SRK SD Audio Playout Module

Introduction

The SRK SD Audio Playout Module allows SRK transmitters to broadcast audio files stored on an SD card and is designed for unattended, stand-alone operation where a single audio track, or multiple audio tracks, must be broadcast repetitively. The module is an optional addition to any of SRK's standard range of FM transmitters and replaces the standard audio input.

Operation

The file(s) to be played are stored on a single SD card (not supplied). Up to 255 files can be played. SD or SDHC (not SDXC or SDUC) cards of up to 32G can be used.

The audio files to be played must be uncompressed WAV format. All standard sampling rates from 8KHz to 48KHz are supported.

File naming convention

The playout module uses a standard FAT filing system.

All files must be in the root directory, with no sub-directories.

If a single file is to be played then it can be named anything, with the .WAV extension. File names should be limited to 8 characters in length, plus .WAV extension.

If multiple files are to be played then they must be named 001.WAV up to 255.WAV.

Playout order

If a single file is to be played then it will play continually, with a short pause between plays.

If multiple files are to be played then they will be played in the numerical order of the file name, with a small pause between tracks. File names need not be contiguous. When a file finishes playing the next highest number file is played. After the highest file number is played, the lowest file number is repeated. The play cycle then continues as before.

However, if there is a large gap in file numbers the pause may be very long as the module searches for non-existent files. In this case an additional file can be added to the SD card. This file is a text file and must be named mode.txt. The file contains the highest number of the audio file to be played.

For example, if only 10 files are to be played then they should be named 001.WAV to 010.WAV, and the mode.txt file should contain "10". The mode.txt file can be very easily created using WordPad or NotePad. Without the mode.txt file, the above example would still play, but there would be a considerable pause between the end of 010.WAV and start of 001.WAV.

File format

The audio files to be played must be stored in uncompressed WAV format. The vast majority of WAV files are uncompressed. However, it is possible to get a compressed WAV file. These will not play on the playout module and there is no easy way to determine if a given WAV file is compressed or uncompressed.

If in doubt, or if your files are currently in some other format (MP3, ACC etc), use Audacity to convert them to uncompressed WAV files.

Follow these steps to do this:

1. Download and install Audacity (https://www.audacityteam.org/). This is freeware.
2. Start Audacity and open a new project.
3. Import the file to be converted.
4. Export the project as an uncompressed PCM WAV file to the SD card you will be using.

Sampling rates

The playout module will accept audio sampling rates from 8K to 48K. Higher sampling rates will sound better but will consume more space on the SD card. For long audio playout times a compromise between high and low sampling rates may be necessary.

Card type

Experience has shown that many SD cards will fail after a few months continuous use. So unless the card will be changed frequently it is recommended to use “industrial grade” SLC (Single Level Cell) SD cards.