RION

IMPEDANCE AUDIOMETER

RS -H1

GREEN

RS-H1

- Multifunctional type which is suitable for clinical and research corresponding to numerous tests
- Automatic measurements for a variety of test from tympanometry to reflex tests.
- The test results are stored in the internal memory and printed out in batches for each tested item, inspected ears.

1000 Hz probe tone, can do tympanometry that is suitable for newborns.

For both 226 Hz and 1000 Hz, the Tympano-gram can be compared with right and left or 5 data.

Equipped with LAN interface, also supports card reader and bar code reader

RS-H1

Multifunctional type for clinical and research with enhanced function and operation.

Characteristic

- The test can select either automatic start or manual start, and can execute the automatic measurement of both tympanometry and reflex test consecutively.
- User can change various condition settings such as sweep stop pressure of tympanometry, the start tone pressure level, level step of Reflex test.
- The test result is stored in the internal memory and is printed out by batch for each test item, test ears.
- In addition to the built-in servo pump, pressure setting of the reflex test is possible by using an external mechanical pump (accessory).

Smaller size to save space

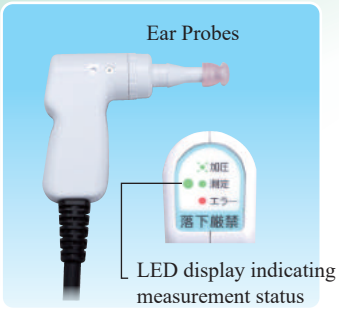
The width is 15.7% (about 6.5 cm) and the depth is 24.9% (about 9.8 cm) smaller than our previous product (RS - 22)*.

Easy operation with touch panel

Some actions such settings and ID input can be operated with the such as touch panel, making it easier to use.

Easier to use and improved ear probes

The transition from the handheld to the headset is smooth.



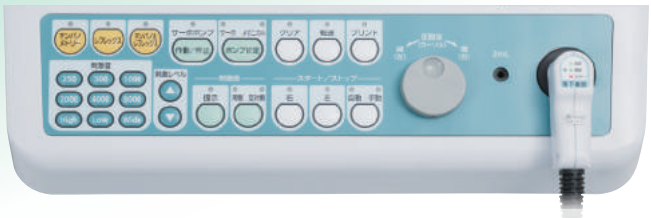
Mechanical pump

FB-22

Mechanical pump that can measure pressure with reflex test is included standardly

Easy to use operation panel

Equipped with a probe holder in the main body



Equipped with LAN interface

Test data can be transferred to external equipment such as a computer via LAN interface. (Please contact our sales department for use)

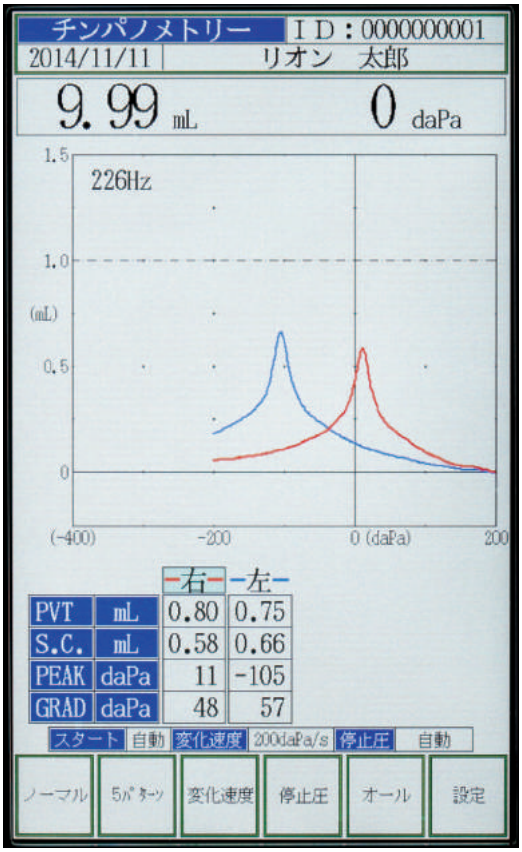
Results of cooperation with electronic medical record system are posted on screen and print example.

Tympanometry

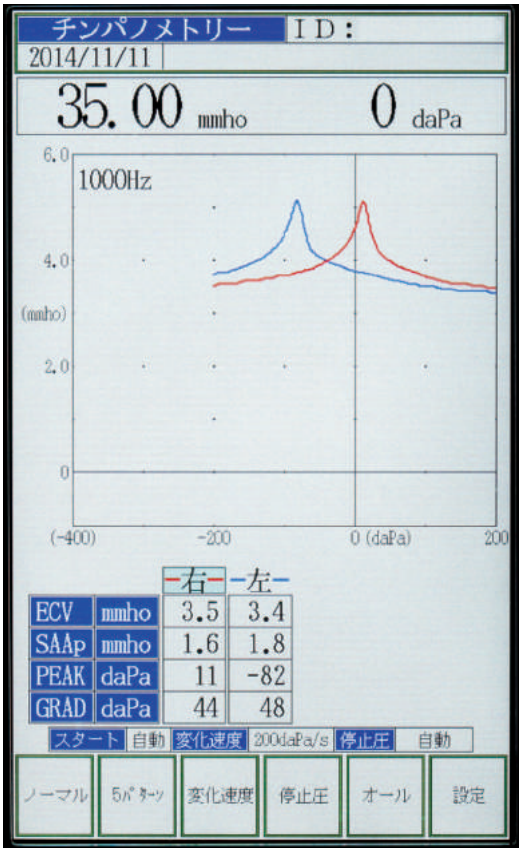
- It is equipped with 1000 Hz probe tone. It is possible to do Tympanometry which is suitable for newborn babies.
- The left and right test results can be displayed in color on the same screen, and 5 patterns can be displayed on the same screen.
- Automatically measure and display ear canal volume, static compliance, and peak pressure. (Probe tone 226 Hz).
- Automatically measure and display ear canal volume, static compliance, and peak pressure. Static acoustic admittance can be displayed by selecting from "Positive Tail" or "Negative Tail". (Probe tone 1000 Hz)
- "Gradient" showing the steepness of the peak can also be displayed.
- Tympanometry "Relative display (MCT)", "Absolute display (MPT)" can be switched.

Tympanogram

Probe tone 226 Hz

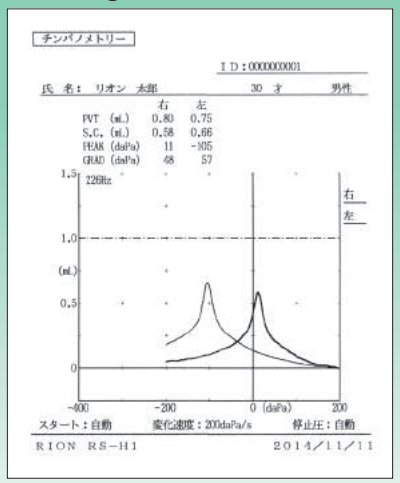


Probe tone 1000 Hz

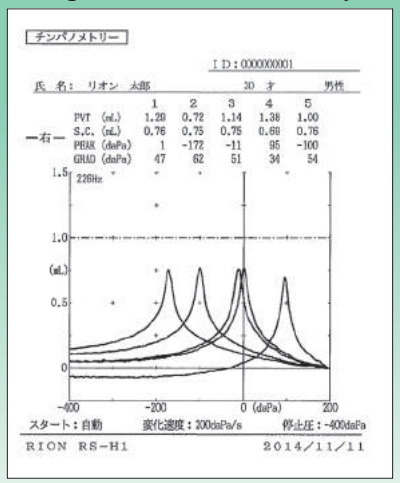


Printout example

Left and right test result simultaneously



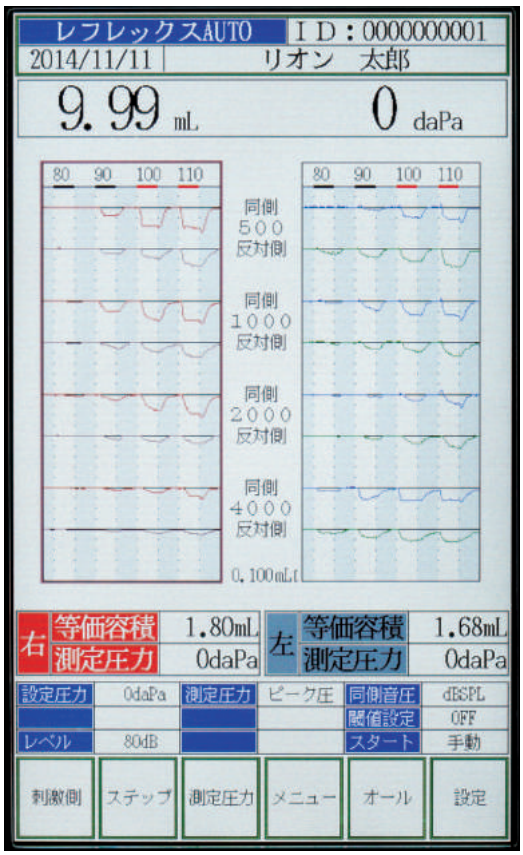
5 pattern simultaneously



Reflex test

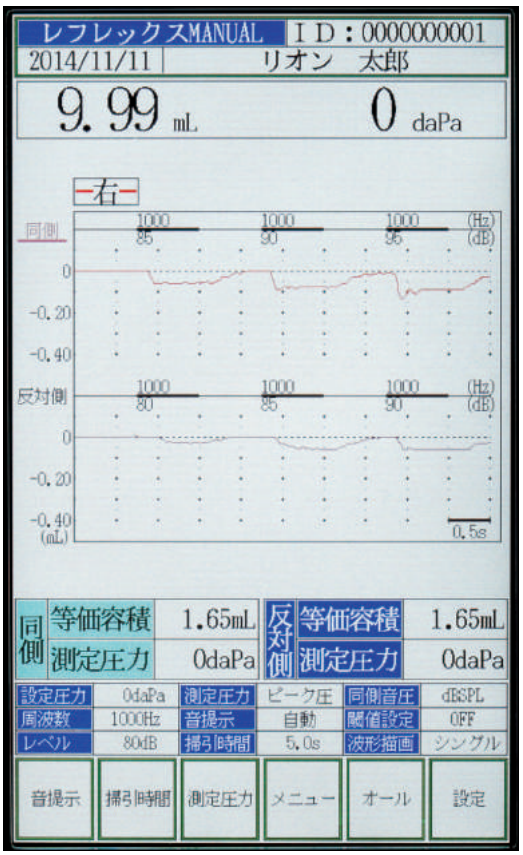
- Five modes (AUTO, MANUAL, ADD, DECAY, LATENCY) are carried.
- Easy threshold measurement in automatic mode (AUTO), measurement with arbitrary level, frequency, timing by reflex test (MANUAL) is possible.
- Easy reflex test (DECAY) is possible with 10 seconds stimulation.
- In addition to "real wave punishment display", "simple display" can also be selected. (Reflex test <Auto> only) Measurement of latency time (Reflex check (Latency)) has become more convenient.
- It is possible to independently set the cursors of the same side waveform and the opposite side waveform. And it is possible to display the latency time of each side

Test mode: AUTO



For the set frequency, measure the same side / opposite side automatically by changing the stimulus tone.

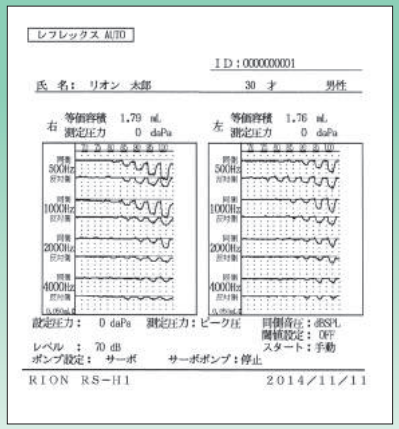
Test mode: MANUAL



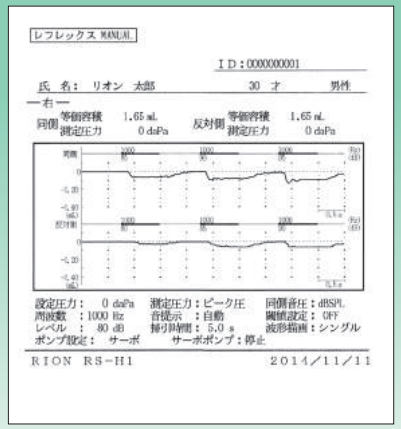
Measure with the set frequency, level, timing

■ Printout examples

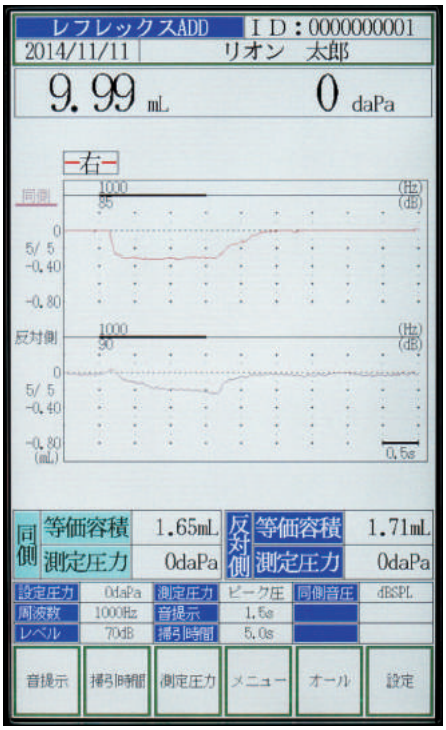
Reflex test (Auto)



Reflex test (Manual)

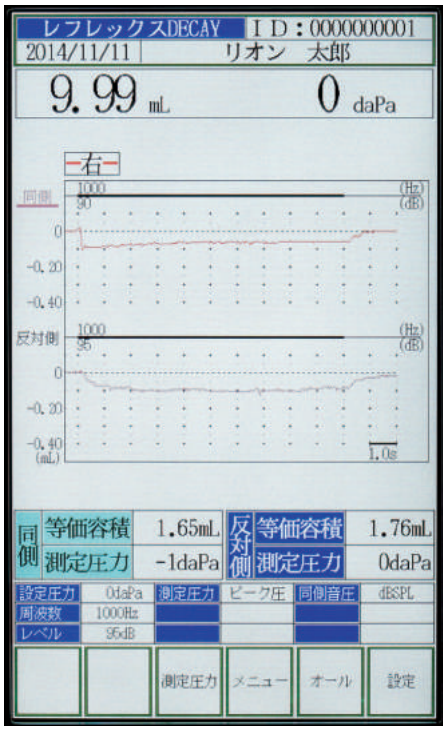


Test mode: ADD



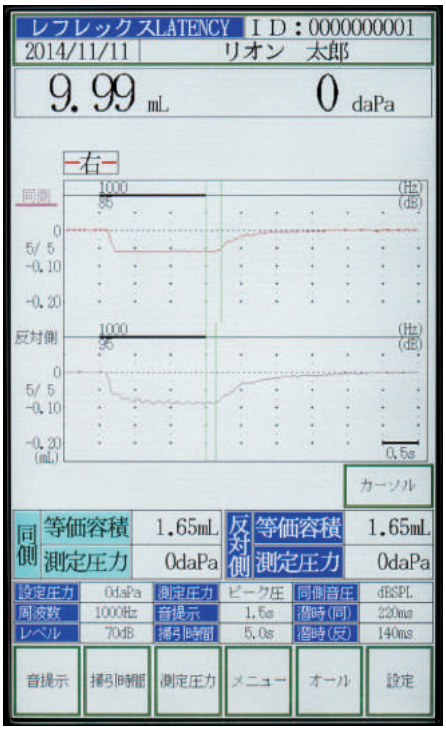
Measure by adding at the set frequency, level, timing. Select from adding time 5, 10, 20.

Test mode: DECAY



Measure with posting stimulus tone for 10 seconds at the set frequency and level. Measurement time 12.5 seconds

Test mode: LATENCY

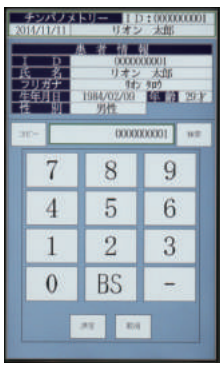


Measurement is performed by adding and averaging at the set frequency, level and timing. Select adding time from 1, 5, 10, 20 times. Time measurement at an arbitrary place is possible

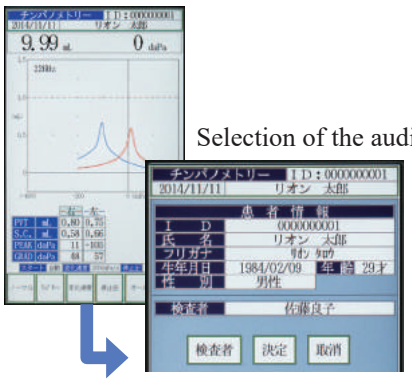
Cooperation with the electronic medical record system

User can transfer test results directly by using optional data linkage system.

Patient Information



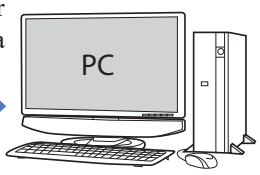
Patient information can be recalled from the electronic medical record system by ID number. The ID number can be entered with an optional card reader or bar code reader.



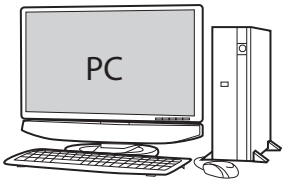
Selection of the audit's name

Image output is also possible.

Images can be transferred directly to the computer without using the data linkage system.



Electronic medical record system



Please contact our sales department for use.

IMPEDANCE AUDIOMETER RS-H1

Specification

Type according to IEC60645－5: Type 1－Diagnostic／Clinical

Test function

Tympanometry
Probe tone: 226 Hz, 85 dBSPL, 1000 Hz 75 dBSPL (According to IEC 60318 - 5: 2 cm3 coupler for the measurement of hearing aids and earphone coupled to the ear by means of ear inserts).
Display mode: Left and right overwriting or 5 data overwriting.
Equivalent volume range: When probe tone 226 Hz is selected.
0.10 ~ 9.99mL (display range).
0.20 ~ 9.00mL (error guarantee range).
When probe tone 1000 Hz is selected.
0.22 (0.05mL) ~ 35.00 (8.00 mL) mmho (display range).
0.44 (0.10 mL) ~ 26.50 (6.00 mL) mmho (guaranteed error range).
Range: mL / div 0.5, 1.0, 1.5, 2.0, 3.0 Automatic selection functions are available.
mmho / div 0.5; 1.0; 2.0; 4.0; 10.0 Automatic selection functions are available
Pressure range: + 200 ~ -600 daPa; + 200 ~ -400 daPa; + 200 ~ -200 daPa; + 200 ~ automatic stop.
(Automatic stop of conditions: - 200 daPa equivalent volume value in the following stop when down to about 1/3 of the static compliance. Maximum -400 daPa).
The screen format has two types of pressure range + 200 ~ -600 daPa and + 200 ~ -400 daPa
Pressure group acceleration: 200 daPa / sec, 50 daPa / sec.
Display: When 226 Hz is selected.
Tympanogram can be overwritten left right or overwritten with 5 data.
Numerical values are peak pressure, S. C, PVT, Gradient, Probe tone frequency.
Relative display (Meatus compensated Tympanometry).
Absolute display (Meatus compensated Tympanometry).
When 1000 Hz is selected.
Numerical values are peak pressure, SAA (p / n), ECV, Gradient, probe tone frequency.
Relative display (Meatus compensated Tympanometry).
Absolute display (Meatus compensated Tympanometry).

Reflex test
Probe tone: 226Hz, 85dBSPL
Test mode: The following five types
AUTO: Measured with the level of stimulus tone automatically changed and continuously on the same side / opposite side for the set frequency.
Threshold can be set
Can set the stop level of stimulus tone
MANUAL Measure with arbitrary stimulus tone frequency, level, timing
Automatic (Measured with the level automatically changed for the set frequency)
Threshold can be set
ADD Measure by adding at any stimulus tone frequency and level
Addition time can be selected from 5; 10; 20 times
DECAY Measure by posting stimulus tone for 10 seconds at arbitrary 1 stimulation tone frequency and level
Measurement time 12.5 seconds
LATENCY Measure by adding averagely at arbitrary 1 stimulation tone frequency and level
The addition time can be selected from 1; 5; 10; 20 times.
Has cursor function
Waveform display: Can switch from actual waveform to simplified display (AUTO only).
Sensitivity: 0.025 (AUTO only), 0.05, 0.1, 0.2 mL / div
Pressure range: + 200 ~ -600 daPa
Measurement pressure: atmospheric pressure, tympanogram peak pressure, manually set pressure.
Setting change of mechanical pump / servo pump is available.
Stimulus tone: As shown in the table above.

* Specifications are subject to change without notice for improvement.
* Data such as test screens and printout examples posted on this page are prepared for catalogs.

Frequency (Hz)		Pure tone						Noise		
		250	500	1000	2000	4000	8000	Wide Noise	Low Noise	High Noise
Synchronism	(dBSPL)	——	50～110	50～110	50～110	50～110	——	50～90	50～90	50～90
	(dBHL)	——	50～105	50～1 10	50～105	50～105	——	——	——	——
Opposite-side	(dBSPL)	——	——	——	——	——	——	50～120	50～120	50～120
	(dBHL)	50～100	50～120	50～120	50～120	50～120	50～90	——	——	——

However, at the time of LATENCY test, the same side 500Hz: 50 ~ 100 dBSPL, 50 ~ 90 dBHL shall be set. Or, the noise output of the same side is not performed
Wide noise: 500 ~ 4000 Hz noise
Low noise: 500 ~ 2500 Hz noise
High noise: 2500 ~ 4000 Hz noise
Synchronization, opposite coupler and HK reference level are according to IEC 60645-5.
Minimum level step: 5 dB

Reflex (AUTO)
Stimulus tone
Frequency On both the frequency side and the opposite side, there are four frequencies of 500, 1000, 2000, 4000 Hz
ON / OFF setting is possible for each frequency
Level step 5 dB (7 level), 10 dB (4 level) can be selected
Start level 70 dB, 80 dB, optional
The threshold determination function 0.025mL; 0.05mL; OFF can be selected
Expanded display : Expand and display the waveform of the selected frequency.
Stop stimulation tone: Can set the stop level of stimulation tone.

Reflex (Manual)
Stimulus tone
Frequency: Same side or opposite side can be selected arbitrarily
Tone posting 1.5 seconds, manual (posted while pushing stimulus notice bulletin), can be selected automatically (rising automatically in steps of 5 dB from the set start level)
Continuous measurement result (overwrite), single (for one screen only)
Stimulus tone: single only when automatic
Sweep speed 2.5; 5.0; 10.0; 20.0 seconds / screen selectable
Threshold judgment function 0.025 mL, 0.05 mL, OFF selectable
However, stimulation tone: valid only when automatic

Reflex (ADD)
Stimulus tone posting 0.5; 1.0; 1.5; 2.0 seconds selectable
Adding times 1; 5;10; 20 times selectable
Sweep speed 2.5; 5.0; 10.0; 20.0 seconds / screen selectable

Reflex (LATENCY)
Stimuli tone posting 0.5; 1.0; 1.5; 2.0 seconds selectable
Adding times 1; 5; 10; 20 times selectable
Sweep speed 2.5; 5.0; 10.0 seconds / screen selectable
Cursor function

Tympanometry & flex test
Continuous test of Tympanometry 226 Hz (left and right over writing) and Reflex Auto test

Digital section

Interface: RS-232-C: Data output, card reader / bar code reader
LAN: Data input / output
External switch: Start / stop measurement by switch
Waveform output: Electrical output
Indicator: 7 inch wide color LCD, 800 x 480 dots, resistive touch panel Built-in printer: 4 inch thermal printer; 832 dots / line, 8 dots / mm

Power supply part

Classification of protection against electric shock by type: Class I device
Classification of mounting parts depending on level of protection against electric shock: B type mounting part
Power: AC100V 50/60 Hz 60VA

Environmental condition

Use environmental conditions: Temperature 15 ~ 35˚C,
Relative humidity 30 ~ 90% (without any condensation)
Pressure 700 ~ 1020 hPa (altitude 3000m or less)
Transport and storage environmental conditions: Temperature -10 ~ 50˚C,
Relative humidity 10 ~ 90% (without any condensation)
Pressure 500 ~ 1050 hPa

Size and weight

Body: About 350 (width) x 295 (depth) x 290 (height) mmx about 6.0 kg

Accessories

Ear Probe	ET-05	1	Earplug set	RS-M1-S10	1
Earplug adapter for ET - 05	ET-05-S11	2	• Earplug for the RS Big, Medium, Smal		Each 3
Air conduction handset	AD-06BF2	1	• Earplug Φ 7~14		Each 3
Air conduction adapter assembly	EB-01A-017	1	• Earplug Φ 6~9		Each 3
Headband adapter for ET-O5	ET-05-S12	1	• Cleaning Wire	RS-32-026	1
Head band assembly for ET 05	ET-05-S13	1	Recording paper axis	AA-M1-025	1
Fuse	0218002.MXP	2	Thermal recording paper	TP-42	2
Mechanical pump	FB-22	1	3P power cord with ground	AA-38-222	1

Specifications subject to change without notice

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