PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3606656

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	SECURITY INTEREST	

CONVEYING PARTY DATA

Name	Execution Date
IBIQUITY DIGITAL CORPORATION	10/01/2015

RECEIVING PARTY DATA

Name:	WELLS FARGO BANK, NATIONAL ASSOCIATION, AS ADMINISTRATIVE AGENT	
Street Address:	1525 WEST W.T. HARRIS BLVD.	
Internal Address:	MAC D1109-019	
City:	CHARLOTTE	
State/Country:	NORTH CAROLINA	
Postal Code:	28262	

PROPERTY NUMBERS Total: 134

Property Type	Number
Patent Number:	5633896
Patent Number:	5703954
Patent Number:	5764706
Patent Number:	5809065
Patent Number:	5828705
Patent Number:	5850415
Patent Number:	5878089
Patent Number:	5898732
Patent Number:	5903598
Patent Number:	5930687
Patent Number:	5949813
Patent Number:	5956373
Patent Number:	5956624
Patent Number:	6014407
Patent Number:	6108810
Patent Number:	6128334
Patent Number:	6128350
Patent Number:	6148007
Patent Number:	6178317

<u>PATENT</u>

REEL: 037069 FRAME: 0153

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Property Type	Number
Patent Number:	6243424
Patent Number:	6259893
Patent Number:	6292511
Patent Number:	6295317
Patent Number:	6317470
Patent Number:	6345377
Patent Number:	6400758
Patent Number:	6430227
Patent Number:	6452977
Patent Number:	6480536
Patent Number:	6487256
Patent Number:	6510175
Patent Number:	6523147
Patent Number:	6532258
Patent Number:	6539063
Patent Number:	6549544
Patent Number:	6556639
Patent Number:	6570943
Patent Number:	6590944
Patent Number:	6622008
Patent Number:	6639949
Patent Number:	6671340
Patent Number:	6721337
Patent Number:	6735257
Patent Number:	6798849
Patent Number:	6845230
Patent Number:	6891898
Patent Number:	6895060
Patent Number:	6898249
Patent Number:	6901242
Patent Number:	6970685
Patent Number:	6982948
Patent Number:	7043681
Patent Number:	7127008
Patent Number:	7191136
Patent Number:	7221688
Patent Number:	7221917
Patent Number:	7305043

Property Type	Number
Patent Number:	7305056
Patent Number:	7340010
Patent Number:	7352817
Patent Number:	7464324
Patent Number:	7474707
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Patent Number:	7542517
Patent Number:	7546088
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Patent Number:	7697620
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Patent Number:	7706474
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Patent Number:	7733983
Patent Number:	7873120
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Patent Number:	7957478
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Patent Number:	8014446
Patent Number:	8019311
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Patent Number:	8041292
Patent Number:	8068563
Patent Number:	8068800
Patent Number:	8111716
Patent Number:	8138915
Patent Number:	8144612
Patent Number:	8180470
Patent Number:	8279908
Patent Number:	8335872
Patent Number:	8351843
Patent Number:	8442170
Patent Number:	8451868
Patent Number:	8520852

Property Type	Number
Patent Number:	8521079
Patent Number:	8576949
Patent Number:	8595748
Patent Number:	8660128
Patent Number:	8660479
Patent Number:	8676114
Patent Number:	8798196
Patent Number:	8804037
Patent Number:	8817917
Patent Number:	8831546
Patent Number:	8923378
Patent Number:	8983365
Patent Number:	9037103
Patent Number:	9094139
Patent Number:	9106472
Patent Number:	9118427
Patent Number:	9118430
Patent Number:	9129592
Patent Number:	9136874
Application Number:	11958783
Application Number:	13189659
Application Number:	13533556
Application Number:	13835011
Application Number:	13843956
Application Number:	13844096
Application Number:	14257286
Application Number:	14266907
Application Number:	14285318
Application Number:	14478233
Application Number:	12805433
Application Number:	14064971
Application Number:	14581291
Application Number:	14580920
Application Number:	14612882
Application Number:	14622260
Application Number:	14817423
Application Number:	14817578
Application Number:	62087581

Property Type	Number
Application Number:	62145000

CORRESPONDENCE DATA

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ATTORNEY DOCKET NUMBER: 2029724-0774	
NAME OF SUBMITTER:	BETTY G. SMITH
SIGNATURE:	/Betty G. Smith/
DATE SIGNED:	11/09/2015

Total Attachments: 13

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NOTICE OF GRANT OF SECURITY INTEREST IN PATENTS

Dated as of October 1, 2015

United States Patent and Trademark Office

Ladies and Gentlemen:

Please be advised that pursuant to the Collateral Agreement dated as of October 1, 2015 (as amended, restated, supplemented or otherwise modified from time to time, the "Agreement") among the Grantor (as identified on the signature pages hereto), the other grantors party thereto and the Administrative Agent (as identified on the signature pages hereto) for the Secured Parties referenced therein, the undersigned Grantor has granted a continuing security interest in and continuing lien upon the patents and patent applications identified on Schedule A to the Administrative Agent for the ratable benefit of the Secured Parties.

The Grantor and the Administrative Agent, on behalf of the Secured Parties, hereby acknowledge and agree that the security interest in such patents and patent applications (a) may only be terminated in accordance with the terms of the Agreement and (b) is not to be construed as an assignment of any patent or patent application.

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Very truly yours,

GRANTOR:

iBiquity Digital Corporation 5220 Las Virgenes Rd. Calabasas, CA 91301

JURISDICTION OF FORMATION OF GRANTOR: DELAWARE

IBIQUITY DIGITAL CORPORATION

Name: MUL FLAT Title: CFS

iBiquity Digital Corporation Notice of Grant of Security Interest in Patents Signature Page Acknowledged and accepted:

ADMINISTRATIVE AGENT:

Wells Fargo Bank, National Association MAC D1109-019 1525 West W.T. Harris Blvd. Charlotte, NC 28262 WELLS FARGO BANK, NATIONAL ASSOCIATION

By: Name: Greg Cohn

Title: Senior Vice President

iBiquiti Digital Corporation Notice of Grant of Security Interest in Patents Signature Page

SCHEDULE A TO NOTICE OF GRANT OF SECURITY INTEREST IN PATENTS

IBIQUITY DIGITAL CORPORATION

PATENTS

Country / U.S. State	Registration Number	Registration Date	Patents
United States	5,633,896	27-May-1997	AM COMPATIBLE DIGITAL WAVEFORM DEMODULATION USING A DUAL FFT
United States	5,703,954	30-Dec-1997	METHOD AND APPARATUS FOR IMPROVING THE QUALITY OF AM COMPATIBLE DIGITAL BROADCAST SYSTEM SIGNALS IN THE PRESENCE OF DISTORTION
United States	5,764,706	09-Jun-1998	AM COMPATIBLE DIGITAL WAVEFORM FRAME TIMING RECOVERY AND FRAME SYNCHRONOUS POWER MEASUREMENT
United States	5,809,065	15-Sep-1998	METHOD AND APPARATUS FOR IMPROVING THE QUALITY OF AM COMPATIBLE DIGITAL BROADCAST SYSTEM SIGNALS IN THE PRESENCE OF DISTORTION
United States	5,828,705	27-Oct-1998	CARRIER TRACKING TECHNIQUE AND APPARATUS HAVING AUTOMATIC FLYWHEEL/REACQUISITION CONTROL AND EXTENDED SIGNAL TO NOISE RATIO
United States	5,850,415	15-Dec-1998	IN-BAND ON-CHANNEL DIGITAL BROADCASTING
United States	5,878,089	02-Mar-1999	COHERENT SIGNAL DETECTOR FOR AM- COMPATIBLE DIGITAL AUDIO BROADCAST WAVEFORM RECOVERY
United States	5,898,732	27-Apr-1999	DATA SERVICE CHANNEL PROVISION FOR AN AM COMPATIBLE BROADCAST SYSTEM
United States	5,903,598	11-May-1999	METHOD AND SYSTEM FOR SIMULTANEOUSLY BROADCASTING AND RECEIVING DIGITAL AND ANALOG SIGNALS
United States	5,930,687	27-Jul-1999	APPARATUS AND METHOD FOR GENERATING AND AM-COMPATIBLE DIGITAL BROADCAST WAVEFORM
United States	5,949,813	07-Sep-1999	METHOD AND SYSTEM FOR SIMULTANEOUSLY BROADCASTING AND RECEIVING DIGITAL AND ANALOG SIGNALS

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Country /	Registration	Registration	Patents
U.S. State	Number	Date	AM COMPATIBLE DICITAL AUDIO
United States 5,956,373		21-Sep-1999	AM COMPATIBLE DIGITAL AUDIO BROADCASTING SIGNAL TRANSMISSION
	5,956,373		USING DIGITALLY MODULATED
		ORTHOGONAL NOISE-LIKE SEQUENCES	
			METHOD AND SYSTEM FOR
United States	5,956,624	21-Sep-1999	SIMULTANEOUSLY BROADCASTING AND
Cinted States	3,750,021	21 Sep 1999	RECEIVING DIGITAL AND ANALOG SIGNALS
			METHOD AND SYSTEM FOR
United States	6,014,407	11-Jan-2000	SIMULTANEOUSLY BROADCASTING AND
	2,021,101		RECEIVING DIGITAL AND ANALOG SIGNALS
			DIGITAL AUDIO BROADCASTING METHOD
United States	6,108,810	22-Aug-2000	USING PUNCTURABLE CONVOLUTIONAL
		8	CODE
TT 1. 1.0.	6.120.224	02.02000	RECEIVER ADDRESSABLE AM COMPATIBLE
United States	6,128,334	03-Oct-2000	DIGITAL BROADCAST SYSTEM
			METHOD AND APPARATUS FOR REDUCING
United States	6,128,350	03-Oct-2000	PEAK TO AVERAGE POWER RATIO IN
			DIGITAL BROADCASTING SYSTEMS
TT 1. 1.0.	6.1.10.007	1437 2000	METHOD FOR DATA TRANSMISSION IN A
United States	6,148,007	14-Nov-2000	DIGITAL AUDIO BROADCASTING SYSTEM
			SYSTEM AND METHOD FOR MITIGATING
United States	6,178,317 B1	23-Jan-2001	INTERMITTENT INTERRUPTIONS IN AN
			AUDIO RADIO BROADCAST SYSTEM
TI 's 1 Ct	6 2 4 2 4 2 4 D 1	05 1 2001	METHOD AND APPARATUS FOR AM DIGITAL
United States	6,243,424 B1	05-Jun-2001	BROADCASTING
			METHOD AND APPARATUS FOR REDUCTION
Linited Chatas	6 250 902 D1	10 1-1 2001	OF FM INTERFERENCE FOR FM IN-BAND ON-
United States	6,259,893 B1	10-Jul-2001	CHANNEL DIGITAL AUDIO BROADCASTING
			SYSTEM
			METHOD FOR EQUALIZATION OF
United States	6,292,511 B1	11 B1 18-Sep-2001	COMPLEMENTARY CARRIERS IN AN AM
Office States			COMPATIBLE DIGITAL AUDIO BROADCAST
			SYSTEM
		25-Sep-2001	METHOD AND APPARATUS FOR
United States	6,295,317 B1		DEMODULATING AND EQUALIZING AN AM
	0,273,317 D 1		COMPATIBLE DIGITAL AUDIO BROADCAST
			SIGNAL
			ADAPTIVE WEIGHTING METHOD FOR
United States 6,	6,317,470 B1 13-Nov-2	13-Nov-2001	ORTHOGONAL FREQUENCY DIVISION
		15 140 4-2001	MULTIPLEXED SOFT SYMBOLS USING
			CHANNEL STATE INFORMATION ESTIMATES
United States 6,	6,345,377 B1	05-Feb-2002	DIGITAL AUDIO BROADCASTING METHOD
			USING PUNCTURABLE CONVOLUTIONAL
			CODE
United States	6,400,758 B1	04-Jun-2002	METHOD AND APPARATUS FOR TRAINING
			SEQUENCE IDENTIFICATION IN AN AM
			COMPATIBLE DIGITAL AUDIO
			BROADCASTING SYSTEM

Country /	Registration	Registration	Patents
U.S. State	Number	Date	
United States	6,430,227 B1	06-Aug-2002	FM IN-BAND-ON-CHANNEL DIGITAL AUDIO
Office States	0,430,227 D 1	00-11ug-2002	BROADCASTING METHOD AND SYSTEM
United States	6,452,977 B1	17-Sep-2002	METHOD AND APPARATUS FOR AM
Cinted States	0,432,777 B1	17 Sep 2002	COMPATIBLE DIGITAL BROADCASTING
			METHOD AND APPARATUS FOR
United States	6,480,536 B2	12-Nov-2002	DEMODULATING AND EQUALIZING AN AM
omica states	0,100,230 22	12 1,0 , 2002	COMPATIBLE DIGITAL AUDIO BROADCAST
			SIGNAL
United States	6,487,256 B2	26-Nov-2002	METHOD AND APPARATUS FOR AM DIGITAL
	0,107,20022	2011012002	BROADCASTING
United States	6,510,175 B1	21-Jan-2003	IN-BAND ON-CHANNEL DIGITAL
	0,010,110		BROADCASTING
			METHOD AND APPARATUS FOR FORWARD
United States	6,523,147 B1	18-Feb-2003	ERROR CORRECTION CODING FOR AN AM IN-
			BAND ON-CHANNEL DIGITAL AUDIO
			BROADCASTING SYSTEM
			METHOD FOR ESTIMATING SIGNAL-TO-
United States	6,532,258 B1	11-Mar-2003	NOISE RATIO OF DIGITAL CARRIERS IN AN
			AM COMPATIBLE DIGITAL AUDIO
			BROADCASTING SYSTEM
			SYSTEM AND METHOD FOR RECOVERING
United States	6,539,063 B1	25-Mar-2003	SYMBOL TIMING OFFSET AND CARRIER
			FREQUENCY ERROR IN AN OFDM DIGITAL
			AUDIO BROADCAST SYSTEM
			METHOD AND APPARATUS FOR
United States	6,549,544 B1	15-Apr-2003	TRANSMISSION AND RECEPTION OF FM IN- BAND ON-CHANNEL DIGITAL AUDIO
			BROADCASTING
			METHOD AND APPARATUS FOR
	6,556,639 B1	29-Apr-2003	DETERMINING TRANSMISSION MODE AND
United States			SYNCHRONIZATION FOR A DIGITAL AUDIO
			BROADCASTING SIGNAL
			METHOD FOR EQUALIZATION OF
		_	COMPLEMENTARY CARRIERS IN AN AM
United States	6,570,943 B2	27-May-2003	COMPATIBLE DIGITAL AUDIO BROADCAST
			SYSTEM
			AUDIO BLEND METHOD AND APPARATUS
United States	6,590,944 B1	08-Jul-2003	FOR AM AND FM IN-BAND ON-CHANNEL
	0,000,000	00 34 1 2003	DIGITAL AUDIO BROADCASTING
United States 6,622,00			METHOD AND APPARATUS FOR REDUCTION
	((22 000 D2	16.0 2002	OF FM INTERFERENCE FOR FM IN-BAND ON-
	6,622,008 B2	16-Sep-2003	CHANNEL DIGITAL AUDIO BROADCASTING
			SYSTEM
			METHOD AND APPARATUS FOR PULSE
United States	6,639,949 B2	28-Oct-2003	OVERLAP PRE-COMPENSATION IN
	, , ,		DIGITALLY MODULATED SIGNALS
United States	6 671 240 D1	30-Dec-2003	METHOD AND APPARATUS FOR REDUCTION
United States	6,671,340 B1	30-Dec-2003 	OF INTERFERENCE IN FM IN-BAND ON-

Country /	Registration	Registration	Patents
U.S. State	Number	Date	
			CHANNEL DIGITAL AUDIO BROADCASTING RECEIVERS
			METHOD AND APPARATUS FOR
			TRANSMISSION AND RECEPTION OF
United States	6,721,337 B1	13-Apr-2004	COMPRESSED AUDIO FRAMES WITH
			PRIORITIZED MESSAGES FOR DIGITAL
			AUDIO BROADCASTING
		11-May-2004	AUDIO BLEND METHOD AND APPARATUS
United States	6,735,257 B2		FOR AM AND FM IN-BAND ON-CHANNEL
			DIGITAL AUDIO BROADCASTING
United States	6 709 940 D2	20 Can 2004	HYBRID AM DIGITAL BROADCASTING
United States	s 6,798,849 B2 28-Sep-2004		SYSTEM WITH ANALOG PRECOMPENSATION
I Inited States	6 945 320 D3	19 Ion 2005	SYSTEM AND METHOD FOR A PUSH-PULL
United States	6,845,230 B2	18-Jan-2005	GATEWAY-DIRECTED DIGITAL RECEIVER
			SYSTEM AND METHOD FOR RECOVERING
TI '. 10	C 001 000 D 2	10 M 2005	SYMBOL TIMING OFFSET AND CARRIER
United States	6,891,898 B2	10-May-2005	FREQUENCY ERROR IN AN OFDM DIGITAL
			AUDIO BROADCAST SYSTEM
			ADAPTIVE WEIGHTING METHOD FOR
TT 1: 1.0: :	6 005 060 D 2	17.14 2007	ORTHOGONAL FREQUENCY DIVISION
United States	6,895,060 B2	17-May-2005	MULTIPLEXED SOFT SYMBOLS USING
			CHANNEL STATE INFORMATION ESTIMATES
		24-May-2005	METHOD AND APPARATUS FOR DIGITAL
United States	6,898,249 B2		AUDIO BROADCASTING WITH AMPLITUDE
			SCALED SUB-CARRIERS
			SYSTEM AND METHOD FOR MITIGATING
United States	6,901,242 B2	31-May-2005	INTERMITTENT INTERRUPTIONS IN AN
	-,,		AUDIO RADIO BROADCAST SYSTEM
TT '4 1 C4 4	6 070 605 D 2	20 N 2005	DYNAMIC FILTER SELECTION IN IBOC DAB
United States	6,970,685 B2	29-Nov-2005	RECEIVERS
		03-Jan-2006	METHOD AND APPARATUS FOR
TT '- 1.C	6,982,948 B2		TRANSMISSION AND RECEPTION OF FM IN-
United States			BAND ON-CHANNEL DIGITAL AUDIO
			BROADCASTING
	7,043,681 B2	09-May-2006	METHOD FOR ENCODING A DIGITAL SIGNAL
United States			USING COMPLEMENTARY PATTERN-MAPPED
			CONVOLUTIONAL CODES
	7,127,008 B2		COHERENT AM DEMODULATOR USING A
United States		24-Oct-2006	WEIGHTED LSB/USB SUM FOR
		21 301 2000	INTERFERENCE MITIGATION
United States	7,191,136 B2		EFFICIENT CODING OF HIGH FREQUENCY
		13-Mar-2007	SIGNAL INFORMATION IN A SIGNAL USING A
			LINEAR/NON-LINEAR PREDICTION MODEL
			BASED ON A LOW PASS BASEBAND
TT 's 1.C.	VI. 16	22.34 2007	METHOD AND APPARATUS FOR RECEIVING
United States	7,221,688 B2	22-May-2007	A DIGITAL AUDIO BROADCASTING SIGNAL
TI-14 1 C: :	7.001.017.00	22-May-2007	METHOD FOR MITIGATING ADJACENT
United States	7,221,917 B2		CHANNEL INTERFERENCE IN FM DIGITAL

Country/	Registration	Registration	Patents
U.S. State	Number	Date	BROADCASTING RECEIVERS
United States	7,305,043 B2	04-Dec-2007	METHOD AND APPARATUS FOR FORMATTING SIGNALS FOR DIGITAL AUDIO BROADCASTING TRANSMISSION AND RECEPTION
United States	7,305,056 B2	04-Dec-2007	COHERENT TRACKING FOR FM IN-BAND ON- CHANNEL RECEIVERS
United States	7,340,010 B2	04-Mar-2008	FORWARD ERROR CORRECTION CODING FOR HYBRID AM IN-BAND ON-CHANNEL DIGITAL AUDIO BROADCASTING SYSTEMS
United States	7,352,817 B2	01-Apr-2008	METHOD AND APPARATUS FOR INTERLEAVING SIGNAL BITS IN A DIGITAL AUDIO BROADCASTING SYSTEM
United States	7,464,324 B2	09-Dec-2008	METHOD AND APPARATUS FOR FORWARD ERROR CORRECTION CODING FOR AN AM IN- BAND ON-CHANNEL DIGITAL AUDIO BROADCASTING SYSTEM
United States	7,474,707 B2	06-Jan-2009	BANDWIDTH REDUCTION OF AN FM BROADCAST SIGNAL USING A BASEBAND PRECOMPENSATION TECHNIQUE
United States	7,512,175 B2	31-Mar-2009	METHOD FOR SYNCHRONIZING EXPORTER AND EXCITER CLOCKS
United States	7,542,517 B2	02-Jun-2009	PEAK-TO-AVERAGE POWER REDUCTION FOR FM OFDM TRANSMISSION
United States	7,546,088 B2	09-Jun-2009	METHOD AND APPARATUS FOR BLENDING AN AUDIO SIGNAL IN AN IN-BAND ON- CHANNEL RADIO SYSTEM
United States	7,551,675 B2	23-Jun-2009	METHOD AND APPARATUS FOR SYNCHRONIZED TRANSMISSION AND RECEPTION OF DATA IN A DIGITAL AUDIO BROADCASTING SYSTEM
United States	7,680,201 B2	16-Mar-2010	FORWARD ERROR CORRECTION CODING FOR AM 9KHZ AND 10KHZ IN-BAND ON- CHANNEL DIGITAL AUDIO BROADCASTING SYSTEMS
United States	7,697,620 B2	13-Apr-2010	EQUALIZER FOR AM IN-BAND ON-CHANNEL RADIO RECEIVERS
United States	7,706,468 B2	27-Apr-2010	TRANSMITTER WITH FORWARD ERROR CORRECTION CODING FOR HYBRID AM IN- BAND ON-CHANNEL DIGITAL AUDIO BROADCASTING SYSTEMS
United States	7,706,474 B2	27-Apr-2010	CARRIER TRACKING FOR AM IN-BAND ON- CHANNEL RADIO RECEIVERS
United States	7,721,337 B2	18-May-2010	SYSTEM AND METHOD FOR PROVIDING A PUSH OF BACKGROUND DATA
United States	7,724,850 B2	25-May-2010	COHERENT TRACKING FOR FM IBOC RECEIVER USING A SWITCH DIVERSITY ANTENNA SYSTEM

Country /	Registration	Registration	Patents
U.S. State	Number	Date	
United States	7,733,983 B2	08-Jun-2010	SYMBOL TRACKING FOR AM IN-BAND ON- CHANNEL RADIO RECEIVERS
United States	7,873,120 B2	18-Jan-2011	FORWARD ERROR CORRECTION CODING FOR AM 9KHZ AND 10KHZ IN-BAND ON- CHANNEL DIGITAL AUDIO BROADCASTING SYSTEMS
United States	7,933,367 B2	26-Apr-2011	METHOD AND APPARATUS FOR IMPLEMENTING SEEK AND SCAN FUNCTIONS FOR AN FM DIGITAL RADIO SIGNAL
United States	7,933,368 B2	26-Apr-2011	METHOD AND APPARATUS FOR IMPLEMENTING A DIGITAL SIGNAL QUALITY METRIC
United States	7,957,478 B2	07-Jun-2011	RADIO SIGNAL GENERATOR
United States	7,982,683 B2	19-Jul-2011	ANTENNA DESIGN FOR FM RADIO RECEIVERS
United States	8,014,446 B2	06-Sep-2011	METHOD AND APPARATUS FOR STORE AND REPLAY FUNCTIONS IN A DIGITAL RADIO BROADCASTING RECEIVER
United States	8,019,311 B2	13-Sep-2011	SYSTEMS AND METHODS FOR DC COMPONENT RECOVERY IN A ZERO-IF RADIO RECEIVER
United States	8,027,419 B2	27-Sep-2011	METHOD FOR ALIGNMENT OF ANALOG AND DIGITAL AUDIO IN A HYBRID RADIO WAVEFORM
United States	8,040,989 B2	18-Oct-2011	SYSTEM AND METHOD FOR SAMPLING RATE ADJUSTMENT OF DIGITAL RADIO RECEIVER
United States	8,041,292 B2	18-Oct-2011	NETWORK RADIO RECEIVER
United States	8,068,563 B2	29-Nov-2011	SYSTEMS AND METHODS FOR FREQUENCY OFFSET CORRECTION IN A DIGITAL RADIO BROADCAST RECEIVER
United States	8,068,800 B2	29-Nov-2011	ADAPTIVE IMPEDANCE MATCHING (AIM) FOR ELECTRICALLY SMALL RADIO RECEIVER ANTENNAS
United States	8,111,716 B2	07-Feb-2012	METHOD AND APPARATUS FOR FORMATTING DATA SIGNALS IN A DIGITAL AUDIO BROADCASTING SYSTEM
United States	8,138,915 B2	20-Mar-2012	SYSTEMS AND METHODS FOR RENDERING ALERT INFORMATION FOR DIGITAL RADIO BROADCAST, AND ACTIVE DIGITAL RADIO BROADCAST RECEIVER
United States	8,144,612 B2	27-Mar-2012	SYSTEMS AND METHODS FOR TRANSMITTING MEDIA CONTENT VIA DIGITAL RADIO BROADCAST TRANSMISSION FOR SYNCHRONIZED RENDERING BY A RECEIVER
United States	8,180,470 B2	15-May-2012	SYSTEMS AND METHODS FOR FINE ALIGNMENT OF ANALOG AND DIGITAL

Country / U.S. State	Registration Number	Registration Date	Patents
e.o. out		LPERE	SIGNAL PATHWAYS
United States			SYNCHRONIZATION OF SEPARATED
	8,279,908 B2	02-Oct-2012	PLATFORMS IN AN HD RADIO BROADCAST
emica states	6,279,900 D 2	02 000 2012	SINGLE FREQUENCY NETWORK
			SYSTEMS AND METHODS FOR FAST SEEK
United States	8,335,872 B2	18-Dec-2012	AND SCAN FUNCTIONS IN A DIGITAL RADIO
Office States	0,333,072 D 2		BROADCAST RECEIVER
			DIGITAL RADIO BROADCAST RECEIVER,
United States	8,351,843 B2	08-Jan-2013	BROADCASTING METHODS AND METHODS
Office States	0,331,043 B 2	00 Jun 2013	FOR TAGGING CONTENT OF INTEREST
			EQUALIZER FOR AM IN-BAND ON-CHANNEL
United States	8,442,170 B2	14-May-2013	RADIO RECEIVERS
			SYSTEMS AND METHODS FOR
			TRANSMITTING MEDIA CONTENT VIA
United States	8,451,868 B2	28-May-2013	DIGITAL RADIO BROADCAST TRANSMISSION
United States	0,431,000 DZ	20-1v1ay-2015	FOR SYNCHRONIZED RENDERING BY A
			RECEIVER
			METHOD AND APPARATUS FOR STORE AND
United States	0.500.050.D0	27 A 2012	
United States	8,520,852 B2	27-Aug-2013	REPLAY FUNCTIONS IN A DIGITAL RADIO
TI.::4. J C4.4	9.521.070.D2	27 A 2012	BROADCASTING RECEIVER
United States	8,521,079 B2	27-Aug-2013	RADIO SERVICE REGISTRY
TT 1: 1 C	0.576.040.00	05 M 2012	METHOD AND APPARATUS FOR STORE AND
United States	8,576,949 B2	05-Nov-2013	REPLAY FUNCTIONS IN A DIGITAL RADIO
			BROADCASTING RECEIVER
		26.37	SYSTEMS AND METHODS FOR
United States	8,595,748	26-Nov-2013	TRANSMITTING AND RECEIVING LARGE
			OBJECTS VIA DIGITAL RADIO BROADCAST
			SYSTEMS AND METHODS FOR A MULTIPORT
	8,660,128	25-Feb-2014	SYNCHRONOUS-ASYNCHRONOUS CLIENT
United States			FOR SCHEDULING AND DELIVERING
			CONTENT FOR DIGITAL RADIO BROADCAST
			TRANSMISSION
	8,660,479	25-Feb-2014	DIGITAL RADIO BROADCAST RECEIVER,
United States			BROADCASTING METHODS AND METHODS
			FOR TAGGING CONTENT OF INTEREST
	8,676,114	18-Mar-2014	DIGITAL RADIO BROADCAST RECEIVER,
United States			BROADCASTING METHODS AND METHODS
			FOR TAGGING CONTENT OF INTEREST
United States	8,798,196 B2		PEAK-TO-AVERAGE POWER RATIO
		05-Aug-2014	REDUCTION FOR HYBRID FM HD RADIO
			TRANSMISSION
United States	8,804,037	12-Aug-2014	SYSTEMS AND METHODS FOR
			TRANSMITTING MEDIA CONTENT VIA
			DIGITAL RADIO BROADCAST TRANSMISSION
			FOR SYNCHRONIZED RENDERING BY A
			RECEIVER
United States	8,817,917 B2	26-Aug-2014	METHOD AND APPARATUS FOR
Jiiio Suios	0,017,717 02	201108 2011	IMPLEMENTING SIGNAL QUALITY METRICS

Country / U.S. State	Registration Number	Registration Date	Patents
			AND ANTENNA DIVERSITY SWITCHING CONTROL
United States	8,831,546 B2	09-Sep-2014	MRC ANTENNA DIVERSITY FOR FM IBOC DIGITAL SIGNALS
United States	8,923,378 B2	30-Dec-2014	EQUALIZER FOR AM IN-BAND ON-CHANNEL RECEIVERS THAT DOES NOT REQUIRE ANALOG SIGNAL BANDWIDTH INFORMATION
United States	8,983,365	17-Mar-2015	SYSTEMS AND METHODS FOR COMMUNICATING AND RENDERING ELECTRONIC PROGRAM GUIDE INFORMATION VIA DIGITAL RADIO BROADCAST TRANSMISSION
United States	9,037,103 B2	19-May-2015	MRC ANTENNA DIVERSITY FOR FM IBOC DIGITAL SIGNALS
United States	9,094,139	28-July-2015	LOOK AHEAD METRICS TO IMPROVE BLENDING DECISION
United States	9,106,472 B1	11-Aug-2015	CHANNEL STATE INFORMATION (CSI) ESTIMATION AND APPLICATIONS FOR IN- BAND ON-CHANNEL RADIO RECEIVERS
United States	9,118,427 B2	25-Aug-2015	METHOD AND APPARATUS FOR STORE AND REPLAY FUNCTIONS IN A DIGITAL RADIO BROADCASTING RECEIVER
United States	9,118,430 B2	25-Aug-2015	BROADCAST EQUIPMENT COMMUNICATION PROTOCOL
United States	9,129,592	08-Sep-2015	SIGNAL ARTIFACT DETECTION AND ELIMINATION FOR AUDIO OUTPUT
United States	9,136,874 B2	15-Sep-2015	METHOD AND APPARATUS FOR TRANSMISSION AND RECEPTION OF IN- BAND ON-CHANNEL RADIO SIGNALS INCLUDING COMPLEMENTARY LOW DENSITY PARITY CHECK CODING

PATENT APPLICATIONS

Country /	Application		Patent Application Title
U.S. State	Number	Filing Date	
	11/070 -05	10 7 2007	METHOD FOR STREAMING THROUGH
United States	11/958,783	18-Dec-2007	A DATA SERVICE OVER A RADIO
			LINK SUBSYSTEM
United States	13/189,659	25-Jul-2011	FM ANALOG DEMODULATOR
emica states	13/107,037	25 541 2011	COMPATIBLE WITH IBOC SIGNALS
			ADAPTIVE BANDWIDTH
United States	13/533,556	26-Jun-12	MANAGEMENT OF IBOC AUDIO
			SIGNALS DURING BLENDING
		15.15 2012	METHOD AND APPARATUS FOR
			TRANSMISSION AND RECEPTION OF
United States	12/025 011		IN-BAND ON-CHANNEL RADIO
United States	13/835,011	15-Mar-2013	SIGNALS INCLUDING
			COMPLEMENTARY LOW DENSITY
			PARITY CHECK CODING
			SYSTEM AND METHOD FOR
	12/012 07/	1.7.7.5.0010	RECOVERING AUDIO PDU
United States	13/843,956	15-Mar-2013	TRANSPORT ELEMENTS IN DIGITAL
			RADIO BROADCAST RECEIVER
			SIGNAL ARTIFACT DETECTION AND
United States	13/844,096	15-Mar-2013	ELIMINATION FOR AUDIO OUTPUT
	14/257,286	21-Apr-2014	FIRST ADJACENT CANCELLER (FAC)
United States			WITH IMPROVED BLENDING USING A
Officed States			PARAMETRIC FILTER
			ITERATIVE FORWARD ERROR
			CORRECTION DECODING FOR FM IN-
United States	14/266,907	01-May-2014	
			BAND ON-CHANNEL RADIO
			BROADCASTING SYSTEMS
	14/285,318	22-May-2014	METHOD AND APPARATUS FOR
United States			IMPLEMENTING SIGNAL QUALITY
			METRICS AND ANTENNA DIVERSITY
			SWITCHING CONTROL
			PEAK-TO-AVERAGE POWER RATIO
United States	14/478,233	05-Sep-2014	REDUCTION FOR QAM MODULATION
			WITH HD RADIO SIGNALS
	12/805,433		SYSTEMS, METHODS AND
			COMPUTER READABLE MEDIA FOR
United States		30-Jul-2010	DIGITAL RADIO BROADCAST
			RECEIVER MEMORY AND POWER
			REDUCTION
	14/064,971	28-Oct-2013	SYSTEMS AND METHODS FOR
			TRANSMITTING AND RECEIVING
United States			LARGE OBJECTS VIA DIGITAL RADIO
			BROADCAST

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Country / U.S. State	Application Number	Filing Date	Patent Application Title
	14/581,291	23-Dec-2014	APPARATUS AND METHOD FOR
United States			DISTRIBUTING CONTENT FROM AN
			HD RADIO SYSTEM
		23-Dec-2014	SYSTEMS AND METHODS FOR
United States	14/580,920		DIGITAL RADIO BROADCAST WITH
			CROSS PLATFORM RECEPTION
			SYSTEM AND METHOD FOR
United States	14/612,882	03-Feb-2015	INCREASING THROUGHPUT IN
Cinica States	1 1/012,002	03-1 60-2013	DIGITAL RADIO BROADCAST
			RECEIVER
	14/622,260	13-Feb-2015	METHOD AND APPARATUS FOR
United States			ANALOG AND DIGITAL AUDIO
			BLEND FOR HD RADIO RECEIVERS
	14/817,423	04-Aug-2015	METHOD AND APPARATUS FOR
			TRANSMISSION AND RECEPTION OF
United States			IN-BAND ON-CHANNEL RADIO
Office States			SIGNALS INCLUDING
			COMPLEMENTARY LOW DENSITY
			PARITY CHECK CODING
	14/817,578	04-Aug-2015	SYSTEM AND METHOD FOR
United States			SYNCHRONOUS PROCESSING OF
Office States			ANALOG AND DIGITAL PATHWAYS
			IN A DIGITAL RADIO RECEIVER
	62/087,581	04-Dec-2014	SYSTEMS AND METHODS FOR
United States			EMERGENCY VEHICLE PROXIMITY
United States			WARNINGS USING DIGITAL RADIO
			BROADCAST
	62/145,000	09-Apr-2015	SYSTEMS AND METHODS FOR
TI-it- d Ct-			AUTOMATED DETECTION OF SIGNAL
United States			QUALITY PROBLEMS IN DIGITAL
			RADIO BROADCAST SIGNALS

RECORDED: 11/09/2015