

NEW PRODUCT

US-EXPERT

Ultrasound device for TOFD, B-SCAN, C-SCAN, Signal analysis, FFT.

Features

- USB2 High Speed connection
- Ultra low noise preamplifier : $0.74 \text{ nV}/\sqrt{\text{Hz}}$
- Wide bandwidth (05 to 20 MHz)
- Pulse Transmitter
- 50Ω load drive
- Digitizer 12 bits at 80 MSPS
- Programmable gain : 0 to 80 dB
- DAC curve
- Size : 110 x 100 mm
- Windows XP / Vista / Seven
- GUI compatible with tactile tablets
- DLL Matlab, Labview, C, ...

General Description

US-EXPERT is our new generation ultrasound devices with a single channel to transmit and receive ultrasonic waves. It is dedicated to IMAGING and SIGNAL ANALYSIS.

The transmitter can generate pulses with a voltage level and a width programmed by the user. A low noise preamplifier combined to a VGA gives a gain range between 0 and 80 dB, a DAC curve is also available. A 12 bits analog digital converter with a sampling frequency of 80 MHz is used to digitize ultrasound signals.

The device has 2 working modes: Transmission or Reflection. The power supply is delivered by the USB connector (5 VDC).

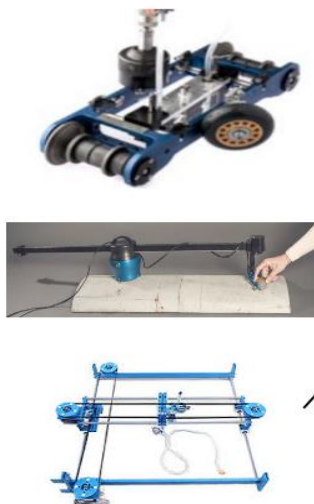
It allows 1 encoders, for Tofd or b-scan and 2 encoders for C-SCAN

A signal analysis module provides probe characterisation and FFT.

Applications

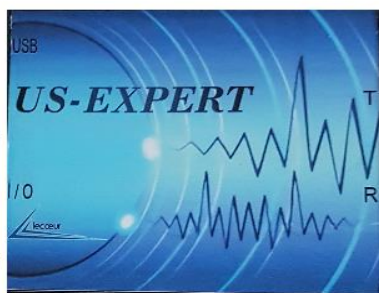
- Automatic and manual scanner
- C-scan imaging
- Tofd imaging
- Signal analysis, FFT.
- ..

YOUR ENCODING DEVICE (1 or 2 incremental encoders)



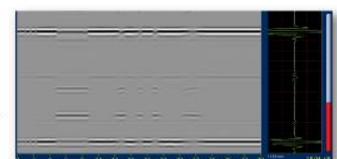
US-EXPERT

LECOEUR ELECTRONIQUE

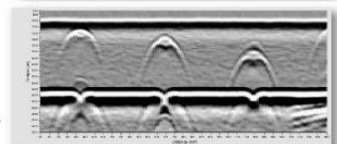


US-EXPERT electronics connects your encoding system and generates images
C-scan ,TOFD, FFT, B-SCAN,..
Ready to use with graphical user interface

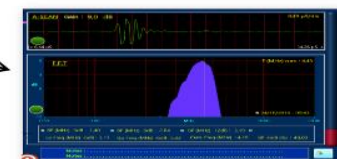
B-SCAN



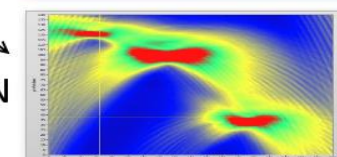
T.O.F.D



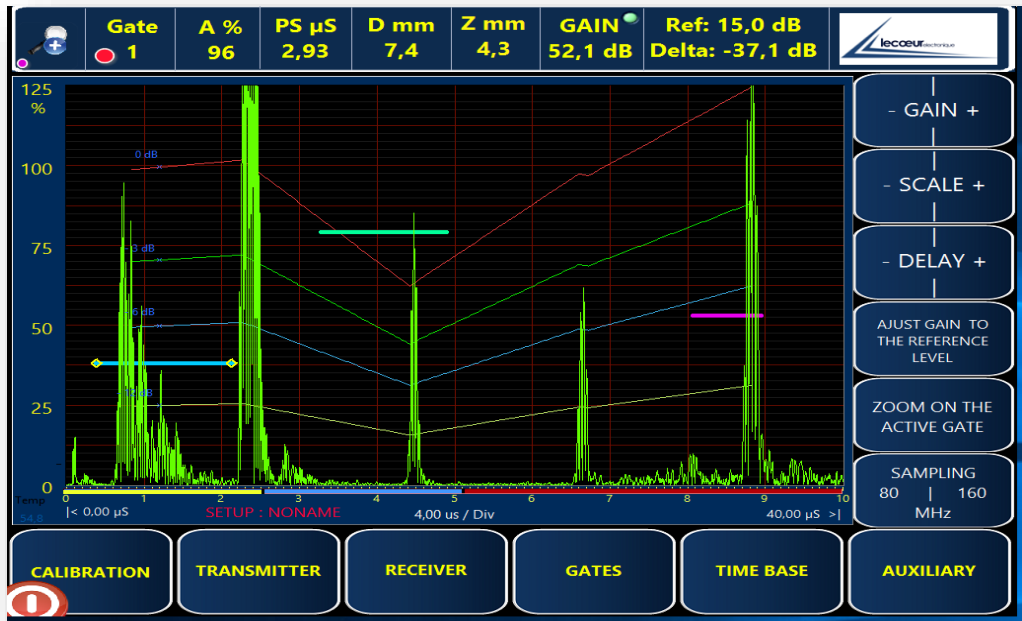
F.F.T



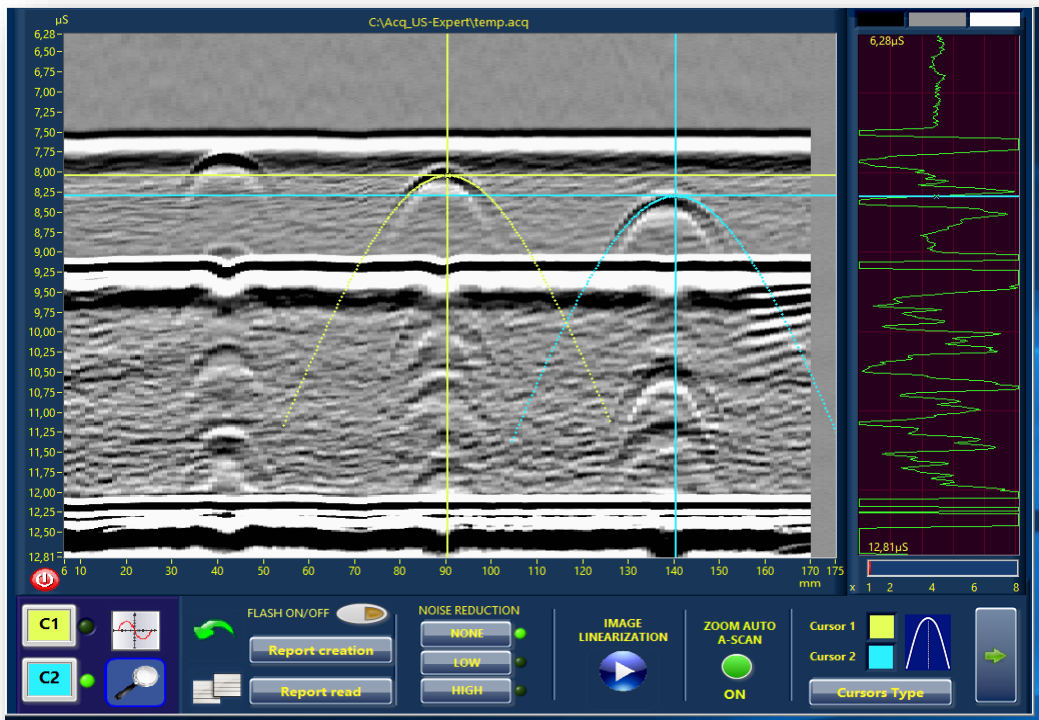
C-SCAN



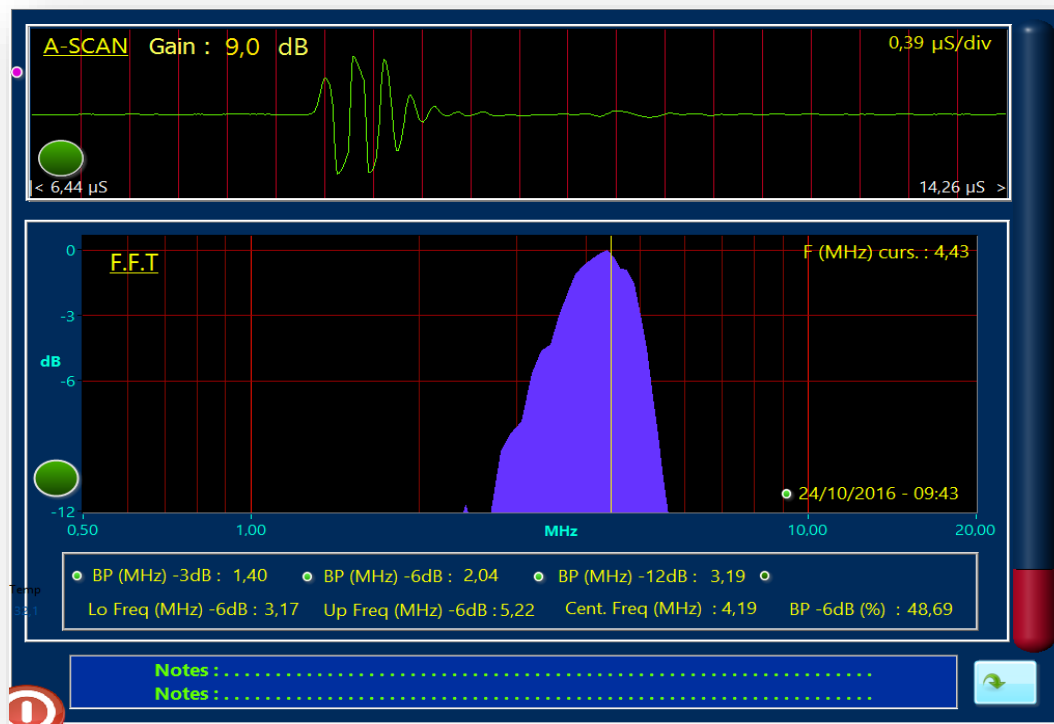
SCREEN SHOTS



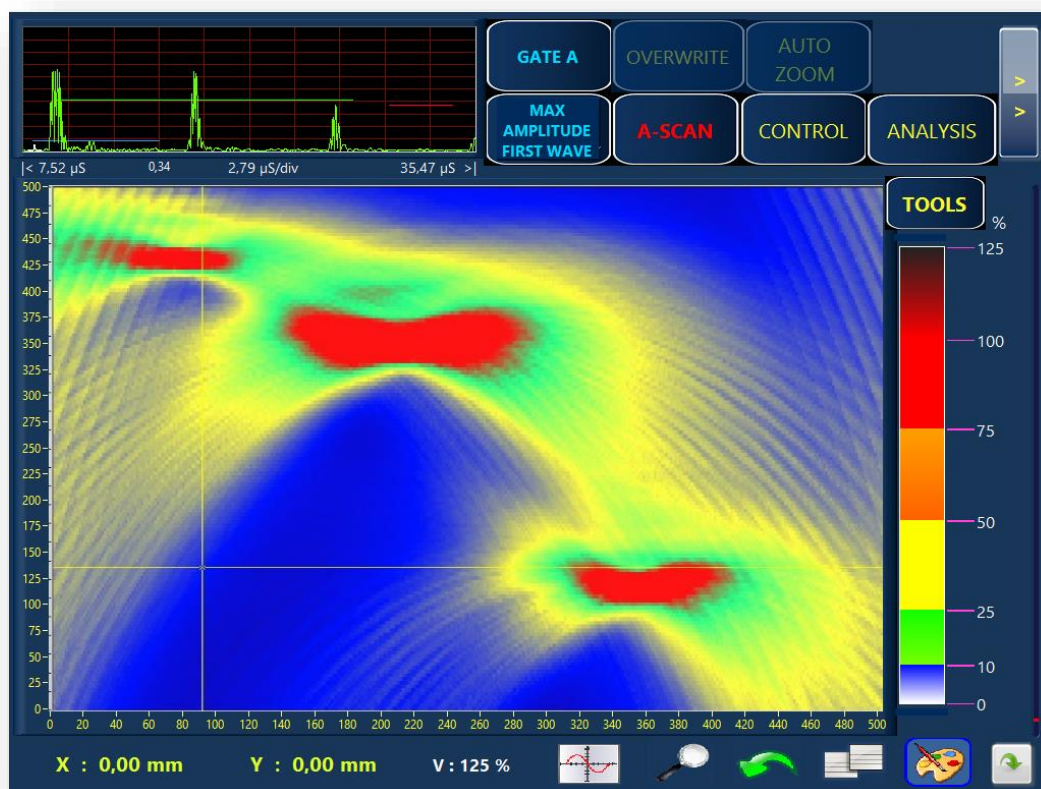
A-SCAN GUI



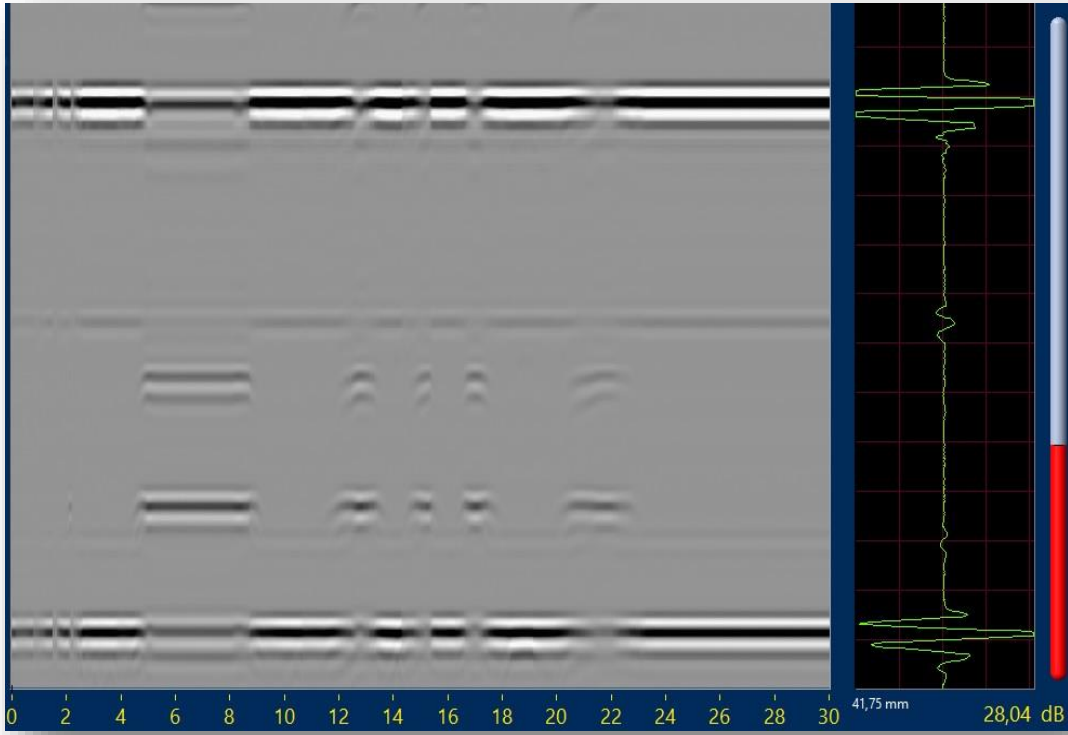
TOFD GUI



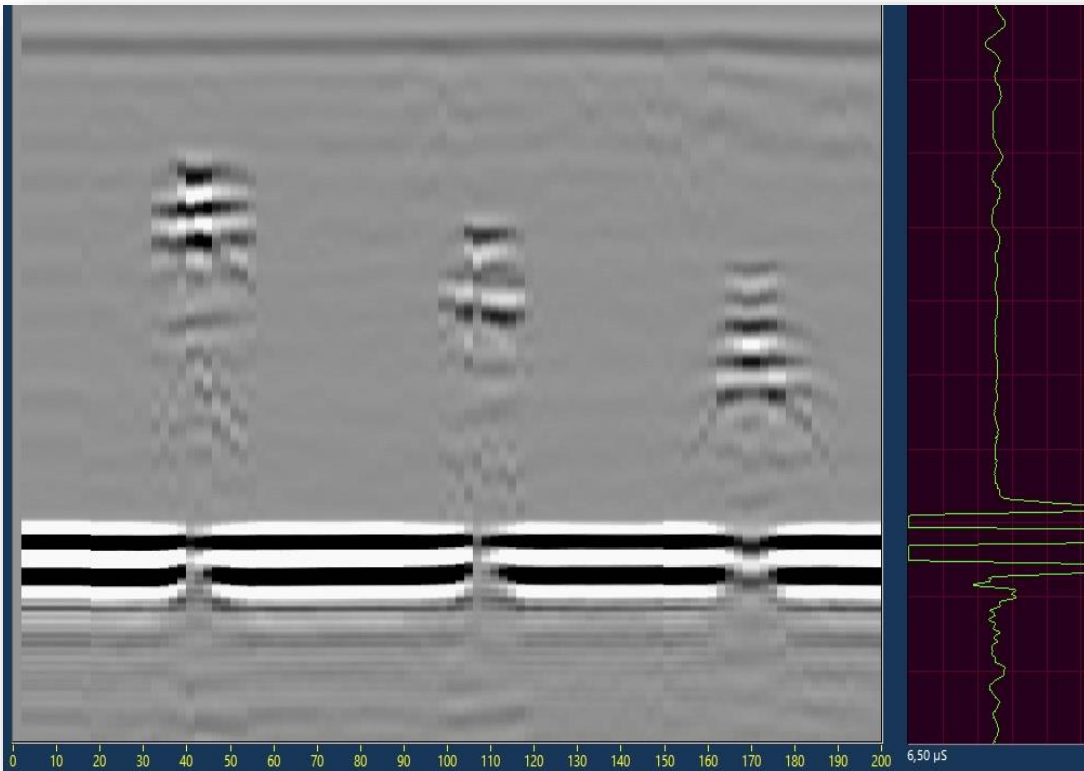
FFT GUI



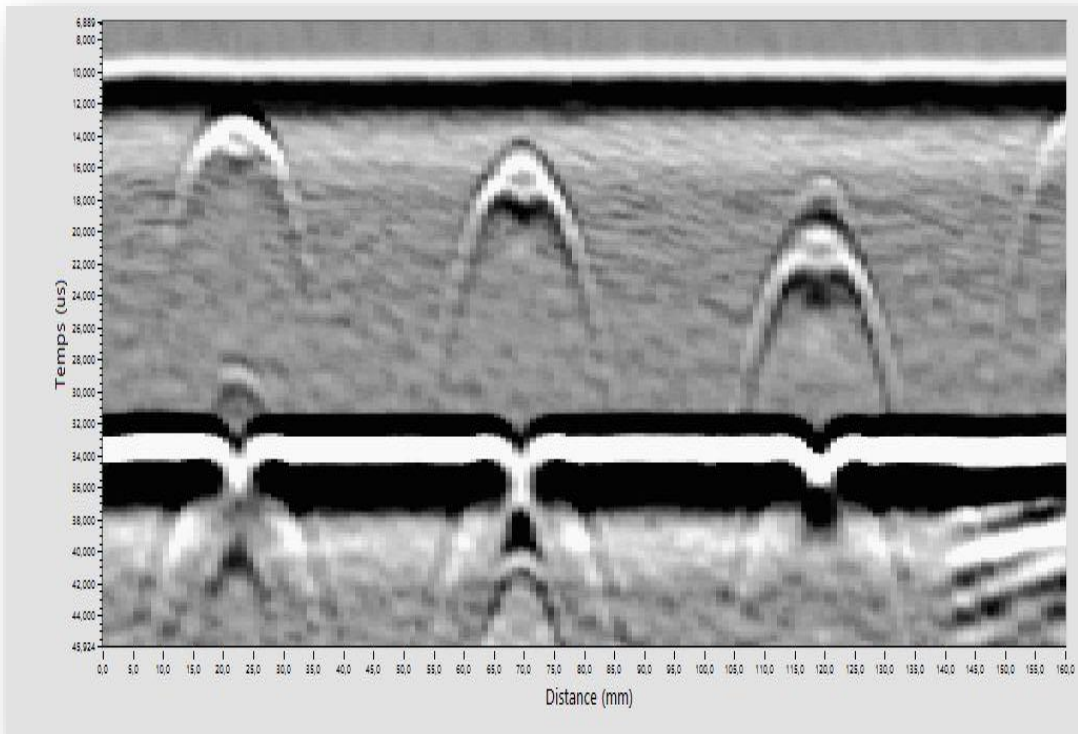
C-SCAN GUI



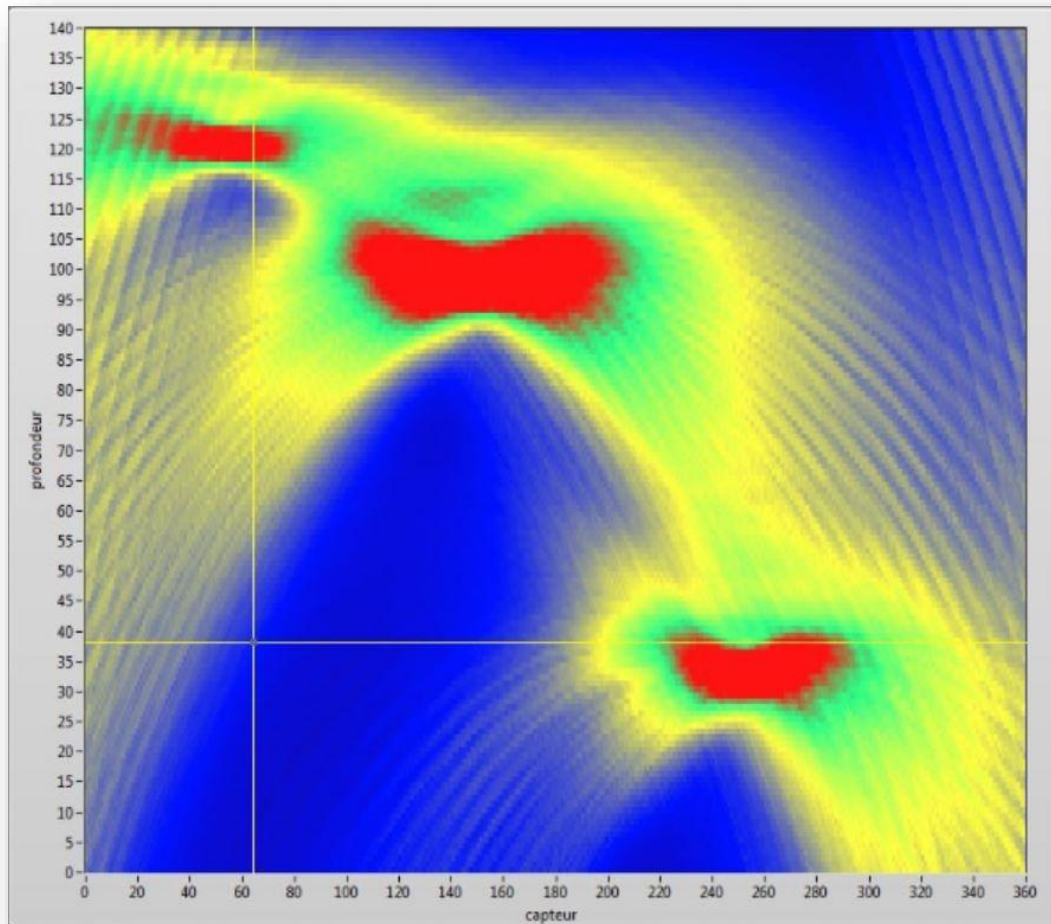
SCROLLING B-SCAN IMAGE



ENCODED B-SCAN IMAGE



TOFD IMAGE



C-SCAN IMAGE

DEVICE PICTURES



I/O CONNECTOR

PIN-OUT I/O CONNECTOR

US-Expert : PinOut

PIN (HE20 - Cn9)	Fon ction	PIN Sub D15
1	Analog output 0-5V gate1	1
2	Analog output 0-5V gate2	9
3	Analog output 0-5V gate3	2
4	TTL output alarm gate1	10
5	TTL output alarm gate2	3
6	TTL output alarm gate3	11
7	Ground	4
8	Encoder 1 input TTL phase A	12
9	Encoder 1 input TTL phase B	5
10	Encoder 2 input TTL phase A	13
11	Encoder 2 input TTL phase B	6
12		
13	Switch input "Start Control"	14
14	Ground	
15	Encoder 3 input TTL phase A	7
16	Encoder 3 input TTL phase B	15
17		
18		
19	Vcc +5 Volts	8
20	Vcc +5 Volts	