



Making Your Job More Enjoyable

Wireless Refrigerant Scale

NRS1i01 NRS2i01

User Manual



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Failure to follow warnings could
result in death or serious injury.

**SAVE THIS MANUAL
FOR FUTURE REFERENCE**



Dear customer:

We are extremely grateful that you have decided to purchase the all new NAVAC series of products.

In order to correctly use this product, please carefully read this instruction manual in full prior to usage, especially on Notes and Warnings.

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 **Note**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

I. Product introduction

NRS1i01/NRS2i01 is a wireless smart e-Scale that is supported by NAVAC's advanced technology and all new design concept. It's primarily used for maintenance and installation in HVAC industry, to set refrigerant amounts for charging and recovering, to weight and promptly issue warning alerts. And it was approved by FCC-ID and RED certifications.

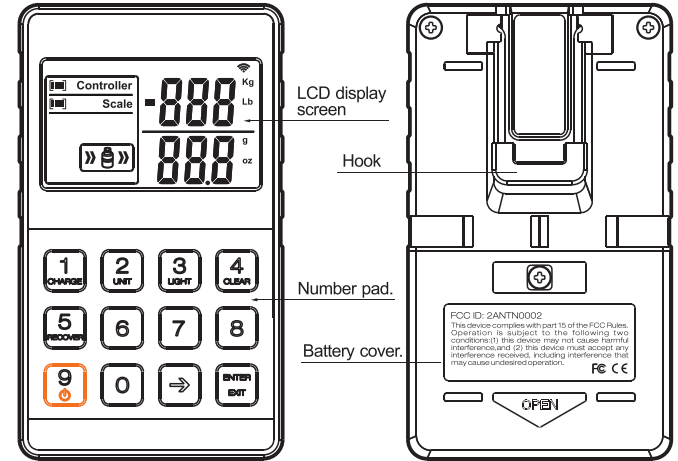
The product was designed primarily from the perspective of the end user. Its a magnesium-alloy cast scale plate and bag design make it light and easy for users to carry. The handheld device scale plate design makes it easier for users to retrieve and store. A nice placement of handheld device with the weight scale provides better protection and a longer life for the handheld device.

II. Functional parameters

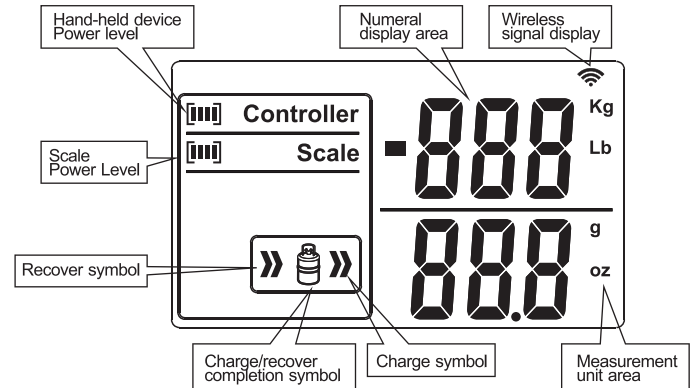
| Model | NRS1i01 | NRS2i01 |
|-----------------------------|--|---------|
| Maximum weight | 110Lb | 220Lb |
| Resolution | 0.1oz | 0.2oz |
| Accuracy | 0.05% FS | |
| Power source | 4x1.5V AA alkaline battery/ 4x1.5V AAA alkaline battery | |
| Work environment | 14~104 °F | |
| Scale dimensions | 10-1/4" x 8-5/8" | |
| Weight | 4.4Lb | |
| Wireless broadcast distance | 10m, it recommended that normal weighing within 5m, function operation within 3m | |

III. Product description

3.1 Explanation diagram



3.2 LCD Display Screen Description



IV. Operating instructions

4.1 Button function description

4.1.1 Handheld device buttons



4.1.2 Scale buttons



| No. | Button | Function description |
|-----|--------|--|
| 1 | | Combo button: Numeric button 1 and Charge button. |
| 2 | | Combo button: Numeric button 2 and Measurement unit switch button. |
| 3 | | Combo button: Numeric button 3 and Back light On/Off button, Automatically close after 30 seconds by default |
| 4 | | Combo button: Numeric button 4 and Clear button. |
| 5 | | Combo button: Numeric button 5 and Recover button. |
| 6 | | Numeric button 6 |
| 7 | | Numeric button 7 |
| 8 | | Numeric button 8 |
| 9 | | Combo button: Numeric button 9 and Power On/Off button |
| 10 | | Numeric button 0. |
| 11 | | Shift button. |
| 12 | | Combo button: Enter and Exit button. |
| 13 | | Power button |
| 14 | | Wireless synchronous communication key |

Note: The numeric buttons can only be used in Charge or Recover modes, the remaining are all function buttons. Once successful matching is established, pressing down and hold on the handheld device power On/Off button will switch off both.

4.2 Operating instructions for specific functions

4.2.1 Start-up mode

Handheld device and scale will be made by paired test before it leaves factory, firstly switch on hand held, press the power key, It is successful linked while scale wireless connection indicator (blue light) long bright, and meanwhile wireless signal indication and power displayed on the LCD screen. The scale is on ordinary weighing mode at this situation.

(Note 1: The handheld device will be automatically shut down after 5 minutes if it failed to connect the pan; if connection succeeds, the scale will be closed automatically if the weight on the scale will not change in 10 minutes; the actual weight will be displayed when the weight on the scale more than 2Kg as it re-started.

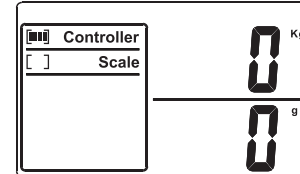
(Note 2: Overweight alarm warning: the LCD screen display "OL" as if weight exceeds the maximum weighing range, and the buzzer alarm, in order to avoid the damage of electronic scales, please immediately remove the object.)

(Note 3: Please check if the code on the back of hand held in accordance with the code on back of pan)

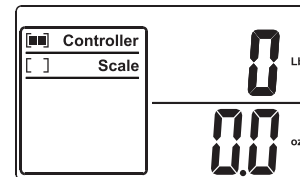
4.2.2 Measurement unit setting

With measurement unit setting, you can switch between Kg + g or Lb + oz units.

1. After switching on the hand-held device, the LCD display will be as follows (the default unit is kg +g):



2. Depending on the different requirements, press the key, and the weighing unit will switch to Lb + oz, which will be displayed as below:



4.2.3 Back-light setting

You can select with or without the back-light, based on different conditions. The default setting is no light. Press the button in order to switch on the light, and press it again to switch it off. The

light stays on for 30 seconds, after 30 seconds it will switch off automatically.

4.2.4 Clear setting

In the standard weighing mode, pressing $\left[\frac{4}{\text{Clear}} \right]$, the weight value of the item on the scale will be set to zero. Pressing $\left[\frac{\text{Power}}{\text{Off}} \right]$, will cancel Clear mode, and display the actual weight of the item.

The scale peels off automatically, data display will be set to "0" as if weight of the scale is less than 4.4Lb, and equal or more than 4.4Lb without making any changes and output with actual weight data.

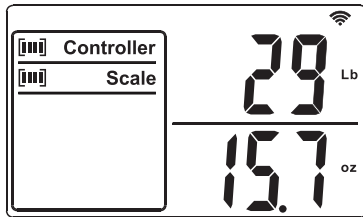
Note: while use the clear setting, to ensure the scale using in normal range, the weight addition of clearing priority and after clearing is not exceed the measuring range of the scale.

4.2.5 Charge mode operation

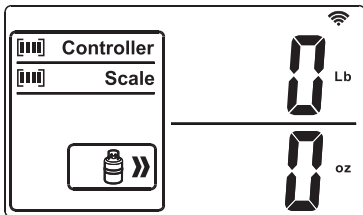
The user can use this function to rapidly and safely add refrigerant to the system. After entering the "Charge" mode, enter the charge value, and start charging. The minimum charge amount is 1.8 oz.

1) Switch on e-Scale.

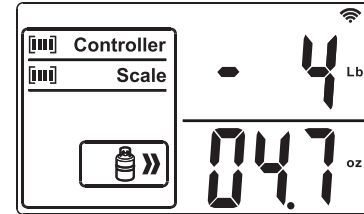
2) Place the refrigerant container on the scale, and wait until the reading stabilizes, displaying the total weight of the container. For example, if the container's total weight is 29Lb+15.7oz, the display will be as follows:



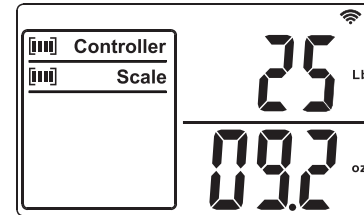
3) Press $\left[\frac{1}{\text{Charge}} \right]$, and the LCD screen will display the "Charge" function sign. Then enter the net weight value for addition, and after pressing the ENTER button $\left[\frac{\text{Enter}}{\text{OK}} \right]$ the net weight charged will be displayed, that is, the net weight added from the container to the system. For example, if you want to add 4Lb+6.5oz of refrigerant, first press $\left[\frac{1}{\text{Charge}} \right]$, then the enter "0-0-4-0-6-5" on the number pad based on the LCD flash figure, then press $\left[\frac{\text{Enter}}{\text{OK}} \right]$. The following will be displayed.



4) After entering "Charge" mode, "»" of the charge symbol $\left[\frac{\text{Charge}}{\text{Bottle}} \right]$ will begin to flash. When the charge volume is down to 1.8oz, the e-Scale will begin to sound an alarm, and Charging/Recovery Complete sign $\left[\frac{\text{Complete}}{\text{Bottle}} \right]$ will flash, indicating to the user that charging is about to finish. The following will be displayed:



5) When the charge weight displayed reaches the set charge amount, charging is complete, then you will manually terminate the system charging, and press $\left[\frac{\text{Enter}}{\text{OK}} \right]$, alarm stops. At this point the LCD screen will display the gross weight of the refrigerant container.



Note:

During the charge input entering process, if there is an input error need to be re-entered, you only need to press the shift button $\left[\frac{\text{Shift}}{\text{Left}} \right]$, move the flashing figure to the position of the figure to be corrected, re-enter the correct figure to complete the correction of the charging weight.

Firstly charging default is 0 after hand held start-up, and press again "charge" will be displayed the measurement of the last charge.

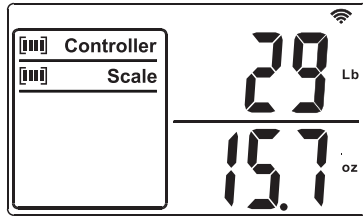
4.2.6 Recover mode operation

This function allows users to rapidly and safely recover refrigerant from the system. After entering "Recover" mode, enter the recover value to start recovery process. The recovery volume must be at least 1.8 oz.

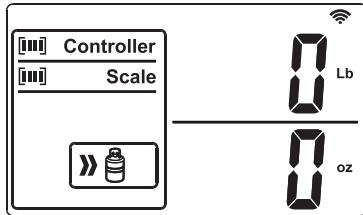
1) Switch on the e-Scale.

2) Place the refrigerant container on the scale and wait until the reading stabilizes, displaying the total weight of the container. For example, if the total weight of the container is 29Lb+15.7oz,

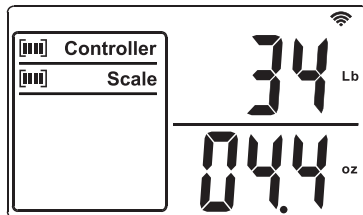
the display will be as follows:



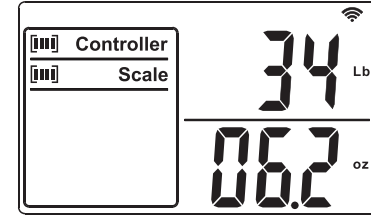
3) Press the recover button and the LCD screen will display the recover symbol. Enter the net value you wish to recover, and press Enter . At this point the net weight of refrigerant recovered to the container from the system will be displayed. For example, if you want to recover (not charge?) 4Lb+6.5oz of refrigerant, first press the recover button , then enter "0-0-2" via the key pad in accordance with the flashing number on the LCD display screen, before pressing . The display will be as follows:



4) After entering "Recover" mode, of the recover symbol will begin to flash. When the recover weight is down to 1.8oz, the e-scale will begin to issue an alarm sound, and the charge/recover completion symbol will begin to flash, telling the user that the recover is about to finish. The display is as follows:



5) When the recover weight reaches the pre-set recover weight, recover is completed, and you can manually end system recover, and pressing , the alarm sound stops. At this point the LCD screen will display the gross weight of the refrigerant container.



Note:

During the recover input entering process, if there is an input error need to be re-entered, you only need to press the shift button , move the flashing figure to the position of the figure to be corrected, re-enter the correct figure to complete the correction of the recover weight.

Firstly charging default is 0 after hand held start-up, and press again "recover" will be displayed the measurement of the last recovery.

Warning: The recovered refrigerant volume cannot exceed 80% of the total capacity of the refrigerant container. This is extremely dangerous.

4.2.7 Wireless Synchronised Communication Operation Setting

If the connection is unsuccessful or a new connection is needed after switching the hand-held device, it will be necessary to perform wireless synchronized communication operation, which involves clearing the wireless communications data on the scale and re-connecting. The detailed procedure is as follows:

(1) First switch on the power for the scale. The scale's wireless connection indicator light (Blue) will flash at a certain frequency, indicating that there is no connection.

(2) Now press on the scale's wireless synchronised communication button for about three seconds. After releasing the wireless synchronized communication button, the scale's power supply light (Red) should flash one time, indicating that the scale's data clearance is successful. At this time the scale's wireless connection light (Blue) will flash and it begins to search for the Bluetooth signal of the handheld device.

(3) In the state of the handheld device shut down, press in turn, the handheld device automatically starts and search signal, when the scale's wireless connection light (blue) glows steadily, and the LCD display shows the wireless signal and scale power level, this indicates that re-connection has been successful. The handheld device shows that the weight is 110Lb or 220Lb, the scales are judged to be NRS1i01 or NRS2i01 respectively.

