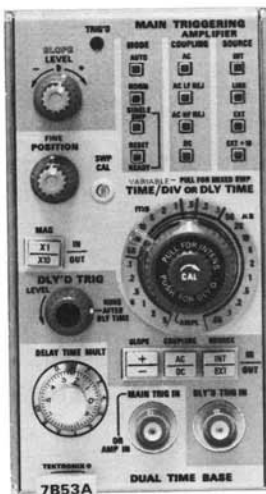


7B53A



Dual Time Base

7B53A

5 ns/div to 5 s/div Calibrated Time Base

Calibrated Mixed Sweep

Triggering to 100 MHz

Single-Sweep Operation

Optional TV Sync-Separator Triggering

The easy-to-use 7B53A Dual Time Base is recommended for use with 7600 Mainframes to provide optimum bandwidth/sweep-speed compatibility. It may, however, be used in any 7000 Series Mainframe. The fastest rate (5 ns/div) is obtained with the X10 MAGNIFIER.

The 7B53A Time Base features four kinds of sweep: normal, intensified delaying, delayed, and mixed. The pushbutton switches cannot be lit.

DELAYING SWEEP

**Sweep Rate** — 0.05  $\mu$ s/div to 5 s/div in 25 steps (1-2-5 sequence). 5 ns/div, the fastest calibrated sweep rate, is obtained with the X10 MAGNIFIER. The uncalibrated VARIABLE is continuous between steps. The variable control is internally switchable between main, delayed-sweep, and variable main-sweep holdoff.

**Sweep Accuracy** — Measured over the center 8 div.

Time/Div	Unmagnified		Magnified	
	+15°C to +35°C	0°C to +50°C	+15°C to +35°C	0°C to +50°C
5 s/div to 1 s/div	3%	4%	*	*
0.5 s/div to 0.05 $\mu$ s/div	3%	4%	3.5%	5%
50 ms/div to 0.5 $\mu$ s/div	2%	3%	2.5%	4%

\*Unspecified

**Delay Time Multiplier Range** — 0 to 10 times the DELAY TIME/DIV setting from 5 s/div to 1  $\mu$ s/div.

**Differential Delay Time Measurement Accuracy** — 5 s/div to 1 s/div  $\pm$  1.4% of measurement + 0.3% of full scale; 0.5 s/div to 1  $\mu$ s/div:  $\pm$  0.7% of measurement + 0.3% of full scale. Full scale is 10 times the DELAY TIME/DIV setting. Accuracy applies over the center 8 DTM divisions from +15°C to +35°C.

**Jitter** — 0.05% or less of TIME/DIV setting.

Triggering —

Coupling	Triggering Frequency Range	Min Signal Required	
		Int	Ext
Ac	30 Hz-10 MHz	0.3 div	100 mV
	10 MHz-100 MHz	1.5 div	500 mV
Ac Lf REJ*	30 kHz-10 MHz	0.3 div	100 mV
	150 kHz-10 MHz	1.5 div	500 mV
Ac Hf REJ	30 Hz-50 kHz	0.3 div	100 mV
	10 MHz-100 MHz	1.5 div	500 mV
Dc	Dc-10 MHz	0.3 div	100 mV
	10 MHz-100 MHz	1.5 div	500 mV

\*Will not trigger on sinewaves of 3 div or less INT or 1.5 V EXT below 120 Hz.

**Single Sweep** — Triggering requirements are the same as normal sweep. When triggered, sweep generator produces one sweep only until reset.

**Internal Trigger Jitter** — 1 ns or less at 75 MHz.

**External Trigger Input** — Max input voltage is 500 V (dc + peak ac), 500 V p-p ac at 1 kHz or less. Input R and C is 1 M $\Omega$  within 2%, 20 pF within 2 pF. LEVEL range is at least +1.5 V to -1.5 V in EXT, at least +15 V to -15 V in EXT  $\div$  10.

DELAYED SWEEP

**Sweep Rate** — 0.05  $\mu$ s/div to 0.5 s/div in 22 steps (1-2-5 sequence). 5 ns/div, the fastest calibrated sweep rate, is obtained with the X10 MAGNIFIER. The uncalibrated VARIABLE is continuous between steps to at least 1.25 s/div and is switchable between the main, delayed sweep, and variable main sweep holdoff.

**Sweep Accuracy** — Measured over the center 8 div.

Time/Div	Unmagnified		Magnified	
	+15°C to +35°C	0°C to 50°C	+15°C to +35°C	0°C to 50°C
0.5 s/div to 0.1 s/div and 0.2 $\mu$ s/div to 0.05 $\mu$ s/div	4%	5%	4.5%	6%
50 ms/div to 0.5 $\mu$ s/div	3%	4%	3.5%	5%

**Delayed Sweep Gate** — Output voltage is  $\approx$  +3.5 V into at least 10 k $\Omega$  shunted by 100 pF or less, or 0.5 V into 50  $\Omega$ . Rise time is 50 ns or less; output R is 350  $\Omega$  within 10%. Gate is available at the DLY'D TRIG IN connector when the delayed sweep source switch is set to INT.

Triggering —

Coupling	Triggering Frequency Range	Min Signal Required	
		Int	Ext
Ac	30 Hz-10 MHz	0.3 div	100 mV
	10 MHz-100 MHz	1.5 div	500 mV
Dc	Dc-10 MHz	0.3 div	100 mV
	10 MHz-100 MHz	1.5 div	500 mV

**Internal Trigger Jitter** — 1 ns or less at 75 MHz.

**External Trigger Input** — Max input voltage is 500 V (dc + peak ac), 500 V p-p ac at 1 kHz or less. Input R and C is 1 M $\Omega$  within 2%, 20 pF within 2 pF. LEVEL range is at least +1.5 V to -1.5 V in EXT.

MIXED SWEEP

**Sweep Accuracy** — Within 2% plus measured main sweep error. Exclude the following portions of mixed sweep: first 0.5 div after start of main sweep display and 0.2 div or 0.1  $\mu$ s (whichever is greater) after transition of main to delayed sweep.

EXT HORIZONTAL INPUT

**Deflection Factor** — 10 mV/div within 10% when in EXT, MAG X10; 100 mV/div within 10% when in EXT; 1 V/div within 10% when in EXT  $\div$  10.

Bandwidth

Coupling	Lower -3 dB	Upper -3 dB
Ac	40 Hz	2 MHz
Ac Lf REJ	16 kHz	2 MHz
Ac Hf REJ	40 Hz	100 kHz
Dc	Dc	2 MHz

TV SYNC

**Option 05, TV Sync Separator Triggering** — Permits stable internal line or field rate triggering from displayed composite video or composite sync waveforms. Conventional waveform displays and measurements can be made from standard broadcast or closed circuit tv systems, domestic or international, with up to 1201-line, 60 Hz field rates. Individual lines may be displayed with delayed sweep features. The wide range of delayed sweeps permits accurate alternate-frame, color-burst observations in the PAL color system. Option 05 deletes ac line trigger and External  $\div$  10 from trigger source.

ORDERING INFORMATION

7B53A Dual Time Base .....	\$1380
7B53A OPTION	
Option 05, TV Triggering .....	Add \$150