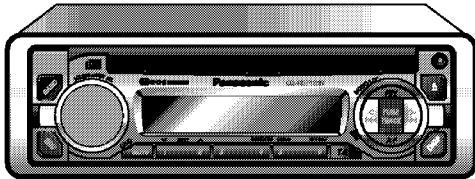


# Service Manual

## AUTOMOTIVE AFTERMARKET



&lt;CQ-RDP153N&gt;

**CQ-RDP153N**  
**CQ-RDP143N**  
**CQ-RDP133N**  
**CQ-RDP123N**  
**CQ-RDP113N**  
**CQ-RDP103N**  
**CQ-RDP003N**

Removable Front Panel CD Player /  
Receiver with CD Changer Control

### Specifications\*

#### General

Power Supply	DC 12V (11V - 16V), Test Voltage 14.4V Negative Ground
Tone Controls	Bass ; $\pm 12$ dB at 100Hz Treble ; $\pm 12$ dB at 10kHz
Current Consumption	Less than 2.5A (CD mode, 0.5W $\times$ 4ch)
Maximum Power Output	45W $\times$ 4ch (at 4 $\Omega$ )
Speaker Impedance	4-8 $\Omega$
Pre-Amp Output Voltage	2.5V (CD mode)
Pre-Amp Output Impedance	200 $\Omega$

#### FM Stereo Radio

Frequency Range	87.5 - 108MHz
Usable Sensitivity	6dB/ $\mu$ V (S/N 30dB)

#### MW Radio

Frequency Range	531 - 1,602kHz
Usable Sensitivity	28dB/ $\mu$ V (S/N 20dB)

#### LW Radio

Frequency Range	153 - 279kHz
Usable Sensitivity	32dB/ $\mu$ V (S/N 20dB)

#### CD Player

Sampling Frequency	8 times oversampling
Pick-Up Type	Astigma 3-beam
Light Source	Semiconductor Laser
Wavelength	780nm
Frequency Response	20Hz to 20,000Hz ( $\pm 1$ dB)
Signal to Noise Ratio	96dB
Channel Separation	75dB

#### Dimensions\*\*

Dimensions**	178(W) $\times$ 50(H) $\times$ 155(D)mm
Weight**	1.4kg

\* Specifications and the design are subject to possible modification without notice due to improvements.

\*\* Dimensions and Weight shown are approximate.

# Panasonic

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### ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

### IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

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## 1 ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF stamp on the PCB.

**Caution :**

- Pb free solder has a higher melting point than standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. Please use a soldering iron with temperature control and adjust it to 700 ± 20°F (370 ± 10°C). In case of using high temperature soldering iron, please be careful not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F/600°C)
- This lead free solder will be used for the products after serial No. 1,000,001.

## 2 FEATUERS

- PLL (Phase Locked Loop) synthesized tuning.
- 18-FM, 6-AM presets with preset scan
- Digital servo for reliable CD playback.
- Removable face plate.
- RDS (Radio Data System) function.

## 3 LASER PRODUCTS

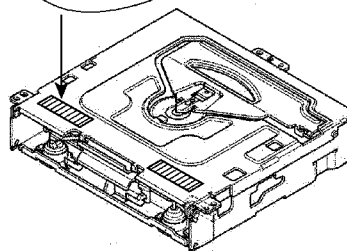
**CAUTION:**

This product utilizes a laser diode with the unit turned "on", laser radiation is emitted from the pickup lens.

Laser radiation from the pickup lens is safety level, but be sure the followings:

1. Do not disassemble the optical pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.

CAUTION LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.



Deck Ass'y (Upper Side)

**Caution**

This Product utilizes a laser. Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.