United States Patent [19]

O'Hagan et al.

[11] **Patent Number:** **5,581,658**

[45] **Date of Patent:** **Dec. 3, 1996**

[54] **ADAPTIVE SYSTEM FOR BROADCAST PROGRAM IDENTIFICATION AND REPORTING**

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[21] Appl. No.: **167,646**

[22] Filed: **Dec. 14, 1993**

[51] **Int. Cl.^{6}** **G06F 15/18**

[52] **U.S. Cl.** **395/22**; 395/2.41

[58] **Field of Search** 395/22, 24, 2.41

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Primary Examiner—George B. Davis
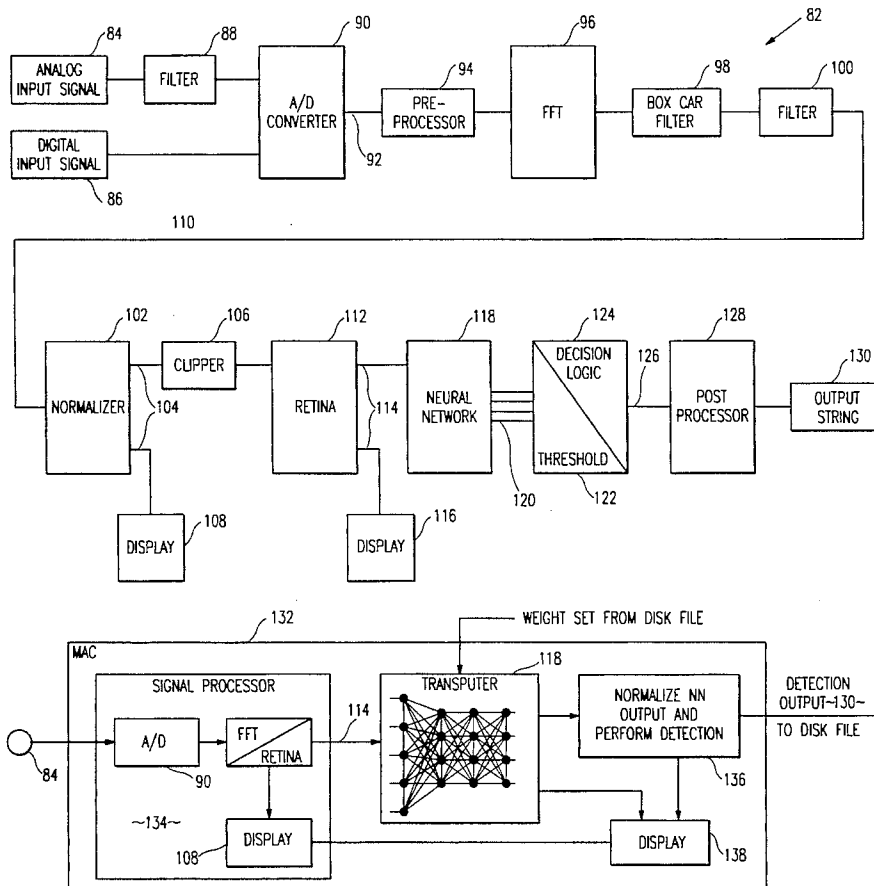*Attorney, Agent, or Firm*—Bruce W. Greenhaus

[57] **ABSTRACT**

A computer-implemented method and system for monitoring, identifying, classifying and logging musical work performance broadcasts over the public airwaves. The system uses a neural network to classify specially-processed "retinal" signatures of the musical work performance. The neural network is trained for each musical work using a single noise-biased retinal sample of the spectral distribution of preselected dynamic features of the corresponding audio signal. A detection decision is made at the neural network output using fuzzy logic circuitry to compare results of predetermined thresholding. The system of this invention fully automates the real-time identification of broadcast musical work performances.

13 Claims, 13 Drawing Sheets

FIG.1
PRIOR ART

FIG. 2

FIG. 3

FIG. 4D

MAC DISPLAY

EXP SMOOTHED SPECTRAL WATERFALL DISPLAY

FIG. 4C

NEURAL NETWORK INPUT RETINA
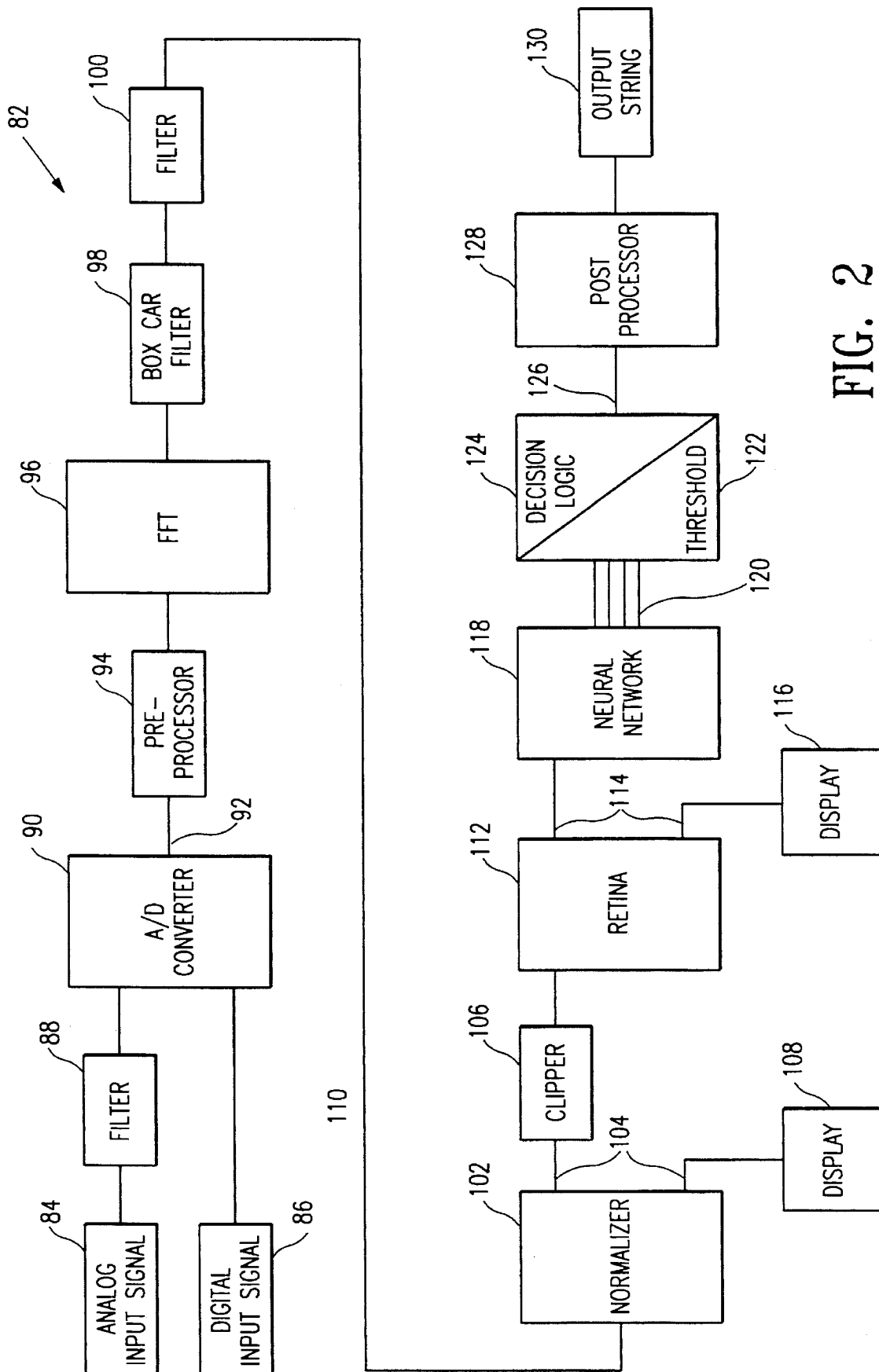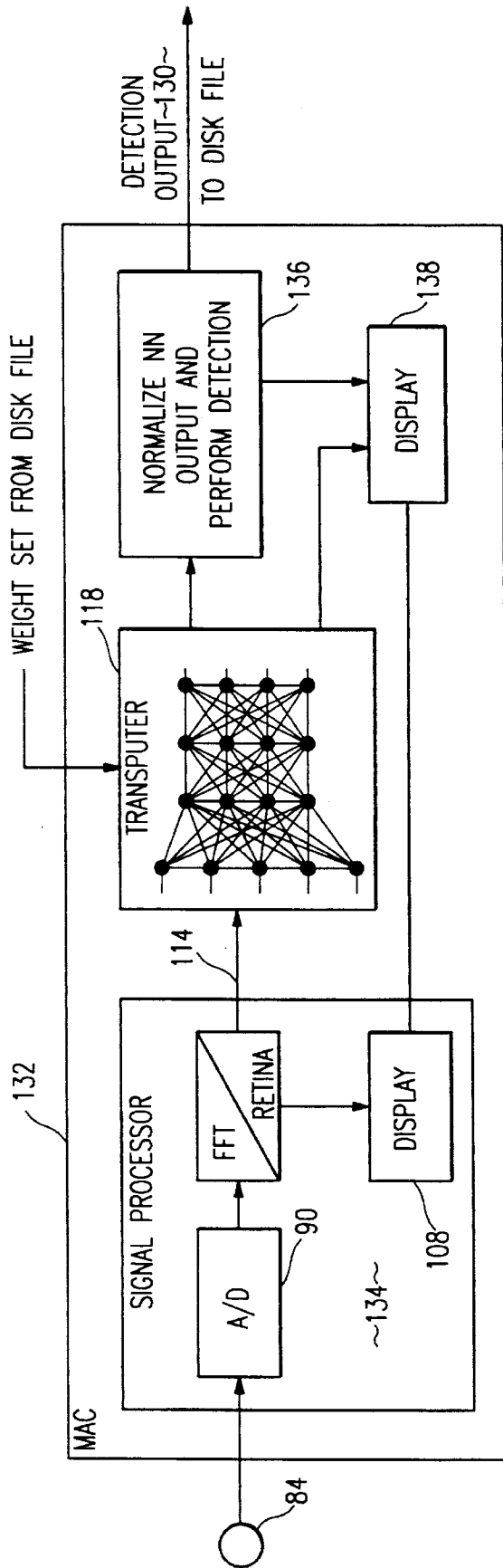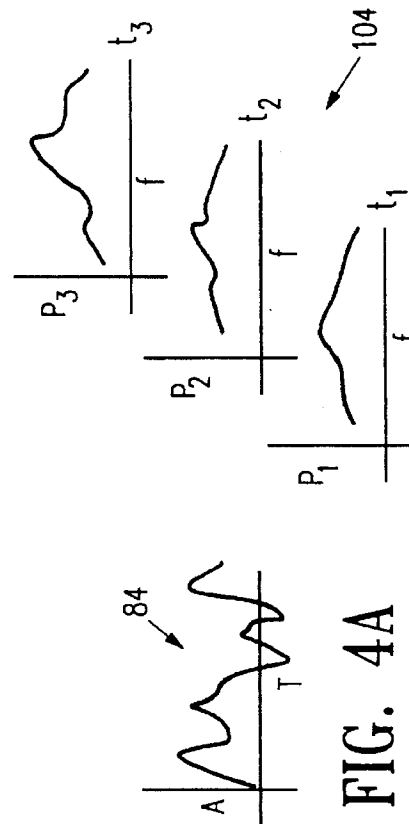
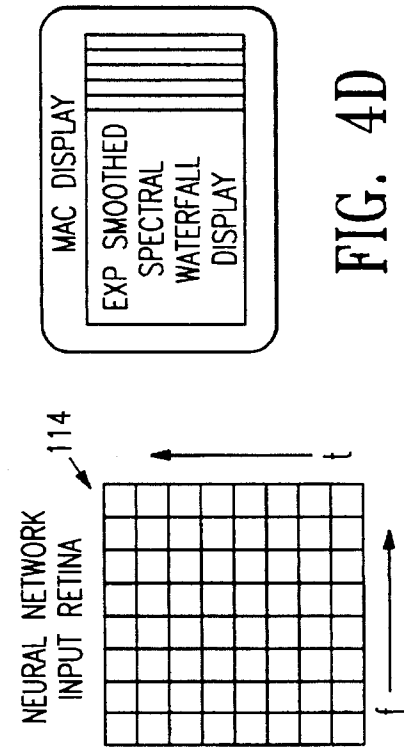FIG. 4B

FIG. 4A
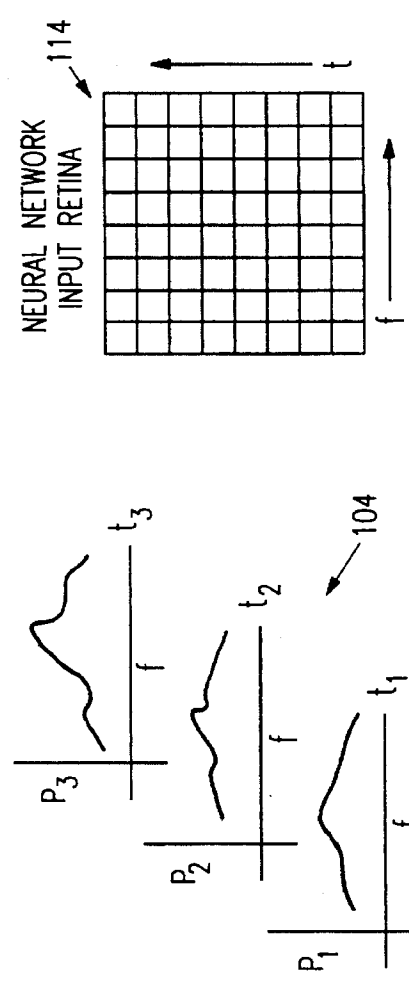
FIG. 5

DOCKET ALARM
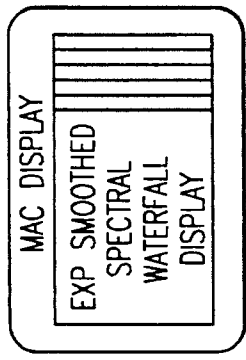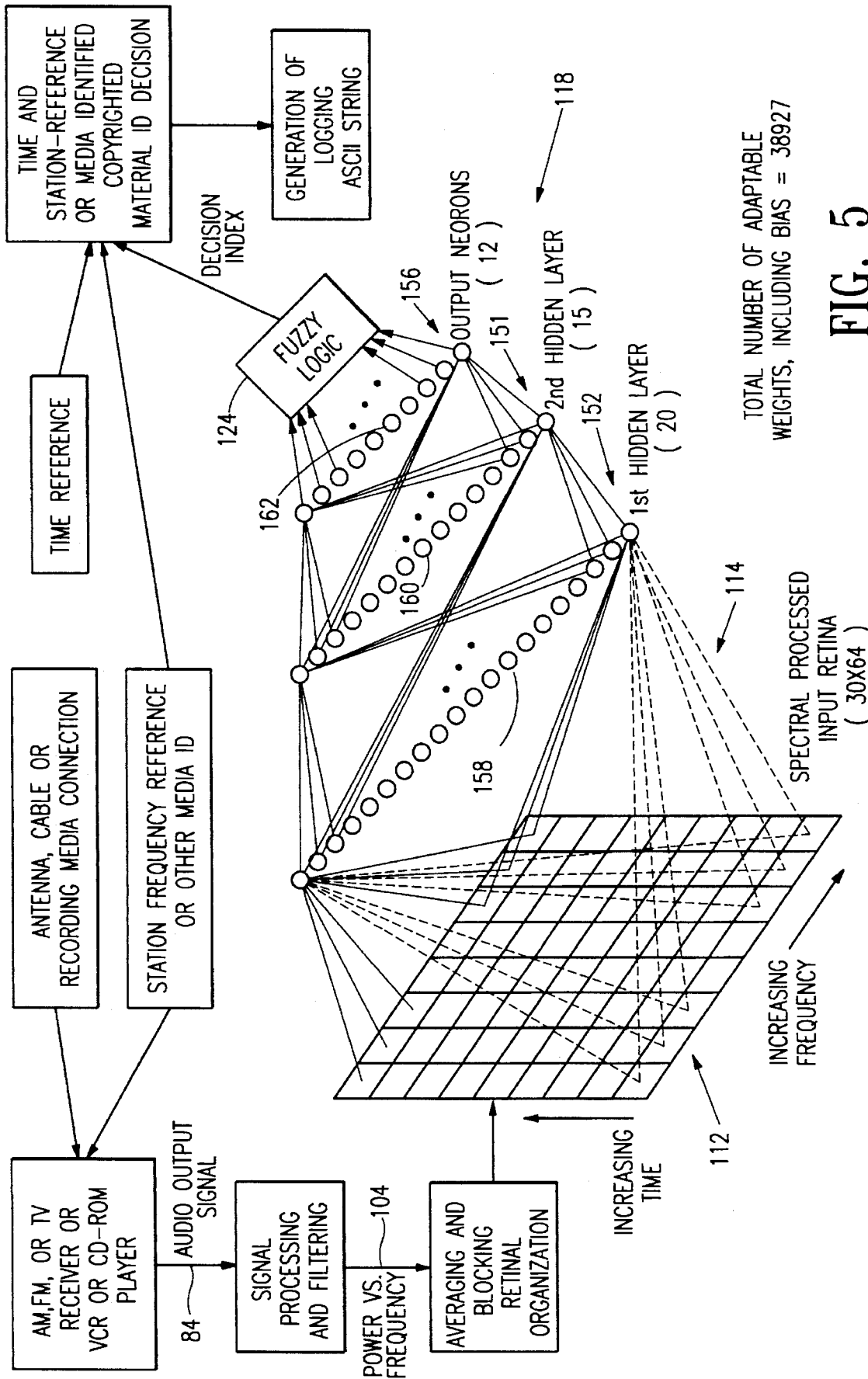
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