

**INTRODUCTION**

Significant technical progress in the electric nystagmograph has made recording of eyeball movements accurate and stable. This has resulted in rapid advancement of electrophysiological studies of eyeball movement and ophthalmencephalon. Clinical serviceability of the nystagmograph has been highly evaluated and it has been widely used as an effective diagnostic tool. In order to obtain correct data, the advent of handy equipment for inducing eyeball movement has been eagerly awaited.

The newly developed visual index tracing equipment (Nystagmo Stimulator) is designed not only for ease of measurement but also for multi-purpose measurement and quantitative recording to assure certain stimulation.

The equipment is characterized by the following features. To make the best use of the functions offered and assure the best performance, read the operating instructions before use.

**FEATURES**

**Indication of certain stimulation**  
The visual index display uses high-brightness LEDs to assure certain tracing indication.

**Convenient selection of stimulus waveforms**  
Either sine or square wave can be selected as desired according to the purpose. The output terminal is provided to record the synchronizing mark with the stimulus waveform.







**Multi-shift angle selection**  
The visual index can be shifted horizontally, vertically and obliquely in both directions.

**Deviation angle of eyeball can be set as desired**  
Amplitude of the visual index can be adjusted to the eyeball deviation angle as desired.

**External stimulation possible as desired**  
Stimulation can be performed as desired by application of external electrical signals.

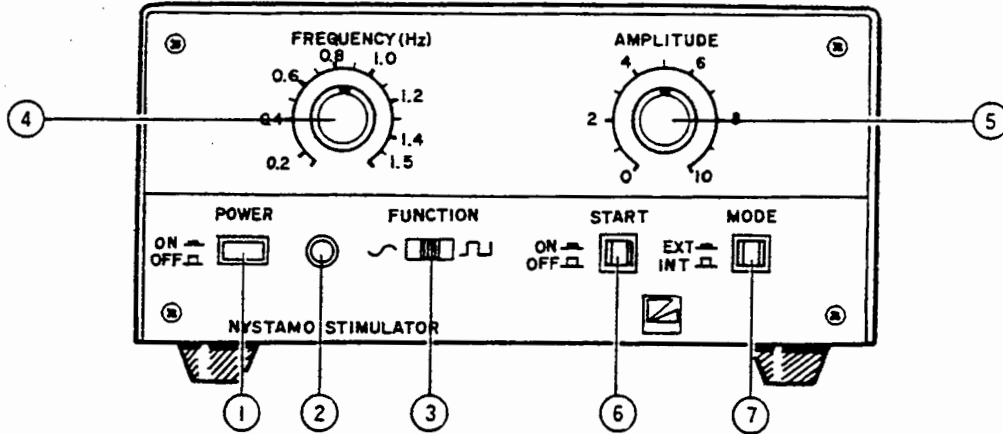
**Explanation of the symbols in this manual/instrument**



The following symbols found in this manual/instrument bear the respective descriptions as given.

 <p>Protective ground terminal</p>	 <p>84/539/EEC conformity mark (YY: Year manufactured)</p>
 <p>"In" position (Two-position push switch)</p>	 <p>Sine wave</p>
 <p>"Out" position (Two-position push switch)</p>	 <p>Square wave</p>

## PANEL EXPLANATION

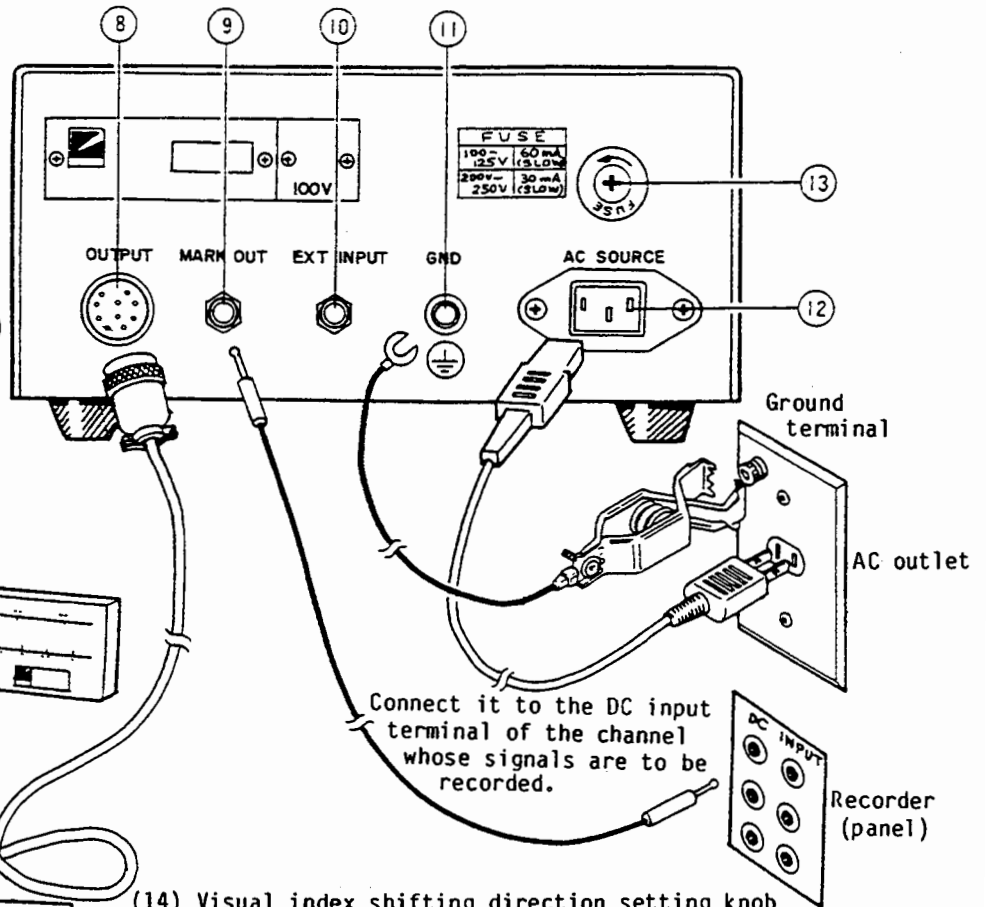
### Front Panel



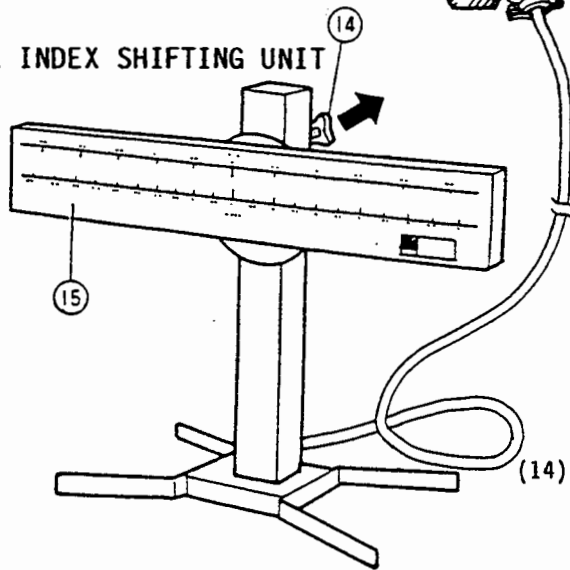
Name	Description
(1) <b>POWER</b> Power switch	When (1) is turned ON, power is supplied and Power lamp(2) will light.
(2) Power lamp	
(3) <b>FUNCTION</b> Stimulus type selector	The waveform can be selected by setting (3). Sine wave is selected when switch is set to  and square wave when set to  .
(4) <b>FREQUENCY (Hz)</b> Frequency setting knob	The repetitive frequency can be set for the waveform selected by (3). The frequency can be set continuously from 0.2 Hz to 1.5 Hz.
(5) <b>AMPLITUDE</b> Amplitude setting knob	This knob is used to set the amplitude for the waveform set by (3). The amplitude can be set continuously up to the maximum amplitude equivalent to deflection angle of +12°30' at the distance of 50 cm between the patient and the stimulator.
(6) <b>START</b> Stimulation start switch	Depress this switch to start stimulation.
(7) <b>MODE</b> Internal drive/ external signal drive selector	When the switch is set to INT position, the index shifts according to internal sine/square wave generator. When set to EXT position, the index shifts according to external signals.

### CONNECTION OF INPUT/OUTPUT

- (8) Visual index display connecting terminal
- (9) Mark output terminal
- (10) External signal input terminal
- (11) Ground terminal
- (12) Power receptacle (SOURCE)
- (13) Fuse

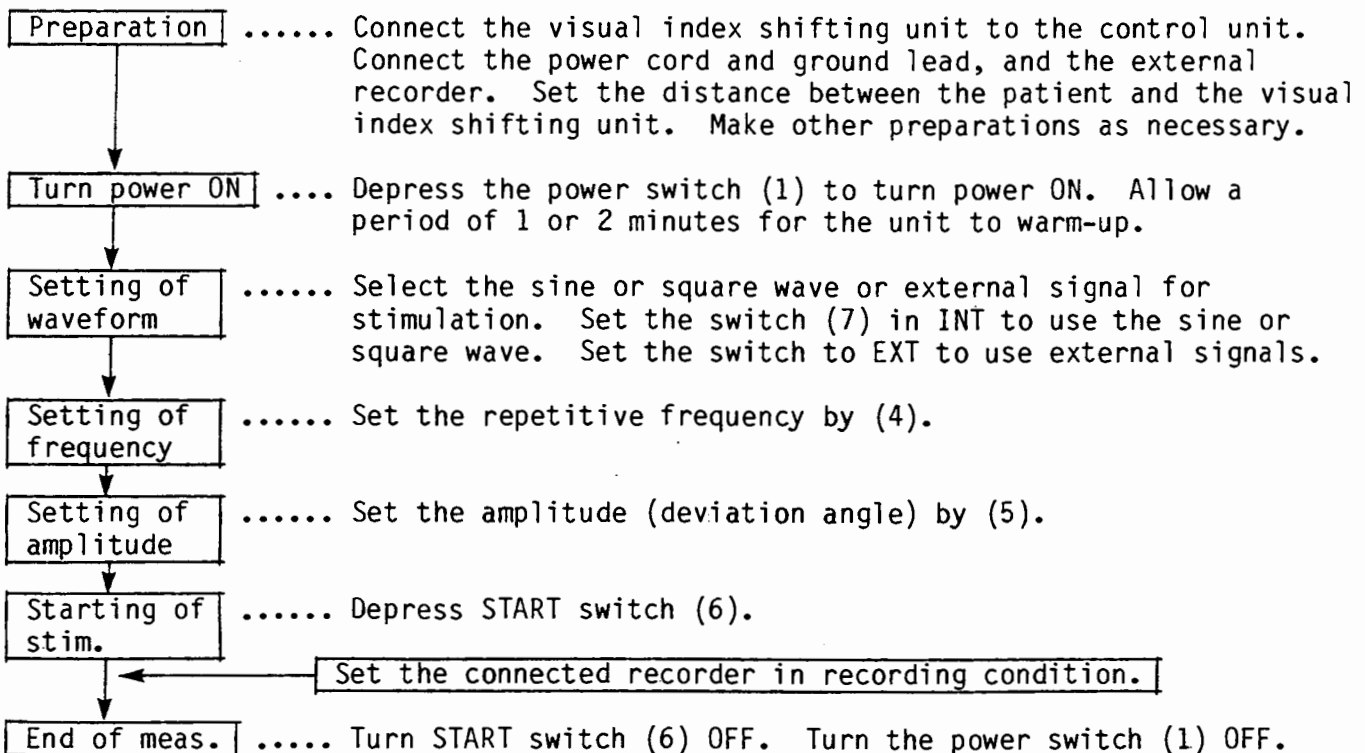


### VISUAL INDEX SHIFTING UNIT



- (14) Visual index shifting direction setting knob  
Pull the knob in the direction of the arrow (←) for unlocking and set the shifting direction. (Setting angles: Vertical, horizontal, 45° oblique rightward and 45° oblique leftward)
- (15) Visual index shifting unit

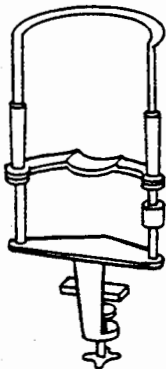
### OPERATION



## SPECIFICATIONS

Setting frequency	: 0.2 Hz to 1.5 Hz accuracy $\pm 10\%$ (Variable continuously)
Stimulus waveform	: Sine and square waves
Shift direction	: Vertical, horizontal, 45° obliquely leftward and 45° obliquely rightward. Selection in 4 steps.
Shift amount (Deviation angle)	: (1) 0° to $\pm 25^\circ$ (Variable continuously) at 50 cm distance. (2) 0° to $\pm 12^\circ 30'$ (Variable continuously) at 1 m distance.
Display system	: LED display
External signal drive (EXT. INPUT)	: 0 to $\pm 5V$ (0° to $\pm 25^\circ$ at 50 cm distance.)
Mark output (MARK OUT)	: 2Vp-p (Fixed)
Power supply	: 100, 110, 117, 220, 240V AC 50/60 Hz, approx. 6VA
Dimensions & weight	: (1) Control unit 20W x 10H x 23.5D cm    Approx. 2.2 kg (2) Visual index shifting unit 52W x 60H x 32H cm    Approx. 6 kg

## OPTION



Face fixing device YZ-0016: This is used to accurately fix the viewing position.

## ACCESSORIES

1.	Power cord	1
2.	Ground lead	1
3.	Output cord	1
4.	Fuse	1
5.	Cover	1

# ***CIRCUIT DIAGRAMS***

## **NYSTAGMO STIMULATOR**

**SLE-5100**

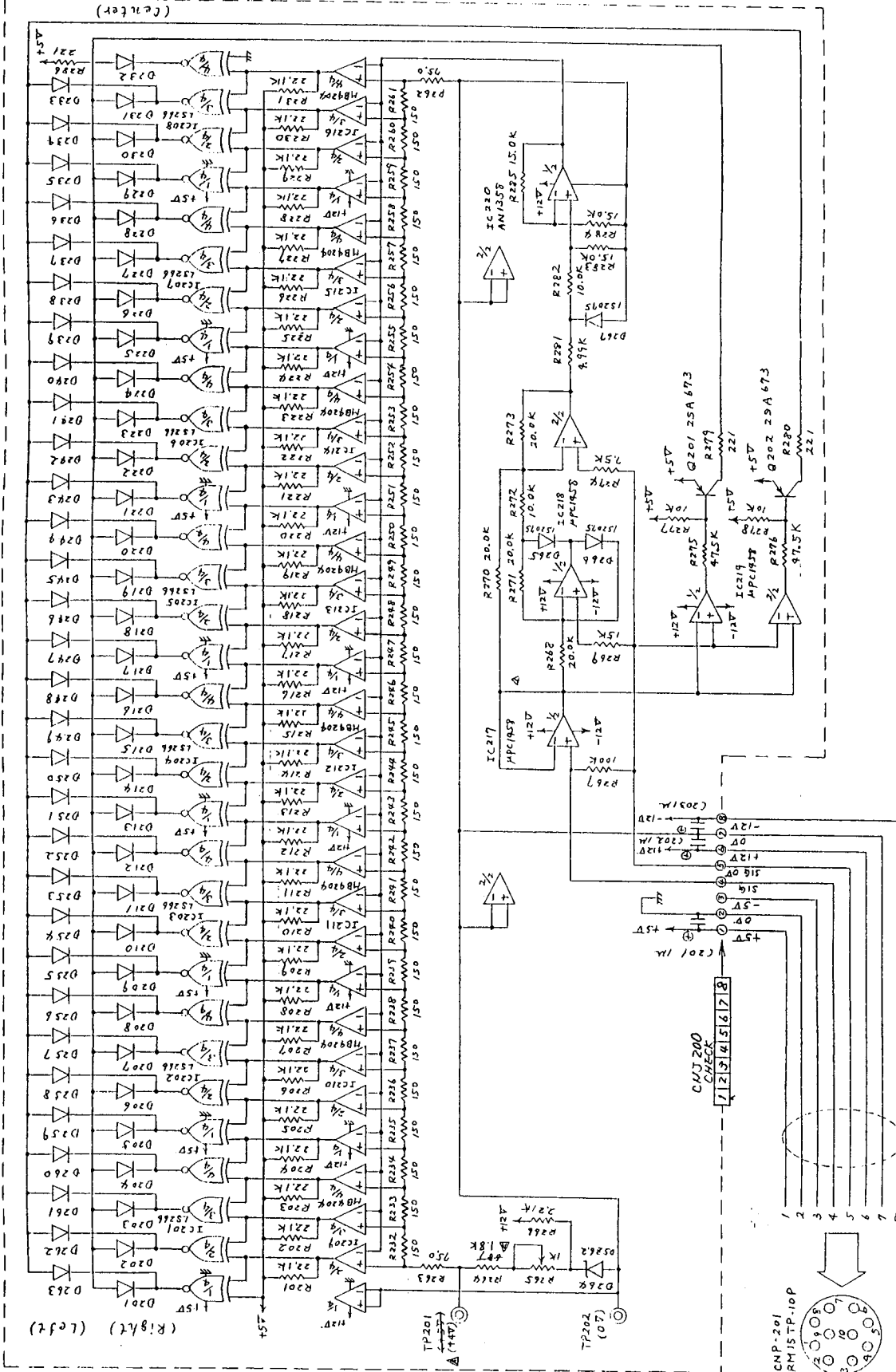




图例

A

(Center)



(Right) (Left)

2193-011828A  
 UT-0286  
 DISPLAY BD  
 CIRCUIT DIAGRAMS 2/2

74138	1
74139	2
74135	3
74137	4

A3

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The model and serial number of your instrument are identified on the rear or bottom of the unit. Write the model and serial number in the spaces provided below. Whenever you call your distributor concerning this instrument, these two pieces of information should be mentioned for quick and accurate service.

Model \_\_\_\_\_

Serial number \_\_\_\_\_

YOUR DISTRIBUTOR