Optimod-FM 5500i, 5700i, 8600Si, 8600 and 8700i Comparison

Revised 9 June 2017

Feature	5500i	5700i	8600Si	8600	8700i
Rack space required	1u	1u	1u	3u	3u
Construction	Large boards mounted on standoffs inside chassis	Large boards mounted on standoffs inside chassis	Large boards mounted on standoffs inside chassis	Large boards mounted on standoffs inside chassis	Large boards mounted on standoffs inside chassis
DSP processing power	1000 MIPS	3000 MIPS	3000 MIPS	4500 MIPS	4500 MIPS
Display	2x40 monochrome LCD, LED meters	2x40 monochrome LCD, LED meters	2x40 monochrome LCD, LED meters	Quarter-VGA active matrix color LCD	Quarter-VGA active matrix color LCD
User Interface	Rotary encoder, soft keys, dedicated keys	Rotary encoder, soft keys, dedicated keys	Rotary encoder, soft keys, dedicated keys	Rotary encoder, dedicated keys, joystick	Rotary encoder, dedicated keys, joystick
Meters visible at all times	Yes	Yes	Yes	Yes	Yes
RDS/RBDS Encoder	Yes	Yes	Yes	Yes	Yes
MX Peak Limiter Technology	No	No	Yes	Yes	Yes
Xponential Loudness™ psychoacoustic processing	No	No	No	No	Yes
Multipath Mitigator/Phase Corrector	No	No	No	Yes	Yes
Loudness capability for given artifact level (re 8200)	+1.5	+2.5 dB.	+2.5 dB. Additionally, the 8600S offers about 3dB more HF energy and more transient punch than other Optimod-FM processors.	+2.5 dB. 3dB more HF energy; more transient punch.	+2.5 dB. 3dB more HF energy; more transient punch.

Feature	5500i	5700i	8600Si	8600	8700i
Levels of preset customization	Basic and intermediate from front panel; advanced available only from PC Remote application	Basic from front panel, advanced available only from PC Remote application	Basic from front panel, advanced available only from PC Remote application	Basic, intermediate, advanced, all accessible from front panel	Basic, intermediate, advanced, all accessible from front panel
Number of user presets	Essentially unlimited	Essentially unlimited	Essentially unlimited	Essentially unlimited	Essentially unlimited
User presets backed up in non-volatile storage	Yes	Yes	Yes	Yes	Yes
2-band AGC	Yes	Yes	Yes	Yes	Yes
Window gating in AGC	Yes	Yes	Yes	Yes	Yes
Dual-Mono AGC	Yes	Yes	Yes	Yes	Yes
Sum-and-difference processing available on AGC	Yes	Yes	Yes	Yes	Yes
Stereo Enhancer	Orban 222-style only	Orban 222 and “Delay” style	Orban 222 and “Delay” style	Orban 222 and “Delay” style	Orban 222 and “Delay” style
Bass Shelving EQ	6, 12, 18 dB/octave	6, 12, 18 dB/octave	6, 12, 18 dB/octave	6, 12, 18 dB/octave	6, 12, 18 dB/octave
Parametric EQ	3-band	3-band	3-band	3-band	3-band
DJ Bass Boost	Yes	Yes	Yes	Yes	Yes
Brilliance Control	Yes	Yes	Yes	Yes	Yes
Program-adaptive HF Enhancer	Yes	Yes	Yes	Yes	Yes
Speech/music detector automatically optimizes processing for input material	Yes	Yes, advanced	Yes, advanced	Yes, advanced	Yes, advanced
Downward Expander, single-ended noise reduction system	Yes	Yes	Yes	Yes	Yes
Dual Mono Multiband Compressor	No	Yes	Yes	Yes	Yes

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Number of bands in multiband compressor	2, 5	2, 5	2, 5	2, 5	2, 5
Compressor Look-ahead processing	No	Yes	Yes	Yes	Yes
Program-adaptive clipping distortion controller	Yes	Yes	Yes; MX technology significantly more advanced than 5700	Yes; MX technology significantly more advanced than 5700	Yes; MX technology significantly more advanced than 5700
Bass clipper modes	Hard	Soft, medium, hard	Soft, medium, hard	Soft, medium, hard	Soft, medium, hard
MX Bass pre-limiting modes	No	No	Soft, medium, hard	Soft, medium, hard	Soft, medium, hard
Bass clipper shape control (Hard mode)	Yes	Yes	Yes	Yes	Yes
Patented anti-aliased clippers and overshoot compensator	Yes	Yes	Yes	Yes	Yes
Subharmonic Synthesizer	No	No	No	No	Yes
Exclusive "Multipath Mitigator" Phase Corrector	No	No	No	Yes	Yes
Latency	5, 15 ms depending on preset	3.7, 12, 17, 22 ms depending on preset	3.7, 12, 17, 22, 265, 270 ms depending on preset	3.7, 12, 17, 22, 265, 270 ms depending on preset	3.7, 12, 17, 22, 265, 270 ms depending on preset
Activating Ultra-Low Latency Structure (5 ms delay)	DSP code reload with ~1-second audio mute	No code reload; mute-free	Code reload required when switching between MX and other structures	No code reload; mute-free	No code reload; mute-free
Low-Latency Monitor Output	Yes; 4 ms	Yes; 4 ms	Yes; 4 ms	Yes; 4 ms	Yes; 4 ms; includes complete FM processing chain for better air-sound simulation
DAB+ / HD radio /Netcast support	No (except for built-in diversity delay)	Two independent digital outputs	Two independent digital outputs	Two independent digital outputs	Two independent digital outputs

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HD/streaming Processing Chain architecture	NA	HD & FM processing chains are independent except for AGC	HD & FM processing chains are independent except for AGC	HD & FM processing chains are independent except for AGC	HD & FM processing chains are independent except for AGC
HD Look-ahead Limiter implements "true peak" Control	NA	Yes	Yes	Yes	Yes
Built-in HD Radio Diversity Delay	Up to 16 seconds	Up to 16 seconds	Up to 16 seconds	Up to 16 seconds	Up to 16 seconds
ITU-R BS. 412-9 controller	Yes	Yes	Yes	Yes	Yes
ITU-R BS. 412-9 measurement tools	Yes	Yes	Yes	Yes	Yes
ITU-R BS.1770 / R-128 Short-Term and Integrated Loudness Meters	NA	Digital radio processing chain only	Separate meters for digital and analog radio processing chains	Separate meters for digital and analog radio processing chains	Separate meters for digital and analog radio processing chains
ITU-R BS.1770 / R-128 configurable HD/streaming Loudness Control	No	Yes; user adjustable –31 to –11 LKFS/LUFS	Yes; user adjustable –31 to –11 LKFS/LUFS	Yes; user adjustable –31 to –11 LKFS/LUFS	Yes; user adjustable –31 to –11 LKFS/LUFS
ITU-R BS.1770 / R-128 configurable FM Loudness Control	No	No	Yes; user adjustable –31 to –11 LKFS/LUFS	Yes; user adjustable –31 to –11 LKFS/LUFS	Yes; user adjustable –31 to –11 LKFS/LUFS
Combined or separate control of ITU-R BS.1770 / R-128 and ITU-R BS. 412-9 for FM	No	No	Yes	Yes	Yes
Stereo coder	DSP	DSP	DSP	DSP	DSP
Patented non-clipping composite limiter	Yes; (dual-mode only in stand-alone stereo encoder mode)	Yes; dual-mode	Yes; dual-mode	Yes; dual-mode	Yes; dual-mode
Stand-alone stereo encoder mode available	Yes	No	No	No	No

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SSB (compatible single side-band/vestigial sideband modulation)	Yes	Yes	Yes	Yes	Yes
19 kHz Pilot frequency sync	AES11id, 1xWordclock, 10 MHz on BNC.	AES11id, 1 x Wordclock, 10 MHz on BNC.	AES11id, 1 x Wordclock, 10 MHz on BNC.	1 x Wordclock, 10 MHz on BNC	1 x Wordclock, 10 MHz on BNC
19 kHz Pilot reference output	Yes; SCA2 can be jumpered as 19 kHz pilot ref. out or second SCA input	Yes; SCA2 can be jumpered as 19 kHz pilot ref. out or second SCA input	Yes; SCA2 can be jumpered as 19 kHz pilot ref. out or second SCA input	Yes; analog SCA2 can be jumpered as 19 kHz pilot ref. out or second SCA input	Yes; analog SCA2 can be jumpered as 19 kHz pilot ref. out or second SCA input
Audio Input	Analog, AES3	Analog, AES3	Analog, AES3	Analog, AES3	Analog, AES3
Audio Output	Analog, AES3	Analog, 2x AES3	Analog, 2x AES3	Analog, 2x AES3	Analog, 2x AES3
Audio-Over-IP	No	No	No	No	Dante (AES67 compatible)
IP streaming for monitoring and remote processor adjustment	No	No	No	No	Built-in streaming encoder; includes OPUS and MP3 codecs
Sync Input	AES11id, 1xWordclock, 10 MHz on BNC.	AES11id, 1xWordclock, 10 MHz on BNC.	AES11id, 1xWordclock, 10 MHz on BNC.	AES11 on XLR	AES11 on XLR
Advanced Programmable Silence Sense Detector with silence alarm	Yes, programmable to switch to analog fallback or digital fallback	Yes, programmable to switch to analog fallback or digital fallback	Yes, programmable to switch to analog fallback or digital fallback	Yes, programmable to switch to analog fallback or digital fallback	Yes, programmable to switch to analog fallback or digital fallback
Composite & SCA	2 comp. out 2 SCA inputs	2 comp. out 2 SCA inputs	2 comp. out 2 SCA inputs	2 x analog comp. out 1 x 192kHz AES digital comp. out 2 x SCA inputs; (optionally 2 x digital SCA inputs)	2 x analog comp. out 1 x 192kHz AES digital comp. out 4 x SCA inputs (2 x analog, 2 x digital)
AES3 Composite MPX	No	No	No	Optional	Yes, 384/192 kHz compatibility
Ratings Encoder Loopthrough between processing and stereo coder	No	Yes	Yes	Yes	Yes

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Ratings Encoder Loopthrough between AGC and Dual-band / Multi-band processing	No	Yes	Yes	Yes	Yes
Low-Delay Monitor Output	Yes	Yes	Yes	Yes	Yes
Front panel security lockout	Yes	Yes	Yes	Yes	Yes
Remote control	GPI, serial, Ethernet	GPI, serial, Ethernet	GPI, serial, Ethernet	GPI, serial, Ethernet	GPI, serial, Ethernet
PC Remote software	Yes	Yes	Yes	Yes	Yes
Remote protocol	TCP/IP	ASCII, TCP/IP	ASCII, TCP/IP	ASCII, TCP/IP	ASCII, TCP/IP
Active RS232 serial ports	1	1	1	2	2
Interface to automation systems via ASCII or scriptable Telnet/SSH API through serial or Ethernet ports	Yes	Yes	Yes	Yes	Yes
SNMP (Simple Network Management Protocol)	Yes	Yes	Yes	Yes	Yes
Silence Alarm and Digital Audio Fault via SMNP	Yes	Yes	Yes	Yes	Yes
Programmable Silence Alarm and Digital Audio Fault Tally Outputs	Yes	Yes	Yes	Yes	Yes
Software upgrade	Internet download	Internet download	Internet download	Internet download	Internet download
Backup and Restore Management	Yes	Yes	Yes	Yes	Yes
Automation by time of day	Yes	Yes	Yes	Yes	Yes
Synchronize Clock to a Network Time Server	Yes	Yes	Yes	Yes	Yes

Feature	5500i	5700i	8600Si	8600	8700i
Dual-redundant power supply with auto-failover and audible alarm	No	No	No	No	Yes