Intendvision HT602A

Intendvision HT602A Sound Level Meter User Manual

Model: HT602A

1. Introduction

The Intendvision HT602A is a portable digital sound level meter designed for measuring noise levels in various environments. It provides accurate readings within a range of 30-130 dBA and includes features such as A-frequency weighting, Max/Min data display, data hold, fast/slow time weighting, and a backlit LCD. This device is suitable for personal, educational, and industrial applications where sound level monitoring is required.

The meter also measures ambient temperature and humidity, enhancing its utility for environmental assessments.

2. Safety Information

- Do not attempt to modify or disassemble the device. Unauthorized modifications can lead to malfunction or injury.
- Ensure correct battery polarity when installing batteries. Remove batteries if the device will not be used for an extended period to prevent leakage.
- Avoid exposing the meter to extreme temperatures, high humidity, or direct sunlight.
- Keep the microphone clean and free from obstructions. Use the provided sponge ball to minimize wind noise during outdoor measurements.
- This device is for informational measurement purposes and should not be used for critical safety applications unless specified by relevant regulations.

3. Product Overview

The Intendvision HT602A Sound Level Meter features a compact design with an easy-to-read LCD. Key components and controls are detailed below:

Figure 3.1: Intendvision HT602A Sound Level Meter Components

3.1. Components

- **Microphone:** Polarized capacitance type, equipped with a removable sponge ball for wind noise reduction.
- **Protection Cover:** Shields the microphone when not in use.
- **LCD Display:** Large, backlit screen showing sound level, temperature, humidity, and various mode indicators.

3.2. Control Buttons

- **Power Key (U):** Turns the device on or off.
- **MAX/MIN Key:** Toggles between maximum, minimum, and current readings.
- **°C/°F Key:** Switches the temperature unit between Celsius and Fahrenheit.
- **H/* Key:** Short press to hold the current data reading. Long press to activate/deactivate the backlight.
- **F/S Key:** Selects between Fast (125ms) and Slow (1 second) time weighting modes.

4. Setup

4.1. Battery Installation

The Intendvision HT602A requires three (3) 1.5V AAA batteries for operation. To install or replace batteries:

1. Locate the battery compartment cover on the back of the device.
2. Use a small Phillips head screwdriver to loosen the screw securing the cover.
3. Remove the battery compartment cover.
4. Insert three AAA batteries, ensuring correct polarity as indicated inside the compartment.
5. Replace the cover and tighten the screw.

Figure 4.1: Battery Installation

5. Operating Instructions

5.1. Power On/Off

- Press the **U** (Power) key to turn the meter on.
- Press and hold the **U** (Power) key for approximately 2 seconds to turn the meter off.
- The device will automatically power off after 10 minutes of inactivity to conserve battery life.

5.2. Sound Level Measurement

Once powered on, the meter will immediately begin displaying the current sound level in dBA, along with ambient temperature and humidity.

Figure 5.1: Noise Measurement in Progress

5.2.1. A-Frequency Weighting

The HT602A supports A-frequency weighting only. A-weighting is commonly used for environmental noise measurements and regulatory compliance (e.g., OSHA) as it approximates the human ear's response to sound.

5.2.2. Fast/Slow Time Weighting

Press the **F/S** key to switch between Fast and Slow time weighting modes.

- **FAST (125ms):** Provides a quicker response to sound changes, suitable for capturing sudden noise peaks.
- **SLOW (1 second):** Provides a more stable reading, averaging out fluctuations, suitable for monitoring general noise levels.

Figure 5.2: Fast/Slow Time Weighting Modes

5.3. Data Hold

Press the **H/*** key once to freeze the current reading on the display. The "HOLD" indicator will appear. Press the key again to release the data hold and resume live measurement.

5.4. Maximum/Minimum Readings

Press the **MAX/MIN** key to cycle through the following display modes:

- **MAX:** Displays the maximum sound level recorded since the meter was powered on or the MAX/MIN function was reset.
- **MIN:** Displays the minimum sound level recorded since the meter was powered on or the MAX/MIN function was reset.
- **Current:** Returns to displaying the live sound level.

5.5. Backlight Control

Press and hold the **H/*** key for approximately 2 seconds to turn the LCD backlight on or off. The backlight improves visibility in low-light conditions.

Figure 5.3: LCD Display with Backlight

5.6. Temperature and Humidity Display

The meter automatically displays ambient temperature and humidity alongside the sound level. Press the **°C/°F** key to switch the temperature unit between Celsius and Fahrenheit.

6. Applications

The Intendvision HT602A Sound Level Meter is a versatile tool for various noise measurement needs:

- **Environmental Noise Monitoring:** Assessing noise levels in residential areas, offices, and public spaces.
- **Workplace Safety:** Identifying areas with excessive noise that may require hearing protection.
- **Home Audio Setup:** Balancing speaker outputs for optimal sound.
- **Appliance Noise Testing:** Measuring the sound output of household appliances like air conditioners.
- **Educational Purposes:** Demonstrating sound principles in classrooms and laboratories.
- **Automotive Sound Testing:** Evaluating noise levels inside vehicles.
- **Construction Site Noise Detection:** Monitoring noise impact from construction activities.

Figure 6.1: Wide Range of Applications

7. Maintenance

- **Cleaning:** Wipe the device with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the meter in a cool, dry place, away from direct sunlight and extreme temperatures. Use the provided storage bag to protect the device from dust and physical damage.
- **Battery Replacement:** Replace batteries when the low power indicator appears on the display. Remove batteries if storing the device for extended periods.

8. Troubleshooting

Problem	Possible Cause	Solution
Device does not power on	Dead or incorrectly installed batteries	Check battery polarity and replace with new AAA batteries.

Problem	Possible Cause	Solution
Inaccurate readings	Microphone obstructed; environmental interference; device not stable	Ensure microphone is clear. Move away from strong electromagnetic fields. Use Slow mode for stable readings.
Display is dim or blank	Low battery; backlight off	Replace batteries. Long press H/* key to turn on backlight.
Auto power off too soon	No operation for 10 minutes	This is a built-in feature to save power. Resume operation to keep the device on.

9. Specifications

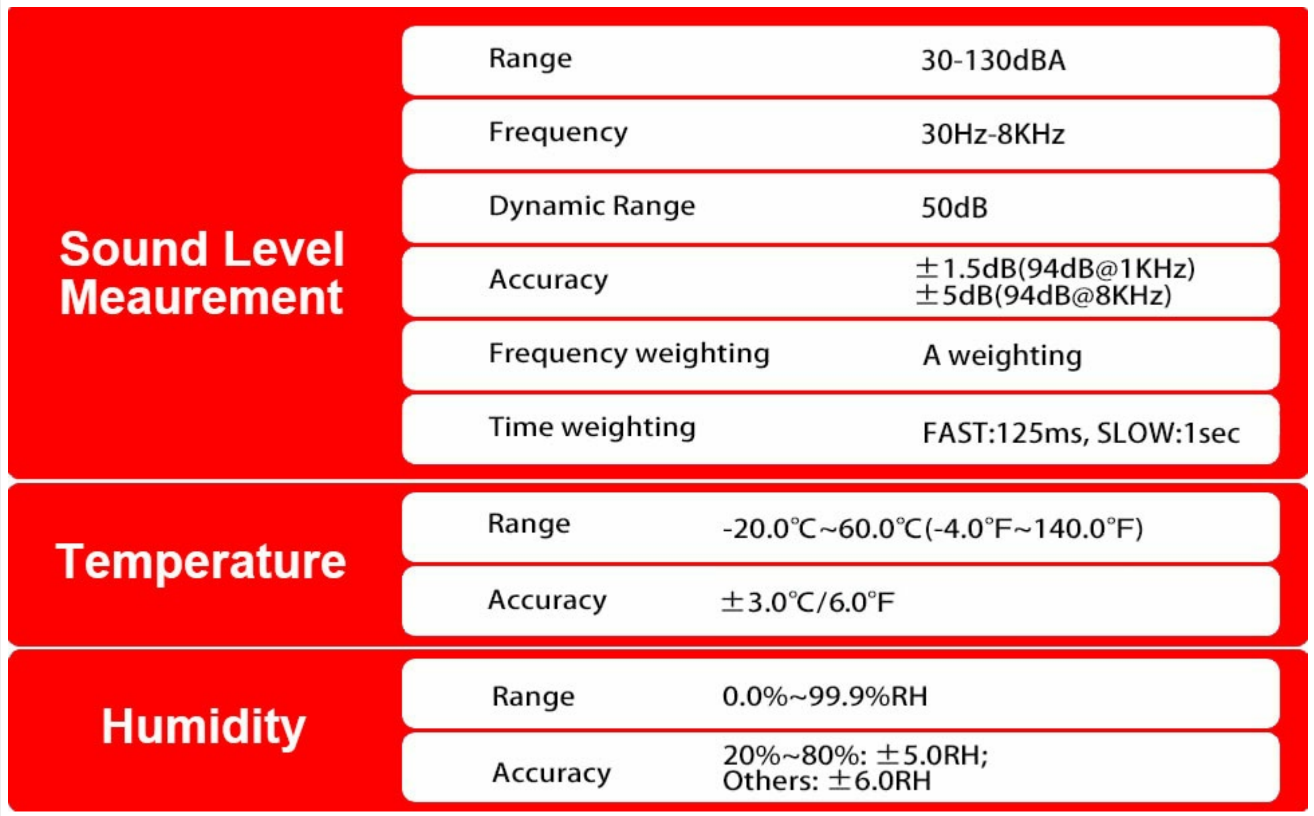

Figure 9.1: Technical Specifications Overview

Parameter	Value
Sound Level Measurement Range	30-130 dBA
Frequency Response	30Hz-8KHz
Accuracy	±1.5dB (94dB@1KHz), ±5dB (94dB@8KHz)
Frequency Weighting	A weighting (C weighting not supported)
Time Weighting	FAST: 125ms, SLOW: 1sec
Temperature Range	-20.0°C ~ 60.0°C (-4.0°F ~ 140.0°F)
Temperature Accuracy	±3.0°C / 6.0°F
Humidity Range	0.0% ~ 99.9%RH

Parameter	Value
Humidity Accuracy	±6.0%RH (for 0.0%~99.9%RH)
Power Source	3 x 1.5V AAA Batteries
Automatic Power Off	After 10 minutes of inactivity
Dimensions	142mm x 58mm x 26mm (approx. 5.59 x 2.28 x 1.02 inches)
Weight	0.21 Kilograms (approx. 7.41 ounces)

10. Warranty and Support

10.1. Warranty Information

The Intendvision HT602A Sound Level Meter comes with a 3-Year Warranty provided by Intendvision. This warranty covers defects in materials and workmanship under normal use.

10.2. Customer Support

For any questions, technical assistance, or warranty claims, please contact Intendvision customer service through the Amazon internal messaging system. Provide your order details for prompt support.