# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6431345

| SUBMISSION TYPE:      | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT     |

#### **CONVEYING PARTY DATA**

| Name             | Execution Date |
|------------------|----------------|
| FUTOSHI KURIYAMA | 07/04/2019     |
| RYO YONEZAWA     | 07/05/2019     |
| TAKESHI MORI     | 07/05/2019     |
| TETSUYA URIMOTO  | 07/12/2019     |

### **RECEIVING PARTY DATA**

| Name:           | PANASONIC INTELLECTUAL PROPERTY MANAGEMENT CO., LTD. |
|-----------------|--|
| Street Address: | 1-61, SHIROMI 2-CHOME, CHUO-KU, OSAKA-SHI            |
| City:           | OSAKA  |
| State/Country:  | JAPAN  |
| Postal Code:    | 540-6207   |

#### **PROPERTY NUMBERS Total: 1**

| Property Type       | Number   |
|---------------------|----------|
| Application Number: | 16537559 |

# **CORRESPONDENCE DATA**

Fax Number:

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

**Email:** epas.pkp@ml.jp.panasonic.com

Correspondent Name: PASONA KNOWLEDGE PARTNER INC.

Address Line 1: 8F OBP PANASONIC TOWER

Address Line 2: 1-61, SHIROMI 2-CHOME, CHUO-KU

Address Line 4: OSAKA, JAPAN 540-6208

| ATTORNEY DOCKET NUMBER: | P1005893US01 |
|-------------------------|--------------|
| NAME OF SUBMITTER:      | ASAMI KATO   |
| SIGNATURE:              | /Asami KATO/ |
| DATE SIGNED:            | 12/03/2020   |

### **Total Attachments: 3**

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PATENT 506384589 REEL: 054540 FRAME: 0266

|                    |              | Assignment Form (Oct. 2014) |
|--------------------|--------------|-----------------------------|
| Panasonic Ref*:    | P1005893US01 | Application Serial No       |
| Japan Firm Name: _ | PIPM Direct  | Japan Firm Ref:             |
| US Firm Name*:     |              | US Firm Ref:                |
| (* must be filled) |              |                             |

## **ASSIGNMENT**

| WHEREAS, the undersigned has (have) invented the invention entitled:  |   |   |  |  |
|---|---|---|--|--|
| Box 1   |   |   |  |  |
| Title of Invention: ELECTRONIC DEVICE   |   |   |  |  |
| 1. For use when signing Declaration prior to filing   | g U.S. patent application (check or   | ily one box below)  |  |  |
| (a) for which an application for U.S. patent has been executed  | by the undersigned concur   | rently herewith, or   |  |  |
| (b)□ for which an application for U.S. patent has been executed   | (b)□ for which an application for U.S. patent has been executed on the following date(s): |   |  |  |
| (if Declaration & Assignment are signed on the same day, check (a) and make no entry in the blank; if t                 | he Declaration was signed before this Assign  | nment, enter the date(s) on which you signed the Declaration) |  |  |
| (c)□ for which an International Application has been filed as:  | PCT Application No.   | and   |  |  |
| (for the PCT-US national entry, check only (c) and enter PCT application number in the right)  PCT Application No.  and |   |   |  |  |
| 2. For use when signing Declara   | tion after filing U.S. patent applicati   | ion   |  |  |
| (d)p for which an application for U.S. patent has been filed on:  | Application Filing Date   | and,  |  |  |

WHEREAS, Panasonic Intellectual Property Management Co., Ltd. of 1-61. Shiromi 2-chome, Chuo-ku, Osaka-shi, Osaka 540-6207

<u>Japan,</u>

its/their heirs, successors, legal representatives and assigns (hereinafter designated as "Assignee(s)") is/are desirous of acquiring the entire right, title, and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and intended to be legally bound hereby, the undersigned, by these presents, does sell, assign and transfer unto said Assignee(s) the entire and exclusive right, title and interest in and to; (i) said invention in the United States of America, its territories, dependencies and possessions (hereinafter designated as the United States) and in all countries foreign to the United States; and (ii) this patent application and any and all related patent application(s) disclosing said invention, including provisionals, non-provisionals, conversions, divisions, continuations, continuations-in-part and reissues thereof in the United States and all countries foreign to the United States (hereinafter designated as "Related Applications"), along with all rights of priority created by this patent application under any treaty relating thereto; and (iii) any and all Letters Patent(s), including all renewals, extensions, reissues and reexamination certificates which may be granted therefore, and all rights to sue for past and future infringement thereunder, in the United States and in all countries foreign to the United States for the full term or terms thereof.

The undersigned agree(s) to execute all papers necessary in connection with this application and any and all Related Applications thereof, all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements, all papers necessary in connection with any interference which may be declared concerning this application or any and all Related Applications thereof and to cooperate with the Assignee(s) in every way possible in obtaining and producing evidence and proceeding with such interference, and for any and all litigations regarding, or for the purpose of protecting the right, title and interest in and to said invention, this application and any and all Related Applications or Letters Patent(s) therefore, and to testify in any legal proceeding relating thereto and in support thereof, for the benefit of Assignee(s), and also to execute separate assignments in connection with such applications as the Assignee(s) may deem necessary or expedient.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States and any foreign patent(s) to the Assignee(s) and to vest all rights hereby conveyed to the Assignee(s) as fully and entirely as the same would have been held by the undersigned if this Assignment had not been made.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents, and officials of all foreign countries, whose duty is to issue patents, to issue any and all Letters Patent(s) resulting from said application or any and all Related Applications thereof to said Assignee(s) and hereby covenants that the undersigned has (have) full right to convey the entire interest herein assigned, and that the undersigned has (have) not executed, and will not execute, any assignment, sale, agreement or encumbrances in conflict herewith.

The undersigned hereby does sell, assign and transfer unto said Assignee(s) the full and exclusive authority for revoking power of attorney(s) executed by the undersigned in connection with this application and for appointing a new power of attorney in place thereof. The undersigned hereby grant(s) the Assignee(s) and the appointed U.S. patent attorneys and agents the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent Office for recordation of this document.

The undersigned hereby agree(s) that the above obligations shall apply to the undersigned both individually and collectively.

The undersigned hereby agree(s) that this Assignment shall be construed in accordance with the law of the appropriate jurisdiction within the United States.

IN WITNESS WHEREOF, executed by the undersigned on the date(s) following the undersigned name(s) and signature(s):

| Box2 | (Each Inventor, please Sign and Date below) |                 |                                |  |  |  |  |
|------|---|-----------------|--------------------------------|--|--|--|--|
|      | (e) First Name, Last Name                   | (f) Signature   | (g) Date signed                |  |  |  |  |
| (1)  | Futoshi KURIYAMA                            | Futali Kuriyaan | Month, Date, Year July 4, 2019 |  |  |  |  |
| (2)  | Ryo YONEZAWA                                |                 | Month, Date, Year              |  |  |  |  |
| (3)  | Takeshi MORI                                |                 | Month, Date, Year              |  |  |  |  |
| (4)  | Tetsuya URIMOTO                             |                 | Month, Date, Year              |  |  |  |  |

□Check if additional paper(s) is/are attached. Total of \_\_\_\_ page is submitted.

|                   |              |  | Assignment Form (Oct. 2014 |
|-------------------|--------------|--|----------------------------|
| Panasonic Ref*: _ | P1005893US01 |  | Application Serial No      |
| Japan Firm Name:  | PIPM Direct  |  | Japan Firm Ref:            |
| US Firm Name*:    |              |  | US Firm Ref:               |
|                   |              |  |                            |

## **ASSIGNMENT**

| WHEREAS, the undersigned has (have) invented the invention entitled:   |   | 55 55 55 FE                                       | #                        |
|--|---|---|--------------------------|
| Box 1  |   |   |                          |
| Title of Invention: ELECTRONIC DEVICE  |   |   | 35<br>33<br>31           |
| 1. For use when signing Declaration prior to fili  | ng U.S. patent application (check         | only one bax below)                               |                          |
| (a)s for which an application for U.S. patent has been executed  | by the undersigned conc                   | urrently herewith, or                             |                          |
| (b)d for which an application for U.S. patent has been executed  | on the following date(s):_                |   | , or                     |
| (if Declaration & Assignment are signed on the same day, check (a) and make no entry in the blank; if  | the Declaration was signed before this As | signment, enter the date(s) on which you:         | rigned the Borchirolioni |
| (c) for which an International Application has been filed as:  (for the PCT-US national entry, check only (c) and enter PCT application number in the right) | PCT Application No.                       |   | and                      |
| 2. For use when signing Declara  | ation after filing U.S. patent applic     | etion   |                          |
| (d) $\!$   | Application Filing Date                   | 1 30 000 11<br>10 000 000 000<br>1000 000 000 000 | and,                     |

WHEREAS, Panasonic Intellectual Property Management Co., Ltd. of 1-61, Shiromi 2-chome, Chuo-ku, Osaka-shi, Osaka 540-6207.

<u>Japan</u>

(\* must be filled)

its/their heirs, successors, legal representatives and assigns (hereinafter designated as "Assignee(s)") is/are desirous of acquiring the entire right, title, and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and intended to be legally bound hereby, the undersigned, by these presents, does sell, assign and transfer unto said Assignee(s) the entire and exclusive right, title and interest in and to; (i) said invention in the United States of America, its territories, dependencies and possessions (hereinafter designated as the United States) and in all countries foreign to the United States; and (ii) this patent application and any and all related patent application(s) disclosing said invention, including provisionals, non-provisionals, conversions, divisions, continuations, continuations-in-part and reissues thereof in the United States and all countries foreign to the United States (hereinafter designated as "Related Applications"), along with all rights of priority created by this patent application under any treaty relating thereto; and (iii) any and all Letters Patent(s), including all renewals, extensions, reissues and reexamination certificates which may be granted therefore, and all rights to sue for past and future infringement thereunder, in the United States and in all countries foreign to the United States for the full term or terms thereof.

The undersigned agree(s) to execute all papers necessary in connection with this application and any and all Related Applications thereof, all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements, all papers necessary in connection with any interference which may be declared concerning this application or any and all Related Applications thereof and to cooperate with the Assignee(s) in every way possible in obtaining and producing evidence and proceeding with such interference, and for any and all litigations regarding, or for the purpose of protecting the right, title and interest in and to said invention, this application and any and all Related Applications or Letters Patent(s) therefore, and to testify in any legal proceeding relating thereto and in support thereof, for the benefit of Assignee(s), and also to execute separate assignments in connection with such applications as the Assignee(s) may deem necessary or expedient.

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The undersigned hereby authorize(s) and request(s) the Commissioner of Patents, and officials of all foreign countries, whose duty is to issue patents, to issue any and all Letters Patent(s) resulting from said application or any and all Related Applications thereof to said Assignee(s) and hereby covenants that the undersigned has (have) full right to convey the entire interest herein assigned, and that the undersigned has (have) not executed, and will not execute, any assignment, sale, agreement or encumbrances in conflict herewith.

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The undersigned hereby grant(s) the Assignee(s) and the appointed U.S. patent attorneys and agents the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent Office for recordation of this

document.

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The undersigned hereby agree(s) that this Assignment shall be construed in accordance with the law of the appropriate jurisdiction within the

United States.

IN WITNESS WHEREOF, executed by the undersigned on the date(s) following the undersigned name(s) and signature(s).

| Box2 | (Each Inventor, please Sign and Date be | XXXXXX        |                               |
|------|---|---------------|-------------------------------|
|      | (e) First Name, Last Name               | (f) Signature | (g) Date signed               |
| (1)  | Futoshi KURIYAMA                        |               | Month, Date, Year             |
| (2)  | Ryo YONEZAWA                            | Ding Grezawa  | Month, Date, Year  45, 20 (9) |
| (3)  | Takeshi MORI                            | Takashi Miri  | July 5. 2019                  |
| (4)  | Tetsuya URIMOTO                         |               | Month, Date, Year             |

□Check if additional paper(s) is/are attached. Total of \_\_1\_ page is submitted

| Panasonic Ref*: P1005893US01 Japan Firm Name: PIPM Direct US Firm Name*:  | Ja   | oplication Serial No<br>pan Firm Ref:<br>S Firm Ref: | <u>catalatica confirmente confirmation de la catala</u> |  |
|---|--|--|---|--|
| (* street be filled)  | ASSIGNME   |  |   |  |
|   | 2.4  |  |   |  |
| WHEREAS, the undersigned has (have) invented :<br>8cx 1   | he invention entitled:   |  |   |  |
| Title of Invention:<br>ELECTRONIC DEVICE  |  |  |   |  |
| 1. For use when signing   | Daciaration prior to filing U.S. pater                                 | l application (check only one box be                 | iow)  |  |
| (a)s for which an application for U.S. patent t   | as been executed by the un   | dersigned concurrently here                          | with, or  |  |
| (b)o for which an application for U.S. patent l   | as been executed on the fol  | owing date(s):                                       | , Of  |  |
| (if Declaration & Assignment are signed on the some day, check (a) and  | make no entry in the blank. If the Declaration                         | was signed before this Assignment, enter the a       | atels) an which you signed the Declaration;             |  |
| (c)o for which an International Application ha  | [PCIAD   | plication No.  | and   |  |
| tfor the PCT-US national entry, check only (c) and enter PCT applica-   | ion number in the right;   |  |   |  |
|   | se when signing Declaration after fills<br>has been filled on: Applica |  | and,  |  |
|   |  |  | L. Carland Carla Second                                 |  |
| WHEREAS, Panseonic Intellectual Property Management Co. Ltd. of 1-81. Shiromi 2-chome. Chuo-hu. Ossia: shi. Ossia: \$60-6207.  JODON. Its/frieir heirs, successors, legal representatives and assigns (hereinafter designated as "Assignee(s)") is/are desirous of acquiring the entire right, title, and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor.  NOW. THEREFORE, to good and valuable consideration, the receipt and sufficiency of white are hereby acknowledged and intended to be legally bound hereby, the undersigned, by these presents, does sell, assign and transfer unto said Assignee(s) the entire and exclusive right, title and interest in and to; (i) said invention in the United States of America, its tentitions, dependention, florations-in-part and reissues thereof in the United States and in all countries foreign to the United States; and (ii) this patent application and any and all related patent applications) disclosing said invention in the United States of America, continuations, continuations, continuations-in-part and reissues thereof in the United States and all countries foreign to the United States (hereinafter designated as "Related Applications"), along with all rights of priority orested by this patent application under any treaty relating thereto, and (iii) any and all Letters Patent(s), including all renewals, extensions, reissues and reasonation certificates which may be granted therefore, and (iii) any and all Letters Patent(s) including all renewals, extensions, reissues and in all countries foreign to the United States for the full tention or terms thereof.  The undersigned agree(s) to execute all papers necessary in connection with this application and any and all Related Applications thereof, all papers as received in the supersection of the Interestinal Patential P |  |  |   |  |
| (e) First Name, Last Name   | () Si  | inature  | (g) Date signed<br>Morrh, Care, Year                    |  |
| (1) Futoshi KURIYAMA  |  | ***************************************              |   |  |

PATENT REEL: 054540 FRAME: 0269

Vsimuto

Month, Date, Year

12th, July 2019

Ryo YONEZAWA

Takeshi MORI

Tetsuya URIMOTO

**RECORDED: 12/03/2020** 

(2)

(3)

(4)