PSG1705008CE

Service Manual

FM-AM PORTABLE RADIO

Model No. RF-562DDGC
RF-562DDGU

Product Color: (K)...Black Type

RF-562DD

⚠ 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 Safety Precautions

1.1. General Guidelines

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, carry out the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.2. Safety Part Information

Safety Parts List:

There are special components used in this equipment which are important for safety.

These parts are marked by ⚠ in the Schematic Diagrams & 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.

Safety	Ref No.	Part No.	Part Name & Description	Remarks
⚠	P1	RPKN0079B	GIFT BOX	562DDGU-K
⚠	P1	RPKN0079A	GIFT BOX	562DDGC-K

2 Warning

2.1. Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices.

Examples of typical ES devices are IC (integrated circuits) and some field-effect transistors and semiconductor "chip" components.

The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

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

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2.2. Service caution based on Legal restrictions

2.2.1. General description about Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30 degrees C (86°F) more than that of the normal solder.

Definition of PCB Lead Free Solder being used

The letter of “PbF” is printed either foil side or components side on the PCB using the lead free solder. (See right figure)	PbF

Service caution for repair work using Lead Free Solder (PbF)

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used. (Definition: The letter of “PbF” is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.
- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30 degrees C (662±86°F).

Recommended Lead Free Solder (Service Parts Route.)

- The following 3 types of lead free solder are available through the service parts route.
  RFKZ03D01K----------(0.3mm 100g Reel)
  RFKZ06D01K----------(0.6mm 100g Reel)
  RFKZ10D01K----------(1.0mm 100g Reel)

Note

* Ingredient: Tin (Sn), 96.5%, Silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%

3 Specifications

■ RADIO

Frequency range:	
FM	88-108 kHz
MW	530-1605 kHz
SW	4.75-18 MHz
Power requirement:	
Battery	DC 3V (Two R20/LR20)
AC adaptor	DC 3.6 V, 0.3A
Plug size	4 mm(OD) x 1.7 mm (ID)
Type	Transformer type
Speaker	8 cm
Poweroutput	800 mW (RMS max)
Output jack	Earphone
Dimensions (W x H x D):	210 mm x 120 mm x 65 mm
Weight:	550 g without batteries

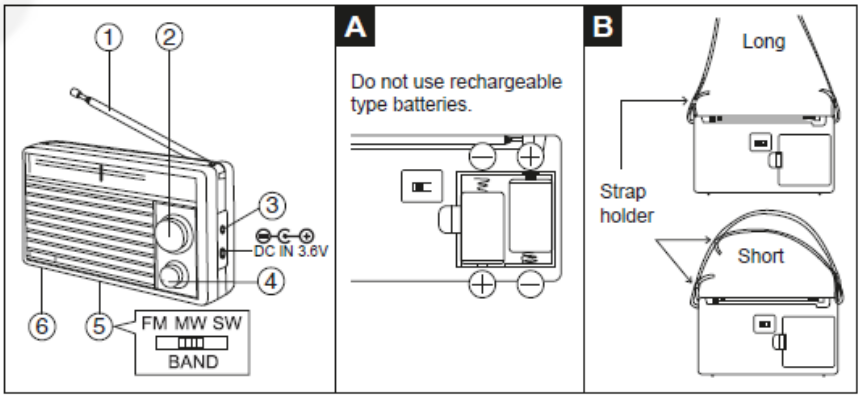
Note:
1. Specifications are subject to change without notice.
2. If a switching-mode power supply or other type of AC adaptor is used, noise may occur while listening to the radio.

4 Location of Controls and Components

4.1. Main Unit Key Button Operations

Operating Instructions

① **Telescopic antenna**
FM: Pull out the telescopic antenna and adjust its length and angle for optimum reception.
MW: The sensitive ferrite core antenna inside the unit will provide excellent MW reception in most areas. For optimum reception, turn the unit in the direction which gives the best results, since the ferrite core antenna is directional.
SW: Extend the telescopic antenna fully and keep it vertical.
② **Tuning control**
③ **Earphone jack**
Listening at full volume for long periods may damage the user's ears.
Excessive sound pressure from earphones and headphones can cause hearing loss.
④ **On-off/volume control switch**
Turn clockwise to switch the radio on, and adjust the volume level.
⑤ **Band Selector**
⑥ **Battery compartment**



BATTERY OPERATION

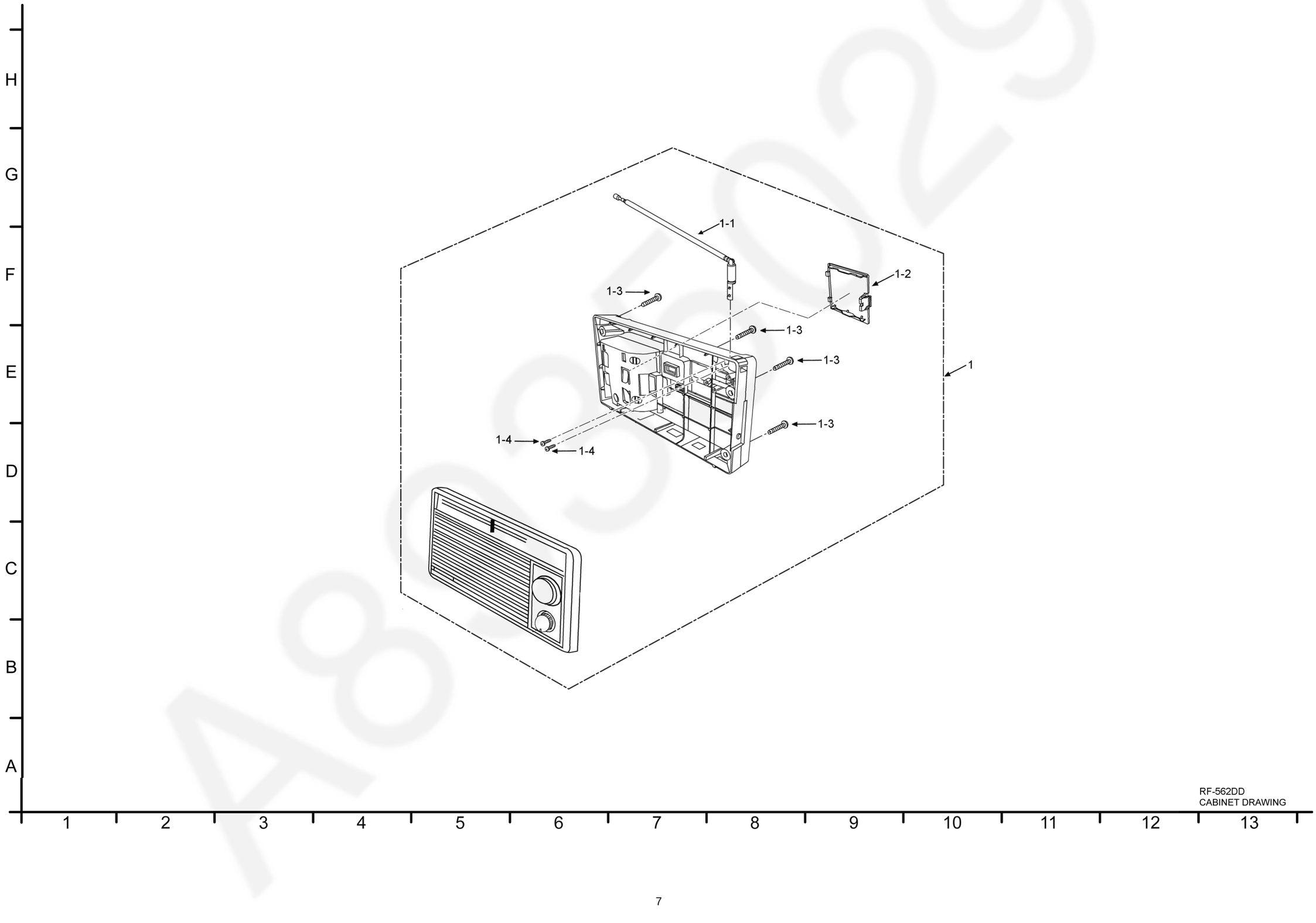
1. Open the battery compartment cover by depressing latch and pulling it.
2. Insert two R20/LR20 or equivalent (not included) batteries into the battery compartment, pressing the flat side of the batteries against the spring. OBSERVE CORRECT POLARITY. **A**
3. Replace the compartment cover.

ATTACHING THE CARRYING STRAP

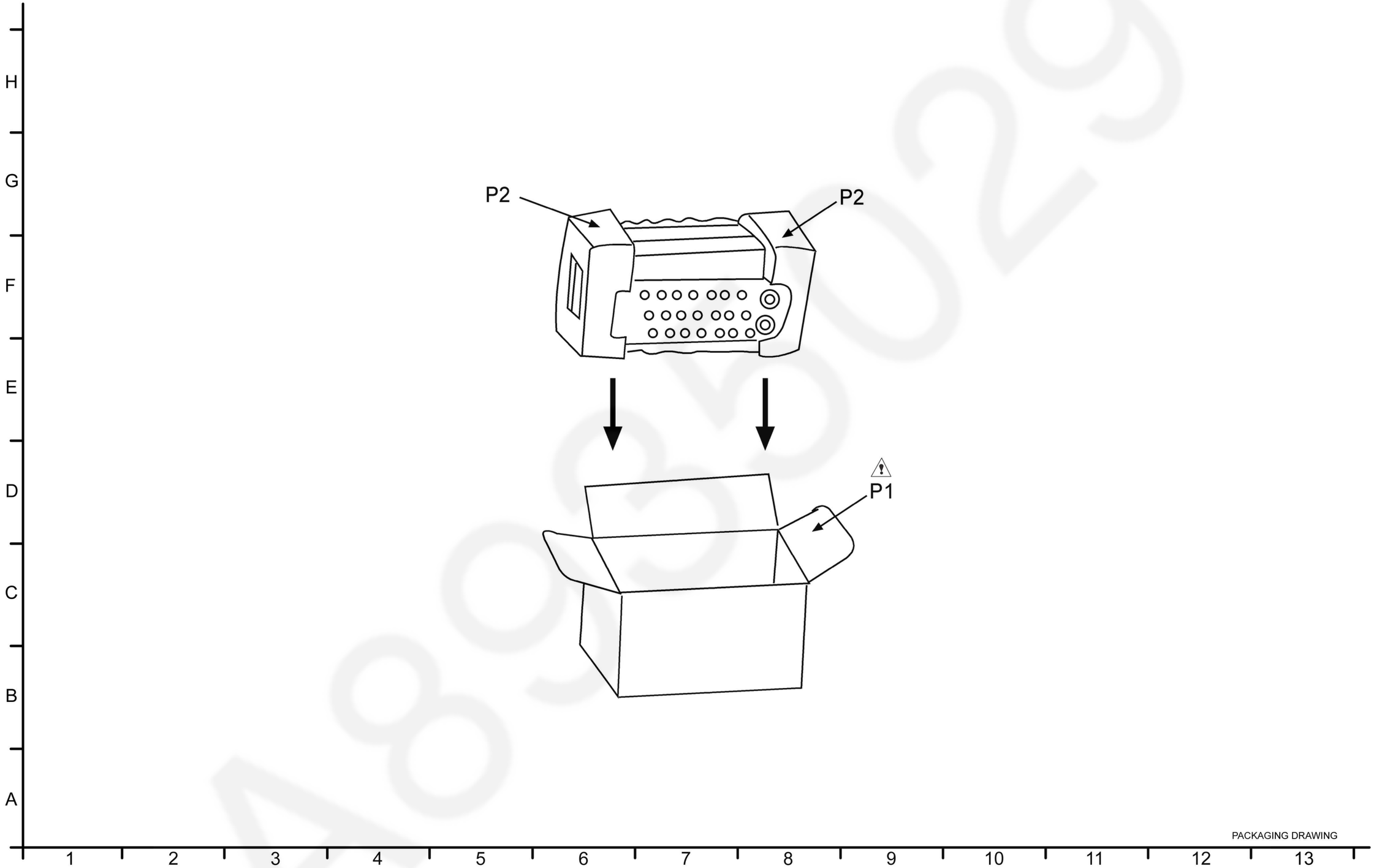
1. Take off the two strap holders from both sides of the carrying strap.
2. Attach the carrying strap to both sides of the cabinet. **B**

5 Exploded View and Replacement Parts List

5.1. Cabinet Parts Location



5.2. Packaging



PACKAGING DRAWING

5.3. Mechanical Replacement Parts List

Important Safety Notice

Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

RTL (Retention Time Limited)

Note: The marking (RTL) indicates that the Retention Time is Limited for this item. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of availability is dependant on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

Note:

- When replacing any of these components, be sure to use only manufacturer's specified parts shown in the replacement part list.
- The parenthesized indications on the Remarks column specify the destination & product color (Refer to the cover page for the information).
- Parts without these indications shall be used for all areas.
- This product uses a laser diode. Refer to "Precaution of Laser Diode".
- All parts mentioned are supplied by PAVCJM unless indicated likewise.
- Reference for O/I book languages are as follows:

Ar:	Arabic	Du:	Dutch	It:	Italian	Sp:	Spanish
Cf:	Canadian French	En:	English	Ko:	Korean	Sw:	Swedish
Cz:	Czech	Fr:	French	Po:	Polish	Co:	Traditional Chinese
Da:	Danish	Ge:	German	Ru:	Russian	Cn:	Simplified Chinese
Pe:	Persian	Ur:	Ukraine	Pr:	Portuguese	Fi:	Finnish

Safety	Ref. No.	Part No.	Part Name & Description	Qty	Remarks
			CABINET AND CHASSIS		
	1	F-RF562DDGUK	MAIN SET RF-562DDGU	1	
	1	F-RF562DDGCK	MAIN SET RF-562DDGC	1	
	1-1	XEARK132GC	ROD ANTENNA	1	
	1-2	RKK4N010ZA	BATTERY COVER	1	
	1-3	XTV3+12GFJ	SCREW	4	
	1-4	XTN23+7JFJ	SCREW	2	
			PACKING MATERIALS		
⚠	P1	RPKN0079B	GIFT BOX	1	562DDGU-K
⚠	P1	RPKN0079A	GIFT BOX	1	562DDGC-K
	P2	RPNN0051	POLYFOAM (L&R)	1	

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