



bw broadcast

SMART GEAR, PRICED RIGHT.

www.bwbroadcast.com

About us

It wasn't too long ago that Roger Howe and Scott Incz were doing the same as you - making great radio. They faced many of the same problems when it came to the equipment they needed. The good stuff worked and sounded great, but was too expensive. The cheap stuff was unreliable and didn't have the sound quality to allow their radio stations to stand out on the dial.

In 1999 they set up BW Broadcast with the aim to create a range of products to set new standards for quality, service and value.

BW Broadcast is now over 10 years old and their product range has grown considerably, along with their global reputation. They are well respected for their innovations in low-power FM transmission, RDS encoders and processors for FM, AM, HD Radio and Internet broadcasting.

2010 sees new lines added to the BW Broadcast stable including a new range of rebroadcast receivers, audio over IP codecs and a range of FM transmitters with built in DSP audio processing, RDS encoding, Audio over IP decoding and much more.

Their advanced technology can be found across the globe in radio stations and broadcast facilities that know that they must have the most reliable equipment. A number of other manufacturers also use the expertise of the BW Broadcast engineers by contracting them to design custom modules to enhance their products.

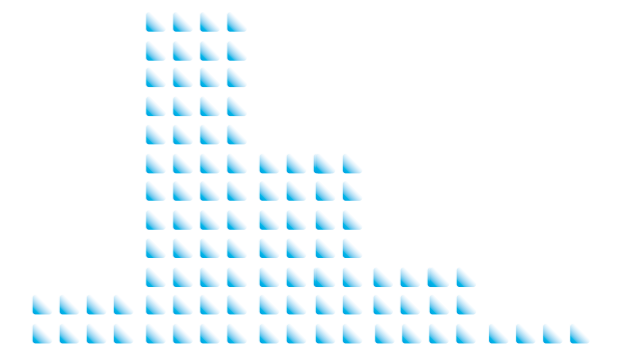
These days, BW Broadcast is a strong company with a talented team of design and support engineers, so Roger and Scott don't have to work nights and weekends anymore. But if you drive by on a Saturday, don't be surprised if you see lights on in their offices as they develop the next great BW Broadcast innovation.

smart gear, priced right.



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FM TRANSMITTERS

Our range of FM transmitters offer great features without the high price.

TX1 & TX5

Low power transmitters which are ideal for campus broadcasting, drive in theatres and cable modulators.

TX25 & TX50

Feature packed FM stereo transmitters which are great for stand-alone low power FM broadcasting or for driving high power amplifiers.

TX150 & TX300

2RU transmitters outputting up to 600 watts of RF power. They are extremely power efficient and lightweight in design.

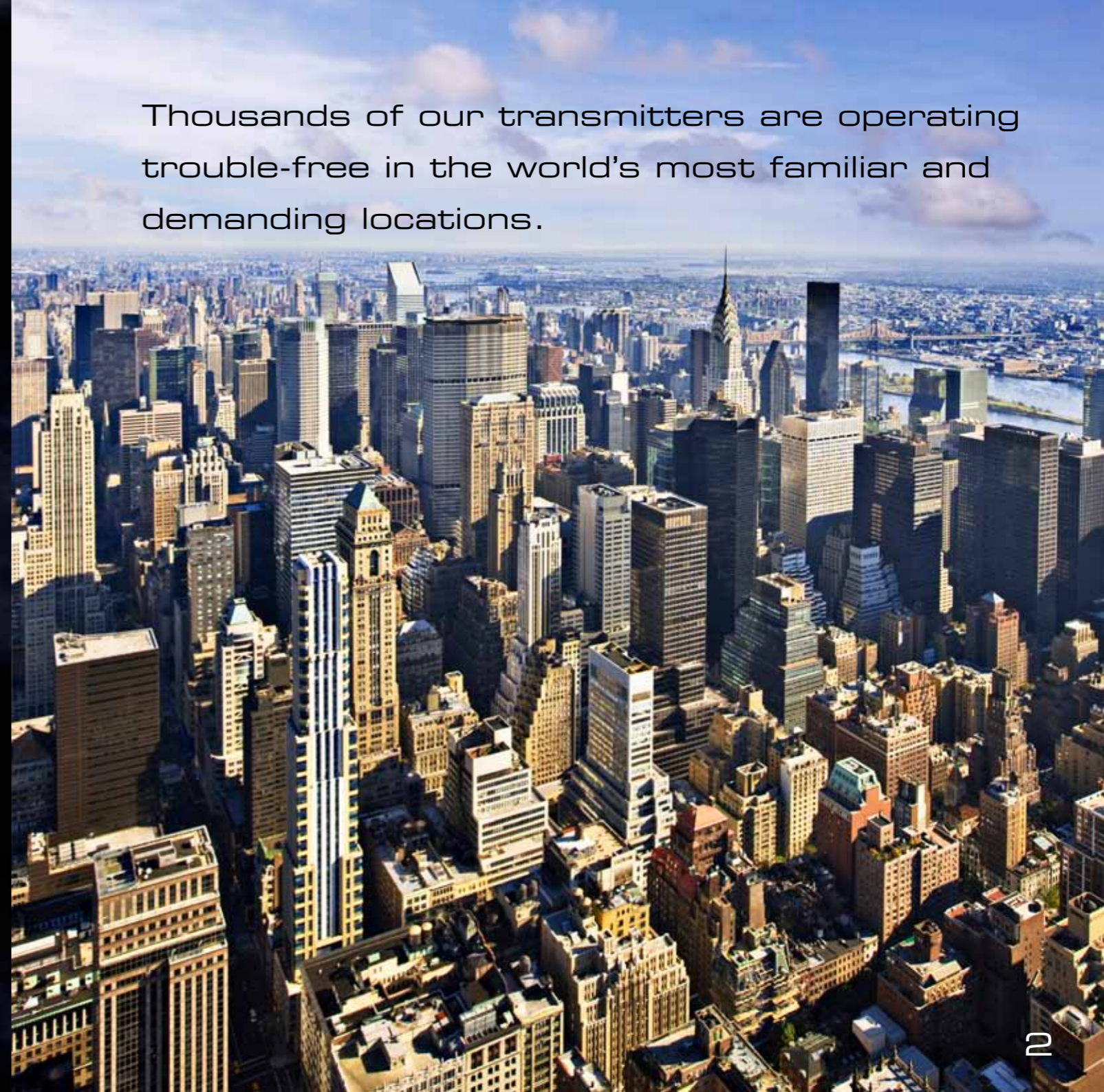
TX600 & TX1000

2RU high power transmitters utilizing BW Broadcast's unique gold clamp transistor technology for unrivalled reliability and ease of servicing. The TX1000 takes ease of maintenance to a new level with its slide in power supply.

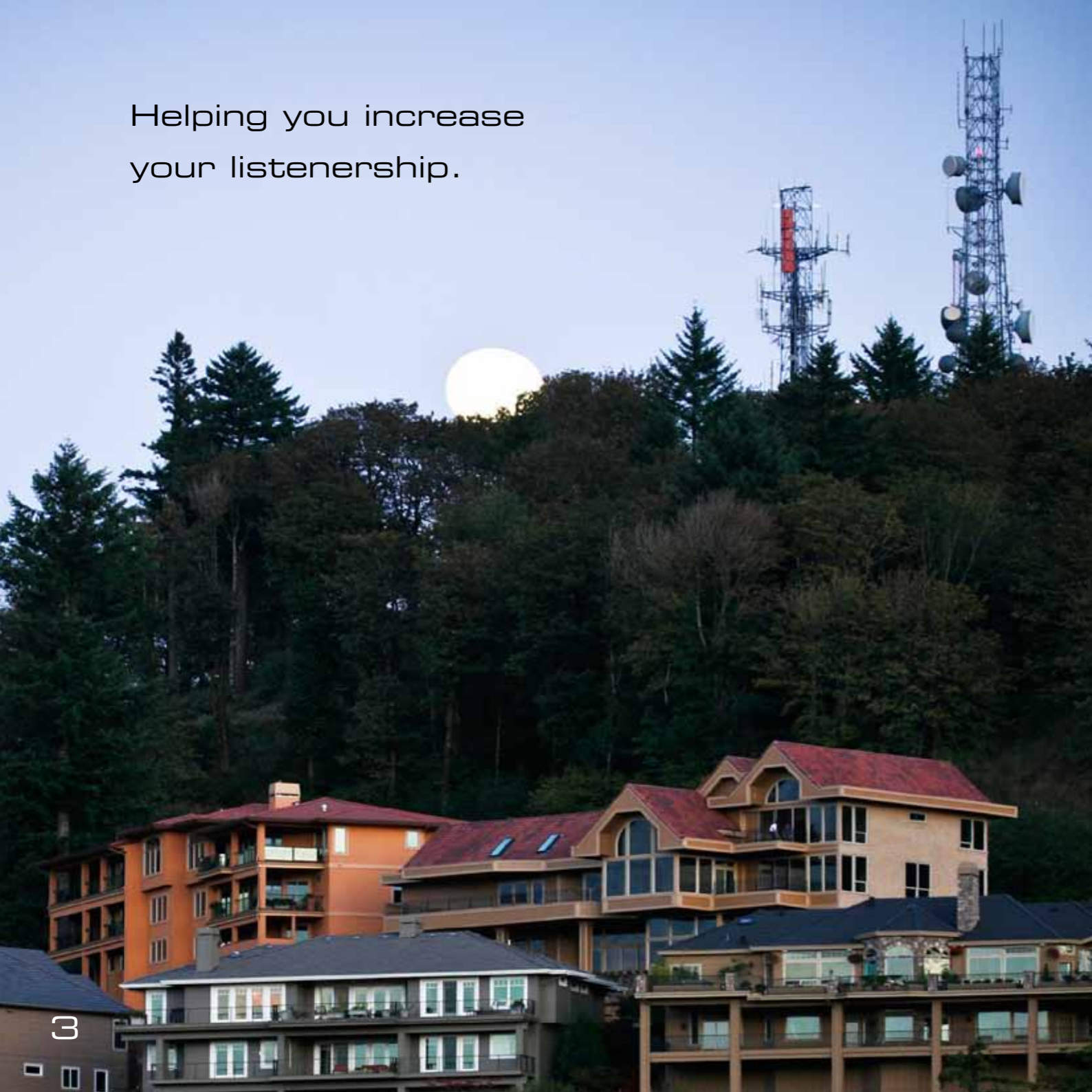
All our transmitters feature; configurable compressors / limiters, high performance stereo encoders, ultra low distortion modulators, universal power input, RS232 remote control, fault alarms and secure frequency & power settings.



Thousands of our transmitters are operating trouble-free in the world's most familiar and demanding locations.



Helping you increase
your listenership.



FM POWER AMPLIFIERS

A simple and efficient
way of boosting your
coverage area.



The PA300 is an effective way of increasing your audience.

A compact 2U design that weighs less than 5kg. Control and monitoring is done via the front panel. It has RS232 remote control, alarms and external RF muting. The power amplifier typically runs at 80% efficiency for ultra-cool long term reliability.

The PA600 will take you up to the next level.

Offers all the features of the PA300, like active and passive VSWR protection, simple modular PSU interface allowing for easy maintenance and a high quality dual fan cooling system. In addition the PA600 includes a unique 'gold clamp' transistor clamping design for ease of servicing of vulnerable components.

The PA1000, now you are getting serious.

A compact 2U design, still only weighing 16kg. The PA1000 shares the features and facilities of its younger brother the PA600, including gold clamp transistor clamping but with the addition of a slide in power supply for ultimate maintenance peace of mind.



FM DSP RECEIVERS

Our class leading DSP receivers set new heights for FM reception.

The RX1 and RBRX1 applies BW Broadcast's RF and audio DSP technology know-how to this new range of products to achieve unprecedented RF and audio performance, as well as access to typically hidden RF and audio settings. This allows optimization of the listening experience, whether used for monitoring radio stations to adjust processing, evaluating the competition, rebroadcasting or pure pleasure.

Adjustments are provided for over 50 parameters, including audio and IF bandwidths, de-emphasis and blending for stereo, HF and ultrasonic noise. Control of blending levels and attack & release times is also possible. All adjustments, plus factory presets and user stored settings, can be accessed from the front panel or via Ethernet and serial connections.

For re-transmission applications, the RBRX1 adds a DSP enhanced MPX output that reconstructs a clean peak-level and bandwidth limited waveform, eliminating worries about studio-transmitter link overshoots.

RDS PI code checking prevents translators and repeaters from being hijacked or jammed.

Plan-B silence detection technology automatically switches to either of the analogue and AES/EBU digital inputs, or to the built-in flash memory to keep broadcasting in the event of reception being lost.



Advanced features for professional monitoring with sound to please the audiophile.



	Full Control of RF & audio filtering / blending	RDS decoding	Network (browser) and serial remote control	Factory and user presets with back panel switching	Front panel control interface	MPX regeneration (with peak control)	PI code checking (for jamming prevention)	Audio switching (for signal loss)	RDS encoding and re-encoding	Real time clock day/time switching of modes and presets	Factory and user presets with back panel switching	24 bit SRC controlled analogue outputs	24 bit XLR balanced analogue outputs (for signal failure switching)	24 bit SRC controlled XLR AES/EBU output (for signal failure switching)	24 bit BNC unbalanced MPX outputs (x2)	1/4 inch front panel Headphone socket
RBRX1	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
RX1	●	●	●	●	●	-	-	●	●	●	●	-	-	-	-	●



Engage your listeners...
From simple song titles
to comprehensive data.

	Front panel control interface	PC application control interface	PC web browser control interface	Dynamic RDS	Scheduling	Network connectivity	Station name PSN	Program type / genre (PTY)	Music / speech setting (MS)	Program identifier (PI)	Traffic flag (TF)	Traffic announcement (TA)	DTMF (TA) switching	Alternative frequency list (AF)	Clock time (CT)	Radio text (RT)	Enhanced other networks (EON)
RDS100	●	-	-	-	-	●	●	●	●	-	-	-	-	-	-	-	-
RDS200	-	●	●	●	-	●	●	●	●	●	●	●	●	●	●	●	●
RDS300	-	-	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

RDS ENCODERS

Static and dynamic Radio Data System encoders designed to suit every budget.



RDS100... Simple to use rack-mount unit for radio stations who wish to broadcast basic 'station name' information to their listeners using the Radio Data System. Unlike most RDS encoders no PC is required for set up.

RDS200... Supports almost all RDS protocols. It has a real-time clock and memory to support 8000 characters of text. Programming is simple with the supplied windows application which can be used directly or remotely. After initial programming no PC is required.

RDS300... A dynamic RDS encoder with powerful interfacing features. It supports all RDS protocols and can effortlessly be connected to your radio automation software to display track information. It has an embedded web server, so can be remotely configured using a standard web browser. It also allows you to broadcast scrolling text which can be customized through the integrated web server and an embedded scheduler allows you to display messages based on time and date. The RDS 300 can either be used in loop through mode in your broadcast chain or can operate as a standalone unit.



AUDIO PROCESSORS

Audio processors for FM, AM or digital radio broadcasting.

DSPmpX.

A final clipper and high specification stereo generator. It features an oversampled audio clipper, 15kHz filtering as well as a pilot and RDS/SCA protected composite clipper.

DSPXmini. (supports FM, HD, WEB and AM processing)

One of the most cost effective FM audio processors on the planet. You will not believe how much sound you get for your money!

DSPX. (supports FM, HD, WEB and AM processing)

This is the UK's most popular audio processor. It is packed with features and with 1GHz of processing under the lid you know you are going to sound great!

DSPXtra. Supports (FM, HD and WEB processing)

The DSPXtra gives you a cleaner, louder sound. The award winning Ariane leveller and full 6 bands of limiting will leave your listeners hooked.

DSPXtreme. FM and FM+HD dual processing (with diversity delay)

Powerful and dynamic bass, clean high-end and consistent loudness, the DSPXtreme guarantees your station will make an impression on your listeners



Our processors give you the upper hand.



FM Broadcasting.

You want your radio station to sound great...right? So do we!

With 5 FM supported models in our range, You'll meet your aspirations of sounding great within your budget. Used around the world by radio stations to 'crush the competition'.

HD Broadcasting.

Our range includes 4 HD audio processors. Used on more DAB services in the UK than any other. They optimise your audio for digital radio transmission whether on the internet stream or a HD-IBOC-DRM-DAB or internet streaming broadcast.

AM Broadcasting.

AM is dead! Who said so? Inject some life back into your AM broadcast with a BW Broadcast variable bandwidth AM audio processor. Parallel processing paths also enable you to feed a 20KHz bandwidth signal to a web stream or a HD service.



Win the ratings war with advanced processing at prices you can afford.



COMPARE OUR PROCESSORS

	FM BROADCASTING					HD BROADCASTING				AM BROADCASTING		
	DSPmpX	DSPX mini-FM	DSPX-FM	DSPXtra-FM	DSPXtreme-FM	DSPX mini-HD	DSPX-HD	DSPXtra-HD	DSPXtreme-FMHD	DSPX mini-AM	DSPX-AM	DSPXtra-AM
APPLICATION												
FM Broadcasting	●	●	●	●	●	-	-	-	-	-	-	-
AM Broadcasting	-	-	-	-	-	-	-	-	-	●	●	●
FM+HD Broadcasting	-	-	●	●	-	-	-	-	●	-	-	-
AM+HD Broadcasting	-	-	-	-	-	-	-	-	-	-	●	●
HD Broadcasting	-	-	-	-	-	●	●	●	-	-	-	-
DAB / DRM Broadcasting	-	-	-	-	-	●	●	●	-	-	-	-
Web streaming / Podcasting	-	-	-	-	-	●	●	●	-	-	-	-
PROCESSING FEATURES												
Relative loudness (dB)	-	-1	0	1	2	-1	0	1	2	-1	0	1
Parametric bass enhancement	-	●	●	●	●	●	●	●	●	●	●	●
Shelf bass enhancement	-	-	●	●	●	-	●	●	●	-	●	●
AGC	-	4 band	Advanced 4 band	WB + Adaptive	Advanced 4 band	4 band	Advanced 4 band	WB + Adaptive	Advanced 4 band	4 band	Advanced 4 band	WB + Adaptive
AGC window gating	-	-	●	●	●	-	●	●	●	-	●	●
4 band limiter	-	●	●	-	-	●	●	-	-	●	●	-
6 band limiter	-	-	-	●	●	-	-	●	●	-	-	●
Bass clip modes	●	●	●	●	●	●	●	●	●	●	●	●
Multi-band clipper	-	-	●	●	●	-	●	●	●	-	●	●
Distortion cancelled clipper	●	●	●	●	●	-	-	-	●	●	●	●
Composite clipper / Pilot protection	●	●	●	●	●	-	-	-	●	-	-	-
Asymmetrical clipping	-	-	-	-	-	-	-	-	-	●	●	●
Tilt EQ	-	-	-	-	-	-	-	-	-	●	●	●
AM low pass filtering (4-10kHz)	-	-	-	-	-	-	-	-	-	●	●	●

AUDIO OVER IP

Point to point audio delivery over IP. Maximum quality and minimum delay.

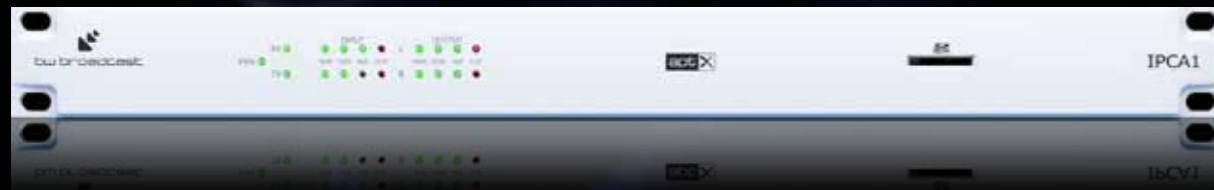
Using latest generation IP and audio coding technologies, the IPCA1 was designed from the ground up for stable operation with the lowest latency and best audio performance possible based on network characteristics.

To keep latency as low as possible, the IPCA1 uses a proprietary, dynamically adjustable jitter buffer that adjusts to network conditions, providing 24 bit audio, with up to 48 KHz sampling, at the lowest possible delay at all times.

Supporting UDP, UDP Multicast and TCP/IP protocols, the unit includes a range of low delay codecs operating at bit-rates as low as 32 kbps with fewer quality/bit-rate trade-offs. Linear, and a selection of loss-less and low delay low bit rate codecs are all on board including the popular APTX low bit-rate, low delay algorithm.

If the worst should happen and the data network fails, the built-in 'Plan B' silence detection can trigger local audio fail-over to SD card storage.

Convenience features include AES/EBU digital and XLR GPIO and RS232 ancillary data channel. The graphically rich web and telnet interfaces provide ease of setup and monitoring and the IPCA1 firmware is remotely upgradeable.



Connect everywhere.



WHAT'S NEXT?

Always innovating...

Working for you.

BW Broadcast has been investing heavily in research and development and this will continue for the foreseeable future.

With continued R&D and new product manufacturing being supported by a move to a larger facility in 2010 it's an exciting time for BW Broadcast and it's customers.

What's coming soon?

With the introduction of a new range of FM transmitters 2010 sees the fusion of several BW Broadcast product lines.

FM modulation, RDS encoding, audio processing, audio backup, remote control and audio over IP technology brought together for the first time in a single piece of FM transmission equipment.

We're not stopping there. You'll also soon see some new stand-alone audio over IP and audio processing products.

Our current line of FM transmitters will be extended with an introduction of 2kW, 3kW and 5kW models.

Into the Future!

BW Broadcast will continue to design and manufacture innovative, high performance broadcast equipment.

We know our competitors are watching, so we can't say too much, but don't be surprised to see the BW Broadcast badge on the front panel of your next digital radio transmitter.

Radio is changing. Are you ready - we are!

Smart Gear, Priced Right.



For full product specifications,
datasheets, software,
manuals and more
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