MRD 12.8.99 Docket No. AlTII588US 12-27-1999 FORM PTO-1595 U.S. DEPARTMENT OF COMMERCE SHEET REC Patent and Trademark Office (Rev. 6-93) OMB No. 0651-0011 (exp. 4/94) Tab settings □□□ ▼ To the Honorable Commissioner of Patents and Trademarks. .ached original documents or copy thereof. 2. Name and address of receiving party(ies) 1. Name of conveying party(ies): Name: ANALOG DEVICES, INC. Richard R. Muller, Jr. Stephen A. Cohen Internal Address:___ Additional name(s) of conveying party(ies) attached?

Yes

No 3. Nature of conveyance: Street Address: One Technology Way □ Merger Assignment □ Change of Name Security Agreement City: Norwood State: MA ZIP: 02062 Other __ December 6, 1999 - Muller Execution Date: December 3, 1999 - Cohen Additional name(s) & address(es) attached? ☐ Yes ☑ No 457 235 4. Application number(s) or patent number(s): 12/6/99--Muller 12/3/99--Cohen If this document is being filed together with a new application, the execution date of the application is: B. Patent No.(s) A. Patent Application No.(s) Additional numbers attached?

Yes

No 6. Total number of applications and patents involved: 5. Name and address of party to whom correspondence concerning document should be mailed: 7. Total fee (37 CFR 3.41).....\$ 40.100 Name: KOPPEL & JACOBS
Internal Address: 9344 Thank S. Koppel KOPPEL & JACOBS Enclosed 40.00 OP Authorized to be charged to deposit account 8. Deposit account number: Street Address: 555 St. Charles Drive 11-1580 Suite 107 (Attach duplicate copy of this page if paying by deposit account) City: Thousand Oaks, State: CA ZIP: 91360 DO NOT USE THIS SPACE To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of 9. Statement and signature. the original document. Richard S. Koppel Date Name of Person Signing Total number of pages including cover sheet, attachments, and document:

ASSIGNMENT

We, Richard R. Muller, Jr., residing at 6435 Zumirez Drive, Unit 19, Malibu, California 90265 and Stephen A. Cohen, residing at 17 Olde Berry Road, Andover, Massachusetts 01810, represent that we have invented improvements in a new and useful "PULSE GENERATION CIRCUIT AND METHOD WITH TRANSMISSION PRE-EMPHASIS" for which we have executed an application for Letters Patent of the United States of America on the same day as our execution of this Assignment.

Analog Devices, Inc. (ADI) is a corporation organized and existing under the laws of the State of Massachusetts, has a place of business at One Technology Way, Norwood, Massachusetts 02062, and desires to acquire the entire right, title and interest in and to the invention, application and letters patent to be granted and issued thereon.

For valuable consideration, the receipt and legal sufficiency of all of which we acknowledge, we have sold and do hereby sell, assign, transfer and set over unto ADI, its successors and assigns, the entire right, title and interest in and to the invention and all improvements thereon, in and to the application for letters patent thereon, in and to applications pertaining to or based upon the invention and application, including divisional and continuing applications and continuations-in-part, and in and to any and all letters patent which may be granted and issued on the invention and applications, or any of them, in the United States of America, its territories and possessions, and in all countries foreign thereto, together with and including all priority rights based upon any and all applications in the United States of America covered by this Assignment.

We also agree that we will, at the request of ADI, execute any and all applications for letters patent for the invention, execute any and all other papers and documents and do all other and further lawful acts that ADI may deem necessary or desirable to obtain letters patent on the invention, to secure the grant of such letters patent and to protect and vest in ADI the undivided interests in the right, title and interest in the invention, applications and letters patent.

We also authorize and empower ADI, its successors and assigns to apply for and obtain, in its or their own names, letters patent for the invention before competent International Authorities and in any and all countries foreign to the United States in which applications for letters patent can be so made or letters patent so obtained.

Date: December 6, 1949 1

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Date: December 3,1999

RECORDED: 12/08/1999

(type or print name below line and sign above)

WITNESS

(type or print name below line and sign above)

PATENT REEL: 010450 FRAME: 0546