# **UNDERSTANDING BATTERIES**

**CAR AUDIO INSTALLATION TIPS** 

#### **HOW YOUR CHARGING SYSTEM WORKS**

The battery's job is to start your vehicle. Running the electrical accessories is the alternator's job. The battery isn't designed to be a continuous source of power. It is a renewable source and is charged by the alternator when the engine runs. Battery charging can only occur when the current demand from the electrical accessories is less than the total current-output capacity of the alternator.

#### **BATTERY APPLICATIONS**

When deciding what battery to use, or how many batteries are needed, you must meet or exceed the power and capacity requirements of your application. You should also consider what kind of cycling the battery will be subjected to. Any application where the battery is repeatedly deep-discharged and recharged will require a deep-cycle battery. This includes applications such as car audio systems, recreational vehicles and emergency vehicles.



### CONNECTING MULTIPLE BATTERIES IN PARALLEL

If your battery application requires more starting power or reserve capacity than one battery can provide, you can install multiple batteries in parallel by connecting the "same" terminals together (positive to positive/negative to negative). Each time you add a battery in parallel, you increase the CCA (cold cranking amps) and reserve capacity, while the voltage remains the same.

## SUGGESTIONS FOR CONNECTING BATTERIES IN PARALLEL

- Use batteries of the same age, make and model.
- Make sure the cable size is sufficient to handle the higher current flow.
- Protect cables from shorting.
- Clean all terminals before installation.
- Use high-quality connectors

#### **BATTERY INSTALLATION TIPS**

- Check the mounting surface for any objects that may cause damage to the case.
- Make sure the battery is properly secured in the vehicle to prevent movement or vibration.
- Replace any cables and connectors that have corrosion, rust or other damage.
- Do not lift the batteries by the thermals.
- Do not overtighten the bolts.

