

多機能 All in One システム AVR-7200/7300

Multifunctional all-in-one system 多功能 ALL in One 系統

2ch Audio analyzer

+ AM/FM SG



Rear panel



SG unit

SGユニット着脱可能
SG unit is detachable.

D W240×H180×D360 mm W 7.0 kg

※ 突起物、脚を除く

● World power

Ext I/O

RS-232C

GP-IB

概要

Outline / 概要

AVR-7200/7300は、オーディオ機器および車載機器の調整と検査の自動化に適したラジオ&オーディオテスタです。AM/FM信号発生部は着脱可能となり、AVR-7300はRDS対応となります。

生産工程に必要なオーディオ信号発生部と測定部、AM/FM信号発生部、制御部を一体化した計測器です。

付属のオリジナルアプリケーションソフトを利用することで、簡単に動作設定が行えます。

AVR-7200/7300 are "Radio & audio tester" suitable for automation of adjustment / inspection of audio instrument and on-vehicle instrument.

AM/FM signal generation part is detachable, and AVR-7300 becomes RDS correspondence.

It is measuring instrument which unified "audio signal generating part and measurement part and AM/FM signal generation part and control section" required for production process. By using attached original application software, operation setting can be performed easily.

AVR-7200/7300是最合适音频设备以及车载设备的自动调整，测试的收音机&音频测试设备的测试仪器。

AM/FM信号发生器可拆卸。AVR-7300具备RDS功能。

其设备是具有生产过程中所必要的音频信号发生器，测试器，AM/FM信号发生器，控制功能集一体的测试仪器。

因利用附带的原软件，能够简单地进行动作设定。

特長

Features / 特長

Audio Measure part

- 差動平衡入力2chまたは4ch切替(不平衡)方式を採用
Differential balanced input 2ch or 4ch change (unbalance) system is adopted.
采用差分平衡輸入2ch或4ch交換(不平衡)方式
- 歪率測定Full Notchを標準装備
The distortion rate measurement Full Notch is equipped standardly.
标配失真度測試Full Notch
- 測定部にGNDフローティングモードを装備
Measurement part is equipped with GND floating mode.
測量部位可以有接地浮動模式
- 各種フィルタを搭載し、追加オプションにも対応可能
Various filters are on board and correspondence also of additional option is possible.
配备了各种过滤器，可对应可选追加

Audio Oscillator part

- DDS方式を採用したオシレータを搭載
The oscillator which adopted the DDS system is on board.
測量用信号源地標準裝置是采用DDS方式的振蕩器
- 2chフローティング方式、正弦波/方形波切替え出力対応(CH2のみ)
2ch floating system, sinusoidal wave / square wave change output correspondence (CH2 only)
可以转换输出2ch漂浮法，正弦波/方波(仅CH 2)

AM/FM SG part

- DDS方式を全面採用し、切替応答2msec以下の超高速レスポンスを実現
DDS system is adopted completely and the fast response of 2 or less msec of change response is realized.
完全采用DDS系統，實現2毫秒以下的超快切換響應
- AM/FMモノラル変調に加え、FMステレオ変調を標準装備
In addition to AM/FM monaural modulation, FM stereo modulation is equipped standardly.
除了AM / FM单声道调制，标配FM立体声调制
- 信頼性の高い電子式アッテネータの採用により長時間の連続使用も安心です
By adoption of reliable electronic formula attenuator, continuous duty of long time is safe.
通过采用高可靠性的电子衰减，就不用担心机械的寿命，即使长时间连续使用也完全可以放心。
- AM/FM同時変調機能を搭載、2系統の内部変調信号によりAM/FMを異なる変調周波数に設定可能
AM/FM simultaneous modulation function is equipped. By 2-line inter modulation signals, setup of AM/FM to the different modulation frequency is possible.
具有AM/FM同时调制功能，通过2个系统的内部调制信号，可以实现设定AM/FM不同的调制频率

Others

- GP-IB、RS-232C、外部制御I/Oを標準装備 電源電圧は90~250Vのワールドワイド対応
GP-IB, RS-232C, and external control I/O are equipped standardly. Supply voltage is worldwide correspondence of 90-250V.
标配GP-IB的，RS-232C，外部控制I/O 电源电压90~250V 全球支持

AVR-7200/7300 仕様 / Specification

Audio Measure specification

周波数測定 / Frequency measurement / 频率测试

Measurement range	10Hz~110kHz
Accuracy	±100ppm±1digit
Input voltage range	25mV~31.5Vrms

ACレベル測定 / AC level measurement / AC参数测试

Measurement channel	2ch balanced or 4ch unbalance
Separation	≥80dB
Input impedance	≥100kΩ
Measurement range	0.0316mV(-90dBV)~31.6V(30dBV) 6 ranges
Accuracy	±0.4dB or less (-70~-30dBV at 1kHz)
Resolution	0.1% of full scale
Detection response	RMS or average responding
Flatness (1kHz ref.)	±0.4dB (100Hz~20kHz) ±1.0dB (10Hz~110kHz)
Relative level range	≥120dB

DCレベル測定 / DC level measurement / DC参数测试

Input impedance	≥1MΩ
Measurement range	0.00~±40.00V
Resolution	0.01V
Accuracy	±50mV

ひずみ率測定 / Distortion measurement / 失真率测试

Frequency range	10Hz~110kHz (Auto select)
	fo±10%
Measurement range	0.003%~30% 7 ranges
Input level range	0.1~31.6Vrms
Resolution	0.1% of full scale
Accuracy	±0.4dB or less
Residual distortion (Input level 1Vrms)	≥96dB :fo±2% 80kHzBW ≥100dB :fo±1% 80kHzBW

フィルタ / Filters / 滤波器

HPF	200Hz :-18dB/oct
LPF	20kHz/30kHz :-18dB/oct
Pre LPF	20kHz
Distortion	≥90dB at 1kHz, 3.16rms input
Flatness	±0.4dB or less (20Hz~10kHz) ±1dB or less (10.01kHz~20kHz)
PSOPHO	JIS-A: Conforming to JIS-C1502 CCIR-ARM: Conforming to Dolby filter

Audio Oscillator specification

正弦波出力 / Sinewave signal output / 正弦波输出

Frequency range	10Hz~50kHz
Output impedance	600Ω
Output range	13.0~-89.9dBV (15.2~-83.7dBm)
Accuracy	±0.5dB of setting (>-37.1dBV) ±0.8dB of setting (≤-37.2dBV)
Flatness (at 1kHz, 600Ω load)	±0.5dB (All range) ±0.2dB (20Hz~20kHz)
Distortion (at ≥10dBV, 600Ω load)	≤0.01%(-80dB) (All range) ≤0.00316%(-90dB) (20Hz~15kHz, 30kHzBW)

方形波出力 / Square wave signal output / 方形波输出

Frequency range	1Hz~100kHz (Pulse width ≥500ns)
Duty range	0~100% (Pulse width ≥500ns)
Setting resolution	1Hz (11.1ns step), 1mV (0.75mV step)
Output impedance	600Ω
Output range	0~12.286Vp-p
Offset range	-6.144~6.143V

AM/FM Signal generator specification

RF出力 / RF output / RF输出

Frequency range	100kHz~170MHz
Setting resolution	100Hz
Frequency accuracy	±2ppm (0.1°C~35°C)
Output range	-20~126dBμV (EMF)
Setting resolution	0.1dB
Output level accuracy	±1.5dB
Output impedance	75Ω
VSWR	1.3 or less
Harmonic spurious	≤-30dBc
Non harmonic spurious	≤-40dBc
Residual FM	≤-80dB (AF 1kHz, FM 75kHz)
Residual AM	≤-55dB (AF 1kHz, AM 30%)

振幅変調 / Amplitude modulation(AM) / 振幅调制

Modulation setting range	0~100% (≥123dBμV:50%max.)
Setting resolution	0.1%
Accuracy (AF:1kHz, Mod:≤80%, Output:≤120dBμV)	
0.4MHz~1.7MHz	±(setting×0.1+1)%
0.15MHz~170MHz	±(setting×0.1+2)%

周波数変調 / Frequency modulation(FM) / 频率调制

Deviation range	0.0kHz~135kHz
	In the case of 0.5 MHz or less of RF frequency (MONO) Maximum FM deviation = RF frequency x0.25
Setting resolution	0.1kHz
Accuracy	
10.7MHz±1MHz, 76~108MHz	±(setting×0.1+0.5)kHz
0.3MHz~170MHz	±(setting×0.1+1)kHz
Distortion	
10.7MHz±1MHz, 76~108MHz	0.05% or less
0.3MHz~170MHz	0.1% or less
Incidental AM	0.5% or less

FMステレオ変調 / FM stereo modulation / FM立体声调制

Modulation mode	MONO /L=R /L / R/ L=-R /OFF
Modulation setting range	0~150% (at 75kHz/100%)
Setting resolution	±1%
Stereo separation	
(AF:400~1kHz,100%Mod., 76~108MHz)	≥55dB
(AF:50~15kHz)	≥40dB
Pre-emphasis	25μs /50μs /75μs /OFF
Pilot signal level setting range	0~15%
Pilot setting resolution	0.1%
Int. modulation frequency	20Hz~15kHz
Frequency characteristic	≤±1dB (20Hz~15kHz, 1kHz ref)

変調信号 / Modulation signal /

Int. modulation frequency	FM: 10Hz~100kHz, AM: 10Hz~20kHz
Frequency accuracy	±0.1%
Ext. modulation frequency	FM: 10Hz~100kHz, AM: 10Hz~20kHz
Frequency characteristic	±1dB (1kHz ref)
Impedance	100kΩ
Input signal level	1Vp-p±2%

General specification

Communication facility	GP-IB, RS-232C
Ext. Control I/O	Fan-out 1(LS TTL level)
Supply voltage	AC90~250V 50/60Hz
Power consumption	Approx. 62VA
Dimension	W240×H180×D360(mm)*
Weight	Approx. 7.0kg

* Protruding parts not included.



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