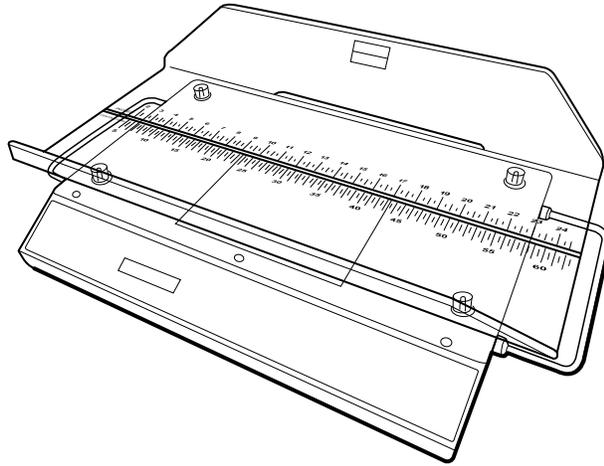


Welch Allyn Pediatric/Infant Scale



Directions for use

Model 4802D

WelchAllyn[®]

Advancing Frontline Care[™]

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For information about any Welch Allyn product, contact your local Welch Allyn representative: <http://www.welchallyn.com/en/other/contact-us.html>.

724510

This manual applies to REF 901110 NONMASTED SCALES.

DIR 80020843 Ver. C Revision date: 2016-07



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Advancing Frontline Care[™]

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Introduction

Intended use

The Welch Allyn Pediatric/Infant Scale is intended to be used by clinicians for weighing patients from 0.35 oz to 44 lbs (10 g to 20 kg) and measuring patients up to 32 inches (81 cm), depending on the size of the scale cradle.

Indications for use

The Welch Allyn Pediatric/Infant Scale is used by clinicians to weigh and measure the length of neonate and pediatric patients.

Symbols

Documentation symbols



WARNING The warning statements in this manual identify conditions or practices that could lead to illness, injury, or death. Warning symbols will appear with a grey background in a black and white document.



Caution The caution statements in this manual identify conditions or practices that could result in damage to the equipment or other property, or loss of data.



Consult Directions for Use

Shipping, storing, and environment symbols



Temperature limit



Keep dry



Separate collection of Electrical and Electronic Equipment. Do not dispose as unsorted municipal waste.



Fragile

	Humidity limitation		Atmospheric pressure limitation
	This way up		Stacking limit by number
	Recyclable		

Miscellaneous symbols

	Manufacturer		Reorder Number
	Product Identifier		For indoor use only
	Serial Number		Prescription only or "For Use by or on the order of a licensed medical professional"
	Battery		Power

About warnings and cautions

Caution statements can appear on the Welch Allyn Pediatric/Infant Scale, the packaging, the shipping container, or in this *Directions for use*.

The Welch Allyn Pediatric/Infant Scale is safe for patients and clinicians when used in accordance with the instructions and caution statements presented in this *Directions for use*.

Before using the device, you must familiarize yourself with all cautions, with the steps to power up the device, and with the sections of this *Directions for use* that pertain to your use of the device. In addition to reviewing the general cautions presented in the next section, you must also review the more specific cautions that appear throughout the manual in conjunction with setup/startup, operation, and maintenance tasks.

- Failure to understand and observe any warning statement in this manual could lead to patient injury or illness.
- Failure to understand and observe any caution statement in this manual could lead to damage to the equipment or other property, or loss of patient data.

General warnings and cautions



WARNING Patient injury risk. Never leave the infant unattended on the scale. Only remove your hands from the infant for a brief amount of time to allow for an accurate weight measurement.



WARNING Patient injury risk. Make sure the cradle is properly cleaned between patients. The use of disposable paper sheets in between weight measurements is also recommended.



WARNING Patient or operator injury risk. Make sure the scale is positioned on a stable surface and in a way to avoid shock or bumping hazards.



CAUTION Make sure that you routinely perform general maintenance and equipment safety checks on your scale. Remove the scale from service when you notice damaged power cords.



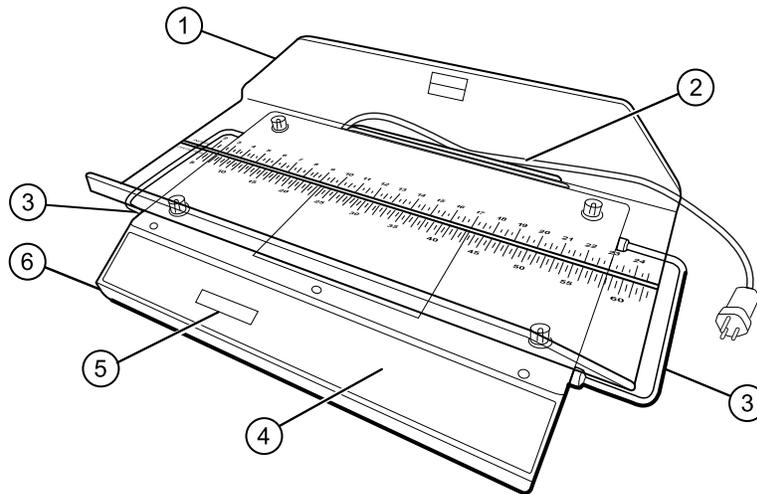
CAUTION Make sure the scale is set in the proper measurement units for your facility. Make sure you record the measurement units as they are displayed.



CAUTION Do not use this scale to transport patients or items.

Controls and indicators

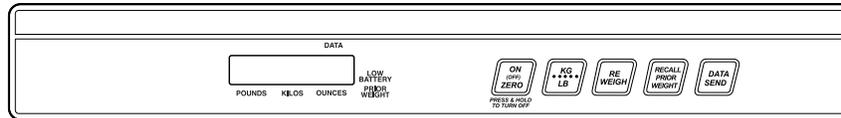
Scale



-
- 1 Weighing cradle with length gauge
 - 2 Rear handle and cord holder
 - 3 Carrying handles
 - 4 Front panel with push buttons

- 5 Digital display
 - 6 Stainless steel cabinet
- N/A Line cord, power supply, and plug (on rear panel)
-

Front panel buttons



Button	Function
ON / (OFF) / ZERO	Briefly press this button to turn the scale on. Press and hold this button to turn the scale off.
KG / LB	Press this button to change the scale between kilograms and pounds. Note If you purchased a scale with the kilograms-only option, this button is not present.
REWEIGH	Press this button to perform a new weighing cycle.
RECALL PRIOR WEIGHT	Press this button to display the weight stored in the scale's memory.
DATA SEND	Pressing this button when the scale is connected to a computer sends the current measurement to the computer. Press this button in conjunction with ON / (OFF) / ZERO to enter the setup mode.

Assembly and setup

The scale is fully assembled at the factory and tested. In some instances, the scales are shipped assembled. However, due to size and shipping restrictions, most scales are partially disassembled. If assembly is required, it can be done with common hand tools. When special tools are required, they are supplied with the scale. Ensure that all bolts and fasteners are securely tightened.

Use the following instructions to assemble and setup your scale for use.

Assembly instructions

The scale is fully assembled at the factory and tested. The scale is shipped with the weighing cradle removed.

1. Carefully remove the acrylic weighing cradle from the shipping carton.
2. Remove the scale from the shipping carton and place it on a stable surface.
3. Position the cradle over the scale so the four metal mounting posts line up with the holes in the top of the scale.

Note the length gauge and rotate the cradle if necessary so the length gauge is positioned correctly.

4. Apply gentle downward pressure to seat all four posts so the cradle rests firmly on the scale.

Custom setup

You can customize the scale to best suit your needs. Configurations that can be selected include the automatic shut-off time, weighting units, beeper, and more.

Enter custom setup mode

1. Make sure that the scale is powered down.
2. Press and hold **DATA SEND** while pressing **ON / (OFF) / ZERO**.
3. Before the scale powers up completely, release **DATA SEND** then press and release it five more times.

The scale displays **Set-UP** and produce a series of four long beeps.

Set the options

Enter the custom setup as described.

Press **DATA SEND** to scroll through the custom setup options.

The options displayed with each press are as follows:

Press **RECALL PRIOR WEIGHT** to turn these options **On** or **OFF**.

Note Options indicated with an asterisk (*) require an additional press of **DATA SEND** to change the value.

Option displayed	Feature
SOft	This option displays the software version of your scale.
dAtE	This option displays the release date of the software. The format is MM/DD/YY.
SCALE	This option displays the model number of the scale.
AutOFF*	This displays the number of seconds before the scale turns off when operating on battery power. The Cont value prevents the scale from turning off automatically.
AC con*	This option causes the scale to remain on when plugged in to AC power.
rES	This option allows you to change the resolution of weight if you ordered the 1-gram option. Pressing RECALL PRIOR WEIGHT switches between the following options: 0.005 0.010 On scales without the 1-gram option, you cannot change the weight resolution.
UnitS*	This option allows you to change the displayed weight unit. Note Do not change the scale units if you have purchased the kilogram-only option. KILOS* This option allows the weight to display in kilograms. POUNDS and OUNCES* This option allows the weight to display in pounds and ounces. POUNDS* This option allows the weight to display in pounds. OUNCES* This option allows the weight to display in ounces.
bEEPEr*	This option determines the audible signal that occurs when a front panel button is pressed.
rS-232	Detailed instructions for this feature are available from Welch Allyn. Go to http://www.welchallyn.com/en/other/contact-us.html to find your local representative.
OutPut*	This option displays the current data port output option. Detailed instructions for this feature are available from Welch Allyn. Go to http://www.welchallyn.com/en/other/contact-us.html to find your local representative. Set the value to OFF to disable the RS-232 port.
PrtUnt*	This option determines whether pounds or kilograms are displayed on data sent to a computer. If the pounds and kilograms indicators are illuminated on the control panel, the data sent is determined by whichever unit is selected on the control panel. If the kilogram indicator is illuminated, it will only send data in kilograms, regardless of the unit is selected on the control panel. If the pounds indicator is illuminated, it will only send data in pounds, regardless of the unit is selected on the control panel.

PrtOPT*	<p>Press RECALL PRIOR WEIGHT to choose between the following options:</p> <p>PnlPrt: The current weight is sent to a computer when DATA SEND is pressed on the control panel.</p> <p>AutPrt: The current weight is automatically sent to a computer when a weight reading occurs.</p>
bAud*	<p>This option allows you to set the baud rate. Values are 1200, 2400, 4800, 9600, and 19200.</p>
pArity*	<p>This option allows you to change the parity between the following options:</p> <p>Off: No parity, 8 data bits</p> <p>Odd: Odd parity, 7 data bits</p> <p>EuEn: Even parity, 7 data bits</p>
Sot.Eot	<p>This option allows checking for a complete data string in some applications.</p>
CAr.rET	<p>This option allows a single carriage return followed by a single line feed after the data string.</p>
Ln.FEEd	<p>This option allows a single line feed followed by a single carriage return after the data string.</p>
StPbit*	<p>This option allows you to change the stop bits between the following options:</p> <p>1 bit: One stop at the end of a word</p> <p>2 bits: Two stops at the end of a word</p>
rtS.ctS*	<p>This option allows you to turn On or Off RS-232 serial transmissions.</p>
Prtbtn*	<p>This option allows you to turn On or Off the front panel DATA SEND button.</p>
rtEPrt*	<p>This option allows you to turn On or Off the enabling of sending data from a remote location by connecting the receive line to the ground.</p>
PC brd*	<p>This option displays the model number of the printed circuit board. A second press of DATA SEND displays the revision of the printed circuit board.</p>
SEt-UP	<p>This option is displayed when you have cycled through all the options. Press and hold ON to power down the scale.</p>

Scale operation

Power options

The scale can be used with battery power or with AC power.

Battery power



CAUTION Use only size D disposable alkaline batteries. The use of any other battery will void the warranty.

Press **ON / (OFF) / ZERO** to turn on the scale.

The scale automatically turns off after 90 seconds of non-use when operating on battery power.

The **LO BATT** indicator displays when the battery power is low.

bAttrY displays when the batteries are unable to properly power the scale.

Replace the batteries when either of these messages are displayed.

AC power

When plugged in, the scale continuously runs on AC power automatically.

The scale switches to battery power when AC power is not present.

Audible beeps

The following beeps occur when using the scale.

Sound	Meaning
One beep	Acknowledgment of a button press.
Two beeps	A zero weight is obtained.
Three beeps	Weight reading is obtained and displayed.
Four long beeps	The battery is too weak to operate the scale. The scale has entered custom setup mode.
Long/short beeps	There is a problem with the scale. See the troubleshooting section.

Continuous long beep There is a problem with the scale. See the troubleshooting section.

One-gram weighing option

This purchasable option allows the scale to display weights below 1 kilogram in 1-gram increments with 1-gram resolution. It is automatically enabled whenever the weight on the cradle is less than 1 kilogram.

Weighing procedure

Make sure to select a consistent time of day to obtain a weight measurement.

Position the scale in a convenient and stable location.

Make sure the scale is clean and prepared for taking a weight measurement.

1. Press **ON / (OFF) / ZERO** to turn on the scale.
The scale goes through the startup sequence.
2. Prepare the infant for weighing. Remove clothing and dressing.
3. Place the infant on the scale so that the weight is distributed evenly near the center of the scale.



WARNING Patient injury risk. Never leave the infant unattended on the scale. Only remove your hands from the infant for a brief amount of time to allow for an accurate weight measurement.

4. Stabilize the infant as necessary with your hand. Remove your hand from the infant, but always keep your hands close in case re-stabilization is required.

Note Do not touch the infant while the weight measurement is in process.

5. The scale displays a series of moving dashes as it waits for stabilization and calculates the weight.

Once the measurement is obtained, the scale beeps three times and displays the weight on the front panel.

6. Return the infant to his or her bassinet or incubator.
7. If necessary, press **REWEIGH** to perform another weight measurement.
8. If necessary, press **RECALL PRIOR WEIGHT** to display the previously stored scale measurement.

Note A measurement is stored in the scale until a new weight is taken and zeroes out.

A stationary display of - - indicates a negative weight. Press **ON / (OFF) / ZERO** to set the zero.

If **O-LOAD** is displayed, the capacity of the scale has been exceeded.

Storage, cleaning, and maintenance

Storage

The scale should be stored on a stable surface. If not, the scale should be stored in a convenient storage facility or closet. At no time should the scale be lifted by grasping the cradle. During storage or shipping, disconnect the cradle from the scale to prevent damage to the scale's electronic transducers.

Cleaning

Scale

1. Clean the scale after every use.
2. Use one of the following products when cleaning your scale:
 - 70 percent isopropyl alcohol
 - PDI Sani-Cloths®

Cradle

1. Clean the cradle after every use.
2. Use soap and water to clean the scale cradle.



CAUTION Do not clean the cradle with alcohol or other drying agents.

Battery replacement



CAUTION Use only size D disposable alkaline batteries. The use of any other battery will void the warranty.

1. Remove the cradle from the scale.
2. Remove the top cover of the enclosure by removing the eight hex screws with a 1/8-inch allen wrench.
3. Install six new size D batteries in the battery holder. Make sure to follow the polarity instructions.
4. Re-attach the top cover of the enclosure by installing the eight hex screws. Make sure the operation label is facing the correct direction.

5. Re-install the cradle by gently pressing down.

Maintenance

Routinely perform the following preventive maintenance to keep your scale in working order.

1. Check the calibration annually or as required.
2. Inspect the cradle for cracks or loose mounting hardware. Replace or repair as necessary.
3. Inspect the scale's enclosure for damage or loose or missing hardware. Replace or repair as necessary.
4. Inspect the AC line cord for abrasions or other signs of wear.
5. Do not expose the scale to excessive water or moisture.
6. Do not store the scale where heavy objects can be placed on it.
7. Replace the batteries annually or as required.

Troubleshooting

This section presents tables of information to help you troubleshoot issues with the scale.

To use these tables, locate the specific problem with your scale in the left column of the table. The remainder of the row explains possible causes and suggests actions that can resolve the issue.

Issue	Possible cause	Suggested action
The display does not illuminate	No power is supplied to the scale	Make sure that the scale is plugged in. Make sure that the batteries are properly installed and are in good condition.
	The cable between the display board and the instrument board is disconnected	Contact your service department.
	The membrane keyboard and the display board are disconnected	Contact your service department.
The weight reading takes too long to display	The cradle is in motion	Wait for the cradle to settle.
The scale displays CABLE	A signal outside the range of the internal A/D converter has been applied	Contact your service department.
The scale displays O-LOAD	The object on the scale is larger than the maximum value allowed	If the weight value is within the specified range, contact your service department.
The reading does not change when weight is applied to the scale	The load cell transducer, connector, or cable may be defective	Contact your service department.

Issue	Possible cause	Suggested action
The scale buttons are not responding	The buttons are damaged	Check for visible signs of damage. Contact your service department.
The error message E-FAIL is displayed	The scale's EEPROM memory has failed	Contact your service department.
The error message r-FAIL is displayed	The scale's random access memory has failed.	Contact your service department.

Appendices

Specifications

Item	Specification
Scale	4802D
Resolution (factory default)	0.2 oz/5 g 1-gram option: 1 g below 1 kg
Weighing range	0.35 oz to 44 lbs (10 g to 20 kg)
Readout	Large, bright, light-emitting diode display. Selectable weight display in grams, kilograms, or pounds and ounces. Indicator light to show selected units.
Power source	Battery <ul style="list-style-type: none"> • 6 D alkaline batteries. Power adapter: <ul style="list-style-type: none"> • Medical grade UL listed external power supply • Nominal input voltage: 100-240V AC $\pm 10\%$ • Nominal input frequency: 50/60 Hz • Nominal input current: 0.3-0.15Arms @ max load • Standby power consumption at U_{in}: 230V AC : $\leq 0.1W$ • Nominal output voltage: U_{out} : 12V DC +5% / -5% U_{Br} : $\leq 150mVpp$ • Nominal output current: I_{out} : 1000mA
Dimensions	Platform with carrying handles: 27.5 in x 16 in. x 7 in. Cradle: <ul style="list-style-type: none"> • Standard – 25 in. x 14 in. • Oversized – 32 in. x 14 in. • Four Sided – 25 in. x 14 in.

Product configurations

The Welch Allyn Pediatric/Infant Scale is available in the following configurations:

Model 4802D, Pediatric/Infant Scale

Model	Description
4802D-AK	Pediatric/Infant Scale, 1 g resolution, kg only
4802D-AX	Pediatric/Infant Scale, 1 g resolution, standard weight
4802D-XK	Pediatric/Infant Scale, standard resolution, kg only
4802D-XX	Pediatric/Infant Scale, standard resolution, standard weight

Approved accessories

Part number	Description
20009	Battery pack
48200W	Standard cradle
48220W	Four-sided cradle
48222	Oversized cradle
48217	Scale liners (500 per carton)
48800-1	Mobile weighing cart with tissue dispenser

Warranty

Welch Allyn will warranty the weight scale to be free of defects in material and workmanship and to perform in accordance with manufacturer specifications for the period of one year from the date of retail purchase.

The warranty period shall start on the date of purchase. The date of purchase is: 1) the invoiced ship date if the device was purchased directly from Welch Allyn, 2) the date specified during product registration, 3) the date of purchase of the product from a Welch Allyn authorized distributor as documented from a receipt from said distributor.

This warranty does NOT cover damages caused by misuse or abuse, including but not limited to:

- Failure caused by unauthorized repairs or modifications
- Damage caused by shock or dropping during transportation
- Damage caused by improper use of the power supply
- Failure caused by improper operation not consistent with the instructions stated in this *Directions for use*

Should this device require maintenance (or replacement at our option) under warranty, contact your local Welch Allyn representative: <http://www.welchallyn.com/en/other/contact-us.html>

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