Installation manual

Projector lift system
PPL 7575

Read this manual carefully before starting the installation of the lift system.

Eindhoven
Date: 1-02-2010
Version: 1.0

Contents:

Specifications

	PPL 7575
Max. lifting weight	180 kg / 400 lbs.
Max. load on adapter	Dedicated adapters
Drop down distance	7,2 meter
Weight of PPL 7575	112 kg / 247 lbs
Operating temperature	32° – 104° F / 0° – 40° C
Voltage	220-230 V, 50 Hz

Important safety information

Before starting the installation read the safety instructions and manual carefully.

Qualified installers
This lift system is a professional machine and may only be installed and serviced by qualified installers.

Transportation blocks
For your own safety and in order to prevent the lift from being damaged, leave the transportation blocks in place until the lift is completely installed.

Strength of the ceiling (specially for PPL 7575)
Ensure that the ceiling is constructed in such a way that it can bear a load of at least four times the combined weight of the lift and the projector. This is a minimum requirement. In addition, make sure that you comply with local regulations.

First install and test the lift system, than mount the projector and options
Only mount the projector, the ceiling cover and/or other items to the lift system after the lift has been installed and tested.

CAUTION!

Use the No-Movement switch when working on the lift system
To prevent serious injury by a moving lift system during installation or maintenance, always turn off the power and/or use the NO MOVEMENT switch on the side of the control box.

When programming or operating the lift system the operator should have sight over the lift system.

Warranty
2 years on production defects.

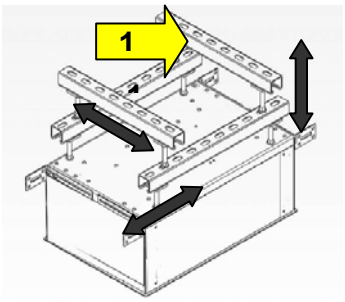
1 Installation of the lift system

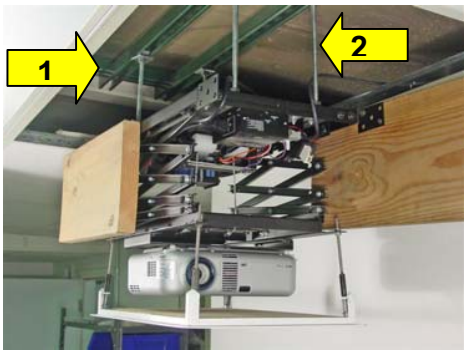
1.1 Getting PPL 7575 of the transport pallet

IMPORTANT PPL 7575 is mounted **UPSIDE DOWN** on a transport pallet. Be very carefull removing PPL 7575 from the pallet and lifting it to the ceiling for mounting.

PPL 7575 upside down on pallet

1.2 Mounting, height positioning and horizontal positioning





For easy horizontal positioning use **"strut" profiles (1)**. (not included) (On the picture a PPL 1515 is shown)

IMPORTANT
The top/home position of the lift systems is fixed (not programmable). For easy positioning the lift system on a false ceiling level use **treaded rods (2)** (not included). See chapter 1.1 for determining the exact height.

1.3. Determining the installation height of the lift system

When the lift system is used in combination with a false ceiling the lift system must be installed just above the false ceiling level. This is easy to do with treated rods.

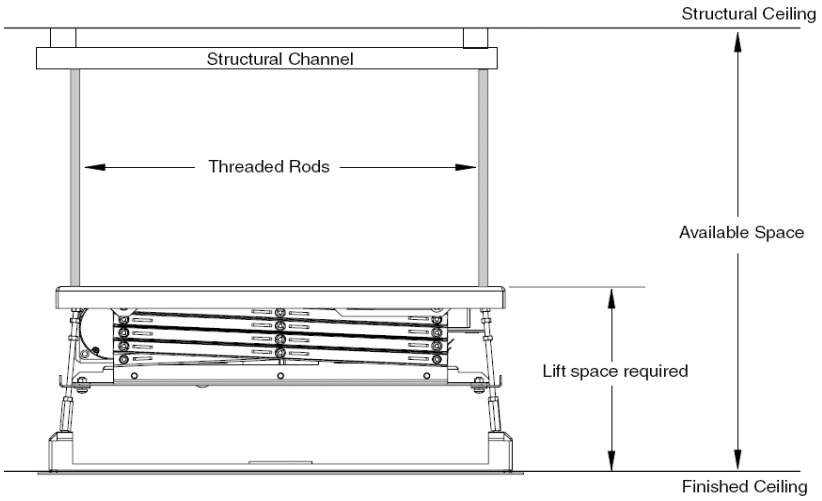
The example below shows how to determine the correct installation height:

Example:
50 cm – space between structural ceiling and false ceiling

Calculation:
21.8 cm – minimum height of the lift including universal projector bracket
+
14 cm – maximum height of the projector
+
2.5 cm – ventilation space between projector and false ceiling panel
=
38,3 cm – installation height required

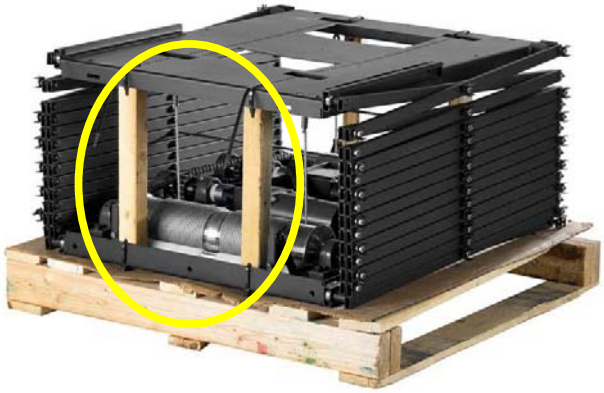
In other words, the lift must be lowered at least 11,7 cm, aside from the 12.5 cm adjustment range of the HOME position.

Illustration on next page.



To Calculate Required Threaded Rod Length:	**To Calculate Required Lift Space:**
Lift height (127.3 - 255 mm)	Available Space
+	
Mount height	minus
+	
Projector height	Lift space required
+	
Ventilation space (20mm)	equals
=	
Lift space required	Threaded Rod length (less structural channel)

1.3. Remove the transportation blocks



1.3 Electrical install

1.3.1 Connect the wired remote control (**NO other remote controls, yet**)

1.3.2 Connect 220-230V power

1.3.3 Testing of the lift system

- Switch on/off switch on
- Flashing LED, continuous
- Switch No-movement switch to Normal
- LED will be off
- Push Down > lift should go down
- Push Up > lift should go up

Now you are sure the lift system is working

1.3.4 Setting Show en Service position

Before mounting the projector, approximately set the show and service position. See chapter 2.

Test the system again a few times.

1.4 Optional remote controls

1.4.1 Remote 1 and 2 connectors

- Remote 1 and remote 2 are for use of the wired remote control (included), an optional IR remote control or a custom wall switch, automation system, etc.
- Remote 1 and 2 can both be used at the same time, it are parallel connectors.
- They switch 5V to ground.
- Use voltage free contacts in optional remote switches !!
- Cable: Shielded 0,35mm² for up to 30m or 0,5mm² for up to 150m

1.4.2 Jack (3,5mm) connectors 3x

- 12V IN > control/operate the lift system by external 12V
- AC aux > control the power of a projector by 12V out
- 12V out > controlling/operating an electrical projection screen by 12V output

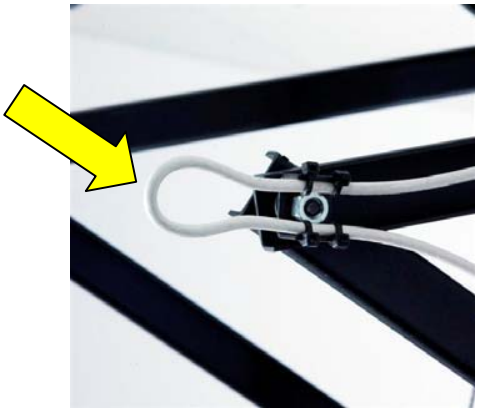
See chapter 3 for details

1.5 Projector install

Order a separate dedicated projector adapter to mount the projector.

1.6 Mounting cables to the scissors

- IMPORTANT: make loops at the turning points of the scissors, this will prevent cable damage.
- Separate power and signal cables to the left and right side.
- Balance the cables on the left and right side on weight and flexibility. This to prevent un-balance of the lift system.



1 Position setting and operation

2.1 Operating modes

2.1.1 Automatic mode

Mode for normal operation.

- Down button: lift goes automatic to show position
- Up button: lift goes automatic to top/home position
- Override + down button: lift goes automatic to service position

2.1.2 Manual mode

Mode for position setting.

The lift only moves when the up or down buttons are pushed and stops when button is released.

Get in Manual mode: override (hold button pressed) > up > release up > release override

Back to Automatic mode: override (hold button pressed) > stop > release stop > release override

2.1.3 Emergency mode

See problem solving, page 20

2.2 The wired remote control

Front

LED

UP

DOWN

STOP

Rear

EMERGENCY – only accessible when back cover is removed

SET - These two buttons are accessible using a narrow pointed object.

OVERRIDE

Keep the wired remote control connected

We recommend keeping the handheld remote control connected to the control box **in addition** to any other optional control systems. This will be of use for operating the OVERRIDE button, carrying out maintenance or in the event that there is an external control system failure.

4.3 Position setting

Position setting is only possible in MANUAL MODE

4.3.1 Get in MANUAL MODE

Use a narrow, pointed object (straightened paperclip)

- Press **and hold** the **OVERRIDE** button (on the back)
- Press **UP**
- Release **UP**
- Then release **OVERRIDE**

Test the lift system by pressing the **DOWN** button. The lift should only descend while the button is pressed. The lift will stop immediately when the button is released.

4.3.2 Get back in AUTOMATIC MODE

- Press **and hold** in the **OVERRIDE** button (on the back)
- Press **STOP**
- Release **STOP**
- Then release **OVERRIDE**

Test the lift system by pressing the UP or DOWN button once. The lift should automatic move to home of show position.

4.3.3 Set SHOW POSITION

The show position is the height at which the lift system automatically stops and the projector projects the image on the screen.

1.) Get the system in **Manual Mode** (see 4.3.1)

2.) Press **DOWN** to lower the lift to the required **Show/projection** height.

3.) Lock this position
- Press **and hold** in the **SET** button (on the back)
- Press **UP**
- Release **UP**
- Then release **SET**

4.) To return to the **Automatic mode** (see 4.3.2)

5.) Return the lift to its home position by pressing the **UP** button once)*

6.) Test the set Show position. Press the **DOWN** button once. The lift will now descend to its pre-programmed position. If the lift does not descend to the pre-programmed position then repeat the previous process)*

)* Note: The lift system must be in the AUTOMATIC MODE for the commands to work properly.

4.3.4 Set SERVICE position

This position is lower than the show position. In service position the lift will descend to a height at which it is easy to do projector maintenance and service.

1.) Get the system in **Manual Mode** (see 4.3.1)

2.) Press **DOWN** to lower the lift to the required **Service** height.

3.) Lock this position
- Press **and hold** in the **SET** button (on the back)
- Press **STOP**
- Release **STOP**
- Then release **SET**

4.) To return to the **Automatic mode** (see 4.3.2)

5.) Return the lift to its home position by pressing the **UP** button once)*

6.) Test the set Service position. Press **and hold** in the **OVERRIDE** button and then press the **DOWN** button. The lift will now descend to the service position. If the lift moves you can release both buttons)*

7.) To prevent unauthorised operation the service/maintenance function only works when the hidden OVERRIDE + DOWN buttons are pushed.

)* Note: The lift system must be in the AUTOMATIC MODE for the commands to work properly.

2 Remote control

There 5 connectors for remote control options

1. Remote 1
2. Remote 2
3. AC Trigger
4. 12VDC Out
5. 12V In

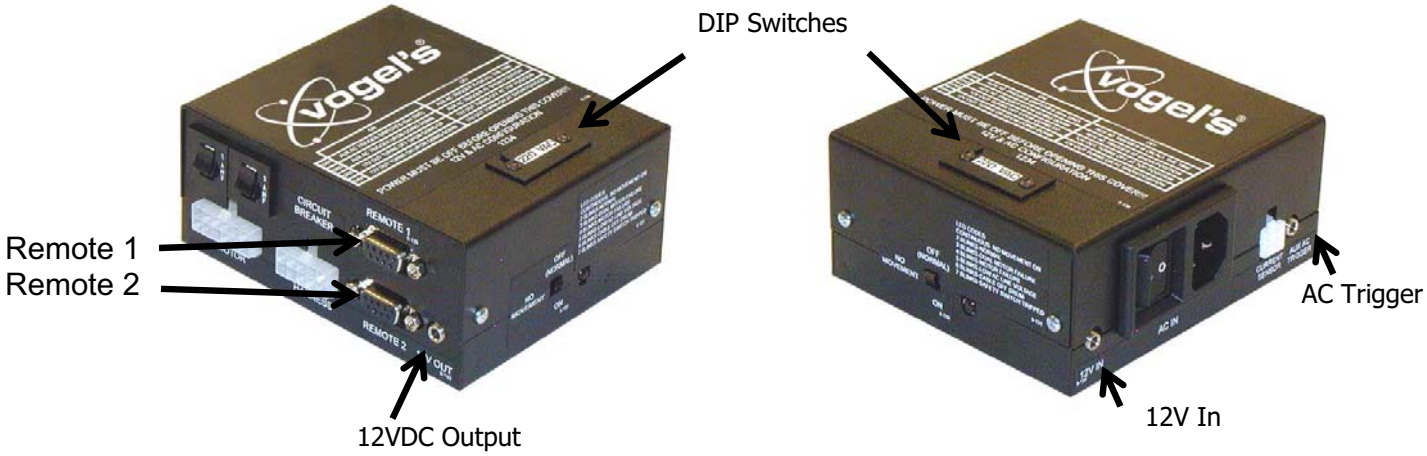
Remote 1 and 2 (9-pin connectors)
Remote 1 and 2 are two parallel connectors for controlling all functions of the lift system by switching 5V to ground. Use these connectors for automation systems as Crestron, AMX, etc. for wall switches or for the optional infra red kit PPA 360.
ATTENTION only connect voltage free switches., **do not connect 220-230 !!**

AC Trigger (3,5mm jack)
Gives 12V out to control eg. the AC power of the projector. The moment of 12V can be set via the DIP switches 1 and 2, see page 16. (moment = lift starts or stops moving)

Only use a **mono** 3,5 mm plug (one included)

12 VDC Out (3,5mm jack)
Gives 12V out to control an electric projection screen. The moment of 12V can be set via the DIP switches 3 and 4, see page 16. (moment = lift starts or stops moving)

12V IN (3,5mm jack)
When the lift system is in Automatic mode and 12V is set on this input the lift moves to SHOW position. 0V will move the lift system to HOME position.



3.1 Connecting an automation/control system to Remote 1 or 2

The lift can easily be connected to automations systems as Creston, AMX, and others.

- Use the special External control connector (included).
- For the cable connections see Annex 1 on the next page.
- Maximum length of cable:
  - 0,35mm² (shielded) up to 30m.
  - 0,50mm² (shielded) up to 150m.

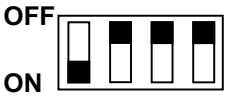
Let a control system relay make contact for ½ a second and then break contact. (Momentary 1/2 second contact mode.)

All functions can be remote controlled, however Up, Down, Stop are most used.
Warning:
To prevent unauthorised operation of specific functions we strongly recommend to program functions as Service position, Manual mode and Emergency mode on hidden or pass word protected pages. (when using automations systems)

3.2 DIP switch functions and setting for AC-trigger and 12V output

Switch off 220-230V power when setting DIP switches

Standard setting
Of DIP switches



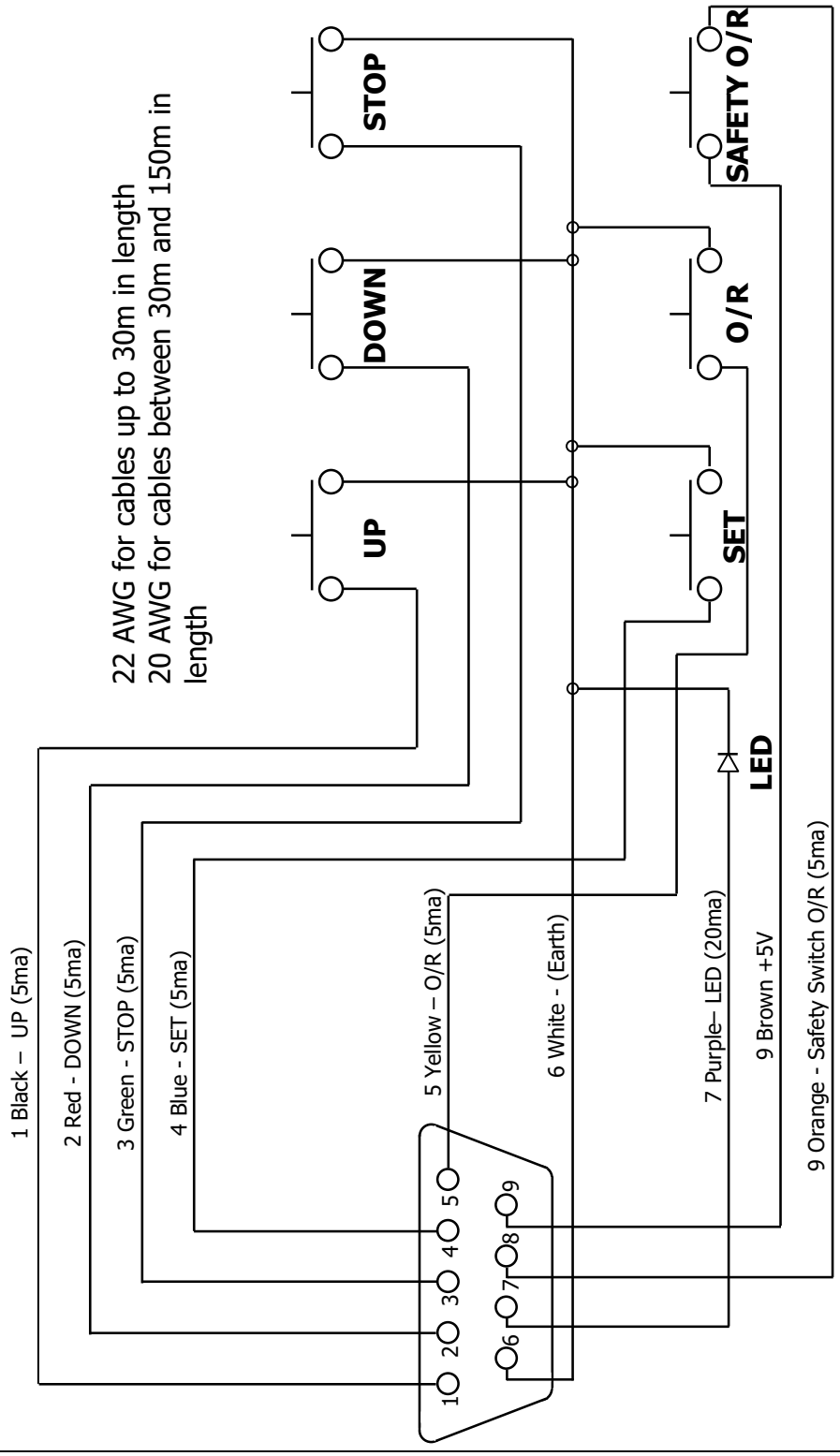
SW 1 and SW 2 for "AC trigger" output

DIP switch posit 1 2	Output	When
	0 V	always 12 V
	12 V	home, descend, show, ascend
	0 V	always 12 V
	12 V	home, descend, show, ascend
	0 V	ascend, home, descend
	12 V	show
	0 V	ascend, home
	12 V	descend, show

SW 3 and SW 4 for "12V" output

DIP switch posi 3 4	Output	When
	0 V	ascend, home
	12 V	descend, show
	0 V	home
	12 V	descend, show, ascend
	0 V	home, descend
	12 V	show, ascend
	0 V	home, descend, ascend
	12 V	show

Annex 1 Connection diagram 9-pins connector



Note:
O/R = OVERRIDE
Do not connect anything to pins 8 and 9 other than the Safety Override button itself since this could lead to a short-circuit

3 **Problem solving**

Clearing errors (stop LED flashing)
To delete errors from the memory, press and hold in the STOP button for 10 seconds and then release it. If the same error occurs, refer to the troubleshooting diagram in Annex 2.

LED blinks continuously
The no-movement switch is ON position, switch to OFF/Normal position.

LED blinks 3, 4, 5, times
These are uncommon indications, see the trouble shooting chart.

LED blinks 6 times
Can not occur as PPL 7575 has no cable safety sensor.

LED blinks 7 times

The lowest limit switch has been activated.
To prevent that the lift cables rewind in opposite direction when the lift for some reason would pass its very lowest position (below the service position), there is a lowest limit safety switch. When this switch is activated the lift completely blocks. None of the buttons on the remote control will work anymore. The LED will blink 7 times.
Most possible cause:

- The lowest limit switch has been adjusted by accident.

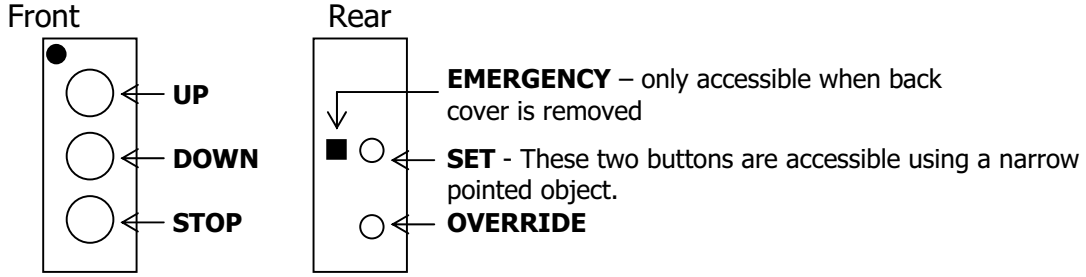
Solve the problem:

1. To ascend the lift and de-activate the lowest limit switch use the emergency mode.

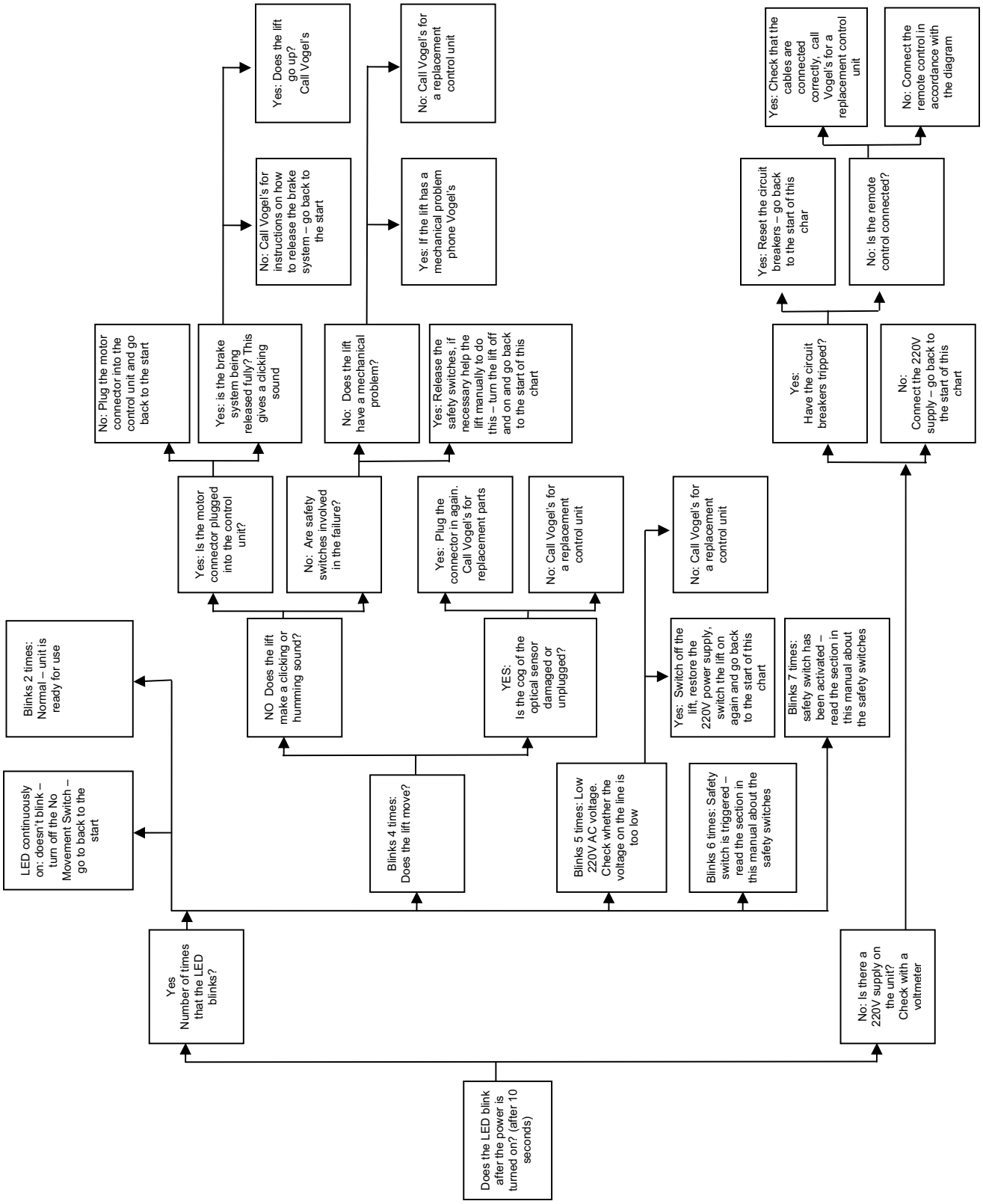
Emergency mode:

- Open the back of the wired remote control (is low voltage, no danger)
- Push STOP for 10 seconds > LED will stop blinking
- Push the "hidden" emergency button + UP > lift will go up again, de-activating the lowest limit switch
- Close wired remote control

2. Check if the lowest limit switch is set okay, app. 3 cm above the lowest point.
3. If this keeps causing problems call your importer for the electronic lowest limit reset procedure.



Annex 2 Troubleshooting chart



Declaration of conformity

EC DECLARATION OF CONFORMITY

Reference code: DoCPlafondlift-tben.doc

Concerning the machinery directive

We Vogel's
Hondsruglaan 93
5628 DB Eindhoven
Netherlands
Tel: +31(0)40 – 26 47 400
Fax: +31(0)40 – 26 47 495

Declare entirely under our own responsibility that:

1- We are the manufacturer of the following product:
Projector lift system
Brand name: Vogel's
Types: PPL 1515, PPL 2525, PPL 3535, PPL 7575
Serial no.: all serial numbers of these types

This declaration refers to:

2- The machine has been designed and built in compliance with the requirements of the machinery directive 98/37/EEC (latest issue).

3- The machine meets the requirements of the additional EC directives shown below:
Low-voltage directive 73/23/EEC. (latest issue)
EMC directive 89/336/EEC (latest issue)

4- The machine has been designed and built in compliance with the following European Standards:

NEN-EN 1050: 1997	Principles of risk assessment
NEN-EN 294: 1994	Safety distances
NEN-EN-IEC 60204-1:2006	Electrical equipment of machines
NEN-EN 953: 1998	Guards

Vogel's Products BV

Eindhoven, Netherlands, 12-4-2007

vogel's Professional

Quick operation manual for projector lift systems:

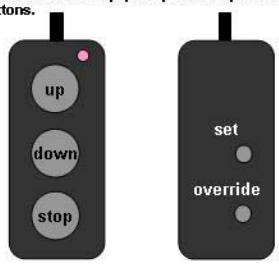
PPL 1515, PPL 2525

PPL 3535, PPL 7575

Wired remote control unit

The wired remote control lets you operate the lifts system, programm the Show and Service positions and give status feedback via the LED.

The SET and OVERRIDE buttons are semi hidden on the back of the remote control. Use a paperclip or other pointed object to push these buttons.



Remote control functions

Function	Buttons
Manual mode	Override + Up
Back to Automatic mode	Override + Stop
Set Show position	Set + Up
Set service position	Set + Stop
Travel to Service position	Override + Down

Manual mode: only used to set/programm positions. In manaual mode the lift only moves when a button is pressed. If a button is released the lift will stop.

Automatic mode: is the normal operating mode.

The Up button will let the lift automatic go to the Top-home position.

The Down button will let the lift automatic go to the Show position.

Override + Down will let te lift automatic go to the service position.

Error codes, number of LED blinks

LED blinks	Status
Continiously	No movement switch on the Control Box is in ON position and all functions are disabled. Set switch in OFF/ Normal position.
2 blinks	Lift is operational, LED stops after start up
3 blinks	Eeprom failure
4 blinks	Motor is not moving, check trouble shooting chart.
5 blinks	Low AC power
6 blinks	Cable safety sensor activated. The steel cable contacted the sensor.
7 blinks	Lowest position switch is activated. See the manual to solve this problem.