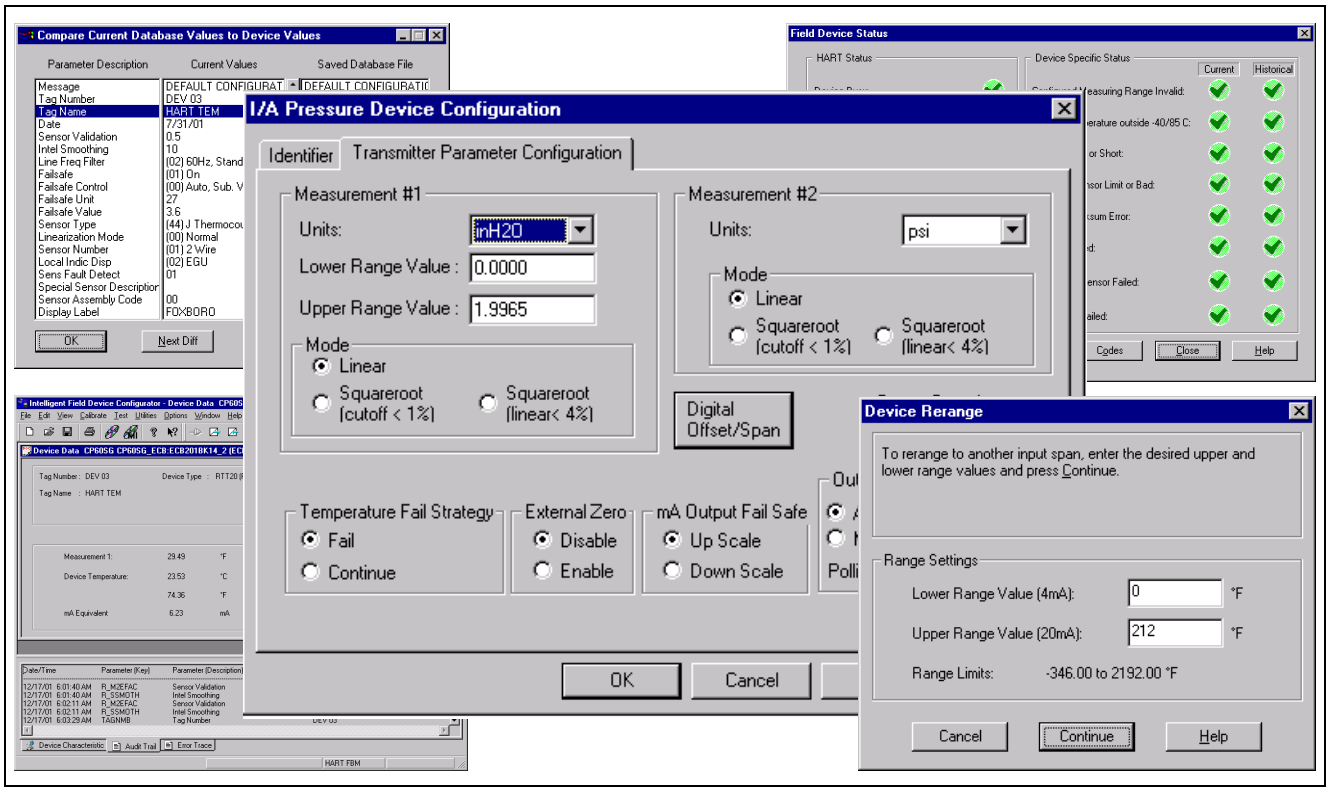
I/A Series® Software
Intelligent Field Device Configurator
FoxCom™ and HART™ Protocols



The Intelligent Field Device Configurator is a general maintenance environment for HART and FoxCom devices. It provides a powerful tool set for on-line monitoring, configuration, calibration and troubleshooting. Its field device database supports off-line and on-line configuration, file management and change tracking management.

The Intelligent Field Device Configurator (IFDC) is a graphical software package providing communication to the complete family of I/A Series Intelligent Field Devices using either FoxCom or HART protocols as well as HART devices from non Foxboro suppliers on I/A Series systems.

The IFDC package provides easy handling of configuration, diagnostic, and calibration tasks for Intelligent Field Devices. This software package provides equivalent functionality to the PC20 Intelligent Field Device Configurator. Communication with the devices is through the I/A Series system with no external connections required.

FEATURES

The IFDC software provides the following features:

- Support of FoxCom and HART devices in the same package
- Support of the following Foxboro Intelligent Transmitters:
  - Intelligent Pressure Transmitters
  - 875 Analytical Transmitters
  - Temperature Transmitters
  - Vortex Transmitters
  - Magnetic Flow Transmitters
  - Mass Flow Transmitters

- Support of Foxboro Intelligent Positioners
- Support of non Foxboro HART devices (Universal and Common Practice Commands)
- Support of configuration/preconfiguration of unconnected devices as well as connected devices
- On-line Help function
- Compatibility with PC20 generated configurations.

STANDARD TASKS

The IFDC allows you to perform the following tasks:

- Configure the device database for a new or existing field device
- Generate printed reports on device databases
- Create user-defined device databases as “default” configurations
- Save the device databases to disk file for later retrieval
- Copy saved device databases to another file
- Load device databases from saved files
- Append user comments to device databases for documentation purposes
- Compare actual device parameters against stored device database files
- Display device status
- Execute diagnostic functions on field devices
- Execute calibration functions on field devices
- Maintain an audit trail of changes made to a field device.

See Figure 1.

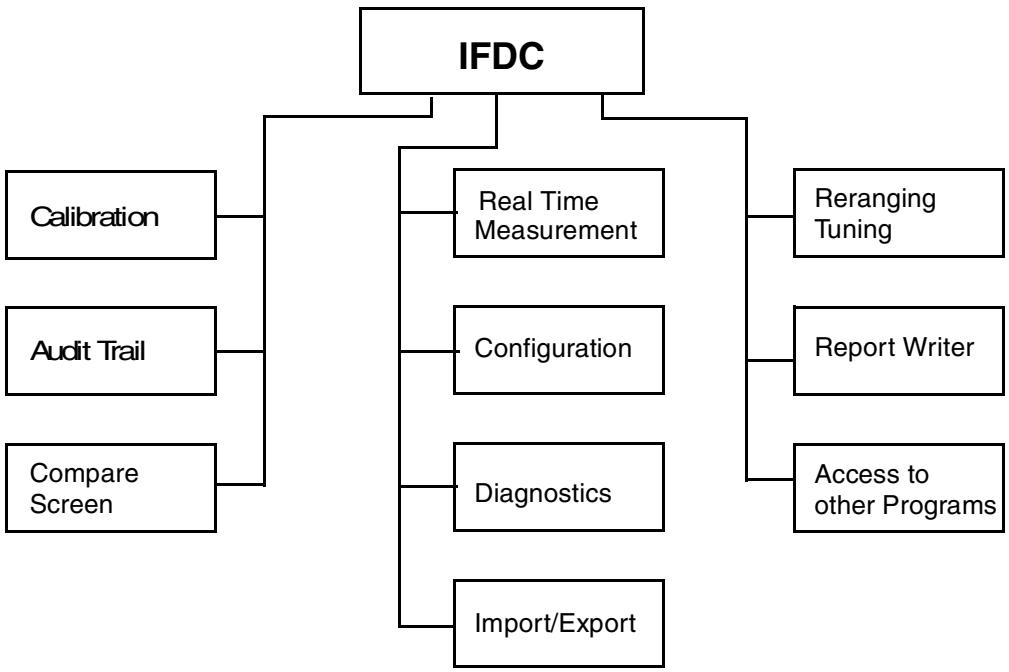


Figure 1. Intelligent Field Device Configurator (IFDC) Features

DEVICE STATUS

An important function of IFDC is to provide information about the status of the field devices. The package allows the user to interrogate the device and run diagnostics to identify devices that have failed or have problems. See Figure 2 for device information.

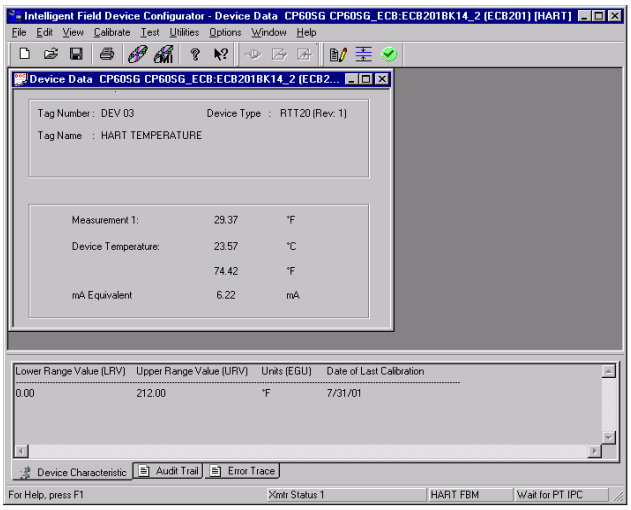


Figure 2. Device Data

From the main screen, the configurator provides access to the device status. This screen provides detailed information about the health of the device. The information is presented in an interpreted form (see Figure 3) eliminating the need for the user to look up error codes in manuals.

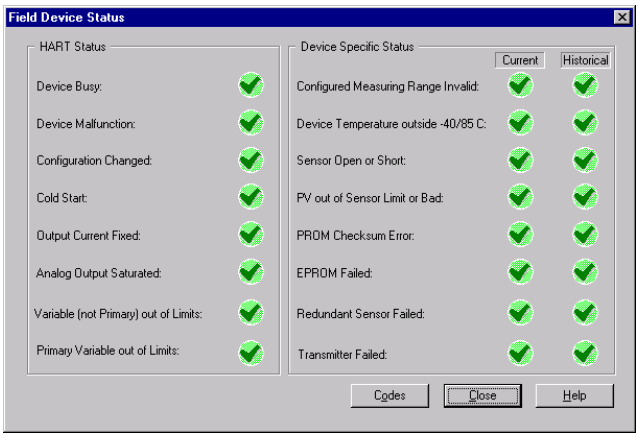


Figure 3. Device Status Information

The configurator also provides access to diagnostic functions that are specific to the device to which it is connected. Through diagnostic functions the health of devices can be ascertained and optimal process measurement insured.

DEVICE CALIBRATION

In addition to measurement, status, and diagnostics, the configurator provides access to calibration functions. These functions allow the user to tune the field device for optimal performance. Some calibration functions, such as re-ranging (see Figure 4), are routine and common to most Intelligent Field Devices.

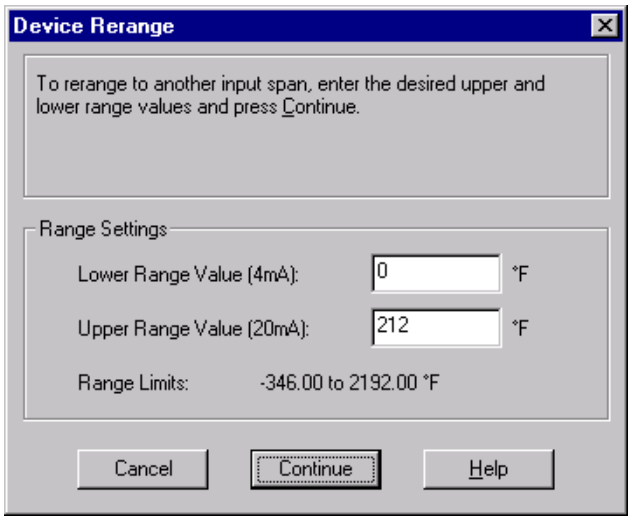


Figure 4. Rerange Calibration Function

Other calibration functions are specific to a particular device. These functions provide the ability to tune a device to correct for drift and adjust the sensor. Multi-point calibration of a RTT20 is one device-specific calibration function. See Figure 5.

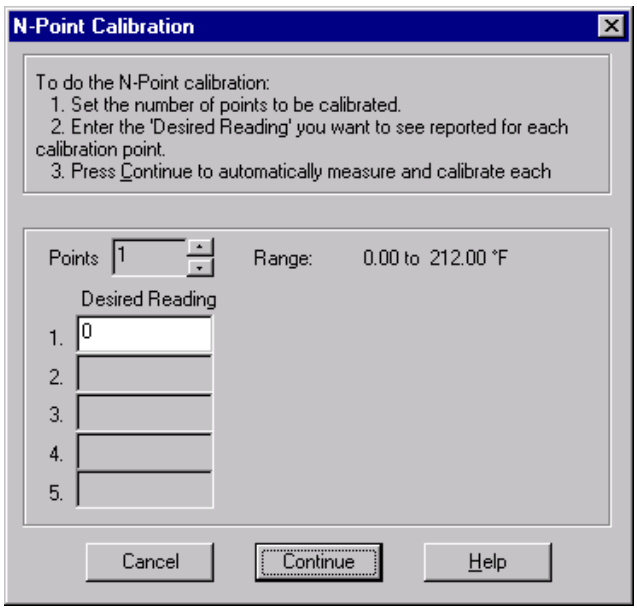


Figure 5. Device-Specific Calibration Function

DEVICE CONFIGURATION

An integral function of integrating field devices into the I/A Series system is providing the ability to configure the field devices. See Figure 6. The user is given the option of changing process parameters, such as the tag number or the measurement units. In addition, the configuration screens provide the ability to modify all user-settable parameters in the field device.

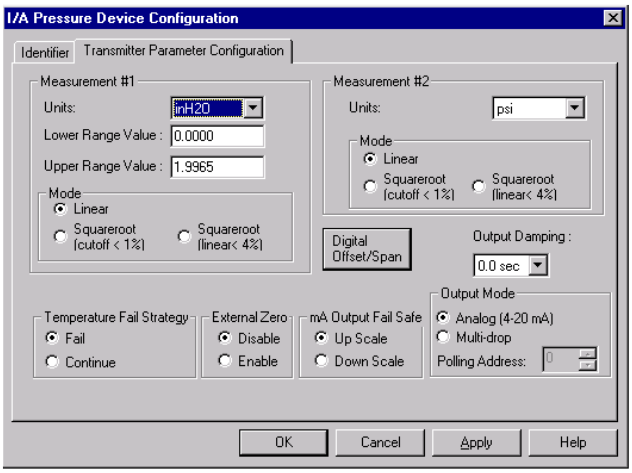


Figure 6. Device Parameter Configuration Screen

The configurator provides configuration of the device tag number, tag name, device name, location, upper and lower range values, damping time, digital or 4 to 20 mA output, type of units measured, and other configurable parameters, as required.

Configuration can be performed while the IFDC workstation is communicating with a device. The user is queried whether to send the configuration changes to the device. The device database configuration can also be saved to a file.

The saved databases can be used to initialize a device to a known configuration. This allows quick setup of a transmitter for maintenance replacement of a field device. The saved databases can also be used to restore devices that have been modified from optimal configurations.

The configurator provides comparison functionality to identify changes between stored device databases and the database currently in the device as shown in Figure 7.

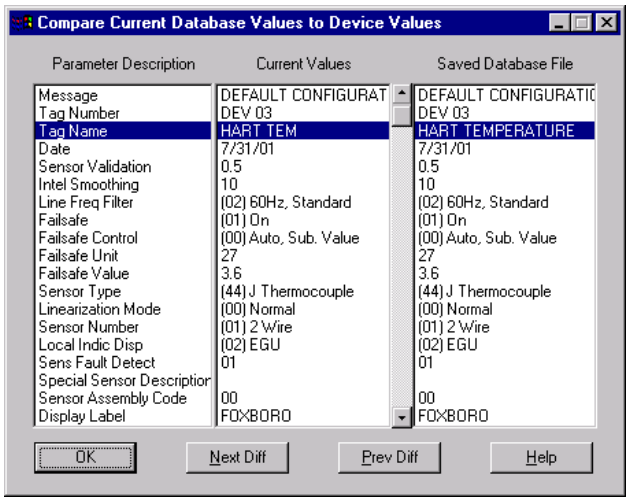


Figure 7. Device Change Comparison Screen

The comparison utility quickly identifies changes made to a device. The user can select whether the saved device database file will be updated to reflect the current device settings. Alternatively the user can select to modify the device to reflect the stored database.

AUDIT TRAIL

Maintaining a record of modifications made to a device is an important feature. The IFDC provides an audit trail capability. See Figure 8. As the user interacts with the device, a list of the device database parameters that are modified is maintained. The session audit trail records can be automatically saved to a file. By saving the audit trail, the user can maintain a record of all changes made to a field device.

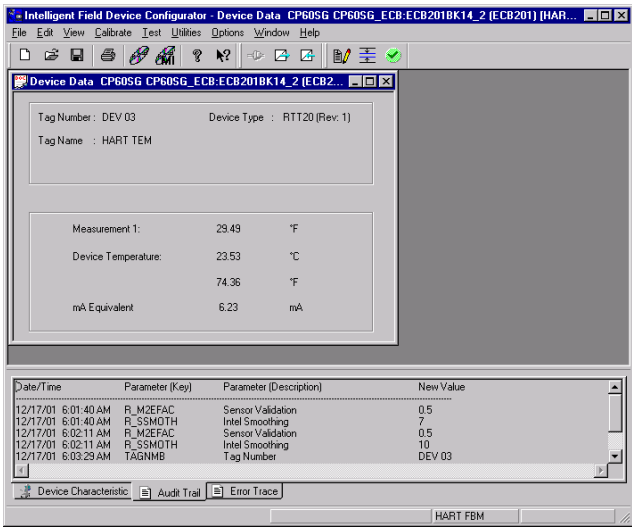


Figure 8. Audit Trail Screen

ON-LINE HELP

The configurator contains an extensive on-line Help package. The ability to bring up information about a device being configured is a major feature of the on-line Help system. The on-line Help system also provides extensive information on using IFDC and hints for fixing problems as they are encountered.

The Help system provides information not only about the configurator but also provides information about the field devices.

In addition to the on-line Help system, the Master Instruction document provides more information about the Intelligent Field devices. See MI 020-495 *Intelligent Field Device Configurator* (IFDC for use with I/A Series systems and PC20 for use with Windows®-based PCs) for additional information.

NON-FOXBORO HART FIELD DEVICES

The IFDC package supports not only Foxboro FoxCom and Foxboro devices with HART protocol, but it also supports non Foxboro devices with HART protocol. Through the use of the HART Universal and Common Practice Commands, the same capabilities to view measurements, display device status, invoke diagnostic functions, and invoke calibration functions are supported for non Foxboro devices. This provides a powerful tool for supporting Intelligent Field Devices from an I/A Series system.

The measurement screen for both Foxboro devices and non Foxboro devices with HART protocol appear the same. Additional information about the device status is shown through the status display pages. See Figure 9.

Configuration of HART devices is done through dialog boxes that provide logical grouping for parameters. These measurement screens follow the same logical grouping as for the Foxboro Intelligent Field Devices.

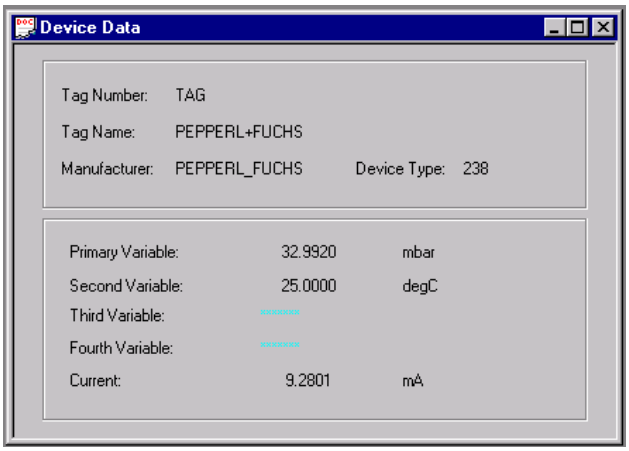


Figure 9. Non Foxboro Device Data

A dialog screen provides access to all HART Universal and Common Practice Commands directly. This provides expert operators with a powerful interface for interacting with HART field devices.

33 Commercial Street
Foxboro, Massachusetts 02035-2099
United States of America
www.foxboro.com
Inside U.S.: 1-866-PHON-IPS (1-866-746-6477)
Outside U.S.: 1-508-549-2424 or contact your local Foxboro representative.
Facsimile: 1-508-549-4999