

PRODUCT INTRODUCTION

MX882005A

PHS Measurement Software

ANRITSU CORPORATION

Copyright © 2003 by ANRITSU CORPORATION

The contents of this manual shall not be disclosed in any way or reproduced in any media without the express written permission of Anritsu Corporation.

MT8820A
Radio Communication Analyzer
MX882005A
PHS Measurement Software
Product Introduction

Ver. 2.0
October 2003

Product Marketing Dept.
Wireless Measurement Div.
Anritsu Corporation

Discover What's Possible™
MX882005A-E-I-1

Slide 1

Anritsu

Table of contents

- 1. Summary**
- 2. Main specification**
- 3. Comparison of functions with MT8801C**
- 4. Compatibility of remote commands with MT8801C**
- 5. Introduction merit**
- 6. MT8820A product configuration for PHS**

Discover What's Possible™
MX882005A-E-I-1

Slide 2

Anritsu

1. Summary

1.1 Background

Anritsu supports PHS (terminals and base stations) with MT8801C Radio Communication Analyzer. This MT8801C accounts for almost 100% share of PHS terminal production market in China and Taiwan as well as in Japan, adopted by numerous vendors as a de-facto standard. The MT8820A Radio Communication Analyzer(W-CDMA, GSM/GPRS, CDMA2000 1X and PDC are already supported), which is the successor to MT8801C, has been to release with new PHS measurement function. This presentation introduces the PHS measurement function of MT8820A in comparison with MT8801C.

2. Main specification

[MT8820A-02 TDMA Measurement Hardware, MX882005A PHS Measurement Software]

Classification	Meas. items(CS and PS standard)		MT8801C with MX880117A	MT8820A with MX882005A
Tx meas.	Freq./Mod. measurement	Carrier frequency	±(reference oscillator accuracy + 10Hz)	
		Mod. accuracy(≤12.5%)	±(2% of indicated value + 0.7%)	
		Origin offset	±0.5dB to signal level of -30dBc	
		Transmission rate(≤±5ppm)	±1ppm	
	Amplitude measurement	Output power (output accuracy: within +20%,-50%)	±10%(+10~+40dBm) after calibration by built-in PM	±0.5dB (-20~+40dBm) ±0.7dB (-30~-20dBm)
	Carrier-off power (≤80nW)	≥55dB(+10~+40dBm) ≥69dB(Wide Dynamic Range power meas.)	≥65dB(Input level ≥10dBm) ≥(Amp. meas. value [dBm]+70)dB (Wide Dynamic Range power meas.)	
	Adjacent CH power	600kHz offset(≤800nW) 900kHz offset(≤250nW)	≤-60dB ≤-65dB	
Rx meas.	Signal generator	Mod. accuracy	≤3% rms	
	Error rate measurement	Mod. data	PN9, PN15 and arbitrary 4-bit data repetitive patterns	
		Function	Bit error rate measurement	
Call proc. function		Measurement object	Rear-panel BER input connector	Rear-panel Call Proc. I/Q(Dsub)
		Call control	Location registration, Terminal call origination, Network call origination, Communication, Network disconnect, Terminal disconnect, Handover	

3. Comparison of functions with MT8801C

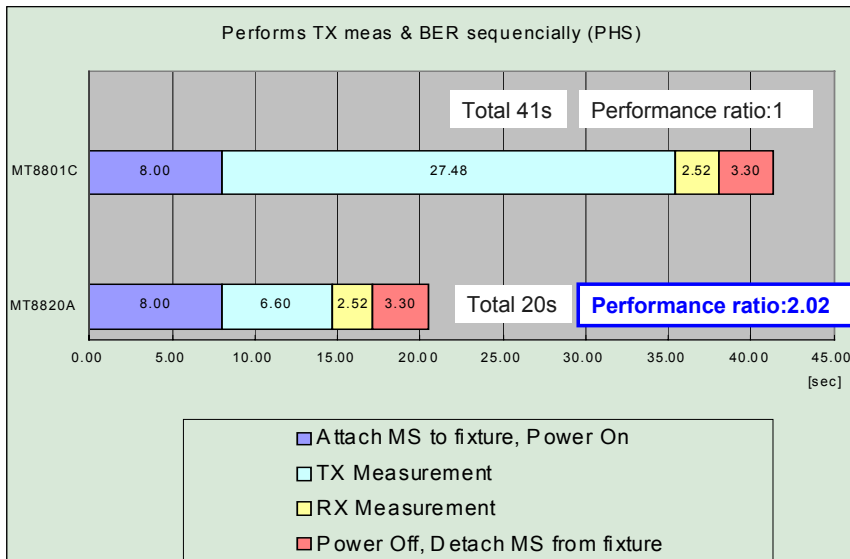
Classification		MT 8801C	MT 8820A
Tx Measurement	Wide Dynamic Range	√	√
	Power Measurement	√	√
	Modulation Analysis	√	√
	Bit Rate Measurement	√	√
	Occupied Bandwidth	√	√
	Adjacent Channel Power	√	√
Rx Measurement	Bit Error Rate	√	√
Judgment of Measurement Result	Limit Setting Window	√	—
	Limit Judgement	√	—
Waveform Plotting	Power Measurement	√	√
	Modulation Analysis	√	—
	Occupied Bandwidth	√	—
	Adjacent Channel Power	√	—
Connection Test	Call Processing Test	√	√
	Sequence Monitor	√	√
Spectrum Monitor	Spectrum Monitor Screen	√	—

4. Compatibility of remote commands with MT8801C

Classification		MT 8801C compatible	MT8820A compatible
Operation	Screen select command		√
	Window operation command		√
Calibration	Calibration start command		√
Measurement	Measurement command	√	
	Meas.result reference command	√	
Setting	Common parameter setting command	√	
	Call proc. parameter setting command	√	
	Tx meas. parameter setting command	√	
	Rx meas. parameter setting command	√	
	Meas. select parameter setting command		√
	Template setting command	√	
Call Control	Terminal report reference command	√	
	Call proc. state reference command	√	

5. Introduction merit -Comparison of PHS meas. time

Terminal production throughput is twice of MT8801C



Meas. parameter: (TX meas. Avg count: 10, Channel LMH x Level LMH -->total 9 points)

Discover What's Possible™
MX882005A-E-I-1

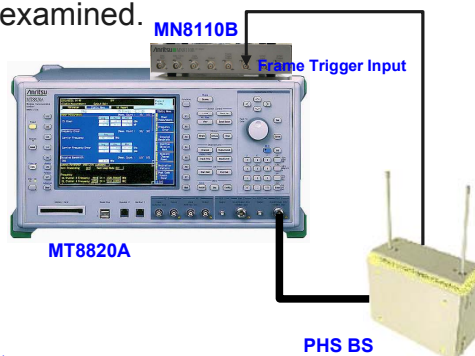
Slide 7

Anritsu

5. Introduction merit -PHS base station measurement

RF Tx/Rx measurement of the PHS base station can be examined.

RF Tx/Rx measurement of not only the PHS terminal but also the base station can be examined.



MN8110B I/O Adaptor

It converts Dsub 15pin connector on rear panel of MT8820A into BNC connector.
MN8110B isn't necessary because the production of the jig is easily possible.

Discover What's Possible™
MX882005A-E-I-1

Slide 8

Anritsu

5. Introduction merit -multi system support

Covering world major communication systems of 2G~3G

Communication systems currently supported by MT8820A

- W-CDMA (External packet data support)
- GSM/GPRS (External packet data support)
- CDMA2000 1X (External packet data support)
- PDC
- PHS

Furthermore, the MT8820A alone covers all 2G(PHS) through 3G.

6. MT8820A product configuration for PHS

APPLICATION	PHS Terminal testing	GSM Terminal testing	GSM Terminal testing (with audio)
MT8820A Main Frame	✓	✓	✓
MT8820A-02 TDMA Measurement Hardware	✓	✓	✓
MT8820A-11 Audio Board			✓
MX882001A GSM Measurement Software		✓	✓
MX882001A-01 GSM voice codec			✓
MX882005A PHS Measurement Software	✓		

✓ Option required

Anritsu

Specifications are subject to change without notice.

ANRITSU CORPORATION

1800 Onna, Atsugi-shi, Kanagawa, 243-8555 Japan
 Phone: +81-46-223-1111
 Fax: +81-46-296-1264

● U.S.A.

ANRITSU COMPANY

TX OFFICE SALES AND SERVICE

1155 East Collins Blvd., Richardson, TX 75081, U.S.A.
 Toll Free: 1-800-ANRITSU (267-4878)
 Phone: +1-972-644-1777
 Fax: +1-972-644-3416

● Canada

ANRITSU ELECTRONICS LTD.

700 Silver Seven Road, Suite 120, Kanata,
 ON K2V 1C3, Canada
 Phone: +1-613-591-2003
 Fax: +1-613-591-1006

● Brasil

ANRITSU ELETRÔNICA LTDA.

Praca Amadeu Amaral, 27 - 1 andar
 01327-010 - Paraiso, Sao Paulo, Brazil
 Phone: +55-11-3283-2511
 Fax: +55-11-3886940

● U.K.

ANRITSU LTD.

200 Capability Green, Luton, Bedfordshire LU1 3LU, U.K.
 Phone: +44-1582-433280
 Fax: +44-1582-731303

● Germany

ANRITSU GmbH

Grafenberger Allee 54-56, 40237 Düsseldorf, Germany
 Phone: +49-211-96855-0
 Fax: +49-211-96855-55

● France

ANRITSU S.A.

9, Avenue du Québec Z.A. de Courtabœuf 91951 Les
 Ulis Cedex, France
 Phone: +33-1-60-92-15-50
 Fax: +33-1-64-46-10-65

● Italy

ANRITSU S.p.A.

Via Elio Vittorini, 129, 00144 Roma EUR, Italy
 Phone: +39-06-509-9711
 Fax: +39-06-502-2425

● Sweden

ANRITSU AB

Fagelviksvagen 9E S145 84 Stockholm, Sweden
 Phone: +46-853470700
 Fax: +46-853470730

● Singapore

ANRITSU PTE LTD.

10, Hoe Chiang Road #07-01/02, Keppel Towers,
 Singapore 089315
 Phone: +65-6282-2400
 Fax: +65-6282-2533

● Hong Kong

ANRITSU COMPANY LTD.

Suite 923, 9/F., Chinachem Golden Plaza, 77 Mody
 Road, Tsimshatsui East, Kowloon, Hong Kong, China
 Phone: +852-2301-4980
 Fax: +852-2301-3545

● P. R. China

ANRITSU COMPANY LTD.

Beijing Representative Office

Room 1515, Beijing Fortune Building, No. 5 North
 Road, the East 3rd Ring Road, Chao-Yang District
 Beijing 100004, P.R. China
 Phone: +86-10-6590-9230

● Korea

ANRITSU CORPORATION

8F Hyun Juk Bldg. 832-41, Yeoksam-dong,
 Kangnam-ku, Seoul, 135-080, Korea
 Phone: +82-2-553-6603
 Fax: +82-2-553-6604

● Australia

ANRITSU PTY LTD.

Unit 3/170 Forster Road Mt. Waverley, Victoria, 3149,
 Australia
 Phone: +61-3-9558-8177
 Fax: +61-3-9558-8255

● Taiwan

ANRITSU COMPANY INC.

7F, No. 316, Sec. 1, NeiHu Rd., Taipei, Taiwan
 Phone: +886-2-8751-1816
 Fax: +886-2-8751-1817

030930