Beam 230

User Manual

Guangzhou Mitek Light Co.,LTD

Email: info@miteklight.com

Website: www.miteklight.com

Add: No. 21 Dongfeng Avenue, Automobile Industry Base, Huadu District, Guangzhou

TECHNICAL PARAMETERS

Light source

Voltage：100-240V/50-60Hz

Power consumption: 350W

LED: 230W lamp

Optical

Lens group of optical system, electric focus, angle 0～4°

Controls

Channel: 16/20 Channels

Dot matrix display, 4 light touch switches, 180° reverse display

Effect

Color Gobo: One color gobo, each color gobo is made of 14pcs of color chips.

Pattern Gobo: 17 kinds of effect

Effect Wheel: One reverse octagonal, moving effect, Atomization function

0—100% dimming by machine, stand by mechanical strobe and speed adjustable effect.

Stand by macro strobe function

Construction

Pan Scan: 540°(16bit high-precision scan) Electronic error correction

Tilt Scan: 270°(16bit high-precision scan) Electronic error correction

IP Protection grade：IP20

Thermal protection

Magnetic ballast，AC/DC on/off switch

Weight&Dimension

Measurement: 430（L）×430（W）×560（H）mm

Net Weight: 17.8KG

1. Precautions and installation

1. Maintenance

The lamp should be kept dry and avoid working in a humid environment.

Intermittent use will effectively extend the life of the lamp.

In order to obtain good ventilation and lighting effects, it is necessary to clean the fan, fan net and lens frequently.

Do not wipe the lamp housing with organic solvents such as alcohol to avoid damage.

2. Statement

When this product is shipped from the factory, its performance is intact and its packaging is complete. All users should strictly abide by the warnings and operating instructions stated above. Any damage caused by misuse is not covered by the company's guarantee, and the dealer is not responsible for the failures and problems caused by ignoring the operating manual. .

This manual is subject to technical changes without notice.

3. Product precautions

In order to ensure the service life of the product, this product should not be placed in a humid or leaking place, and it should not be used in an environment where the temperature exceeds 60 degrees.

Do not place the product in a place that is easy to loosen or shake.

In order to avoid the risk of electric shock, the maintenance of this product requires professional maintenance.

When the bulb is in use, the power supply voltage should not change more than ±10%. Too high voltage will shorten the life of the bulb, and too low voltage will affect the light color of the bulb.

After the power is off, it takes 20 minutes to use the lamp to cool down before it can be powered on again.

In order to ensure the normal use of this product, please read this manual carefully. Signal line connection (DMX)

Use RS-485 cables that meet the specifications: shielded, 120ohm characteristic impedance, 22-24 AWG, low capacitive reactance. Do not use microphone cables or cables with different specified characteristics. The connection of the terminal must use 3 or 5 pin XLR type male/female connector. (Minimum 1/4 W).

Important note: The wires must not touch each other or the metal shell.

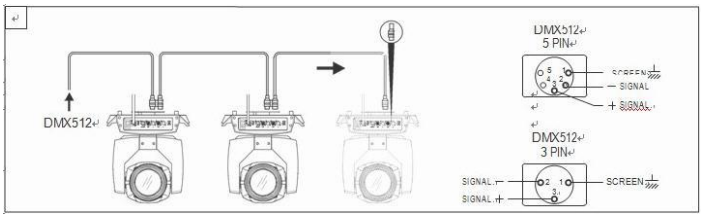

Figure 1 Schematic diagram of DMX signal line connection

4. installation

The lamps can be placed horizontally, hung diagonally and hung upside down. Be sure to pay attention to the installation method when hanging diagonally and upside down.

As shown in Figure 2, before locating the luminaire, ensure the stability of the installation site. During the reverse hanging installation, ensure that the luminaire does not fall down on the support frame. You need

to use a safety rope to pass through the support frame and the luminaire lift. Hand assisted hanging to ensure safety and prevent the lamp from falling and sliding.
When the lamps are installed and debugged, pedestrians are prohibited from passing underneath.
Regularly check whether the safety ropes are worn and the hook screws are loose.
Our company will not bear any responsibility for all the consequences caused by the falling of the lamp due to the unstable installation of the hanging.

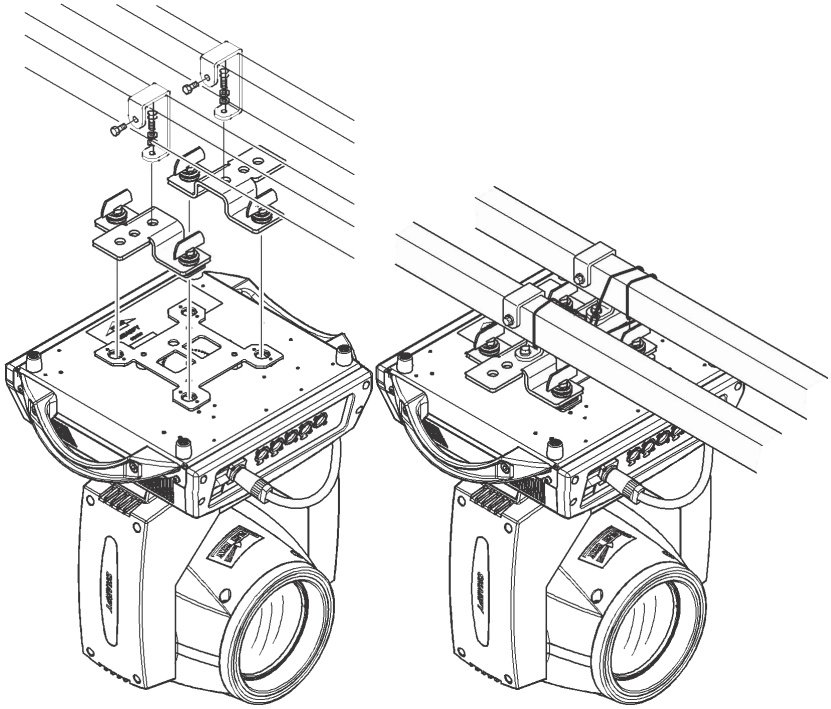

Figure 2 Schematic diagram of upside down lamps

2. Panel Operation

1. Overview

The schematic diagram of the luminaire panel is shown in Figure 3. The upper title displays the name of the luminaire, and the lower is the status bar, which displays the current luminaire's signal, bulb status, and fault (when there is a fault message that has not been checked, it will display "ERR", otherwise it will display "NOR") Wait.

This lamp supports DMX/RDM protocol. When the lamp is searched by the RDM host, the three letters "RDM" will appear on the panel, indicating that the lamp is enumerated normally.

The display and operation are similar to the "Android operating system", just click the corresponding item with your fingertip or a blunt object to operate.

Note: Do not use pointed or sharp objects to click on the display to prevent damage.

Figure 3 Schematic diagram of the display panel

2. Subpage (parameters)

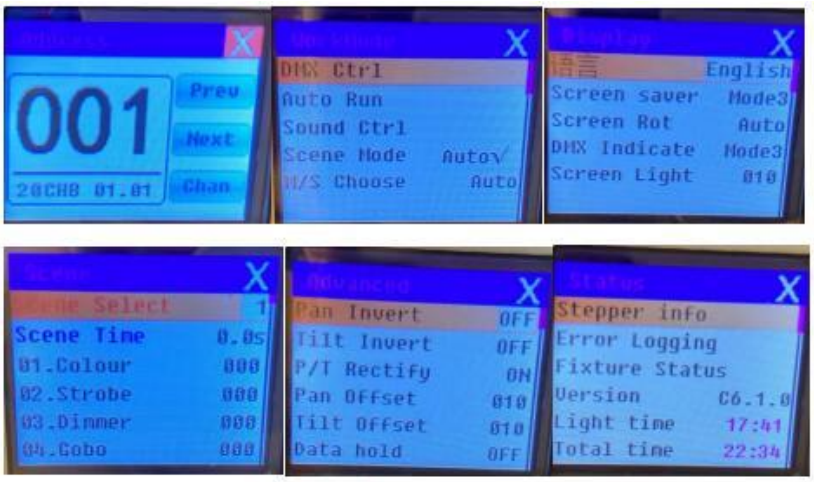

Figure 4 Function page

3 . Function operation and parameter setting

Enter the setting interface, as shown in Figure 4:

In the main interface, you can enter the corresponding parameter setting interface by selecting six buttons. In the parameter setting interface, you can press the blue option on the left to quickly switch to other setting interfaces.

1/ Set the DMX address code

Through the page shown in Figure 4-1, the DMX address and channel mode of the fixture can be set.

The menu setting of the lamp optimizes the address setting, and the operations of several setting address codes are as follows:

Choose "previous" or "next", the lamp will automatically calculate the address code of the next or previous unit according to the current address code and channel data, which can be quickly set;

Click on the value of the address code to enter the value editing window, where any valid address code can be used, and the fixture will automatically obtain the current channel number of the fixture, and automatically filter the unusable address code (512-current channel number).

The lamp supports the RDM protocol, and the lamp address code can be set remotely through RDM.

Two buttons are provided:

Channel mode: different channel modes can be selected cyclically;

Fixture reset: reset all motors.

2/ Set the working mode of the lamp

Through the page shown in Figure 4-2, you can set the operating mode of the lamps and control the lights. The lamp supports four operating modes (DMX mode, self-propelled mode, voice control mode and scene mode). For detailed parameter value setting, please refer to the previous section. The specific parameter description is shown in the following table:

workmode

DMX Ctrl	Console mode, receiving DMX signal, RDM signal	
Auto Run	Light run automatically according to the built-in program	
Sound Ctrl	When the Light detects a strong sound, the lamp will automatically run a scene according to the built-in program, otherwise the last scene will be kept	
Scene Mode	Run in the set scene mode, support custom editing of up to 10 scenes	
	1~10	Output the specified scene
	automatically	Automatically output the scenes in the sequence of the set scene time (not 0), and the scene with the time of 0 will be automatically skipped and ignored
Master/Slave Choose	It takes effect in non-DMX mode, select the data output mode, the lamp will automatically detect the DMX status and automatically switch the output to prevent data conflicts	
	Master	The light runs as built-in, if there is no signal from DMX, it outputs data (synchronized), otherwise it does not output data
	Slave	The Light are operated as built-in, no data is output (not synchronized with other lamps)
	Automatically	If there is no DMX signal, the lamp will operate as built-in, otherwise, the lamp will operate as DMX signal
Lamp on/off		(Lamp light source) A confirmation dialog box pops up, select "SURE" to confirm the current operation, turn the bulb on or off, and the switching time interval is limited to 30 seconds
	Off	The current lamp output is turned off
	On	The current lamp output is turned on

3/ Panel display settings

The lamp supports Chinese and English bilingual, upside down display, etc., enter the corresponding parameter settings as shown in Figure 6-3, the specific menu content is shown in the following table:

Display Setting

Language	Set the displayed language	
	English	English display
	Chinese	Chinese display
Screen saver	After setting the screen for 30 seconds without operation, the screen display content or method	
	Close	Keep the last operation page, bright screen
	Mode 1	Screen off
	Mode 2	Black screen, the address code of the current fixture is displayed in the lower left corner
	Mode 3	Display brand information, address code and operating mode
Screen Rot	Set the display direction of the screen	
	shutdown	Do not reverse the display

	Turn on	Reverse display
	autom atic	Automatically detect the direction of the lamp hanging lamp, and automatically switch the display direction
DMX Indicate	Set the indication mode of DMX signal indicator	
	Mode 1	On when there is a signal, off when there is no signal
	Mode 2	Off when there is a signal, on when there is no signal
	Mode 3	Flashing when there is a signal, and off when there is no signal
Screen Light	Set the brightness of the screen backlight after 10 seconds of no operation, and it will be all on during operation	
	1~10	10 levels

4/ Scene mode

Entering the page shown in Figure 4-4, the fixture enters the scene editing mode. Under this page, the fixture does not receive DMX console data, and the edited data is immediately reflected on the fixture.

The content of the page depends on the currently selected channel, and the displayed channel content and sequence are consistent with the fixture channel table. Through this page, 10 scenes can be edited, as shown in the following table:

Scene Mode

Scene Selection	Select the current operating scene	
	1~10	10 scene settings
Scene time	Set the retention time of the current scene in automatic mode, the unit is 0.1 seconds	
	0	The current scene does not participate in automatic scene output
	1-255	0..1 second to 25.5 seconds
1. color	0-255	Set the data of each channel, the display content and sequence correspond to the channel table of the lamp one by one
……	0-255	
……	0-255	
No. function	0-255	

If the reset channel in the scene edits the effective reset data, the lamp will be reset, but after reset, the value of the corresponding reset channel will be automatically cleared to prevent multiple consecutive resets.

Check this page, you can get the current channel table sequence of the fixture, please refer to the detailed channel description for specific channel data.

5/ Set the working parameters of the lamps and lanterns

Enter the page shown in Figure 4-5, adjust the on-site parameters of the lamp, and facilitate the on-site installation of the lamp, etc：

Advanced Setting

Pan Invert	Set the X axis rotation direction

	shut down	Not reverse
	Turn on	reverse
Tilt Invert	Set Y axis rotation direction	
	shut down	Not reverse
	Turn on	reverse
Pan/Tilt Rectify	Set whether the lamp detects XY out-of-step and corrects it	
	shut down	Position is not corrected after out of step
	Turn on	Automatically correct the position after losing step
Pan Offset	Set the position of the zero point of the X-axis of the lamp	
	4-150	
Tilt Offset	Set the position of the Y-axis zero point of the lamp	
	4-48	
Data hold	Set the output state of the lamp when there is no DMX signal	
	shut down	No signal, so the motor and light source return to the position and state when the reset is complete
	Turn on	No signal, keep the last frame of DMX data output
Open lamp mode	Set the way the bulb is turned on for the first time after powering on	
	open lamp after power on	Turn on the bulb first when powering on, and reset the lamp after 30 seconds
	Open lamp after reset	Reset the lamp 3 seconds after power-on, and turn on the bulb after the reset is complete
	Manually open lamp	After the reset is complete, manually turn on the bulb through the menu or console
Factory setting	A confirmation box pops up, after selecting "SURE", the lamp parameters return to the factory settings	

When setting the XY offset, after completing the setting, please control XY with the maximum stroke first to check that after the setting, X Y will not hit the positioning rod or the housing.

6/ View the current status of the fixture

Enter the page shown in Figure 4-6, you can view the information and real-time status of the lamp to get the status of the lamp. If the lamp needs after-sales service, please provide the status information displayed on this page as a basis for judgment, as shown in the following table:

Status Information

Stepper Info	Display the information status of all motors and signals in the lamp	
	Hall	No display, it means that the motor has no Hall calibration, 0 means that the motor has left the calibration position, 1 means that the motor is at the calibration position
	state	Display the completion status of the motor reset
	X axis	Display the real-time position value of the X-axis optocoupler feedback
	Y axis	Display the real-time position value of Y-axis optocoupler feedback
	Optocoupler	Display the level status of the two signals of the X and Y axis optocouplers, binary
Error Logging	Display the latest 8 fault records when the lamp is reset and running	
	Failure data	The total number of faults detected after power-on
	12：:03	Power-on time when the fault occurs, in minutes
	Hall failure	Corresponding to the motor did not detect a valid Hall signal when the motor was reset
	Hall short circuit	Corresponding to the detection of the motor's Hall signal when the motor is reset, it is always valid

	Optocoupler failure	No valid optocoupler signal is detected when the corresponding motor is reset
	Out of step	Corresponding motor loses step during operation
	Bump	Corresponding to hit the positioning rod when the motor is reset
	Lamp failure	The light bulb has been blown out unexpectedly
	Sensor failure	The temperature sensor signal is abnormal,
	Fan failure	The main fan is not working properly
Fixture status	Display the key status data of the current luminaire for reference	
	Communication	0~100%, the communication quality of the internal data link of the lamp
	Error count	The total number of error frames detected after power-on, accumulated
	Light source temperature	Display the current temperature of the light source, "---" means no detection
	Display board temperature	Display the temperature of the current display board or the ambient temperature nearby
	Sensor 1 temperature	Display the current motherboard temperature or the ambient temperature of the motherboard installation location
Version	Display the current lamp information and version, an important reference for after-sales maintenance	
	equipment	The name of the lamp, the same as the device information of RDM
	model	Lamp model, same as RDM model information
	display board	Display the firmware version and serial number of the board
	Motherboard 1	Firmware version and serial number of motherboard 1
Light time	Record the total cumulative time when the light source is turned on, the unit is minute, and the user can manually clear it as a time reference for regular maintenance of the light source	
Total time	Record the total cumulative time the lamps are turned on, in minutes, cannot be cleared	

Channel description

Channel	Channel	Function	Value	Description
CH1	CH1	Color	0-4	White
			5-8	White + Color 1
			9-12	Color 1
			13-17	Color 1 + Color 2
			18-21	Color 2
			22-25	Color 2 + Color 3
			26-29	Color 3
			30-34	Color 3 + Color 4
			35-38	Color 4
			39-42	Color 4 + Color 5
			43-46	Color 5
			47-51	Color 5 + Color 6
			52-55	Color 6

			56-59	Color 6 + Color 7
			60-63	Color 7
			64-68	Color 7 + Color 8
			69-72	Color 8
			73-76	Color 8 + Color 9
			77-81	Color 9
			82-85	Color 9 + Color 10
			86-89	Color 10
			90-93	Color 10 + Color 11
			94-98	Color 11
			99-102	Color 11 + Color 12
			103-106	Color 12
			107-110	Color 12 + Color13
			111-115	Color 13
			116-119	Color 13 + Color 14
			120-123	Color 14
			124-127	Color 14 + white
			128-255	Positive flow from fast to slow
CH2	CH2	strobe	0-3	close
			4-103	Strobe from slow to fast
			104-107	open
			108-207	Pulse strobe from slow to fast
			208-212	open
			213-251	Random strobe from slow to fast
			252-255	open
CH3	CH3	Dimmer	0-255	0-100% dimmer
CH4	CH4	Gobo	0-3	white
			4-7	Gobo 1
			8-11	Gobo 2
			12-15	Gobo 3
			16-19	Gobo 4
			20-23	Gobo 5
			24-27	Gobo 6
			28-31	Gobo 7
			32-35	Gobo 8
			36-39	Gobo 9
			40-43	Gobo 10
			44-47	Gobo 11
			48-51	Gobo 12
			52-55	Gobo 13
			56-59	Gobo 14
			60-63	Gobo 15
			64-67	Gobo 16
			68-71	Gobo 17
			72-113	Positive flow from fast to slow

			114-117	Stop rotation
			118-159	Reverse flow from slow to fast
			160-166	Gobo 2 shake
			167-172	Gobo 3 shake
			173-179	Gobo 4 shake
			180-185	Gobo 5 shake
			186-191	Gobo 6 shake
			192-198	Gobo 7 shake
			199-204	Gobo 8 shake
			205-211	Gobo 9 shake
			212-217	Gobo 10 shake
			218-223	Gobo 11 shake
			224-230	Gobo 12 shake
			231-236	Gobo 13 shake
			237-243	Gobo 14 shake
			244-249	Gobo 15 shake
			250-255	Gobo 16 shake
CH5	CH5	Prism	0-127	Remove prism
			128-255	Insert prism
CH6	CH6	Prism rotation	0-127	0-400 degree
			128-190	reverse flow from fast to slow
			191-192	stop
			123-255	Positive flow from slow to fast
CH7	CH7	Reserve	0-000	Reserve
CH8	CH8	Frost	0-255	0-100% insert Frost
CH9	CH9	Focus	0-255	From far to near
CH10	CH10	Pan	0-255	0-540 degree
CH11	CH11	Pan fine	0-255	
CH12	CH12	Tilt	0-255	0-270 degree
CH13	CH13	Tilt fine	0-255	
CH14	CH14	Reserve	0-000	Reserve
CH15	CH15	Reset	0-127	No
			128-255	Reset (more than 3 seconds)
CH16	CH16	Lamp control	0-25	No
			26-100	Turn off lamp (more than 3 seconds)

			101-255	Turn on lamp (more than 3 seconds)
	CH17	XY Speed	0-255	From fast to slow
	CH18	Color speed	0-255	From fast to slow
	CH19	Focus speed	0-255	From fast to slow
	CH20	Gobo speed	0-255	From fast to slow

Common Faults and Cautions for Use

1. Common troubleshooting

The lamp contains professional components such as microcomputer circuit board and high-voltage power supply. For your safety and product life, non-professionals should not disassemble the lamp and related accessories without authorization.

1/The bulb does not light up (except LED light source)

Possible cause: The bulb is not completely cooled, or the bulb has reached the end of its life, the treatment is as follows:

Due to abnormal operation, the bulb has not been completely cooled, so let the lamp body cool for more than 10 minutes to make the interior completely return to normal state, and then turn on the power again;

Check whether the bulb has reached the end of its service life, and replace it with a new one;

Check whether the bulb and the lighter circuit are leaking, falling off or having poor contact;

Replace with a new lighter.

2/The light beam appears dim

Possible cause: The lamp has been used for a long time or the light path is not clean. The treatment is as follows:

Check whether the bulb has reached the end of its service life, and replace it with a new one;

Check whether the optical components or bulbs are clean, and whether there is dust on the bulbs and other optical components. Regular cleaning and maintenance of the bulbs and components in the lamps are required.

3/ Blurred pattern projection

Check whether the electronic focus channel value is suitable for the current projection distance.

4/The lamps work intermittently

Possible cause: The internal circuit enters the protection state, and the processing is as follows:

Check whether the fan is operating normally or whether it is dirty, causing the internal temperature of the lamp to rise;

Check whether the internal temperature control switch is in the closed state;

Check whether the bulb has reached the end of its service life, and replace it with a new one.

5/After the lamp is reset normally, it does not accept the control of the console

Possible cause: The signal line is faulty or the lamp parameter setting is not normal, the treatment is as follows:

Check the start address code and check the connection of the DMX signal line (whether the signal line cable is intact, and whether the connection of the Deng Nong head is loose);

Add signal amplifier and 120 ohm terminal resistance;

6/The lamps cannot be started

Possible reason: bad power line, the treatment is as follows:

Check whether the fuse on the power input socket is fused, and replace the fuse;

Lamps have poor line contact due to vibration during long-distance transportation

Check the input power, computer board and other plug-in devices.

2. Precautions for use

Check whether the local power supply meets the rated voltage requirements of the product, and the leakage protector and overcurrent protector meet the requirements of the load;

Do not use power cords with damaged insulation, and do not overlap power cords with other wires;

The lamp adopts strong air cooling, which is easy to accumulate dust. It must be cleaned once a month, especially the heat dissipation vent, otherwise it will be blocked by the accumulation of dust, resulting in poor heat dissipation
and abnormalities in the lamp.

When installing the lamp, the fixing screws must be fastened, with safety cables, and regular inspections;

When installing and positioning the luminaire, keep a minimum distance of 10 meters between any point on the surface of the luminaire and any flammable and explosive object, and the distance from the irradiated object is 2.5 meters. Please do not install the luminaire directly on the surface of combustible materials;

It is recommended that the continuous working time of the lamp should not exceed 10 hours, and the interval between continuous starting of the lamp should not be less than 10 minutes, otherwise it will not be triggered normally due to the overheating protection of the lamp;

The closing time using the on-off valve should not exceed 5 minutes. If you need to close the light for a long time, you should use the console (lighting control channel) to turn off the light;

In order to ensure that multiple lamps can better comply with the scene effect, the lamps should not be in the unfinished current scene all the time, that is, start the next scene action. It is best not to exceed 3 minutes in this state to ensure that multiple lamps can run simultaneously;

During use, if the lamp is abnormal, stop using the lamp in time to prevent other malfunctions.

3. Precautions for the use of RDM

RDM is an extended version of the DMX512-A protocol. It is a remote device management (Remote Device Management) protocol. The traditional DMX512 protocol communication is one-way communication. The protocol is based on the RS-485 bus. RS-485 is a time-sharing multipoint, half-duplex protocol. , Only one port is allowed to output from the host at the same time, so, pay attention to the following points when using RDM:

Use a console or host device that supports the RDM protocol host;

To use a two-way signal amplifier, the traditional one-way signal amplifier is not applicable to the RDM protocol, because the RMD protocol requires feedback data, and the use of a one-way amplifier will block the returned data, resulting in the failure to search for the lamps;

The lamp must be set to DMX mode to ensure that there is only one host on the signal line;

A 120ohm impedance matching resistor must be inserted between terminals 2 and 3 of the terminal plug. When the signal line is relatively long, the use of differential signals is more stable and beneficial, which is beneficial to the quality of communication;

When it appears that the lamp accepts DMX control, but cannot search for the lamp by RDM, first check the signal amplifier, and then check whether there is a bad connection between the 2 and 3 lines of the signal line

REMARK

The product has perfect performance and intergrity packing.
All users should be strictly comply with the warning and operating instructions as stated.
Or we aren ’t in charge of any result by misusing.
Any damage resulting by misuse is not within the Company ’s warranty.
Any fault or problem caused by neglecting the manual is also not in the charge of dealers.
Errors and omissions for every information given in this manual excepted.
All information is subject to change without prior notice.