



# QUANTEC

## Yardstick 249x Series

### Getting started Ver. 4.2

This brief instruction should only be used as a quick-start guide  
on how to operate your Yardstick

For an in-depth operations guide and additional information  
please visit: <http://www.quantec.com/>

#### **1. Start-up**

- Attach Yardstick to power outlet with a three-wire IEC connector cable (protection ground – IEC class I)  
Power supply automatically adapts to all common mains voltages
- Turn-on device using front-panel rocker switch on the right
- After a short boot-up of less than 15 seconds, both displays will light up, and your Yardstick is ready for use

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#### **2. Connectors**

##### **XLR:**

- 2492 – 2 digital AES3 inputs, 2 digital AES3 outputs
- 2493 – 2 analog inputs, 2 analog outputs
- 2496 – 2 digital AES3 inputs, 6 digital AES3 outputs
- 2498 – 8 digital AES3 inputs, 8 digital AES3 outputs (breakout snake supplied with unit)

##### **Ethernet:**

- Cat-5 Ethernet port for connection to router / switch / hub (10Mbit/s).  
For real-time remote control of one or more Yardsticks via web browser control panel

##### **USB:**

- USB port (currently inoperable)

##### **MIDI:**

- MIDI IN / THRU / OUT ports to control Yardstick parameters via midi messages  
Use your editor's MIDI tracks for total recall and real-time automation

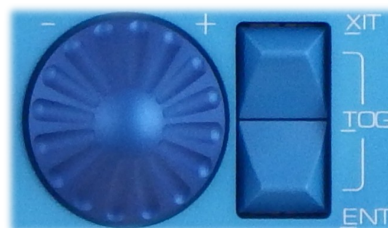
##### **RS-232:**

- serial D-SUB connector for debug and configuration functions

### 3. Operation by tap keys and wheel

**Tap keys:** two keys with following functions:

- ENT:** „Enter“ bottom key  
→ enter submenu / confirm parameter
- XIT:** „Exit“ top key  
→ close submenu / cancel parameter
- TOG:** „Toggle“ both keys (while holding one key, tap the other)  
→ hotkey menu / access various on/off parameters



**Wheel:**

- move horizontally through menus / select parameters / change parameter values

**For 2496/2498 Yardsticks only:**

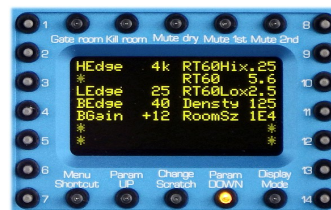
Circumferential switches around display

**10 push buttons with LED indicators**

- above and below display
- functions printed on front panel

**14 toggle keys (left-right toggle)**

- left and right columns alongside display
- change parameters that are shown on adjacent fields in display



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### 4. Control by web browser

Requires Ethernet cable connection of your Yardstick to a router (or switch / hub) port via a *straight* Cat-5 patch cable. For an optional *direct* connection to PC (point-to-point, not recommended), a *crossover* patch cable is required instead. Although a Yardstick has no internal Wi-Fi (WLAN) – if your facility has wireless infrastructure, you may operate your Yardstick(s) from notebook, iPad, or iPhone. Even *several* browser windows controlling *one* Yardstick seem to work ...

#### Configure Ethernet:

a.) **Automatically** (default)

- network with DHCP (automatic allocation of IP addresses)
- **Please note:** if MAC address access-control is enabled in router, your Yardstick's MAC address must be added to the list of authorized devices. Please check your router manufacturer's documentation for details
- Show automatically-allocated IP address:  
Menu „System“ → „Ethernet“ → „Show Ethernet“

b.) **Manually**

- Menu „System“ → „Ethernet“ → „Config eth.“ → „man.“
- change IP address, netmask, and gateway by using tap keys and wheel
- For solutions and advice in the context of network problems, please check your router manufacturer's documentation, or contact your local network administrator or tech guru

**Important Note:**

- The Yardstick Ethernet port can handle 10Mbps data rate only. Please make sure that your router is able to use that speed, without instabilities while negotiating Ethernet protocols (full or half duplex, 10 or 100 or 1000 Mbps, Auto-MDIX, etc). We regularly experience trouble with certain devices, although 95% of low-cost routers and switches work right away. In the case of protocol flapping, a 10 Mbps hub or switch from your vintage collection (between Yardstick and router) most often will do the trick. If connected to a Managed Switch, configuring its Yardstick port is almost always required.

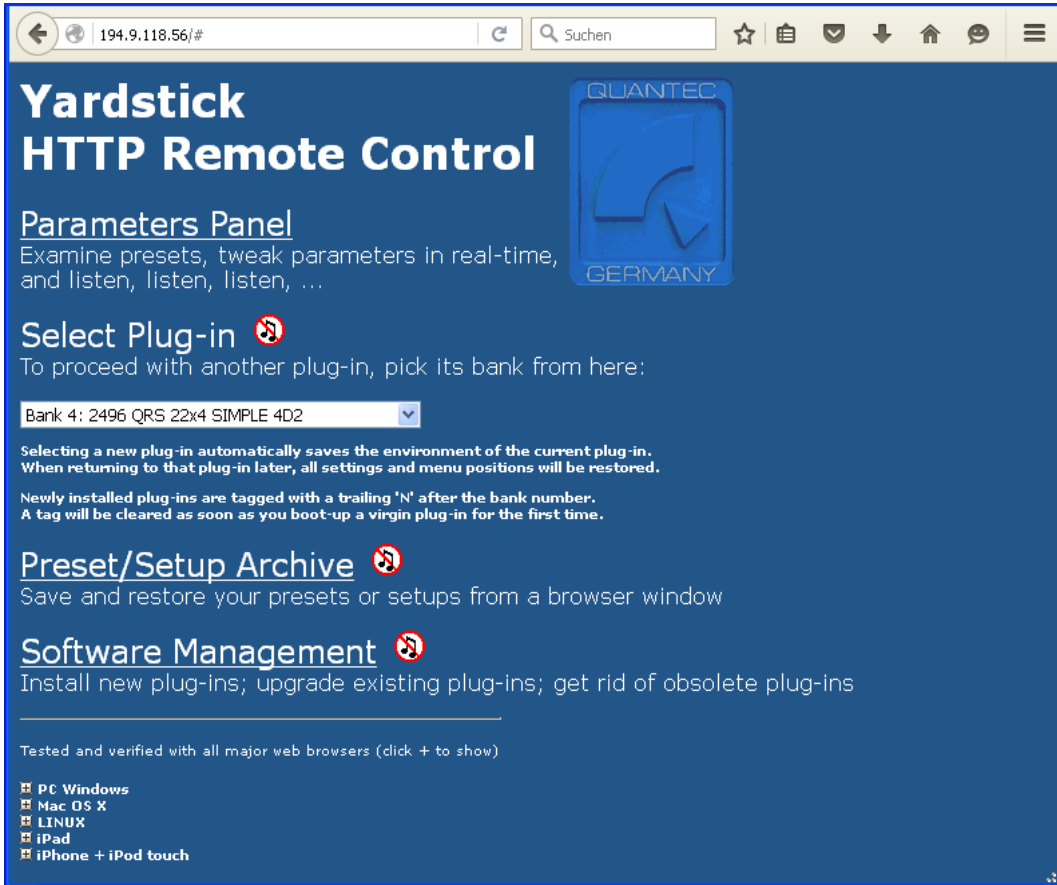
**Open Yardstick control panel in web browser:**

Please enter device IP as following (do not enter 'www' – unless you've set up some DNS configuration for your Yardstick):

<http://xxx.xxx.xxx.xxx> (example <http://192.168.0.10>)

Provided that all settings are correct, the Yardstick control panel's splash screen should pop up.

Splash screen of web-based Yardstick remote control:



Parameter panel for real-time control of Yardstick effect parameters and presets:



**Note:** turning-on **bubble help** may enlighten newbies. To enable bubble help, check square white box on the right, near top of panel. Parameter fields, bargraphs, rolldown text, buttons, checkmark boxes, and radio buttons are all sensitive – faders are not. Clicking a bubble makes it persistent, thus gives access to yellow bottom bars with clickable links to corresponding FAQs on Quantec website.

## 5. Descriptions of plug-ins

### **Please note:**

„Plug-ins“ used in Yardsticks are specially-written sound effect algorithm software packages, only to be installed within Yardstick devices. Don't mix that up with „native“ plug-ins for desktop computer audio editors or workstations.

For the Yardstick 249x series, there are currently 3 different plug-ins available (with more to come):

1. **Simple**            sampling rates 44,1kHz – 192 kHz (varispeed range 38-216 kHz)
2. **Medium**          sampling rates 44,1kHz – 96 kHz (varispeed range 38-108 kHz)
3. **Complex**         sampling rates 44,1kHz – 48 kHz (varispeed range 38-54 kHz)

Plug-ins vary in complexity, i.e. how much DSP power is spent for room model accuracy, coloration, pulse and resonance densities. For a constant (and certainly limited) DSP processing power, model complexity and sampling rate may be traded against each other.

### **Exceptions:**

- 2493 Yardstick    constant crystal clock at DSP rates of Simple=192 kHz / Medium=96 kHz / Complex=48 kHz  
(with the exception of 192 kHz plug-ins, all 2493 AD/DA operate on twice the DSP sampling rate)
- 2498 Yardstick    no „Simple“ plug-in, and, due to the algorithm's complexity, up to 96 kHz (108kHz varispeed) only

For more information about quality and performance trade-offs, please visit

- FAQ012**            [www.quantec.com/?id=faq012](http://www.quantec.com/?id=faq012)  
**FAQ069**            [www.quantec.com/?id=faq069](http://www.quantec.com/?id=faq069)

There's a huge collection of subject-based FAQs on Quantec website, most of them are pretty comprehensive.

### **How to select a plug-in:**

There are two ways to select a different plug-in:

1. Front panel: shut down Yardstick, wait for 10 seconds, then turn on device again while holding down both tap keys.  
→ select a plug-in by spinning the wheel, confirm with ENT tap key, then wait until rest of boot-up has finished.
2. Web browser: select new plug-in in pull-down menu, then confirm pop-up window. Unit will reboot automatically.

**Important:**        To avoid overclocking, please only select plug-ins that can handle your facility's (or workstation's) sampling rate. Misconfiguration will be indicated by red-flashing sample rate LEDs, assisted by an error message on right display (while unit will be globally muted).

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## 6. Important advice to prevent common pitfall

To prevent unintentional comb filter effects while using a Yardstick, please make sure that you use **one** direct signal path only. At your discretion, or in-house policy, you need to decide: either through your Yardstick, or through your mixing console.

If you open both, an unavoidable double-path comb filter (of several milliseconds) will occur, that would definitely ruin your sound. What to do if you run into that problem?

There are four (4) ways out - select the one most appropriate for your studio or facility:

1. Disable direct path in your console
2. Go to **System Setup / Direct Path Enable**, then globally disable direct path of all Yardstick presets (both user and ex-works)
3. If available (2496 or 2498), hit mini push button „**Mute dry**“ (lights up red)
4. Hit **TOGGLE** and enter **Hotkey Menu**. Search for **Mute Dry** and enable it.

**HAVE FUN !!!**