QX-108 10-bit 8 Ch. A/D Converter board

1. Feature

- Interface with RS-232 serial port.
- Baud rate 19,200 bits per second in 8-bit data none parity and 1-stop bit.
- 8-channels Analog input with 10-bit analog to digital converter
- Voltage input range 0 to 5Vdc.
- 9 to 12V external DC power supply with on-board +5V regulator

2. Interface data format

QX-108 provides 4 command formats.

2.1 2-Byte Binary data reading single channel

Single channel conversion
Return: 2 byte immediate value

Send	Receive	
0 - 7	High byte	Low byte

Total 2 byte

2.2 6-Byte ASCII data reading single channel

Single channel conversion
Return: 6 byte value as decimal 4 digit (ASCII) with line feed and carriage return code

Send	Receive					
"0" - "7"	x1000	x100	x10	x1	$0A	$0D

Total 6 byte

2.3 2-Byte Binary data reading 8 channels

All 8 channels conversion
Return: 16 byte immediate value

Send	Receive								
8	High byte	Low byte	High byte	Low byte	...	High byte	Low byte	High byte	Low byte
	Ch.0		Ch.1			Ch.6		Ch.7	

Total 16 byte

2.4 Check signature

Check signature
Return: 16 byte Model name with line feed and carriage return code

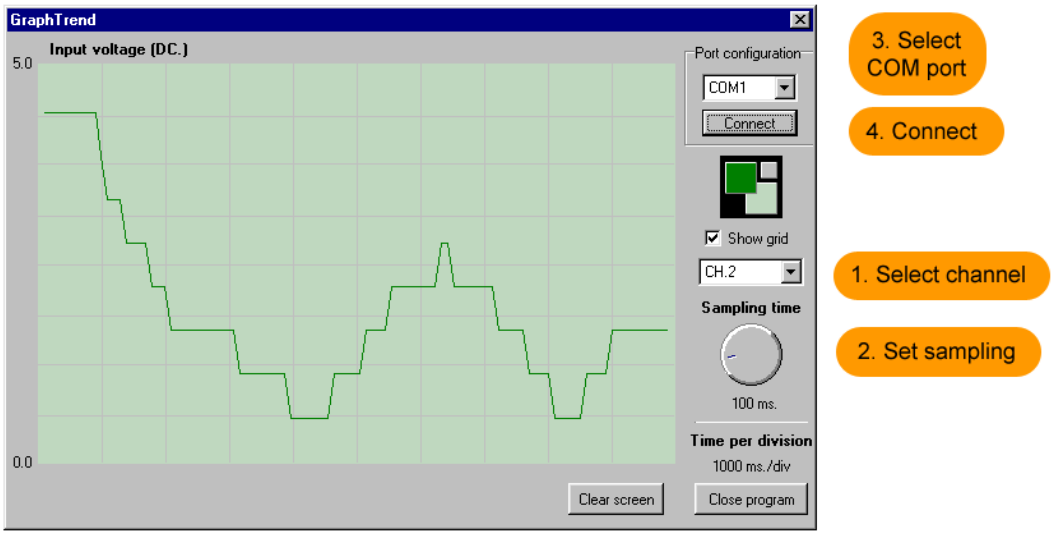
Send	Receive
$AA (170)	QX-108 Revision name + $0A +$0D

Total 16 byte

3. PC software

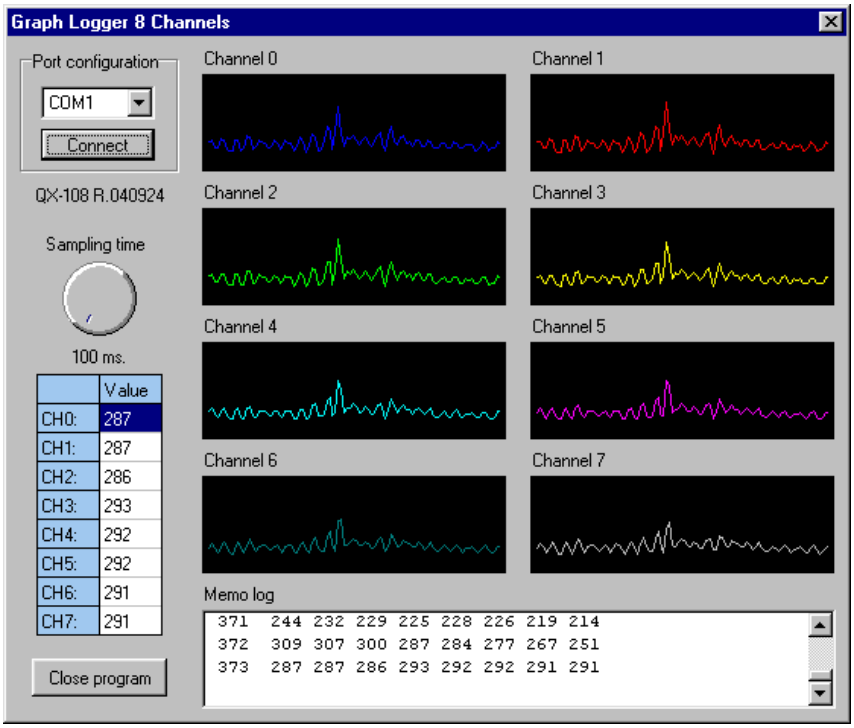
3.1 GraphTrend

This software displays the single channel graph. User can select any channel to display value and sampling rate. Select read time in range 10ma to 500ma. Use can set the graph line color, background color and grid line color.

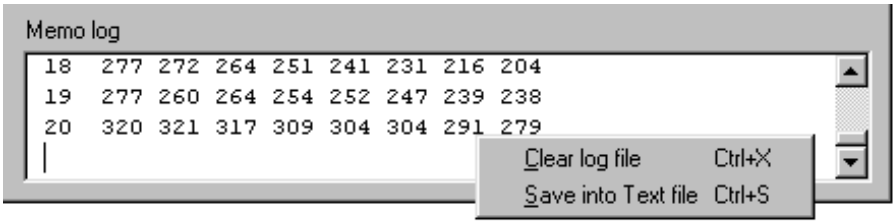


3.2 GraphLogger

This software can get and display data from all 8 channels of QX-108 board. User can select reading time in range 100ms to 5000ms. Select the serial port that interface. After that connect the QX-108 with this software to begin data reading.



When disconnect, all data will be stored in Memo log by clicked right-button mouse to Save into Text file or select Clear log file to delete data.



3.3 Hardware condition for making your own application with QX-108 board

QX-108 board use 19,200bps baud rate in 8-bit data, no parity bit and 1 stop bit. Addition DTR pin of RS-232 serial port is used for restting QX-108 board.

For example, if develop application on Microsoft Visual BASIC developer who use MSCOMM for interface serial port must define "DTREnable" property as "True". See the sample from QX_8CH.EXE file.

Another in Borland Delphi, developer favor to use Synaser library for interface serail port. See the sample from SimpleData.EXE file.

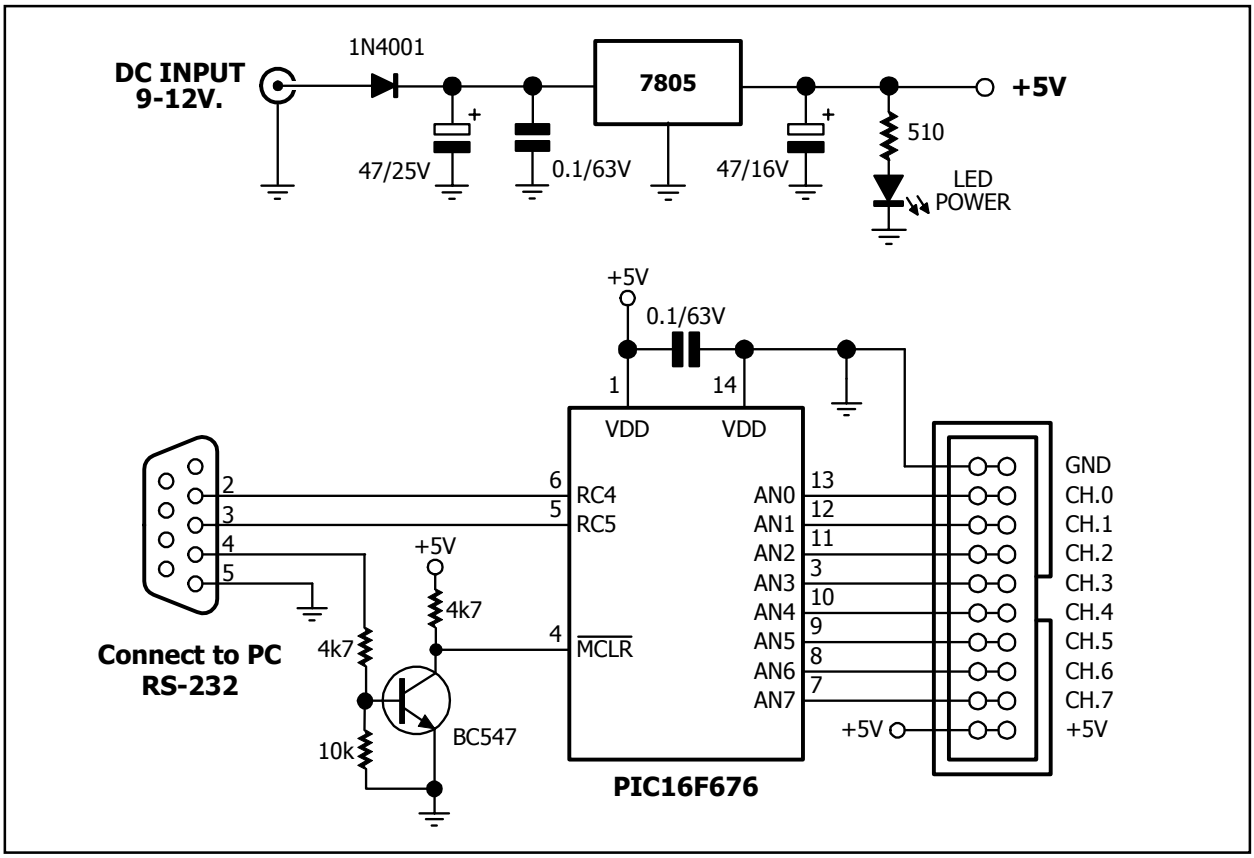


Figure 1 : QX-108 schematic diagram