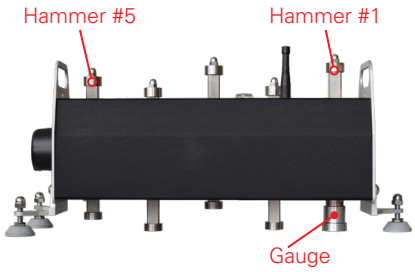
TM3 Tapping Machine

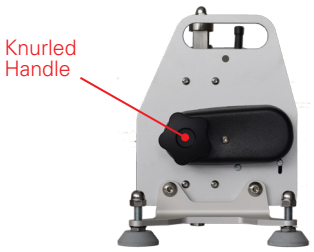
Impact Sound Insulation Measurement Source

TM3 Tapping Machine with Antenna, Remote Control, Gauge, Wrench and Battery Charger

TM3 front view



Hammer drop height adjustment



TM3 rear view

The TM3 Tapping Machine is a precision impact noise source for building acoustic measurements. It is typically used for the assessment of general impacts in dwellings that occur on floors or stairs in a building. The machine can be switched On/Off manually or via remote control. It is powered by a built-in battery, or from mains power.

NOTE **This User Guide refers to the TM3 rev. A1.**

Preparations

1. Rock the main switch to position 'ON'.
2. Connect the battery charger to mains power and to the corresponding plug on the machine's front panel. As soon as the charger is connected, the 'Batt.' LED will start flashing:
   amber: charging in progress
   green: battery fully charged (→ *switch OFF the TM3 and disconnect the charger*)

Hint *As soon as the voltage available at the battery is getting low, the 'Batt.' LED will start flashing red*

Setup

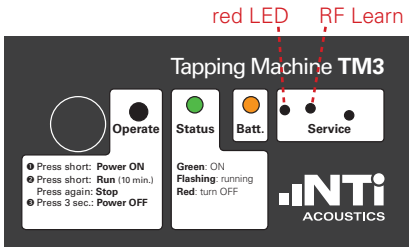
1. Put the machine on a flat, stable ground.
2. Plug the antenna to the BNC connector on the control panel.

Hammer Fall Height Adjustment

1. Slowly turn the knurled handle counter-clockwise until hammer #1 falls down; then lift the hammer with one hand and turn back (clockwise) the handle a little bit, until the hammer is kept in its top position.
2. Adjust the hammer fall height by fitting the 40.8 mm gauge beneath the hammer with light friction evident. For this purpose, rotate the machine's feet clock- or anti-clockwise in order to raise or lower the machine, respectively.
3. Repeat steps 1. and 2. with hammer #5. Take care to maintain the horizontality of the machine by checking the spirit level.
4. Upon completion of the procedure, tighten the lock nuts of all three feet by using the wrench.

Hint *The setup procedure is explained in this instruction video:* https://youtu.be/zdaYmEaqgWs

TM3 Remote Control (sender)



TM3 Control Panel

Operation

Rock the main switch to position 'ON' to arm the tapping machine and shortly press the 'Operate' button on the TM3 control panel.

Now you may start / stop the machine in either of the following modes.

- Remotely: press the button of the TM3 Remote Control sender to switch the machine ON or OFF.
- Manually: shortly press the 'Operate' button on the TM3 control panel to switch the machine ON for 10 minutes.

  Press the 'Operate' button again shortly to stop the TM3.

Hint *The manual operation mode allows you to run the machine without using the remote control.*

Switch OFF the TM3 by pressing the 'Operate' button for > 3 seconds.

Pairing the Remote Control with the TM3 (*only if required*)

1. Push the 'RF Learn' button on the TM3 Control Panel → the red LED turns on
2. Press the button of the TM3 Remote Control sender for a
   - first time → red LED turns off
   - second time → red LED flashes for a few seconds
   - third time → TM3 switches into operation mode
   - fourth time → TM3 switches to standby mode

Maintenance

The TM3 tapping machine basically requires no maintenance by the user. However, in case of prolonged use in very dusty environments, it may be advisable to clean the surfaces of the metal hammers with a clean, dry cloth.

NOTE **Neither the metal hammers nor their linear guides shall be oiled or greased under any circumstances, as this can lead to contamination and impair the correct operation.**

Generally, it is recommended to send the tapping machine for calibration once a year.

Specifications TM3

Standards	ISO 16283-2, ISO 717-2, ISO 10140-3/-4/-5, ISO 140-6/-7/-8 DIN 52210-6, ASTM E492, ASTM E1007
Power supply Input Output Consumption Coaxial power connector	 100 to 240 VAC, 50/60 Hz, 1.0 A 18 VDC ± 10%, 2.22 A 40 W max. D = 5.5 mm, d = 2.5 mm, ⊖—C—⊕
Battery Type Charge time Continuous operation	 12 V, 3.2 Ah Lead-Acid gel (no maintenance required) approx. 8 hours up to 2 hours
Hammers Material Weight Diameter Distance between hammers Rated drop height	 Stainless steel, hardened 500 g ± 6 g (1.1 lbs ± 0.212 oz) 30 mm ± 0.2 mm 100 mm (3.94") 40 mm (1.575")
Dimensions L x W x H	650 x 215 x 275 mm (25.6" x 8.5" x 10.8")
Weight (including battery)	10.2 kg (22.5 lbs)
Temperature, humidity Storage Operation	 –20° to +70°C (–4° to 122°F) @ ≤ 90% RH (non-condensing) –10° to +50°C (14° to 158°F) @ ≤ 90% RH (non-condensing)
Remote Control Function Transmission power Dimensions	 Tapping machine ON/OFF 1 mW 68 x 36 x 18 mm / 25 g (2.7 x 1.4 x 0.7" / 0.9 oz)
EMC conformity	EN 61326-1:2013 / CISPR11 / BS EN 55011:2009+A1:2010
Scope of supply (included)	• Carrying bag • Battery charger • Drop height gauge • 17 mm wrench • Remote control sender • Antenna • Manufacturer calibration certificate
Recommended calibration interval	1 year
Order information	NTi Audio # 600 000 520 (433 MHz) NTi Audio # 600 000 529 (USA, 315 MHz) NTi Audio # 600 000 528 (Japan, without RC)

All information subject to change without notice.