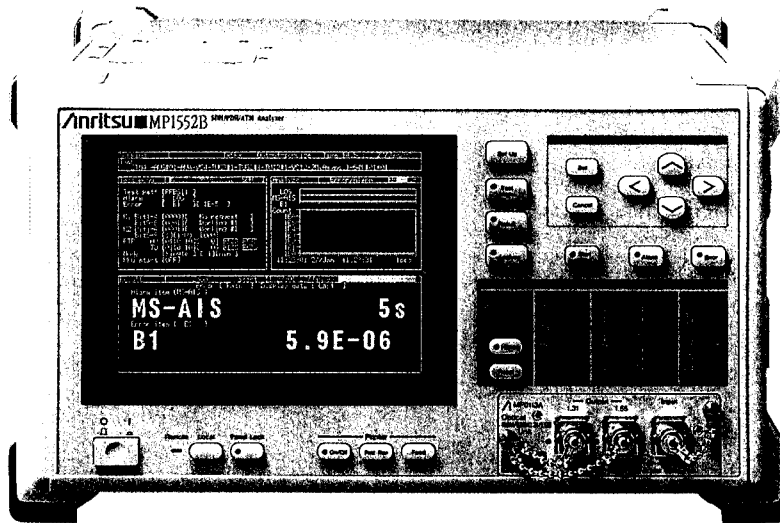


SDH/PDH/ATM ANALYZER  
MP1552B

For General Testing of PDH, SDH, ATM, and SONET Network

NEW



CE GPIB OPTION

The MP1552B is a portable analyzer designed specifically for troubleshooting the construction and maintenance of SDH, PDH, and ATM networks, as well as for evaluating equipment for these networks. Various systems can be configured using plug-in units, according to the application.

The MP1552B has two basic slots and three application slots. CEPT, North American, and Japanese systems can be analyzed by installing interface units into the basic slots. In addition, when two interface units are installed at the same time, the analyzer can perform international mapping. ATM and Jitter/Wander tests can be performed by installing application plug-in units in the three other slots.

The analyzer has a built-in printer and 3.5 inch floppy disk drive as standard. The measurement results can be printed out or the data can be saved directly to the FDD for reading with an external personal computer. Furthermore, the FDD can be used to upgrade the analyzer firmware, making compliance with the latest ITU-T specifications easy.

The pop-up menus permit item selection at a glance, so even a novice can use the MP1552B immediately. In addition, the auto set-up function enables automatic line mapping and easy line evaluation.

**Feature**

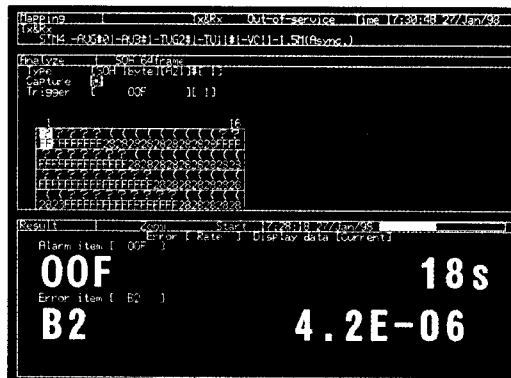
- For SDH, PDH, and ATM network construction and maintenance

**Performance and functions**

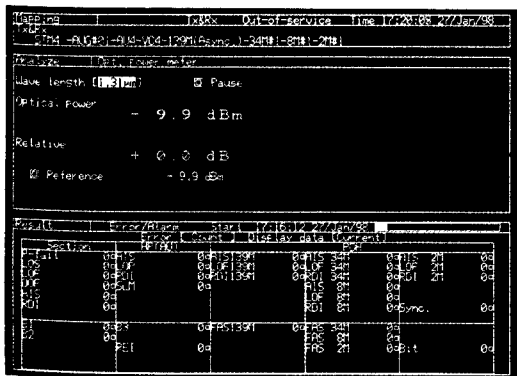
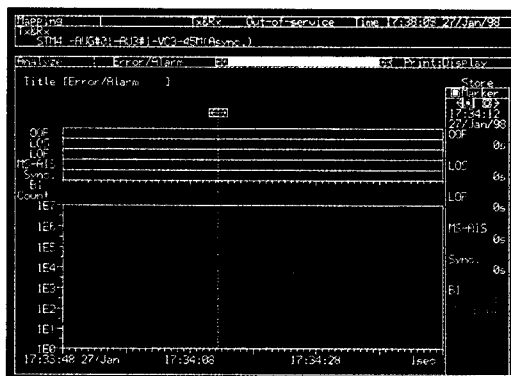
- PDH/SDH full analysis functions

An optical power meter is built-in, permitting optical power measurement while measuring alarms and errors, with no need to switch optical fiber connections.

Any SOH (1 byte) or K1/K2 byte can be captured in 64 frames for both error/alarm analysis and APS operation confirmation.



Measured errors/alarms can be displayed as a graph, and 1 second, 1 minute, 15 minutes, and 60 minutes can be set as the bar graph time units.

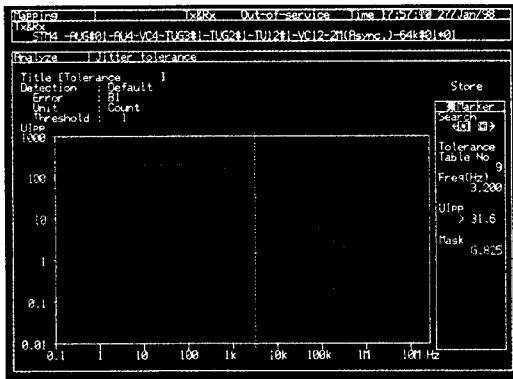


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### Jitter and wander automatic measurement

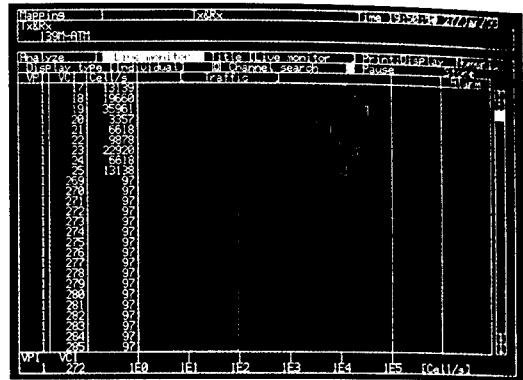
Jitter tolerance, jitter transfer, and jitter frequency can all be measured automatically. And since the data can be saved to floppy disk in text format, data management is made simple by using a personal computer.

Masks conforming to ITU-T Rec. G.823/G.824/G.825/G.958 standards are provided as preset data. Measurement is performed simply by pressing the start key. Furthermore, the operator can also set any other mask as necessary.



### Simultaneous monitoring of 1023 channel cells and non-conforming cells

The VPI/VCI for 1023 channels can be detected automatically, and the presence/absence of alarms, ATM cell count, and non-conforming cell count can be displayed graphically for easy comparison of line channel traffic.



## Specifications

### • MP0121A 2/8/34/139/156M\*1 Unit

Bit rate	2.048, 8.448, 34.368, 139.264 Mb/s
Level/waveform	Conforms to ITU-T G.703 (with 20 dB monitoring point)
Connectors	BNC (75 Ω, unbalanced), 3-pin Siemens (120 Ω, balanced) 2.048 Mb/s: HDB3 (balanced/unbalanced) 8.448, 34.368 Mb/s: HDB3 (unbalanced) 139.264 Mb/s: CMI (unbalanced)
Clock	Internal (accuracy: ±7 ppm, jitter unit not installed), external (ECL [AC] 50 Ω), received signal
Frame format	Unframed: 2, 8, 34, 139 Mb/s Framed: 2 Mb/s (with/without CRC-4 at channels 30/31, G.704), 8 Mb/s (G.742), 34 Mb/s (G.751), 139 Mb/s (G.751), MUX/DEMUX (Option 06)
Test patterns	PRBS: 2 <sup>11</sup> - 1, 2 <sup>15</sup> - 1, 2 <sup>20</sup> - 1, 2 <sup>23</sup> - 1 (O.151) Word: 16-bit programmable, all 0, all 1
Error addition	Bit (all, test pattern), code, E-bit Timing: Single, rate (1E-3, 1E-4, 1E-5, 1E-6, 1E-7) FAS: n in 16 (n: 1 to 4), all
Alarm addition	LOS, LOF, AIS, RDI, RDI (MF) Timing: All
Measurements	Mode: Single, repeat, manual In-service Errors: Frame, code, CRC-4, E-bit Alarms: Power-fail, LOS, AIS, LOF, MF loss, RDI, RDI (MF) Error performance: G.821 (inc. Annex D), M.2100, G.826 Out-of-service Errors: Frame, code, CRC-4, E-bit, bit Alarms: Power-fail, LOS, AIS, LOF, MF loss, RDI, RDI (MF), sync loss Error performance: G.821 (inc. Annex D), M.2100, G.826
LEDs	LOS, AIS, LOF, MF loss, RDI, RDI (MF), sync loss, errors
Monitor	Frame word
Trouble search	Auto search for errors/alarms in all measured channels
Delay measurement	0 to 1 s
Auxiliary interface	Clock sync output, frame sync output, error output

\*1 Built-in 156M CMI (electrical) interface

### • MP0122A 1.5/45/52M\*1 Unit, MP0122B 1.5/45/52/52M\*2 (1.31) Unit

Bit rate	1.544, 44.736 Mb/s
Level/waveform	1.544 Mb/s: ANSI T1.102 (with 20 dB monitoring point), 0/655 ft 44.736 Mb/s: ANSI T1.102 (with 20 dB monitoring point), 0/450/900 ft
Connectors	BNC (75 Ω, unbalanced), Bantam (100 Ω, balanced) 1.544 Mb/s: AMI/B8ZS (balanced), 44.736 Mb/s: B3ZS (unbalanced)
Clock	Internal (accuracy: ±7 ppm, jitter unit not installed), external (ECL [AC] 50 Ω) received signal

Continued on next page

## Ordering information

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

Model/Order No.	Name
MP1552B	<b>Main frame</b> SDH/PDH/ATM Analyzer
	<b>Standard accessories</b>
J0670A	AC power cord: 1 pc
Z0169	Printer paper (5 rolls/pack): 1 pack
F0014	Fuse, 6.3 A: 2 pcs
B0329G	Protective cover: 1 pc
J0907Q	Remote interlock cord (for MP0127A/0128A/0129A): 1 pc
J0908	Remote interlock terminator (for MP0127A/0128A/0129A): 1 pc
E0008A	Optical output control key (for MP0127A/0128A/0129A): 1 pc
J0747C	Fixed optical attenuator (for MP0127A/0128A/0129A): 1 pc
J0900A	Coaxial cable (AA-165-200), 20 cm (for MP0130A): 2 pcs
W1503AE	MP1552B operation manual (Vol. 1, Panel operation): 1 copy
W1504AE	MP1552B operation manual (Vol. 2, Remote control, supplied with MP1552B-01 or MP1552B-02): 1 copy
W1505AE	MP1552B operation manual (Vol. 3, Jitter/wander, supplied with MP0124A, MP0125A or MP0126A): 1 copy
W1506AE	MP1552B operation manual (Vol. 4, ATM, supplied with MP0123A): 1 copy
W1507AE	MP1552B operation manual (Vol. 5: 2.5G, supplied with MP0127A/0128A/0129A): 1 copy
W1508AE	MP1552B operation manual (Vol. 6: 2.5G jitter, supplied with MP0130A): 1 copy
W1509AE	MP1552B operation manual (Vol. 7: Add/Drop, supplied with MP0131A): 1 copy
W1323AE	MX150001A wander (MTIE, TDEV) application software operation manual (supplied with MX150001A): 1 copy
	<b>Plug-in units</b>
MP0121A*1	2/8/34/139/156M Unit
MP0122A*1	1.5/45/52M Unit
MP0122B*1	1.5/45/52/52M (1.31) Unit
MP0123A	ATM Unit
MP0124A	2/8/34/139M, 156/622M Jitter Unit (only jitter generation/measurement, requires MP0121A)
MP0125A	1.5/45/52M, 156/622M Jitter Unit (only jitter generation/measurement, requires MP0122A/B)
MP0126A	2/8/34/139M, 1.5/45/52M, 156/622M Jitter Unit (only jitter generation/measurement, requires MP0121A or MP0122A/B)
MP0127A**2	2.5G (1.31) Unit (with optical power meter)
MP0128A**2	2.5G (1.55) Unit (with optical power meter)
MP0129A**2	2.5G (1.31/1.55) Unit (with optical power meter)
MP0130A	2.5G Jitter Unit
MP0131A	Add/Drop Unit
MP0111A**2,*3	Optical 156M/622M (1.31) Unit (with optical power meter)
MP0112A**2,*3	Optical 156M/622M (1.55) Unit (with optical power meter)
MP0113A**2,*3	Optical 156M/622M (1.33/1.55) Unit (with optical power meter, 1.31/1.55 switchable)
MP0105A	CMI Unit (used in common with MP1550A/B)
MP0108A	NRZ Unit (used in common with MP1550A/B)
	<b>Options</b>
MP1552B-01	RS-232C
MP1552B-02	GPIB
MP1552B-03	Ethernet
MP1552B-05**4	SDH/SONET
MP1552B-06	MUX/DEMUX (2/8/34/139 Mb/s, for MP0121A)
MP1552B-07	MUX/DEMUX (1.5/45 Mb/s, for MP0122A/B)
MP1552B-08	45M-2M MUX/DEMUX (requires MP0121A and MP0122A/B)
MP1552B-09	VC11-384k mapping (for MP0122A/B)
MP1552B-12	VC2-6M mapping
MP1552B-15**5	Video output
MP1552B-16	64k lock
MP1552B-17	Japan ESF (requires MP0122A or MP0122B)
MP0124A-01	RMS measurement
MP0125A-01	RMS measurement
MP0126A-01	RMS measurement

Model/Order No.	Name
MP0130A-01	RMS measurement
MP0124A-02	Wander measurement
MP0125A-02	Wander measurement
MP0126A-02	Wander measurement
MP0127A-02	2.5G non-frame pattern (requires MP0122A or MP0122B)
MP0128A-02	2.5G non-frame pattern (requires MP0122A or MP0122B)
MP0129A-02	2.5G non-frame pattern (requires MP0122A or MP0122B)
MP0111A/0112A-37	FC connector (exchangeable 2 sets)
MP0111A/0112A-38	ST connector (exchangeable 2 sets)
MP0111A/0112A-39	DIN connector (exchangeable 2 sets)
MP0111A/0112A-40	SC connector (exchangeable 2 sets)
MP0111A/0112A-43	HMS-10/A connector (exchangeable 2 sets)
MP0113A-37	FC connector (exchangeable 3 sets)
MP0113A-38	ST connector (exchangeable 3 sets)
MP0113A-39	DIN connector (exchangeable 3 sets)
MP0113A-40	SC connector (exchangeable 3 sets)
MP0113A-43	HMS-10/A connector (exchangeable 3 sets)
MP0122B-37	FC connector (replaceable, 2 sets)
MP0122B-38	ST connector (replaceable, 2 sets)
MP0122B-39	DIN connector (replaceable, 2 sets)
MP0122B-40	SC connector (replaceable, 2 sets)
MP0122B-43	HMS-10/A connector (replaceable, 2 sets)
MP0127A-37	FC connector (replaceable, 2 sets)
MP0128A-37	FC connector (replaceable, 2 sets)
MP0129A-37	FC connector (replaceable, 2 sets)
MP0127A-38	ST connector (replaceable, 2 sets)
MP0128A-38	ST connector (replaceable, 2 sets)
MP0129A-38	ST connector (replaceable, 2 sets)
MP0127A-39	DIN connector (replaceable, 2 sets)
MP0128A-39	DIN connector (replaceable, 2 sets)
MP0129A-39	DIN connector (replaceable, 2 sets)
MP0127A-40	SC connector (replaceable, 2 sets)
MP0128A-40	SC connector (replaceable, 2 sets)
MP0129A-40	SC connector (replaceable, 2 sets)
MP0127A-43	HMS-10/A connector (replaceable, 2 sets)
MP0128A-43	HMS-10/A connector (replaceable, 2 sets)
MP0129A-43	HMS-10/A connector (replaceable, 2 sets)
MP1656A	<b>Application equipment</b> Portable STM-16 Analyzer
MX150001A	<b>Optional accessories</b> Wander (MTIE, TDEV) Measurement Application Software (for MP0124A/0125A/0126A-02)
J0796A	ST connector (exchangeable, with protective caps, 1 set)
J0796B	DIN connector (exchangeable, with protective caps, 1 set)
J0796C	SC connector (exchangeable, with protective caps, 1 set)
J0796D	HMS-10/A connector (exchangeable, with protective caps, 1 set)
J0796E	FC connector (exchangeable, with protective caps, 1 set)
J0162A	Balanced cable, 1 m (Siemens 3p-Siemens 3p)
J0162B	Balanced cable, 2 m (Siemens 3p-Siemens 3p)
J0845A	Balanced cable, 6 ft (BANTAM 3P/BANTAM 3P)
J0775D	Coaxial cable (BNC-P620 • 3C-2WS • BNC-P620, 75 Ω), 2 m
J0776D	Coaxial cable (BNC-P-3W • 3D-2W • BNC-P-3W, 50 Ω), 2 m
J0398A	Conversion cable (M-1PS • BANTAM 3P), 1 m
J0398B	Conversion cable (M-1PS • BANTAM 3P), 2 m
J0635A	Optical fiber cable, 1 m (SM, FC-SPC connector both ends)
J0635B	Optical fiber cable, 2 m (SM, FC-SPC connector both ends)
J0635C	Optical fiber cable, 3 m (SM, FC-SPC connector both ends)
J0747B	Fixed optical attenuator (10 dB, SM, FC-SPC connector both ends)
J0747C	Fixed optical attenuator (15 dB, SM, FC-SPC connector both ends)
J0747D	Fixed optical attenuator (20 dB, SM, FC-SPC connector both ends)
J0322B	Coaxial cable (11SMA • SUCOFLEX104 • 11SMA), 1 m
J0008	GPIB cable, 2 m
B0448	Soft case
B0336C	Carrying case

\*1: Either the MP0121A or the MP0122A/B is required to operate the MP1552B.

\*2: Specify the connector to be supplied as the standard connector when ordering the above options. If the connector is not specified, the FC connector (MP0111A/0112A/0113A/0122B/0127A/0128A/0129A-37) is supplied as standard.

\*3: MP0111A/0112A/0113A can not be used with MP1550A/B.

\*4: The SONET functions (technical terms) can be used with the MP1552B.

\*5: The video output, RS-232C and GPIB options cannot all be used simultaneously. Only the video output + RS-232C, or video output + GPIB, or RS-232C + GPIB board combinations support simultaneous use, so change the board combinations according to the purpose.