

Santa Anita Racetrack, California Tele-Fire Operation with Keltron CSD703



The famous Santa Anita Racetrack monitors its alarm signals from an off-site remote station. Their older, coded signaling technology did not support that functionality and they came to Keltron for a solution. Keltron provided a cost-effective solution to effectively convert their old technology to a simple hardware output for easy monitoring and off-site signal transmission.

Overview

Keltron's system achieved the requirements for decoding coded signals, automatically re-transmitting those coded signals and providing relay outputs to connect them to a digital alarm communicator transmitter (DACT) for remote signaling.

The Keltron CSD703 receiver is configured to accept, decode and annunciate coded fire alarm signals. Output command lines can be field-programmed into the message database so that each code will cause the system to generate an alarm relay after receiving two identical rounds. Once the alarm relay is generated, subsequent identical rounds will only be printed. The alarm and trouble relay outputs are wired to separate input zones of a DACT that communicates the general alarm and trouble signals to a central operator station. In effect, the coded signals are transformed into an alarm input point to the DACT, enabling accurate transmission of the coded events over the dialup telephone network.

How it works

The Keltron CSD703 receiver decodes and annunciates coded fire alarm signals and displays them on its integral 7" CRT and on its red/black printer. Information from the field-programmed database accompanies the received signal to the display and printer with a time and date stamp. Upon finding an output command line, the system generates a programmed output(s). The system also retransmits the received coded signal in the message database, as instructed by the programmed command lines. The typically unmanned system is factory programmed to auto-acknowledge, annunciate the next received signal, and clear the relay outputs after 60 seconds. Signals are stored in the internal memory until annunciated.

The error output module that is included in the system, dedicates a single output to activate under certain error conditions that are not within the control of the system. These error conditions are - open circuit (normally closed circuits), code overrun (too many digits), and received codes with no programmed message in the database.

Any received code with no message programmed in the database will be considered a partial code and cause the trouble relay to energize after the first round. The trouble relay energizes for the following system supervisory conditions - AC power failure and 95M2739 front end decoding processor failure. These error conditions are locally annunciated on the display and printer, and as an audible signal.

The system automatically transmits a coded signal of 3-3-3-3 in response to any condition that causes the trouble relay to be energized. The trouble-coded signal is four digits to prevent confusion with existing two and three digit codes. The number 3 is used to minimize transmission time and enable quick response to a trouble condition. To prevent sending partial codes or no code under certain trouble conditions, the trouble code is factory-programmed and not database- or partial-code-dependent.

15:36:09 15:36:09 15:36:09
03/11/02 03/11/02 03/11/02
15:36:09 15:36:09 15:36:09
05/18/08 05/18/08 05/18/08
20:36:09 20:36:09 20:36:09
08/07/08 08/07/08 08/07/08

Coded signals may consist of a maximum of 5 digits per round. Each round is individually annunciated on the system display and printer. The annunciated information includes the circuit number, numeric code, date and time stamp as well as any field programmed text.

The display is required to enable field programming of the assigned outputs. The printer provides the only access to the list of codes that have been saved in the database and the only historical record of received signals.

Other options included in the Santa Anita system include a coded re-transmitter, and a printer interface with a remote logging printer.

Sequence of events - normal operation

Round one

- Print and display each code as received, accompanied by a field-programmed message if existing in the database
- Store code in memory
- Retransmit code as instructed by field-programmed command line
- Auto-acknowledge and auto-silence

Round two

- Print and display each code as received, accompanied by a field-programmed message if existing in the database
- Retransmit code as instructed by field-programmed command line
- Compare round one with round two. If they are identical energize alarm relay for 60 seconds
- Auto-acknowledge and auto-silence

Round three

- Print and display each code as received, accompanied by a field-programmed message if existing in the database
- Retransmit code as instructed by field-programmed command line
- Auto-acknowledge and auto-silence

Round four - same as round three.

Sequence of events - partial code

- Energize trouble relay for 60 seconds
- Transmit code 3-3-3-3

Keltron develops and manufactures universally-compatible, UL listed life safety event management systems for the municipal and proprietary markets. Solutions include Ethernet signaling systems, active network radio systems, distributed multiplex systems, digital communicator/receiver systems, and direct wire systems. This document is not intended for installation or maintenance purposes. All specifications are subject to changes without notice. For more information visit www.keltroncorp.com or contact us at 781-894-8710.

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