

DYNASCOPE

DS-1700/1800 System



FUKUDA DENSHI reserves the right to change specifications without notice.



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DYNASCOPE

Adaptive Monitoring Solutions, Expandable technology for now and the future

■ Larger and more visually efficient

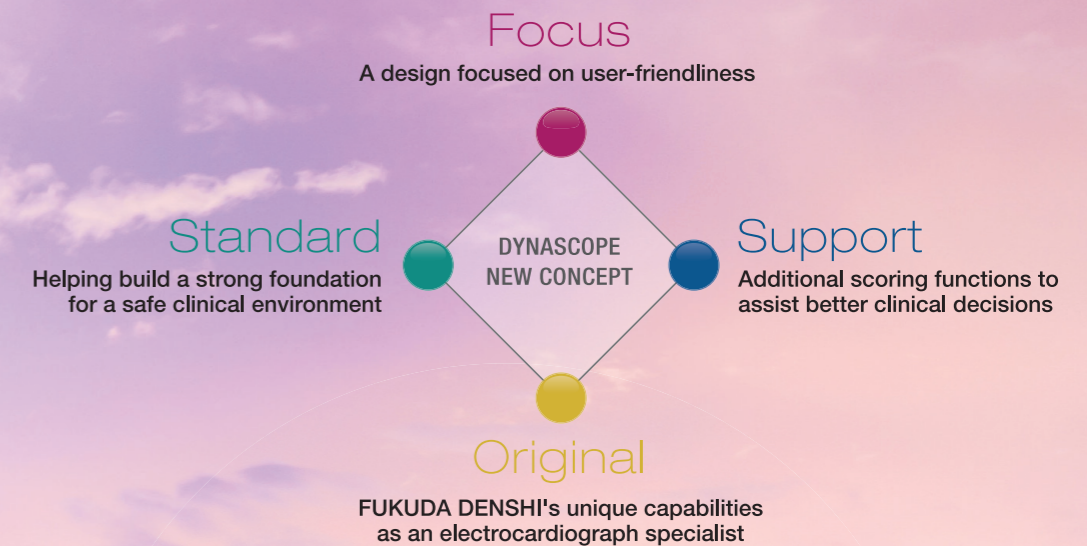
The DS-1800 system is a central monitor with a 27-inch wide display. It can be used in a variety of system configurations, from general wards to ICUs, with a mixture of wired network and wireless systems. This system can monitor up to 32 beds simultaneously.



DS-1800 System



DS-1700 System



A design focused on user-friendliness

Familiar flat design

Central monitors used in busy clinical environments require both visibility that enables the instant and accurate understanding of the measured values, etc. during alarms and operability that enables rapid entry. Our system's display utilizes the same kind of flat design that is also used for smartphones and other mobile devices. The simple layout of the display design achieves both high visibility and stress-free operability, thereby supporting safe, accurate monitoring in ICUs and hospital wards.



Capacitive touch panel

Our system uses a touch panel screen that is clear and reduces glare. The screen specifically consists of an LCD surface with a sheet of touch-detecting film attached to it. The screen therefore achieves the clearer display of waveforms and numerical information while also being highly responsive to touch operations.



Large 27-inch display

The display's high brightness, definition, and viewing angle achieve excellent visibility from all angles. The capacitive touch panel, also used in smartphones, enables a smooth operation with a familiar ease of usability, and the AF (anti-fingerprint) coating prevents fingerprints and smudges, and also for smooth finger gliding. It supports medical operations with a clear and clean display at all times.



Support

Additional scoring functions to assist better clinical decisions

Scoring function included

Rapid response systems (RRS) are currently being introduced by many medical institutions to enable specialized teams to promptly intervene and provide medical treatment based on prescribed standards. Meanwhile, a scoring function is based on the respiratory rate, body temperature, blood pressure, oxygen saturation, and level of consciousness, which are used as standards to trigger the RRS, and such a score can be used to provide patient care based on any set standards.

Score mode equipped as standard

NEWS 2 (National Early Warning Score)
This scoring system was released by the NHS (National Health Service) in 2017.

Original score modes can also be set

The score can be set in combination with any other parameters according to hospital operations.

Parameter Selection

Supp. O ₂	SpO ₂	RR	LOC	GCS
JCS	TEMP	Urine out.	NIBP-S	HR/PR
Sixth sense	Age	Blood glucose	Weight	Pain(NRS)
Pain(FPS)				
OFF				

Menu > Parameter > Scoring

Score Calculation List Setup

Explanation Area

EWS1	3	2	1	0	1	2	3	Score Mode
NIBP-S [mmHg]	90	91	101	111	111	91	111	IV
HR/PR [bpm]	40	50	41	51	110	130	131	IV
TEMP [°C]	35.0	35.1	36.0	36.1	38.0	38.1	39.1	IV
SpO ₂ [%]	91	92	94	96	96	97	98	IV
RR [bpm]	0	11	12	20	21	24	25	IV
Supp. O ₂		Oxy.	Air					IV
LOC				A				C, V, P, U

Change Base Initialize

FUKUDA DENSHI's unique capabilities as an electrocardiograph specialist

Algorithm for analyzing 28 types of arrhythmias included

All of our DS-1700/DS-1800 systems are equipped with Fukuda Denshi's signature arrhythmia analysis algorithm as standard which may find arrhythmias before further changes occur.

Our DS-1700/DS-1800 systems can analyze 28 types of arrhythmias— currently the largest number among all central monitors used in clinical environments of Japan* — along with issuing their alarms.

* Current as of July of 2021 (based on our company's research)

Asystole	VF	VT	Slow VT	Tachy	Brady	Run	Bigeminy	Trigeminy	Pause
Couplet	Frequent	Ireg RR	Prolung RR	Not Capt	Not Pacing	Vent Rhtm	SVT	AFib	Multiform
Ext Tachy	Ext Brady	R on T	Triplet	S Frequent	S Couplet	VPC	SVPC		

QT/QTc measurement

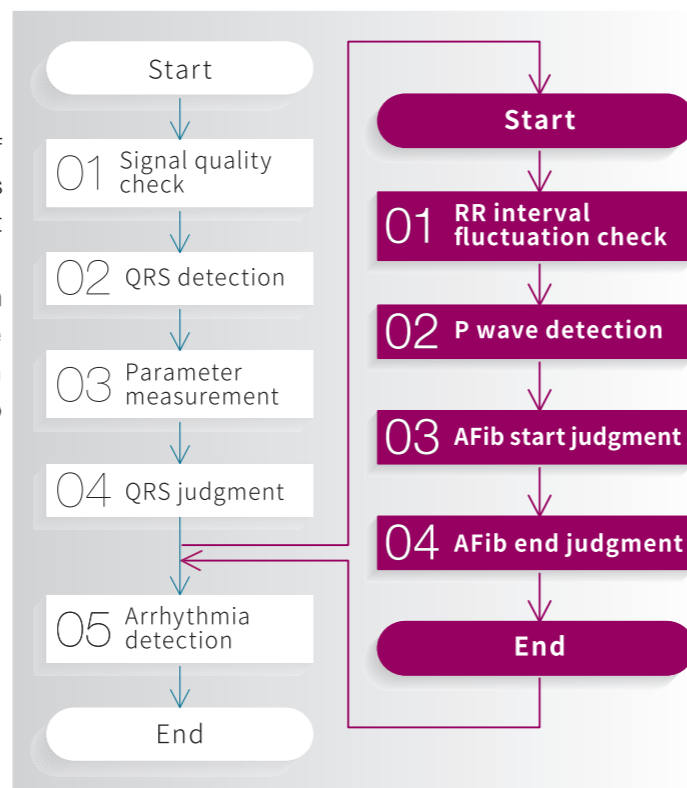
With its comprehensive set of waveform functions, our system can be used to achieve rapid and continuous QT/QTc monitoring.

This system can be easily used to quickly confirm the presence of long QT segments, which have been known to indicate cases with patients experiencing serious health issues or sometimes even sudden death. With the capability to quickly identify these measurements, patients can receive immediate preventative care to avoid more serious changes in their condition.

FUKUDA DENSHI's original AF analysis flow included

In addition to our algorithm for analyzing 28 types of arrhythmias, our system includes our own original analysis flow of atrial fibrillation (AFib). The flowchart to the right portrays the flow of our analysis.

Our unique analysis technology has been cultivated from our years of experience holding a large share of the Japanese Holter ECG market. This insight has been applied to the development of our technology and also included with our central monitor.



Helping build a strong foundation for a safe clinical environment

27.0 full HD display

Built-in receivers for twelve beds*

Up to 32 beds simultaneously displayed

Full Disclosure up to 14 days (optional)

Diagnostic support functions available

* For details, see Composition of the System on p. 10

DS-1800/DS-1700 screen size comparison



DS-1800



DS-1700

The depth remains unchanged, only the display size has been enlarged.

60-minute battery



Battery model BTO-005

Specifications

Display Size	DS-1700 : 21.5-inch wide Resolution (1,920x1,080dot) / DS-1800 : 27-inch wide Resolution (1,920x1,080dot)
Maximum number of displayed beds (per screen)	32 beds
Maximum number of displayed waveforms	32 waveforms (when used alone) 64 waveforms (when used with an extended display unit)
Waveform display time	DS-1700 : 17.8seconds / DS-1800 : 21.1seconds
Sweep speed	Circulatory system 12.5mm/s, 25mm/s Respiratory system 6.25mm/s, 12.5mm/s, 25mm/s
Waveform display method	Stationary Trace
Operation	Touch panel, remote controller, keyboard, and mouse
Displayed items	Electrocardiogram (ECG), respiration (RESP), invasive blood pressure (BP1~8), arterial oxygen saturation (SpO2-1, SpO2-2), carbon dioxide concentration (CO2), oxygen concentration (O2), anesthetic gas concentration (AGENT), airway pressure (AWP), airway flow (AWF), and amount of ventilation (AWV)
Waveforms	HR, PR_SpO2, PR_SpO2-2, PR_IBP, ST-A ~ C, BP1 ~ 8, NIBP, NIBP list, SpO2, SpO2-2, SpCO, SpCO-2, SpMet, SpMet-2, SpHb, SpHb-2, RR_IMP, RR_GAS, RR_VENT, RR_SpO2, T1 ~ 8, Tb, VENT, BIS, INVOS, CO2, O2, N2O, Agent, SPIRO, VENT-A, VENT-B, Hemo-A, Hemo-B, Scoring, ODI, QTc, QTc-A, QTc-B, QTc-C, SI, RPP
Measurements	28 items
Arrhythmic event	Asystole, VF, VT, Slow VT, Run, Couplet, Pause, Bigeminy, Trigeminy, Frequent, Tachy, Brady, Ext Tachy, Ext Brady, Triplet, R on T, Multiform, Vent Rhythm, SVT, AFib, Irregular RR, Prolonged RR, S Frequent, S Couplet, VPC, SVPC, Pacer not Capture, Pacer not Pacing
Full disclosure of waveform	32 waveforms for 336 hours/ 64 waveforms for 240 hours/ 256 waveforms for 96 hours
Trend items for graphs	HR, ST1, ST2, ST(I~V6), SpO2, SpO2-2, PR_SpO2, PR_SpO2-2, VPC, VPC_HOUR, ΔST1, ΔST2, ΔST(I~V6), QTc1, QTc2, QTc(I~V6), AFib, AFib 1h, AFib 24h, NIBP, BP1 ~ 8, PR_IBP, PDP, CPP, T1 ~ 8, SI, RPP, Tb, RR_IMP, APNEA, EtCO2, InspCO2, RR_GAS, ExpN2O, InspN2O, ExpAGT, InspAGT, MAC, RR_VENT, ExpO2, InspO2, PI, PI-2, PVI, PVI-2, SpCO, SpCO-2, SpMet, SpMet-2, SpHb, SpHb-2, PEAK, PEEP, ExpMV (Vigilance) SvO2, ScvO2, CCO, CCI, BT (Others) BIS, Lt-rSO2, Rt-rSO2, S1-rSO2, S2-rSO2
Trend time for graphs	48 hours / 336 hours (when FSD-64G is used)
Trend items for lists	HR, VPC, VPC_HOUR, ST1, ST2, ST(I ~ ST(V6)), ΔST1, ΔST2, ST(I~V6), QTc1, QTc2, QTc (I~V6), AFib, SpO2, PR_SpO2, SpO2-2, PR_SpO2-2, BP1-S ~ BP8-S, BP1-D ~ BP8-D, BP1-M ~ BP8-M, NIBP-S ~ NIBP-M, PR_IBP, CPP, PDP, PAWP, T1 ~ Tb, Tb, PI, PI-2, PVI, PVI-2, SpCO, SpCO-2, SpMet, SpMet-2, SpHb, SpHb-2, EtCO2, InspCO2, APNEA, RR_IMP, RR_GAS, RR_VENT, RR_SpO2, O2-E, O2-I, N2O-E, N2O-I, AGT-E, AGT-I, AGT2-E, AGT2-I, E-TV, I-TV, E-MV, P-PEA, PEEP, P-MEAN (Vigilance) SvO2, ScvO2, SaO2, O2EI, B-Temp, SI, RPP, CCO, CCO STAT, CCI, CCI STAT, DO2, RVEF, RVEF STAT, VO2, SV, SV STAT, SVI, SVI STAT, SVR, SVRI, SVV, EDV, EDV STAT, EDVI, EDVI STAT, ESV, ESVI, CFI, ICO, ICI, ISV, ISVI, ISVR, ISVRI, GEDV, GEDI, GEF, EVLW, ELWI, PVPI, ITBV, ITBI, VO2e, VO2i, VO2le, iB-Temp, SQI, MAP, CVP, HR, PR, SpO2, iMAP, iCVP, iAvgPR, DO2i, HGB, dPmx, CO CAL (Ventilator) E-TV, I-TV, E-MV I-MV, SMV, P-PEAK, P-PAUSE, PEEP, P-MEAN, P-MIN, E-RES, I-RES, FIO2, D-COMP, S-COMP, I:E, S_RR, VTCO2, etCO2, VCOV, Flowee, Ti, Ti/Ttot, PEEPtot, Elastance, D-Chara., Leakage, S-Mve/Mve, Tc, WOBvent, WOBpat, CPAP, P 0.1, Edipeak, Edimin, SBI, VT/PBW (Anesthesia apparatus) Sup.Air, Sup.O2, Sup.N2O (Others) BIS, SQI, EMG, SR, Lt-rSO2, Rt-rSO2, S1-rSO2, S2-rSO2, tcpO2, tcpCO2
Trend time for lists	48 hours / 336 hours (when FSD-64G is used)
Number of recalls	Up to 1000 recalls (when FSD-64G is used)
Alarm history	5000 alarms/bed
Classification by form of protection	Class I equipment, internally powered equipment
Power input	100VA
Battery life	60 minutes*optional

Composition of the System

The following model types are available.

Model Name	Number of Telemetry Receiving Beds	Printer	Extended Display
DS-1800LRE	0	Yes	Yes
DS-1812RE	12	Yes	Yes
DS-1800L	0	No	No
DS-1812	12	No	No
DS-1800LR	0	Yes	No
DS-1812R	12	Yes	No

Other equipment such as general-purpose display unit, mouse, keyboard can be also connected. Models sold vary by region. Please contact us or the distributors for details.

Example of an Hospital Network

