

BCD Audio are much involved in Broadcast Custom Design, and some of their specially designed items were found to have a wider appeal and have become 'stock' units.

Digital Tone Generator DTG-1

This can be powered by an internal 9V PP3 battery or by external +8V to +30V DC. The generator output is on an XLR3M as an AES/EBU feed. Its basic purpose is to supply -18dBFS tone for line-up purposes, but there are many

other related features provided by the two six-way rotary switches.

The right-hand of these offers three alternative sets of six facilities determined by the positions of the left-hand switch. Four positions of the left-hand switch relate to the inner labelling

changing settings, apparently inherent in the design, but these are not actually a problem in use.



BCD AUDIO BOXES

DTG-1, INTERBOXES 1&2 AND ALT-1

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*reviews some of the
BCD Audio Boxes
that have become
indispensable for
some broadcast
installations.*

around the other switch, with two other positions, Special and Glits Tone, relating to the two other groups.

In the basic positions of the left-hand switch, the chosen tone output can be L + R, left only, right only, or muted. The right-hand switch provides a choice of 400Hz, 1kHz or 10kHz at the standard -18dBFS. Other settings can provide 10kHz at 0dBFS, plus 1kHz at 0dBFS and at -48dBFS.

The Glits setting of the left-hand switch causes the other switch to provide the EBU sequence of 1kHz at -18dBFS with the left feed interrupted every four seconds for 0.25 seconds. An alternative is the BBC sequence of the left interrupted once and the right twice over the four seconds. Suggestions are invited for the possible use of the other four positions.

The Special setting of the left-hand switch provides some interesting output variations. There is a Phase position where the positive-going half cycle of a 400Hz output is clipped. Use of an oscilloscope will allow phase checks to be made throughout a system. There is a White Noise output at -3dB RMS for checking equalisers. A 10kHz feed is available plus emphasis. As would be expected, this will read below the -18dBFS, by some 7.6dBs if the feed is subjected to emphasis 'wipe' in subsequent gear, in the A&D DMM-1 mixer, for instance. A fourth switch setting provides the usual -18dBFS at 10kHz with V Flag for checking AES/EBU operation.

Two interesting settings provide very low level signals which audibly show up any curiosities in the low level performance of D/A convertors. Signals at -96dB and -114dB are available. It was interesting to hear the differences I obtained when listening to the low level performances of the various D/As in my facility.

Some other points. The 1kHz and 10kHz tones are quoted as being to 24-bit accuracy, the 400Hz output being to 16 bit. The sampling rate frequency is internally set to 48kHz, but

there is a BNC socket allowing the connection of a word clock source allowing the sampling frequency to be altered in sympathy within a range of 30kHz to 52kHz. The signal frequencies will be appropriately varied, for instance, by around nine percent lower at 44.1kHz.

Certainly the DTG-1 is a useful item to have around. I tend to have my reference tones at -14dBFS and not the AES/EBU broadcast standard of -18dB. There are short duration clicks produced in

Interboxes 1 & 2

These allow digital feeds, of the three types in use, to be interconnected. External powering is needed, 8V to 30V DC. Both versions of this product cater for the three types of input — AES/EBU, SPDIF(IEC958), optical Toslink, via four pairs of DIP switches.

Both versions have three isolated, parallel outputs. With Interbox 1 it is to three separate AES/EBU outputs, allowing a low cost splitting of such signals. The Interbox 2 has parallel outputs to all the three available types, facilitating the interconnection of consumer and professional equipment. Obviously a versatile unit with possible retro-fit updates to address a few situations where some DAT recorders do not accept the present conversions.

Auto Level Taker ALT-1

This well thought out practical box allows auto setting of its microphone amplifier's gain. External DC powering is between 10V and 40V DC with at least 2W capability. The unit provides a 48V phantom microphone feed, internally derived.

Balanced or unbalanced signals over a 100dB range are automatically catered for, obviously covering microphone and line level signals. In setting up, a typical signal is applied and the Take button pressed. For six seconds of this typical signal, the incoming level is sampled and the gain set. This setting is stored in EPROM and is present on the next switch on.

As an extension to this automatic overall setting, there is an on-board compressor limiter carefully chosen for a sensible retention of audio quality performance. Additionally, in the presence of any actual limiting there is progressive gain reduction of up to 8dB, the original levels being returned to over a period of 20 seconds from when limiting ceased. Three LEDs on the front of the unit initially relate to the auto levelling and subsequently show if AGC, limiting or compression is needed.

The ALT-1 was interesting to try out and it performed its intended task very well indeed, was simplicity itself to use, and I just couldn't make it come up with the wrong setting. □

INFORMATION

- Ⓔ DTG-1 £350 + VAT; Interboxes 1&2 £195 + VAT; ALT-1 £375 + VAT.
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