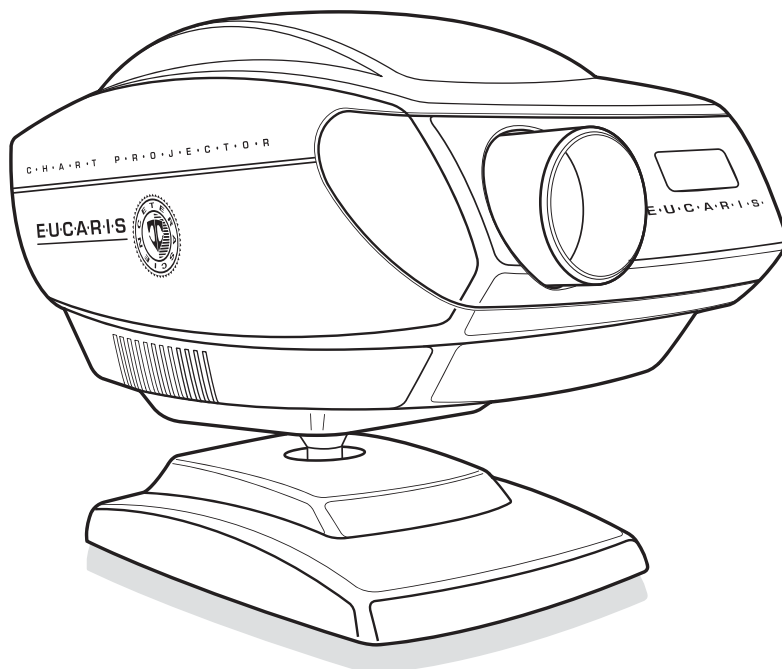


Operation Manual



TSCP-800

EUCARIS Chart Projector

REVISION 1.01



sciencetera

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WARRANTY



E·U·C·A·R·I·S

Thanks a lot for your buying of the chart projector
(Model name : EUCARIS) from Sciencetera Co., Ltd.

IMPORT NOTICE

Please use the chart projector after you read the manual.

It is not allowed to add the any factors which will be
caused machine problems.

This manual contains information necessary for correct
and effective operation of chart projector EUCARIS and
provides specifications and procedures for operation and
maintenance.

Please keep this manual and read it whenever necessary.

For EU countries



The following mark, the name & address of EU
Representative shows compliance of the instrument with
Directive 93/42/EEC

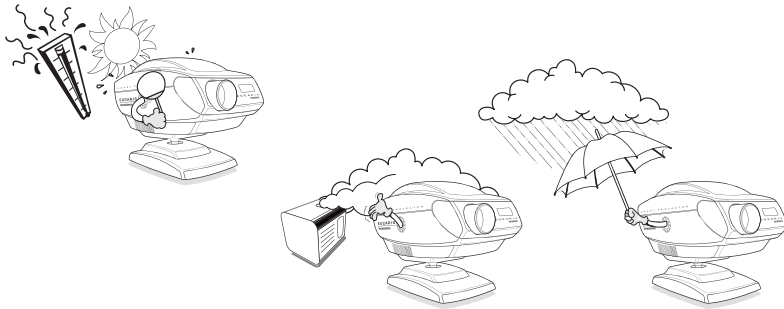
EU Representative:

EUROM-SERVICE LTD.

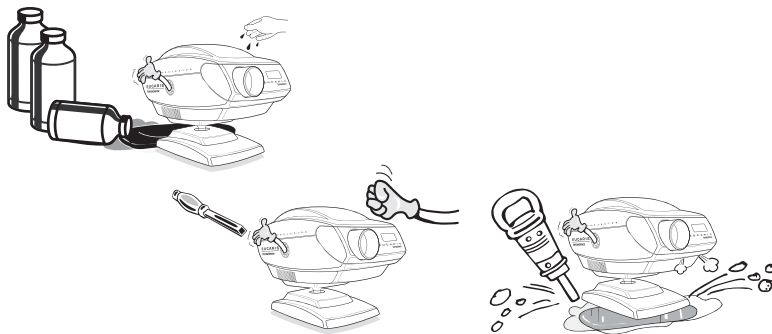
Helmholtzstrabe 2-9 D-10587 Berlin, Germany



ENVIRONMENT FACTORS



- Please do not use at hot and humid places.
- Normal operation temperature range is from 10°C to 40°C and humidity is from 30% to 75%



- Do not use chemical detergents for cleaning the dirt on the case.
- Do not give the shock and open the case without any purpose.

SAFETY SYMBOLS



Attention, Consult Accompanying Documents



EU Certification



Protective earth (ground)



Off (Power : Disconnection from the mains)



On (Power : Connection to the mains)



Alternating current



According to their own law of disposal industrial waste the waste must be disposed in the country that uses our product.

Disposal of Waste Products, Residues, etc.

Dispose of Waste Products, Residues, etc. according National Code.

Potential Electromagnetic or other Interference.

Do not use this product in strong magnetic fields, such as near motors.

Do not place heavy objects on the case, or block the ventilation holes.

Do not place electromagnetic device near TSCP-800. It might cause malfunction of TSCP-800.

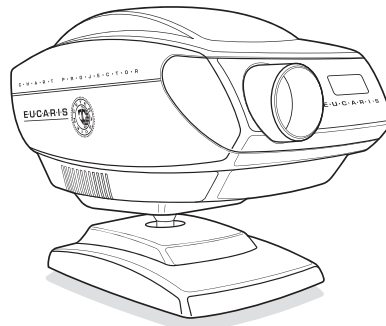
Keep away such device(personal mobile, radio remote control) products.



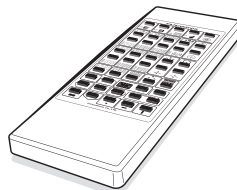
1. GENERAL DESCRIPTION

EUCARIS chart projector consists with main body, remote controller and screen.

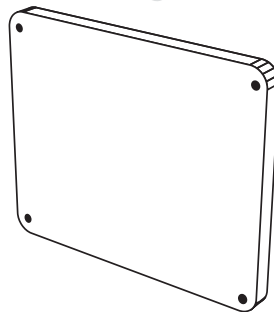
1. Main body



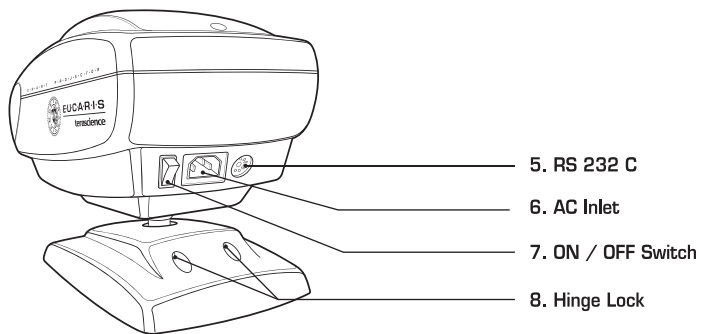
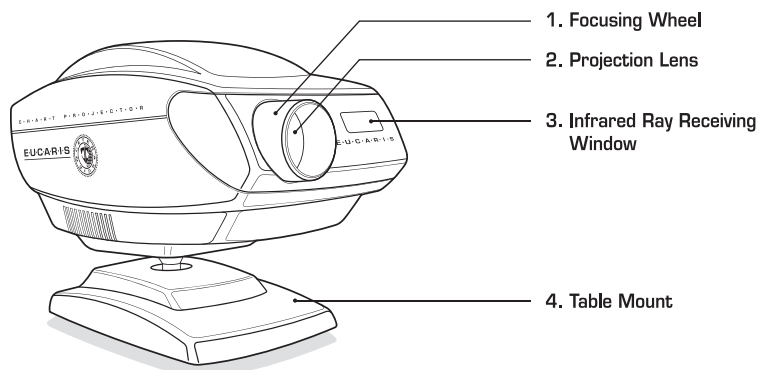
2. Remote controller



3. Screen



2. DESCRIPTION OF PARTS



All device which are connected to TSCP-800 needs to be fulfilled Medical Device Directive 93/42/EEC

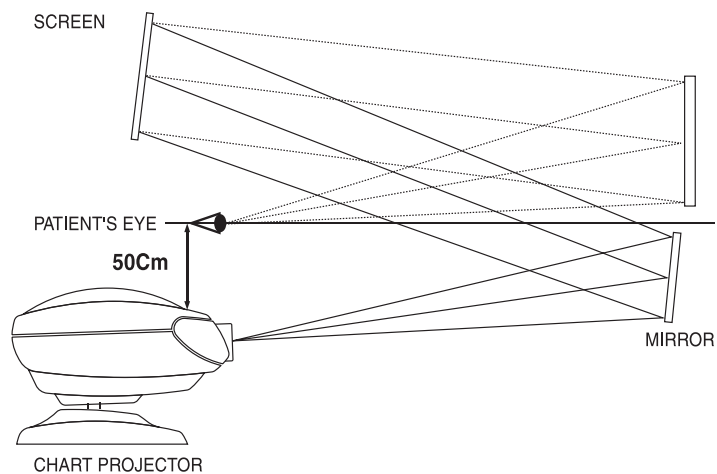
3. INSTALLATION

3-1. Adjustment of Distance

1. Place chart projector within **1.5 - 10m** from screen.
(5m is standard)
2. Measure the distance between patient and screen including reflection.

3-2. Positioning the projector

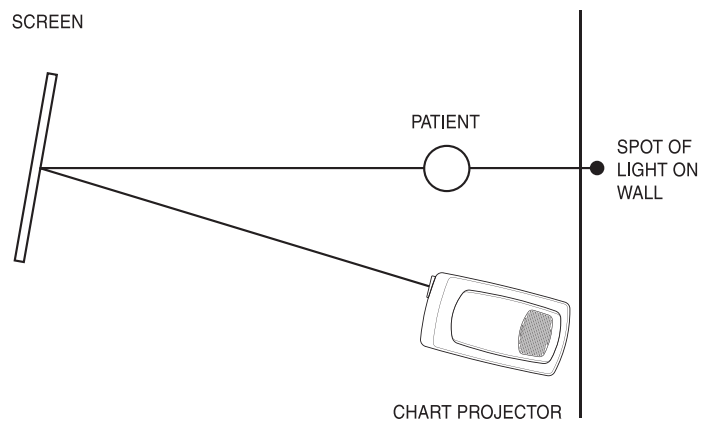
Determine the distance from patient to screen within **1.5 - 10m** and place the projector at same distance from the patient to the screen. The mirror can be used to obtain longer distance in a small indoor as follow.



3-3. Positioning the screen

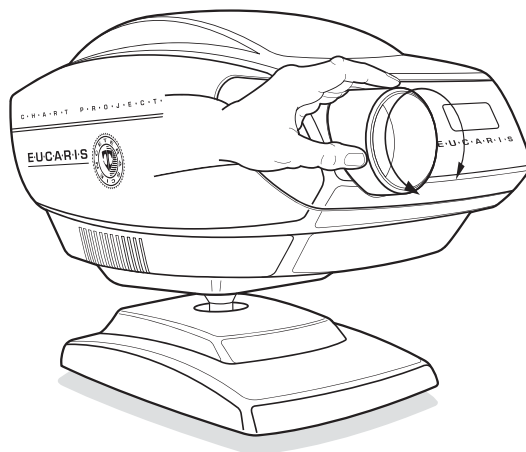
Install screen where you want within **1.5 - 10m** from chart projector in order to adjust projection angle for brightest and clearest image, hold a mirror on the screen and tilt the screen until projected spot of light is directed to patient.

The screen is made for bright reflection.



3-4. Adjustment of Focus

- 1) Project the chart of 0.05 alphabet "E".
- 2) Adjust the correct focus, tuning the focus wheel until the chart of 0.05 alphabet "E" is viewed clearly within the respective distance range.



4. OPERATION

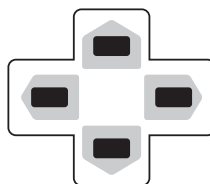
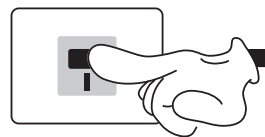
1. Power on chart projector. Within 3 seconds, the projection lamp is on and "E(0.05)" chart shall be viewed.
2. Adjust the correct focus. (Page 5)
3. Changing the chart. Press the chart button to be wanted on the remote controller.



4-1. Isolation of visual acuity chart

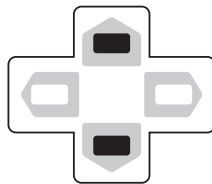
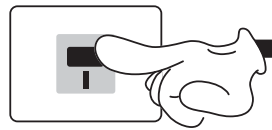
1. How to use Vertical line mask

- 1) To use vertical line mask.
- 2) To move the position left or right,
To move the position up or down.



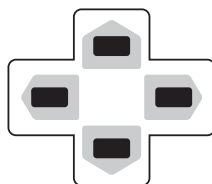
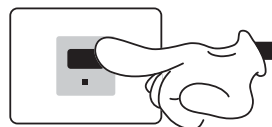
2. How to use Horizontal line mask

- 1) To use horizontal line mask.
- 2) To move the position up or down.



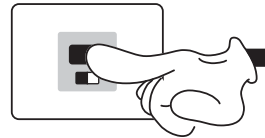
3. How to use Single letter mask

- 1) To use single letter mask.
- 2) To move the position left or right,
To move the position up or down.



4-2. How to use Red/Green filter mask

1) Press Red / Green filter MASK button.



※ Releasing the Red / Green filter mask :

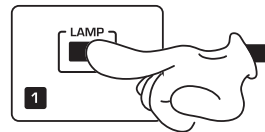
Press Red / Green filtering button one more and the Red / Green filter mask is released.

TDVAH	1.2
LONHT	1.5
KEZFR	2.0

TDVAH	1.2
LONHT	1.5
KEZFR	2.0

4-3. How to use program mode 1

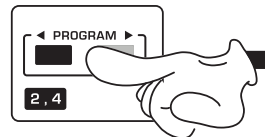
1) Press LAMP button and power off lamp.



2) Press LEFT PROGRAM button **about 6 seconds**.

3) Press the selected chart buttons one by one to store every selection.

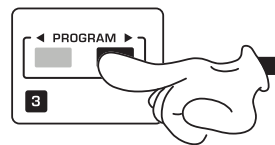
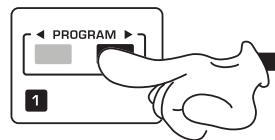
4) Press LEFT PROGRAM button **about 6 seconds** and this mode is completed.



Maximum 30 charts can be stored in this program mode.

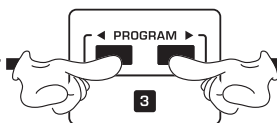
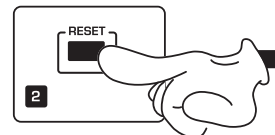
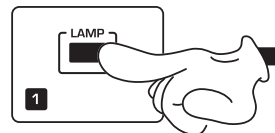
4-4. How to use program mode 2

- 1) Press **RIGHT PROGRAM** button **about 6 seconds**.
- 2) Press the selected chart buttons one by one to store every selection into memory.
- 3) Press **RIGHT PROGRAM** button **about 6 seconds** and this mode is completed.
Maximum 30 charts can be stored in this program mode.



4-5. Programmed operation

- 1) Press **LAMP** button and lamp lights.
- 2) Press **RESET** button and the program mode 1 starts with first chart. (Press RESET button once more so that the program mode 1 changes Program mode 2)
- 3) Press **PROGRAM** button and the chart is changed forward or backward.



5. MAINTENANCE



CAUTION

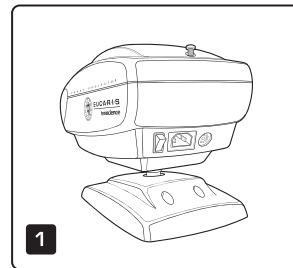
Turn off power and pull out power cord.

< Projection lens >

Remove dusts with a bluish blower, if not clean enough, wipe with lens Cleaning paper.

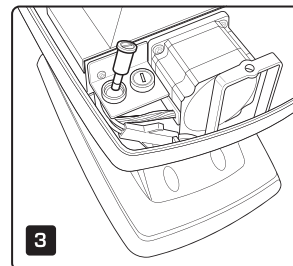
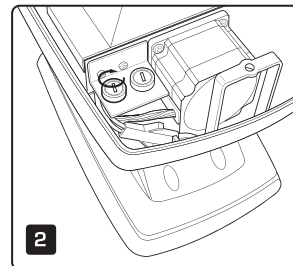
< Case and screen >

Remove dusts with a dry and soft cloth, if not clean enough, immerse a soft cloth in neutral detergent, wring it well and wipe the parts finish the cleaning with a dry and soft cloth.



5-1. Replacement of fuse

- 1) Open upper case by releasing the fixed screw on upper case.
 - 2) Press fuse holder and turn anticlockwise.
 - 3) Replace the fuse and return it with fuse holder to the socket.
- ※ Press and turn it clockwise.



NOTE

Equivalent Fuse Specification : 250V, T 800mAL

6. CHART DESCRIPTIONS

6-1. A Type

E 0.05	S 0.05	0.1	ЭМЕ 0.1 МВЕ 0.15	
FRA 0.1 HDN 0.15	592 0.1 386 0.15	0.2 0.4	WMEEW 0.2 M3WME 0.3 EWME3 0.4	
KNVHO 0.2 LRF AZ 0.3 DTCEN 0.4	89259 0.2 53699 0.3 68532 0.4	0.6 0.8 1.0	EMW3M 0.5 WE3ME 0.6 3WEE3 0.7	
THFOZ 0.5 NETDP 0.6 ALVAH 0.7	26389 0.5 35926 0.6 82699 0.7		W3MWE 0.8 EM3EW 0.9 MEW3 1.0	
HVNAO 0.8 LKZCE 0.9 CTFDK 1.0	96382 0.8 26953 0.9 38269 1.0		E3W3M 1.2 WMEEW 1.5 3EWE 2.0	
TDVAH 1.2 LONHT 1.5 KEZFR 2.0	89635 1.2 23586 1.5 35298 2.0		2 3	
			CHART PROJECTOR EUCARIS	

6-2. B Type

E 400	S 400	200	ЭМЕ 200 МВЕ 150	
FRA 200 HDN 150	592 200 386 150	100 70	WMEEW 100 M3WME 80 EWME3 70	
KNVHO 100 LRF AZ 80 DTCEN 70	89259 100 53699 80 68532 70	50 30 20	EMW3M 60 WE3ME 50 3WEE3 40	
THFOZ 60 NETDP 50 ALVAH 40	26389 60 35926 50 82699 40		W3MWE 30 EM3EW 25 MEW3 20	
HVNAO 30 LKZCE 25 CTFDK 20	96382 30 26953 25 38269 20		E3W3M 15 WMEEW 12 3EWE 10	
TDVAH 15 LONHT 12 KEZFR 10	89635 15 23586 12 35298 10		2 3	
			CHART PROJECTOR EUCARIS	

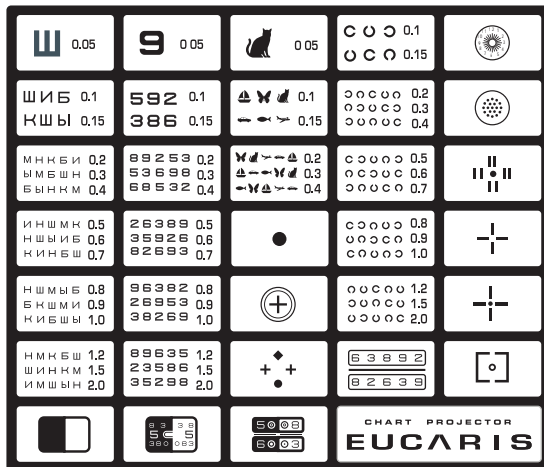
6-3. C Type

C 0.05	S 0.05	0.1	0.1 0.15	
FRA 0.1 HDN 0.15	592 0.1 386 0.15	0.2 0.4	0.2 0.3 0.4	
KNVHO 0.2 LRFAZ 0.3 DT CEN 0.4	89253 0.2 53699 0.3 68532 0.4	0.6 0.8 1.0	0.5 0.6 0.7	
THFOZ 0.5 NETDP 0.6 ALVAH 0.7	26389 0.5 35926 0.6 82693 0.7		0.8 0.9 1.0	
HVNAO 0.8 LKZCE 0.9 CTFDK 1.0	96382 0.8 26959 0.9 38269 1.0		1.2 1.5 2.0	
TDVAH 1.2 LONHT 1.5 KEZFR 2.0	89635 1.2 23586 1.5 35298 2.0		2.0	
			CHART PROJECTOR EUCARIS	

6-4. D Type

E 0.05	26389 0.2 35926 0.3 82693 0.4	0.1	0.2 0.3 0.4	
FRA 0.1 HDN 0.15	96382 0.5 26959 0.6 38269 0.7	0.2 0.4	0.5 0.6 0.7	
KNVHO 0.2 LRFAZ 0.3 DT CEN 0.4	89635 0.8 23586 0.9 35298 1.0	0.6 0.8 1.0	0.8 0.9 1.0	
THFOZ 0.5 NETDP 0.6 ALVAH 0.7	ΞME 0.1 ΠWE 0.15		1.0 1.2 1.5	
HVNAO 0.8 LKZCE 0.9 CTFDK 1.0	λMEω 0.2 μMEε 0.3 εMEε 0.4		2.0	
TDVAH 1.0 LONHT 1.2 KEZFR 1.5	EMωM 0.5 λEεM 0.6 ελEω 0.7		2.0	
	λμEε 0.8 εMεω 0.9 μEωM 1.0		CHART PROJECTOR EUCARIS	

6-5. E Type



7. SPECIFICATIONS

Projection Distance	1.5 ~ 10 m
Projection Magnification	30 x (in 5m refraction)
Number of Chart	32
Chart Rotation Speed	1 frame Average 0.2 sec
Mask & Filter	Open 1, Horizon line 5, Vertical line 8, Single isolation 15 , Red/Green 1
Power Supply	AC 100-240V 50/60Hz , 100VA
Lamp	LED 10W
Power Consumption	0.2A at 220V
Power Saving	2~5 min (step 1min)
Tilt Angle	±20°
Dimension & Weight	310 (D) X170 (W) X 243 (H) mm , 3.9kg
Accessaries	Remote Control/ Power Cable/ Dust Cover/ Battery/ Fuse/Table Stand/ Screen (410x280mm for 5m Distance)
Optional Accessories	Wall Mount Bracket/ RS-232C (Interface)/ Adaptor/ Red-Green glasses/ Polarized glasses/ Screen (500x400mm for 6m Distance)

Environmental conditions

Operation	+10°C to +40°C / 30% to 75% RH / 700hPa to 1060hPa
Transport / Storage	0°C to +55°C / 20% to 90% RH / 600hPa to 1200hPa

Classification

Type of protection against electric shock	Class I Equipment
Degree of protection against electric shock	No applied part
Degree of protection against ingress of wate	IPXO
Mode of operation	Continuous operation
Degree of safety of application in the presence of a flammable anaesthetic mixture with air or with oxygen or nitrous oxide : Equipment not suitable.	

Specifications and design are subject to change without prior notice for improvement.

WARRANTY

Sciencetera Co., Ltd.

Sciencetera Co.,Ltd. warrant this product against defects in materials and workmanship for a period of **ONE(1) YEAR** from the date of original retail purchase.

Purchase Information

Model Number

Serial Number

Purchase Date

Sciencetera Co., Ltd.

404 1st Innoplex B/D 371-47, Gasan-Dong
Geumcheon-gu, Seoul, Korea 153-803

Tel: +82-2-6679-0120 Fax: +82-2-6679-0123
E-mail: city@cityopt.com



SERVICE INFORMATION

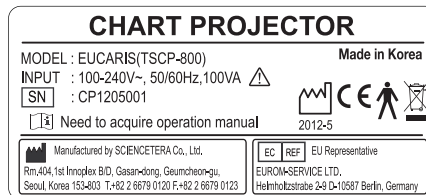
(1) Repair

- If problem cannot solved even after taking the measures indicated in section 5, contact sciencetera representative or distributor for repair.
Please refer to the name plate and let us have the following information.

Name of the instrument : TSCP-800

Serial Number : 9-digit characters indicated on the name plate

Phenomenon : In detail

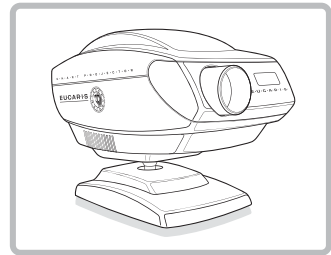


(2) Limit for supplying performance parts for repair

- Performance parts(required to maintain the functioning of the product) of this product will be stocked for eight years after discontinuation of product, to allow for repair.

A new form of uplifting Chart Projector.

E·U·C·A·R·I·S



sciencetera Co., Ltd.

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