dynabook

User's Manual

dynaEdge DE200

Series

Table of Contents

Chapter 1 **Legal, Regulatory, and Safety**

Copyright, Disclaimer and Trademarks 1-1
Regulatory Information 1-2
Video Standard Notice 1-9
OpenSSL Toolkit License Issues 1-9
FreeType License Issues 1-12
Disposing of the computer and the computer's batteries 1-15
General Precautions 1-15
Safety Icons 1-18

Chapter 2 **Getting Started**

Equipment checklist 2-1
Conventions 2-2
Using your computer for the first time 2-2
Getting to know Windows 2-6
Turning off the power 2-8
System Recovery 2-12

Chapter 3 **The Grand Tour**

Grand Tour 3-1
Internal Hardware Components 3-5
Power Condition Descriptions 3-6

Chapter 4 **Operating Basics**

Using the Control buttons 4-1
Using the Fingerprint Sensor 4-1
Battery 4-3
Wireless WAN device 4-9
GPS Function 4-10
USB Type-C™ Adapters 4-11
Wireless display 4-16
Security lock 4-16
Optional Accessories 4-17
Sound System and Video mode 4-17

Chapter 5 **Utilities and Advanced Usage**

Utilities and Applications 5-1
Special features 5-5

Chapter 6 **Troubleshooting**

Problem-solving process 6-1
Hardware and system checklist 6-4
Technical support 6-12

Chapter 7 **Appendix**

Specifications 7-1
AC Power Cord and Connectors 7-2
Information for Wireless Devices 7-3
Information about Intel® Authenticate 7-14
Accessibility 7-14
Ease of Access for Dynabook notebook 7-15
Legal Footnotes 7-17
Glossary 7-20

Index

Chapter 1

Legal, Regulatory, and Safety

This chapter states the legal, regulatory, and safety information applicable to your computer.

Copyright, Disclaimer and Trademarks

Copyright

© 2021 Dynabook Inc. All Rights Reserved. Under the copyright laws, this manual cannot be reproduced in any form without the prior written permission of Dynabook Inc. No patent liability is assumed, with respect to the use of the information contained herein.

First edition July 2021

Copyright authority for music, movies, computer programs, databases and other intellectual property covered by copyright laws belongs to the author or to the copyright owner. Copyrighted material can be reproduced only for personal use or use within the home. Any other use beyond that stipulated above (including conversion to digital format, alteration, transfer of copied material and distribution on a network) without the permission of the copyright owner is a violation of copyright or author's rights and is subject to civil damages or criminal action. Comply with copyright laws in making any reproduction from this manual.

Disclaimer

This manual has been validated and reviewed for accuracy. The instructions and descriptions it contains are accurate for your computer at the time of this manual’s production. However, succeeding computers and manuals are subject to change without notice. Dynabook Inc. assumes no liability for damages incurred directly or indirectly from errors, omissions or discrepancies between the computer and the manual.

Any references in this Guide to “Dynabook” shall mean Dynabook Inc. and/or its affiliates.

Trademarks

Intel, Intel logo, Thunderbolt, Thunderbolt logo are trademarks of Intel Corporation or its subsidiaries in the United States and/or other countries.

Microsoft, Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

The Bluetooth® word mark is a registered trademark owned by Bluetooth SIG, Inc.

The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.

Wi-Fi is a registered trademark of Wi-Fi Alliance.

USB Type-C™ and USB-C™ are trademarks of USB Implementers Forum.

All other company names, product names, and service names mentioned herein may be trademarks of their respective companies.

Regulatory Information

The regulatory information herein might vary. Check the ID information on the bottom of the device or box for specific information applicable to the model you purchased.

FCC information

This device complies with FCC RF exposure requirements

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, 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, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Only peripherals complying with the FCC class B limits can be attached to this equipment. Operation with non-compliant peripherals or peripherals not recommended by Dynabook is likely to result in interference to radio and TV reception. Shielded cables must be used between the external devices and the computer's Universal Serial Bus (USB 3.2 Gen1) port and USB Type-C™ port. Changes or modifications made to this equipment, not expressly approved by Dynabook or parties authorized by Dynabook could void the user's authority to operate the equipment.

FCC conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Contact

Address:	Dynabook Americas, Inc. 5241 California Avenue, Suite 100 Irvine, California, USA, 92617
Telephone:	(949) 583-3000

This information is only applicable for the countries/regions where it is required.

California Prop 65 Warning

This product contains chemicals, including lead, known to the State of California to cause cancer and birth defects or other reproductive harm. ***Wash hands after handling.***

For the state of California only.

Export Administration Regulation

This document contains technical data that may be controlled under the U.S. Export Administration Regulations, and may be subject to the approval of the U.S. Department of Commerce prior to export. Any export, directly or indirectly, in contravention of the U.S. Export Administration Regulations is prohibited.

EU Declaration of Conformity

This product is carrying the CE mark in accordance with the related European Directives. Responsible for CE marking is Dynabook Europe GmbH, Stresemannallee 4b, 41460 Neuss, Germany. The complete and official EU Declaration of Conformity can be found on the web site https://emea.dynabook.com/product-conformity.

CE compliance

Hereby, Dynabook Europe GmbH declares that the model(s) described in this manual is/are in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address: https://emea.dynabook.com/product-conformity.

This product is labeled with the CE mark in accordance with the essential requirements and other relevant provisions of the applicable European Directives, notably Radio Equipment Directive (2014/53/EU), RoHS Directive 2011/65/EU, Ecodesign Directive 2009/125/EC (ErP) and the related implementing measures.

This product and the original accessories are designed to observe the applicable EMC (Electromagnetic Compatibility) standards. However, Dynabook cannot guarantee that this product still observes these EMC standards if accessories or cables not produced by Dynabook are connected or implemented. In this case the persons who have connected/implemented those accessories/cables have to provide assurance that the system (PC plus options/cables) still fulfils the required standards. To avoid in general EMC problems, the following guidance should be noted:

- Only CE marked accessories should be connected/implemented
- Only best shielded cables should be connected

Working environment

This product was designed to fulfil the EMC (Electromagnetic Compatibility) requirements to be observed for so-called “Residential, commercial and light industry environments”. Dynabook do not recommend the use of this product in working environments other than the above listed working environment.

For example, the following environments are not verified:

- Industrial Environments (e.g. environments where a mains voltage of 380 V three-phase is used)
- Medical Environments (according to Medical Device Directive)
- Automotive Environments
- Aircraft Environments

Any consequences resulting from the use of this product in working environments that are not verified/recommended are not the responsibility of Dynabook.

The consequences of the use of this product in non-verified working environments may be:

- Interference with other devices or machines in the near surrounding area.
- Malfunction of, or data loss from, this product caused by disturbances generated by other devices or machines in the near surrounding area.

Therefore Dynabook strongly recommend that the electromagnetic compatibility of this product should be suitably tested in all non-verified working environments before use. In the case of vehicles or aircraft, the manufacturer or airline operator respectively should be asked for permission before use of this product.

Furthermore, for general safety reasons, the use of this product in environments with explosive atmospheres is not permitted.

VCCI Class B Information (Japan Only)

この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをしてください。

VCCI－B

Canadian regulatory information (Canada only)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulation of the Canadian Department of Communications.

Note that Canadian Department of Communications (DOC) regulations provide, that changes or modifications not expressly approved by Dynabook could void your authority to operate this equipment.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Canadian Notice

This device complies with ISED (formerly Industry Canada) license-exempt RSS standard(s).

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

- *To comply with the Canadian RF exposure compliance requirements, this device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.*

  Pour être conforme aux exigences canadiennes en matière d'exposition aux fréquences radio, l'appareil et son antenne ne doivent pas être situés au même endroit qu'une autre antenne ou un autre émetteur ni fonctionner en même temps.
- *This device is restricted to indoor use due to its operation in the 5.15 GHz to 5.25 GHz frequency range. FCC requires this product to be used indoors for frequency range 5.15 GHz to 5.25 GHz to reduce the potential for harmful interference to co-channel Mobile Satellite systems.*

  High power radars are allocated as primary users of the 5.25 GHz to 5.35 GHz and 5.65 GHz to 5.85 GHz bands. These radar stations can cause interference with and/or damage this device.

  Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

  Veuillez noter que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

The above caution applies to products that operate with an 802.11a radio device.

La mise en garde ci-dessus ne s'applique qu'aux appareils ayant un transmetteur opérant en mode 802.11 a.

Following information is only valid for EU-member States:

Information requirements Regulation EC 1275/2008

Additional information as required by Regulation (EC) 1275/2008 amended by Regulation (EU) 801/2013 implementing European Eco-Design Directive with regard to requirements for standby, off mode and networked standby electric power consumption of electrical and electronic household and office equipment can be found here: http://emea.dynabook.com/environment.

Disposal of products

The crossed out wheeled dust bin symbol indicates that products must be collected and disposed of separately from household waste. Integrated batteries and accumulators can be disposed of with the product. They will be separated at the recycling centres.

The black bar indicates that the product was placed on the market after August 13, 2005.

By participating in the separate collection of products and batteries, you will help to assure the proper disposal of products and batteries and thus help to prevent potential negative consequences for the environment and human health.

For more detailed information about the collection and recycling programmes available in your country, please visit our website http://emea.dynabook.com/environment or contact your local council office or the retail outlet where you purchased the product.

Disposal of batteries and/or accumulators

Pb, Hg, Cd

The crossed out wheeled dust bin symbol indicates that batteries and/or accumulators must be collected and disposed of separately from household waste.

If the battery or accumulator contains more than the specified values of lead (Pb), mercury (Hg), and/or cadmium (Cd) defined in the European Battery Directive, then the chemical symbols for lead (Pb), mercury (Hg) and/or cadmium (Cd) will appear below the crossed out wheeled dust bin symbol.

By participating in the separate collection of batteries, you will help to assure the proper disposal of products and batteries and thus help to prevent potential negative consequences for the environment and human health. To achieve this you should take any battery and/or accumulator to your local recycling site, or to a retail outlet or facility that offers to collect these devices for environmentally friendly disposal, ensuring that the terminal contacts are covered by non-conductive tape.

For more detailed information about the collection and recycling programmes available in your country, please visit our website http://emea.dynabook.com/environment or contact your local council office or the retail outlet where you purchased the product.

These symbols might not stick depending on the country and region where you purchased.

REACH - Compliance Statement

The European Union (EU) chemical regulation, REACH (Registration, Evaluation, Authorization and Restriction of Chemicals), entered into force on 1 June 2007, with phased deadlines to 2018.

Dynabook will meet all REACH requirements and is committed to provide our customers with information about the presence in our articles of substances included on the candidate list according to REACH regulation.

Please consult the following website http://emea.dynabook.com/environment for information about the presence in our articles of substances included on the candidate list according to REACH in a concentration above 0.1 % weight by weight.

Following information is only for Turkey:

- Disposal of products:

  The crossed wheelie bin symbol means that this product should not be collected and disposed with other household wastes. When product become waste at the end-of-life, to protect environment and human health, it should be given to nearest collection recycling or disposal center. For more information about collection and recycling programs in your country please contact your local authority or the retailer where the product was purchased.

- Dynabook meets all requirements of Turkish regulation 28300 “Restriction of the use of certain hazardous substances in electrical and electronic equipment”.

  AEEE Yönetmeliğine Uygundur

  Dynabook 28300 sayılı Türkiye "Elektrikle çalışan ve elektronik ekipmanda belirli tehlikeli maddelerin kullanımıyla ilgili kısıtlama” yönetmeliği gereklerini tamamen yerine getirmektedir.
- The number of possible pixel failures of your display is defined according to ISO 9241-307 standards. If the number of pixel failures is less than this standard, they will not be counted as defect or failure.
- Battery is a consumption product, since the battery time depends on the usage of your computer. If the battery can not be charged at all, then it is a defect or failure. The changes in battery time is not a defect or failure.

Following information is only for India:

The use of this symbol indicates that this product may not be treated as household waste.

By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

For more detailed information about recycling of this product, please visit our website https://asia.dynabook.com or contact call center (1800-200-6768).

These symbols might not stick depending on the country and region where you purchased.

Video Standard Notice

THIS PRODUCT IS LICENSED UNDER THE AVC, THE VC-1 AND MPEG-4 VISUAL PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER FOR (I) ENCODING VIDEO IN COMPLIANCE WITH THE ABOVE STANDARDS ("VIDEO") AND/OR (II) DECODING AVC, VC-1 AND MPEG-4 VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NONCOMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED BY MPEG LA TO PROVIDE SUCH VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION INCLUDING THAT RELATING TO PROMOTIONAL, INTERNAL AND COMMERCIAL USES AND LICENSING MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE http://www.mpegla.com.

OpenSSL Toolkit License Issues

LICENSE ISSUES

==========

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact openssl-core@openssl.org

OpenSSL License

/*==========

Copyright (c) 1998-2019 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgment:

   "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit."

   http://www.openssl.org.
4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact openssl-core@openssl.org.
5. Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project.
6. Redistributions of any form whatsoever must retain the following acknowledgment:

   "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit"

   [http://www.openssl.org].

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

==========

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

*/

Original SSLeay License

/* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)

All rights reserved.

This package is an SSL implementation written by Eric Young (eay@cryptsoft.com).

The implementation was written so as to conform with Netscapes SSL.

This library is free for commercial and non-commercial use as long as the following conditions are adhered to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed.

If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used.

This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

   "This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)"

   The word 'cryptographic' can be left out if the routines from the library being used are not cryptographic related :-).
4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement:

   "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER

CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The licence and distribution terms for any publically available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution licence [including the GNU Public Licence.]

*/

FreeType License Issues

The FreeType Project LICENSE

2006-Jan-27

Copyright 1996-2002, 2006 by

David Turner, Robert Wilhelm, and Werner Lemberg

Introduction

==========

The FreeType Project is distributed in several archive packages; some of them may contain, in addition to the FreeType font engine, various tools and contributions which rely on, or relate to, the FreeType Project.

This license applies to all files found in such packages, and which do not fall under their own explicit license. The license affects thus the FreeType font engine, the test programs, documentation and makefiles, at the very least.

This license was inspired by the BSD, Artistic, and IJG (Independent JPEG Group) licenses, which all encourage inclusion and use of free software in commercial and freeware products alike. As a consequence, its main points are that:

- We don't promise that this software works. However, we will be interested in any kind of bug reports. (`as is' distribution)
- You can use this software for whatever you want, in parts or full form, without having to pay us. (`royalty-free' usage)
- You may not pretend that you wrote this software. If you use it, or only parts of it, in a program, you must acknowledge somewhere in your documentation that you have used the FreeType code. (`credits')

We specifically permit and encourage the inclusion of this software, with or without modifications, in commercial products.

We disclaim all warranties covering The FreeType Project and assume no liability related to The FreeType Project.

Finally, many people asked us for a preferred form for a credit/disclaimer to use in compliance with this license. We thus encourage you to use the following text:

"""

Portions of this software are copyright (C) <year> The FreeType Project

www.freetype.org.

All rights reserved.

"""

Please replace <year> with the value from the FreeType version you actually use.

Legal Terms

==========

0. Definitions

Throughout this license, the terms `package', `FreeType Project', and `FreeType archive' refer to the set of files originally distributed by the authors (David Turner, Robert Wilhelm, and Werner Lemberg) as the `FreeType Project', be they named as alpha, beta or final release.

`You' refers to the licensee, or person using the project, where `using' is a generic term including compiling the project's source code as well as linking it to form a `program' or `executable'. This program is referred to as `a program using the FreeType engine'.

This license applies to all files distributed in the original FreeType Project, including all source code, binaries and documentation, unless otherwise stated in the file in its original, unmodified form as distributed in the original archive. If you are unsure whether or not a particular file is covered by this license, you must contact us to verify this.

The FreeType Project is copyright (C) 1996-2000 by David Turner, Robert Wilhelm, and Werner Lemberg. All rights reserved except as specified below.

1. No Warranty

THE FREETYPE PROJECT IS PROVIDED `AS IS' WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL ANY OF THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY DAMAGES CAUSED BY THE USE OR THE INABILITY TO USE, OF THE FREETYPE PROJECT.

2. Redistribution

This license grants a worldwide, royalty-free, perpetual and irrevocable right and license to use, execute, perform, compile, display, copy, create derivative works of, distribute and sublicense the FreeType Project (in both source and object code forms) and derivative works thereof for any purpose; and to authorize others to exercise some or all of the rights granted herein, subject to the following conditions:

- Redistribution of source code must retain this license file (`FTL.TXT') unaltered; any additions, deletions or changes to the original files must be clearly indicated in accompanying documentation. The copyright notices of the unaltered, original files must be preserved in all copies of source files.
- Redistribution in binary form must provide a disclaimer that states that the software is based in part of the work of the FreeType Team, in the distribution documentation. We also encourage you to put an URL to the FreeType web page in your documentation, though this isn't mandatory.

These conditions apply to any software derived from or based on the FreeType Project, not just the unmodified files. If you use our work, you must acknowledge us. However, no fee need be paid to us.

3. Advertising

Neither the FreeType authors and contributors nor you shall use the name of the other for commercial, advertising, or promotional purposes without specific prior written permission.

We suggest, but do not require, that you use one or more of the following phrases to refer to this software in your documentation or advertising materials: `FreeType Project', `FreeType Engine', `FreeType library', or `FreeType Distribution'.

As you have not signed this license, you are not required to accept it. However, as the FreeType Project is copyrighted material, only this license, or another one contracted with the authors, grants you the right to use, distribute, and modify it. Therefore, by using, distributing, or modifying the FreeType Project, you indicate that you understand and accept all the terms of this license.

4. Contacts

There are two mailing lists related to FreeType:

- freetype@nongnu.org

  Discusses general use and applications of FreeType, as well as future and wanted additions to the library and distribution. If you are looking for support, start in this list if you haven't found anything to help you in the documentation.

- freetype-devel@nongnu.org

  Discusses bugs, as well as engine internals, design issues, specific licenses, porting, etc.

Our home page can be found at http://www.freetype.org

Disposing of the computer and the computer's batteries

- Discard this computer in accordance with applicable laws and regulations. For further information, contact your local government.
- This computer contains rechargeable batteries. After repeated use, the batteries will finally lose their ability to hold a charge and you need to replace them. Under certain applicable laws and regulation, it might be illegal to dispose of old batteries by placing them in the trash.
- Please be kind to our shared environment. Check with your local government authority for details regarding where to recycle old batteries or how to dispose of them properly.

Dynabook is strongly committed to reducing electronic waste. For the efficient use of resources and appropriate treatment of hazardous substances, local, state and federal regulations must be adhered to when recycling your electronic device. To learn about Dynabook's sustainability commitment, visit:
http://us.dynabook.com/company/corporate-social-responsibility/sustainability

General Precautions

Your computer is designed to optimize safety, minimize strain and withstand the rigors of portability. However, certain precautions should be observed to further reduce the risk of personal injury or damage to the computer.

Be certain to read the following general precautions and to note the cautions included in the text of the manual.

Provide adequate ventilation

Always make sure that your computer and AC adaptor have adequate ventilation and are protected from overheating when the power is turned on or when an AC adaptor is connected to a power outlet (even if your computer is in Sleep Mode). In this condition, observe the following:

- Never cover your computer or AC adaptor with any object.
- Never place your computer or AC adaptor near a heat source, such as an electric blanket or heater.
- Never cover or block the air vents including those at the base of the computer.
- Always provide sufficient space around the computer.

Overheating your computer or AC adaptor could cause system failure, computer or AC adaptor damage or a fire, possibly resulting in serious injury.

Creating a computer-friendly environment

Place the computer on a flat surface that is large enough for the computer and any other items you are using, such as a printer.

Leave enough space around the computer and other equipment to provide adequate ventilation. Otherwise, they might overheat.

To keep your computer in prime operating condition, protect your work area from:

- Dust, moisture, and direct sunlight.
- Equipment that generates a strong electromagnetic field, such as stereo speakers (other than speakers that are connected to the computer) or speakerphones.
- Rapid changes in temperature or humidity and sources of temperature change such as air conditioner vents or heaters.
- Extreme heat, cold, or humidity.
- Liquids and corrosive chemicals.

Stress injury

Carefully read the **Instruction Manual for Safety and Comfort**. It contains information on the prevention of stress injuries to your hands and wrists that can be caused by extensive keyboard use. It also includes information on work space design, posture, and lighting that can help reduce physical stress.

Heat injury

- Avoid prolonged physical contact with the computer. If the computer is used for long periods, its surface can become very warm. While the temperature will not feel hot to the touch, if you maintain physical contact with the computer for a long time, for example if you rest the computer on your lap or if you keep your hands on the palm rest, your skin might suffer a low-heat injury.
- If the computer has been used for a long time, avoid direct contact with the metal plate supporting the various interface ports as this can become hot.
- The surface of the AC adaptor can become hot when in use, but this condition does not indicate a malfunction. If you need to transport the AC adaptor, disconnect it and let it cool before moving it.
- Do not lay the AC adaptor on a material that is sensitive to heat as the material could become damaged.

Pressure or impact damage

Do not apply heavy pressure to the computer or subject it to any form of strong impact as this can damage the computer's components or otherwise cause it to malfunction.

Cleaning the computer

To help ensure long, trouble-free operation, keep the computer free of dust and dirt, and use care with all liquids around it.

- Be careful not to spill liquids into the computer. If the computer does get wet, turn the power off immediately and let the computer dry completely. In these circumstances, you should get the computer inspected by an authorized service provider in order to assess the scope of any damage.
- Clean the plastics of the computer using a cloth slightly dampened with water.

Never spray cleaner directly onto the computer or let liquid run into any part of it. Never use harsh or caustic chemical products to clean the computer.

Moving the computer

While the computer is designed for flexible day-to-day usage, you should exercise a few simple precautions when moving it in order to help ensure trouble-free operation.

- Make sure all disk/disc activity has ended before moving the computer.
- Do not expose the computer to rapid temperature changes (for example, in a situation where you carry the computer from a cold environment to a warm room). Do not turn on the power until condensation disappears.
- Be careful not to subject the computer to impact or shock. A failure to follow this instruction could result in damage to computer, computer failure, or loss of data.
- Always use a suitable carry case when transporting the computer.
- When carrying your computer, be sure to hold it securely so that it does not fall or hit anything.
- Do not carry your computer by holding any of its protruding elements.

Mobile phones

Be aware that the use of mobile phones can interfere with the audio system. The operation of the computer will not be impaired in any way, but it is recommended that a minimum distance of 30 cm is maintained between the computer and a mobile phone that is in use.

Instruction Manual for Safety and Comfort

All important information on the safe and proper use of this computer is described in the enclosed Instruction Manual for Safety and Comfort. Be sure to read it before using the computer.

Safety Icons

Safety icons are used in this manual to bring important information to your attention. Each type of message is identified as follows.

Indicates a potentially hazardous situation, which could result in death or serious injury, if you do not follow instructions.

A caution informs you that improper use of equipment or failure to follow instructions might cause data loss, equipment damage, or might result in minor or moderate injury.

Please read. A note is a hint or advice that helps you make best use of your equipment.

Chapter 2

Getting Started

This chapter provides an equipment checklist, and basic information to start using your computer.

If you use an operating system that was not pre-installed by Dynabook, some of the features described in this manual might not function properly.

You might not have all the software mentioned in this manual depending on the model you purchased.

To start using this device as a Windows computer, connect the following items:

- *a monitor*
- *a keyboard*
- *a mouse*

A USB-C™ to HDMI™/VGA Travel Adapter is recommended for the connections.

Refer to the Using your computer for the first time section for more information.

This manual introduces the computer which is under these connections.

Equipment checklist

Carefully unpack your computer, taking care to save the box and packaging materials for future use.

Hardware

Check to make sure that you have all the following items:

- Portable Personal Computer
- USB-C™ to HDMI™/VGA Travel Adapter
  (provided with some models)
- AC adaptor and power cord (2-pin plug or 3-pin plug)

Documentation

- User Information Guide or Quickstart

- Warranty Information

If any of the items are missing or damaged, contact your dealer immediately.

Conventions

This manual uses the following formats to describe, identify, and highlight terms and operating procedures.

Click	■ Left-click the connected mouse once.
Right-click	■ Right-click the connected mouse once.
Double-click	■ Left-click the connected mouse twice.
Start	The word "Start" refers to the " ⊞ " button in the lower-left corner of the screen on the connected monitor.

Using your computer for the first time

Be sure to read the enclosed Instruction Manual for Safety and Comfort for information on the safe and proper use of this computer. It is intended to help you be more comfortable and productive while using a notebook computer. By following the recommendations in it, you can reduce your chance of developing a painful or disabling injury to your hand, arms, shoulders, or neck.

This section provides basic information to start using your computer. It covers the following topics:

- Connecting the AC adaptor
- Connecting the USB-C™ Adapter and other peripherals (monitor/keyboard/mouse)
- Turning on the power
- Initial setup
- Getting to know Windows

- *Use a virus-check program and make sure that it is updated regularly.*
- *Never format storage media without checking its content - formatting destroys all stored data.*
- *It is a good idea to back up the internal Solid-State Drive or other main storage device to external media periodically. General storage media is not durable or stable over long periods of time and under certain conditions might result in data loss.*
- *Before you install a device or application, save any data in memory to the internal Solid-State Drive or other storage media. Failure to do so might result in data loss.*

Connecting the AC adaptor

Attach the AC adaptor when you want to charge the battery or operate from AC power. The battery pack must be charged before you can operate from battery power.

The AC adaptor can automatically adjust to any voltage ranging from 100 volts to 240 volts and to a frequency of either 50 hertz or 60 hertz, enabling you to use this computer in almost any country/region. The adaptor converts AC power to DC power and reduces the voltage supplied to this computer.

- *Always use the AC adaptor that was included with your computer, or use AC adaptors specified by Dynabook to avoid any risk of fire or other damage to the computer. Use of an incompatible AC adaptor might cause fire or damage to the computer, possibly resulting in serious injury. Dynabook assumes no liability for any damage caused by use of an incompatible adaptor.*
- *Never plug the AC adaptor into a power source that does not correspond to both the voltage range and the frequency specified on the regulatory label of the unit. Failure to do so might result in a fire or electric shock, possibly resulting in serious injury.*
- *Always use or purchase power cables that comply with the legal voltage and frequency specifications and requirements in the country of use. Failure to do so might result in a fire or electric shock, possibly resulting in serious injury.*
- *The supplied power cord conforms to safety rules and regulations in the region the computer is bought and should not be used outside this region. For use in other regions, buy power cords that conform to safety rules and regulations in the particular region.*
- *Do not use a 3-pin to 2-pin conversion plug.*
- *When you connect the AC adaptor to the computer, always follow the steps in the exact order as described in this User's Manual. As a general safety precaution, avoid touching any metal parts.*
- *Never place your computer or AC adaptor on a wooden surface, furniture, or any other surface that might be marred by exposure to heat since the computer base and the surface of the AC adaptor increase in temperature during normal use.*
- *Always place your computer or AC adaptor on a flat and hard surface that is resistant to heat damage.*

Refer to the enclosed Instruction Manual for Safety and Comfort for detailed precautions and handling instructions.

1. Connect the power cord to the AC adaptor.

Figure 2-1 Connecting the power cord to the AC adaptor (2-pin plug)

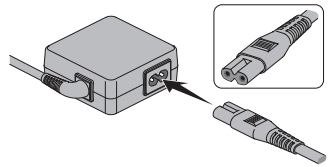
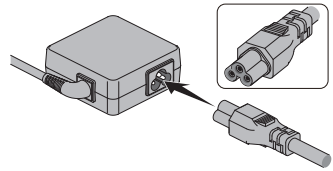


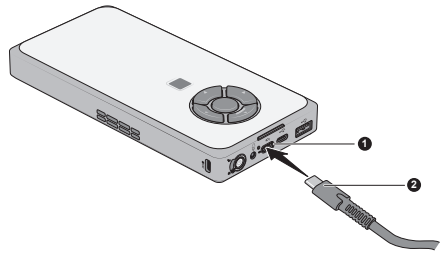
Figure 2-2 Connecting the power cord to the AC adaptor (3-pin plug)



Either a 2-pin or 3-pin adaptor/cord is included with the computer depending on the model.

2. Connect the DC output plug of the AC adaptor to the USB Type-C™ port (for charging only) on your computer.

Figure 2-3 Connecting the DC output plug to the computer



1. USB Type-C™ port (for charging only)
2. DC output plug

Product appearance depends on the model you purchased.

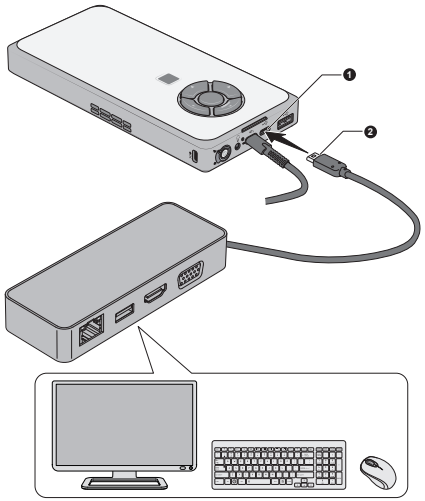
3. Plug the power cord into a live wall outlet. The **DC IN/Battery** indicator glows.

Connecting the USB-C™ Adapter and other peripherals

To start using this computer as a standard one:

1. Connect a USB-C™ to HDMI™/VGA Travel Adapter to the USB Type-C™ port on the computer.
2. Connect other peripherals such as a monitor/keyboard/mouse to the computer or via the USB-C™ to HDMI™/VGA Travel Adapter.

Figure 2-4 Connecting the USB-C™ Adapter and other peripherals



1. USB Type-C™ (USB3.2 Gen1) port 2. USB Type-C™ adapter plug

Product appearance depends on the model you purchased.

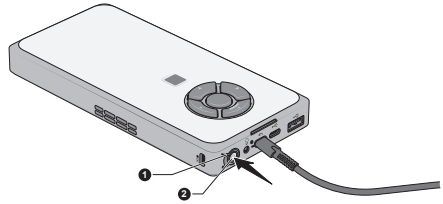
Turning on the power

This section describes how to turn on the power. The Power indicator indicates the status. Refer to the *Power Condition Descriptions* section for more information.

- *After you turn on the power for the first time, do not turn it off until you have set up the operating system.*
- *Volume cannot be adjusted during Windows Setup.*
- *The computer can not be powered on by pressing the power button if the battery power is completely exhausted. It is recommended to charge the battery pack by connecting the AC adaptor for 30 minutes before turning on the power.*

1. Make sure the power button switch is set to its unlocked (🔓) position.
2. Press the power button.

Figure 2-5 Turning on the power



1. Power button switch
2. Power button

Product appearance depends on the model you purchased.

Initial setup

The Windows Startup Screen is the first screen displayed when you turn on the power. To install the operating system properly, follow the on-screen instructions on each screen.

When it is displayed, be sure to read the license terms and license agreement carefully.

Getting to know Windows

For detailed information on what is new and how to operate Windows, refer to **Tips** in the Start menu.

Start menu

The Start menu is the launching pad for everything you can do in the Windows operating system, providing easy ways to access your apps, programs, websites and other important information.

You can access the Start menu from an app or the desktop in the following ways:

- Click the **Start** button ( ) in the lower-left corner of the connected screen.
- Press the Windows® logo key ( ) on your connected keyboard.

You can pin your favorite apps to the Start menu as tiles in grid-like pattern, and also group them. Tiles show you dynamic information from apps without having to open them.

Windows taskbar

By default, the bottom of the desktop is Windows taskbar. You can see all of your currently running apps on the Windows taskbar.

Task view

Task view ( ) is launched from the Windows taskbar at the bottom of the screen. Task view allows you to view the apps that are currently running. Also, you can create custom desktops so that running apps can be grouped for entertainment, productivity, or what you just want.

To do this, click the **Task view** icon , and then click **New desktop**. Open the apps you want to use on that desktop. To switch between desktops, click **Task view** again.

Search

Search on the Windows taskbar allows you to find apps, files, settings, and more on the computer. When internet connection is available, it also shows you the best search result from the internet.

The personal assistant called **Cortana** may be available, depending on your country/region. You can ask questions or talk to Cortana in your natural voice, and Cortana answers your questions using information from the internet. To talk with Cortana, an internal or external microphone is required.

Action Center

You can review important notifications from apps or Windows in Action Center, and take action without having to open apps. It also provides quick action buttons to access to most-used settings instantly. Select the Action Center icon on the Windows taskbar to view your notifications and quick actions.

Settings

Settings provides system settings including advanced settings in the Control Panel. They are divided in categories so that you can configure, optimize, or personalize Windows.

You can also type in the keyword, and use **Search** to find any setting.

To open Settings, click **Start -> (Settings)**.

You can pin it to the Start menu as a tile by right-clicking on **Settings** and selecting **Pin to Start**.

Windows Store

Although many apps are pre-installed in your computer, you can also download many others from the Windows Store.

You can search for and browse thousands of apps, all grouped into easy-to-find categories there.

Windows Hello

Windows Hello is a more personal and secure way to sign in to your Windows system, apps, and services using fingerprint recognition or a PIN.

To set up Windows Hello, click **Start -> ⚙ (Settings) -> Accounts -> Sign-in options**.

Under Sign-in options, you will see options for Fingerprint if your computer has fingerprint sensor that supports it. Once you have set up, you will be able to sign in with a quick touch.

You might need to add a PIN under **Windows Hello PIN** before you can set up **Windows Hello Fingerprint**.

Sign-in options

Windows offers a number of sign-in options including **Password (🔑)**, **PIN (⠿)**, **Fingerprint (🖐)** and **Picture password (🖼)** authentication to prevent from unauthorized access. If you have multiple sign-in methods set for a user account, you can select an option on the Windows login screen by clicking sign-in options.

Turning off the power

The power can be turned off in one of the following modes, either Shut Down Mode, Sleep Mode or Hibernation Mode.

Shut Down Mode

When you turn off the power in Shut Down Mode, no data will be saved and the computer will boot to the main screen of the operating system the next time it is turned on.

1. If you have entered data, either save it to the internal storage drive or to other storage media.
2. Make sure all disk/disc activity has stopped before removing the disk/disc.

- *If you turn off the power while a disk (disc) is being accessed, you might lose data or damage the disk.*
- *Never turn off the power while an application is running. Failure to do so can cause data loss.*
- *Never turn off the power, disconnect an external storage device, or remove storage media during data read/write. Failure to do so can cause data loss.*

3. Click **Start -> ⏻ (Power)** and then select **Shut down**.
4. Turn off any peripheral devices connected to your computer.

Do not turn the computer or peripheral devices back on immediately. Wait a short period to avoid any potential damage.

Restarting the computer

Certain conditions require that you restart the computer, for example if you change certain computer settings.

To restart the computer, there are several ways this can be achieved:

- Click **Start ->** ⏻ **(Power)** and then select **Restart**.
- Press **CTRL**, **ALT**, and **DEL** simultaneously (once) to display the menu window, and then select **Restart** by clicking the power icon (⏻) in the lower-right corner.

Before restarting the computer, be sure to save your data.

Sleep Mode

If you have to interrupt your work, you are able to turn off the power without exiting from your software by placing the computer into Sleep Mode. In this mode, data is maintained in the main memory of the computer. When you turn on the power again, you can continue working right where you left off.

When you have to turn off your computer aboard an aircraft or in places where electronic devices are regulated or controlled, always shut down the computer. This includes turning off any wireless communication functionalities, and canceling settings that reactivate the computer automatically, such as a timer recording function. Failure to shut down the computer in this way might allow the operating system to reactivate and run pre-programmed tasks or preserve unsaved data, which might interfere with aviation or other systems, possibly causing serious injury.

- *Before entering Sleep Mode, be sure to save your data.*
- *To avoid possible battery life decrease, it is recommended to remove any peripheral device connected to the computer before entering Sleep Mode.*
- *To prevent data loss, do not switch to Sleep Mode while transferring data to external media, such as USB devices, memory media, or other external memory devices.*

- *When the AC adaptor is connected, the computer will go into Sleep Mode according to the settings in the Power Options (to access it, click **Start -> Windows System -> Control Panel -> System and Security -> Power Options**.)*
- *If the computer enters Sleep Mode while a network application is active, the application might not be restored when the computer is next turned on and the system returns from Sleep Mode.*
- *To prevent the computer from automatically entering Sleep Mode, disable Sleep Mode within the Power Options.*

Benefits of Sleep Mode

The Sleep Mode feature provides the following benefits:

- Restores the previous working environment more rapidly than the Hibernation Mode feature.
- Saves power by shutting down the system when the computer receives no input or hardware access for the time period set by the System Sleep Mode feature.

Executing Sleep Mode

You can enter Sleep Mode in one of following ways:

- Click **Start ->** ⏻ **(Power)** and then select **Sleep**.
- Press the power button. Note that this feature must be enabled within the Power Options.

When you turn the power back on, you can continue where you left off when you shut down the computer.

If you are operating the computer on battery power, you can lengthen the overall operating time by turning it off into Hibernation Mode. Sleep Mode consumes more power while the computer is off.

Sleep Mode limitations

Sleep Mode will not function under the following condition:

- Memory circuits are exposed to static electricity or electrical noise.

Hibernation Mode

The Hibernation Mode feature saves the contents of memory to the internal storage drive when the computer is turned off so that, the next time it is turned on, the previous state is restored. Note that the Hibernation Mode feature does not save the status of any peripheral devices connected to the computer.

- *Save your data. While entering Hibernation Mode, the computer saves the contents of memory to the internal storage drive. However, for safety sake, it is best to save your data manually.*
- *Data will be lost if you disconnect the AC adaptor before saving is completed.*
- *To prevent data loss, do not switch to Hibernation Mode while transferring data to external media, such as USB devices, memory media, or other external memory devices.*

Benefits of Hibernation Mode

The Hibernation Mode feature provides the following benefits:

- Saves data to the internal storage drive when the computer automatically shuts down because of a low battery condition.
- You can return to your previous working environment immediately when you turn on the computer.
- Saves power by shutting down the system when the computer receives no input or hardware access for the time period set by the System Hibernate feature.

Starting Hibernation Mode

To enter Hibernation Mode, click **Start ->** ⏻ **(Power)** and then select **Hibernate**.

*To show **Hibernate** in Power menu, set up according to the following steps:*

1. *Click **Start -> Windows System -> Control Panel -> System and Security -> Power Options**.*
2. *Click **Choose what the power buttons do**.*
3. *Click **Change settings that are currently unavailable**.*
4. *Select the **Hibernate** check box from Shutdown settings.*
5. *Click the **Save changes** button.*

Automatic Hibernation Mode

The computer can be configured to enter Hibernation Mode automatically when you press the power button. To define these settings, do the following:

1. Click **Power Options** and then click **Choose what the power buttons do**.
2. Enable the desired Hibernation Mode settings for **When I press the power button**.
3. Click the **Save changes** button.

Data saving in Hibernation Mode

When you turn off the power in Hibernation Mode, the computer takes a moment to save the current data in memory to the internal storage drive.

After you turn off the computer, and the content of memory has been saved to the internal storage drive, turn off the power to any peripheral devices.

Do not turn the computer or devices back on immediately. Wait a moment to let all capacitors fully discharge.

System Recovery

There is a hidden partition allocated on the internal storage drive for the System Recovery Options in the event of a problem.

You can also create recovery media and restore the system.

The following items are described in this section:

- Creating Recovery Media
- Restoring the pre-installed software from your created Recovery Media
- Restoring the pre-installed software from the Recovery Partition

If you choose dynabook Maintenance Utility to erase the internal storage drive, all data including the operating system and recovery partition will be deleted. In that case, you cannot create recovery media or restore the pre-installed software from the recovery partition. Make sure that you have already created recovery media before you start dynabook Maintenance Utility. This recovery media can be used to restore your system after you have erased your internal storage drive.

Creating Recovery Media

This section describes how to create Recovery Media.

- *Be sure to connect the AC adaptor when you create Recovery Media.*
- *Be sure to close all other software programs.*
- *Do not run software such as screen savers which can put a heavy load on the CPU.*
- *Operate the computer at full power.*
- *Do not use power-saving features.*
- *Do not write to the media when the virus check software is running. Wait for it to finish, then disable virus detection programs including any software that checks files automatically in the background.*

- *Do not use utilities, including those intended to enhance internal storage drive access speed. They might cause unstable operation and damage data.*
- *Do not shut down/log off or Sleep/Hibernate while writing or rewriting the media.*
- *Set the computer on a level surface and avoid places subjected to vibrations such as airplanes, trains, or cars.*
- *Do not use on an unstable surface such as a stand.*

A recovery image of the software on your computer is stored on the internal storage drive, and can be copied to either disc media or USB Flash Memory by using the following steps:

1. Select either blank disc or USB Flash Memory.
   The application allows you to choose from a variety of different media onto which the recovery image can be copied including disc media and USB Flash Memory.

- *Some of the disc media might not be compatible with the optical disc drive connected to your computer. You should therefore verify that the optical disc drive supports the blank media you have chosen before proceeding.*
- *USB Flash Memory will be formatted and all the data in the USB Flash Memory will be lost when proceeding.*

2. Turn on your computer and allow it to load the Windows operating system from the internal storage drive as normal.
3. Insert the first blank disc into the external optical disc drive tray, or insert the USB Flash Memory into one available USB port.
4. Click **Start -> Windows System -> Control Panel -> System and Security -> Security and Maintenance -> Recovery -> Create a recovery drive**.
5. Follow the on-screen instructions to finish creating the Recovery Media.

dynabook Recovery Wizard *option in dynabook Maintenance Utility will not exist if you restore the computer from the recovery media you created by recovery drive creating option in Windows system.*

Restoring the pre-installed software from your created Recovery Media

If the pre-installed files are damaged, you are able to use the Recovery Media you have created to restore the computer to the state it was in when you originally received it. To perform this restoration, do the following:

- *Make sure that the AC adaptor is connected during the restoring process.*

- *When you reinstall the Windows operating system, the internal storage drive will be reformatted and all data will be lost.*
- *If your model has fingerprint function, before you reinstall the Windows operating system, delete the registered fingerprints. Otherwise, the same fingerprints cannot be registered after the reinstallation.*

1. Load the Recovery Media into the external optical disc drive or insert the recovery USB Flash Memory into one available USB port.
2. Click **Start ->** ⏻ **(Power)** and then select **Restart**.
3. Hold down the **F12** key and then release this key just after the computer is powered on.
4. Use the up and down cursor key to select the appropriate option from the menu according to your actual recovery media.
5. A menu is displayed from which you should follow the on-screen instructions.

If you have previously chosen to remove the recovery partition without creating Recovery Media, the Recovery Media cannot be created.

However, if you have already created a Recovery Media, you can use it to restore the recovery partition.

If you have not created Recovery Media, contact Technical support for assistance.

Restoring the pre-installed software from the Recovery Partition

A portion of the total internal storage drive space is configured as a hidden recovery partition. This partition stores files which can be used to restore pre-installed software in the event of a problem.

If you set up your internal storage drive again later, do not change, delete, or add partitions in a manner other than specified in the manual, otherwise you might find that space for the required software is not available.

In addition, if you use a third-party partitioning program to reconfigure the partitions on your internal storage drive, you might find that it becomes impossible to set up your computer.

- *Make sure that the AC adaptor is connected during the restoring process.*

- *When you reinstall the Windows operating system, the internal storage drive will be reformatted and all data will be lost.*
- *If your model has fingerprint function, before you reinstall the Windows operating system, delete the registered fingerprints. Otherwise, the same fingerprints cannot be registered after the reinstallation.*

1. Click **Start ->** ⏻ **(Power)** and then select **Restart**.
2. Hold down **0** (zero) key and then release this key just after the computer is powered on.
3. Select **Troubleshoot -> dynabook Maintenance Utility -> dynabook Recovery Wizard**.
4. Follow the on-screen instructions to finish the recovery.

Chapter 3

The Grand Tour

This chapter identifies the various components of the computer. It is recommended that you become familiar with each before you operate the computer.

Legal Footnote (Non-applicable Icons)

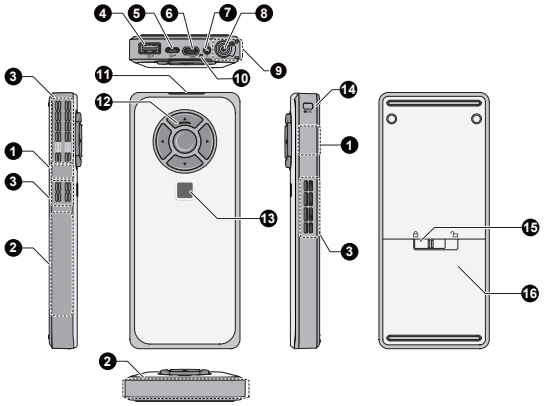
For more information regarding Non-applicable Icons, refer to the *Legal Footnotes* section.

Handle your computer carefully to avoid scratching or damaging the surface.

Grand Tour

The following figure shows essential components of the computer.

Figure 3-1 Grand tour of the computer



1. Wireless communication antennas (not shown)
2. Wireless communication antennas (Wireless WAN) (not shown)*
3. Cooling vents
4. Universal Serial Bus (USB 3.2 Gen1) port
5. USB Type-C™ (USB3.2 Gen1) port
6. USB Type-C™ port (for charging only)
7. Headphone/Microphone jack
8. Power button
9. Power button switch
10. DC IN/Battery indicator
11. Power indicator
12. Control buttons
13. Fingerprint Sensor*
14. Security lock slot
15. Battery lock
16. Battery pack

* Provided with some models.
Product appearance depends on the model you purchased.

Wireless communication antennas	Depending on the configuration of your computer, one of the following antennas are built-in: ■ Wireless LAN/Bluetooth® ■ Wireless WAN/Wireless LAN/Bluetooth®

Do not cover the wireless communication antennas area with any metal objects, otherwise the wireless function might not work.

Legal Footnote (Wireless LAN)

For more information regarding Wireless LAN, refer to the *Legal Footnotes* section.

Cooling vents	The cooling vents help the processor to avoid overheating.

Do not block the cooling vents. Keep foreign metal objects, such as screws, staples, and paper clips, out of the cooling vents. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

Carefully clean the dust on the surface of the cooling vents using a soft cloth.

Universal Serial Bus (USB 3.2 Gen1) port	One type-A Universal Serial Bus port, which complies to the USB 3.2 standard, is provided on the computer. The USB 3.2 port is compliant with USB 3.2 Gen1 standard and backward compatible with USB 2.0 devices.
USB Type-C™ (USB 3.2 Gen1) port	One USB Type-C™ port, which complies to the USB 3.2 Gen1 standard, is provided on the computer. This USB Type-C™ port supports USB 3.2 Gen1 (DC5V, 3A) with theoretical maximum transmission rate at 5Gbps. This port supports USB data transmission, Video output (audio stream can be included) and USB Power Delivery.

- *Note that it is not possible to confirm the operation of all functions of all USB devices that are available. Some functions associated with a specific device might not operate properly.*
- *Before removing a USB device from the USB port/USB Type-C™ port of your computer, click the **Safely Remove Hardware and Eject Media** icon on the Windows Taskbar, and then select the USB device that you want to remove.*

Keep foreign metal objects, such as screws, staples, and paper clips, out of the USB port/USB Type-C™ port. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.

	USB Type-C™ port (for charging only)	One USB Type-C™ port, which is designed for Power Delivery charging, is provided on the computer. Please note that this USB Type-C™ port is used for connecting an AC adaptor only. The AC adaptor connects to this port in order to power the computer and charge its internal battery pack. It is recommended to use the AC adaptor that was included with your computer, or use AC adaptors specified by Dynabook. Use of an incompatible AC adaptor might cause fire or damage to the computer possibly resulting in serious injury.
	Headphone/ Microphone jack	A 3.5 mm mini headphone/microphone jack enables connection of a monaural microphone, stereo headphones, or a headset.
	Power button	Press this button to turn the computer's power on or off.
	Power button switch	The power button switch allows you to set this button to its lock/unlock position.
	DC IN/Battery indicator	The **DC IN/Battery indicator** shows the condition of the DC IN and the battery charge status. White indicates that the battery is fully charged while the power is being correctly supplied from the AC power adaptor. Refer to the *Power Condition Descriptions* section for more information on this feature.
	Power indicator	The **Power indicator** normally glows blue when the computer is turned on.
	Control buttons	Press the arrow buttons to go up/down/left/right and press the round (ENTER) button to confirm the operation.
	Fingerprint Sensor	This sensor enables you to enroll and sign in with a fingerprint in Windows Hello. For more information, refer to the on-screen instructions in Windows Hello. Some models are equipped with a Fingerprint Sensor.

	Security lock slot	A security cable can be attached to this slot and then connected to a desk or other large object in order to deter theft of the computer.
	Battery lock	Slide the battery lock to release the battery pack ready for removal.
	Battery pack	The rechargeable lithium-ion battery pack provides power to the computer when the AC adaptor is not connected. For more detailed information on the use and operation of the battery pack, refer to the *Battery* section.

Legal Footnote (Battery Life)

For more information regarding Battery Life, refer to the *Legal Footnotes* section.

	SIM card slot	This slot allows you insert a SIM card which enables a high-speed access to the internet, corporate intranet and your email while you are away from office. Refer to the *Wireless WAN device* section for more information. Some models are equipped with the SIM card slot.

Internal Hardware Components

This section describes the internal hardware components of your computer.

The actual specifications might vary depending on the model you purchased.

CPU	The processor type varies depending on model. To check which type of processor is included in your model, click **Start -> dynabook PC Information**.

Legal Footnote (CPU)

For more information regarding CPU, refer to the *Legal Footnotes* section.

Internal Storage Drive	The capacity of the internal storage drive varies depending on the model. Note that part of the internal storage drive overall capacity is reserved as administration space.

- *Your computer is equipped with a "Solid-State Drive (SSD)". In this manual, the word "internal storage drive" refers to SSD unless otherwise stated.*
- *SSD is a large-capacity storage device which uses Solid-State Memory in place of a magnetic disk of the hard disk.*

Under certain unusual conditions of prolonged non-use and/or exposure to high temperatures, the SSD might be vulnerable to data retention errors.

Legal Footnote (Internal Storage Drive Capacity)

For more information regarding Internal Storage Drive Capacity, refer to the *Legal Footnotes* section.

Video RAM	The memory in the graphics adaptor of the computer, used to store the image displayed on a bitmap display. The amount of Video RAM available depends on the system memory of the computer.
Graphics Processing Unit	Graphics Processing Unit (GPU) performance might vary depending on product model, design configuration, applications, power management settings and features utilized. GPU performance is only optimized when operating in AC power mode and might decrease considerably when operating in battery power mode.

Legal Footnote (Graphics Processing Unit (GPU))

For more information regarding Graphics Processing Unit (GPU), refer to the *Legal Footnotes* section.

Power Condition Descriptions

The computer operating capability and battery charge status are affected by different power conditions, including whether an AC adaptor is connected and what the battery charge level is.

DC IN/Battery indicator

Check the **DC IN/Battery** indicator to determine the status of the battery pack and the power status with the AC adaptor connected. The following indicator conditions should be noted:

Flashing Amber	The battery charge is low. The AC adaptor must be connected to recharge the battery.

Amber	Indicates that the AC adaptor is connected and the battery is charging.
White	Indicates that the AC adaptor is connected and the battery is fully charged.
Flashing White	Indicates a problem with the computer. Disconnect the AC adaptor and remove the battery for several seconds, and then reinstall the battery and reconnect the AC adaptor. After that, press the power button. If it still does not operate properly, you should contact your reseller or dealer.
No light	Under any other conditions, the indicator does not light.

*If the battery pack becomes too hot while it is being charged, the charge stops and the **DC IN/Battery** indicator goes out. When the temperature of the battery pack falls to a normal range, charging will resume. This process occurs regardless of whether the computer's power is on or off.*

Power indicator

Check the **Power** indicator to determine the power status of the computer. The following indicator conditions should be noted:

Blue	Indicates that power is being supplied to the computer, and the computer is turned on.
No light	Under any other conditions, the indicator does not light.

Chapter 4

Operating Basics

This chapter describes the basic operations of your computer, and highlights the precautions that must be taken when using it.

Using the Control buttons

The Control buttons on the computer might support the following operations:

Arrow buttons	Press the up/down/left/right button to navigate within the connected screen. Up + down: press and hold these two buttons simultaneously for 5 seconds to lock/unlock the buttons.
Center button	Press this button to select the desired action. It acts like the **ENTER** key. Press and hold this button more than one second to acts like the **ESC** key.

Some of the Control buttons operations described in this section are only supported in certain applications.

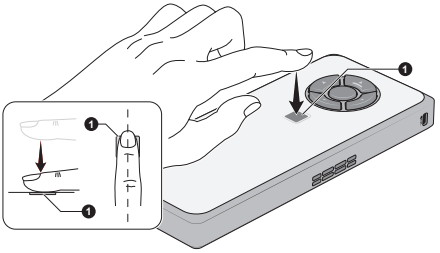
Using the Fingerprint Sensor

Some models are equipped with the fingerprint sensor for the purpose of enrolling and recognizing fingerprints. Lightly touch and rest your finger on the fingerprint sensor to recognize fingerprints. During enrollment, you might need to touch and lift your finger on the sensor repeatedly until setup is complete. Follow the on-screen instructions to finish the setup.

By enrolling the ID and password onto the fingerprint authentication feature, it is no longer necessary to input the password from the keyboard. Fingerprint feature enables you to:

- Sign-in to Windows
- Authentication of the User Password (and, if applicable, the HDD/SSD Password) when booting up the computer (Pre-Boot authentication).
- Single Sign-On feature

Figure 4-1 Using the Fingerprint Sensor



1. Fingerprint sensor

Product appearance depends on the model you purchased.

- *Fingerprint cannot be used in models that do not have a fingerprint function.*
- *Total fingerprints which can be registered are 10 pcs per account.*

Points to note about the Fingerprint Sensor

Be aware of the following considerations when using the fingerprint sensor. A failure to follow these guidelines might result in damage to the sensor, sensor failure, fingerprint recognition problems or a lower fingerprint recognition success rate.

- Do not scratch or poke the sensor with your nails or any hard or sharp objects.
- Do not press the sensor strongly.
- Do not touch the sensor with a wet finger or any wet objects. Keep the sensor surface dry and free from water vapor.
- Do not touch the sensor with a soiled or dirty finger as minute foreign particles of dust and dirt might scratch it.
- Do not paste stickers or write on the sensor.
- Do not touch the sensor with a finger or any other object which might have a build-up of static electricity on it.

Observe the following before you place your finger on the sensor whether for fingerprint enrollment/registration or recognition.

- Wash and dry your hands thoroughly.
- Remove static electricity from your fingers by touching any metal surface. Static electricity is a common cause of sensor failures, especially when the weather is dry.
- Clean the sensor with a lint-free cloth. Do not use detergent or any other chemicals to clean the sensor.

Avoid the following finger conditions for enrollment or recognition as they might result in fingerprint enrollment errors or a drop in the fingerprint recognition success rate:

- Soaked or swollen finger, for example as might occur after taking a bath
- Injured finger
- Wet finger
- Soiled or oily finger
- Extremely dry skin condition on finger

Observe the following to improve the fingerprint recognition success rate:

- Enroll two or more fingers.
- Enroll additional fingers if a recognition failure often occurs when using already enrolled fingers.
- Check the condition of your finger. Any conditions which have changed since enrollment, such as injury, rough skin, and extremely dry, wet, soiled, dirty, oily, soaked or swollen fingers, might lower the recognition success rate. Also if the fingerprint is worn down or the finger becomes thinner or fatter, the recognition success rate might be lowered.
- As the fingerprint for each finger is different and unique, you should ensure that only the registered or enrolled fingerprint or fingerprints are used for identification.
- The fingerprint sensor compares and analyzes the unique characteristics in a fingerprint. However, there might be instances where certain users are unable to register their fingerprints due to insufficient unique characteristics in their fingerprints.
- The recognition success rate might differ from user to user.

Battery

This section explains battery types, use, recharging methods and handling.

Battery types

The computer has different types of batteries.

Battery back

When the AC adaptor is not connected, the main power source of the computer is a removable lithium ion battery pack, also referred to in this manual as the main battery. You can purchase additional battery packs for extended use of the computer away from an AC power source although you should not change the battery pack while the AC adaptor is connected.

Before you remove the battery pack, save your data and shut down the computer, or place the computer into Hibernation Mode. Be aware that, when placing the computer into Hibernation Mode, the contents of memory are saved to the internal storage drive, although for safety sake, it is best to also save your data manually.

Real-Time Clock (RTC) battery

The Real-Time Clock (RTC) battery provides power for the internal real-time clock and calendar function and also maintains the system configuration while the computer is turned off. If the RTC battery becomes completely discharged, the system will lose this information and the real-time clock and calendar will stop working.

You can change the Real-Time Clock settings in the dynabook Setup Utility. Refer to *Real-Time Clock* for further information.

The RTC battery of the computer must be replaced only by your dealer or by a Dynabook service representative. The battery can explode if not properly replaced, used, handled, or disposed of. Dispose of the battery as required by local ordinances or regulations.

Care and use of the battery pack

This section provides the important safety precautions in order to handle your battery pack properly.

Refer to the enclosed **Instruction Manual for Safety and Comfort** for detailed precautions and handling instructions.

- *Make sure the battery is securely installed in the computer before attempting to charge the battery pack. Improper installation might generate smoke or fire, or cause the battery pack to rupture.*
- *Keep the battery pack out of reach of infants and children. It can cause injury.*

- *The battery pack can explode if not replaced, used, handled or disposed of properly. Dispose of the battery as required by local ordinances or regulations. Use only batteries recommended by Dynabook as replacements.*
- *Charge the battery pack only in an ambient temperature from 5 through 35 degrees Celsius. Otherwise, the electrolyte solution might leak, battery pack performance might deteriorate, and the battery life might be shortened.*
- *Never install or remove the battery pack without first turning off the power and disconnecting the AC adaptor. Never remove the battery pack while the computer is in Sleep Mode, as data might be lost.*
- *Never remove the battery pack when the USB type-C port is in use.*

Charging the batteries

When the power in the battery pack becomes low, the **DC IN/Battery** indicator flashes amber to indicate that only a few minutes of battery power

remain. If you continue to use the computer while the **DC IN/Battery** indicator flashes, the computer enters Hibernation Mode so that you do not lose any data, and automatically turns itself off.

You must recharge the battery pack when it becomes discharged.

Procedures

To recharge a battery pack, connect the AC adaptor to the USB Type-C™ port (for charging only) and plug the other end into a working outlet. The **DC IN/Battery** indicator glows amber while the battery is being charged.

Charging Time

The following table shows the approximate time required to charge an exhausted battery fully.

Battery type	Power off	Power on
Battery pack (29 Wh, 2 cell)	about 7 hours	about 7~10 hours
RTC battery	Does not charge	Does not charge

- *Be aware that the charging time when the computer is on is affected by ambient temperature, the temperature of the computer and how you are using the computer. If you make heavy use of external devices for example, the battery might scarcely charge at all during operation.*
- *Note that charging time will vary depending on the ambient temperature, the computer's internal temperature, and how the computer is being used. For example, whether the display is set to shut off automatically when idle, whether you make heavy use of external devices powered by the computer, or if the computer's internal storage drive is being accessed frequently by an application.*
- *The battery might not be charged depending on how the computer is being used, and the charge of battery decreases and battery might not be fully charged sometimes.*

Charging notice

The battery might not begin charging immediately under the following conditions:

- The battery is extremely hot or cold (if the battery is extremely hot, it might not charge at all). To ensure the battery charges to its full capacity, charge it at room temperature of between 5°C to 35°C (41°F to 95°F).
- The battery is nearly completely discharged. In this instance, leave the AC adaptor connected for a few minutes and the battery should begin charging.

The **DC IN/Battery** indicator might show a rapid decrease in battery operating time when you try to charge a battery under the following conditions:

- The battery has not been used for a long time.
- The battery has completely discharged and been left in the computer for a long time.

In such cases, do the following:

1. Fully discharge the battery by leaving it in the computer with the power on until the system automatically turns itself off.
2. Connect the AC adaptor to the USB Type-C™ port (for charging only) on the computer and to a wall outlet that is supplying power.
3. Charge the battery until the **DC IN/Battery** indicator glows white.

Repeat these steps two or three times until the battery recovers normal capacity.

Monitoring battery capacity

Remaining battery power can be monitored using the following methods:

- Clicking the battery icon on the Windows Taskbar
- Via the Battery Status in the Windows Mobility Center window

- *Wait several seconds to monitor the remaining operating time because the computer needs time to check the remaining capacity of the battery pack and then calculate the remaining operating time, based on this together with the current power consumption.*
- *Be aware that the actual remaining operating time might differ slightly from the calculated time.*
- *With repeated discharges and recharges, the battery capacity will gradually decrease. In view of this, it is noted that an often used, older battery will not operate for as long as a new battery even when both are fully charged.*

Maximizing battery operating time

The usefulness of a battery depends on how long it can supply power on a single charge, while how long the charge lasts in a battery depends on:

- Processor speed
- Internal storage drive power off period
- How often and for how long you use the internal storage drive and external disk drives, for example, optical disc
- How much charge the battery contained to begin with
- How you use optional devices, such as a USB device, to which the battery supplies power
- Where you store your programs and data

- The environmental temperature - operating time decreases at low temperatures.
- System Sleep Mode
- System Hibernation Mode
- Whether you enable Sleep Mode, which can conserve battery power if you are frequently turning the computer off and on.

Battery pack exhausted time

When you turn off the power of your computer with the battery pack fully charged, the battery pack will exhaust within the following approximate period.

Battery type	Sleep Mode	Shut Down Mode
Battery pack (29 Wh, 2 cell)	about 8 days	about 45 days
RTC battery	about 8 years	about 8 years

Be aware that the battery pack exhausted time is affected if there are any external devices connected.

Extending battery life

To maximize the life of your battery pack, do the following at least once a month:

1. Turn off the computer's power.
2. Disconnect the AC adaptor and turn on the computer's power. If it does not turn on, then go to Step 4.
3. Operate the computer on battery power for five minutes. If you find that the battery pack has at least five minutes of operating time, continue operating until the battery pack is fully discharged. However, if the **DC IN/Battery** indicator flashes or there is some other warning to indicate a low battery condition, go to Step 4.
4. Connect the AC adaptor to the USB Type-C™ port (for charging only) on the computer and to a wall outlet that is supplying power. The **DC IN/Battery** indicator glows amber to indicate that the battery pack is being charged. However, if **DC IN/Battery** indicator does not glow, this indicates that power is not being supplied. Check the connections for the AC adaptor and the power cord.
5. Charge the battery pack until the **DC IN/Battery** indicator glows white.

Replacing the battery pack

Be aware that the battery pack is classified as a consumable item.

The operating life of the battery pack will gradually reduce through repeated charging and discharging, and should be replaced when it

reaches the end of its operating life. In addition to this, you might also replace a discharged battery pack with a charged spare when you are operating your computer away from an AC power source for an extended period of time.

This section explains how to remove and install the battery pack, and begins with the removal process which is detailed through the following steps.

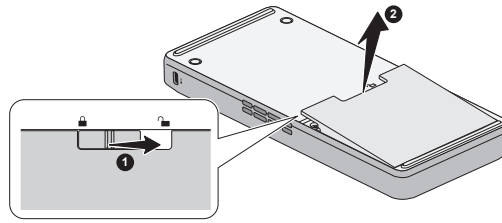
- *Do not remove the battery pack while the computer is in Sleep Mode, as data is stored in RAM, so if the computer loses power it might be lost.*
- *In Hibernation Mode, data will be lost if you remove the battery pack or disconnect the AC adaptor before the save is completed.*
- *Do not remove the battery pack when you are charging your computer by connecting the AC adaptor via the USB Type-C™ adapter (e.g. USB-C™ to HDMI™/VGA Travel Adapter). Otherwise, the computer cannot be powered on properly.*
- *Do not unlock the battery pack while carrying the computer or the battery pack might fall out and cause injuries.*

Removing the battery pack

To remove a discharged battery, do the following:

1. Save your work.
2. Click **Start ->** ⏻ **(Power)** and then click **Shut down** while holding down the **SHIFT** key. Ensure that the **Power** indicator is off.
3. Remove all cables and peripherals that are connected to the computer.
4. Turn the computer upside down.
5. Slide the battery lock to its unlocked (🔓) position to release the battery pack.
6. Lift the battery pack up to remove it from the computer.

Figure 4-2 Releasing the battery pack



1. Battery lock
2. Battery pack

Installing the battery pack

To install a battery pack, do the following:

Do not unlock the battery pack while carrying the computer or the battery pack might fall out and cause injuries.

1. Insert the battery pack as far as it will go into the locked (🔒) position on the computer.
2. Turn your computer over.

Wireless WAN device

Some models are equipped with the Wireless WAN device. This device enables a high-speed connection to the internet, corporate intranet, and your email while you are away from the office.

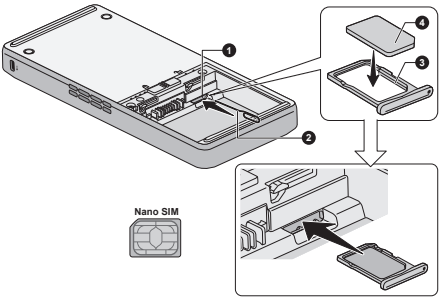
Installing a SIM card

To install a SIM card, do the following:

1. Click **Start ->** ⏻ **(Power)**, and then select **Shut down** and ensure that the **Power** indicator is off.
2. Remove the AC adaptor and all cables and peripherals connected to the computer.
3. Turn the computer upside down and remove the battery pack (refer to *Replacing the battery pack* section, if required).
4. Locate the SIM card slot.
5. To pop the SIM card tray partially open, insert a slender object (about 10 mm, diameter 0.8 mm), such as a straightened paper clip, into the eject hole. Gently pull to open the SIM card tray.
6. Place the SIM card into the SIM card tray with the metal connectors facing down.

7. Insert the SIM card tray into the SIM card slot, and push the center of the tray to close it. Press gently until it locks into place.

Figure 4-3 Installing the SIM card



1. SIM card slot
2. Slender object (diameter 0.8 mm)
3. SIM card tray
4. SIM card

Product appearance depends on the model you purchased.

- *Never allow metal objects, such as screws, staples and paper clips, to enter the computer. Foreign metal objects can create a short circuit, which can cause damage and fire, possibly resulting in serious injury.*
- *Do not touch the connectors on the SIM card or on the computer. Debris on the connectors might cause access problems.*

*If you can see **Internet and attach** at APN type when creating APN information, please make sure to select **Internet and attach** as the APN type.*

Removing a SIM Card

To remove the SIM card, do the following:

1. Shut down the computer. Make sure the **Power** indicator is off.
2. Remove the AC adaptor and all cables and peripherals connected to the computer.
3. Turn the computer upside down and remove the battery pack.
4. Locate the SIM card slot.
5. To pop the SIM card tray partially open, insert a slender object (about 10 mm, diameter 0.8 mm), such as a straightened paper clip, into the eject hole. Gently pull to open the SIM card tray.
6. Remove the SIM card from the SIM card tray.
7. Insert the SIM card tray back into the SIM card slot.

GPS Function

If your computer includes Wireless WAN device, it may include GPS (Global Positioning System).

The performance of GPS varies depending on the environment. Failure to pinpoint a location might happen.

Your current location might not be shown depending on the status of GPS or the location. If you are obtaining your current location information from the computer, your current location might not be detected due to the information accuracy. Specifically, your current location might not be detected in the following places or situations:

- Inside or directly under a building
- Inside a bag or box
- Among dense trees
- When there is an obstacle (person or object) in front of the antenna
- Underground tunnel, underground, or underwater
- Buildings, streets or residential areas
- Near to high voltage cables
- Bad weather, such as heavy rain or snow

USB Type-C™ Adapters

Your computer capabilities can be enhanced by connecting external devices such as an HDMI™/VGA monitor to the USB Type-C™ port via a USB Type-C™ adapter.

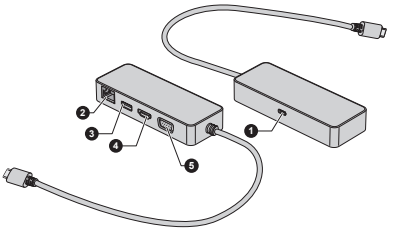
Depending on the model you purchased, one USB-C™ to HDMI™/VGA Travel Adapter might be provided.

- *Always use the USB Type-C™ adapter that is included with your computer or dynabook accessories.*
- *Disconnect any devices and cables from the USB Type-C™ adapter when connecting/disconnecting the AC adaptor or the USB Type-C™ adapter.*
- *Do not connect other USB Type-C™ adapter to USB Type-C™ port of USB Type-C™ adapter.*
- *Do not connect a USB hub to the USB 3.0 port of the USB Type-C™ adapter. Be sure to connect it to the USB 3.0 port on the computer itself.*

- USB-C™ to HDMI™/VGA Travel Adapter

  This adapter provides: USB Type-C™ port (Power Delivery Charging), USB 3.0 port, HDMI™ out port, VGA monitor port, and LAN jack.

Figure 4-4 USB-C™ to HDMI™/VGA Travel Adapter



1. USB Type-C™ port (Power Delivery Charging)
2. LAN jack
3. Universal Serial Bus (USB 3.0) port
4. HDMI™ out port
5. VGA monitor port

- *The output resolution of HDMI™ out port on this adapter is up to 3840 x 2160 @30Hz, and output resolution of VGA monitor port on this adapter is up to 1920 x 1200 @60Hz.*
- *Do not use the HDMI™ out port and VGA monitor port simultaneously.*
- *The USB Type-C™ port (Power Delivery Charging) on this adapter is used for connecting an AC adaptor only. USB data transmission is not supported by this port.*

LAN jack

The LAN jack on the USB Type-C™ adapter supports Ethernet LAN (10 megabits per second, 10BASE-T), Fast Ethernet LAN (100 megabits per second, 100BASE-TX) or Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T).

This section describes how to connect/disconnect to a LAN.

- *The Link speed (10/100/1000 megabits per second) changes automatically depending on the network conditions (connected device, cable or noise and so on).*

LAN cable types

The computer must be configured properly before connecting to a LAN. Logging onto a LAN using the computer's default settings might cause a malfunction in LAN operation. Check with your LAN administrator regarding set-up procedures.

If you are using Gigabit Ethernet LAN (1000 megabits per second, 1000BASE-T), be sure to connect with a CAT5e cable or higher. You cannot use a CAT3 or CAT5 cable.

If you are using Fast Ethernet LAN (100 megabits per second, 100BASE-TX), be sure to connect with a CAT5 cable or higher. You cannot use a CAT3 cable.

If you are using Ethernet LAN (10 megabits per second, 10BASE-T), you can connect with a CAT3 or higher cable.

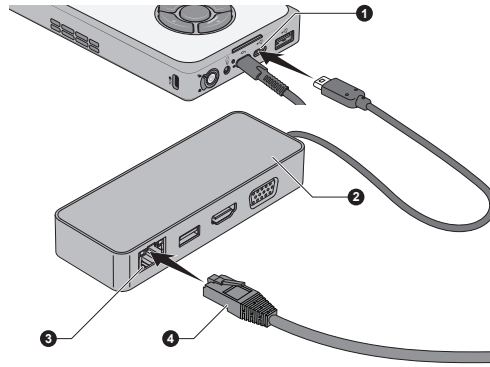
Connecting the LAN cable

To connect the LAN cable, do the following:

- *Do not connect any other cable to the LAN jack except the LAN cable. Otherwise, malfunctions or damage might occur.*
- *Do not connect any power supplying device to the LAN cable that is connected to the LAN jack. Otherwise, malfunctions or damage might occur.*

1. Connect the USB Type-C™ adapter to the USB Type-C™ port on your computer.
2. Plug one end of the cable into the LAN jack on the USB Type-C™ adapter. Press gently until you hear the latch click into place.

Figure 4-5 Connecting the LAN cable



1. USB Type-C™ port
2. USB Type-C™ adapter
3. LAN jack
4. LAN cable

USB Type-C™ adapter appearance varies depend on the model you purchased.

3. Plug the other end of the cable into a LAN hub connector or router. Check with your LAN administrator and hardware or software vendor before using or configuring a network connection.

HDMI™ out port

HDMI™ (High-Definition Multimedia Interface™) out port digitally transfers both video and audio data without reducing the quality. HDMI™-compatible external display devices including televisions can be connected via the HDMI™ out port.

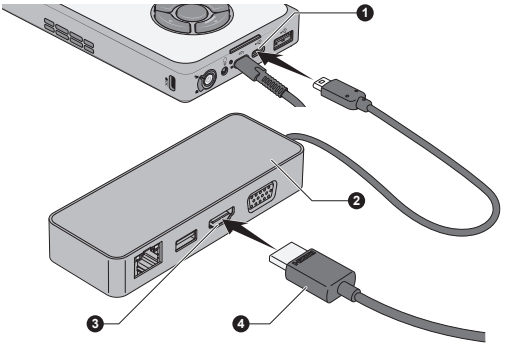
As the port operation of all external monitors have not been confirmed, some display devices might not function properly.

To connect an HDMI™-compatible display device, do the following:

To connect a device to the HDMI™ out port, you must purchase a suitable HDMI™ cable.

1. Connect the USB Type-C™ adapter to the USB Type-C™ port on your computer.
2. Plug one end of the HDMI™ cable into the HDMI™ in port of the HDMI™ display device.
3. Turn the HDMI™ display device's power on.
4. Plug the other end of the HDMI™ cable into the HDMI™ out port on the USB Type-C™ adapter.

Figure 4-6 Connecting the HDMI™ out port



1. USB Type-C™ port
2. USB Type-C™ adapter
3. HDMI™ out port
4. HDMI™ cable

USB Type-C™ adapter appearance varies depend on the model you purchased.

Do not plug/unplug an HDMI™ device under the following conditions:

- *The system is starting up.*
- *The system is shutting down.*

When you unplug the HDMI™ cable and replug it, wait at least 5 seconds before you replug the HDMI™ cable again.

Settings for display video on HDMI™

To view video on the HDMI™ display device, be sure to configure the settings otherwise you might find that nothing is displayed.

Be sure to select the display device or audio device before starting to play video. Do not change the display device or audio device while playing video.

Do not change the display device under the following conditions.

- *While data is being read or written*
- *While communication is being carried out*

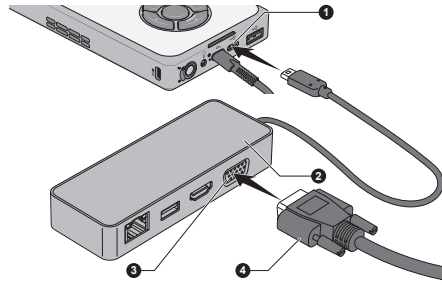
VGA monitor port

An external analog monitor can be connected to the VGA monitor port on the USB Type-C™ adapter. To connect an external analog monitor, do the following:

1. Connect the USB Type-C™ adapter to the USB Type-C™ port on your computer.
2. Plug one end of the VGA cable into the VGA port of the external VGA monitor.
3. Turn the external monitor's power on.
4. Plug the other end of the VGA cable to the VGA monitor port on the USB Type-C™ adapter.

There are no fastening screws for an external monitor cable on the VGA monitor port. However, external monitor cables which have connectors with fastening screws can still be used.

Figure 4-7 Connecting the VGA cable to the VGA monitor port



1. USB Type-C™ port
2. USB Type-C™ adapter
3. VGA monitor port
4. VGA cable

USB Type-C™ adapter appearance varies depending on the model you purchased.

When displaying desktop on an external VGA monitor, desktop is sometimes displayed on the center of the monitor with black bars around desktop (with small size).

In this case, read the manual of the monitor and set the suitable supporting display mode at the monitor. Then it will be displayed in suitable size with correct aspect ratio.

Wireless display

Your computer might support wireless display, a wireless technology which utilizes Wi-Fi® to allow the computer to be wirelessly connected to external displays including TVs as extended screens. With wireless display, documents, streamed/local media contents or other online contents can be shared wirelessly with others.

To use wireless display, either one of the following devices is required:

- A compatible external display with built-in support for wireless display.
- An external display with HDMI™ port and a wireless display adapter.

  The wireless display adapter is a device that connects to the external display via HDMI™ port and can receive Wi-Fi® signals from your computer.

To wirelessly connect to an external display, you can follow the steps as described below:

1. Go to ⚙ **(Settings)** and click **Devices -> Bluetooth & other devices -> Add Bluetooth or other device**.
2. Click **Wireless display or dock**. Your computer starts searching for the wireless display device.
3. After the wireless display device is searched, follow the on-screen instructions to finish connection.

After the connection is established, the name of the wireless display device appears under **Projectors**.

To disconnect the Wireless display device, click the wireless display device name and then click **Remove device**.

Security lock

A security lock enables you to anchor your computer to a desk or other heavy object in order to help prevent unauthorized removal or theft. The computer has a security lock slot into which you can attach one end of the security cable, while the other end attaches to a desk or similar object. The methods used for attaching security cables differ from product to product. Refer to the instructions for the product you are using for more information.

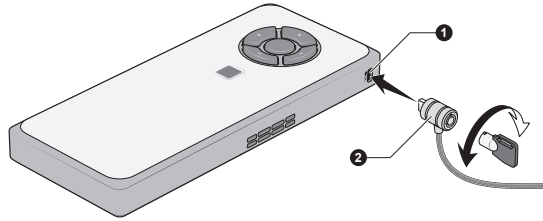
Connecting the security lock

To connect a security cable to the computer, do the following:

1. Turn the computer so the security lock slot faces you.

2. Align the security cable with the lock slot and secure it in place.

Figure 4-8 Security lock



1. Security lock slot
2. Security lock

Product appearance depends on the model you purchased.

Optional Accessories

To make your computer even more powerful and convenient to use, you can add a number of options and accessories. For reference, the following list details some of the items that are available from your reseller or Dynabook dealer:

AC Adaptor	If you frequently use your computer at more than one site, it might be convenient to purchase an additional AC adaptor to be kept at each site in order to remove the need to carry the adaptor with you always.
USB Type-C™ Adapters	You can purchase different types of USB Type-C™ adapters as accessories from Dynabook. Please contact your reseller or Dynabook dealer regarding which type is available in your region.
dynabook USB-C™ Dock	dynabook USB-C™ Dock is the docking station that enables you to connect your computer peripherals through one USB Type-C™ cable to selected Dynabook computers. Refer to dynabook USB-C™ Dock's User's Manual for more details.

Not all the accessories are available in your region. Contact your reseller or Dynabook dealer for more information.

Sound System and Video mode

This section describes some of the audio control functions.

Volume Mixer

The Volume Mixer utility lets you control the audio volume for playback of devices and applications under Windows.

- To launch the Volume Mixer utility, right-click on the speaker icon on the Windows Taskbar, and then select **Open Volume Mixer** from the sub menu.
- To adjust the volume level of speakers or headphones, move the **Speakers** or **Headphones** slider.
- To adjust the volume level of an application that you are using, move the slider for the corresponding application.

Microphone Level

To change the microphone recording level, do the following:

If the microphones are not built in, you can connect an external microphone instead.

1. Click **Start -> Windows System -> Control Panel -> Hardware and Sound -> Sound -> Recording**.
2. Select **Microphone Array** or **External Microphone**, and click **Properties**.
3. On the **Levels** tab, move the **Microphone Array** or **External Microphone** slider to increase or decrease the microphone volume level.

If you feel the microphone volume level is inadequate while using an external microphone, move the **Microphone Boost** slider to a higher level.

Realtek Audio Console

You can confirm and change the audio configuration using the **Realtek Audio Console**. To launch the **Realtek Audio Console**:

- Click **Start -> Realtek Audio Console**.

Main

When you launch the Realtek Audio Console, the **Main** tab shows all available Playback and Recording devices. You can adjust the volume and switch to relate setting pages by clicking the icon in this tab.

Speakers/Headphones

This tab allows you to set Main Volume, Sound Effects, Default Format and Speaker configuration.

Click the **Auto Test** button at the bottom of this tab to confirm the internal speakers or the headphone sound is coming from the right direction.

Microphone Array/External Microphone

This tab allows you to set Main Volume, Microphone Effects and Default Format.

If the microphones are not built in, you can connect an external microphone instead.

Device advanced settings

This tab allows you to choose the type of headphone or microphone and select devices when an external device is plugged in.

To choose the type of headphone or microphone, do the following:

1. Plug a headphone or microphone into the headphone/microphone jack.
2. Click the **Device advanced settings** tab.
3. Select one from the device list under **ANALOG** for the device you plugged into.

When an external headphone is plugged in, you can turn on/off the multi-stream function under **Playback Device** in this tab.

To use multi-stream function, do the following:

1. Select **Make internal and external output devices playback two different audio streams simultaneously**.
2. Click **Start -> ⚙ (Settings) -> System -> Sound**.
3. Click **App volume and device preferences** under **Advanced sound options**.
4. Choose different devices from the drop-down list.

Information

This tab shows the driver version and UI version as well.

Video mode

Video mode settings are configured via the **Display** dialog.

To open the **Display** dialog, click **Start -> ⚙ (Settings) -> System -> Display**.

If you are running some applications (for example a 3D application or video playback), you might see some disturbance, flickering, or frame dropping on your screen.

If that occurs, adjust the resolution of display, lowering it until the screen is displayed properly.

Chapter 5

Utilities and Advanced Usage

This chapter describes the utilities and special features of this computer, and the advanced usage of some utilities.

Utilities and Applications

This section describes the pre-installed utilities that come with the computer and details how to start them. For further information on their operation, refer to online manual, help files, or README.TXT file (if applicable) of each utility.

You might not have all the software listed in this section depending on the model you purchased.

dynabook Settings

dynabook Settings is the configuration management tool available through the Windows operating system.

To run dynabook Settings, click **Start -> dynabook Settings**.

This utility allows you to configure your computer settings by the following tabs:

- Home—Allows you to view the current BIOS/EC version or change certain settings back to their default values
- eco Utility—llows you to manage the power consumption of your computer
- Boot Options—Allows you to manage boot settings
- System Password—Allows you to manage the User Password, Supervisor Password, Owner String and set the User policy
- Advanced Options—Allows you to set conditions for each device or function

The settings or options explained here might vary depending on the model you purchased.

eco Utility

This computer is equipped with "eco mode". This mode slightly lowers performance of some devices to reduce electric power consumption. You can realize measurable power savings by using it continuously.

eco Utility helps control the power consumption of your computer. It also provides information that can help you understand your degree of contribution to the preservation of the environment.

In addition, this utility provides the Peak shift function that can help reduce power usage during periods of peak demand by shifting some power consumption to periods when demand is lower.

To access this utility, click **Start -> dynabook Settings -> eco Utility**.

For details on eco Utility, click **Please click here for more information before you use eco Utility** in this tab to see the help file.

System Password

The System Password tab allows you to set a password in order to restrict access to the computer. Two levels of password security are provided: User and Supervisor.

Passwords set by the System Password function are different from the Windows password.

User Password

To set a user password, click **Start -> dynabook Settings -> System Password**.

User authentication may be required to validate user rights when using System Password to delete or change passwords.

- **Set** (button)

  Click this button to register a password. After a password is set, you are prompted to enter it when you start the computer.

- *After you set the password, a dialog box appears asking whether you want to save it to other media. If you forget the password, you can open the password file on another computer. Be sure to keep the media in a safe place.*
- *When entering the character string to register the password, enter from the keyboard character by character and do not enter as ASCII code or copy-and-paste the character string. In addition, ensure that the registered password is correct by outputting the character string to the password file.*
- *When entering a password, do not enter any non-alphanumeric characters (for example "!" or "#").*

- **Delete** (button)

  Click this button to delete a registered password. Before you can delete a password, you must first enter the current password correctly.

- **Change** (button)

  Click this button to change a registered password. Before you can change a password, you must first enter the current password correctly.
- **Owner String** (text box)

  You can use this box to associate text with the password. After you enter text, click **Apply**. When the computer is started, this text is displayed together with the prompt asking you to enter a password.

Supervisor Password

If you set a Supervisor Password, some functions might be restricted when a user logs on with the User Password. To set a Supervisor Password:

Click **Start -> dynabook Settings -> System Password**. Then click the down arrow next to **Advanced options** to show the **Supervisor Password** settings.

This function lets you do the following:

- Register, change or delete the Supervisor Password.
- Specify restrictions for general users.

Starting the computer using a password

If you have already registered a user password, there is one way to start the computer:

- Enter the password manually.

The password is necessary if the computer was shut down in Hibernation Mode or Boot Mode. It is not needed in Sleep Mode or Restart.

To enter a password manually, do the following:

1. Turn on the power as described in the *Getting Started* section. The following dialog appears in the screen:

   Enter Password

At this point, the function keys do not work. They will function after you enter the password.

2. Enter the Password.
3. Press **ENTER**.

If you enter the password incorrectly three times in a row, or if you do not enter the password within 1 minute, the computer shuts down. In this case, some features that can power on the computer automatically (Task Scheduler, etc.) might not work. You must turn the computer back on to retry password entry.

Pre-Boot Authentication

You can also enable/disable Pre-Boot Authentication function that allows you to authenticate by scanning fingerprints instead of inputting a password before Windows boots up, and Single Sign-On function that allows you to sign on using a fingerprint for both Pre-Boot Authentication and Windows operating system under **Pre-Boot Authentication** in **System Password**.

Please note that Pre-Boot Authentication and Single Sign-On function will be disabled if dynabook Settings is uninstalled.

dynabook Service Station

dynabook Service Station allows your computer to automatically search for dynabook software updates or other alerts from Dynabook that are specific to your computer system and its programs.

This utility also provides hardware diagnostic and troubleshooting function and service. The diagnostic or troubleshooting activity log is stored in your computer. When "Send diagnostic and troubleshooting data log" is enabled, the log will be sent to Dynabook periodically. The transmission is completely anonymous since no personal identifiable information is collected.

To access this utility, click **Start -> dynabook Service Station**.

The following tabs might be provided:

- Home—Allows you to view current system power consumption and temperature of your computer
- Software Updates—Allows you to check available software updates and perform necessary operations
- Alerts—Allows you to check available alerts
- Diagnostic Tools—Allows you to perform tests which will help check the performance of your computer
- Troubleshooting—Allows you to solve many hardware issues of your computer by clicking listed items
- Report—Allows you to check and print reports
- System Information—Allows you to view basic information of your computer
- Options—Allows you to set options for sending data logs

dynabook Setup Utility

dynabook Setup Utility is a BIOS setup utility that provides you a menu-based user interface so that you can easily view and change BIOS settings.

To enter the dynabook Setup Utility, do the following:

1. Save your work.
2. Click **Start ->** ⏻ **(Power)** and then select **Restart**.

3. Hold down the **F2** key and then release this key just after the computer is powered on.
4. Follow the on-screen instructions to proceed.

To save the changes and exit the utility, press the **F10** key and proceed by selecting **Yes** or select **Exit -> Exit Saving Changes -> Yes**. The computer restarts immediately.

dynabook Maintenance Utility

dynabook Maintenance Utility is provided to erase the internal storage drive. This utility allows you to delete all data and partitions and also overwrite all sectors on the internal storage drive.

If there is an external hard disk drive connected to your computer, it can also be erased. However, if you do not want to delete the data from the external hard disk drive, disconnect it from your computer.

To access this utility:

1. Go to ⚙ **(Settings)** and click **Update & Security -> Recovery**.
2. Click **Restart now** under **Advanced startup**.
3. Click **Troubleshoot -> dynabook Maintenance Utility**.

If you select the deletion method and continue with the operation, you will lose all data (including the operating system and recovery partition) on the internal storage drives. Make sure that you have already created recovery media if you want to use the computer after erasing your hard disk drive(s).

Special features

The following features are either unique to Dynabook computers or are advanced features which make the computer more convenient to use.

Access each function using the following procedures.

*1 To access the Power Options, click **Start -> Windows System -> Control Panel -> System and Security -> Power Options**.

Display automatic power off *1	This feature automatically cuts off power to the connected display panel when there is no keyboard input for a specified time, with power being restored the next time a key is pressed. This can be specified in the Power Options.
Internal storage drive automatic power off *1	This feature automatically cuts off power to the internal storage drive when it is not accessed for a specified time, with power being restored when the internal storage drive is next accessed. This can be specified in the Power Options.

System automatic Sleep/Hibernation Mode *1	This feature automatically shuts down the system into either Sleep Mode or Hibernation Mode when there is no input or hardware access for a specified time. This can be specified in the Power Options.
Power on password	Two levels of password security, supervisor and user, are available to prevent unauthorized access to your computer.
Intelligent power supply *1	A microprocessor in the computer's intelligent power supply detects the battery charge, automatically calculates the remaining battery capacity, and protects electronic components from abnormal conditions such as a voltage overload from the AC adaptor. This can be specified in the Power Options.
Battery save mode *1	This feature lets you configure the computer in order to save battery power. This can be specified in the Power Options.
Low battery automatic Hibernation Mode *1	When battery power is exhausted to the point that computer operation cannot be continued, the system automatically enters Hibernation Mode and shuts itself down. This can be specified in the Power Options.
Hibernation Mode	This feature lets you turn off the power to the computer without exiting from your software. The contents of main memory are automatically saved to the internal storage drive so that when you next turn on the power again, you can continue working right where you left off. You must enable the Hibernation Mode before using this feature. Refer to the *Starting Hibernation Mode* section for more details.
USB Wake-up function	This function restores the computer from Sleep Mode depending on the external devices connected to the USB ports. For example, if a mouse or USB keyboard is connected to a USB port, clicking the mouse button or pressing the keyboard will wake up the computer.

Heat dispersal *1	To protect against overheating, the processor is equipped with an internal temperature sensor which activates a cooling fan or lowers the processing speed if the computer's internal temperature rises to a certain level. You are able to select whether to control this temperature by either turning on the fan first, then if necessary lowering the processor speed, or by lowering the processor speed first, then if necessary turning on the fan. Both of these functions are controlled through the Power Options. When the processor's temperature falls within normal range, the fan and the processor operation return to their standard speed. If the processor's temperature reaches an unacceptably high level with either setting, the computer automatically shuts down to prevent any damage. In this instance, all unsaved data in memory will be lost.

Chapter 6

Troubleshooting

Dynabook has designed this computer for durability, however, should problems occur, you are able to use the procedures detailed in this chapter to help determine the cause.

You should become familiar with this chapter as knowing what might go wrong can help prevent problems from occurring in the first place.

Problem-solving process

If you observe the following guidelines, resolving problems will be much easier.

- Stop immediately when you recognize a problem exists as taking further action might result in data loss or damage, or you might destroy valuable problem-related information that can help solve the problem.
- Observe what is happening. Write down what the system is doing and what actions you performed immediately before the problem occurred. Make a screenshot of the current display.

Also be aware that the questions and procedures described in this chapter are meant only as a guide, they are not definitive problem-solving techniques. In reality many problems can be solved simply, but a few might require help from Technical Support. If you find you need to consult others, be prepared to describe the problem in as much detail as possible.

Preliminary checklist

You should always consider the simplest solution first. The items detailed in this checklist are easy to fix and yet can cause what appears to be a serious problem:

- Make sure that you turn on all peripheral devices before you turn on the computer - this includes your printer and any other external device you are using.
- Before you attach an external device, you should first turn off the computer, then when you turn the computer back on, it recognizes the new device.
- Make sure that all optional accessories are configured properly in the computer's setup program and that all required driver software has been loaded (refer to the documentation included with the optional accessories for further information on its installation and configuration).

- Check all cables to ensure that they are correctly and firmly attached to the computer - loose cables can cause signal errors.
- Inspect all connecting cables for loose wires and all connectors for loose pins.
- Check that your disc media is correctly loaded.

Always try to make detailed notes of your observations and keep them in a permanent error log - this helps you to describe your problems to Technical Support. In addition, if a problem recurs, the log you have made helps to identify the problem faster.

Analyzing the problem

Sometimes the computer gives you clues that can help you identify why it is malfunctioning. In view of this, keep the following questions in mind:

- Which part of the computer is not operating properly - USB keyboard, HDD/SSD, external display panel - as each device produces different symptoms.
- Check the options within the operating system to ensure that its configuration is set properly.
- What appears on the external display? Does it display any messages or random characters? Make a screenshot of the current display and, if possible, look up the messages in the documentation included with the computer, software, or operating system.
- Check that all connecting cables are correctly and firmly attached as loose cables can cause erroneous or intermittent signals.
- Do any indicators light, if so, which ones, what color are they and do they stay on or blink? Write down what you see.
- Do you hear any beeps, if so, how many, are they long or short and are they high pitched or low pitched? In addition, is the computer making any unusual noises? Write down what you hear.

Record your observations so you can describe them in detail to Technical Support.

Software	The problems might be caused by your software or disk. If you cannot load a software package, the media might be damaged or the program might be corrupted. In these instances, try loading another copy of the software if possible. If an error message appears while you are using a software package, you should refer to the documentation supplied with it as this usually includes a problem-solving section or a summary of error messages. Next, check any error messages against the operating system documentation.

Hardware	If you cannot find a software problem, you should then check the setup and configuration of your hardware. First run through the items in the preliminary checklist as described previously, then, if you still cannot correct the problem, try to identify the source. The next section provides checklists for individual components and peripherals.

Before using a peripheral device or application software that is not an authorized part or product, make sure that the device or software can be used with your computer. Use of incompatible devices might cause injury or might damage your computer.

If something goes wrong

Your computer does not respond to the keyboard commands

If an error occurs and the computer does not respond to your keyboard commands, do the following:

Press the power button and hold it down for five seconds. Once the computer has turned itself off, wait 10-15 seconds before turning on the power again by pressing the power button.

Your program stops responding

If you are working with a program that suddenly freezes all operations, chances are the program has stopped responding. You can exit the failed program without shutting down the operating system or closing other programs.

To close a program that has stopped responding:

1. Press **CTRL**, **ALT**, and **DEL** simultaneously (once), then click **Task Manager**. The Windows Task Manager window appears.
2. Select the program you want to close, then click **End Task**. Closing the failed program should allow you to continue working. If it does not, continue with the next step.
3. Close the remaining programs one by one by selecting the program name, then **End Task**. Closing all programs should allow you to continue working. If it does not, power off your computer and then restart it.

The computer does not start

Make sure that you attached the AC adaptor and power cord/cable properly.

If you are using the AC adaptor, check that the wall outlet is working by plugging in another device, such as a lamp.

Verify that the computer is on by looking at the **Power** indicator.

If the indicator is glowing, the computer is on. Also, try turning the computer off and then on.

If you are using an AC adaptor, verify that the computer is receiving power from the external power source by looking at the **DC IN/Battery** indicator. If the indicator is glowing, the computer is connected to a live external power source.

The computer does not load advanced options during startup

By holding down one of the following keys during startup, your computer can load the following advanced options:

Key	Advanced option
F2	dynabook Setup Utility
F12	Boot Menu
0 (zero)	Recovery options

If your computer starts to load the Operating System instead of desired advanced options, do the following:

1. Click **Start ->** ⏻ **(Power)** and then select **Restart**.
2. Hold down the corresponding key and then release this key just after the computer is powered on.
3. Follow the on-screen instructions to proceed.

Hardware and system checklist

This section discusses problems caused by your computer's hardware or attached peripherals. Basic problems might occur in the following areas:

- Power
- Internal storage
- Pointing device
- Fingerprint sensor
- USB device
- Sound system
- External monitor
- LAN
- Wireless LAN
- Bluetooth®

Power

When the computer is not plugged into an AC power outlet, the battery pack is the primary power source. Your computer also has a number of other power resources, including an intelligent power supply and a Real-Time Clock (RTC) battery, all of which are interrelated with anyone having the ability to produce apparent power problems.

Overheating power down

If the processor's temperature reaches an unacceptably high level with either setting, the computer automatically shuts down to prevent any damage. In this instance, all unsaved data in memory is lost.

Problem	Procedure
Computer shuts down automatically.	Leave the computer off until it reaches room temperature. If the computer has reached room temperature and it still does not start, or if it starts but shuts down quickly, contact Technical Support.

AC power

If you have trouble turning on the computer with the AC adaptor connected, check the status of the DC IN/Battery indicator. Refer to the *Power Condition Descriptions* section for further information.

Problem	Procedure
AC adaptor does not power the computer	Check the connections to make sure that the power cord/adaptor is firmly connected to the computer and a working power outlet. Check the condition of the cord and terminals. If the cord is frayed or damaged, it should be replaced, while if the terminals are soiled, they should be cleaned with a clean cotton cloth. If the AC adaptor still does not power the computer, you should contact Technical Support.

Battery

If you suspect a problem with the battery, check the status of the **DC IN/ Battery** indicator.

Problem	Procedure
Battery does not power the computer	The battery might be discharged. Connect the AC adaptor to recharge the battery.

Problem	Procedure
Battery does not charge when the AC adaptor is attached.	If the battery is completely discharged, it will not begin charging immediately. In these instances, wait a few minutes before trying again. If the battery still does not charge, check that the power outlet of the AC adaptor is connected to its supplying power. This can be tested by plugging another appliance into it. Check whether the battery is hot or cold to the touch - if so, it will not charge properly and should be allowed to reach room temperature before you try again. Unplug the AC adaptor and remove the battery to make sure its connecting terminals are clean - if necessary wipe them with a soft dry cloth lightly dipped in alcohol. Connect the AC adaptor and replace the battery, taking care to ensure that it is securely seated in the computer. Check the **DC IN/Battery** indicator - if it does not glow, allow the computer to charge the battery for at least twenty minutes. If the **DC IN/Battery** indicator starts to glow after this period, allow the battery to continue to charge for at least another twenty minutes before turning on the computer. However, if the indicator still does not glow, the battery might be at the end of its operating life and should be replaced. However, if you do not believe the battery is at the end of its operating life, you should speak to Technical Support.
Battery does not power the computer as long as expected	If you frequently recharge a partially charged battery, the battery might not charge to its full potential. In these instances, you should fully discharge the battery and then attempt to charge it again.

Real-Time Clock

Problem	Procedure
The BIOS setting and system date/ time are lost.	If the RTC battery becomes completely discharged, the realtime clock and calendar will stop working. The RTC battery should be replaced only by your dealer or by a Dynabook servicerepresentative. You must set the date and time in the dynabook Setup Utility by using the following steps: 1. Launch the dynabook Setup Utility. Refer to the *dynabook Setup Utility* section for further information. 2. Set the date in the **System Date** field. 3. Set the time in the **System Time** field. 4. Follow the on-screen instructions to proceed.

BIOS

Problem	Procedure
The computer cannot be powered on	Disconnect the AC adaptor for several seconds and then reconnect the AC adaptor. After that, press the power button. If it does not work, press the power button twice again. If it still does not work, press and hold the power button for 18 seconds. Real-Time Clock (RTC) information might be cleared if the power is turned on by pressing the power button. You should set the system date/time manually in dynabook Setup Utility. If it still does not operate properly, you should contact your reseller or dealer.

Internal Storage Drive

Problem	Procedure
Computer does not boot from internal storage	Check to see whether there is a disc in the external optical disc drive - if so remove it and try to start the computer again. If this has no effect, check the **Boot Priority Options** setting under **Boot** within the dynabook Setup Utility.

Problem	Procedure
Slow performance	The files on the internal storage drive might be fragmented. In this instance you should run the disk defragmentation utility to check the condition of your files and the internal storage drive. Refer to the operating system's documentation or online Help File for further information on operating and using the defragmentation utility. As a last resort, you should reformat the internal storage drive and then reload the operating system and all other files and data. If you are still unable to resolve the problem, contact Technical Support.

Pointing device

If you are using a USB mouse, you should also refer to both the *USB mouse* section and the documentation supplied with your mouse.

USB mouse

Problem	Procedure
Mouse pointer does not respond to mouse operation	In this instance, the system might be busy. Try moving the mouse again after waiting a short while.
	Remove the mouse and then reconnect it to a free USB port in order to ensure that it is firmly attached.
Double-clicking does not work	In this instance, you should initially try changing the double-click speed setting within the Mouse Control utility. 1. To access this utility, click **Start -> Windows System -> Control Panel -> Hardware and Sound -> Mouse**. 2. Within the Mouse Properties window, click the **Buttons** tab. 3. Set the double-click speed as required and click **OK**.

Problem	Procedure
The mouse pointer moves too fast or too slow	In this instance, you should initially try changing the speed setting within the Mouse Control utility. 1. To access this utility, click **Start -> Windows System -> Control Panel -> Hardware and Sound -> Mouse**. 2. Within the Mouse Properties window, click the **Pointer Options** tab. 3. Set the mouse pointer speed as required and click **OK**.
The mouse pointer moves erratically	The elements of the mouse responsible for detecting movement might be dirty. Refer to the documentation supplied with the mouse for instructions on how to clean it. If you are still unable to resolve the problem, contact Technical Support.

Fingerprint sensor

Problem	Procedure
Fingerprints cannot be registered or deleted.	1. Save your work. 2. Click **Start ->** ⏻ **(Power)** and then select **Restart**. 3. Hold down the **F2** key and then release this key just after the computer is powered on to show the dynabook Setup Utility. 4. Select **Security -> BIOS Password -> Supervisor**, and then register the Supervisor Password. (If the User Password has been registered, clear it first.) 5. Select **Clear Fingerprint data**, and then press **Yes**. 6. Clear Supervisor Password. (If necessary, register the User Password again after that.) 7. To save the changes and exit the utility, press the **F10** key and proceed by selecting **Yes** or select **Exit -> Exit Saving Changes -> Yes**. The computer restarts immediately.

USB device

In addition to the information in this section, also refer to the documentation supplied with your USB device.

Problem	Procedure
USB device does not work	Remove the USB device from the computer and then reconnect it to a free port in order to ensure that it is firmly attached. Ensure that any required USB device drivers are properly installed. To achieve this, you should refer to both the device documentation and the operating system documentation.

Sound system

In addition to the information in this section, also refer to the documentation supplied with your audio device.

Problem	Procedure
No sound is heard	Press the function keys to increase or decrease volume. Check the software volume settings. Check to see if Mute is turned to Off. Check to make sure that the headphone connection is secure. Check within the Windows Device Manager application to ensure that the sound device is enabled and that the device is properly working.
Annoying sound is heard	In this instance, you might be experiencing feedback from either the internal microphone or an external microphone connected to the computer. Refer to *Sound System and Video mode* for further information. Volume cannot be adjusted during Windows start up or shut down. If you are still unable to resolve the problem, contact Technical Support.

External monitor

Also refer to *Operating Basics*, and to the documentation supplied with your monitor for further information.

Problem	Procedure
Monitor does not turn on	After confirming that the monitor's power switch is on, check the connections to make sure that the power cord/adaptor is firmly connected to the monitor and to a working power outlet.
No display	Try adjusting the contrast and brightness controls on the external monitor. Press the function key in order to change the display priority. Check to see if the external monitor is connected. When the external monitor is set as the primary display device in extended desktop mode, it does not display when the computer wakes up from Sleep Mode if the external monitor has been disconnected while in Sleep Mode. To keep this from happening, do not disconnect the external monitor while the computer is in Sleep or Hibernation Mode. Remember to turn off the computer before disconnecting the external monitor. When booting up the computer, screen of BIOS setting and etc. might not be indicated correctly if the power saving function of the external monitor is enabled. In this case, turn the power of the external monitor OFF and ON once (to disable power saving function) and then restart your computer.
Display error occurs	Check that the cable connecting the external monitor to the computer is firmly attached. If you are still unable to resolve the problem, contact Technical Support.

LAN

Problem	Procedure
Cannot access LAN	Check for a firm cable connection between the LAN jack and the LAN hub.
Wake-up on LAN does not work	Make sure the AC adaptor is connected. The Wake-up on LAN function consumes power even when the system is off. If problems persist, consult your LAN administrator.

Wireless LAN

Problem	Procedure
Cannot access Wireless LAN	Make sure that the wireless communication function of the computer is on. If problems persist, contact your LAN administrator.

Bluetooth®

Problem	Procedure
Cannot access Bluetooth® device	Check to ensure that the wireless communication function of the computer is on. Check to ensure that power to the external Bluetooth® device is turned on. Check to ensure that no optional Bluetooth® Adaptor is installed in the computer. The built-in Bluetooth® hardware cannot operate simultaneously with another Bluetooth® controller. If you are still unable to resolve the problem, contact Technical Support.

Technical support

If you require any additional help using your computer or if you are having problems operating the computer, you might need to contact us for additional technical assistance.

Before you call

Some problems you experience might be related to software or the operating system, so it is important that you investigate other sources of assistance first. Before contacting, try the following:

- Review troubleshooting sections in the documentation supplied with your software and/or peripheral devices.
- If a problem occurs when you are running software applications, consult the software documentation for troubleshooting suggestions and consider calling the software company's technical support department for assistance.
- Consult the reseller or dealer from where you purchased your computer and/or software - they are your best resource for current information and support.

Technical support

If you are still unable to solve the problem and suspect that it is hardware related, refer to the information listed in the accompanying warranty booklet.

Chapter 7

Appendix

Specifications

This section summarizes the technical specifications of the computer.

Physical Dimensions

The physical dimensions vary depending on the model you purchased.

Size	■ Approximately 197 (w) x 85 (d) x 20 (h) millimeters (not including parts that extend beyond the main body)

Environmental Requirements

Conditions	Ambient temperature	Relative humidity
Operating	5°C (41°F) to 35°C (95°F)	20% to 80% (noncondensing)
Non-operating	-20°C (-4°F) to 60°C (140°F)	10% to 90% (noncondensing)
Wet-bulb temperature	29°C maximum	

Conditions	Altitude (from sea level)
Operating	-60 to 3,000 meters
Non-operating	-60 to 10,000 meters maximum

Power Requirements

AC adaptor	100-240V AC 50 Hz or 60 Hz (cycles per second)
Computer	19V DC

AC Power Cord and Connectors

The AC input plug of the power cord must be compatible with the various international AC power outlets and the cord must meet the standards for the country/region in which it is used. All cords must meet the following specifications:

Wire size:	Minimum 0.75 mm^2
Current rating:	Minimum 2.5 amperes

Certification agencies

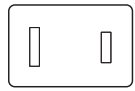
China:	CQC		
U.S. and Canada:	UL listed and CSA certified No. 18 AWG, Type SVT or SPT-2		
Australia:	AS		
Japan:	DENANHO		
Europe:			
Austria:	OVE	**Italy:**	IMQ
Belgium:	CEBEC	**The Netherlands:**	KEMA
Denmark:	DEMKO	**Norway:**	NEMKO
Finland:	FIMKO	**Sweden:**	SEMKO
France:	LCIE	**Switzerland:**	SEV
Germany:	VDE	**United Kingdom:**	BSI

In Europe, two conductors power cord must be VDE type, H05VVH2-F or H03VVH2-F and for three conductors power cord must be VDE type, H05VV-F.

For the United States and Canada, two-pin plug configuration must be 2-15P (250 V) or 1-15P (125 V) and three-pin plug configuration must be 6-15P (250 V) or 5-15P (125 V) as designated in the U.S. National Electrical Code Handbook and the Canadian Electrical Code Part II.

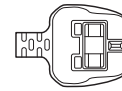
The following illustrations show the plug shapes for the U.S.A. and Canada, the United Kingdom, Australia, Europe, Middle-East, Africa, South Africa, Switzerland, Italy and China.

USA



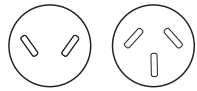
UL approved

United Kingdom, South Africa, Middle-East



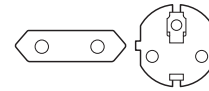
BS approved

Australia



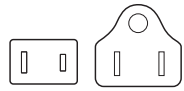
AS approved

Europe, Africa, South Africa, Middle-East



Approved by the appropriate agency

Canada



CSA approved

China

CCC approved

State of Israel

SII approved

Africa

Approved by the appropriate agency

Switzerland

Approved by the appropriate agency

Italy

Approved by the appropriate agency

Information for Wireless Devices

Wireless Technology Interoperability

The Wireless LAN is compatible with other LAN systems with Direct Sequence Spread Spectrum (DSSS) /Orthogonal Frequency Division Multiplexing (OFDM) radio technology, and is compliant to:

- The IEEE 802.11 Standard on Wireless LANs (Revision a/b/g/n/ac/ax), as defined and approved by the Institute of Electrical and Electronics Engineers.

Bluetooth® Modules are designed to be interoperable with any product with Bluetooth® wireless technology that is based on Frequency Hopping Spread Spectrum (FHSS) radio technology, and is compliant to:

- Bluetooth® Specification (depending on the model you purchased), as defined and approved by the Bluetooth® Special Interest Group.
- Logo certification with Bluetooth® wireless technology as defined by the Bluetooth® Special Interest Group.

This Bluetooth® product is not compatible with devices using Bluetooth® Version 1.0B specifications.

The wireless devices have not completed verification of connection and operation with all devices which are using the Wireless LAN or Bluetooth® radio technology.

Bluetooth® and Wireless LAN devices operate within the same radio frequency range and might interfere with one another. If you use Bluetooth® and Wireless LAN devices simultaneously, you might occasionally experience a less than optimal network performance or even lose your network connection.

If you experience any such problem, immediately turn off either one of your Bluetooth® or Wireless LAN.

Wireless devices and your health

Wireless products, like other radio devices, emit radio frequency electromagnetic energy. The level of energy emitted by wireless products however is far much less than the electromagnetic energy emitted by wireless devices like for example mobile phones.

Because wireless products operate within the guidelines found in radio frequency safety standards and recommendations, Dynabook believes wireless products are safe for use by consumers. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature.

In some situations or environments, the use of wireless products might be restricted by the proprietor of the building or responsible representatives of the organization. These situations might for example include:

- Using the wireless products equipment on board of airplanes, or
- In any other environment where the risk of interference to other devices or services is perceived or identified as harmful.

If you are uncertain of the policy that applies to the use of wireless devices in a specific organization or environment (for example, airports), you are encouraged to ask for authorization to use the wireless device prior to turning on the equipment.

Wireless LAN Technology

The wireless communication function of the computer supports some wireless communication devices.

Only some models are equipped with both Wireless LAN and Bluetooth® functions.

- *Do not use the Wireless LAN (Wi-Fi®) or Bluetooth® functionalities near a microwave oven or in areas subject to radio interference or magnetic fields. Interference from a microwave oven or other source can disrupt Wi-Fi® or Bluetooth® operation.*
- *Turn off all wireless functionalities when near a person who might have a cardiac pacemaker implant or other medical electric device. Radio waves might affect pacemaker or medical device operation, possibly resulting in serious injury. Follow the instruction for your medical device when using any wireless functionality.*
- *Always turn off wireless functionality if the computer is near automatic control equipment or appliances such as automatic doors or fire detectors. Radio waves can cause malfunction of such equipment, possibly resulting in serious injury.*
- *It might not be possible to make a network connection to a specified network name using the ad hoc network function. If this occurs, the new network (*) has to be configured for all computers connected to the same network in order to re-enable network connections.*
  ** Make sure to use new network name.*

Security

- Dynabook strongly recommends that you enable encryption functionality, otherwise your computer is open to illegal access by an outsider using a wireless connection. If this occurs, the outsider might illegally access your system, eavesdrop, or cause the loss or destruction of stored data.
- Dynabook is not liable for the loss of data due to eavesdropping or illegal access through the wireless LAN and the damage thereof.

Card Specifications

Compatibility	■ IEEE 802.11 Standard for Wireless LANs
Network Operating System	■ Microsoft Windows Networking
Media Access Protocol	■ CSMA/CA (Collision Avoidance) with Acknowledgment (ACK)

Radio Characteristics

Radio Characteristics of Wireless LAN module might vary according to:

- Country/region where the product was purchased
- Type of product

Wireless communication is often subject to local radio regulations. Although Wireless LAN wireless networking products have been designed for operation in the license-free 2.4 GHz and 5 GHz band, local radio regulations might impose a number of limitations to the use of wireless communication equipment.

Radio Frequency	■ Band 5 GHz (5150-5850 MHz) (Revision a, n, ac and ax) ■ Band 2.4 GHz (2400-2483.5 MHz) (Revision b/g, n and ax)

The range of the wireless signal is related to the transmit rate of the wireless communication. Communications at lower transmit range might travel larger distances.

- The range of your wireless devices can be affected when the antennas are placed near metal surfaces and solid high-density materials.
- Range is also impacted due to "obstacles" in the signal path of the radio that might either absorb or reflect the radio signal.

Radio Frequency Interference Requirements

This device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range.

High-power radars are allocated as primary users (i.e. priority users) of the bands 5.25 to 5.35 GHz and 5.65 to 5.85 GHz and that these radars could cause interference and/or damage to LE-LAN devices.

Bluetooth® wireless technology

Some computers in this series have Bluetooth® wireless communication function which eliminates the need for cables between electronic devices such as computers, printers, and mobile phones. When it is enabled, Bluetooth® provides a safe and trustworthy wireless personal area network environment that is quick and easy.

You cannot use the built-in Bluetooth® functions of the computer and an external Bluetooth® adaptor simultaneously. For reference, Bluetooth® wireless technology has the following features:

Security

Two advanced security mechanisms ensure a high level of security:

- Authentication prevents access to critical data and makes it impossible to falsify the origin of a message.
- Encryption prevents eavesdropping and maintains link privacy.

Worldwide operation

The Bluetooth® radio transmitter and receiver operate in the 2.4 GHz band, which is license-free and compatible with radio systems in most countries in the world.

Radio links

You can easily establish links between two or more devices, with these links being maintained even if the devices are not within a line-of-sight of each other.

Radio Regulatory Information

The Wireless device must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. This product complies with the following radio frequency and safety standards.

Europe

Restrictions for Use of 2400.0-2483.5MHz Frequencies in Europe

Azerbaijan:	Limited implementation	No license needed if used indoor and power not exceeding 30 mW (14.77dBm).
Italy: IT	Implemented	The public use is subject to general authorisation by the respective service provider.

Russian Federation:	Limited implementation	Using SRD (Short Range Device) with FHSS (Frequency-Hopping Spread Spectrum) modulation. 1. Maximum 2.5mW (4dBm) EIRP (Equivalent Isotropically Radiated Power) is permitted to use. 2. Maximum 100mW (20dBm) EIRP is permitted to use with the following conditions: Permitted to use SRD for outdoor applications without restriction on installation height only for purposes of gathering telemetry information for automated monitoring and resources accounting systems. Permitted to use SRD for other purposes for outdoor applications only when the installation height is not exceeding 10m above the ground surface. 3. Maximum 100mW (20dBm) EIRP. Indoor applications is permitted to use.

		Using SRD with DSSS (Direct Sequence Spread Spectrum) and other than FHSS wideband modulation. 1. Maximum EIRP density is 2mW/MHz. Maximum100mW (20dBm) EIRP is permitted to use. 2. Maximum EIRP density is 20mW/MHz. Maximum 100mW (20dBm) EIRP is permitted to use with the following condition: It is permitted to use SRD for outdoor applications only for purposes of gathering telemetry information for automated monitoring and resources accounting systems or security systems. 3. Maximum EIRP density is 10mW/MHz. Maximum 100mW (20dBm) EIRP. Indoor applications is permitted to use.
Ukraine:	Limited implementation	EIRP =100mW (20dBm) with built-in antenna's maximum gain is 6dBi.

Restrictions for Use of 5725-5875MHz Frequencies in Europe

Russian Federation:	Limited implementation	When duty cycle is 0.1% or using LBT (Listen Before Talk) technology. Antenna height should not exceed 5m, with maximum EIRP 25mW (13.98dBm) is permitted to use.

Software Version and Maximum Power Output of the Wireless Module

Europe: model AX201D2W

Software Version	Intel® PROSet/Wireless WiFi Software 21.x and following versions

Maximum Power Output	
(2400 - 2483.5 MHz) IEEE802.11 b/g/n/ax mode / Bluetooth	Maximum 100mW (20dBm) EIRP
(2400 - 2483.5 MHz) BLE	Maximum 10mW (10dBm) EIRP
(5150 - 5725 MHz) IEEE802.11 a/n/ac/ax mode	Maximum 200mW (23dBm) EIRP The low band 5.15 - 5.35 GHz is for indoor use only.
(5745 - 5875 MHz) IEEE802.11 a/n/ac/ax mode	Maximum 25mW (13.98dBm) EIRP

Europe: model EM7565

Software (Firmware) Version: SWI9X30C_02.xx

Band	Frequencies		Conducted Tx (Transmit) power tolerances
LTE frequency band support			
Band 1	2100 MHz	Tx: 1,920–1,980 MHz	+23 dBm ± 1 dB
		Rx: 2,110–2,170 MHz	
Band 3	1800 MHz	Tx: 1,710–1,785 MHz	+23 dBm ± 1 dB
		Rx: 1,805–1,880 MHz	
Band 7	2600 MHz	Tx: 2,500–2,570 MHz	+22 dBm ± 1 dB
		Rx: 2,620–2,690 MHz	
Band 8	900 MHz	Tx: 880–915 MHz	+23 dBm ± 1 dB
		Rx: 925–960 MHz	
Band 20	800 MHz	Tx: 832–862 MHz	+23 dBm ± 1 dB
		Rx: 791–821 MHz	
WCDMA frequency band support			
Band 1	WCDMA 2100	Tx: 1,920–1,980 MHz	+23 dBm ± 1 dB
		Rx: 2,110–2,170 MHz	
Band 3	WCDMA 1800	Tx: 1,710–1,785 MHz	+23 dBm ± 1 dB
		Rx: 1,805–1,880 MHz	
Band 8	WCDMA 900	Tx: 880–915 MHz	+23 dBm ± 1 dB
		Rx: 925–960 MHz	

To remain in conformance with European spectrum usage laws for Wireless LAN operation, the above 2.4 GHz and 5 GHz channel limitations apply for outdoor usage. The user should use the wireless LAN utility to check the current channel of operation. If operation is occurring outside of the allowable frequencies for outdoor use, as listed above, the user must contact the applicable national spectrum regulator to request a license for outdoor operation.

Canada - Industry Canada (IC)

This device complies with RSS-247 of the Industry Canada Rules. 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.

Ce dispositif est conforme à la norme CNR-247 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Les dispositifs fonctionnant dans la bande 5.15-5.25 GHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

Les utilisateurs devraient aussi être avisés que les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bandes 5.25-5.35 GHz et 5.65-5.85 GHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

The term “IC” before the equipment certification number only signifies that the Industry Canada technical specifications were met.

USA - Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Refer to the FCC information section for the detailed information.

Caution: Exposure to Radio Frequency Radiation

The radiated output power of the Wireless device is far below the FCC radio frequency exposure limits. Nevertheless, the Wireless device shall be used in such a manner that the potential for human contact during normal operation is minimized.

The installer of this radio equipment must ensure that the antenna is located or pointed such that it does not emit RF field in excess of Health Canada limits for the general population; consult Safety Code 6, obtainable from Health Canada's website www.hc-sc.gc.ca

Caution: Radio Frequency Interference Requirements

This device is restricted to indoor use due to its operation in the 5.15 to 5.25 GHz frequency range.

High-power radars are allocated as primary users (i.e. priority users) of the bands 5.25 to 5.35 GHz and 5.65 to 5.85 GHz and that these radars could cause interference and/or damage to LE-LAN devices.

Taiwan

Article 12	Without permission granted by the NCC, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to any approved low power radio frequency devices.
Article 14	The low power radio-frequency devices shall not influence aircraft security and interfere legal communications. If found, the user shall cease operating immediately until no interference is achieved. The said legal communications means radio communications is operated in compliance with the Telecommunications Act. The low power radio-frequency devices must be susceptible with the interference from legal communications or ISM radio wave radiated devices.

Australia and New Zealand regulatory compliance

This equipment incorporates a radio transmitting device, in normal use a separation distance of 20cm will ensure radio frequency exposure level complies with the Australian and New Zealand Standards.

Using this equipment in Japan

In Japan, the frequency bandwidth of 2,400 MHz to 2,483.5 MHz for second generation low-power data communication systems such as this equipment overlaps that of mobile object identification systems (premises radio station and specified low-power radio station).

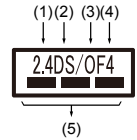
1. Important notice

The frequency bandwidth of this equipment may operate within the same range as industrial devices, scientific devices, medical devices, microwave ovens, licensed radio stations and non-licensed specified low-power radio stations for mobile object identification systems (RFID) used in factory production lines (Other Radio Stations).

1. Before using this equipment, ensure that it does not interfere with any of the equipment listed above.
2. If this equipment causes RF interference to other radio stations, promptly change the frequency being used, change the location of use, or turn off the source of emissions.
3. Contact an authorized service provider if you have problems with interference caused by this product to Other Radio Stations.

2. Indication for Wireless LAN

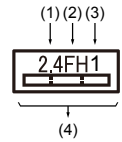
The indication shown below appears on this equipment.



1. 2.4 : This equipment uses a frequency of 2.4 GHz.
2. DS : This equipment uses DS-SS modulation.
3. OF : This equipment uses OFDM modulation.
4. 4 : The interference range of this equipment is less than 40 m.
5. ▬▬▬ : This equipment uses a frequency bandwidth from 2,400 MHz to 2,483.5 MHz. It is possible to avoid the band of mobile object identification systems.

3. Indication for Bluetooth®

The indication shown below appears on this equipment.



1. 2.4 : This equipment uses a frequency of 2.4 GHz.
2. FH : This equipment uses FH-SS modulation.
3. 1 : The interference range of this equipment is less than 10 m.
4. ▭ : This equipment uses a frequency bandwidth from 2,400 MHz to 2,483.5 MHz. It is impossible to avoid the band of mobile object identification systems.

4. About the JEITA

5 GHz Wireless LAN supports W52/W53/W56 Channel.

IEEE802.11b/g/n/ax			
IEEE802.11a/n/ac/ax			
J52	W52	W53	W56

Device Authorization

This device obtains the Technical Regulation Conformity Certification and it belongs to the device class of radio equipment of low-power data communication system radio station stipulated in the Telecommunications Business Law of Japan.

- Intel® Wi-Fi® 6 AX201

  The Name of the radio equipment: AX201D2W

  DSP Research, Inc.

  Approval Number: D180132003

The following restrictions apply:

- Do not disassemble or modify the device.
- Do not install the embedded wireless module into other device.

Information about Intel® Authenticate

For Intel® Authenticate, please refer to www.intel.com/authenticate or related Intel website.

Accessibility

Accessibility options provided by Windows 10 operating system are accessible through Ease of Access features of Windows settings. It allows you customise your Dynabook notebook the way you want to use it. To see the available features in one of the following ways:

- Go to **Start** and select ⚙ **(Settings)**.
- For touch screen, slide your finger inward from the screen's right edge inward and tap the ⚙ **(All Settings)** icon.
- Using a keyboard, press the ⊞ **(Windows key) + I**, scroll up to the word **Settings**, then press Enter.

Then select **Ease of Access** from the **Windows Settings** screen.

Ease of Access for Dynabook notebook

Ease of access options provides those with learning, vision, hearing, mobility and other impairments with the following features categories.

Vision

- **Display:** To change of text similar to zoom in or out in browser or using the magnifying glass option. You can **personalise your background and other colours**. Show animations, transparency and automatically hide scroll bars in Windows can be enabled or disabled. The **Show notification** for can be adjusted for 5 seconds, 7 seconds, 15 seconds, 30 seconds, 1 minute and 5 minutes.
- **Cursor & pointer:** Makes pointer, cursor and touch feedback easier to see. Change pointer size and colour, cursor thickness, touch feedback and make visual feedback for touch points darker and larger.
- **Magnifier:** Makes part or all of your screen bigger allowing words and images easier to see. For more information, refer to Use Magnifier to make things on the screen easier to see.
- **Colour Filters:** Makes photos and colours easier to see by applying a colour filter to your screen. Toggle **Turn on colour filters** to enable or disable this feature. Then, select a colour filter from the menu and see which one best suits you.
- **High contrast:** This can be turned on using the toggle under **Turn on high contrast**. Then, choose a theme from the drop-down menu to customise colour for links and button text. To turn high contrast mode on or off from the sign-in screen, select the **Ease of access** button , then turn on the toggle under High Contrast. From the keyboard press **Left Alt + Left Shift + Print Screen**.
- **Narrator:** Screen-reading app built into Windows 10. For more information, refer to How to use Narrator.

Click here for more information about making your device easier to see or use without a screen.

Hearing

- **Audio:** For those with hearing difficulties, this option makes it easier to hear with features like **Hear all sounds in one channel**, and **Display audio alerts visually**.
- **Closed captions:** Lets you read the word spoken in the audio portion of a video, TV show or Movie that supports Closed Caption technology. You can select the settings you want and see how they appear in Preview.

Click here for more information about making your device easier to hear or use with these visual alternatives to sound.

Interaction

- **Speech:** Talk instead of type. Press the **(Windows key) + H** to start dictation or select the microphone button on the touch keyboard. Cortana, the Windows 10 built-in digital assistant can help with setting reminders, opening apps, finding facts, and sending emails and text messages.

  Cortana is only available in certain countries and some Cortana features might not be available everywhere.
- **Keyboard:** Among many other features, this option allows those with limited typing ability to type by pointing and clicking.
- **Mouse:** Allows you to change the size, color of the mouse pointer making it easier to view. Other mouse properties settings are customizable through the **Additional mouse options**.
- **Eye control:** Allows you to setup an eye tracking device. Refer to Compatible Eye tracking device for more information.

For more information about Ease of Access and other accessibility features with the preloaded Windows 10 operating system, click here.

Others

- **Hardware:** All ports used for input or output device connections are industry standards and can be used to connect to any industry standard compatible third party devices.
- **Power On/Off:** User can choose to have their notebook go to sleep mode to avoid having to manually power off or click on **Start** and then select **(Power) > Shutdown** when closing the lid. Click here for more information on this feature. The notebook can be configured to resume when the lid is open without having to push the power on button. This can be specified in the Power Options. Right click on the battery icon in task bar and select **Power Options** to configure.
- **Sign-in options:** Windows offer a number of sign-in options including biometric and non-biometric, refer to *Sign-in options* in Chapter 2 of the user's manual.
- **Fingerprint Sensor:** Some notebooks configuration have fingerprint sensor for enrolling and recognizing fingerprints. Refer to *Using the Fingerprint Sensor* section for more information.
- **Battery:** When the AC adaptor is not connected, the main power source of the computer is the main battery. Refer to the *Battery* section for information about charging and caring of the battery pack.
- **Wireless WAN:** Some models are equipped with wireless WAN device. Refer to *Wireless WAN device* section for more information.
- **GPS Function:** If your computer includes Wireless WAN device, it may include GPS. Refer to *GPS Function* section for more information.

- **USB Type-C™ Adapters:** Your computer capabilities can be enhanced by connecting external devices such as RGB monitor to the USB Type-C™ port via USB Type-C™ adapters. Refer to *USB Type-C™ Adapters* section for more information.
- **Wireless Display:** Your computer might support wireless display, a wireless technology which utilizes WiFi to allow the computer to be wirelessly connected to external displays including TVs as extended screens. Refer to *Wireless display* section for more information.
- **Security Lock:** This feature enables you to anchor your computer to a desk or other object in order to prevent unauthorised removal or theft. Refer to *Security lock* section for more information.
- **Sound System and Video mode:** This section describes some of the audio controls functions such as volume mixer, Microphone level, Realtek Audio Console and video modes. Refer to *Sound Systems and Video mode* section for more information.
- **Utilities and Advanced Usage:** Your computer comes with pre-installed utilities such as dynabook Settings, eco Utility, System Password, User Password, Supervisor Password, Pre-Boot Authentication, dynabook Service Station, dynabook Setup Utility, and dynabook Maintenance Utility. Refer to *Utilities and Advanced Usage* section for more information. You might have all the software listed depending on the model you purchased.
- **Special features:** If your computer may come pre-installed with several special features such as Display automatic power off, Internal storage drive automatic power off, System automatic Sleep/ Hibernation Mode, Power on password, Intelligent power supply, Battery save mode, Panel power on/off, Low battery automatic Hibernation Mode, Sleep Mode, Hibernation Mode, USB Wake-up function, and Heat dispersal. Refer to *Special features* section for more information.
- **Troubleshooting:** Dynabook has designed this computer for durability, however, should problems occur, you are able to use the procedures detailed in the *Troubleshooting* section to help determine the cause. You should familiarize yourself with this section as knowing what might go wrong can help prevent problems from occurring in the first place.
- **Support:** Please visit our support website support.dynabook.com if you need further assistance.

Legal Footnotes

Non-applicable Icons

Certain computer chassis are designed to accommodate all possible configurations for an entire product series. Therefore, be aware that your selected model might not have all the features and specifications corresponding to all of the icons or switches shown on the computer chassis.

CPU

CPU performance in your computer product might vary from specifications under the following conditions:

- use of certain external peripheral products
- use of battery power instead of AC power
- use of certain multimedia, computer generated graphics or video applications
- use of standard telephone lines or low speed network connections
- use of complex modeling software, such as high end computer aided design applications
- use of several applications or functionalities simultaneously
- use of computer in areas with low air pressure (high altitude >1,000 meters or >3,280 feet above sea level)
- use of computer at temperatures outside the range of 5°C to 30°C (41 -86°F) or >25°C (77°F) at high altitude (all temperature references are approximate and might vary depending on the specific computer model - contact Technical support for details).

CPU performance might also vary from specifications due to design configuration.

Under some conditions, your computer product might automatically shut down. This is a normal protective feature designed to reduce the risk of lost data or damage to the product when used outside recommended conditions. To avoid risk of lost data, always make back-up copies of data by periodically storing it on an external storage medium. For optimum performance, use your computer product only under recommended conditions. Read additional restrictions in your product documentation. Contact technical service and support, refer to *Technical support* section for more information.

64-Bit Computing

Certain 32-bit device drivers and/or applications might not be compatible with a 64-bit CPU/operating system and therefore might not function properly.

Memory (Main System)

Part of the main system memory might be used by the graphics system for graphics performance and therefore reduce the amount of main system memory available for other computing activities. The amount of main system memory allocated to support graphics might vary depending on the graphics system, applications utilized, system memory size, and other factors.

Battery Life

Battery life might vary considerably depending on product model, configuration, applications, power management settings, and features utilized, as well as the natural performance variations produced by the design of individual components. Published battery life numbers are achieved on select models and configurations tested by Dynabook at the time of publication. Recharge time varies depending on usage. Battery might not charge while computer is consuming full power.

After going through many charge and discharge cycles, the battery loses its ability to perform at maximum capacity and needs to be replaced. This is a normal phenomenon for all batteries. To purchase a new battery pack, see the accessories information that is shipped with your computer.

Internal Storage Drive Capacity

1 Gigabyte (GB) means 10^9 = 1,000,000,000 bytes using powers of 10. The computer operating system, however, reports storage capacity using powers of 2 for the definition of 1 GB = 2^{30} = 1,073,741,824 bytes, and therefore shows less storage capacity. Available storage capacity will also be less if the product includes one or more pre-installed operating systems, such as Microsoft Operating System and/or pre-installed software applications, or media content. Actual formatted capacity might vary.

Graphics Processing Unit (GPU)

Graphics processing unit (GPU) performance might vary depending on product model, design configuration, applications, power management settings and features utilized. GPU performance is only optimized when operating in AC power mode and might decrease considerably when operating in battery power mode.

Total Available Graphics Memory is the total of, as applicable, Dedicated Video Memory, System Video Memory and Shared System Memory. Shared System Memory varies depending on system memory size and other factors.

Wireless LAN

The transmission speed over the wireless LAN and the distance over which wireless LAN can reach might vary depending on surrounding electromagnetic environment, obstacles, access point design and configuration, and client design and software/hardware configurations.

The actual transmission speed is lower than the theoretical maximum speed.

Copy Protection

Applicable copy protection standards included in certain media may prevent or limit recording or viewing of the media.

Glossary

The terms in this glossary cover topics related to this manual. Alternate naming is included for reference.

Abbreviations

AC:	Alternating Current
AMT:	Intel® Active Management Technology
ASCII:	American Standard Code for Information Interchange
BIOS:	Basic Input/output System
BD-ROM:	Blu-ray Disc™ Read-only Memory
bps:	bits per second
CD:	Compact Disc
CD-ROM:	Compact Disc Read-only Memory
CD-RW:	Compact Disc-rewritable
CMOS:	Complementary Metal-oxide Semiconductor
CPU:	Central Processing Unit
DC:	Direct Current
DDR:	Double Data Rate
DIMM:	Dual Inline Memory Module
DVD:	Digital Versatile Disc
DVD-R:	Digital Versatile Disc-recordable
DVD-RAM:	Digital Versatile Disc-random Access Memory
DVD-R DL:	Digital Versatile Disc Recordable Dual Layer
DVD-ROM:	Digital Versatile Disc-read Only Memory
DVD-RW:	Digital Versatile Disc-rewritable
DVD+R DL:	Digital Versatile Disc Recordable Double Layer
FAT:	File Allocation Table
FCC:	Federal Communications Commission
FHD:	Full High Definition
GB:	gigabyte
GBps:	gigabytes per second
HD:	High Definition
HD+:	High Definition Plus
HDD:	Hard Disk Drive

HDMI™:	High-definition Multimedia Interface™
HDMI™ CEC:	High-definition Multimedia Interface™ Consumer Electronics Control
HTML:	Hypertext Markup Language
IEEE:	Institute of Electrical and Electronics Engineers
I/O:	Input/Output
IRQ:	interrupt request
ISP:	Internet Service Provider
KB:	kilobyte
LAN:	Local Area Network
LCD:	Liquid Crystal Display
LED:	Light Emitting Diode
MB:	megabyte
MBps:	megabytes per second
MMC:	MultiMediaCard
OCR:	Optical Character Recognition (Reader)
PC:	Personal Computer
PCI:	Peripheral Component Interconnect
PCMCIA:	Personal Computer Memory Card International Association
RAM:	Random Access Memory
RGB:	Red, Green, and Blue
RFI:	Radio Frequency Interference
ROM:	Read-Only Memory
RTC:	Real-Time Clock
S/P DIF:	Sony/philips Digital Interface Format
SD:	Secure Digital
SDHC:	Secure Digital High Capacity
SDXC:	Secure Digital Extended Capacity
SDRAM:	Synchronous Dynamic Random Access Memory
SSD:	Solid-State Drive
TFT:	Thin-film Transistor
URL:	Uniform Resource Locator
USB:	Universal Serial Bus
WAN:	Wide Area Network

WQHD:	Wide Quad High Definition
www:	World Wide Web

Index

A

AC adaptor
- additional 4-17
- connecting 2-3

B

Battery
- extending life 4-7
- monitoring capacity 4-6
- real time clock 4-4
- save mode 5-6

Battery pack
- replacing 4-7

Bluetooth® 7-6

C

Cleaning the computer 1-17

Cooling vents 3-2

D

DC IN/Battery indicator 3-6

Display
- automatic power off 5-5

Documentation list 2-1

E

Equipment checklist 2-1

External monitor
- problems 6-11

G

Graphics Processing Unit 3-6

H

Hard disk drive
- automatic power off 5-5

L

LAN
- cable types 4-12
- connecting 4-13

LAN jack 4-12

M

Moving the computer 1-17

P

Password
- power on 5-6
- Starting the computer by password 5-3
- Supervisor 5-3
- user 5-2

Power
- Hibernation Mode 2-10
- Shut Down mode 2-8
- Sleep Mode 2-9
- turning off 2-8
- turning on 2-5

Problems
AC power 6-5
Analyzing the problem 6-2
Battery 6-5
Dual Pointing device 6-8
External monitor 6-10
Hardware and system checklist 6-4
HDD 6-7, 6-8
Overheating power down 6-5
Power 6-4
Real Time Clock 6-7
Sound system 6-10
Technical support 6-12
USB device 6-9
USB mouse 6-8

R

Recovery hard disk drive 2-14

Recovery Media 2-13

S

Security lock 4-16

SIM Card
installing 4-9
removing 4-10

Sleep Mode
setting 2-9
System automatic 5-6

Sound system
problems 6-10

U

USB device
problems 6-9

V

Video mode 4-19

Video RAM 3-6

W

Wireless communication 7-5