iDimension 100

Workstation

Assembly Instructions

RICE LAKE®
WEIGHING SYSTEMS

PN 171899 Rev A

Contents

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1.0 Introduction

iDimension 100 is the future of dimensioning. Designed as an economical solution for low- and high-volume shipping applications, *iDimension 100* dimensions packages, flats and irregular shapes in sub-second speeds.

Once the instructions found in this manual have been implemented, the *iDimension 100* will be setup to view the dimensions and weight, with compatible scale, on the USB touchscreen display by simply placing an item underneath the scanning head on a scale platform or the base plate of the unit.

When interfacing this device to a third party's software program, please reference the software manufacturer's documentation for set-up and configuration parameters necessary.

Additional manuals are available on the Rice Lake website.

iDimension 100 Assembly Instructions

Describes how to assemble and configure the *iDimension 100* using the set-up wizard to perform an accuracy test prior to placing the unit into service in its intended location.

iDimension 100 Operators Manual

An overview of the installation requirements, operation of the *iDimension 100* and configuration parameters to change to in the QubeVU manager guide to alter the performance of the unit.

iDimension 100 QubeVu Managers Guide

QubeVu is a set of tools provided to set up and configure the *iDimension 100* in any environment. These tools are recommended for use by a technical systems administrator.

A detailed overview of the QubeVu manager, the embedded firmware of the *iDimension 100* that provides additional operator displays when hooked up to a network computer and configuration parameter setting used to adjust the device to meet the applications needs.

Manuals can be viewed or downloaded on the Rice Lake Weighing Systems distributor site at www.ricelake.com

Warranty information can be found on the website at www.ricelake.com/warranties

1.1 Safety

Safety Symbol Definitions

WARNING *Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death, and includes hazards that are exposed when guards are removed.*

CAUTION *Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.*

Important *Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.*

Safety Precautions

Do not operate or work on this equipment unless you have read and understand the instructions and warnings in this manual. Contact any Rice Lake Weighing Systems dealer for replacement manuals. Proper care is your responsibility.

General Safety

WARNING

Failure to heed may result in serious injury or death.

Electric shock hazard!

- *Pluggable equipment must be installed near an easily accessible socket outlet.*
- *Always disconnect from main power before performing any work on the device.*
- *Check the power cable for damage regularly and replace it immediately if it is damaged.*
- *On the side of the device, maintain a clearance of at least 1.5 inches in order to prevent damage to the cable.*

Do not allow minors (children) or inexperienced persons to operate this unit.

Do not operate without all shields and guards in place.

Do not place fingers into slots or possible pinch points.

Do not use this product if any of the components are cracked.

Do not make alterations or modifications to the unit.

Do not remove or obscure warning labels.

Keep hands, feet and loose clothing away from moving parts.

Do not use in hazardous areas.

Do not open the scanning head. The warranty and certification is void if this stipulation is ignored. The device may only be opened by authorized persons.

1.2 iDimension 100 Parts

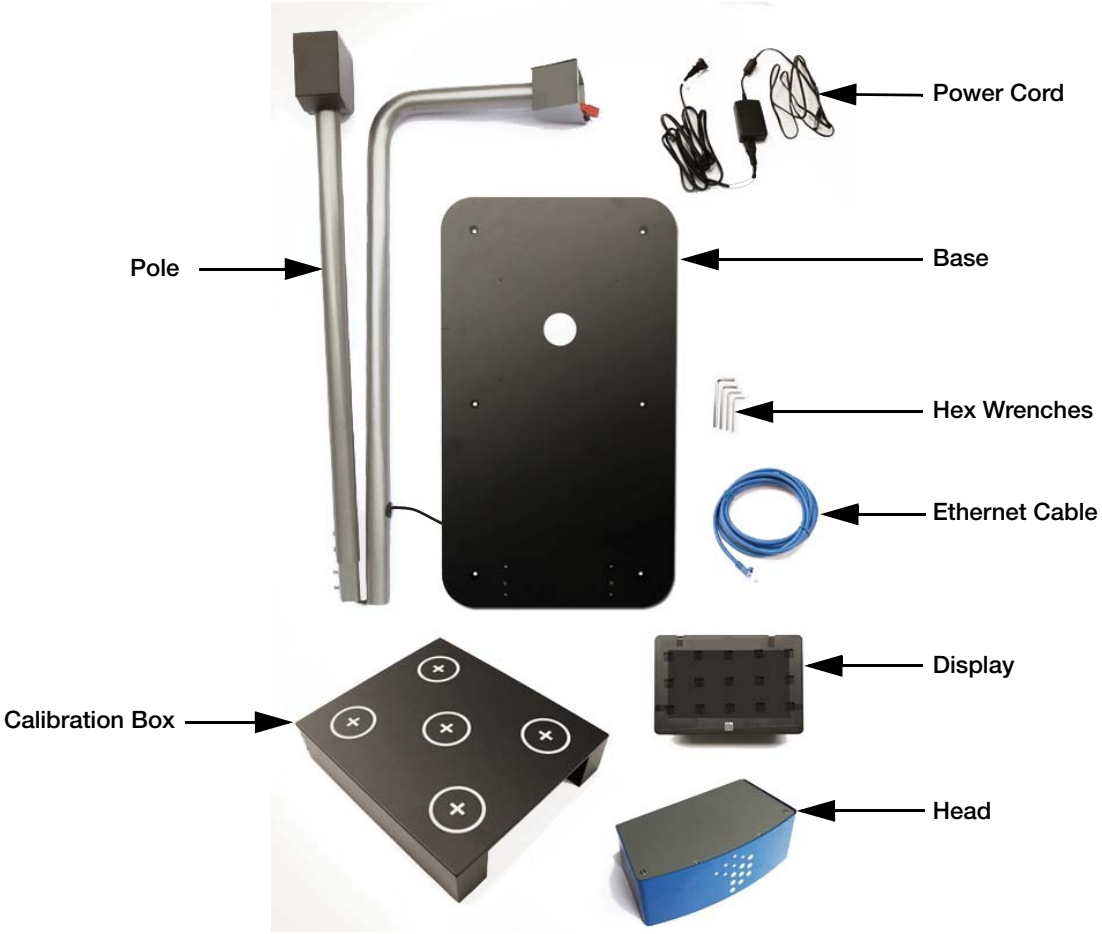


Figure 1-1. Parts Illustration

Immediately after unpacking the *iDimension 100*, visually inspect the contents to ensure all components are included and undamaged. If any parts were damaged in shipment, notify the shipper immediately.

Important *Failure to adhere to the notes below will invalidate the warranty and may result in damage that could require repair or replacement charges.*

- *Retain packaging. When transporting the unit, always disassemble and pack it in its original packaging.*
- *Use only supplied power adapter. Never short-circuit the power adapter or the device.*
- *Keep the unit dry.*
- *Operate between 41 - 104° F (5 - 40° C).*
- *Never remove the iDimension 100's head cover or the electrical connection panels at the base of the pole assembly.*
- *Never modify or attempt to repair the unit. Service must be performed only by Rice Lake Weighing Systems.*
- *Handle cables and cable connectors with care. Never use damaged power cords or plugs or loose electrical sockets. Never touch the power cord with wet hands.*
- *Ensure that the base plate, pole assembly and head unit are all securely attached before attempting to move the unit.*
- *Never lift the unit by grasping only the pole assembly; always ensure that both sections of the pole assembly and the base plate are supported.*
- *Never drop or allow an impact to the head.*
- *Mount on a flat surface.*
- *Never use product for anything other than its intended purpose.*

2.0 Assembly

2.1 Pole Assembly

Figure 2-1. Remove Screws

1. Using the appropriate hex wrench, remove the two screws at the pole joint. Retain the screws for assembly.

Note *Leave the other two screws in place.*

2. Lay the pole out on a hard surface covered with a rug or similar soft covering.
3. Ensure that the poles are aligned correctly using the notch and pin as a guide.
4. Insert the lower half of the pole into the upper half.

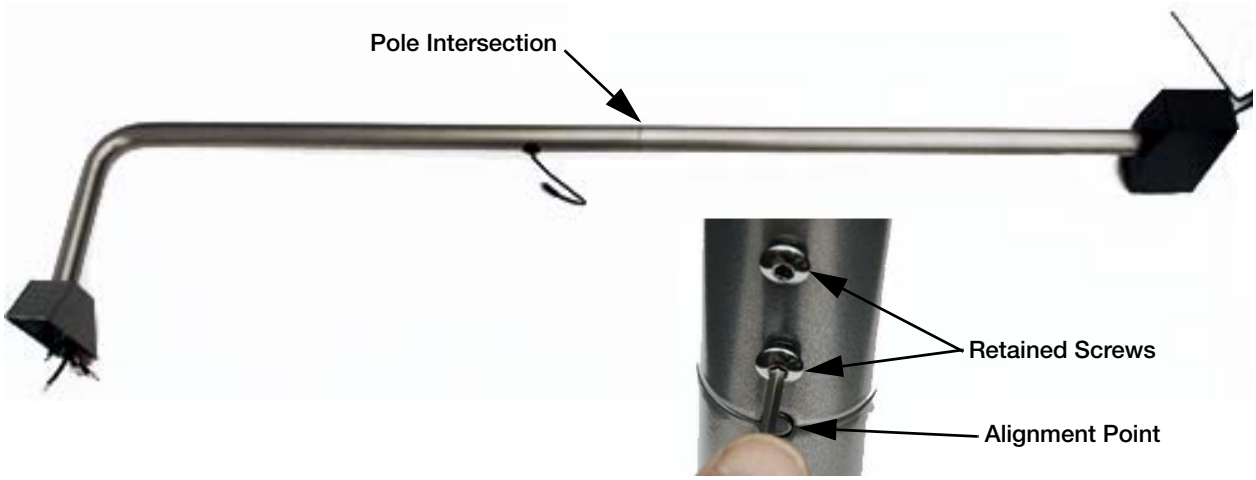


Figure 2-2. Pole Assembly

5. Reinsert and tighten the screws removed in step 1.
6. Lay the pole assembly on a table or other stable surface. Ensure the power block is hanging over the edge.

Figure 2-3. Remove Power Block Screws

7. Remove the four screws that are in the bottom of the power block.
8. Insert the two pins on the base into the matching holes of the power block.
9. Holding the base plate in place, reinsert and tighten the four bolts removed in step 7.

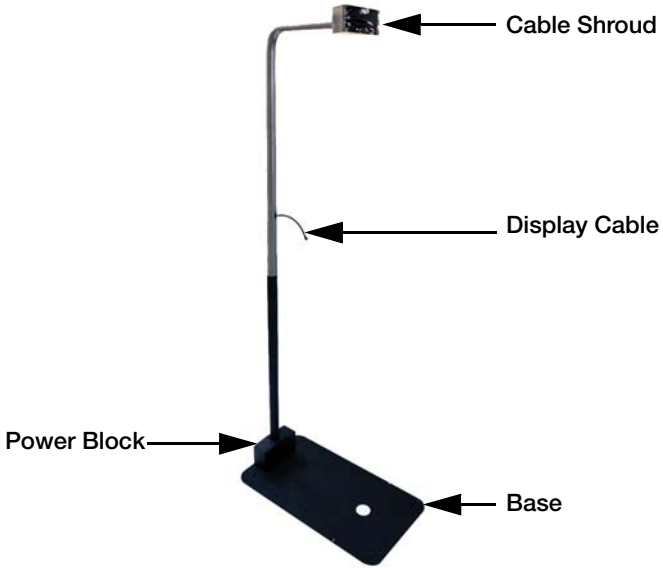


Figure 2-4. Pole Assembly

10. Stand the assembled pole upright.

2.2 Head Attachment

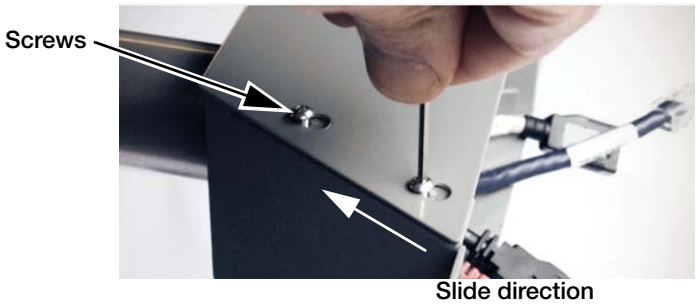


Figure 2-5. Remove Cable Shroud Cover

1. Loosen the four screws that secure the cable shroud cover. Do not remove them.
2. Slide the shroud cover back and lift it off.
3. Align the head with the cable shroud at the top of the pole.

Figure 2-6. Align Head with Shroud

4. Connect the cables. See Figure 2-7.

Note The cables and ports on back of the head are labeled for easy connections.

Figure 2-7. Cable Connections

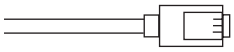
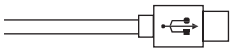
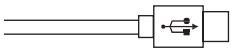
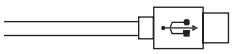
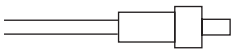
Cable	Order	Cable Label	Port Label
	1	Ethernet	Ethernet
	2	USB 3	USB 3
	3	USB 2	USB 2
	4	Auxiliary power only	Power only 1
	5	24 VDC in	Input: 24v

Table 2-1. Cable Connections

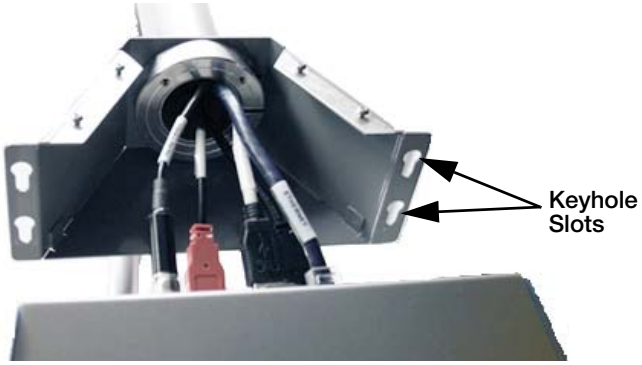


Figure 2-8. Connected Cables

5. Push the cables into the cable shroud carefully.
6. Insert the screws on the head into the keyhole slots on the shroud, slide down into place. Do not tighten them yet.

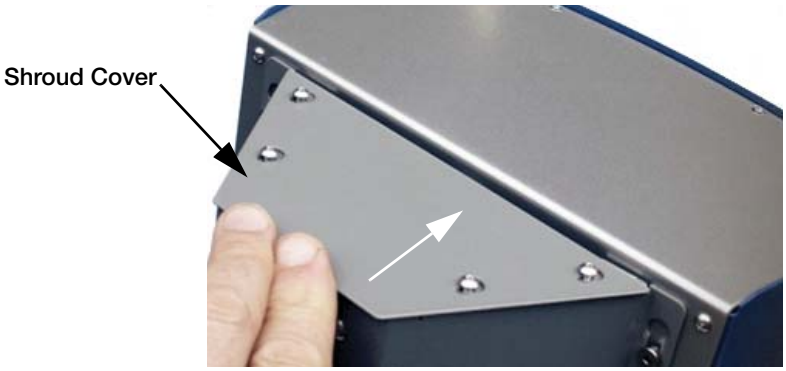


Figure 2-9. Reinstall Shroud Cover

7. Place the shroud cover in the cable shroud and slide it forward until it clicks into place.
8. Re-tighten the fours screws that secure it.

Figure 2-10. Tighten Head Screws

9. Tighten the bolts that attach the head to the shroud.

2.3 Display Assembly

Figure 2-11. U-Shaped Display Bracket

1. Loosen the bolt that holds the u-shaped display bracket.

Figure 2-12. Cable Cover

2. Remove the cable cover on the back of the display (for attachment of the USB cable in steps 5 and 6).

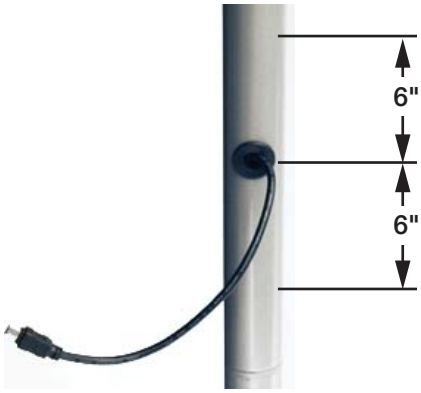


Figure 2-13. Select Display Location

3. Select the display location. The display is usually mounted just above the display cable opening.

Note ***It's possible to mount the display up to six inches above or below the opening. This depends on the size of the items that are to be dimensioned, operator height or other factors (the location can be easily adjusted later).***

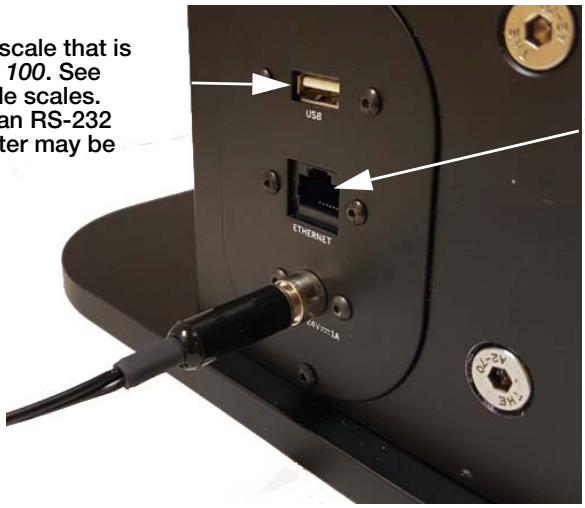
Figure 2-14. Mount Display

4. Mount the display to the pole at the selected location by re-tightening the bolt on the u-shaped bracket.

Figure 2-15. Insert Display Cable

5. Insert the display cable into the mini USB port.
6. Route the USB cable into the cable slot and replace the cover that was removed in step 2 above.
7. Remove the overlay that protects the display screen.

The USB port is for attaching a scale that is compatible with the *iDimension 100*. See Operators Manual for compatible scales. Most scales are equipped with an RS-232 option (an RS-232 to USB adapter may be required).



The Ethernet connector is for connecting to the network to perform more advanced configuration of the device.

Figure 2-16. USB and Ethernet Ports

8. Attach the power cable to the port labeled ***Input 24v***.

CAUTION ***Do not plug the unit in until all connections have been made.***

2.3.1 Install Scale (Optional)

In this step the installation of the scale is for the initial setup wizard to perform a zero height calibration and automatic scale communication interface for testing of the assembly and calibration process. Once placed into it's intended location for use, perform the zero height function again.

When using a scale it should be installed prior to plugging the unit in.

1. When using a scale, place it on the base, centering it from side to side.
2. To place the scale front-to-back, find the small grooves engraved on both edges of the base. Center the scale between them.

3.0 Setup Wizard

The *iDimension 100* is now ready to be plugged in. When it is, the software setup process will begin automatically.

Don't plug in the unit until there is time to complete all of the setup steps.

Additional setup may be required for connecting a compatible scale, placing the unit in its permanent location or interfacing to a compatible software program.

When the *iDimension 100* is powered up for the first time, the setup wizard will launch automatically.

Figure 3-1. Welcome Screen

1. Touch the **Arrow** button to begin setup.

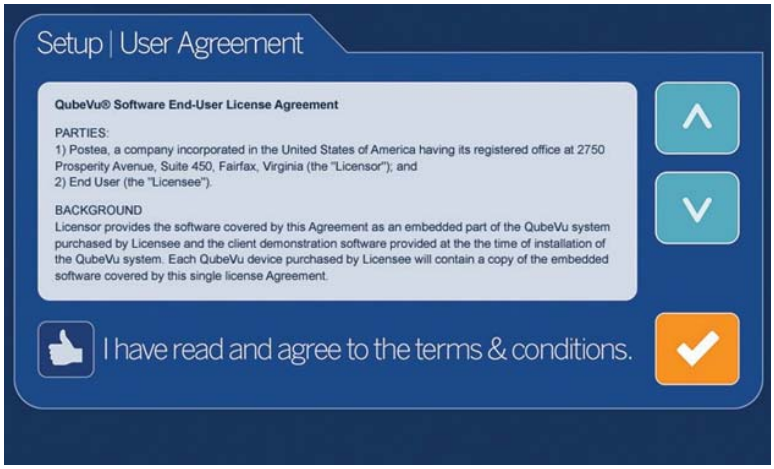


Figure 3-2. User Agreement Screen

2. Review the End User License Agreement (EULA) by using the **Up/Down** scroll buttons.
3. Press the **Thumbs Up** button to confirm the EULA terms and conditions have been read and accepted. Setup cannot be continued until it is pressed.
4. Press the **Check Mark** to continue.

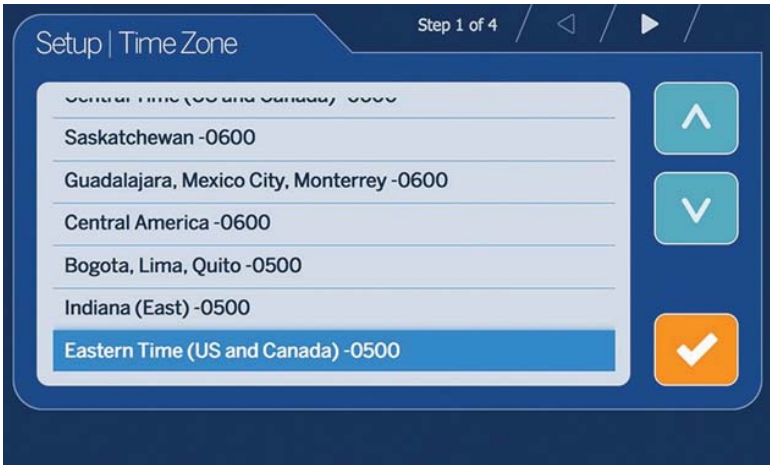


Figure 3-3. Time Zone Setup

5. Using the **Up/Down** arrows, select the time zone for the *iDimension 100*.
6. Press the **Check Mark** to continue.

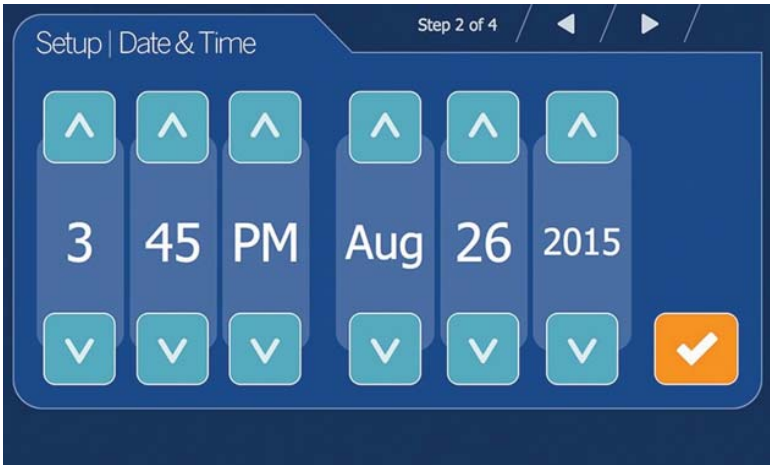


Figure 3-4. Time and Date Setup

7. Using the **Up/Down** arrows, adjust the date and time if necessary.
8. Press the **Check Mark** to continue.

Figure 3-5. Base Selection

Note ***Zero Height calibration allows iDimension 100 to calculate the distance between the scan head and the base. The process differs depending on whether the base is flat or uneven.***

9. Define the base or scale platform being used.
   - If the scale platform has a smooth top or if a scale is not being used, touch the ***Flat base or smooth scale*** button and skip to step 13.
   - If the scale is uneven, such as rollers or ball transfers, continue with step 10.

Figure 3-6. Calibration Screen

10. Place the calibration box on top of the scale, if the scale platform has rollers, a ball transfer option or installation is over a roller conveyor.

Note ***If the calibration box cannot be placed on the ball transfers at level, remove the scale from this part of the setup for initial testing and contact Rice Lake Weighing Systems for review of the correct parameters used from the Operators and Administrators manual.***

11. If the calibration box is level, select the ***Scale with bumps, treads or rollers*** button.
12. Press the ***Check Mark*** to continue and skip to step 14.

Figure 3-7. Clear Scale

Note ***It is important to keep the base clear and unobstructed during zero height calibration, so that it can set Zero Height accurately.***

13. Clear the base.

Figure 3-8. Stand Clear of Device

14. Stand clear of device while the countdown completes.

Note ***If the Zero Height has failed, try performing the function a second time.***

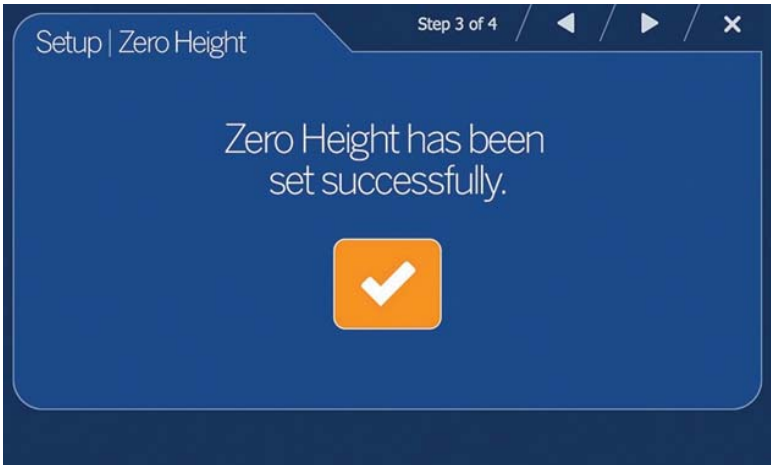


Figure 3-9. Zero Height Complete

15. If a calibration object was used, remove it from the base.
16. Press the **Check Mark** to continue.

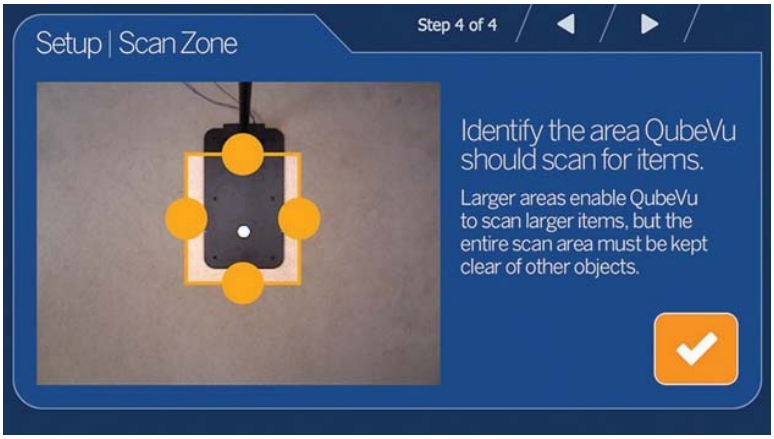


Figure 3-10. Identify Scan Area

Note ***The Scan Zone (Work Zone) is the area in which the unit looks for motion during the dimensioning of items. For best performance, adjust this to cover the largest area possible that can be used for scanning items and can be kept clear of all other objects.***

17. Adjust the scan area by dragging each of the four touch points.
18. Press the **Check Mark** to continue.

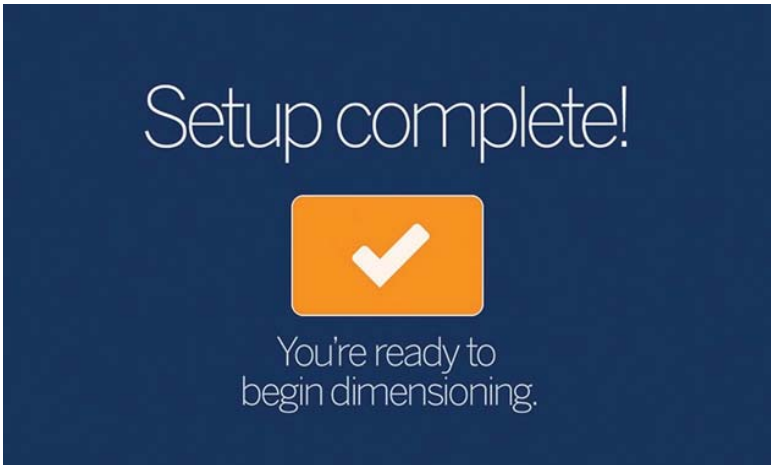


Figure 3-11. Setup Complete

19. Press the **Check Mark** to begin using the *iDimension 100*.

Figure 3-12. Confirm calibration

20. Test the *iDimension 100* to ensure it is properly calibrated. Place the calibration object on the base or scale and check the displayed dimensions.
21. Dimensions should be:
    - Length: 14.0 inches
    - Width: 12.0 inches
    - Height: 3.0 inches

3.1 iDimension 100 Out of Box Configuration

The *iDimension 100* setup wizard has configured the following:

- USB touch screen display – weight display ***Enabled***
- NTEP configurations – ***Off***
- Automatic dimensioning mode – ***On***

  Example: Place an item on the scale or on the base plate and display the l x w x h and weight (if the scale is enabled) on the USB touch screen display.
- Identification of flats (items less than 1.2 inches) – ***H***, using the scale to determine object is available
- Scale interface configuration is set to automatic for interfacing to the following compatible scales:

  NCI Shipping Scales using NCI protocol*

  Mettler Toledo Shipping Scales*

  Mettler Toledo Scales using the MTSICS command set*

  Pennsylvania 7300 Shipping Scale*

  USB HID scales like the Fairbanks Ultegra and Mettler Toledo PS Series

  Rice Lake 420 Indicator with custom NCI software

  *requires RS-232 to USB converter for connection to the *iDimension 100*
- Flat detection – ***Off***

To modify the out-of-box configuration, use the Operators Manual in conjunction with the Managers Guide to make the appropriate settings or contact the RLWS dimensioning team for support.

3.1.1 Advanced configuration with QubeVu Manager

The QubeVu Manager is an optional set of software tools provided to enable advanced configuration. They are not needed in most cases. They are recommended for use only by a technical systems administrator.

This introduction is not intended as a replacement for complete documentation. Please refer to the QubeVu Manager Guide for a complete guide to the tools. The latest version of the Manager Guide, along with all other product documentation, can be downloaded from www.ricelake.com.

3.1.2 Define QubeVu on your Network

QubeVu Manager is accessed via the *iDimension 100*'s IP address over a wired Ethernet connection. To access these tools the *iDimension 100* must be defined on the network.

The *iDimension 100* can be installed as a network device and can be configured with a static IP address or by using DHCP. Talk to the network administrator to determine the best approach for the enterprise network.

The *iDimension 100* is shipped with a dual IP configuration. The network interface will lease an IP address from any available DHCP server. However, it also has a fixed, fail-safe IP address of 169.254.1.1. If DHCP is preferred, the network administrator can share the IP address leased by the *iDimension 100*.

- Configure PC network settings to connect to *iDimension 100* on 169.254.1.1
- Connect *iDimension 100* to a computer using a standard Ethernet cable
- Configure the computer's Ethernet interface with an IP address of 169.254.1.10.
- Consult with the network administrator if unsure how to change the computer's IP address.

Verify connectivity

Verify the communication between the *iDimension 100* and the computer.

Use the ***ping*** command to confirm connectivity.

ping 169.254.1.1

If the ping command does not show that the *iDimension 100*, is responding this may be due to an issue with the network configuration. Make sure that wireless networking is turned off and then try the ping command again. If this is still unsuccessful contact the network administrator for further assistance.

Access QubeVu Manager

To view the QubeVu Manager home page, open an Internet browser and enter http://169.254.1.1. If using DHCP, remember to replace 169.254.1.1 with the IP address provided by the network administrator.

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