

# **SR** Scales™

by SR Instruments, Inc.



## *Model SR520 Stand-On Scale System*

OWNERS MANUAL

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## MODEL SR520 STAND-ONSCALE SYSTEM

The SR520 is a Precision Digital Scale System specifically designed for use as a Stand-On scale for weighing ambulatory patient. The SR520 Scale System employs the latest in microprocessor and load cell technology to provide accurate and repeatable weight data. Four (4) identically matched transducers are strategically placed to ensure an accurate representation of the patient's weight regardless of weight distribution.

The scale system derives its power from 6 "D" cell alkaline batteries. The low power microprocessor circuitry allows the SR520 to derive its power from six (6) "D" cell alkaline batteries which will provide approx. 10,000 weight reading before needing replacement. This eliminates the need for an external battery charger and the danger of an A.C. cord.

The Patient's weight is displayed on a 16 character dot matrix liquid crystal display in KILOGRAMS with a displayed resolution of 0.1 Kg.

### SPECIFICATIONS

MAX Capacity	450 Kg's
Display Resolution	0.1 Kg's
Accuracy	0.1% +/- 1 digit of reading for calibrated range
Zero	One Button Automatic
Hold	Freezes Displayed Weight and Stores data in Memory.
Last Weight Recall	Hold Button Recalls Last Stored Weight.
Display Type	16 character dot matrix L..C.D.
Display Time	Auto power-down 60 sec.
Damping	Automatic digital filter
Power Supply	6 "C" Cell Alkaline Batteries
Warranty	Two Years Parts and Labor

# SR520 SYSTEM OPERATION

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## BASIC OPERATION

Before the patient is positioned on to the scale system you must first set the system zero. This is done as follows;



1. Press the "0" button. The displayed message will indicate " **HANDS OFF** ". Make sure that nothing is in contact with the scale system while zeroing. In a few seconds the display will indicate " **WEIGHT = 0.0 KG** ".

Note: When the unit is first turned on the mode will default to the last mode used.

**The patient may now step on to the weighing surface to view the weight data.**

## BUTTON FUNCTIONS :



The "0" button is used to initialize the system zero before placing a patient on to the scale system. When the "0" button is pressed, the display message will indicate " **HANDS OFF** ". At this point you should make sure that nothing is in contact with the weighing surface so that the system zero will be accurate. In a few moments the display will read - " **WEIGHT = 0.0 KG** ".

The display mode will automatically default to the last mode used



If after positioning the patient on to the scale system, the display shuts off before you are able to view the weight data, simply press the " **WEIGH** " button to WAKE the display and view the patient's weight.

NOTE: It is recommended that you ZERO the system before each weighing to assure accuracy.



The " **HOLD** " button will freeze the displayed patient weight and store it away in memory. To recall the LAST WEIGHT after the system has shut off, press the " **HOLD** " button BEFORE pressing any other. The system only recalls the LAST WEIGHT that was stored by HOLD.



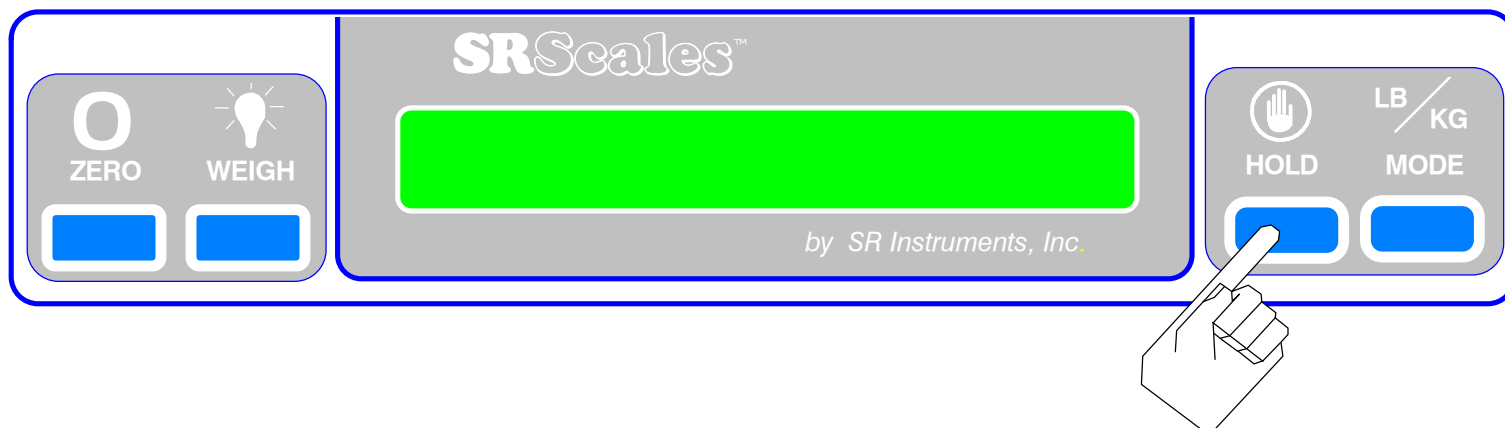
Button is inactive.

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## SPECIAL FEATURES

The SR520 has the capability of displaying patient weight in two different ways.

### CONTINUOUS WEIGH and AUTO-HOLD



**CONTINUOUS WEIGH** - When the SR520 is shipped it comes in the Continuous Weigh Mode. This means that when the patient is being weighed, the weighing surface remains *ACTIVE* and the display may show variations depending on the movement of the patient. To *LOCK* the displayed reading you must press the "**HOLD**" button. This will also store the weight data in memory if you wish to recall it.

**AUTO-HOLD** - The Auto-Hold Mode will automatically *LOCK* the displayed weight data and store it memory as the last weight. The Auto-Hold Mode is activated as follows:

Press and Hold the "**HOLD**" button for approximately 5 sec. until the display indicates "**AUTO-HOLD ENABLED**" then release the button.

To return to the Continuous Weigh Mode simply repeat the same procedure. The display will indicate "**CONTINUOUS WEIGH**".

Weighing Procedure:

1. Press the "**ZERO**" button to set the zero.
2. Position the patient on to the scale.
3. When the patient's motion has stabilized, press the "**WEIGH**" \* button.

\* Note: In the Auto-Hold mode you *MUST* press the "**WEIGH**" button to display the weight.

If the display turns off before you view the weigh data or if you wish to re-weigh the patient simply press the "**WEIGH**" button once again.

**IMPORTANT:** If after the display turns off you wish to recall the last stored weight, press the "**HOLD**" button first. Otherwise the last stored weight will be reset.

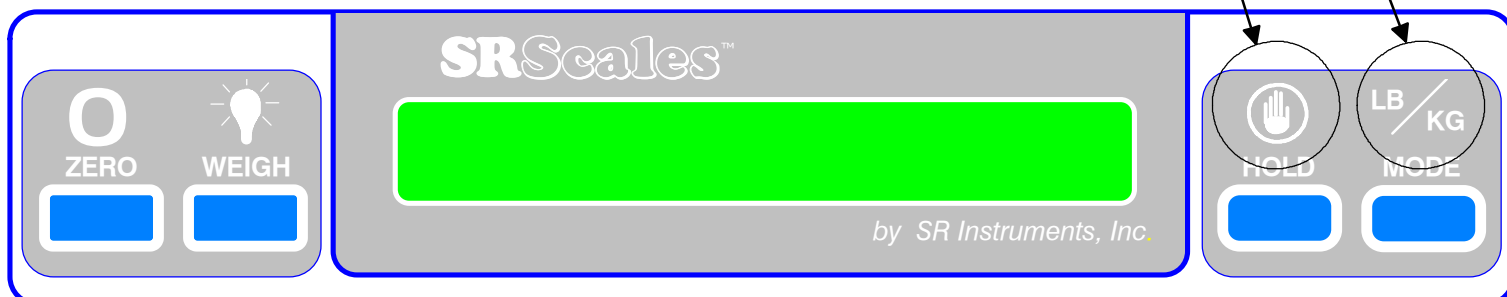
## SYSTEM CALIBRATION and MAINTENANCE

# SR Scales™

**IMPORTANT :** The following calibration procedure should only be performed by qualified service personnel. The SR520 load cell, itself, has no user serviceable components and should not be tampered with for any reason. Recalibration is generally not required, but may be checked periodically to ensure accuracy.

### CALIBRATION PROCEDURE :

### CALIBRATION BUTTONS



**NOTE:** Make sure that nothing is in contact with the scale system during this procedure. Be sure to remove your hands from the system when noting the displayed calibration results.

1. Remove the two(2) screws on the bottom of the display housing. Lift the display panel. The Calibration buttons are located on the P.C. Board as indicated above.
2. **Press** and **Hold** both buttons simultaneously.
3. The display will read "**HOLD TO CAL**" as the right hand digit counts down to enter the **CAL MODE**.
4. When in the **CAL MODE**, press the "**ZERO**" button to zero the display.
5. Place a known calibrated weight on to the weighing surface and compare it to the displayed reading.
6. Use the **LEFT CAL** button to make "+" corrections and the **RIGHT** button to make "-" corrections to the displayed weight. The displayed value should be within 0.1% of the calibrated weight plus or minus 1 digit of reading.

When adjustments are completed:

press the "**WEIGH**" button to **ABORT** your changes and exit the CAL mode or press the "**HOLD**" button to **SAVE** all changes and exit the CAL mode.

### CALIBRATION TOLERANCE TABLE

LOW LIMIT	APPLIED LOAD	HIGH LIMIT
99.9	100.0	100.1
199.8	200.0	200.2
299.7	300.0	300.3
399.6	400.0	400.4
499.5	500.0	500.5
599.4	600.0	600.6
699.3	700.0	700.0
799.2	800.0	800.8

## **SYSTEM CARE and CLEANING**

### **CLEANING and DISINFECTING:**

The readout and transducer housing for the SR520 Scale System is made of an epoxy coated aluminum casting with stainless steel riser posts. You need only exercise caution when cleaning the display window of the electronics as this is made of clear polyester . We recommend mild soap and water for general cleaning.

SECTION II  
TECHNICAL SERVICE INFORMATION

FOR SALES and PRODUCT INFORMATION  
and TECHNICAL ASSISTANCE Please Call:

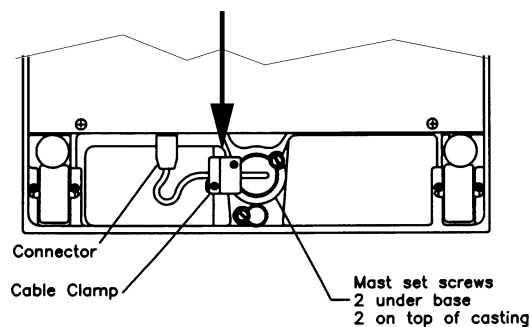
**1 (800)654-6360**

## ASSEMBLY NOTICE:

**The Scale systems are calibrated at the factory as a set. Components should not be interchanged with other systems.**

**To assure optimum accuracy and reliability make sure that the serial number on the display matches the serial number on the transducer.**

**WARNING:  
CABLE CLAMP MUST BE  
INSTALLED PROPERLY TO  
AVOID CABLE DAMAGE**



**Refer to assembly Instructions**

# MODEL SR520

## ASSEMBLY INSTRUCTIONS

(refer to figure on next page)

1. Insert mast (7) into mast collar of base assembly (6) as shown.
2. Remove the 4 set screws from the base collar and apply loctite to all set screws.
3. Make sure the mast is seated firmly in the base unit then reinstall the set screws and tighten against the mast.
4. Slide the readout (5) cable down the mast (7) and pull out through the base (6).
5. Place the readout (5) on to the top of the mast (7) as shown
6. Remove the 4 set screws from the readout collar and apply loctite to all set screws.
7. Make sure the readout (5) is seated firmly in the mast (7) and the readout and base assembly are lined up square and level to each other then reinstall the set screws and tighten against the mast.
8. Lay system on it's side and remove the cable clamp (see drawing on next page) from the base.
9. Attach the readout cable connector to the mating connector in the base.
10. **IMPORTANT: REINSTALL THE CABLE CLAMP** - Set the readout cable in to the grove under the cable clamp and reinstall the cable clamp leaving just enough slack to alleviate any tension on the connector. Make sure to apply loctite to cable clamp screws. Slide the excess cable back up into the mast.
11. Remove the 2 screws from the battery compartment cover and install 6 "C" cell batteries as indicated on the cover diagram. Replace the cover.

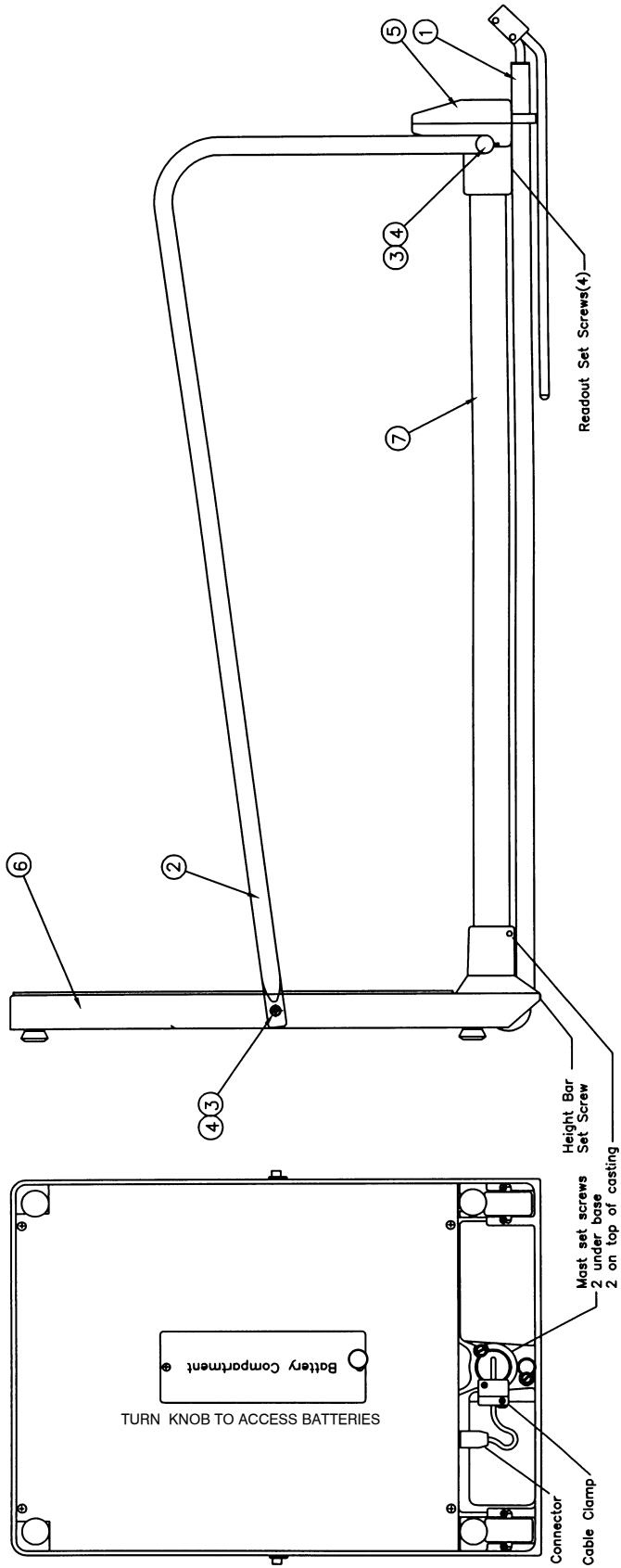
### **OPTIONAL HANDRAILS -**

1. Apply loctite to all screws provided with handrails.
2. Attach the handrails (2) to the bottom side of the readout with 2 screws and split lock washers each side (3,4).
3. Attach the bottom of the handrails to the base as shown (3,4) with 1 screw and split lock washer each side.

### **OPTIONAL HEIGHT BAR -**

1. Remove the clamp screw on the rear tab of the readout (5).
2. Slide the height bar (1) down through the readout clamp and seat firmly into the base
3. Apply loctite to all of the set screws.
4. Make sure that the height bar is square to the base then tighten all set screws.

If you have any questions or problems please call 1(800)654-6360 for assistance. Our technicians will be glad to help you.



**Assembly Instructions:**

- 1) Insert Mast (7) into base assembly (6).
- 2) Remove 4 mast set screws from base (6) and add loctite. Reinstall setscrews and tighten against Mast (7).
- 3) Place readout cable into mast (7) and pull through mast and out base (6).
- 4) Place readout (5) onto mast (7) and remove 4 readout setscrews. Apply loctite to screws, reinstall and tighten against mast.  
NOTE: Make sure readout is square and level with base!
- 5) Lay unit on side and remove cable clamp from base. Feed connector from readout to mating connector in base. Attach connector.
- 6) Reinstall cable clamp with loctite applied to screws. Make sure excess cable is in mast (7).
- 7) Open battery compartment cover and install 6 "C" cells matching batteries to diagrams. Reinstall battery compartment cover.
- 8) Optional Handrails (2) can be installed now with provided screws and lock washers. Apply loctite to all 3 screws on each handrail (2 under readout and one in base).
- 9) Optional Heightbar (1) can be installed by removing the clamp screw on the rear of the readout. Install the height bar into base and clamp and reinstall screws (readout and base) with loctite and tighten.  
Your scale is now ready for use. Please follow the procedure in the manual and check for proper operation.  
Call SR Instruments at 1-800-654-6360, if you have and installation questions or problems.

- Tools required:**
- 1) 1/8" allen wrench - supplied
  - 2) 3/16" allen wrench - supplied
  - 3) straight blade screwdriver
  - 4) 6 "C" batteries - supplied
  - 5) Scale assembly - listed to right

ITEM	QTY	DESCRIPTION
7	1	Mast
6	1	base assembly #3082
5	1	display assembly # 3085
4	6	1/4 split lock washer s.s. w/handrail
3	6	1/4-20 x 3/4 lg shcs s.s. w/handrail
2	1	hand rail set # 3070 (1 LH/1 RH) (Optional)
1	1	height bar assembly #3086 (Optional)

USED ON  
MOD 555  
REQ'D/UNIT

**SR Instruments**

**FINAL ASSEMBLY**

DWG. BY: *R.F.B.*  
SCALE: NONE  
DWG. NO. 5-14-95  
SHEET 1 OF 1  
3087

