

Title (en)
A DETECTING SYSTEM FOR A STRING INSTRUMENT

Title (de)
DETEKTIONSSYSTEM FÜR EIN SAITENINSTRUMENT

Title (fr)
SYSTÈME DE DÉTECTION POUR UN INSTRUMENT À CORDES

Publication
EP 2959472 A4 20160803 (EN)

Application
EP 15765489 A 20150309

Priority
• US 201461954937 P 20140318
• IL 2015050244 W 20150309

Abstract (en)
[origin: WO2015140783A1] A detection system is provided for detecting a musical note played on a string instrument having a fretboard provided with a plurality of conductive frets and conductive strings. The system includes at least one conductor coupled to each of the frets; an inverter having a first terminal coupled to the conductor and a second terminal coupled to the conductive string, the inverter being configured to logically invert a signal transmitted therethrough, such that when the conductive string is pressed against one of the frets allowing thereby for a signal to be transmitted therethrough, the signal is sequentially inverted between two logical states at a frequency being dependent on the distance between the inverter and the fret; a frequency detector configured to measure the frequency; and a controller configured for determining the location of the fret along the fretboard in accordance with the frequency, and to thereby detect the musical note.

IPC 8 full level
G10H 1/34 (2006.01)

CPC (source: EP)
G10H 1/342 (2013.01); **G10H 2220/171** (2013.01); **G10H 2220/301** (2013.01)

Citation (search report)
• [T] M K MANDAL ET AL: "Ring oscillators: Characteristics and applications", INDIAN JOURNAL OF PURE & APPLIED PHYSICS, 28 February 2010 (2010-02-28), pages 136 - 145, XP055282128, Retrieved from the Internet <URL:http://nopr.niscair.res.in/bitstream/123456789/7244/1/IJPAP%2048%282%29%20136-145.pdf> [retrieved on 20160620]
• See references of WO 2015140783A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2015140783 A1 20150924; AU 2015232959 A1 20160929; AU 2015232959 B2 20200319; CA 2945916 A1 20150924;
CN 106104671 A 20161109; CN 106104671 B 20180316; EP 2959472 A1 20151230; EP 2959472 A4 20160803; EP 2959472 B1 20170517;
ES 2637856 T3 20171017; JP 2017509032 A 20170330; JP 6338313 B2 20180606; PL 2959472 T3 20171130

DOCDB simple family (application)
IL 2015050244 W 20150309; AU 2015232959 A 20150309; CA 2945916 A 20150309; CN 201580014303 A 20150309; EP 15765489 A 20150309;
ES 15765489 T 20150309; JP 2017500469 A 20150309; PL 15765489 T 20150309