ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Anritsu MP1580A* at our website: ***Click HERE***

Anritsu

MP1580A

Portable 2.5G/10G Analyzer



For 2.5G/10G Jitter/Wander Measurements

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

The MP1580A is a unique and powerful solution for analyzing jitter at the standard OC-48/192 or STM-16/64 bit rates. It can measure jitter of 2.5G/10G electrical interfaces (clock signal) with a simple operation. In addition, when used in combination with the MP1570A SONET/SDH/PDH/ATM Analyzer, evaluation of jitter characteristics in digital transmission lines, systems and devices, such as — jitter tolerance, jitter transfer, jitter generation, etc., can be performed easily.

Complies with the Latest ITU-T O.172 and Bellcore GR-1377 Standards

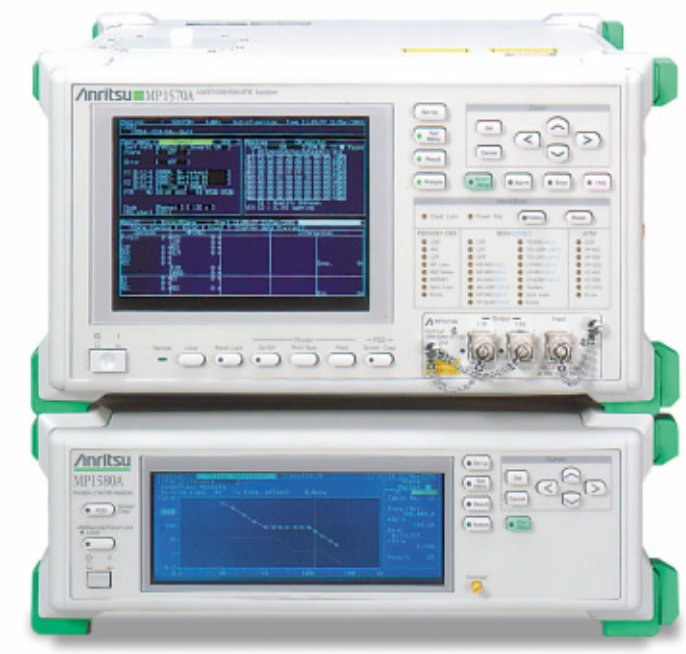
The MP1580A conforms to both the OC-192/STM-64 jitter measurement standards and supports required jitter modulation amplitude of 4000 UIp-p and 80 MHz jitter bandwidth.

Supports 10 GHz Wander Measurement According to the Latest ITU-T G.813 Standard (Option)

The MP1580A can generate and measure various types of wander. It can generate wander in the frequency range of 10 µHz to 10 Hz at 400,000 UIp-p max. In addition, MTIE/TDEV can be measured in real-time using an external PC and optional application software (MX150002A).

Single Cabinet Support for Both 2.5G and 10G Jitter/Wander Measurements

Just one MP1580A is required for 2.5G and 10G jitter generation and analysis. When combined with the MP1570A and MU150000A, jitter can be added to SONET/SDH signals and measured.



Differences from Existing Instrument (MP1777A)

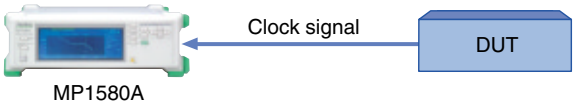
Anritsu launched the MP1777A 10 GHz Jitter Analyzer in February of 1998, as a jitter measurement solution for OC-192/STM-64 (9953M). The new MP1580A Portable 2.5G/10G Jitter Analyzer is providing more convenience in measurement without the need for ancillary equipment (network analyzer, external E/O-O/E converter). Anritsu has also developed a Wide Band O/E Converter (MU150017A/B) for the MP1570A to support jitter measurement of 80 MHz at 9953.28 Mbit/s as required by ITU-T standard in conjunction with the MP1580A. Although it uses two cabinets, the compact size makes the system ideal for R&D, manufacturing, installation and maintenance. In addition, the MP1570A can be controlled from the MP1580A for performing automatic measurements, such as Jitter Tolerance and Jitter Transfer.

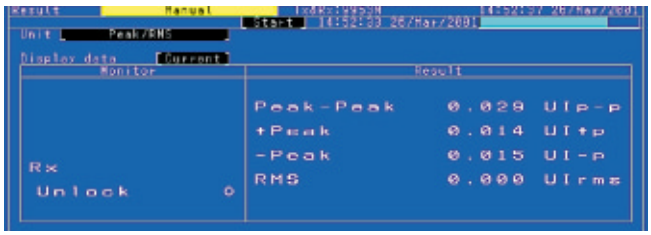
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Application

Output Jitter Measurement

The MP1580A can easily measure the jitter clock signal (electrical interface only) by just inputting the output clock of DUT directly.

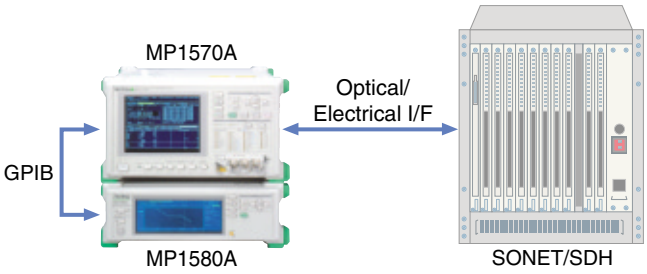


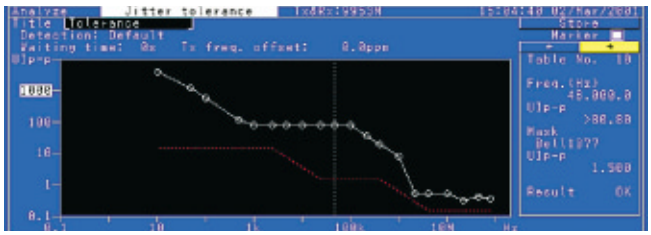


Optical signals can be measured easily by combining the MP1580A with the MP1570A, MU150000A, MU150001A and MU150017A/B.

Jitter Tolerance Measurement

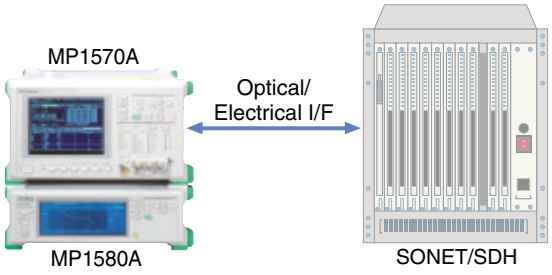
When the MP1580A is used with the MP1570A (send/receive jittered clock), jitter tolerance tests can be performed on OC-192/STM-64 and OC-48/STM-16 signals of electrical and optical interfaces.

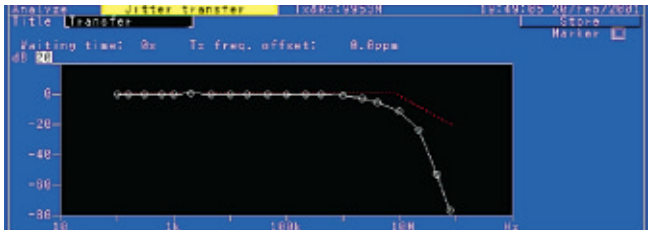




Jitter Transfer Measurement

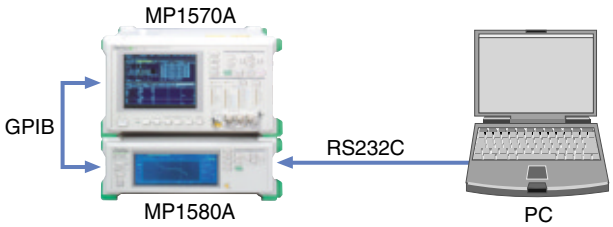
When the MP1580A is used with the MP1570A (send/receive jittered clock), jitter transfer tests can be performed on OC-192/ STM-64 and OC-48/STM-16 signals of electrical and optical interfaces.

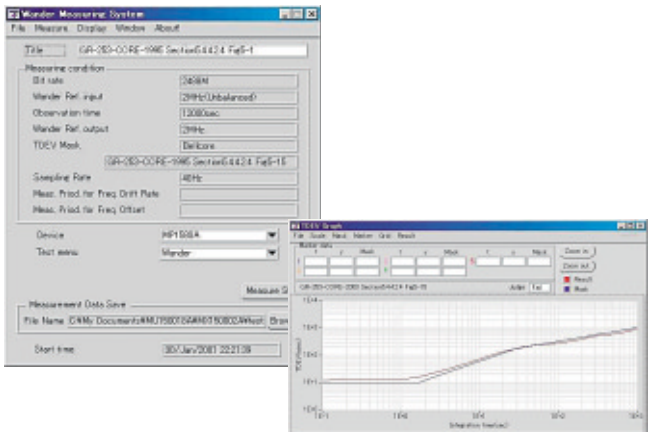




Wander Generation and Measurement

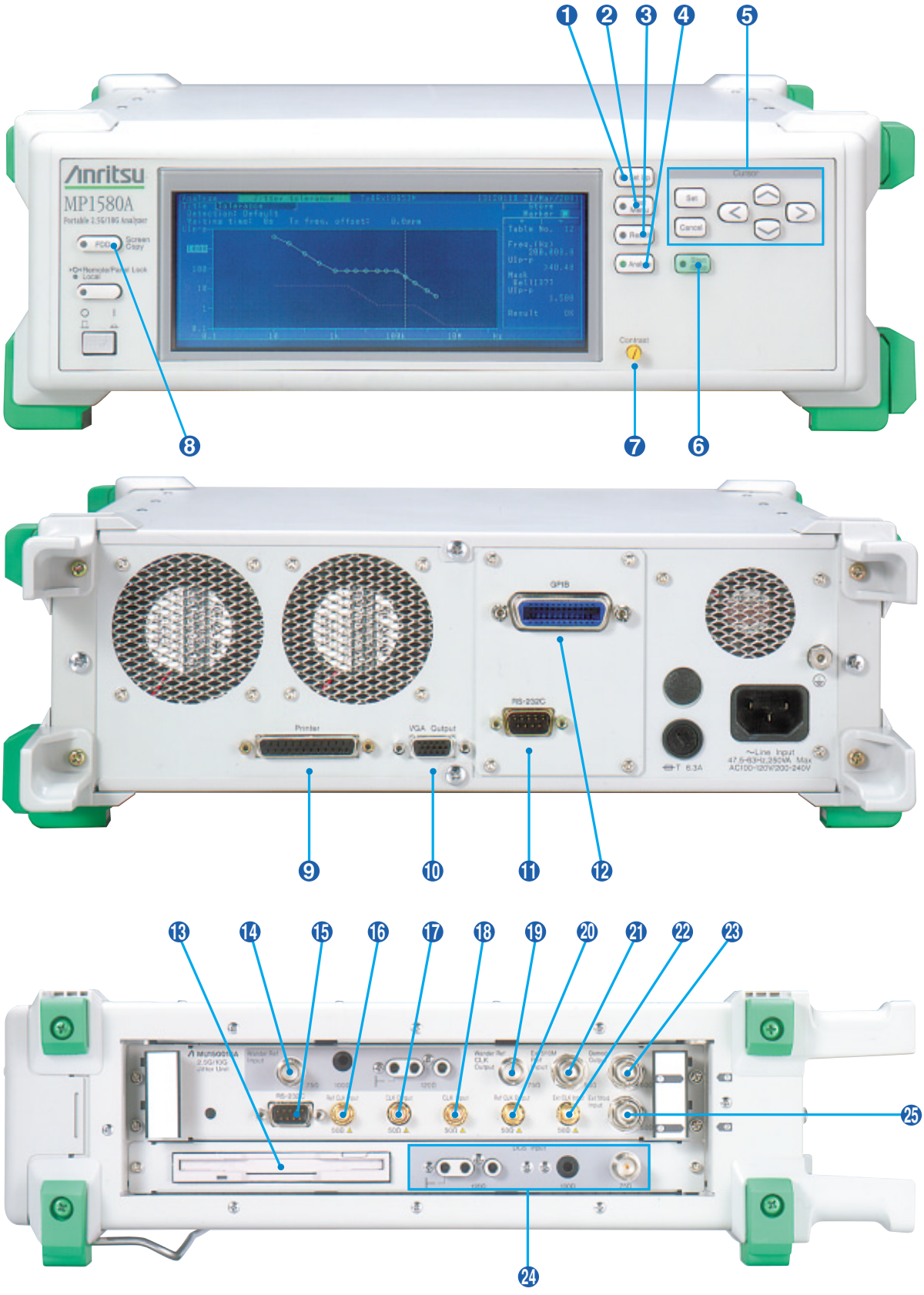
The MP1580A can generate and measure of wander conforming to ITU-T O.172 and also generation of TDEV conforming to ITU-T G.813. It also can measure TIE (Time Interval Error) by itself and measure MTIE and TDEV by connection of an external PC in which MX150002A is installed.





Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

MP1580A Portable 2.5G/10G Analyzer



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

❶ **Setup:** Displays setup screen
❷ **Test Menu:** Displays main test menu screen
❸ **Result:** Displays main measurement results screen
❹ **Analyze:** Displays main analysis screen
❺ **Cursor**
Set: Set data and opens windows for numeric and character input
Cancel: Cancels data setting and closes windows for numeric and character input
∧ v< >: Move cursor or windows cursor on screen. At the numeric input windows, the ∧ and v keys increase and decrease the numeric value, respectively
❻ **Start/Stop:** Starts and stops measurement
❼ **Contrast:** Controls LCD contrast
❽ **FDD:** Outputs screen in bitmap format to floppy disk

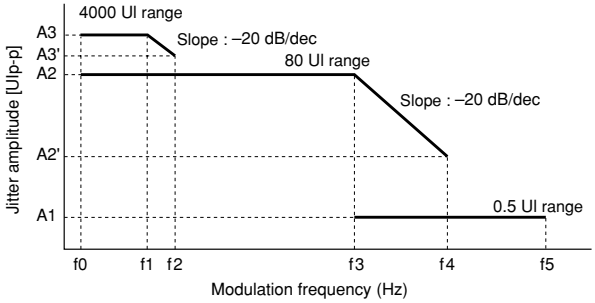
❾ **Printer:** Connector for external printer
❿ **VGA Output:** Connector for external monitor (Option)
⓫ **RS-232C:** For external control (Option)
⓬ **GPIB:** For MP1570A and external control (Option)

⓭ Floppy disk drive
⓮ **Wander Ref. Input:** Reference signal input for wander measurement (Option)
⓯ **RS-232C:** Wander measurement data output (Option)
⓰ **Ref. CLK Input:** External reference signal input for jitter measurement (155.52 MHz)
⓱ **CLK Output:** Clock signal output (2488.32/9953.28 MHz)
⓲ **CLK Input:** Clock signal input (2488.32/9953.28 MHz)
⓳ **Wander Ref. CLK Output:** Reference signal output for wander measurement
⓴ **Ref. CLK Output:** Reference signal output
㉑ **Ext 5/10M Ref. Input:** Reference signal input (5/10 MHz)
㉒ **Ext CLK Input:** External reference signal input for jitter generation (155.52 MHz)
㉓ **Demod Output:** Jitter demodulation signal output
㉔ **DCS Input:** Input for synchronization transmission signal with external signal
㉕ **Ext Mod Input:** External modulation signal input

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

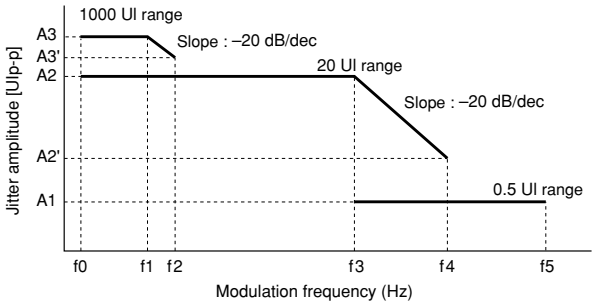
Jitter generation

Frequency
Range: 9953.28, 2488.32 MHz
Offset range: ±100 ppm
Resolution: 0.1 ppm
Accuracy: ±0.1 ppm (calibrate after 60 min warm-up, 23 ±5˚C)
Generation function: Clock signal output, data signal output (with MP1570A), jitter on, wander on/off
Modulation source: Internal (sine wave), external (for jitter generation function only)
Modulation frequency accuracy: fm ±100 ppm (0.1 Hz to 80 MHz)
Jitter generation: Conform to ITU-T O.172



Bit rate (bit/s)	f0 (Hz)	f1 (Hz)	f2 (Hz)	f3 (kHz)	f4 (MHz)	f5 (MHz)	A1 (UIp-p)	A2' (UIp-p)	A2 (UIp-p)	A3' (UIp-p)	A3 (UIp-p)
9953.28M	0.1	15	600	100	2	80	0.5	4	80	100	4000

0.5 UI range: 0.000 to 0.505 UIp-p (0.001 UIp-p steps)
80 UI range: 0.00 to 80.80 UIp-p (0.05 UIp-p steps)
4000 UI range: 0 to 4040 UIp-p (2 UIp-p steps)



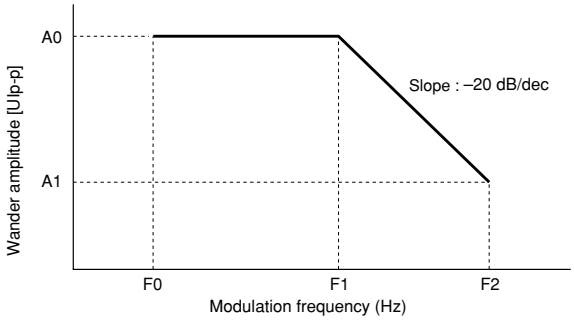
Bit rate (bit/s)	f0 (Hz)	f1 (Hz)	f2 (Hz)	f3 (kHz)	f4 (MHz)	f5 (MHz)	A1 (UIp-p)	A2' (UIp-p)	A2 (UIp-p)	A3' (UIp-p)	A3 (UIp-p)
2488.32M	0.1	15	600	100	2	20	0.5	1	20	25	1000

0.5 UI range: 0.000 to 0.505 UIp-p (0.001 UIp-p steps)
20 UI range: 0.00 to 20.20 UIp-p (0.01 UIp-p steps)
1000 UI range: 0 to 1010 UIp-p (1 UIp-p steps)

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Wander generation

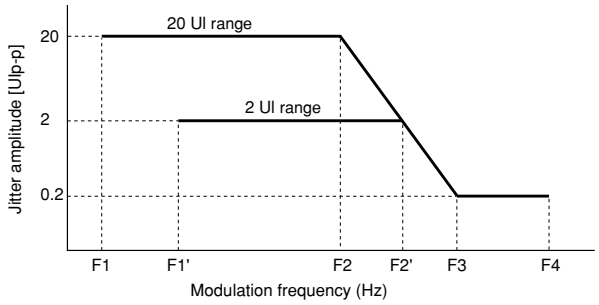
Wander generation: 10 µHz to 10 Hz, 0 to 400,000 UIp-p (1 UIp-p steps), conform to ITU-T O.172



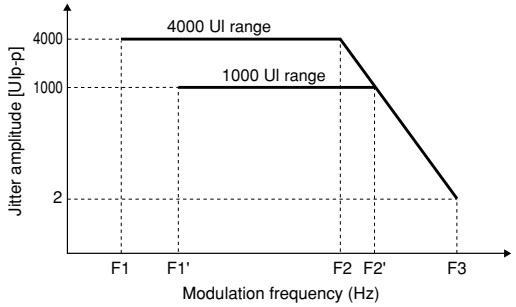
Bit rate (bit/s)	F0 (µHz)	F1 (mHz)	F2 (Hz)	A0 (UIp-p)	A1 (UIp-p)	Steps (UIp-p)
2488.32M	10	400	10	400,000	16,000	1
9953.28M	10	400	10	400,000	16,000	1

Jitter measurement

Measurement functions: UIp-p, UI + peak, UI – peak, UIrms, hit count, hit second, %F second, peak jitter
Measurement mode: Repeat, single, manual
Display: Current, last
Measurement interval: 1 to 99 s, 1 to 99 min, 1 to 99 h, 1 to 99 day
Jitter measurement: Conform to ITU-T O.172



Bit rate (bit/s)	Range (UI)	F1 (Hz)	F1' (Hz)	F2 (kHz)	F2' (kHz)	F3 (MHz)	F4 (MHz)
2488.32M	2	—	100	—	100	1	20
	20	10	—	10	—	1	20
9953.28M	2	—	100	—	400	4	80
	20	10	—	40	—	4	80



Bit rate (bit/s)	Range (UI)	F1 (Hz)	F1' (Hz)	F2 (Hz)	F2' (Hz)	F3 (kHz)
2488.32M	1000	—	1	—	12.1	5
9953.28M	4000	1	—	12.1	—	20

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

<table>
<tr><td>Jitter measurement</td><td>
UIp-p measurement
2 UI range: 0.000 to 2.020 UIp-p (0.001 UIp-p steps)
20 UI range: 0.00 to 20.20 UIp-p (0.01 UIp-p steps)
1000 UI range: 0 to 1010 UIp-p (1 UIp-p steps, 2488.32 Mbit/s only)
4000 UI range: 0 to 4040 UIp-p (2 UIp-p steps, 9953.28 Mbit/s only)
UI rms measurement
2 UI range: 0.000 to 0.714 UIrms (0.001 UIrms steps)
20 UI range: 0.00 to 7.17 UIrms (0.01 UIrms steps)
Filters:
Confirming to ITU-T O.172 and Bellcore GR1377
LP, HP0 + LP, HP1 + LP, HP1' + LP, HP2 + LP, HP + LP, HP' + LP, LP' (1000/4000 UI range only),
HP0 + LP' (1000/4000 UI range only)
<table>
<tr><th>Bit rate (bit/s)</th><th>HP0 (Hz)</th><th>HP1 (kHz)</th><th>HP1' (kHz)</th><th>HP2 (MHz)</th><th>HP' (kHz)</th><th>HP (kHz)</th><th>LP (MHz)</th><th>LP' (kHz)</th></tr>
<tr><td>2488.32M</td><td>10</td><td>5</td><td>—</td><td>1</td><td>—</td><td>12</td><td>20</td><td>5</td></tr>
<tr><td>9953.28M</td><td>10</td><td>10</td><td>20</td><td>4</td><td>50</td><td>12</td><td>80</td><td>20</td></tr>
</table>
</td></tr>
<tr><td>Reference wander generation (Option 03)</td><td>
Off: Able to set non-modulated status*
TDEV mask:
The 37 types of TDEV masks that are regulated by ITU-T, ETSI, ANSI, and Bellcore standards are available as default.
It is possible to add the wander modulation on the user specified TDEV mask.
Transient: It is possible to change the A (1 – e $^{-63.7t}$) phase by the timing of the start.
Signal off: It is possible to disconnect the standard signal.
Wander tolerance (TDEV) measurement: Evaluation by the various TDEV mask generations
</td></tr>
<tr><td>Wander measurement (Option 02)</td><td>
Conform to ITU-T O.172
Reference input: 2.048M (HDB3, clock), 1.544M (AMI/B8ZS, clock), 64k + 8 kHz, 5 MHz, 10 MHz
Sampling frequency: 40 Hz, 1 Hz, 0.1 Hz (select by MX150002A)
Measurement range
P-P: 0.0 to 2E10 ns, +P/–P: 0.0 to 1E10 ns, TIE: 0.0 to ±1E10 ns
Measurement time: 10 to 1 x 10^8 s (max. 120,000 s; MP1570A only)
Wander application (requires MX150002A Wander Application Software)
TIE: Max. 1 x 10^8 s, MTIE: Max. 1 x 10^8 s, TDEV: Max. 1 x 10^6 s
Frequency offset: Measurement conforms to ANSI TI.105.09
Frequency drift rate: Measurement conforms to ANSI TI.105.09
MRTIE: The evaluation separated from the wander by a frequency offset
Wander tolerance (TDEV) measurement: Evaluation by the various TDEV mask generations
</td></tr>
<tr><td>Other measurement</td><td>Jitter tolerance (with MP1570A), jitter sweep, frequency sweep, wander sweep, peak jitter, jitter transfer, frequency measurement</td></tr>
<tr><td>Dimensions and mass</td><td>320 (W) x 100 (H) x 350 (D) mm, ≤10 kg (with MU150018A)</td></tr>
<tr><td>Temperature range</td><td>0˚ to +40˚C (operating), –20˚ to +60˚C (storage)</td></tr>
</table>

*: Only non-modulated status can be set without this option.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Ordering Information

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

Model/Order No.	Name		Remarks
	Main frame		
MP1580A	Portable 2.5G/10G Analyzer		
	Standard accessories		
	AC power cord:	1 pc	
F0093A	Fuse, 6.3 A:	1 pc	
B0489	Front cover:	1 pc	
W1889AE	MP1580A operation manual (Vol 1 Jitter/wander):	1 copy	
W1890AE	MP1580A operation manual (Vol 2 Remote control):	1 copy	
MX150002A	Wander Measurement Application Software (MTIE/TDEV):	1 pc	Supplied with MU150018A-02
W1892AE	MX150002A operation manual (wander application):	1 copy	Supplied with MX150002A
	Plug-in unit		
MP150018A	2.5G/10G Jitter Unit		
	Options		
MP1580A-01	RS-232C		
MP1580A-02	GPIB		
MP1580A-04	VGA		
MU150018A-02	Wander measurement		
MU150018A-03	Wander reference output phase modulation		
	Peripherals		
MP1570A	SONET/SDH/PDH/ATM Analyzer		
MP1570A-02	GPIB		Requires to combine with MP1580A
MP1570A-10*	SDH		
MP1570A-11*	SONET		
MU150000A	2.5G/10G Unit		Electrical for MP1570A
MU150001A	Optical 10G Tx (1.55) Unit		2 km, for MP1570A
MU150001B	Optical 10G Tx (1.55) Unit		40 km, for MP1570A
MU150001A/B-01	2.5G (1.31)		Option for MP1570A
MU150001A/B-02	2.5G (1.55)		Option for MP1570A
MU150001A/B-03	2.5G (1.31/1.55)		Option for MP1570A
MU150017A	Optical 10G Rx (Wide) Unit		For MP1570A
MU150017B	Optical 2.5G/10G Rx (Wide) Unit		For MP1570A
MP9677B	E/O, O/E Converter		
MU967701A	Clock Recovery Unit (9953.28 MHz)		For MP9677B
MP35A	Matching Transformer (BNC-J/Siemence, C42334-A282)		75/120 Ω
	Optical accessories		
J0661A	RS232C cable, 2 m		Cross cable with D-sub 9 pin connector at both ends
J0006	GPIB cable, 0.5 m		
J0007	GPIB cable, 1 m		
J0008	GPIB cable, 2 m		
J1074	Semirigid cable Tx		For connection to MP1570A
J1075	Semirigid cable Rx		For connection to MP1570A
J0696A	Coaxial cord (AA-165-500), 0.5 m		
J0696C	Coaxial cord (AA-165-1000), 1 m		
J0900E	Coaxial cord (AA-165-1500), 1.5 m		
J0162A	Balanced cord (Siemence 3P･Siemence 3P) 1 m		
J0162C	Balanced cord (Siemence 3P･Siemence 3P), 2 m		
J0845A	Balanced cord, (Bantam 3P･Bantam 3P), 6 ft		
J0775D	Coaxial cord (BNC-P620･3C-2WS･BNC-P620, 75 Ω), 2 m		
J0776D	Coaxial cord (BNC-P-3W･3D-2W･BNC-P-3W, 50 Ω), 2 m		
B0490	Joint plate		To mount MP1580A and MP1570A in a stack
B0491	Soft case		
B0492	Hard carrying case		

*: Must specify SDH (Option 10) or SONET (Option 11) when ordering depends on your systems. The option price is included in the MP1570A. These two options can be installed simultaneously. But in this case, one option is charged.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Anritsu

Specifications are subject to change without notice.

ANRITSU CORPORATION
MEASUREMENT SOLUTIONS
5-10-27, Minamiazabu, Minato-ku, Tokyo 106-8570, Japan
Phone: +81-3-3446-1111
Telex: J34372
Fax: +81-3-3442-0235

● **U.S.A.**
ANRITSU COMPANY
North American Region Headquarters
1155 East Collins Blvd., Richardson, Tx 75081, U.S.A.
Toll Free: 1-800-ANRITSU (267-4878)
Phone: +1-972-644-1777
Fax: +1-972-671-1877

● **Canada**
ANRITSU ELECTRONICS LTD.
Unit 102, 215 Stafford Road West
Nepean, Ontario K2H 9C1, Canada
Phone: +1-613-828-4090
Fax: +1-613-828-5400

● **Brasil**
ANRITSU ELETRÔNICA LTDA.
Praia de Botafogo 440, Sala 2401 CEP 22250-040,
Rio de Janeiro, RJ, Brasil
Phone: +55-21-5276922
Fax: +55-21-537-1456

● **U.K.**
ANRITSU LTD.
200 Capability Green, Luton, Bedfordshire LU1 3LU, U.K.
Phone: +44-1582-433200
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: +39-06-502-24-25

● **Sweden**
ANRITSU AB
Botvid Center, Fittja Backe 1-3 145 84 Stockholm, Sweden
Phone: +46-853470700
Fax: +46-853470730

● **Spain**
ANRITSU ELECTRÓNICA, S.A.
Europa Empresarial Edificio Londres, Planta 1, Oficina 6 C/ Playa de Liencres, 2 28230 Las Rozas. Madrid, Spain
Phone: +34-91-6404460
Fax: +34-91-6404461

● **Singapore**
ANRITSU PTE LTD.
6, New Industrial Rd., #06-01/02, Hoe Huat Industrial Building, Singapore 536199
Phone: +65-282-2400
Fax: +65-282-2533

● **Hong Kong**
ANRITSU COMPANY LTD.
Suite 719, 7/F., Chinachem Golden Plaza, 77 Mody Road, Tsimshatsui East, Kowloon, Hong Kong, China
Phone: +852-2301-4980
Fax: +852-2301-3545

● **Korea**
ANRITSU CORPORATION
14F Hyun Juk Bldg. 832-41, Yeoksam-dong, Kangnam-ku, Seoul, Korea
Phone: +82-2-553-6603
Fax: +82-2-553-6604– 5

● **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.
6F, 96, Sec. 3, Chien Kou North Rd. Taipei, Taiwan
Phone: +886-2-2515-6050
Fax: +886-2-2509-5519

Catalog No. MP1580A-E-A-1-(1.00) Printed in Japan 2001-4 20W/M

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP