UM Unified Microsystems

ATS-1 Terminal Shield
Frequently Asked Questions
Version 3

Q. The ATS-1 sends a "1" if switch one is pressed, "2" for switch 2. I would like it to send something else.
A. The codes sent by the ATS-1 are coded into the onboard microcontroller and cannot be changed by the user. You can use define statements to set any expression to be equivalent to the character sent by the ATS-1. This will make your program easier to understand.
Example:

```
#define UP        '1'          // equates UP to the ASCII '1' for switch 1 press (^)
#define RIGHT    '2'          // equates RIGHT to the ASCII '2' for switch 2 press (>)
#define DOWN  '3'              // equates DOWN to the ASCII '3' for switch 3 press (V)
 #define LEFT     '4'          // equates LEFT  to the ASCII '4' for switch 4 press (<)
#define ENTER   '5'          // equates ENTER to the ASCII '5' for switch 5 (F1)
#define START   '6'           // equates START to the ASCII '6' for switch 6 (F2)


Loop()
{
char keyPress;                //define variable to hold key press data

keyPress = Serial.read();        //wait until the user presses a key, result is in keyPress.
if(keyPress == DOWN) //check if the key pressed was DOWN (V)
   {
      // do the stuff for a DOWN key press
   }

If(keyPress == START)        //check if the user pressed the start key (F2)
        StartMotor();            //if so, execute the StartMotor function
}
```

Q. The ATS-1 demo program or other programs do not compile now that I updated to the Arduino 1.0 IDE.
A. The new Arduino 1.0 development environment no longer supports the Serial.print (n, BYTE); structure. The ATS-1 examples used some of these statements. Replace these statements with Serial.write(n);

Q. I sometimes get missing characters or characters printing in unexpected locations after I use the GOTOXY command to position the cursor.

A. There is a bug in the ATS-1 version 1.00 firmware. You can check the software version by holding down Switch 1 (labeled ^) and then turning on the power. Release Switch 1 and press the RESET Switch to restore normal operation.

A work around is to use the CUR_CR, CUR_LF and similar commands to position the cursor. Using the Arduino Serial_println() to position the cursor at the start of the next line is another option.

Contact Unified Microsystems for information on updating the firmware on the ATS-1.

Q. I sometimes have trouble with the ATS-1 with the back light. I'm powering it with the USB port but it does not seem to be getting power.
A. The ATS-1 with an LED back light draws a fair amount of power, about 150ma. USB ports can normally supply up to 500ma, but some might limit current to 100ma. Also if you are using a USB hub without a separate power supply, the total amount of current used by all ports can't exceed 500ma. Some laptops may limit USB current.

Use a USB cable plugged directly into the PC instead of a self powered hub. Alternatively power the Arduino through the power jack instead of USB power.