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06 March 2000

SERVICE BULLETIN, RF80-K

When the RF80-K was introduced in 1992 the standard charge and discharge cutoff voltages for Nickel Cadmium and Lead Acid batteries were established based on the then current accepted standards. It is becoming apparent that some of these standards are changing, in particular for the discharge cutoff voltages for Lead Acid batteries. Christie Electric Corp. policy is to always follow the charge and discharge recommendations published by the battery manufacture (if available).

Paragraph 2.4.3 of the RF80-K Technical Manual (TD-668, Rev A) infers that any switch position may be calibrated to a non-standard value provided that it is clearly labeled with its new purpose. TD-668 also has a procedure to calibrate the RF80-K in the field. All that is needed is to replace the standard values with the desired non-standard values.

There are some concerns about voiding the current calibration and any warranties. The end user may recalibrate the RF80-K using a calibrated Digital VoltMeter (DVM) without voiding any warranties as long as the affected adjustments are clearly labeled. For a fee the user also has the option of sending the RF80-K, along with the required specifications, to an approved calibration lab, an authorized service center or to the factory for recalibration.

Since the primary concerns seem to be with the discharge cutoff, the procedure on the next page may be used to quickly recalibrate a discharge setting to a lower nonstandard value.

1. Remove the top cover from the RF80-K.
2. Identify and locate the Control PCA (P/N 121622-001). It's the large PCA in the center of the RF80-K.
3. Identify and locate the following pots on the Control PCA: R56 through R59, R96 through R98 and R117. As viewed from the front of the RF80-K these pots are along the left side of the top edge of the Control PCA.
4. Using the table below determine which pot will be used to recalibrate the discharge cutoff setting desired. The table also lists the standard voltage cutoffs as set by the factory.

Battery	Cells	Pot	Std Voltage
Ni-Cad	11	R56	10.5
Ni-Cad	19	R57	18.1
Ni-Cad	20	R58	19.0
Ni-Cad	22	R59	20.9
Lead Acid	3	R117	5.4
Lead Acid	6	R98	10.8
Lead Acid	12	R97	21.6
Lead Acid	14	R96	25.2

5. Obtain a known good battery of the chemistry and number of cells for the pot that is to be recalibrated.
6. Scrape off the insulating paint on the adjustment screw of the pot being recalibrated. Be especially mindful to clean out the slot of the adjustment screw.
7. To reset a discharge cutoff point:
   a) Connect the battery to the RF80-K.
   b) Turn on the RF80-K AC power and, if necessary, charge the battery to a voltage level above the desired discharge voltage.
   c) Turn the pot 1 full turn counter clockwise. This will reduce the cutoff approximately 2 to 3 volts.
   d) Initiate a discharge function with enough time to discharge the battery to the desired voltage. NOTE: the discharge cycle switch must be set to "short."
   e) Attach a CALIBRATED DMM to the battery to monitor its actual voltage.
   f) When the DMM indicates the desired voltage SLOWLY turn the pot clockwise until the discharge function terminates.
8. Turn off the RF80-K AC power, disconnect the battery and install the RF80-K's top cover.
9. Mark the RF80-K indicating the new discharge cutoff point for the given cell setting.