USER'S MANUAL

SOUND STORM®
LABORATORIES

STM93RDS

MP3-COMPATIBLE IN-DASH CD RECEIVER

RDS EUROPEAN FREQUENCY MODEL

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CONGRATULATIONS!

Congratulations on your purchase of this Sound Storm CD Receiver.

We hope you enjoy using this product and encourage you to always listen at a moderate, safe sound level to avoid any possible hearing damage or loss. If you listen to excessively loud sound over time, your hearing can adapt to higher volumes and what sounds "normal" to you may be quite harmful and can cause you to have permanent hearing loss. So please practice "safe sound" and always listen at moderate sound levels only.

Start with your volume control at the lowest setting, and slowly increase the level until you can hear it comfortably and clearly, free from distortion. Once you have established this comfortable sound level, leave it there.

ABOUT THIS MANUAL

Please read this manual thoroughly and save it for future reference. This CD receiver incorporates manual sophisticated functions which may enhance your listening experience. Without reading the manual, you might miss a few, so please take the time to read and understand all the product's capabilities.

A NOTE ABOUT CD-R/CD-R/W

In addition to commercially-recorded audio CD's, this unit can play CD-R and CD-R/W discs. In some cases, particularly when recorded on older CD burners, some CD-R and CD-R/W discs may not play. Also, whenever you are recording a CD for playback in this receiver, it is recommended that you record at 24x or slower speed for CD-R and 4x or slower for CD-R/W to achieve higher signal quality and better playback performance.

SPECIFICATION

GENERAL

Supply Voltage	DC 12 V. Negative Ground
Current Consumption	Max.7A
Power Output	50Watts X 4.
Number of channels	2 STEREO channels.
Unit Dimensions	178[W] X165[D] X 50[H] mm.

FM SECTION

Frequency range	87.5MHz -108MHz
Effective sensitivity	3uV.
I.F Frequency	10.7MHz.

RCA LINE OUT (OPTION)

Output	5 Volt @ CD MAX.

CD PLAYER

System	MP3 Audio System.
Suitable CDs	MP3, CD, CD-R, CD-RW Disc
Frequency characteristics	20Hz-100Hz $\leqslant$5dB
	10KHz-20KHz $\leqslant$5dB.
S/N Ratio to CD	50dB [1KHz]

TROUBLE SHOOTING

Before using the check list please make all the connections first.
If you still have questions after going through the checklist, please consult
your local customer service representative.

| Common Symptoms	Cause	Solution
There is no power.	The car ignition is switched off.	If the power supply is properly connected to the car accessory, switch the ignition key to " ON " or " ACC " .
	The fuse has blown.	Replace another fuse according to the wiring diagram.
The CDs cannot be loaded.	A disc is inside the player.	Remove the disc in the player then put a new upward
The CDs are loaded only halfway into the CD tray.	The transport screws have not been removed.	Remove the transport screws before using.
The device does not work correctly (EJECT, LOAD, PLAY)	The disc is inserted upside-down.	Insert the compact disc with the label facing upward
	The surface of CD is extremely dirty or it is damaged.	Clean the CD or try another CD, if this works correctly, the first CD is properly damaged.
	Temperature inside the car is too high.	Cool off until the ambient temperature returns to normal
There is no sound.	The volume control is set too low.	Turn up the volume properly.
	The device has not been correctly connected.	Check the power and earth connection according to the wiring diagram.
The operation keys do not work	1.The built-in microcomputer is not operating properly due to noise	1. Switch the device off and on again. Or press the RESET button to resume the program.
	2.The front panel is not properly installed.	2. Reinstall the front panel
The sound of the CD player skips	The installation angle is more than 30 degrees	Adjust the installation angle to less than 30 degrees
	The surface of the road is uneven.	Wait until the road becomes smoother before playing the CD.
	The surface of CD is extremely dirty or it is damaged.	Clean the CD or try another CD, if this works correctly, the first CD is properly damaged.
No radio reception.	The antenna cable is not connected.	Insert the antenna cable firmly into the antenna socket of the device.
In automatic search mode the radio does not stop at a transmitting station.	The transmission signals are too weak.	Tune in to a radio station manually.

LOCATION AND FUNCTION OF CONTROLS

Fig. 1
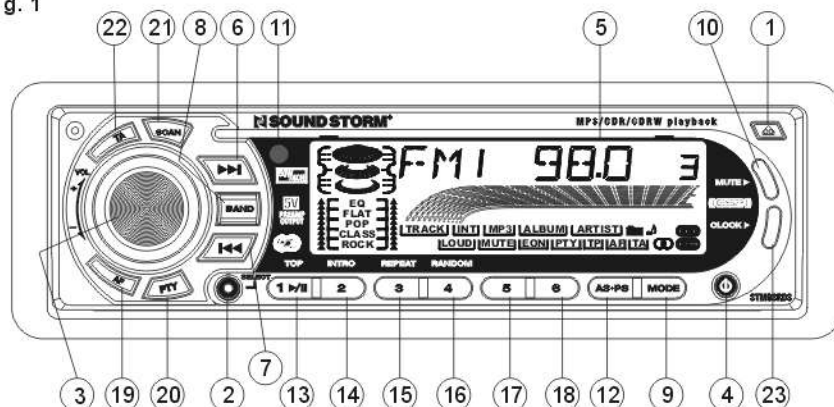
Fig. 2
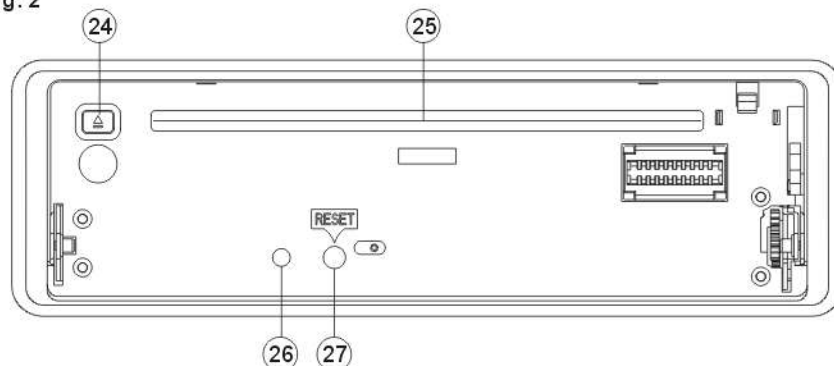
1. OPEN BUTTON
To remove and/or insert a CD, press the OPEN button to fold-down the front panel. To insert a CD, place it in the slot. To eject a CD, press the EJECT button.

If you wish to remove the front panel, once it is folded down in this manner, pull the front panel forward to remove it.

2. SELECT BUTTON
Push this button to step through the various adjustment parameters, such as VOLUME, BASS, TREBLE, etc. When you stop at a given adjustment parameter, the unit will wait for approximately 5 seconds for you to enter or change a value with the VOL knob, and then return to the tuner or CD playback mode.

3. VOLUME KNOB
a)During tuner or CD playback, turning this knob well increase or decrease the volume level. It also serves as the encoder for adjusting the various parameters accessed by pressing the SELECT button.

b) Pressing and holding the SELECT button for more than 2 seconds will cause the unit to scroll through the following functions. If you wish to change a function's setting, select it and use the VOLUME knob to change to another setting.

TA SEEK/TA ALARM
TA SEEK mode: when newly tuned station does not receive TP information for 5 seconds, the radio retunes to next station which has not the same station(PI) as the last station, but has the TP information.
When TP information gets lost at the current station for retune time which is set by RETUNE SHORT(60 seconds) or RETUNE LONG(90 seconds), the radio start to retune to next same PI station. When same PI station does not catch in 1 cycle search, the radio retunes to next station with TP information.
TA ALARM mode: when this mode is selected, any automatic retune mode is not activated. Only double beep sound(ALARM) is output.
When newly tuned station does not have TP information for 5 seconds, beeps come out. When TP information gets lost at the current station for retune time, the beep sound is outputted.
When newly tuned station has not RDS signal, PI SEEK is suppressed somewhat.

PI SOUND/ PI MUTE:
PI SOUND mode: if a car cruises that critical area back and forth, an oscillation pheno-menon can be occurred, because the different PI code can be receive from the same AF. When the different PI sound (DIP) is heard once in a while, the different PI sound will be heard for less than 1 second.
PI MUTE mode: under above same situation, a mute sound will be heard for less than 1 second.

RETUNE L / RETUNE S:
The initial time of automatic TA search or PI SEARCH mode is selected.
When PI information is not caught for retune time , the radio start to retune to next same PI station.
When same PI station does not catch 1 cycle search, the radio goes to last station and waits for 4-5 minute until PI code is received.
RETUNE L mode: selected as 90 seconds.
RETUNE S mode: selected as 60 seconds.

MASK DPI/MASK ALL:
MASK DPI mode: masked only the AF which has different PI.
MASK ALL mode: masked the AF which has different PI and NO RDS signal with high field strength.

BEEP: The setting choices are:
BEEP 2ND: Unit beeps when a two-function button is pressed for one second, indicating that the secondary function for the button has occured.
BEEP ALL: A beep occurs when any button is pushed.
BEEP OFF: Beeping is disabled for all buttons.

SEEK: The setting choices are:
SEEK 1: Press and hold the << or >> button. The radio tunes up or down and stops seeking when station with a strong signal is found.
SEEK 2: Press and hold the << or >> button. The radio scans until you release the button and stops on the next available strong station.

PRECAUTION OF DISC PLAY:

Cleaning the CD:
Before playing a CD, wipe it off with a clean, dust-free cleaning cloth.
Wipe the disc in the direction of the arrow.

Always insert the CD with the label side facing upwards.
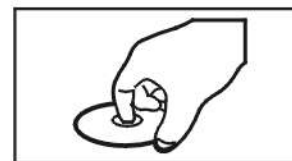If the CD is inserted with the printed side facing downwards, the device may be damaged.

Note: If there is already a CD in the CD slot, do not try to insert a second CD.
This may damage the device.
Always hold CDs by the edge. In order to keep the CD clean do not touch the surface.
Pull out the CD as shown below.

Do not attach any sticker or adhesive tape on the CD.
Do not expose the CD to direct sunlight or sources of heat such as heating vents.
Do not leave CDs in a car if it is parked in direct sunlight as that will lead to a con-siderable rise in the temperature inside the car.
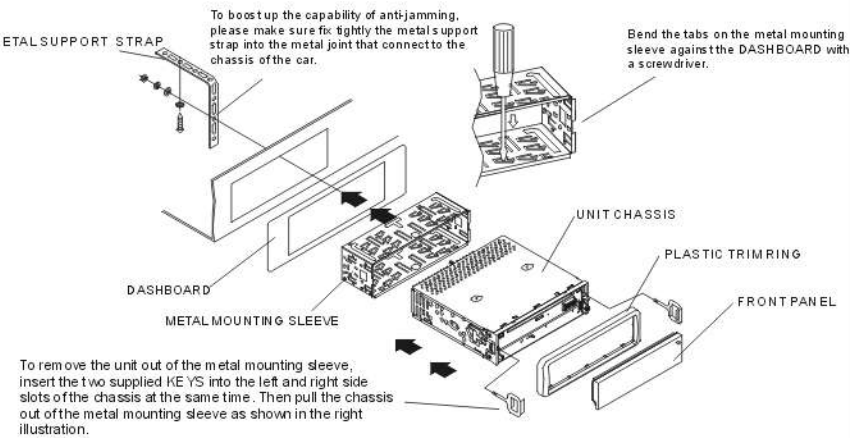
Note: Do not use any solvents such as petrol or thinning agents.
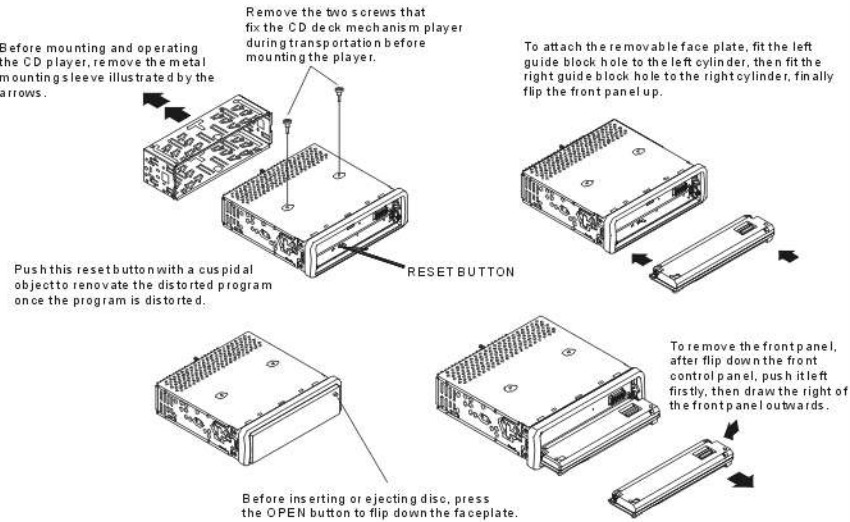Commercially available cleaning substances or antistatic spray. This will damage the device.

INSTALLATION METHOD

This diagram shows the anti-theft installation method. With this installation, the main unit is installed within a metal mounting sleeve.
Please connect the wiring, eg, the Power Supply, the Speakers and the Antenna according to the requirements of this Instruction Manual, then install the metal mounting sleeve into the car as per the diagram illustrated below.

To boost up the capability of anti-jamming, please make sure fix tightly the metal support strap into the metal joint that connect to the chassis of the car.

METAL SUPPORT STRAP

Bend the tabs on the metal mounting sleeve against the DASHBOARD with a screwdriver.

UNIT CHASSIS

PLASTIC TRIM RING

DASHBOARD

METAL MOUNTING SLEEVE

FRONT PANEL

To remove the unit out of the metal mounting sleeve, insert the two supplied KEYS into the left and right side slots of the chassis at the same time. Then pull the chassis out of the metal mounting sleeve as shown in the right illustration.

NOTE

Remove the two screws that fix the CD deck mechanism player during transportation before mounting the player.

Before mounting and operating the CD player, remove the metal mounting sleeve illustrated by the arrows.

To attach the removable face plate, fit the left guide block hole to the left cylinder, then fit the right guide block hole to the right cylinder, finally flip the front panel up.

Push this reset button with a cuspidal object to renovate the distorted program once the program is distorted.

RESET BUTTON

To remove the front panel, after flip down the front control panel, push it left firstly, then draw the right of the front panel outwards.

Before inserting or ejecting disc, press the OPEN button to flip down the faceplate.

DSP (OFF/POP/ROCK/CLASSIC/FLAT)
When you have selected DSP, use the VOLUME knob to select the EQ preset you prefer.

LOUD OFF/LOUD ON

SUBW OFF/ON(with subwoofer output)

STEREO/MONO

DX/LOCAL

VOL LAST/VOL ADJ
This setting controls the volume level you hear when the unit is first turned on. You can select either VOL LAST (the volume setting when the unit was last turned on) or VOL ADJ (a preset volume level).
To enter the volume level for VOL ADJ, simply adjust the volume to the desired level when in this programming mode.

ESP10/ESP40: This setting offers you to select time of electronic shock protection. There are 2 modes of 10 seconds or 40 seconds.

4. **POWER ON/OFF**
When the CD receiver is turned off, pressing any button (except OPEN or EJECT) will turn on the unit. It will also power on when a disc is inserted.
To turn the unit OFF, press and hold the POWER button for about one-half second or longer.

5. **LCD Display**

6.7. **TUNE, SEEK, TRACK, SKIP UP / DOWN BUTTONS**
a. In RADIO (TUNER) MODE:
Press and quickly release the I<< or >>I button to manually tune up or down to a desired station in a step by step manner. Press and bold either button to allow the unit to scan up or down to locate the next strong station on the dial.

b. During CD/MP3 playback, press and quickly release the >>I button to play the next track. Press the I<< button to restart playing the currently playing track. Press the I<< button twice to play the previous track. Press >>I or I<< button hold to skip forward or backward.

8. **BAND BUTTON**
This receiver permits you to have station 18 FM presets, arranged in three groups (FM1, FM2 and Fm3).
Use the BAND button to scroll through these five groups or to change the reception from FM tuning bands.
In CD/MP3 format-mixed disc playback mode, long press BAND button, it will change from one mode to another mode.

9. MODE BUTTON

When a disc is present in the CD slot, pressing the MODE button will allow you to change to RADIO mode (and back). The LCD display information changes with the mode (please note: when no disc is present in the unit, this button does not provide a function).

10. MUTE BUTTON

Press the MUTE button to silence the receive. Press again to return the receiver volume to the level at which you were last listening.

11. INFRARED REMOTE CONTROL SENSOR

12. AS·PS BUTTON (Auto-storage /Preset scan)

During radio mode:

1) When pressed and held for several seconds, the tuner will search and store the first six strong stations as presets.

2) When you press the button once it will scan the presets for 5 seconds and then move to the next station.

MP3 SEARCH MODES;

This unit allows you to search for songs by three different methods: TRACK SEARCH, DIRECTORY SEARCH or FIRST CHARACTER SEARCH.
In all modes, you use the VOLUME knob to make choices, and the SELECT button to enter these choices.

To select the desired search mode, press the AMS button to step through the three methods and stop when the desired search method name is displayed.

In TRACK SEARCH mode, a three digit number will be displayed, indicating the number of tracks the unit has detected are present on the disc. By changing this number, a particular track can be identified. After the total track count is displayed, turning the VOLUME knob will change the number in the "hundreds" place. To select this number, press SELECT. Turning the knob again changes the number in the "tens" place. After pressing SELECT again to confirm this number, repeat for the "ones" place. Pressing SELECT one last time will start playback of this track.

In DIRECTORY SEARCH mode, the root folder will be visible in the display. Use the VOLUME knob to move to the desired folder. Press the I<< or >>I to move to the desired track in the folder, and SELECT to play this track.

In FIRST CHARACTER SEARCH mode, the display will first show the first letter used in the name of the first of your tracks when listed alphabetically. To select a different first letter, turn the VOLUME knob until you reach the right one. Use the I<< and I>> buttons to move through the various tracks available starting with that letter. Press SELECT to begin play of a desired track.

WIRING DIAGRAM

ANTENNA PLUG
ISO CONNECTOR

RCA LINE OUT FRONT (BLACK) — RED R / WHITE L
RCA LINE OUT REAR (GRAY) — RED R / WHITE L

YELLOW CONSTANT 12 Volts
BLACK(GND)
IGNITION SWITCH RED (B+)

FUSED 7A & 0.5A FUSES FILTER BOX

FUSE 0.5A
BLUE AUTO ANT

FRONT LEFT SPEAKERS REAR
WHITE
WHITE/BLACK
GREEN
GREEN/BLACK

FRONT RIGHT SPEAKERS REAR
GRAY
GRAY/BLACK
VIOLET
VIOLET/BLACK
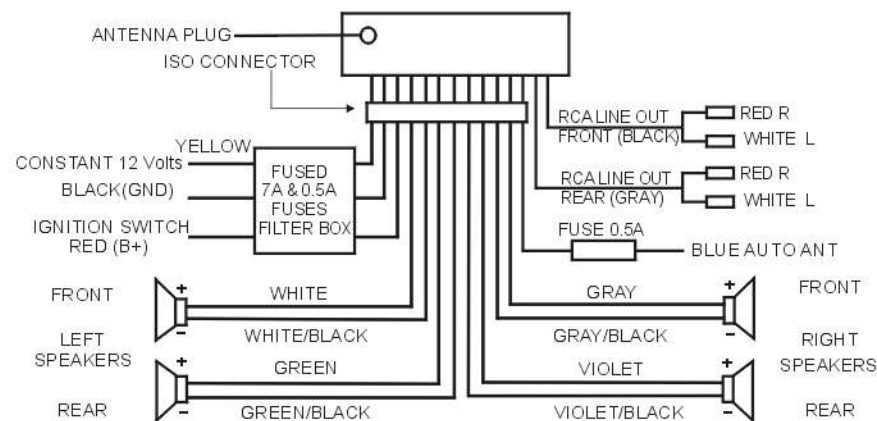
Note:
1.Make sure use ONLY speakers with 4 ohm load impedance.
2.Do not allow the auto antenna wire and ground touch each other.

10. Mode Button

16. CD Track TOP/▶||/Radio Preset 1

11. Tune/Seek Up And
Track Skip Up/FF Button

17. CD Track INT/Radio Preset 2

12. Tune/Seek Down And
Track Skip Down/REW Button

18. CD Track RPT/Radio Preset 3

13. SCN Button

19. CD Track RDM/Radio Preset 4

14. Clock Display /Setting Button

20. Radio Preset 5

15. PTY Button

21. Radio Preset 6

MAINTENANCE OF REMOTE CONTROLLER

Before using the remote controller, pull out the insulating patch. This patch was installed to insulate the battery from draining until ready to use.
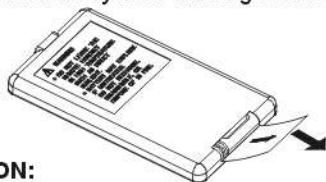
BATTERY INFORMATION:
Lithium Battery: CR2025 3V
Battery Life: Approximately 6 months.

Replacing the Battery from the Remote Controller:
1) Remove the battery holder by pressing the locking tab with your thumb and pulling it out.
2) Replace the battery with the same type and the " + " side facing up.
3) Gently push in the holder until securely locked into place.
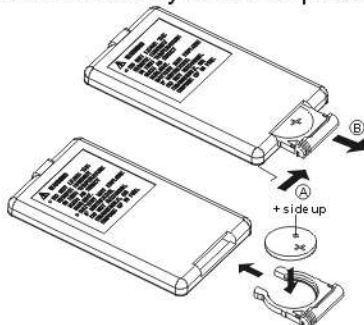
⚠ WARNING:

• Do not recharge, disassemble or dispose of in fire.

• Battery leakage may cause damage to the unit.

• To avoid the risk of accident, keep batteries out of reach of children.

13-18. PRESET STATION MEMORY AND TOP/ >|| , INT, RPT, RDM BUTTONS

RADIO MODE:
The six PRESET buttons are used to program (and later, to select) memorized radio stations. To create a preset, simply tune the radio to a desired station and press and hold the button for about 2 seconds. To play it later, press and release the same button later. Please note that you can set FM presets in three different groups (FM1, FM2 and FM3).

CD MODE:
The TOP/ >II button is used to either PAUSE the playback (when you press and release quickly) or to begin playing the first track on the disc (press and hold for more than 2 seconds).

In CD mode, press and release the INT ("Intro") button to play the first 10 seconds of each track. When you hear a track you like and want to play the entire track, press INT again. (In MP3 mode, the INT function plays the first 10 seconds of each track within a particular folder.)

Pressing RPT will cause the currently playing track to repeat until cancelled by a second press of the RPT button. (In the MP3 mode, pressing and holding this button for more than one-half second will cause the songs in a particular folder to repeat until a second press of the RPT button).

To play all the tracks on a disc in random order, press the RDM button.
(In MP3 mode, you can press and hold this button for more than one-half second to initiate random play of all tracks in a particular folder).
Press again to cancel random playback mode.

To move up or down ten tracks at a time (in either CD or MP3 modes), use the 5 (-10) or 6 (+10) button.

19. AF BUTTON

When pressed short, AF switching mode is selected and the state of AF switching mode is displayed by AF segment in display.
Segment off: AF switching mode off.
Segment on: AF switching mode on, and has RDS information.
Segment flashing: AF switching mode on, but RDS information is not received yet.

When AF switching mode is selected, the radio checks the signal strength of AF all the time. The interval of checking time of each AFs depends on the signal strength of current station, from a few minute for strong station to a few seconds for weak station. Every time that new AF is stronger than current station, it switches over to that frequency for very short time, and NEW FREQUENCY is displayed for 1-2 second. Because the mute time of AF switching or checking time is very short, it is almost inaudible in case of normal program.

During FM mode, when AF is on, SEEK, (SCAN), AUTO-MEMORY function can only receive and save RDS program.

When pressed long, AF mode is converted to REGION ON/OFF mode.

time is displayed, you can flash the time by long pressing CLOCK button, then adjust the hour and minute by rotating the VOLUME knob.

24. EJECT KEY
When the unit is turned on and a disc is present in the player slot, press the EJ button to eject the disc.

25. CD SLOT

26. FLASHING LED
When the front control panel is removed this indicator flashes.

27. RESET BUTTON
After installation, or anytime the unit is disconnected from power, you may need to reset the unit. Use a small pointed object (such as a pen) to press this button. Doing so will erase the clock setting and some of the other stored settings.

OPERATION OF REMOTE CONTROLLER:

NOTE:
Before you use the remote control, be sure to turn on the unit by pressing the POWER button on the front panel.

1. Power On/Off.

2. Mute Button

3. TA Button

4. Level/MENU UP Button

5. SEL/MENU Button

6. Level/MENU Down Button

7. AF Button

8. A.P Button

9. Band Button