



SA UltraCode

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Introduction

At present nobody leaves home without a smartphone.

At live events you have to look hard for someone without a smart phone. This massive presence almost begs for interaction with these devices at those events

Sending data to the mobile phones in the form of, information, advertisements, song info, contest, hyperlinks, text (real-time) provides a marketing opportunity. Also remotely "triggering" an event on the mobile phone itself, like a light show (controlled color changes of the mobile display) or send it a message with a link to a particular website are possible.

The massive use of mobile phones during a live event often completely overloads existing Wi-Fi, 3G/4G Internet and Bluetooth connections.

The challenge thus becomes to devise an alternative data carrier and the SA solution is:

Sending data through (inaudible) sound!

At present two types of codecs that are able to send data through sound are available: SA UltraCode codec and the Sonic Notify codec.

Operation

The Stage Accompany UltraCode codec data can be sent to smart phones as sound. Text, "triggers" and other data sent from the DMX console at a live event is translated by the SA UltraCode codec into sound and broadcasted through a PA system.

The mobile devices receives the sound (with the data) through the microphone of the device. The sound received is decoded back to data that enables the smart phone, with the pre-installed SA app that "understands" the SA UltraCode codec, to react to the commands.

The technique

Data as sound at a live event, with many decibels of sound, will that work?

Yes, several successful tests have been carried out at major live events.

By using the SA UltraCode and the SA RB3 SMS (Sonic Message Series) speakers (with the SA8535 Ribbon Compact Driver), it is even possible to send sound with the data, to outperform the SPL levels of the existing PA system playing at a live event.

The frequency is high enough to be inaudible for humans and animals but low enough for the microphone of the smart phone to still receive the sound (and the data).

Can I send Ultra Code with every speaker?

In principle yes, but at a live event, the sound is so loud that special high frequency loudspeakers must be used to get above the existing PA and to sustain it for hours.

The only speaker capable to perform this is the SA RB3 SMS (Message Sonic Series) by using the SA8535 Ribbon Compact Driver, with a range that extends to 90kHz (measured at the labs of Brüel & Kjær).

More information

Additional information about Stage Accompany UltraCode, StageTools and the RB3 speaker can be found on:

<http://www.stageaccompany.com/products/software/software.html>

<http://www.stageaccompany.com/products/sms/sms.html>

Questions or comments concerning SA Ultra Code and related subjects are welcomed at the following email address:

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