



# ET150, 300 & 450 AFILS Amplifiers

## Description

The ET150, 300 & 450 form the professional range of Current Thinkings' *Easy T*™ series of audio frequency induction loop (AFILS) amplifiers and are designed to provide studio quality sound in an AFILS system.

The amplifiers have 3 inputs on XLR; 2 dedicated microphones and one microphone or line selectable using a rear panel switch. User selectable Phantom Powering is available for the microphone inputs, enabled via a rear panel switch. The inputs are individually mixed before passing to the compressor limiter, which prevents loop overload whilst compensating for varying microphone usage.

All controls are recessed to prevent unauthorised access. Indication is provided for compression level, output current, loop status and power supply. A loop current monitor socket is provided to allow headphones to be used to monitor the actual loop current. An audio output (post compressor) is provided for recording, with a slave audio in to allow cascading. A loop OK voltage is available to illuminate a sign showing correct loop operation. The units are all 1u (44.5mm) high and a 19" rack mounting kit is available.

## Choosing the right unit

All In order to remove the "magic" from loop amplifier specification, Current Thinking recommends loop amplifiers are specified thus; by maximum square area and by length of the shortest side. These areas relate to loops fitted at skirting board or ceiling (2.4m) height and provide even loop coverage.

For example, the ET150 will cover a square room 12.25m per side (150m<sup>2</sup>), however the same amplifier will also cover a rectangular room 10m by 20m (200m<sup>2</sup>). In this example the ET150 is rated at 150m<sup>2</sup> square area and 10m for the shortest side. The shortest side rating is valid for distances up to twice the shortest side, for example the ET450 is rated at 20m shortest side, so the other side of the rectangle can be a maximum of 40m (giving a coverage of 800m<sup>2</sup>). If the loop is above 2.4m in height, then 20% should be subtracted from the shortest length for every additional metre in height the loop is (to a maximum of 4m).

These values do not take into account additional losses present in some building constructions, if you are in any doubt always lay a temporary loop. It is always wise to allow 20% spare capacity when specifying a loop amplifier, just to cover the unknown element.

Amplifier	Square Area	Shortest Side	Maximum Area
ET150	150m <sup>2</sup>	10m	200m <sup>2</sup>
ET300	300m <sup>2</sup>	15m	450m <sup>2</sup>
ET450	450m <sup>2</sup>	20m	800m <sup>2</sup>

All information is believed to be correct at the time of printing, however Current Thinking Ltd reserve the right to change any specification as part of our programme of continuous improvement, E&OE.



## Features

- Up to 800m<sup>2</sup> Coverage
- 3 Inputs on XLR
- Phantom Power
- Current Mode Output
- Loop Monitoring
- Soft Start
- Compressor
- Compression Meter
- Full Protection System
- Protected Mixer & Drive Controls
- Power Indication
- High Peak Current Capability
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## Technical Specification

### Inputs

- Audio inputs  2 off microphone, 1 mic / line selectable
- Type  XLR
- Phantom  Selectable, 15V 2mA
- Sensitivity  -50dB Microphone -10dB Line

### Mains Input

- Voltage  230V ~ 50/60 Hz
- ET150  ET300  ET450
- Power  100VA Max  180VA Max  300VA Max
- Internal fuse  2 off 2A (T)  2 off 3.15A (T)  2 off 5A (T)
- Plug top Fuse  5A
- Fuse for Spur  5A

### Indication & Controls

- LED indicators  4 off gain reduction, 5 off loop current, power,  loop integrity and protection operating.
- User Controls  3x input mixer and current Drive.
- Protection  Recessed screwdriver adjust only.

### Audio Processing

- Compressor  Variable ratio 1:1 to limit 20:1.
- Attack  10mS
- Release  Automatic from 500mS to 1500mS
- Dynamic Range  >60dB
- THD  <0.25%

### Output Stage

- Type  Current Mode
- Loop impedance  0.1Ω to 1Ω
- ET150  ET300  ET450
- Peak Current  >9A peak  >12A peak  >15A peak
- 125mS burst  >6A peak  >8A peak  >10A peak
- RMS Current  2A  3A  4A (@1KHz)
- Protection  DC, Thermal, Short circuit, soft start.

### Dimensions

- Extents  Height  44.5mm
- Width  432mm (free standing) 485mm with Rack kit
- Depth  165mm

### Supplied By



Document number DET457001

## Installation

Installation is simplicity itself, the unit should be sited in a convenient place, ideally as close to the area to be covered as possible, the loop cable (a single turn loop of between 1mm (ET150), 1.5mm (ET300) or 2.5mm (ET450) CSA cable) is installed securely (see note 1 below) and the microphone(s) are located as close to the area(s) where the sound is to be picked up from (see note 2 below). Mains power can now be applied using the IEC cable supplied this cable has a moulded plug fitted, which can be removed if direct wiring to a fused spur is required, the spur should be fused at 5A.

The input mixer controls can now be adjusted so that the gain reduction meter moves to 12dB on loud speech. The output drive control can now be adjusted to give the correct field strength in the area to be covered. This is best done with a loop field strength meter during installation, or a loop listening device (good practice is to supply a loop listening device to all installations to allow the responsible person to test the loop periodically and record correct operation in a log booklet).

### Notes:

1. If there is any doubt about the construction of the building, it is always best to lay a temporary loop in the approximate position the final loop will occupy, this will determine the operation of the loop. Many new buildings contain aluminium in lost screed flooring, loops placed on the floor near this aluminium will fail to operate satisfactorily.

2. Microphone cables must be run separately from the loop cable, under no circumstances should the cables be tied together for any distance, this will cause magnetic feedback and the unit will not perform correctly. Good practice is to twist the loop feeder cable together between the start and end of the loop and the amplifier.

## Products & ordering information

ET150  1u free standing, 3 XLR inputs (2 mic, 1 mic /line) AFILS amplifier, with loop monitor, loop current indication, compressor limiter, mixer and output drive recessed controls. Covers a square room 12.25m per side (150m<sup>2</sup>) up to a rectangular room 10m by 20m (200m<sup>2</sup>). Output current >5.44A

ET300  1u free standing, 3 XLR inputs (2 mic, 1 mic /line) AFILS amplifier, with loop monitor, loop current indication, compressor limiter, mixer and output drive recessed controls. Covers a square room 17.3m per side (300m<sup>2</sup>) up to a rectangular room 15m by 30m (450m<sup>2</sup>). Output current >7.7A

ET450  1u free standing, 3 XLR inputs (2 mic, 1 mic /line) AFILS amplifier, with loop monitor, loop current indication, compressor limiter, mixer and output drive recessed controls. Covers a square room 21.2m per side (450m<sup>2</sup>) up to a rectangular room 20m by 40m (800m<sup>2</sup>). Output current >9.5A

ETRM  Pair of 1u rack mount wings for the ET150, ET300, and ET450 allowing easy installation into standard 19" rack cabinets.

ETOK  Over door loop operating sign. A blue sign designed to be driven by the loop OK output from the ET150, ET300 and ET450 AFILS amplifiers.

ETRX  Induction loop receiver, allowing anyone to listen to the loop using standard walkman type headphones