ARK-70 Series

MULTI PROCESS CONTROLLER
56 BIT DSP ENGINE

DATA SHEET

ARK-7048

ARK-7044

ARK-7026

ARK-7024

- Double Dynamics (RMS and Peak) are standard in all ARK-70 models. These double dynamics lower levels of distortion and provide protection for all the speaker components and internal electronics.
- With 0.6ms fixed latency the ARK-70 is one of the lowest latency processors available.
- All ARK units deliver a wide dynamic range of 120dB, high performance Cirrus Logic AD & DA 24bit converters running at 96kHZ. The internal DSP processing works with double precision in floating point, achieving an internal resolution of 56 bits, one of the largest resolutions available on the market today.
- The ARK-70 offer atmospheric compensation – essential when working outdoors where temperature and humidity varies considerably between night and day causing noticeable loss in high frequency, especially at long distances. Each output can be configured separately depending on the throw required from each cabinet.
- ARK software has been designed for fast user access to make each processing zone simpler for the user. The Compare function option enables the user to listen to the difference between 2 complete set ups in real time with no fade-ins or fade-outs. As well as being able to import measurement curves from the principal systems (SMAART LIVE, CLIO, SAT Live etc), they can also be seen directly in the final frequency response window showing the effects of the process applied. All ARK processors can be configured and monitored in real time by USB or ETHERNET.
- Each input has up to 29 filters of Parametric EQ which can be switched to Graphic EQ. Each output also has Parametric EQ which can be chosen between adaptable or constant Q, All Pass, Band Pass, Notch, HP Q, LP Q or High and low Shelvs providing flexibility. Moreover, crossover filters with high and low cuts of Linkwitz Riley, Bessel, Butterworth up to 48 dB/oct slopes in 6 dB steps are available. A 6 dB/octave slope, for instance, corresponding to a first order filter, allows for frequency shading.
- Other features include advanced security features, polarity, gain and delay on ins and outs, routing of any input to any output and a signal generator with sine and noise (pink or white).

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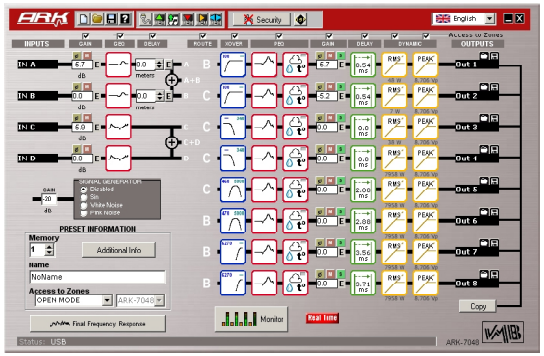

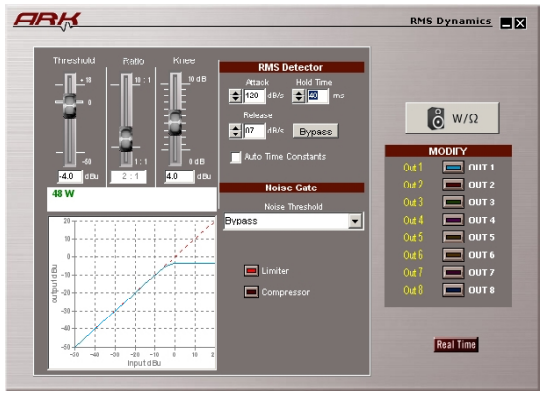

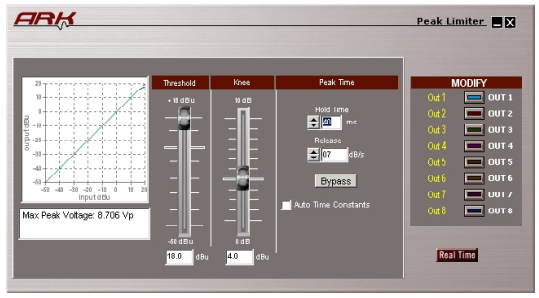

Input 2 or 4
Impedance: 20 K Ohm Balanced (10 K Ohm unbalanced).
Connector: Balanced XLR (pin 2 +).
AD converter: 24 bit-192KHz, 512x Oversampling.
Dynamic Range: 120 dB.
Max. level: +19 dBu (balanced).
Digital AES/EBU: Optional.

Outputs 4, 6 or 8
Impedance: 50 Ohm Balanced (25 Ohm unbalanced).
Connector: Balanced XLR (pin 2 +).
DA converter: 24 bit-192KHz, 512x Oversampling.
Dynamic Range: 120 dB.
Max. level: +18 dBu (balanced).
Digital AES/EBU: Optional.

Ethersound Optional.

Audio
Frequency Range 10 Hz – 24 KHz.
THD (%) <0,0018%.
DSP Process Internal resolution with 56 bit double precision in floating point.
Converters 24 bit resolution.
Propagation Delay: 0.6 miliseconds.

Equalisation
Input GEQ / PEQ 29 GEQ Bands or 29 parametric filters per input.
PEQ output 9 per way.
PEQ Type filtersParametric, Shelving High, Shelving Low, Low-Pass, High-Pass, Low-Pass Q variable, High-Pass Q variable, BandPass, Reject Band, AllPass order 1, AllPass order 2.
Possibility to Link filters between Input and Outputs.

Crossover Linkwitz Riley with 12, 24, 48 dB/oct.
Butterworth and Bessel with 6, 12, 18, 24, 30, 36, 42 and 48 dB/oct.

Delay
Input 212 milisec. (channels A & B) / 54 milisec. (C & D)
Output 20.8 milisec for Speaker alignment.
Possibility to Link Delays.

RMS Limiter-Compressor 1 per output.
Threshold: +18dBu to -50dBu.
Compression Ratio: 1:1 to 1:10 (1:infinite with limiter).
Power indication Shows the maximum power applied to the speaker for the selected threshold.

Peak Limiter 1 per output.
Threshold: +18dBu to -50dBu.
Peak Indication: Shows the maximum peak Voltage applied to the speaker for the selected threshold.

Noise Gate 1 per Output.
Noise Threshold: -79dBu to -37dBu.

Level Control
Gain +6dBu to -40 dBu per input / output.
Mute per input / output.
Phase inversion per input / output.
Possibility to Link Controls.

Signal Generator
Level 0dBu to –40dBu.
Type: sine tone from 10Hz to 22KHz, Pink noise, White noise.

Latency **0.6 ms**

Security Options
Password global.
Level 0: No restrictions.
Level 1: Only allows preset to changes.
Level 2: Only allows mute modification.
Level 3: Only allows preset to changes and mute modification.
Level 4: Blocks all the front panel controls.
Restricted Zones: For each Preset it is possible to disable the access to any processor function (EQ, crossover, Limiter, etc) writing a preset password.

Other functions Atmospheric compensation by Air absorption.
Process Integration with RAINBOW – The acoustical prediction software
Speaker data import from main audio measurement systems.
Export & Import EQ files.
Etc.

Front Panel Display: LCD with 24 x 2 characters.
Encoders: 3.
Buttons: Navigator with 5 backlight buttons.
12 buttons for Edition and Mute with light indications.
Level Meter: 7 leds per input/output, -40db, -6db, 0db, +6db, +12db, Limit, Over Limit.

Communication
USB.
Ethernet.

General Power supply 85-240 V ~ 40-400 Hz. IEC connector. (Switching power supply, wide range).
Consumption 30 W.
Operating temperature: -5º to 60º C (23º to 140º F).
Storage temperature: -60º to 75º C (-76º to 167º F).
Humidity: Max. 90% non-condensing.
Dimensions 482 x 45 x 226 mm.
Weight 3 Kg
Warranty 3 years