

QPKING LM110

QPKING LM110 Digital Manifold Gauge User Manual

Model: LM110 (MMT211832)

1. INTRODUCTION

Thank you for choosing the QPKING LM110 Digital Manifold Gauge. This device is designed for precise measurement and analysis of refrigeration systems, offering functions for refrigerant filling, vacuuming, and leak testing. This manual provides detailed instructions for safe and efficient operation of your device.

Please read this manual thoroughly before operating the device and keep it for future reference.

2. SAFETY INFORMATION

- Always wear appropriate personal protective equipment (PPE) such as safety glasses and gloves when working with refrigerants.
- Ensure proper ventilation in the work area to prevent accumulation of refrigerant gases.
- Do not expose the device to extreme temperatures, direct sunlight, or corrosive environments.
- Avoid dropping or subjecting the device to severe impact.
- Only use the device for its intended purpose as described in this manual.
- Refer to local regulations and industry standards for handling refrigerants.

3. PRODUCT OVERVIEW

3.1 Package Contents

The QPKING LM110 Digital Manifold Gauge package typically includes:

- QPKING LM110 Digital Manifold Gauge Unit
- Refrigerant Hoses (typically 3, color-coded)
- User Manual
- Storage Box



Image: The QPKING LM110 Digital Manifold Gauge unit, along with its included refrigerant hoses, user manual, and packaging box.

3.2 Key Features

- **Three Major Functions:** Supports Refrigerant Filling & Testing, Vacuuming Operation & Testing, and Leak Testing of Refrigeration System Pressure.
- **Built-in Refrigerant Data:** Contains data for 89 types of refrigerants.
- **Multi-unit Switching:** Supports various pressure units (KPa, MPa, Bar, PSI, inHg) and temperature units (°C, °F).
- **Manual Brightness Adjustment:** Adjustable display brightness for different working environments.
- **Refrigerant Observation Window:** Allows visual inspection of refrigerant flow.



Image: The digital manifold gauge highlighting its main capabilities: leak testing, refrigerant filling, vacuum testing, built-in refrigerant data, and multi-unit switching.

THREE MAJOR FUNCTIONS

Refrigerant Filling & Testing, Vacuuming Operation & Testing,
Leak Testing of Refrigeration System Pressure



Image: The digital manifold gauge displaying screens for refrigerant filling, vacuuming, and leak testing, illustrating its three primary operational modes.

4. SETUP

4.1 Battery Installation

1. Locate the battery cover on the back of the device (refer to component diagram if available).
2. Open the battery cover.
3. Insert the required batteries, ensuring correct polarity.
4. Close the battery cover securely.

4.2 Connecting Hoses

1. Identify the high-pressure, low-pressure, and service port connections on the manifold gauge.
2. Connect the appropriate color-coded hoses to the corresponding ports on the manifold gauge.
3. Ensure all connections are tight to prevent leaks.

5. OPERATING INSTRUCTIONS

5.1 Power On/Off

Press and hold the Power button (usually marked with a power symbol) to turn the device on or off.

5.2 Refrigerant Selection

Use the "Refrigerant Select" button (or similar, refer to button labels on device) to cycle through the built-in refrigerant types (e.g., R11, R12, R134a). Select the refrigerant relevant to your system.

5.3 Unit Switching

Press the "Unit" button (or similar) to switch between different pressure units (KPa, MPa, Bar, PSI, inHg) and temperature units (°C, °F) as needed for your measurements.



Image: The digital manifold gauge screen illustrating the selection of multiple pressure units (KPa, MPa, Bar, PSI, inHg) and temperature units (°C, °F).

5.4 Brightness Adjustment

Short press the Power button to cycle through different brightness levels of the display.

MANUAL BRIGHTNESS ADJUSTMENT

Short press the power button to adjust the brightness.



Image: A hand pressing the power button on the digital manifold gauge, demonstrating the manual brightness adjustment feature with a visual change in screen illumination.

5.5 Refrigerant Filling & Testing

This mode allows for simultaneous pressure, evaporation temperature, and condensation temperature tests while filling refrigerant. Ensure the correct refrigerant type is selected.

REFRIGERANT FILLING & TESTING

Based on the type of refrigerant setting, pressure test, evaporation temperature test and condensation temperature test can be performed at the same time when filling the refrigerant.



Image: The digital manifold gauge screen showing refrigerant selection (R114), condensation temperature (Co 86.8°C), measured pressure (1037 KPa), and evaporation temperature (Ev 36.8°C) during filling and testing.

5.6 Vacuuming Operation & Testing

Use this function to vacuum refrigeration systems. The device displays current vacuum pressure and the percentage of the vacuum level in real-time.

VACUUMING OPERATION & TESTING

It is used for vacuuming the refrigeration systems.
Real-time display of current vacuum pressure and percentage of vacuum level.

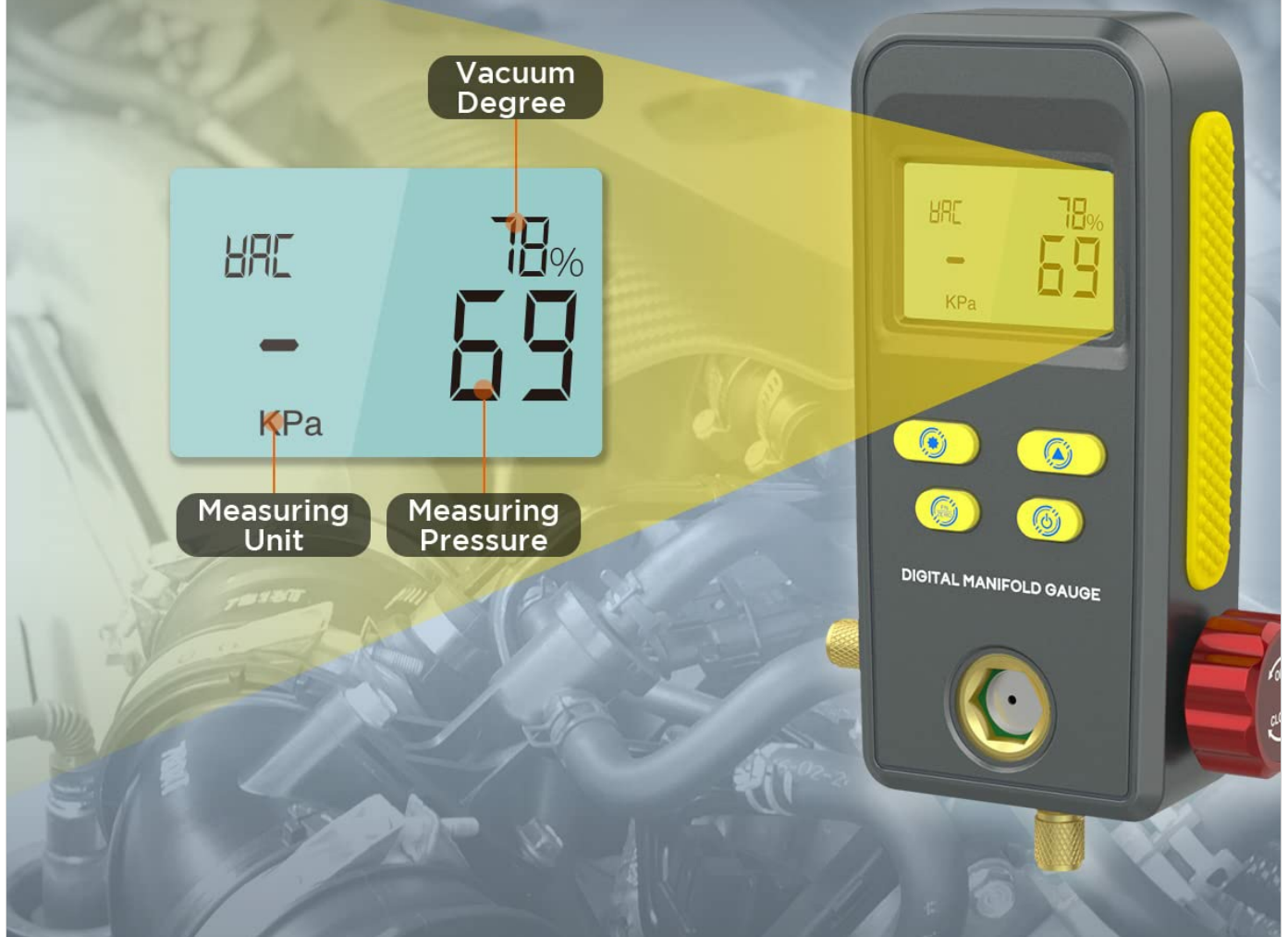


Image: The digital manifold gauge screen showing vacuum degree (VAC 78%) and measured vacuum pressure (69 KPa) during a vacuuming operation.

5.7 Leak Testing of Pressure

This mode detects pressure leaks in refrigeration systems. It displays the original pressure, current pressure, leak pressure, and the testing time.

LEAK TESTING OF PRESSURE

Used for real-time detecting of pressure leaks in refrigeration system as well as displaying the original pressure, current pressure, leak pressure, and testing time.

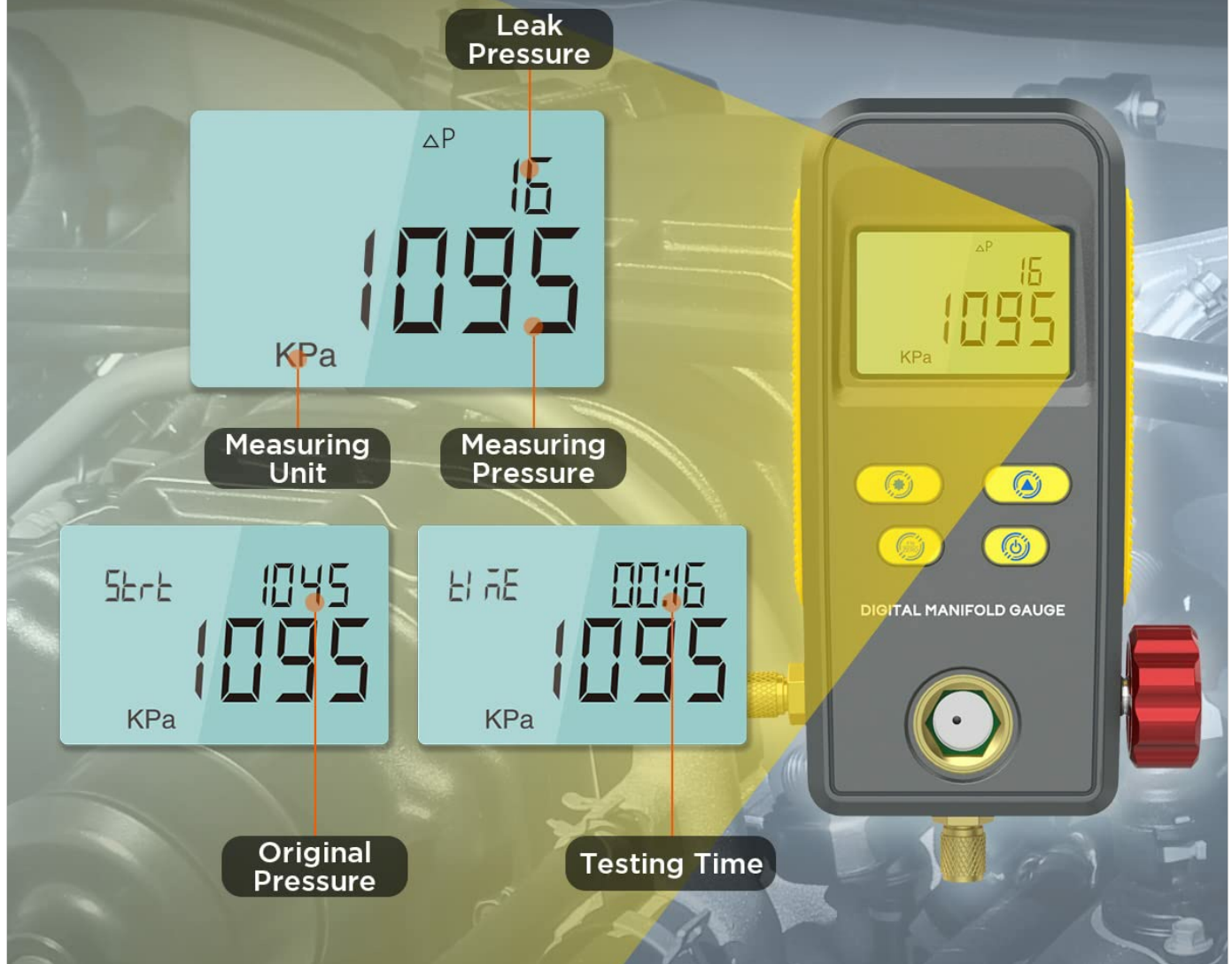


Image: The digital manifold gauge screen showing leak pressure (ΔP 16, 1095 KPa), original pressure (Strt 1045 KPa), and testing time (El tAE 00:16) during a pressure leak test.

6. BUILT-IN REFRIGERANT DATA

The QPKING LM110 comes with pre-programmed data for 89 different refrigerants, allowing for accurate measurements across a wide range of systems. A partial list is shown below:

BUILT-IN 89
KINDS OF
REFRIGERANT
DATA

REFRIGERANT DATA LIST AS FOLLOW									
S/N	Refrigerant	S/N	Refrigerant	S/N	Refrigerant	S/N	Refrigerant	S/N	Refrigerant
1	R 11	19	R 21	37	R 405A	55	R 414B	73	R 427A
2	R 113	20	R 218	38	R 406A	56	R 415A	74	R 428A
3	R 114	21	R 22	39	R 407A	57	R 415B	75	R 50
4	R 115	22	R 227EA	40	R 407B	58	R 416A	76	R 500
5	R 116	23	R 23	41	R 407C	59	R 417A	77	R 501
6	R 12	24	R 236EA	42	R 407D	60	R 418A	78	R 502
7	R 123	25	R 245CA	43	R 407E	61	R 419A	79	R 503
8	R 124	26	R 245FA	44	R 408A	62	R 420A	80	R 504
9	R 125	27	R 290	45	R 409A	63	R 421A	81	R 507A
10	R 1270	28	R 32	46	R 409B	64	R 421B	82	R 508A
11	R 13	29	R 401A	47	R 41	65	R 422A	83	R 508B
12	R 134A	30	R 401B	48	R 410A	66	R 422B	84	R 509A
13	R 14	31	R 401C	49	R 410B	67	R 422C	85	R 600
14	R 141B	32	R 402A	50	R 411A	68	R 422D	86	R 600A
15	R 142B	33	R 402B	51	R 411B	69	R 423A	87	R 717
16	R 143A	34	R 403A	52	R 412A	70	R 424A	88	R 744
17	R 152A	35	R 403B	53	R 413A	71	R 425A	89	R 1234
18	R 170	36	R 404A	54	R 414A	72	R 426A		

Image: A table listing 89 different refrigerants (R11, R113, R114, etc.) that are pre-programmed into the QPKING LM110 Digital Manifold Gauge.

7. MAINTENANCE

- **Cleaning:** Wipe the device with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Storage:** Store the device in its original packaging or a protective case in a dry, cool place when not in use.
- **Battery Replacement:** Replace batteries promptly when the low battery indicator appears to ensure accurate readings.
- **Hose Inspection:** Regularly inspect refrigerant hoses for cracks, wear, or damage. Replace damaged hoses immediately.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on	Low or dead batteries; incorrect battery installation.	Replace batteries; ensure correct polarity.
Inaccurate readings	Incorrect refrigerant selected; sensor contamination; loose hose connections.	Verify refrigerant type; clean sensors if accessible; tighten all hose connections.
Display is dim or unreadable	Low battery; brightness setting too low.	Replace batteries; adjust display brightness using the power button.
Leak test fails unexpectedly	Loose connections; damaged hoses; actual system leak.	Check and tighten all connections; inspect hoses for damage; perform a thorough system leak detection.

9. SPECIFICATIONS

Detailed technical specifications for the QPKING LM110 Digital Manifold Gauge:

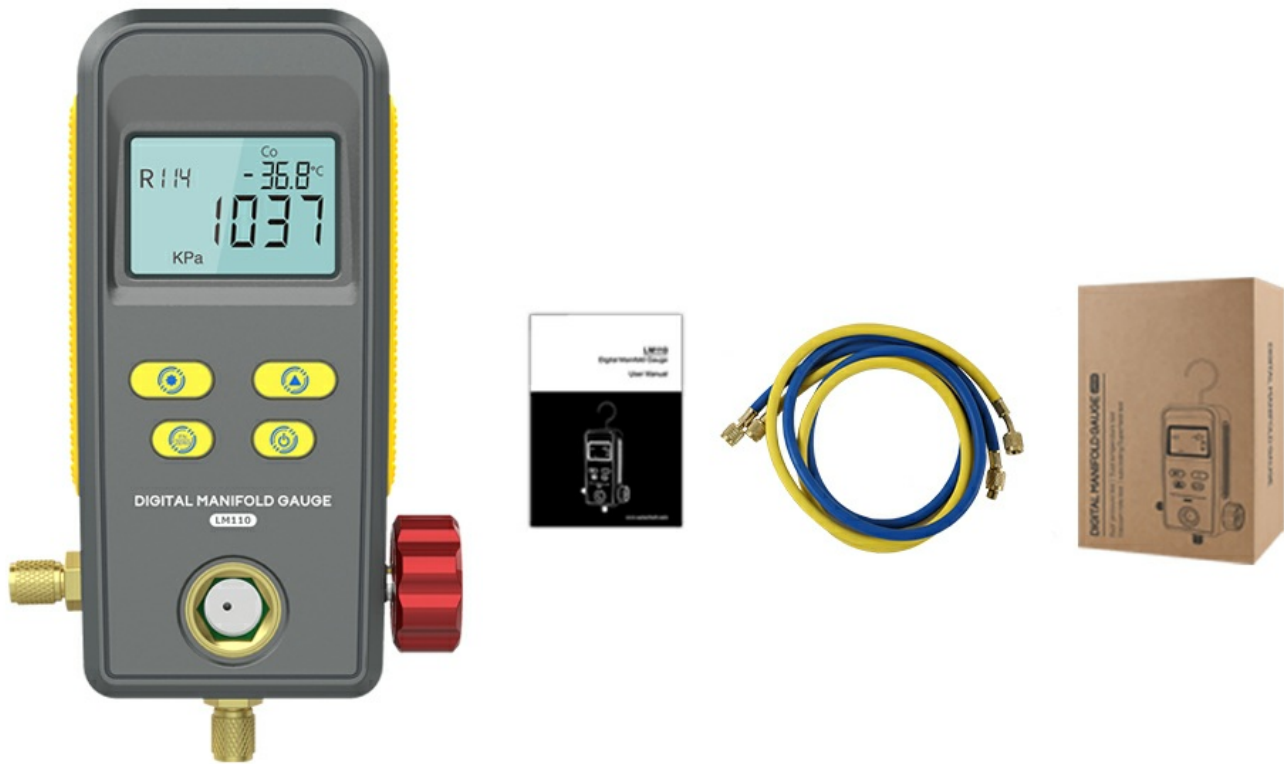


Image: A table detailing the technical specifications of the QPKING LM110, including pressure test units, ranges, resolution, accuracy, vacuum test units, range, resolution, main unit dimensions, and weight.

Parameter	Value
Model Number	MMT211832
Pressure Test Unit	KPa, MPa, Bar, PSI, inHg
Pressure Test Range	0 KPa - 6000 KPa
Pressure Test Resolution	1 KPa
Pressure Test Accuracy	±0.5%(FS)+5dgt
Pressure Overload Limit	10 MPa
Vacuum Test Unit	KPa, MPa, Bar, PSI, inHg
Vacuum Test Range	-101 KPa - 0 KPa
Vacuum Resolution	1 KPa
Main Unit Dimensions	184 x 107 x 45 mm (7.24 x 4.21 x 1.77 inches)
Weight	0.446 kg (1.04 lbs)
Power Source	(Battery type not specified, assuming standard AA/AAA)

10. WARRANTY AND SUPPORT

QPKING products are manufactured to high-quality standards. For warranty information and technical support, please refer to the warranty card included with your product or visit the official QPKING website. Please retain your proof of purchase for warranty claims.

For further assistance, contact QPKING customer service.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question