

BACK PANEL INFORMATION:

POWER PACK INPUT +14 to +18 volts DC power should be connected here. Center pin should be positive.

GATE INPUT This input accepts between +3 to +10 volts pulse for gating the constant current output.

HOW TO USE THE SIU90:

It is very simple to use the SIU90. Plug in the power pack of the SIU90 on the AC line. Set your pulse generator output to between +3 to +10 volts. Connect it to the Gate Input of the back of the SIU90. Turn on the SIU90 power switch. Flip the output polarity switch in the direction which you like. Increase current output dial. Now you will see the current pulse.

Caution!!!! The voltage between the red and black banana terminal can go up beyond 100V. If this output is connected to the oscilloscope without a resistor load (example 10k ohm) between red and black terminal, you might blow up your oscilloscope input. Remember this is a current device, not a voltage device.

HOW TO CHANGE CURRENT OUTPUT TO VOLTAGE OUTPUT:

Put a 10k ohm resistor between red and black output banana terminal. If the output will be fed in the high input impedance device, the current setting on the 10 turn dial unit may be changed

13414

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STIMULUS ISOLATION UNIT

MODEL SIU90

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WARRANTY

One year parts and labor from date of receipt, plus for an additional one year we will replace or reimburse you for parts which fail during service, provided such failures are not due to misuse.

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DAMAGED SHIPMENTS AND RETURN OF MERCHANDISE:

- A. Claims for damages and shortages must be reported within 5 days of receipt of goods.
- B. Please follow these instructions in case of damage to shipment or shortage.
 - 1. If received by UPS:
CONCEALED DAMAGE: Keep cartons, call local UPS for inspection, and notify us immediately.
 - 2. If received by Air Cargo:
You must file claim with air carrier.

SHORTAGES: Sign only for the number of cartons delivered; notify us immediately.

3. If received by Parcel Post:
CONCEALED DAMAGE: Keep cartons and notify us immediately.

IF DAMAGE IS APPARENT ON DELIVERY: Either refuse, or sign for as damaged, accept and notify us.

C Please follow these instructions for return of merchandise.

1. No merchandise will be accepted without prior approval of our Customer Service Department. All merchandise must be returned prepaid.
2. Return copy of original invoice with all returned merchandise. This copy of invoice must be returned to insure proper credit.
3. A 15% restocking fee will be deducted from all authorized returns for credit except for those units being returned for repair due to a faulty component part within our warranty period.
4. Any merchandise returned for credit without Customer Service approval will be subject to a nominal service charge in addition to our restocking fee.
5. No charge is made for repair of faulty component parts (incl. labor involved) within our warranty period on those units obtaining return approval. A nominal service charge in addition to freight will be made on unauthorized returns.
6. Regardless of "within warranty period" and return authorization, any misused or customer damaged unit will be subject to standard repair fees and returned.
7. Any merchandise to be returned for credit must be received by Neuro Data within 4 months of original billing, or authorization for return will be cancelled.

INTRODUCTION

The SIU90 is an isolated precision constant current type stimulator which is gated by a +3 to +10 volt external pulse. The power to this unit can be supplied by an external power pack or by an internal rechargeable battery (optional). The NEURO DATA Digital Stimulator (Model PG4000A) is one of the best pulse generators to support this isolation unit.

FRONT PANEL INFORMATION:

POWER ON/OFF SWITCH This switch disables the output stage power supply. The internal battery charging circuit keeps working until the power pack is unplugged from the AC power line.

TEN TURN DIAL Gated pulse current intensity can be changed by turning this dial. Normal 0 to 1mA range.

X1/X10 CURRENT MULTIPLIER SWITCH This switch changes the maximum current output from 1mA to 10mA when the switch is flipped from x1 to x10 position. When this unit is used for a very long pulse mode or DC current mode, it can pass up to 3mA continuously. However with the short pulse mode, the output can pass up to 10mA constant current.

POLARITY SWITCH (+/off/-) This switch can change the output of the pulse polarity or disable the output (off position).

OUTPUT BANANA TERMINAL When the polarity switch is in (+) position, the RED banana terminal is output positive and the BLACK banana terminal is negative current. If the polarity switch is in (-) position, the current will be reversed. The GREEN banana terminal is the case ground terminal.

to 0 to 10 volts in x1 setting and 0 to 100 volts in x10 setting of the current multiplier switch.

Because the output of this unit is current type, any load attached between these terminals could change the output voltage. The output voltage can be calculated by the following formula.

$$\text{Output Voltage} = (\text{total load resistance between red and black terminal}) \times (\text{output current value})$$

NOISE PROBLEMS:

When the green grounding terminal is not terminated to your amplifier ground, 60Hz noise will be induced to your preparation.

Solution:

- Connect the grounding terminal to your amplifier ground.
- OR connect to your pulse generator through the Gate Input with BNC connector cable. The shields of the BNC connector should be grounded in somewhere.
- OR drive with the rechargeable battery (which is an optional purchase).

When more than 3mA of very long pulse or DC current will be output, you might experience very fast noise. This is a sign of over driving of the power supply. There is no solution for this problem.