Electric Friends™ R1 and its patented controller software Axis Ctrl™ has been designed by a team of broadcast producers ensuring that it adheres to extreme requirements in remote robotic productions. Electric Friends™ systems are developed for a variety of applications including studio, outside broadcast and film production. This new broadcast solution allows a giant leap forward in terms of productivity, flexibility and cost efficiency.

The R1 robot is a Plug and Play solution and replaces a staffed jib or small crane and is ideal for repeated trajectory like in News and Sports studios.

Electric Friends™ provides different hardware and software configurations suitable to any studio, Virtual or outside broadcast.

Electric Friends™ and its software Axis Ctrl™ support several VR systems. The trajectory and position repeatability is 0.1 mm and requires no further calibration after initial setup. Electric Friends™ solution is an advanced industrial collaborative robot platform custom built for the broadcast industry. The robot is programmed with safety in mind, and has been certified to work in an environment with people in close proximity.

Axis Ctrl™ is Electric Friends™ patented software. All the movements, trajectories, preset frames and shots are run by an intuitive user interface on a touchscreen. Axis Ctrl™ can simultaneously control up to four robot arms during production, remote or in studio. Axis Ctrl™ provides an easy and precise on-air adjustments and limitless preset trajectories (shots).

Electric Friends is advanced robotics that can be controlled by anyone from anywhere after only minutes of training.
Integrations

Electric Friends is based on the certified industrial Collaborative Robot standard, no fencing needed.

TÜV Nord, EMC 2004/108/EC, 2006/42/EC, RoHs 2011/65/EU

Supported Hardware/lenses
The system is camera agnostic. Any camera fitting within the weight and size constraints can be used. Modifications to the cable assembly and external terminals of the robots base can be made by studio Engineers.
All Canon models with 20-pin virtual/remote connector
(Fujinon or other on request)

The robot exports high accuracy tracking data +/- 0.1 mm used by any graphic engine to render virtual Studios or augmented reality elements. Data is transmitted as an UDP Ethernet stream over the Studio network using the Free-D protocol specification. Electric Friends is Vizrt, AVID, Ross compatible.

Vizrt Mosart
Electric Friends is compatible with Vizrt Mosart, Vizrt Multiplay providing added studio automation benefits.

HTTP API
The robot can easily be integrated with 3rd party systems using a modem, fully documented REST API. Both recall of preprogrammed frames (presets) and complex motions are possible, as well as fully Customized movements providing target coordinates.

Support/Remote service
The Electric Friends robot controller is able to detect and diagnose many potential problems Automatically, and will alert the central support system. This enables operators to perform Both mandatory and preventive maintenance with minimal downtime.
Software updates and upgrades can be distributed and installed either automatically or manually.

High trajectory precision makes it the markets best and easiest solution for Virtual Reality and Augmented graphics for any production
Physical Specifications and wiring

Robot Controller and user Interface
Connections needed by the robot and control system are shown in the chart below. Grey components are provided by Electric Friends. Power cables are omitted.

Camera and Robot Base
Details for how to connect the camera and robot base. Not all connections are required. Power to the Camera and other equipment such as prompters may be pulled from the robot’s integrated PSU.

Server and User Interface
The server is a Windows 8.1 installation, running the required services. Configuration of OS settings to comply with local network policies can be made by studio engineers.

Collaborative Robots, TUV certified to work in close proximity with people. No fencing or protection needed.
R1 Technical specifications

Camera payload, max 7 kg
Joint ranges +/- 360°
7 Axis
Repeatability/trajectory accuracy +/- 0,1 mm
Speed 120°- 180°/second
Power consumption 350 W, normal use
Power 100-240 VAC 50-60Hz
Absolute encoders/no calibrations after setup
Reach 136 cm radius (Diameter 272 cm)
Different mounting solutions, roof, floor, wall, (track by 201)
Low noise (6 Db at medium speed)
IP 54

Support: support@electricfriends.zendesk.com