

#### GENERAL PRODUCT INFORMATION:



This product is ETL listed and suitable only for indoor dry locations and approved for use at any height above the finished floor.

A typical installation is shown. Specific installation must be in accordance with the local electrical codes.

All 120 volt transformer wires must be connected to the same phase.

This product is suitable for dry locations only.

This product may be dimmed only with a low voltage electronic dimmer. Using a dimmer not designed for low voltage electronic applications may work initially, but will eventually cause transformer failure and will void the warranty. The dimmer must be derated as indicated by the dimmer manufacturer.

This product is intended for use with Tech Lighting low voltage lighting systems only.

During installation, make sure all power connections are tight.

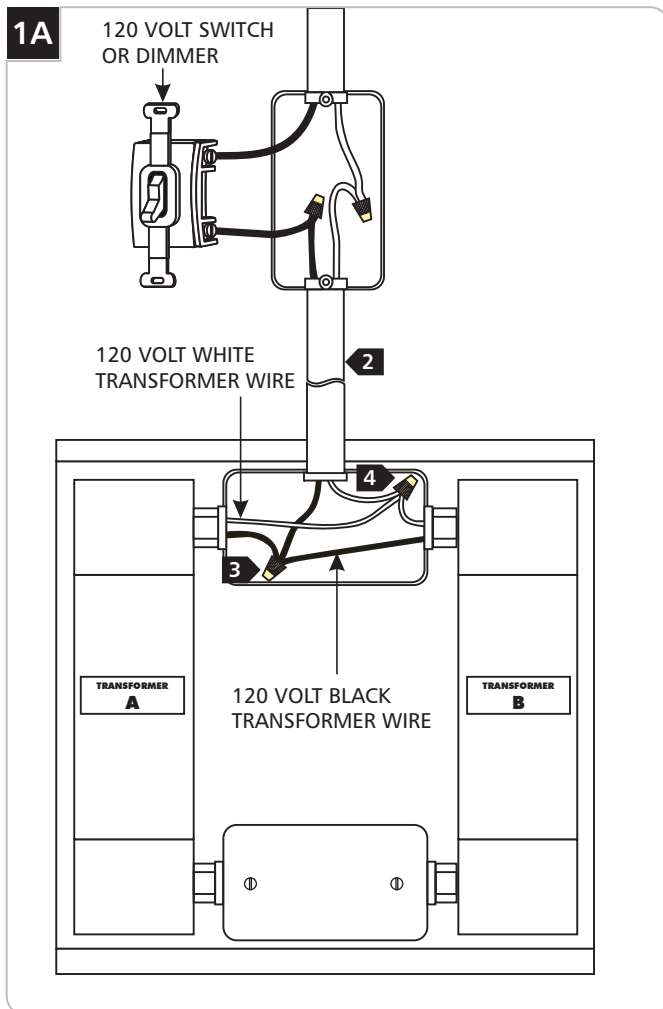
Read all instructions thoroughly. Read "Important Safety Information" on page 8 before proceeding with the installation.

#### CAUTION—RISK OF FIRE

This product requires installation by a qualified electrician. Before installing be sure to read all instructions and **TURN THE POWER TO THE ELECTRICAL BOX OFF.**

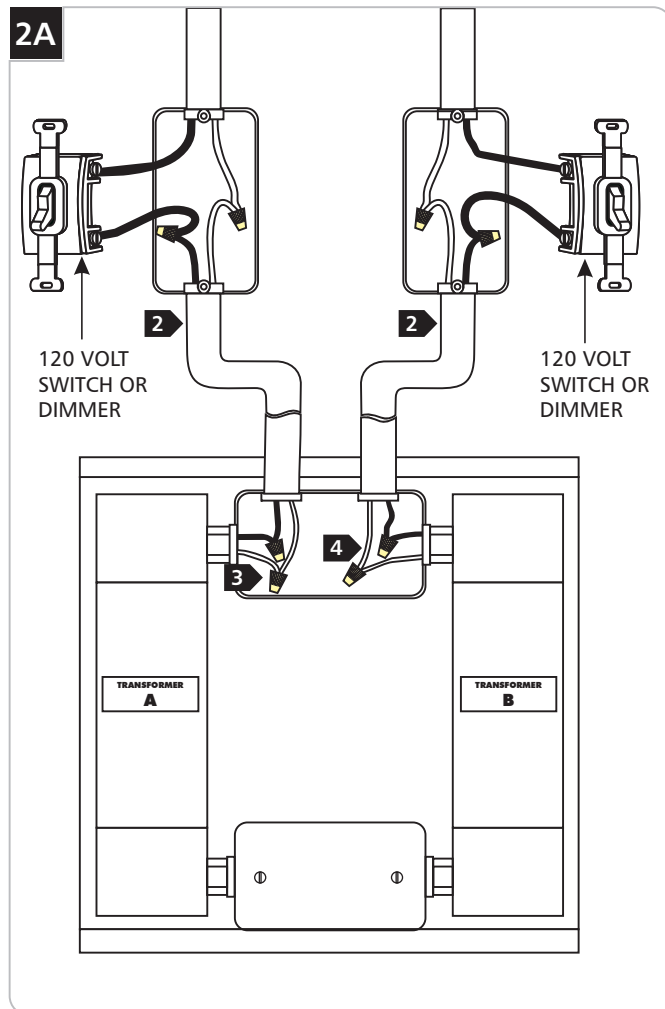
# 120 Volt Wire Connections

## PROCEDURE #1: Using One Switch or Dimmer to Power Both Transformers



- 1 Remove the 120 volt transformer junction box cover.
- 2 Install the wires from a 120 volt switch or dimmer to 120 volt transformer junction box.
- 3 Connect the 120 volt hot power line wire coming from the switch or the dimmer to 120 volt black transformer wires with a wire nut.
- 4 Connect the 120 volt neutral power line wire to 120 volt white transformer wires with a wire nut.
- 5 Replace the 120 volt transformer junction box cover.

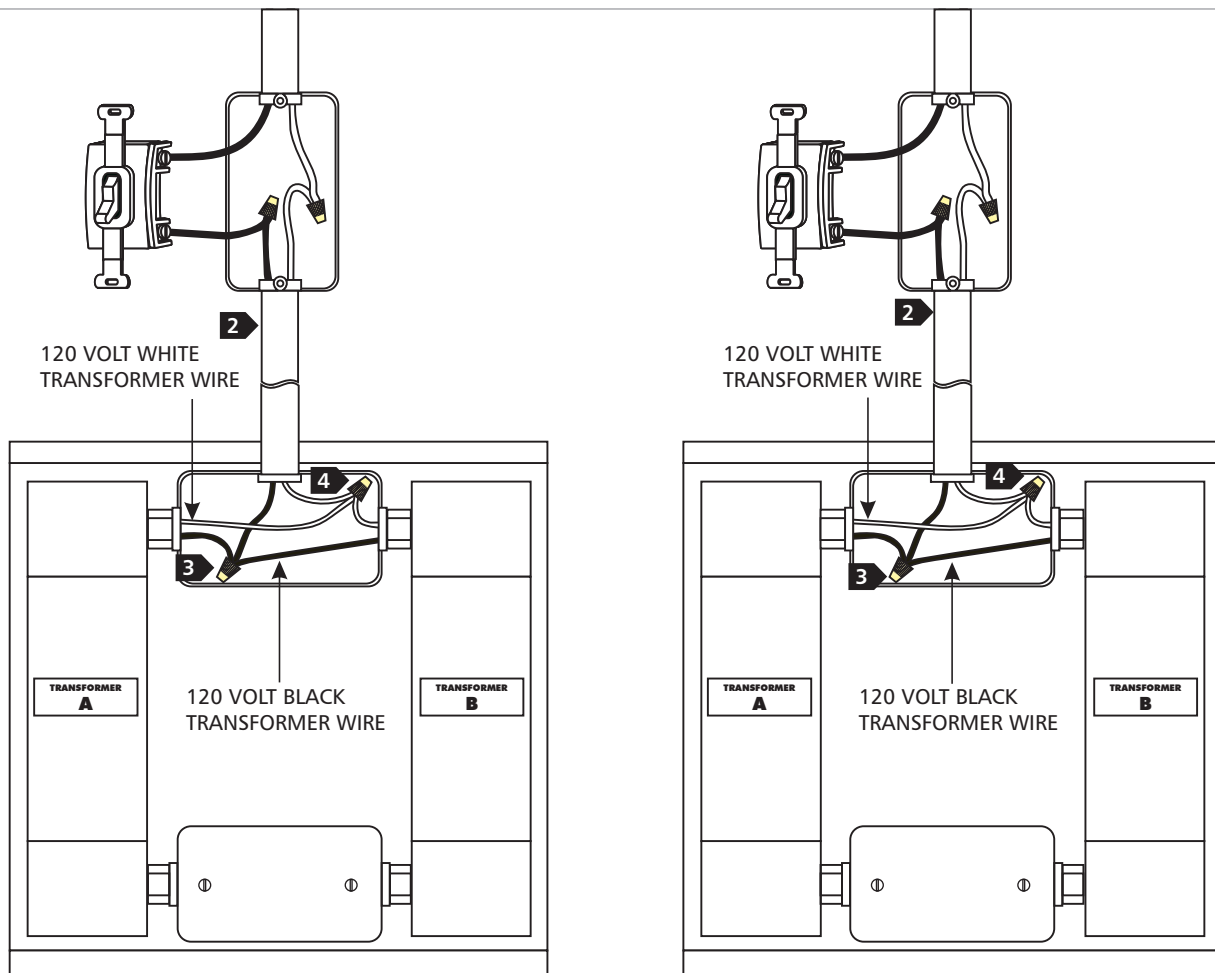
## PROCEDURE #2: Using Two Independent Switches or Dimmers to Power the Transformers



- 1 Remove the 120 volt transformer junction box cover.
- 2 Install the wires from a 120 volt switches or dimmers to 120 volt transformer junction box.
- 3 Connect the 120 volt hot and neutral power line wires of the left switch or dimmer to the 120 volt black and white transformer wires coming from the "TRANSFORMER A" respectively with wire nuts.
- 4 Connect the 120 volt hot and neutral power line wires of the right switch or dimmer to the 120 volt black and white transformer wires coming from the "TRANSFORMER B" respectively with wire nuts.
- 5 Replace the 120 volt transformer junction box cover.

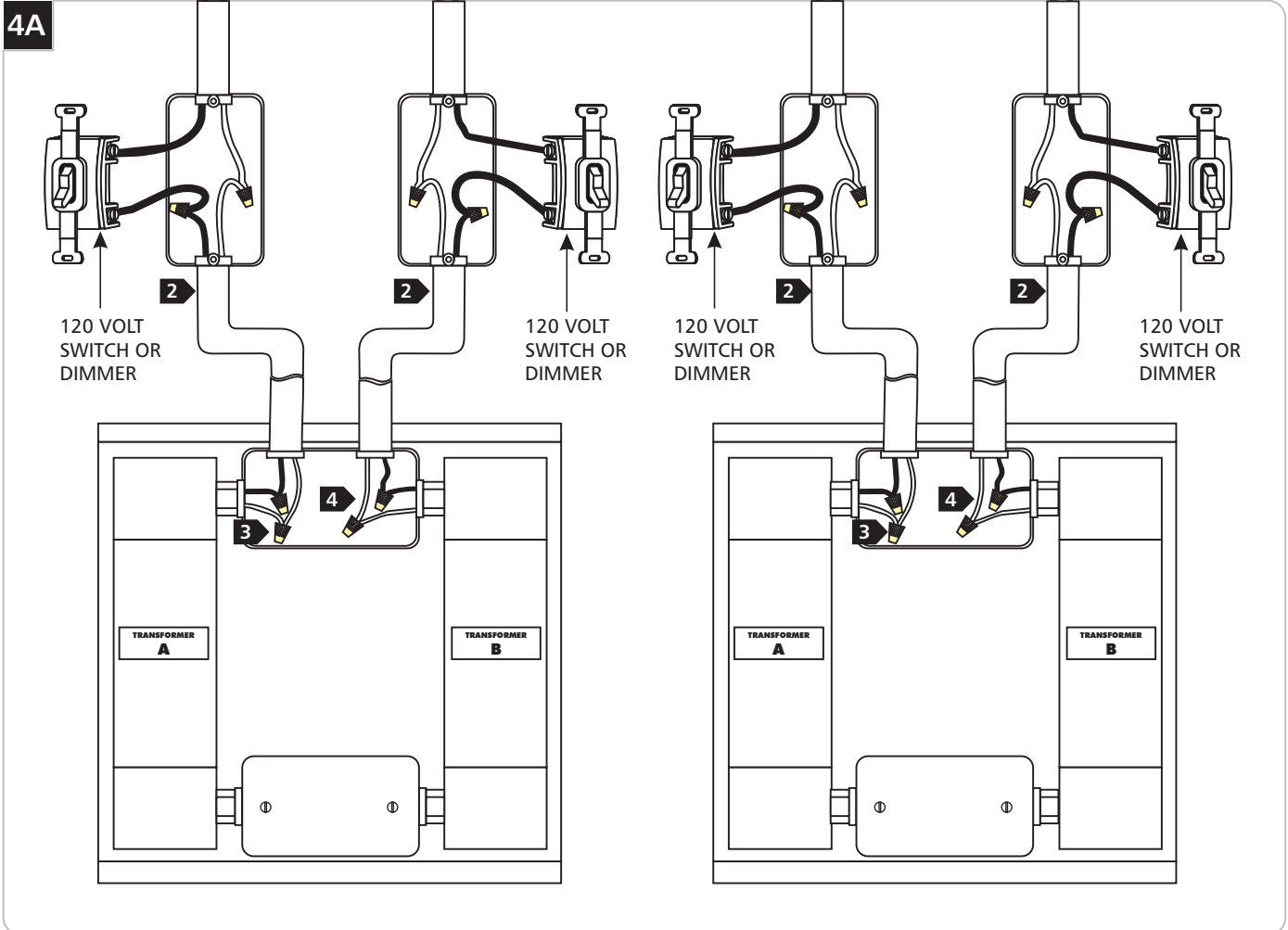
**PROCEDURE #3: Using Two Switches or Dimmers to Power Both Transformers of Each Transformer Set**

**3A**



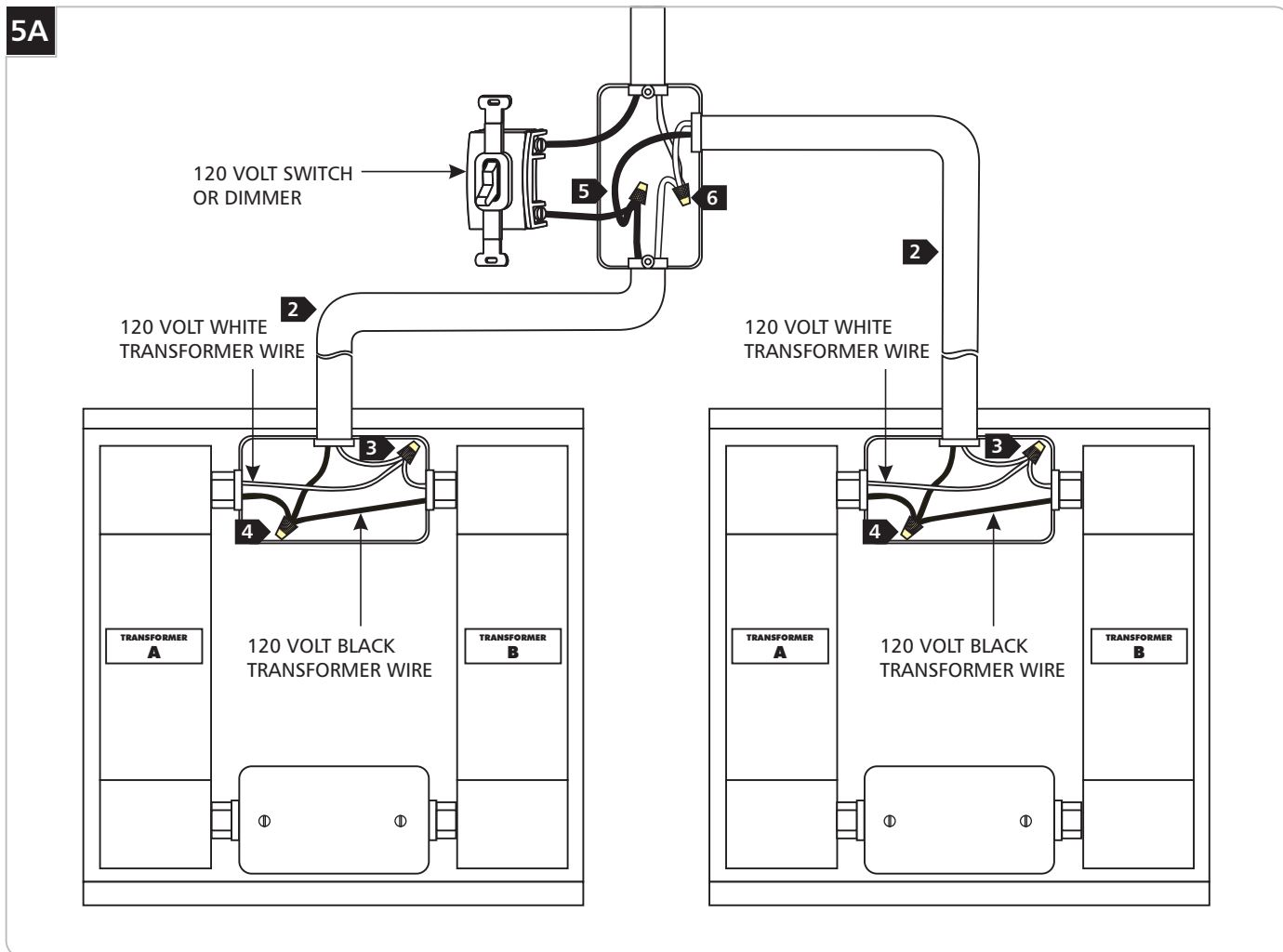
- 1 Starting with one transformer set, remove the 120 volt transformer junction box cover.
- 2 Install the wires from a 120 volt switch or dimmer to 120 volt transformer junction box.
- 3 Connect the 120 volt hot power line wire coming from the switch or the dimmer to 120 volt black transformer wires with a wire nut.
- 4 Connect the 120 volt neutral power line wire to 120 volt white transformer wires with a wire nut.
- 5 Replace the 120 volt transformer junction box cover.
- 6 Repeat steps 1 through 5 for the other transformer set.

**PROCEDURE #4: Using Four Independent Switches or Dimmers to Power the Transformer of Each Transformer Set**



- 1** Starting with one transformer set, remove the 120 volt transformer junction box cover.
- 2** Install the wires from a 120 volt switches or dimmers to 120 volt transformer junction box.
- 3** Connect the 120 volt hot and neutral power line wires of the left switch or dimmer to the 120 volt black and white transformer wires coming from the "TRANSFORMER A" respectively with a wire nut.
- 4** Connect the 120 volt hot and neutral power line wires of the right switch or dimmer to the 120 volt black and white transformer wires coming from the "TRANSFORMER B" respectively with a wire nut.
- 5** Replace the 120 volt transformer junction box cover.
- 6** Repeat steps 1 through 5 for the other transformer set.

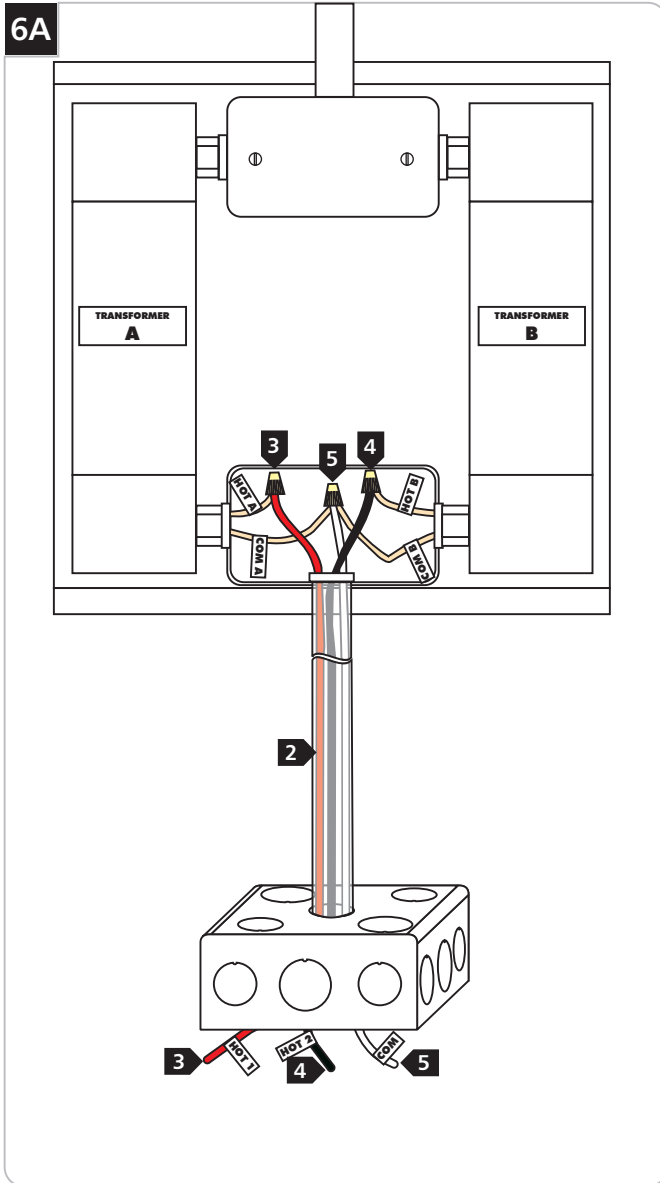
## PROCEDURE #5: Using One Switch or Dimmer to Power All four Transformers



- 1** Remove the 120 volt transformer junction box cover of each transformer set.
- 2** For each transformer set, run the two 120 volt wires from the switch or dimmer to the transformer 120 volt junction boxes.
- 3** In the 120 volt junction box of each transformer set, connect the 120 volt white wire of each transformer to the neutral 120 volt wire coming from the switch or dimmer electrical box with a wire nut.
- 4** Connect the 120 volt black wire of each transformer to the 120 volt hot wire coming from the switch or dimmer electrical box with a wire nut.
- 5** In the switch or dimmer electrical box, connect the black wires from each transformer set to the 120 volt hot power line wire coming from the switch with a wire nut.
- 6** Connect the white wires from each transformer set to the 120 volt neutral power line wire with a wire nut.
- 7** Replace the 120 volt transformer junction box covers.

# 12 Volt Low Voltage Wire Connections

## PROCEDURE #1: For a Single 2XAT300EL Transformer Set



- 1 Remove the 12 volt transformer junction box cover.
- 2 Run the three insulated THHN wires, the wires that are going to be connected to the transformer low voltage wires, from the 12 volt transformer junction box, into the electrical power feed box. For correct wire size refer to "LOW VOLTAGE WIRE SIZE TABLE" below.

**NOTE:** Other wire sizes that comply with electrical code can be used, but may result in an increased voltage drop and reduced lamp intensity.

**NOTE:** The THHN wire sizes are for 3% drop in voltage based on 300 watt loads. Lengths are the distance from the transformer to the system power feed connector.

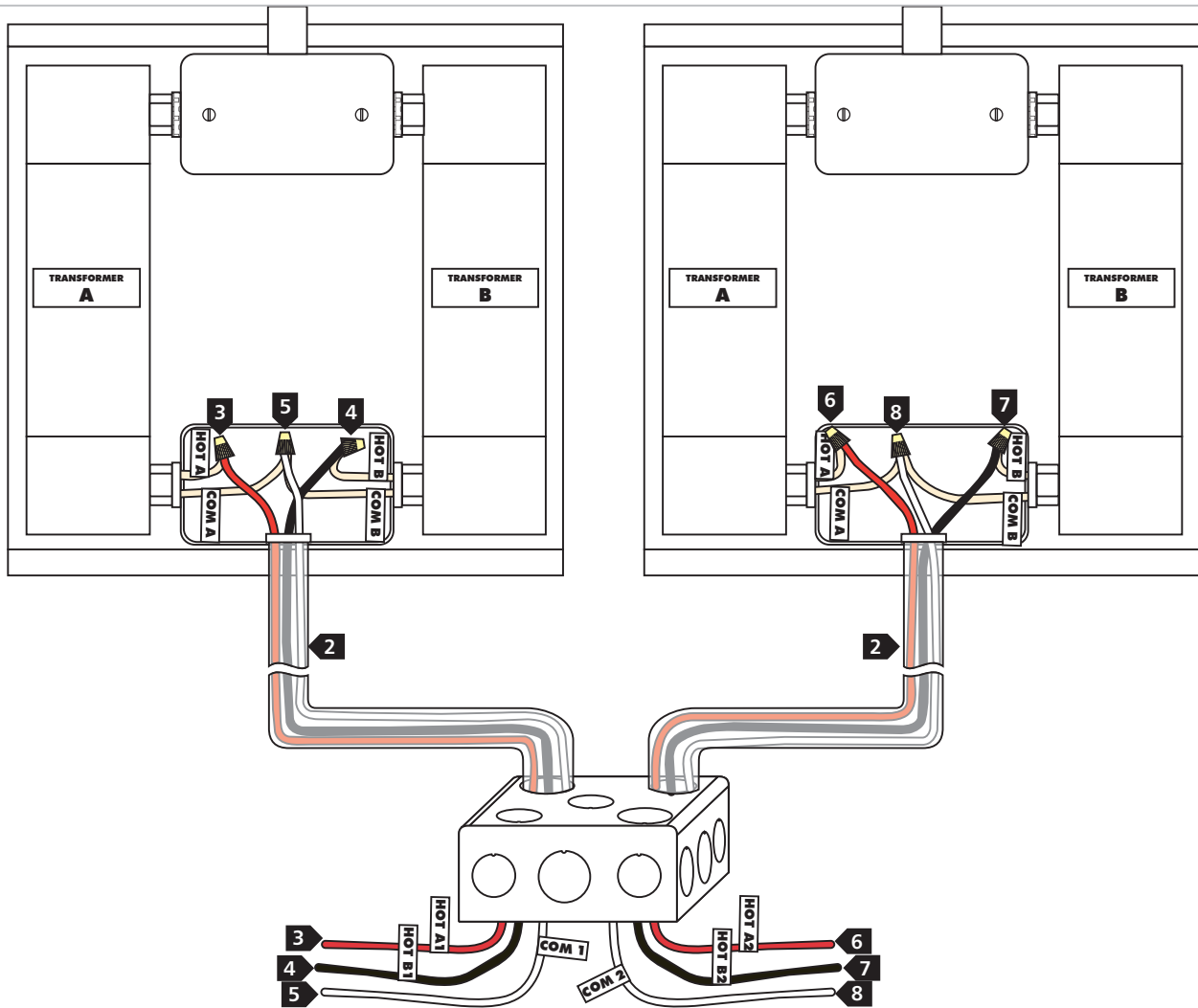
- 3 Connect the transformer wire marked "HOT" A to the first low voltage wire with a wire nut. Mark that low voltage wire in the electrical power feed box as "HOT 1".
- 4 Connect the transformer wire marked "HOT B" to the second low voltage wire with a wire nut. Mark that low voltage wire in the electrical power feed as "HOT 2".
- 5 Connect the transformer wire marked "COM A" and "COM B" to the third low voltage wire with a wire nut. Mark that low voltage wire in the electrical box as "COM".
- 6 Replace the 12 volt transformer junction box cover.

LOW VOLTAGE WIRE SIZE TABLE						
TRANSFORMER WATTAGE	WIRE SIZE FOR 5 FT	WIRE SIZE FOR 6-15 FT	WIRE SIZE FOR 16-20 FT	WIRE SIZE FOR 21-40 FT	WIRE SIZE FOR 40-60 FT	WIRE SIZE FOR 61-90 FT
300 WATT	#10 GA	#6 GA	#4 GA	#1 GA	#1/0 GA	#3/0 GA

**PROCEDURE #2: For Dual  
4XAT300EL Transformer Sets**

**NOTE:** The THHN wire sizes are for 3% drop in voltage based on 300 watt loads. Lengths are the distance from the transformer to the system power feed connector.

**6A**



- 1** From each transformer set, remove the 12 volt transformer junction box cover.
- 2** For each transformer set, run the three insulated THHN wires, the wires that are going to be connected to the transformer low voltage wires, from the 12 volt transformer junction box, into the electrical power feed box. For correct wire size refer to "LOW VOLTAGE WIRE SIZE TABLE" below.

**NOTE:** Other wire sizes that comply with electrical code can be used, but may result in an increased voltage drop and reduced lamp intensity.

- 3** In the 12 volt transformer junction box of the left 2XAT300EL transformer set, connect the transformer wire marked "HOT" A to the first low voltage wire with a wire nut. Mark that low voltage wire in the electrical power feed box as "HOT A1".
- 4** Connect the transformer wire marked "HOT B" to the second low voltage wire with a wire nut. Mark that low voltage wire in the electrical power feed as "HOT B1".
- 5** Connect the transformer wire marked "COM A" and "COM B" to the third low voltage wire with a wire nut. Mark that low voltage wire in the electrical box as "COM 1".

**LOW VOLTAGE WIRE SIZE TABLE**

TRANSFORMER WATTAGE	WIRE SIZE FOR 5 FT	WIRE SIZE FOR 6-15 FT	WIRE SIZE FOR 16-20 FT	WIRE SIZE FOR 21-40 FT	WIRE SIZE FOR 40-60 FT	WIRE SIZE FOR 61-90 FT
300 WATT	#10 GA	#6 GA	#4 GA	#1 GA	#1/0 GA	#3/0 GA

- 6 In the 12 volt transformer junction box of the right 2XAT300EL transformer set, connect the transformer wire marked "HOT" A to the first low voltage wire with a wire nut. Mark that low voltage wire in the electrical power feed box as "HOT A2".
- 7 Connect the transformer wire marked "HOT B" to the second low voltage wire with a wire nut. Mark that low voltage wire in the electrical power feed as "HOT B2".
- 8 Connect the transformer wire marked "COM A" and "COM B" to the third low voltage wire with a wire nut. Mark that low voltage wire in the electrical box as "COM 2".
- 9 Replace the 12 volt transformer junction box covers.

## Important Safety Information

Do not conceal or extend bus bar conductors through a building wall.

Do not install this lighting system in a damp or wet location.

To reduce the risk of fire and burns, do not install this lighting system where the uninsulated open bus bar conductors can be shorted or contact any conductive materials.

To reduce the risk of the system overheating and possibly causing a fire, make sure all the connections are tight.

Do not install fixture assemblies closer than six inches to curtains or similarly combustible materials.

Turn the electrical power off before modifying the lighting system in any way.

The fixtures used with the system must be identified to be used with the corresponding system.

Minimum volume of the electrical box must be 6 cubic inches (98 cubic centimeter).

The system is "ETL" listed for USA and Canada only when all the products used are supplied by Tech Lighting.

It is important to wire the remote transformer for the system as described in these instructions. Wrong hook up will double the current in the "COM" wire feeding the system. This could cause the wire overheat and melt.

Load the circuit of the remote transformers to no more than the maximum rated capacity as specified.

**SAVE THESE INSTRUCTIONS!**



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