

## RK0035 - 2 x 16 LCD Digital Alarm Clock

Vdd	.	Vss
OSC1		Yes/Inc
OSC2		No/Enter
N/C		N/C
LCD D7		LCD RS
LCD D6		LCD EN
LCD D5		LCD D4
N/C		Alarm Set Out
Alarm Sound Out		N/C
N/C		N/C

18F14k22

Design RK0035 is a PIC based Microprocessor designed to function as a digital alarm clock. This offers easy interface with 3 push buttons and a single 2 x 16 alphanumeric LCD. Timing is provided by a single 32.768 kHz watch crystal. Via OSC1 and OSC2

Programming the chip is achieved by providing three normally open push buttons to negotiate through a series of electronic menus to set time and set the alarm.

Alarm sound output provides a source of sound for the alarm. A single transistor DC amplifier is recommended for higher volumes. Alarm set out is designed for an LED for alarm active indication.

### *Truth Table for push buttons*

Function	Yes/Increment	No/Enter
Yes/Increment	1	0
No/Enter	0	1
Access Menu	1	1

PIC Chip Used	PIC18F14k22
System OSC	Internal
Tmr1 OSC	External 32.768 kHz Xtal
LCD	16 x 2 HD44780