

Gracenote Playlist Plus

Mix your music to match your mood.

Gracenote Playlist Plus™ gives the music fan new ways to enjoy music collections on portable and low-end devices. Now, even flash-based portable MP3 players, mobile phones, home CD/DVD players and car stereos that do not have Internet connectivity, CPU resources or disk drive storage to support music recognition, can provide automatic intelligent playlists that play back a mix of songs to match your mood. Users can simply plug in a portable MP3 player or music phone to a Playlist Plus-enabled car stereo, for example, and instantly get great mixes while on the road.

Playlist Plus analyzes text data available in file tags and filenames to link the music to a sophisticated internal database of relational music information, enabling advanced playlisting. For example, with Playlist Plus enabled, if the user wants to play music that is similar to the song currently playing, More Like This™ can be selected to instantly generate a focused mix of related songs from the music collection. More Like This Playlists and other Auto-Playlist functionality is invaluable in situations where navigating a large music collection is impractical on devices with small screens and limited controls like car stereos, MP3 players or cell phones.

BIG INTELLIGENCE IN A SMALL PACKAGE

Designed for Limited Resource Devices

Playlist Plus is designed for consumer electronic devices when memory, storage and Internet capabilities are limited or not available. Examples include car stereo systems, portable music players, cell phones and home stereo CD/DVD players that play MP3-CD/DVDs.

Expanded Genre System Provides a New Level of Music

Mixing Sophistication

Like embedded Playlist™, Playlist Plus is powered by proprietary metadata types developed by Gracenote's editorial team of music experts, including Gracenote's newly expanded genre system of more than 1,600 highly granular genre categories and associated relational data. This lets Playlist Plus find subtle relationships between songs normally missed by simpler systems. For example, a "Punk Pop" song may be more similar to a "Ska Revival" song than it might be to one belonging to another "Punk" sub-category, such as "Hardcore Punk".

Integration with Voice Recognition: Gracenote MediaVOCS

Playlist Plus is also designed to seamlessly work with Gracenote MediaVOCS™, which provides voice recognition controls for consumer electronic devices such as cars stereos and other devices with limited user interfaces.

BASED ON THE INDUSTRY'S MOST ADVANCED PLAYLIST GENERATION ENGINE

Advanced Playlist Functionality

Playlist Plus includes much of the same advanced playlisting functionality found in Gracenote Playlist even with its small data and memory requirements.

More Like This: One-Touch Playlists

Gracenote Playlist Plus provides pre-defined functions that allow the music fan to generate one-touch playlists by simply selecting one or more songs, albums or artists as seeds. Playlist Plus returns a new mix of similar songs each time it is selected, and automatically incorporates new music in the mixes as the user's collection evolves. The resulting playlist may cross genres and eras to create a playlist of similar music based on the user's mood, just like getting a personal mix from a radio programmer or DJ.

Dynamic Playlists: Automatically Adapt as the Music Collection Grows

As new files are added to a music collection, Playlist Plus automatically updates its dynamic playlists to include the new songs.

Integration of Personal Listening Preferences

Playlist Plus can also create playlists that pay attention to the music fan's own music preferences as indicated by listening activity and personal ratings of songs, albums and artists. The more the user interacts with the music library, the smarter Playlist Plus gets.

Pre-set Dynamic Playlists

Playlist Plus comes pre-loaded with an extensive set of pre-set dynamic playlists such as "70's Soul and Funk" and "Rock On, Dude". Developers can also define and name their own additional customized pre-set dynamic playlists.

Name and Save

Users may name and save any dynamic playlist definition so that they can easily run it again at any time to generate a new mix or save a specific result set of tracks as a traditional, fixed playlist.

Custom User Assignment

To further personalize the results that Playlist Plus produces, the user also has the ability to manually classify songs with descriptors that more closely match their own preferences.

WHAT'S INCLUDED IN DEVICE DEVELOPMENT KIT

- Sample application and source code
- Sample playlist database
- Source code for operating system abstraction layer
- Reference ports for Windows, Linux or Darwin platforms
- Embedded mapping lists and decryption key
- Object code for full database lookup layer, cross-compiled to device
- Documentation

Consumer Electronics Device System Requirements

• Prototyping and Development

The minimum requirements for the PC for device code development are as follows:

- **Operating Systems Supported:** Windows 2000, Windows XP, Suse Linux 9 or Macintosh OS X
- **System Requirements:** 256 MB RAM to build sample code; 2 GB hard disk space for tool kit files, database and documentation
- **Developer Environment:** The Windows sample application and supplied source code use Visual Studio 6.0. The Linux and Macintosh OSX sample application and supplied source code use GCC with GNU Make-compatible Make files. The source files are written in standard ANSI C and are designed for easy porting and compiling on various target operating systems and environments.
- **Code:** C source code/Visual C++ 6.0 or GNU development tools (GCC, Make, etc)

• Target Device

The device code is designed to have a small footprint allowing simple integration with the application and to be portable to many architectures. Gracenote Playlist for devices is compiled into object code for the target microprocessor and operating system. The minimum requirements to run on a device on most platforms are as follows:

- **Processor:** 64 and 32-bit microprocessor and operating system; other designs by Gracenote approval.
- **Operating Systems Supported:** Most commercial 32 bit Operating Systems, including Linux, VxWorks, QNX, and others. Other operating systems may be supported upon customer request.
- **ROM:** 256 bytes for the decryption key
- **Code:** C source code / Visual C++ 6.0 or GNU development tools (GCC, Make, etc)
- **Memory:**

Code Size: ROM, FLASH, or Copied into RAM from the HDD (Code sizes are for an x86 platform. Instruction sets on other platforms may be twice as big.)	<200KB*
Static Data	<100KB*
Heap: Peak Usage (RAM)	200KB*
Stack Usage	10KB*
Persistent Storage = Flash/ROM/HDD (Artist-->Genre map based on 30k artists, phonetic metadata)	4MB* (6MB* with ASR/TTS)
Database for playlisting	<1KB* per track

*All values are preliminary and are subject to change