

Case Study

Emission Test Centre - Whitley



Automotive Control Centre



Project Overview

(Note: Image is not of the actual centre due to sensitivity of the control room):

Jaguar Land Rover have a number of Emission test Centres located at their various sites. Due to the increase in the sales and the vehicles produced and the increase interest in testing, they wanted to ensure that they were able to have the latest in technology and systems.

The facility at the Whitley site was already built and required an upgrade in the methodology and technology to ensure it met the higher standards being imposed by Jaguar Land rover on its vehicles and engines.



LOCATION

Emission Test Centre - Whitley



DATE

October 2014 - May 2015 (5 Phases)



PHOENIX STATUS

External Sub-Contracted AV Integrator



NET VALUE

£ 177,998 +



MAIN EQUIPMENT

32" Samsung 24/7 Monitors
CCTV & Intercom System
CorioMaster Mini
Extron Control Solutions
RFID System

Existing Situation

Following the successful installation of a Command & Control Centre at the Solihull PoC, Phoenix AV were tasked with installing a new Command & Control facility at the Whitley Emission Test Centre. This centre however consisted of 5 test cells, each with a controller.

The cells were set side by side with a corridor along one end from the first to the last. Infront of each cell was a viewing window and a desk for the cell operator / controller. Each operator worked independently watching what they could through the windows and referring to the test analysers alongside (see image)



Requirement

The requirement was for a full overhaul in the system and technology. The cell operators not only had to have a better facility to view and operate their own test systems, but any operator was to have viewing access to any other

test cell to provide secondary monitoring in the event an operator had to leave their desk. In addition, there was to be a method by which the management could access and view any of the testing cells data at any time to ensure full complicity and proper practices.

A final requirement was for an RFID system to assist with locating required test vehicles in the soak area, based on two floor levels.

Advanced testing and instrumentation facilities

Project Progress

The project was divided into 5 parts or phases, each dealing with a specific area of the requirement. Installation had to be staged and undertaken in such a way as to allow the centre to continue testing at intervals throughout.

- **Phase 1: Cabling** This was the initial phase to ensure all the required cabling including power and network cables were properly installed. The several thousand metres of cabling stretched throughout the five cells, control room, external areas including the soak parking on two floor levels and the management facilities.
- **Phase 2: Cell CCTV** Each cell was equipped with 2 CCTV cameras and a DVR system (located in a central rack). This allowed the operators to have a better view of the activities in the cell particularly of areas unsighted through the window. The images were viewed on one of the three Samsung 32" monitors located on each of the cell control desks. Views included the 2 cameras in the operators own cell and / or any other cell cameras.
- **Phase 3: Main Control Desks** Each of the five control desks was equipped with 3 x Samsung 32" screens. The first used for the CCTV as described above. The second screen allowed the operator to select via a control panel a variety of screen views, single or multi-image, of the various analysers connected to the test equipment in his cell. Additionally, via a KVM system, he could select which of the computers / analysers to interact with from the the desk rather than having to get up and walk to them.

The third screen located on the desk allowed the operator to view any of the test screens / analysers from any of the other 4 cells within the control room overall. In this way, if a desk was vacated for any reason, the tests and the safety of personnel in that cell were always monitored in real time as well as recorded.
- **Phase 4: Soak CCTV** The cars due to be tested were located in various bays throughout the 'soak' area located on two floors. Because of the shape of the areas, CCTV cameras were set at vantage points to allow staff to monitor activities and movements for safety reasons as well as vehicle location.
- **Phase 5: RFID** With over 60 bays across two floors and identical looking vehicles with no registration numbers to identify them, time was being lost searching and locating vehicles both prior to and after testing. An RFID system was introduced with each vehicle being 'tagged' on entry to the area. A 55" touch screen allows the various operators and users to search for and locate vehicles using a variety of search parameters, thus cutting down on wasted time. In addition, the tags allow for a variety of sensitive information to me monitored and logged such as temperature variations.