

DISCLOSURE BACKUP
DATA - TVGD

RHRae

Started 1 Sept 66

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Witnessed &
understood

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Background Material - Conceptual, TV Gaming Display

1. Intent



The purpose of the invention is to provide a large variety of low-cost data entry devices which can be used by an operator to communicate with a monochrome or color TV set of standard, commercial unmodified type. Entry into the TV set is to be gained either through direct connection to the video system (at and detector) or by connection to the antenna terminals, substituting the entry device (hereinafter called "generator") for the broadcast TV signal, by modulating an RF oscillator operating on one of several standard TV channel frequencies, and tuning the TV set to that channel. (Channel 19 for Let's Play).

2. Some Classes of Games Considered

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The following general classes of games are presently envisioned:

- (A) Action games in which skill of operator (observation, manual dexterity) play a part. Example: "Steering" a wheel to control random drift of color (line) over the CRT face - timer determines which participant (hereinafter called player) can maintain a particular hue longest etc.
- (B) Board ^{skill} games - i.e. classes of games imitative of checker, chess, domino,
- (C) Artistic games in which the player manipulates controls to produce artistic designs, working against time (integral timer)
- (D) Instructional games designed to teach basics of geometry, basic arithmetic (ex. adding blocks)
- (E) Board chance games - i.e. classes of games imitative

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of board games usually employing dice, roulette wheels
etc to determine character of next move.

(F) Card Games - Games imitative of card games requiring
intellectual "skill" or dexterity; such games might be
played with coded cards which player inserts into generator

(G) Game Monitoring - player communicate with TV set
while playing standard games (cards, skill etc) for
the purpose of entering score into generator &
displaying it on TV set. generator may have provision
to provide simple arithmetic operations (such as adding
a player scored points).

(H) Sport Games - such as Auto Racing, using screen as
road way or obstacle course; or Target Shooting,
using screen as target

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3. Prior to the practical implementation of the above mentioned approaches to TV Gaming the following conceptual ideas have been formulated and are here recorded to show the extent of the possible combinations & permutations which are presently apparent; and to form a basis for possible patent (protective) action. It is planned to follow this conceptual deposition by corporately-financed experimental work in the immediate future. Such work will be carried on in the company's facility at Nashua NH and will be properly guarded against inadvertent disclosure but confining it to a minimum number of personnel & by conducting the work in a guarded & otherwise inaccessible room.

The following is a list of conceptual ideas ^{and techniques} which have occurred to the writer. It is intended to supplement this list with new material as it is formulated by adding new depositions (sheets) appropriately dated to this present material. No special order will be followed. However, each conceptual scheme will be coded as to Gaming Category by appending to it a letter corresponding to "Class" letter of Section 2, pages 1 and 2 above.

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- 3.1 An oscillator centered at 3.579545 Mc or approx 3.58 Mc is provided with a phase shift control in its output which is capable of producing a signal displaced from the basic 3.58 Mc output (pulse) over a range of 0° up to 360° . Purpose: to develop single-color flat field on TV screen. Applications -
(a) Connect shaft of phase shift control to flywheel - player spins flywheel. Player's score if flywheel comes to rest in player-preselected color on CRT screen. [E, H (manual skill required to position phase shift control so as to produce desired color)]
- 3.2 Two players operate a "Pumps" - one pumps "up", one down; ~~control~~ 3.58 Mc pulses plus phase shifted chroma pulse are generated; pump controls level of

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chroma signal. One player pumps for black, other pumps for saturated color. Alternate (for monochrome) players pump for black or white screen. [A, H] Use CCR overlay showing section of vessel being filled.

3.3 Bar, Line or Dot Generation - players control selective blanking, blinking, color coding of lines, bars, dots, fields via generator [B, C, D, E]

3.4 Noise injection - in combination with color, geometric patterns such as lines, bars, dots etc to form characteristic displays of color distribution, brightness distribution. Variations may be result of selective blanking etc as in 3.2 above or by controlling spectral content, distribution, bandwidth of noise. Noise may be modulated onto 3.58 mc carrier, used as substitute for chroma signal etc. [A, E, H]

3.4. Scan Conversion Techniques -

Using a mechanically vibrating or rotating device, such as spinning Nipkov disk, in the generator, the player can enter data (color, brightness, dots, squares, circles, other geometric figures) by placing sensor (photocell, capacitive pickoff, magnetic pickoff, electric contact etc) over spinning Nipkov disk or similar device. Multiple pickoffs for several players may be used.

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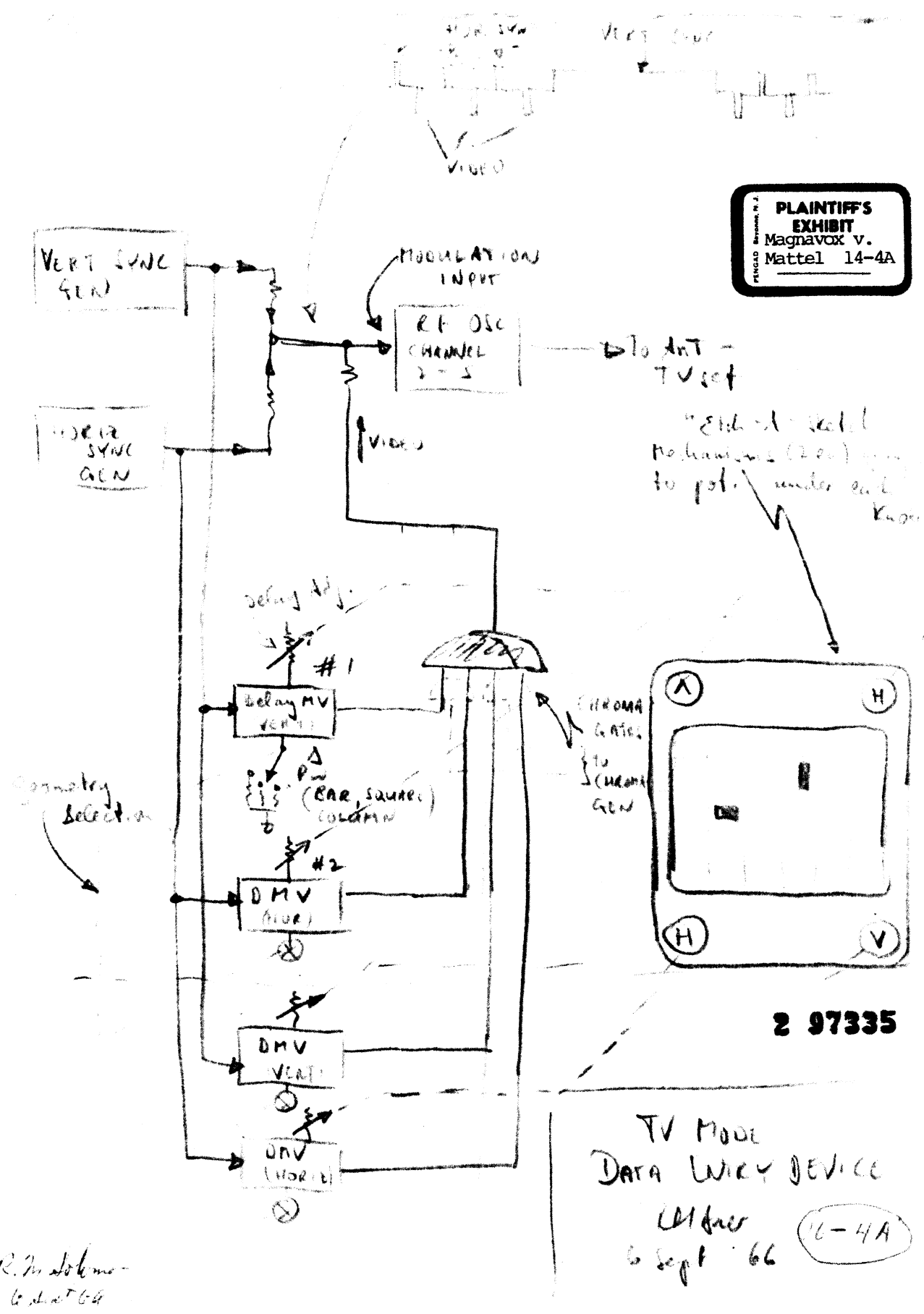
3.5 Free-Running Raster Techniques -

Generation of displays by providing only H sync, only vertical, both or neither synchronization pulser to the TV set from the generator, entering TV set only with either horiz sync or vertical sync correlated signals or noise or totally uncorrelated noise using level, blink-rate, etc as characteristic (identifying) display.

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