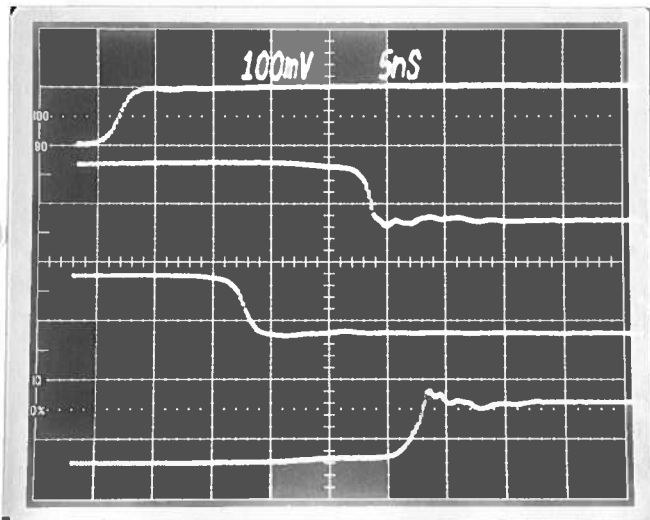


PULSE GENERATOR  
PERFORMANCE CHECK

Model: *AV-1011B1-B*

S.N.: *10970*

Date: *SEPT 2 2004*



*60 dB ATTN ∴ 100V/DIV*

- a) Output signal amplitude:  
*0 TO ±100V (TO 50Ω)*
- b) Pulse width:  
*100 NS TO 1 μS  
(5% MAX DUTY CYCLE)*
- c) Rise time:  
*≤ 2 NS (20-80%)*
- d) Fall time:  
*≤ 2 NS (20-80%)*
- e) PRF:  
*0 TO 100 KHz  
(5% MAX DUTY CYCLE)*
- f) Jitter, stability:  
*OK*
- g) Prime power:

*100 → 240 V  
50-60 Hz*

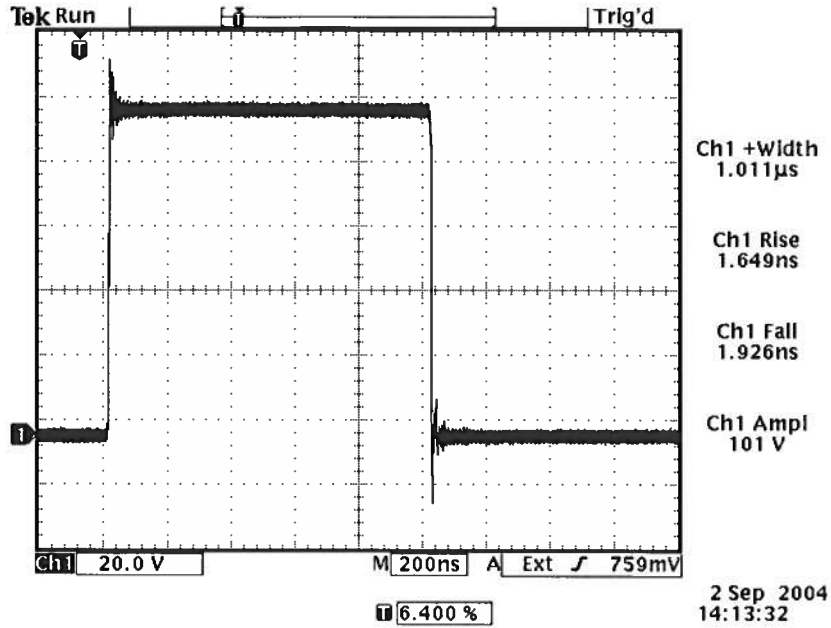
- ① *P<sub>out</sub> : 5 NS/DIV, RISE TIME 20-80%*
- ② *P<sub>out</sub> : 5 NS/DIV, FALL TIME*
- ③ *N<sub>out</sub> : 5 NS/DIV, RISE TIME  
(LEADING EDGE)*
- ④ *N<sub>out</sub> : 5 NS/DIV, FALL TIME*

*PRF = 10 KHz*

*PW = 100 NS*

(A)

10970  
NARROW PULSE



POS OUT

$R_L = 50 \Omega$

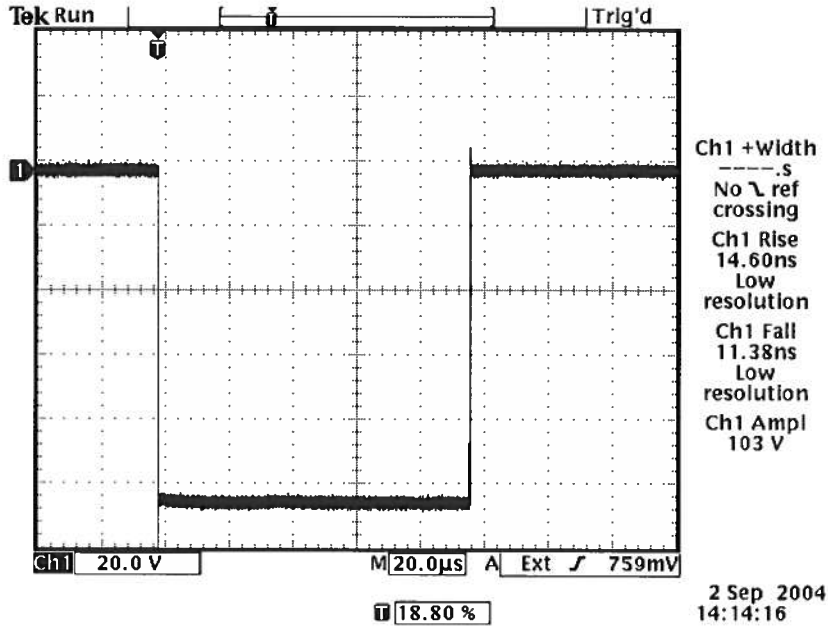
PRF = 10 kHz

300 MHz SCOPE  
(TDS 3032)

(B)

10970

WIDE PULSE



NEG out

$R_L = 50 \Omega$

$f_{BF} = 100 \text{ MHz}$

300 MHz SCOPE

(TEK TDS 3032)



# AVTECH ELECTROSYSTEMS LTD.

NANOSECOND WAVEFORM ELECTRONICS  
SINCE 1975

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U.S.A. 13669-0265  
TEL: (315) 472-5270  
FAX: (613) 226-2802

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FAX: 1-800-561-1970

e-mail: info@avtechpulse.com  
http://www.avtechpulse.com/

BOX 5120, LCD MERIVALE  
OTTAWA, ONTARIO  
CANADA K2C 3H4  
TEL: (613) 226-5772  
FAX: (613) 226-2802

## "-B" Functional Test & Calibration Certificate

Date of test:	August 20, 2004				Tester:	MJC
Programmed model name:	AV-1011B1-B-R5					
Programmed serial number:	10970	MAC address:	N/A			
Firmware revision:	2.59					
Internal trigger checked at:	1 Hz	100 Hz	1 kHz	10 kHz	100 kHz	
Actual measured output <sup>1</sup> :	1.008 Hz	100.7 Hz	1.007 kHz	10.03 kHz	99.5 kHz	
External trigger checked:	Yes			Gate checked:	Yes	
Manual trigger checked:	Yes					
Pulse compression checked:	Yes			Low Amplitude PW Distortion Nulled:	N/A	
Pulse width checked at:	100 ns	1 us	10 us	1 ms	50 Hz, +100V to 50 Ohms	
Actual measured output <sup>2</sup> :	99 ns	1.008 us	10.08 us	1.04 ms		
PWin = PWout mode checked:	Yes			DC mode checked:	N/A	
Duty Cycle Limit:	5%					
Delay nulled:	Yes					
Delay checked at:	100 ns	1 us	10 us	1 ms	50 Hz, +100V to 50 Ohms	
Actual measured output <sup>1</sup> :	99.7 ns	1.000 us	10.02 us	1.002 ms		
Double pulse checked:	Yes					
Invert mode checked:	N/A					
ECL/TTL modes checked:	N/A					
Zout switch checked:	Yes					
Amplitude checked at:	-10V	+20V	-50V	+100V	10 kHz, 1 us to 50 Ohms	
Actual measured output <sup>2</sup> :	-10.2V	+20.0V	-51.2V	+100.0V		
Amplitude polarity:	+/-					
Zout calibration:	N/A					
Electronic amplitude control:	OK					
External amplify mode:	N/A					
Bleeder resistors adequate:	N/A					
Burst mode:	N/A					
Monitor V/I Ratio:	N/A			Monitor offset nulled:		
LCD Monitor calibrated:	N/A					
Offset checked at:	N/A					
Actual measured output <sup>2</sup> :	N/A					
Offset nulled (output on):	N/A			Amplitude-dependent offset nulled:		
Offset nulled (output off):	N/A					
RS-232 checked:	Yes					
LCD pull-ups installed:	N/A					
PCB 108H oscillator resistor update:	N/A					
PN trigger pull-downs installed:	N/A					
Sync pulse width checked:	200 ns nominal					
Circuit Boards:	PS:	158E	Main:	108B		
Overload Trigger Resistance:	Trips at:	4.4k	Installed:	3.9k		
DC fuses:	Main:	2.5A	Overload:	1.6A		
AC Current:	Quiescent:	0.29A @ 115V	Max. Load:	0.55A @ 115V		
		0.19A @ 230V		0.29A @ 230V		
AC fuse:	0.8A					
1.5 kV RMS, 5 second Hypot Test:	OK					
25A RMS Ground Continuity Test:	OK					
Fan operational:	Yes					
Photographed:	Yes					

<sup>1</sup> Checked with: Fluke PM6681 Counter (S/N 9446 066 81016), referenced to Datum ExacTime 9390-6000 (S/N 4461) GPS Frequency Reference

<sup>2</sup> Checked with: Tektronix TDS3052 digital oscilloscope (S/N B014783) for PW ≥ 5 ns, Tektronix 7704A/7S11/7T11/S4 sampling oscilloscope (Cal. Label 112506) for PW < 5 ns.