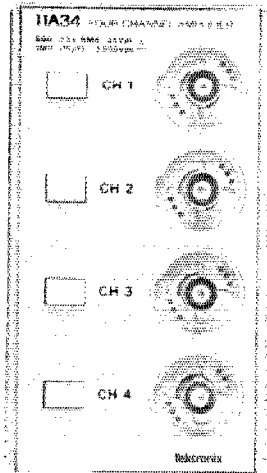


11A32 Two-Channel Amplifier



11A34 Four-Channel Amplifier

11A32/11A34

- DC to 350-MHz Bandwidth (11A32 in 11402 Mainframe)
- Dual Trace (11A32) or Four Trace (11A34)
- 1-mV to 10-V/Div Calibrated Deflection Factors in 1% Increments
- Switchable 50- Ω or 1-M Ω Input Impedance
- High-Resolution Calibrated DC Offset
- Fast Overdrive Recovery

The 11A32 and 11A34 amplifier plug-in units are virtually identical to one another except for the number of channels. The 11A32 is a dual-trace unit, and the 11A34 is a four-trace unit. The bandwidth of the 11A32 is slightly higher than that of the 11A34 in each of the four 11000-Series mainframes.

Bandwidth—11A32

Volts/div	11301	11302	11401	11402
> 10 mV	300 MHz	350 MHz	350 MHz	400 MHz
5 to 9.95 mV	250 MHz	250 MHz	300 MHz	350 MHz
2 to 4.98 mV	200 MHz	200 MHz	250 MHz	250 MHz
1 to 1.99 mV	200 MHz	200 MHz	200 MHz	200 MHz

Bandwidth—11A34

Volts/div	11301	11302	11401	11402
> 10 mV	250 MHz	250 MHz	300 MHz	300 MHz
5 to 9.95 mV	200 MHz	250 MHz	250 MHz	250 MHz
2 to 4.98 mV	200 MHz	200 MHz	200 MHz	200 MHz
1 to 1.99 mV	150 MHz	150 MHz	150 MHz	150 MHz

Two built-in four-pole bandwidth-limit filters (100 and 20 MHz) may be activated to reduce unwanted high-frequency noise at 24 dB/octave for each channel.

Both coarse and fine deflection-factor steps are fully calibrated. At 1 mV/div, the high-resolution calibrated dc offset has a setability of 25 μ V and a range of ± 1 V (equivalent to 16 bits), giving an effective screen height of 2000 div and permitting absolute dc measurement accuracies to $\pm 0.4\%$.

CHARACTERISTICS

Number of Channels—11A32: Two; 11A34: Four.

Calibrated Deflection Factors—Coarse steps: 1 mV to 10 V/div in 1-2-5 sequence. Fine steps: Between coarse steps in 1% increments of next more-sensitive coarse step.

Accuracy—

Δ Volts dc accuracy: With 11301/11302: $\pm(1.0\% + 0.04 \text{ div})$. With 11401/11402: $\pm(0.9\% + 0.012 \text{ div})$.

DC Balance, 1 to 99.5 mV/div: With 11301 and 11302: $\pm(1.0 \text{ mV} + 0.13 \text{ div})$. With 11401 and 11402: $\pm(1.0 \text{ mV} + 0.10 \text{ div})$.

Offset Accuracy, 1 to 99.5 mV/div (± 1 V range): $\pm(0.2\% + 0.5 \text{ mV})$.

For absolute dc accuracy of single-point measurements using offset, add the Offset Accuracy and DC Balance terms.

Offset Range—

1 to 99.5 mV/div: ± 1 V; Resolution: 25 μ V. 100 mV to 0.995 V/div: ± 10 V; Resolution: 250 μ V.

1 to 10 V/div: ± 100 V; Resolution: 2.5 mV.

Overdrive Recovery—

1 to 99.5 mV/div: To within $+(0.3\% + 0.1 \text{ div})$ within 50 ns from $+2$ V step.

100 to 995 mV/div: To within $\pm 1\%$ within 50 ns from ± 20 V step.

1 to 10 V/div: To within $\pm 1\%$ within 50 ns from ± 200 V step.

Typical Noise (RMS)—

1 to 1.99 mV/div: 0.12 div.

2 to 4.98 mV/div: 0.06 div.

4 to 9.95 mV/div: 0.025 div.

10 mV to 10 V/div: 0.014 div.

Input Impedance—Switchable 1 M Ω in parallel with 15 pF, or 50 Ω $\pm 0.5\%$.

Input Coupling Modes—AC, DC, and off.

Maximum Input Voltage—1 M Ω : 500 V (dc + peak ac). 50 Ω : Input automatically disconnects when the input signal exceeds safe limits. Manual reset.

ORDERING INFORMATION

11A32 Two-Channel Vertical Amplifier \$2,025

Includes: Operator manual supplement.

11A34 Four-Channel Vertical Amplifier \$3,525

Includes: Operator manual supplement.

OPTIONS

Option 22—(11A32) Includes two P6134 probes. \$400

Option 23—(11A34) Includes four P6134 probes. \$800

OPTIONAL ACCESSORY

Service Manual—

(11A32) Order 070-6782-00*

(11A34) Order 070-6785-00*

* To order, contact your local Tektronix Sales Office.