

## 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>Teruo ASAKAWA</td> <td>09/09/2013</td> </tr> <tr> <td>Makoto YAMAMOTO</td> <td>09/03/2013</td> </tr> <tr> <td>Akira MACHIDA</td> <td>08/30/2013</td> </tr> <tr> <td>Masaaki KAWAGUCHI</td> <td>09/02/2013</td> </tr> </tbody> </table>		Name	Execution Date	Teruo ASAKAWA	09/09/2013	Makoto YAMAMOTO	09/03/2013	Akira MACHIDA	08/30/2013	Masaaki KAWAGUCHI	09/02/2013
Name	Execution Date										
Teruo ASAKAWA	09/09/2013										
Makoto YAMAMOTO	09/03/2013										
Akira MACHIDA	08/30/2013										
Masaaki KAWAGUCHI	09/02/2013										
RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>TOKYO ELECTRON LIMITED</td> </tr> <tr> <td>Street Address:</td> <td>3-1 Akasaka 5-chome, Minato-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>107-6325</td> </tr> </table>		Name:	TOKYO ELECTRON LIMITED	Street Address:	3-1 Akasaka 5-chome, Minato-ku	City:	Tokyo	State/Country:	JAPAN	Postal Code:	107-6325
Name:	TOKYO ELECTRON LIMITED										
Street Address:	3-1 Akasaka 5-chome, Minato-ku										
City:	Tokyo										
State/Country:	JAPAN										
Postal Code:	107-6325										
<table border="1"> <tr> <td>Name:</td> <td>MURATA MACHINERY, LTD.</td> </tr> <tr> <td>Street Address:</td> <td>3 Minami Ochiai-cho, Kisshoin, Minami-ku, Kyoto-shi</td> </tr> <tr> <td>City:</td> <td>Kyoto</td> </tr> <tr> <td>State/Country:</td> <td>JAPAN</td> </tr> <tr> <td>Postal Code:</td> <td>601-8326</td> </tr> </table>		Name:	MURATA MACHINERY, LTD.	Street Address:	3 Minami Ochiai-cho, Kisshoin, Minami-ku, Kyoto-shi	City:	Kyoto	State/Country:	JAPAN	Postal Code:	601-8326
Name:	MURATA MACHINERY, LTD.										
Street Address:	3 Minami Ochiai-cho, Kisshoin, Minami-ku, Kyoto-shi										
City:	Kyoto										
State/Country:	JAPAN										
Postal Code:	601-8326										
<table border="1"> <tr> <td>Name:</td> <td>MA SOLUTIONS LIMITED</td> </tr> <tr> <td>Street Address:</td> <td>2-31-11, Shima, Koriyama-shi</td> </tr> <tr> <td>City:</td> <td>Fukushima</td> </tr> <tr> <td>State/Country:</td> <td>JAPAN</td> </tr> <tr> <td>Postal Code:</td> <td>963-8034</td> </tr> </table>		Name:	MA SOLUTIONS LIMITED	Street Address:	2-31-11, Shima, Koriyama-shi	City:	Fukushima	State/Country:	JAPAN	Postal Code:	963-8034
Name:	MA SOLUTIONS LIMITED										
Street Address:	2-31-11, Shima, Koriyama-shi										
City:	Fukushima										
State/Country:	JAPAN										
Postal Code:	963-8034										
<table border="1"> <tr> <td>Name:</td> <td>DAIFUKU CO., LTD.</td> </tr> <tr> <td>Street Address:</td> <td>2-11, Mitejima 3-chome, Nishi Yodogawa-ku, Osaka-shi</td> </tr> <tr> <td>City:</td> <td>Osaka</td> </tr> <tr> <td>State/Country:</td> <td>JAPAN</td> </tr> <tr> <td>Postal Code:</td> <td>555-0012</td> </tr> </table>		Name:	DAIFUKU CO., LTD.	Street Address:	2-11, Mitejima 3-chome, Nishi Yodogawa-ku, Osaka-shi	City:	Osaka	State/Country:	JAPAN	Postal Code:	555-0012
Name:	DAIFUKU CO., LTD.										
Street Address:	2-11, Mitejima 3-chome, Nishi Yodogawa-ku, Osaka-shi										
City:	Osaka										
State/Country:	JAPAN										
Postal Code:	555-0012										

CH \$40.00 14004120

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14004120

**CORRESPONDENCE DATA**

Fax Number: 2027836031  
*Correspondence will be sent via US Mail when the fax attempt is unsuccessful.*  
Phone: 202-783-6040  
Email: mshirai@rfem.com  
Correspondent Name: Rothwell, Figg, Ernst & Manbeck, P.C.  
Address Line 1: 607 14th Street, N.W.  
Address Line 2: Suite 800  
Address Line 4: Washington, DISTRICT OF COLUMBIA 20005

ATTORNEY DOCKET NUMBER:	4030-0332US
NAME OF SUBMITTER:	Steven P. Weihrouch
Signature:	/Steven P. Weihrouch/
Date:	09/25/2013

Total Attachments: 4  
source=4030\_0332ASN#page1.tif  
source=4030\_0332ASN#page2.tif  
source=4030\_0332ASN#page3.tif  
source=4030\_0332ASN#page4.tif

UNITED STATES

ASSIGNMENT FROM INVENTOR

In consideration of One Dollar (\$1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned Assignor:

**Teruo ASAKAWA** of c/o Tokyo Electron Limited, 3-1, Akasaka 5-chome, Minato-ku, Tokyo 107-6325, Japan

**Makoto YAMAMOTO** of c/o Murata Machinery, Ltd., 3 Minami Ochiai-cho, Kisshoin, Minami-ku, Kyoto-shi, Kyoto 601-8326, Japan

**Akira MACHIDA** of 5-1-10, Matsunaga, Ikki-machi, Aizuwakamatsu-shi, Fukushima, 965-0001, Japan

**Masaaki KAWAGUCHI** of c/o Daifuku Co., Ltd., 2-11, Mitejima 3-chome, Nishiyodogawa-ku, Osaka-shi, Osaka 555-0012, Japan

hereby sells, assigns and transfers to Assignee:

**TOKYO ELECTRON LIMITED**, 3-1 Akasaka 5-chome, Minato-ku, Tokyo 107-6325, Japan  
**MURATA MACHINERY, LTD.**, 3 Minami Ochiai-cho, Kisshoin, Minami-ku, Kyoto-shi, Kyoto 601-8326, Japan  
**MA SOLUTIONS LIMITED**, 2-31-11, Shima, Koriyama-shi, Fukushima 963-8034, Japan  
**DAIFUKU CO., LTD.**, 2-11, Mitejima 3-chome, Nishi Yodogawa-ku, Osaka-shi, Osaka 555-0012, Japan

its successors, assigns and legal representatives, the entire right, title and interest for the United States and all foreign countries, in and to, and any and all improvements which are disclosed in

Application for Letters Patent which has been executed by the undersigned concurrently herewith and entitled

**PRODUCTION EFFICIENCY IMPROVING APPARATUS, PRODUCTION EFFICIENCY IMPROVING METHOD, AND COMPUTER PROGRAM**

and in and to said application and all divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent which have been or shall be filed in the United States and all other foreign countries on any of said improvements; and in and to all original and reissued patents which have been or shall be issued in the United States and all foreign countries on said improvements.

The Assignee may apply for and receive the Letters Patent in its own name. When requested by the Assignee or its successors, the undersigned will execute all other patent applications; proper oaths, assignments; powers of attorney, or other papers and communicate all facts known to it relating to the improvements and the history thereof; and generally do everything possible which the Assignee or its successors shall consider desirable for aiding in securing and maintaining proper patent protection for the improvements and for vesting title in the Assignee or its successors.

Assignor warrants that he/she has the full right to convey the rights and property described herein and no assignment, grant, mortgage or license or other agreement affecting such rights and property has been made to others by the undersigned.

ASSIGNOR

Dated: Sep. 9, 2013

By Teruo Asakawa  
Teruo ASAKAWA

Dated: September 3, 2013

By   
Makoto YAMAMOTO

Dated: \_\_\_\_\_, 2013

By \_\_\_\_\_  
Akira MACHIDA

Dated: \_\_\_\_\_, 2013

By \_\_\_\_\_  
Masaaki KAWAGUCHI

Dated: \_\_\_\_\_, 2013

By \_\_\_\_\_  
Makoto YAMAMOTO

Dated: *Aug. 30*, 2013

By *Akira Machida*  
Akira MACHIDA

Dated: \_\_\_\_\_, 2013

By \_\_\_\_\_  
Masaaki KAWAGUCHI

Dated: \_\_\_\_\_, 2013

By \_\_\_\_\_  
Makoto YAMAMOTO

Dated: \_\_\_\_\_, 2013

By \_\_\_\_\_  
Akira MACHIDA

Dated: September 2, 2013

By Masaaki Kawaguchi  
Masaaki KAWAGUCHI