# MODEL SPECIFIC OPERATIONAL MANUAL

## KVANT 600 PRESTIGE BEAM

KVANT®

www.kvantlasers.sk

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# 1 INTRODUCTION

**Thank you for purchasing this KVANT product.**

To ensure proper operation, please read this manual carefully before using the product.
After reading it, keep it in a safe place for future reference.

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# 2 SAFETY & WARNINGS

Before a projector's installation, power-on, operation and maintenance, please carefully read the safety information hereinafter!

## Warning

- When unpacking, check if there is transportation damage before using a projector. Should there be any damage caused by transportation, consult your dealer and do not use it.
- The manufacturer is not responsible for any loss caused by the user not following the manual or changing a projector as he/she likes.
- Please be noted that the damage caused by changing a projector at will is not warranted.
- Do not hesitate to contact the dealer or the manufacturer if any questions or advice.
- If a lamp is damaged or deforms because of heat, it should be replaced.( It applies only to traditional lamps)
- There are safety cord holes at the bottom of the base of a projector. In view of safety, please run the safety cord supplied through the safety cord holes for safety support.
- Before any installation, maintenance and cleaning work, please ensure a projector is disconnected from power mains.


## User Manual

- The projector is for indoor and outdoor use, IP66.
- It can be used in humid and dusty areas. And it can contact water and other non-corrosive liquids.
- The projector should be kept away from high temperature, fire, electrical surge, vibration and strong light while being operated
- The projector is only intended for installation, operation and maintenance by qualified personnel. And the operation must strictly follow the procedures in the manual
- No repairable parts in the projector and do not open covers for maintenance by yourself.

## Goggles

- Don't look straightly into the light sources especially for epileptics, otherwise eyes will be burned.
- Do not connect a projector to any type of dimmer pack.
- If the lamp, lens and screen protective cover of the a projector have obvious damage, i.e., to the extent that it hurts the performance like cracking or deformation. Please stop using it and replace them with the original parts, otherwise its performance will be compromised.
- For the installation location of a projector, it shouldn't be seen in the distance of less than 4 meters for a long time.

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## Protective gloves

- Before operation, please confirm that all covers (housing) are on and screws tightened. It's forbidden to use a projector while covers (housing)are off.
- Keep the lamp clean and do not touch it with bare hands.
- While operating it, wear protective items like eye goggles, gloves and etc..

## Electrical shock

- Any electrical connection must be carried out by a qualified person.
- Before installation, please confirm the voltage supplied matches what is required for a projector.
- Each projector must be properly earthed and installed as per related electrical standards.
- Do not use power cord with its insulator damaged and connect the power cord with other cables.
- If a projector is not used or under cleaning, please hold the plug and unplug it. Do not unplug it forcefully or by pulling the power cable.
- All power cords must conform to related safety and regulations.
- If a projector is not water and dust proof, while being operated it should not be under rains or in humidity to avoid short circuit.
- Do not switch on and off a projector constantly in very short intervals, otherwise the light source's and other electrical parts' life will be shortened.

## High temperature

- While running normally under normal ambient temperature, the temperature of the external surface of the metal housing of a projector including that of the heat sink may reach 75°C at maximum.
- While the lamp is stricken for the first time, there will be smoke and strange smell. It's normal and does not mean a projector has some defects.
- While it running, don't touch the metal housing to avoid being burned!

## Flames

- Do not mount a projector directly on inflammable surface.
- Do not project the beam straightly on combustible items and the minimum distance between a projector and illuminated items is 18m.
- A projector should be installed with good ventilation and the minimum distance between a projector and a wall is 50cm.At the same time, please ensure the fans and air inlets and outlets are workable.
- Do not let the front lens under sunlight or other strong light sources at any angle, otherwise the danger of fire can be caused by the focused beam by the lens inside a projector.

## Compliance and Disposal Guidelines

- The product meets The General Technical Requirements and Standards for Recycle and Use Of Expired Appliance and Electronic Products.
- When the product meets disposal standards and needs to be disposed, a client needs to dispose and recycle it.

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# 3 INSTRUCTIONS

## Cleaning and Maintenance

Under normal running, the protective units of a projector should be inspected regularly like power fuse. If it is burned, please install a new one and ensure it is the same rating as the burned one. For a projector with an over-temperature protective unit, please inspect cooling units regularly like cooling fans, heat sink and other cooling parts. Please check if the fans run normally or fans and air inlets are blocked by dust. To keep air inlets /outlets clean, cooling fans should be cleaned every 15days.

For projectors with lens, reflectors and coated filters, the accumulation of oil, smoke and dust on them will compromise the light output. Cleaning a projector is very necessary to ensure a reliable use. Internal and external lens, flat glass, reflector and coated filters need to be cleaned periodically to optimize light output.

Cleaning frequency is to be decided by operations and its environment. Use soft cloth and normal detergent for glass for cleaning work. It's advised external optical system be cleaned every 20days and internal optical systems every 30/60days. For a projector with high IP rating, if no damage inside, it is advised to clean the surfaces of its housing in principle. Keep lens clean and do not touch optical parts with bare hands.

> It's normal phenomena that there will be mild water mist on the lens while the waterproof product is in use.

- Before any maintenance and cleaning, please ensure a project is off the power.
- Only a qualified person is allowed to do maintenance.
- To avoid sunlight or other light penetrating into the head via the front lens, resulting in high temperature internally causing damages to a projector. Before power-off, please use Tilt channel to move the head and make the head facing downward.
- Do not use alcohol or other organic solvent to clean the housing to avoid damage.
- Do not use any solvent with chemical elements to clean coated filters.

## Lubrication

To ensure smooth movement of gobos and zoom and focus lens, it's advised rotators' bearings and 2 sliding bars for zoom and focus lens be lubricated every 2 months. High quality and high temperature lubricant/grease is advised.

## Troubleshooting

**Problem**: A projector doesn't switch on.
**Action**: Check the fuse on the power socket. Check the lamp.

**Problem**: The lamp is on but a projector doesn't respond to the controller.
**Action**: Make sure that the fixture's start address is right. Replace or repair the XLR signal cable.

**Problem**: A projector functions intermittently.
**Action**: Make sure the fan is working well or fans and their shields are not blocked.

**Problem**: Beam appears dim, Low in brightness.
**Action**: Make sure the lamp is within its lifespan. Remove dust or grease from the lenses.

**Problem**: The project image appears to have a halo.
**Action**: Carefully clean the lamp, optical lenses and other components.

**Problem**: Heavily Defective Beam.
**Action**: Check if lens are in good condition(not cracked). Clean dust or grease on the lens.

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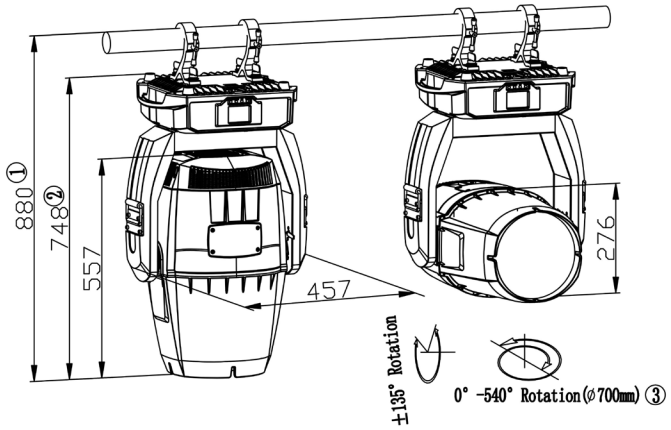
# 4 INSTALLATION

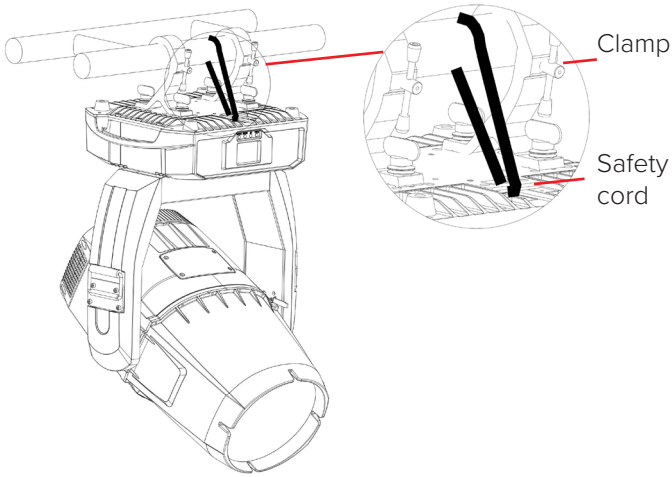
## Rigging

Before moving a projector, Please lock Pan and Tilt. Before its operation, please unlock them. It's forbidden to run a projector with power while it is locked.




Remarks:

1. The distance between the top of the mounting bar and the top of the head;
2. The Distance between the top of the feet and the top the head;
3. The head's rotating diameter (the minimum distance between 2 neighboring projectors on the truss).




For safety, please run the safety cord through its hole.

Take 2 clamps and the safety cord out from the package and mount 2 clamps on the underside of fixture with 2 retainers attached to each clamp. Hang the fixture on the structure and fasten the screws attached to each clamp. (See the WARNING on the underside of the base as shown above). **Pass the SAFETY CORD through the HOLES for safety!** Always ensure that the projector is firmly anchored to avoid vibration and slipping whilst functioning. Always ensure that the structure that you are going to mount the projector to is secure and strong enough to support the weight of a XR 1000 Framing.

The projector MUST be lifted or carried by the HANDLES instead of clamps.
For safety the safety cord should afford 10 times the Projector's weight.

## Power connection

Connect the power cord as follows:

L (live) =brown
E (earth) =yellow/green
N (neutral) =blue

Before power connection, please ensure the power supplied must match what the nameplate says. It is recommended that each projector be connected with power separately so that they may be individually switched on and off.

The earth wire(yellow/green) must be connected to the ground. And electrical connection must be in accordance with the standards concerned.
If any questions about the electrical installation, do not continue but consult a qualified electrician.

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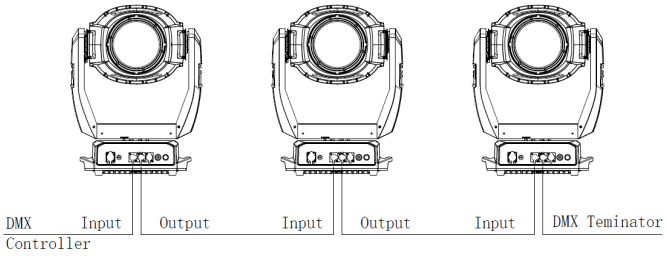
## DMX control connection

Connection between controller and projector and between one projector and another must be made with a twin-screened cable, with each wire having at least a 0.5mm in diameter. Connection to and from the projector is via cannon 5 pin (which are included with the projector) or 5 pin XLR plugs and sockets. The XLR's are connected as shown in the figure above.

> care should be taken to ensure that none of the pins touch the metallic body of the plug or each other. XLR plugs and sockets mustn't be connected in any way other than mentioned in the above figure. The Fixture accepts digital control signals in protocol DMX512 (1990).

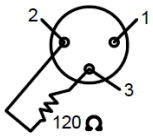
Connect the controller's DMX output to the first fixture's DMX input, and connect the first fixture's DMX output to the second fixture's DMX input and connect the rest fixtures in the same way. Eventually connect the last fixture's DMX output to a DMX terminator as shown in the figure below.




## DMX terminator

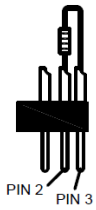
In the Controller mode, at the last fixture in the chain, the DMX output has to be connected with a DMX terminator. This prevents electrical noise from disturbing and corrupting the DMX control signals.

The DMX terminator is simply an XLR connector with a 120Ω (ohm) resistor connected across pins 2 and 3, which is then plugged into the output socket on the last projector in the chain. The connections are illustrated below.




DMX TERMINATOR CONNECTION

Connect a 120Ω(OHM) resistor across pins 2 and 3 in an XLR plug and insert into the DMX out socket on the last unit in the chain.

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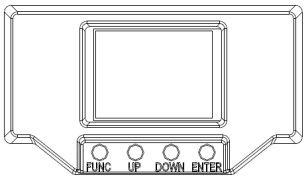
# SETUP AND CONFIGURATION

## Front panel operation




To browse through or change the projector 's settings, press ENTER key for more than 3s(press ENTER key after power on) to unlock the screen , then press UP/DOWN key to enter the projector 's function menus. Each main menu has its sub-menus. And each menu stands for special function. For the details, please see the following 6th point "Operation Menu".:

1. At the page to set the fixture's functions, press UP or DOWN key to select the functions desired.
2. While menu operations, the FUNC key to escape, and ENTER key is used to confirm. Press ENTER key to save the changes or enter into the sub menus. Press UP or DOWN key to change the numbers(minus or plus).

Press FUNC key to go to the uppler menu. If no key is pushed, the system will go back to initial status automatically.

## DMX start address

Each projector must be given a DMX start address so that the correct projector responds to the correct control signals. This DMX start address is the channel number from which the projector starts to "listen" to the digital control information being sent out from the controller. The device uses 2 DMX modes. For proper operation, the DMX mode must be selected on the switch: Standard Mode 17CH, Extend mode 18CH.

To control the brightness of the fixture, use the first 3 DMX addresses.

Switch on the Projector. Press ENTER key more than 3 seconds to unlock panel, then press UP or DOWN key to enter into the fixture's operation menus.

Select DMX Address icon and press ENTER key on the display and select DMX address at the 2nd level menu for the address setting.

Press UP or DOWN key for the DMX address desired.
Press ENTER key to confirm.
Press the FUNC key to go back to the upper level menu.

## DMX protocol function

| | Control |
|---|---|
| Strobe | R_Dimmer (0-100%) (000-255) |
| Dimmer | G_Dimmer (0-100%) (000-255) |
| Dimmer Fine | B_Dimmer (0-100%) (000-255) |

## Stand-alone mode

Operate the projector without connecting with a controller, enable the master mode through the operation panel, the projector will run in Stand-Alone mode automatically.

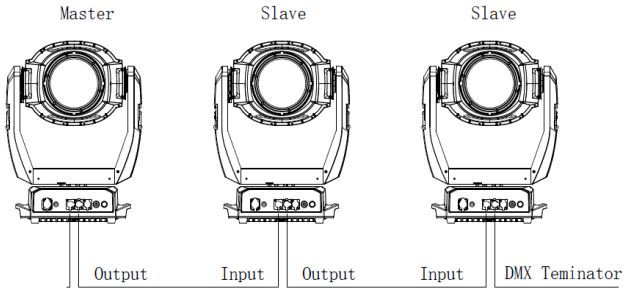
DMX address can be set at any number within 512.

## Master/slave mode

Many projectors can run synchronously in the Master/Slave mode by linking them with each other. First, connect the first fixture's DMX output to the second fixture's DMX input using XLR-XLR control cable and then connect the second fixture's DMX output to the third fixture's DMX input, and so on until all projector are connected in this way. Eventually connect the last fixture's DMX output to a DMX terminator. Set 1st projector as the master and others are Slaves.

Start Addresses of all Slaves are 001; Operation mode of the Master can be set any mode for a Master' and Slaves' operation mode can be set accordingly.

After Powered on, the group will run in Master/Slave Mode

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# 6 OPERATION MENU

| 1st LEVEL | 2nd LEVEL | 3rd LEVEL | 4th LEVEL | 5th LEVEL |
|---|---|---|---|---|
| Address | DMX Address | 1-498(Short Mode)<br>1-496(Standard Mode)<br>1-495(Extend Mode) | | |
| | IP Address | Default IP Address<br>Custom IPAddress | 2.X.X.X /10.X.X.X<br>X.X.X.X | |
| | SubNet Mask | X.X.X.X | | |
| | ArtNet<br>ArtNet Universe | 0-255 | | |
| | sACN Universe | 1-63999 | | |
| Reset | Total Reset | Really Reset?<br>Confirm or Cancel | | |
| | Pan&Tilt Reset | Really Reset?<br>Confirm or Cancel | | |
| | Colour System Reset | Really Reset?<br>Confirm or Cancel | | |
| | Gobo Reset | Really Reset?<br>Confirm or Cancel | | |
| | Fo. Pr. Reset | Really Reset?<br>Confirm or Cancel | | |
| Config Settings | DMX Channel Mode | Standard Mode 17CH | | |
| | | Extended Mode 18CH | | |
| | | View Selected Mode | Ch.01 Strobe<br>Ch.02 Dimmer<br>...<br>Ch. XX control function | |
| | Signal Select<br>(Only for fixtures with wireless control) | XLR Only | | |
| | | XLR First | | |
| | | Wireless Only | | |
| | | Wireless First | | |
| | | Wireless In/XLR Out | | |
| | | Artnet Only | | |
| | | Artnet In/XLR Out | | |
| | | sACN only | | |
| | | sACN/XLR | | |
| | Loss of DMX | Normal time out | | |

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| 1st LEVEL | 2nd LEVEL | 3rd LEVEL | 4th LEVEL | 5th LEVEL |
|---|---|---|---|---|
| | | Hold Last Value | | |
| | Display Config | Display Mode | Off After Delay | |
| | | | OnAlways | |
| | | Display Invert | Invert OFF | |
| | | | Invert ON | |
| | | | Invert Auto | |
| | | Language Setting | English\Chinese | |
| | Temperature Unit | Celsius Degree | | |
| | | Fahrenheit Degree | | |
| | Un-LinkWireless (Only for fixtures with wireless control) | Really Un-Link? Confirm or Cancel | | |
| | Factory Defaults | Restore Defaults? Confirm or Cancel | | |
| Option Settings | Pan/Tilt Settings | Pan DMX Invert | OFF/ ON | |
| | | Tilt DMX Invert | OFF/ ON | |
| | | Pan Tilt Swap | OFF/ ON | |
| | | XYFeedback | OFF/ ON | |
| | | Pan/Tilt mode | Speed/Time | Note: "Speed Mode" means Pan and Tilt will move from Point A to Point B at their respective maximum speeds. "Time Mode" means both Pan and Tilt will arrive at designated point at the same time. It's advised Time Mode be used if the projector runs circles or in oblique lines. |
| | Dimmer Settings | Dimmer Speed | Fast/Medium/Slow Speed | |
| | View DMX Values | Channel Value<br>Strobe XXX<br>Dimmer XXX<br>Dimmer Fine XXX<br>Color Wheel XXX<br>FixedGoboWheel XXX<br>Prism 1 XXX<br>Prism 1 Rotation XXX<br>Prism 2 XXX<br>Prism 2 Rotation XXX<br>Focus XXX<br>Pan XXX<br>Tilt XXX<br>ControlFunction XXX | | |
| | Display Config | Lamp Hous=XXX H<br>Reset Lamp Hours | | |
| | Total Hours | Total Hours ×××× H | | |

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| 1st LEVEL | 2nd LEVEL | 3rd LEVEL | 4th LEVEL | 5th LEVEL |
|---|---|---|---|---|
| Information | Temperature | Display Board=×××C<br>Panboard=×××C<br>Tiltboard=×××C<br>Motordriver board1=×××C<br>Motordriver board2=×××C<br>Light source driverboard =×××C<br>Light source=×××C | | |
| | Software Version | Display Board xxx xxx<br>Panboard xxx xxx<br>Tiltboard xxx xxx<br>Motordriverboard xxx xxx<br>Light source driver board xxx xxx | | |
| | Electronic SN | XXXXXX | | |
| | RDM Device Label | ANSI E1.20 RDM | | |
| | Fan Status | Fan Speed RSpeed<br>Base fan xxx on/off<br>Lens fan xxx on/off<br>Head fan xxx on/off<br>Lightsourcefanxxx on/off | | |
| | Lamp Fan Error | Base fan xxx<br>Lens fan xxx<br>Head fan xxx<br>Lightsource fan xxx | | |
| Service | Manual Effect Control | Channel Value<br>Strobe XXX<br>Dimmer XXX<br>Color Wheel XXX<br>FixedGobo Wheel XXX<br>Prism1 XXX<br>Prism 1 Rotation XXX<br>Prism 2 XXX<br>Prism 2 Rotation XXX<br>Focus XXX<br>Pan XXX<br>Tilt XXX | | |
| | Factory Mode | XXX | | |
| Operation Mode | Electronic SN | Change Operation Mode?<br>Confirm or Cancel | | |
| | Master Mode | Preset Memory | Change Operation Mode?<br>Confirm or Cancel | |
| | | User Memory 1 | Change Operation Mode?<br>Confirm or Cancel | |
| | | User Memory 2 | Change Operation Mode?<br>Confirm or Cancel | |
| | Stand-Alone Mode | Preset Memory | Change Operation Mode?<br>Confirm or Cancel | |
| | | User Memory 1 | Change Operation Mode?<br>Confirm or Cancel | |
| | | User Memory 2 | Change Operation Mode?<br>Confirm or Cancel | |
| | Static Scene | Change Operation Mode?<br>Confirm or Cancel | | |

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| 1st LEVEL | 2nd LEVEL | 3rd LEVEL | 4th LEVEL | 5th LEVEL |
|---|---|---|---|---|
| User Memories | Edit User Memory | Edit User Memory 1/ Edit User Memory 2 | (1~200Scenes)<br>Scene XX<br>(1~200 Scenes) | Strobe XXX<br>Dimmer XXX<br>ColorWheel XXX<br>FixedGoboWheel XXX<br>Rot.Gobo Wheel XXX<br>Prism1 XXX<br>Prism1 Rotation XXX<br>Prism2 XXX<br>Prism2Rotation XXX<br>Focus XXX<br>Pan XXX<br>Tilt XXX<br>Hold time XXX<br>Delay Time XXX<br>Delaytimeunit ms/s/m<br>LinktoStep XXX |
| | | Edit Static Scene | Paste?<br>Confirm or Cancel | Strobe XXX<br>Dimmer XXX<br>ColorWheel XXX<br>FixedGoboWheel XXX<br>Rot.GoboWheel XXX<br>Prism1 XXX<br>Prism1Rotation XXX<br>Prism2 XXX<br>Prism2Rotation XXX<br>Focus XXX<br>Pan XXX<br>Tilt XXX |
| | Init User Memory | Reset User Memory 1 | Reset User Memory?<br>Confirm or Cancel | |
| | | Reset User Memory 2 | Reset User Memory?<br>Confirm or Cancel | |
| | | Reset Static Scene | Reset Static Scene?<br>Confirm or Cancel | |

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# 7 DMX PROTOCOL

| Standard Mode S | Standard Mode S | Extended Mode E | FUNCTION | DMX | DESCRIPTION |
|---|---|---|---|---|---|
| 1 | 1 | 1 | Strobe | 000 | Close |
| | | | | 001-255 | Strobe speed from slow to fast |
| 2 | 2 | 2 | Dimmer | 000-255 | Linear dimming (0-100%) |
| | 3 | 3 | Dimmer Fine | 000-255 | Dimmer in 16 bit |
| 3 | 4 | 4 | Red | 000-255 | Linear Red |
| | 5 | 5 | Red Fine | 000-255 | Red in 16 bit |
| 4 | 6 | 6 | Green | 000-255 | Linear Green |
| | 7 | 7 | Green Fine | 000-255 | Green in 16 bit |
| 5 | 8 | 8 | Blue | 000-255 | Linear Blue |
| | 9 | 9 | Blue Fine | 000-255 | Blue in 16 bit |
| 6 | 10 | 10 | Fixed Gobo Wheel | 0-11 | Gobo1 |
| | | | | 12-15 | Gobo2 |
| | | | | 16-19 | Gobo3 |
| | | | | 20-23 | Gobo4 |
| | | | | 24-27 | Gobo5 |
| | | | | 28-31 | Gobo6 |
| | | | | 32-35 | Gobo7 |
| | | | | 36-39 | Gobo8 |
| | | | | 40-43 | Gobo9 |
| | | | | 44-47 | Gobo10 |
| | | | | 48-51 | Gobo11 |
| | | | | 52-55 | Gobo12 |
| | | | | 56-59 | Gobo13 |
| | | | | 60-63 | Gobo14 |
| | | | | 64-67 | Gobo15 |
| | | | | 68-71 | Gobo16 |
| | | | | 72-75 | Gobo17 |
| | | | | 76-79 | Gobo18 |
| | | | | 80-83 | Gobo19 |
| | | | | 84-87 | Gobo20 |
| | | | | 88-91 | Gobo21 |
| | | | | 92-95 | Gobo22 |
| | | | | 96-99 | Gobo23 |
| | | | | 100-103 | Gobo24 |
| | | | | 104-107 | Gobo25 |
| | | | | 108-111 | Gobo26 |
| | | | | 112-115 | Gobo27 |
| | | | | 116-119 | Gobo28 |
| | | | | 120-123 | Gobo29 |
| | | | | 124-127 | Gobo30 |
| | | | | 128-149 | Clockwise rotation from slow to fast |
| | | | | 150-171 | Anti Clockwise rotation from slow to fast |

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| Standard Mode S | Standard Mode S | Extended Mode E | FUNCTION | DMX | DESCRIPTION |
|---|---|---|---|---|---|
| 6 | 10 | 10 | Fixed Gobo Wheel | 172-174 | Shake effect 1 from slow to fast |
| | | | | 175-177 | Shake effect 2 from slow to fast |
| | | | | 178-180 | Shake effect 3 from slow to fast |
| | | | | 181-183 | Shake effect 4 from slow to fast |
| | | | | 184-186 | Shake effect 5 from slow to fast |
| | | | | 187-189 | Shake effect 6 from slow to fast |
| | | | | 190-192 | Shake effect 7 from slow to fast |
| | | | | 193-195 | Shake effect 8 from slow to fast |
| | | | | 196-198 | Shake effect 9 from slow to fast |
| | | | | 199-201 | Shake effect 10 from slow to fast |
| | | | | 202-204 | Shake effect 11 from slow to fast |
| | | | | 205-207 | Shake effect 12 from slow to fast |
| | | | | 208-210 | Shake effect 13 from slow to fast |
| | | | | 211-213 | Shake effect 14 from slow to fast |
| | | | | 214-216 | Shake effect 15 from slow to fast |
| | | | | 217-219 | Shake effect 16 from slow to fast |
| | | | | 220-222 | Shake effect 17 from slow to fast |
| | | | | 223-225 | Shake effect 18 from slow to fast |
| | | | | 226-228 | Shake effect 19 from slow to fast |
| | | | | 229-231 | Shake effect 20 from slow to fast |
| | | | | 232-234 | Shake effect 21 from slow to fast |
| | | | | 235-237 | Shake effect 22 from slow to fast |
| | | | | 238-240 | Shake effect 23 from slow to fast |
| | | | | 241-243 | Shake effect 24 from slow to fast |
| | | | | 244-246 | Shake effect 25 from slow to fast |
| | | | | 247-249 | Shake effect 26 from slow to fast |
| | | | | 250-252 | Shake effect 27 from slow to fast |
| | | | | 253-255 | Shake effect 28 from slow to fast |

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| Standard Mode S | Standard Mode S | Extended Mode E | FUNCTION | DMX | DESCRIPTION |
|---|---|---|---|---|---|
| 7 | 11 | 11 | Prism 1 | 000-016 | Open |
| | | | | 017-127 | Prism1 |
| | | | | 128-255 | Prism2 |
| 8 | 12 | 12 | Prism 1 Rotation | 000-127 | Prism Indexing |
| | | | | 128 | Stop |
| | | | | 129-191 | Rotation (Clockwise from slow to fast) |
| | | | | 192 | Open |
| | | | | 193-255 | Rotation (Anti- Clockwise from slow to fast) |
| 9 | 13 | 13 | Prism 2 | 000-016 | White |
| | | | | 017-127 | Prism3 |
| | | | | 128-255 | Frost in |
| 10 | 14 | 14 | Prism 2 Rotation | 000-127 | Prism2 Indexing |
| | | | | 128 | Stop |
| | | | | 129-191 | Rotation (Clockwise from slow to fast) |
| | | | | 192 | Open |
| | | | | 193-255 | Rotation (Anti- Clockwise from slow to fast) |
| 11 | 15 | 15 | Focus | 000-255 | Linear focus |
| | | 15 | Focus Fine | 000-255 | Focus in 16 bit precision |
| 12 | 16 | 17 | Pan | 000-255 | Pan (0°~540°) |
| 13 | 17 | 18 | Pan Fine | 000-255 | Pan in 16 bit |
| 14 | 18 | 19 | Tilt | 000-255 | Tilt (0°~270°) |
| 15 | 19 | 20 | Tilt Fine | 000-255 | Tilt in 16 bit |
| 16 | 20 | 21 | Pan & Tilt Speeds | 000-255 | Pan & Tilt Speed from Fast to Slow |
| 17 | 21 | 22 | Control | 000-019 | Reserved |
| | | | | Keep in the DMX range for more than 5S to activate the following functions. If power-off, the following are invalid. | |
| | | | | 020-024 | Graphic Display On |
| | | | | 025-029 | Graphic Display Off |
| | | | | 030-052 | Reserved |
| | | | | 053-054 | Diming speed fast |
| | | | | 055-056 | Diming speed medium |
| | | | | 057-058 | Diming speed slow |
| | | | | 059-089 | Reserved |
| | | | | 090-094 | Pan & Tilt Speed Mode |
| | | | | 095-099 | Pan & Tilt Time Mode |
| | | | | 100-139 | Reserved |
| | | | | 140-149 | Pan & Tilt Reset |
| | | | | 150-159 | Reserved |
| | | | | 160-169 | Gobo Wheel Reset |
| | | | | 170-179 | Dimmer/Shutter Reset |
| | | | | 180-189 | Focus/Prism Reset |
| | | | | 190-199 | Reserved |
| | | | | 200-209 | Total Reset |
| | | | | 210-255 | Reserved |

**Remarks:**

1. Fan error can cause lamp-off.
2. Note: “Speed Mode” means Pan and Tilt will move from Point A to Point B at their respective maximum speeds.”Time Mode” means both Pan and Tilt will arrive at designated point at the same time. It’s advised Time Mode be used if the projector runs circles or in oblique lines.

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# 8 ERROR MESSAGES

The system can detect some errors during the reset, if ⚠ displayed, touch ⚠ to view the error.

The error messages are as follows:

| NAME | TYPE | CORRECTION |
|---|---|---|
| Pan | Timeout/magnet Sensor/Encoder | Check if wiring, positioning parts and motors are normal |
| Tilt | Timeout/magnet Sensor/Encoder | Check if wiring, positioning parts and motors are normal |
| Fixed gobo wheel | Timeout | Check if wiring, positioning parts and motors are normal |
| Dimmer | Timeout | Check if wiring, positioning parts and motors are normal |
| Prism | Timeout | Check if wiring, positioning parts and motors are normal |
| Prism Rotation | Timeout | Check if wiring, positioning parts and motors are normal |
| Focus | Timeout | Check if wiring, positioning parts and motors are normal |
| Fan | Error | Check if fan and its wiring are normal |
| Pan Board | Error | Check signal wire |
| Tilt Board | Error | Check signal wire |
| Motor Driver Board | Error | Check signal wire |
| Light source driver board | | |
| Acceleration Sensor | Error | Check signal wire |
| Lamp on | Timeout | Check if the lamp is damaged |
| Lamp Life | Timeout Warning | |
| Lamp Off[Fan Error] | Error | Check if all fans are normal |
| Time IC | Error | |

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# 9 TECHNICAL SPECIFICATIONS

Please note that as part of our ongoing commitment to continuous product development, specifications are subject to change without notice. Whilst every care is taken in the preparation of the manual we reserve the right to change specifications in the course of product improvement. The publishers cannot be held responsible for the accuracy of the information herein, or any consequence arising from them.
Every unit is tested completely and packed properly by the manufacturer. Please make sure the packing and / or the unit are in good condition before installation and use. Should there be any damage caused by transportation, consult your dealer and do not use the unit. Any damage caused by improper use will not be assumed by the manufacturer and / or dealer.

# 9.1 TECHNICAL SPECIFICATION [KVANT 600 PRESTIGE BEAM]

## Device Information

| | |
|---|---|
| Model: | Kvant 600 Prestige Beam |
| Country of origin: | Slovakia (EU) |
| Warranty: | 12 months standard (up to 5 years on request) |

## Electric Parameters

| | |
|---|---|
| Input Voltage: | 100V~240V AC, 50/60Hz |
| Max Power Consumption: | 800 W @230VAC |
| Rated Current: | 3.48A @ 230V |
| Typical Current Draw (at 230 V AC): | 2,7A |
| Inrush Current (Peak): | 3,9A |
| Power Factor: | PF>0.9 |

## Light Sources

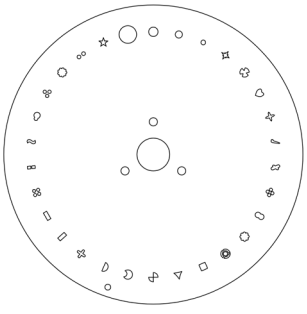
| | |
|---|---|
| Light Source Type: | Semiconductor laser diodes |
| Laser Light Sources: | 600W laser |
| Rated life: | 20 000 hrs |
| Input Voltage Range: | 100 - 240V AC 50/60Hz |
| Light Output (Lumens): | 34500lm |
| Source Life (L70): | 20000h |
| Laser Class: | Class 1 |
| Laser Safety Certificate: | RG3 IEC EN 62471-5:2015, CLASS 1 IEC EN 60825-1:2014 |

## Colors

| | |
|---|---|
| White Temperature: | Tunable white |
| Color Mixing: | Color change by RGB component mixing (not by absorbing filters) |
| Color Wheel: | No (Color change by RGB component mixing (not by absorbing filters)) |
| CTO / CTB Filters: | No (Color change by RGB component mixing (not by absorbing filters)) |
| UV / Special Colors: | 16 milion colors |
| Color Modes & Control: | Color change by RGB component mixing (not by absorbing filters) |

## Gobo Wheel

| | |
|---|---|
| 1 fixed gobo wheel: | 30 gobos+ open<br>Shakable at variable speeds and bi-directional rotation at variable speeds. |



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## Prism/Frost

| | |
|---|---|
| 3 prism wheels: | (a 8-facet circular prism+ a 4-facet linear prism)<br>+ (a 16-facet circular prism + a frost filter)<br>Other prism options available. |
| Frost / Diffusion: | Yes (on Prism2 Wheel) |

## Focus

| | |
|---|---|
| Focus: | DMX linear focus |

## Strobe/Dimmer

| | |
|---|---|
| Dimmer: | Yes (via DMX/ArtNet, other control options) |
| Linear dimmer: | 16 bit |
| Strobe: | 0.5 - 25 f.p.s. |

## Head Movements

| | |
|---|---|
| Pan Range: | 0°-540° |
| Tilt Range: | 0°-270° |
| Pan/Tilt Resolution: | 16bit |
| Pan/Tilt Speed: | 8bit (speed/time mode) |

## Beam Angle

| | |
|---|---|
| Beam Angle / Zoom Range: | 0.15 - 1.6° |
| Lens Diameter: | 220mm |

## Control

| | |
|---|---|
| Power Connections: | Neutrick power input connector, 5-pin XRL IN/OUT, RJ45 Ethernet |
| Follow-Spot Mode: | Yes |
| Local User Interface: | Yes (from the front panel) |
| Standalone Control: | Yes |
| RDM & Remote Management: | Yes |
| Operational Monitoring System: | RDM/Artnet, sACN |
| Firmware Update Method: | COM online, USB online, USB offline |

## Other Functions

| | |
|---|---|
| Positioning & Calibration: | Auto positioning correction/Calibration function |
| Anti-Shake Stabilization: | No |

## Housing and Ingress Protection

| | |
|---|---|
| Body Composition: | Cast aluminium and high temperature UV resistant ABS with IP66 |
| Body Finish: | Powder coating (Color up to request) |
| Cooling System: | Air cooled heat-pipe heat-sink |
| Cooling System Maintenance Interval: | 3 months or as needed |
| Battery For Menu/Settings: | No |
| Mounting & Rigging: | Yes (G clamps or custom brackets) |
| Environmental Protection: | IP66 |
| Salt Spray Testing: | on request |
| Certifications: | pending (EMC/LVD) |
| Sun Protection: | Cast aluminium and high temperature UV resistant ABS + powder coating |
| Recommended Maintenance Interval: | 60/90days, as needed |
| Future Maintenance Alert System: | RDM |

## Weight

| | |
|---|---|
| Weight (Fixture Only): | 38 kg |
| Weight (With Mounting Bracket): | 38+ |

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## Ambient Temperature

Operating Temperature: -20 °C ~ 45 °C

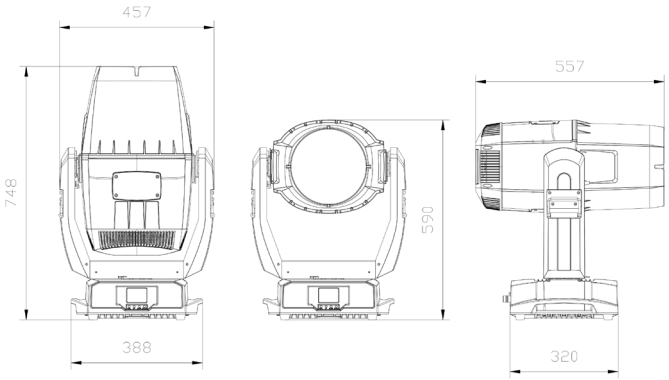
If a fixture runs with the ambient temperature below 0 Celsius, it should be heated for some time (less than 20 minutes based on actual conditions) before turning on the laser module.

## Sizes

Dimensions (W × D × H): 457x 557x 748mm (overall)

## Special Features

Color change by RGB component mixing (not by absorbing filters), Colors 16 milion, gobo wheel, prisms, dimmer/strobe function, DMX linear focus, pan and tilt speeds adjustable. Modular construction easy for maintenance.

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# 10 CONTACT INFORMATION

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