

Aircraft Battery Charger / Analyzer



Features

- Nickel Cadmium Batteries
- Multistep Programmable
- Stores 100 Programs
- Exclusive DigiFLEX® Analysis
- Constant Potential Charging
- Optional PC Interface
- Lead Acid Batteries
- Automatic Operation
- Unique ReFLEX® Charging
- Constant Current Charging
- Up to 60 Amps Discharge
- Touch Screen Display

RF80-M Equipment Capabilities

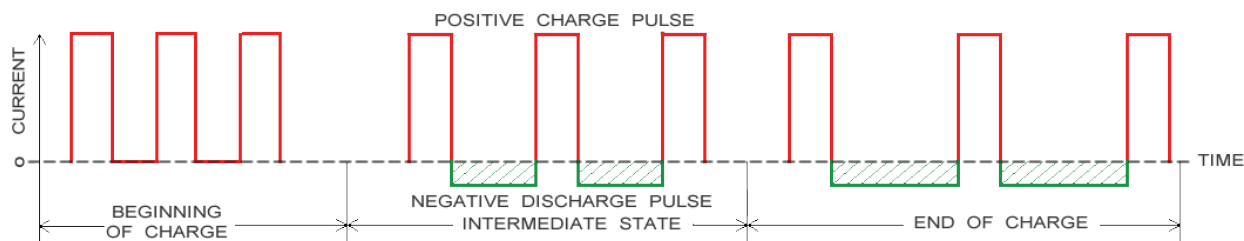
Programming

The RF80-M is the latest evolution of the well known Christie ReFLEX® charger. The Christie RF80-M features a touch screen format which is easily programmable. The RF80-M will store up to 100 battery processing programs; each program may have up to 16 functions/steps. Program functions include: charge, discharge, and wait steps. The program/function flexibility permits the battery technician the ability to easily and accurately replicate the exact battery requirements as detailed by the battery's CMM and the applicable technical manuals. The RF80-M's user friendly screen-prompts simplify battery processing. The process programs can be saved for future use, and may be password protected. During operation, the RF80-M touch screen will continuously display in color the specific process function currently being performed.

ReFLEX® Charge

The RF80-M will perform the exclusive ReFLEX® charge to fully and safely charge a battery in a little more than 1 hour.

ReFLEX® Charge Cycle

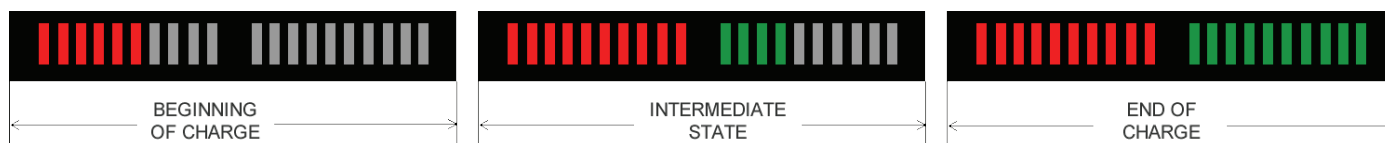


The unique advantage of the ReFLEX® charging method is that the positive charge current pulses alternate with the negative current pulses. When used on nickel cadmium batteries, the battery can be charged at twice the charge rate as a constant current charge. ReFLEX® charging also provides: 1) lower battery end-of-charge temperatures, 2) cell balance restoration, 3) increased battery cycle-life, and 4) elimination of the nickel cadmium “memory” effect. In addition to the ReFLEX® charge, the RF80-M is capable of constant current or constant potential charging as specified by all nickel cadmium and lead acid battery manufacturers.

DigiFLEX® Display

The RF80-M also incorporates a special feature called DigiFLEX®. The DigiFLEX® circuitry provides measurement and display of the battery condition during the ReFLEX® charge cycle. DigiFLEX® uses the display of luminescent bars to portray the rate and duration of negative pulses throughout the charge cycle. The green luminescent bars show the “relative state of charge” of the battery. Green bars will initially appear when the battery has attained approximately 80% capacity. At full charge, the green luminescent bars will extend completely to the right side of the display on the RF80-M.

DigiFLEX® Trend Bar Display



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RF80-M Equipment Capabilities

Constant Potential Charge

In constant potential charge mode, the RF80-M will charge all 6, 12, and 24 volt lead acid batteries. Up to 65 amp charging can be accomplished at a set voltage, to a set time, or to both as needed. If more than one step is involved, the battery technician simply programs the added steps into the RF80-M via the user-friendly touch screen.

Constant Current Charge

Nickel cadmium batteries can be constant current charged at up to 65 amps to a set cut off voltage, a set time, or both.

Discharge

The RF80-M will constant current discharge at current levels up to 60 amps. Screen-prompts allow the battery technician to: 1) discharge to a programmable voltage, 2) discharge to a programmable time, 3) recondition, or 4) fully discharge the nickel cadmium battery(s) for deep cycle or storage.

Wait

A “wait step” can be added at any point in a battery process program. The wait step can be up to 99 hours and 59 minutes in duration.

Alerts

Alerts can be inserted at any point within the battery process program. Audible and touch screen visual alerts will notify the battery technician to: 1) check, 2) record, or 3) perform a particular CMM specified function.

Multi Battery Processing

Certain 21 and 22 cell nickel cadmium aircraft batteries are composed of 3-7 cell or 2-11 cell modules. These 7 or 11 cell modules should be tested as installed in the aircraft, as a singular unit. The RF80-M easily addresses the 7 or 11 cell modules with battery cable assemblies specifically designed for the 21 cell and 22 cell modular batteries. These specialized cable assemblies are available as optional equipment.

Cell Monitor

External jacks for cell-probes are provided to permit ease in monitoring individual cell voltages. The cell probes, a touch screen stylus and a “screen kit” are included as standard equipment.

Calibration

An optional calibration shunt will allow the operator to perform annual calibration checks, eliminating the expense of shipping the RF80-M to an authorized repair facility for yearly calibration.

DataFX®

The optional DataFX® will automate data management for both nickel cadmium and lead acid batteries. The DataFX® automatically scans the battery and displays the following: 1) the individual cell voltages, 2) total battery voltage and 3) total battery current. If a fault is detected, a warning light will flash. The display will identify the fault type as well as identify the affected cell until the “clear button” is activated.

The DataFX® has an RS232 port for delivery of data to a PC interface or to a serial printer, further facilitating the automation of data management, often required by the battery manufacturer, the aircraft owner and/or the regulatory authorities.

RF80-M Typical Displays

Processing

28.5 V **80.0 A**

Reflex

▶ Reflex A	80.00A	01:00	20
CC Charge	10.80A	02:30	30.40V
Wait		04:00	
Discharge	54.00A	01:00	19.00V

00:48:13
Time Remaining

0.00 V
Cell Voltage

DigiFLEX®

Stop Pause

Charge Time Remaining

DigiFLEX® Display

PAUSE Button

Battery Voltage

Function In Process

Functions Pending

Processing

26.1 V **27.0 A**

CC Charge

▶ CC Charge	27.00A	02:00	30.40V
CC Charge	10.80A	02:30	30.40V
Discharge	54.00A	01:00	19.00V
CC Charge	27.00A	02:00	30.40V
CC Charge	10.80A	02:30	30.40V

01:36:13
Time Remaining

0.00 V
Cell Voltage

DigiFLEX®

Stop Pause

Current

Discharge Time Elapsed

Cell Voltage

Processing

23.6 V **17.0 A**

Discharge

▶ Discharge	17.00A	01:00	19.00V
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00:41:23
Time Elapsed

0.00 V
Cell Voltage

DigiFLEX®

Stop Pause

RF80-M Aircraft Battery Charger / Analyzer

RF80-M Specifications

Mechanical

18.55 inches (47.12 cm) wide
11 inches (27.94 cm) high
21.5 inches (54.61 cm) deep
Weight: 145 pounds (65.90 kg)
Case material: Steel
Front Panel: Steel w/polyester overlay

Touch Screen – Displays

7 inch color-resistive touch screen
800 x 480 resolution
Current: 80.0 amps full scale +/- 2%
Voltage: 50.0 volts full scale +/- 2%
Cell Voltage: 5 volts full scale +/- 2%
DigiFLEX®: 10 segment red/green trend bar
Time: Elapsed / Remaining

Electrical Input

Input voltage: 187 to 250 VAC, single phase
Frequency: 47 to 63 hertz
Current: 25 amps maximum
Power Switch: Opens both sides of line

Environmental

Non-operating

-40°F - +159.8°F (-40°C - +71°C)
Altitude: 0 – 50,000 feet

Operating

+32°F - +122°F (0°C - 50°C)
Altitude: 0 - 8,000 feet

Electrical Output

Charge, ReFLEX®: 2 - 80 amps
Charge, constant current: 1 – 65 amps
Charge, constant potential: 1 – 65 amps
Discharge, constant current: 1 – 60 amps



Marked and Certified

RF80-M Standard and Optional Accessories

Standard:

Cell probe Kit	P/N 526020-065
Stylus & Screen kit	P/N 123031-001
Cable Adapter - Quick Disconnect	P/N 121666-001
Cable Adapter - Universal	P/N 121666-002

Options:

Calibration Shunt	P/N 121666-010
2/11 cell battery module cable assembly*	P/N 121961-001
3/7 cell battery module cable assembly *	P/N 121961-003
DataFX® / ProEase	P/N 121711-004

*Max total cells 24 NiCad, 14 Lead Acid



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CHRISTIE®

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