DAB Test Transmitter SDB601

Generation of DAB test signals

Photo 43850-1

Brief description

The input signal of the DAB exciter with integrated COFDM modulator is an ETI(NI, G703) or ETI(NA, G704) signal, the type of signal applied being detected automatically. There are two physical inputs (main and standby path), a FIFO input being used to compensate input signal clock fluctuations relative to the reference clock.

The output signal is a DAB signal according to ETS 300401 at the RF. The time stamps contained in the signal are evaluated and used to control the dynamic delay compensation which may take up to one second. The data stream can additionally be delayed by up to one second within a static delay section. The ETI signal transports data channels, which may be used for configuration (TII: transmitter identification information, static delay, etc) of the transmitter network, both in the NA layer (NASC: NA service channel) and in the NI layer (MNSC: multiplex network service channel). This data is extracted from the data stream and taken to the controller for further evaluation. Retrieval of the configuration information and detection of the dynamic reconfigurations are followed by error control coding and time interleaving.

For test purposes, PRBS (pseudo random binary sequence) signals can be inserted into a subchannel. After the transmission frame has been formed, the DAB time signal is generated by means of an IFFT calculation. The desired TII pattern and the guard interval are then added. The digital precorrector is able to correct the amplitude and phase of the signal and to influence the frequency response.

Features

- Extremely high transmission quality
- Great ease of servicing thanks to modular design
- Integrated COFDM modulator for ETI(NI) or ETI(NA) input signals
- Optionally integrated GPS receiver
- Input for external frequency synchronization
- Built-in fans
- DAB RF output
- I/Q signal output for maximum simulation capability in conjunction with the SMIQ

Specifications

Input Signals

Input 1	ETI(NI,G703) or ETI(NA,G704) according to ETS 300799
Input 2	ETI(NI,G703) or ETI(NA,G704) to ETS 300799
Connector	BNC, 75 Ω, XLR adapter in accessories
External reference	sinewave 1 MHz, 2.048 MHz, 5 MHz and 10 MHz
GPS antenna connector	active DC, 5 V remote power supply, BNC

Output signals

I/Q analog output	DAB baseband signal
Connector	BNC, 50 Ω
Level	0 dBm ±0.2dB shoulder >45 dB at f >968 kHz
RF output 1	DAB signal
Connector	BNC, 50 Ω
Level	0 dBm to 8 dBm shoulder >45 dB at 4 dBm, 200 MHz shoulder >43 dB at 4 dBm, 1472 MHz
RF output 2	DAB signal
Connector	BNC, 50 Ω
Level	0 dBm ±1 dB shoulder >45 dB at 4 dBm, 200 MHz shoulder >43 dB at 4 dBm, 1472 MHz
Frequency range	174 MHz to 240 MHz, 1.452 GHz to 1.492 GHz
Transmission mode	I, II, III, IV

Interface

External computer	RS-232-C
Remote control	RS-485/CAN

Ordering information

DAB Test Transmitter	SDB601	3542.1009.02
	SDB601	3542.1009.03

(incl. manual, operating software (CD-ROM), RS-232-C cable (0 modem))

Option

Built-in GPS receiver	2080.4700.02