

Technical Note**Truecharge 20**

512-0052-01-01 Rev 1

**Equalizing Batteries with
Truecharge 20****Introduction**

Equalize mode is a controlled overcharge used periodically (for example, once each month) to help dissolve any recently solidified sulfate deposits on the battery plates. Older sulfation deposits typically harden onto the plates and cannot dissolve into the electrolyte. The Equalize feature is only available on the TC20 or TC40. Equalize charge is manually initiated by the pressing of a small recessed button just below the “Charging” indicator. See below for procedure (also see Truecharge Owner’s Guide).

Equalizing Batteries

The following is the usual sequence of events when a TC20 is used to equalize a flooded type 27 series battery in 50–80 °F ambient temperatures, no other charge sources, no other loads are connected:

1. Fill the battery cell’s electrolyte levels to the “full” mark in each cell. Set the charger to Warm and Flooded switch settings. Connect the charger DC lines to battery. At your option you may attach a voltmeter to the battery terminals for monitoring. Connect charger to AC power. Charger lights should flash during a self test sequence for 15 seconds then go into absorption mode with orange “Charging” light ON. Charge current should show a decreasing charge current as the battery is fully charged. As the charger reduces the charge current it will raise the battery voltage to approx. 14.4 V (Flooded/Warm settings). When the charge current lights are all out the unit will go into float mode within approximately 1 hour.
2. Press Equalize button for approximately 5 seconds until both the Ready and Charging lights come on simultaneously, and steady (not flashing). The charger allows the battery voltage to drop (no charge) for approximately 30–60 seconds, then raises battery voltage to 14.4 V, that is, normal absorption mode, charger current shows no lights on (<2 A) since the battery was almost fully charged already.
3. This initial absorption voltage continues for approximately 15 minutes after charge current drops below 2–3 A, and then the TC will begin charging at 10 A, raising the battery voltage to 15.5 V. The charge current LEDs are NOT on, but you will measure 10 A with an external current meter.
4. This continues until the Equalize button is pressed again and the unit goes into Float mode/Ready light ON and all charge current LEDs are off, i.e. < 2 A.

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Part number: 512-0052-01-01 Rev 1

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