



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

Revised 3 January 2019

<b>Feature</b>	<b>5500i</b>	<b>5700i</b>	<b>8600Si</b>	<b>8600</b>	<b>8700i</b>
<i>Rack space required</i>	1u	1u	1u	3u	3u
<i>Construction</i>	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
<i>DSP processing power</i>	1000 MIPS	3000 MIPS	3000 MIPS	4500 MIPS	4500 MIPS
<i>Display</i>	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
<i>User Interface</i>	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
<i>Meters always visible during processing adjustments</i>	Yes	Yes	Yes	Yes	Yes
<i>RDS/RBDS Encoder</i>	Yes	Yes	Yes	Yes	Yes
<i>MX Peak Limiter Technology</i>	No	No	Yes	Yes	Yes
<i>Xponential Loudness™ psychoacoustic processing</i>	No	No	No	No	Yes
<i>Multipath Mitigator/Phase Corrector</i>	No	No	No	Yes	Yes
<i>Loudness capability for given artifact level (re 8200)</i>	+1.5	+2.5 dB.	+2.5 dB. Additionally, the 8600S offers about 3dB more HF energy and more transient punch than 5xxx Optimod-FM processors.	+2.5 dB. 3dB more HF energy; more transient punch.	+2.5 dB. 3dB more HF energy; more transient punch.

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<i>Levels of preset customization</i>	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
<i>Number of user presets</i>	Essentially unlimited	Essentially unlimited	Essentially unlimited	Essentially unlimited	Essentially unlimited
<i>User presets backed up in non-volatile storage</i>	Yes	Yes	Yes	Yes	Yes
<i>2-band AGC</i>	Yes	Yes	Yes	Yes	Yes
<i>Window gating in AGC</i>	Yes	Yes	Yes	Yes	Yes
<i>Dual-Mono AGC</i>	Yes	Yes	Yes	Yes	Yes
<i>Sum-and-difference processing available on AGC</i>	Yes	Yes	Yes	Yes	Yes
<i>Stereo Enhancer</i>	Orban 222-style only	Orban 222 and "Delay" style	Orban 222 and "Delay" style	Orban 222 and "Delay" style	Orban 222 and "Delay" style
<i>Bass Shelving EQ</i>	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
<i>Parametric EQ</i>	3-band	3-band	3-band	3-band	3-band
<i>DJ Bass Boost</i>	Yes	Yes	Yes	Yes	Yes
<i>Brilliance Control</i>	Yes	Yes	Yes	Yes	Yes
<i>Program-adaptive HF Enhancer</i>	Yes	Yes	Yes	Yes	Yes
<i>Speech/music detector automatically optimizes processing for input material</i>	Yes	Yes, advanced	Yes, advanced	Yes, advanced	Yes, advanced
<i>Downward Expander, single-ended noise reduction system</i>	Yes	Yes	Yes	Yes	Yes
<i>Dual Mono Multiband Compressor</i>	No	Yes	Yes	Yes	Yes

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<i>Number of bands in multiband compressor</i>	2, 5	2, 5	2, 5	2, 5	2, 5
<i>Compressor Look-ahead processing</i>	No	Yes	Yes	Yes	Yes
<i>Program-adaptive clipping distortion controller</i>	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
<i>Bass clipper modes (non-MX)</i>	Hard	Soft, Medium, Hard, LLHard	Soft, Medium, Hard, LLHard	Soft, Medium, Hard, LLHard	Soft, Medium, Hard, LLHard
<i>Bass clipper threshold control</i>	Yes	Yes	Yes	Yes	Yes
<i>Bass clipper shape control</i>	Yes	Yes	Yes	Yes	Yes
<i>MX bass pre-limiting modes</i>	No	No	Soft, medium, hard	Soft, medium, hard	Soft, medium, hard
<i>MX bass pre-limiter shape control</i>	No	No	“Bass Impact Engine” is program adaptive, not requiring a control. It works in Hard Mode only	“Bass Impact Engine” is program adaptive, not requiring a control. It works in Hard Mode only	“Bass Impact Engine” is program adaptive, not requiring a control. It works in Hard Mode only
<i>Patented anti-aliased clippers and overshoot compensator</i>	Yes	Yes	Yes	Yes	Yes
<i>Subharmonic Synthesizer</i>	No	No	No	No	Yes
<i>Exclusive “Multipath Mitigator” Phase Corrector</i>	No	No	No	Yes	Yes
<i>Latency</i>	5, 15 ms depending on preset	4, 12, 17, 22 ms depending on preset	4, 12, 17, 22, 265, 270 ms depending on preset	4, 12, 17, 22, 265, 270 ms depending on preset	4, 12, 17, 22, 265, 270 ms depending on preset
<i>Activating Ultra-Low Latency Structure (4 ms delay)</i>	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

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<i>Low-Latency Monitor Output</i>	Yes; 4 ms; taken from multiband compressor output	Yes; 4 ms; taken from multiband compressor output	Yes; 4 ms; taken from multiband compressor output	Yes; 6 ms; includes complete FM processing chain for better air-sound simulation	Yes; 6 ms; includes complete FM processing chain for better air-sound simulation
<i>DAB+ / HD radio /Netcast support</i>	No (except for built-in diversity delay)	Two independent digital outputs	Two independent digital outputs	Two independent digital outputs	Two independent digital outputs
<i>HD/streaming Processing Chain architecture</i>	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
<i>HD Look-ahead Limiter implements "true peak" Control</i>	NA	Yes	Yes	Yes	Yes
<i>Built-in HD Radio Diversity Delay</i>	Up to 16 seconds	Up to 12 seconds	Up to 12 seconds	Up to 12 seconds	Up to 12 seconds
<i>ITU-R BS. 412-9 controller</i>	Yes	Yes	Yes	Yes	Yes
<i>ITU-R BS. 412-9 measurement tools</i>	Yes	Yes	Yes	Yes	Yes
<i>ITU-R BS.1770 / R-128 Short-Term and Integrated Loudness Meters</i>	NA	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	Separate meters for digital and analog radio processing chains
<i>ITU-R BS.1770 / R-128 configurable HD/streaming Loudness Control</i>	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
<i>ITU-R BS.1770 / R-128 configurable FM Loudness Control</i>	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
<i>Combined control of ITU-R BS.1770 / R-128 and ITU-R BS. 412-9 for FM</i>	No	Yes	Yes	Yes	Yes
<i>Stereo coder</i>	DSP	DSP	DSP	DSP	DSP

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<i>Patented non-clipping composite limiter</i>	Yes; (dual-mode only in stand-alone stereo encoder mode)	Yes; dual-mode	Yes; dual-mode	Yes; dual-mode	Yes; dual-mode
<i>Stand-alone stereo encoder mode available</i>	Yes	No	No	No	No
<i>SSB (compatible single side-band/vestigial sideband modulation)</i>	Yes	Yes	Yes	Yes	Yes
<i>19 kHz Pilot frequency sync</i>	1x Wordclock, 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
<i>19 kHz Pilot reference output</i>	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
<i>Audio Input</i>	Analog, AES3	Analog, AES3	Analog, AES3	Analog, AES3	Analog, AES3
<i>Audio Output</i>	Analog, AES3	Analog, 2x AES3	Analog, 2x AES3	Analog, 2x AES3	Analog, 2x AES3
<i>Audio-Over-IP</i>	No	No	No	No	Dante (AES67 compatible)
<i>IP streaming for monitoring and remote processor adjustment</i>	No	No	No	No	Built-in streaming encoder; includes OPUS and MP3 codecs
<i>Sync Input</i>	1x Wordclock, 10 MHz on BNC.	AES11id, 1xWordclock, 10 MHz on BNC.	AES11id, 1xWordclock, 10 MHz on BNC.	AES11 on XLR	AES11 on XLR
<i>Advanced Programmable Silence Sense Detector with silence alarm</i>	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
<i>Composite &amp; SCA</i>	2 comp. out 2 SCA inputs	2 comp. out 2 SCA inputs	2 comp. out 2 SCA inputs	2 x analog comp. out; Free on request: 1 x 192kHz AES digital comp. out 4 x SCA inputs (2 x analog, 2 x digital)	2 x analog comp. out 1 x 192kHz AES digital comp. out 4 x SCA inputs (2 x analog, 2 x digital)

<b>Feature</b>	<b>5500i</b>	<b>5700i</b>	<b>8600Si</b>	<b>8600</b>	<b>8700i</b>
<i>AES3 Composite MPX</i>	No	No	No	Yes, 384/192 kHz compatibility	Yes, 384/192 kHz compatibility
<i>Ratings Encoder Loophrough between processing and stereo coder</i>	No	Yes	Yes	Yes	Yes
<i>Ratings Encoder Loophrough between AGC and Dual-band / Multi-band processing</i>	No	Yes	Yes	Yes	Yes
<i>Relay Bypass</i>	No	No	No	No	Analog, AES3 digital, and composite connections.
<i>Front panel security lockout</i>	Yes	Yes	Yes	Yes	Yes
<i>Remote control</i>	GPI, serial, Ethernet	GPI, serial, Ethernet	GPI, serial, Ethernet	GPI, serial, Ethernet	GPI, serial, Ethernet
<i>PC Remote software</i>	Yes	Yes	Yes	Yes	Yes
<i>Remote protocol</i>	TCP/IP	ASCII, TCP/IP	ASCII, TCP/IP	ASCII, TCP/IP	ASCII, TCP/IP
<i>Active RS232 serial ports</i>	1	1	1	2	2
<i>Interface to automation systems via ASCII or scriptable Telnet/SSH API through serial or Ethernet ports</i>	Yes	Yes	Yes	Yes	Yes
<i>SNMP (Simple Network Management Protocol)</i>	Yes	Yes	Yes	Yes	Yes
<i>Silence Alarm and Digital Audio Fault via SMNP</i>	Yes	Yes	Yes	Yes	Yes
<i>Programmable Silence Alarm and Digital Audio Fault Tally Outputs</i>	Yes	Yes	Yes	Yes	Yes

<b>Feature</b>	<b>5500i</b>	<b>5700i</b>	<b>8600Si</b>	<b>8600</b>	<b>8700i</b>
<i>Software upgrade</i>	Internet download	Internet download	Internet download	Internet download	Internet download
<i>Backup and Restore Management</i>	Yes	Yes	Yes	Yes	Yes
<i>Automation by time of day</i>	Yes	Yes	Yes	Yes	Yes
<i>Synchronize Clock to a Network Time Server</i>	Yes	Yes	Yes	Yes	Yes
<i>Dual-redundant power supply with auto-failover</i>	No	No	No	No	Yes