

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

| SUBMISSION TYPE:   | NEW ASSIGNMENT                  |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
|--|---------------------------------|---------------|---------------------------------|---------------------|-------------------------|-------------------|------------|----------------|------------|----------------|-------|--------------|----------|
| NATURE OF CONVEYANCE:  | ASSIGNMENT                      |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| CONVEYING PARTY DATA   |                                 |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| <table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Hidetoshi KITANAKA</td> <td>05/30/2013</td> </tr> <tr> <td>Shoji YOSHIOKA</td> <td>05/31/2013</td> </tr> <tr> <td>Keita HATANAKA</td> <td>05/31/2013</td> </tr> </tbody> </table>  |                                 | Name          | Execution Date                  | Hidetoshi KITANAKA  | 05/30/2013              | Shoji YOSHIOKA    | 05/31/2013 | Keita HATANAKA | 05/31/2013 |                |       |              |          |
| Name   | Execution Date                  |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| Hidetoshi KITANAKA   | 05/30/2013                      |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| Shoji YOSHIOKA   | 05/31/2013                      |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| Keita HATANAKA   | 05/31/2013                      |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| RECEIVING PARTY DATA   |                                 |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| <table border="1"> <tr> <td>Name:</td> <td>Mitsubishi Electric Corporation</td> </tr> <tr> <td>Street Address:</td> <td>7-3, Marunouchi 2-chome</td> </tr> <tr> <td>Internal Address:</td> <td>Chiyoda-ku</td> </tr> <tr> <td>City:</td> <td>Tokyo</td> </tr> <tr> <td>State/Country:</td> <td>JAPAN</td> </tr> <tr> <td>Postal Code:</td> <td>100-8310</td> </tr> </table>  |                                 | Name:         | Mitsubishi Electric Corporation | Street Address:     | 7-3, Marunouchi 2-chome | Internal Address: | Chiyoda-ku | City:          | Tokyo      | State/Country: | JAPAN | Postal Code: | 100-8310 |
| Name:  | Mitsubishi Electric Corporation |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| Street Address:  | 7-3, Marunouchi 2-chome         |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| Internal Address:  | Chiyoda-ku                      |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| City:  | Tokyo                           |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| State/Country:   | JAPAN                           |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| Postal Code:   | 100-8310                        |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| PROPERTY NUMBERS Total: 1  |                                 |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| <table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13978426</td> </tr> </tbody> </table>  |                                 | Property Type | Number                          | Application Number: | 13978426                |                   |            |                |            |                |       |              |          |
| Property Type  | Number                          |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| Application Number:  | 13978426                        |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| CORRESPONDENCE DATA  |                                 |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| <p>Fax Number: 7038362021<br/> <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 703-836-6620<br/>       Email: ashley.fernandez@bipc.com<br/>       Correspondent Name: BUCHANAN, INGERSOLL &amp; ROONEY PC<br/>       Address Line 1: POST OFFICE BOX 1404<br/>       Address Line 4: ALEXANDRIA, VIRGINIA 22313-1404</p> |                                 |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| ATTORNEY DOCKET NUMBER:  | 1032404-000457                  |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| NAME OF SUBMITTER:   | James A. LaBarre                |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| Signature:   | /James A. LaBarre/              |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| Date:  | 07/05/2013                      |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |
| Total Attachments: 1<br>source=Assignment#page1.tif  |                                 |               |                                 |                     |                         |                   |            |                |            |                |       |              |          |

OP \$40.00 13978426

# U.S. ASSIGNMENT

IN CONSIDERATION of the sum of One Dollar (\$1.00), and of other good and valuable consideration paid to the undersigned inventor(s) (hereinafter, "ASSIGNOR") by  
(Insert Name(s) & Address(es) of ASSIGNEE(S))

Mitsubishi Electric Corporation

7-3, Marunouchi 2-chome, Chiyoda-ku, Tokyo 100-8310 Japan

(hereinafter, "ASSIGNEE"), the receipt of which is hereby acknowledged, the undersigned ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest to the invention entitled  
(Title of Invention)

CHARGING AND DISCHARGING DEVICE

relating to International Patent Application PCT/JP2011/050205 and/or for which application for Letters Patent of the United States was executed on even date herewith or, if not so executed, was:

(a) executed on \_\_\_\_\_; (Insert date of execution of application, if not concurrent)

(b) filed on \_\_\_\_\_

Serial No. \_\_\_\_\_

Assignee's attorney is hereby authorized to insert in (b) the specified data, when known.

and to said application and all Letters Patent(s) of the United States granted on said application and any continuation, division, renewal, substitute, reissue or reexamination application based thereon, for the full term or terms for which the said Letters Patent(s) may be granted and including any extensions thereof (collectively, hereinafter, "said application(s) and Letters Patent(s)").

The ASSIGNOR agree(s), when requested by said ASSIGNEE and without charge to but at the expense of said ASSIGNEE, to do all acts which the ASSIGNEE may deem necessary, desirable or expedient, for securing, maintaining and enforcing protection for said invention, including in the preparation and prosecution of said application(s) and the issuance of said Letters Patent(s), in any interference, reissue, reexamination, or public use proceeding, and in any litigation or other legal proceeding which may arise or be declared in relation to same, such acts to include but not be limited to executing all papers, including separate assignments and declarations, taking all rightful oaths, providing sworn testimony, and obtaining and producing evidence.

IN WITNESS WHEREOF, the undersigned inventor(s) has (have) affixed his/her/their signature(s).

|    |  |  |                               |
|----|--|--|-------------------------------|
| 1) | <u>Hidetoshi KITANAKA</u><br>(Signature) | <u>Hidetoshi KITANAKA</u><br>(Type Name) | <u>May 30, 2013</u><br>(Date) |
| 2) | <u>Shoji YOSHIOKA</u><br>(Signature)     | <u>Shoji YOSHIOKA</u><br>(Type Name)     | <u>May 31, 2013</u><br>(Date) |
| 3) | <u>Keita HATANAKA</u><br>(Signature)     | <u>Keita HATANAKA</u><br>(Type Name)     | <u>May 31, 2013</u><br>(Date) |
| 4) | _____<br>(Signature)                     | _____<br>(Type Name)                     | _____<br>(Date)               |
| 5) | _____<br>(Signature)                     | _____<br>(Type Name)                     | _____<br>(Date)               |