Human Machine Interface Add-ons

- HMI add-ons extend the Tenore platform with all the tools for effective plant control
- Each add-on includes:
  - Support for DCS-specific tags and function blocks
  - Support for import of DCS configuration
  - Pop-up faceplates for common function blocks
  - System Management and Diagnostics
- Available add-ons:
  - Symphony/Harmony, INFI90, Network90
  - Control^{IT} AC800F, Freelance
  - Control^{IT} AC800M




Harmony HMI add-on (1)

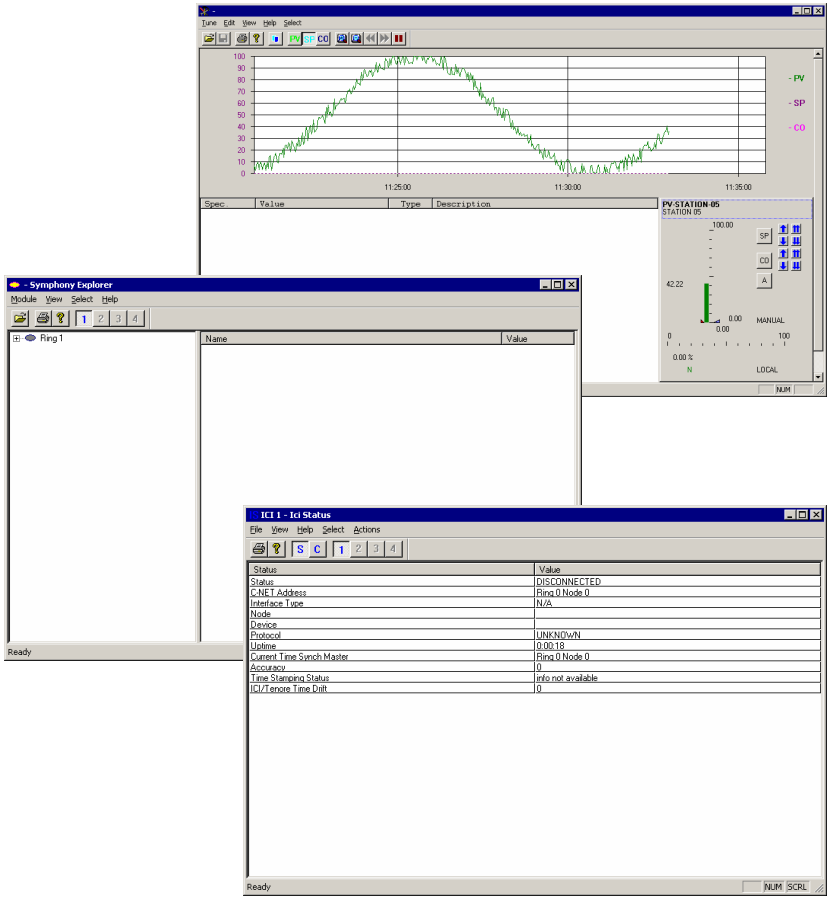
- Supported Function Blocks
  - ANALOG
  - CLIF
  - DAANALG
  - DADIG
  - DADIGTL
  - DANG
  - DD
  - DEVSTAT
  - DIGITAL
  - INTANG
  - INTDIG
  - MSDD
  - N90STA
  - RCM
  - RMCB
  - RMSC
  - STATION
  - TEXT
  - TEXTSTR
  - UNDEF
  - EXTANG
  - EXTDIG
  - ANGRPT
  - DIGRPT
  - LABANG
  - LABDIG
  - CALCANG
  - CALCDIG
  - APMSSTA
  - NODESTA
  - BITMASK
  - COMPOSITE
  - INTEGER

Harmony HMI add-on (2)

- Faceplates
  - DCS — Digital Control Stations
  - DD — Device Driver
  - MSDD — Multi-state Device Driver
  - PV — Analog Control Station
  - DI — Digital Input
  - RCM — Remote Control Memory
  - RMCB — Remote Motor Control Block
  - RMSC — Remote Manual Set Constant
  - TEXTSTR — Text Selector

Harmony HMI add-on (3)

- System Management and Diagnostics
  - Block Details
  - Tune Block
  - System Diagnostics
    - Module status and module problem reports
    - Point quality inspection
  - Time synchronization
    - Time Master, synchronizes all other modules
    - Time Slave, receives time from other modules
- Configuration data import from Composer



AC800F & Freelance HMI add-on (1)

- Supported Function Blocks (each with faceplate)
  - Analog
    - C_ANA Set Point Controller
    - CT_ANA Counter With Analog Input
  - Binary
    - M_BOUT Binary Output
    - CT_P Pulse Counter
    - CTUD Up/Down Counter
    - TOUCH Touch Button
    - MONOF Monoflop
    - TONOF Timer, switch-on/switch-off delay
    - TON Timer, switch-on delay
    - TOF Timer, switch-off delay
  - Controller
    - C_CU Continuous Controller, Universal
    - C_CR Continuous Controller, Ratio
  - Monitoring
    - M_ANA Analog Monitoring
    - M_BIN Binary Monitoring
    - M_BAV Binary Monitoring of Antivalence
  - Open Loop Control
    - IDF_1* IDF for unidirectional units
    - IDF_2 IDF for bi-directional units
    - IDF_A IDF for actuators
  - Constant
    - CSTRE Real Constant
  - Macro^
    - Breakers control
    - Sequence control
    - Group Control

*IDF: Individual Drive Function

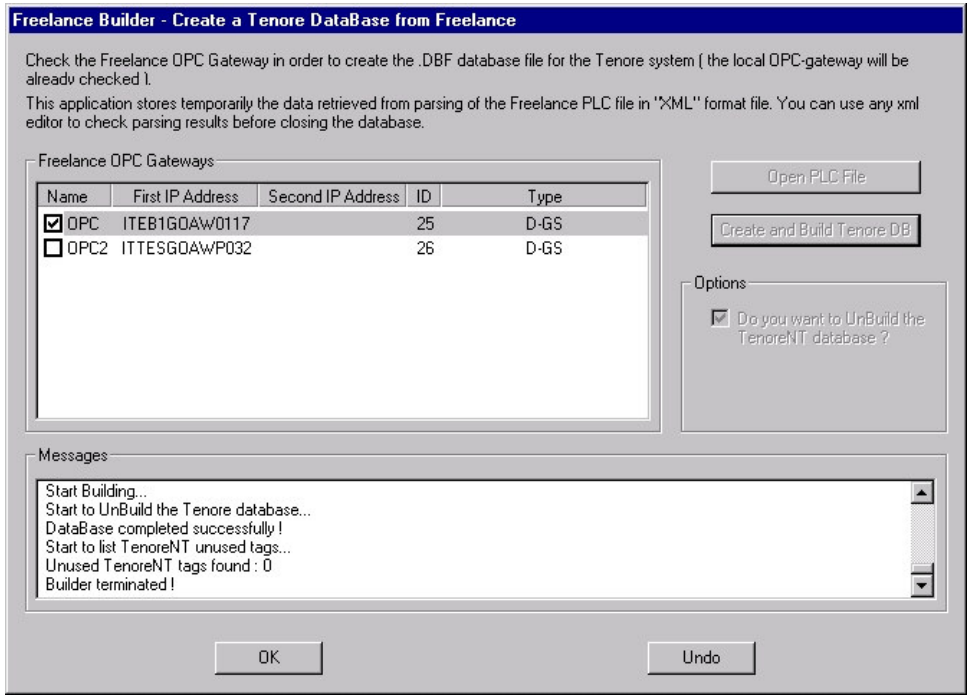
^Developed by ITTES

AC800F & Freelance HMI add-on (2)

- System Management and Diagnostics
  - Support for Diagnostic Function Blocks
    - AC800FR
    - EI803FR
    - FI803FR
    - SA801FR
  - Support for Profibus Diagnostics
    - PROFI_S_DEV Profibus Slave Object
    - PROFI_M_DEV Profibus Master Object

AC800F & Freelance HMI add-on (3)

- Support for DCS configuration import
  - Automatic import of controller configuration
  - Support for partial import after controller configuration changes
  - Import driven by selected OPC server



AC800M HMI add-on (1)

- Supported Function Blocks (faceplates)

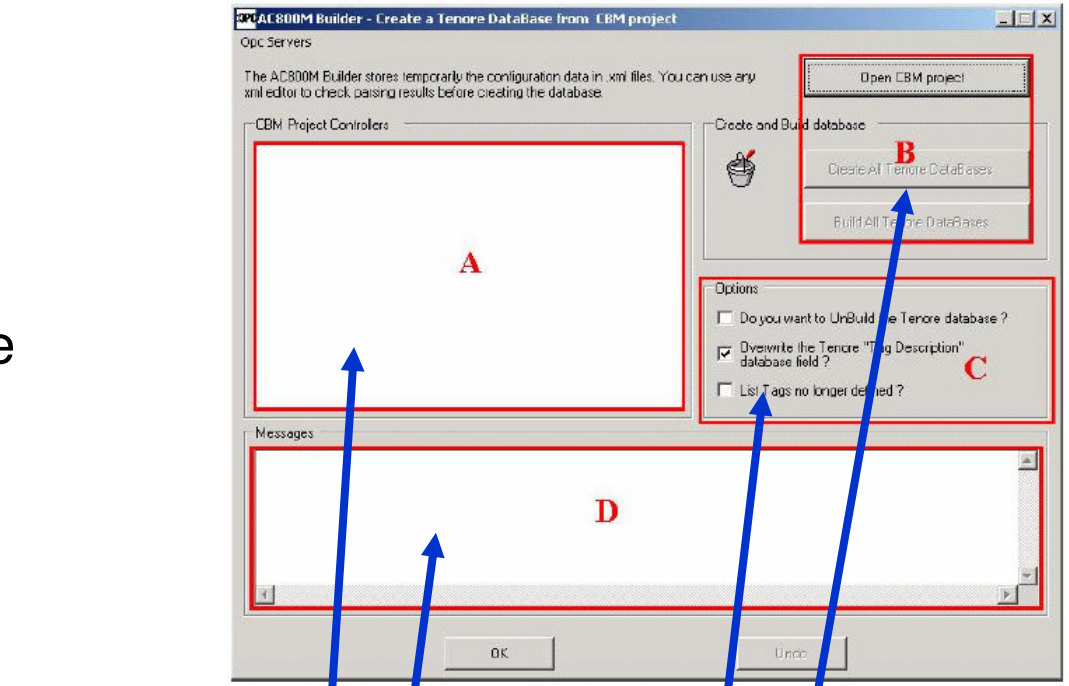
AnaOut	set analog value
AnaStat	analog control station
B2Alm	inconsistency alarm
Balm	boolean alarm
BAlmSoe	boolean SOE alarm
Bevt	boolean event
BevtSoe	boolean SOE event
BinOut	set boolean value
BIOAlm	boolean I/O alarm
BIOEvt	boolean I/O event
BIOMon	monitor boolean I/O
Button	pulse output
DriveUni	drive control UNI
DriveBi	drive control BI
Ralm	generate thresholds
Restart	CPU restart
RIOAlm	analog I/O alarm
RIO2Alm	analog I/O alarm (2)
RIOMon	monitor analog I/O
Sel2P	2 positions selector
Sel3P	3 positions selector

AC800M HMI add-on (2)

- System Management and Diagnostics
  - Offline AC800M Management and Diagnostics through Control Builder M
  - Online AC800M Management and Diagnostics
    - Import tool provided with Tenore (AC800MBuilder) generates a set of pre-configured diagnostics objects based on the hardware configuration of the project
    - These objects provide AC800M on-line diagnostic information to Tenore
    - AC800M programs available for:
      - Power Failures Information
      - Memory Usage
      - Time Management
      - Restart

AC800M HMI add-on (3)

- Support for DCS configuration import
  - AC800M Builder provided with Tenore
  - Main functions:
    - Access Control Builder M projects
    - Create Tenore database starting from CBM projects
    - Import database



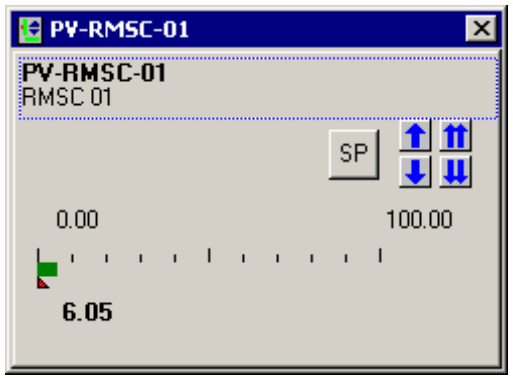
Controllers

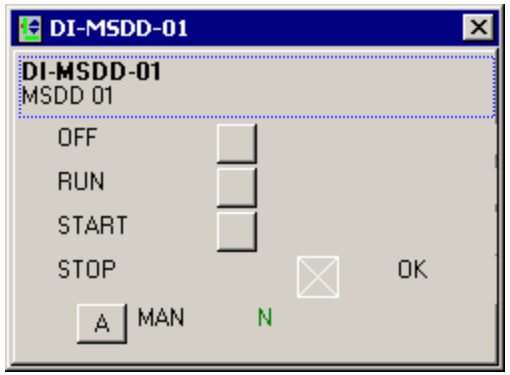
Messages

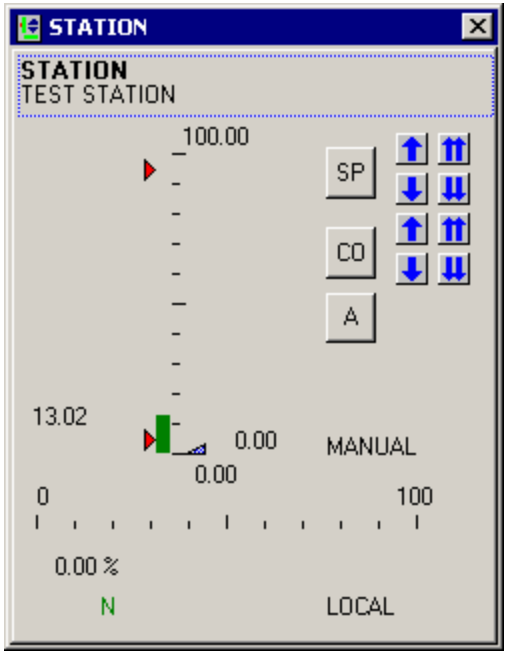
Options

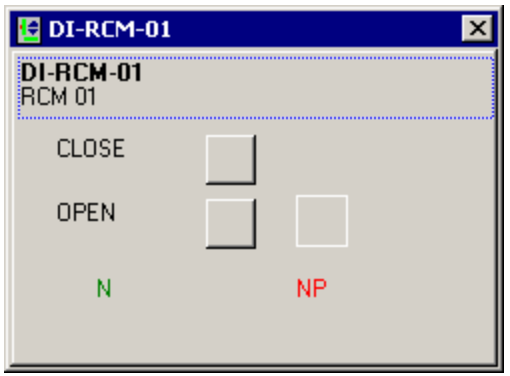
Actions

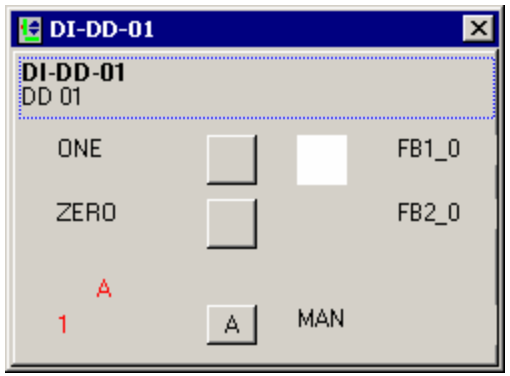
Examples of Harmony faceplates



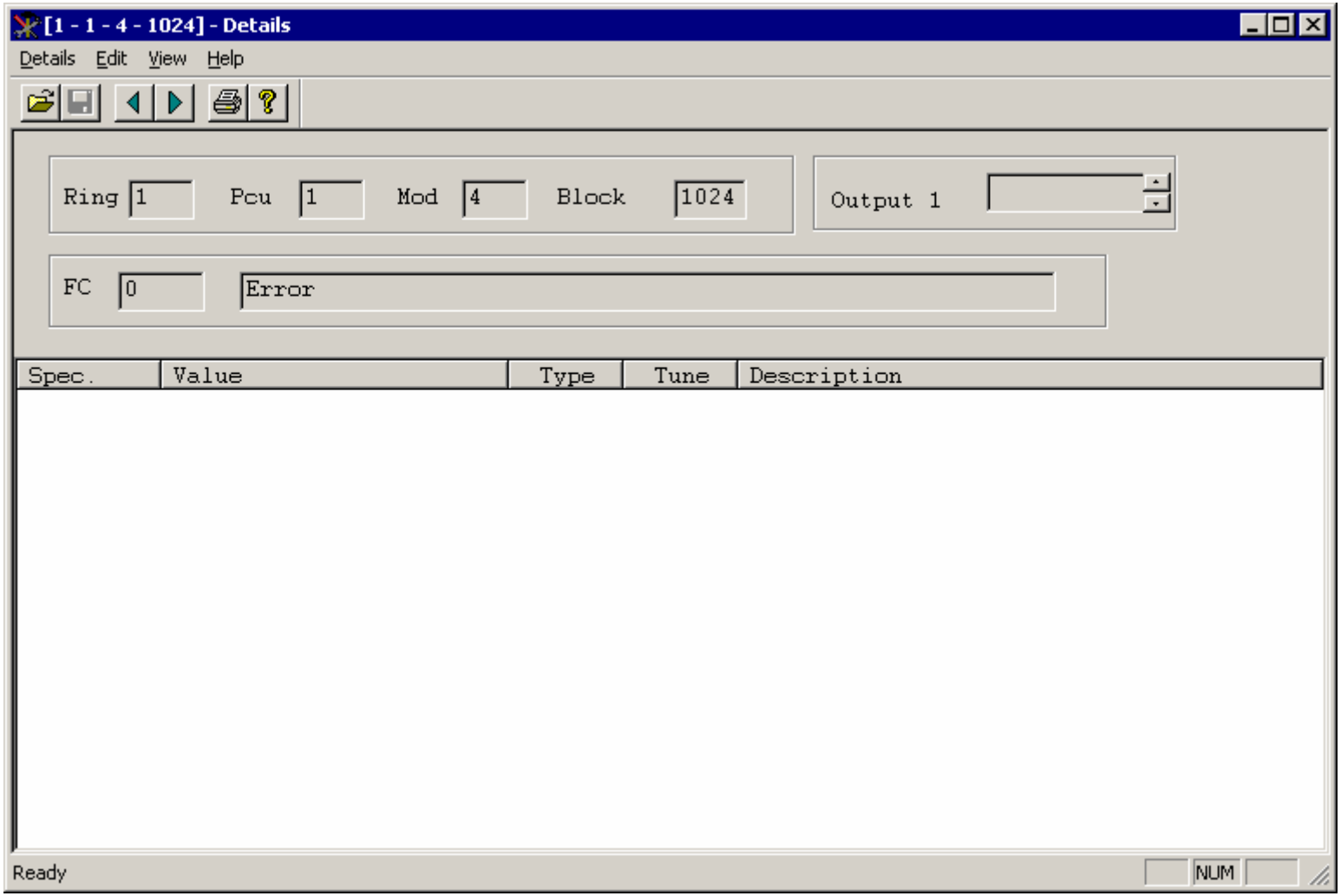




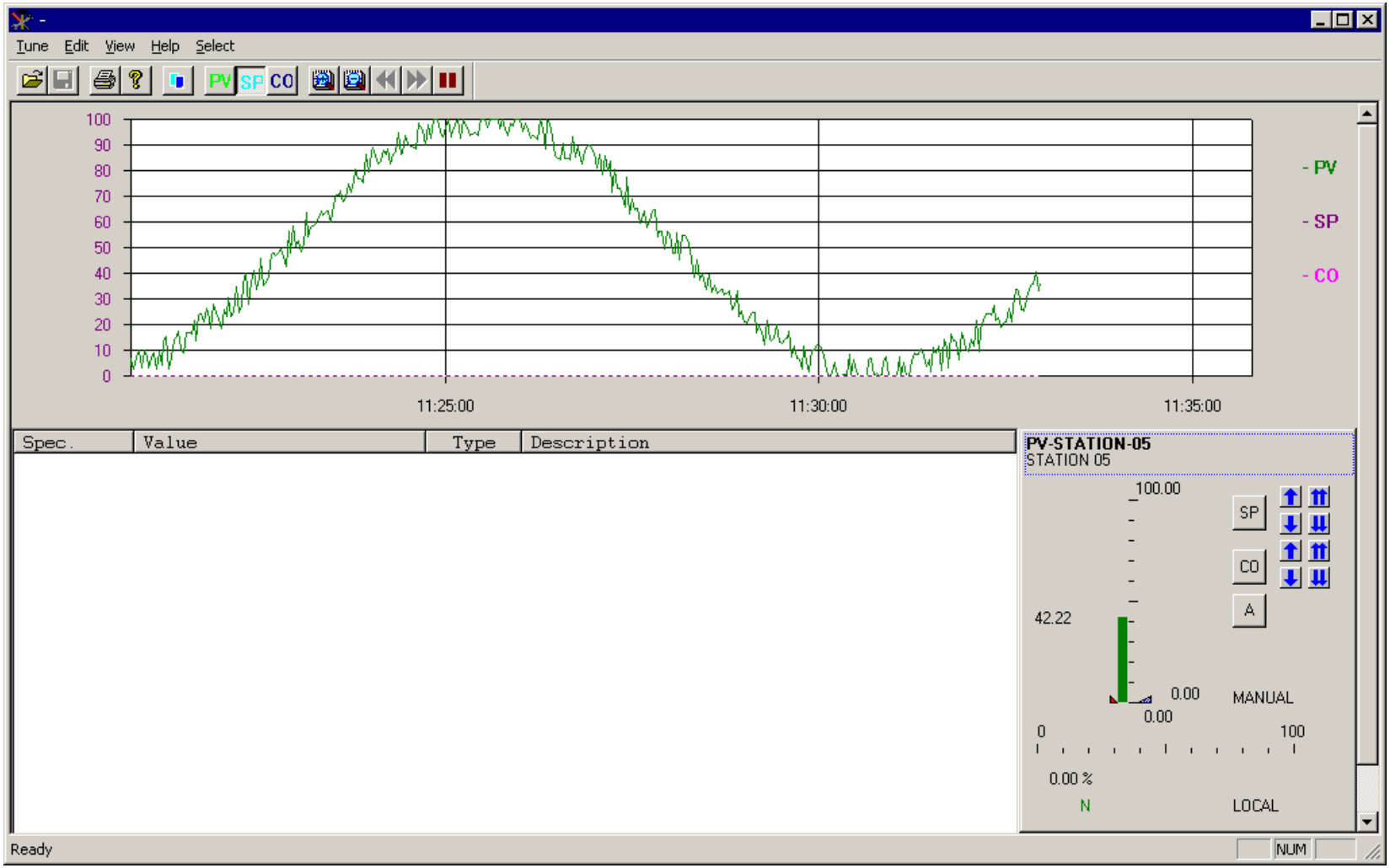




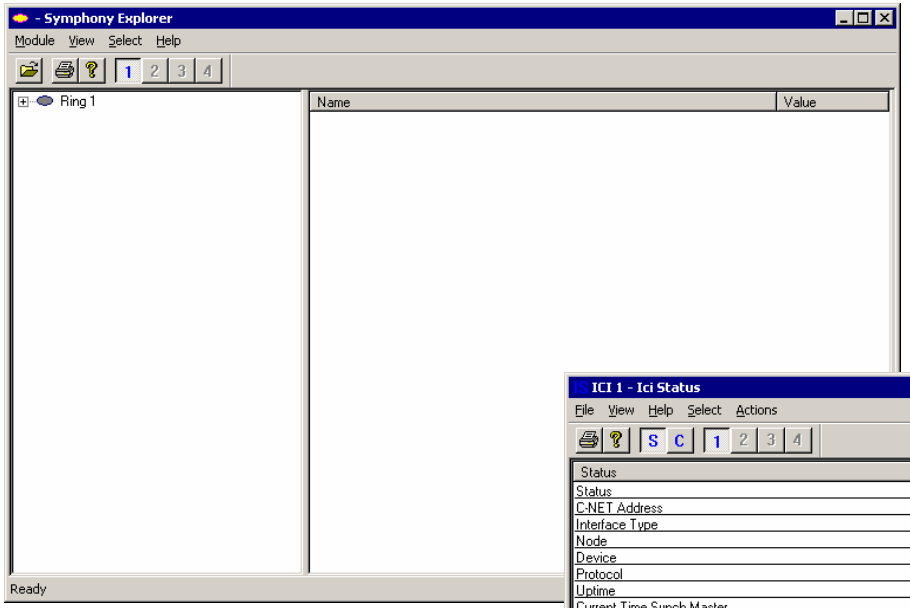
Block Details



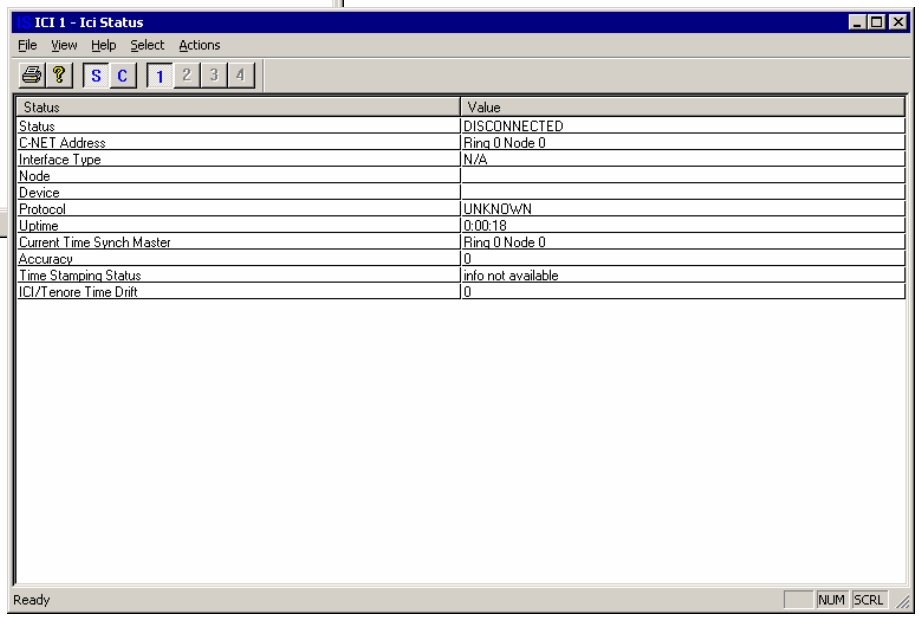
Tune Block



System Diagnostics

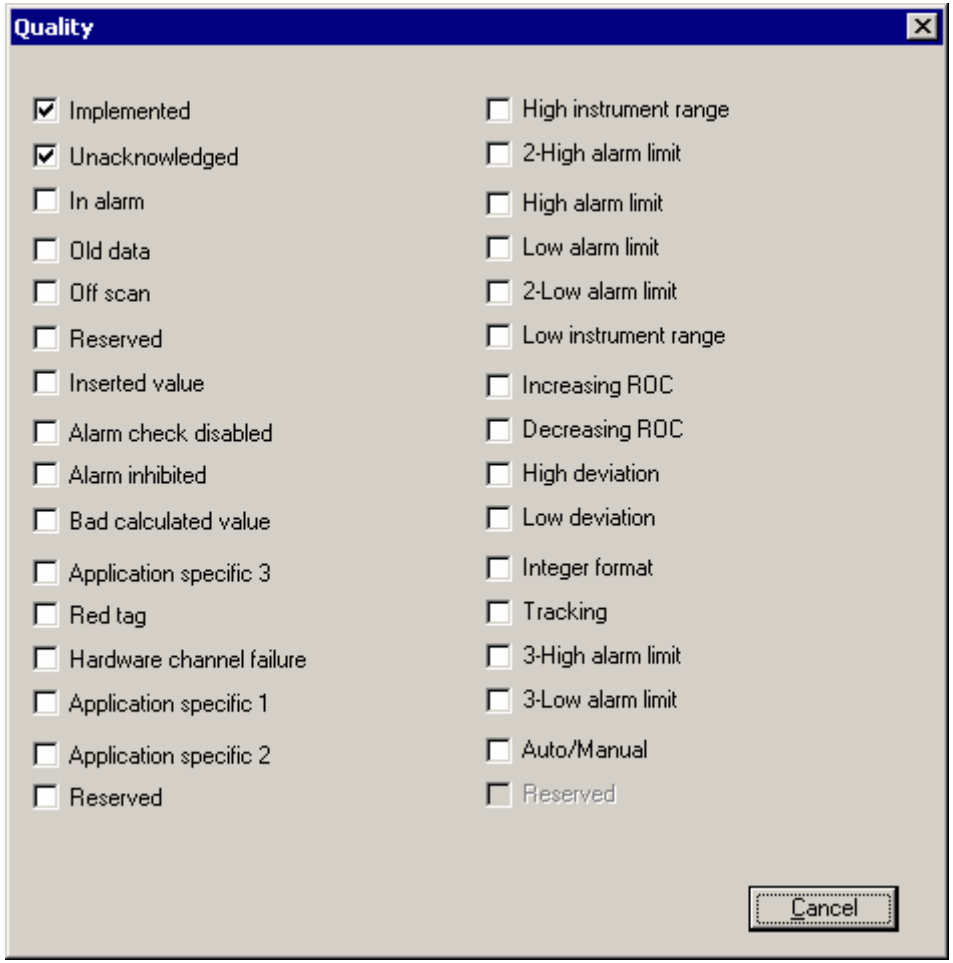


System View

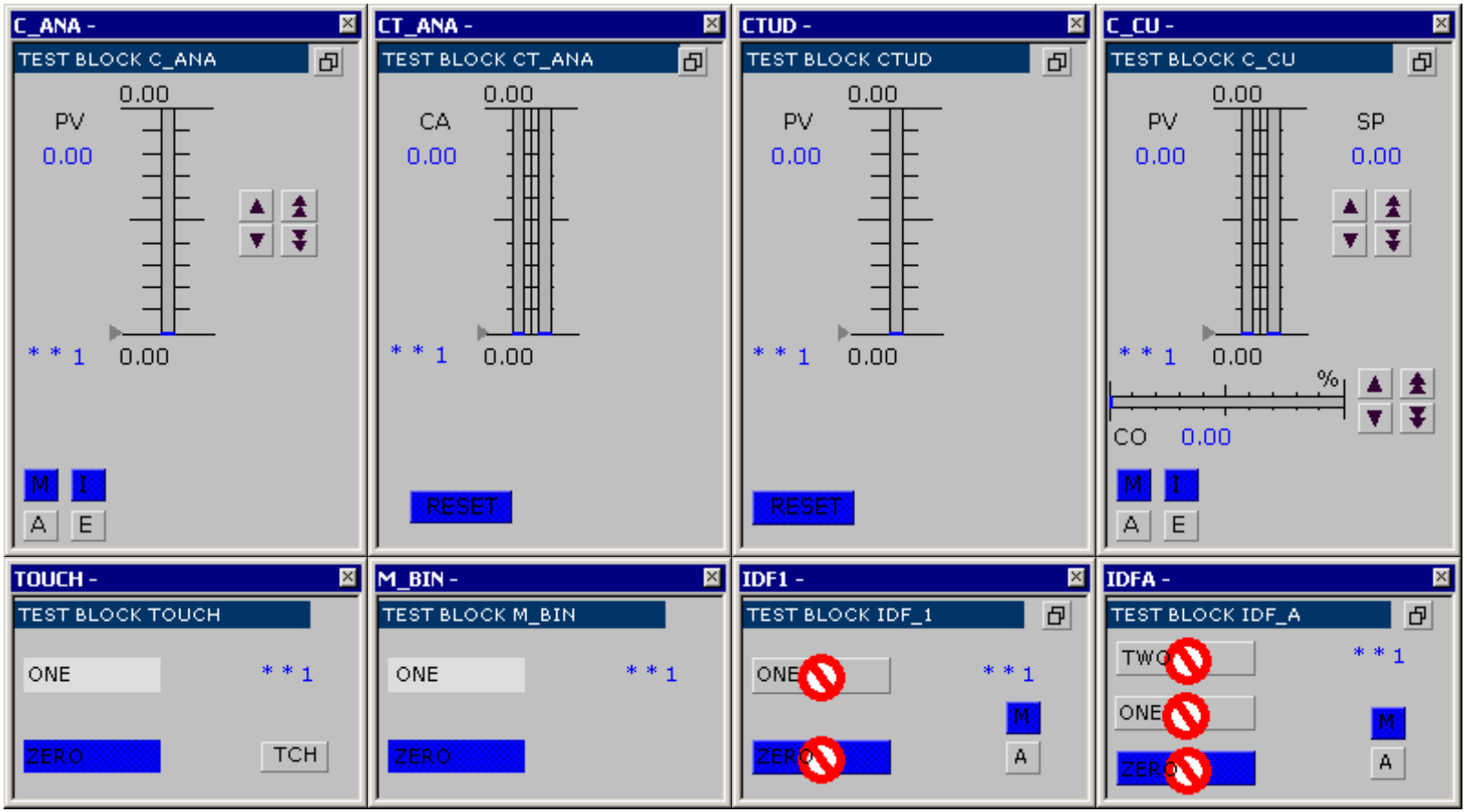


Module View

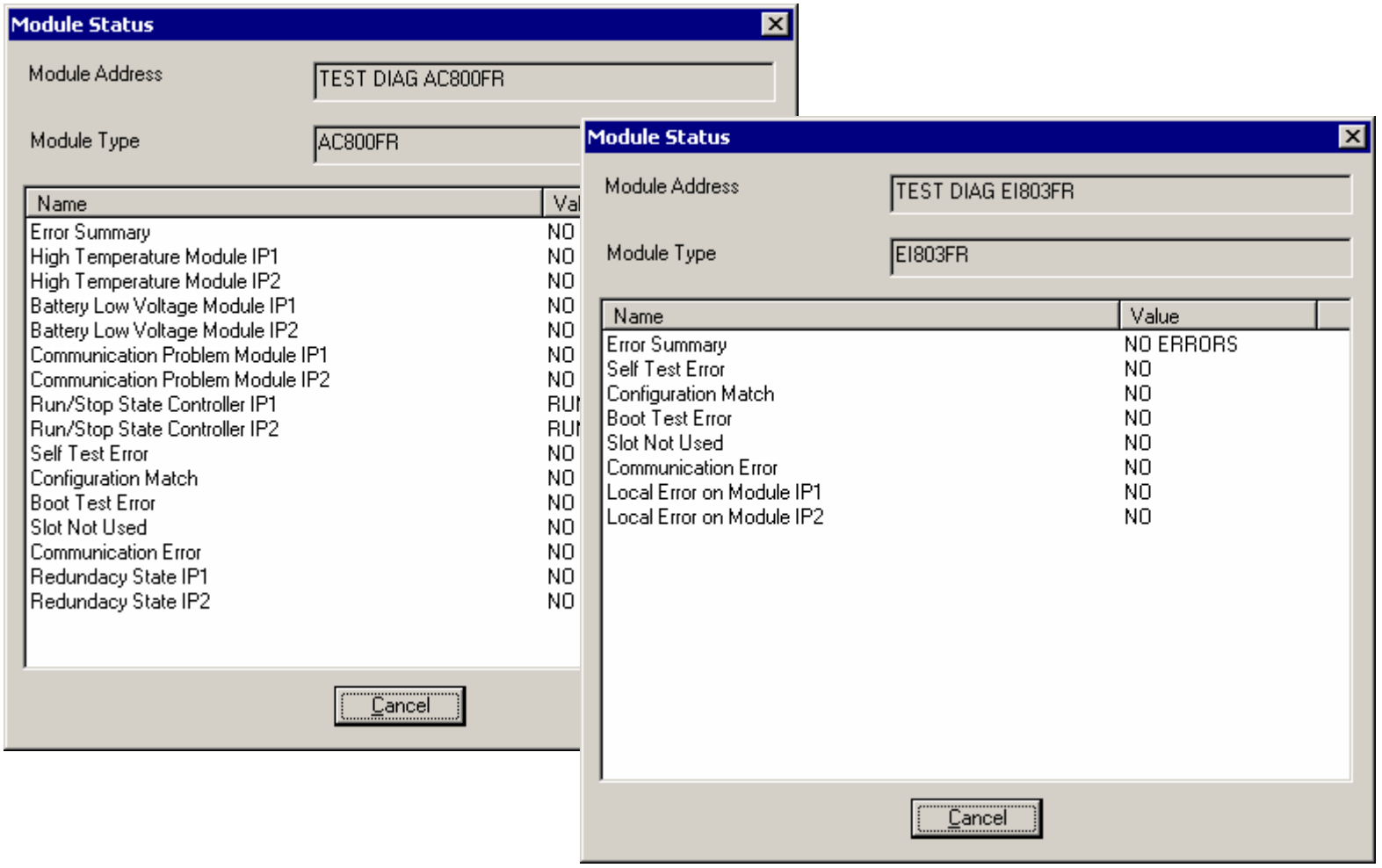
Point Quality Inspection



Examples of AC800F/Freelance faceplates



Examples of Diagnostic Blocks Views



Examples of AC800M faceplates