CHIRON
telesystems

CHIRON II ELECTRONIC GRAPHICS SYSTEM

DESCRIPTION:

The CHIRON II GRAPHICS SYSTEM is based on an extremely flexible device providing high resolution, graphic quality typefaces and line illustrations for use in standard television broadcast titling applications.

Its unique versatility lies in the use of programmable typefaces, which may be created locally at the station directly from artwork using a broadcast camera, and stored conveniently on a removable magnetic disc (VIDIDISC) in digital form. Thus, many different type styles can be kept on hand and brought out for use on different television programs as required. If desired, each advertiser's unique fonts and logos may be created and stored on a separate VIDIDISC.

A very high resolution system is used to define the start and stop points in each horizontal line segment of a character. This results in a smoothness of diagonals and curved characters equivalent to live camera video.

In addition to the graphic quality characters in any typeface, the CHIRON II GRAPHICS SYSTEM combines a large number of operating and programming features with the rapid random access title storage system of the VIDIDISC.

FEATURES:

● **Camera Video Interface:**
Allows the recording, with your studio camera, of virtually any standard or specially designed typefaces and logos, for VIDIDISC storage.

● **6 Keyboard Selectable Fonts:**
Characters from the various fonts may be selected by simple keyboard operations for composing and editing titles or messages. A font consists of a set of upper and lower case letters and/or numerals and symbols.

● **Composition Flexibility:**
In addition to its unequalled character quality, CHIRON II offers complete flexibility in display composition. Characters, words, or entire rows can be individually positioned as desired. The system provides color and flash capability on a character or group basis.

● **Large Capacity Storage:**
Up to 2,000 rows of information may be stored for instant retrieval on a single VIDIDISC.

● **Message Retrieval Flexibility:**
Previously stored messages may be recalled for display at any position on the screen. The operator may also select the display in either roll or crawl mode.

CHIRON II ELECTRONIC GRAPHICS SYSTEM TECHNICAL SPECIFICATIONS

TYPE FONT CHARACTERISTICS

Each character of the programmable font is generated from a standard TV broadcast camera video signal, using any black on white image. The analog camera image is digitized and superimposed on an electronically generated grid, reducible by ratios of 8:1, 4:1, 2:1, or 1:1, and then may be previewed on the Edit Monitor.

Transitions in each horizontal line segment comprising a character are defined to the nearest 28 nanosecond transition point in a horizontal scan line.

The maximum height of a font is 480 TV scan lines. The minimum is 8 TV scan lines.

Width (including spacing) is variable for each character. The maximum width is 6.9 microseconds, and the minimum 900 nanoseconds. The increments of width are 224 nanoseconds. This flexibility allows both character and word proportional spacing.

Note 1): Two "characters" can be run together horizontally to form a continuous character, such as in a bar chart.

Note 2): For logo purposes, the maximum character width can be 43 microseconds (full screen).

The maximum number of characters per row varies up to 40, depending on character construction and width.

The working memory (font descriptor memory) has a standard capacity of 16,384 segment descriptors. This means that the equivalent of approximately 400 average characters are available for use at one time.

Note: Any number of type fonts can be made available for preselection, stored on additional VIDIDISCS.

MESSAGE (TITLE) COMPOSE

Messages are composed on an alphanumeric keyboard which features standard typewriter keys plus auxiliary keys for editing functions.

Upper case characters are normally selected by use of the "Shift" key (as in typing).

Type fonts are selected by the use of six interlocked "Font Selection" keys. These fonts may be intermixed on a character-by-character basis.

A cursor on the edit channel indicates the position of the next character to be entered, or the current character to be modified.

The "Cursor Control" and "Character Shift" keys permit positioning horizontally in 224-nanosecond increments, and vertically, in increments of scan line pairs.

Flash:
Flashing of any letter or word is accomplished simply by depressing the "Flash" key.

Automatic Row Centering:
A title on any row may be centered after typing by locating the cursor on that row and pressing the "Center Line" key. This will balance the space to the right and left of the title.

Automatic Page Centering:
An entire page may be centered by depressing the "Center Page" key.

Character Delete:
Any character may be deleted by locating the cursor on the character and pressing the "Character Delete" key. All following characters in the row move left one space.

Character Insert:
A space or new character may be inserted at any point in a row by locating the cursor at that point and pressing the "Character Insert" key. All characters to the right move right one space.

Row Delete:
Any row may be deleted by locating the cursor on the row and pressing the "Row Delete" key. That row disappears and all following rows move up one row.

Row Insert:
Space between two rows may be opened up by placing the cursor at any position in a row and pressing "Row Insert". That row and all rows below drop down one row space.

Tab Control:
Three tab control keys are provided — TAB, TAB SET, and TAB CLEAR. Operation of the tab controls is similar to that on a standard typewriter, and up to four tab positions may be selected.

Color Control:
A color for the subsequent character(s) is selected by depressing one of seven interlocked "Color Selection" keys. The RBG outputs of the system, when used with the CHIRON Model 502 colorizer or any similar encoder, will provide seven colors.

MESSAGE (TITLE) STORAGE:

Messages are stored in digital form on the same VIDIDISC medium used for font storage. (Separate VIDIDISCS are used for these different purposes.)

The capacity of a single VIDIDISC is 80,000 32-bit characters. This is equivalent to approximately 2000 rows of average title information.

As an option, additional VIDIDISC transports may be added to the system to provide greater on-line message storage capacity.

MESSAGE (TITLE) RECALL:

Previously stored messages may be recalled from the composing keyboard or, as an option, from one of two remote address keyboards.
The recall functions are described below:

Read:
The message will commence displaying from the cursor position, terminating with the pre-recorded Record Mark or End of Message.

In this mode, it is possible to display from one character up to a full page of information.

Lower Third Read:

This mode is used to display messages up to three rows in length in the lower third of the screen.

Next:

"Next" is used for lower third titles, recorded in sequence, without going to "black" between titles.

Roll:

In the roll mode titles will appear at the bottom of the screen and disappear smoothly at the top of the screen. Any number of pages may be linked together up to the maximum storage capacity of the VIDIDISC.
Roll speed is controlled by five push buttons (including "Pause") and may be changed at any time, even during roll.

Crawl:

A crawl message will appear from the right side of the screen and disappear on the left of the screen. Messages are normally crawled along the lower portion of the screen, but may be positioned elsewhere by use of the cursor.

SYNCHRONIZING

Synchronizing is by standard mixed sync input 4.0V nominal ±2V. All inputs are looped through 75 ohm connectors.

Synchronizing Stability:

Video output will lock and be synchronous with any input synchronizing signal within FCC standards, including 60 Hz power line lock.

"Set Up":

Where set up is required in composite video outputs, a blanking input is provided for standard 4.0V peak-to-peak ±2V. Output set up level is adjustable from 0 to +20 IEEE units.

VIDEO OUTPUTS

Title Video:

0.7V (nominal) non-composite, or 1.0V (nominal) composite by strapping.

Level Controls on video, sync and set up.

Edge Key Video:

0.7V non-composite, or 1.0V composite by strapping.

Color:

Three color control signals are provided which correspond to RBG. Each signal is 0.7V.
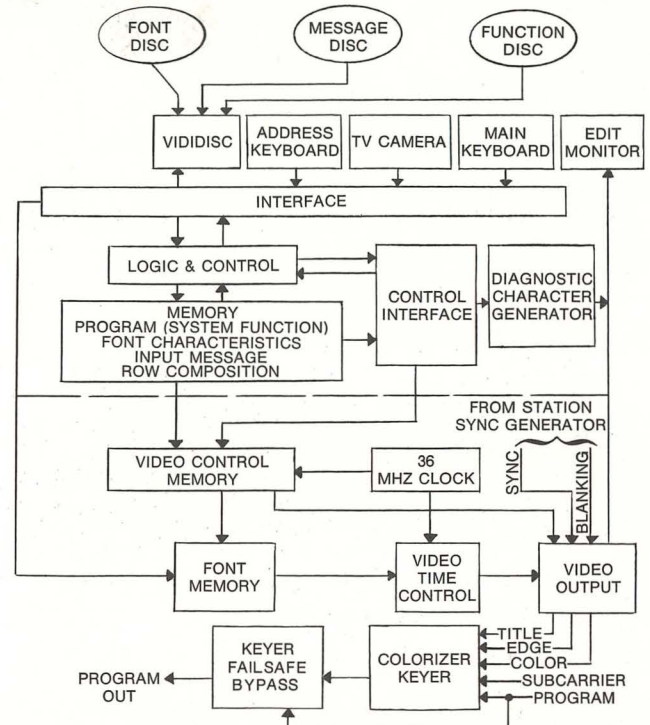
Edit Video:

0.7V non-composite, or 1.0V composite by strapping. Contains title video with cursor signal, diagnostic video, and type compose indices.

All outputs are designed to feed symmetrical rise and fall times of 125 nanoseconds (approximating a sine squared function).

POWER REQUIREMENTS

Input: 117V ± 10% @ 60 Hz, 1600 watts. Also available on order 230V @ 50 Hz.

MECHANICAL

Central Equipment

Standard 19″ width Rack Mounted assembly, consisting of:

Logic Controller (with memories and VIDIDISC Transport) : 42″ high x 20″ deep.

Power Supply: 14″ high x 20″ deep.

Model 502 Colorizer/Mixer: 1³/₄″ high x 12″ deep.

All Video and signal circuits on BNC coax sockets.

All interconnecting cables supplied with plug-in connectors.

Model 204C Control Keyboard:

(Alphanumeric with Message Address functions)
Dimensions: 27″ wide x 12″ deep x 5″ high.

Weight: 30 lbs. (approx.)
Cable: Connects to Main Frame through 30 conductor cable. Standard length 25 ft. Special lengths (up to 500 ft.) available on order.

Model 204R Remote Message Address Keyboard:

Dimensions: 8″ wide x 12″ deep x 5″ high.
Weight: 15 lbs. (approx.)
Cable: Connects to Main Frame through 30 conductor cable. Standard length 25 ft. Special lengths (up to 500 ft.) available on order.

ENVIRONMENTAL

Temperature: Operating range 40°F to 100°F.
Humidity: 5% to 95% (with no condensation).

CHIRON II BASIC GRAPHICS SYSTEM:

- Controller.

- VIDIDISC Sub-System.

- Program/Font Disc with 4 pre-recorded standard type fonts (Model 203SFD).

- Message Disc (Model 203MD).

- Font Descriptor Memory (capacity six average fonts).

- Power supplies and Interconnecting Cables.

- Control Keyboard containing both alphanumeric and message address functions with 25 ft. cable (Model 204C).

CHIRON II OPTIONS AND SERVICES:

- Model 201 Type Font Compose Interface and Program (Provides capability of composing any new character fonts from standard camera video input).

- Model 202 Type Font Compose Service (New font of 120 characters maximum composed from customer supplied artwork — includes one font disc).

- Model 203D VIDIDISC (For either type font or message data storage).

- Model 204C Auxiliary Control Keyboard (Containing both alphanumeric and message address functions, including 25 ft. cable).

- Model 204R Auxiliary Remote Address Keyboard (Including 25 ft. interconnect cable).

- Model 205D Additional VIDIDISC Transport with Interface.

- Model 206 Complete Electronic Spares Kit.

- Extension cables for Keyboards or VIDIDISC Any length up to 500 ft. assembled with connectors at each end.

- Model 502 Colorizer/Mixer (NTSC compatible).

- Model 502P Colorizer/Mixer (PAL compatible).

- Field Engineering — installation and test of CHIRON Graphics II on site. Includes operator and maintenance training at station.

- Motion Picture Subtitling Interface.

- Graphics/Titling Stand.
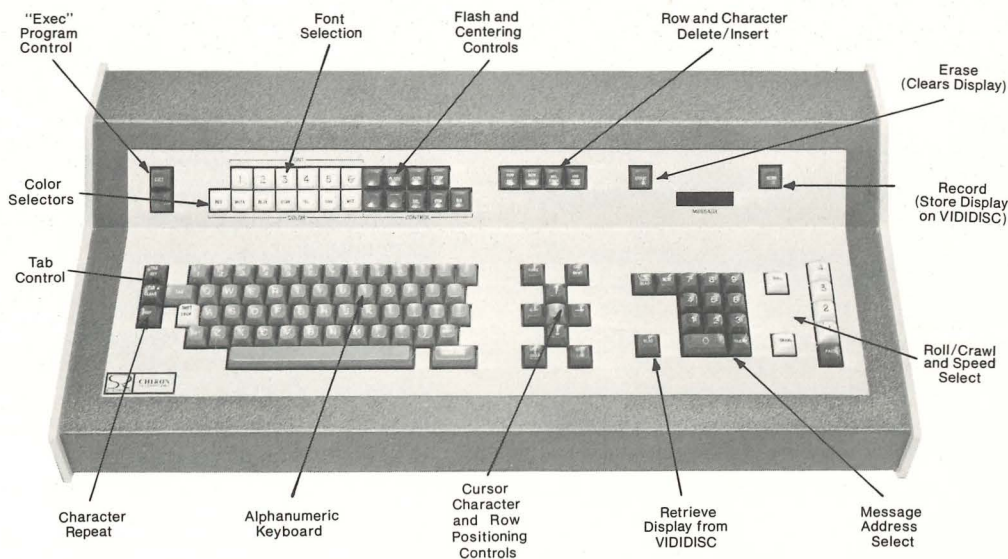
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CHIRON II GRAPHICS SYSTEM
Domestic
Price List
November 1, 1974

CHIRON II BASIC SYSTEM . . . . $ 45,300.

    Model 200 includes the following:
       Controller
       VIDIDISC Sub-system
       Two VIDIDISCS (Systems & Font), each with a
          Program Library & 5 Fonts of 120 characters
          maximum (Model 203S)
       One VIDIDISC (Message) (Model 203M)
       Font Descriptor Memory (capacity six average fonts)
       Power supplies and Interconnecting Cables
       Control Keyboard containing both Alphanumeric and Message
          Address Functions with 25 ft. cable (Model 204C)
       Diagnostic Program & Indicator Panel (Model 207)

Field Engineering-installation and test of CHIRON II GRAPHICS
    on site . . . . $ 1,250.
    Includes operator & maintenance training at station.   plus airfare.

CHIRON II OPTIONS:

    Model 201 Type Font Compose Interface and Program . . . . . $ 4,500.
       (Provides capability of composing new character fonts
       from standard camera video input.)

    Model 202C Type Font Compose Service
       (New font of 120 characters maximum composed
       from customer supplied artwork
       and includes one font disc) . . . . .Set up $ 400.
       Each complete font (maximum of five per disc) . . . . $ 175.

    Model 203M MESSAGE VIDIDISC . . . . $ 25.

    Model 203F Font Disc . . . . $ 100.
       (Containing up to any 5 fonts from CHIRON II's
       standard library)

    Model 203A Alignment Disc . . . . $ 75.

    Model 204C Control Keyboard (Add-on for multistudio use.) . . $ 2,150.
       (Containing both alphanumeric and message address
       functions includes 25 ft. cable.)

Model 204R Remote Address Keyboard (Add-on for
multistudio recall.) . . . . $ 1,350.
(Including 25 ft. interconnect cable.)

Model 502 Colorizer / Mixer . . . . $ 1,950.
Accepts color control and edge, program, title and subcarrier
inputs and produces program video with colored inserted
characters.

Model 502P (Colorizer for PAL) . . . . $ 2,950.

Model 205D VIDIDISC Transport . . . . $ 2,750.

Model 206 Complete Electronic Spares Kit . . . . $ 800.

Model 209 Camera Compose Easel . . . . $ 1,200.

Extension cables for Keyboards or VIDIDISC any length up
to 500 ft. assembled with connectors at each end:

Price per foot of cable . . . . $ 1.25
Plus termination charge . . . . $ 100.

Field modification of CHIRON II to replace Vidiloop with
VIDIDISC Sub-system . . . . $ 4,850.

Field Installation, if desired $ 250.
                                                                         plus air fare

NOTE: The prices shown are subject to change without notice
          All prices are FOB Plainview, New York
          Equipment packed for Air Freight shipment

CHIRON
telesystems

CHIRON III ELECTRONIC TITLING SYSTEM

DESCRIPTION:

The CHIRON III Electronic Titling System offers extensive capabilities for broadcast titling applications. It features font versatility, large capacity message storage, fast access, and character quality exceeded only by CHIRON II.

Font Availability

Up to two 96-character fonts plus one 64-character font may be loaded for a program on a single removable magnetic disc (VIDIDISC). Additional fonts are available with quick loading VIDIDISCS. Minimum character height is 16 TV lines, and minimum character space width is 1/48 of the safe title area. Maximum height is 140 TV lines and maximum width is 16 microseconds. Font detail (65 nanoseconds) provides adequately for most titling requirements and limited graphics use. Font creation service is available.

Message Handling

Up to 2000 38-character rows may be stored on one VIDIDISC. VIDIDISCS are interchangeable in a matter of seconds. Retrieval is controllable by the main composing Keyboard or by optional remote Keyboards. Up to three Keyboards and three VIDIDISC transports may be used under "Delegate" control.

Message Composition

The composing Keyboard provides full upper and lower case facilities. Seven colors (including white) are key selectable. Cursor control is provided on the composing (Edit) display. Features include:

> EOM and RM (End of Message and Record Mark)
> Center Row
> Center Page
> Flash Character
> Flash Word
> Insert Character
> Delete Character
> Insert Row
> Delete Row
> Shift character horizontally
> Shift row vertically
> Character-by-character Color

Titles appear as integrated words rather than as oddly spaced letters.

FEATURES:

Powered by a Read Only Memory microprocessor and operating with a 65 nanosecond starting point resolution, CHIRON III provides:

- Inter-character space adjustment
- Inter-row spacing up to full screen
- Up to one-third screen character size
- Multi-speed Roll and Crawl message handling
- Character-by-character flash and color control
- Internally generated edging

CHIRON III ELECTRONIC TITLING SYSTEM
TECHNICAL SPECIFICATIONS

TYPE FONT CHARACTERISTICS

The Programmable font is generated from your own art work. Any ASCII code character may be assigned to designate a particular piece of art work.

Transitions in each horizontal line segment comprising a character are defined to the nearest 65 nanosecond transition point in a horizontal scan line.

The maximum height of a font is 140 TV lines. The minimum height is 16 TV scan lines.

Width (including spacing) is variable for each character (proportional spacing).The maximum width is 16 microseconds, and the minimum is 845 nanoseconds. The increment of inter-character width is 260 nanoseconds.

Note: Two "characters" can be run together horizontally to form a continuous character such as in a bar chart.

The maximum number of characters per row (within the safe title area) varies to 38, depending on character construction and width.

The working memory (font descriptor memory) has a standard capacity of 8192 segment descriptors. This means that the equivalent of approximately 2½ average type fonts is available for use at one time (two 96-character fonts and one 64-character font.)

Note: Any number of type fonts can be made available for preselection, stored on additional VIDIDISCS.

MESSAGE (TITLE) COMPOSE

Messages are composed on an alphanumeric keyboard which features standard typewriter keys plus auxiliary keys for editing functions.

Upper case characters are normally selected by use of the "Shift" key (as in typing).

Type fonts are selected by the use of three interlocked "Font Selection" keys. These fonts may be intermixed on a character-by-character basis.

A cursor on the edit channel indicates the position of the next character to be entered, or the displayed character to be modified.

The "Cursor Control" and "Character Shift" keys permit positioning of characters horizontally, in up to three 130-nanosecond increments, and positioning of rows vertically, in increments of scan line pairs.

Flash:

Flashing of any letter or word is accomplished by depressing the "flash" key with the cursor positioned at the appropriate location.

Automatic Row Centering:

A title on any row may be centered after typing by locating the cursor on that row and pressing the "Center Line" key. This will balance the space to the right and left of the title.

Automatic Page Centering:

An entire page may be centered row by row by depressing the "Center Page" key.

Character Delete:

Any character may be deleted by locating the cursor on the character and pressing the "Character Delete" key. All following characters in the row move left one space.

Character Insert:

A space or new character may be inserted at any point in a row by locating the cursor at that point and pressing the "Character Insert" key. All characters move right one space, leaving room to insert the new character.

Row Delete:

Any row may be deleted by locating the cursor on the row and pressing the "Row Delete" key. That row disappears and all following rows move up one row.

Row Insert:

Space between two rows may be opened up by placing the cursor at any position in a row and pressing "Line Insert". That row and all rows below drop down one row space, leaving room to insert a new row.

Tab Control:

Three tab control keys are provided — TAB, TAB SET, and TAB CLEAR. Operation of the tab controls is similar to that on a standard typewriter.

Color Control:

A color for the subsequent character(s) is selected by depressing one of seven interlocked "Color Selection" keys. The RBG outputs of the system, when used with the CHIRON Model 502 colorizer or any similar encoder, will provide seven colors.

MESSAGE (TITLE) STORAGE:

Messages are stored in digital format on the same VIDIDISC medium used for font storage. (Separate VIDIDISCS are used for these different purposes.)

The capacity of a single VIDIDISC is 76,000 characters. This is equivalent to approximately 2000 rows of average title information.

As an option, additional VIDIDISC transports may be added to the system to provide greater on-line message storage capacity.

MESSAGE (TITLE) RECALL

Previously stored messages may be recalled from the composition keyboard or, as an option, from two remote address keyboards.

Read:

The message will commence displaying from the cursor position, terminating with the pre-recorded Record Mark or End of Message.

In this mode, it is possible to display from one character up to a full page of information.

Lower Third Read:

This mode is used to display messages up to three rows in length in the lower third of the screen.

Roll:

In the roll mode titles will appear at the bottom of the screen and disappear smoothly at the top of the screen. Any number of pages may be linked together up to the maximum storage capacity of the VIDIDISC.

Roll speed is controlled by 4 push buttons (including "Pause") and may be changed at any time, even during roll.

Crawl:

A crawl message will appear from the right side of the screen and disappear on the left of the screen. Messages are normally crawled along the lower portion of the screen, but may be positioned elsewhere by use of the cursor.

SYNCHRONIZING

Synchronizing is by standard mixed sync input 4.0V nominal ±2V. All inputs are looped through 75 ohm connectors.

Synchronizing Stability:

Video output will lock and be synchronous with any input synchronizing signal within FCC standards, including 60 Hz power line lock.

"Set Up":

Where set up is required in composite video outputs, a blanking input is provided for standard 4.0V peak-to-peak ±2V. Output set up level is adjustable from 0 to +20 IEEE units.

VIDEO OUTPUTS

Title Video:

0.7V (nominal) non-composite, or 1.0V (nominal) composite by strapping.

Level Controls on video, sync and set up.

Edge Key Video:

0.7V non-composite, or 1.0V composite by strapping.

Color:

Three color control signals are provided which correspond to RBG. Each signal is 0.7V.
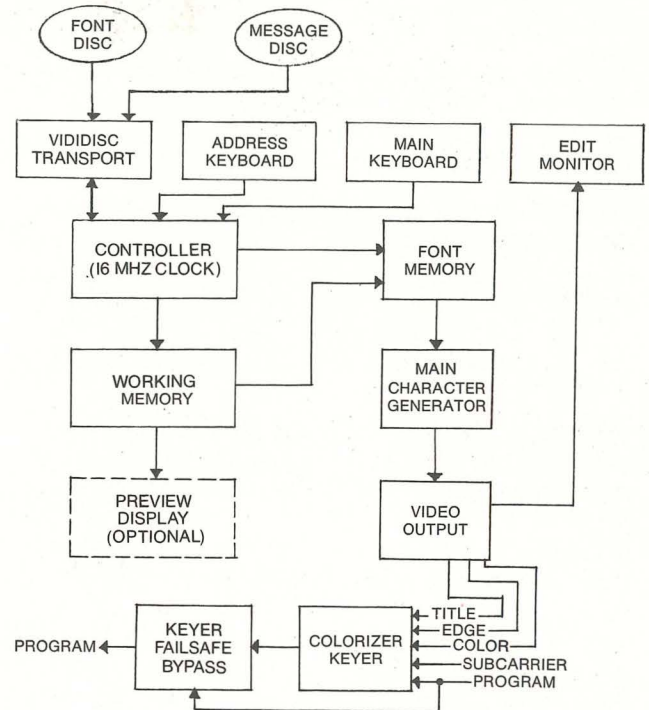
Edit Video:

0.7V non-composite, or 1.0V composite by strapping. Contains title video with cursor signal and diagnostic video.

All outputs are designed to feed symmetrical rise and fall times of 125 nanoseconds (approximating a sine squared function).

POWER REQUIREMENTS

Input: 117V ± 10% @ 60 Hz, 1000 watts. Also available on order 230V @ 50 Hz.

Block diagram: FONT DISC, MESSAGE DISC → VIDIDISC TRANSPORT, ADDRESS KEYBOARD, MAIN KEYBOARD, EDIT MONITOR; CONTROLLER (16 MHZ CLOCK); FONT MEMORY; WORKING MEMORY; MAIN CHARACTER GENERATOR; PREVIEW DISPLAY (OPTIONAL); VIDEO OUTPUT; KEYER FAILSAFE BYPASS; COLORIZER KEYER; TITLE, EDGE, COLOR, SUBCARRIER, PROGRAM; PROGRAM

MECHANICAL

Central Equipment

Standard 19" width Rack Mounted assembly, consisting of:

Logic Controller (with memories): 20³/₄" high x 20" deep.

Power Supply: 8³/₄" high x 22" deep.

VIDIDISC Transport: 10¹/₂" high x 20" deep.

Standard 19" RETMA panel width & mounting

Minimum depth required behind panel: 23¹/₂"

Maximum height: 42"

Forced air cooling provided.

Input & Output connectors accessible from rear.

Model 304C Control Keyboard:
(Alphanumeric with Message Address functions)
Dimensions: 27" wide x 12" deep x 5" high.
Weight: 30 lbs. (approx.)
Cable: Connects to Main Frame through 30 conductor cable. Standard length 25 ft. Special lengths (up to 500 ft.) available on order.

ENVIRONMENTAL
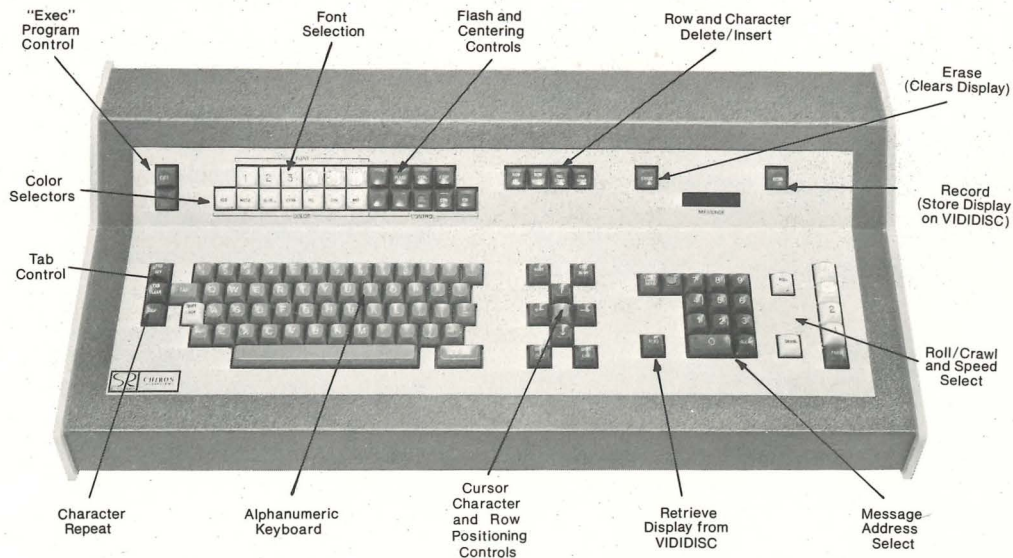
Temperature: Operating range 40°F to 100°F.
Humidity: 5% to 95% (with no condensation).

CHIRON III SYSTEM:

- Controller.

- VIDIDISC Sub-System.

- Font Disc with 3 pre-recorded standard type fonts (Model 303FD).

- Message Disc (Model 303MD).

- Font Descriptor Memory (capacity $2^1/_2$ average fonts).

- Power supplies and Interconnecting Cables.

- Control Keyboard containing both alphanumeric and message address functions with 25 ft. cable (Model 304C).

- Model 307 Diagnostic Control and Indicator Panel.

CHIRON III OPTIONS AND SERVICES:

- Model 303 Type Font Compose Service (New font of 120 characters maximum composed from customer supplied artwork — includes one font disc).

- Model 203D VIDIDISC
(For either type font or message data storage).

- Model 304C Auxiliary Control Keyboard
(Containing both alphanumeric and message address functions, including 25 ft. cable).

- Model 304R Auxiliary Remote Address Keyboard
(Including 25 ft. interconnect cable).

- Model 205D Additional VIDIDISC Transport with interface.

- Model 306 Complete Electronic Spares Kit.

- Model 502 Colorizer/Mixer (NTSC compatible).

- Model 502P Colorizer/Mixer (PAL compatible).

- Extension cables for Keyboards or VIDIDISC
Any length up to 500 ft. assembled with connectors at each end.

- Field Engineering — installation and test of CHIRON III on site. Includes operator and maintenance training at station.

- Preview Option permits previewing of next message for content check. Message is displayed using 7 x 9 dot matrix characters.

- Motion Picture Subtitling Interface.

"Exec" Program Control — Font Selection — Flash and Centering Controls — Row and Character Delete/Insert — Erase (Clears Display) — Color Selectors — Record (Store Display on VIDIDISC) — Tab Control — Roll/Crawl and Speed Select — Character Repeat — Alphanumeric Keyboard — Cursor Character and Row Positioning Controls — Retrieve Display from VIDIDISC — Message Address Select

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CHIRON III TITLING SYSTEM
Domestic
Price List
November 1, 1974

CHIRON III TITLING SYSTEM . . . . $ 19,500.

    Includes:
        Controller
        VIDIDISC Sub-system
        Two duplicate font discs
        Message Disc
        Manual Control and Test Panel
        Font Descriptor Memory
        Power Supplies and Interconnecting Cables
        Control Keyboard-alphanumeric with 25 ft. cable

Field Engineering — installation and test CHIRON III
on site (if desired) . . . . $ 750.
                                             plus airfare

    Includes operator and maintenance training at station.

CHIRON III OPTIONS:

Model 303M MESSAGE VIDIDISC . . . . $ 25.

Model 303F Font Disc . . . . $ 100.
    (containing any 2½ fonts from Chiron III's standard library)

Model 303A Alignment Disc . . . . $ 75.

Model 304C Control Keyboard (Add-on for multistudio use) . . $ 2,150.
    (containing both alphanumeric and message address
    functions, including 25 ft. cable).

Model 304R Remote Address Keyboard (Add-on for
multistudio recall) . . . . $ 1,350.
    (Including 25 ft. interconnect cable)

Model 205D VIDIDISC Transport . . . . $ 2,750.

Model 303C Font Compose Service (New font of 120
characters maximum composed from customer supplied
artwork — includes one font disc) . . . . Set up $ 400.
Each complete Font (Maximum of 2½ per disc) . . . . $ 175.

Model 306 CHIRON III Semi conductor spares . . . . $ 800.

Model 310 7x9 Dot Matrix Preview Display . . . . $ 3,000.

Model 502 Colorizer/Mixer . . . . $ 1,950.
    Accepts color control and edge, program, title, and
    subcarrier inputs and produces program video with colored
    inserted characters.

Extension cables for Keyboards or VIDIDISC
    Any length up to 500 ft. assembled with connectors
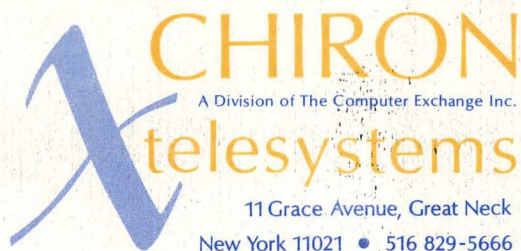   at each end:

      Price per foot of cable . . . . $ 1.25
      Plus termination charge . . . . $ 100.

NOTE: The prices shown are subject to change without notice.

       All prices are FOB Plainview, New York.

       Equipment packed for Air Freight shipment.

June 11, 1975

Gentlemen:

Thank you for your interest in the CHIRON Telesystems line of Graphics Generators and Titling Systems.

Enclosed is the data you recently requested. The CHIRON II Graphics Generator permits the user to create his own fonts, logos, and other graphics in addition to providing unmatched capabilities in titling and message composition.

The inexpensive CHIRON III Titling System offers more features and greater versatility than any other character generator with the exception of CHIRON II.

We believe that the enclosed data sheets will show these systems to be the finest available anywhere. If we can furnish any additional information, or assist you in any way, please do not hesitate to contact us.

Very truly yours,

CHIRON TELESYSTEMS

David H. Buckler
Sales Manager
Eastern Region

DHB/bar
enclosures