

## **In-Line Ultrasonic Receiver Amplifier** **(For Piezoelectric Sensors)** **TYPE NO.: CP-UW20120-A26**

### **Description**

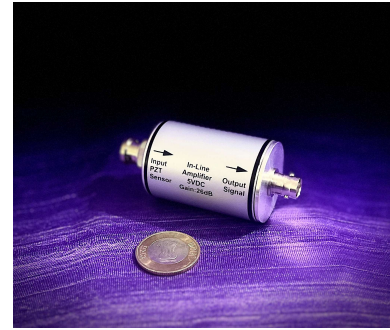
The In-Line Ultrasonic Receiver Amplifier improves the measurement sensitivity by adding extra gain (+26 dB) to the measurement system. Additionally, it allows use of extended length of cable (>50m) for connecting Piezoelectric Sensors used as receivers with Ultrasonic Testing Instruments.

When performing ultrasonic testing on large path lengths, e.g. concrete structures, limitations are faced due to receiver signal attenuation when longer cable is used. Use of In-line Receiver Amplifier helps to overcome this constraint.

This device fits on the BNC Connector of the sensor. The high impedance piezoelectric sensor signal is amplified & buffered to provide low impedance output signals, which can be transmitted over longer length of co-axial cable with very low loss of signal. The CP-UW20120-A26 model is designed specifically for interfacing low frequency sensors (<120KHz) used in testing of Non-Homogenous materials such as Concrete, Rock, Ceramics, Composites, etc. Use of this low noise amplifier helps in detecting low amplitude signals encountered due to long path lengths or due to the highly attenuating nature of the materials under test.

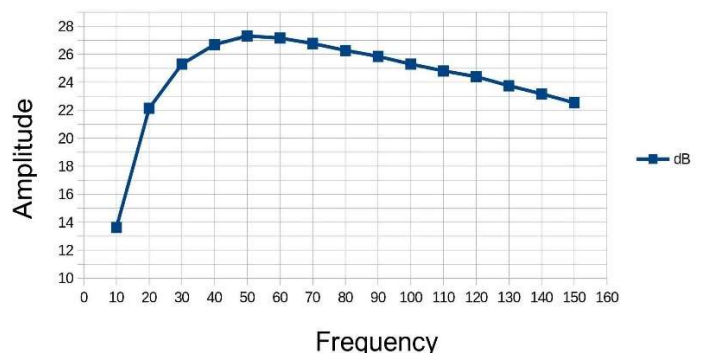
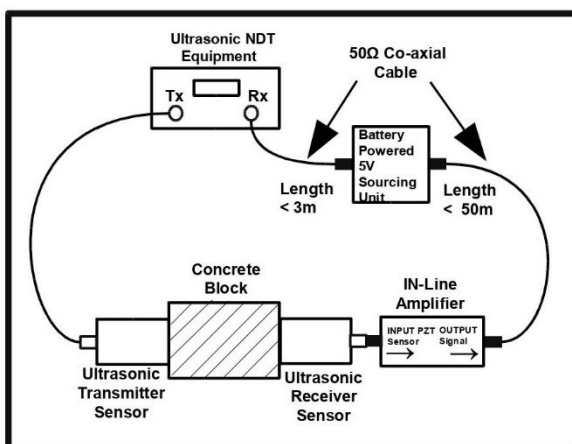
The use of CP-UW20120-A26 amplifier requires a 5V power supply to be sourced from the measuring instrument. External 5V sourcing Unit has to be used if the measuring instrument does not have in-built sourcing facility.

The Connection Scheme is as shown below.



### **APPLICATIONS**

**Ultrasonic Non-Destructive Testing of**  
**Non-Homogeneous materials & other**  
**Coarse-Grained materials,**  
**Testing of,**  
**Concrete Structures**  
**Rocks**  
**Ceramics, Refractories**  
**Wood, Timber**  
**Composite Materials**



Specifications	
Input Impedance	100 Kohms
Frequency Range	20 – 120 KHz
Gain	26 dB
Operating Voltage	5 VDC (Range: 4.5 to 5.5VDC)
Operating Current (Standby)	5 mA
Power Consumption (Standby)	25 mW.
Operating Current Dynamic Range:	5/35 mA (min/max)
Noise Level RMS (RTI)	<10 $\mu$ V
Operating Temperature Range	-10 to +50 °C
Mechanical Dimensions.	
Size: Dia.	36 mm
Size: Height	84 mm
Weight	100 Grams Approx
Body Material	Aluminum
Connector Type	BNC
Cable Type	50 $\Omega$ standard RG58 Co-axial cable recommended
Cable Length	Up to 50 meters

Ordering information and Accessories	
In-Line Ultrasonic Receiver Amplifier	CP-UW20120-A26
Battery Powered 5VDC Sourcing unit	CP-9-5
RG58; 50 $\Omega$ Co-axial Cable with BNC Plug Connectors at both ends	
Order Code: -	RG58-BNCM-BNCM-XX
Cable Length	XX
1m	01
3m	03
5m	05
10m	10
25m	25
50m	50

#### IMP. NOTE:

The CP-UW20120-A26 device must not be connected to the Transmitter (Tx) port. Care must be taken to ensure that it is never connected to the transmitting port of the Ultrasonic Instrument.



#### Related Products

- ✓ Ultrasonic Pulse Velocity (UPV) Testing Equipment, Models: CUTE103A & CUTE102X0
- ✓ Ultrasonic Pulser-Receiver with High Voltage Tone Burst Capability. Model: CUTE104A



- ✓ Transducers Frequency Range : 24KHz – 500 KHz
- ✓ Immersion Transducers for Under Water Testing Applications
- ✓ NEW: Receiver Probes with In-built Pre-Amplifier (26dB Gain)

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INSTRUMENTS

#### Works I:

2 & 3, Vishwas, Kamik Road,  
Off. Murbad Road,  
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Email: [marketing@canopusinstruments.com](mailto:marketing@canopusinstruments.com)  
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#### Works II:

C/1/9, Ram Girdhar Industrial Estate,  
Station Road, Vithalwadi (W),  
Ulhasnagar – 421003, Dist. Thane,  
Maharashtra, INDIA

**MADE IN INDIA**