


# Intelligent Desk

Technical Quick Guide

## IMPORTANT SAFETY INSTRUCTIONS

Your safety and the safety of others are very important. Please familiarize yourself with the instructions and safety warnings before operating the table. Please keep this manual for future reference. To help you make informed decisions about safety, we have provided this user's manual, operating procedures and other information on labels. This information alerts you to potential hazards that could hurt you or others. It is not practical or possible to warn you about all the hazards associated with operating or maintaining a table. Please use your own good judgment.

You will find important safety information in a variety of forms. Safety Messages are preceded by a safety alert symbol  and one of three signal words: **DANGER**, **WARNING**, or **CAUTION**. These safety messages are listed in order of severity, identify the general risks and what actions you are to take to avoid the risks. These signal words mean:

### **DANGER**


Indicates an imminent hazard with a high risk of serious injury or death.

### **WARNING**

Indicates a potential hazardous may result in serious injury.

### **CAUTION**

Indicates a potential hazardous, which may result in minor or moderate injury. It may also be used to alert against unsafe practices.

 **NOTICE** - Indicates an alert to call attention to proper assembly instructions or particular operation procedures to assure correct equipment function and to avoid equipment damage or wear. The information and specifications included in this manual were in effect at the time of approval for printing. Knoll reserves the right to discontinue or change specifications or design at anytime without notice and without incurring any obligation whatever.



## **WARNING**

Grounding Instruction. This product does NOT require grounding to earth. This product is double insulated and equipped with a non-polarized 120V plug and 2-conductor cord. The plug must be plugged into an appropriate building outlet that is properly installed in accordance with all local codes and ordinances. Please read Servicing of double-insulated products as well.

## **DANGER** – Risk of electrical shock

Improper connection of the equipment can result in a risk of electric shock. Check with a qualified electrician for any concerns. Do not modify the plug provided with the product – if it will not fit the outlet have a proper outlet installed by a qualified electrician. This product is designed for the voltage indicated on the power supply label. No adapters should be used with this product.


## **CAUTION** – Risk of electrical shock.

Before you plug in the power cord, check the following again:  
The voltage must be as specified on the power supply label. When the power cord is plugged in, the system is operational.

### Servicing of double-insulated products

In a double-insulated product, two systems of insulation are provided instead of grounding. No grounding means is provided on a double-insulated product, nor is a means for grounding to be added to the product.

Servicing a double-insulated product requires extreme care and knowledge of the system, and is to be done only by qualified service personnel. Replacement parts for a double-insulated product must be identical to the original parts. A double insulated product is marked with the words "**DOUBLE INSULATION**" or "**DOUBLE INSULATED**". The symbol (square within a square) is also able to be marked on the product.

 The symbol

## CONNECTIONS



Connection for LED lamp  
(See specifications)

Connection for power strip

Current measuring Connection  
(For future use)



Modular connector for NFC reader

Multipurpose button with LED indicator

USB host connector (iOS)

USB device connector (Android)

iDrive connector x 2

## **CONNECTIONS DESCRIPTION**

### **LED - Connection for LED lamp**

This connector drives a LED lamp with constant current @ max 35V/550 mA using pulse width modulation (PWM). Center pin positive. **Caution!** Check LED lamp specifications and configure the LED output accordingly before connecting. Improper use may damage the equipment.

### **EXT. - Connection for power strip.**

This connector connects to a ROL Ergo Intelligent Desk power strip control circuit that can control up to 4 individual 115VAC/230VAC sockets. Use only cable supplied with power strip and socket control circuit to connect (Separate part).

### **VU - Connection for current measuring sensor**

Only suitable for ROL Ergo Intelligent Desk power sensor (For future use - TBA)

### **NFC - Modular Connector for NFC reader**

This connection allows connection of an ROL Ergo Intelligent Desk NFC/RFID reader for user identification.

### **Multipurpose button with LED indicator**

The multipurpose button has two functions. Press the button for 2 seconds to disconnect a Bluetooth device from the Intelligent Desk unit. Press the button for 8 seconds to restart the unit.

### **LED indicator description**

Green blinking light (1sec on/1sec off) - Everything OK

Yellow steady light - Connection with device established (USB or Bluetooth)

Yellow fast blinking light - Disconnect delay. If device is disconnected (USB) or out of range (Bluetooth) there is a delay before the Intelligent Desk unit terminates the connection (Default 15 min)

Red steady light - An error has occurred.

### **USB host connector (iOS)**

This connector is dedicated for connecting iOS devices.

### **USB device connector (Android)**

This connector is dedicated for connecting Android devices. Some devices might require OTG (On-The-Go) adapter.

## **iDrive - iDrive connector x2**

The Intelligent Desk has 2 iDrive connectors. Power is supplied from the power supply unit to the Intelligent Desk unit via iDrive. When connecting iDrive devices on the bus please ensure that the power supply unit isn't connected directly to the Intelligent Desk unit. The Intelligent Desk unit should preferably be at the end of the line bus.

## **Bluetooth connectivity**

The Intelligent Desk is capable of communicating over Bluetooth. If a device, such as iPhone/iPad or other smartphone or tablet, supports Bluetooth you can pair it with the Intelligent Desk. Please consult the manual for the device for instructions about how to pair via Bluetooth.

## **Wi-Fi connectivity**

The Intelligent Desk is capable of communicating over Wi-Fi (802.11 b/g). Support of encrypted network with the standard WEP, WPA-PSK and WPA2-PSK. To configure the wireless network, connect to the Intelligent Desk WLAN with SSID Desk-XYZ (ZYX = Intelligent Desk serial number) and go to webpage <http://192.168.1.3>.

## **INDICATORS DESCRIPTION**

### **Button**

The button can be used for various purposes depending on the state of the Intelligent desk.

A short press (<= 1second):

- If the red indicator is flashing or is on:
  - o a short press on the button will display the oldest warning/error in the log for 5 seconds.
- If the red indicator is off:
  - o if the Intelligent desk is connected to an iOS device, the application in the device will be launched

A medium long press (> 1 second, < 3 seconds):

- If the table is connected to a device via bluetooth, the connection will be terminated

A prolonged medium long press (> 3 seconds, < 8 seconds):

- If the desk is equipped with Wifi connectivity options, the Wifi profile will be restored and the board will be set to Soft-AP mode

A long press (> 8 seconds):

- The Intelligent desk will be reset

## Indicators

Normal conditions:

### Green LED:

Off: A fatal error occurred – error is indicated

Flashing: Heartbeat – indicating that the system is running

On: A fatal error occurred – error is indicated

### Orange LED:

Off: No connection established

Flashing: Device has been disconnected and the Intelligent desk is awaiting disconnect delay

On: Connection to device established over BlueTooth or USB

Short flash: Connected to internet and in headless mode

### Red LED:













Off: No error has occurred

Flashing: At least one warning has occurred. The warning can be displayed by pressing the button

On: At least one error has occurred. The error can be displayed by pressing the button

## Display warnings:

If the red indicator is flashing, there are at least one warning logged in the system. A maximum of 5 warning/errors can be stored in the log at the same time. By pressing the button, the oldest warning will be displayed for 5 seconds according to the list below. Afterwards the warning will be removed from the log and the indicator will return to its normal state. If multiple warnings/error exist in the log, the red light will indicate this, and they can be displayed by pressing the button.

Green	Orange	Red	Warning
			NFC reader failed
			Bluetooth failed
			iDrive failed
			Headless connection failed
			USB Device failed
			USB Host failed
			Buffer full, data discarded

### Display errors:

If the red indicator is on, there are at least one error logged in the system. A maximum of 5 warning/errors can be stored in the log at the same time. By pressing the button, the oldest error will be displayed for 5 seconds according to the list below. Afterwards the error will be removed from the log and the indicator will return to its normal state. If multiple warnings/error exist in the log, the red light will indicate this, and they can be displayed by pressing the button.

Green	Orange	Red	Error
■			USB buffer overrun
	■		Wifi connection failed
■	■		To be defined
		■	To be defined
■		■	To be defined
	■	■	To be defined
■	■	■	iOS authentication failed

### Fatal errors:

If the system gets a fatal error and can not continue running, the board will indicate the error on the indicators, and if possible, restart within 8 seconds, where the error will be reset as well.

Green	Orange	Red	Fatal error
■			Low voltage
	■		Unhandled interrupt
■	■		Oscillator failed
		■	Addressing error
■		■	Stack error
	■	■	Math error
■	■	■	Bootloader - insert USB memory stick

### USB firmware upgrade:

The system can be updated using USB memory stick. If the button on the Intelligent desk is held while powering up the Intelligent desk, the system will be set into firmware update mode. A prolonged button press (>10 sec) will also result in entering USB firmware upgrade mode. When a USB memory stick is discovered with appropriate firmware-file (hex-file) is detected, the firmware will be automatically updated. The Orange LED indicator will flash while the system is updating. Once the system is updated, it will be automatically restarted.