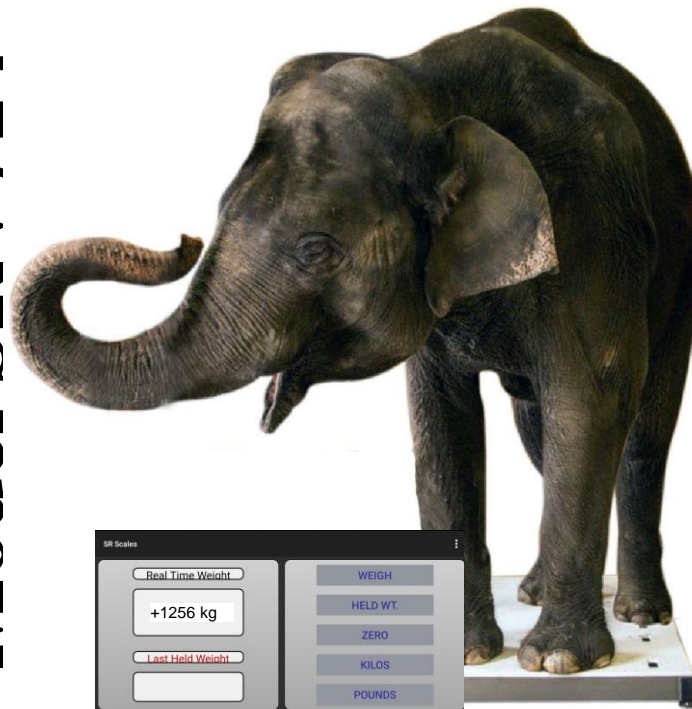


SR Scales®

by **SR** Instruments, Inc.

Model SRV714



Large Animal Platform Scale

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PACKING CHECKLIST - Model SRV714 Large Animal Platform Scale

√	DESCRIPTION	QUANTITY
	TOP PANELS - 47 in (119 cm) x 31.75 in (81 cm)	3 ea
	TRANSDUCERS - 95 3/8 in (242 cm) x 6 in (15 cm)	2 ea
	DISPLAY UNIT (ATTACHED TO (1) TOP PANEL)	1 ea
	PACK OF SIX (6) "D" CELL BATTERIES	1 pk
	PACK OF SIX (6) LOAD CELL SPACERS	1 pk
	RUBBER FOOT	6 ea
	CALIBRATION CERTIFICATE	1 ea
	WARRANTY CARD	1 ea
	MANUAL	1 ea

ASSEMBLY

ASSEMBLY STEPS

- STEP 1:** Unpack Large Animal Platform Scale (1) and check parts against PACKING CHECKLIST. If there are any missing or damaged parts, call Service Hotline at: 1-800-654-6360.
- STEP 2:** Remove the center panel to access the Display Housing (see Figure 4). Unplug the two (2) transducer cables that come from the display box. Unscrew the four (4) screws from the plastic cover on the display housing. Loosen the two thumb screws on the battery holder cover and remove the cover. Install the six (6) “D” cell batteries according to battery holder imprinted instructions. Attach the battery holder cover and tighten the thumb screws. Re-secure the plastic cover with the four (4) screws.
- STEP 3:** Remove the other two end panels from the Transducers.
- STEP 4:** Place one (1) load cell spacer (metal ring) over the threaded stud of each of the six (6) load cells. Then thread on one (1) rubber foot on each of the threaded studs (Figure 1).
- STEP 5:** Place the two (2) Transducers, with the adjustable stainless feet resting on the floor, parallel to each other and approximately four (4) feet apart (Figure 2).

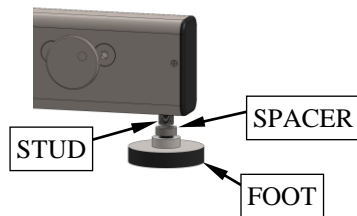


Figure 1: Foot Assembly



Figure 2: Transducer Setup

- STEP 6:** Align one of the end panels (without electronics) with the alignment pins at either end of the transducer tubes. Carefully slide the panel down onto the alignment pins in the transducer tubes. Ensure that the panel is sitting flat on the tubes and all four (4) alignment pins are engaged. Repeat this step for the opposite end (Figure 3).



Figure 3: End Panel Assembly

ASSEMBLY (CON'T)

STEP 7: Carefully place the center panel with electronics on an angle on top of one of the previously assembled panels and one (1) transducer tube. When stable, plug in the two (2) transducer cables that come from the display box under the center panel to each of the transducer tubes. Ensure that the transducer cables are in line with the connectors on the transducer tubes (Figure 4).

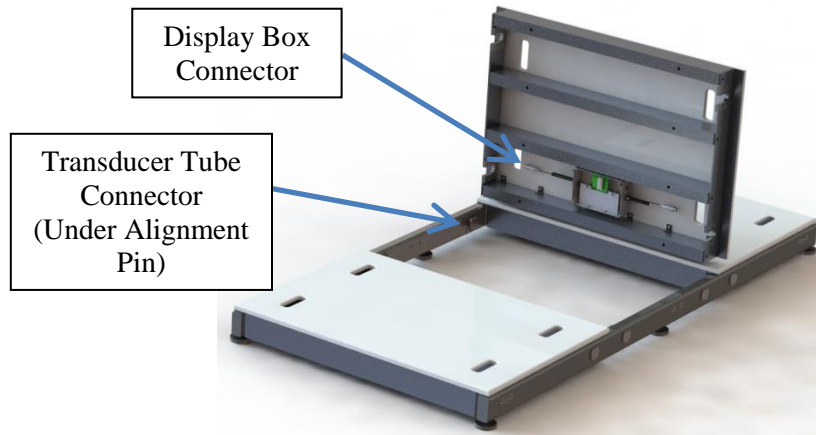


Figure 4: Center Panel Assembly

STEP 8: After the transducers are plugged in, carefully align the center panel with the four (4) alignment pins that are located in the center of the transducer tubes and slide it down over the remaining transducer assembly pins (Figure 5).



Figure 5: Final Assembly

NOTE: Ensure all adjustable stainless steel feet are in contact with the floor, that the scale is level and does not rock or twist.

NOTE: If the scale is going to be set up in the same location repeatedly, it may be helpful to outline the feet of the scale after the scale is fully assembled to assist with placement of the transducer tubes in the future.

REPLACEMENT PARTS and ACCESSORIES

Part #	Description
FK52001079	STAINLESS/RUBBER LEVELING FOOT
MAN714	MANUAL
MF9090	LOAD CELL SPACER

SYSTEM DESCRIPTION and INTENDED USE

SYSTEM DESCRIPTION

The SRV714 Large Animal Platform Scale employs the latest in microprocessor and load cell technology to provide accurate and repeatable weight data. Six (6) identically matched Load Cells are environmentally sealed and strategically placed to ensure an accurate representation of the subject's weight.

The SRV714 Large Animal Platform Scale derives its power from six (6) "D" cell batteries.

Weight is displayed with a displayed resolution of 5 pounds or 2 kilograms.

The SRV714 Large Animal Platform Scale is equipped with a wireless communication module. By waking the scale up with the "**ZERO / ON**" button (located at the end of the Transducer), the wireless feature is turned on. Then use the free SR Scales app (Google Play store) to connect with the scale from any Android device to allow for remote wireless operation.

INTENDED USE

The SRV714 Large Animal Platform Scale is designed for use with farm stock, pachyderms, marine mammals, pinnipeds, and other large animals. It is a preferred means of gathering weight data up to 15,000 pounds or 6,800 kilograms.



MAINTENANCE and CLEANING

The SRV714 is constructed from durable stainless and aluminum tube with a high density anti-slip plastic surface. Exercise caution when cleaning the high density plastic surface as it can be scratched by abrasive cleaners. Waterproof seals can also be damaged. We recommend mild soap and water for general cleaning and disinfecting.



WARNING



DO NOT use pressurized water or steam. The scale system contains microprocessor circuitry and strain gauge sensors that may be adversely affected by exposure to such an environment.

STORAGE and TRANSPORTATION

If storing this equipment for periods longer than three (3) months, remove the batteries. To maintain proper operation of this instrumentation, storage and transport conditions should not vary outside the following conditions: Relative Humidity 0% to 85%, Ambient Temperature 14°F to 122°F (-10°C to +50°C).

THEORY OF OPERATION

SR Instruments patient weighing systems are digital scales. Strain-gauge force cells convert the force of an applied weight into an analog signal. This signal is amplified by an operational amplifier and converted to a digital signal by an analog to digital converter. The digital signal is transferred to a micro-controller where it is filtered, converted to appropriate units and displayed on a liquid crystal display.

Strain-gauge force cells each contain four strain gauges mounted in a full Whetstone-bridge configuration. These bridges convert the physical movement of the force cell, due to the applied mass on the system, into minute changes in electrical resistance. These changes in resistance produce a voltage difference across the Whetstone-bridge, which is amplified by the operational amplifier. The amplifier is configured to current sum the output of each cell, with potentiometers serving to adjust the sensitivity (voltage out per unit of weight applied) of each bridge.

The output of the operational amplifier is digitized by the analog to digital converter.

The micro-controller averages and filters the digital output of the analog to digital converter, subtracts the value saved during the system zero operation and scales the filtered output, then displays the result on the liquid crystal display. The micro-controller performs a rolling average of data for continuous weigh.

SPECIFICATIONS

MAXIMUM WEIGHT CAPACITY	15,000 lb. / 6800 kg. (Minimum 10 lb.)
PLATFORM SIZE	47 in x 95 3/8 in x 6 in 119 cm x 242 cm x 15 cm
DISPLAY TYPE	LCD
DISPLAY RESOLUTION	5 lb / 2 kg
ACCURACY	1% +/- 1 digits of displayed resolution for calibrated range
AUTO ZERO	One button operation
STABILIZATION TIME	Five (5) seconds
AUTO POWER DOWN	After ten (10) minutes
WIRELESS COMMUNICATION ON-TIME	10 minutes from last button press
AVERAGING	Automatic digital filter
POWER SUPPLY	Six (6) “D” cell batteries
CALIBRATION	Calibration is traceable to NIST
OPERATING CONDITIONS	Normal operating conditions for this product: Ambient Relative Humidity Range: 0% to 85% Temperature Range: 40°F to 95°F (5°C to 35°C) Avoid exposure to high-pressure water or steam.
TRANSPORTATION AND STORAGE	Storage and transport conditions should not vary outside the following conditions: Relative Humidity 0% to 85% Ambient Temperature 14°F to 122°F (-10°C to +50°C) Remove batteries if storing longer than three (3) months.
WIRELESS REQUIREMENTS	Refer to the SR Scales App on the Google Play store for further information. Minimum requirements for an OS level of android device are listed at the google play store.

BASIC SYSTEM OPERATION

NOTE: Ensure that the scale is free and clear of any obstructions before operating.

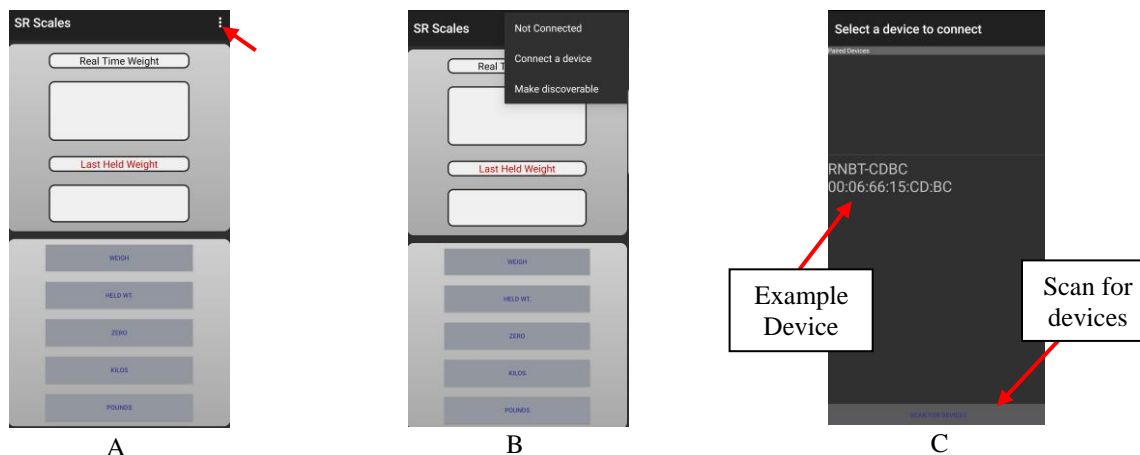


Figure 6: SR App Operation

- STEP 1:** Turn the scale on. There is a “ZERO/ON” button located at the end of one Transducer tube.
- STEP 2:** Scan for wireless devices on your Android device (or the tablet provided with the scale). Then locate the SRV714 wireless module in the list of devices. The wireless ID starts with “RNBT-” followed by 4 digits (also listed on the Calibration Form). Select the appropriate device and pair.
- STEP 3:** Open the SR Scales app (download free from the Google Play Store) on any supported Android device (or the tablet provided with the scale) to allow for remote wireless operation (Figure 6A).
- STEP 4:** Click on the three dots in the upper right corner of the SR App and select to “Connect a device” (Figure 6B).
- STEP 5:** Select the SRV714 wireless module from list of devices (Figure 6C). If the device is not listed, the display may have turned off or it may not have properly paired. Pressing the “Scan for devices” button on the bottom of the screen may also refresh the list.
- STEP 6:** When the device is connected, a weight value will show in the “Real Time Weight” area. Ensure that the Android Device is communicating with the scale by placing a load on scale and verifying the reading in “Real Time Weight” area of the SR Scales App.

NOTE: The display will automatically shut down after ten (10) minutes of non-use. If the scale becomes “Disconnected” from the Android device you must remove the animal from the weight platform and press the “ZERO/ON” button located at the end of one transducer tube. After doing so, you can reconnect your Android device. Assist the animal onto the scale platform and its weight will appear on the display.

It is recommended that the system be zeroed prior to each subject being weighed.

Continued next page

BASIC SYSTEM OPERATION (CON'T)

BUTTON FUNCTIONS

The “**WEIGH**” button will display weight in pounds or kilograms as selected.

The “**Held Wt**” button allows access to the last stable weight that was achieved.

The “**ZERO**” button is used to zero the system.

The “**POUNDS**” button allows weight data to be viewed in pounds, displayed in a resolution of 5 pound intervals.

The “**KILOS**” button allows weight data to be viewed in kilograms, displayed in a resolution of 2 kilogram intervals.

BATTERY REPLACEMENT

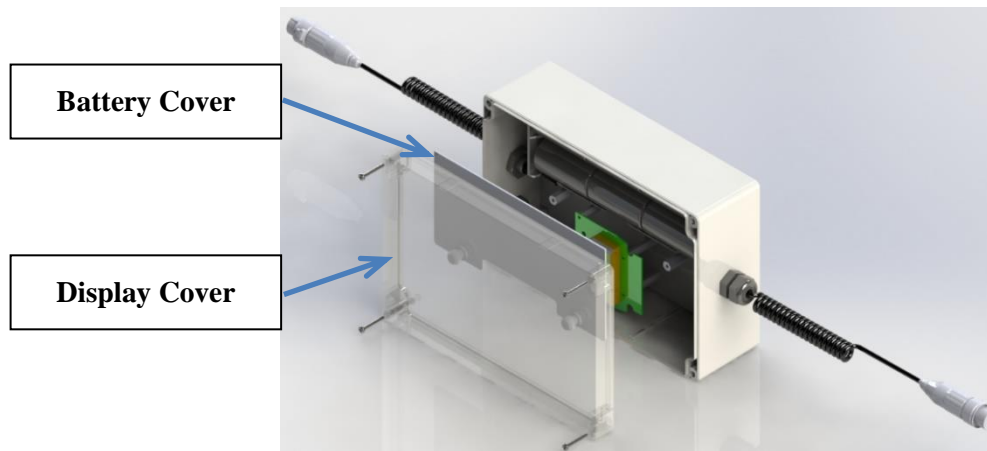


Figure 7: Display Assembly

When battery replacement is needed, an indicator will appear on the display.

STEP 1: Remove the center Top Panel (Figure 4) and disconnect the two (2) cables from the Transducers. Turn the Top Panel over and remove the four (4) Display Cover screws and the clear plastic cover from the Display housing. Unscrew the two thumb screws on the Battery Cover and remove the battery cover (Figure 7).

STEP 2: Remove and replace all six (6) “D” cell batteries. Replace the Battery Cover and tighten the two thumb screws.

STEP 3: Place the clear plastic cover on the housing and secure with the four (4) screws.

NOTE: Tighten screws only until rubber seal starts to compress.

STEP 4: Connect the two (2) cables from the Display housing to the Transducers.

STEP 5: Press the “**ZERO/ON**” button on end of Transducer tube and confirm display is working.

STEP 6: Set the Top Panel back in place by sliding it down over the Transducer assembly pins.

CALIBRATION



IMPORTANT



CALIBRATION CHECK Qualified service personnel only should perform this procedure. Load cells have no user serviceable components and should not be tampered with for any reason. Re-calibration is generally not required, but should be verified periodically to ensure accuracy. The recommendation for calibration check is at least once every 12 months, or as individual maintenance policy requires.

- STEP 1:** Select weights traceable to NIST, up to the Full Scale value (maximum capacity).
- STEP 2:** Remove the center Top Panel and disconnect the two (2) cables from the Transducers. Turn the Top Panel over and remove the four (4) screws and the clear Plastic Cover from the Display housing.
- STEP 3:** Remove the four (4) screws holding the Display housing to the Top Panel and remove housing. Run the two cables from the Display housing under the Transducer and reconnect to the Transducer connectors.
- STEP 4:** Slide the Top Panel back in place over the Transducer assembly pins. Ensure the Display housing is out from under the scale assembly.
- STEP 5:** Press the calibration button “S2” (Figure 8). The display will read “CAL”.
- STEP 6:** Press button “S4” to scroll through menu options until “FULL” is displayed. Press the “S1” button to select.
- STEP 7:** Set the “FULL” value to the selected weight from Step 1. Use the “S1” button to select digit positions and use button “S4” to change the value.
- STEP 8:** When finished, the display will read “SAVE”. Press the “S1” button to save, or press button “S4” then “S1” to “QUIT”.
- STEP 9:** Press “S4” to scroll to the menu option “2 PT” and press the “S1” button.

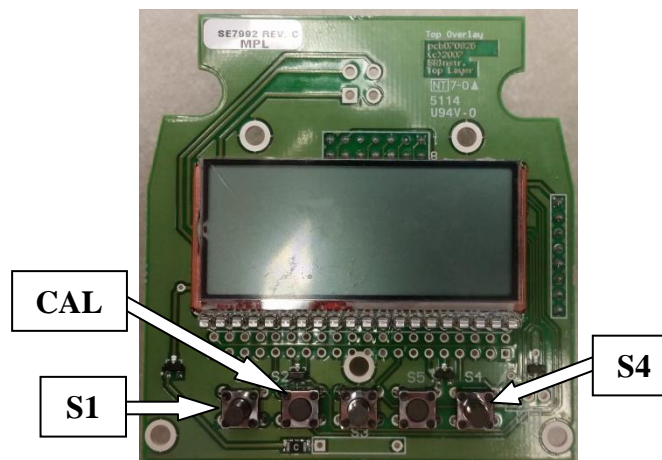


Figure 8: Calibration Buttons

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CALIBRATION (CON'T)

STEP 10: Ensure nothing is in contact with the platform then press the “S1” button when the display reads “ZERO”.

STEP 11: When the display reads “FULL”, place the weight from Step 1 on the platform and press the “S1” button.

STEP 12: Press the “S1” button once more to save. To exit without saving, press “S4” to select “QUIT”, then press the “S1” button.

STEP 13: When finished making adjustments, remove all weight from the scale.

STEP 14: Remove the center Top Plate, disconnect the two cables to the Transducers. Re-attach the Display to the platform and securely tighten screws. Re-attach plastic cover to Display.

NOTE: Tighten screws only until rubber seal starts to compress.

STEP 15: Connect the two Display cables to Transducers. Position Top Panel and slide back in place over the Transducer assembly pins.

STEP 16: Press the “S4” button to zero the platform. When the display indicates “0.0”, place the calibrated weight on the scale again and check against the weight displayed (Figure 9). If the weight is not correct, recalibrate. (If calibration cannot be accomplished, call the Service Department.).

Calibration Chart (+/- 1%)		
Low Limit	Applied Load	High Limit
0	0	0
990	1000	1010
2970	3000	3030
5940	6000	6060
8910	9000	9090
14850	15000	15150

Figure 9: Calibration Chart

CAUTION

The integrated circuits and semiconductors on the printed circuit boards may be damaged by electrostatic discharge (ESD). Be sure to use proper handling precautions at all times.

TROUBLESHOOTING

SYMPTOM	REASON/CORRECTIVE ACTION
Weight reading is much lower than expected.	Check that the platform is clean underneath, stand on each of the four corners to see if one corner is not weighing correctly.
For additional information or assistance, telephone our Service Hotline: 1-800-654-6360 or e-mail: sri@srinstruments.com	

WARRANTY

TWO (2) YEAR LIMITED WARRANTY

Each **SR** Scales® system is manufactured with high quality components. SR Instruments, Inc. warrants that all new equipment will be free from defects in material or workmanship, under normal use and service, for a period of two (2) years from the date of purchase by the original purchaser. Normal wear and tear, injury by natural forces, user neglect, and purposeful destruction are not covered by this warranty. Warranty service must be performed by the factory or an authorized repair station. Service provided on equipment returned to the factory or authorized repair station includes labor to replace defective parts. Goods returned must be shipped with transportation and/or broker charges prepaid. SR Instruments, Inc.'s obligation is limited to replacement of parts that have been so returned and are disclosed to SR Instruments, Inc.'s satisfaction to be defective. The provisions of this warranty clause are in lieu of all other warranties, expressed or implied, and of all other obligations or liabilities on SR Instruments, Inc.'s part, and it neither assumes nor authorizes any other person to assume for SR Instruments, Inc. any other liabilities in connection with the sale of said articles. In no event shall SR Instruments, Inc. be liable for any subsequent or special damages. Any misuse, improper installation, or tampering, shall void this warranty.

DAMAGED SHIPMENTS

Title passes to purchaser upon delivery to Transportation Company. Purchaser should file any claims for shortage or damage with the delivery carrier and should refuse any shipment that has obvious external damage.

RETURN POLICY

All products being returned to SR Instruments, Inc. require a Return Goods Authorization number (RGA). To receive an RGA, call our Customer Service at 716-693-5977 ext 103 or toll-free in the USA and Canada at 800-654-6360 ext 103.

When inquiry is made, please supply model and serial numbers, purchase order and reason for return.

Generally, deleted, damaged, and outdated merchandise will not be accepted for credit. A minimum restocking charge of 15% will be assessed on return of current merchandise unless scale is returned because of SR error.

No returns will be accepted after 30 days.

All returns are to be shipped FREIGHT PREPAID to: SR Instruments, Inc., 600 Young Street, Tonawanda, NY 14150.

RESTOCKING FEE

- **15% fee** will be assessed on return of current merchandise
- **No fees** will be charged if the scale is returned because of an error on the part of SR Instruments, Inc.
- **No returns** accepted after 30 days



**Precision & Technology in
Perfect Balance®**