

# Uniden DECT3216 phone LCD initialisation sequence

v1.03 10 Feb 2019

LCD 10 pin, 4 wire SPI interface : RS, CS, DATA, CLK,?,?,?,GND,Vdd?

RS Register select  
Low = command  
High = data  
asserted 333nS to 667ns before CS

CS Chip select, active low  
asserted 12uS before first CLK pulse  
held low for duration of a byte until 667nS after last CLK rising

DATA Data, write clocked on rising edge of CLK.  
Sent most-significant-bit first, 8 bit words, 1000uS delay between bytes.

CLK Clock, 4.7uS (214kHz), only present when clocking data bits.  
3.24v  
1.93v  
3.41v  
-1.4v

GND 0V  
3.25v

## Initialisation sequence:

(each byte is a command, unless designated with a "d" as data)

20 4bits, 1 line, 5x8 dots?  
0D Display ON, Cursor OFF, Cursor Blink ON?  
28 4bits, 2 lines, 5x8 dots?  
13 ?  
50  
12d  
08  
18  
0E  
24

100ms delay

26

10ms delay

27

15ms delay

1C

## Store programable character patterns

C0 Set CGRAM addr register to 0000000

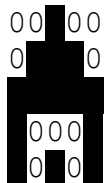
04d 00 00

0Ed 0 0

1Fd

11d 000

15d 0 0



```

15d  00
1Fd  ██████████
00d  00000

```

```

01d  0000
1Fd  ██████████
11d  000
11d  000
1Fd  ██████████
1Fd  ██████████
1Fd  ██████████
00d  00000

```

```

15d  00
0Ad  000
15d  00
0Ad  000
15d  00
0Ad  000
15d  00
00d  00000

```

```

0Ad  000
15d  00
0Ad  000
15d  00
0Ad  000
15d  00
0Ad  000
00d  00000

```

Clear icon display

```

40    Set Icon addr register to 0
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d

```

Clear text display

```

"
"
80    Set DDRAM addr register to 0000000

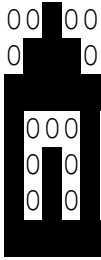
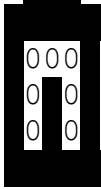
```

20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d

20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d  
20d

29  
13  
1C  
50  
12d  
08  
29  
0E  
27

**Store programable character patterns**

C0 Set CGRAM addr register to 0000000  
04d 0000  
0Ed 0000  
1Fd   
11d 000  
15d 000  
15d 000  
1Fd   
00d 00000

```
01d 0000
1Fd
11d 000
11d 000
1Fd
1Fd
1Fd
00d 00000
```

```
15d 000
0Ad 000
15d 000
0Ad 000
15d 000
0Ad 000
15d 000
00d 00000
```

```
0Ad 000
15d 000
0Ad 000
15d 000
0Ad 000
15d 000
0Ad 000
00d 00000
```

```
40 Set Icon addr register to 0
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
03d battery icon?
08d
00d
```

```
" Welcome! "
" Please wait... "
80 Set DDRAM addr register to 0000000
20d
20d
20d
20d
20d
57d W
```

```

65d e
6Cd l
63d c
6Fd o
6Dd m
65d e
21d !
20d
20d
20d
20d

20d
50d P
6Cd l
65d e
61d a
73d s
65d e
20d
77d w
61d a
69d i
74d t
2Ed .
2Ed .
2Ed .
20d

```

4.5s delay

```

13
1C
50
12d
08
29
0E
27

```

### Store programable character patterns

```

C0 Set CGRAM addr register to 0000000
04d 0000
0Ed 0000
1Fd
11d 000
15d 00
15d 00
1Fd
00d 00000

01d 0000
1Fd
11d 000
11d 000

```



20d  
20d  
20d  
20d  
20d  
20d

20d  
20d

4Fd O

75d u

74d t

20d

4Fd O

66d f

20d

52d R

61d a

6Ed n

67d g

65d e

20d

20d