

January 26 2002

Mobile Wireless MP3 Player
Group 10

Adib Naim – Group Leader
John-Paul Spiro-Colwell
John DiCapua
Erick Van Haaster

Faculty Advisor: Dr. Hong Man

The Mobile Wireless MP3 Player (MWMP) is a unique system that provides unsurpassed functionality and features to the customers. The main application of the MWMP is a car MP3 audio playback system. The innovative features include a wireless communication interface with a home computer for transfer of MP3 files to and from the device, and a 6.4" touch screen LCD panel. The MWMP will seamlessly interface with a car's existing audio system through the use of a radio frequency modulator. The user will simply tune his or her radio to a specific FM frequency transmitted by the MWMP directly into the car radio's antenna jack.

The MWMP can be installed in any vehicle containing an existing car audio system. Vehicles without a car audio system can still use it if some minor modifications are made. With some other modifications to the appearance and encasing of the MWMP, it could be used as a home MP3 playback system. The advantage of this setup is the aesthetic result of not having a personal computer in visible view in a home's living room.

Potential users of the MWMP are the middle class and car audio enthusiasts, since the price of the product will be significantly higher than regular car audio systems. However, its price matches that of higher end car audio systems that do not provide the same functionality and features as the MWMP.

Other car MP3 players match the MWMP in terms of MP3 file storage capacity, but are severely limited in three major aspects: ease of use and functionality, wireless transmission of MP3 files, and expandability. Current car MP3 players on the market have small displays that hinder the fast accessibility of information and functions, requiring more attention from the driver than the MWMP would. They also do not have a wireless connection to the home computer, and need to be physically removed from the vehicle and attached to the home computer in order for file transfer to take place. This results in an extremely inconvenient and cumbersome device.

The MWMP has tremendous expandability potential. Since it is essentially a mini media computer, other features that may be added to the MWMP are limited only by what a computer is capable of. Such features include:

- DVD Video playback
If small LCD screens are installed in the car for the passengers and a DVD player is added to the MWMP, movies can be watched.
- Cell phone integration
A car cell phone can be integrated into the MWMP, with a microphone above the driver's head. The LCD panel can be used to quickly access a list of people to call; the microphone and car speakers would offer hands-free operation of the cell phone.
- Global Positioning System
With the addition of a GPS, the LCD panel can be used to display a map and current position on the map. Such systems already exist as stand-alone units.

- Games
Again with separate LCD screens installed throughout the vehicle, and the addition of game control pads, passengers would be able to select various games to play.

- Internet access
Through the installation of a satellite downlink and cell phone uplink, internet access can be achieved with the MWMP. This would be a very expensive addition, limited for luxury cars.

- Individual audio playback for each passenger
Through the use of headphones and individual control pads, each passenger can chose to listen to his or her own choice of music. This includes either MP3 files or radio stations.

As one can see from the above list of expandable features, the MWMP is a very versatile product that may be adapted to serve multiple purposes. The only limiting factor is what price people are willing to pay for the MWMP. Various models of the MWMP can be produced for different customer bases, resulting in the MWMP being sold in different markets.