

Beatnik Rich Music Format™

Play RMF- Your Ears Will Thank You

What is RMF®?

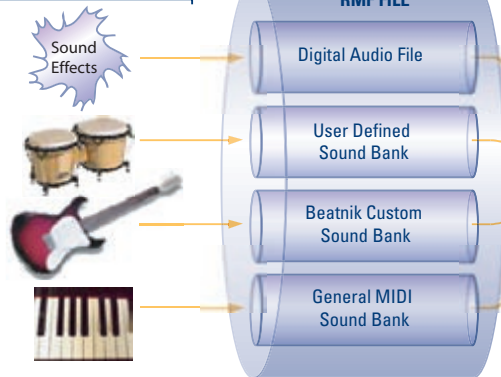
RMF stands for Rich Music Format™, a new type of sound file that's transforming music and sound on digital and wireless devices, such as mobile phones and PDAs. Developed by Beatnik for playback with the Beatnik Audio Engine™ (BAE™), RMF combines MIDI's compact file size and interactive capabilities with the high fidelity of digital audio. The BAE, with RMF, dramatically enhances the sound quality of ringtones and user interface sounds on any digital device. Developers are using RMF to create mobile audio content applications, while composers are leveraging the flexibility to create music and sound using multiple audio sources

Three Types of RMF Files



The first type of RMF file contains playback data for General MIDI (GM) sounds built into Beatnik's audio engine. This kind of file contains no recorded sounds, but rather binary instructions on how to make the BAE produce sound. It's like sheet music for an orchestra: it tells all the instruments - which are stored with the BAE - when to play, what notes to hit, how loud or soft to play, and when to stop.

MULTI-TRACK RECORDING



BENEFITS OF RMF

- Compression
- Encryption
- Copyright Notice
- Lockable to Devices

RMF can contain instruments from multiple sources as well as digitally recorded samples. Through the use of file metadata unique identifiers can be used to lock content to a specific device



The second type contains one or more digitally recorded audio files, which produce what we typically think of as 'recorded' music or sound. This type of file is usually bigger than the first kind of RMF file, because digital audio takes up more space than MIDI instructions.



The final type of RMF file contains both General MIDI instructions, and high-fidelity digital audio samples. Whether it's a

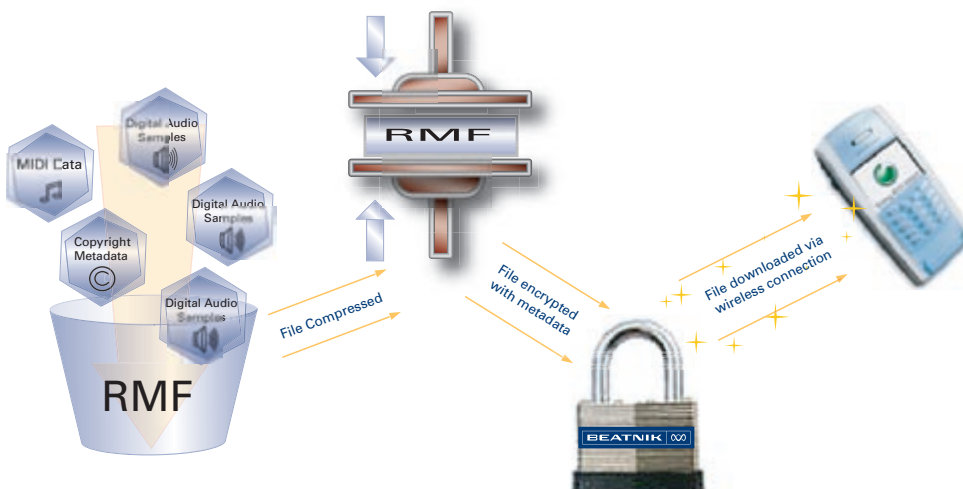
custom instrument like a sampled Balinese gong for your orchestra, or a couple of voice parts that are simply played back over a MIDI background, this type of RMF file offers limitless sonic possibilities. You can build unique custom instruments by sampling external sound sources and calling them in your composition, producing a completely original, stylistic sound.

How Is RMF Different Than Other Formats?

As mobile music download numbers continue to climb, RMF can provide unique benefits at every major link in the value chain from the original composer to the end-user.

RMF files are small, efficient and bundle all the resources needed for a song— performance, instrument, sample, and copyright information – into a single file with data compression and encryption. Files are completely optimized for real-time playback. RMF files are created by using tools already familiar to composers such as industry standard MIDI sequencers. To export files in RMF, Beatnik offers the Beatnik Editor™ application which integrates with many sequencer products.

The timing and controller portion of RMF is based on the Standard MIDI file model. Data compression for audio samples and



RMF adds significant benefits to General MIDI files as they can be compressed and encrypted. They also contain metadata fields for valuable security data such as copyright and composer.

MIDI data is also provided – audio data compression options include MPEG (on supporting devices), IMA 4:1, ulaw and alaw.

RMF is not streaming audio

Streaming audio is digitally recorded music and sound transmitted in real time over a wireless network and the Internet. Listeners wait through a buffering period before the audio stream begins, and must remain connected to the stream until they're finished listening. RMF files, on the other hand, generate near CD-quality sound, download and begin to play instantly, and do not require a perpetual connection during playback. RMF files are also ideal for situations that require a non-linear audio approach, like interactive remixes of hit songs, interactive animation accompaniment, or interactive mobile and online games.

RMF is not MP3

MP3 is a technology that allows you to compress an audio file to between one-fifth and one-one-hundredth of its original size. MP3 compression makes it possible to transmit music and sound over a wireless network or the Net in minutes, rather than hours, but there is a trade-off: the more you compress an audio file, the more the fidelity of that file decreases. RMF sidesteps this equation by playing back full-fidelity instrument samples from the 'sheet music' of MIDI files, and then mixing in sparing amounts of digital audio samples. The music sounds great, and the file sizes stay low.

RMF is interactive

Along with its combination of tiny file size and incredible sound quality, RMF adds interactivity to digital audio. A typical music download work flow is as follows: users arrive, download a digital audio file, and go offline again to listen to it. RMF enables a new and engaging twist to this workflow. Applications like interactive music remixes allow users to play *with* the music by adjusting tempo, key, timbre, and track mixes in real time. Simply listening to music is no longer a cutting edge activity in the mobile marketplace. RMF will help change this by providing the technology necessary for a completely different and interactive music experience.

Who's Using It?

Mobile Developers

Since 1997, RMF has been used in dozens of PC and console games. With the evolution and explosion of the mobile device market, RMF's tiny file size, high quality and interactivity offer the best solution for audio on wireless devices. Whether it's a polyphonic ringtone on a cell phone or interactive music and sound for a game on a PDA, RMF is poised to become the industry leading audio format.

The BAE, with RMF, provides a powerful combination of instant response, high quality, and flexibility - ideal for games and audio content applications such as previewing and exchanging music.

Audio Producers

In a time where most cell phone ringtones are a collection of ear-piercing "bleeps" and "bloops", RMF is music to the market's ears. That's because Beatnik soundbanks are fully configurable, and can be built using custom instrument samples, allowing for a more personalized audio experience. This is also great for sonic branding, opening up new possibilities for a branded audio experience for a particular wireless device.

Composers/Musicians

The Beatnik Editor™ links with most major sequencer tools including Digital Performer, Cubase, and LogicAudio. This allows composers to create their music using their favorite composition tools, while providing a simple way to mix their creation with linear samples and export the new song

as an RMF file.

Protect Your Creations

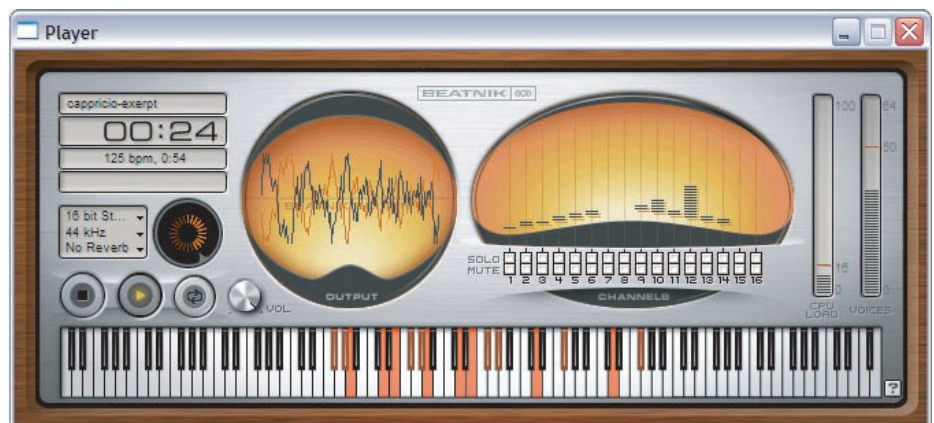
RMF files are automatically "locked" with a 40-bit encryption scheme. Information including composer's name, copyright, song lyrics, playback device identifiers and publisher can travel with an RMF file wherever it goes. This provides a level of security that benefits everyone involved in the creation and distribution of RMF files. Specifically for composers, encryption provides a barrier against duplication of the combinations of sounds that comprise unique custom instruments.

Find New Clients

The proliferation of RMF files and the BAE opens up brand new markets for your compositions. There's a whole generation of mobile and wireless multimedia and game developers out there who are constantly looking for audio to incorporate into their work, and since RMF compositions are cross-platform compatible, the same content can be marketed to multiple clients, saving valuable time and effort previously needed to develop and/or convert compositions to play on multiple devices.

Contact Information

Beatnik, Inc.
 60 E. 3rd Avenue Suite 400
 San Mateo, CA 94401 USA
 Phone: +1 (650) 295-2300
 Fax: +1 (650) 295-2398
 sales@beatnik.com
 www.beatnik.com



Composers and sound designers can integrate the Beatnik Editor into their normal production workflow to create high-fidelity, interactive, custom instruments and compositions.