

AUTO-TRICKLE ADAPTER

USER'S MANUAL MODEL ATA-CX3



INTRODUCTION

Congratulations for having purchased the AUTO-TRICKLE ADAPTER III (ATA) by Tejera Microsystems Engineering, Inc. . You are now the owner of the best and **most cost effective** way of keeping your NiCd batteries safely and automatically in a constant state of readiness. The ATA's unique microprocessor circuitry works with your existing overnight charger(s) to prevent overcharging. It also safely maintains the charge on your batteries indefinitely by converting your charger into a pulse trickle charger. The gentle pulse trickle effect not only gives you a visual indicator but tests have proven it is actually better for your NiCd battery's life than conventional trickle charging. The ATA is simple to use since there is nothing else to buy and no soldering is required. Simply plug it in and go! For obtaining the maximum benefit from this product please read the following instructions very carefully.

I. INSTRUCTIONS

IMPORTANT NOTE:

DO NOT PLUG ANY SURGE PROTECTING POWER STRIPS (REGULAR POWER STRIPS WITH BREAKERS ARE OK), INTO THE AUTO-TRICKLE ADAPTER. This AUTO-TRICKLE ADAPTOR is designed to work ONLY with STANDARD OVERNIGHT NiCd BATTERY CHARGERS that operate at a C10 rate (14-16 hour rate). Make sure you have matched the charger to the battery so that it will require a 14-16 hr. charge. Example: Use a 50ma. charger for 500 mah batteries, a 120ma charger for 1200 mah , a 25 ma charger for 250mah, etc. DO NOT USE the AUTO-TRICKLE ADAPTER with: other types of Auto-trickle chargers, non-mechanical battery cyclers, fast chargers, peak chargers, or trickle only chargers. Switchable rate chargers must be set at the appropriate overnight charge rate.

INSURING COMPATIBILITY - PLEASE READ

The AUTO-TRICKLE ADAPTER has been tested and IS COMPATIBLE with most inexpensive overnight chargers.

To insure compatibility prior to use, the following test must be made. Note that this test does not require the use of the Auto-Trickle Adapter.

STEP 1. Fully charge your batteries in the normal fashion.

STEP 2. Unplug the battery charger from the wall while leaving the batteries connected to the charger.

STEP 3. On a daily basis for the next seven days, test the batteries by temporarily connecting them to your equipment and verifying normal operation. If after seven days your batteries still have adequate capacity to operate your equipment, the charger may be safely used with the Auto-Trickle Adapter.

The reason for this test is that some charger designs can actually DISCHARGE the batteries when unplugged from the AC outlet. The AUTO-TRICKLE ADAPTER uses an on / off technique to create a pulse trickle effect. Chargers that load down (discharge) your batteries may not effectively produce enough charge to maintain an effective trickle. A diode may easily be added to your charger to rectify this problem if necessary. For more information on this visit our web site at "www.TMEnet.com"

OPERATION

STEP 1 Plug the unit into a standard 120 Volt 60 hertz receptacle. (A surge protected power strip here is OK too.) You may then plug your overnight NiCd chargers into the unit as provided. If you wish to plug in more chargers you will need to provide a power strip (breaker and switch OK) or a multiple extension cord. (Make sure this power strip does not have surge protection circuitry as this will damage your ATA.) Be careful not to exceed the maximum load of 120 Watts. (Simply add up the wattage ratings of all connected chargers, make sure it's less than 120 Watts) Now connect your batteries to your existing charger(s) as you have always done.

When first powered up, the ATA will place your charger into a pulse trickle mode. Notice that the charger's light will flash approximately once per second. This shows your charger is now providing a trickle rate to the batteries.

STEP 2 When you are ready to give your batteries a complete overnight charge, simply push the "START" button on the front panel of the ATA. The light should stop flashing and remain constantly on. This steady light tells you your charger is now providing a normal full overnight charge to the batteries.

In 16 hours the unit will automatically change back to the trickle mode. This will be indicated by the flashing light on your charger. You can now use your batteries immediately, or leave them on for months. They will be safely kept in a fully charged state until you are ready to use them.

II. FUSE REPLACEMENT

If your charger does not work when connected to the unit, you may have exceeded the maximum 120 watt capacity and blown the fuse in the ATA. To check or replace the fuse you will need to UNPLUG THE ATA and carefully remove the four screws on the box. The fuse may be removed by gently pulling it away from its clips. Be sure to replace with a 1 Amp Fast blowing fuse only or you will void the warranty. Carefully reassemble the ATA before plugging it into a power receptacle.

III. SPECIAL NOTES

* To stop the 16 hour charge timer and go back to trickle mode prematurely, simply push the switch once again. The charger will go back to trickle mode.

* Take these special precautions when using ONE unit with BOTH charged and discharged batteries.

In most cases leaving your batteries on trickle rate alone will fully charge your fully discharged batteries in about three to four days. If this is too long a wait then try the techniques below.

ADDING DISCHARGED BATTERIES WHEN SOME ARE ALREADY CHARGED AND IN TRICKLE.

You may start a 16 hour charge to ALL the batteries as long as there has been a minimum of two days between pressing the START button. If you need daily charging or if just some of your batteries need charging, then it is best to charge those batteries separately. Either purchase a second ATA and use one for newly discharged batteries or you may simply plug your charger directly into the wall receptacle and remember to move them to the trickler after 16 hours.

HOW TO ADD NEW BATTERIES WHEN SOME ARE ALREADY IN CHARGE.

You must push the "START" button momentarily to prematurely end the first charge and again press the START button to initiate a new 16 hour period. You may extend the charge time in this way, as long as you do not force a full charge for more than 32 hours. This may happen when adding new batteries several times throughout the day. When operating in this fashion, wait until the unit automatically goes back to trickle mode before using your batteries. If these rules become a problem, we recommend a second ATA should be purchased to prevent overcharging. Fully independent operation can be achieved by using one unit per charger. Two units should handle the demands of the most active users. One unit is fine for weekly activity.

*** There is a possibility that your batteries will not be fully charged if there is a power failure during the 16 hour charge time.** To be certain that they are fully charged simply push the start button again. This will start another full 16 hour charge. Note that NiCd batteries can handle an occasional day or two of overcharging at C10 rate without harm.

IV. CHARGING TIPS and SUGGESTIONS

If battery running time is IMPORTANT to you then it is VERY IMPORTANT TO CYCLE or CONDITION (test) your NiCd batteries once every two or three months of use. We also recommend testing after a very long term period in trickle mode simply as a precautionary test.

The main reason for cycling is to predict any negative trends and to uncover anything that has gone wrong with your charging system. This is critical with flying models. Cycling immediately after use allows you to gauge your systems operating time.

KEEP YOUR BATTERIES COOL! The AUTO-TRICKLE ADAPTER will safely reduce the output current of your chargers to prevent internal heat buildup. However, storing or charging them in a hot garage or basement will speed up the chemical reactions in a NiCd. Charging in a hot environment will result in reduced battery capacity and can lead to premature shorts.

THE AUTO-TRICKLE ADAPTER may be used with some overnight GEL CELL and WET CELL battery chargers. **BUT MAKE VERY SURE** before trying that if you calculate 25% of your chargers available output current, that this number does not exceed your battery's maximum float or trickle rate. **Once the GEL OR WET CELL IS ON TRICKLE, IT REALLY IS BEST TO DISCONNECT IT FROM THE CHARGER. THESE CELLS DO NOT SELF-DISCHARGE AS FAST AS NiCd BATTERIES AND THEREFORE DO NOT REQUIRE A TRICKLE CHARGE.** Leaving GEL CELLS on for long periods may cause leakage. Wet cells may dry out in time as well.

V. SPECIFICATIONS

POWER: 120 VAC, 60Hz. 120 WATTs MAXIMUM. 1 A. FUSE;
CHARGE TIMER: 16 hours
CHARGER REQUIREMENTS: Overnight C/10;
TRICKLE RATE: PULSED at 1Hz. 25% duty cycle
BOX DIMENSIONS: 2.25" X 4.1" X 2.65"

LIMITED WARRANTY

The AUTO-TRICKLE ADAPTER is warranted to the original purchaser for a full 2 YEARS from the date of purchase to be free from defects in material and workmanship. During this period Tejera Microsystems Engineering Inc. will repair or replace, at their discretion, the defective unit. Be sure you fill out and return your warranty registration card below.

This warranty does not apply to any unit which has been abused, improperly installed, improperly used, used for purposes other than those purposes for which the unit was designed, handled roughly, damaged in shipment, nor to any unit which has been altered or repaired by unauthorized personnel. Under no circumstances will the buyer be entitled to incidental or consequential damages. This Limited warranty gives you specific legal rights; you may also have other rights that vary from state to state.

WE STRONGLY RECOMMEND THAT THE COMPATIBILITY OF THIS DEVICE BE VERIFIED BEFORE RELYING ON IT. AS A NORMAL PRECAUTION WE RECOMMEND THE TESTING OF ALL BATTERIES PRIOR TO AND DURING OPERATION WITH RADIO CONTROLLED EQUIPMENT.

WARRANTY PROCEDURE:

NOTE: Fuse replacement is not covered under this warranty.

A minimum charge of \$4.00 to cover shipping and handling is required on all returned units, and should be enclosed with the unit. You must enclose your Bill of Sale as proof of purchase with the unit (A legible photocopy is acceptable.) In the event that the work is not covered under the warranty, the unit will be repaired and you will be notified of repair charges.

REPAIRS:

For out of warranty repairs the standard repair fee per unit is 50% of the suggested retail price plus \$4.00 shipping and handling charges. Please prepay or supply credit card information along with a telephone number.

ALL RETURNS MUST BE SENT TO:

Tejera Microsystems Engineering Inc.

Visit www.TMEnet.com for the current address.

Carefully pack and ship the unit fully insured and prepaid.

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Warranty Registration

TME, Inc. limited warranty becomes effective upon the date of purchase. However, this form OR A COPY must be filled out and returned within 10 days to validate the warranty.

Date Purchased: _____

Name _____

Address _____

City _____

STATE _____ **ZIP** _____

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