

PATENT ASSIGNMENT

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| SUBMISSION TYPE: | NEW ASSIGNMENT | | | | | | |
|--|-----------------------------|---------------|----------------|---------------------|------------|--------------------|------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT | | | | | | |
| CONVEYING PARTY DATA | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:70%;">Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Ryan Bunch</td> <td>10/14/2008</td> </tr> <tr> <td>Stephen T. Janesch</td> <td>10/14/2008</td> </tr> </tbody> </table> | | Name | Execution Date | Ryan Bunch | 10/14/2008 | Stephen T. Janesch | 10/14/2008 |
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| Ryan Bunch | 10/14/2008 | | | | | | |
| Stephen T. Janesch | 10/14/2008 | | | | | | |
| RECEIVING PARTY DATA | | | | | | | |
| Name: | RF Micro Devices, Inc. | | | | | | |
| Street Address: | 7628 Thorndike Road | | | | | | |
| City: | Greensboro | | | | | | |
| State/Country: | NORTH CAROLINA | | | | | | |
| Postal Code: | 27409 | | | | | | |
| PROPERTY NUMBERS Total: 1 | | | | | | | |
| <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>12251757</td> </tr> </tbody> </table> | | Property Type | Number | Application Number: | 12251757 | | |
| Property Type | Number | | | | | | |
| Application Number: | 12251757 | | | | | | |
| CORRESPONDENCE DATA | | | | | | | |
| Fax Number: | (919)238-2301 | | | | | | |
| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> | | | | | | | |
| Phone: | 919-238-2300 | | | | | | |
| Email: | jsmith@withrowterranova.com | | | | | | |
| Correspondent Name: | Withrow & Terranova, PLLC | | | | | | |
| Address Line 1: | 100 Regency Forest Drive | | | | | | |
| Address Line 2: | Suite 160 | | | | | | |
| Address Line 4: | Cary, NORTH CAROLINA 27518 | | | | | | |
| ATTORNEY DOCKET NUMBER: | 2867-596 | | | | | | |
| NAME OF SUBMITTER: | Julie Smith | | | | | | |

Total Attachments: 3
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**PATENT
 REEL: 021684 FRAME: 0745**

OP \$40.00 12251757

ASSIGNMENT

This Assignment made by us, **Ryan Bunch**, a citizen of the United States of America, residing at 5614 Poplar Hill Ct, City of Greensboro, State of North Carolina; and **Stephen T. Janesch**, a citizen of the United States of America, residing at 7702 Wilder Court, City of Greensboro, State of North Carolina, hereinafter referred to as assignors.

WITNESSETH: That,

WHEREAS, we are the joint inventors of certain new and useful improvements in **FREQUENCY MEASUREMENT BASED FREQUENCY LOCKED LOOP SYNTHESIZER** for which we are about to make application for Letters Patent of the United States, and for which we have executed a declaration.

WHEREAS, RF Micro Devices, Inc., a corporation duly organized and existing under the laws of the State of North Carolina and having a principal place of business at 7628 Thorndike Road, City of Greensboro, State of North Carolina, hereinafter referred to as assignee, is desirous of acquiring the entire right, title and interest in and to said invention as described in the specification executed by us concurrently herewith, and any and all Letters Patent which shall be granted therefor;

NOW, THEREFORE, To All Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, we, the said assignors, have sold, assigned, transferred and set over unto the said assignee, its successors and assigns, the entire right, title and interest in and to the above-mentioned application and invention and in and to any and all Letters Patent of the United States which may hereafter be granted therefor, and in any and to any and all continuations, continuations-in-part, substitutions, divisions or reissues of said Letters Patent, the same to be held and enjoyed by the said assignee, for its interest, and for its own use and behalf, and the use and behalf of its successors and

assigns, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made.

And for the consideration aforesaid, we hereby covenant and agree to and with the said assignee, its successors and assigns, that at the time of the execution and delivery of these presents we are the joint and lawful owners of the entire right, title and interest in and to the invention, application and Letters Patent above-mentioned and that the same are unencumbered, and that we have good right and lawful authority to sell and convey the same in the manner herein set forth.

And for the consideration aforesaid, we hereby covenant and agree to and with the said assignee, its successors and assigns, that we will, whenever its counsel or the counsel of its successors and assigns, learned in the law, shall advise that an amendment, division, continuation, continuation-in-part, or substitution of, or any other proceeding in connection with said application, including interference proceedings, is lawful and desirable, sign all papers and drawings, take all rightful oaths, and do all acts necessary or required to be done for the procurement of valid Letters Patent for said invention, or for the reissue of the same without charge to our said assignee, its successors or assigns, but at its or their expense.

We hereby request the Commissioner for Patents to issue the Letters Patent in accordance with this instrument.

For the consideration aforesaid, we have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto the said assignee, its successors, assigns or nominee, the entire right, title and interest in and to any and all Letters Patent for said invention which may be granted in countries foreign to the United States and in and to any

applications for Letters Patent which may be filed for said invention in countries foreign to the United States and in and to the invention described in said application; and we hereby authorize and empower the said assignee, its successors, assigns or nominees to apply for Letters Patent or other form of protection on said invention in its own name or in the name of its successor, assignee, or nominee, in any and all countries where it may desire to file such application and where said application may be filed by another than the inventor; and we hereby covenant and agree to sign all papers and drawings, take all rightful oaths, and do all acts necessary or required to be done for procurement of Letters Patent, or other form of protection, for said invention or inventions in countries foreign to the United States, and for further investing or confirming the right and title therein to the assignee, its successors, assignee, or nominee, without charge to our said assignee, its successor, assignee or nominee, but at its or their expense.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

10/14/2008

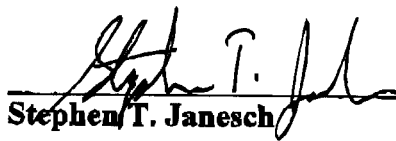
Date



Ryan Bunch

14 October 2008

Date



Stephen T. Janesch