

Technical Service Bulletin 2007-979

ATTENTION SERVICE MANAGER AND PARTS PERSONNEL

Bulletin Level: 1 Specific Warranty Coverage: Parts: N/A Labor: N/A Travel: N/A

Announcing . . . A simplified way to reprogram Delta-Q battery chargers!



Delta-Q on-board battery charger 56315204/56315124

QuiQ Programmer Kit 56315732

- Minimize downtime
- Reduce costs
- Improve battery life
- Extend warranty coverage
- Improve machine performance

Nilfisk-Advance machines equipped with Delta-Q battery chargers can now be easily programmed with the exact charging curve (algorithm) needed to optimize your customers' battery performance. Each type of battery has characteristics that are affected by the charger output; improper charging can actually damage a battery.

To optimize your customer's battery performance, utilize the new QuiQ programming software on your desktop or laptop PC to quickly and conveniently program the Delta-Q charger to the exact charging curve for the batteries used. No more counting LEDs – the simple menu-driven software allows you to quickly program the charger to the proper algorithm.

Refer to the algorithm table in this Technical Service Bulletin, and check EzParts for more Technical Service Bulletins for updated algorithms designed to improve battery performance.

Models Affected: Adhancer (all models); AquaPLUS (all models); BA 625; BA 725 (all models); BA 755 (all models); BA 825 (all models); BA 855 (all models); Convertamatic (all models); Warrior (all models); 34 RST (all models).

Parts List Form Numbers Affected: 56042451; 56042463; 56042469; 56042476; 56042485.

ECO#: A-03120.

Informational Bulletin: The QuiQ Programmer Kit consists of a CD containing the programmer software and User Guide, a set of leads, an A/B USB cable and a USB interface module. Note that this Kit is only applicable to chargers that have a black dot on the bar code label.

Note: There is also a training video in development that will show you how to change the charge algorithm with the charger installed in the machine. This video will be available soon as a secured download in the Authorized Sign In section at www.advance-us.com

Purpose of these Supplemental Instructions: These supplemental instructions differ somewhat from the QuiQ User Guide included with the Programmer Kit. The instructions in the User Guide pertain to a charger that has not been installed in a machine. The instructions in this Technical Service Bulletin show you how to change the charge algorithm with the charger installed in the machine and without having to remove any machine panels or components.

Note: Although the computer processor speed and memory requirements are not critical for this application, Delta-Q recommends that you use a desktop or laptop running Windows XP.

****Technical Service Bulletins Levels:**

Level 1: These Bulletins contain general information and are without specific warranty coverage.

Level 2: These Bulletins describe continuous quality improvements that are made to products. Specific warranty coverage may apply and if so is noted in the Bulletin.

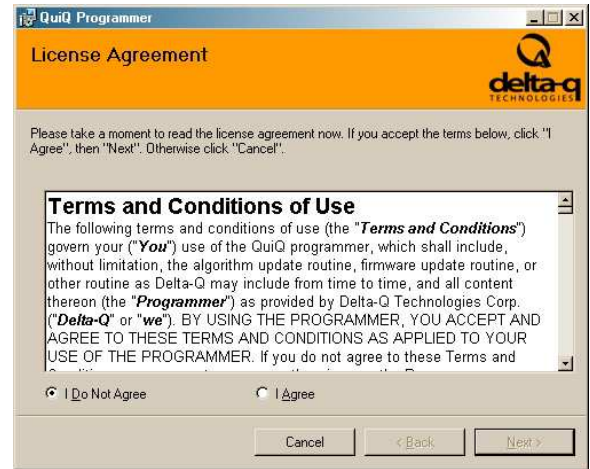
Level 3: These Bulletins describe a quality problem that has been determined to require a mandatory update to the product. Specific warranty coverage is as noted in Bulletin.

To Change the Charge Algorithm

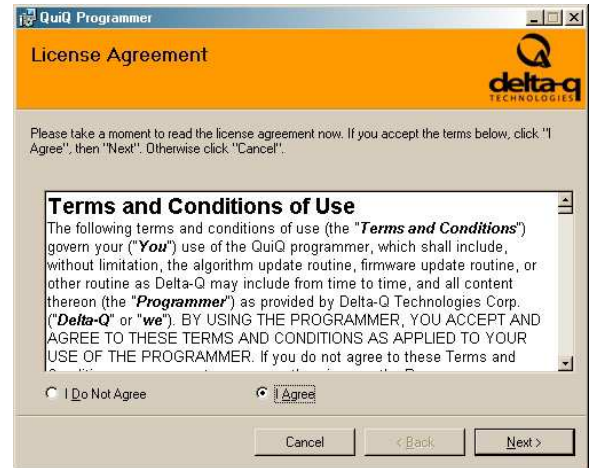
1. Insert the Programmer CD into the laptop drive. The screen will briefly display the “Windows Installer” screen.



2. Once the CD is loaded, the screen will display the “License Agreement” screen.

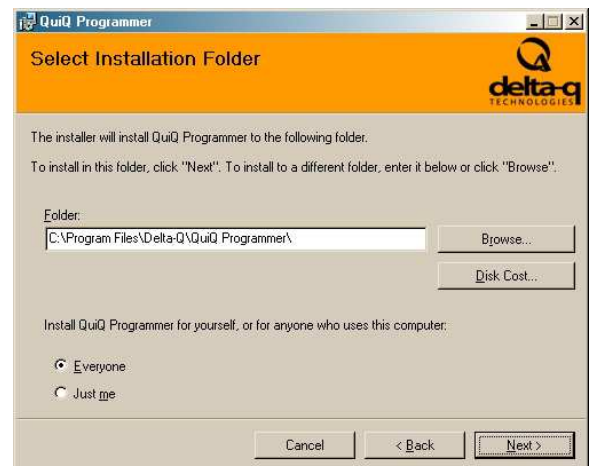


3. If you agree to the terms, click on “I Agree”, then click on “Next”.

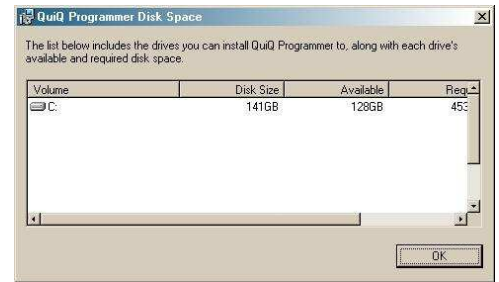


4. The screen will display the “Select Installation Folder” screen. You can use the default folder location as shown in the “Folder” field, enter the path to the desired folder in the “Folder” field, or browse to the folder in which you want to install the programmer by clicking on the “Browse” button.

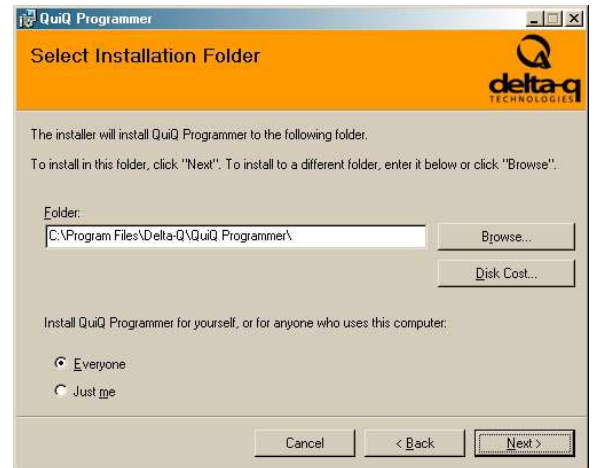
If you want to see how much disk space you'll have available on your local drive before and after the programmer installation, click on the “Disk Cost” button.



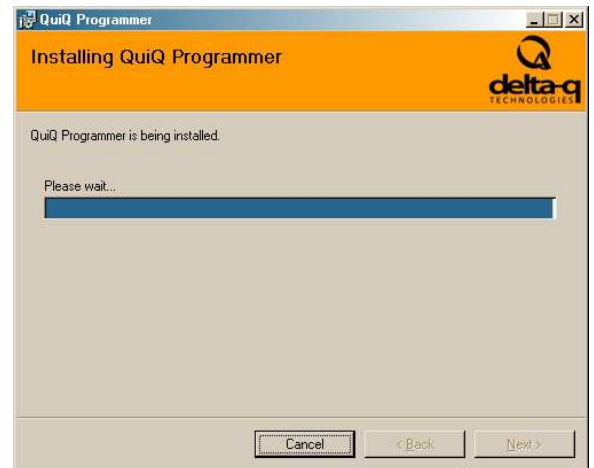
The screen will display the “QuiQ Programmer Disk Space” window. Click “OK” to close the “QuiQ Programmer Disk Space” window.



5. Select whether the QuiQ programmer will be available to everyone or just to yourself by clicking on either the “Everyone” or the “Just me” button, then click “Next”.



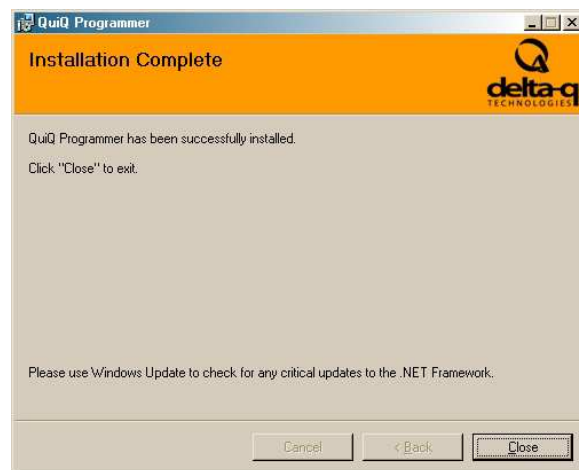
The screen will display the “Installing QuiQ Programmer” screen.



6. The screen will then display the “Installing Delta-Q QuiQ USB Interface Module Driver” screen. Click “OK”.



7. The screen will then display the “Installation Complete” screen. Click on “Close” to exit the Windows Installer.



8. Make sure the charger AC line power cord is unplugged, then lift or remove the appropriate tank or machine panel to access the battery pack.
9. Disconnect the battery pack connector. Make sure the free end of the connector is in a secure position with no chance of arcing or shorting out.
10. **See Figure 1.** Connect the black crocodile clip to the negative terminal on the battery pack.

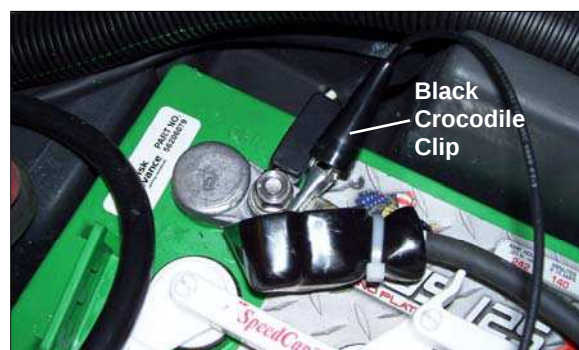


Figure 1 – Attach Black Crocodile Clip to Negative Battery Terminal

11. **See Figure 2.** Connect the red crocodile clip to the positive side of the battery pack connector attached to the machine.



Figure 2 – Attach Red Crocodile Clip to Positive Side of Battery Pack Connector

12. See Figure 3. Plug the two-conductor plug on the red and black crocodile clip leads into the matching connector in the USB Interface Module.



Figure 3 – Connect Two-conductor Plug to USB Interface Module

13. See Figure 4. Plug the square “B-type” plug on the USB cable into the matching connector in the USB Interface Module.

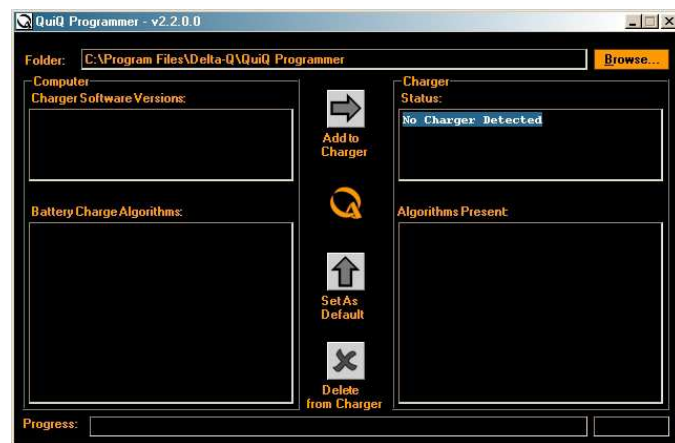


Figure 4 – Connect “B-type” USB Plug to USB Interface Module

14. Plug the rectangular “A-type” plug on the USB cable into a USB port in your laptop.
15. When all of the cables have been connected and are secure, plug the charger AC line power cord into a wall outlet.
16. Go to the “Start” menu in the taskbar and select “QuiQ Programmer” to launch the QuiQ application.
17. The screen will display the “COM Settings” window that lists the port on the laptop to which the QuiQ Interface USB cable is connected. Note that with Windows XP, the system will detect the correct communications port automatically. Click on “OK” to display the “QuiQ Programmer” window.



If for some reason you see a “No Charger Detected” message in the “QuiQ Programmer” window, check to make sure all of the connections to the charger, interface module and laptop are correct and secure, and that the charger is plugged into an AC outlet.



The “Charger Status” fields in the “QuiQ Programmer” window list the charger serial number, the firmware and software information, and the number of the charge algorithm currently selected as the default algorithm. In this case algorithm number 7 is listed as the current default algorithm.



18. Refer to the algorithm table shown on the following page to determine the correct charge algorithm for the type and brand of battery installed in your machine. In this case we've installed US Battery, model number US-305 wet cell batteries in our machine, so according to the chart we need to be using charge algorithm number 72.

Domestic Batteries								
Nilfisk-Advance Battery Part Number	Battery Manufacturer	Battery Model Number	Wet/Gel AGM	Volts	Amp-Hour	Rate	Delta Q Algorithm	
							36V Model 56315204	24V Model 56315124
56206078	Trojan	J185...	Wet	12	195	20	3	3
	US Battery	US-185	Wet	12	195	20	11	11
56206079	Trojan	T-125	Wet	6	235	20	3	3
	US Battery	US-125	Wet	6	235	20	11	11
56206117	Trojan	T-605	Wet	6	195	20	3	3
	US Battery	US1800	Wet	6	208	20	11	11
56026200	Trojan	J-250...	Wet	6	250	20	3	3
	US Battery	US250HC	Wet	6	275	20	11	11
56206987	Nilfisk (East Penn / MK Battery)	56206987 (8GGC2 / T881)	Gel	6	180	20	26	26
56315772	Discover	EVGT6A	AGM	6	255	20	43	43
	Discover	EV250A-A	AGM	6	260	20	43	43
56315959	Discover	EV305A-A	AGM	6	312	20	43	43
56317154	US Battery	US-145XC	Wet	6	251	20	72	72
	Discover	EVL16A-A	AGM	6	390	20	43	43
56388582	Trojan	L16...	Wet	6	395	20	Not Recommended	Not Recommended
	US Battery	L16HC	Wet	6	415	20	73	73
56391391	Trojan	J-305G	Wet	6	285	20	7	7
	US Battery	US-305	Wet	6	305	20	72	72
56393912	Discover	EV185A-A	AGM	12	234	20	43	43

European Batteries								
Nilfisk-Advance Battery Part Number	Battery Manufacturer	Battery Model Number	Wet/Gel AGM	Volts	Amp-Hour	Rate	Delta Q Algorithm	
							36V Model 56315204	24V Model 56315124
00200020	Exide	3 ET 174	Wet	6	174	5	51	51
00190050	Energysys	6 TP 175	Wet	6	175	5	21	21
00190032	Energysys	6 XP 180	AGM	6	180	5	21	21
00190121	Exide	3 DF 180	Gel	6	180	5	51	51
00200050	Exide	FF 06 200	Wet	6	200	5	21	21
80561500	Exide	18-5PZB210		36	210	5	21	21
00196122	Exide	DF 06 240 V		6	240	5	12	12
00200651	Exide	FF 06 255		6	255	5	21	21

19. Click on the appropriate algorithm, number 72 in this case, to highlight the field in the “Algorithms Present” window.

Note: If the charge algorithm you need is not listed in the “Algorithms Present” window, please contact Nilfisk-Advance Commercial Technical Service at 800-989-2235.



20. Click on the “Set As Default” button to set the default algorithm to number 72. The new default algorithm will be shown to the right of the “Algorithm” field in the “Charger Status” window.
21. Once you've changed the charge algorithm, click on the close box to quit the QuiQ Programmer application.



22. Unplug the charger from the wall outlet.
23. Unplug the USB cable from your laptop.
24. Disconnect the red crocodile clip from the battery pack connector.
25. Disconnect the black crocodile clip from the negative battery pack terminal.