

Seasonal Maintenance & Winter Power Optimization

Protect Your Investment, Ensure Data Reliability, and Prevent Winter Downtime

Regular maintenance is the most effective way to identify and resolve small issues before they become expensive field repairs. Use this comprehensive checklist to prepare your telemetry equipment for the demanding fall and winter months.

FALL PHYSICAL EQUIPMENT CHECKLIST

- **Mounting Hardware:** Tighten all loose screws and bolts. Replace any hardware showing rust or corrosion.
- **Equipment Enclosures:** Inspect for dents or cracks. Ensure all covers are secure and cap any unused port or expansion holes to seal out moisture.
- **Gaskets:** Verify enclosure gaskets are fully seated in their grooves with no visible gaps to prevent internal moisture buildup.
- **Antennas:** Confirm all antennas are securely attached and do not spin or wobble at the base. Check plastic covers for cracks or weather damage.
- **Cables & Connectors:** Check for cuts, abrasions, or exposed wiring. Secure loose cabling to structures using metal or flexible conduit to protect against farm equipment and pests.
- **Rain Gauges:** Clean the collector funnel thoroughly to remove dirt, leaves, spider webs, and debris that block winter drainage.
- **Solar Panels:** Clean off dust, pollen, and debris using plain water or mild dish soap with a soft cloth (never use solvents or abrasive pads). Ensure panels are free from low-horizon winter shading. On the RS130, a heavily weathered or discolored enclosure limits sunlight to the panel. Replace if necessary.

WINTER POWER & SETTINGS OPTIMIZATION

- **Extend Sync Rates:** Change device transmission frequencies from short defaults (e.g., 10–15 minutes) to 1 or 2 hours to drastically cut power draw.
- **Activate Sleep Modes:** Ensure your equipment has the latest firmware updates to enable automated sleep cycles during periods of inactivity.
- **Deactivate High-Power Sensors:** Seasonally turn off non-critical, power-heavy accessories like field cameras when they are not actively required.
- **Minimize SMS Polling:** Turn off or reduce the frequency of automated SMS checking features unless they are explicitly required for instant field control.
- **Consider Hardware Upgrades:** For sites with chronic low-light issues, upgrade to larger solar panels, high-capacity battery kits, or power-friendly attachment boards.

Need help changing settings? Use RanchChat AI by going to the Unit Config tab in myRanch, select a unit, then click “Chat about this unit” and ask “winter recommendations”.

PROACTIVE MONITORING BEST PRACTICES

Health Index Alerts

Do not ignore automated warnings. Address flagged issues immediately before units go completely offline.

Storm Resilience

Battery levels may dip during a 2-to-3-day storm. They typically recover automatically once the weather clears, but optimized settings prevent total field failure.

Spring Reversal

Remember to change these power-saving settings back to high-frequency defaults in the spring when solar energy is abundant.