20th Century Fox ADR Project 2011-2013

(HPA Award submission for Creativity and Innovation – Sound Category)

Submission :
20th Century Fox Automatic Dialog Replacement Audio Monitoring System

1. Introduction

The Fox Post Production Engineering ADR System is a purpose designed and built system for ADR recording with 5.1 mixing and monitoring capability. The system is based on digitally controlled analog technology, assembled of a Fox Spec'd Vector Electronics Chassis, Fox Engineering designed, drafted and built Stem modules, Return modules, Master modules, Communication Module, Control surface module, Control surface fascia, Fox Engineering software control and Acopian Power supplies.
The system uses public domain I2C bus to control logic functions and provide high speed data exchange between modules.
Features include change sensitive control knobs, Digital level display, Snap shot recall, 5.1 Stem mixing, ADR "Ahead" / "In" / "Past" logic, SoundMaster ION interface, SSL Duality console integration, Audio sampler integration, standalone system capability, and can be integrated to consoles with fader automation for the linear mixing faders.

- System design, PCB design / trace routing / Gerber file creation / front panel design and front panel manufacturing / PCB and system assembly / software design / all testing - was done in house on the 20th Century Fox Lot in Los Angeles CA.
- PCBs were manufactured by third party.

2. Purpose of Project

1). Replacement of Fox's, (end of life), analog ADR console systems.
2). Marketable system that can be sold to third party users, console manufacturer for integration and resale.
3). System components will spin-off additional systems and / or products by Fox Engineering.

3. Justification

Purpose built, Analog ADR systems are no longer manufactured. Custom digital systems and software systems are available but do not meet Fox Studios requirements and typically are replaced in a few years.

4). Noteworthy

The 20th Century Fox ADR system is a significant achievement in analog technology. It reflects the passion and determination to innovate and create high performance technology for the Movie and TV industry here in Los Angeles, CA.

The Lead Design Engineer Marc Gebauer and Project Engineer Derek Casari worked tirelessly while maintaining a fully operational Sound Recording department consisting of (1) Scoring Stage, (2) ADR Stages and (1) Foley Stage to design and build this innovative ADR system.

Careful consideration was given to the technology implemented for the ADR system. The choice to go analog resulted from analysis of system durability and longevity requirements combined with the ability to create a system that was capable of digital precision and 5.1 capability.

Recent technology developments in highly reliable processors, MDACs and I2C bus control provide the precision and recall capability in an analog design that matches digital technology but will not be replaced as obsolete in a few years.

Today's Digital Audio Recorders are introduced and replaced every few years the Fox ADR system will serve and the recording an monitoring front end and continue service with an anticipated life of 15 years.