



DS for Formula™

Software tools for Basic Line Terminals

FEATURES

- Powerful and flexible
- Allows management of:
 - Display and keyboard
 - Calendar/Clock
 - Laser and optical pen readers
 - RF and serial communication
 - Program Extended Memory and CPU overspeed
 - Software timer
 - Buzzer and LED
 - Additional fonts and characters
 - Serial number
- C ANSI standard
- Complete with application examples

APPLICATIONS

- Software personalization for batch and RF applications
- Complete compatibility of the developed program on any terminal model

GENERAL DESCRIPTION

DS for Formula™ is a software that provides instruments for fully exploiting Basic Line Terminals by creating fully-structured and personalized applications. In fact, thanks to **DS for Formula™**, it is possible to develop programs for all the following basic line terminals: F630, F660, F725, F732, F734, in both their standard or "E" (Enhanced) versions.

DS for Formula™ uses a "C" standard ANSI compiler, integrated with special libraries, operating in an MS-DOS environment and developed specifically for the type of terminals' processor. Furthermore, the developed program is compatible with any terminal model by recompiling the source with specific libraries.

The libraries, developed by Datalogic, permit direct management of the terminal's functions: for example, the management of bar code reading devices is immediate and rational thanks to interaction with functions that automatically start up the bar code acquisition procedure.

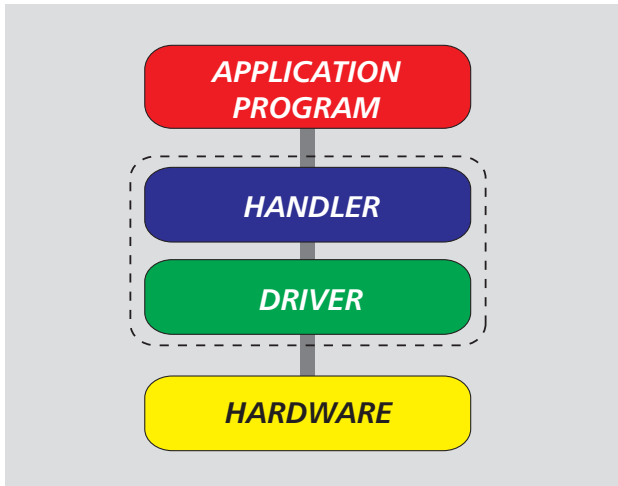
Equally transparent, by using a philosophy of events programming, is the procedure for managing the keyboard, display, serial and radio-frequency communication, calendar/clock and, either directly or through a vdisk utility, the data memory organized into banks. The main hardware elements generate a series of coded events that allow Operating System multitasking to be effectively managed.

All these functions are then grouped into a structured application so as to manage the terminal in the best manner possible.

DS for Formula™ also offers a series of effective general purpose application examples which represent an excellent starting point while simultaneously providing a practical guide for studying and working on complex or personalized programs.



STRUCTURAL AND FUNCTIONAL OVERVIEW



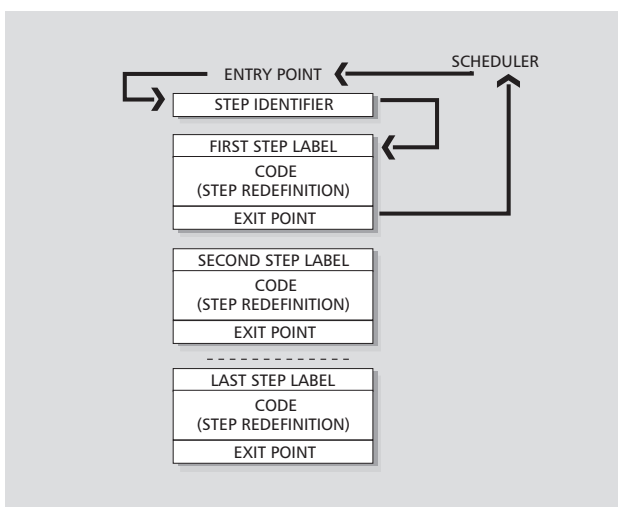
This flowchart represents the low-level management of the hardware resources.

To dialogue with the hardware, the user uses a handler that coherently and automatically controls several devices.

For example, the "dec_hreqst" handler allows you to carry out a complete barcode acquisition by independently managing the waiting time of the pressure of the scan button, the activation of the laser, decoding and the saving of the value read in a structure which is directly accessible to the user.

This function allows a high level view of the various devices thus simplifying access to the terminal's resources.

The subdivision of the application into STEPs (displayed below) allows the operating system to manage the terminal's operations in multitasking mode, thus reducing unnecessary workload on the CPU at a specific moment.



```
void tkapl( void )
{
  switch( nextstep )
  {
    STEP FIRST_START: /* initialization at first activation */
      irecx = 0;
      ring( F4_RN, MEDIUM_RD, 1 );
      printf( "iDemo 1" );
      gotoxy( 0, 1 );
      printf( "Application" );
      dlytsk( PROC_TKAPL, T4SEC + T500MS );
      if( pen_portable() )
        nextstep = CLEAR_START;
      else
        nextstep = PREPARE_TX;
      ENDOFSTEP;

    STEP CLEAR_START: /* clear display entry point */
      putchar( '\f' );
      nextstep = ACTIVE_DECODER;
      ENDOFSTEP;

    STEP ACTIVE_DECODER: /* decoder activation & buffer full check */
      .....
      nextstep = WAIT_ANSWER;
      ENDOFSTEP;
  }
}
```

- The DS for Formula™ Basic Line Terminals includes:
 - Datalogic libraries containing the Operating System and basic functions with manual;
 - Software accessories (tools, batch files, transmission program, etc.).
- The CA51 C Compiler Kit is available separately and includes:
 - C51 C Compiler + BL51 linker + manuals;
 - Hardware lock for parallel port.

MODELS AND ACCESSORIES

MODEL	DESCRIPTION	ORDER NO.
DS for Formula	Development System for Formula Basic Line	94A104860
CA51 Compiler	8051 Compiler kit V6 for F6xx and F7xx	94A104890
XCA51 Upgrade	Upgrade kit (CS51 V5 to CA51 V6)	94A104900



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