

Uniden DECT3216 phone LCD initialisation sequence

v1.4 5 Feb 2021

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

LCD initialisation:

(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



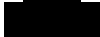
10ms delay


27








15ms delay








1C








Store programmable character patterns

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

15d 
1Fd
00d 00000

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

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

0Ad 
15d 
0Ad 
15d 
0Ad 
15d 
0Ad 
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

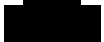



20d
20d
20d
20d
20d
20d
20d
20d
20d
20d
20d
20d
20d
20d
20d
20d
20d

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

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

Store programmable character patterns

C0 Set CGRAM addr register to 0000000

04d 00 00
0Ed 0 0
1Fd 
11d 
15d 
15d 

1Fd ██████████
00d 00000

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

15d █████0████████
0Ad 0████0████████
15d █████0████████
0Ad 0████0████████
15d █████0████████
0Ad 0████0████████
15d █████0████████
00d 00000

0Ad 0████0████████
15d █████0████████
0Ad 0████0████████
15d █████0████████
0Ad 0████0████████
15d █████0████████
0Ad 0████0████████
00d 00000

40 Set Icon addr register to 0
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
03d =2 bar battery icon? 02D = 1 bar
08d
00d

" **Welcome!** "
" **Please wait...** "
80 Set DDRAM addr register to 0000000
20d
20d
20d

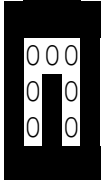
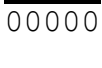
20d
 57d W
 65d e
 6Cd l
 63d c
 6Fd o
 6Dd m
 65d e
 21d !
 20d
 20d
 20d
 20d



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 programmable 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
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
10d   bell icon?
00d
00d
00d
00d
03d   battery icon?
08d
00d

```

```

"
"
"  Out Of Range  "
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
4Fd O
75d u
74d t
20d
4Fd O
66d f
20d
52d R
61d a
6Ed n
67d g
65d e
20d
20d

...

40
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
10d bell off icon
00d
00d
00d
00d
02d battery one bar
08d battery icon
00d

80
50d P
6Cd l
65d e
61d a
73d s

65d e
20d
70d p
75d u
74d t
20d
6Fd o
6Ed n
20d
20d
20d
74d t
68d h
65d e
20d
42d B
61d a
73d s
65d e
20d
63d c
72d r
61d a
64d d
6Cd l
65d e
2Ed .

...

13
1C
50
12
08

29
0E
27

C0
04d
0Ed
1Fd
11d
15d
15d
1Fd
00d

01d
1Fd
11d
11d

1Fd
1Fd
1Fd
00d

15d
0Ad
15d
0Ad
15d
0Ad
15d
00d

0Ad
15d
0Ad
15d
0Ad
15d
0Ad
00d

40
00d
00d
00d
00d
00d
00d
00d
00d
00d
10d
00d
00d
00d
00d
02d
08d
00d

" Ringer Volume "
"- ----- +"

80
20d
52d R
69d i
6Ed n
67d g
65d e
72d r
20d
56d V
6Fd o

6Cd l
75d u
6Dd m
65d e
20d
20d
2Dd -
20d
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
20d
2Bd +

...

init etc

...

" Ringer Volume "
"- [REDACTED]----- +"

40
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
00d
02d
08d
00d

80
20d
52d R

69d i
6Ed n
67d g
65d e
72d r
20d
56d V
6Fd o
6Cd l
75d u
6Dd m
65d e
20d
20d
2Dd -
20d
FFd █
FFd █
FFd █
FFd █
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
2Dd -
20d
2Bd +

...

init etc

...

"▶Intercom "
" Bluetooth setup"
80
A8d ▶
49d I
6Ed n
74d t
65d e
72d r
63d c
6Fd o
6Dd m
20d
20d
20d
20d
20d
20d

20d
20d
42d B
6Cd l
75d u
65d e
74d t
6Fd o
6Fd o
74d t
68d h
20d
53d s
65d e
74d t
75d u
70d p