
**M O S T F R E Q U E N T L Y
A S K E D Q U E S T I O N S**

THE MOST ASKED QUESTIONS ABOUT THE
AMECTRAN COMPANY AND THE EXAR-1

ELECTRONIC POWERED AUTOMOBILE

Q: What effect do the accessories, such as lights, windshield wipers and radio have on the performance of the EXAR-1?

A: Because these accessories operate on an auxiliary, independent 12-volt system, they do not effect the performance (i.e., range or acceleration) of the EXAR-1 under normal conditions; however, in an emergency, the entire system can provide electrical power for extended use.

Q: What type of air conditioning system does the EXAR-1 have?

A: First lets point out that there is no heat to leak into the passenger compartment from the engine, as in a gasoline powered automobile, the passenger compartment will stay naturally cooler in hot summer months and require somewhat less air conditioning.

Amectran has, in co-operation with Sankyo, developed a system, unique to the EXAR-1, but usable in all automobiles, to provide air conditioning. This system operates on the same general principle as your normal air conditioning system, however, the addition of a stabilizing factor improves the system sufficiently to operate at a cost in range of approximately twenty miles, or at a energy usage of about twenty percent of the operating distance of the EXAR-1. It should also be noted that the system can be turned on by the on board computer in advance of entry, so that the EXAR-1 can be cool by the time the driver is ready to go. Another advantage is that the air conditioning can be left operating while you leave the car, without fear of overheating, so that on trips where you must get in and out of the car, you don't have to recool it each time and go through the "cool down your 140 degree temperature car and sweat-up your fresh suit or dress" every time you leave the car for a few minutes.

Q: What type of batteries does it have?

A: At this point in time, the production model of the EXAR-1 will have advanced Lead-Acid, deep cycle, rechargeable batteries. The system includes twenty-four 6-volt batteries. If time permits, one of the several other batteries we are now experimenting with could be used in production. At this time, we are not sure if the actual mass production of these batteries is feasible, however, we anticipate that within two to three years, other battery systems will be available which will be retro-fitable to the EXAR-1.

Q: What Kind of new Batteries are in the near future? A: There are several types of batteries which are currently in various stages of development:

1. High temperature lithium sulfide
2. Nickel/zinc
3. Nickel/iron
4. Iron/chlorine
5. Sodium-sulfur
6. Fuel Cell (Several in this category)

NOTE: Until there is a substantial market created by the production of electric vehicles, battery manufacturers have no incentive to continue development of new advanced battery systems. A scale of economies will offset and allow these newly innovative battery systems to be commercially produced. By the time the batteries delivered with the EXAR-1 are ready for replacement there will no doubt be several alternatives for the owner of an EXAR-1 Electronic Powered Automobile.

Q: How often must the batteries you are currently using be replaced?

A: The lead-acid batteries currently in the EXAR-1 would need to be replaced approximately every three years under what is considered normal use, i.e., 40,000 to 60,000 miles.

Q: What would be the cost of such replacement?

A: In today's dollars, the cost of such replacement would be approximately 4 to 5 cents per mile, even if you added the cost of electricity, at 2 cents per mile, 100 miles could cost \$7.00 (basic cost).

Q: If one battery goes bad in the system, will the car still be able to drive?

A: Actually, several batteries could go bad and you would still be able to drive, however, your range would be reduced.

Q: How do the EXAR-1 batteries differ from regular car batteries?

A: The extremely heavy-duty 6-volt lead-acid batteries are designed for heavy discharge over a long period of time, for hundreds of full recharging cycles (discharge of up to 80 percent) which is necessary for an electric automobile, whereas, conventional car batteries are meant to be discharged heavily for only a very short period of time.

Q: What material is the body made from?
How strong is it?

A: The body of the EXAR-1 is to be constructed with panels of Acrylic laminated Kevlar. This material is color-impregnated so that it will never need painting under normal circumstances. The color is actually in the material, not on the material, therefore a slight scratch in the material (which is difficult to do) can easily be buffed away and the same color appears underneath the scratch so as to make the scratch blend with the rest of the car.

A further exceptional feature of this material is that should an accident occur (say, on the left quarter panel), the cost to replace a new part would be approximately \$3.00 - \$4.00 per square foot; therefore the total cost difference of approximately \$60 to \$80 vs. \$485 to \$525 for current steel automobiles.

As to strength, if you were to take a hammer and strike a metal car part, while the steel would bend and cause costly damage, the Acrylic/Kevlar part would simply give (with the same blow) and return to its normal shape, with no more than a slight scratch. In an accident the energy absorbing Acrylic/Kevlar would hold up much better, provide more safety, as cause less associated damage.

Q: What options are available on the EXAR-1 ?

A: There are NO options on the EXAR-1, since the company's attitude is that if something is good and worthwhile enough to be on the automobile, it should be

standard EQUIPMENT. But, the standard equipment of the EXAR-1 includes such items as: tachometer, AM/FM stereo with tape player and probably a telephone, Kevlar/Acrylic body, air conditioning, heating, rear window defroster, bucket seats, plush-pile carpeting, electric sun roof, electric windows, 4130 chrome/alloy chassis, energy level indicator, microprocessor computer system, anti-theft devices, computer display specially designed Goodyear tires, specially designed wing windows, vents and many, many more features not normally considered for other automobiles.

The only choice that the customer has is that of color. Body colors available are black, white, blue, yellow, red, green, bronze and silver. It should be noted that Amectran reserves the right to make such modifications to the EXAR-1 at any time and without notice as is desirable and necessary to improve the vehicle or to comply with Federal or State government regulations.

Q: If I live in Smuts, 'rural anywhere' can I order a car?

A: Yes, regardless of where a person lives, it is possible to order a car. Amectran takes no liability whatsoever as to having a service facility near where you would live. However, service for the EXAR-1 is not so complicated that it can't be taken to any garage. If a special part is necessary, Amectran can probably get the car fixed faster than GM, even if there is no facility within hundreds of miles. Furthermore, the EXAR-1's maintenance requirements are considerably less than those for gasoline automobiles with their planned obsolescent parts. Where gasoline cars have some 28,000 parts and the EXAR-1 has only some 6,000 parts, the chance for failure is reduced considerably. Any garage can fix any mechanical problems while any electrician can repair any electrical problems making repairs and maintenance quite easy. The automobile would have to be arranged to be picked up by the purchaser of the vehicle, F.O.B. the nearest manufacturing facility, or make prior arrangements with Amectran for shipping your vehicle to you. The price of the EXAR-1 does not include shipping arrangements. If this arrangement is satisfactory with the consumer, there is no problem with ordering cars from virtually anywhere in the World.

****Note:**

For this type of order along with the standard operation and service manual, special servicing instructions will be made available.**

Q: How many cars will Amectran produce?

A: The estimated production for Amectran at each particular manufacturing facility is 20 cars per day, per 8 hour shift; or 10,000 cars per year per factory.

Q: Is the EXAR-1 pollution free?

A: Yes, battery/electronic drive in general is largely pollution-free; there is no exhaust or pollutants emitted like a gasoline or diesel-powered car. This applies only to electric vehicles, not hybrid vehicles which operate by a combination of a battery storage system and usually an internal combustion engine.

Electric vehicles are classified as inherently non-polluting vehicles by the U.S. Environmental Protection Agency. Although some pollution is emitted from generating power plants, it is much easier to control at the source than in millions of individual polluting vehicles. Also, these plants are relatively few in number.

Q: What are the basic performance characteristics of this car, i.e., range, top speed, etc...?

A: The EXAR-1 has a maximum speed of 85 mph, and has a range of 75 to 100 miles at the cruising speed of 55 mph.

This range will vary slightly depending on the road conditions, individual driver, and type of driving cycle. Since relatively no energy is consumed when the accelerator pedal is not depressed, the EXAR-1 does not waste energy when coasting or idling as an internal combustion engine automobile will.

The acceleration of the EXAR-1 is comparable to that of normal internal combustion engine automobiles now in production and can move from 0 to 55 in 12 seconds. Even the prototype, although grossly overweight, has been independently tested at 0-30mph in 6 seconds, where the \$16,000,000 Department of Energy's automobile made by GE, Chrysler, Globe Union, JPL was 50% slower and couldn't be kept running two days in a row. The handling of the EXAR-1 is comparable to that of the better European cars since the center of gravity of the automobile is very low, the wheelbase and the weight is distributed evenly, cornering and handling of the car are much improved over that of most ICE automobile.

Q: Is the acceleration good enough to enter a rapid-moving expressway or pass safely?

A: Yes, the EXAR-1 has more than adequate acceleration to enter a rapid-moving expressway or for in-town stop and go traffic. Unlike other electrics, its acceleration and passing ability equals that of many conventional gasoline and diesel cars.

Q: Will the performance of the EXAR-1 fulfill my everyday driving needs?

A: Certainly the EXAR-1 is not for everyone, however, it can fulfill the needs of a huge segment of the American automobile market, especially second and third car market. According to a recent Department of Energy Report an electric vehicle with a 40 mile range could be used for over 90% of all trips and one with a 100 mile range could accommodate almost all of the local travel needs of a multi-car household and business fleets at a substantially lower cost per mile.

Q: What was the purpose of Amectran in designing this type of car?

A: Amectran has taken a "ground-up" approach to the electric car with its overall performance in mind to be an efficient and marketable electric automobile rather than a converted or golfcart-type electric car. The purpose of the EXAR-1 is, "to combine the roominess of a mid-sized automobile, the compactness of an efficient practical motor vehicle and futuristic design of an expensive sports car." Amectran's intention in the evolutionary EXAR-1 is to give the public an economical alternative in their personal transportation that they can be proud of and drive in comfort and safety.

Q: What are the production and marketing plans for the EXAR-1 in the near future?

A: Amectran plans to produce the EXAR-1 vehicles in medium-size plants designed to turn out specific numbers of pre-sold vehicles each year (a projected 5,000 units annually per 8-hour shift) and to market the vehicles directly thus avoiding traditional automotive industry costs such as dealer floorplans, inventories and markups. The regional manufacturing plants basically are assembly plants for components made elsewhere with the exception of the bodies which are manufactured at each plant.

Q: What about replacement parts?

A: Replacement parts will be available through the nearest assembly plant. In case of any inquiry the consumer may call a toll-free number for Parts and Service.

Q: Is the EXAR-1 safe?

A: Yes, most definitely. The EXAR-1 will be produced with all Department of Transportation (DOT) specifications in mind and will meet or exceed all these regulations. The materials used as well as the construction of the materials will offer the consumer an extremely safe car in comparison with other vehicles on the road today. For instance, the EXAR-1 will have a 5 to 7 mph crash bumper whether the current law at the time necessitates this or not (currently required is a 2 mph bumper). This bumper is not presently a current regulation requirement by law. Presently, the intention is to use passive restraint systems such as air bags, are contemplated. A seat belt and shoulder harness protection system will be standard equipment. Also, the box-type Chrome/Alloy steel frame combined with the strength of the Acrylic/Kevlar body panels and roll cage, will provide protection for the occupants in the event of a crash.

Q: In an accident, isn't the battery acid dangerous?

A: The batteries are not located within the passenger section of the automobile, but in front and rear sealed off compartments, in order to give maximum stability and prevent any contact between the passengers and the battery acid.

Q: Who can service my EXAR-1?

A: For those residing in the vicinity of a plant, service can be obtained at the plant's customer service center or you may call a 24-hour mobile service truck to service the unit in the most convenient location for you.

For those in other areas, information regarding the nearest servicing point can be obtained through the Service Department's toll-free number. Since there are so few moving parts in the EXAR-1 and little maintenance, frequency of servicing is greatly reduced.

For example, the motor needs no servicing for up to 8+ years from the date of purchase and this service is to replace the motor brushes (an inexpensive process). Other common mechanical servicing such as brakes and tire alignment can be performed at most conventional automobile service centers.

Q: How does the EXAR-1 handle in the rain or snow?

A: Excellent. Because of its premium-grade Goodyear tires as standard equipment, low center of gravity, equal weight distribution, front-wheel drive, and powerful electric motor (which achieves its maximum torque or pulling power at 0 rpm, rather than several thousand rpm like a conventional automobile). The EXAR-1 design is beneficial to this type of inclement road condition and therefore is superior to most other vehicles.

Q: What type of tires does the EXAR-1 have?

A: The tires for the EXAR-1 are supplied by the Goodyear Tire and Rubber Company which has been working for several years to develop a low rolling resistance tire to improve the vehicles' range. Amectran has demonstrated the advantages of using larger tires for improved performance on some of its past prototypes.

Q: Does the EXAR-1 have a transmission?

A: Yes, the 5-speed manual transmission in the EXAR-1 will be operated by the driver via a gearshift handle using a standard gear pattern. Although the EXAR-1 prototype includes a clutch pedal, shifting in the production models will operate much differently

than a gasoline automobile in that you select a gear to drive in and the EXAR-1 drive system will give you smooth acceleration from 0 to what ever speed you have set the gear for without further use of the clutch. For example:

- 1st. gear = 0 to 12 MPH
- 2nd. gear = 0 to 30 MPH
- 3rd. gear = 0 to 55 MPH
- 4th. gear = 0 to 72 MPH
- 5th. gear = 0 to 80 MPH

The computer being linked to this system will warn the driver whenever he is not operating the automobile in the optimal gear for a given driving speed.

Q: Can the EXAR-1 be towed?

A: The EXAR-1 may be towed like any other conventional automobile. For your safety, it is recommended that a proper trailer or tow-bar be used.

Q: What is the weight of the prototype EXAR-1 and what will be the difference in the weight of the production model? How much of that weight is batteries?

A: The EXAR-1 currently has a curb weight (without passengers) of 4, 715 pounds of which approximately 1,800 pounds are batteries. In production, it is anticipated the curb weight will be at least 1500 pounds less or some 3,215 pounds.

Q: What about a warranty?

A: With the purchase of every EXAR-1, a five(5) year warranty will go into effect on any defective parts.