ILS22Setup
Software User Guide version 5.05
The program to configure your ILS22M…

Introduction.
As the name of the program suggests, ILS22Setup gives the VAR (Value Added Reseller) and the end-user the opportunity to program the behaviour of the ILS22 with respect to the control functions, which are located to the left, bottom and right of the system LCD screen, engraved in the glass plate.

Note: These functions are 'out-side the 'reach' of the Windows operating system', accessible via the LCD touch panel, in the centre.

See the ILS22 user guide for a more in-depth explanation on using these buttons and headers. Simply put, the ILS22 glass-plate buttons and headers can be used by the presenter, end-user or supporting technicians to execute commands directly (e.g. startup the Sho-Q Presenter package), enable or disable keyboard entries, increase or decrease system audio volume output etc. And by hitting the Touch Screen Off button one can temporarily disable all these keys (until the On button is hit again). This is handy when presenters use the surface for other purposes then presenting using the embedded functions.
As far as control features, the ILS22 and embedded functions in general can control:

- An attached projector. Power On, Power Off, or definable commands for example inquiring power status or lamp hours.
- Room light condition. Turn light higher or lower.
- Audio volume. Higher or lower or mute.
- Microphone volume.
- Microphone mute/un-mute.
- Display out selection, either Lectern itself or attached devices such as Notebook or auxiliary.
- Electrical pedestal elevation up/down.

All of these functions depend on the embedded system software driver which we call ILStranslator, and the setup defined with ILS22Setup.
Basically, and as defined with ILS22Setup, there are 3 possibilities per control function:

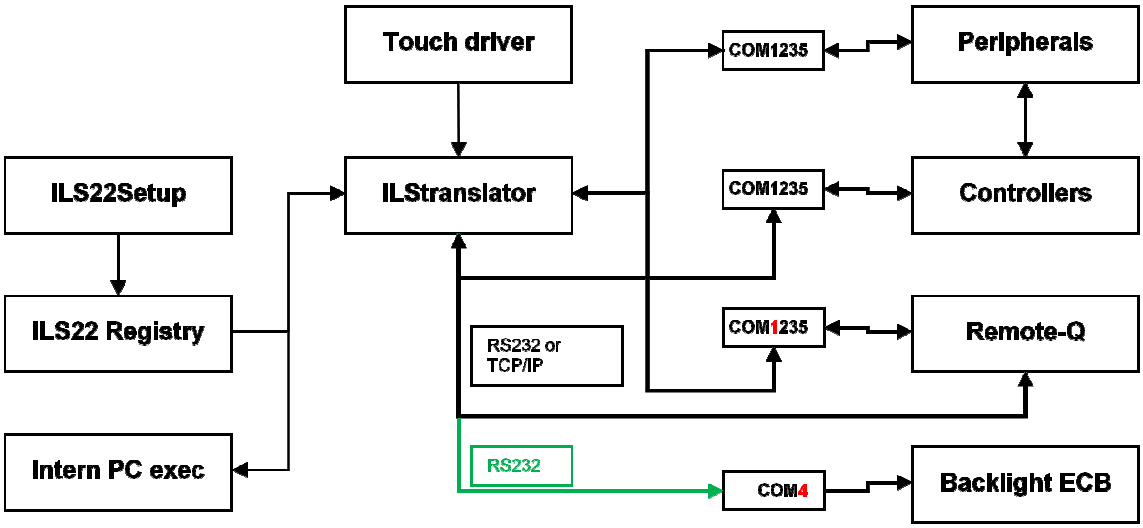
- The ILS22 will do it. Internal software in ILStranslor, internal relays and direct communication (RS232 or TCP/IP) to external devices are under direct control of the ILS22M.
- The ILS22 has nothing to do with it. Glass-plate touches have no effect, external devices and circuitry is used.
- The ILS22 is setup as an intermediate or user-interface. Glass-plate touches will be translated into commands to external intelligent controllers which will perform the requested action.

ILS22Setup makes the system a hybrid one. You can choose and match according to local conditions and requirements:

- Select which device is taking the action.
- Define communication parameters.

- Which keys are programmed for action.
- Enter the ASCII/Hex combined command strings you want for external control.
- Which relays in the system are used.

The following schematics shows how all components work together.



Note: All attached peripherals and/or controllers can be connected either via RS232 or TCP/IP. The Backlight and Relay controller can only be reached over RS232. COM4 is reserved for that purpose. If you want to connect to Remote-Q over RS232, COM1 by default is reserved for that purpose.

The ILS22Setup wizard is used to determine which peripherals are under direct control of the ILS22, which peripherals are controlled via external intelligent controllers, which communications settings and command strings are used to address peripherals and controllers, and whether remote control via Remote-Q is enabled. The ILS22Setup wizard is saving all this to the lectern system registry.

At start up, ILStranslator will read the registry. If ILS22Setup was not used, ILStranslator will use defaults.
The ILS developed hardware and touch driver determines which glass plate buttons or headers were pressed and passes this on to ILStranslator. In turn, ILStranslator will 'translate' this to embedded system functions or pass it on to attached intelligent controllers, following ILS22Setup parameters and settings.

The ILS22Setup Wizard will guide you through the possibilities. Each form will show what the default factory setting is.

The ILS22Setup Wizard.
The ILS22Setup program when first started, will show up as a XP-alike Microsoft Wizard.

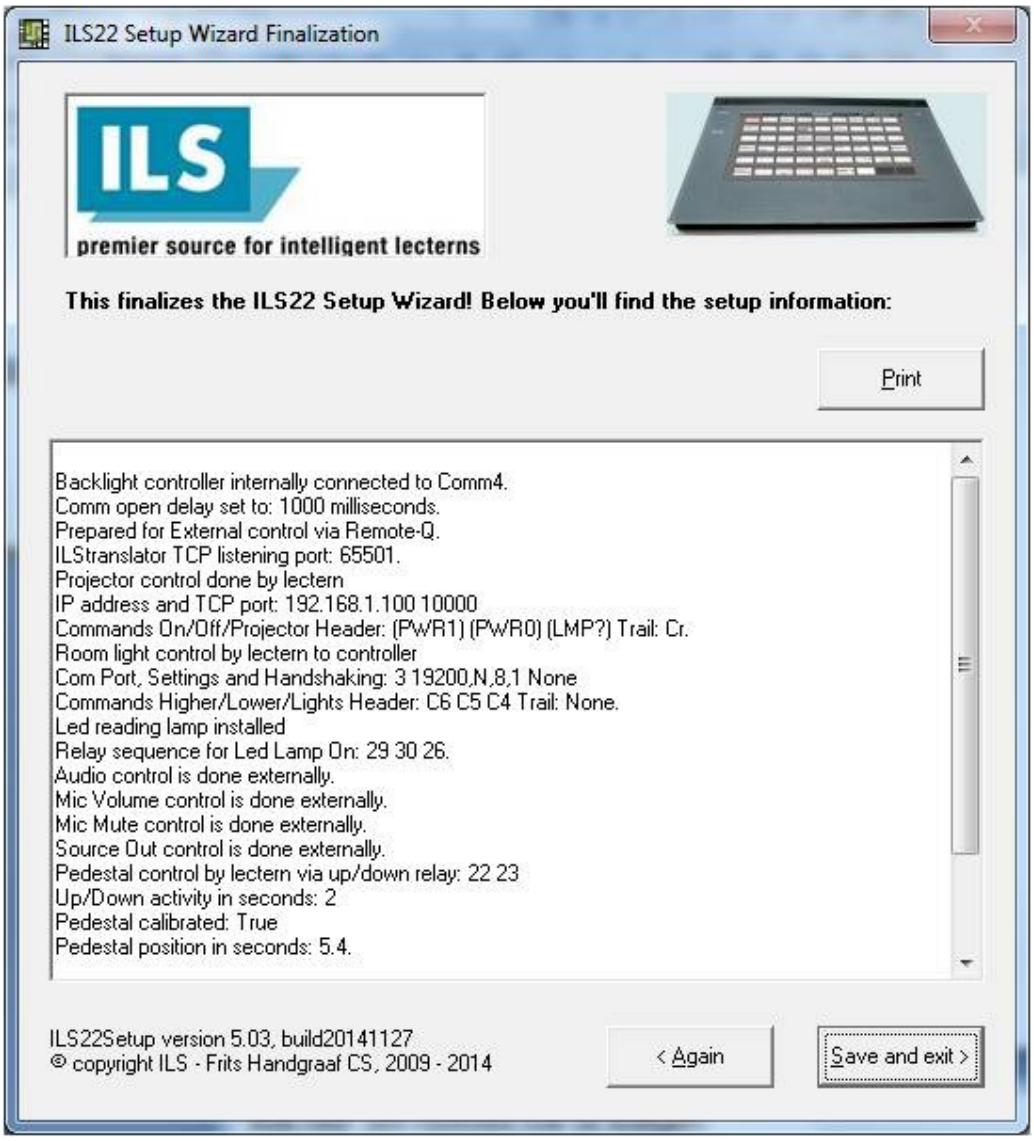
In order to change the Setup, either press (Alt-C) or the Continue button.
In order to leave the wizard, press Alt-x or the Exit button.

The wizard is self-explanatory, but we will continue with some examples.

Note: Moving the mouse pointer over a button, option, check box, or text entry field will bring up related tool-tip-text.

Note: If ILStranslator is started up without running this wizard, it will use factory default settings. Most of the default settings are explained in this Software User Guide.

When ILS22Setup was executed before and parameters were saved to the system registry, another form will come up showing the last saved parameters.



If you want to change the system setup, press on the Again button and Continue button in the startup window.

Only the ILS22 system administrator should be allowed to adapt the system setup settings, Therefore, a password is required. Type the password followed by Enter.

Note: By default the characters will not be shown but you can use the checkbox to make them readable.

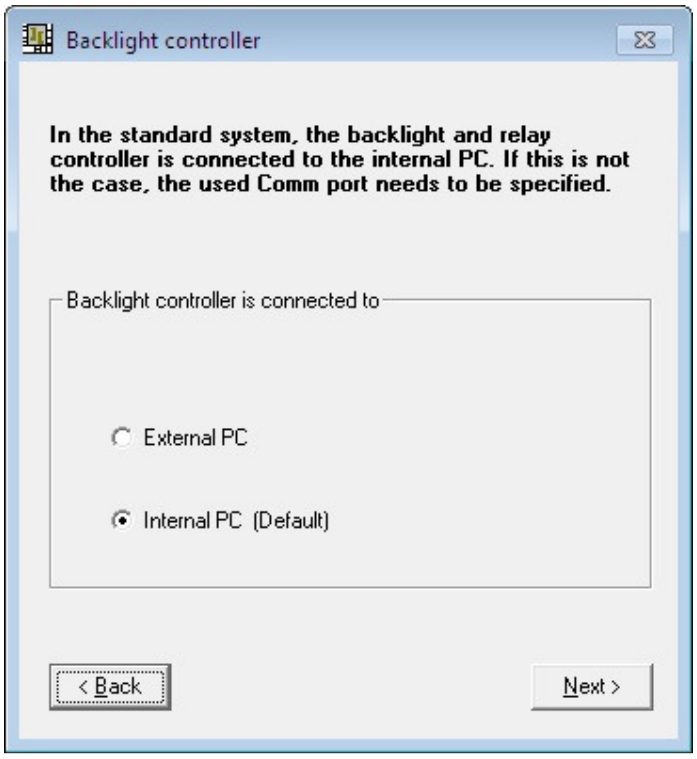
After entering the password (do not forget the Enter button in the end), the Next button and Change buttons are enabled. Change allows to make a new password.

Note: The factory password is ‘SetupILS22M’ (without the quotes).

Note: The password will be encrypted before being saved.

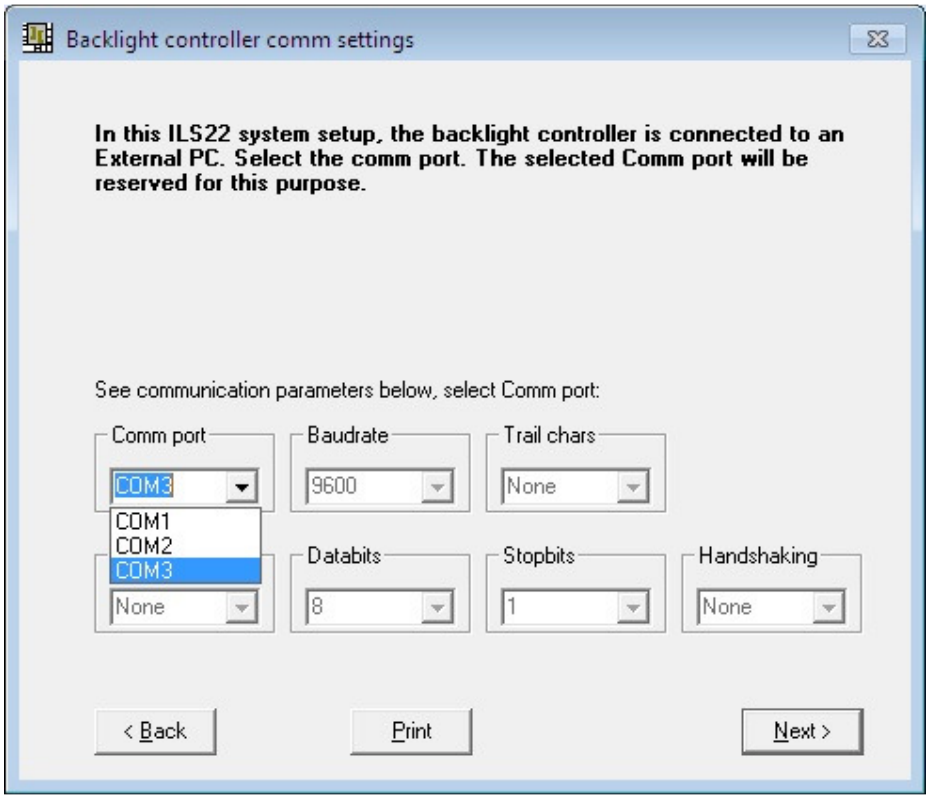
Next will take you through the wizard.

Backlight controller.

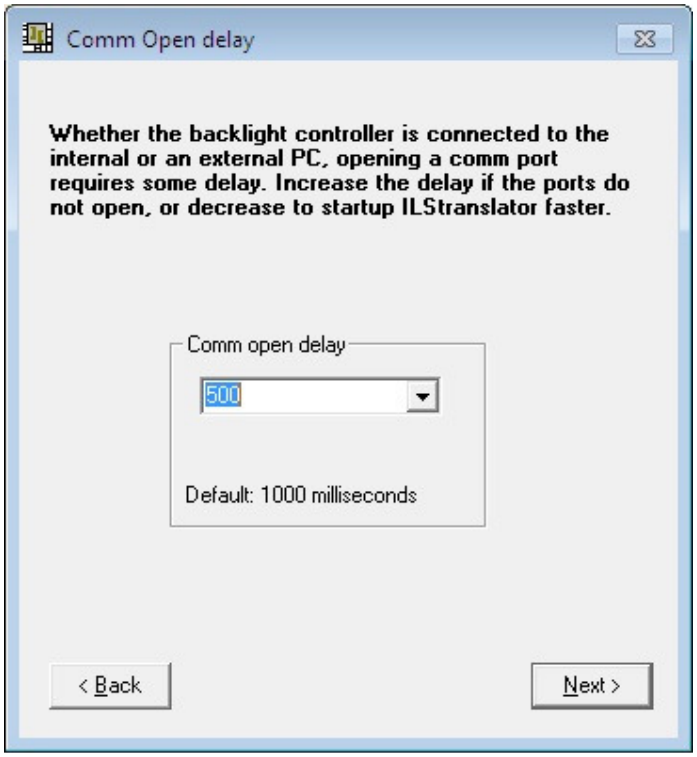


When the ILS22 is delivered in a standard setup, an internal PC is used to control the system and the backlight and relays controller. The internal PC has 5 serial comm. ports, of which COM4 is used to communicate with the backlight controller (see above scheme). In situations where an external PC is used, ILStranslator needs to know to which comm. port.

Note that only the Comm port can be changed. The other communication parameters are fixed.



Comm port open delay.
Whether or not the backlight and relays controller is connected to the internal or to an external PC, the comm. ports need some time after an open comm port command.



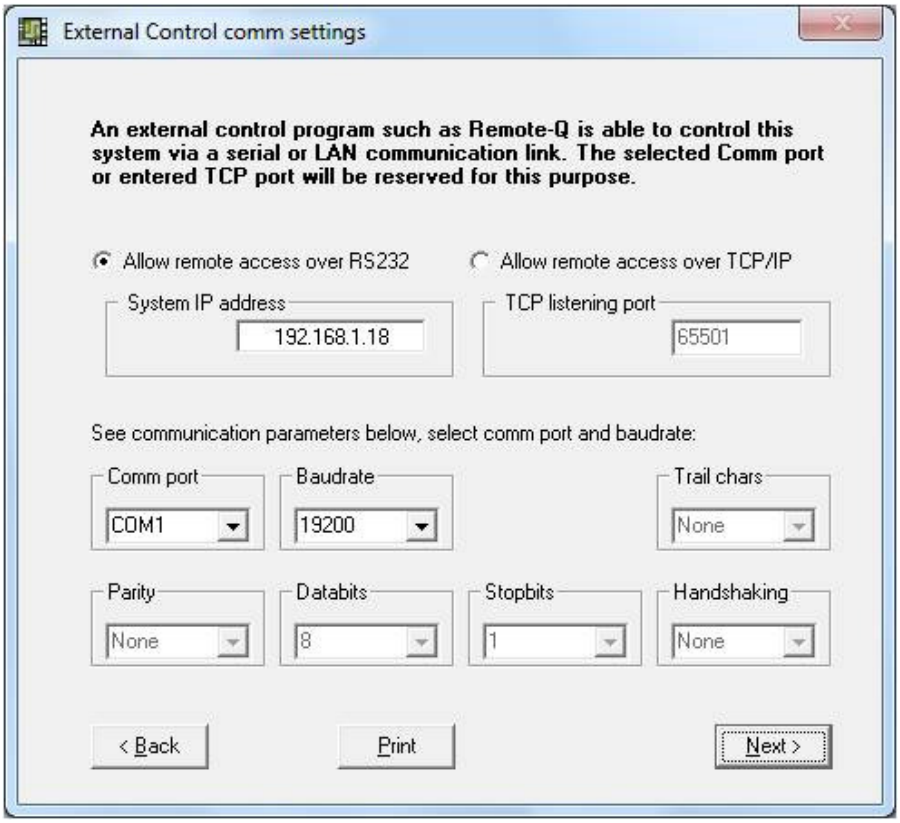
In the above form you can specify the number of milliseconds to wait before the comm. port gets active after opening it. If the internal PC is used, comm. ports may open successfully in just 250 milliseconds. With an external PC it may take longer. This entry allows to fine tune the system and has an impact on the ILStranslator start-up time.

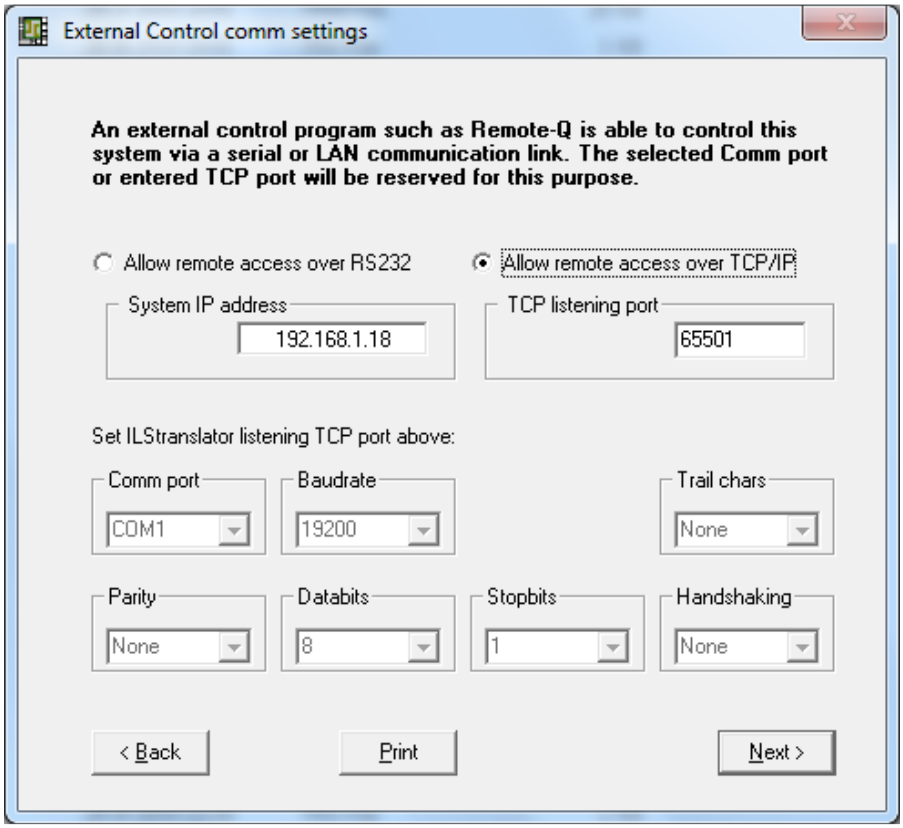
Remote control.
If you want ILStranslator to also listen and allow control besides the direct glass plate buttons, keep that possibility open by selecting the second option.

Note: Select the second option if you also obtained Remote-Q.

Select which Comm port on the ILS22 you want to use and the Baudrate to operate at. Default is 19200 baud, but here you can increase that depending on your remote control hardware capabilities.

Note: With a modern PC or laptop you should be able to successfully communicate at 115200 baud or higher. But you can also connect over a network (TCP/IP). Default TCP listening port in ILStranslator is 65501. Make sure that no Firewall is blocking a TCP/IP connection and that the Remote-Q PC is in the same address range as for ILStranslator. The ILS22 system IP address is shown as an aid in setting the Remote-Q PC IP address.

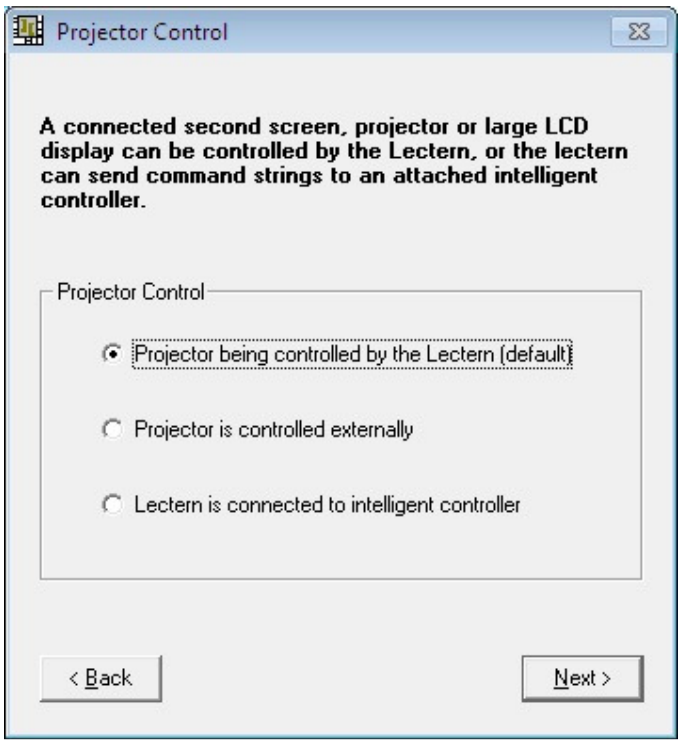

External Control comm settings
An external control program such as Remote-Q is able to control this system via a serial or LAN communication link. The selected Comm port or entered TCP port will be reserved for this purpose.
Allow remote access over RS232
Allow remote access over TCP/IP
System IP address
192.168.1.18
TCP listening port
65501
See communication parameters below, select comm port and baudrate:
Comm port
COM1
Baudrate
19200
Trail chars
None
Parity
None
Databits
8
Stopbits
1
Handshaking
None
< Back
Print
Next >


External Control comm settings
An external control program such as Remote-Q is able to control this system via a serial or LAN communication link. The selected Comm port or entered TCP port will be reserved for this purpose.
Allow remote access over RS232
Allow remote access over TCP/IP
System IP address
192.168.1.18
TCP listening port
65501
Set ILStranslator listening TCP port above:
Comm port
COM1
Baudrate
19200
Trail chars
None
Parity
None
Databits
8
Stopbits
1
Handshaking
None
< Back
Print
Next >

If you rather want to control the lectern over a wired or WiFi LAN connection, select the TCP/IP option and enter the TCP listening port number.

Note: The entered TCP port number should be in the range 49152 – 65535.
Note: Firewall settings may prohibit access to the lectern via TCP/IP. Verify with your ICT department that the ILS22 can be reached via local LAN.
Note: A dedicated RS232 connection can be faster than a networked connection but also requires a dedicated wired connection. Via TCP/IP you can control the lectern from any PC running Remote-Q and connected to the TCP/IP network.

Projector control.
The projector control form allows to select which device is controlling the projector concerning power on, power off or inquiry.



Option possibilities are displayed.

Select the first option if the projector is under direct control of the lectern.

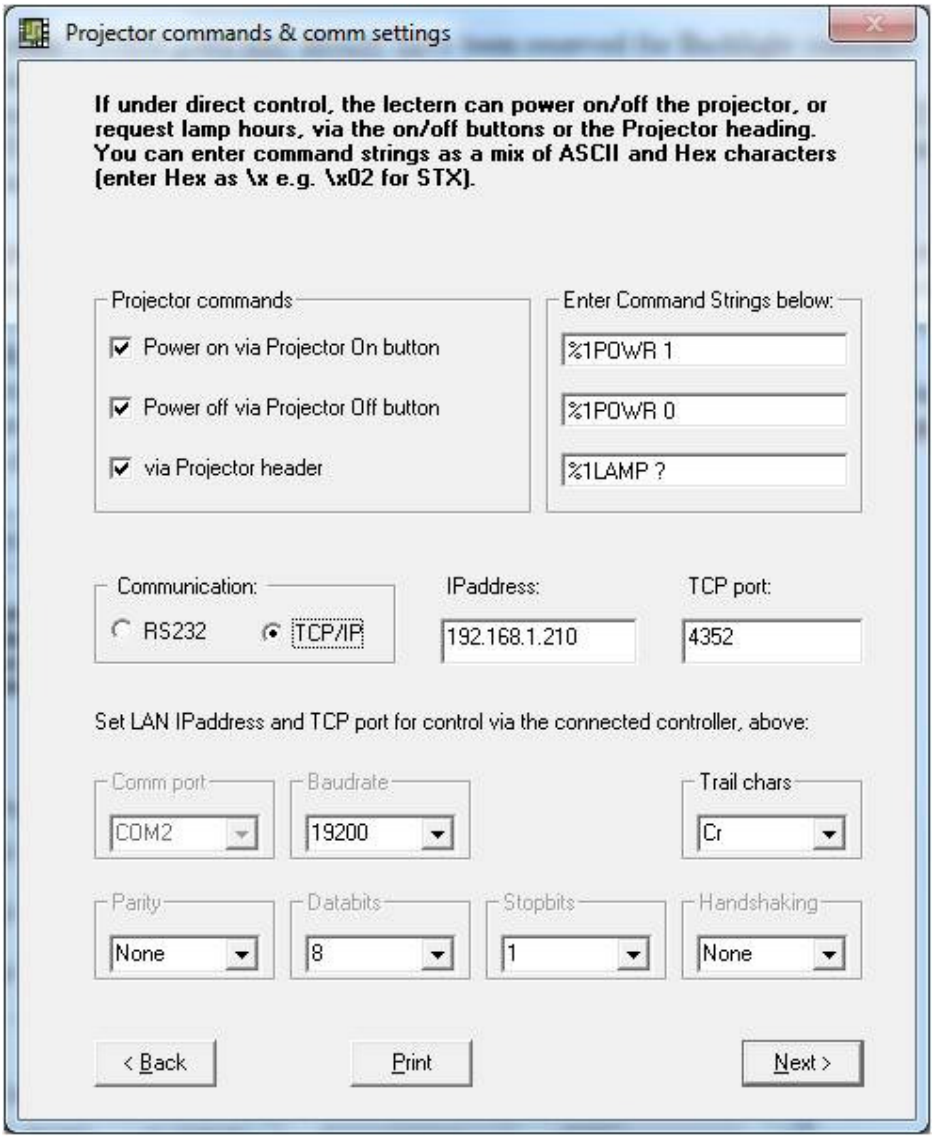
Select the second option if the lectern has nothing to do with it, e.g. the projector functions are under direct control of a supplier supplied IR remote or a controller board room interface.

Select the third option if the lectern has to send out a command string to a connected intelligent controller.

Selecting option 1 or option 3 allows you to enter the communication parameters as shown in the following picture.
Note that other COMM ports may already have been reserved for Backlight controller communication and for Remote-Q control. In the standard ILS22Setup with internal PC,

communication to the backlight controller is via the internal PC COM4 port, leaving COM1, COM2, COM3 and COM5 available for other connections. You can also specify commands are being send out over a TCP/IP connection. In that opt for the TCP/IP option in the next window.

For some projectors (such as Panasonic PT-series) you may need to enter Hex characters. ILS22Setup allows to enter Hex characters via a \x entry, e.g. \x02PON\x03 for a power on command for the Panasonic PT-series. If a command needs to be followed by a trail character (such as \x0D as Cr), you can enter that too, and leave Trail chars to None.
The following image shows an example for Japanese manufactured projectors applying the PJLink protocol. You can send a power on command as %1POWR 1. As the PJLink prototol projectors do require a Trail character (Cr), Trail chars is set to Cr.

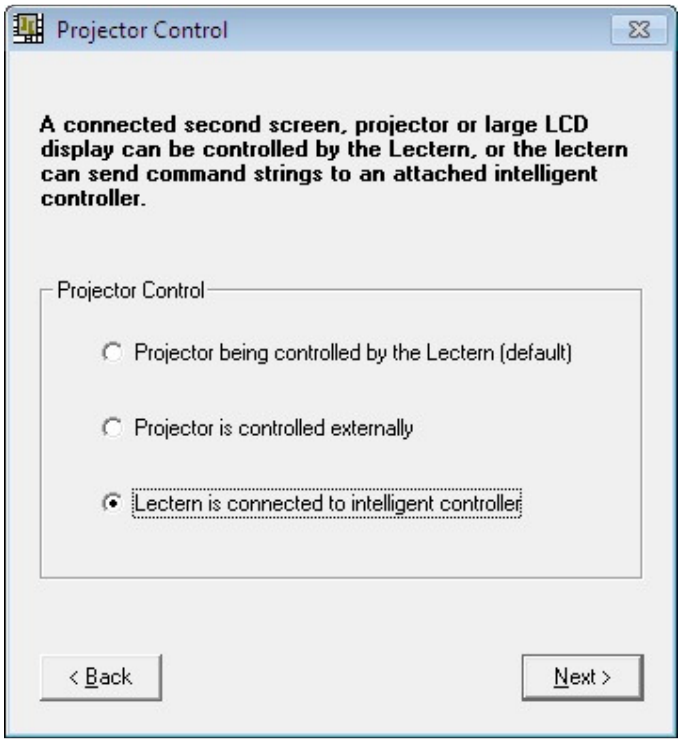


The check boxes allow to specify whether the glass plate buttons are activated (check the box) or not activated (un-check the box).
In the Command string text boxes you can enter the ASCII containing \x Hex strings to be send out to the projector to perform the function. In this example, the PJLink protocol

command structure is used. Enter as text without quotes. '%1POWR 1', and it will power up projectors supporting the PJLink protocol. Default TCP port to use is 4352.
Some protocols (like PJLink) require a trailing character to indicate the end of the command. Select under Trail chars. PJLink requires a Cr.
Make sure to enter the correct IP address assigned to the projector. A TCP/IP connection basically only requires a correct IP address and TCP port.

If you want to connect over RS232, opt for RS232.
The bottom half allows to specify the serial (RS232) communication setting. Select the Comm port to be used on the ILS22, baudrate, parity, number of databits, number of stopbits and communication handshaking. People familiar with Windows embedded Hyperterminal should recognize the choices.

Instead of being under direct control, the ILS22 can be set up to control projectors via an attached controller capable of receiving command strings over a serial RS232 communication line or being TCP/IP connected.



Basically, the Projector form is representative for the remainder of this user guide:

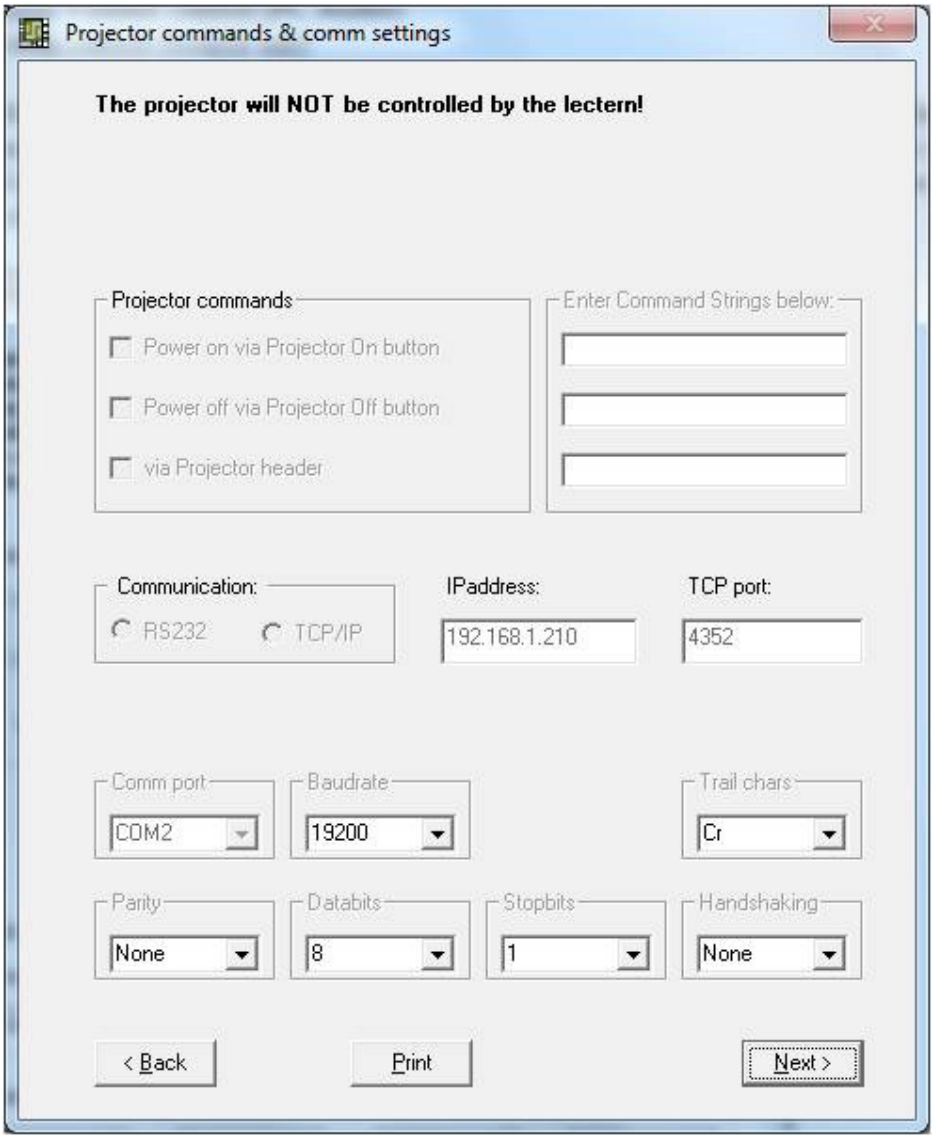
- Either control is directly via the ILS22 Lectern (actually via ILStranslator)
- Control is performed via external circuitry (externally)
- Control is performed with ILStranslator functioning as a user interface to an attached intelligent controller

If attached to an intelligent controller, and ILStranslator functioning as a user interface, you can specify which buttons are active, which commands to send and where to.

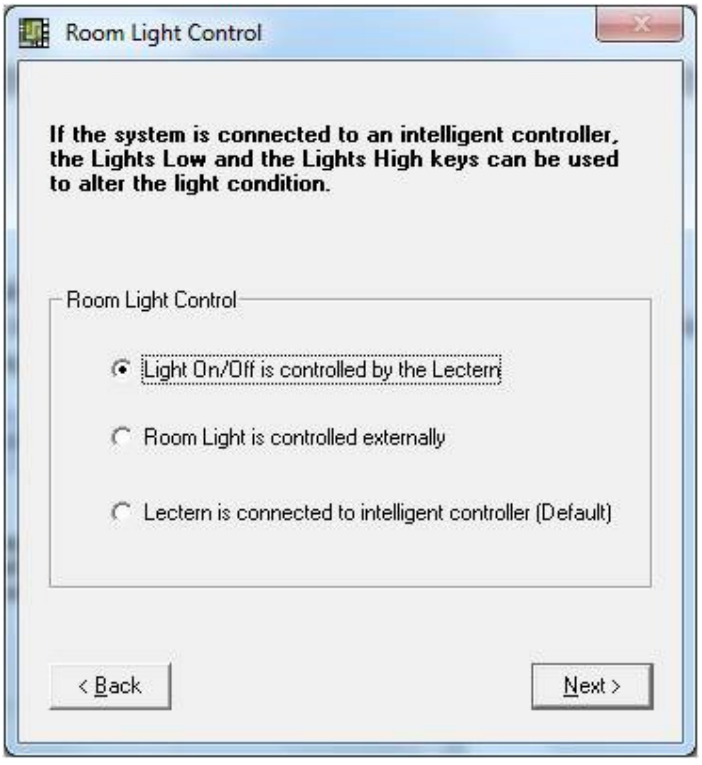
Next to Projector control via an attached intelligent controller, this also applies to:

- Room light control (Lights)
- Mute Mic control (Mute Mic)
- Mic Volume control (Mic sensitivity)
- Master Volume control (PC Audio)
- Switch control (Source out)

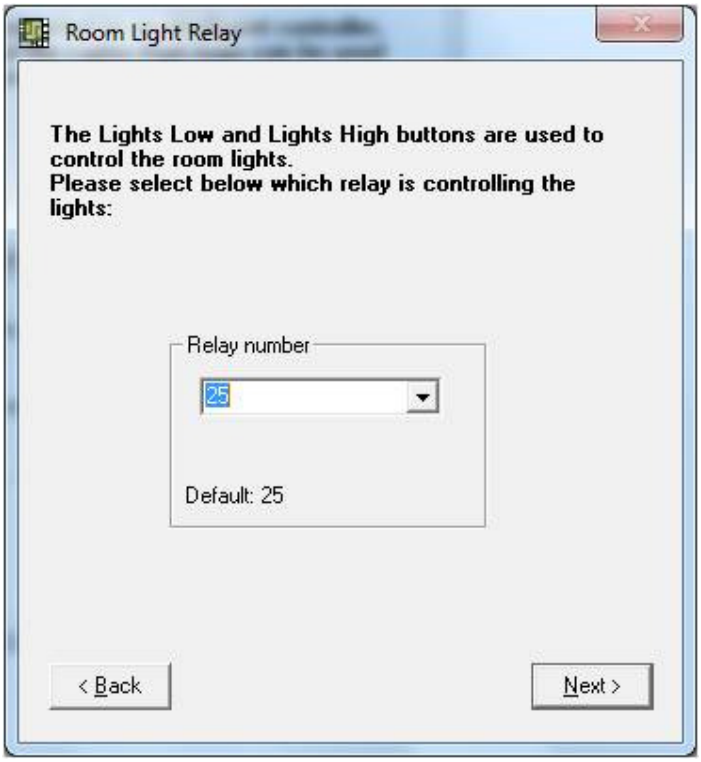
If all off these functions you specify are to be done without interaction with ILStranslator, or ILStranslator as user interface, choose for the second option which directs commands to be performed or controlled 'externally'. In that case, ILStranslator will not backlight these buttons to the Presenter.

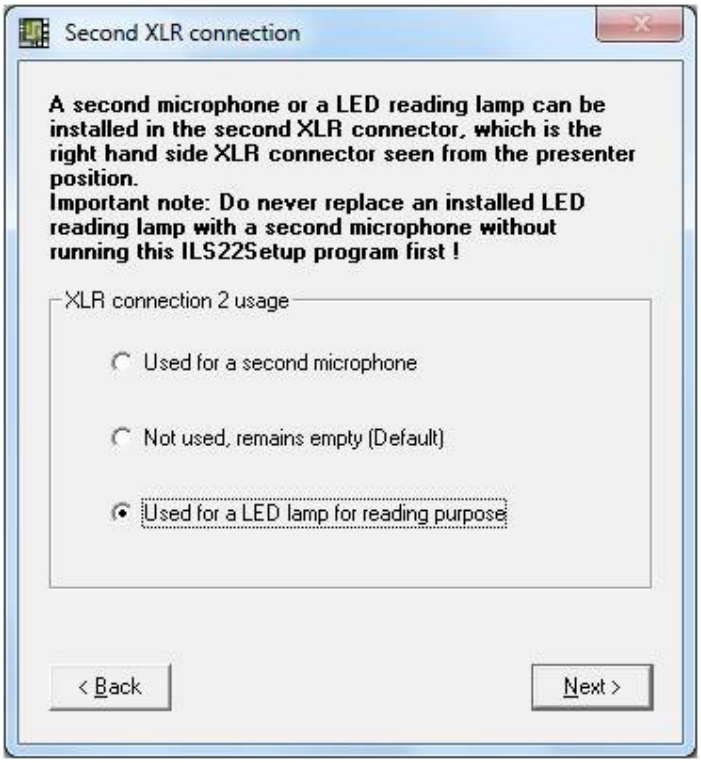


Room Light control.
The ILS22 with it's internal relays, can close a relay to increase room lightning, or open a relay to decrease it again. The choice is made in the Room light window. Default is an attached intelligent room light controller.

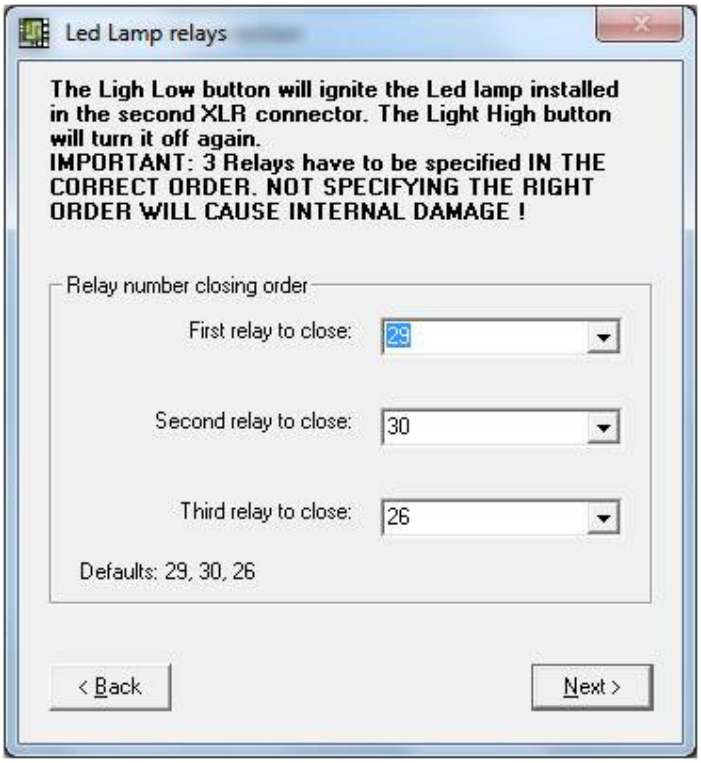


If you (via the Light High/Low) button want to increase or decrease Room light via the lectern relay, select the first option. This will bring up a window in which you can select which relay to use.





Straight after selecting the way to control room light, you are requested whether the second XLR connector (on the right hand side seen from behind the lectern) is used, for a second microphone (XLR microphone), not used (Default) or used to power up or down (switch on or off) an optionally available LED reading lamp from ILS. See last image previous page.
In the latter case (LED reading lamp), it is extremely important which relays are used and in which sequence the relays are closed and opened again !



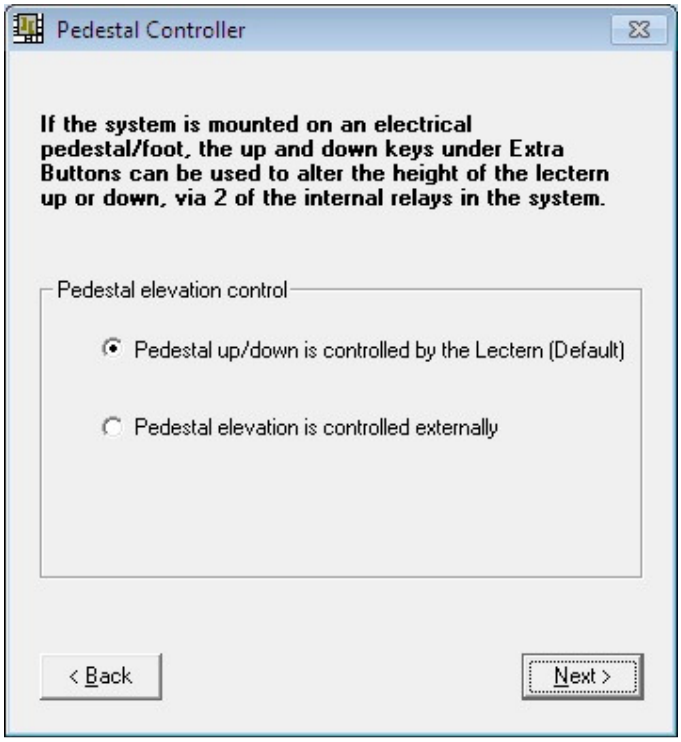
Pushing the Light Low button will automatically ignite the connected LED reading lamp. The Light High button will turn it Off again.

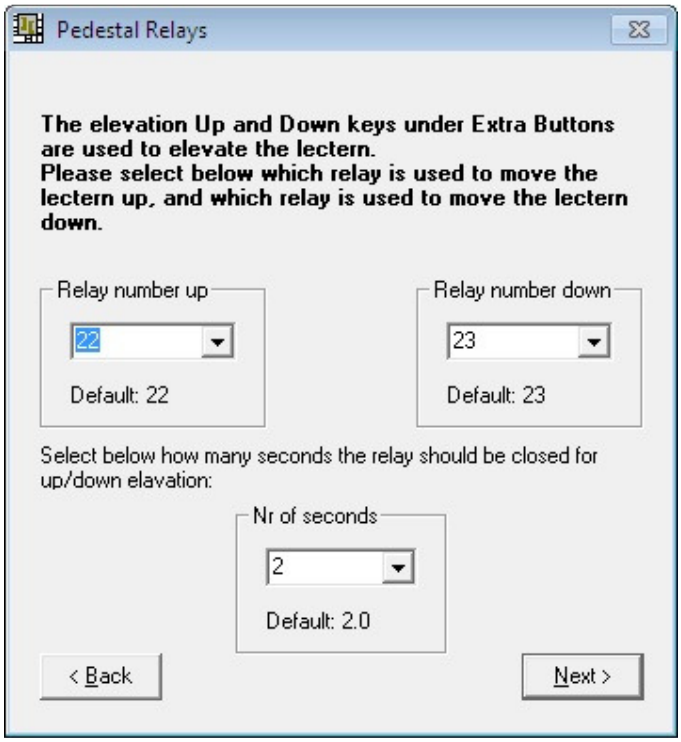
NOTE: The list-boxes will show which relays are available, but they are locked, so you can not change the relays. If, for any reason, you want to change them, please contact ILS first !

NOTE: If you specified the second XLR2 connector to house a XLR 48V (Phantom) powered microphone, replacing the microphone with a LED reading lamp and without running this program first, will result into internal electrical damage !

In neither of the above noted cases, ILS is responsible for any damage caused. Sending back to ILS for repair and repair costs are to be carried by you !

Pedestal control.
If the ILS22 is mounted on an electrical pedestal (the ILS Powerlift), it can be elevated up or down .





The ILS22 has build-in relays for control functions.

By default, relay 22 and relay 23 are reserved for driving the motor in the optional electrical pedestal from ILS (supplied with the ILS22).
One can define the number of seconds the relays will be closed (number of seconds for up/down movement). Default is 2 seconds.

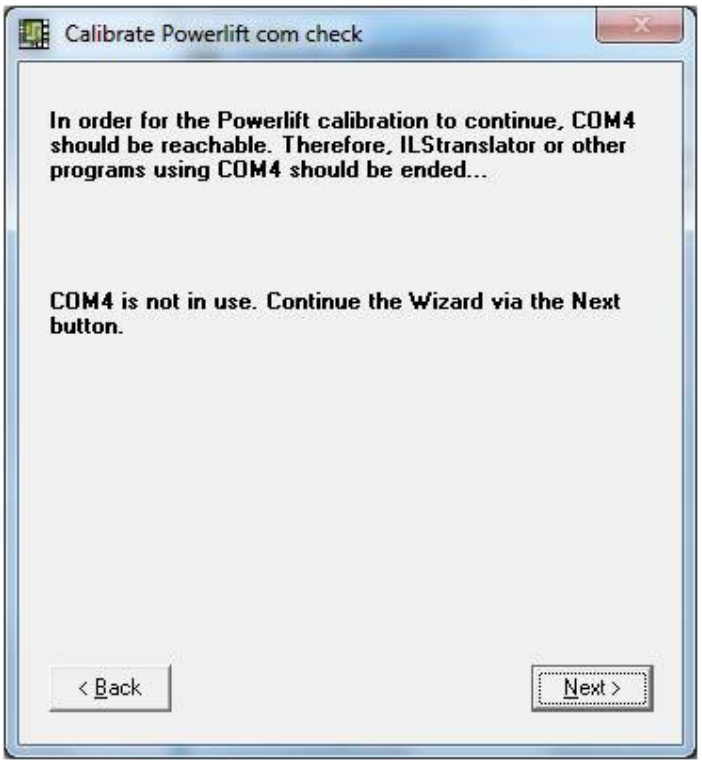
If under direct control of the lectern (ILStranslator), the following Window will show up.
Via Powerlift Calibration you can specify ('Mark') the highest and lowest setting, which in turn will be used to provide a calculated indication in ILStranslator (and Remote-Q) what the current height is calculated in cm's and inches.
This calculated indication is shown in ILStranslator/Extra Buttons.

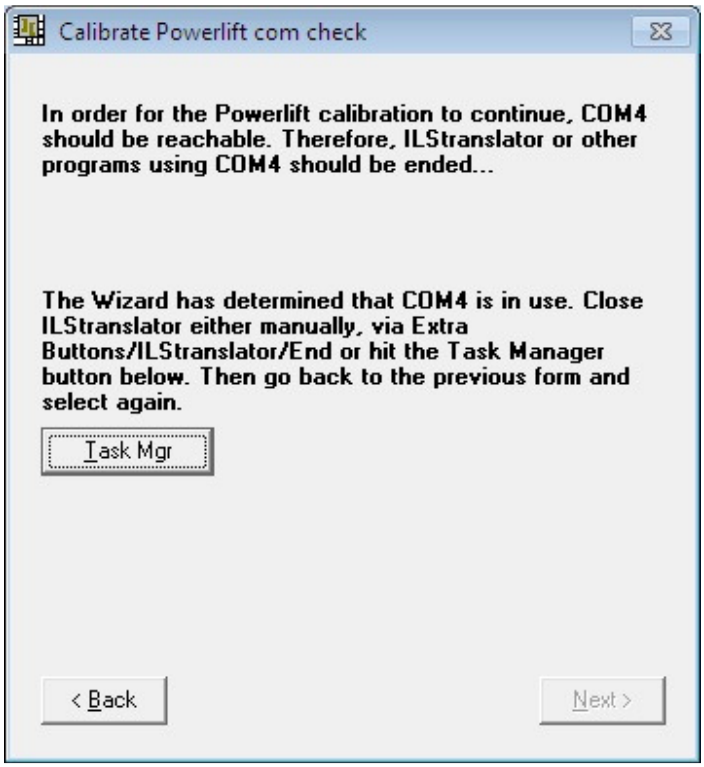
Select the first or third option to calibrate the Powerlift.

Important note: If you do NOT Calibrate the Powerlift, neither ILStranslator nor Remote-Q will be able to estimate approx height or adjust it showing approx height. In this case, in ILStranslator/Extra Buttons, the approx height is not shown and in Remote-Q you can not automatically adjust the desired pedestal height for the next presenter…

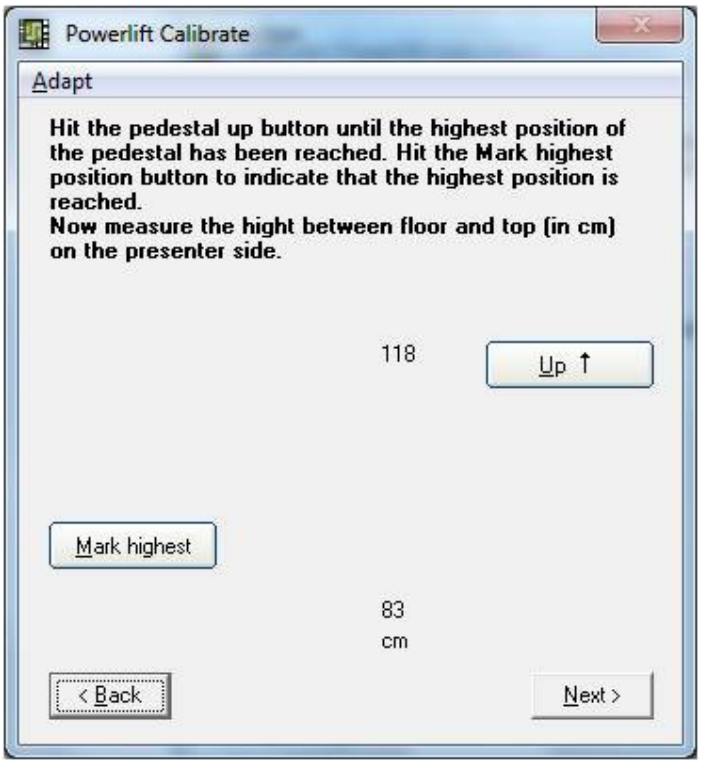
After hitting the Next button, ILS22Setup is verifying whether the Comm port to the backlight/relays controller is free for communication.
If it is, the following form on the next page, will show up.
If the Comm port is not available, the second form on the next page will show up, allowing (e.g. via Task Manager) to stop running the program using the Comm port.

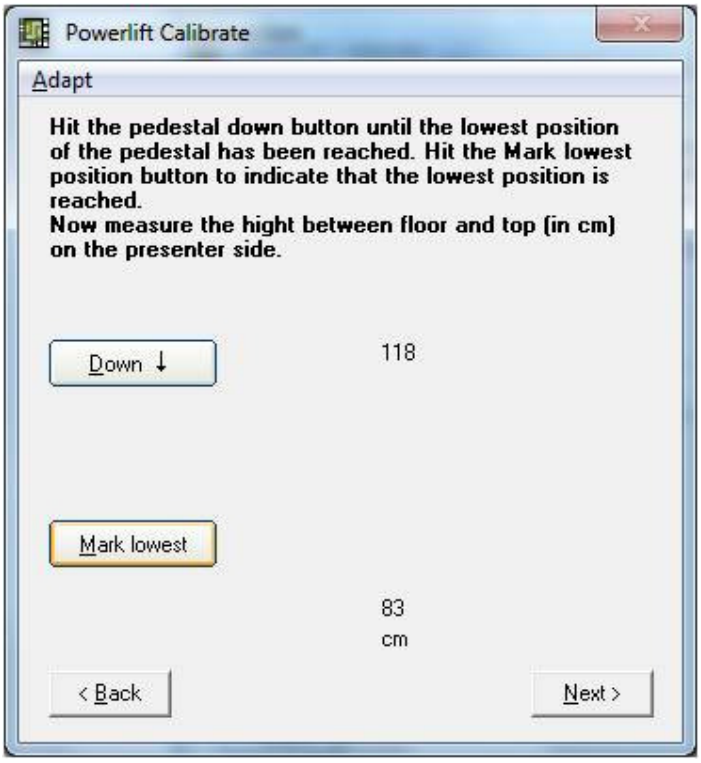
Note: Always end ILStranslator before running ILS22Setup. Specifically in the case of calibrating the PowerLift, as by default ILStranslator is communicating to the relay controller over COM4.





When the Next button is enabled, the next 2 forms allow to mark the highest and lowest positions of the PowerLift:

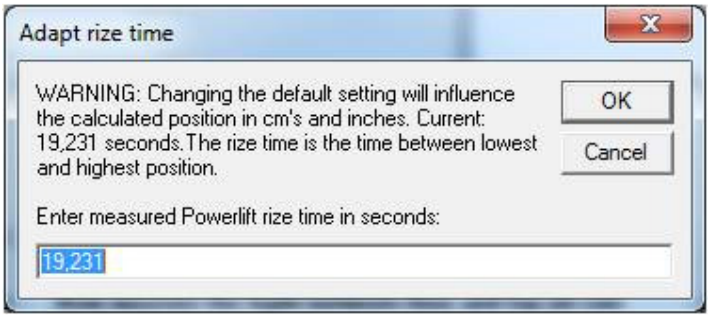




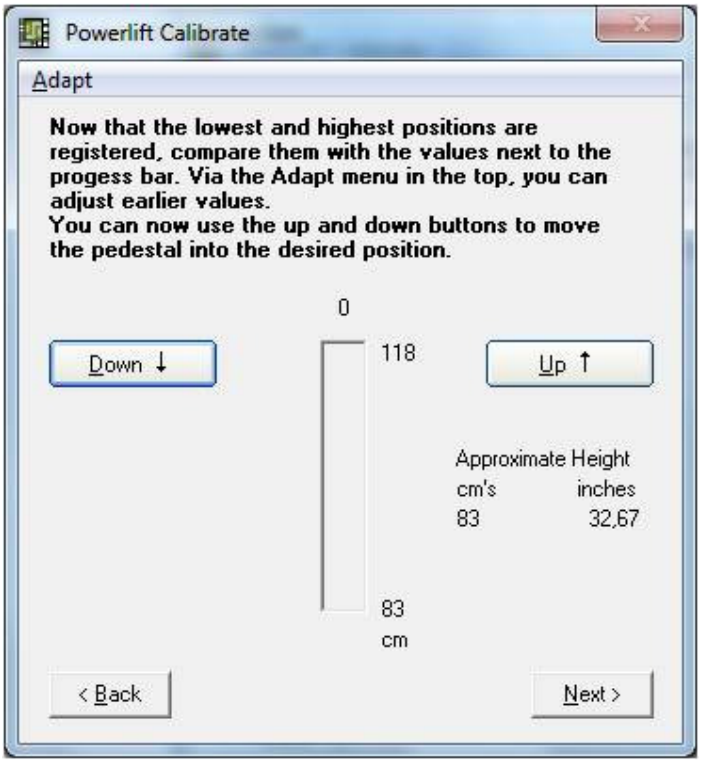
The forms show the approximate lowest and highest position measured in rounded centimeters (in this case 83 cm as lowest and 118 cm as highest). The positions are measured at the front (Presenter side) from ground up to the top of the pedestal.
Note: There might be later Powerlift engines which go lower or higher, or have a different rise-time from lowest to highest measured in seconds.

In the mean time, also measure the time it takes to go from the lowest position to the upmost position and the other way around (in seconds). By default this is something between 19 and 20 seconds.

In the top menu, select Adapt to adjust your findings for lowest position in cm, for highest position in cm and the rize-time. For example:



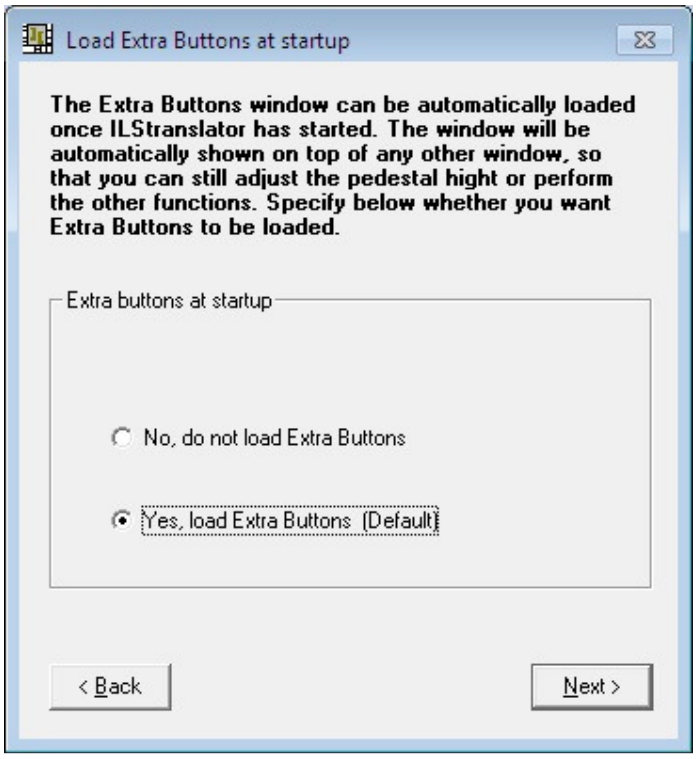
Once the calibration has been performed, you can move the pedestal up or down into a desired default position:



Hit the Down or Up buttons to elevate the pedestal into a required default position. The approximate height values will be adjusted accordingly.

Hitting Next will show the Load Extra Buttons window:

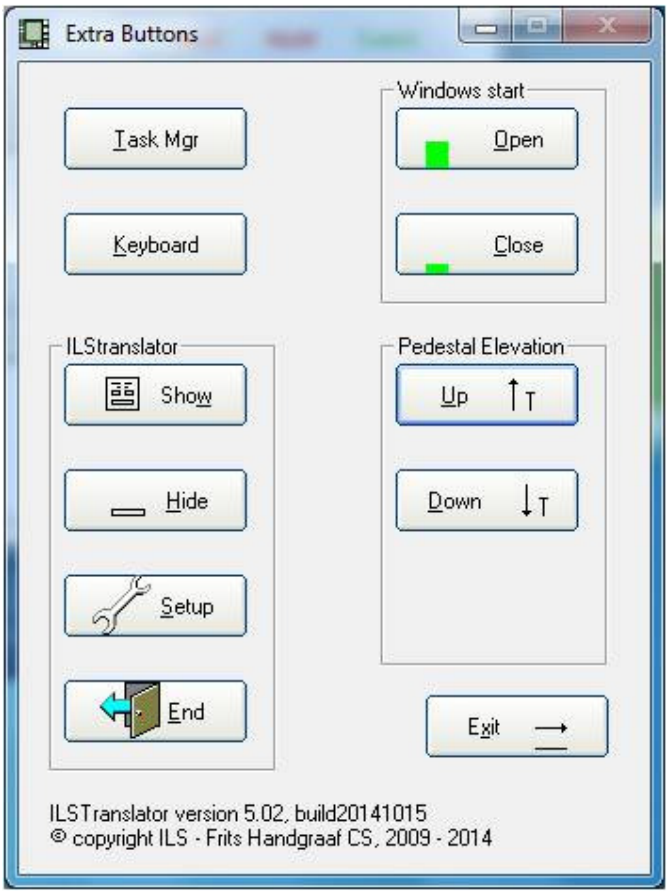
Load Extra Buttons.



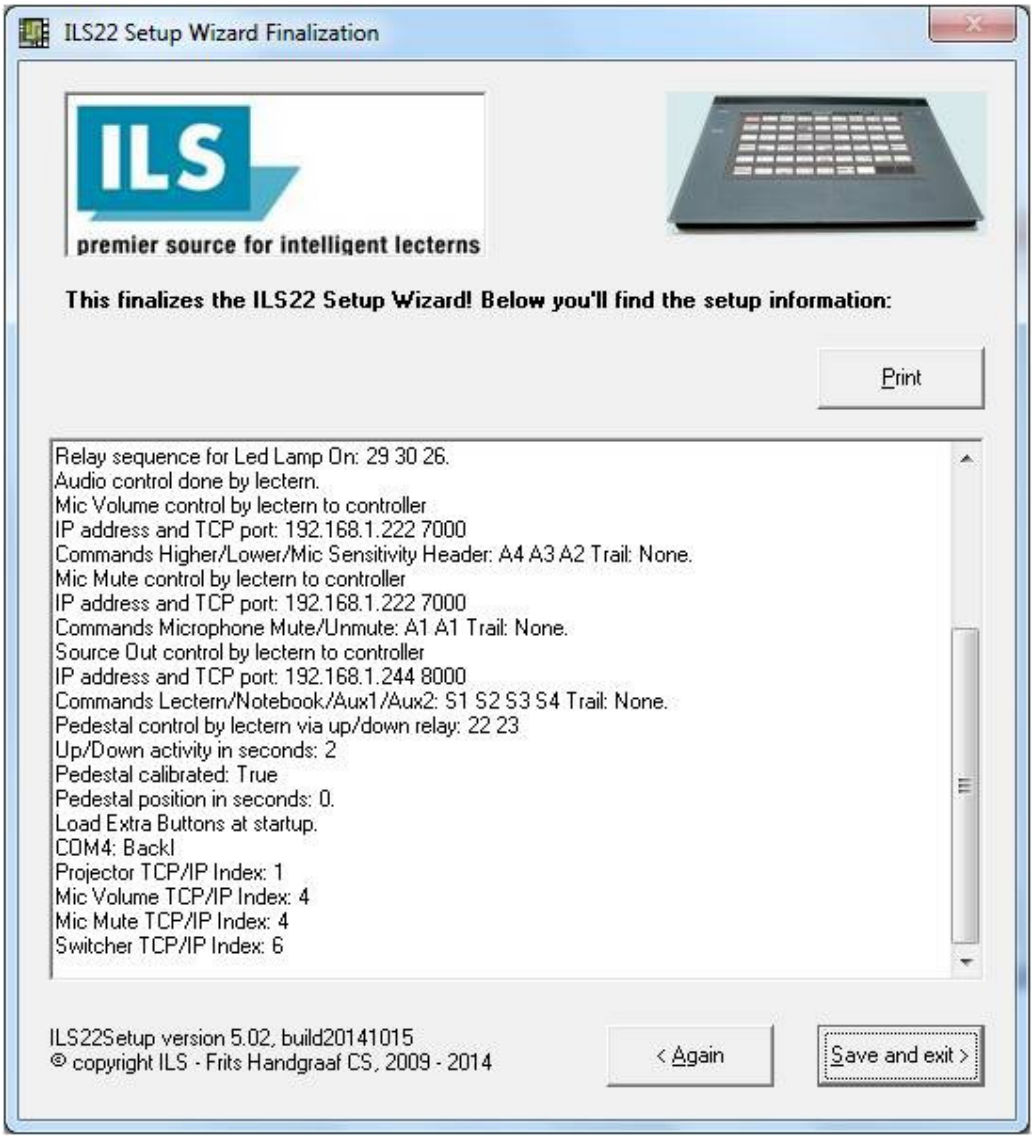
When loaded, you can adjust pedestal height, change ILStranslator settings (not ILS22Setup settings), show the Main window (which displays sent commands, received commands, connection status to Remote-Q) and can serve as a debug tool. In the Extra Buttons window you can also end ILStranslator from running, or hide the Extra Buttons window.

Note: When not loaded at startup, or unloaded via ILStranslator, bring the Extra Buttons window up again via the Extra Buttons glass-plate button.

The next screenshot shows how the Extra Buttons window appears:



To end the Wizard, hit the Next button to continue.



At the end of the wizard, an overview of selected settings will be provided.
If you scroll down, ILS22Setup will also show which of the 5 RS232 COM ports are used (and for which purpose) and which of the 6 TCP/IP Winsocks are used (and for which purpose).
In ILStranslator, via the Extra Buttons window and Show, the Main form will show up with labeling like Backl, MicV, MicM, Proj etc. It will also indicate the state of RS232 connections and TCP/IP connections, whether commands were sent and whether replies were received. It will display commands sent and received in scrollable text boxes. This is a great aid for technicians, ICT and presentation support personnel to check out connections and functionality.

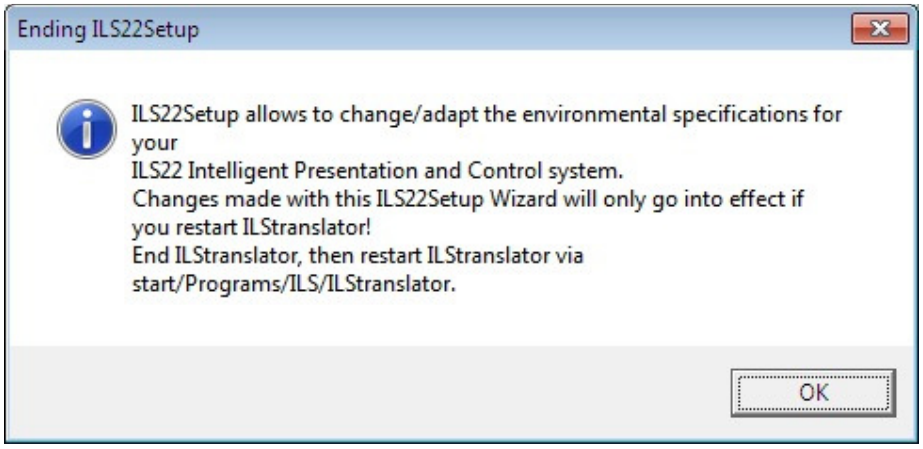
Note: If you want to prepare projectors, peripherals and intelligent controllers, connections and check it out before arrival of the ILS22, request me or ILS for a free copy of CheckPi.

Hit the Save and exit button to save the settings to system registry.

If not content, hit the Again button to restart the Wizard.

When ILStranslator, the glass-plate interface embedded software, is started up, it will read the ILS22Setup settings from the registry and act accordingly.

Note: Within ILStranslator, these settings can not be changed. Therefore, restart ILStranslator if changes were made in ILS22Setup, and you want them to be in effect.
Note: Typically, ILS22Setup is run once only to adapt the ILS22 to required conditions.



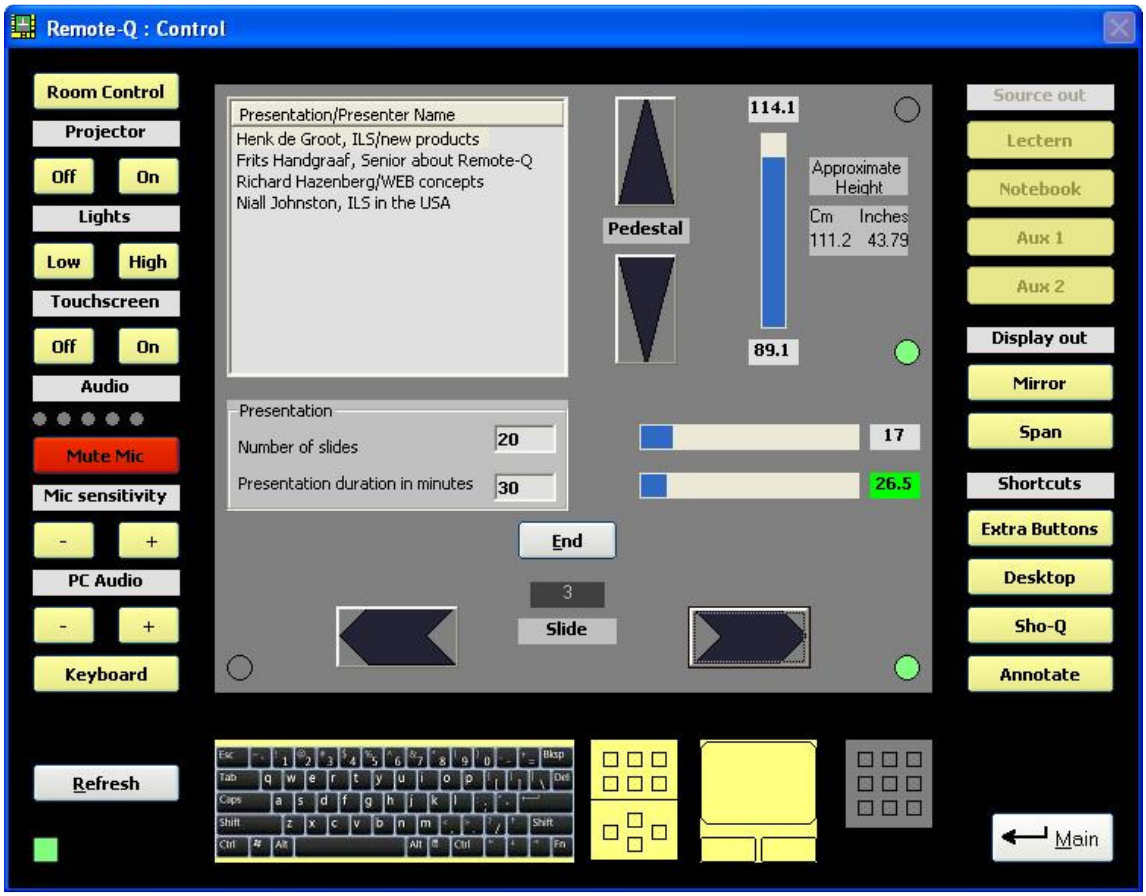
Conclusion.

With the ILS22Setup wizard, you, your ILS VAR reseller, or your local ICT/AV support personnel, can exactly determine and specify the ILS22 setup configuration. If it needs a change, for instance because a projector or other device is being replaced, other default requirements are being desired, or in any other circumstances, ILS22Setup can be used to redefine your requirements. Your ILS22 presentation and control system is reacting accordingly (as is Remote-Q).
In other words, redefine your new requirements and setup, with this single wizard…

For more information concerning the ILS22, ILS22Setup, ILStranslator or Remote-Q, check the ILS web-site:
www.intelligentlecterns.com
or the FHCS web-site:
www.fritshandgraafcs.com
or contact:
henk.degroot@intelligentlecterns.com
frits.handgraaf@intelligentlecterns.com or
frits@fritshandgraafcs.com

February, 2015 by:
Frits Handgraaf

Appendix, Remote-Q screenshot.



Appendix, ILS22 glass-plate buttons.