

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511069096 A

(19) INDIA

(22) Date of filing of Application :19/07/2025

(43) Publication Date : 08/08/2025

(54) Title of the invention : A MULTI-SENSORY MATH EXPRESSION READER FOR STUDENTS WITH LEARNING DISABILITIES

(51) International classification :G06F0003010000, G09B0021000000, G09B0019020000, H04R0001020000, G09B0005040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY

Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. -----

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)KANIKA JINDAL

Address of Applicant :Department of Electronics and Communication Engineering, Noida Institute of Engineering & Technology, Greater Noida. Greater Noida -----

(57) Abstract :

The present invention discloses a multi-sensory math expression reader comprising a scanning unit (101), processing module (102), visual display (103), speaker system (104), and tactile feedback module (105). Designed for students with learning disabilities, it converts math expressions into interactive audio, visual, and tactile outputs. The device uses OCR for symbol recognition and provides real-time feedback with operator-specific vibrations, touch-guided narration, and corrective assistance to enhance understanding and engagement with mathematical content.

No. of Pages : 13 No. of Claims : 5