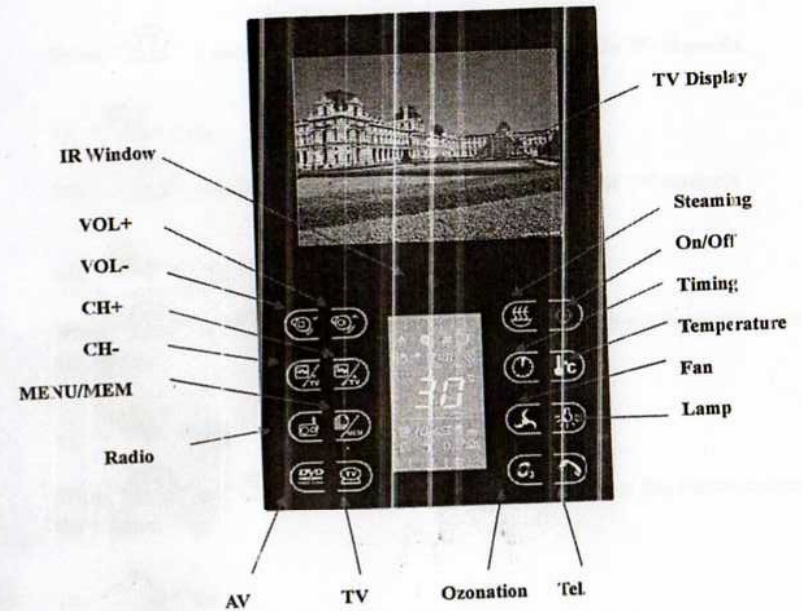
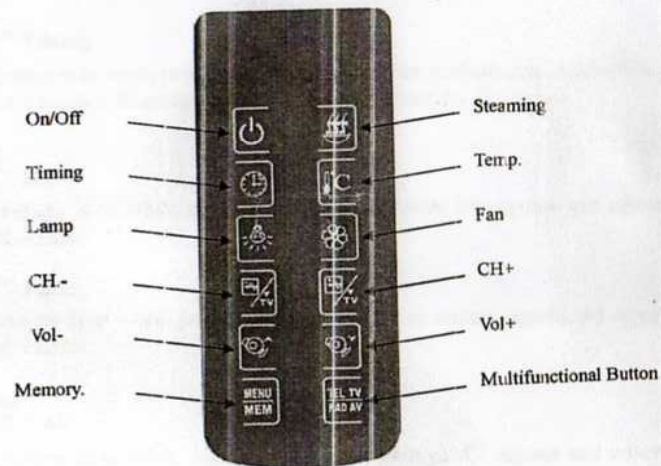


I. System

This controller is specially designed for the steam room used at home. The controller is fitted with the following functions: Temperature Setting, Time Setting, Fan Control, Lamp Control, O₃ Disinfection & Steaming, TV/AV function, Radio Function, handfree phone answer etc. Besides, it is of remote control and perfect protection functions.

II. Operational Panel



There are 16 buttons on the controller and the functions are as follows:

1. "⏻" On/Off

Turn on/off the system. The system will close automatically in 60 minutes (if the disinfection/steaming are on after 60 minutes, the whole system will turn on after the customized time for these two functions).

2. "☁" Steaming

Turn on/off steaming function

3. "🌀" Fan

Turn on/off fan.

4. "💡" Lamp

Turn on/off top lamp and background lamp at the same time.

5. "O₃" Ozonation

Turn on/off disinfection function. The system will turn off all the other functions when the disinfection is active. In 20 minutes, the system turns off the disinfection, and turns on the fan for 15 minutes, after that, the system turn off automatically.

6. "°C" Temperature

When the system is at work, press this button and the temperature increases. The temperature will be back to 20°C after it reaches 50°C. The temperature ranges from 20-50°C

7. "⌚" Timing

When the system is at work, press this button and the time increases, but it goes back to 5 minutes after it reaches 50 minutes. The timing ranges from 5—50 minutes.

8. "TV" TV

When the system is at work, press this button to receive TV signals and adjust the frequency & volume.

9. "📻" Radio

When the system is at work, press this button to receive station signals and adjust the frequency & volume.

10. "DVD VIDEO/AUDIO" AV

When the system is at work, press this button to receive AV signals and adjust the volume.

11. "MENU/MEM" MENU/MEM

When "TV" is at work, press this button to set the brightness/contrast/sharpness, etc.

When "📻" is switched on, press this button to keep the station signals. There are totally 8 stations that can be stored.

12. "CH-" CH-

When "TV" is switched on, press this button to decrease the TV channels.

13. "CH+" CH+

When "TV" is switched on, press this button to increase the TV channels.

14. "VOL+" VOL+

When "TV" or "📻" and "DVD VIDEO/AUDIO" is turned on, press this button to increase the volume.

15. "VOL-" VOL-

When "TV" or "📻" and "DVD VIDEO/AUDIO" is turned on, press this button to decrease the volume.

16. "☎" Tel.

When the system is open, if there is incoming signal, press this key to get the phone call, while in phone state, press of this key can break off the call.

Radio System

"MENU/MEM" MENU/MEM button

In case the radio system is on, press this button for one second and release it, then radio station number plus 1 (if the number is bigger than 8, it will be backward to 1), and the frequency of station stored in this position will tuned out; press this button for more than one second, then radio station number plus 1 (if the number is bigger than 8, it will be backward to 1), current frequency will be stored at this position.

"CH+" CH+

In case the radio system is on, press this button to increase frequency, it will return to 87.5MHz after reaching 108.0MHz. If you long press this button for more than 1 second, the frequency will be raised automatically till a station is detected or the frequency comes up to 108.0MHz.



In case the radio system is on, press this button to decrease frequency, it will return to 108.0MHz after going down to 87.5MHz. If you long press this button for more than 1 second, the frequency will be decreased automatically till a station is detected or the frequency reaches 87.5MHz.

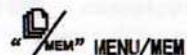


In case the radio system is on, press this button to increase volume. If you hold this button for more than 1 second, the volume will go up rapidly till you release the button or the volume come up to upper limit.



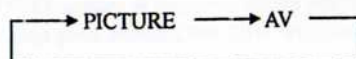
In case the radio system is on, press this button to decrease volume. If you hold this button for more than 1 second, the volume will go down rapidly till you release the button or the volume come up to lower limit.

TV/AV System

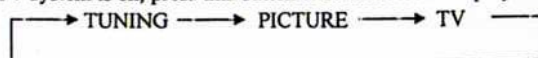


MENU/MEM button

In case AV system is on, press this button to switch screen display in the following order:



In case TV system is on, press this button to switch screen display in the following order:



When the screen displays PICTURE or TUNING for 10 seconds and no operation is done with this period, such display will disappear automatically.



In case TV system is on, press this button to increase station number, and it will be back

to the smallest station number after reaching the biggest one (station number preset to "SKIP ON" will not be displayed).



In case TV system is on, press this button to decrease station number, and it will be back to the biggest station number after reaching the smallest one (station number preset to "SKIP ON" will not be displayed).



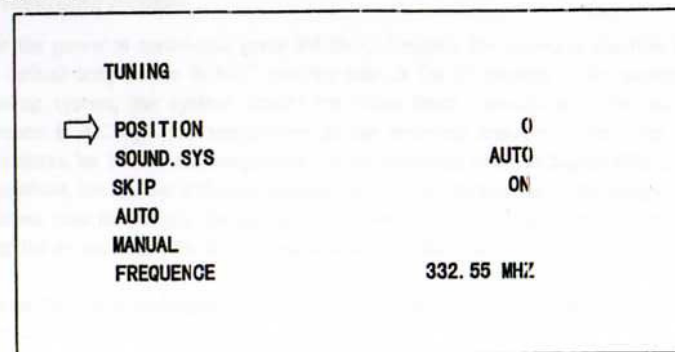
In case TV/AV system is on, press this button to display volume bar. Hold this button for more than one second, the volume will go up rapidly till you release this button or the volume comes up to the upper limit.



In case TV/AV system is on, press this button to display volume bar. Hold this button for more than one second, the volume will go down rapidly till you release this button or the volume comes up to the lower limit.

TUNING Setting

In case TV system is on, press button MENU/MEM to enter TUNING setting interface; then press buttons CH+, CH-, VOL+ or VOL- to set sound system, station number, automatic station selection, semi-automatic station selection, manual station selection or skip mode.



Under above interface, press button CH+, then the arrow will go upwards; press button CH-, the arrow will go downwards; the menu to which the arrow points is selected.

POSITION – station number

Press button VOL+ or VOL- to change station number, which ranges from 0 to 99.

SOUND. SYS -

Press button VOL+ or VOL- to select sound system, there are 5 sound systems available, namely AUTO, MN, BG, I and DK. AUTO adopts automatic-selective sound system by which the above systems can be automatically selected. Sometimes it fails to select correct sound system due to TV signal, which lead to image and sound distortion. In such case you have to select sound system manually.

SKIP -

Press button VOL+ or VOL- to turn on or turn off SKIP function.

AUTO - automatic station selection

Press button VOL+ or VOL- to select station automatically.

MANUAL – semi-auto station selection

Press button VOL+ to search a channel over a higher frequency, stop searching while a channel is detected; Press button VOL- to search a channel over a lower frequency, stop searching while a channel is detected.

FINE - manual station selection

Press button VOL+ to fine tune a higher frequency while press button VOL- to fine tune a lower frequency.

PICTURE – setting

In case TV/AV system is on, press button MENU/MEM to enter into TUNING setting interface; then press button CH+, CH-, VOL+ or VOL- to set tone, chroma, contrast or brightness.

PICTURE	
⇒ COLOR. SYS	AUTO
SHARP	31
BRIGHT	31
CONTRAST	31
COLOR	31
TINT	31

Under the above interface, press CH+, the arrow goes upwards, press CH-, the arrow goes down, the menu to which the arrow points is selected.

COLOR. SYS

Press VOL+, VOL- to set the color system--- AUTO, PAL, NTSC, N443, SECAM

SHARP

Press VOL+, VOL- to change sharpness from 0~63

BRIGHT

Press VOL+, VOL- to change brightness from 0~63

CONTRAST

Press VOL+, VOL- to change contrast from 0-63

COLOR

Press VOL+, VOL- to change color from 0~63

TINT

Press VOL+, VOL- to change the tint from 0~63. It only works under system NTSC & N443

III. Instructions

1. Steaming System

After the power is connected, press the On/Off button, the steaming function is active. The default temperature is 40°C and the time is for 30 minutes. After turning on the steaming system, the system detects the water level automatically. The temperature tolerance is 3°C, i.e., the temperature in the steaming room is lower than the fault temperature by 2°C. If the temperature in the steaming room is higher than the setting temperature, the system will close the generator automatically, and if the temperature is 2°C lower than the setting, the generator will restart. Meanwhile, if there is no sufficient water, the system will turn on the generator to input the water.

Turn on the water-discharging valve after the system is turned off. The valve will be shut off in 120sec.

2. Radio System

This controller has electronic tuning, automatic station selection & frequency display function.

IV. Failures

BS159 controller is with strong protection and failure detection function as follows:

1. Failure Code "E1": Communication Failure

BS152 uses two CPU (display panel & controlling part use individual CPU). During the operation, the main CPU & affiliated CPU send messages constantly, if there is communication problem in 15 seconds, the system will show code "E1" and shut off all connecting loads; when it comes back to normal, the system will restore all the functions automatically

Reason:

- a. Communication Circuit Failure
- b. CPU I/O Entry Damage

2. Failure Code "E3": Water Input Failure

When the steaming function is active, the system will turn on the water valve and let water in if system finds that there is no sufficient water in the steaming box. If the water doesn't reach the specified level in 60 seconds, the system will show failure code "E3" and close the steaming function automatically.

Reason:

- a. General Water Valve on Off Status
- b. Water Supply Problem In Residential Area
- c. Water-entry System Failure
- d. Water-level Slope Failure

3. Failure Code E5: Overheat Protection

When turn on the power, the system will detect the water level. If there is no water, the system will show failure code "E5" and turn off the steaming function automatically.

Reason:

- a. Steaming System Failure
- b. Dry-heat Protection Switch Damage

V. General Technical Parameter

Technical Parameters (for the Connecting Electronic Accessories)

1. Steam Generator: Rated Voltage AC220V/50HZ, Power<3KW, Water Level Sensor (with probe)
2. Electromagnetic Valve: DC12V/5W
3. Ventilation Fan: DC12V/3W
4. Top Lamp: AC12V/10W
5. Background Lamp: AC12V/6W

Radio System:

1. Frequency: 37.5~108.0MHz
2. Receiving Sensitivity: <15uV/m
3. Speaker: 8Ω/10W

TV/AV System:

1. Display Panel: 5.6-inch, color TFT-LCD
2. Color system: PAL, NTSC, SECAM, N433
3. Receiving system: PAL-DK, PAL-I, PAL-BG, NTSC-M, SECAM-DK, SECAM-I, SECAM-BG
4. TV input mode and impedance:
75Ω unbalanced VHF/UHF input at the same terminal
Intermediate frequency: Image intermediate frequency: 38.9MHz
5. TV receiving range:
VHF Low band: 48.25 to 170.00MHz
VHF High band: 170.00 to 450.00MHz
UHF band: 450.00 to 863.25MHz
6. AV input mode and impedance:
75Ω composite video signal input