

analog Broadcast Mixing Consoles



The BC4 analog Broadcast Console System fills the range between the compact BC3 mixers and the big 5MT Broadcast and Production Consoles. While it shares the basics with the BC3 system and is based on the same solid construction principles, it offers more features in every respect at affordable prices. Already the basic module set offers 10 auxiliary sends, 8 subgroups, two program masters, 6 VCA groups, extensive control and start features and a versatile control room and talkback/playback section. In addition, BC4 is a solid base for custom build broadcast consoles in an ,of the shelf' price range. Up to 96 input modules can be combined with up to 16 mono or 8 stereo audio groups, up to 16 auxiliaries and up to three program masters. The integration of dynamics sections is possible in different versions of input modules, subgroups and program master modules and as a separate module that is mounted in the console's meter bride above the particular input or group module. Several different mono and stereo dynamics are available that can be integrated into the insert chain these modules.



BC4 offers a well-done combination of professional technical properties with outstanding sound performance. Modern analog audio technique is combined with proven circuitry and skilled craftsmanship in the tradition of German professional audio. High headroom of + 30 dBu, best noise performance of all stages, linear



analoge + digitale Tonstudiotechnik, in Germany makes professional audio mixing consoles since the company was founded by Dipl.-Ing. Gerd Juengling, who is still the chairman of the company, in 1978.

adt-audio has a long tradition in making of custom build consoles from the very beginning.

Our history in brief:

1978

company founded by Dipl.-Ing. Gerd Juengling

1980

First small format console A500 added to the product pallet of ,cassette' based modular consoles

1981

Range of magnetic recording and reproduce amplifiers extended for film tape recorders, OEM products for several local and international tape deck manufacturers

1982

More specialized modular consoles systems, special versions for Neumann disc cutting machines, special film mix consoles

1983

first complete installation of a private broadcast network station in Germany, with 12 consoles, first inline based, automated music recording console system C24

1984

upgraded version with extended

phase response, excellent transient response and the ability of all outputs to drive high capacitive loads without any loss in quality makes this console best suited for any kind of music recording and broadcasting.

All important broadcast specific functions are extensively implemented. Three separate on air busses can be assigned to all channels. The input selection changes the assigned control bus automatically. In combination to the fader switch, the channel on control and the additional start switch, almost all conceivable control systems can be configured without the need of additional, custom build logic. Very comfortable handling of telephone interfaces is possible with the use of special TelCo input modules.

Like all adt-audio Broadcast Consoles, the BC4 broadcast systems uses best quality components, gold plated switches, encapsulated relays, full gold plated IC sockets, gold plated connectors and oversized power supply units to assure high reliability and long lifespan. Fail-safe power supply units and crossover devices are available for every possible console configuration.

Basic technical data:

general conditions

- 0 dBu = 0.775 V, unless otherwise noted, RMS measurement
- all gain controls and faders in 0 dB position
- Frequency band 40 Hz 15 kHz, unless otherwise noted
- all data are ,worst case'

Level:

Max. Microphone Gain Line Gain Nominal Output Level 70 dB +/- 1 dB +/- 20 dB, any level between 0 and +10 dBu, depending on local requirements

Max. Output Level:

40 Hz ... 15 kHz Electronically balanced versions

Transformer balanced versions

> +30 dBu into 2 kOhms> +26 dBu into 600 Ohms

> +26 dBu into 600 Ohms

Headroom throughout the entire console:

(Line In, 0 dB, Insert, Fader 0 dB, Pan Pot all to L or R, Master Fader 0 dB,) + 30 dBu, referred to input/output level, output limited by load resistance

Input Impedance:

Mic All line level inputs > 1.6 kOhm (transformer)> 10 kOhm

Output Impedance:

Electronically balanced < 50 Ohms All electronically balanced outputs can be connected to unbalanced input without level difference, Transformer balanced < 40 Ohms

CMRR:

Mic input (transformer, no pad), 40 Hz ... 15 kHz > 70 dB Line level input, electronically balanced 40 Hz ... 15 kHz > 50 dB Line level input, transformer, 40 Hz ... 15 kHz > 60 dB Outputs, transformer, 40 Hz ... 15 kHz, IEC > 40 dB, IRT > 60 dB

Frequency response

Without processing stages (EQ, Filters,..) > +/- 0.5 dB any line level input to any output EQ characteristic: see module data sheet

THD:

S/N:

@ +6 dBu, 40 Hz - 15 kHz, any input to any output, > 0.1 %
@ +24 dBu, 40 Hz - 15 kHz, any input to any output, > 0.3 %
THD of dynamics units depends on settings and frequency

multitrack facilities and automation of the small format A500 system, distribution of the A500 by Tefefunken

1985

basic development of the 5MT universal console system

1986

production of magnetic amplifiers and modular ,cassette' audio consoles discontinued, major product range music recording consoles, begin of development of the MAGNUM V1 console

1987

MAGNUM V1 console, first consoles delivered with 56 channel, 128 automated faders, 8 stereo sends, 8 VCA groups, 3 stereo masters, 48 channel routing, dynamics unit per channel, automated stereo effect returns with base width control, master compressors...

1988

First 5MT based broadcast consoles for German network stations

1989

Development of extended input and master modules for the 5MT music production consoles, new console automation system

1990

MAGNUM V2 with additional features, more aux sends and a new master section with full mastering feature set

1991

adt-audio becomes German market leader for large format audio consoles

1992

First multiformat console development, delivery of the first 5 channel HDTV consoles

1993

More multiformat console systems for 5.1 and Dolby Surround

1994

Additional Product line of medium size live sound console for a German distributor, upgrade of multiformat console versions for 5.1 with extended features

1995

5MT C-Series completes the range of the 5MT System with compact but professional consoles that offer the same quality level as the 5MT standard

Microphone Preamp: Gain 70 dB, input referred < - 116 dBqp Gain 40 dB, input referred < - 114.5 dBqp (Quasi peak, according to DIN45405, Filter CCIR468-3)

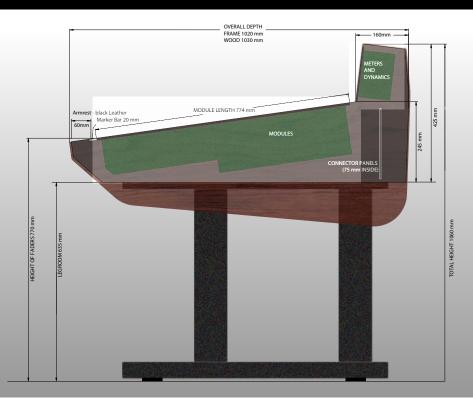
Channel in line mode (Line in, 0 dB, to channel out, 0 dB): EQ off <-92 dBu</pre>EQ on, 0 dB, <-89 dBu</pre>(RMS, 22Hz...22kHz)

Mix noise: 32 fader routed into one group or program master, channel faders down, but on, master fader 0 dB < -86 dBu, RMS 22 Hz... 22kHz

Crosstalk

Channel to channel, 40 Hz to 15 kHz (Channel N routed to group U, Channel M routed to group V, all faders 0 dB, > 80 dB Channel On, routing switches, channel and group faders > 90 dB

All data refer to a typical standard console. They may be different with other configurations. Changes due to technical progress are possible without prior notice.



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1996

18 custom build film sound consoles for a new German dubbing studio complex in Berlin

1997

Development of the MAGNUM -V3 and the MR5 music production system with upgraded console automation system and recall

1998

Several custom build broadcast systems for German Broadcast Network station ZDF, and several private broadcasting companies

1999

Custom consoles for Studio Hamburg, Germany, several film sound consoles, development of Series D music recording consoles 2000 Broadcast consoles for EXPO 2000, several smaller custom build broadcast systems, BC-SRD custom console system for ZDF

2001

Complete redesign of BC3 medium range broadcast consoles and begin of development of the V700 and Integrator audio module systems

2002

5MT Broadcast consoles for Viva TV Cologne and QVC Cable TV Station, in cooperation with MCI Studio Hamburg Germany

2003

Completion of the 5MT broadcast versions with the 5MT-C/Broadcast

2004

Development of Toolkit Pro Audio System of channel strips, mixers and other gear, 12 BC3 and 5MT-C consoles for Radio Uzbekistan, in cooperation with Siemens Austria