

MX882004A

PDC Measurement Software

(For MT8820A Radio Communication Analyzer)



Supports PDC Mobile Communication Systems

MX882004A PDC Measurement Software

Solution for PDC Mobile Terminal Production Lines

The MX882004A PDC measurement software supports transmit/receive measurements of mobile terminals conforming to the PDC system, the most common system in Japan. By installing the MX882004A PDC measurement software in the MT8820A mainframe, one unit can evaluate major transmission/reception characteristics of common digital mobile terminals used in Japan.

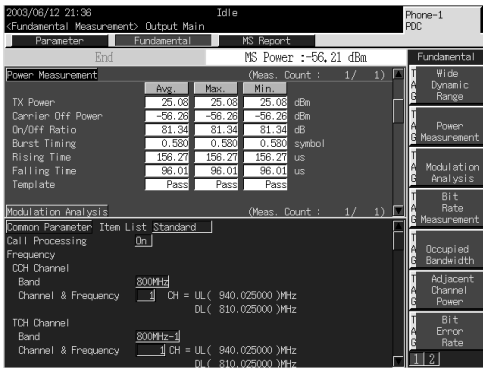
Advanced DSP & parallel measuring technologies greatly reduce manufacturing and test time for wireless equipments. In addition, multiple measurement items can be selected freely for batch processing while the number of repetitive measurements can be set for each individual measurement. The selected measurement items can be batch-measured with just one touch, thus a pass/fail evaluation on major test items such as transmission frequency, modulation accuracy, transmission power, adjacent channel leakage power & BER can be conducted simply and quickly. It can be built into automated production lines and can create an automated on-site maintenance test system as the GPIB interface is equipped as standard.



Transmission Measurement

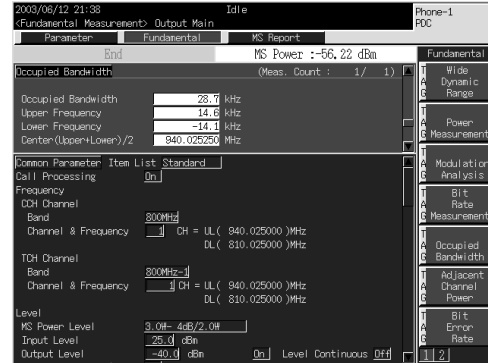
Transmission Power

Transmission power for a PDC mobile terminal is measured. Maximum, average and minimum values of measured results are indicated by setting the number of repetitive measurements to 2 or above, so the variations in terminal characteristics can be assessed. This repetitive measurement function is also equipped for other measurements.



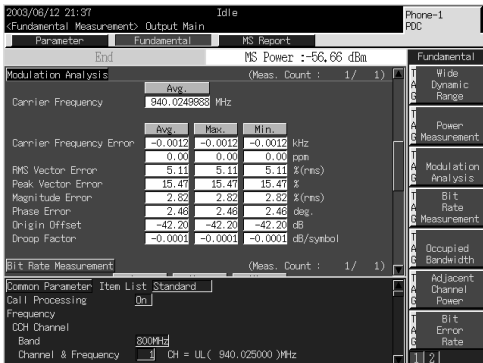
Occupied Frequency Bandwidth

Occupied frequency bandwidth of a PDC terminal is measured. The bandwidth ratio for total power can be changed within the range of 80.0% to 99.9%. Supports measurements in the high-speed mode.



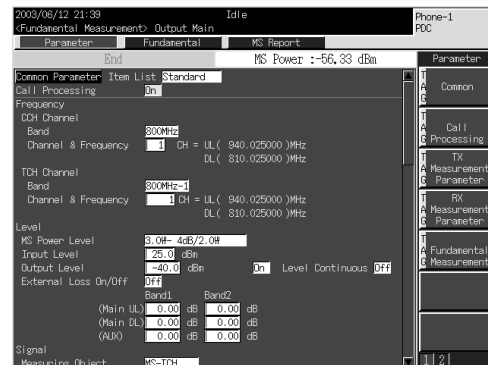
Modulation Accuracy

Frequency, frequency errors (in kHz & ppm), modulation accuracy, phase error, amplitude error and origin offset of a PDC terminal are measured simultaneously and can be displayed.



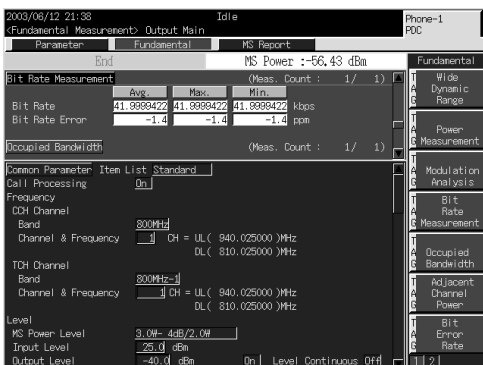
Adjacent Channel Power

Adjacent channel power of a PDC terminal is measured. Measures power spectrum at 4 frequency points, -100 kHz, -50 kHz, 50 kHz and 100 kHz, offset from the carrier frequency. Advanced DSP technology and parallel processing of power spectrum with other measurements enable high-speed measurement.



Transmission Speed

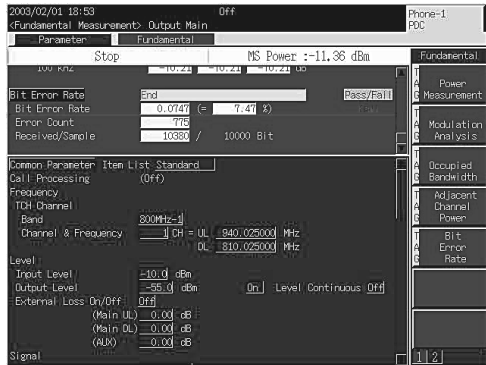
Transmission speed and transmission speed error of a PDC terminal can be measured.



Reception Measurement

Error Rate Test

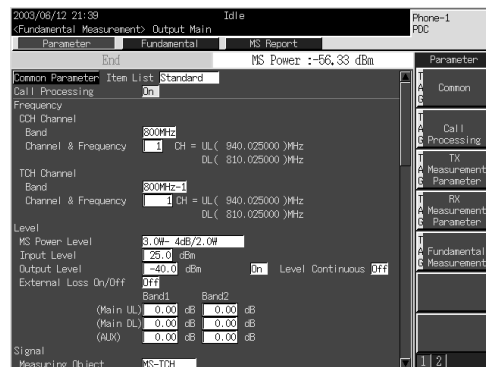
By controlling a PDC mobile terminal, up-link RF signals are demodulated to measure the bit error rate. This measurement can be performed in parallel with transmission measurement.



Call Processing Function

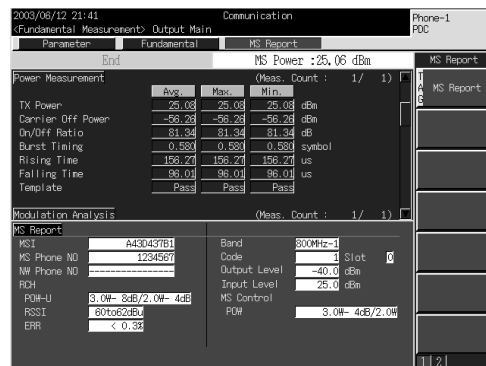
Connection Test

The call processing function enables performance of various connection tests including location registration, terminal call origination, network call origination, terminal disconnect and network disconnect.



Mobile Terminal Report Monitor

PDC terminal status can be displayed based on the measurement report that the terminal sends back to the tester. "RCH RSSI" monitoring shows the down-link RF signal level received by the terminal.



High-speed, User-friendly GPIB Controls

Eliminating Dependence on Measurement Screen

Readout and changes of settings can be performed freely without having to change screens, even when no items that exist on screen are currently being displayed. This controls loss time effects, critical to screen plotting

Batch Measurement Results Readout Command

All results for batch measurements can be read out with one "ALLMEAS?" command. In addition, the desired measurement results can be selected for readout by specifying measurement targets such as "ALLMEAS? MOD" (Modulation Analysis). Decreases in the number of GPIB commands lower the load for the MT8820A and controller PC while enhancing measurement throughput. Since the step size of a control program is reduced, it's effective in creating a control program with high maintainability that's easy to view.

Specifications

• MT8820A-02 TDMA Measurement Hardware, MX882004A PDC Measurement Software

Frequency/Modulation measurement	<p>Frequency: 300 to 2200 MHz Input level range: -30 to +40 dBm (measurement object: TCH), -30 to +35 dBm (measurement object: UPCH continuous wave) Measurement items: TCH, UPCH, continuous wave Carrier frequency accuracy: \pm (reference oscillator accuracy + 1 Hz) Modulation accuracy: \pm (2 % of indicated value + 0.7 %) rms Origin offset accuracy: \pm0.5 dB (relative to signal of -30 dBc) Transmission rate: \pm1 ppm (measurement range: 42 kbps \pm100 ppm)</p>
Amplitude measurement	<p>Frequency range: 300 to 2200 MHz Input level range: -30 to +40 dBm (measurement object: TCH), -30 to +35 dBm (measurement object: UPCH continuous wave) Measurement items: TCH, UPCH, continuous wave Measurement accuracy: \pm0.5 dB (-20 to +40 dBm), \pm0.7 dB (-30 to -20 dBm) *After calibration Linearity: \pm0.2 dB (0 to -40 dB, \geq-30 dBm) Power measurement range at carrier off: \geq65 dB (input level: \geq-10 dBm), \geq (Amplitude measurement value [dBm] + 80) dB (wide dynamic range power measurement)</p>
Occupied bandwidth measurement	<p>Frequency range: 300 to 2200 MHz Input level range: -10 to +40 dBm (measurement object: TCH), -10 to +35 dBm (measurement object: UPCH continuous wave) Measurement items: TCH, UPCH, continuous wave</p>
Adjacent channel power measurement	<p>Frequency range: 300 to 2200 MHz Input level range: -10 to +40 dBm (measurement object: TCH), -10 to +35 dBm (measurement object: UPCH continuous wave) Measurement items: TCH, UPCH, continuous wave Measurement range: \leq-60 dB (50 kHz offset), \leq-65 dB (100 kHz offset)</p>
RF signal generator	<p>Output frequency: 300 to 2200 MHz, 1 Hz step Modulation accuracy: \leq3 %rms Modulation data Continuous wave output: PN9, PN15 and repetition of arbitrary 4-bit data Burst wave output: PN9, PN15</p>
Error rate measurement	<p>Function: Bit error rate measurement Measurement items: Serial data inputted from the Call Proc. I/O terminal of a back panel</p>
Call processing	<p>Call control: Location registration, call origination, call termination, communication, network-side termination, phone-side termination Phone control: Output level, time slot, time alignment</p>
Channel coding	Full rate, Half rate
Frequency band	800 MHz-1, 800 MHz-2, 800 MHz-3, 1.5 GHz

Ordering Information

Please specify the model/order number, name and quantity when ordering.

Model/Order No.	Name
MT8820A	Main frame Radio Communication Analyzer
	Standard accessories
	Power cord, 2.6 m : 1 pc
HB28B064C8H	CF card (64 MB) : 1 pc
CA68ADP	PC card adapter : 1 pc
W1940AE	MT8820A operation manual (CD-ROM) : 1 copy
	Options
MT8820A-01	W-CDMA measurement hardware
MT8820A-02	TDMA measurement hardware
MT8820A-03	CDMA2000 measurement hardware
MT8820A-04	1xEV-DO measurement hardware
MT8820A-11	Audio board
MT8820A-12	Parallel phone measurement hardware
MT8820A-21	W-CDMA measurement hardware retrofit
MT8820A-22	TDMA measurement hardware retrofit
MT8820A-23	CDMA2000 measurement hardware retrofit
MT8820A-24	1xEV-DO measurement hardware retrofit
MT8820A-31	Audio board retrofit
MT8820A-32	Parallel phone measurement hardware retrofit
	Softwares
MX882000B	W-CDMA Measurement Software (requires MT8820A-01 and MX88205xA)
MX882000B-01	W-CDMA voice codec (requires MT8820A-11 and MX882000B)
MX882001A	GSM Measurement Software (requires MT8820A-02)
MX882001A-01	GSM voice codec (requires MT8820A-11 and MX882001A)
MX882001A-02	GSM external packet data (requires MX882001A)
MX882001A-11	EGPRS Measurement Software (requires MX882001A)
MX882002A	CDMA2000 Measurement Software (requires MT8820A-03)
MX882002A-02	CDMA2000 external packet data (requires MX882002A)
MX882003A	1xEV-DO measurement Software (requires MT8820A-03, MT8820A-04 and MX882002A)
MX882003A-02	1xEV-DO external packet data (requires MX882003A)
MX882004A	PDC Measurement Software (requires MT8820A-02)
MX882005A	PHS Measurement Software (requires MT8820A-02)
MX882010A	Parallel Phone Measurement Software*1 [requires MT8820A-12, the two same measurement hardware (2 board/set) and one measurement software]
MX882022A	CDMA2000 Wireless Application Test Software (requires MT8820A-03)
MX882050A	W-CDMA Call Processing Software*2 (requires MX882000B)
MX882051A	W-CDMA Call Processing Software*2 (requires MX882000B)

Model/Order No.	Name
MX882051A-02	W-CDMA external packet data*2 (requires MX882051A)
MX882051A-03	W-CDMA video phone test*2 (requires MX882051A)
MX882071A	W-CDMA Ciphering Software*2 (requires MX882051A)
W2161AE	MX882000B operation manual*3 (attached to MX882000B)
W2026AE	MX882001A operation manual*3 (attached to MX882001A)
W2104AE	MX882002A operation manual*3 (attached to MX882002A)
W2201AE	MX882003A operation manual*3 (attached to MX882003A)
W2159AE	MX882004A operation manual*3 (attached to MX882004A)
W2228AE	MX882005A operation manual*3 (attached to MX882005A)
W2247AE	MX882022A operation manual*3 (attached to MX882022A)
W2220AE	MX88205xA operation manual*3 (attached to MX88205xA)
W2230AE	MX88207xA operation manual*3 (attached to MX88207xA)
	Warranty
MT8820A-90	Extended three year warranty service
MT8820A-91	Extended five year warranty service
	Application parts
P0019	TEST USIM001
A0012	Handset
J0576B	Coaxial cord (N-P · 5D-2W · N-P), 1 m
J0576D	Coaxial cord (N-P · 5D-2W · N-P), 2 m
J0127A	Coaxial cord (BNC-P · RG58A/U · BNC-P), 1 m
J0127C	Coaxial cord (BNC-P · RG58A/U · BNC-P), 0.5 m
J0007	GPIB cable, 1 m
J0008	GPIB cable, 2 m
MN8110B	I/O Adapter (for call processing I/O)
B0332	Joint plate (4 pcs/set)
B0333G	Rack mount kit
B0499	Carrying case (hard type, with protective cover and casters)
B0499B	Carrying case (hard type, with protective cover, without casters)
W1943AE	MT8820A operation manual (booklet)
W2162AE	MX882000B operation manual (booklet)
W2027AE	MX882001A operation manual (booklet)
W2100AE	MX882002A operation manual panel operation (booklet)
W2101AE	MX882002A operation manual remote control (booklet)
W2202AE	MX882003A operation manual panel operation (booklet)
W2203AE	MX882003A operation manual remote control (booklet)
W2160AE	MX882004A operation manual (booklet)
W2229AE	MX882005A operation manual (booklet)
W2245AE	MX882022A operation manual panel operation (booklet)
W2246AE	MX882022A operation manual remote control (booklet)
W2221AE	MX88205xA operation manual (booklet)
W2231AE	MX88207xA operation manual (booklet)

*1: Max two types of measurement hardware (MT8820A-01, MT8820A-02) are selectable for parallel phone measurement.

*2: For W-CDMA terminal connectivity, contact your Anritsu sales representative.

*3: Supplied by CD-ROM



Specifications are subject to change without notice.

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