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## STX Power Supply Mother Board Replacement Application Guide

597-4101-003  
November 22, 2011  
Rev. C

## **STX Power Supply Mother Board Replacement Application Guide**

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## Table of Contents

<b>1</b>	<b>STX Power Supply Mother Board Replacement .....</b>	<b>1</b>
<b>2</b>	<b>Preparation .....</b>	<b>1</b>
<b>3</b>	<b>919-4090 Power Supply Mother Board.....</b>	<b>1</b>
<b>4</b>	<b>919-4090-200 Power Supply Mother Board .....</b>	<b>5</b>
<b>5</b>	<b>RF Technical Services Contact Information.....</b>	<b>9</b>



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# 1 STX Power Supply Mother Board Replacement

## 1.1 Overview of the removal and installation of the Power Supply Mother Board

Replacing the Power Supply Mother Board is a straight forward procedure. No adjustments to the Replacement mother board are required. This Application Guide covers the replacement of the 919-4090 and the 919-4090-200 Power Supply Mother Boards

## 2 Preparation

### 2.1 Overview / Estimated Completion Time

The basic replacement of the STX Power Supply Mother Board will take about 5 minutes (per deck) after it is un-racked and placed in a proper work area. Note: If the Power Supply Mother Board is being replaced because of an upgrade, all individual decks must be upgraded. The STX LP 5 kW Transmitter has five separate decks, the STX LP 3 kW has three separate decks, etc.

### 2.2 Items / Tools required for the Replacement Process

- No. 2 Phillips Screwdriver
- ¼" nut driver (for 919-4090-200)
- STX LP Power Supply Mother Board (919-4090 or 919-4090-200)

## 3 919-4090 Power Supply Mother Board



**WARNING:** ENSURE ALL PRIMARY POWER IS DISCONNECTED BEFORE PROCEEDING.

**Step 1** – Power unit OFF, disconnect all transmitter primary power, remove from rack and place on bench. Remove top cover from unit.

**Step 2** – Remove the power supply rear cover screws using a #2 Phillips screwdriver.

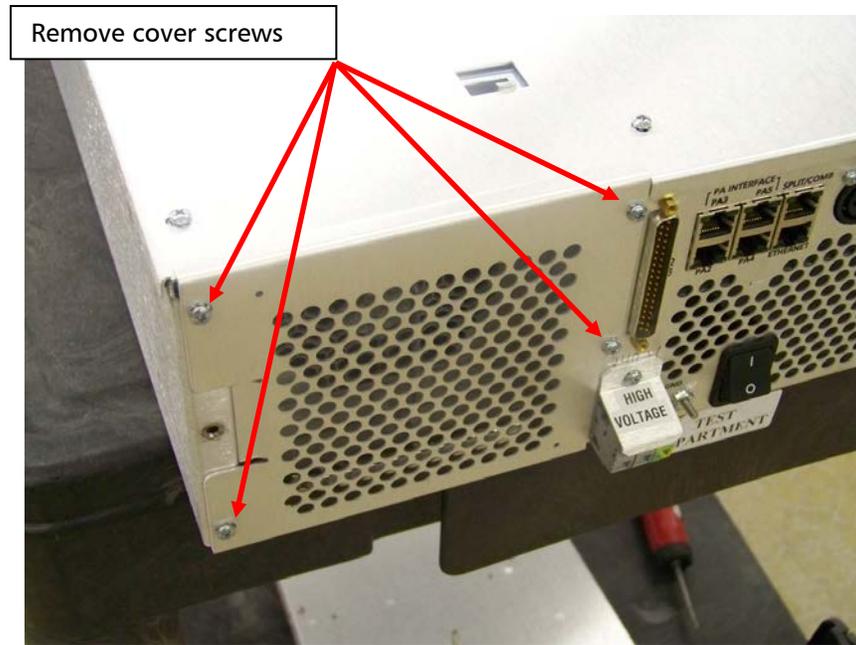


Figure 1. Remove Power Supply rear cover

**Step 3** – If your unit is equipped with the clear plastic power supply retainer, remove it now by rotating the piece out from the top.



Figure 2. Retainer removal

**NOTE:** Units shipped prior to December 2009 may not include this power supply retainer. This retainer will securely hold the power supply in place during transit and can be permanently installed because it does not impede airflow.

If your transmitter does not have this retainer, contact RF Technical Services and request part number 471-4260 while referencing this document (597-4101-003). This retainer will be provided at no charge, see the end of this guide for assembly instructions.

**Step 4** – Turn the power supply retaining arm counter clockwise to disengage it from the transmitter top cover. Then remove the transmitter top cover screws using a #2 Phillips screwdriver.

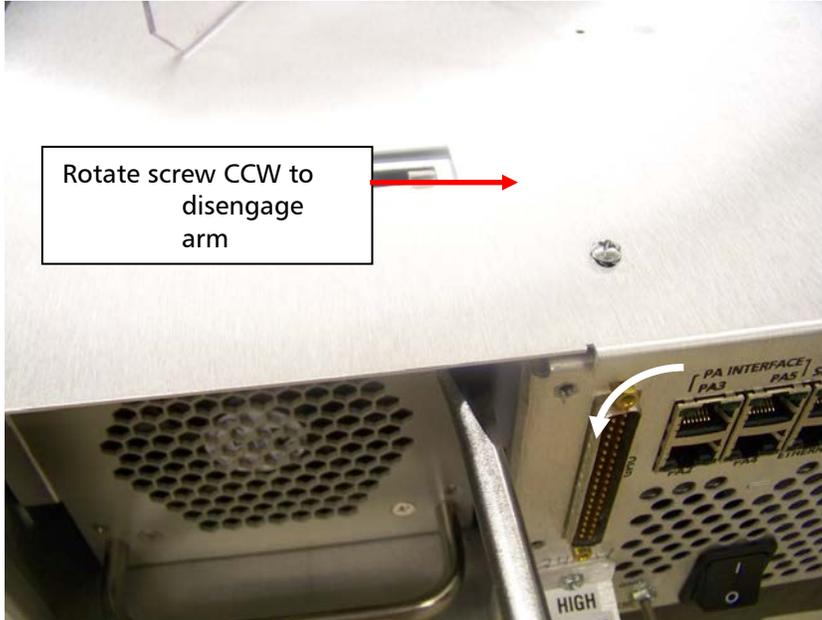


Figure 3. Disengage power supply

**Step 5** – Remove the power supply by grasping the handle and pulling the power supply out.



Figure 4. Remove power supply

**Step 6** – Disconnect the four wire harness connectors from the front side of the mother board.

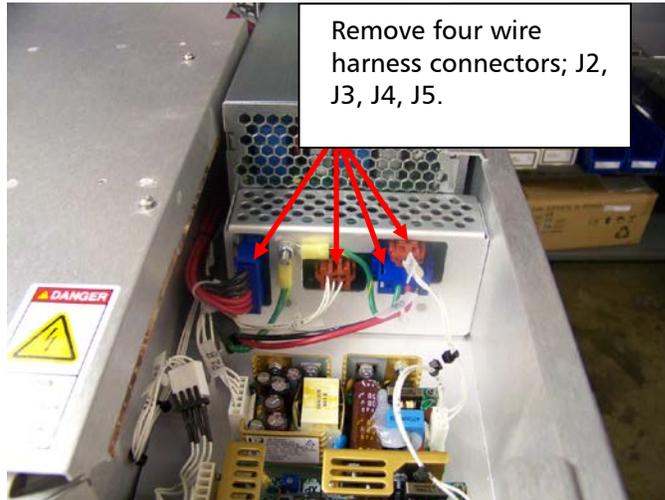


Figure 5. Disconnect wire harness

**Step 7** – Remove two #2 Philips head screws holding the mother board to the chassis.

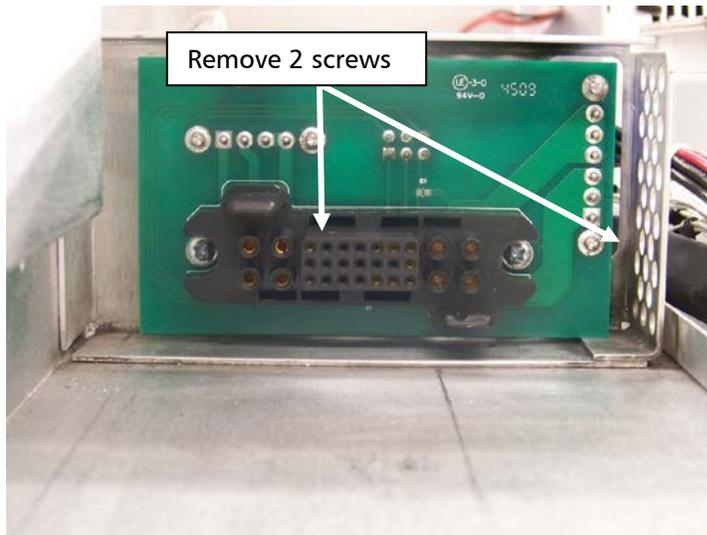


Figure 6. Remove mother board screws

**Step 8** – Remove the motherboard from the chassis and replace with new board.

**Step 9** – Assemble in the reverse order and return the transmitter to normal operation.

### 3.1 Power Supply Retainer Assembly Instructions

Assembling the 471-4260 STX Power Supply Retainer, snap pieces apart and assemble as shown:



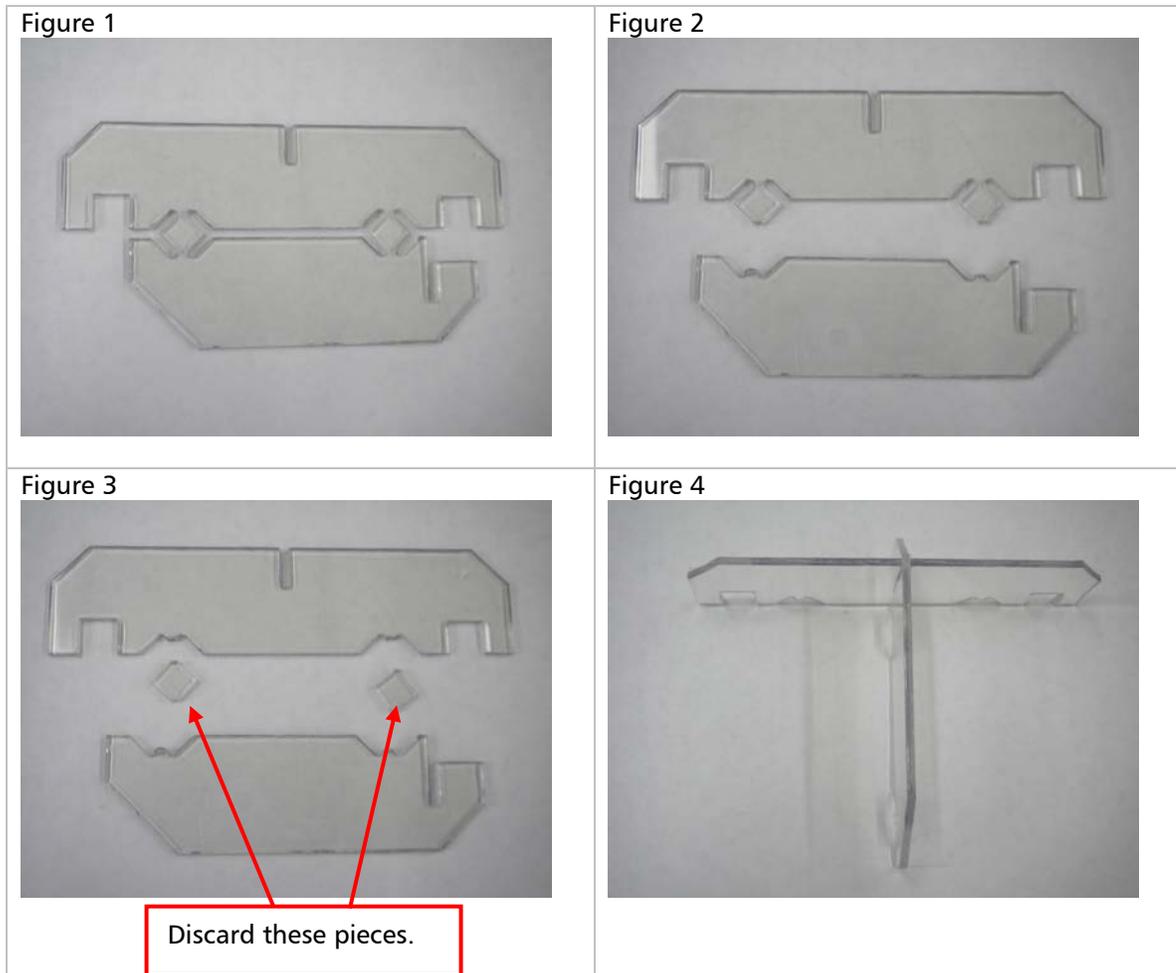


Figure 7. Power Supply Retainer

## 4 919-4090-200 Power Supply Mother Board

The 919-4090-200 Power Supply Mother Board is not interchangeable with the earlier 919-4090 version. The power supplies are also not interchangeable and all power supplies in an STX combined transmitter (STX-2, STX-3 and STX-5) must be the same.



**WARNING:** ENSURE ALL PRIMARY POWER IS DISCONNECTED BEFORE PROCEEDING.

**Step 1** – Power unit OFF, disconnect all transmitter primary power, remove from rack and place on bench. Remove top cover from unit.

**Step 2** – Remove the power supply rear cover screws using a #2 Phillips screwdriver to remove two mounting screws. Pull cover off using the cover handle.

**Step 3** – Insert Phillips screwdriver into exposed holes to loosen 2 Phillips screws inside allowing retainer to be slide to the side.

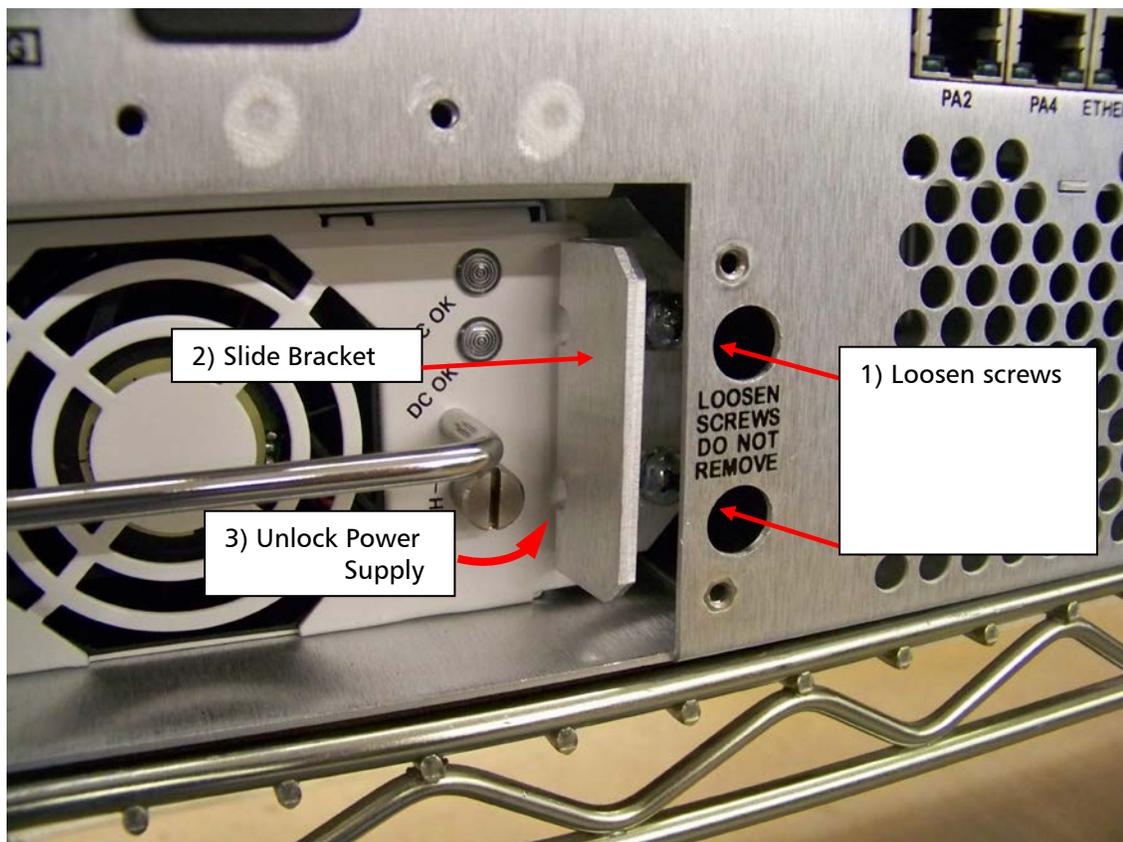
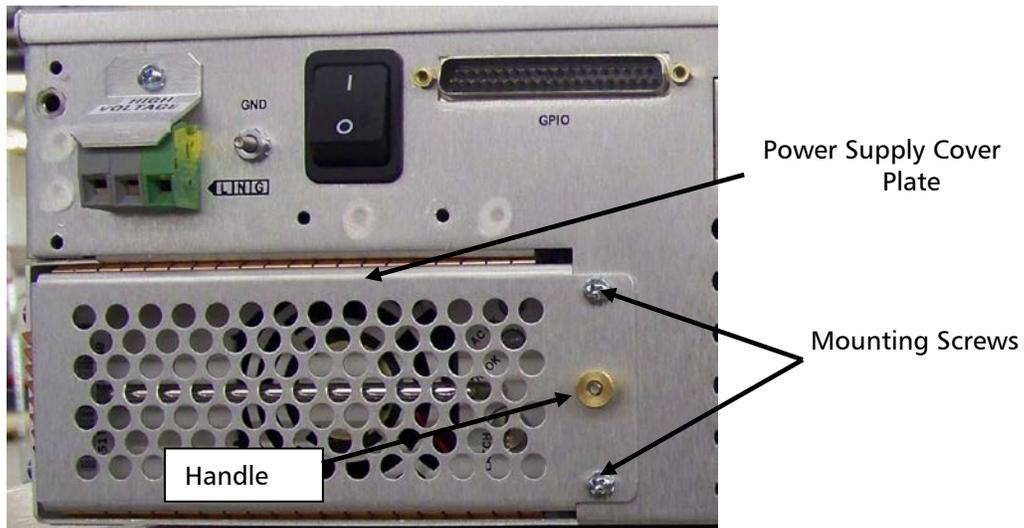


Figure 8. Remove Power Supply rear cover and power supply

**Step 4** – Unlock the power supply by rotating the power supply locking knob counterclockwise to disengage the mechanism.

**Step 5** – Gently pull on the power supply handle and slide the unit out of the chassis.

**Step 6** – Disconnect all wire harness connectors from board.

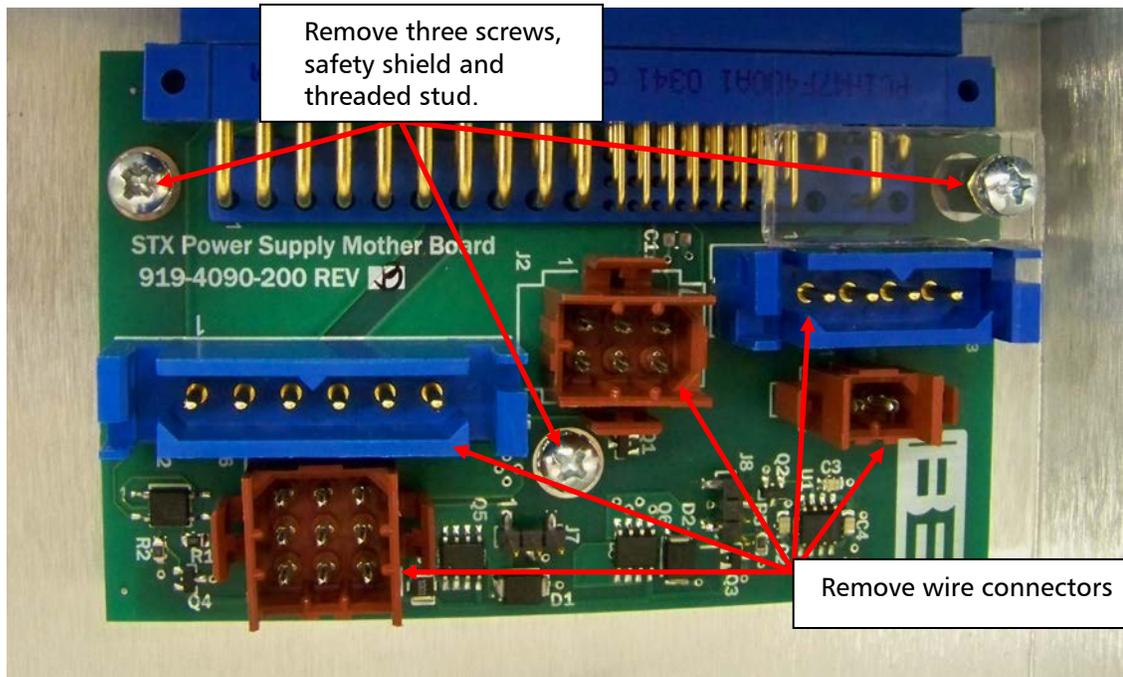


Figure 9. Power Supply Mother Board

**Step 7** – Remove three Philips screws from the Power Supply Mother Board.

**Step 8** – Remove clear safety shield and threaded stud under the shield.

**Step 9** – Remove board from chassis.

**Step 10** – Assemble in the reverse order and return the transmitter to normal operation.



Figure 10. Power Supply Mother Board installed in chassis.

## 4.1 Fan setting

The STX Power Supply Mother Board (part number 919-4090-200) comes equipped with a fan control circuit. The factory default setting for the fan control circuit is enabled, meaning that the internal fans will transition to a reduced speed when the unit is muted. However, BE has provided the option of allowing the fans to operate in high speed mode continuously (fan control circuit bypass mode) even when the transmitter is muted. To bypass the fan control circuit, and allow the transmitter fans to operate in high speed mode continuously, simply short J7 pins 1-2 and short J8 pins 1-2.

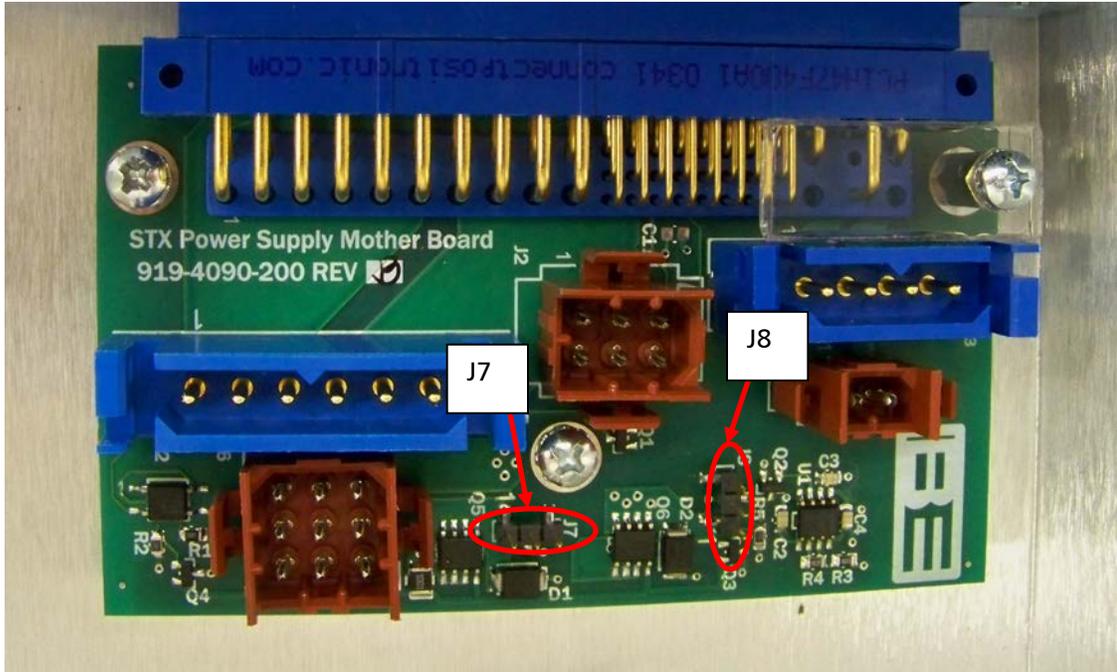


Figure 11. Fan speed selection if desired.

## 5 RF Technical Services Contact Information

RF Technical Services -

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