



FIGURE 1

ES-JG01LR Intelligent, selective GSM jammer for lifesaving applications

Description

ES-JG01LR is a part of easy-id's upcoming security and lifesaving communications series. It is designed for applications where mobile phone communication must be restricted to fulfil requirements for safety of life.

Unlike other products currently available on the market the ES-JG01LR is capable of jamming only frequencies that are used by adjacent base stations. This way it stays invisible to jammer detectors which look for high RF power wideband jammers.

Its 19" standardized form factor with three rack units height makes it highly portable and easy to install into mobile and immobile hosts. Figure 1 depicts a possible installation of the ES-JG01LR in a

standard rack (black box in the middle, with additional components).

The ES-JG01LR is very easy to use. No setup is needed for proper operation. Simply switching on the device is everything the user has to do.

Working principle

The ES-JG01LR will look for adjacent BTS and thereby detects their carrier frequencies. It then launches a special jamming signal that overrides the carrier signals of the observed BTSs and renders them undetectable to a mobile phone (Figure 2). The algorithm uses successive approximation to make sure that the transmission power stays on a reasonable but minimum level.

This algorithm makes the ES-JG01LR a very energy efficient device allowing operation from a standard 12V car battery or an emergency backup generator.

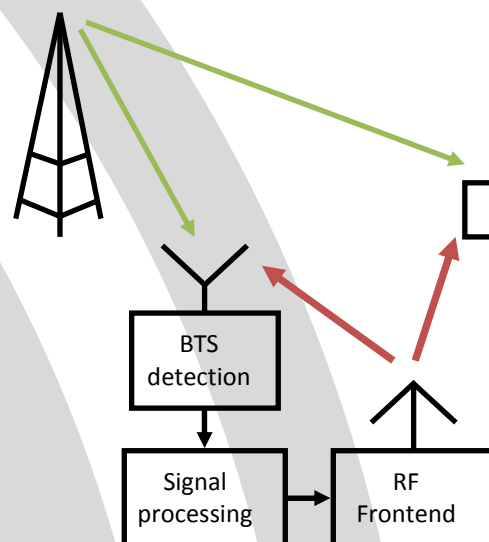


FIGURE 2

Figures 3A and 3B exemplify two states of the GSM spectrum. Figure 3A depicts a spectrum with three GSM BTSs detectable (green) by a mobile phone and the ES-JG01LR turned off. After the ES-JG01LR is turned on, two of the detectable BTSs are overridden by the jammer's signal and thus undetectable (red) by the mobile phone. One BTS, for example the one needed for communication of the safety personnel, is left untouched.

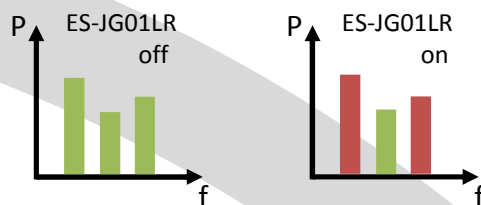


FIGURE 3A

FIGURE 3B

Expandability

ES-JG01LR's use cases can be expanded easily to support other communication systems as well. In the near future, eesy-id will be able to expand their jammer family to support W-CDMA/UMTS systems. Further plans include a BTS to allow helping forces to communicate via mobile phone while jamming adjacent BTSs.

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Technical Data

Property	Value
jamming radius @ 40 dBm output stage with standard antenna	220 m
RF Output Power (expandable on request)	10 W typ.
number of jammable BTSs	no limit
size ca. W/H/D	48.3 cm / 13.4 cm / 25.0 cm
power input	120 W
Supply	12 V DC or 220 V AC
frequency bands *)	EGSM 900 DCS 1800
channel raster	200 kHz

*) other frequencies and communication systems available on request.

This datasheet is based on preliminary data and is subject to change without any prior notice.