



# Engineering

## Part 4: Additional Functions



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# About this Manual

BatchXpert is a control system for managing and visualizing batch processes. It supports recipe execution, batch tracking (including material handling), alarm and event management, trend recording, and batch reporting via BatchXpert stations and HMI clients.

The system is modular and can be scaled from single units (for example, CIP or pasteurization skids) to complete production lines. In a typical automation project, BatchXpert integrates three layers—PLC control, SCADA/HMI visualization, and the engineering/database toolchain—that operate together as one system.

This manual is organized into three parts: **Part 1** provides a general overview of BatchXpert, **Part 2** focuses mainly on PLC-related topics and engineering in SIMATIC TIA Portal, and **Part 3** explains how to create the HMI and Operating Station. **Part 4** contains information about additional modules that can be used in the BatchXpert system.

## Target Audience of this Manual

This manual is intended for project engineers and automation specialists who implement or maintain BatchXpert projects. It assumes familiarity with batch/process automation concepts and general commissioning practices. This document explains how BatchXpert applies these concepts; it is not an introduction to PLC programming. Working knowledge of Siemens SIMATIC S7 programming and the associated engineering tools (SIMATIC Manager and/or TIA Portal) is required.

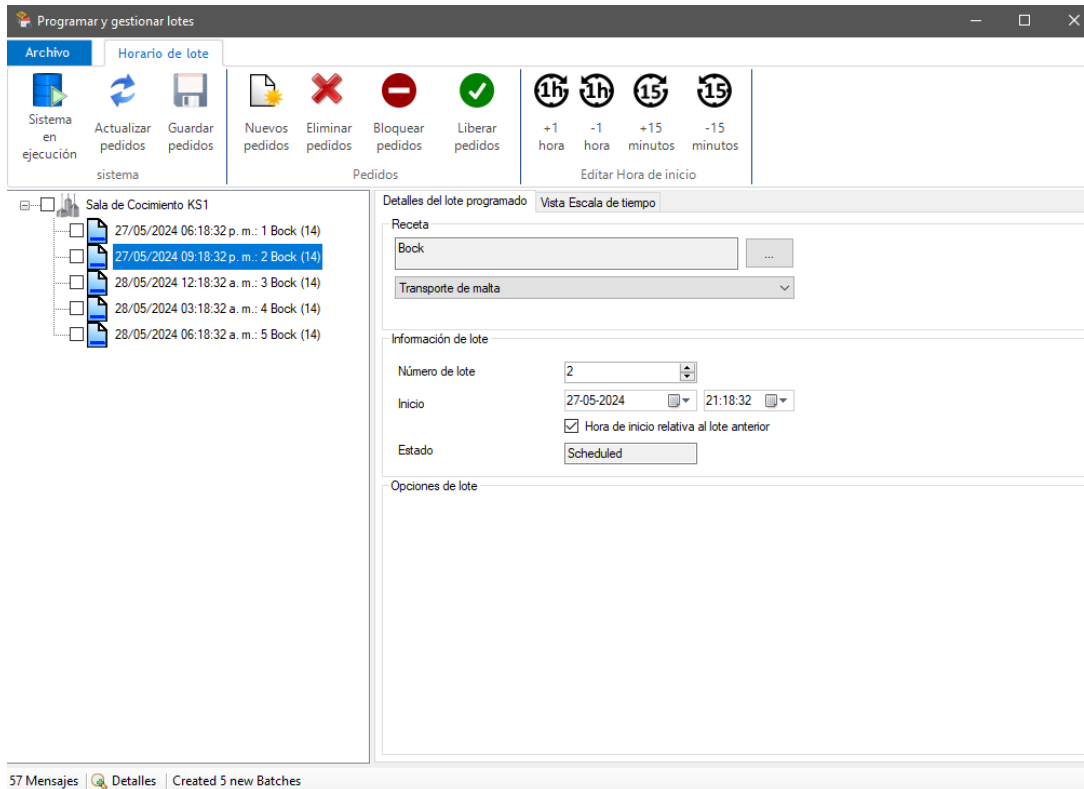
## AI-assisted editing notice:

This manual was produced with the support of AI tools. AI was used primarily to assist with grammar and spelling corrections and to improve readability. The technical content, procedures, and engineering guidance are based on the author’s expertise and project knowledge, not generated by AI.

## Version of this Manual

Version 3.0	Reworked completely Separated into multiple Parts
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# Batch Scheduler



It is a simple code integrated into the production system. Here you will find the production plan, number of productions, program number (specification type), production rhythm and some Start options. How to use the boot options is up to the programmer, the system in "Run" mode, batches are processed one after the other. The start of the respective Unit takes place once it is free. With the start time (see Status) you can switch from Hold state to Run mode automatically.

The planned time for the production rate is passed on to a deferred batch.

+ ST7 Info  
 + ST7 Opt Alarm Groups  
 - ST7 Opt Production Scheduler  
   + Info  
   + Bausteine  
 + ST7 Opt Recipe Buffer PLC  
 + Opt Recipe Editor PLC

Object name	Symbolic name	Created in language	Size in the work me...	Type
FC3	Bx ProdSchedule	STL	1042	Function
FC581	Bx ProdSchedule2	STL	596	Function
DB3	Bx ProdSchedule D	DB	488	Data Block
DB551	Bx ProdSchedule2 D	DB	5646	Data Block
UDT281	sBx ProdSchedul	STL	---	Data Type
SFC24	TEST_DB	STL	---	System function

```

//this network must be inserted into OB1
Network
Title= Production Schedule

CALL "Bx ProdSchedule2"
  
```

# Preselection system

Coming Soon