SEMBOX DSM2009MKII Manual

Thank you for purchasing this product and therefore trusting our company. To obtain the best performance from this product, please read the manual carefully before using for first time.

The technical specifications and operating methods included in this manual are subject to changes without notice. In case of any inquires after a period of usage, please contact the manufacturer to the latest news and updates.

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Chapter I Introduction

Digital satellite finder ASF2008 is professional instruments dedicated to aligning and setting satellite dishes quickly, easily and accurately.

Designed for field measurement, all instruments are compact (0.9 kg with the battery), autonomous (packed with battery and fast charger), rainproof designed and are equipped with a 3.5 Inch High Definition TFT LCD Screen for better readability.

The instrument can be left and operate on its own as it is equipped with rechargeable Li-oN battery pack, 12.6V, 2,200 mAh ensuring a standard operation for 4 hours. We recommend that you to give the unit a three hours charge at first time
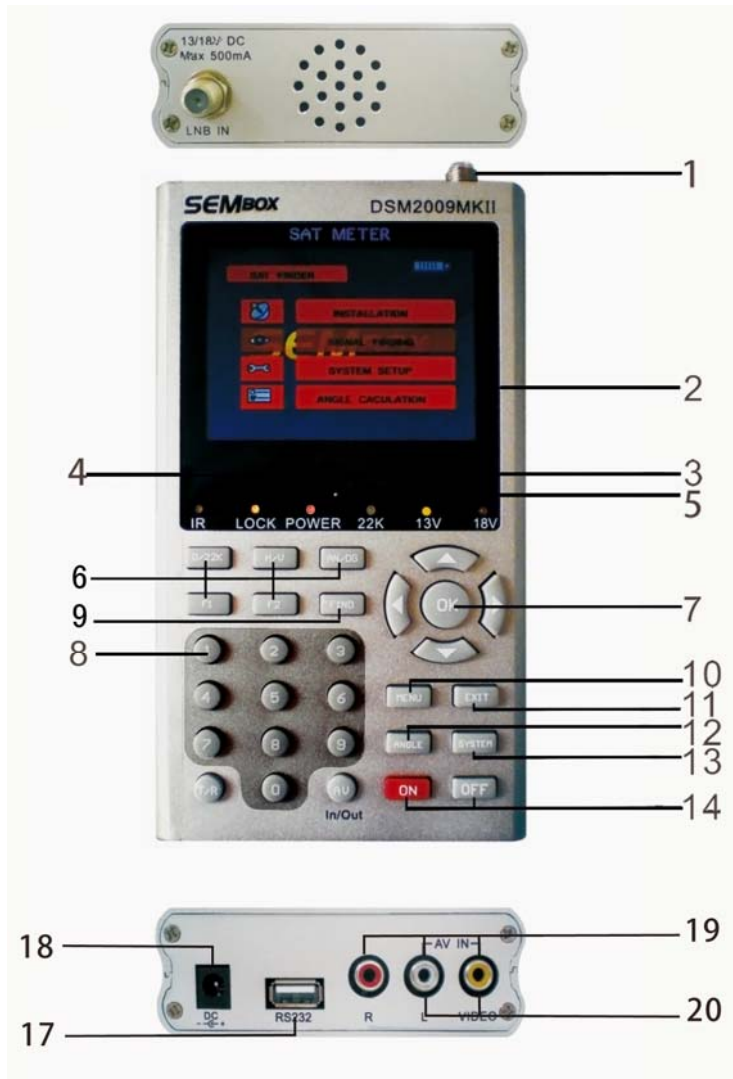
In the package:
1 x Protective carrying bag with strap.
1 x Car charger cable
1 x Upgrade line
1 x Audio/Video cable
1 x Adaptor/charger
1 x Full function IR remote control.

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Chapter II Function

A. Front Panel

<Figure2-1>

(1) LNB INPUT：

Satellite signal input port, connects directly to satellite antenna with coaxial cable.

(2) LCD Screen：

Shows menus and programs clearly

(3) Power Light：

Light up while power is on.

(4) Lock Light：

This will be lighted when signal is locked.

(5)22K/13V/18V light：

Indicates the mode of 22K/13V/18V

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(6) Function Key：

Consist of 2 keys, F1 – F2.

F1: Changes the signal bar on SIGNAL FINDING menu

F2: Actives DiSEqC1.2 function on the SIGNAL FINDING menu

      AN/DG: To active the spectrum on the SIGNAL FINDING menu

      0/22K: A quick key to switch 22K output on the SIGNAL FINDING menu

      H/V: A quick key to switch 13V/18V output on the SIGNAL FINDING menu

(7) Arrow Key and OK Key：

Use Arrow key to browse the item, press OK key to select option

(8) Numerical Key：

Used to enter numerical settings directly.

(9) FIND Key:

Accesses prompt satellite menu that sets and aligns a satellite dish quickly.

(10) MENU Key:

Display the main menu or return to the previous one.

(11) EXIT Key：

Cancel the selection and exit from the present menu.

(12)ANGLE Key：

Accesses the AZ, EL and Polarity calculation menu

(13) SYSTEM Key：

Access SYSTEM mode to create all parameters and information

(14) POWER Key：

For turn-on / off, to press and hold for 3 seconds to power on the device

(15) TV/RADIO：

Selects and plays TV/Radio channel in playing mode.

(16) AV（Optional）：

Shifts AV output / input

(17) Charge port:

Allows the external power supply as well as the charging of the battery

(18) USB Port:

Used to connect to PC for upgrade.

(19) R/L/VIDEO:

Output audio and video signal.

(20) AV IN:

Input audio and video signal to LCD screen.

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B. Remote Control

(1) 0/22K：

Switch 22K output on the SIGNAL FINDING menu

(2) H/V：

Switch 13V/18V output on the SIGNAL FINDING menu

(3) AN/DG：

Actives the spectrum on the SIGNAL FINDING menu

(4) FIND Key:

Accesses easy satellite find menu that sets and aligns a satellite dish quickly.

(5) F1:

Changes the signal bar on SIGNAL FINDING menu

(6) F2:

Actives DiSEqC1.2 function on the SIGNAL FINDING menu

(7) Arrow Key and OK Key：

Browse the item and press OK key to select.

(8) AV：

Shifts AV output /AV input

(9) TV/RADIO：

Selects and plays TV/Radio channel in playing mode.

(10) MENU Key:

Display the main menu or return to the previous one.

(11) EXIT Key：

Cancel the selection and exit from the present menu.

(12) 0-9 Numerical Key：

Enter numerical settings directly.

(13) ANGLE Key：

Accesses the AZ, EL and Polarity calculation menu

(14) SYSTEM Key：

Access SYSTEM mode to create all parameters and information

C. Quick Operation

1）OSD language Setting

    1. Turn on the satellite finder

    2. Press SYSTEM button to display the setting menu. see <Figure2-2>

<Figure2-2>

    3. Use [◄][►] button to browse the language items . Select the one required and confirm by OK key.

2）Quick operation guide

    1. Press the FIND button to display the signal finding menu, see <Figure2-3>

<Figure2-3>

    The modifiable parameters are the following:

- SATELLITE NAME: Use [◄][►] button to scroll through the stored memory and select the required satellite.

- LNB SETTING: Select the item needs editing, and set its parameters as desired.

    LNB Type: Use [◄][►] button to select C/Ku/Universal mode

    LNB.LOW / LNB.HIGH: input the parameters as desired by number key

- TRANSPONDER: Modification of a transponder's parameters, including:

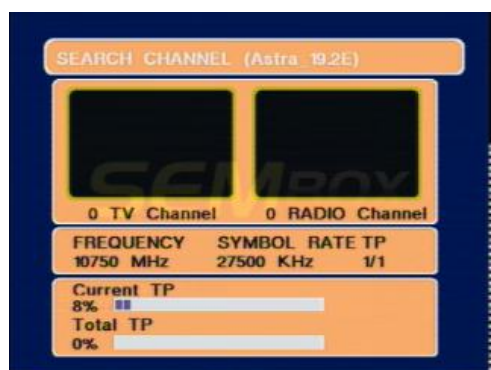FREQUENCY: Press [◄][►] button to add or reduce values or specify the desired value by the numeric keys.

SYMBOL RATE: Perform same operation as described as FREQUENCY

POLARITY：Use [◄][►] button to select between vertical and horizontal

Note: Make sure all above information is correct to search the signal successfully.

- SCAN CHANNEL: Once you have correctly informed all date, use [◄][►] button to select the scan mode, then press OK to launch search.

(a.) TP SCAN: Scan all transponders one by one, see<Figure2-4>

<Figure2-4>

(b.) TP NIT: Scan the transponders in one certain network.

(c.) SAT SCAN: Scan all the transponders in one satellite (these transponders have been set in advance).

(d.) Blind 8MHz: Blind scan the frequency from 950-2150 by step 8MHz; see<Figure2-5>

<Figure2-5>

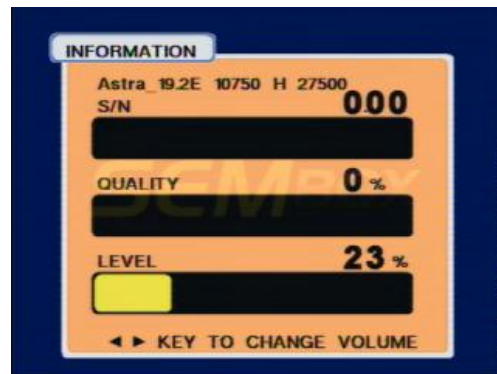(e.) Blind 12MHz: Blind scan the frequency from 950-2150 by step 12 MHz.

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In the course of signal searching, you can get to know the status by bar meter of the LEVEL and QUALITY as well as the numerical of S/N, FEC, BER. DiSEqC indicates which port is connected to the DiSEqC1.0 switch.

Adjust the dish slightly until you get the maximum of level and best quality.

Once the signal is got, the LOCK light comes on immediately. Now, if press F1 to enter Outdoor / ZOOM mode, you can find a continue beeping sound working as indicator that may change its tone frequency according to the signal strength.
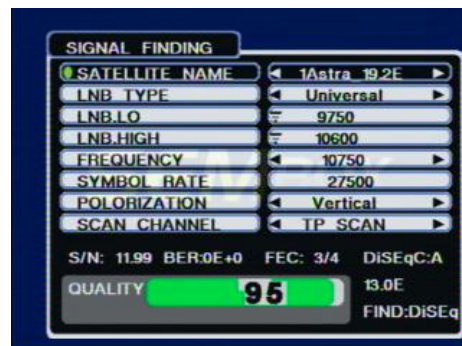
2. MODE CHANGE: Press F1 to shift the display mode between Normal /Zoom/Outdoor Zoom mode:

<Figure2-6>

- S/N : reflects the signal to noise in dB
- QUALITY: reflects the signal quality (%)
- LEVEL: reflects the signal level (%)
- Press [◄][►] key to adjust the volume of beep.

Outdoor mode

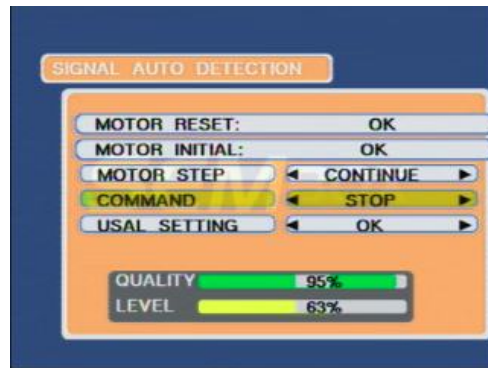:   <Figure2-7>

3. MOTOR SETTING: Press F2 to activate the DiSEqC1.2 control menu , see<Figure2-8>

<Figure2-8>

- MOTOR RESET: Press OK to clear the limit of the position.

- MOTOR INITIAL: Press OK to back to the initial position.

- COMMAND: Use [◄][►] button to switch motor moving to west or east. Stop option automatically once the signal is locked.

4. USAL SETTING: Press OK on the USAL SETTING item, see <Figure2-9>

<Figure2-9>

Choose your desired satellite at the Satellite Name option. Give your location value to the Local Longitude and Local Latitude. Enter the position of your selected satellite to the Satellite Longitude if it is not correct. Press OK to select USAL POSITION, then the motor will turn toward your selected satellite as calculating its position

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D. Detailed operation Guide

1) POWER ON

   Press POWER ON button and hold for 3 seconds to turn on the device

   TIPS: Release the POWER ON button when the logo is displayed.
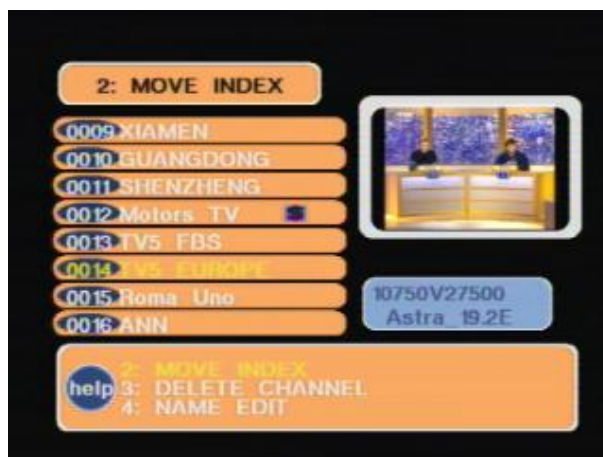
2) INSTALLATION

   Choose INSTALLATION item on main menu, then the following window appears.

<Figure2-10>

1. SATELLITE NAME: Use [◄][►]button to browse stored satellites or press OK to show the satellite list for selection.

2. LNB TYPE: Use [◄][►]button to browse all options.

3. 22K SWITCH: Use [◄][►]button to shift AUTO/ON/OFF

4. LBN POWER: Use [◄][►]button to choose OFF /ON

5. DISEQC1.0: allows switching among DISEQC port A/B/C/D

6. DISEQC1.1: allows switching among DISEQC switch from port 1 to port 16,

7. NEW SAT: Press OK to create a new satellite name by ∗ soft keyboard popping up on screen.

8. DEL SAT: press OK to delete the current satellite.

9. TV EDIT: Press F1 to edit TV channel, see <Figure2-11>

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<Figure2-11>

MOVE INDEX:

- Moves channel to another position. Press 2 to MOVE INDEX mode, and the

MOVE INDEX on the help information will be highlighted.

- Press OK to select channel.

- Use [▲] [▼] key to move the cursor to a new position as you require and then press OK to confirm.

DELETE CHANNEL:

- Deletes the current channel. Press 3 to DELETE CHANNEL, and the DELETE

  CHANNEL on the help information will be highlighted.

- Use [▲] [▼] key to select a channel press OK to delete.

NAME EDIT

- Press 4 to NAME EDIT, and NAME EDIT on the help information will be highlighted.

- Press OK to enter name with * soft keyboard on screen.

 * SOFT KEYBOARD instruction:

Use [◄][►][▲] [▼] buttons to move cursor and Press OK to pick the alphabet.

Use SAVE button on keyboard to save the channel name entered in.

Use DEL button on keyboard to delete the alphabet entered.

Use OTHER button on keyboard for shifting upper/lower case.

Use EXIT button to leave soft keyboard mode.

10. RADIO EDIT: Press F2 to edit radio channel.

Usage instruction refers to TV EDIT

3) SYSTEM SETTING

1. Press SYSTEM button to display setting menu, see <Figure2-12>

<Figure2-12>

2. OSD TRANSPARENT: Adjust OSD transparent mode.

3. SLEEP TIMER: Set up the sleep timer mode for auto shut off timer

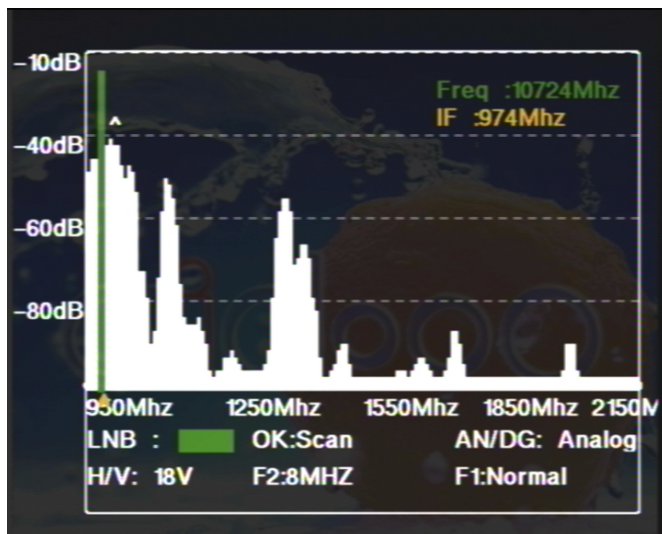4. PROFILE : Shift between the normal mode and outdoor mode

5. LOCK BEEP: Switch on/off the beep function while signal locked

6. FACTORY DEFAULT: Remove all the user data, press OK to confirm on the item.
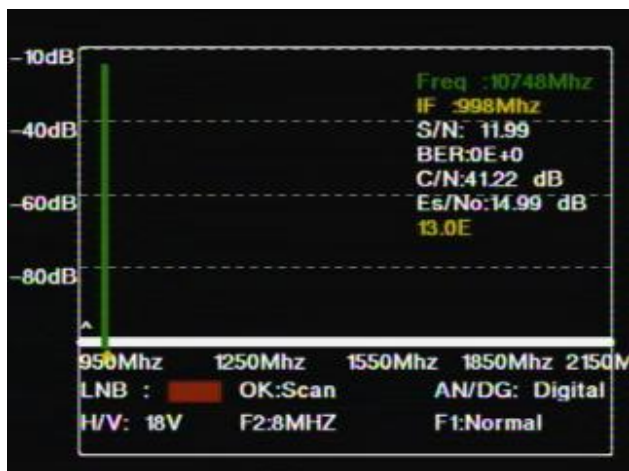
4) Analogue SPECTRUM

Pressing AN/DG key on the signal finding menu gives access to the spectrum analyzer function. The spectrum of current satellite signal represents as <Figure2-18>
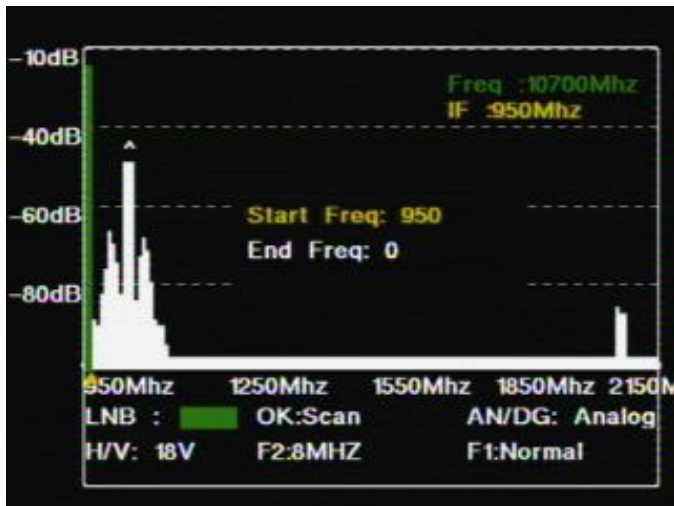
<Figure2-18>

1. H/V key to change between18V(Horizontal) and 13V(Vertical)

2. F2 key to change the scan step (8Mhz , 12Mhz, 20Mhz optional)

3. AN/DG: can change the scan mode from analog to digital

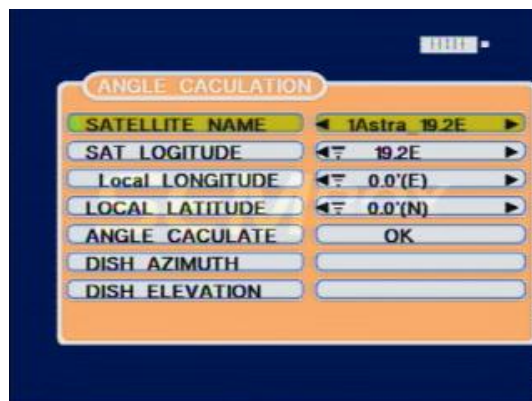4. F1: to switch ZOOM mode and NORMAL can mode

5. Freq: to show the value of current focus frequency

6. Green axis indicates focused frequency, can be moved by up & down Key for faster movement or by left & right keys for slower movement.

7. Top maker will be shown on the high level position of spectrum.

8. The user can move the green column to the peak，and press OK to scan out the channels.

9. LNB STATUS: reference to the LNB connected or not.

TIPS: Distinguishing of the analog spectrum. There is few change of the spectrum data between the neighbor steps when signal is weak. In case, the signal appears, the spectrum level will increase suddenly or the slope increase to a certain data, which is the peak.

5) ANGLE CACULATION
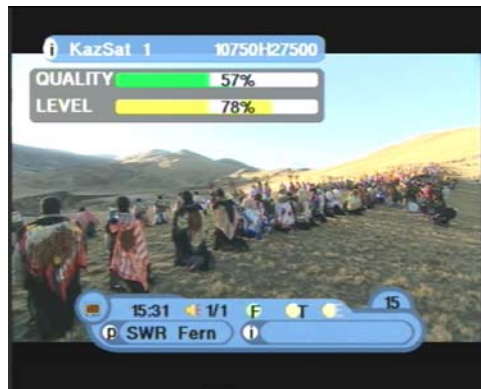
1. Press ANGLE button to display the Calculation menu, see <Figure2-14>

<Figure2-14>

2. SATELLITE NAME: Use [◄][►]button to browse stored satellites or press OK to show the satellite list for selection.

3. Give your location value to the Local Longitude and Local Latitude.

4. Move cursor to ANGLE CACULATION and press OK to calculate the data of azimuth and elevation according to which you adjust the dish. The result you can read on ANTENNA AZIMUTH, ANTENNA ELEVATION item.
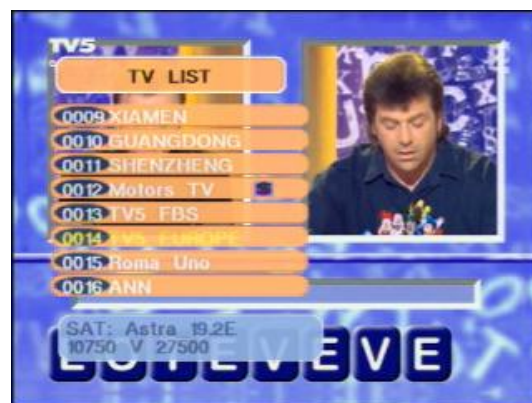
6) CHANNEL INFORMATION

In the playing mode, pressing F1 key gives access to looking over the information of current Satellite name and transponder, as < Figure2-15> shown

< Figure2-15>

7) CHANNEL LIST

Press OK in the playing mode to get TV list displayed, see < Figure2-16>

< Figure2-16>

1. Scroll the cursor to choose a new channel and for play it by OK key.

2. EXIT key for returning back to playing mode.

8) TV/RADIO MODE CHANGE

Press TV/RADIO key in the playing mode to shift alternatively.

Chapter III Specifications

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System capabilities	Fully DVB compliant	Yes
LNB/Tuner input	Connector	F type, male
	Frequency range	950MHz-2150MHz
	Signal lever	-65dBm~-25dBm
	LNB supply	13/18V,max500mA
	LNB switch control	22KHz
	DiSEqC	DiSEqC1.0 DiSEqC 1.2
Demodulator	Front end	QPSK
	Symbol rate	2Mbps~45Mbps
	SCPC and MCPC Capable	Yes
	Spectral inversion	Auto conversion
System resource	Processor	32bit processor
	SDRAM	8Mbytes
	FLASH	1Mbyte
	EEPROM	
Video decoder	MPEG 2	Main Proflie@Main Level
	Data Rate	up to 15M bits/s
	Resolution	720*576,720*480
	Video format	PAL/NTSC/SECAM
MPEG Audio	MPEG 1 layer 1&2	
	Type	Mono
	Sampling rates	32,44.1 and 48KHz
Serial data interface	Connector	USB type
Power supply	Li-oN Battery	2200 mA
	Supply voltage	13.3Volt
	charger	90-240V AC
Panel connectors	Digital tuner input	F type, male
Physical Specification	Size	102x34x180 (mm)
	Weight(Net)	0.9 Kg