OLYMPUS®

Quick Reference Guide

R1018 Series
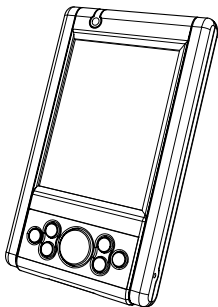
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Patents

This product is covered by one or more of the following Singapore or foreign Patents and Registered Designs:

Singapore Patent No. 200401460-1
Singapore Registered Design No. D2003/1055/C

Table of Content

Introduction

Getting Started

Resetting Your R1018 Terminal

Host Communications

Using wireless communications

Introduction

Thank you for your purchase of R1018 terminal. This guide describes how to set up and use the terminal. The term R1018 refers to the entire batch.

Model Configuration

R1018-xx20-yyy-zz: This is a basic handy terminal of the series with color display, WiFi and Bluetooth radio function.

Note: "xx" shows memory configuration and "yyy" shows software configuration. ("zz" is for optional.)

Accessories

Each R1018 operates on a 1500 mAh Lithium Polymer built-in battery. The following are the accessories included together with your purchase:

- AC Adapter
- USB Sync Cable
- Stylus

AC Adapter   USB Sync Cable   Stylus

Parts of the R1018 Series

LED

LCD Display

Keypad

Communication Port

Mic

Speaker

Stylus

Audio Connector

Side Button

Reset Switch

IrDA Port
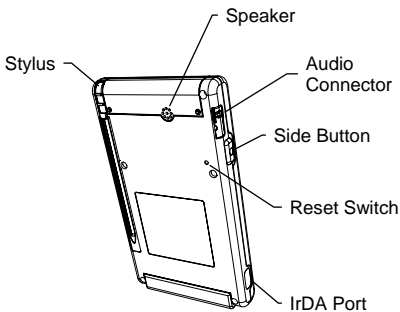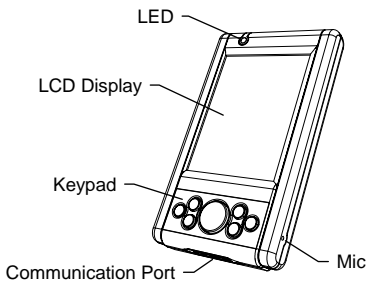
Getting Started

Before you can use your R1018, perform these basic setup procedures:

- Charge the battery
- Start the R1018

Charging the Battery

Before using your R1018 for the first time, charge the built-in Lithium-Polymer battery for about 3 hours using the USB Sync Cable with AC Adapter attached. Follow these same procedures to recharge the battery.

When the battery is fully used up, charge within 72 hours to prevent any data loss.

- Connect the AC Adapter to the USB Sync Cable.
- Insert the USB Sync Cable to the Communication Port found at the bottom of the R1018.
- Plug the AC Adapter into a wall outlet and turn on a wall outlet, if applicable.
- The Terminal Status LED turns RED to indicate charging.
- The LED will turn GREEN after the battery is fully charged. This will take approximately 3 hours.

Starting the R1018

Press the Power Button to turn the R1018 on or standby. In case where the Power Button is pressed for the first time, the booting splash screen will be displayed for about 30 seconds.

Aligning the Screen

Remove the Stylus from its storage silo on the back of the R1018. To align your R1018, the cursor on the touch screen needs to be aligned with the tip of your Stylus.

- Tap and hold the center of each target that appears on the screen with the tip of the Stylus.
- Tap anywhere on the screen to finish to the setting.

Target

Press & hold stylus on the center of the target. Repeat as the target moves around the screen.

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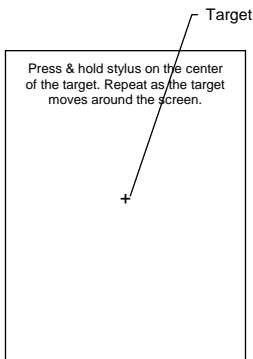
Note: The process will repeat if it detects an inaccuracy. These screens also appear every time you perform a hard reset.

Using the Keypad and Side Button
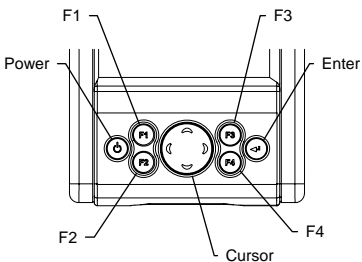
Key	Action
Power	Press Power to either set the R1018 to standby or ON mode.
F1	Press F1 to start Word Pad.
F2	Press F2 to start Internet Explorer.
F3	Press F3 to start Media Player.
F4	Press F4 to display Inbox.
F2+F4	Enable Wireless LAN.
Enter	Press Enter after entering data or a command.
Cursor	Press cursor keys to move the cursor left, right, up and down on the screen.
Side Button	Press Side Button to launch Bluetooth application.

Using the Stylus

The Stylus selects items and enters information. The Stylus functions as a mouse.

- Tap: Touch the screen once with the Stylus to select an item or option.
- Double-Tap: Touch the screen twice with the Stylus to open an item.
- Drag: Hold the Stylus on the screen and drag across the screen to select text and messages. Drag in a list to select multiple items.
- Tap-and-Hold: Tap and hold the Stylus on an item to see the available actions.

Initiating the Screen

When you turn on your terminal, the Desktop screen appears. You can also display it by tapping the Desktop icon at the lower right of the screen. On the Desktop screen, you can see the programs. You can start the programs by tapping on the Start Menu.

Double-Tap the item to start the application

Tap this icon to show the Start Menu

Input method icon

Tap here to show the Desktop icon

Input Methods

Tap the Input method icon to pop up and hide the
Software Keyboard.

Keyboard

Esc	1	2	3	4	5	6	7	8	9	0	-	=	←
Tab	q	w	e	r	t	y	u	i	o	p	[	]	
CAP	a	s	d	f	g	h	j	k	l	;	'		
Shift	z	x	c	v	b	n	m	,	.	/	←		
Ctl	áü	`	\						↓	↑	←	→	

5:42 PM

Turn on and off the Backlights

By pressing the Power Key and holding it, the
backlights of the LCD Display and Keypad can
be switched on/off in following order:

- Keypad backlight off, LCD Display backlight
  on.
- Both Keypad and LCD Display backlights off.
- Both Keypad and LCD Display backlights on.

Using the Headset

To use the Headset, plug the Headset Jack into
the audio connector on the side of the terminal.

Resetting Your R1018 Terminal

If your R1018 terminal stops responding to input, reset it.

Performing a Soft Reset

Push the Reset Switch with a Stylus gently to perform a soft reset. A soft reset restarts your R1018 terminal and saves all stored records and entries.

Caution: Files that remain open during a soft reset may not be stored / saved. DO NOT perform a soft reset if the terminal is suspended. Press the Power Button to wake the terminal; if the terminal does not turn on, perform soft reset.

Note: In case password setting is applied to Windows CE model, press F2 and Enter button simultaneously to show the Software Keyboard.

Performing a Hard Reset

A hard reset restarts your R1018 terminal, but erases all stored records and entries.

Note: You can restore any data previously synchronized with your computer during the next Active Sync operation.

To perform a hard reset on the terminal:

- While holding the Power Button, gently push the Reset Switch with a Stylus.
- Hold for about 5 seconds.
- As the terminal reboots, the booting splash screen displays for about 10 seconds.

• Realign the screen.

Note: With a hard reset, Formats, Preferences, and other settings are restored to their factory default settings.

Host Communications

The R1018 series terminal can communicate with a host PC through its communication port using the USB Sync Cable.

Refer to www.olympus-ost.com for software download.

Using the USB Sync Cable

To communicate through the USB Sync Cable:

- Ensure all connections between the USB Sync Cable and the host computer are secure.
- Power on the host computer and the terminal.
- Plug the USB Sync Cable to the Communication Port on the terminal.
- Begin host communications as specified by your application.

Using wireless communications

The R1018 series terminal can communicate with other device through its wireless communication functions, IrDA, Bluetooth and WiFi.

Establishing Active Sync via IrDA
On PC
1. Go to PC and start Active Sync.
2. Configure Active Sync settings
   • Go to "File > Connection Settings".
   • Select "Infrared Port"
   • Uncheck "Allow USB Connection"..

ON R1018
1. Ensure IrDA port is enabled.
(Start > Settings > Control Panel > IR-Bluetooth)
2. Create a new IrDA connection: "XXXX"
(Start > Settings > Control Panel > Network and Dial-Up-Connections)
3. Select "Direct Connection". Tap "Next".
4. Select "Modem to IrDA port", and tap "Finish".
5. Tap "Change Connection", and select "XXXX".
(Start > Settings > Control Panel > PC > Connection)
6. Point the IrDA ports at each other
7. Start "repllog" on R1018, and then Active Sync should now detect and connect. Verify that you can explore the R1018 and perform file transfer

Browsing Internet via IrDA
Configure the Internet Explorer settings:
   • Select Autodial Name: IrDA.
     (Tools > Options > Connection)
   • Uncheck Proxy.

Establishing Active Sync via Bluetooth
On PC
1. Start Active Sync.
2. Select File, click "Connection Settings", select the com port of your Bluetooth device
3. Uncheck "Allow USB Connection" and click "OK"

On R1018
1. Ensure Bluetooth port is enabled.
(Start > Settings > Control Panel > IR-Bluetooth)
2. Double-tap "Bluetooth Monitor" icon on the desktop to discover all the Bluetooth devices.
3. Create a new connection: "XXXX".
(Start > Settings > Control Panel > Network and Dial-Up Connections)
4. Select "Direct Connection". Tap "Next".
5. Set Modem to Bluetooth Serial Port. Tap "Next"
6. Tap "Change Connection". Select "XXXX".
(Start > Settings > Control Panel > PC Connection)
7. Double-tap "repllog" on R1018, and then Active Sync should now detect and connect.

Note: "XXXX" is the user preferred friendly name.

Connecting to the GPRS mobile phone via Bluetooth

Please refer to the respective mobile phone user manual and service provider's settings for instructions in configuring the Bluetooth and GPRS

15

1. Enable Bluetooth.
(Start > Settings > Control Panel > IR-Bluetooth)
2. Tap "OK"
3. "Bluetooth Selected" pop-up window will appear. Tap "OK".
4. R1018 will auto perform soft reset.
5. Make a new Connection: "XXXX".
(Start > Settings > Control Panel > Network and Dial-up Connections)
6. Select "Dial-Up Connection". Tap "Next".
7. Select "Bluetooth Modem on COM5".
8. Tap on "Configure". Set Baud Rate to 115200.
9. Go to "Call Options" tab. Deselect "Wait for dial tone before dialing"
10. Tap "OK" to set the configuration for "Port Settings" and "Call Options"
11. TCP/IP settings to be confirmed for different models of mobile phone.
12. Tap "OK" on pop-up confirmation window.
13. Tap "Next".
14. Input "65" for country / region code (for Singapore. Leave the area code blank)
15. Enter a phone number "*99***X#"

Note: 'X' is the CID number that can be found on the mobile phone. Phone number is obtained from the GPRS subscriber. In this example, the phone number is the singtel number.

16. Tap "Finish".
17. Double tap on the new connection icon "XXXX", that has been just created.
18. Tap "Dial Properties".
19. Tap "Edit".
20. Enter the following Dialing Patterns:
 • For local Calls: G

16

- For long distance call : 01FG
- For international call: 001EFG

21. Tap "OK"
22. Enter "65" (for Singapore) for country / region code, blank for region code
23. Tap "OK".
24. Logon to GPRS:
    - Double tap on the "XXXX" icon.
    - Enter username as <country code><mobile phone number> e.g.: 6591234567
    - Enter account password for the GPRS service e.g.: E-ideas account password
    - Tap on "Save Password".
    - Tap "Connect" to make the connection to the GPRS service.
    - Select the mobile phone from the device selection window. Tap "Connect".
25. Configure the Internet Explorer settings:
    - Launch the Internet Explorer by double tap on its icon located in the Desktop area.
    - Select from menu "Tools > Options > Connection"
    - Deselect "Use LAN (no autodial)".
    - Select "XXXX" for the autodial name.
    - Select "Access the Internet using a proxy server".
    - Enter the proxy address: proxy.e-ideas.com.sg
    - Enter the port : 8080
    - Select "Bypass proxy server for local addresses".
    - Tap "OK".

Connecting to the Bluetooth access point
1. Click "Bluetooth Monitor" application icon on the Desktop to discover the Bluetooth access point within range.
2. Click "File > Connect to PAN".
3. Click "Connect" on the "XTND LAN Connect window".
4. Select the Bluetooth access point from the "Device Selection" screen.
5. Click "Connect".
6. Connection dialog box should appear and show the process from:
"Device connection > User Authentication > Connected"
7. Configure the Internet Explorer:
- Launch the Internet Explorer by double tap on its icon located in the Desktop area
- Select from menu: "Tools > Options > Connection".
- Select "Access the Internet using a proxy server".
- Enter the server proxy address: e.g.: proxy.ntti.net.sg
- Enter the port : 8080
- Select "Bypass proxy server for local addresses"
- Tap "OK".

Browsing Internet via WiFi

With the R1018, you can connect to internet across a wireless network. By Default, WiFi is turned OFF.

1. To Enable WiFi, press Function keys F2+F4 on the Keypad. Progressing status Bar to start the wireless LAN, appears on the Desktop.

2. Tap the WiFi Icon on the Task Bar.

WiFi icon

3. Tap "Add New…" to create a new Connection. The device tries to locate Access Points (AP) in the area when it locates a Wireless LAN.

4. Enter the Network "SSID" value.

Note: For encryption and authentication, see your network administrator for this information.

5. Tap "Connect" on the WLAGS46B1 window.
6. Verify if the "IP Address" is obtained.

7. Select Start > Programs > Internet Explorer.
8. Enter the Proxy address.
   - Tap Tools >Options >Connection.
   - Check "Use LAN (no autodial)".
   - Check "Access the Internet using a proxy server".
   - Enter the Proxy address and Port Number.

9. Verify able to browse internet successfully.

Using Online Help

The online help is installed as a default. You can get more information about both operating systems from there.

To use online help, show Start Menu icon and tap Help icon.

Help icon

Tap Start Menu icon
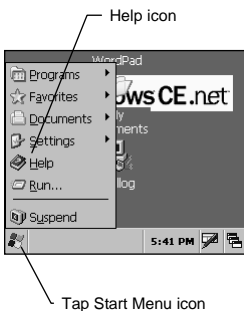
Maintaining the R1018

To maintain your R1018 in good working condition:

- Do not scratch the screen. Use the supplied Stylus or plastic-tipped pens intended for use with a touch-sensitive screen. Never use a pen or pencil or other sharp object on the screen.
- Although your R1018 is water and dust resistant, do not expose it to rain or moisture for an extended period of time. Treat your R1018 as you would for a pocket calculator or other electronic instrument.
- The touch-sensitive screen of your R1018 contains glass. Do not drop your R1018 or subject it to a strong impact.
- Protect your R1018 from temperature extremes. Do not leave it on the dashboard of a car on a hot day, and keep away from heat sources.
- Do not store or use your R1018 in any location that is extremely dusty, damp or wet.
- If the surface of the R1018 screen becomes soiled, clean it with a soft cloth moistened with a diluted window-cleansing solution.
- R1018 should be strictly kept within 20±5 °C temperature range if you want to store it for a period of 6 months and beyond, otherwise the battery may be permanently damaged. This is due to the limitation of the lithium ion/ polymer battery.

Troubleshooting

Problem	Cause	Solution
R1018 does not turn on.	Lithium-Polymer battery not charged.	Charge the Lithium-Polymer Battery in the R1018.
	System crash.	Perform a hard reset.
Rechargeable Lithium-Polymer battery did not charge.	Loose connections.	Check the connection on your R1018 and wall outlet.
	Battery failed. (If Battery fault indication occurs).	Plug out and re-insert USB Sync Cable to continue charging. If battery error message persist, please contact vendor.
	System crash.	Perform a hard reset.
Cannot see characters on display.	R1018 not powered on.	Press the Power Button.
Fail to communicate using IrDA.	Distance from the other device is more than 1 meter.	Bring the terminal closer to the device and attempt communication again.
	Obstruction interfered with communication.	Check the path to ensure no objects obstruct the way.
	Devices too close together.	Place at least 1 inch apart.
	Inappropriate room lighting.	Adjust room lighting or move to a different location.

Problem	Cause	Solution
During data communication, no data was transmitted, or transmitted data was incomplete.	USB Sync Cable unplugged from terminal or from host computer during communication.	Ensure connections and re-transmit.
	Incorrect cable configuration.	See your System Administrator.
	Communication software was incorrectly installed or configured.	Download setup program from www.olympus-ost.com and perform setup again.
No sound is audible.	Volume setting is low or turned off.	Check the System Volume slider in the Sounds & Reminders properties dialog box to make sure the volume is not turned down.
R1018 turns off itself.	R1018 is inactive.	Your R1018 turns off after a period of inactive interaction. This period can be set from 1 to 5 minutes, in 1-minute interval. Check the Power dialog box and change the setting if you need a longer delay before the automatic shut off feature activates.

Problem	Cause	Solution
R1018 does not recognize my handwriting.	Character strokes written incorrectly with the stylus.	Refer to the Block Recognizer.
Tapping the screen buttons or icons does not activate the corresponding feature.	LCD screen does not be aligned correctly.	Align the screen. Choose Align Screen from System tab.
A message appears stating that your R1018 terminal memory is full.	Too many files stored on the terminal.	Delete unused memos and records. You can save these records on your computer.
	Memory allocation too low.	Adjust memory allocation.
	Too may applications installed on terminal.	If you have installed additional applications on your R1018, remove them to recover memory.
When receiving beamed data, an out of memory message appears.	Not enough free memory available for receiving data.	Your R1018 terminal requires at least twice the memory available as the data you are receiving.
Cannot use IrDA or Bluetooth function.	Function disabled.	IrDA and Bluetooth can not be used simultaneously. So you have to switch each function by software setting.

Problem	Cause	Solution
Failed to sign-in to Messenger service.	System clock not set to current date and time.	Set system clock at taskbar to current date and time.
Failed to configure encryption and authentication option with Access Point.	Access Point does not support the type of encryption and authentication options.	Check your Access Point Encryption and Authentication Settings through the AP Manager or check with your vendor.
Able to connect to WiFi but unable to browse internet.	Proxy server IP address not set.	Go to IE > Tools > Options. Tab on "Connection" and checked "Access the Internet using a proxy server" and enter the correct proxy address and the Port number.
Wireless Network not found.	Incorrect SSID or Access Point place out of range.	Check the correct SSID with your Administrator or place the Access Point in range (check with Access Point vendor).

Regulatory and Warning Information

⚠️ RF Exposure Guidelines

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated in conjunction with minimum distance 20 cm between the radiator and user's body.

The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter, except when used with the Bluetooth transmitter FCC ID identified in the label that is pasted onto the equipment.

Radio Frequency Interface Requirements

FC Tested To Comply With FCC Standards.
For Home Or Office Use.

Note: This equipment has been tested and found to comply with Part 15 of the FCC rules. Operation is subject to the condition that this device does not cause harmful interference. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the maintenance manual, may cause harmful interference to radio communications. There is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, the user is encouraged to consult the dealer or an experienced radio / TV technician for help.

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following 2 conditions: (1) this equipment may not cause harmful interference, and (2) this equipment must accept any interference received, including interference that may cause undesired operation. Any changes or modifications made without the approval by the party responsible for compliance could void the user's authority to operate this equipment.

Note: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications made by the user to this equipment. Such modifications could void the user's authority to operate the equipment.

Radio Frequency Interference Requirements - Canada

This device complies with RSS210 of Industry & Science Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept

any interference received, including interference that may cause undesired operation.

Kindly refer to FCC RF Exposure for more information concerning IC radiation exposure statement.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

The term "IC" before the radio certification only signifies that Industry Canada technical specifications were met.

Bluetooth Regulatory Information

FHSS Descriptions

1. Output Power and Channel Separation of a Bluetooth Device in the Different Operating Modes

The different operating modes (data-mode, acquisition-mode) of a Bluetooth device don't influence the output power and the channel spacing. There is only one transmitter, which is driven by identical input parameters concerning these two parameters. Only a different hopping sequence will be used. For this reason, the RF parameters in one op-mode are sufficient.

2. Frequency Range of a Bluetooth Device

The maximum frequency of the device is 2402MHz - 2480 MHz. This is according the Bluetooth Core Specification V 1.1.

3. Co-Ordination of the Hopping Sequence in Data Mode to Avoid Simultaneous Occupancy by Multiple Transmitters

Bluetooth units, which want to communicate with other units, must be organized in a structure called piconet. This piconet consist of maximum 8 Bluetooth units. One unit is the master the other seven are the slaves. The master co-ordinates frequency occupation in this piconet for all units. As the master hop sequence is derived from it's BD address which is unique for every Bluetooth device, additional masters intending to establish new piconets will always use different hop sequences.

4. Example of a Hopping Sequence in Data Mode: Example of a 79 hopping sequence in data mode:

40, 21, 44, 23, 42, 53, 46, 55, 48, 33, 52, 35, 50, 65, 54, 67, 56, 37, 60, 39, 58, 69, 62, 71, 64, 25, 68, 27, 66, 57, 70, 59, 72, 29, 76, 31, 74, 61, 78, 63, 01, 41, 05, 43, 03, 73, 07, 75, 09, 45, 13, 47, 11, 77, 15, 00, 64, 49, 66, 53, 68, 02, 70, 06, 01, 51, 03, 55, 05, 04

5. Equally Average Use of Frequencies in Data Mode and Short Transmissions

The generation of the hopping sequence in connection mode depends essentially on two input values:

1. LAP/UAP of the master of the connection
2. Internal master clock

The LAP (lower address part) is the 24 LSB's of the 48 BD-ADDRESS. The BD ADDRESS is an unambiguous number of every Bluetooth unit. The UAP (upper address part) are the 24 MSB's of the 48 BD-ADDRESS. The internal clock of a Bluetooth unit is derived from a free running clock, which is never adjusted and is never turned off. For synchronization with other units, only the offsets are used. It has no relation to the time of the day. Its resolution is at least half the RX/TX slot length of 312.5lJs. The clock has a cycle of about one day (23h30). In most case it is implemented as a 28-bit counter. For the deriving of the hopping sequence the entire LAP (24 bits), 4 LSB's (4 bits) (Input 1) and the 27 MSB's of the clock (Input 2) are used. With this input values different mathematical procedures (permutations, additions, XOR-operations) are performed to generate the sequence. This will be done at the beginning of every new transmission.

Regarding short transmissions, the Bluetooth system has the following behavior:

The first connection between the two devices is established, a hopping sequence is generated. For transmitting the wanted data, the complete hopping sequence is not used and the connection ends. The second connection will be established. A new hopping sequence is generated. Due to the fact that the Bluetooth clock has a different value, because the period between the two transmission is longer (and it cannot be shorter) than the minimum resolution of the clock (312.5 µs). The hopping sequence will always differ from the first one.

6. Receiver Input Bandwidth, Synchronization and Repeated Single or Multiple Packets

The input bandwidth of the receiver is 1 MHz. In every connection, one Bluetooth device is the master and the other one is the slave. The master determines the hopping sequence (see section 5). The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection (e.g. single or multi-slot packet) is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing is according to the packet type of the connection. Also, the slave of the connection uses these settings. Repeating a packet has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means, a repeated packet will not be send on the

same frequency, it is send on the next frequency of the hopping sequence.

7. Dwell Time in Data Mode

The dwell time of 0.3797s within a 30 seconds period in data mode is independent from the packet type (packet length). The calculation for a 30 seconds period is as follows:

Dwell time = time slot length * hop rate / number of hopping channels *30s

Example for a DH1 packet (with a maximum length of one time slot)
Dwell time = 625 IJs * 1600 1/s /79 * 30s = 0.3797s (in a 30s period)

For multi-slot packet the hopping is reduced according to the length of the packet.

Example for a DH5 packet (with a maximum length of five time slots)

Dwell time = 5 * 625 µs * 1600 * 1/5 *1/s / 79 * 30s = 0.3797s (in a 30s period)

This is according the Bluetooth Core Specification V 1.1 for all Bluetooth devices. Therefore, all Bluetooth devices comply with the FCC dwell time requirement in the data mode. This was checked during the Bluetooth Qualification tests. The Dwell time in hybrid mode is approximately 2.6ms (in a 12.8s period).

8. Channel Separation in Hybrid Mode

The nominal channel spacing of the Bluetooth system is 1 MHz independent of the operating mode. The maximum "initial carrier frequency tolerance" which is allowed for Bluetooth is center = 75 kHz.

This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/07-E) for three frequencies (2402MHz, 2441MHz, 2480 MHz).

9. Derivation and Examples for a Hopping Sequence in Hybrid Mode

For the generation of the inquiry and page hop sequences the same procedures as described for the data mode are used (see section 5), but this time with different input vectors:

- For the inquiry hop sequence, a predefined fixed address is always used. This result in the same 32 frequencies used by all devices doing an inquiry but every time with a different start frequency and phase in this sequence.
- For the page hop sequence, the device address of the paged unit is used as the input vector. This results in the use of a subset of 32 frequencies, which is specific for that initial state of the connection establishment between the two units. A page to different devices would result in a different subset of 32 frequencies.

31

So it is ensured that also in hybrid mode, the frequency is used equally on average.

Example of a hopping sequence in inquiry mode:

48, 50, 09, 13, 52, 54, 41, 45, 56, 58, 11, 15, 60, 62, 43, 47,00, 02, 64, 68, 04, 06, 16, 17, 21,08, 10, 66,70, 12, 14,19, 23

Example of a hopping sequence in paging mode:

08, 57, 68, 70, 51, 02, 42, 40, 04, 61, 44, 46, 63, 14, 50, 48, 16, 65, 52, 54, 67, 18, 58, 56, 20, 53, 60, 62, 55, 06, 66, 64

10. Receiver Input Bandwidth and Synchronization in Hybrid Mode

The receiver input bandwidth is the same as in the data mode (1 MHz). When two Bluetooth devices establish contact for the first time, one device sends an inquiry access code and the other device is scanning for this inquiry access code. If two devices have been connected previously and want to start a new transmission, a similar procedure takes place. The only difference is, instead of the inquiry access code, a special access code, derived from the BD-ADDRESS of the paged device will be, will be sent by the master of this connection. Due to the fact that both units have been connected before (in the inquiry procedure) the paging unit has timing and frequency information about the page scan of the paged unit. For this reason the time to establish the connection is reduced.

11. Spread Rate I Data Rate of the Direct Sequence Signal

The spread rate / data rate in inquiry and paging mode can be defined via the access code. The access code is the only criterion for the system to check if there is a valid transmission or not. If you regard the presence of a valid access code as one bit of information, and compare it with the length of the access code of 68 bits, the spread rate / data rate will be 68/1.

12. Spurious Emission in Hybrid Mode

The dwell in hybrid mode is shorter than in data mode. For this reason the spurious emissions average level in data mode is worst case. The spurious emissions peak level is the same for both modes.

ϵ **Marking and European Economic Area (EEA)**

Hereby, the manufacturer (that is mentioned on the label that is pasted onto the equipment), declares that this ruggedized Bluetooth and wireless PDA is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

RLAN's (2.4GHz) for use through the EEA have the following restrictions:
1) France, restriction for indoor and outdoor use in a number of the following:

a) Indoor usage restricted to maximum RF output power of 100mW EIRP across the frequency range of 2.4GHz to 2.4835GHz.
b) Outdoor usage restricted to maximum RF output power of 100mW EIRP across the frequency range of 2.4GHz to 2.454GHz.
c) Outdoor usage restricted to maximum RF output of 10mW EIRP across the frequency range of 2.454GHz to 2.483GHz.

2) Belgium frequency range is restricted to 2.460GHz to 2.4835GHz.
3) Italy requires a user license for outside usage.

This product complies with the following:
    a) European Union CE requirements,
    b) America and Canadian C-UL-US safety requirements,
    c) Australian C-tick requirements,
    d) Singapore iDA requirements.

Battery Caution

Caution: Danger of explosion if battery is incorrectly replaced. Replace only with the same type recommended by the manufacturer. Discard used batteries according to the manufacturer's instruction.

Service Information

Refer to www.olympus-ost.com to get more information.