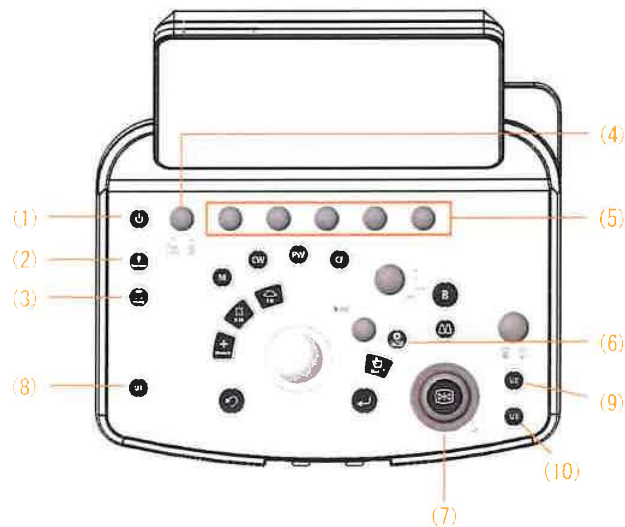Graphics information in a color display

(5)	Color bar: Color coded indication and flow velocity set in the color map
	"F84" : Color Gain
	"25" : Velocity value
(6)	Color map: Color coded flow velocity.
(7)	Focus mark: Focus location

1.2   Operation panel

Operation panel diagram

(1)   [Power] key

(2)   [New Patient] key

(3)   [Probe] key

2.1 Basic measurement menu

The following measurement menus and parameters are available under basic measurements.

Table1: B Mode

Menu	Measurement Methods	Measurement Results Display Parameters				
Distance measurements						
Distance	Dist					
Dist-trace	Dist-trace					
Area and Circumference Measurements						
Area-Trace	Area	Circ				
Area-Circle	Area	Circ	Diam			
Area-Ellipse	Area	Circ	x-axis	y-axis		
Volume measurements						
Volume 1 Volume 2	Area-Length	VOL	Area	Dist	Circ	
	Ellipse+Caliper	VOL	Area	Circ	x-axis	y-axis
		z-axis				
	3 Caliper	VOL	x-axis	y-axis	z-axis	
	Ellipse	VOL	Area	Circ	x-axis	y-axis
Index measurements						
B.Index	Caliper, Ellipse, Trace, Circle	A	B	A/B	B/A	|A-B|/A
Histogram measurements						
Histogram	Square, Rectangle, Circle, Trace	T	L	M	MN	SD
Bone angle measurements						
Rt. Hip J Angle Lt. Hip J Angle		A	B	type		
Angle measurements						
Angle	2 Caliper, Point	Angle 1	Angle 2	D1	D2	

Table2: M Mode

Menu	Measurement Methods	Measurement Results Display Parameters				
Distance measurements (amplitude)						
M. Length	d					
Time measurements						

Menu	Measurement Methods	Measurement Results Display Parameters				
Time		dt				
Heart rate measurements						
HR		HR	dt	beats		
Velocity measurements						
Velocity	Caliper Horizontal L	v	dt	dD		
Index measurements						
M. Index	Time Length Velocity	A	B	A/B	B/A	|A-B|/A

Table3: D Mode

Menu	Measurement Methods	Measurement Results Display Parameters				
Time measurements						
Time		dt				
Heart rate measurements						
HR		HR	dt	beats		
Blood flow velocity measurements						
Velocity1	Horizontal L, Vertical L, Cross Line, Cross Point	pV	PG			
Velocity2	Horizontal L, Vertical L, Cross Line, Cross Point	v1	v2	dv	dt	v1/v2
		PG1	PG2	dPG	dPG/dt	ACC
Acceleration (deceleration) measurements						
ACCEL	Horizontal L, Vertical L, Cross Line, Cross Point	v1	v2	dv	dt	v1/v2
		PG1	PG2	dPG	dPG/dt	ACC
RI measurements						
RI		RI	PSV	EDV	S/D	D/S
Pressure half-time measurements						
P1/2T		pV	PG	P1/2T	VA	
D. Caliper measurements						
D.Caliper1 D.Caliper2	Horizontal L, Vertical L, Cross Line, Cross Point	v1	v2	dv	dt	v1/v2
		v2/v1	PG1	PG2	dPG	dPG/dt
		ACC	P1/2T	VA		
Mean flow velocity measurements						

Menu	Measurement Methods	Measurement Results Display Parameters				
Mean VEL		MnV	MPG	PV	PG	VTI
		FlowT	AccT	ACC	AccT/FT	
PI measurements						
PI		MnV	MnPG	PSV	EDV	dV
		dT	PG1	PG2	dPG	VTI
		PI	RI	FT	AccT	ACC
		AccT/FT	S/D	D/S	Vm	
Stenosis flow measurement						
STENO Flow		MnV	MnPG	PVel	PG	VTI
		FT	AccT	ACC	AccT/FT	P1/2T
		VA				
Regurgitant flow measurement						
Regurg Flow		MnV	MnPG	PVel	PG	VTI
		FT	P1/2T			
D. Trace measurements						
D.Trace1 D.Trace2		MnV	MnPG	PSV	EDV	dV
		dT	PG1	PG2	dPG	VTI
		PI	RI	FT	AccT	ACC
		AccT/FT	S/D	D/S		
D. Index measurements						
D.Index (Caliper)	Velocity, PG, Time	A	B	A/B	B/A	|A-B|/A
D.Index (Caliper)	Mn Vel, MnPG, VTI	A	B	A/B	B/A	|A-B|/A

Table4: B/D Mode

Menu	Measurement Methods	Measurement Results Display Parameters				
Blood flow Volume Measurements (for peripheral blood vessels)						
FV(Artery)MnV		MnV	PSV	EDV	dv	dt
		VTI	PI	RI	FlowT	ACCT
		ACC	AccT/FT	S/D	Vm	FV(MnV)
		FVm(MnV)	CSD	CSA		
Blood flow Volume Measurements (for peripheral blood vessels)						
FV(Artery)VTI		MnV	PSV	EDV	dv	dt
		VTI	PI	RI	FT	ACCT
		ACC	AccT/FT	S/D	Vm	FV(beat)
		FV(min)	CSD	CSA	HR	
Blood flow Volume Measurements						

Menu	Measurement Methods	Measurement Results Display Parameters				
F.Volume (Vein)		MnV	pV	VTI	AccT	ACC
		FV	CSD	CSA		
Blood flow Volume Measurements (for cardiovascular use)						
SV/CO		MnV	pV	VTI	AccT	ACC
		SV	CO	CSD	CSA	HR

2.2 Measurement Methods

2.2.1 B mode measurement

(1) Distance measurements

Caliper and Trace methods are available for measuring the distance between two points.
Distance measurement: Caliper method
The distance between 2 points can be measured via the caliper method.

Procedure

1. Press [Measurement] button on the touch panel.

2. Select [Dist.] from the Measurement menu.
   The + mark is displayed.

3. Set the start and end point positions with the Caliper method.
   The distance is displayed.

Example of Measurement Results Display

Dist: cm	Distance measurement value

Dist-trace measurement: Trace method
The distance of two points can be measured using the Trace method.

Procedure

1. Press [Measurement] button on the touch panel.

2. Select [Dist-trace] from the Measurement menu.

3. Trace along the boundary of the measurement target with the B Trace method.
   The distance is displayed.

Example of Measurement Results Display

Dist-trace:	
cm	Distance measurement value

(2) Area and Circumference Measurements

The Trace, Ellipse and Circle methods are available for measuring area and circumference.
Area-T measurement: Trace methods

Adjusting Images in the Full Screen View

For adjusting images displayed in full screen from video data acquired in the Line format. By using the preset ([Preset Set-Up Menu > Menu-Function]), make adjustments from the menus assigned to the Other tab of the function menu. The menus are shown below.

- [Gain]
- Display/hide color modes (Flow, Power Doppler, eFlow)
- [Dynamic Range]
- [Gamma Curve]
- [Saturation]
- [Rejection]
- [Graymap]
- [Baseline Shift (Color)]
- [Invert Color Map]
- [Priority Level]
- [Rejection (Color)]
- [Color Map (B/M)]
- [Color Map (Color)]
- [Display Priority]

Procedure

1. Display an image Full Screen.
2. Set [Playback] from the [Full Screen] tab on the function menu to "Stop".
3. Switch to the Other tab on the function menu, and select the adjustment menu. Make adjustments to the image. If you switch to another image or return to the Image Viewer, any image adjustments up to that point are discarded. Images that have been adjusted cannot be saved.

5.2 Searching for an image using the find screen

This function searches for images stored inside or outside the system.

Procedure

1. Select [Review] from the [Accessories]]tab in the function menu.
   Image Viewer is displayed.
2. Select [Find].
   The display switches to the Find View.

   The screen differs according to the Auto Input (review) setting of the Presets ([Common Preset > Common2]).

Menu	Options	Description
Angle Correct. Reverse		With the cursor as the origin, this menu item switches the direction of the angle set by using Angle Correction and Auto Angle Correction in the opposite direction (the Off position) around the origin.
Angle Correction	0° to 80°	Sets the insonation angle of incidence in increments of 1° to correct the flow velocity value. When the set insonation angle exceeds 80 degrees, the angle cannot be corrected because the error is too large.
Auto Angle Correction		Automatically corrects the flow velocity value that corresponds to the angle of incidence of the Doppler beam. This function can be selected during cursor display in either the B (Color)/D or 1B (Color) modes.
Base Line Reset (D)		Resets the baseline of the Doppler pattern to the factory default position.
Baseline Position	Unchanged	Does not change the baseline.
	0 to 16	Sets the shift position of the baseline when compensating automatically for the Doppler velocity range and baseline shift.
Base Line Shift (D)	-16 to 16	Moves the baseline of the Doppler pattern. The Doppler pattern without aliasing phenomena can be displayed.
Beam Steer (D)	-30 to 30	Sets the deflection of the D mode image in increments of 5°. This menu item enables information about the area being examined to be obtained by electronically transmitting and receiving the ultrasound beam in the oblique direction. This is used for areas such as the carotid artery where the ultrasound beam and a bloodstream direction cross perpendicularly. NOTE: The configurable range varies depending on the probe.
Beam Steer Reverse (D)		Switches the angle set in Beam Steer (D) to an angle on the opposite side or the 0° position.
Color Map (D)	Gray	The D mode image is displayed without adding color.
	A	Displays an image adding from orange to blue.
	B	Displays an image with blue color.
	C	Displays an image with blue that are slightly weaker than those of B.
	D	Displays an image adding orange.
	E	Brown brightness characteristics.
	F	Brown brightness characteristics that are weaker than E.
	G	Blue and yellow brightness characteristics.