



BT3030

Bluetooth™ USB Dongle

Product Description

BT3030 Bluetooth™ USB Dongle is an external dongle, for enabling of Notebook and Desktop PC through USB interface to communicate wirelessly with other Bluetooth™ enabled devices. This dongle product provides hardware and software drivers to enable wireless experience under Windows 98/2000/ME/XP.

BT3030 Bluetooth™ USB Dongle is a fast implementation solution for mobile and office workers to work intelligently in any different environment.

BT3030 Bluetooth™ USB Dongle is compact in size, low in cost, and fast in implementation. It is a true saver for mobile and office workers to work intelligently in any different environment. With USB interface, the dongle is ready for Plug&Play.

The **BT3030** supports data transmission and is fully compliant with Bluetooth™ specification version 1.1 standard, class1, 2, & 3 operations, which allows up to 20 dBm output power, supporting operation range up to 100 meters.

BT3030 Bluetooth™ USB Dongle is available in industry standard packages.



Key Features

- Bluetooth Specification V.1.1 compliant
- Supports USB interface.
- 0 to 20dBm Output Power (Support Class 1, 2, 3)
- Working distance up to 100 meters
- Supports Windows 98, Windows ME, Windows 2000, Windows XP
- Compliant with USB UHCI/OHCI spec. 1.1

Applications

- Personal Computers accessories
- Notebook PCs accessories

Benefits to Users

- Easy and fast to install
- Ready to go wirelessly at a small cost
- Easy to carry

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Specifications

Tx Power

- 20dBm max with power control

Frequency band

- 2.402GHz~2.4835GHz unlicensed ISM band

Modulation

- GFSK

Data rate

- 723kb/s (max)

Interface

- B-type USB connector

Sensitivity

- -80 dB minimum

Same Tx/Rx Bandwidth

- Use the same RF channel filter

Certification

- Bluetooth™ logo (applying)

Operating systems

- Windows 98SE, Windows Me, Windows 2000, Windows XP

Security

- Paring, encryption, authentication

DC Power

- 3.3V

Environment

- Operating: 0°C ~ 50°C
- Humidity: 10% - 90% non-condensing

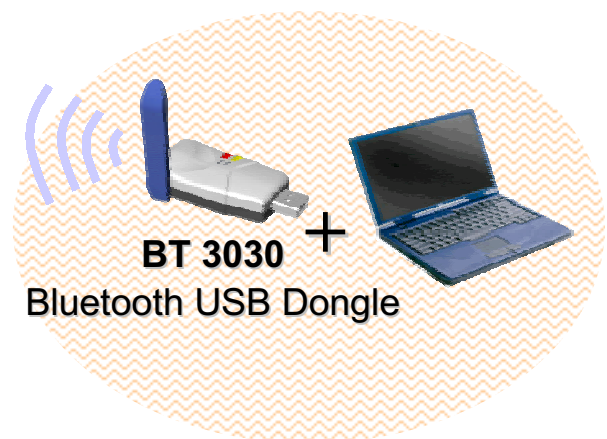
Antenna

- External

Dimension

- Length: 70 mm
- Width: 33 mm
- Height: 13 mm

Product Application



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2.1.1 First set

```
=====
79 HOP SYSTEM
=====
```

Hop sequence {k} for PAGE SCAN/INQUIRY SCAN:

CLKN start: 0x00000000

ULAP: 0x00000000

#ticks: 0000 | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 |

```
-----
0x00000000: 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 |
0x00080000: 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 |
0x00100000: 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 |
0x00180000: 48 | 50 | 52 | 54 | 56 | 58 | 60 | 62 |
0x00200000: 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 |
0x00280000: 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 |
0x00300000: 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 |
0x00380000: 48 | 50 | 52 | 54 | 56 | 58 | 60 | 62 |
```

Hop sequence {k} for PAGE STATE/INQUIRY STATE:

CLKE start: 0x00000000

ULAP: 0x00000000

#ticks: 00 01 02 03 | 04 05 06 07 | 08 09 0a 0b | 0c 0d 0e 0f |

```
-----
0x00000000: 48 50 09 13 | 52 54 41 45 | 56 58 11 15 | 60 62 43 47 |
0x00000100: 00 02 64 68 | 04 06 17 21 | 08 10 66 70 | 12 14 19 23 |
0x00000200: 48 50 09 13 | 52 54 41 45 | 56 58 11 15 | 60 62 43 47 |
0x00000300: 00 02 64 68 | 04 06 17 21 | 08 10 66 70 | 12 14 19 23 |
...
0x00010000: 48 18 09 05 | 20 22 33 37 | 24 26 03 07 | 28 30 35 39 |
0x00010100: 32 34 72 76 | 36 38 25 29 | 40 42 74 78 | 44 46 27 31 |
0x00010200: 48 18 09 05 | 20 22 33 37 | 24 26 03 07 | 28 30 35 39 |
0x00010300: 32 34 72 76 | 36 38 25 29 | 40 42 74 78 | 44 46 27 31 |
...
0x00020000: 16 18 01 05 | 52 54 41 45 | 56 58 11 15 | 60 62 43 47 |
0x00020100: 00 02 64 68 | 04 06 17 21 | 08 10 66 70 | 12 14 19 23 |
0x00020200: 16 18 01 05 | 52 54 41 45 | 56 58 11 15 | 60 62 43 47 |
0x00020300: 00 02 64 68 | 04 06 17 21 | 08 10 66 70 | 12 14 19 23 |
...
0x00030000: 48 50 09 13 | 52 22 41 37 | 24 26 03 07 | 28 30 35 39 |
0x00030100: 32 34 72 76 | 36 38 25 29 | 40 42 74 78 | 44 46 27 31 |
0x00030200: 48 50 09 13 | 52 22 41 37 | 24 26 03 07 | 28 30 35 39 |
0x00030300: 32 34 72 76 | 36 38 25 29 | 40 42 74 78 | 44 46 27 31 |
```

Hop sequence {k} for SLAVE PAGE RESPONSE STATE:

CLKN* = 0x00000010

ULAP: 0x00000000

#ticks: 00 | 02 04 | 06 08 | 0a 0c | 0e 10 | 12 14 | 16 18 | 1a 1c | 1e

0x00000012: 64 | 02 68 | 04 17 | 06 21 | 08 66 | 10 70 | 12 19 | 14 23 | 16

0x00000032: 01 | 18 05 | 20 33 | 22 37 | 24 03 | 26 07 | 28 35 | 30 39 | 32

0x00000052: 72 | 34 76 | 36 25 | 38 29 | 40 74 | 42 78 | 44 27 | 46 31 | 48

0x00000072: 09 | 50 13 | 52 41 | 54 45 | 56 11 | 58 15 | 60 43 | 62 47 | 00

Hop sequence {k} for MASTER PAGE RESPONSE STATE:

Offset value: 24

CLKE* = 0x00000012

ULAP: 0x00000000

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |

0x00000014: 02 68 | 04 17 | 06 21 | 08 66 | 10 70 | 12 19 | 14 23 | 16 01 |

0x00000034: 18 05 | 20 33 | 22 37 | 24 03 | 26 07 | 28 35 | 30 39 | 32 72 |

0x00000054: 34 76 | 36 25 | 38 29 | 40 74 | 42 78 | 44 27 | 46 31 | 48 09 |

0x00000074: 50 13 | 52 41 | 54 45 | 56 11 | 58 15 | 60 43 | 62 47 | 00 64 |

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Appendix IV - Sample Data

Hop sequence {k} for CONNECTION STATE:

CLK start: 0x00000010

ULAP: 0x00000000

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |

0x00000010: 08 66 | 10 70 | 12 19 | 14 23 | 16 01 | 18 05 | 20 33 | 22 37 |

0x00000030: 24 03 | 26 07 | 28 35 | 30 39 | 32 72 | 34 76 | 36 25 | 38 29 |

0x00000050: 40 74 | 42 78 | 44 27 | 46 31 | 48 09 | 50 13 | 52 41 | 54 45 |

0x00000070: 56 11 | 58 15 | 60 43 | 62 47 | 32 17 | 36 19 | 34 49 | 38 51 |

0x00000090: 40 21 | 44 23 | 42 53 | 46 55 | 48 33 | 52 35 | 50 65 | 54 67 |

0x000000b0: 56 37 | 60 39 | 58 69 | 62 71 | 64 25 | 68 27 | 66 57 | 70 59 |

0x000000d0: 72 29 | 76 31 | 74 61 | 78 63 | 01 41 | 05 43 | 03 73 | 07 75 |

0x000000f0: 09 45 | 13 47 | 11 77 | 15 00 | 64 49 | 66 53 | 68 02 | 70 06 |

0x00000110: 01 51 | 03 55 | 05 04 | 07 08 | 72 57 | 74 61 | 76 10 | 78 14 |

0x00000130: 09 59 | 11 63 | 13 12 | 15 16 | 17 65 | 19 69 | 21 18 | 23 22 |

0x00000150: 33 67 | 35 71 | 37 20 | 39 24 | 25 73 | 27 77 | 29 26 | 31 30 |

0x00000170: 41 75 | 43 00 | 45 28 | 47 32 | 17 02 | 21 04 | 19 34 | 23 36 |

0x00000190: 33 06 | 37 08 | 35 38 | 39 40 | 25 10 | 29 12 | 27 42 | 31 44 |

0x000001b0: 41 14 | 45 16 | 43 46 | 47 48 | 49 18 | 53 20 | 51 50 | 55 52 |

0x000001d0: 65 22 | 69 24 | 67 54 | 71 56 | 57 26 | 61 28 | 59 58 | 63 60 |

0x000001f0: 73 30 | 77 32 | 75 62 | 00 64 | 49 34 | 51 42 | 57 66 | 59 74 |

```

0x0000210: 53 36 | 55 44 | 61 68 | 63 76 | 65 50 | 67 58 | 73 03 | 75 11 |
0x0000230: 69 52 | 71 60 | 77 05 | 00 13 | 02 38 | 04 46 | 10 70 | 12 78 |
0x0000250: 06 40 | 08 48 | 14 72 | 16 01 | 18 54 | 20 62 | 26 07 | 28 15 |
0x0000270: 22 56 | 24 64 | 30 09 | 32 17 | 02 66 | 06 74 | 10 19 | 14 27 |
0x0000290: 04 70 | 08 78 | 12 23 | 16 31 | 18 03 | 22 11 | 26 35 | 30 43 |
0x00002b0: 20 07 | 24 15 | 28 39 | 32 47 | 34 68 | 38 76 | 42 21 | 46 29 |
0x00002d0: 36 72 | 40 01 | 44 25 | 48 33 | 50 05 | 54 13 | 58 37 | 62 45 |
0x00002f0: 52 09 | 56 17 | 60 41 | 64 49 | 34 19 | 36 35 | 50 51 | 52 67 |
0x0000310: 38 21 | 40 37 | 54 53 | 56 69 | 42 27 | 44 43 | 58 59 | 60 75 |
0x0000330: 46 29 | 48 45 | 62 61 | 64 77 | 66 23 | 68 39 | 03 55 | 05 71 |
0x0000350: 70 25 | 72 41 | 07 57 | 09 73 | 74 31 | 76 47 | 11 63 | 13 00 |
0x0000370: 78 33 | 01 49 | 15 65 | 17 02 | 66 51 | 70 67 | 03 04 | 07 20 |
0x0000390: 68 55 | 72 71 | 05 08 | 09 24 | 74 59 | 78 75 | 11 12 | 15 28 |
0x00003b0: 76 63 | 01 00 | 13 16 | 17 32 | 19 53 | 23 69 | 35 06 | 39 22 |
0x00003d0: 21 57 | 25 73 | 37 10 | 41 26 | 27 61 | 31 77 | 43 14 | 47 30 |
0x00003f0: 29 65 | 33 02 | 45 18 | 49 34 | 19 04 | 21 08 | 23 20 | 25 24 |

```

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Appendix IV - Sample Data

2.1.2 Second set

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Set mode:

Set clock:

Set ULAP:

=====

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=====

Hop sequence {k} for PAGE SCAN/INQUIRY SCAN:

CLKN start: 0x00000000

ULAP: 0x2a96ef25

#ticks: 0000 | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 |

0x0000000: 49 | 13 | 17 | 51 | 55 | 19 | 23 | 53 |

0x0008000: 57 | 21 | 25 | 27 | 31 | 74 | 78 | 29 |

0x0010000: 33 | 76 | 1 | 35 | 39 | 3 | 7 | 37 |

0x0018000: 41 | 5 | 9 | 43 | 47 | 11 | 15 | 45 |

0x0020000: 49 | 13 | 17 | 51 | 55 | 19 | 23 | 53 |

0x0028000: 57 | 21 | 25 | 27 | 31 | 74 | 78 | 29 |

0x0030000: 33 | 76 | 1 | 35 | 39 | 3 | 7 | 37 |

0x0038000: 41 | 5 | 9 | 43 | 47 | 11 | 15 | 45 |

Hop sequence {k} for PAGE STATE/INQUIRY STATE:

CLKE start: 0x00000000

ULAP: 0x2a96ef25

```

#ticks: 00 01 02 03 | 04 05 06 07 | 08 09 0a 0b | 0c 0d 0e 0f |
-----

0x00000000: 41 05 10 04 | 09 43 06 16 | 47 11 18 12 | 15 45 14 32 |
0x00000010: 49 13 34 28 | 17 51 30 24 | 55 19 26 20 | 23 53 22 40 |
0x00000020: 41 05 10 04 | 09 43 06 16 | 47 11 18 12 | 15 45 14 32 |
0x00000030: 49 13 34 28 | 17 51 30 24 | 55 19 26 20 | 23 53 22 40 |
...
0x00010000: 41 21 10 36 | 25 27 38 63 | 31 74 65 59 | 78 29 61 00 |
0x00010100: 33 76 02 75 | 01 35 77 71 | 39 03 73 67 | 07 37 69 08 |
0x00010200: 41 21 10 36 | 25 27 38 63 | 31 74 65 59 | 78 29 61 00 |
0x00010300: 33 76 02 75 | 01 35 77 71 | 39 03 73 67 | 07 37 69 08 |
...
0x00020000: 57 21 42 36 | 09 43 06 16 | 47 11 18 12 | 15 45 14 32 |
0x00020100: 49 13 34 28 | 17 51 30 24 | 55 19 26 20 | 23 53 22 40 |
0x00020200: 57 21 42 36 | 09 43 06 16 | 47 11 18 12 | 15 45 14 32 |
0x00020300: 49 13 34 28 | 17 51 30 24 | 55 19 26 20 | 23 53 22 40 |
...
0x00030000: 41 05 10 04 | 09 27 06 63 | 31 74 65 59 | 78 29 61 00 |
0x00030100: 33 76 02 75 | 01 35 77 71 | 39 03 73 67 | 07 37 69 08 |
0x00030200: 41 05 10 04 | 09 27 06 63 | 31 74 65 59 | 78 29 61 00 |
0x00030300: 33 76 02 75 | 01 35 77 71 | 39 03 73 67 | 07 37 69 08 |

Hop sequence {k} for SLAVE PAGE RESPONSE STATE:

CLKN* = 0x00000010
ULAP: 0x2a96ef25

#ticks: 00 | 02 04 | 06 08 | 0a 0c | 0e 10 | 12 14 | 16 18 | 1a 1c | 1e
-----

0x00000012: 34 | 13 28 | 17 30 | 51 24 | 55 26 | 19 20 | 23 22 | 53 40 | 57
0x00000032: 42 | 21 36 | 25 38 | 27 63 | 31 65 | 74 59 | 78 61 | 29 00 | 33
0x00000052: 02 | 76 75 | 01 77 | 35 71 | 39 73 | 03 67 | 07 69 | 37 08 | 41
0x00000072: 10 | 05 04 | 09 06 | 43 16 | 47 18 | 11 12 | 15 14 | 45 32 | 49

Hop sequence {k} for MASTER PAGE RESPONSE STATE:

Offset value: 24

CLKE* = 0x00000012
ULAP: 0x2a96ef25

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |
-----

0x00000014: 13 28 | 17 30 | 51 24 | 55 26 | 19 20 | 23 22 | 53 40 | 57 42 |
0x00000034: 21 36 | 25 38 | 27 63 | 31 65 | 74 59 | 78 61 | 29 00 | 33 02 |
0x00000054: 76 75 | 01 77 | 35 71 | 39 73 | 03 67 | 07 69 | 37 08 | 41 10 |
0x00000074: 05 04 | 09 06 | 43 16 | 47 18 | 11 12 | 15 14 | 45 32 | 49 34 |

```

Appendix IV - Sample Data

Hop sequence {k} for CONNECTION STATE:

CLK start: 0x0000010

ULAP: 0x2a96ef25

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |

0x0000010:	55 26		19 20		23 22		53 40		57 42		21 36		25 38		27 63	
0x0000030:	31 65		74 59		78 61		29 00		33 02		76 75		01 77		35 71	
0x0000050:	39 73		03 67		07 69		37 08		41 10		05 04		09 06		43 16	
0x0000070:	47 18		11 12		15 14		45 32		02 66		47 60		49 64		04 54	
0x0000090:	06 58		51 52		53 56		08 70		10 74		55 68		57 72		59 14	
0x00000b0:	61 18		27 12		29 16		63 30		65 34		31 28		33 32		67 22	
0x00000d0:	69 26		35 20		37 24		71 38		73 42		39 36		41 40		75 46	
0x00000f0:	77 50		43 44		45 48		00 62		26 11		69 05		73 07		36 17	
0x0000110:	40 19		04 13		08 15		38 25		42 27		06 21		10 23		12 48	
0x0000130:	16 50		59 44		63 46		14 56		18 58		61 52		65 54		28 64	
0x0000150:	32 66		75 60		00 62		30 72		34 74		77 68		02 70		20 01	
0x0000170:	24 03		67 76		71 78		22 09		58 43		24 37		26 41		68 47	
0x0000190:	70 51		36 45		38 49		72 55		74 59		40 53		42 57		44 78	
0x00001b0:	46 03		12 76		14 01		48 07		50 11		16 05		18 09		60 15	
0x00001d0:	62 19		28 13		30 17		64 23		66 27		32 21		34 25		52 31	
0x00001f0:	54 35		20 29		22 33		56 39		19 04		62 63		66 00		07 73	
0x0000210:	11 10		54 69		58 06		23 75		27 12		70 71		74 08		76 33	
0x0000230:	01 49		44 29		48 45		13 35		17 51		60 31		64 47		05 41	
0x0000250:	09 57		52 37		56 53		21 43		25 59		68 39		72 55		78 65	
0x0000270:	03 02		46 61		50 77		15 67		51 36		17 18		19 34		41 24	
0x0000290:	43 40		09 22		11 38		57 28		59 44		25 26		27 42		29 63	
0x00002b0:	31 00		76 61		78 77		45 67		47 04		13 65		15 02		37 71	
0x00002d0:	39 08		05 69		07 06		53 75		55 12		21 73		23 10		33 16	
0x00002f0:	35 32		01 14		03 30		49 20		75 60		39 48		43 56		00 66	
0x0000310:	04 74		47 62		51 70		08 68		12 76		55 64		59 72		61 18	
0x0000330:	65 26		29 14		33 22		69 20		73 28		37 16		41 24		77 34	
0x0000350:	02 42		45 30		49 38		06 36		10 44		53 32		57 40		63 50	
0x0000370:	67 58		31 46		35 54		71 52		28 13		73 03		75 11		34 17	
0x0000390:	36 25		02 15		04 23		42 21		44 29		10 19		12 27		14 48	
0x00003b0:	16 56		61 46		63 54		22 52		24 60		69 50		71 58		30 64	
0x00003d0:	32 72		77 62		00 70		38 68		40 76		06 66		08 74		18 01	
0x00003f0:	20 09		65 78		67 07		26 05		44 29		32 23		36 25		70 43	

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Appendix IV - Sample Data

2.1.3 Third set

fh_79_C.txt

Set mode:
Set clock:
Set ULAP:

=====

79 HOP SYSTEM

=====

Hop sequence {k} for PAGE SCAN/INQUIRY SCAN:

CLKN start: 0x00000000

ULAP: 0x6587cba9

#ticks: 0000 | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 |

0x00000000: 16 | 65 | 67 | 18 | 20 | 53 | 55 | 6 |
0x00080000: 8 | 57 | 59 | 10 | 12 | 69 | 71 | 22 |
0x00100000: 24 | 73 | 75 | 26 | 28 | 45 | 47 | 77 |
0x00180000: 0 | 49 | 51 | 2 | 4 | 61 | 63 | 14 |
0x00200000: 16 | 65 | 67 | 18 | 20 | 53 | 55 | 6 |
0x00280000: 8 | 57 | 59 | 10 | 12 | 69 | 71 | 22 |
0x00300000: 24 | 73 | 75 | 26 | 28 | 45 | 47 | 77 |
0x00380000: 0 | 49 | 51 | 2 | 4 | 61 | 63 | 14 |

Hop sequence {k} for PAGE STATE/INQUIRY STATE:

CLKE start: 0x00000000

ULAP: 0x6587cba9

#ticks: 00 01 02 03 | 04 05 06 07 | 08 09 0a 0b | 0c 0d 0e 0f |

0x00000000: 00 49 36 38 | 51 02 42 40 | 04 61 44 46 | 63 14 50 48 |
0x00000010: 16 65 52 54 | 67 18 58 56 | 20 53 60 62 | 55 06 66 64 |
0x00000020: 00 49 36 38 | 51 02 42 40 | 04 61 44 46 | 63 14 50 48 |
0x00000030: 16 65 52 54 | 67 18 58 56 | 20 53 60 62 | 55 06 66 64 |
...
0x00010000: 00 57 36 70 | 59 10 74 72 | 12 69 76 78 | 71 22 03 01 |
0x00010010: 24 73 05 07 | 75 26 11 09 | 28 45 13 30 | 47 77 34 32 |
0x00010020: 00 57 36 70 | 59 10 74 72 | 12 69 76 78 | 71 22 03 01 |
0x00010030: 24 73 05 07 | 75 26 11 09 | 28 45 13 30 | 47 77 34 32 |
...
0x00020000: 08 57 68 70 | 51 02 42 40 | 04 61 44 46 | 63 14 50 48 |
0x00020010: 16 65 52 54 | 67 18 58 56 | 20 53 60 62 | 55 06 66 64 |
0x00020020: 08 57 68 70 | 51 02 42 40 | 04 61 44 46 | 63 14 50 48 |
0x00020030: 16 65 52 54 | 67 18 58 56 | 20 53 60 62 | 55 06 66 64 |
...
0x00030000: 00 49 36 38 | 51 10 42 72 | 12 69 76 78 | 71 22 03 01 |
0x00030010: 24 73 05 07 | 75 26 11 09 | 28 45 13 30 | 47 77 34 32 |
0x00030020: 00 49 36 38 | 51 10 42 72 | 12 69 76 78 | 71 22 03 01 |
0x00030030: 24 73 05 07 | 75 26 11 09 | 28 45 13 30 | 47 77 34 32 |

Hop sequence {k} for SLAVE PAGE RESPONSE STATE:

CLKN* = 0x00000010

ULAP: 0x6587cba9

#ticks: 00 | 02 04 | 06 08 | 0a 0c | 0e 10 | 12 14 | 16 18 | 1a 1c | 1e

0x00000012: 52 | 65 54 | 67 58 | 18 56 | 20 60 | 53 62 | 55 66 | 06 64 | 08

0x00000032: 68 | 57 70 | 59 74 | 10 72 | 12 76 | 69 78 | 71 03 | 22 01 | 24

0x00000052: 05 | 73 07 | 75 11 | 26 09 | 28 13 | 45 30 | 47 34 | 77 32 | 00

0x00000072: 36 | 49 38 | 51 42 | 02 40 | 04 44 | 61 46 | 63 50 | 14 48 | 16

Hop sequence {k} for MASTER PAGE RESPONSE STATE:

Offset value: 24

CLKE* = 0x00000012

ULAP: 0x6587cba9

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |

0x00000014: 65 54 | 67 58 | 18 56 | 20 60 | 53 62 | 55 66 | 06 64 | 08 68 |

0x00000034: 57 70 | 59 74 | 10 72 | 12 76 | 69 78 | 71 03 | 22 01 | 24 05 |

0x00000054: 73 07 | 75 11 | 26 09 | 28 13 | 45 30 | 47 34 | 77 32 | 00 36 |

0x00000074: 49 38 | 51 42 | 02 40 | 04 44 | 61 46 | 63 50 | 14 48 | 16 52 |

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Appendix IV - Sample Data

2.2 THE 23-HOP SYSTEM SAMPLE DATA

2.2.1 First set

Hop sequence {k} for CONNECTION STATE:

CLK start: 0x00000010

ULAP: 0x6587cba9

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |

0x00000010: 20 60 | 53 62 | 55 66 | 06 64 | 08 68 | 57 70 | 59 74 | 10 72 |

0x00000030: 12 76 | 69 78 | 71 03 | 22 01 | 24 05 | 73 07 | 75 11 | 26 09 |

0x00000050: 28 13 | 45 30 | 47 34 | 77 32 | 00 36 | 49 38 | 51 42 | 02 40 |

0x00000070: 04 44 | 61 46 | 63 50 | 14 48 | 50 05 | 16 07 | 20 09 | 48 11 |

0x00000090: 52 13 | 06 15 | 10 17 | 38 19 | 42 21 | 08 23 | 12 25 | 40 27 |

0x000000b0: 44 29 | 22 31 | 26 33 | 54 35 | 58 37 | 24 39 | 28 41 | 56 43 |

0x000000d0: 60 45 | 77 62 | 02 64 | 30 66 | 34 68 | 00 70 | 04 72 | 32 74 |

0x000000f0: 36 76 | 14 78 | 18 01 | 46 03 | 72 29 | 42 39 | 44 43 | 74 41 |

0x00000110: 76 45 | 46 47 | 48 51 | 78 49 | 01 53 | 50 63 | 52 67 | 03 65 |

0x00000130: 05 69 | 54 55 | 56 59 | 07 57 | 09 61 | 58 71 | 60 75 | 11 73 |

0x00000150: 13 77 | 30 15 | 32 19 | 62 17 | 64 21 | 34 31 | 36 35 | 66 33 |

0x00000170: 68 37 | 38 23 | 40 27 | 70 25 | 27 61 | 72 71 | 76 73 | 25 75 |

0x00000190: 29 77 | 78 00 | 03 02 | 31 04 | 35 06 | 01 16 | 05 18 | 33 20 |

```

0x00001b0: 37 22 | 07 08 | 11 10 | 39 12 | 43 14 | 09 24 | 13 26 | 41 28 |
0x00001d0: 45 30 | 62 47 | 66 49 | 15 51 | 19 53 | 64 63 | 68 65 | 17 67 |
0x00001f0: 21 69 | 70 55 | 74 57 | 23 59 | 53 22 | 35 12 | 37 28 | 67 14 |
0x0000210: 69 30 | 23 32 | 25 48 | 55 34 | 57 50 | 39 40 | 41 56 | 71 42 |
0x0000230: 73 58 | 27 36 | 29 52 | 59 38 | 61 54 | 43 44 | 45 60 | 75 46 |
0x0000250: 77 62 | 15 00 | 17 16 | 47 02 | 49 18 | 31 08 | 33 24 | 63 10 |
0x0000270: 65 26 | 19 04 | 21 20 | 51 06 | 06 54 | 65 42 | 69 58 | 18 46 |
0x0000290: 22 62 | 55 64 | 59 01 | 08 68 | 12 05 | 71 72 | 75 09 | 24 76 |
0x00002b0: 28 13 | 57 66 | 61 03 | 10 70 | 14 07 | 73 74 | 77 11 | 26 78 |
0x00002d0: 30 15 | 47 32 | 51 48 | 00 36 | 04 52 | 63 40 | 67 56 | 16 44 |
0x00002f0: 20 60 | 49 34 | 53 50 | 02 38 | 38 78 | 12 05 | 14 13 | 44 07 |
0x0000310: 46 15 | 16 17 | 18 25 | 48 19 | 50 27 | 24 33 | 26 41 | 56 35 |
0x0000330: 58 43 | 20 21 | 22 29 | 52 23 | 54 31 | 28 37 | 30 45 | 60 39 |
0x0000350: 62 47 | 00 64 | 02 72 | 32 66 | 34 74 | 08 01 | 10 09 | 40 03 |
0x0000370: 42 11 | 04 68 | 06 76 | 36 70 | 70 31 | 42 35 | 46 43 | 74 39 |
0x0000390: 78 47 | 48 49 | 52 57 | 01 53 | 05 61 | 56 65 | 60 73 | 09 69 |
0x00003b0: 13 77 | 50 51 | 54 59 | 03 55 | 07 63 | 58 67 | 62 75 | 11 71 |
0x00003d0: 15 00 | 32 17 | 36 25 | 64 21 | 68 29 | 40 33 | 44 41 | 72 37 |
0x00003f0: 76 45 | 34 19 | 38 27 | 66 23 | 11 71 | 05 18 | 07 22 | 13 20 |

```

Frequency Hopping Sample Data—Mandatory Scheme22 February 2001 969

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Appendix IV - Sample Data

--

Set mode:

Set clock:

Set ULAP:

=====

=

23 HOP SYSTEM

=====

=

Hop sequence {k} for PAGE SCAN/INQUIRY SCAN:

CLKN start: 0x00000000

ULAP: 0x00000000

#ticks: 0000 | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 |

0x0000000: 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 |

0x0008000: 16 | 18 | 20 | 22 | 1 | 3 | 5 | 7 |

0x0010000: 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 |

0x0018000: 16 | 18 | 20 | 22 | 1 | 3 | 5 | 7 |

0x0020000: 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 |

0x0028000: 16 | 18 | 20 | 22 | 1 | 3 | 5 | 7 |

0x0030000: 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 |

0x0038000: 16 | 18 | 20 | 22 | 1 | 3 | 5 | 7 |

Hop sequence {k} for PAGE STATE/INQUIRY STATE:

CLKE start: 0x0000000

ULAP: 0x00000000

#ticks: 00 01 02 03 | 04 05 06 07 | 08 09 0a 0b | 0c 0d 0e 0f |

0x0000000: 16 18 02 10 | 20 22 06 14 | 01 03 04 12 | 05 07 08 16 |

0x0000010: 00 02 09 17 | 04 06 13 21 | 08 10 11 19 | 12 14 15 00 |

0x0000020: 16 18 02 10 | 20 22 06 14 | 01 03 04 12 | 05 07 08 16 |

0x0000030: 00 02 09 17 | 04 06 13 21 | 08 10 11 19 | 12 14 15 00 |

...

0x0001000: 18 20 10 06 | 22 01 14 04 | 03 05 12 08 | 07 00 16 09 |

0x0001010: 02 04 17 13 | 06 08 21 11 | 10 12 19 15 | 14 16 00 02 |

0x0001020: 18 20 10 06 | 22 01 14 04 | 03 05 12 08 | 07 00 16 09 |

0x0001030: 02 04 17 13 | 06 08 21 11 | 10 12 19 15 | 14 16 00 02 |

...

0x0002000: 20 22 06 14 | 01 03 04 12 | 05 07 08 16 | 00 02 09 17 |

0x0002010: 04 06 13 21 | 08 10 11 19 | 12 14 15 00 | 16 18 02 10 |

0x0002020: 20 22 06 14 | 01 03 04 12 | 05 07 08 16 | 00 02 09 17 |

0x0002030: 04 06 13 21 | 08 10 11 19 | 12 14 15 00 | 16 18 02 10 |

...

0x0003000: 22 01 14 04 | 03 05 12 08 | 07 00 16 09 | 02 04 17 13 |

0x0003010: 06 08 21 11 | 10 12 19 15 | 14 16 00 02 | 18 20 10 06 |

0x0003020: 22 01 14 04 | 03 05 12 08 | 07 00 16 09 | 02 04 17 13 |

0x0003030: 06 08 21 11 | 10 12 19 15 | 14 16 00 02 | 18 20 10 06 |

Hop sequence {k} for SLAVE PAGE RESPONSE STATE:

CLKN* = 0x0000010

ULAP: 0x00000000

#ticks: 00 | 02 04 | 06 08 | 0a 0c | 0e 10 | 12 14 | 16 18 | 1a 1c | 1e

0x0000012: 09 | 02 17 | 04 13 | 06 21 | 08 11 | 10 19 | 12 15 | 14 00 | 16

0x0000032: 02 | 18 10 | 20 06 | 22 14 | 01 04 | 03 12 | 05 08 | 07 16 | 00

0x0000052: 09 | 02 17 | 04 13 | 06 21 | 08 11 | 10 19 | 12 15 | 14 00 | 16

0x0000072: 02 | 18 10 | 20 06 | 22 14 | 01 04 | 03 12 | 05 08 | 07 16 | 00

Hop sequence {k} for MASTER PAGE RESPONSE STATE:

Offset value: 24

CLKE* = 0x0000012

ULAP: 0x00000000

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |

0x0000014: 02 17 | 04 13 | 06 21 | 08 11 | 10 19 | 12 15 | 14 00 | 16 02 |

0x0000034: 18 10 | 20 06 | 22 14 | 01 04 | 03 12 | 05 08 | 07 16 | 00 09 |

Appendix IV - Sample Data

fh_23_AT ST.txt

0x0000054: 02 17 | 04 13 | 06 21 | 08 11 | 10 19 | 12 15 | 14 00 | 16 02 |

0x0000074: 18 10 | 20 06 | 22 14 | 01 04 | 03 12 | 05 08 | 07 16 | 00 09 |

Hop sequence {k} for CONNECTION STATE:

CLK start: 0x0000010

ULAP: 0x00000000

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |

0x0000010: 08 11 | 10 19 | 12 15 | 14 00 | 16 02 | 18 10 | 20 06 | 22 14 |

0x0000030: 01 04 | 03 12 | 05 08 | 07 16 | 16 02 | 18 10 | 20 06 | 22 14 |

0x0000050: 01 04 | 03 12 | 05 08 | 07 16 | 09 18 | 11 03 | 13 22 | 15 07 |

0x0000070: 17 20 | 19 05 | 21 01 | 00 09 | 09 18 | 13 03 | 11 20 | 15 05 |

0x0000090: 17 22 | 21 07 | 19 01 | 00 09 | 02 11 | 06 19 | 04 13 | 08 21 |

0x00000b0: 10 15 | 14 00 | 12 17 | 16 02 | 02 11 | 06 19 | 04 13 | 08 21 |

0x00000d0: 10 15 | 14 00 | 12 17 | 16 02 | 18 04 | 22 12 | 20 06 | 01 14 |

0x00000f0: 03 08 | 07 16 | 05 10 | 09 18 | 18 04 | 20 20 | 22 08 | 01 01 |

0x0000110: 11 06 | 13 22 | 15 10 | 17 03 | 03 12 | 05 05 | 07 16 | 09 09 |

0x0000130: 19 14 | 21 07 | 00 18 | 02 11 | 11 20 | 13 13 | 15 01 | 17 17 |

0x0000150: 04 22 | 06 15 | 08 03 | 10 19 | 19 05 | 21 21 | 00 09 | 02 02 |

0x0000170: 12 07 | 14 00 | 16 11 | 18 04 | 04 13 | 08 06 | 06 15 | 10 08 |

0x0000190: 20 17 | 01 10 | 22 19 | 03 12 | 12 21 | 16 14 | 14 00 | 18 16 |

0x00001b0: 05 02 | 09 18 | 07 04 | 11 20 | 20 06 | 01 22 | 22 08 | 03 01 |

0x00001d0: 13 10 | 17 03 | 15 12 | 19 05 | 05 14 | 09 07 | 07 16 | 11 09 |

0x00001f0: 21 18 | 02 11 | 00 20 | 04 13 | 13 22 | 06 07 | 17 03 | 10 11 |

0x0000210: 21 15 | 14 00 | 02 19 | 18 04 | 15 01 | 08 09 | 19 05 | 12 13 |

0x0000230: 00 17 | 16 02 | 04 21 | 20 06 | 06 15 | 22 00 | 10 19 | 03 04 |

0x0000250: 14 08 | 07 16 | 18 12 | 11 20 | 08 17 | 01 02 | 12 21 | 05 06 |

0x0000270: 16 10 | 09 18 | 20 14 | 13 22 | 22 08 | 15 16 | 01 10 | 17 18 |

0x0000290: 07 01 | 00 09 | 09 03 | 02 11 | 03 12 | 19 20 | 05 14 | 21 22 |

0x00002b0: 11 05 | 04 13 | 13 07 | 06 15 | 15 01 | 08 09 | 17 03 | 10 11 |

0x00002d0: 00 17 | 16 02 | 02 19 | 18 04 | 19 05 | 12 13 | 21 07 | 14 15 |

0x00002f0: 04 21 | 20 06 | 06 00 | 22 08 | 08 17 | 16 10 | 12 21 | 20 14 |

0x0000310: 01 02 | 09 18 | 05 06 | 13 22 | 10 19 | 18 12 | 14 00 | 22 16 |

0x0000330: 03 04 | 11 20 | 07 08 | 15 01 | 01 10 | 09 03 | 05 14 | 13 07 |

0x0000350: 17 18 | 02 11 | 21 22 | 06 15 | 03 12 | 11 05 | 07 16 | 15 09 |

0x0000370: 19 20 | 04 13 | 00 01 | 08 17 | 17 03 | 02 19 | 19 05 | 04 21 |

0x0000390: 10 11 | 18 04 | 12 13 | 20 06 | 21 07 | 06 00 | 00 09 | 08 02 |

0x00003b0: 14 15 | 22 08 | 16 17 | 01 10 | 10 19 | 18 12 | 12 21 | 20 14 |

0x00003d0: 03 04 | 11 20 | 05 06 | 13 22 | 14 00 | 22 16 | 16 02 | 01 18 |

0x00003f0: 07 08 | 15 01 | 09 10 | 17 03 | 03 12 | 05 16 | 11 20 | 13 01 |

*Appendix IV - Sample Data***2.2.2 Second set**

fh_23_B.txt

Set mode:

Set clock:

Set ULAP:

=====

23 HOP SYSTEM

=====

Hop sequence {k} for PAGE SCAN/INQUIRY SCAN:

CLKN start: 0x00000000

ULAP: 0x2a96ef25

#ticks: 0000 | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 |

0x00000000: 7 | 18 | 3 | 8 | 16 | 4 | 12 | 1 |

0x00080000: 9 | 20 | 5 | 6 | 14 | 2 | 10 | 22 |

0x00100000: 7 | 18 | 3 | 8 | 16 | 4 | 12 | 1 |

0x00180000: 9 | 20 | 5 | 6 | 14 | 2 | 10 | 22 |

0x00200000: 7 | 18 | 3 | 8 | 16 | 4 | 12 | 1 |

0x00280000: 9 | 20 | 5 | 6 | 14 | 2 | 10 | 22 |

0x00300000: 7 | 18 | 3 | 8 | 16 | 4 | 12 | 1 |

0x00380000: 9 | 20 | 5 | 6 | 14 | 2 | 10 | 22 |

Hop sequence {k} for PAGE STATE/INQUIRY STATE:

CLKE start: 0x00000000

ULAP: 0x2a96ef25

#ticks: 00 01 02 03 | 04 05 06 07 | 08 09 0a 0b | 0c 0d 0e 0f |

0x00000000: 09 20 18 00 | 05 06 02 04 | 14 02 06 11 | 10 22 13 12 |

0x00000010: 07 18 14 19 | 03 08 21 08 | 16 04 10 15 | 12 01 17 16 |

0x00000020: 09 20 18 00 | 05 06 02 04 | 14 02 06 11 | 10 22 13 12 |

0x00000030: 07 18 14 19 | 03 08 21 08 | 16 04 10 15 | 12 01 17 16 |

...

0x00010000: 20 05 00 02 | 06 14 04 06 | 02 10 11 13 | 22 07 12 14 |

0x00010010: 18 03 19 21 | 08 16 08 10 | 04 12 15 17 | 01 09 16 18 |

0x00010020: 20 05 00 02 | 06 14 04 06 | 02 10 11 13 | 22 07 12 14 |

0x00010030: 18 03 19 21 | 08 16 08 10 | 04 12 15 17 | 01 09 16 18 |

...

0x00020000: 05 06 02 04 | 14 02 06 11 | 10 22 13 12 | 07 18 14 19 |

0x00020010: 03 08 21 08 | 16 04 10 15 | 12 01 17 16 | 09 20 18 00 |

0x00020020: 05 06 02 04 | 14 02 06 11 | 10 22 13 12 | 07 18 14 19 |

0x00020030: 03 08 21 08 | 16 04 10 15 | 12 01 17 16 | 09 20 18 00 |

...

```

0x0003000: 06 14 04 06 | 02 10 11 13 | 22 07 12 14 | 18 03 19 21 |
0x0003010: 08 16 08 10 | 04 12 15 17 | 01 09 16 18 | 20 05 00 02 |
0x0003020: 06 14 04 06 | 02 10 11 13 | 22 07 12 14 | 18 03 19 21 |
0x0003030: 08 16 08 10 | 04 12 15 17 | 01 09 16 18 | 20 05 00 02 |

Hop sequence {k} for SLAVE PAGE RESPONSE STATE:

CLKN* = 0x0000010

ULAP: 0x2a96ef25

#ticks: 00 | 02 04 | 06 08 | 0a 0c | 0e 10 | 12 14 | 16 18 | 1a 1c | 1e
-----

0x0000012: 14 | 18 19 | 03 21 | 08 08 | 16 10 | 04 15 | 12 17 | 01 16 | 09
0x0000032: 18 | 20 00 | 05 02 | 06 04 | 14 06 | 02 11 | 10 13 | 22 12 | 07
0x0000052: 14 | 18 19 | 03 21 | 08 08 | 16 10 | 04 15 | 12 17 | 01 16 | 09
0x0000072: 18 | 20 00 | 05 02 | 06 04 | 14 06 | 02 11 | 10 13 | 22 12 | 07

Hop sequence {k} for MASTER PAGE RESPONSE STATE:

Offset value: 24

CLKE* = 0x0000012

ULAP: 0x2a96ef25

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |
-----

0x0000014: 18 19 | 03 21 | 08 08 | 16 10 | 04 15 | 12 17 | 01 16 | 09 18 |
0x0000034: 20 00 | 05 02 | 06 04 | 14 06 | 02 11 | 10 13 | 22 12 | 07 14 |

```

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Appendix IV - Sample Data

fh_23_B.txt

```

0x0000054: 18 19 | 03 21 | 08 08 | 16 10 | 04 15 | 12 17 | 01 16 | 09 18 |
0x0000074: 20 00 | 05 02 | 06 04 | 14 06 | 02 11 | 10 13 | 22 12 | 07 14 |

Hop sequence {k} for CONNECTION STATE:

CLK start: 0x0000010

ULAP: 0x2a96ef25

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |
-----

0x0000010: 16 10 | 04 15 | 12 17 | 01 16 | 09 18 | 20 00 | 05 02 | 06 04 |
0x0000030: 14 06 | 02 11 | 10 13 | 22 12 | 00 07 | 11 12 | 19 14 | 01 01 |
0x0000050: 09 03 | 20 08 | 05 10 | 17 09 | 02 11 | 13 16 | 21 18 | 22 20 |
0x0000070: 07 22 | 18 04 | 03 06 | 15 05 | 14 02 | 04 05 | 12 09 | 17 15 |
0x0000090: 02 19 | 15 22 | 00 03 | 10 00 | 18 04 | 08 07 | 16 11 | 13 13 |
0x00000b0: 21 17 | 11 20 | 19 01 | 06 21 | 07 18 | 20 21 | 05 02 | 10 08 |
0x00000d0: 18 12 | 08 15 | 16 19 | 03 16 | 11 20 | 01 00 | 09 04 | 06 06 |
0x00000f0: 14 10 | 04 13 | 12 17 | 22 14 | 02 09 | 05 22 | 21 01 | 03 18 |
0x0000110: 19 20 | 22 10 | 15 12 | 11 11 | 04 13 | 07 03 | 00 05 | 01 14 |
0x0000130: 17 16 | 20 06 | 13 08 | 09 07 | 18 02 | 21 15 | 14 17 | 19 11 |
0x0000150: 12 13 | 15 03 | 08 05 | 04 04 | 20 06 | 00 19 | 16 21 | 17 07 |

```

```

0x0000170: 10 09 | 13 22 | 06 01 | 02 00 | 09 20 | 14 08 | 07 12 | 12 02 |
0x0000190: 05 06 | 10 17 | 03 21 | 20 18 | 13 22 | 18 10 | 11 14 | 08 00 |
0x00001b0: 01 04 | 06 15 | 22 19 | 16 16 | 02 13 | 07 01 | 00 05 | 05 18 |
0x00001d0: 21 22 | 03 10 | 19 14 | 13 11 | 06 15 | 11 03 | 04 07 | 01 16 |
0x00001f0: 17 20 | 22 08 | 15 12 | 09 09 | 20 00 | 08 05 | 12 07 | 02 02 |
0x0000210: 06 04 | 17 09 | 21 11 | 18 06 | 22 08 | 10 13 | 14 15 | 00 17 |
0x0000230: 04 19 | 15 01 | 19 03 | 16 21 | 13 16 | 01 21 | 05 00 | 18 18 |
0x0000250: 22 20 | 10 02 | 14 04 | 11 22 | 15 01 | 03 06 | 07 08 | 16 10 |
0x0000270: 20 12 | 08 17 | 12 19 | 09 14 | 04 09 | 17 12 | 19 16 | 13 11 |
0x0000290: 15 15 | 05 18 | 07 22 | 06 13 | 08 17 | 21 20 | 00 01 | 09 03 |
0x00002b0: 11 07 | 01 10 | 03 14 | 02 05 | 20 02 | 10 05 | 12 09 | 06 04 |
0x00002d0: 08 08 | 21 11 | 00 15 | 22 06 | 01 10 | 14 13 | 16 17 | 02 19 |
0x00002f0: 04 00 | 17 03 | 19 07 | 18 21 | 15 10 | 18 00 | 22 02 | 05 20 |
0x0000310: 09 22 | 12 12 | 16 14 | 13 01 | 17 03 | 20 16 | 01 18 | 03 04 |
0x0000330: 07 06 | 10 19 | 14 21 | 11 08 | 08 03 | 11 16 | 15 18 | 21 13 |
0x0000350: 02 15 | 05 05 | 09 07 | 06 17 | 10 19 | 13 09 | 17 11 | 19 20 |
0x0000370: 00 22 | 03 12 | 07 14 | 04 01 | 22 19 | 04 07 | 06 11 | 16 06 |
0x0000390: 18 10 | 00 21 | 02 02 | 01 08 | 03 12 | 08 00 | 10 04 | 12 13 |
0x00003b0: 14 17 | 19 05 | 21 09 | 20 15 | 15 12 | 20 00 | 22 04 | 09 22 |
0x00003d0: 11 03 | 16 14 | 18 18 | 17 01 | 19 05 | 01 16 | 03 20 | 05 06 |
0x00003f0: 07 10 | 12 21 | 14 02 | 13 08 | 19 17 | 07 22 | 15 15 | 02 20 |

```

Frequency Hopping Sample Data—Mandatory Scheme 22 February 2001 973

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Appendix IV - Sample Data

2.2.3 Third set

--

Set mode:

Set clock:

Set ULAP:

=====

23 HOP SYSTEM

=====

Hop sequence {k} for PAGE SCAN/INQUIRY SCAN:

CLKN start: 0x0000000

ULAP: 0x6587cba9

#ticks: 0000 | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | 7000 |

0x0000000: 0 | 10 | 14 | 12 | 16 | 9 | 13 | 11 |

0x0008000: 15 | 2 | 6 | 4 | 8 | 17 | 21 | 19 |

0x0010000: 0 | 10 | 14 | 12 | 16 | 9 | 13 | 11 |

0x0018000: 15 | 2 | 6 | 4 | 8 | 17 | 21 | 19 |

0x0020000: 0 | 10 | 14 | 12 | 16 | 9 | 13 | 11 |

0x0028000: 15 | 2 | 6 | 4 | 8 | 17 | 21 | 19 |

0x0030000: 0 | 10 | 14 | 12 | 16 | 9 | 13 | 11 |

0x0038000: 15 | 2 | 6 | 4 | 8 | 17 | 21 | 19 |

Hop sequence {k} for PAGE STATE/INQUIRY STATE:

CLKE start: 0x0000000

ULAP: 0x6587cba9

#ticks: 00 01 02 03 | 04 05 06 07 | 08 09 0a 0b | 0c 0d 0e 0f |

0x0000000: 15 02 05 11 | 06 04 19 13 | 08 17 21 22 | 21 19 07 01 |

0x0000010: 00 10 09 15 | 14 12 00 17 | 16 09 02 18 | 13 11 03 20 |

0x0000020: 15 02 05 11 | 06 04 19 13 | 08 17 21 22 | 21 19 07 01 |

0x0000030: 00 10 09 15 | 14 12 00 17 | 16 09 02 18 | 13 11 03 20 |

...

0x0001000: 02 06 11 19 | 04 08 13 21 | 17 21 22 07 | 19 00 01 09 |

0x0001010: 10 14 15 00 | 12 16 17 02 | 09 13 18 03 | 11 15 20 05 |

0x0001020: 02 06 11 19 | 04 08 13 21 | 17 21 22 07 | 19 00 01 09 |

0x0001030: 10 14 15 00 | 12 16 17 02 | 09 13 18 03 | 11 15 20 05 |

...

0x0002000: 06 04 19 13 | 08 17 21 22 | 21 19 07 01 | 00 10 09 15 |

0x0002010: 14 12 00 17 | 16 09 02 18 | 13 11 03 20 | 15 02 05 11 |

0x0002020: 06 04 19 13 | 08 17 21 22 | 21 19 07 01 | 00 10 09 15 |

0x0002030: 14 12 00 17 | 16 09 02 18 | 13 11 03 20 | 15 02 05 11 |

...

0x0003000: 04 08 13 21 | 17 21 22 07 | 19 00 01 09 | 10 14 15 00 |

0x0003010: 12 16 17 02 | 09 13 18 03 | 11 15 20 05 | 02 06 11 19 |

0x0003020: 04 08 13 21 | 17 21 22 07 | 19 00 01 09 | 10 14 15 00 |

0x0003030: 12 16 17 02 | 09 13 18 03 | 11 15 20 05 | 02 06 11 19 |

Hop sequence {k} for SLAVE PAGE RESPONSE STATE:

CLKN* = 0x0000010

ULAP: 0x6587cba9

#ticks: 00 | 02 04 | 06 08 | 0a 0c | 0e 10 | 12 14 | 16 18 | 1a 1c | 1e

0x0000012: 09 | 10 15 | 14 00 | 12 17 | 16 02 | 09 18 | 13 03 | 11 20 | 15

0x0000032: 05 | 02 11 | 06 19 | 04 13 | 08 21 | 17 22 | 21 07 | 19 01 | 00

0x0000052: 09 | 10 15 | 14 00 | 12 17 | 16 02 | 09 18 | 13 03 | 11 20 | 15

0x0000072: 05 | 02 11 | 06 19 | 04 13 | 08 21 | 17 22 | 21 07 | 19 01 | 00

Hop sequence {k} for MASTER PAGE RESPONSE STATE:

Offset value: 24

CLKE* = 0x0000012

ULAP: 0x6587cba9

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |

0x0000014: 10 15 | 14 00 | 12 17 | 16 02 | 09 18 | 13 03 | 11 20 | 15 05 |

0x0000034: 02 11 | 06 19 | 04 13 | 08 21 | 17 22 | 21 07 | 19 01 | 00 09 |

Appendix IV - Sample Data

fh_23_C.txt

0x0000054: 10 15 | 14 00 | 12 17 | 16 02 | 09 18 | 13 03 | 11 20 | 15 05 |

0x0000074: 02 11 | 06 19 | 04 13 | 08 21 | 17 22 | 21 07 | 19 01 | 00 09 |

Hop sequence {k} for CONNECTION STATE:

CLK start: 0x0000010

ULAP: 0x6587cba9

#ticks: 00 02 | 04 06 | 08 0a | 0c 0e | 10 12 | 14 16 | 18 1a | 1c 1e |

0x0000010: 16 02 | 09 18 | 13 03 | 11 20 | 15 05 | 02 11 | 06 19 | 04 13 |

0x0000030: 08 21 | 17 22 | 21 07 | 19 01 | 16 02 | 03 08 | 07 16 | 05 10 |

0x0000050: 09 18 | 02 11 | 06 19 | 04 13 | 08 21 | 18 04 | 22 12 | 20 06 |

0x0000070: 01 14 | 10 15 | 14 00 | 12 17 | 09 18 | 19 22 | 21 07 | 00 03 |

0x0000090: 02 11 | 18 04 | 20 12 | 22 08 | 01 16 | 11 20 | 13 05 | 15 01 |

0x00000b0: 17 09 | 03 06 | 05 14 | 07 10 | 02 11 | 12 15 | 14 00 | 16 19 |

0x00000d0: 18 04 | 11 20 | 13 05 | 15 01 | 17 09 | 04 13 | 06 21 | 08 17 |

0x00000f0: 10 02 | 19 22 | 21 07 | 00 03 | 03 12 | 05 02 | 09 18 | 07 04 |

0x0000110: 11 20 | 04 13 | 08 06 | 06 15 | 10 08 | 12 21 | 16 14 | 14 00 |

0x0000130: 18 16 | 20 17 | 01 10 | 22 19 | 19 05 | 21 18 | 02 11 | 00 20 |

0x0000150: 04 13 | 20 06 | 01 22 | 22 08 | 03 01 | 05 14 | 09 07 | 07 16 |

0x0000170: 11 09 | 13 10 | 17 03 | 15 12 | 12 21 | 14 09 | 16 02 | 18 13 |

0x0000190: 20 06 | 13 22 | 15 15 | 17 03 | 19 19 | 21 07 | 00 00 | 02 11 |

0x00001b0: 04 04 | 06 01 | 08 17 | 10 05 | 05 14 | 07 02 | 09 18 | 11 06 |

0x00001d0: 13 22 | 06 15 | 08 08 | 10 19 | 12 12 | 14 00 | 16 16 | 18 04 |

0x00001f0: 20 20 | 22 17 | 01 10 | 03 21 | 13 22 | 17 05 | 21 07 | 02 13 |

0x0000210: 06 15 | 22 08 | 03 10 | 07 16 | 11 18 | 15 01 | 19 03 | 00 09 |

0x0000230: 04 11 | 01 12 | 05 14 | 09 20 | 06 15 | 10 21 | 14 00 | 18 06 |

0x0000250: 22 08 | 15 01 | 19 03 | 00 09 | 04 11 | 08 17 | 12 19 | 16 02 |

0x0000270: 20 04 | 17 05 | 21 07 | 02 13 | 22 08 | 05 12 | 07 16 | 13 20 |

0x0000290: 15 01 | 08 17 | 10 21 | 16 02 | 18 06 | 01 10 | 03 14 | 09 18 |

0x00002b0: 11 22 | 12 19 | 14 00 | 20 04 | 15 01 | 21 05 | 00 09 | 06 13 |

0x00002d0: 08 17 | 01 10 | 03 14 | 09 18 | 11 22 | 17 03 | 19 07 | 02 11 |

0x00002f0: 04 15 | 05 12 | 07 16 | 13 20 | 16 02 | 04 15 | 08 17 | 20 08 |

0x0000310: 01 10 | 17 03 | 21 05 | 10 19 | 14 21 | 02 11 | 06 13 | 18 04 |

0x0000330: 22 06 | 19 07 | 00 09 | 12 00 | 09 18 | 20 08 | 01 10 | 13 01 |

0x0000350: 17 03 | 10 19 | 14 21 | 03 12 | 07 14 | 18 04 | 22 06 | 11 20 |

0x0000370: 15 22 | 12 00 | 16 02 | 05 16 | 02 11 | 15 22 | 17 03 | 08 15 |

0x0000390: 10 19 | 03 12 | 05 16 | 19 05 | 21 09 | 11 20 | 13 01 | 04 13 |

0x00003b0: 06 17 | 07 14 | 09 18 | 00 07 | 18 04 | 08 15 | 10 19 | 01 08 |

0x00003d0: 03 12 | 19 05 | 21 09 | 12 21 | 14 02 | 04 13 | 06 17 | 20 06 |

0x00003f0: 22 10 | 00 07 | 02 11 | 16 00 | 15 01 | 01 18 | 17 03 | 03 20 |

