / Laser
2 33µF / -12V
3 33µF / +11V

Settings

Laser 500mV DC
Mesurepoint: 3. Servo

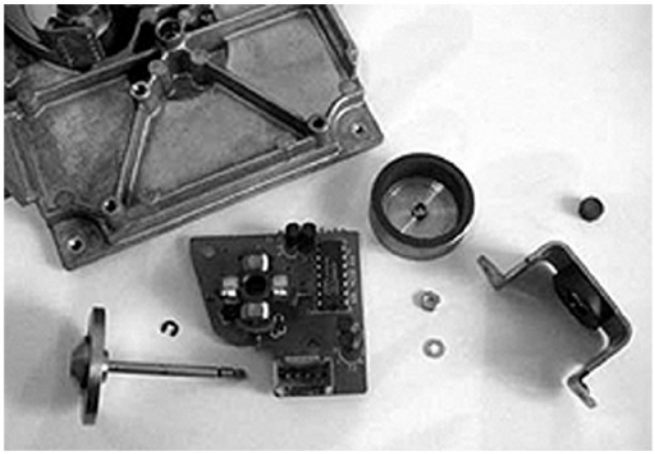
Focus DC ~ 0mV DC
Mesurepoint: 3. Servo

Focus Gain to minimum

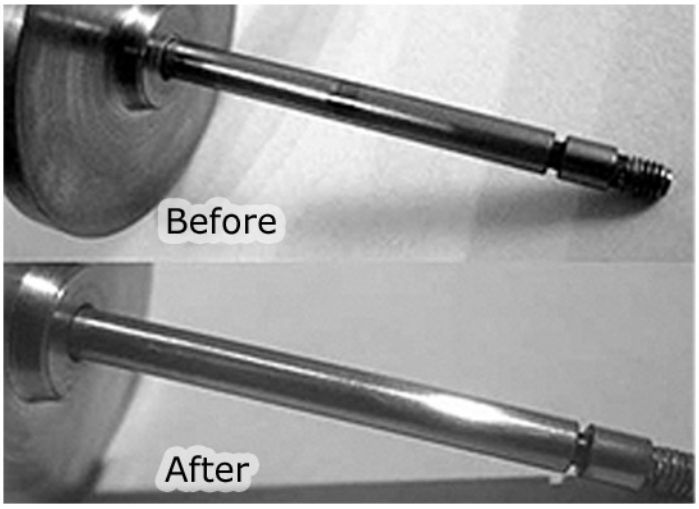
Mesurepoint A, B: 3. Servo

Hallmotor

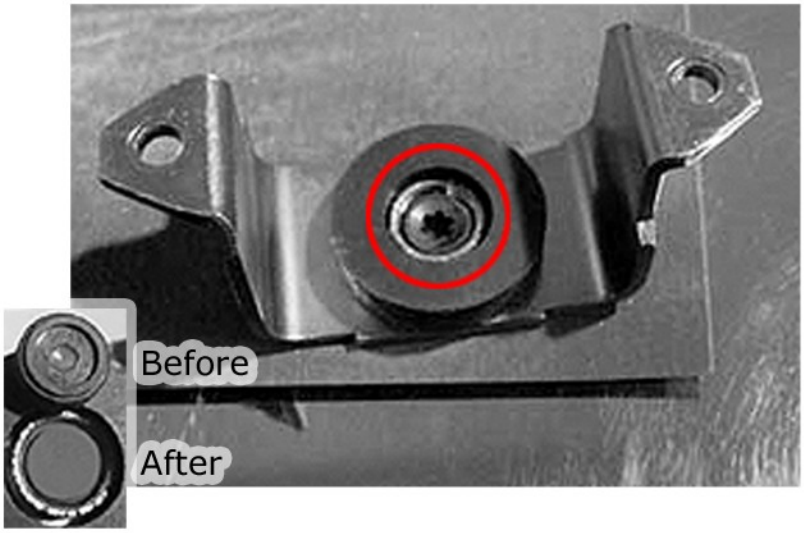
Disassemble and clean
Fitting with 1 drop of silicone oil



1. Drive axle
Cleaning and polishing (toothpaste and paper)



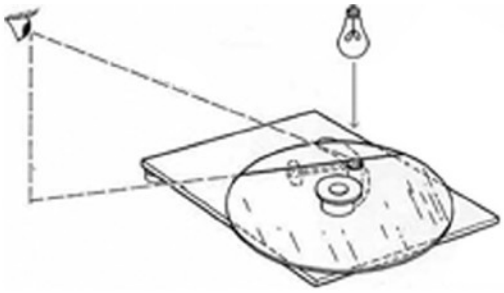
2. Axle bearing
Inverted screwed to plan with sandpaper



Laserpin

Check and adjust the scanning angle

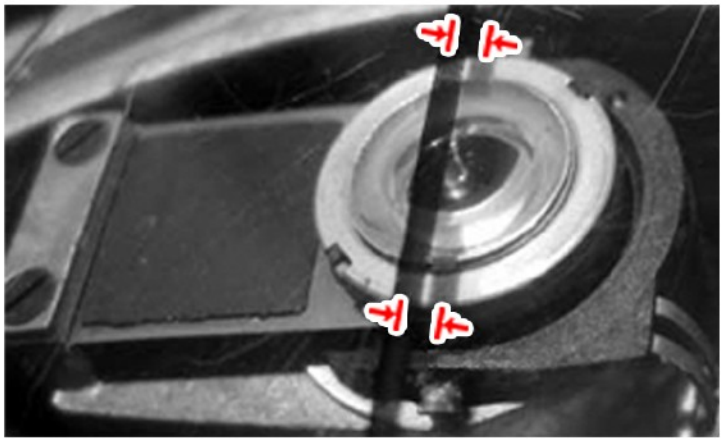
Check for straight light



Note
This setting is not necessary in normal cases. These only occur after replacing the laser pin or if the screws shown have been loosened.

Transparente Test-CD mit Strich erstellen
Create transparent test CD with line

Maximum deviation of the shadow 4mm
2 Measurements with different angles



Loosen screws to move the angle adjustment
Ensure smooth operation of the turning arm