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Introduction

This document contains the User's Guide and Specification for the **V-Amp** EEG amplifiers.

Abbreviations

Term	Meaning
ADC	Analog-to-Digital Converter
CMOS	Complementary metal-oxide semiconductor
CPU	Central Processing Unit
DC	Direct Current
DSP	Digital Signal Processor
ECG	Electrocardiogram
EEG	Electroencephalogram
EMG	Electromyogram
GSR	Galvanic Skin Response
MD	Medical Device
PC	Personal computer
TBD	To Be Determined
TTL	Transistor-Transistor Logic

References

1. D-Link Inc. – _____
2. Franz Binder GmbH. – _____ r.de

1. Symbols on labels

Symbol	Meaning
	Electrical medical device, CLASS II EQUIPMENT.
	Electrical medical device, TYPE BF EQUIPMENT.
	Attention. Carefully read specification or instruction for use.
	This device conforms to Directive 93/42/EEC (Directive on concerning medical devices)
	Separate collection with electrical and electronic equipments for recycling.
	USB connector

2. Warnings

⚠ Use IEC60601-1-1 standard to combine the V-Amp with other devices (computers and peripherals, triggers sources and drivers).

⚠ Do not operate the V-Amp within 3 meters of an operating cellular phone, similar radio transmitting device, other powerful radio interference producing sources such as arc welders, radio thermal treatment equipment, x-ray machines, or any other equipment that produces electrical sparks. More information about distance to radiofrequency equipment at chapter 8.3 is described.

⚠ After use, the Disposable Electrodes may be a biohazard. Handle, and when applicable, dispose of these materials in accordance with accepted medical practice and any applicable local, state and federal laws and regulations.

⚠ Reusable electrodes present a potential risk of cross-infection especially when used on abraded skin, unless they are restricted to a single patient or sterilized between patients. If sterilizing electrodes, employ only gas sterilization.

⚠ Explosion Hazard; Do not use in the presence of a flammable anesthetic mixture with air, or with Oxygen or Nitrous Oxide.

⚠ Not to be immersed in water.

⚠ Take care in arranging patient and sensor cables to avoid risk of patient entanglement or strangulation.

⚠ The operator is responsible for ensuring the safety of any devices controlled or triggered by V-Amp equipment or software, or by any software or hardware receiving data from V-Amp. The V-Amp must not be configured or connected in such a way that failure in its data acquisition, processing or control functions can trigger patient feedback stimulus that poses an unacceptable level of risk.

⚠ Not to be connected to a patient undergoing Electro surgery or defibrillation.

⚠ Use USB cable up to 5 meters length with special *fixation lock* for FirsAmp only.

⚠ Auxiliary probe or probes set which is connected, must comply with the safety standard for electric medical devices IEC60601-1. If used two probes with separate functions (for example GSR and pletismograph) or one probe with set of functions then should be use double or reinforced galvanic isolation between this functions parts.