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ELECTRONIC TRANSISTORIZED
RECORDING ACCUMULATING COUNTERS

11 Jan 64

This proposal is submitted in response to and conforms with specifications as outlined in Code 822 File 3900.

The purpose of this product improvement is to provide an encoding measurement system with electronic transistorized recording accumulating counters.

Basically, the system will consist of a rack (Figure 1), in accordance with the Block Diagram (Figure 2). The system operation will be as follows:

Encoders attached to the X and Y lead screws will feed pulses equivalent to 2 1/2 microns at the film plane into solid state up-down counters. Upon operator demand, this count information together with the three (3) digit event counter data will be processed, converted, coded and recorded on an eight (8) level punch tape in a BCD code. A 100 hole patch board will provide program information flexibility. Convenient remote controls will permit the operator to zero reset all counters, as well as automatically record all data.

STATINTL

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DESCRIPTION OF EQUIPMENT AND WORK STATEMENT

1) Install (4) 1000 count per revolution encoders, Data Tech Magnetic Incrosyn type. 1.5 diameter to eliminate rework of base frame and carriage castings. 1000 count/rev. will provide a least bit measurement resolution of 2 1/2 microns when decoding 2 1/2 milimeter pitch screws. Encoder count rate of 20 KC is expected to be more than adequate for 10,000 bit per second rate equivalent to 1 inch/second carriage travel.

2) (4) 6 decade bi-directional high speed counters employing transistorized plug in decade boards and mounted for maximum heat dissipation together with accessability for easy maintenance. True negative and positive ± indication is provided on nixie tube numeric displays, (one for each coordinate axis).

3) Event Counter - 3 decade, solid state counters with visual readout and reset-preset capabilities.

4) Input - Output sequencors, with decoder logic, punch driver, converter, start-stop print logic and remote control provisions with all necessary interconnecting cables.

5) Patch board with patch wires and interconnecting wiring (50 input to 50 hole output), see Figure 2. This is in accordance with the above referenced specifications.

STATINTL 6) Tape punch [redacted]. Print format will be compatible with 8 channel Dura-BCD code.

7) Console to house the above items 2, 3, 4, and 5. This console contains a blower for cooling, and contains racks on slides to allow accessibility for maintenance.

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8) An interlock circuit will be provided so that power to the X and Y drive is removed while readout to the tape punch is in progress.

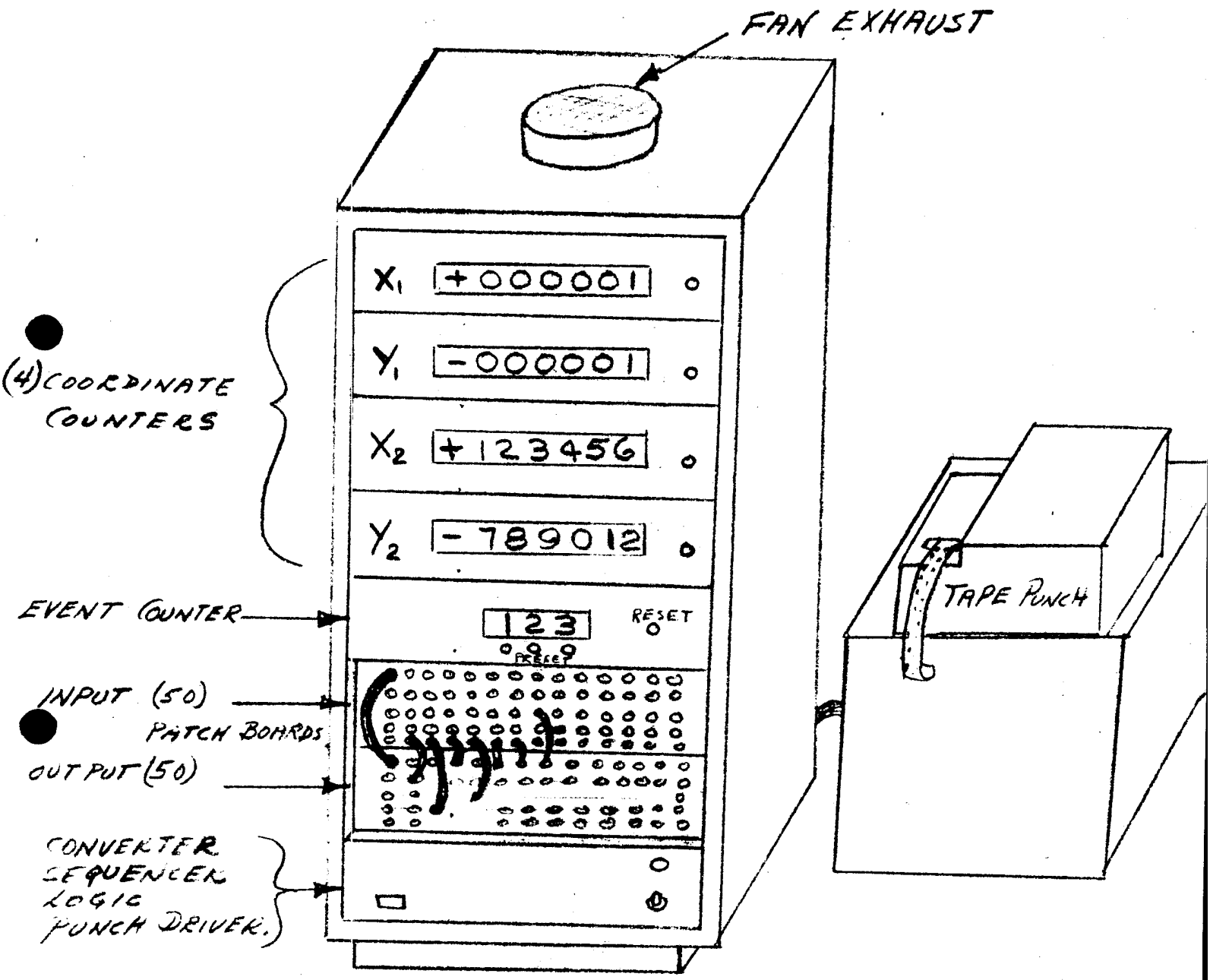

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FIG. 1

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MEASUREMENT-READOUT SYSTEM

PATCH BOARD USED TO CHANGE PRINT OUT SEQUENCE

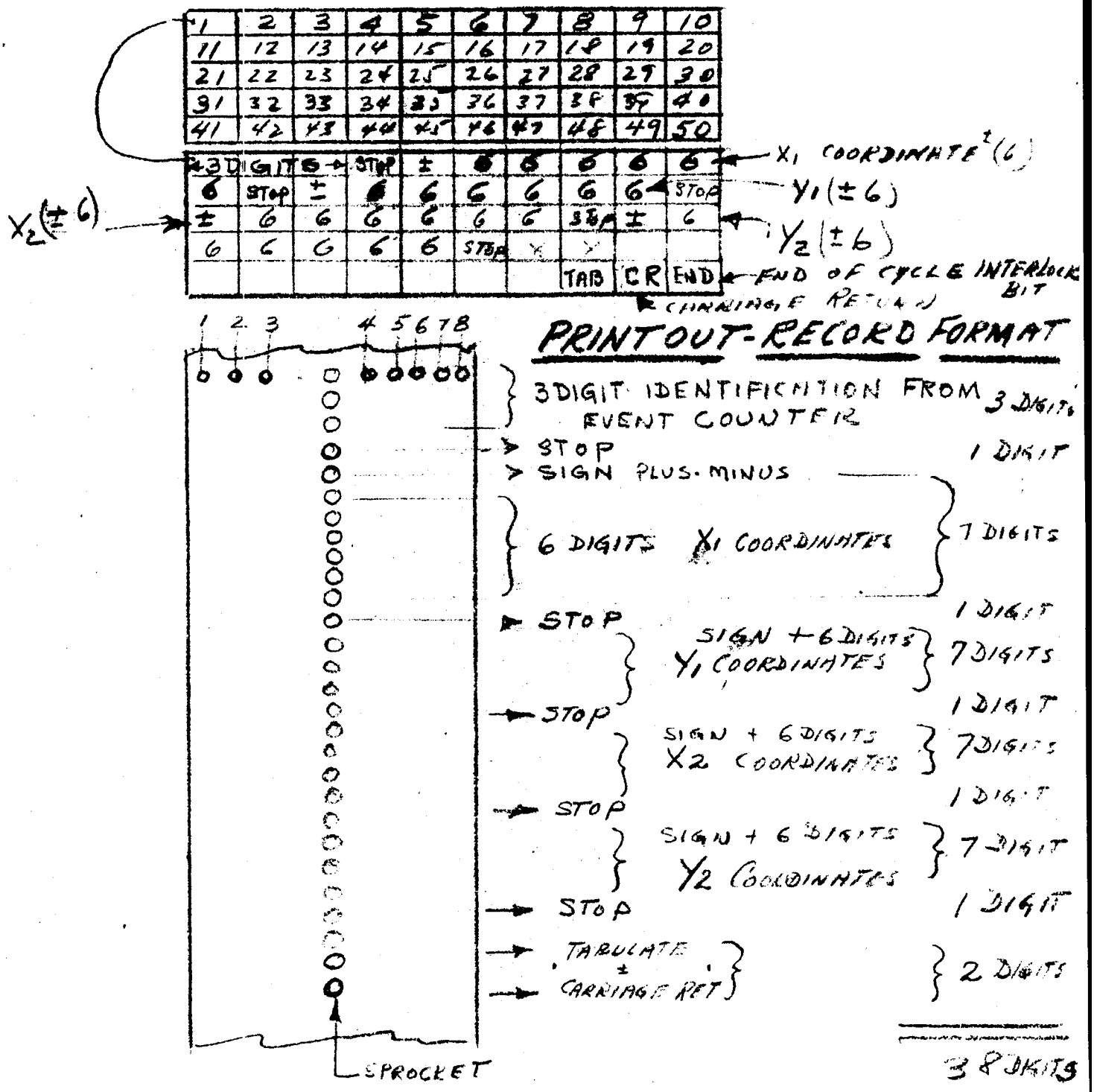

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FIG. 2

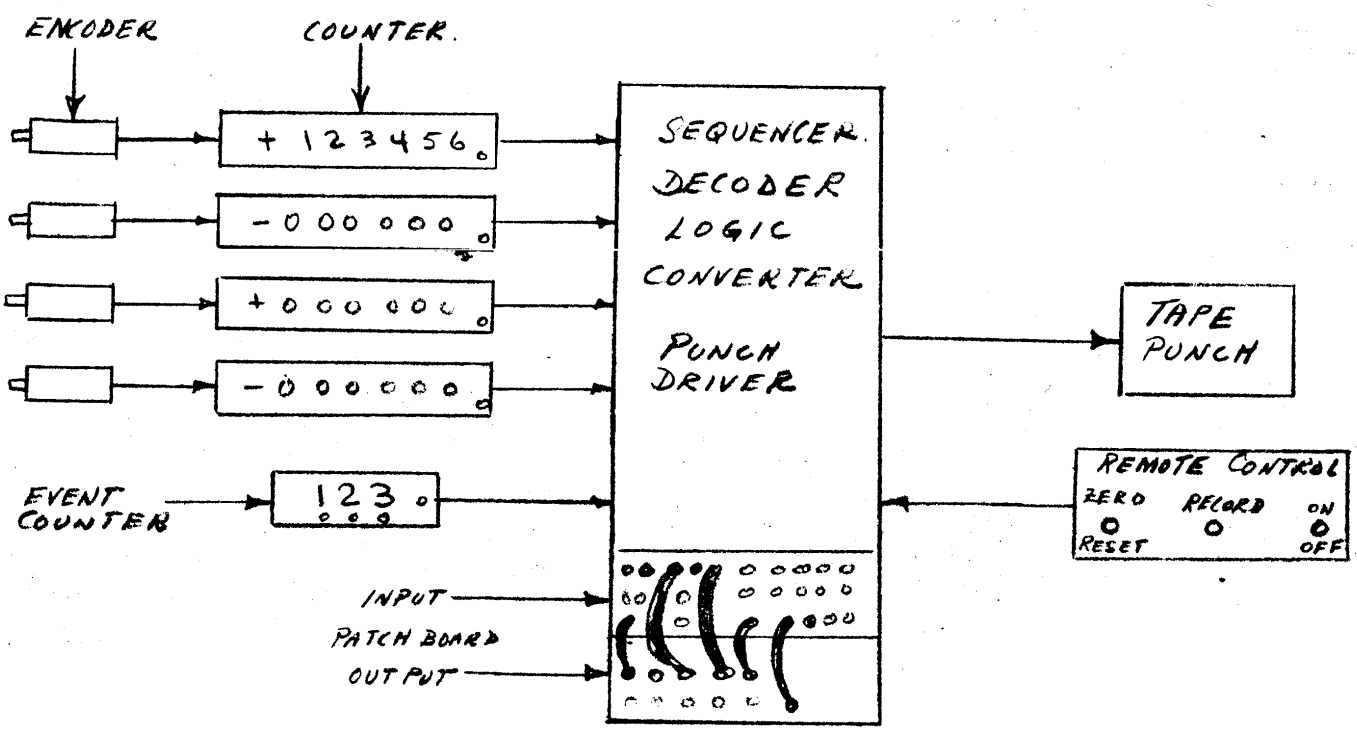

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FIG. 3

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BLOCK DIAGRAM
MEASUREMENT-READ
SYSTEM