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TECHNICAL INFORMATION

NEWS and DEVELOPMENTS

NEW PRODUCTS and PROCEDURES

PLEASE ROUTE

Dir. of Eng.

Chief Eng.

Asst. Ch. Eng.

VTR Supervisor

Video Eng.

Video Tape PLAYBACK, a publication regularly provided as a service to the television industry, devotes this issue to information about "SCOTCH" Brand Video and Audible Range Tape Products to be shown for the first time at this show. Please take this copy with you; circulate it in your own organization if you wish.

(We've provided a "buck-slip" for that purpose on this page.)

If you are not now receiving PLAYBACK on a regular basis and wish to be, you can indicate such in the coupon inside, return it to us, and be placed on the regular PLAYBACK mailing list. Meanwhile,

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TAPE STORAGE: A PROBLEM?

While the days of randomly-strewn - tapes - atop - audio - consoles are no longer with us, storage facilities for sound tapes throughout the industry have seemed to differ with each set of call letters. Some stations utilize re-carpeted disc files; others, book shelves; still others, slightly converted office

equipment racks or files.

Now there's a tape storage rack built for professional tape users FROM THE GROUND UP--and that's the secret to its success. Called the STORETTE, it fashionably, precisely tailors your available space to your storage requirements.

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Tape Storage

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Consisting of interlocking unitized sections, 9-3/8" high, 25" wide and 8" deep, the STORETTE stores both 5- and 7-inch tape boxes, as well as 6-1/2" Video Reels. Its design allows stacking the sections up to seven high as a floor cabinet. However, the all-welded units are also key-slotted for wall mounting like bookshelves, and have rubber feet for tabletop use.

A unique "follow-block", spring-mounted to the TOP of each section, keeps tape boxes neatly vertical even when less than 36 tapes, a section's capacity, are stored. The top mounting of the follow-block, rather than shelf-level mounting (like some), keeps

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An Editorial?

"SCOTCH" VIDEO TAPE TWICE AS GOOD — APPARENTLY

Nearly everyone knows the story of how, even after a video recorder was developed, nobody had a magnetic tape which could hold up through the destructive forces of the recording equipment and still supply the magnetic capability needed. And also, to continue the history lesson, how the tape product that 3M researched and developed withstood the test of seven years as the industry's only practical and commercially acceptable video tape.

An even stronger testimony to "SCOTCH" Video Tape quality is revealed in a new advancement in recording equipment. It is the unspoken endorsement by equipment manufacturers of video tape's efficiency to record TWICE as much information in the same area of tape--still with acceptable broadcast quality. The standard tape speed of 15 inches per second was the only system available seven years ago. Now, half that speed--7-1/2 inches per second--is both possible and in use; with recorder operators getting twice the work, still with dependable quality from "SCOTCH" Brand Video Tapes.

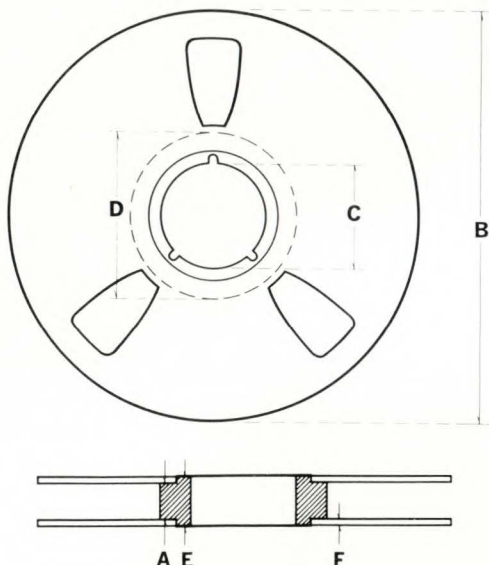
Another video recorder, operating at five inches per second, is now being developed. And while its present scanning system does not allow it to be compatible for broadcast use, the demands on video tape

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NEW EIGHT-INCH HEAVY DUTY REEL

Designed to provide 44 minutes recording time on equipment utilizing the newer 7-1/2 ips tape speed, the new 8-inch reel also offers increased dependability and durability for all of your short length tapes, such as short programs, often-used commercials, your recorder testing and "setup" tapes, etc.



Designed and built to the same specifications (except flange diameter) as the larger "SCOTCH" Brand Heavy Duty Video Reels, the new 8 inch reel holds 1,650 feet of video tape, and meets or exceeds all tolerances proposed by the SMPTE in the Proposed American Standard No. 16.1.

Attesting to its quality and close tolerances are these specifications:

HEAVY DUTY VIDEO REEL	2-VR-8	
	8 INCH	
WIDTH 2 IN.	Dimension (Inches)	Tolerance (Inches)
A. TRAVERSE WIDTH OF HUB*	2.020	+ .002 - .000
B. REEL OUTSIDE DIAMETER	8.000	+ .010 - .000
C. HUB INSIDE DIAMETER**	3.000	+ .003 - .000
D. HUB OUTSIDE DIAMETER** (Exclusive of Friction Ring)	4.500	± .005
E. REEL OVER-ALL WIDTH	2.212	+ .003 - .000
F. FLANGE THICKNESS	.090	+ .002 - .004
REEL CONCENTRICITY, Inches (Total Indicator Reading)	.010	
DISTANCE Between Flanges, Inches	Dimension A + .020 - .010	

*Mounting surfaces of hub are parallel within .0002 inch per inch and are perpendicular to center axis within 2 minutes of arc.

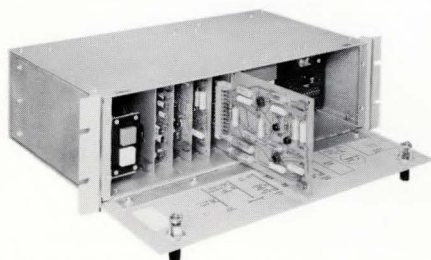
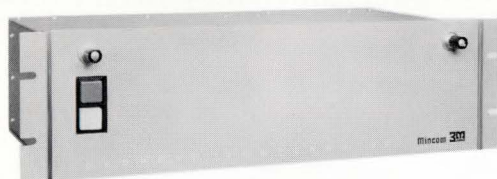
**Hub inside and outside diameters are concentric within .002 inch T.I.R.

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NEW EQUIPMENT ELIMINATES DROPOUTS BY LINE SUBSTITUTION



Effectiveness of Mincom's Dropout Compensator in restoring tape dropouts is seen in the Monitor on the left in the demonstration above. The dropout is replaced with information similar to that lost from the previous line which has been stored in a 63.5 μ s delay channel.



Mincom's solid state Dropout Compensator features nanosecond switching from normal recorder video output to output of 63.5 μ s delay channel. Delayed video is switched in by the detection of a dropout in the RF. The 5 1/4" high unit is compatible with existing black and white and color VTR equipment and can be installed in minutes with standard cable connectors. It is available for immediate delivery.

● Signal dropouts in video tape playback are restored by a new accessory from Mincom Division, 3M Company. Called the Dropout Compensator, the new unit was introduced in a presentation to the IEEE (IRE) Professional Group on Broadcasting, on February 27, 1963.

It has long been known that an error which constitutes a dropout on one video tape recorder may pass visibly unnoticed on another recorder. This is because equipment parameters governing limiting, head travel, head penetration and so on, are not themselves held to sufficiently standard dimensional and electronic tolerances. The Dropout Compensator eliminates the need for such strict standardization by eliminating a portion of the line in which a dropout occurs, substituting the same portion of the previous line in its place.

How this is accomplished was the subject of a talk presented to the IEEE by Irving Moskowitz, Mincom, from a paper prepared by Mr. Moskowitz and Mr. Berten Holmberg of 3M Magnetic Products Division. Copies of paper in its entirety, giving details of circuitry, optical reaction, line substitution uniformity, etc., are available on request. Check the correct space in the coupon on page 5.

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TELEVISION TAPE STORAGE CABINETS AVAILABLE

Just as sound tape took over space previously held by disc files or literature shelves, video recording tape inherited, mostly, old film storage shelves and "carts." But not without some carpentering revision; tape is wider so film spacers had to be removed. Also, since video tape is more the engineer's responsibility than film was, space for tape often



means hiking from the VTR room to the film room for accessibility.

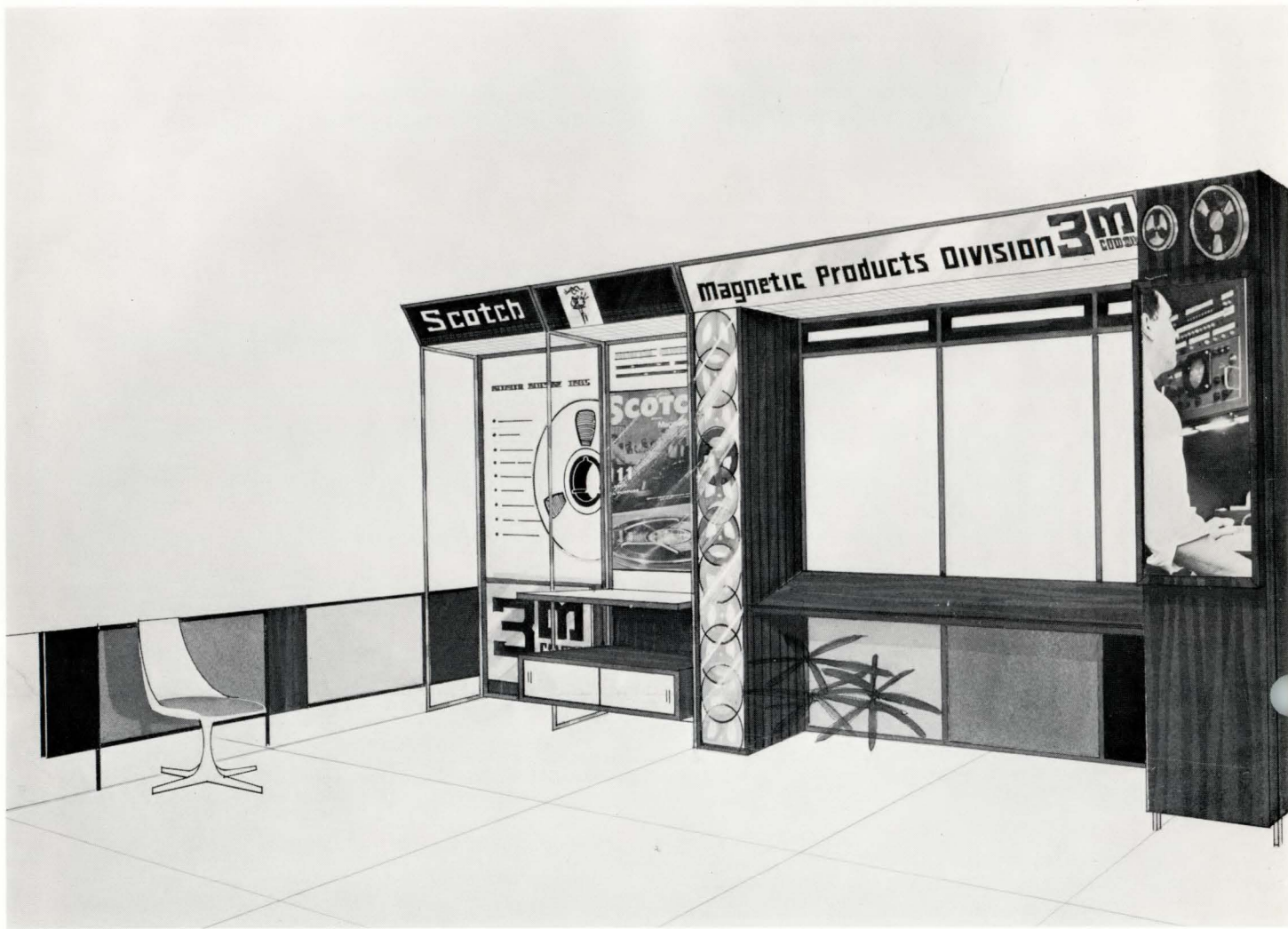
A unique unitized Video Tape Storage Rack, designed with the VTR room in mind, is available on a cost-sharing plan. Each unit's capacity is a dozen video tapes--with each tape separated by a half-inch "grabbing" space via built-in heavy gauge spacers.

Measuring about 42-inches long, 17-inches high and 16-inches deep (fitting nicely flush in the same wall depth as your standard equipment racks), the units can stack one atop the other to precisely tailor to your storage requirements. Rubber pads mounted on each unit can allow one of the sections to be used with table-top accessibility near the recorder for storing often played or currently programmed tapes. A 4-inch splash panel base with heavy duty leveling feet is also available if floor mounting of the cabinet units is desired, and the 20-gauge metal of the units is slotted in back for wall installation.

The units are all-welded construction so there's nothing to assemble. Two coats of baked-on gray enamel, and smooth snagproof corners and edges attractively matches the units' color and design to your recorders and other electronic gear.

Mentioned earlier, the low cost of the base and units is reduced even lower by means of a special you-and-us cost sharing plan. Be sure to ask your 3M Representative about it--or stop by the booth at the show--to learn the full story.

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3M BOOTH AT NAB

The 3M Magnetic Products Division at the NAB Convention...the place to bring all of your magnetic tape questions...is booth No. 19W.

Although you would probably recognize it anyway, (what with our new 3M logo so prominently displayed and repeated, and the plaid of the "SCOTCH" clan tastefully bedecking the surroundings) we thought perhaps a picture of the booth environs would remove even the slightest possibility of your missing it during your promenade.

"SCOTCH" Video Tape

(Continued from Page 2)

involve much more picture information in a given tape area than the 15-ips systems. There is no reason to doubt that still slower speeds will evolve. They will be possible through improved equipment design, but also through video tape improvements: In manufacture. In tape research. In tape construction. And the improvements will be not unlike the often unheralded advancements and work-a-day adjustments that each year's experience has provided.

Being "first" with a basic product, you'd think, might justify a boast. Being "first and only" for seven experience-filled years justifies, we think, undisputed video tape leadership.

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Tape Storage

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each shelf free of grooves or channels which could tear and scuff tape boxes. The handsome STORETTE units are two-coated with gray baked-on enamel, and quality built to assure smooth corners and edges.

A special offer to professional tape users will make the useful STORETTE available at about half its actual value, with "SCOTCH" Brand Tapes picking up the remainder of the tab. Be sure to ask your 3M Magnetic Tape Representative about the special STORETTE 'deal.'



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Return this coupon for more information...

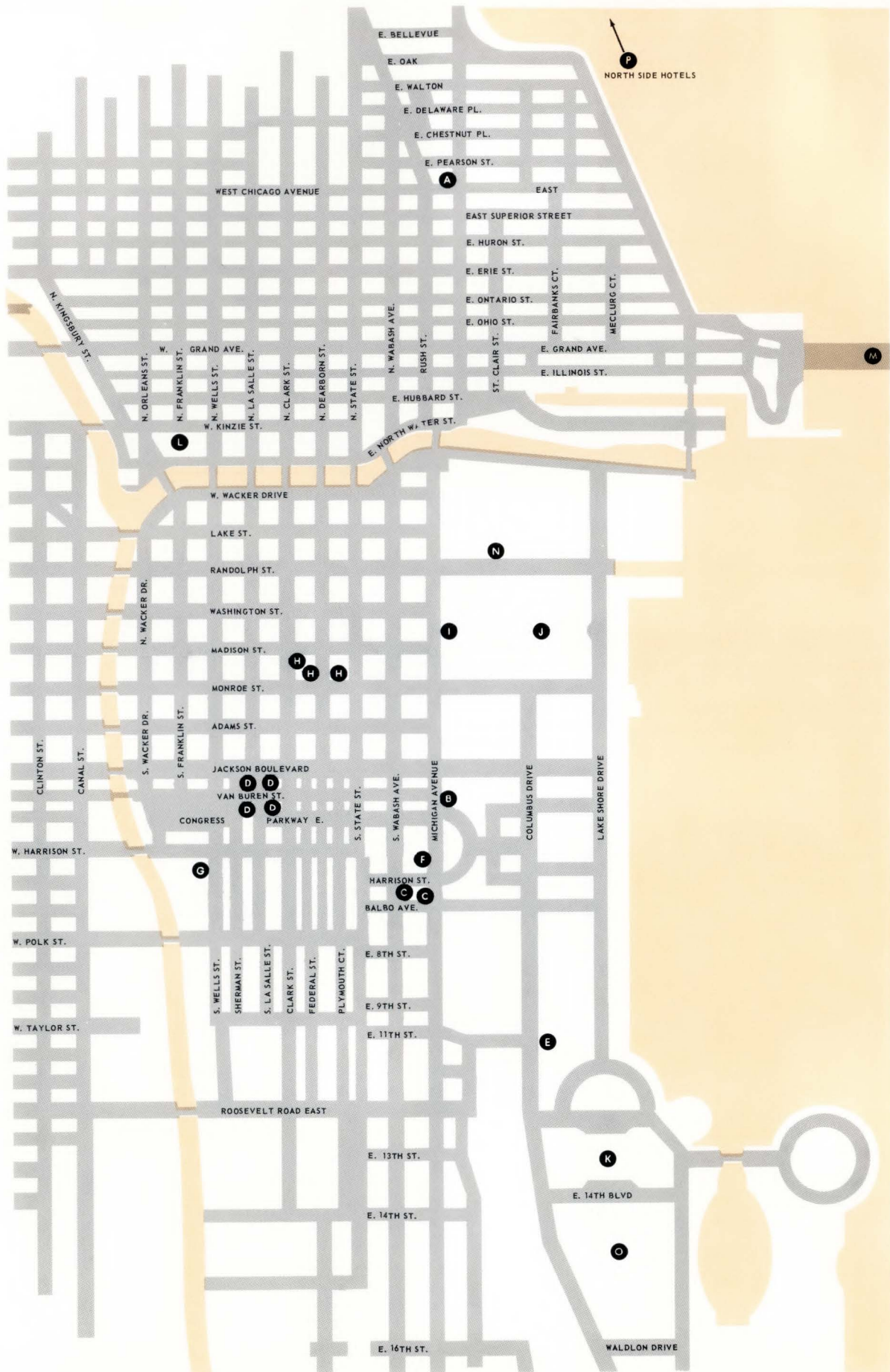
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Magnetic Products Division
3M Company
2501 Hudson Road
St. Paul 19, Minnesota

- _____ I have not been receiving PLAYBACK but would like to be placed on the list to receive all future copies.
- _____ Please send me a free copy of the complete paper explaining the Mincom Dropout Compensator, as presented to the IEEE.
- _____ Please send me information about "SCOTCH" Video Tape Physical and Magnetic Properties.

Name _____
Company _____
Title _____
Address _____
City _____ Zone _____ State _____

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CHICAGO CONVENTION CITY



KNOW CHICAGO?

Your last trip to Chicago may have been some time back, so here's a map of the area currently important to NAB exhibitors and visitors. We've tried covering enough of the high spots to ensure against your getting "misplaced," yet not so many that studious cross-referencing is required.

Key:

- A** Conrad Hilton Hotel--NAB Headquarters
- B** Van Buren Station of the Chicago, South Shore and South Bend RR
- C** Sheraton-Blackstone and Harrison Hotels
- D** LaSalle Street Station, Ft. Dearborn Hotel, Board of Trade (Observation Tower) and Atlantic Hotel
- E** Hutchinson Field Band Shell
- F** Congress Hotel
- G** Grand Central Station
- H** Morrison Hotel, Hamilton Hotel and Visitors Bureau--Chicago Assoc. of Commerce and Industry
- I** Grant Park Garage (Underground)
- J** Monroe Street Parking Lot
- K** Chicago Natural History Museum
- L** Merchandise Mart
- M** Navy Pier
- N** Prudential Bldg. (Observation Tower)
- O** Soldier Field
- P** Allerton
Drake
Eastgate
Knickerbocker
St. Clair
Sheraton
Sherman
Executive House
Seneca
Ambassador
Belmont
Edgewater Beach
Plaza
Sheridan Plaza

NOW...TWO VIDEO TAPES

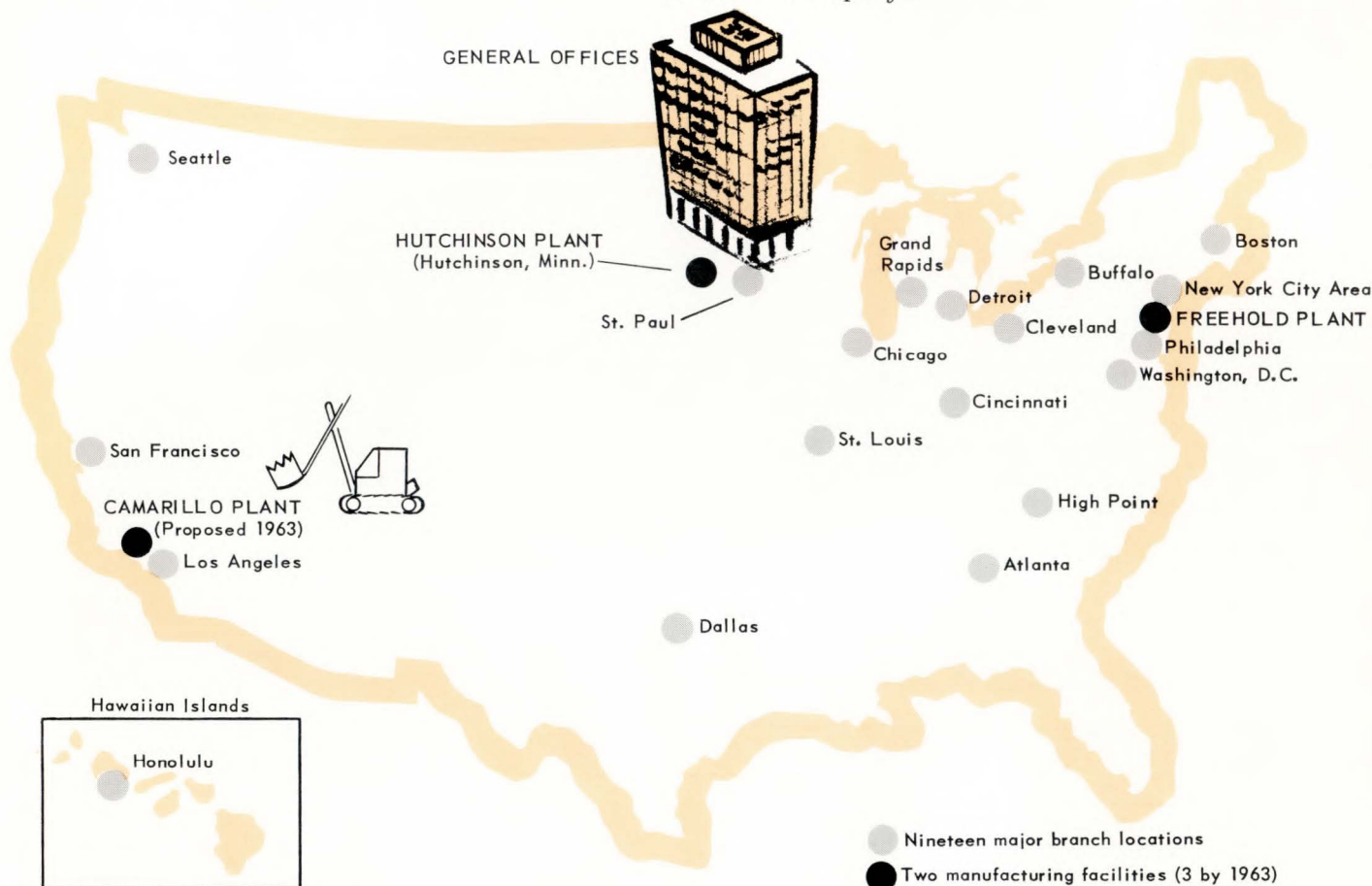
Until recently, Video Tape was Video Tape. It was two-inches wide. It was transversely oriented. And it was made to tight television specifications.

Now, video tape is available in two different configurations. The standard broadcast video tape is still "SCOTCH" Brand No. 379, still transversely oriented for best output from the vertically scanning heads of broadcast video equipment, and still two-inches wide. However, a new video tape, No. 378, is longitudinally oriented and is only one-inch wide for the newer types of slant-track recording gear.



To Serve You Better . . .

Newest addition to St. Paul's expanding skyline, the new, 14-story, 238 foot-high Administration Building of the 3M Company.



Nineteen major branch locations--two manufacturing facilities (three by 1963)--plants specifically designed for the manufacture of magnetic tape--direct sales through trained and experienced sales engineers in principle cities throughout the U.S.--over 50 years' experience in coating technology--pioneering development and commercial production of Video Tape for six years! This is the experience and capability 3M brings to you.

ATLANTA
5925 Peachtree Ind. Boulevard
Chamblee, Georgia
(451-1661)

BOSTON
155 4th Avenue
Needham Heights 94, Mass.
(HI 9-0300)

BUFFALO
330 Greene St., All Mail:
P. O. Box 2012,
Buffalo 6, New York
(TX 4-5214)

CHICAGO
6850 So. Harlem Ave., Argo P.O.
Bedford Park, Illinois
(GL 8-2200) (Chic. LU 5-7800)

CINCINNATI
4835 Para Drive
Cincinnati 37, Ohio
(EL 1-2313)

CLEVELAND
12200 Brookpark Road
Cleveland 30, Ohio
(CL 2-4300)

DALLAS
2121 Santa Anna Ave.
Dallas 28, Texas
(DA 7-7311)

DETROIT
411 Piquette Ave.
Detroit 2, Michigan
(TR 5-7111)

GRAND RAPIDS
815 Monroe Ave.
Grand Rapids 4, Mich.
(GL 6-8577)

HIGH POINT
2401 Brevard St., All Mail:
P.O. Box 151
High Point 3, N.C.
(883-1496)

HONOLULU
1441 Kapiolani Blvd., Rm. 1116
Honolulu 14, Hawaii
(996-483)

LOS ANGELES
6023 So. Garfield Ave.
Los Angeles 22, Calif.
(RA 3-6641)

PHILADELPHIA
5698 Rising Sun Ave.
Philadelphia 20, Pa.
(PI 2-0200)

NEW YORK CITY AREA
700 Grand Ave., Ridgefield, N.J.
(N.Y.-OX 5-5520)
(N.J.-WH 3-6700)

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10725 Baur Blvd.
St. Louis 32, Mo.
(WY 1-1320)

SAN FRANCISCO
320 Shaw Road
So. San Francisco, Calif.
(PL 1-1155)

SEATTLE
3663 1st Ave., So.
Seattle 4, Wash.
(MU 2-5550)

WASHINGTON, D.C.
Gov't. Office
(NA 8-9478)

GENERAL OFFICES
St. Paul, Minn.
(733-1110)

To provide a tape that consistently meets the demanding requirements of video recording, both for commercial and instrumentation applications, 3M manufactures its own backing to meet its own hypercritical quality control specifications. 3M also manufactures and controls the quality of the oxide and binder formulation designed specifically for Video Tape... and coats and slits this tape on precision equipment specially designed and built for this purpose.

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