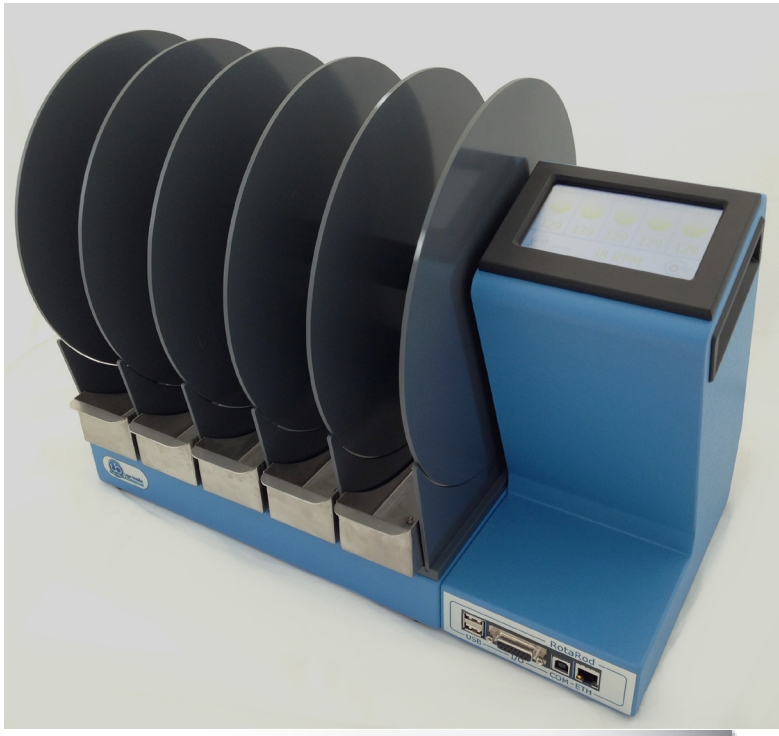
Mouse Rota-Rod

Cat. No. 47650

ng



General

Ugo Basile designed the first industrial Rota-Rod in the 1960s, based on the 1957 paper by N.W Dunham and T.S Miya.

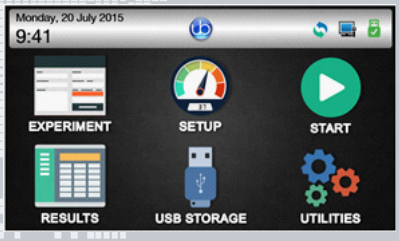
The name we coined soon became so popular, now everybody knows this instrument as RotaRod!

The Rota-Rod is the reference test to screen drugs potentially active, or having side effects, on motor coordination.

The **47650 Rota-Rod NG** (Next Generation), is an evolution of the original model and the result of many years of research in cooperation with the latest development in behavioral and pharmacological research.

The 47650 combines the same functionality of the previous version, now considered the standard, with additional new features: **surprisingly silent operation, much easier experimental organization and data management.**

- UGO BASILE DESIGNED THE ORIGINAL ROTA-ROD IN THE 1960S; SINCE THEN, OUR ROTA-RODS HAVE BEEN CITED IN THOUSANDS OF SCIENTIFIC PAPERS
- NEXT GENERATION ROTA-ROD:
  SAME RELIABILITY, INNOVATIVE TECHNOLOGY!



Main Features

- **SPEED:** adjustable in the range 5-80 RPM, in steps of 1 RPM
- **MODE:** constant, ramp (accelerating), multi-step ramp (***NEW!***)
- **ROTATION:** forward, reverse and rocking
- **DRIVE:** totally silent motor. Zero noise!
- **CONTROLS:** 4"3 touch-screen to set and monitor the test
- ***X-PAD* SOFTWARE:** brand new, user-friendly version, to set the experiment and manage the results
- **DETECTION:** new design: trip-boxes to enclose the animals, stainless-steel to ease sterilization

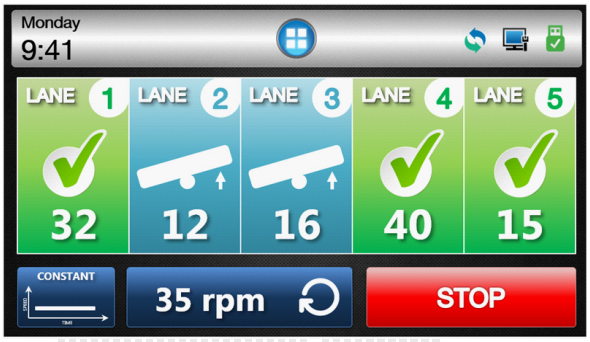
Ugo Basile: more than 10,000 citations

General

The Ugo Basile Rota-Rod NG consists of a 3cm diam. rod, suitably machined to provide grip. Five flanges divide the five 5.7cm lanes, enabling **five mice** to be simultaneously on test.

When a mouse falls off its rod section into the trip-box below, its endurance in RPMs is recorded. Height to fall is 16cm.

A 4"3 touch-screen shows the information for each section, and indicates the actual speed, (RPM):



What's new

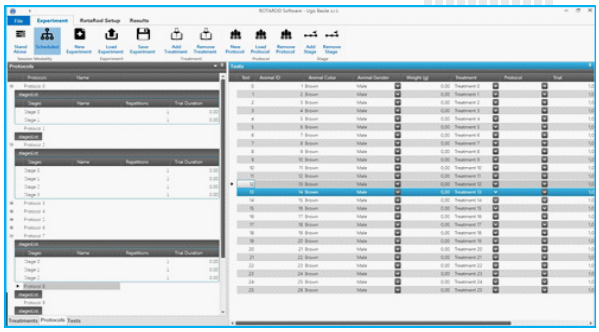
Physically similar to the previous versions, the new model features stainless-steel trip-boxes to facilitate cleaning and confine the animals when they fall off the rod.

Totally new is the software included as standard, see paragraphs below. Remote diagnosis and internet access are provided.

Experimental Configuration

Via the new ***X-PAD*** software, the operator can easily **organize** the experiment on her/his PC, and upload it to the Rota-Rod via the USB key.

Treatments, protocols, stages, animals, and various test features (speed, mode, revolution, etc.) can be quickly defined and saved for future use.



Data Collection and Management

A basic version of the collected data can be viewed on the touch-screen; when transferred to PC via USB drive, test results appear in full version.

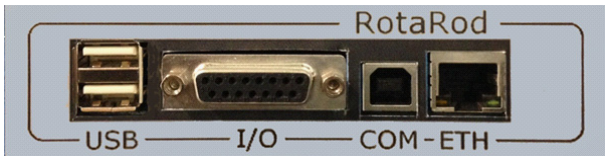
The ***X-PAD*** software automatically classifies the data, combining configuration settings with test results. The user can add information, before or after the test. Results appear in a tree-like structure, where columns can be dragged and dropped to customize the layout.

Configurations and data are exported as **Text**, **Excel** or **Pdf** reports and can be saved to cloud via **DropBox**, **OneDrive**, **GoogleDrive**.

47850 Combo-Package for Mouse & Rat

You work with both rats and mice? You should consider the Combination Package 47850, including both Mouse and Rat Rota-Rods.

Connections



USB1 this USB 2.0 enables data exchange (protocols & results) with the PC, and allows firmware upgrades

USB2 the lower USB port accommodates the USB storage key and should not be removed

I/O this D-SUB 15 connector provides TTL outputs for lane status, rotation and speed

COM this USB-B 2.0 allows communication to the PC (for factory use only)

ETH the Ethernet connector is used for remote diagnosis and Internet access

Ordering Information

47650	**MOUSE ROTA-ROD**, standard package, including:
47650-320	Stainless-Steel Trip-Box
47650-302	Instruction Manual (on USB key)
X-PAD	Dedicated Software Package (on USB)
Mains Cord	

Optional

47850	Combination Package 47650 Mouse Rota-Rod and 47750 Rat Rota-Rod

Physical

Universal input	85-264 VAC, 50/60 Hz
Dimensions	46(w)x28(d)x33(h)cm
Weight	Kg 11
Shipping Weight	Kg 16 (approx.)
Packing	70x36x46cm

Bibliography

Method Papers

- N.W. Dunham & T.S. Miya: "**A Note on a Simple Apparatus for Detecting Neurological Deficit in Rats & Mice**" J. Am. Pharmaceut. Assoc., Scientific Edit., XLVI: No. 3, 1957
- B.J. Jones & D.J. Roberts: "**The Quantitative Measurement of Motor Incoordination in Naive Mice Using an Accelerating Rotarod**" J. Pharm. Pharmac.: 20: 302-304, 1968

Papers Dealing With Rota-Rod Technique

- L. Micheli et alia: "Acu**te and subchronic antinociceptive effects of nociceptin/orphanin FQ receptor agonists infused by intrathecal route in rats**" Eur. J. Pharmacol. 754 : 73-81, ***2015***
- L. A. Griffiths et alia: "**Knocking Down Metabotropic Glutamate Receptor 1 Improves Survival And Disease Progression in the SOD1G93A Mouse Model of Amyotrophic Lateral Sclerosis**" J. of Pain, accepted manuscript, ***2015***
- JV. Jokinen et alia: "**Pregabalin enhances the antinociceptive effect of oxycodone and morphine in thermal models of nociception in the rat without any pharmacokinetic interactions**" Eur. J. Pain DOI: 10.1002/ejp.728, ***2015***
- JF. Barthel et alia: "Lo**ng-term Application of Glycine Transporter Inhibitors Acts Antineuropathic and Modulates Spinal N-methyl-D-aspartate Receptor Subunit NR-1 Expression in Rats**" Anesthesiology 121.1: 160-169, ***2014***
- C.D. Heldermon et alia: "**Therapeutic Efficacy of Bone Marrow Transplant, Intracranial AAV-mediated Gene Therapy, or Both in the Mouse Model of MPS IIIB**" Molecular Therapy 15(5): 873-880, ***2010*** (*rocking, mouse*)