

VORSIS
ULTRA-HIGH RESOLUTION PROCESSING



FM-55

FM DIGITAL AUDIO PROCESSOR



FM-55

it's amazing what a difference a fresh approach can make



Our FM-55 FM audio processor with stereo generator is simple and affordable, yet powerfully modern – right down to its AES digital multiplex into the exciter. You’ll be amazed what its intelligent five-band AGC, or iAGC, can do. For FM stations requiring sound consistency across a variety of source material, this is it.

Unique among processors, the FM-55 includes new intelligent five-band AGC technology — or iAGC — coupled to a five-band limiter and stereo generator. The combination provides automatic and superior real-time program density control for a consistent, spectrally-balanced sound regardless of density variations in incoming source material.

Other features of the FM-55 include our five-band stereo enhancement and program adaptive L-R control for multipath mitigation.

The FM-55 fully supports the WheatNet-IP Intelligent Network, and is equipped with two analog composite outputs, two SCA inputs, balanced analog Left/Right outputs and an AES digital output which may be switched to deliver either discrete Left/Right or baseband192 digital multiplex signal. Input audio may be delivered via analog, AES or WheatNet-IP.

The composite output signal is available as traditional analog via twin rear panel BNC connectors and simultaneously as Wheatstone’s baseband192 digital multiplex technology.

Smartly designed with a front panel OLED display, Guru GUI navigation and headphone jack on the front panel, the FM-55 has the incredible sound and build quality that the industry has come to expect of a Wheatstone audio processor.

The FM-55 represents an exceptional value for the LPFM broadcaster, and can be packaged with an Audioarts AIR-1 or AIR-4 console for on-air, production and processing at an affordable price.

Intelligent iAGC

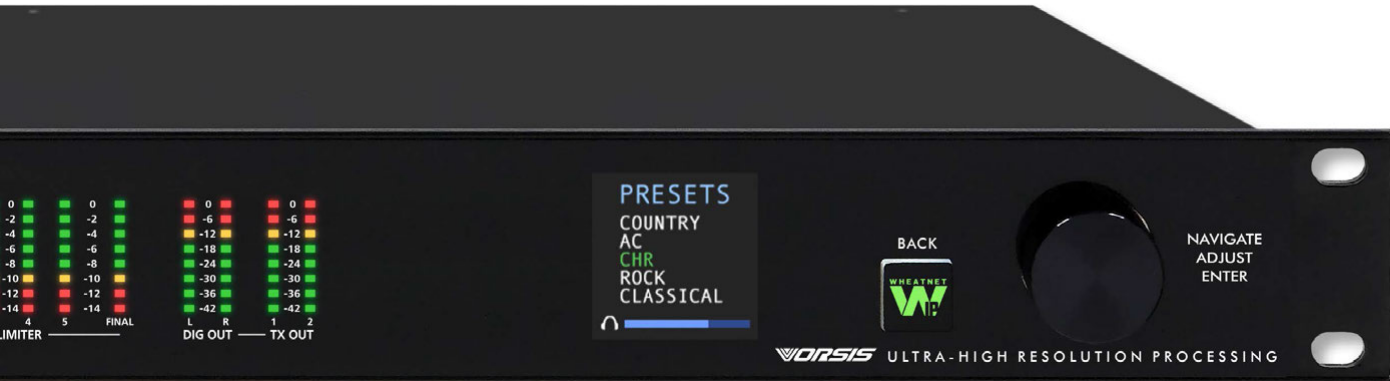
An FM-55 exclusive, our newly developed adaptive iAGC – or intelligent AGC – which allows unobtrusive transitions between hyper-compressed recordings and those with more dynamic range. Our iAGC effectively manages the behavior of the multiband AGC as program content density changes, something a typical broadband AGC simply cannot do. By coupling the iAGC and multiband AGC, we are able to produce a consistent, spectrally-balanced sound regardless of density variations in incoming source material.

Smart Stereo Enhancement

The FM-55’s Smart Stereo Enhancement provides a wide but extremely stable ‘on-air’ stereo image. “Wide”, “alive”, “exciting to listen to”, and “very natural sounding” are terms customers have used to describe how our stereo enhancement method sounds. Users have reported hearing artistically important nuances in music that were simply inaudible when the same material was processed by competing products.

Vorsis Bass Management System

The FM-55’s Bass Management System is also new and circumvents bass-related distortion plaguing other broadcast audio processors. The result is increased depth, feel, and clarity of bass impact without affecting mid and high frequency program – in fact bass detail and the clarity of higher frequency audio are actually enhanced by the new algorithm.



Exclusive Multipath Control

Exclusive to the Wheatstone line of audio processors is the Stereo Multipath Limiter. A single user control assigned to this algorithm sets it to mitigate market and terrain-specific multipath behavior, reducing the annoyances of multipath-triggered receiver-induced stereo blending.

Wheatstone baseband192

Wheatstone® baseband192 digitizes the entire multiplex spectrum including RDS and SCAs up to 80kHz, providing a higher performance interface than using the classic analog composite method between processing and transmitter.

A single AES/EBU cable between the processor and a current solid-state FM transmitter carries the digital baseband signal, bypassing the need for multiplexing in the exciter and eliminating the resulting signal overshoot with its associated loudness tradeoff.

WheatNet-IP Compatible

WheatNet-IP I/O compatibility makes it possible to control the FM-55 and stream its audio to and from anywhere in the IP audio network, making it 100% compatible with WheatNet-IP surfaces and controllers!

GUI Guru

The FM-55 comes packaged with our powerful GUI Guru software. It's as if we sent a processing expert with each box! GUI Guru makes the tough, behind-the-scenes decisions based on the simple-to-use controls supplied for texture (Drive, Density, Loudness) and EQ (Low, Warmth, High).

- Multiband adaptive iAGC
- Newly developed Bass Management System
- FM peak control via oversampled distortion masked clipper
- Four-band equalizer: low/high shelf, two parametric
- Exclusive stereo multipath controller technology for enhanced stereo reception
- Wheatstone® baseband192 built in for composite digital link to transmitter
- Variable high pass filter and voice phase rotator
- Ethernet-based remote control via 100BaseT Ethernet and rear panel RJ-45
- Four GPI triggers
- Front panel headphone jack
- AES3 digital input accepts 32kHz - 96kHz
- AES3 digital output automatically synchronizes to AES3 digital input
- Precision FM stereo MPX generator with multiplex mask filters
- Specially tuned factory presets
- Graphical User Interface, for easy setup and navigation
- WheatNet-IP compatible
- Front panel setup and configuration menu eliminates the need for a PC during installation



FM-55 Audio Processing Guru® Software

Processing is as much art as science. If you're more artist than scientist and have trouble keeping track of the dozens and sometimes hundreds of controls that modern processors offer, Audio Processing Guru® software will be the key to happiness. It condenses the functions of the various processor controls down to just a few, easy-to-understand sliders, enabling you to concentrate on what you hear, not what you see.

VORSIS™

ULTRA-HIGH RESOLUTION PROCESSING

Wheatstone believes that you should have the power to shape your OWN sound – one with a completely unique sonic signature that's your sound, not the one created by a processor manufacturer. To achieve this goal Wheatstone has developed Vorsis Ultra-High Resolution Processing technology to provide completely clean, high quality 'draw you in' sound that even the best ears in the business love to hear. This proven Vorsis technology is embedded in every Wheatstone processor to create the cleanest sound, as loud as you want it.

Getting there required taking a completely fresh approach to processing. Vorsis Dynamics Control (AGC and compression) employs multiband AGC to ensure consistent spectral balance. Its Multiband Compressor works with the AGC to provide unprecedented dynamics control.

Our bass management system, Bass Tools extracts and reveals nuances in the program to deliver pristine, deep, distortion-free bass over the air. No other processor delivers bass this bold and clean.

Specifications and features subject to change without notice.

Designed and built by
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Vorsis' Superior Stereo Enhancement is integral to the processing and creates a smear-free perception of a wider sound field in the cleanest possible way. Just stunning.

Our limiting and clipping are, bar none, the finest you'll ever use, ensuring surgical precision and the ability to have the cleanest, loudest signal on the dial.

Vorsis' presets are also some of the finest in the world. You may never need to tweak them, but if you do, our Graphical User Interface, whether via the front panel or accessed by a PC, gives you an intuitive toolset that'll make you feel right at home.

We think Wheatstone's Vorsis Ultra-High Resolution Processing is the best you'll ever use. But don't take our word for it. Try it out. We CAN guarantee you'll be happy you did!

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