MARSHALLTOWN
The Premier Line

# R2TECH
## LASER CONTROLLED SCREED

Marshalltown, IA • Phone 800-888-0127 / 641-753-0127 • Fax 800-477-6341 / 641-753-6341 • www.MARSHALLTOWN.com

Dear Valued Customer,

Marshalltown Company would like to congratulate you on your purchase of the R2 Tech Laser Controlled Vibrating Screed. From this point forward you will look at pouring concrete from a new perspective. The R2 Tech Laser Controlled Screed is going to save you **Materials**, **Manpower**, and **Money!**

The patented R2 Tech Laser Controlled Screed is the simplest and easiest to use laser controlled vibrating screed on the market. Operating on reliable DC power the R2 Tech eliminates exposure to materials such as gasoline fumes and dealing with awkward power cords. Not only will you have to deal with fewer materials but you'll also save on manpower using the R2 Tech.

Finishing slabs with the R2 Tech can be done in almost half of the time it would take using a hand or gas powered screed. No need to set grade pins or wet pads. Just set the receiver to the correct height and let the screed do the work.

Saving manpower and materials really means you're saving money, and in turn creating greater profits!

Your first step toward saving materials, manpower, and money is learning how to correctly assemble and operate the R2 Tech. Make sure to read the manual carefully and practice setting up the R2 Tech Laser Controlled Screed off site, becoming familiar with all of the components.

Once again thank you for your purchase of the R2 Tech Laser Controlled Screed. Make sure to fill out and send in the warranty card located in the back of the manual. We are confident the R2 Tech Laser Controlled Screed will be a purchase you will not regret. For over 100 years Marshalltown has been dedicated to setting the Standard of Quality in construction tools.

Best Wishes,

Marshalltown Company

# Table of Content



**Use the following spaces to record the model and serial numbers of your unit**

**Model Number** _____

**Serial Number**_____

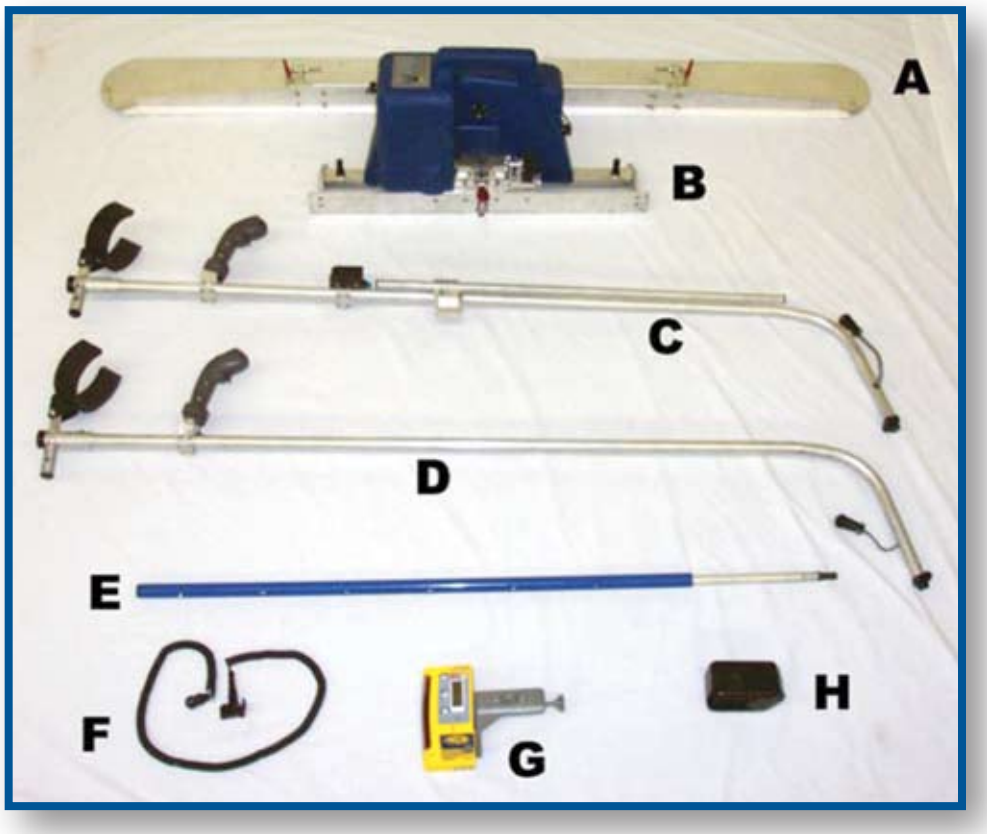
**Date of Delivery**_____

**Dealer**_____

# The R2Tech Screed Consists of the Following Parts

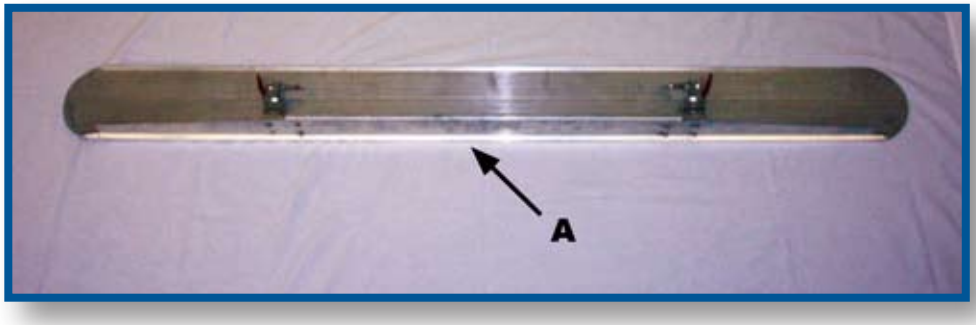
**A** Tech Blade
**B** Power Unit
**C** Left Handle (Battery Connection & Vibration Control)
**D** Right Handle (Leveling Control)
**E** Receiver Post
**F** Receiver Cord
**G** Laser Receiver
**H** Battery Pack

**Please check to ensure that you have all parts before beginning assembly.**

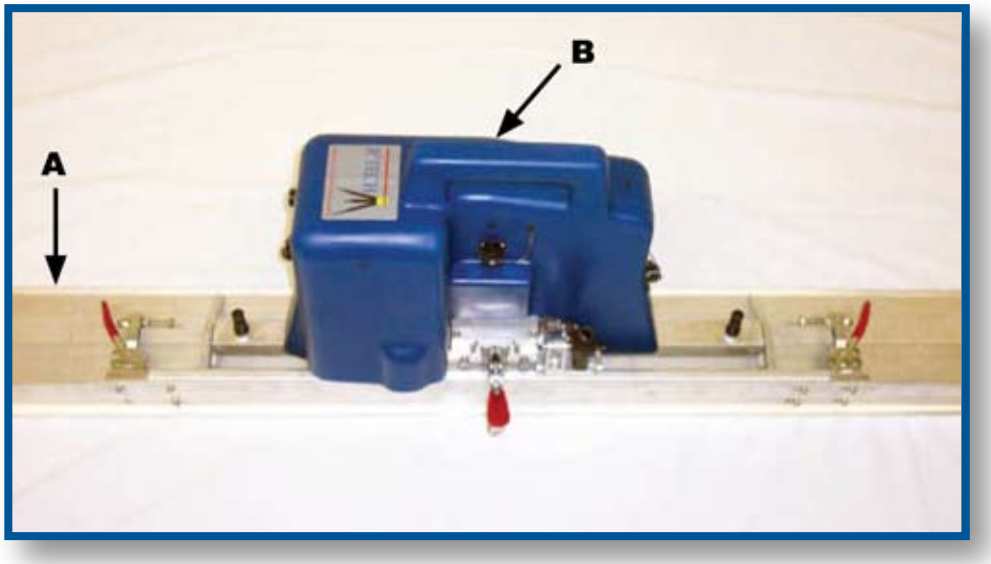


## Assembly Instructions

**Step 1:** Lay the desired R2Tech Screed Blade **(A)** flat on the ground with the cutting edge toward you. The two lever latches will be on the side away from you. Fully open the two lever latches.

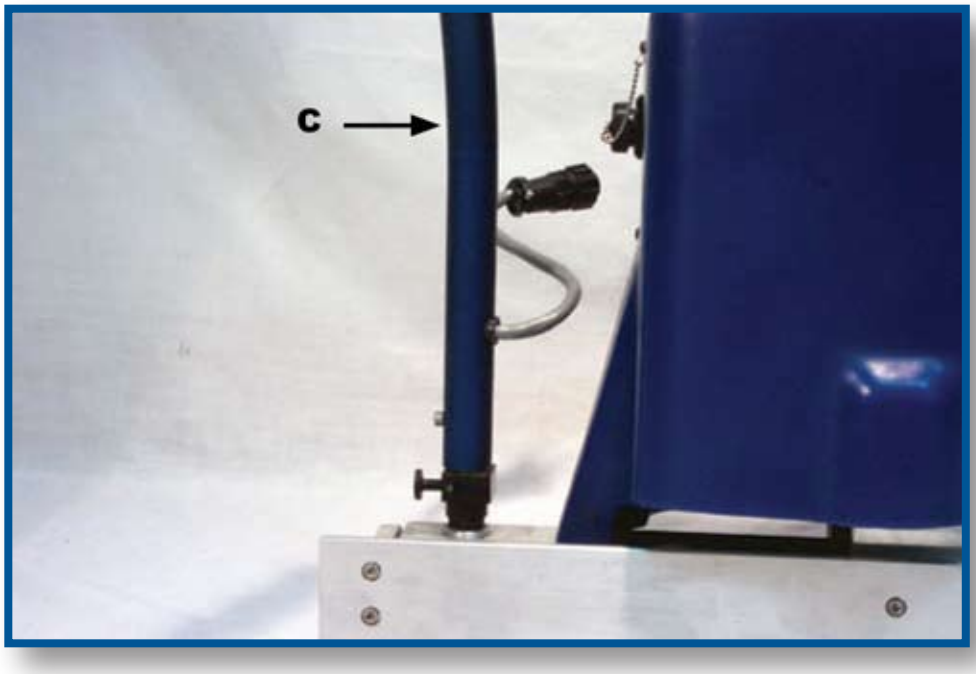



**Step 2:** Fully open the lever latch on the center of the Power Unit **(B)**. Holding onto the handle of the power unit cover, place the horizontal bar against the blade. Tilt the power unit until the upper lip of the blade bar goes under the upper lip of the blade. Let the power unit tilt back until it sits flat on the blade.




**Step 3:** Latch the lever latch on the power unit and the two lever latches on the blade.

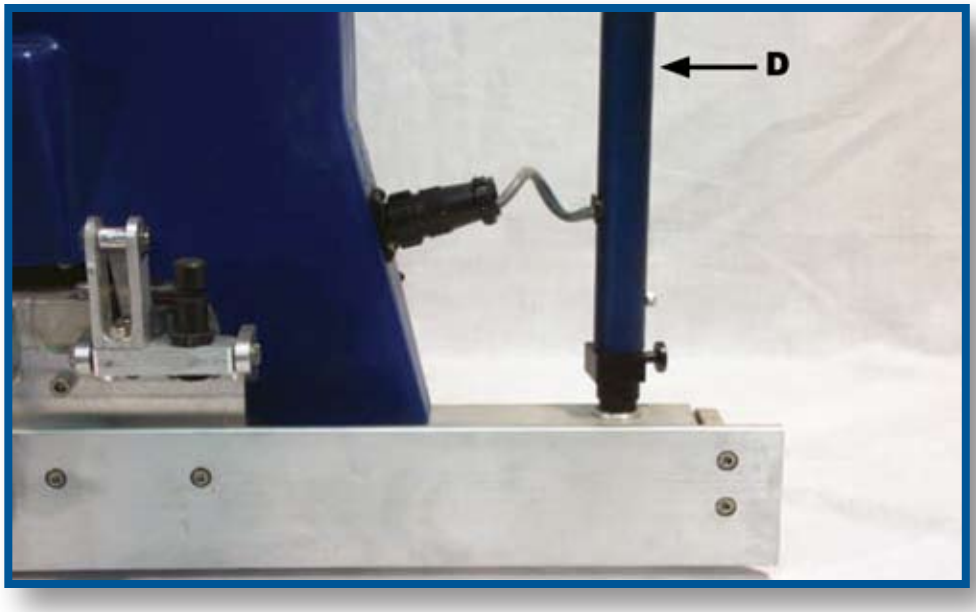
**Step 4:** Place the female socket quick coupler on the lower end of the left handle **(C)** (the handle with the battery connector) down onto the left handle attachment male plug. This black male plug is located to the left of the power unit cover. Squeeze the release on the female quick coupler to allow the socket to slide down and securely latch onto the male plug.



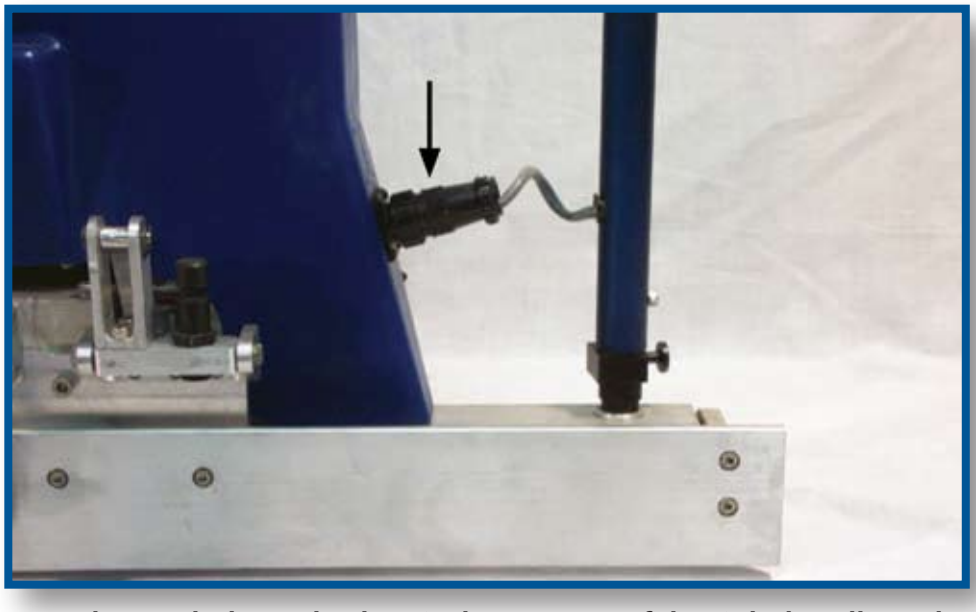

**Step 5:** Swivel the handle kickstand down to the vertical position and let it rest on the floor.

**Step 6:** Securely attach the male electrical connector of the left handle to the female connector on the left end of the power unit cover.

**NOTE:** Line up electrical ends. **DO NOT** force adapters together

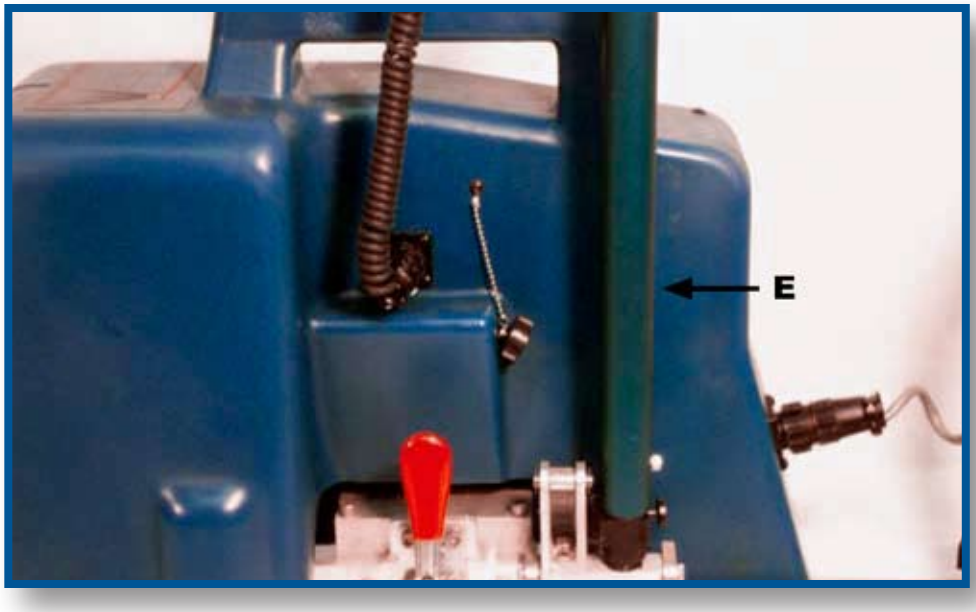



**Step 7:** Place the female socket quick coupler on the lower end of the right handle **(D)** down onto the right handle attachment male plug. This black male plug is located to the right of the power unit cover. Squeeze the release on the female quick couplet to allow the socket to slide down and securely latch onto the male plug.



**Step 8:** Securely attach the male electrical connector of the right handle to the female connector on the right end of the power unit cover.

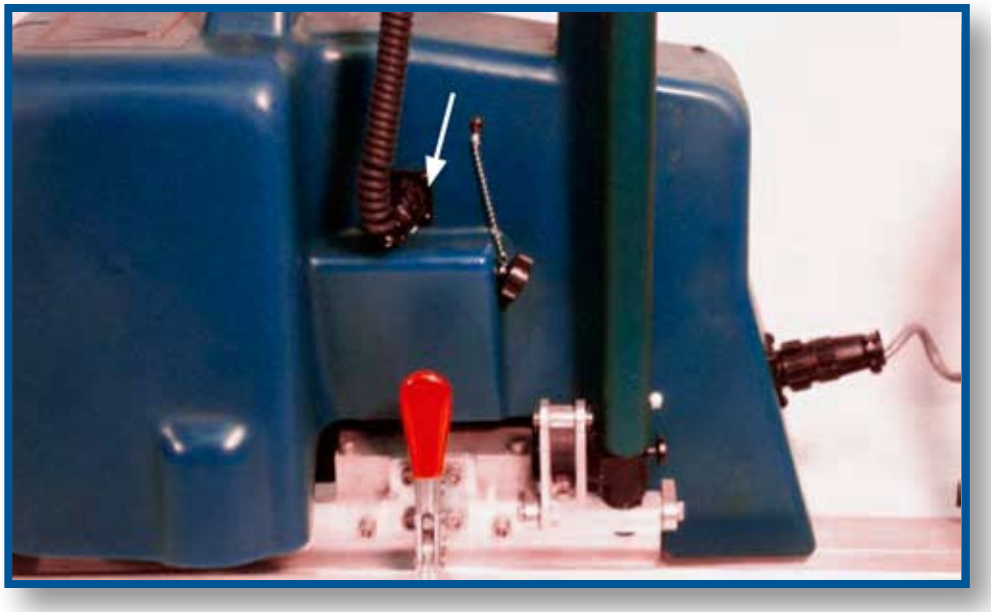
**NOTE:** Line up electrical ends. **DO NOT** force adapters together




**Step 9:** Slide the female socket on the lower end of the receiver post **(E)** down onto the receiver post male plug located to the right rear side of the power unit cover. Squeeze the release button on the quick coupler to allow the male plug to slide in and securely latch into the female socket.

**NOTE:** Line up electrical ends. **DO NOT** force adapters together


**Step 10:** Securely attach the laser receiver **(G)** to the receiver post **(E)**. Clip the receiver cord **(F)** to the bottom of the laser receiver **(G)**.



**Step 1 1:** Attach the round male plug end on the other end of the receiver cord **(F)** to the female connector in the upper center of the back of the power unit cover **(B)**.


**Step 12:** Slide the battery **(H)** onto the battery connection on the left handle. The unit will power up and automatically center itself out.

## The unit is now ready for setup!

## Set-Up Procedures

**The screed is now assembled & ready to set to the desired grade height.**

**Step 1:** Set up, turn on, and level the laser transmitter. It is IMPORTANT to set the laser transmitter in a position that gives a clear, unobstructed shot to the laser receiver when operating the screed. Optimally the transmitter should be set to the left while working the screed away from the transmitter location to improve reception. This will keep puddlers or rakers on the opposite side of the screed, out of the way of the laser beam. The R2Tech Laser Transmitter Wall Mount, is a good option for pouring basements or other areas that do not allow setting a tripod.

**Step 2:** Remove laser pole/receiver from unit. Turn on the receiver and make sure it is set in the fine mode. (Read the instruction manual in the receiver box to learn how to change between modes.)

**Step 3:** Locate the desired grade height.

**Step 4:** With the laser pole in hand, flip down the grade offset leg from the home position located at the bottom end of the pole and snap into place. The offset leg should extend past the receiver pole quick coupler assembly.

**Step 5:** Set the pole on the desired grade benchmark and slide the receiver on the pole until the green light on the receiver is flashing. Once the green light is flashing, firmly tighten the receiver as not to slide on the laser pole. Make sure the light is still green after tightening.

**Step 6:** Flip the grade offset leg back to the home position and snap into place on the laser pole.

**Step 7:** Install the receiver pole in the black receiver yoke. Push the button on the bottom of the receiver pole and firmly attach the pole to the screed power unit. Make sure you have the pole snapped completely in place and the button releases (otherwise the grade setting may be off).

**Step 8:** Now attach the receiver cord to the receiver and attach the other end of the receiver cord to the power unit. You may want to wrap the receiver cord around the pole so that it does not drag in the concrete.

## Your Screed is now ready for operation.

# Operating Instructions

## Concrete Placement

Concrete placement is very IMPORTANT. Place the concrete ½" to ¾" above the desired grade height. The more accurately the concrete is placed the less work is required, and it will be easier to pour an accurate floor.

## How It Works

The left handle grip trigger activates the vibration. The unit will vibrate as long as the trigger is held in. Use the rocker switch on the left handle to increase or decrease the vibration to the desired level.

**Note:** When power has been interrupted (each time a battery is replaced or removed from the battery terminal) the vibration level defaults to the slowest speed and the blade automatically returns to the "home" position.

The right handle grip trigger activates the automatic laser leveling mode. You must keep the right trigger squeezed while screeding, for the unit to continuously operate in automatic mode. You may manually adjust the blade angle by using the rocker switch on the right handle. This must be done while NOT squeezing the right trigger.

## Operation

Set the assembled and elevation adjusted R2Tech Screed into the wet concrete at the beginning point of the pour.

Squeeze the right handle grip trigger to activate the automatic leveling mode.

Squeeze the left handle grip trigger to activate the vibration. Use the left rocker switch to adjust the vibration to the desired level. Start pulling the unit at a slow pace to give the unit time to adjust to the preset elevation. Once the receiver is flashing green, continue to pull the unit through the concrete at a comfortable pace.

Pull the R2Tech Screed back through the concrete at a steady pace. There should ideally be ½" to 1" of concrete "rolling" ahead of the leading edge of the blade at all times. Avoid excessive concrete buildup ahead of the leading edge of the blade. Excessive concrete buildups will overly fatigue the operator and possibly flow over the blade adversely affecting accuracy. Also, keep the concrete from building up on the ends of the blade. This could cause a weight imbalance, causing the blade to tilt from side to side during operation.

The "puddlers" need to keep the concrete close to level from side to side, and fill in the operator's tracks. The operator should constantly watch the receiver indicator to make sure it is running in the green. Be sure to watch the blade angle so that it is not maxing out at the upper or lower limits during operation.

The operator needs to maintain a steady pace and steady angle of pull while pulling the unit through the concrete. Try and keep the receiver pole at a constant angle, which is the same angle as it was during the setup procedure. This is VERY IMPORTANT. Do not try and influence the blade angle

as with other wet screeds. All you need to do is consistently pull the unit straight across the concrete and the R2Tech Screed will automatically regulate the blade height.

It is **very important** to be sure that the receiver is receiving an unobstructed signal from the transmitter at all times.

The average battery life at a 5 inch slump concrete is approximately 1200-1600 square feet. You will be made aware of the end of the battery cycle by a rapid decline in the vibration.

## Trouble Shooting

R2Tech Screed is light weight

| | |
|---|---|
| No laser receiver reception | Make sure that the laser transmitter is on and sending a signal. Check batteries. |
| | Make sure the laser receiver is on. Check batteries. |
| | Make sure the receiver is within the operating range of the laser. |
| | Check area for obstacles that are interrupting transmission. |
| Erratic receiver indication and blade actuation | Make sure the laser beam is not bouncing off highly reflective surfaces (building and/or vehicle windows). |
| | Make sure there are no strobe lights or welding flashes from nearby equipment. |
| | Make sure the receiver is not near a radar or high-frequency radio stations. |
| | Re-do the set-up procedure. |
| Unit will automatically raise the blade, but not enough to get to preset grade | Concrete level is too low. Rake more concrete under blade. |
| | Make sure the receiver pole is constantly remaining at the same angle as in the set up procedure. |
| | The unit may be operating at the maximum range of travel which is not enough. The unit may have been set up with the handles too low. You need to raise the handles up and reset the whole unit. |
| Machine will not operate in automatic laser mode | Check the receiver cord and receiver connection. |
| | Check the receiver cord and power unit connection. |
| | Check the right handle and power unit connection. |
| Power loss, no vibration, no actuation | Make sure battery is properly seated on battery terminal. |
| | Change battery. |
| | Check fuse in the battery block. |
| | Check left handle wire connection to power unit. |
| | Remove cover, check wire connection to control box. Return to nearest dealer for assistance. |

## Safety Precautions

**Prolonged use of the R2Tech Screed (or other machines) exposing the operator to vibrations may produce whitefinger disease (Raynaud's phenomenon) or carpal tunnel syndrome.**

**These conditions reduce the hand's ability to feel and regulate temperature, produce numbness, and burning sensations and may cause nerve and circulation damage and tissue necrosis.**

**All factors which contribute to whitefinger disease are not known, but cold weather, smoking and diseases or physical conditions that affect blood vessels and blood transport, as well as high vibration levels and long periods of exposure to vibration are mentioned as factors in the development of whitefinger disease. In order to reduce the risk of whitefinger disease and carpal tunnel syndrome, please note the following:**

- Wear gloves and keep your hands warm.
- Maintain a firm grip at all times, but do not squeeze the handles with constant, excessive pressures and take frequent breaks.
- The majority of machine contact should be confined to the handles and specifically the handle grips.
- Screed noise may damage your hearing. Wear sound barriers (ear plugs or ear mufflers) to protect your hearing. Continual and regular users should have their hearing checked regularly.
- Wear an approved safety hard hat to reduce the risk of injury to your head when there is danger of head injuries.
- Protect your hands with gloves when handling the R2Tech Screed.
- Never modify a R2Tech Screed in any way. Only use authorized attachments supplied by Marshalltown Company, or expressly approved by Marshalltown Company, for use with the specific R2Tech Screed models. Although certain unauthorized attachments are with the R2Tech Screed, their use may, in fact, be extremely dangerous.
- Keep work area clean and well lit. Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.
- Disconnect the battery from the screed before making any adjustments, changing accessories, or storing the screed.
- Maintain the screed, check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the tool's operation. If damaged, have the tool repaired before operation.
- Ensure the switch is in the off position before inserting a battery pack. Inserting the battery pack into a screed which has the switch turned on can cause serious accidents.
- Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk when used with another type of battery pack.
- Use a screed only with specifically designated battery packs.
- When battery pack is not in use, keep it away from other metal objects like paper clips, coins, keys, nails, screws, or other small metal objects that can make connection from one terminal to another.

- Under abusive conditions, liquids may be ejected from the battery, avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical attention.
- Have your R2Tech Screed serviced by a qualified repair person using only identical replacement parts.

R2Tech Screed is durable

## Battery Information

**SPECIAL NOTE: New battery packs are not fully charged.**
**Charge your battery pack before using it for the first time and follow the charging instructions in the charger manual.**

# GENERAL SAFETY RULES- WARNING!

**Read and save instructions for future reference.**

**This instruction sheet contains important safety and operating instructions for battery packs. Before using the battery pack, read this instruction sheet as well as any labels on the charger and battery pack.**

1. **CAUTION! TO REDUCE THE RISK OF INJURY,** charge battery packs only in the supplied charger. Other types of batteries may explode, causing personal injury or damage. Please call your R2Tech Screed dealer for appropriate replacement batteries and chargers.
2. **DO NOT USE BATTERY PACK** if has received a sharp blow, been dropped or damaged in any way. Do not disassemble. Incorrect reassembly may result in the risk of electric shock, fire, or exposure to battery fluids. If it is damaged, take it to your R2Tech Screed dealer.
3. **DO NOT BURN, MUTILATE, OR DISASSEMBLE BATTERY PACK**. The battery pack can explode in a fire. Mutilation may expose battery fluids, causing burns.
4. **BATTERY FLUIDS CAUSE SERIOUS CHEMICAL BURNS**. Never allow contact with skin or eyes. If a damaged battery pack leaks battery fluid, use rubber or neoprene gloves to dispose of it. If skin is exposed to battery fluids, wash with soap and water and rinse with vinegar. Remove and dispose of contaminated clothing. If eyes are affected, immediately flush with water for 15 minutes and seek medical attention.
5. **DO NOT SHORT CIRCUIT**. Battery packs will short circuit if a metal object makes a connection between the positive and negative contacts on the battery pack. Do not place a battery pack near anything that may cause a short circuit, such as coins or keys in your pocket. A short circuited battery pack may cause fire and personal injury.
6. **TO REDUCE THE RISK OF INJURY**, read your R2Tech Screed and charger manuals in their entirety for additional instructions and safety information.

## Charging Battery Packs

**The battery pack will feel warm immediately after use. Allow it to cool before inserting in into the charger since the charging cycle will not begin if the battery pack is still warm.**

**NOTE: For specific charging instructions, read the operator's manual packaged with your charger.**

## Maintaining Battery Packs

**A battery pack that is stored for six months without being used will discharge itself. Batteries discharge at a rate of about 1% per day. Charge the battery every six months even if it is unused to maximize battery life. Do not leave battery on unit unattended as this may discharge the battery to a point where it will no longer be able to recharge. Use the battery pack only until it no longer performs with power and torque needed for your application.**

**NOTE: Never completely discharge the battery pack.**

**Store your battery pack in a cool, dry place, Do not store it where the temperature may exceed 120° F (50°) C such as in a vehicle or metal building during the summer. High temperatures will over heat the battery pack, reducing the battery life. If it is stored for several months, the battery pack will gradually lose its charge. One to three cycles of charging and discharging through normal use will restore the capacity of the battery pack. During the life of the battery pack, the operating time between charges becomes shorter, IF the operating time becomes extremely short after a proper charge, the usable life of the battery pack has been reached and it should be replaced.**

### Disposing of Nickel—Cadmium Battery Packs

**Nickel—Cadmium battery packs are recyclable. Under various state and local laws, it may be illegal to dispose of the battery in the municipal waste stream. Return the battery to the nearest R2Tech Screed dealer or dispose of the battery pack according to federal, state and local regulations.**

## WARNING!

**To reduce the risk of explosion, never burn a battery pack even if it is damaged, dead or completely discharged.**

## Limited Warranty

**This limited warranty is exclusive with no other guarantees or warranties expressed or implied.**

**Unless otherwise provided in writing and approved by Marshalltown Company, the limited warranty is for 90 days from the date of invoice all defects and workmanship or materials manufactured by Marshalltown Company.**

**Owner hereby acknowledges and understands that Marshalltown Company makes no warranties in regard to the products sold hereunder, except that such products shall conform to the manufacturers' specifications in effect at the time of shipment. This warranty is expressly in lieu of any other express or implied of any purpose and of any other obligation on the part of Marshalltown Company. No warranty, expressed or implied, concerning the products will be made by the owner except with the express prior written authorization of Marshalltown Company. Marshalltown Company shall not be liable for any representation by the dealer without such prior authorization.**

**Hardware purchased by Marshalltown Company and used for manufacturing the R2Tech Screed shall be covered by any warranty that may be applicable to such hardware and shall be warranted to Marshalltown Company by the original manufacture. Any products thought to be defective shall be returned to Marshalltown Company and approved by Marshalltown Company. If a product is approved and returned and is found to be defective, Marshalltown Company shall repair or replace the defective part at the discretion of Marshalltown Company. Marshalltown Company's maximum liability including direct damages shall not exceed the amount of the original purchase price of the defective part, Labor and service charges must be pre-approved by Marshalltown Company in order to be reimbursed under this warranty.**

### To Validate Warranty:

**Purchaser shall return the enclosed warranty registration card within 30 days of purchase.**

### Receiving & Handling

**Before unpacking equipment, check carton for any damage that my have occurred during shipment. File any claims for loss or damage with the delivering carrier, Assistance for filing or settling claims may be obtained from the distributor and/or equipment manufacturers' transportation department. When requesting information about this equipment, always provide the model and serial number.**

**Marshalltown Company**
**104 S 8th Ave**
**Marshalltown, Iowa 50158**
**1.800.888.0127**
**www.MARSHALLTOWN.com**