
Automatic balancing recorder

Uni-Coder

U - 8 4 1

SPECIFICATIONS

Specifications are subject to change without notice.

PANTOS CO., LTD	Drawing number	Amendment
	841-00-0001D	

1 . OUTLINE

The uni-corder U-841 is the recorder of a pen writing system, and is the series product of U-1641.
By 4-8 channels, the input part has adopted the unit system.

2 . SPECIFICATIONS

Basic Specifications

Model	:	U-841
Channel	:	4 to 8
Recording method	:	Auomatic balancing system (digital servo system)
Type or input unit	:	Plug-in type (2channels for 1unit)
Reference point	:	Right end of chart paper

Recording

Recording pen	:	A felt-tip pen (Recording length approx.5km)
Effective recording width	:	250mm
Pen interval	:	4mm
Pen name	:	NDL- * *
Accuracy	:	±0.25% of (measurement accuracy and effective recording width) (Including linearity and bead band)
Pen speed	:	Approx.1600mm / s
Synchronizer	:	ON, OFF 20date / 1mm
Measurement ON / OFF	:	Each channel individually
Chart paper	:	Roll paper [№25020P50 (50m)、 №2501P50 (20m)]
Chart speed	:	10 to 2400mm / min, / h Set at every 1mm
Resolution of time axis	:	0.05mm
Sampling speed	:	4msec
Rapid chart drive	:	2400mm / min (Reverse rotation not allowed)
Accuracy for chart drive	:	±0.1% (at a recording length over 1m)
Chart end detection	:	Provided (pen up, feed stop, signal OFF, end indication)
Swing-out protection	:	Signal limiter
Paper winding-up	:	Equipped (option)
Superimposed marker	:	Operate by operation switch. Operate by external remote. Link with ON / OFF of synchronizer.
Amplitude	:	Approx.10mm
ON time	:	Approx.50ms
Auto pen cap	:	Pen is automatically stored at the specifed position on power OFF and measurement OFF.

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Printing

Printing method : Wire dot-impact method 5×7dots
 Ink ribbon : Cassette method (black) , Model P1101
 Printing speed : Approx. 1.5sec / line
 Contents of printing

Mode	Time	Input value	Range	SYNC	Limiter	Limiter value	Chart speed	Comment
S t a t u s	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>
M a n u a l	<input type="radio"/>	<input type="radio"/>						
S t a r t	<input type="radio"/>			<input type="radio"/>			<input type="radio"/>	
C h a r t s p e e d	<input type="radio"/>						<input type="radio"/>	
S Y N C	<input type="radio"/>			<input type="radio"/>				
L i m i t e r	<input type="radio"/>				<input type="radio"/>			
L o g g i n g	<input type="radio"/>	<input type="radio"/>						
S c a l e	<input type="radio"/>		<input type="radio"/>					

S t a t u s m o d e : Printing the setting conditions.
 Range, SYNC ON or OFF , Limiter value,
 Comment (Max 60 characters, 3kinds)

M a n u a l m o d e : Prints time and Measured value for all channels

S t a r t m o d e : Prints time, SYNC ON or OFF , Chart speed

C h a r t s p e e d m o d e : Prints chart speed and Time after chart speed was changed.

S Y N C m o d e : Synchronizer, time of ON/OFF, ON, OFF display

L i m i t e r m o d e : Prints Channel No. and ON or OFF time

L o g g i n g m o d e : Prints Time, Chart speed, Channel No., measured value and unit at constant.
 When logging mode is set to ON, printing is possible even if the paper drive is stopped.

Relation between paper drive speed and a standard printing interval.

Chart speed	Interval
10mm/sec or more	30 sec
5mm/sec to 9mm/sec	1 min
1mm/sec to 4mm/sec	5 min
30mm/min to 59mm/min	10 min
10mm/min to 29mm/min	30 min
5mm/min to 9mm/min	1 hour
1mm/min to 4mm/min	2 hour
40mm/h to 59mm/h	3 hour
20mm/h to 39mm/h	6 hour
10mm/h to 19mm/h	12 hour

CHART SPEED is fixed, and it is changeable and as for the interval.

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Relation between chart drive speed and the minimum printing interval

Chart speed	Interval
time of mm/sec	5 sec
50 mm/min	6 sec
40 mm/min	7 sec
30 mm/min	10 sec
20 mm/min	15 sec
10 mm/min	30 sec
5 mm/min	1 min
2 mm/min	2 min
1 mm/min	5 min
50 mm/h	6 min
40 mm/h	7 min
30 mm/h	10 min
20 mm/h	15 min
10 mm/h	30 min

S c a l e m o d e : Printes the range scale when a fixed amount of chart paper is fed.
Printing interval varies according to chart speed.

Chart speed	Printing interval
40mm/sec to 10mm/sec	1200mm
9mm/sec to 5mm/sec	600mm
4mm/sec to 10mm/hour	300mm

Display

Display : EL display 5inchs
320 × 256 dots

Display mode : (1) Range display, Simultaneous display for all channels
(2) Digital measurement value display
6 digits (Mark, Measurement data, Decimal point)
Date, Chart speed
(3) Wave
(4) AUX (Optional screen)
Limiter, Chart feed trigger, Scaling (Physical amount) ,
Time, Tag name, Rogging printing, Pen adjustment,
Comment, Print, ICard,
Floppy disk (option) ,
Interface (option)

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Limit switch (Output is option)

Number of level : 2-level (Each channel)
 Type : Maximum Minimum
 Alarm : The warning buzzer sounds if it exceeds the limit value. With ON/OFF function
 Output (option) : 2 contact point / ch, Photo-MOS output, Max 8channels
 Capacity of contact : DC400V (DC + AC peak) 0.1A

Chart feed trigger

Remote mode : Paper is fed by turning on the remote mode.
 Trend : Number of speeds : 3 (3stage are set.)

Operation

Scaling : Range -10000 to +10000 (decimal point, arbitrary setup, arbitrary unit)

GP-IB interface (Option)

Standard : Based on IEEE std 488-1978
 Mode : Both input and output of setting value and measured value.

RS-232C interface (Option)

Standard : Based on EIA RS-232C
 Mode : Both input and output of setting value and measured value.
 Transmission speed : 1.2K, 2.4K, 4.8K, 9.6K bps

IC memory card

Function : Set value
 Capacity : 8Kbytes (8file)
 Model : BS-8D1-A-262
 Battely : 2016 series
 "NO BATTELY" is displayed when there is no battery.
 Life : More than 5 years

(at 25 °C, and state that the battery is removed from the mainframe. The BR2016 is used In this case.)

Memory item : 1 . Setup of input amplifier and chart drive (INPUT)
 2 . Setup of a waveform display (MONITOR)
 3 . Setup of a limiter
 4 . Setup of a chart drive trigger
 5 . Setup of scaling
 6 . Setup of a tag name
 7 . Setup of rogging printing
 8 . Setup of a comment

Floppy disk (Option)

Media : 3.5Inch 2HD
 Format : MS-DOS
 Data capacity : 1.2Mbytes (Approx.500Kdate)

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External remote 1

Type of signal : TTL Level
 : Transistor Switch
 : Contact signal

Following functions can be operated from the external devices : operation panel and OR.

Chart paper feed : Start-up · Stop
 Falling ↓ → Start-up
 Rising ↑ → Stop (The signal for 3ms or less is not answered)

Chart paper rapid feed : Start-up · Stop (Feed)
 L → Start-up
 H → Stop

Select of clock for

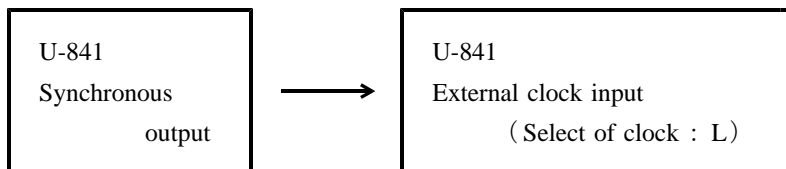
chart paper feed : Select the external clock or internal clock
 Chart paper can be fed in synchronization with the external clock.
 L → External
 H → Stop

External clock input : 50μm / 1clock TTL
 Maximum frequency 800Hz
 Minimum pulse width 10μs

Weight marker : Simultaneously for all channels
 L ↓ → ON

Chart drive : Used when operating the units in parallel.

Synchronous output : 1clock / 50μm TTL



Manual printing : Prints the setting items for printing ON.
 L ↓ → Print

Masurement ON/OFF : Simultaneously for all channels
 Falling ↓ → Measurement ON
 Rising ↑ → Measurement OFF
 (Not respond to the signal for 5ms or less)

External remote 2 (option)

EXT. Chart speed ①
 EXT. Chart speed ②

Built-in clock

Accuracy : ± 4 sec.per (TYP.)
 Record beam : NNyear NNmonth NNday NNtime NNpart NNsecond (A.D.)

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Back-up

- Item : Each setup, Built-in clock
Battery : TWO lithium batteries, Built-in the body
Memory time : Approx. 1 month (25 °C)

Operation

- Pen lift : All pens move to pen rest when the power is turned OFF.
(All pen simultaneous operation type)
• Measurement ON / Off-switch
Measurement OFF → Pen up → Pen rest
(During this operation, pens other than the one that is in the measure OFF operation does not wave.)
Measurement ON → Pen up → Moves to recording position. → Pen down
(During this operation, pens other than the one that is in the measure OFF operation does not wave.)

General specifications

- Voltage proof : Power supply pair Between chassis (GND) AC 1500V For 1 minute
Analog input pair Between chassis (GND) AC 500V For 1 minute
Between analog each input AC 500V For 1 minute
- Insuration resistance : Power supply pair Between chassis (GND) Above 100MΩ
With DC500V megger
Control input-and-output pair Between chassis (GND) Above 20MΩ
With DC250V megger
Analog input pair Between chassis (GND) Above 100MΩ
With DC500V megger
- Operating environment : Temperature 5 to 45 °C Hummidity 35 to 80 % RH
Storage environment : Temperature -5 to 50 °C Hummidity 35 to 80 % RH
Vibration : 5 to 50Hz Less than 0.1G
Shock : It does not approve.
Power supply : AC 90 to 132V / 170 to 265V (Changeover by switch)
47 to 440Hz
DC 9V to DC 16V (Option)
- Power consumption : Max 4pen 250W typ.
6pen 250W typ.
8pen 250W typ.
At baamced 4pen 140W typ.
6pen 145W typ.
8pen 150W typ.
Maximum becomes 20% rise of typ value.
- Dimension : Approx 438 (W) × 255 (H) × 440 (D) mm
- Mass : 4ch 16.5kg (Including input unit)
6ch 18kg (")
8ch 19.5kg (")

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Accessories

Power code	1
Paper (20m) №2501P50	1
Ribbon cassette P1101	1
IC memory card	1
Pen (each color) NDL-**	1
Dust cover	1
5A fuse (built in type)	1
Input cover	1
Input coverstay	2
Dropping pipet	1
Founding adapter	1
External remote connector (57-30360)	1
Insutruccion manual	1

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