

# FUNCTIONAL DESCRIPTION

## **MANTRA 47**

*advanced process control system  
for Allen-Bradley platforms*

*from  
ControlSoft, Inc.*

*For unit process applications designed for better quality, higher productivity, and reduced tolerance for errors, MANTRA 47—a small yet robust advanced control system—is powerful enough to meet your application processing needs well into the next millennium.*

*Designed by ControlSoft, Inc., MANTRA 47 is a complete modular control system which offers significant advantages over conventional PLC or loop controller based systems.*

*Intuitive operational design and its scalable form factor combine with state-of-the-art technology to make MANTRA 47 an unbeatable control system.*

## **ControlSoft, Inc.**

*The Company ... with Leading Process Control Technologies*

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INTRODUCTION 5

---

SYSTEM CONFIGURATION 7

---

Controllers and I/O ..... 8  
A-B Communication Interface Module ..... 10  
Analog I/O Modules ..... 11  
4-Channel RTD/Resistance Input Module ..... 14  
Thermocouple/Millivolt Module ..... 17  
Discrete Input and Output Modules ..... 18  
Workstations ..... 21

SYSTEM INTEGRATION 22

---

Function Modules ..... 23

CONTROL SYSTEM FUNCTIONS 25

---

Sequence Development Tools ..... 27  
Advanced Model-Based Control ..... 28  
Integrated Auto-Tuning ..... 29  
Function Block Faceplates ..... 29

GRAPHICS DEVELOPMENT & DISPLAY 30

---

RSView32 Structure ..... 32  
Data Logging and Editor Features ..... 35  
Security and Other Features ..... 36  
Minimum Requirements and Other Information ..... 37

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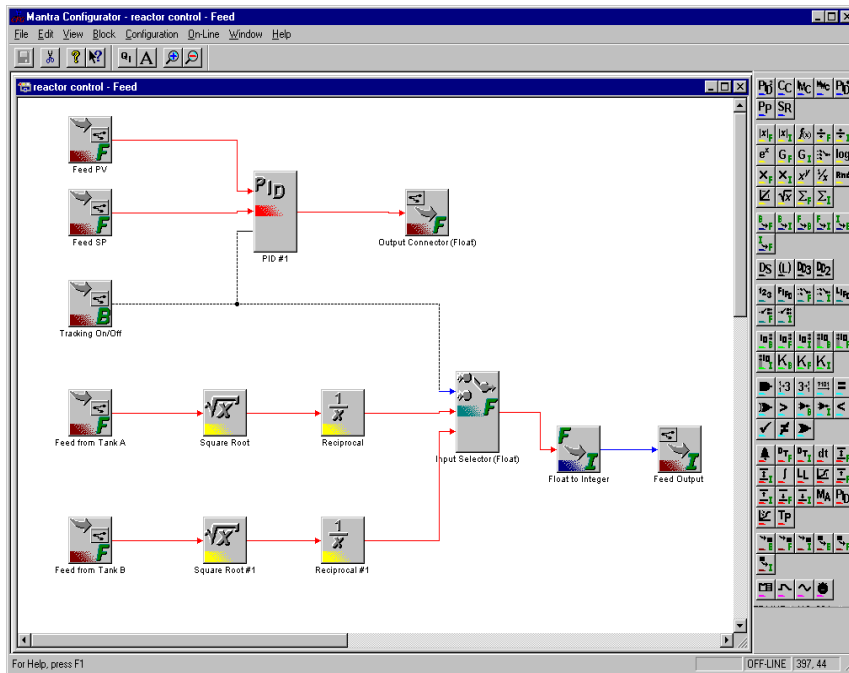
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## Intuitive Operation and Design

**MANTRA 47 process control system has been designed from the bottom up based on intuitive operation principles. Using the familiar MS Windows point and click and browse approach, the MANTRA 47 system software allows you, the user, to engineer and stage a complete control system using point and click configuration tables and picking from a list of available options. Some of the powerful features which make navigation of the new MANTRA 47 system so easy are:**



### Point and click configuration

Unlike PLC and other control systems, there is no special I/O configuration logic or software to be written. The user selects the current configuration from a list of available options and downloads the same to the controller for quick startup.

### Watch lists

Using a Windows 95 style Explore function, MANTRA 47 allows the user to browse through the block configuration and pick parameters of interest to monitor. This eliminates the need to open a database for reference.

### Transparent database

Unlike most other control systems, the entire control system database is transparent to the user. There are no fields to edit, no tags to build, and no CAD drawings to compile. Since we use true object-oriented techniques, the control schematic drawing is the program.

### ActiveX controls

Every control function block is accompanied with its own ActiveX faceplate control which can be inserted in an ActiveX compliant container for quick development of sophisticated control displays. Each object can be clicked and dropped in a container and connected to a block name and instantly be made to go on-line.

### Auto-tuning & identification

From regulatory PID to Cascade and IMC (alias Smith predictor) and even multivariable control blocks, every control algorithm offers ControlSoft time-tested self-tuning or self-modelling functions.

Auto-tuning control blocks offer the unique benefits of a fast startup and optimal loop performance.

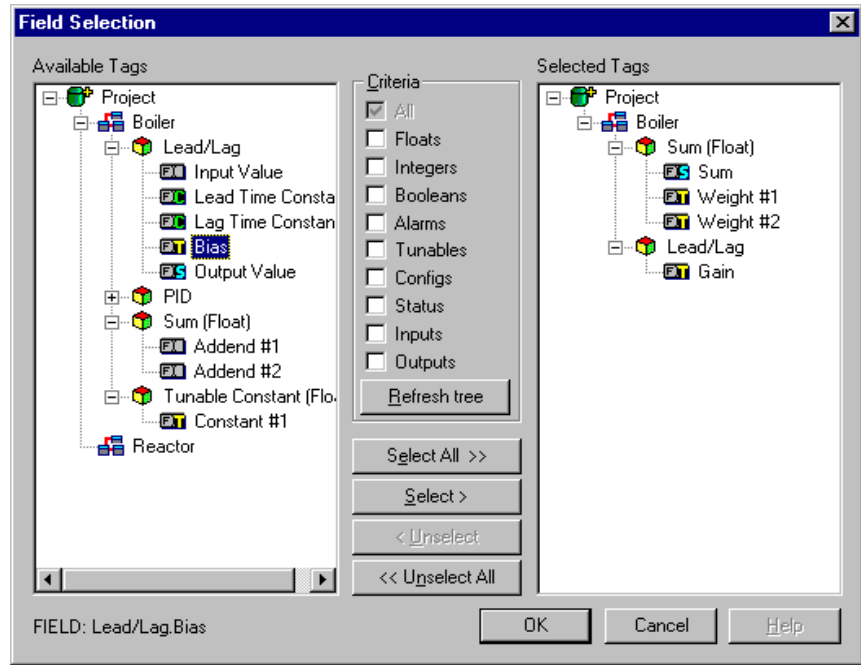
**Function block object-oriented programming**

Possibly the smartest control system programming tool available on systems in its class, the new object-oriented block programming style employed in MANTRA 47 offers the benefits of rapidly deploying simple to complex control strategies.

Since each block is an object, it can be manipulated to change character and size, inhibit outputs, change parameter types (tunable to input or outputs and vice-versa) and thus allow the user to create a control scheme exactly tailored for an application.

**Microsoft Windows NT environment**

Taking advantage of a full 32 bit multitasking operating system environment and Windows based GUI, the new MANTRA 47 workstation system software provides a familiar interface and reduces the learning curve on the system.



**Plant-wide integration**

MANTRA 47 systems are modular and networkable to help transfer data between different sections of a plant operation.

Using high-speed Ethernet or DH+ network and ActiveX-compliant displays, MANTRA 47 allows data to be presented anywhere on a plant floor.

MANTRA 47 also offers peer-to-peer network with PLC, if the need arises to integrate high-speed Allen-Bradley programmable controllers on the Ethernet or DH+.

**Scalable**

MANTRA 47 offers the benefits of a modular system by helping the user start small and add to the size and functionalities of the system along the way.

Controllers can be added on the network to increase the power of the system, while I/O's can be added on the remote I/O bus if the system demands an increase in size.

System sizing is limited by memory alone, and addition of control schemes to an existing design does not present any problem.



To go to System Configuration  
Click Here



To go to Table of Contents  
Click Here