



**Professional Background Lift System
BLS 2.0
Pro Version
User's Manual**

ENGLISH

OVERVIEW

Thank you for purchasing Ventis professional background lift system BLS 2.0.
We put a lot of attention to make it easy to use, fast in operation and reliable.

The main features of your system are:

- Automatic background control
- Programable stop levels for each background
- Ultra fast background change
- Heavy duty - allows backgrounds up to 10 kg
- Motors with brass work gear improve motor life
- IR remote control
- Modular design - grows with your studio
- 2 years warranty
- Compatible with Manfrotto expan system
- Controls up to 10 backgrounds
- Enviromental friendly - RoHS directive compatible
- CE certified

PACKAGE INSPECTION

Please verify, that you received all ordered components and that none were damaged. If anything is missing or damaged, contact your Ventis distributor. Depending on your order you should receive a combination of following components:

- control box with remote control unit, holder and this manual
- several sets of motorised drives (each set is one motorised and one passive drive)
- one pair of holders
- power supply cable

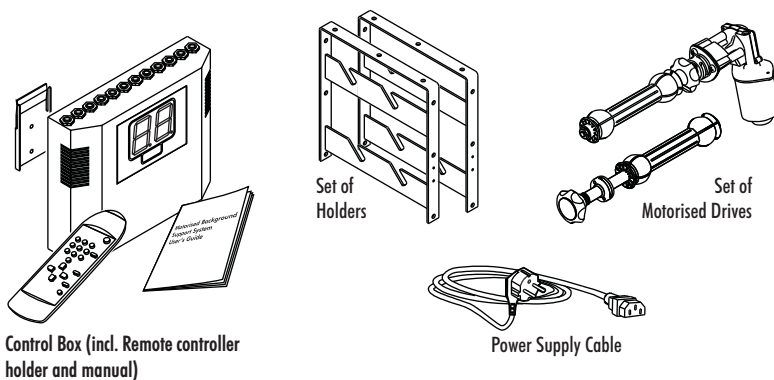


Fig. 1 System contents

GETTING STARTED

SYSTEM INSTALLATION

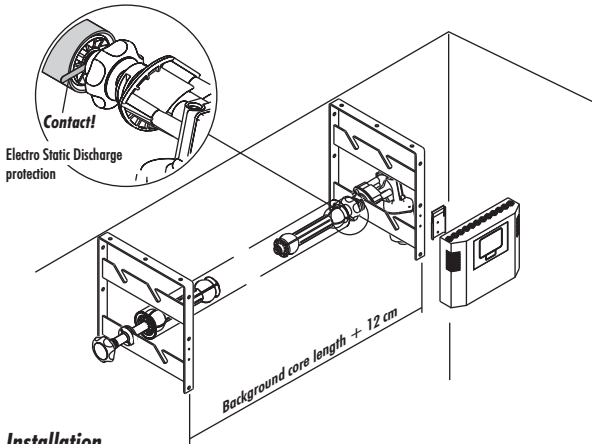


Fig. 2 Installation

FIX THE HOLDERS TO THE WALL OR TO THE CEILING

The distance between the holders depends on your background core length and should be 12 cm + the length. Remember to fix the holders as levelled as possible, otherwise the backgrounds will not be rolled straight - this may lead to background damage. Make sure to not exceed maximal specified load for each holder.



Always use screws designed for a specific wall or ceiling type. Make sure you do not exceed maximal screw load

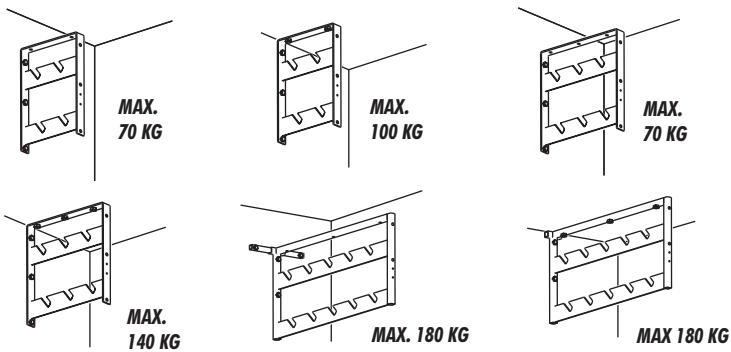


Fig. 3 Holder maximal load (load specified per pair of holders)

INSTALL BACKGROUNDS WITH DRIVES

Install backgrounds with supplied drives: put the expandable part of the drive into background core and lock it with the knob. Remember to not to exceed maximal specified load (see "Specifications"). Motorised drives should be installed at the same side as the control box.

IMPORTANT! The control box is equipped with electrostatic discharge protection system, which will work only if it is properly installed - the bronze electrostatic plate, found at the motorised drive knob, has to touch the background core (see fig. 2 Installation). Otherwise static electricity as high as 60.000 V may generate at the background core. Continuous, uncontrolled electrostatic discharges may be dangerous for the control box electronics, and may cause the control box to function in unexpected way.



Warning will be void, if the electrostatic protection not installed properly!

INSTALL THE CONTROL BOX

The control box may be fixed, to the wall (use appropriate screws) or onto the background holder with supplied screws. In either case use supplied holder. You can fix it, on the left or right hand side of the background system. Make sure the control box is off and connect the control box to the mains power supply with ordered power supply cable.

FIRST USE

- 1) Switch the control box on, by means of power supply switch, found at the bottom side of the control box.
- 2) Install the supplied batteries into the remote controller. Remember to follow picture inside the remote controller when inserting the batteries.
- 3) Set up motorised drive position
If motorised drives are installed on the right side, the drive position is already pre-set. In case the drives are installed on the left side, you have to change the motors position: press simultaneously "PROG" and "5" buttons and keep them pressed until you hear a long "beep" signal (the first one after short "beep"). The digits in the display will start to blink .
- 4) Set up background stop levels



Do not use automatic rolling modes until you set the background stop levels properly!

- A) Choose first background number pressing one of the numbers (1..10) on the remote controller keypad.
- B) Use the "manual background up/down" buttons to position the background in a level you want it to stop.
- C) Set the background high stop level, by pressing simultaneously "PROG" and "AUTOMATIC UP" buttons. Keep them pressed until you hear a long "beep" signal (the second one).
- D) Follows the same steps as described in pt. B and C to set-up low stop level.
- E) Repeat points from B to D for each background.

After programming background stop levels, you can use the system in automatic mode. To take advantage of all system features read carefully next paragraphs of the manual.

OPERATING INSTRUCTIONS

CONTROL BOX AND REMOTE CONTROLLER

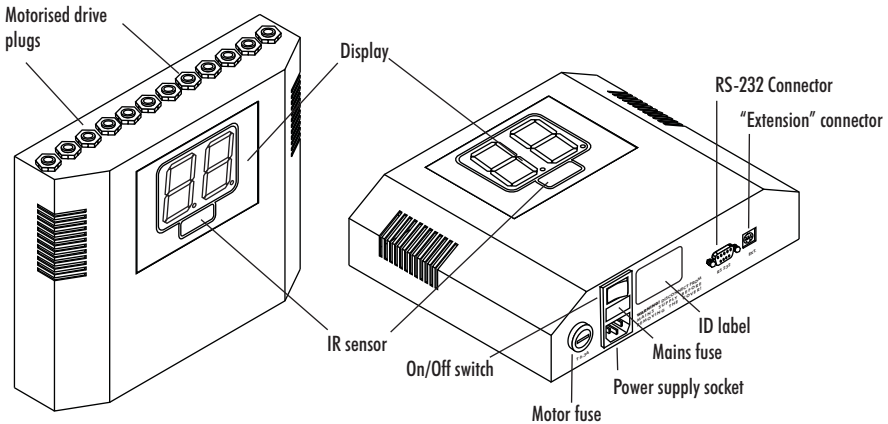


Fig. 4 Control Box

The control box is the "heart" of the system. It supplies power to motorised drives and executes commands from remote controller. Current background number is displayed in the display. Only the current background may be rolled up or down at a time.

Control box plugs and connectors

- Ten motorised drives power supply plugs 24V DC 4A max. - allows connecting up to 10 motorised drives
- RS232 standard connector for connecting to PC - enables future software upgrades and control by PC
- Extension connector enables to equip control box with additional features in the future
- Mains power supply socket



Never connect to the control box any other equipment that is not a part of Ventis professional background support system. This may lead to a damage of the system or even a risk of injury.

CONNECTING CONTROL BOX TO POWER SUPPLY

Before connecting the control box to power supply, always make sure that the voltage rate specified on the control box identification label is equivalent with your local power supply system!

Before connecting the power supply cable, make sure that the cable complies with your local safety standards!

CONNECTING MOTORISED DRIVES

Switch the control box off. Plug the motorised drive 6,3 mm jack into one of the ten power supply plugs in the control box. Make sure that the electric part of the jack is completely inserted into the plug. After connecting the motorised drive is immediately ready to use.

REPLACING THE MOTOR PROTECTION FUSE

Switch the control box off. Unscrew fuse cover with a screwdriver and exchange the fuse for the new one with same current rating as indicated on the cover by the fuse. Voltage rating should be at least 50 V. Standard values 110V or 230V are appropriate.

REPLACING THE MAINS FUSE

Switch the control box off and remove power supply cable from the socket. Using a screwdriver, open the fuse cover. Inside you will find one spare fuse. Exchange the broken fuse with the new one with the same current and voltage rating, as indicated in the ID label.

REMOTE CONTROLLER

WORKING WITH REMOTE CONTROLLER

Position the remote controller toward control box IR sensor and press one of the buttons on the remote controller. Infra red signals reception is indicated by two LEDs, placed in the lower, right corner of each display digit.

To ensure the best IR commands reception make sure to:

- Place the control box in a position, that the IR sensor is not covered by any other studio equipment
- Avoid light sources lighting directly the IR sensor - it may significantly reduce the sensor sensitivity

The commands are sent as long as the button is pressed. Some buttons may have double function, if pressed with "PROG" button (see fig. Remote controller).

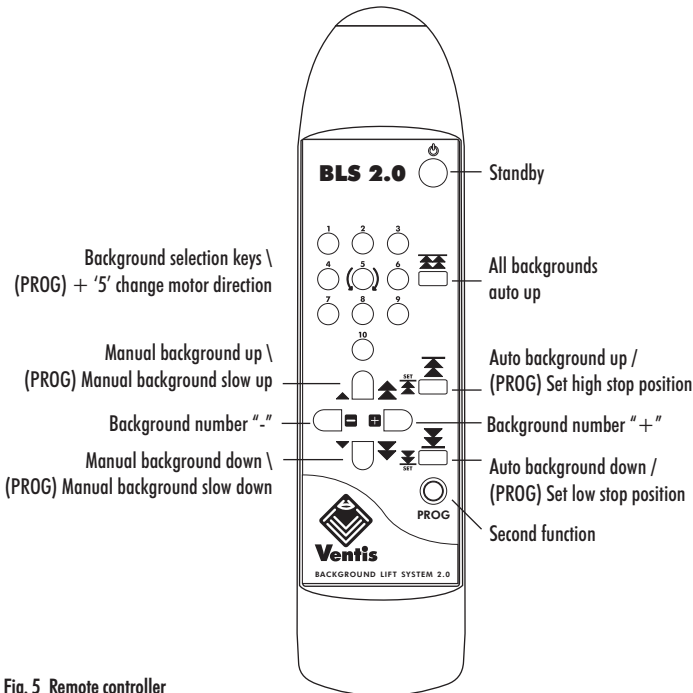


Fig. 5 Remote controller

REPLACING BATTERIES

In case the distance, from which the IR sensor is able to receive commands from the controller, significantly drops, you should exchange the batteries for the new ones. To prevent accidental acid leakage, always use alkaline batteries, AAA/LR06 type. Follow the picture in the battery socket, to insert the batteries in correct direction. Be careful not to press any button during battery change as you may accidentally change the working channel (see following paragraph "To setup working IR channel").

OPERATION

TO SWITCH THE CONTROL BOX INTO STANDBY MODE



Press the On/Off button. The numbers in the display will disappear, but the on/off switch will still light, indicating that the control box is still powered. While switching into the standby mode all background stop levels and current positions will be updated in the non-volatile memory, therefore it is recommended to always use standby mode before switching the control box off.

The control box should always be switched off, when not used for longer period of time.

TO SWITCH THE CONTROL BOX ON AND OFF

Press the on/off switch to switch it on or off. If the control box is on, the on/off switch will light in red.

While the control box is being switched off, the background stop levels and current position are updated in microprocessor non-volatile memory. Because of short time of power-off some data may not be updated correctly, therefore it is recommended to always roll all backgrounds up, or use standby mode, before switching it off.

TO SELECT BACKGROUND TO OPERATE

Most of the function are carried on the current background, which number is shown in the control box display. You can quickly choose background number by pressing one of quick background selection buttons from '1' to '10'. Additionally you can change background number with '-'/'+' buttons.

ROLLING BACKGROUNDS

To protect motors and electronics, the control box is equipped with multi level protection against over-voltage, over-current, short-circuit, over-temperature and electrostatic discharge.

If during background movement the background stops and in the display appear "OL" (Over Load) characters, it means that too high current was flowing through the motor and it was stopped to prevent damage. The reason for this may be too heavy background or badly fixed holder, which causes to much friction to the motor rotation movement. Other reason may be that the motorised drive jack is not plugged correctly and causes short circuit.

TO ROLL THE BACKGROUNDS IN MANUAL MODE

Regardless on setup background stop level, you can always move backgrounds in manual fast or slow mode.



Select background number, than press "manual up" or "manual down" button to move background respectively up or down. The background is rolling as long as you keep the button pressed. If you want to move background slowly (for precise background positioning) follow the same steps, while pressing in



addition 'PROG' button.

TO ROLL THE BACKGROUNDS IN AUTOMATIC MODE



Select background number, than press "auto up" or "auto down" button. Keep it pressed until you hear the "beep" sound. After that, release the button and let the background roll automatically up or down. You can interrupt background movement at any time, by simply pressing any button.



Note: stop level precision is $\frac{1}{2}$ of motor turn, if you need to adjust background more precisely use manual mode.

TO ROLL ALL BACKGROUNDS UP



Press "all backgrounds auto up" button and keep it pressed until you hear the "beep" sound. After that, release the button and let all background roll automatically to preset upper levels.

You can interrupt background movement at any time, by simply pressing any button on the remote controller. It is good practice to roll all backgrounds up before the system is not used.

TO SET BACKGROUND STOP LEVELS



Choose the background, for which you want to set new stop level. Using manual roll up/down buttons position background at desired stop level (high or low).



Set the high stop level, by pressing simultaneously 'PROG' and 'Auto up' buttons. Keep them pressed until you hear a long 'beep' signal (second signal after a short 'beep'). The digits in the display will start to blink indicating that the new stop level was programmed. In the same way program low stop level, pressing 'Auto down' button instead of 'Auto up'.

TO SET MOTORISED DRIVE POSITION (MOTOR DIRECTION)

Depending on motorised drive position (left or right), you have to set proper motor direction. Otherwise motors will roll the backgrounds in opposite direction to buttons pressed on the remote controller.

To change the motor direction, press simultaneously 'PROG' and '5' buttons. Keep them pressed until you hear a long "beep" signal (next signal after short "beep"). The digits in the display will start to blink indicating that the motor direction was changed. This operation, should be done only once, when the system is installed.

ADVANCED OPERATION

TEST (PRESENTATION) MODES



Before entering any of test modes backgrounds stop levels should be properly programmed, otherwise uncontrolled background rolling may occur

Test modes are generally used for test purposes, but can be also used for system presentation - e.g. during exhibition the control box can automatically roll up and down, selected number of backgrounds, attracting in the same way visitors.

1ST TEST MODE

In this mode, the control box rolls each background down and than up. The number of backgrounds to be used may be defined.

To enter the 1st test mode, first select number of backgrounds you want use in the mode and press simultaneously 'PROG' and '8' buttons. Keep them pressed until you hear the "long beep" signal (the second one) and the digits in the display will start to blink.

After that the control box will enter the test mode. The control box will roll up and down all backgrounds with number equal to and lower to the number displayed while entering the test mode. E.g. if you choose number 4 in the display before you entered the mode, the control box will roll backgrounds 1, 2, 3 and 4. Backgrounds with numbers 5 to 10 will be omitted. This lets you choose how many backgrounds you want to roll up and down.

If you want the control box to omit only one of the backgrounds, e.g. you selected 7, but you want background no. "1" to be omitted during presentation, set the high and low stop levels at the same position. The control box "thinks" that the background is already rolled and takes no action.

2ND TEST MODE

In this mode, the control box rolls all backgrounds down. After it rolls all backgrounds down, it rolls them up.

To enter the 2nd test mode, first select number of backgrounds you want use in the mode and pres simultaneously 'PROG' and '9' buttons. Keep them pressed until you hear the "long beep" signal (the second one) and the digits in the display will start to blink.

After that the control box will enter the test mode. The control box will roll all backgrounds with number equal to and lower to the number displayed while entering the test mode. E.g. if you choose number 4 in the display before you entered the mode, the control box will roll backgrounds 1, 2, 3 and 4. backgrounds with numbers 5 to 10 will be omitted. This lets you choose how many backgrounds you want to roll up and down.

If you want the control box to omit only one of the backgrounds, e.g. you selected 7, but you want background no. "1" to be omitted during presentation, set the high and low stop levels at the same position. The control box "thinks" that the background is already rolled and takes no action.

TROUBLESHOOTING

NONE MOTOR IS WORKING BUT THE DISPLAY IS ON AND IT IS POSSIBLE TO CHANGE BACKGROUND NUMBER
The motor fuse is broken. Replace the fuse.

ONE OF MOTORS IS NOT WORKING

Check if the motorised drive jack is fixed well in the power supply plug. Check if other drive is working well on the same channel, if yes the drive is broken - contact your local distributor to repair the motor. If the same motor is working on different channel - the control box is broken - contact your local distributor to repair the control box..

WHILE ROLLING A BACKGROUND, THE BACKGROUND STOPS AND "OL" IS DISPLAYED

WHILE ROLLING A BACKGROUND. THE BACKGROUND STOPS AND LOW SOUND IS COMING FROM THE CONTROL BOX

In either case, internal protection sensors have switched the motor off.

Check if the motorised drive jack is fixed well in the power supply plug.

Check if you are not using too heavy background. Check if the motorised drive and holders are fixed properly and do not cause additional friction to the motor.

Check, if electro static discharge protection is installed properly on all motors (see "Quick start" paragraph).

LOW SOUND IS COMING FROM THE CONTROL BOX AND MOTOR WHEN TRYING TO ROLL THE BACKGROUND UP

Probably temperature sensor has switched off the motor power supply. Let the internal circuitry to cool for one minute. The most frequent reason of overheating is too heavy background - check if you do not exceed maximal specified background weight.

WHILE ROLLING A BACKGROUND IN AUTOMATIC MODE, THE BACKGROUND STOPS AND "E1" IS DISPLAYED, BUT YOU ARE ABLE TO ROLL THE SAME BACKGROUND IN MANUAL MODE

E1code means no position impulse from the motor. Check if the motorised drive jack is fixed well in the power supply plug. Check if other drive is working well on the same channel, if yes the drive sensor circuit is broken - contact your local distributor to repair the motor. If all motors are working in the same way on this channel there is problem with control box internal circuit - contact your local distributor to repair the control box.

BACKGROUNDS ARE ROLLING IN OPPOSITE DIRECTION TO THE BUTTON PRESSED ON THE REMOTE CONTROLLER

Change the motor rotation direction see paragraph: "To set motorised drive position"

THE REMOTE CONTROLLER IS NOT WORKING

Check the batteries. If the batteries are ok, and you can see two small dots in the display blinking when a button on remote controller is pressed, it means you have to reset remote controller:

- Remove batteries
- Using coin, or metallic tool short circuit two battery contacts inside remote controller
- Press number 7 on the remote and while keeping it pressed, insert batteries into remote
- Keep the button pressed for additional 3-4 seconds
- Release the button - remote controller should be reset to factory pre-sets and working again

GENERAL PRECAUTIONS

Never use the system, if it is broken!

Never use with the system any components (motorised drives, extension cables) , which are not part of Ventis Professional Background Support System - not applicable for RS-232 cable - standard cable may be used!

Always switch the system off when not used for longer period of time (e.g. during night) - do not leave it in standby mode!

Connect the system only to grounded mains socket!

Do not use the system for any for other purpose than background suspension!

SPECIFICATIONS

Power consumption standby	0,65 W max
Power consumption (not rolling a background)	3 W max
Power consumption (rolling a background)	100 W max
Working temperature range	10°C to 40°C
Relative humidity	80% max. (Non condensing)
Max. background weight	10 kg
Remote controller transmission range.....	10 mt
RS-232 specifications	19200 N-1-1
Voltage rating	see ID label
Mains protection	see ID label
Motor protection	see specifications near the fuse

DISCLAIMER

The information contained in this document is subject of change without notice.

Ventis makes no warranty and shall not be liable for any errors and omissions on information contained in this document.

DECLARATION OF CONFORMITY

Manufacturer's name: Ventis s.c.

Manufacturer's address: Ul. Sienkiewicza 48
42-600 Tarnowskie Góry
Poland

Declares that product:

Product name: Background Lift System

Product symbol: 220E, 220S, 223E, 223S, 203S

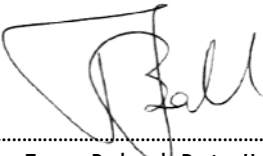
Complies with the requirements of the EMC directive 89/336/EEC and Low Voltage Directive 73/23/EEC and carries "CE" mark accordingly.

The product has been tested and found to comply with following harmonized standards:

Safety: EN 60950-1:2000

EMC: EN 61000-3-2:2002
EN 61000-3-3:1997 + A1:2002
EN 55022:2000 + A1:2002 (Class B)
EN 61000-4-2:1999/A2:2002 (ESD 4kV CD, 8kV AD)
EN 61000-4-3:2002 (3V/m)
EN 61000-4-4:1998 + A1 + A2:2002
EN 61000-4-5:1998 + A1:2002 (2kV)
EN 61000-4-6:1999 + A1:2002 (3V 80% AM)
EN 61000-4-8:1998 + A1:2002

Tarnowskie Góry, 01.05.2004



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Tomasz Bochenek, Design Head

