



## ATD-5921

# RECHARGEABLE 12 VOLT 18 AMP/HOUR JUMP START OWNERS MANUAL



- 1000 PEAK AMPS/400 CRANKING AMPS OF STARTING POWER.
- STARTS CARS, TRUCKS, RV's AND BOATS WITHOUT THE NEED OF ANOTHER VEHICLE OR AC POWER CORDS.
- 12V DC SOCKET WITH OVERLOAD PROTECTION PROVIDES POWER FOR ANY 12V APPLIANCE.
- PROVIDES UP TO 50-HOURS OF DC POWER WHEN USED WITH 12V DC APPLIANCES.
- ALLOWS 12V DC APPLIANCES TO BE USED IN REMOTE SITES AND/OR IN EMERGENCIES WHEN COMMERCIAL POWER IS NOT AVAILABLE.
- SOLID-STATE, AUTOMATIC OPERATION AND CIRCUIT PROTECTION.
- REQUIRES NO MAINTENANCE FOR OPTIMUM OPERATION.
- SEALED, MAINTENANCE-FREE, HEAVY-DUTY BATTERY IS SAFE TO USE AND TRANSPORT.
- CAN BE STORED IN ANY POSITION WITHOUT RISKING ACID LEAKAGE.
- 43" HEAVY-DUTY 4 GAUGE COPPER CABLES CAN CARRY MORE AMPERAGE THAN SIMILAR UNITS.
- EASY TO READ COLOR CODED BATTERY METER.
- BUILT-IN CONVERTER ALLOWS RECHARGING FROM ANY 120V AC SOURCE.
- DC POWER CORD ALLOWS RECHARGING FROM 12V DC SOCKET.
- MOLDED HIGH-IMPACT CASE IS TOUGH AND DURABLE.
- BUILT-IN LIGHT FOR ROADSIDE VEHICLE REPAIRS OR EMERGENCY SITUATIONS AWAY FROM COMMERCIAL POWER.
- BUILT-IN 120V AC RECHARGING CIRCUITRY WITH AN AUTOMATIC CUT-OFF TO PREVENT OVERCHARGING.

Made in China

To ATD Specifications

## INTRODUCTION

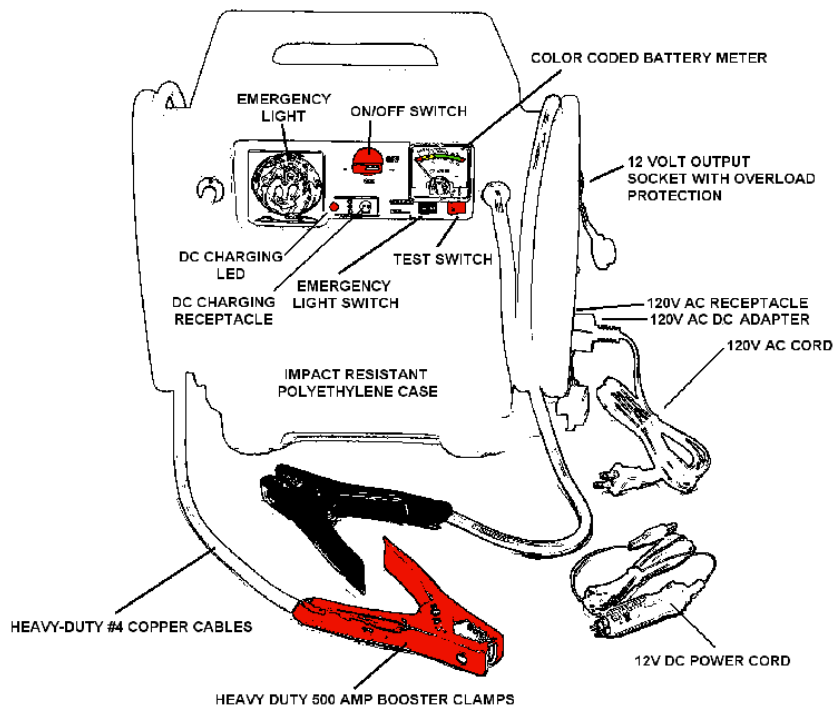
YOUR POWER PACK UNIT IS DESIGNED AS A COMPACT, DURABLE AND PORTABLE JUMP START SYSTEM FOR 12 VOLT DC VEHICLES AND BOATS. THIS SELF-CONTAINED SYSTEM WILL START MOST VEHICLES AND BOATS WITHOUT THE NEED FOR A HOST VEHICLE OR 120V AC POWER SUPPLY. THIS SYSTEM CAN ALSO BE USED AS A SAFE, PORTABLE SOURCE OF 12V DC ELECTRIC POWER IN REMOTE LOCATIONS AND/OR IN EMERGENCIES.

THE POWER PACK UNIT HAS AN EASY-TO-READ, COLOR-CODED BATTERY METER THAT INDICATES CHARGE LEVEL. A 12V DC SOCKET IS PROVIDED FOR USE WITH APPLIANCES THAT WOULD OPERATE FROM A VEHICLES CIGARETTE LIGHTER OR 12V DC SOCKET. THIS ALLOWS MAXIMUM PORTABILITY AND UTILITY WHEN YOUR POWER PACK UNIT IS USED IN REMOTE LOCATIONS.

FOR MAXIMUM CONVENIENCE, YOUR POWER PACK UNIT CAN BE RECHARGED FROM A 120V AC POWER SOURCE. THE BUILT-IN 500 mA RECHARGER/CONVERTER HAS AN AUTOMATIC CUT-OFF THAT PREVENTS OVER CHARGING THE BATTERY. A BLACK ROCKER SWITCH OPERATES THE BUILT-IN LAMP. A RED ROCKER SWITCH SHOWS THE BATTERY CONDITION ON THE METER. A COVERED 12V DC SOCKET IS PROVIDED, AS WELL AS A COVERED RECEPTACLE FOR A 120V AC POWER RECHARGING CORD. THE RED LIGHT EMITTING DIODE (LED) ILLUMINATES WHEN THE SYSTEM IS RECHARGING.

**NOTE: ON/OFF SWITCH ONLY CONTROLS POWER TO THE 2 BATTERY CLAMPS. WE SUGGEST YOU KEEP THIS SWITCH IN THE "OFF" POSITION FOR ALL OPERATIONS OTHER THAN JUMP STARTING A CAR.**

FIGURE 1.



## **WARNINGS**

- **ALWAYS** WEAR EYE PROTECTION WHEN WORKING ON OR AROUND LEAD-ACID BATTERIES.  
**IF SPLASHED WITH BATTERY ACID: IMMEDIATELY** FLUSH AFFECTED AREA SUCH AS FACE AND PARTICULARLY THE EYES WITH CLEAN WATER. CONTINUE FLUSHING FACE AND EYES UNTIL MEDICAL HELP ARRIVES.
- LEAD-ACID BATTERIES GENERATE HYDROGEN GAS DURING NORMAL OPERATION. MORE GAS IS GENERATED WHEN THE BATTERY IS CHARGING. HYDROGEN GAS IS:
  1. **EXPLOSIVE**
  2. **POISONOUS TO BREATH**
  3. **HIGHLY FLAMMABLE**
- TO AVOID POSSIBLE DAMAGE THAT MAY SHORTEN THE UNITS WORKING LIFE, PROTECT THIS UNIT FROM DIRECT SUNLIGHT, DIRECT HEAT, AND /OR MOISTURE.
- THIS SYSTEM IS DESIGNED TO BE USED ONLY ON VEHICLES OR BOATS WITH 12-VOLT ELECTRICAL SYSTEMS.
- THIS SYSTEM IS NOT DESIGNED TO BE USED AS A REPLACEMENT FOR A VEHICLE BATTERY.

### **TO AVOID AN EXPLOSION AND/OR THE POSSIBILITY OF BEING SPLASHED WITH BATTERY ACID:**

- NEVER ALLOW THE RED AND BLACK CLAMPS TO TOUCH EACH OTHER OR FOR BOTH TO TOUCH THE SAME METAL OBJECT OR ANY ELECTRICALLY CONDUCTIVE MATERIAL FOR THAT MATTER.
- ONLY ATTEMPT TO JUMP START A VEHICLE OR BOAT IN A WELL VENTILATED AREA.
- ALWAYS CONNECT THE RED(+) CLAMP TO THE POSITIVE (+) BATTERY TERMINAL FIRST .
- DO NOT CONNECT THE BLACK(-) CLAMP TO THE NEGATIVE (-) BATTERY TERMINAL.
- CONNECT THE BLACK (-) CLAMP TO A NON-MOVING METAL PART ON THE ENGINE NOT TO THE NEGATIVE (-) BATTERY TERMINAL.

## **RECOMMENDATIONS FOR GETTING THE MOST FROM YOUR NEW POWER PACK UNIT**

## **RECHARGING**

1. FOR MAXIMUM BATTERY LIFE, WE RECOMMEND THAT YOUR POWER PACK UNIT BE KEPT FULLY CHARGED AT ALL TIMES. IF THE BATTERY IS ALLOWED TO REMAIN IN A DISCHARGED STATE, BATTERY LIFE WILL BE SHORTENED.

TABLE I SHOWS THE RELATIONSHIP OF THE FREQUENCY OF USE BETWEEN RECHARGING AND THE EXPECTED NUMBER OF CHARGE/RECHARGE CYCLES.

**TABLE 1. - BATTERY LIFE**

<b>NUMBER OF JUMP-STARTS BETWEEN RECHARGING</b>	<b>DISCHARGE AND RECHARGE CYCLES</b>
1	1000+
5	700+
10	500+

2. THE TIME REQUIRED TO FULLY RECHARGE YOUR POWER BOOSTER AFTER JUMP-STARTING AN ENGINE IS A FUNCTION OF HOW MANY JUMP-STARTS ARE PERFORMED BETWEEN RECHARGING SESSIONS. TABLE II SHOWS THE APPROXIMATE RECHARGING TIMES YOU CAN EXPECT.

**TABLE II. - RECHARGING TIMES VS. JUMP-STARTS**

<b>NUMBER OF JUMP-STARTS</b>	<b>RECHARGING TIME (IN HOURS)</b>	<b>NUMBER OF JUMP-STARTS</b>	<b>RECHARGING TIME (IN HOURS)</b>
1	8	4	32
2	16	5	40
3	24	6	48

3. CHECK THE CHARGE IN YOUR POWER PACK UNIT OFTEN BY DEPRESSING THE RED PUSH-BUTTON SWITCH.  
THE METER WILL SHOW THE BATTERY CHARGE.

### 120V AC CHARGING :

PLUG THE 120V AC POWER CORD INTO AN OUTLET AND INTO THE RECEPTACLE ON YOUR NEW POWER PACK UNIT. CHARGE THIS DEVICE FOR AT LEAST 4 HOURS OR UNTIL THE METER SHOWS A FULL (14- TO 15-V DC) CHARGE WHEN THE RED ROCKER SWITCH IS DEPRESSED. THE RECHARGING CONVERTER CIRCUIT IN YOUR POWER PACK UNIT HAS AN AUTOMATIC CUT-OFF CIRCUIT SO THE INTERNAL BATTERY CANNOT BE OVERCHARGED. TO RECHARGE YOUR POWER PACK UNIT BATTERY FROM 120V AC FOLLOW THESE STEPS :

1. ON THE POWER PACK UNITS' RIGHT SIDE THERE ARE TWO PLUGS, ONE ROUND AND ONE RECTANGULAR PLUG. **SEE FIGURE 2.**

2 . PULL THE PLUG COVER FROM THE RECTANGULAR RECEPTACLE OUT, EXPOSING TWO (2) PRONGS OF A STANDARD 120V AC POWER CORD. A RESTRAINT KEEPS THE PLUG COVER FROM GETTING LOST. THE PLUG IS IMPORTANT TO MAINTAIN THE WEATHER-RESISTANT INTEGRITY OF YOUR POWER PACK UNIT.

3. ONE OF THE POWER CORDS FURNISHED WITH YOUR POWER BOOSTER HAS A STANDARD 120V AC PLUG AT ONE END AND A RECTANGULAR TWO (2) PRONG RECEPTACLE AT THE OTHER END. PLUG THIS POWER CORD INTO THE SOCKET ON THE SIDE OF THE UNIT AND THE OTHER END INTO YOUR 120V AC WALL OUTLET. THE RED LED WILL ILLUMINATE TO DENOTE CHARGING IS IN PROGRESS.

4. PRESSING THE 'TEST' BUTTON WILL INDICATE THE LEVEL OF CHARGE. A BUILT-IN SAFETY DEVICE PREVENTS OVERCHARGING.

5. CONTINUE TO CHARGE UNTIL THE CHARGING LIGHT GOES OUT, OR THE VOLTMETER REGISTERS 14V OR MORE WHEN THE TEST BUTTON IS PRESSED.

**IMPORTANT: DO NOT STOP CHARGING BEFORE THE METER REGISTERS 14V.** AT THIS POINT, ONCE THE CHARGER IS DISCONNECTED, THE VOLTAGE WILL SLOWLY SETTLE BACK TO READ 100%. THIS IS QUITE NORMAL AND INDICATES THAT THE BATTERY IS AT FULL CAPACITY.

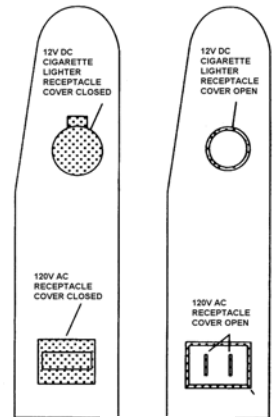
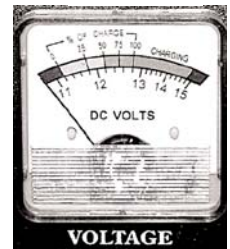


FIGURE 2



**NOTE:** TO FULLY CHARGE A BATTERY COULD TAKE UP TO 72 HOURS, DEPENDING UPON THE STATE OF DISCHARGE. THE UNIT CAN REMAIN PLUGGED INTO THE POWER SOCKET INDEFINITELY AS THE INTERNAL PCB HAS AN AUTOMATIC "FLOAT CHARGING CIRCUIT" WHICH WILL NOT ALLOW AN OVERCHARGE CONDITION OR DAMAGE TO THE BATTERY.

### 12V DC CHARGING

YOUR NEW POWER PACK UNIT IS EQUIPPED WITH A RECEPTACLE THAT WILL ALLOW YOU TO RE-CHARGE THIS SYSTEM FROM THE 12V DC SOCKET IN YOUR VEHICLE OR BOAT.

**NOTE :THIS RECHARGING METHOD WILL NOT RECHARGE THE SYSTEM TO THE SAME 14-TO 15V DC VOLTAGE LEVEL AS PLUGGING IT INTO A 120V AC OUTLET WILL. WE RECOMMEND THAT YOU USE THE 12V DC RECHARGING PROCEDURE ONLY WHEN IT IS NECESSARY, AS CONTINUED USE OF THE 12V DC RECHARGING PROCEDURE MAY SHORTEN THE SYSTEM'S LIFE.**

### TO USE THE 12V DC RECHARGING SYSTEM :

1. INSERT THE POWER CORD WITH THE 12V DC PLUG INTO THE 12V DC RECEPTACLE ON YOUR VEHICLE OR BOAT.
2. INSERT THE PLUG AT THE OTHER END OF THIS POWER CORD INTO THE RECEPTACLE ON THE FRONT PANEL OF YOUR POWER BOOSTER.

## OPERATION

### TO USE YOUR POWER PACK UNIT AS A 12V DC POWER SOURCE:

1. LIFT UP THE COVER OF THE 12V DC RECEPTACLE (ROUND RECEPTACLE AS IN FIGURE 2).
2. INSERT THE 12V DC PLUG FROM THE APPLIANCE INTO THE 12V DC RECEPTACLE.

**Note:** ON/OFF SWITCH CAN BE LEFT IN THE "OFF" POSITION

**TABLE III. WILL GIVE YOU AN IDEA OF WHAT OPERATION TIME YOU CAN EXPECT WHEN STARTING FROM A FULLY CHARGED SYSTEM.**

**TABLE III.**  
POWER PACK UNIT AS A 12V DC POWER SOURCE

APPLIANCE TYPE	ESTIMATED POWER CONSUMPTION (IN WATTS)	ESTIMATED USAGE TIME (IN HOURS)
FLUORESCENT LIGHTS, CELL PHONES	4	30
RADIOS, FANS, DEPTH FINDERS	9	21
CAMCORDERS, VCR'S, SPOTLIGHTS	15	12
ELECTRIC TOOLS, BILGE PUMPS	24	7
ELECTRIC COOLERS	48	3
AIR COMPRESSORS, CAR VACUUMS	80	1.5

**TABLE IV WILL GIVE YOU AN IDEA OF WHAT OPERATION TIME YOU CAN EXPECT WHEN STARTING FROM A FULLY CHARGED SYSTEM.  
WHEN USING YOUR POWER PACK UNIT AS A 120 V AC POWER SOURCE WITH A POWER INVERTER.**

**TABLE IV.**  
POWER PACK UNIT AS A 12-VDC POWER SOURCE WITH  
POWER INVERTER

APPLIANCE TYPE	ESTIMATED POWER CONSUMPTION (IN WATTS)	ESTIMATED USAGE TIME (IN HOURS)
SPOTLIGHTS, SUMP PUMPS, & VCR'S	100	1.5
FAXES, TV'S SMALL APPLIANCES	150	1
COMPUTERS , PRINTERS	200	0.75
MEDIUM POWER TOOLS, BLENDERS	250	0.05

#### **JUMP-STARTING:**

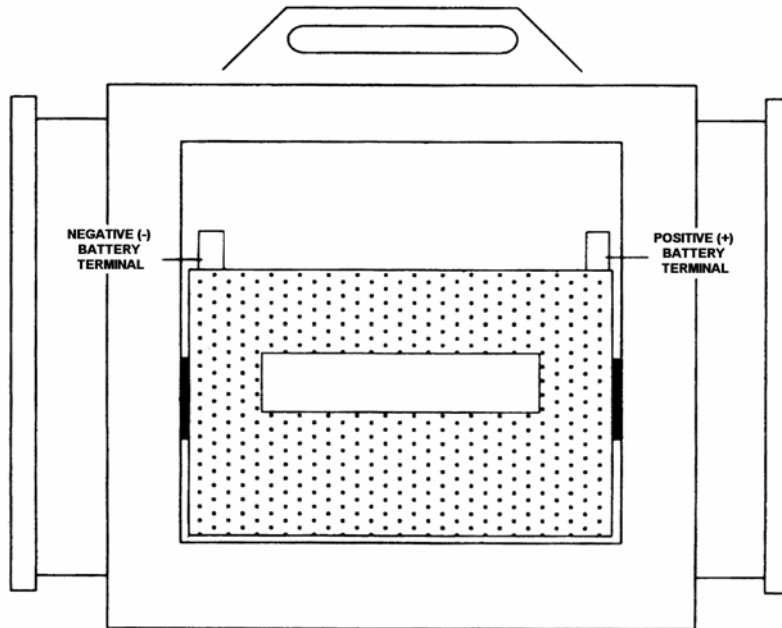
FOR OPTIMUM PERFORMANCE, WHEN USING YOUR POWER PACK UNIT TO JUMP START A VEHICLE OR BOAT, PLEASE READ AND FOLLOW THESE STEP-BY-STEP INSTRUCTIONS:

1. SWITCH THE ENGINE OF THE VEHICLE OR BOAT TO BE JUMP-STARTED TO "OFF".
2. CONNECT THE RED (+) "ALLIGATOR" CLAMP TO THE RED (+) POSITIVE BATTERY TERMINAL.
3. CONNECT THE BLACK (-) "ALLIGATOR" CLAMP TO A NON-MOVING METAL PART OF THE ENGINE, **NOT TO THE (-) NEGATIVE BATTERY TERMINAL.**
4. TURN POWER PACK UNIT SWITCH TO "ON".
5. WAIT A MINUTE OR TWO TO LET THE VEHICLE BATTERY TO CHARGE
6. TRY TO START THE VEHICLE BUT **DO NOT TRY FOR MORE THAN 5 TO 6 SECONDS.**
7. IF THE VEHICLE OR BOAT ENGINE DOES NOT START, WAIT AT LEAST 3 MINUTES BEFORE TRYING AGAIN.

**\*UNDER NO CIRCUMSTANCES ALLOW THE RED AND BLACK CLAMPS TO TOUCH EACH OTHER OR A COMMON CONDUCTOR\***

ONCE THE ENGINE IS RUNNING, **FIRST** DISCONNECT THE BLACK (-) CLAMP AND RETURN THIS CABLE TO ITS STORED POSITION ON THE POWER PACK UNIT, **THEN** DISCONNECT THE RED (+) CLAMP AND RETURN THIS CABLE TO ITS STORED POSITION ON THE POWER PACK UNIT. AS SOON AS POSSIBLE, CONNECT YOUR POWER PACK UNIT SYSTEM TO 120-VAC AND RECHARGE.

## **BATTERY REPLACEMENT**



**FIGURE 3. - REAR VIEW OF THE POWER PACK UNIT SHOWING THE BATTERY COMPARTMENT**

1. UNSCREW AND REMOVE THE EIGHT (8) PHILLIPS HEAD SCREWS THAT HOLD THE REAR COVER IN PLACE ON THE BACK OF YOUR POWER PACK UNIT.
2. LIFT OFF THE COVER PLATE TO EXPOSE THE BATTERY COMPARTMENT.
3. LIFT THE BATTERY OUT OF THE BATTERY COMPARTMENT.
4. DETACH THE #4 JUMPER CABLES AND THE RED AND BLACK RECHARGING WIRES FROM THE BATTERY TERMINALS .
5. ENSURE THAT THE REPLACEMENT BATTERY IS ORIENTED WITH THE POSITIVE ON THE RIGHT SIDE AND THE NEGATIVE ON THE LEFT SIDE, JUST AS THE OLD BATTERY CAME OUT.
6. CONNECT THE RED #4 JUMPER CABLE AND RED RECHARGING WIRE TO THE POSITIVE (+) BATTERY TERMINAL (ALSO MARKED WITH RED), THEN CONNECT THE BLACK #4 JUMPER CABLE AND RECHARGING WIRE TO THE NEGATIVE (-) BATTERY TERMINAL. DOUBLE CHECK ALL CONNECTIONS, AND TIGHTEN.
7. TAKING CARE NOT TO DAMAGE THE CIRCUIT BOARD, SLIDE THE NEW BATTERY IN POSITION.
8. REPLACE THE BATTERY COMPARTMENT COVER AND SECURE IN PLACE WITH THE EIGHT (8) "PHILLIPS" (CROSS- HEAD) SCREWS.

### **EMERGENCY LIGHT-BULB REPLACEMENT**

1. GENTLY SQUEEZE THE SIDES OF THE EMERGENCY LIGHT LENS BEZEL TOGETHER AND REMOVE THE LENS AND BEZEL.
2. UNSCREW AND REMOVE THE BURNED OUT BULB.
3. REPLACE WITH A NEW BULB.
4. SNAP THE LENS AND BEZEL IN PLACE.

## **SPECIFICATIONS**

ITEM # .....ATD-5921

VOLTAGE .....12V DC

BOOST POWER .....400 CRANKING AMPS

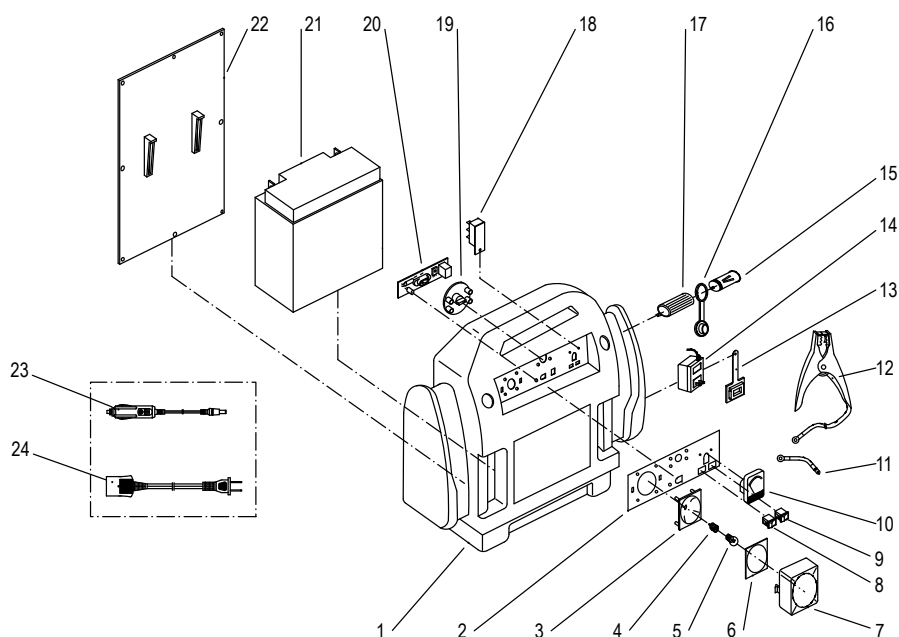
PEAK AMPS.....1000 AMPS

BATTERY TYPE .....SEALED, LEAD- ACID, RECHARGEABLE, MAINTENANCE-FREE, 12V DC, 18-AMP-HOURS

BOOSTER CABLES ......43", #4 AWG 100% COPPER CABLES WITH 500 AMP "ALLIGATOR" CLAMPS

DIMENSIONS .....30 x 27 x 9 CM

# ATD-5921



ITEM #	ORDERING PART#	PARTS DESCRIPTION	ITEM #	ORDERING PART#	PARTS DESCRIPTION
1	PRT5921-01	HOUSING	13	PRT5921-13	COVER
2	PRT5921-02	LABEL	14	PRT5921-14	TRANSFORMER
3	PRT5921-03	REFLECTOR	15	PRT5921-15	CIG. LIGHTER SOCKET (INNER)
4	PRT5921-04	BULB SOCKET	16	PRT5921-16	CAP
5	PRT5921-05	BULB	17	PRT5921-17	CIG. LIGHTER SOCKET (OUTER)
6	PRT5921-06	LENS	18	PRT5921-18	CIRCUIT BREAKER
7	PRT5921-07	BEZEL	19	PRT5921-19	ON/OFF SWITCH
8	PRT5921-08	LIGHTING SWITCH	20	PRT5921-20	PCB ASSY.
9	PRT5921-09	TEST SWITCH	21	ATD5902	12V/18AH BATTERY
10	PRT5921-10	VOLTMETER	22	PRT5921-22	BACK COVER
11	PRT5921-11	SHORT CABLE ASSY.	23	PRT5921-23-24	AC & DC POWER CORDS
12	PRT5921-12	JUMP CABLE SET	24	PRT5921-23-24	AC & DC POWER CORDS