

INSTALLER'S GUIDE

Professional Installation Product Range

2008-2009

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When ECLER was first set up in 1965, its chief and practically its only asset was its enthusiasm. Today, now that our company is about to celebrate its 50th birthday, we have one of the widest offers in professional audio and have succeeded in making our firm known all over the world.

Since ECLER started its business activities, it has always been committed to Innovation and Research. This, together with our obsessive eye for detail, have made us worthy of the loyalty shown by our customers, thanks to whom we have been able to consolidate our business project and become the leading actors in a creative technological future.

We are proud to present our first Installer's Guide, for the purpose of grouping together all the necessary information for offering comprehensive solutions in audio projects. Through this, we aim to continue to be worthy of our clients' trust and make their work much easier. You will see that its pages still contain our most valuable asset: our enthusiasm.

Enrique Casimiro Gibert
Director General of ECLER

VALUES

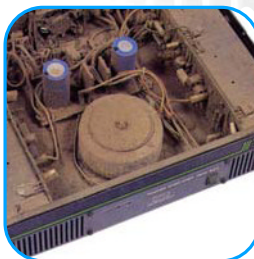


Quality

The ISO9001 standard guarantees organised internal functionalities. The QUALITY procedure protocols are also applied to commercial relations between suppliers and clients. All our production processes have been designed to guarantee quality and the full satisfaction of our clients. ECLER does not believe in sampling criteria in quality control, which would lead to a production that is not entirely TRUSTWORTHY.

Reliability

All the ECLER products are designed to last, maintain their services and remain free from failures for many years, even in extreme conditions of use, thereby guaranteeing low MTBF (Medium Time Between Fails) ratios.



Innovation

ECLER firmly believes that INNOVATION is essential in providing the market with audio solutions that require a pioneer approach. Several technological achievements, such as SPM technology, class D amplification and many other technologies applied to DJ products are the result of one of the main objectives of ECLER: INNOVATION.

The Team

People are one of our chief assets: a wide distribution network, relational marketing, specialists in product follow-up, our own projects department, technical assistance service, training and cooperation... all with a view to better understanding what is required of our company and our SERVICE



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Processors



Tech. Characteristics

AMIC-lab

| | |
|-------------------------------------|---|
| AMICLAB Software | <ul style="list-style-type: none"> Realtime full GUI of all functions Interactive graphical display Real time metering at input / output Save & Recall setup functions Firmware update capability Password protection |
| Operating System | Windows 98SE; WMe; W2000 Prof.; (SP4); XP Home (SP1); XP Prof.; (SP1) |
| Minimum AMIClab System Requirements | Pentium III 600MHz 128MB RAM 20MB HDD free space 800x600 dpi & 16bits color display |

Technical Characteristics AMIC

| | | |
|------------------------------|---|---|
| Processing | A/D & D/A DSP Latency | 24 bit, 48kHz 48 bits 0,585ms |
| Input / Output: | | 2 Inputs / 4 outputs (2 internal & 2 external) |
| Input Levels | Nominal Maximum | 0dBV +12dBV |
| Input attenuator | | Stepless from -84dB to +12dB |
| Input Impedance | balanced, | 30K Ω |
| Stack Output impedance | | 300 Ω |
| CMRR (20Hz - 20kHz) | | >60dB |
| Distortion @ 0dBV 20Hz-20kHz | | <0,008% |
| Frequency Response (-0,3dB) | | 10Hz - 20kHz |
| Noise from 20Hz to 20kHz | | below -105dB |
| Crosstalk (20Hz-20kHz) | | better than -60dB CH1 to CH2 & Stack1 to Stack2 |
| Maximum Delay | | 310ms (312,5m) global for all 4 ch |
| Delay resolution | | 20,83us (7mm) |
| Compressor / Limiter | Threshold Ratio Attack time Release time | from -48dBV to +12dBV 1:1 to inf:1 (limiter) Auto or from 0,1ms to 150ms Auto or from 1ms to 5s. |

2x4 internal DSP management card for DPA and DPA-T amplifier series. Fully configurable with AMICLAB PC control software

Key features

- 24bits / 48kHz sampling rate for superior audio quality
- Powerful 48bits DSP architecture allows real time configurations
- Four full independent channels management for extra versatility
- Input selection and gain controls, MUTE and PHASE invert
- Crossover section with 9 different high and low pass filter options. Up to 24dB/oct
- Cross over edge link possibility
- Equalisation section with 11 different filter types. Up to 10 equalisation points running per output channel
- Limiter and compressor section with automatic mode possibility. Compression status indicator
- Independent remote input VCA control
- Independent delay per output adjustable to installers preferred units (m, cm, s, ms)
- Built in signal generator allows white and pink noise, sine tone and polarity check as an extra versatility tool
- USB controlled by AMICLAB included software
- Graphic user interface (GUI) allows all parameters to be edited by a single drag and drop mouse operation
- Password controlled for unwanted set up manipulation
- Full VU-METER control at inputs and outputs
- Grouping channels feature simplifies set up when stereo configurations are required
- Upgradeable DSP firmware
- Full file management
- Can be easily installed in any DPA and DPA-T stereo power amplifier

| | |
|--|--|
| High & Low pass Crossover filters | Butterworth in 6/12/18/24dB/oct Bessel in 12/18/24dB/oct Linkwitz-Riley in 12/24dB/oct |
| Parametric Eq types (10 max, per output) | <ul style="list-style-type: none"> Bypass Param. Eq, 20Hz-20kHz; -60/+12dB; Q from 1,3 to 200 Low & High Shelf 6/12 dB/oct Low & High Pass 6/12 dB/oct All Pass 1/2 order |
| Built in signal generator | <ul style="list-style-type: none"> Sine (20Hz to 20kHz) Polarity (20Hz to 20kHz) Pink White |
| Signal Mute | Yes |
| Signal Polarity Invert | Yes |
| Analog Volume remote control (0-10VDC) | 0V= no attenuation (0dB) +10V= full attenuation (-inf.) |
| Connectivity | USB1,1 (2,0 compatible) Can provide supply to AMIC while programming |

* Measuring AMIC as a independent device

Applications

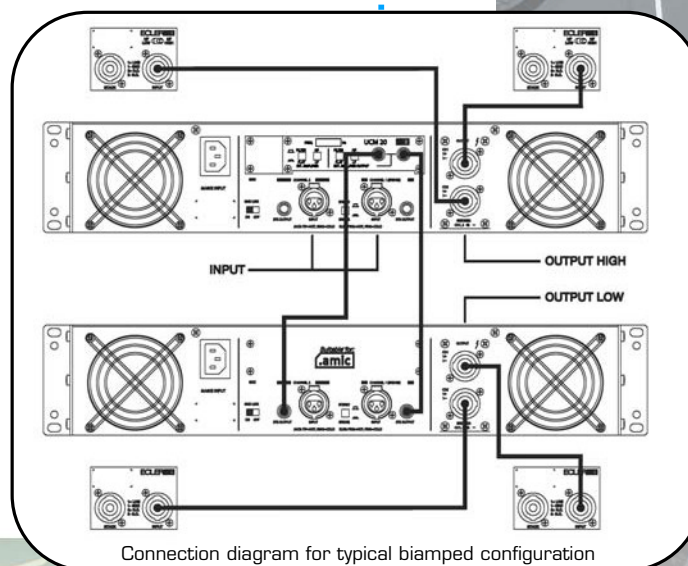
- Permanent installation management system
- Live sound. Monitor management
- Stereo bi-amped general applications

Accessories

- **REV010:** on-wall remote level control for AMIC. Frame, circuit board and holder included. For fitting into standard wall-mounting installations. Dimensions (mm): 89x82x60. Snow white colour

Key Features

- 2x4 internal analogue stereo cross over card for DPA and DPA-T amplifier series
- Internally selectable cut-off frequencies: 100Hz, 125Hz, 150Hz and 200Hz
- Externally configurable as high pass filter or low pass filter for both the host amplifier and external amplifier
- Bypassable for full range operation (FLAT button)
- Internal input sensitivity adjustment 0dBV or +6dBV
- Unbalanced output connectors (JACK) allows processed signal to be sent to an external amplifier
- 0dBV output signal level
- Linkwitz-Riley 24dB/oct cross over circuitry
- Can be easily installed in any DPA and DPA-T stereo power amplifier
- Blank space for sticker indicating cut-off frequency setting
- Ideal for non expert audio users and plug and play bi-amped audio systems



Technical Characteristics

UCM 20

| | |
|--------------------------------------|--|
| Nom. Inputs Sensitivity/Impedance | 0(+6) * dBV / >46kΩ |
| Outputs Level (UNBAL) / Minimum Load | 0dBV / 2kΩ |
| THD+N | <0,01% |
| Signal Noise Ratio | >100dB |
| Crosstalk | >100dB |
| Filters | Linkwitz Riley 24dB/oct Slope in all the cases |
| Cut frequency at -6dB | 100 Hz * |
| Cut frequency at -6dB | 125 Hz * |
| Cut frequency at -6dB | 150 Hz * |
| Cut frequency at -6dB | 200 Hz * |
| Dimensions | Panel 30x113mm Depth 80mm |
| Weight | 125g |

*Internally selectable

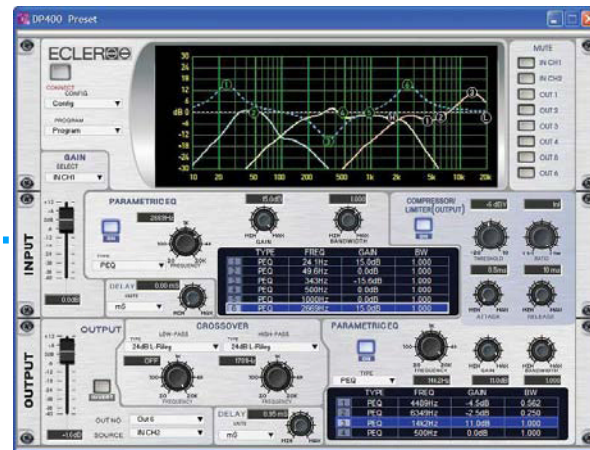
General applications

- Stereo bi-amped plug and play general applications



Main applications

- Stereo 3 way loudspeaker management
- 2 way L, C, R configurations
- 1 input / 6 output mono signal processor



Digital loudspeaker management unit. The ultimate solution for accurate control and adjusting of professional sound systems.

Key features

- 2 input / 6 output digital loudspeaker management processor
- Dual 24 bits on board DSP
- 48 kHz sampling rate
- Selectable crossover slopes of 12, 18, 24 or 48dB per octave
- Cross over filter types: Butterworth, Linkwitz-Riley or Bessel
- Parametric or shelving equalisation for smooth system frequency response in INPUTS and OUTPUTS
- Available delays in INPUTS and OUTPUTS
- Limiter and compressor. Compressor output with adjustable threshold, attack and release times
- Phase invert switch per output
- 30 memory bank locations for user programs
- Lock-function for protecting program settings
- Electronically balanced inputs and outputs
- USB control
- 2x20 character backlit LCD
- Fully configurable from PC via DPLAB_2 control software

Technical Characteristics* DP 400

| | | |
|-------------------|--------------------------------|---|
| Input section | Input Impedance | 10k Ω , electronically balanced |
| | Maximum Input Level | +20dBV |
| | CMRR | Better than 50dB (30Hz-20kHz) |
| | Input Connector | XLR-3F |
| Output section | Output Impedance | <50 Ω , electronically balanced |
| | Maximum Output Level | +14dBV into 600 Ω or greater |
| | Output Gain | ± 15 dB, variable in 0,5dB steps |
| | Output Connector | XLR-3M |
| Crossover filters | Slopes | 6, 12, 18, 24, or 48dB per octave (Filter type dependant) |
| | Type | Bessel, Butterworth, or Linkwitz-Riley |
| Delays | Delay Step | 21 μ s |
| | Max Delay time | 630 ms |
| EQ | Maximum number of EQ filters | 60 (depending on crossover slopes) |
| | EQ Type Parametric, | Nine filters assigned to Dynamic EQ. |
| | Bel or shelving on any filter, | |

DP 400

| | | |
|---------------------------------------|-------------------------|---|
| EQ | EQ Gain | ± 15 dB, variable in 0,5dB steps |
| | G (bandwidth) | 0,05 to 3 octaves, variable in 0,05 steps |
| | EQ freq | 15Hz to 16kHz |
| | Dynamic Slope | 2:1 to 20:1 (dynamic EQ's only) |
| General Performance with filters out: | Frequency Response | 15Hz - 20kHz, $\pm 0,25$ dB 15Hz - 40kHz, ± 3 dB |
| | Dynamic range | >100dB unweighted 22Hz to 22kHz |
| | Channel Separation | >80dB, 30Hz to 20kHz |
| | Distortion (THD) | <0,007%, 20Hz - 20kHz @ +10dBu output |
| | Input Metering | -20dB, -12dB, -6dB, -3dB, CLIP relative to Clip point (+20dBV) |
| | Output Meter Indication | SIG (-40dB), -20dB, -12dB, -6dB, -3dB, 0dB, OVER (+6dB) relative to limiter threshold setting |
| General | Dimensions | (481mm x 44mm x 223mm) |
| | Weight | 2,5kgs, unpacked |
| | AC Power | 90V-250V AC, 50/60Hz, 25VA |
| | Fuse | 1A TEMP |

Accessories

- DP400 is provided with DPLAB_2 control software for accurate remote unit set up in a simple and effective way.

*Preliminary



Constant Q design stereo and mono graphic equalisers

QEM 16-2 Key features

- Two channel, 16 bands two thirds octave (ISO) equaliser
- 2 RU high
- 12 dB boost and cut ranges
- General slide output level controls. FLAT mode switch
- 45mm sliders
- CLIP, FLAT and POWER ON indicators
- Electronically balanced inputs (XLR) and outputs (XLR)
- Radiofrequency filter and switchable subsonic filter
- Fail safe design: unit switches to bypass mode in case of power supply failure

QEM 30-1 Key features

- One channel, 30 bands one third octave (ISO) equaliser
- 2 RU high
- 12 dB boost and cut ranges
- General slide output level control. FLAT mode switch
- 45mm sliders
- CLIP, FLAT and POWER ON indicators
- Electronically balanced inputs (XLR) and outputs (XLR)
- High and low cut filter controls, providing the ability to set the upper and lower cut-off frequencies between 2.2 kHz to 30 kHz on the high end and 15 Hz to 300 Hz on the low
- Fail safe design: unit switches to bypass mode in case of supply failure

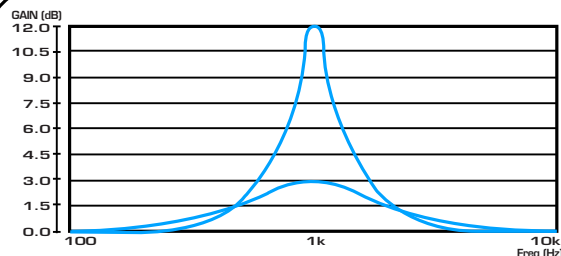
QEM

QEM 16-2, QEM 30-1

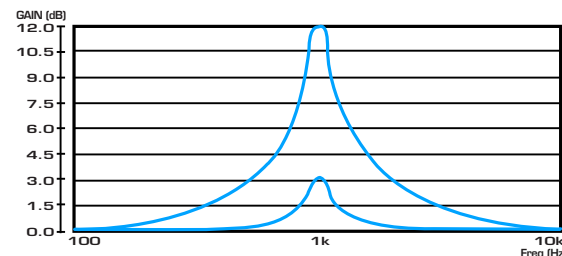
Processors



CONSTANT Q SYSTEM, ACCURATE EQUALISATION



Comparison graphic of Q factor change between full boost and low boost.



Constant Q graphic at full and low boost.

Constant shape, or constant Q system, makes filter bandwidth independent from the selected gain. This system provides a better selectivity and accuracy in the equalisation.

General QEM series applications

- General accurate stereo and mono equalisation applications

Technical Characteristics

QEM 16-2

QEM 30-1

| | | |
|---------------------------------------|-----------------------------|-----------------------------|
| Bands (ISO standard center frequency) | 2 x 16 | 1 x 30 |
| Max boost/cut | 12 dB | 12 dB |
| Input sensitivity/impedance | 0 dBV/10k Ω balanced | 0 dBV/10k Ω balanced |
| Output level/minimum load | 0 dBV/600 Ω balanced | 0 dBV/600 Ω balanced |
| Adjustable low pass filter | ... | 15 Hz to 300 Hz |
| Adjustable high pass filter | ... | 2,2 kHz to 30 kHz |
| Switchable subsonic filter | Yes | NO |
| Radiofrequency filter | Yes | YES |
| Frequency response | 20Hz-40kHz \pm 0,5 dB | 20Hz-40kHz \pm 0,5 dB |
| Max. ripple all controls @ +12 dB | 1,5 dB | 1,5 dB |
| Harmonic distortion | < 0,05% | < 0,05% |
| Signal/noise ratio | > 95dB | > 95dB |
| CMRR @ 1kHz | > 50 dB | > 50 dB |
| Power consumption | 13VA | 12VA |
| Dimensions Panel (w x h) x depth | (482,6 x 88) x 181 mm | (482,6 x 88) x 181 mm |
| Weight | 3,2 kg | 3,2 kg |

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Professional Installation Product Range

All the characteristics are subject to variation due to production tolerances. ECLER SA reserves the right to make changes or improvements in manufacturing or design that may affect specifications.

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