



CDL 9000 Series Data Logger

*An intuitive and simple
approach to collecting data*

As data collection has become a daily part of the sewer inspection routine, every software vendor with the exception of Cobra has been adapting and modifying office software database programs in an effort to collect data in the field. This has resulted in complex data collection screens being presented to the Operator.



Cobra recognizes the data collection process needs to be developed specifically to enable the User in the field to collect data without having to manage multiple screens and complex database software programs.

In the past, Cobra provided the marketplace with a data logger using a bar code interface to collect the data. Ten years ago Cobra began adding a Video Compressor to allow the User to collect MPEG video with the CDL 8000. With the advent of PACP in the U.S. and the implementation of WRc, Version 4, in the UK, Cobra set about designing a new data logger to handle the complex requirements of the new data collection programs.

The CobraTouch™ Data Logger application is designed to operate with an Industrial Touch Screen providing the User with a number of screens designed to enter data into work orders, import work orders from data management programs or edit work orders as required. Once the work order has been selected, the User is presented with a screen specifically designed for the data collection protocol used.

Incorporated in the main screen is a real time video display with video controls for brightness, contrast, saturation and hue. The main menu has the list of defect groups listed with Touch Screen icons plus a matrix allowing the User to review the data

collected during the inspection. For Users having reservations about the Touch Screen technology, a conventional mouse can be used to operate the program; however, it has been found to be slow and cumbersome when compared to the touch screen.

In PACP there is required data and optional data contained in a two inch thick manual involving some 200 defect codes with each defect having specific requirements. The CobraTouch™ with its Validation Software will not accept data that does not meet the PACP required data standard. This eliminates the need for the Operator to remember all the PACP requirements or the need to use the NASSCO two page Code definitions. Front-end validation routines built into the software ensure the User only saves data compliant with the data set being used.

As soon as a Defect Group icon is selected, a secondary screen opens allowing the User to complete the defect input. Once the Required Data has been added to the defect, the ENTER Button is activated allowing the User to send the data to the database. Optional data such as At Joint, Continuous Defect, and Remarks, etc., can be added by the User as specified by the PACP rules. The appropriate optional fields are displayed on the defect screen.

The JPEG image in the center of the clock position is an image of the PACP standard published by NASSCO. This is to assist the User in comparing the live image viewed on the screen in the upper left-hand corner and the PACP standard image.

MPEG FILES

At the start of the inspection the MPEG Video file will open. At any time during the inspection the User can pause the video file and restart the file. At the end of the inspection there is only one single video file irrespective of the number of times the file has been paused.

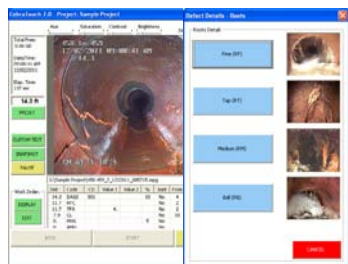
An automatic restart function has been implemented so that if the User pauses the video and attempts to resume the inspection the video file will un-pause. This also manages any VCR that may be in use at the time. (Serial controlled VCR is required.)

CAPTURING JPEGS DURING THE INSPECTION

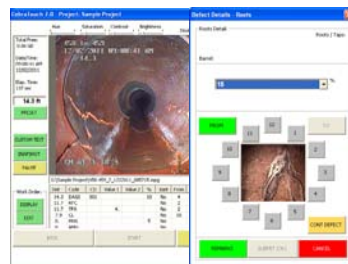
The CobraTouch™ can be configured to automatically capture JPEGS at every defect entered; alternatively the User can capture and print a JPEG manually at any time during the inspection.

ACCESSING WORK ORDERS

To open a work order the User simply selects a Work Order from the Open Project section, makes changes to the Work Order



As defects are selected the CobraTouch helps the user enter all required information by presenting secondary screens to refine the selected defect information



Data can not be transferred to the database until the Submit button is green indicating that all required data has been entered for that defect.

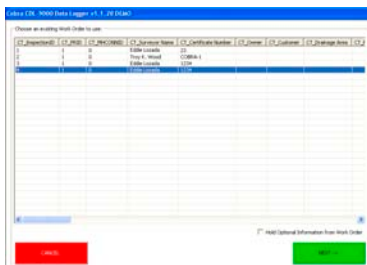
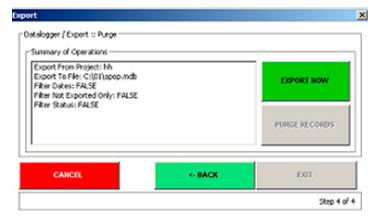
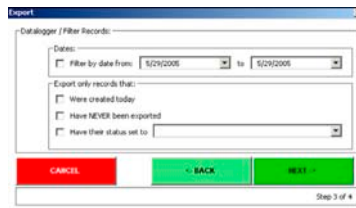
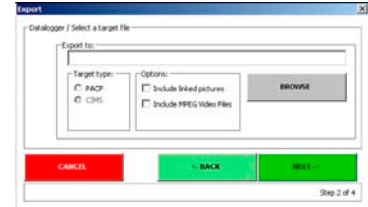
and opens the Main Menu to Start the inspection. The User has the option to start with a new blank work order.

EXPORTING DATA FILES (INCLUDING MPEG AND JPEG)

With the introduction of the National standards WRc and PACP, the export of data is no longer associated with any particular program. The CobraTouch™ can be used to collect data in the field and transfer the data to any PACP compliant program. When exported, the data, the JPEG and the MPEG files are transferred to a directory selected by the User. This could be on a CD / DVD, a Removable (USB) Drive, a LAN connection to a network, or, a Wireless connection.



When the JPEG is captured manually, it is displayed on the screen. This allows the User to review the image captured prior to saving the image. The image may be printed simply by selecting the Print Button at the bottom of the JPEG screen and may be saved with the defect to the database.



Work orders can be made from a copy of an existing order



The first work order screen contains all fields required by PACP protocol



The second work order screen contains optional fields that can be completed if required by a contract

“If you can check yourself out of a grocery store self service kiosk, you can operate the new Cobra data logger. It’s that simple!”

Clarence Baldwin
McCullough Rehab - Birmingham, AL



Visit our web site to download a demo!

UK MSCC V.3 sewer.dat

So Advanced ... It's Simple

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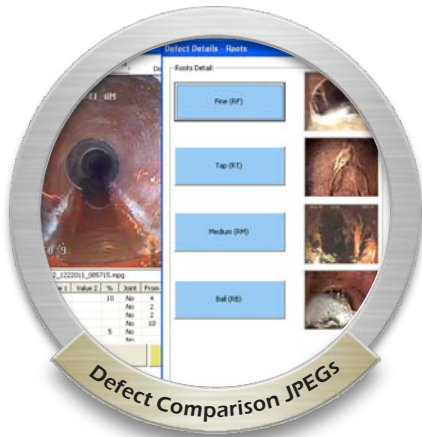
*Eliminates constant referring
to PACP defect books*



**UK MSCC V. 3
sewer.dat**



Industrial Touch Screen



Defect Comparison JPEGs

DESIGNED PRIMARILY TO COLLECT PACP/WRC DATA

- Guides the User through the “Required” and “Optional” entries for each observation using a touch screen interface
- Enters only allowable data using the data logger software verification program. No more errors
- On Screen JPEG images to compare actual defect found in pipe with the standard images (Cobra Comparator™)
- Standard PACP version 4.2/4.4 & UK MSCC version 3&4. Other output formats available

INTEGRATED DIGITAL VIDEO - MPEG 1, 2, 4 OR H.264

- Collects MPEG Video in MPEG 1, 2, 4 or H.264 formats
- Certified Pause Function - continues after a Pause at any time without closing the file.
- Instant access to any observation or defect

ONLY IN THE COBRATOUCH™ . . .

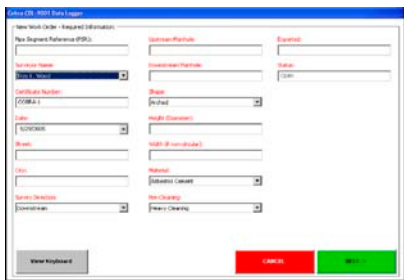
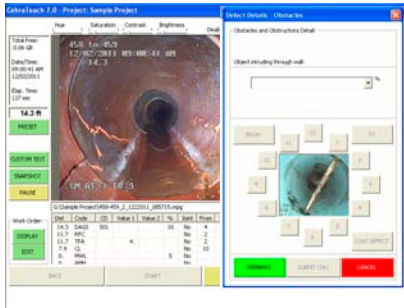
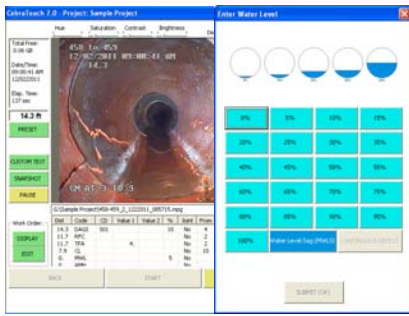
- User option - Automatic JPEG capture at point of observation. Additional Manual JPEG capture used with Automatic for additional still image capture
- JPEG image capture in real time with real-time review & print capability
- Automated Secondary Footage for lateral launcher applications
- Inclinometer and gyro inputs with display on screen and data storage
- Report printing in truck when required
- Review of data during inspection
- Visual display of Open Continuous Defects, providing automated tracking and prompting the Operator to close the Open Continuous Defects before the inspection can be completed

With other systems the user must continually refer to the PACP manual to find the specific requirements for each defect code. The CobraTouch™ verification system eliminates the need to constantly refer to the rule book and prompts the User to enter only “Required” and “Optional” data.

***Visit our web site to
download a demo!***

GIS INTERFACE (OPTIONAL)

- The CobraTouch™ Data Logger, by utilizing the integrated TerraGo Technologies' MAP2PDF, leverages the popular Adobe® Acrobat document formatting standard to provide a portable mapping format known as a GeoPDF™ enabling the creation and publishing of layered, georegistered maps. GIS professionals then distribute



GeoPDF's to non-GIS field operations personnel who choose a line segment to export and the Work Order Header is pre-populated with the GIS attribute data. Operators can also view maps, display coordinates and location, immediately view all completed inspections, create redlines and add notes. Changes can be exported for review and consumption back into the master GIS database, all without the need for non-GIS users to have GIS applications, databases or any knowledge of how they work.

THE COBRATOUCH™ GIS MODULE:

- Integrates with existing GIS infrastructure
- Automatic embedding of projection and datum coordinate systems within the PDF
- Displays coordinates in alternate projections and datums
- Displays point, line and area attributes of map feature class data with search and query capabilities
- Allows for zoom to points and objects by coordinates
- Supports GPS integration
- Replicates GIS system layers with a layered GeoPDF file
- Measures distance, azimuth and bearing in the most common units
- Prints maps to any desktop printer



UK MSCC v.3
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All Specifications subject to change.

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