

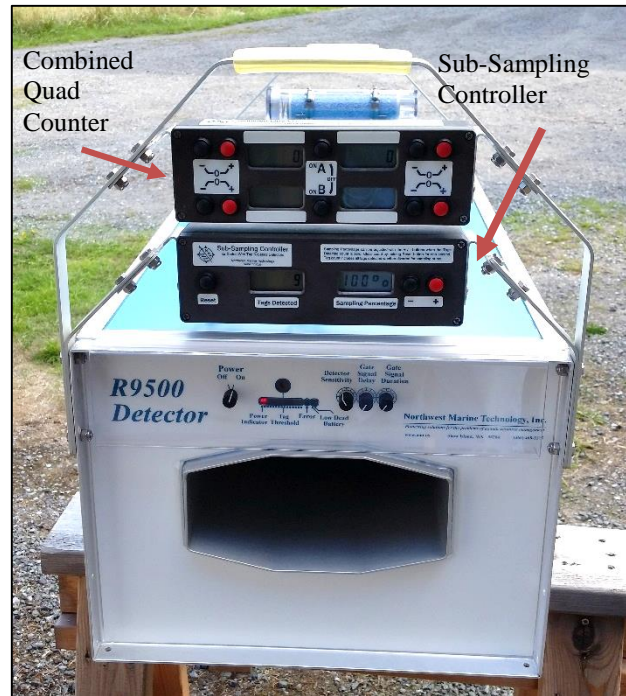


## Combined Quad Counter

### For use with an R-Series Detector and Diverter Gate

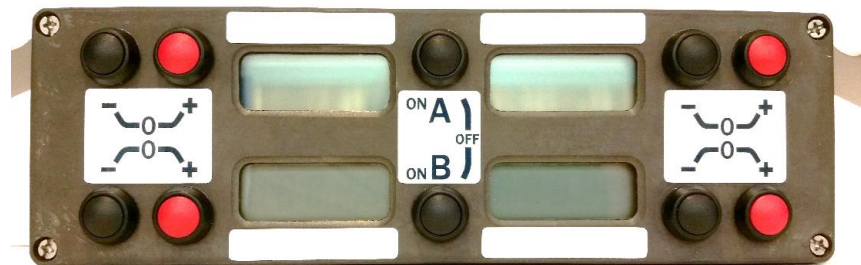
Tunnel Detectors are used for sorting fish with and without Coded Wire Tags at centralized fish collection locations such as hatcheries and processing plants. An optional Diverter Gate can be attached to the Detector. The Gate diverts tagged fish to one side and untagged fish to the other as they exit the tunnel. The Combined Quad Counter can be used with the Gate to tally fish that are tagged or untagged in two groups.

Mount the Combined Quad Counter on its bracket and the bracket onto the front handle of the Detector using the four bolts and nuts provided. Install the door switch probes in the doors of the Diverter Gate, and if so equipped, lock the probe in place with the spring. Connect the other end of this cable to the connector in the center of the back panel of the Counter. If you are using the A/B foot switch, plug it into the connector in the lower left corner of the back panel. If you are not using foot switches, leave the cap on that second connector to keep it clean. The Combined Quad Counter can be stored with its door-switches attached, so long as the power is turned off. The gate switches cause a temporarily higher battery drain when activated. If a gate switch stays steadily active (door open or probe out of position) for 10 minutes, power will go off to save battery life.



## Operation

To turn the Counter on, press either the A or B button in the center of the unit. To turn it off, press both of these buttons simultaneously. Any accumulated counts will be preserved while the unit is off, so long as battery power remains.



The left displays of each pair count fish exiting through the left door of the Gate. The right-hand display of each pair counts exits from the right door. If your fish are exiting to the side opposite of the display, switch the probes in the Gate doors. Each display has a pair of buttons labelled + and – that may be used



to make small manual corrections to the accumulated counts. Pressing both the + and – buttons of a pair simultaneously for a full second will clear the associated display to zero. Continuing to hold down a pair of + and - buttons after the counter has cleared may cause the counter window to show either a test pattern or a display of numerical information used by NMT during manufacture and servicing. If this occurs, restore the normal display by pressing any button, or by counting a gate event.

The two center buttons labelled A and B are used to select the upper pair (A) or lower pair (B) as the active displays. The optional foot switch can be used to select which counter pair is active. Exiting fish will only be tallied on the pair that you have selected. The two displays that are not active will be blank, but the counters that they serve will retain the value last shown, and that same value will be shown again the next time you select that pair.

## Batteries

The Combined Quad Counter is powered by an internal lithium battery, which has an expected lifetime of 5 or more years. When the battery is nearly exhausted, a “lobat” message will appear in the two inactive displays. The unit will continue to operate for a short time before the battery is completely exhausted. A replacement CR2/3A lithium battery can be obtained from NMT, or the more common CR123 lithium camera battery can be used instead, but it may have a shorter lifetime.

Before you replace the battery, record any counts you need from the display. Loosen the four screws in the corners of the front panel and pull the panel forward away from the case. The battery is in a black plastic holder on the circuit board behind the right hand side of the front panel. Gently pry up one end of the old battery and then pull it out. Replace it with the new battery oriented in the same direction as the old one, return the panel to its original position, making certain the o-ring is in its groove, and tighten the screws just snug. The old lithium battery must be disposed of according to local regulations, ordinarily as hazardous waste.

## Related Documentation

The R-Series Instruction Manual is available on our website and contains detailed information about using these detectors.

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