

Overview

CS Technologies controllers have a ‘soft’ microcontroller which contains the operating instructions for the controller, as well as all of the setup data. By changing the programs in the microcontroller it is possible for the controller to be configured for different readers and different functionality.

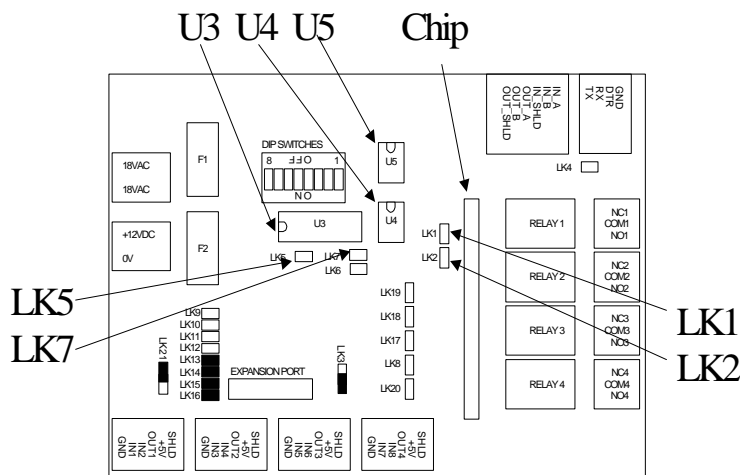
Because the controller is soft and the firmware can be reloaded it is also possible to update the controller operation to the latest features and functionality at any time.

This document describes the hardware and software required to perform a firmware download, and the procedure which must be followed.

Hardware

The firmware is stored in a microprocessor ‘sim’ module which is fitted to a socket on any controller board. The chip is green and stands vertically on the board; it has a battery and several surface mount chips affixed to it. This is the ‘chip’ which must be reprogrammed with the new firmware.

The downloading can occur in any standard controller, as long as it is configured for the download. The diagram below shows a typical controller board.



To configure a controller for downloading it must be connected directly to the PC which is to be used for download. Before changing any settings make a note of the current links and chip settings so that you can put the controller back into its current configuration.

To set up the controller for downloading, remove power and then:

- Set up the comms chips – remove U4 and U5, and ensure that U3 is present.
- Set up the comms links – install LK5 and LK7
- Set the controller up to download – install LK1 and LK2

To load a particular chip it must be inserted into the socket. To remove a chip from a controller board, there are clips at the top and bottom of the chip which must be prised apart gently. When the clips are moved out of the way the chip will fall to the right and it can then be removed. Of course, never remove or insert a chip into a controller with the power on.

Install the chip to be loaded into the controller. To do this, reverse the removal procedure – insert the chip from the right gently into the socket and then stand it up. The clips will slip into place to hold the chip firmly.

Never force a chip – it will only go in one way and can easily be installed and removed; if you have to force it you will be doing something wrong, and something may break.

When the controller is configured as above, with the power on and a chip installed, it will not beep as the controller is powered up. The controller can be used to download as many chips as are required in this configuration.

Software

To download the controller requires a program called DL.EXE. This is a DOS application which must be installed along with a required file SETUP.DAT and HELP.DAT. It will not operate correctly unless these files are also installed.

The application is supplied as a ZIP file – simply unpack it into a directory like C:\CSTECH\DL. When you run the DL.EXE program a window will appear which has a menu at the top. The menu has several options as follows:

Terminal – runs a dumb terminal program

Load system – allows downloading of firmware into a controller configured as described above. Note that when this menu option is selected it will not work unless a controller is correctly connected to the com port and powered up.

Com port – select the desired com port

Baud rate – doesn't matter

Printer – ignore

Exit – quits the program

To download firmware into the controller, simply select the 'load system' option. If a controller is present and correctly configured you will be prompted to enter the filename of the firmware. This will be a short file name with a 'CST' extension – for example WDN0015.CST.

If all is well the controller will begin the download which will take a couple of minutes, and a progress bar on the screen will indicate its completion.

After downloading the chip can be removed and installed in its correct location. It will then require a full download from the PC3 software.

Firmware

Firmware is supplied as CST files; a separate document describes all the different CST files available.

With some versions of firmware within the controller already it is possible to update the firmware on a network of controllers via PC3 software. In the future we envisage that all firmware upgrades will be done this way.

Copyright © 2000 CS Technologies (A division of Trycup Pty Ltd ACN 003 341 982)

The above information is intended for information only and is believed to be correct at time of printing. CS Technologies accepts no responsibility for any damage as a result of the use or misuse of this information. E. & O. E.

F:\DOCS\Contacts\Corresp\Current Pricelists and Info\Tech bulletin 2 - firmware download.doc 04/07/00 3:47 PM