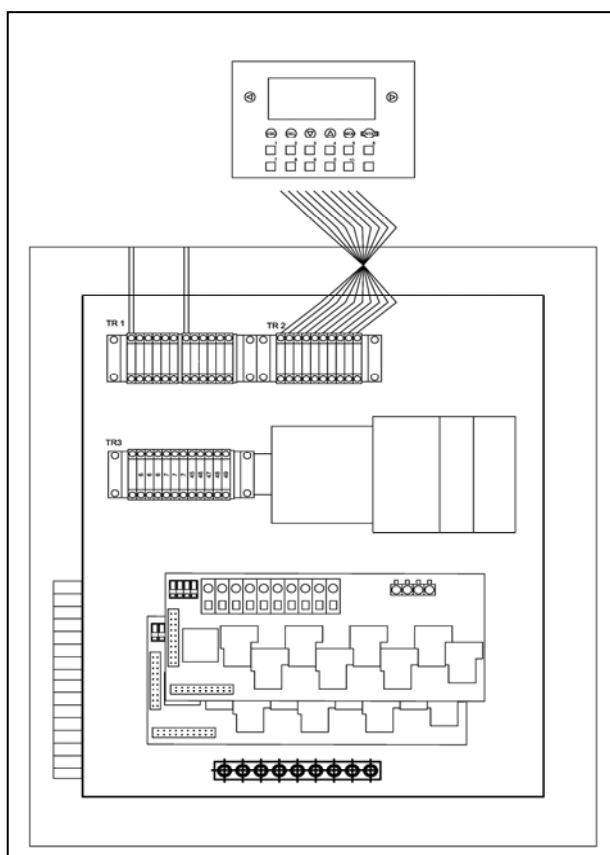




## TSC

**Models: 2000**



### **Installation Instructions**

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**Please read all instructions before attempting installation or operation of these units**

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**SAVE THESE INSTRUCTIONS FOR FUTURE USE**

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TSC 2000



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## TSC 2000



### ***Introduction***

The TSC 2000 system is comprised of two components. A text pad unit that provides the interface for the operator and one relay box that provides the control for the devices.

The system was developed to provide the operator ease of control without the need for keys that can be lost, misplaced, or broken. By creating a touch pad control station, the operator can conveniently operate all equipment in the gymnasium easily and efficiently. Controls for backstops, curtains, mats, batting cages, and even scoreboards and lights are available at the touch of a button.

The key pad is equipped from the factory with default passwords for the administrator and operator. The system administrator can easily reprogram each of these passwords to fit your individual security requirements. Further, the administrator can change the passwords as frequently as necessary.

TSC 2000 was designed with the capability to manually control each device and optionally control multiple devices for predetermined room setups. The factory must program predetermined setups such as practice configuration, wrestling configuration, etc. This is normally done at time of order of the system; however, these programs can be added at a later date by contacting the factory.

The TSC 2000 can also be equipped with a corded remote control for the keypad to allow for better visibility of the devices during manual operation.

<p><b>⚠ CAUTION</b></p> <p>ONLY TRAINED AND AUTHORIZED PERSONNEL SHOULD OPERATE THIS EQUIPMENT. OPERATION BY UNTRAINED OR UNAUTHORIZED PERSONNEL MAY RESULT IN DAMAGE TO THE EQUIPMENT OR STRUCTURE AND/OR INJURY TO ANYONE NEAR THE EQUIPMENT.</p> <p>OPERATION OF MORE THAN ONE DEVICE AT A TIME REQUIRES SPECIAL ATTENTION BY THE OPERATOR. THE OPERATOR SHOULD BE TRAINED IN OBSERVING MULTIPLE DEVICES IN MOTION AND FAMILIAR WITH THE TSC2000 KEYPAD OPERATION.</p> <p>ALWAYS MAKE SURE AREA AROUND AND BELOW THE EQUIPMENT IS CLEAR OF PERSONNEL AND OBSTACLES BEFORE OPERATING THE DEVICES.</p>	<p><b>⚠ CAUTION</b></p> <p>THIS EQUIPMENT IS TO BE INSTALLED BY A QUALIFIED ELECTRICIAN IN COMPLIANCE WITH ALL LOCAL, STATE, AND NATIONAL ELECTRIC CODES</p> <p>FOLLOW INSTALLATION SEQUENCE TO PREVENT DAMAGE OR INJURY FROM ELECTRICAL SHOCK</p> <p>KEYPAD MUST BE MOUNTED IN CLEAR VIEW OF THE BACKSTOPS TO BE OPERATED BY THE SYSTEM KEYPAD SHOULD BE MOUNTED IN A 12 BY 12 BY 6 DEEP BOX AT A CONVENIENT HEIGHT FOR AUTHORIZED USERS</p>
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**⚠ CAUTION**

DO NOT ATTACH THE COMMON OR 24V WIRE TO THE "L" OR "N" TERMINALS OR THE MOTOR TERMINALS IN THE RELAY BOX.

THE SYSTEM WILL NOT FUNCTION PROPERLY AND DAMAGE COULD RESULT TO THE CONTROL SYSTEM IF THE COMMON OR 24V WIRE ARE NOT CONNECTED TO APPROVED BOARD OR PLC OUTPUT TERMINALS

**⚠ WARNING**

Do not drill relay box. Sensitive equipment contained inside are susceptible to damage from metal shavings.

**⚠ WARNING**

DC COMMUNICATION LINES SHOULD NEVER CROSS ANY AC LINES. THEY MUST BE IN THEIR OWN CONDUIT AND RUN SEPARATE FROM ANY AC CONDUIT.

**⚠ WARNING**

DO NOT MOUNT RELAY BOX UPSIDE DOWN IN CEILING. SYSTEM IS NOT DESIGNED TO BE INSTALLED IN THIS MANNER. SYSTEM FAILURE WILL OCCUR.



## TSC 2000



### INSTALLATION INSTRUCTIONS

Tools Required:

Drill

Phillips screwdriver

Straight edge screwdriver

Ratchet with sockets

#### Installation Procedure

System consists of one (1) relay box and one (1) keypad assembly supplied by Performance Sports Systems.

**Determine location for relay box. Relay box should be securely mounted in a location as near as possible to the center of all backstops and/or curtains being controlled in order to minimize wiring.**

**Determine location for keypad. Keypad should be located at a convenient height for authorized users. Keypad must be located such that the authorized user has full view of gymnasium equipment at all times when operating controls. Keypad is designed to fit a standard 12 by 12 by 6 deep box.**

**Once the relay box and keypad have been located and properly mounted, wiring of the system can be accomplished.**

**Refer to System Wiring Configuration drawing (Page 5) from Performance Sports Systems, Model TSC 2000X Total System Control. Refer to design form for wiring location of all motors in the system to corresponding relay board location.**

NOTE: MOUNT RELAY BOX IN A CENTRALIZED LOCATION OF ALL THE EQUIPMENT BEING CONTROLLED.

IMPORTANT: THE SHIELD OF THE COMMUNICATION WIRE BETWEEN THE RELAY BOX AND THE INTERFACE MUST BE GROUNDED

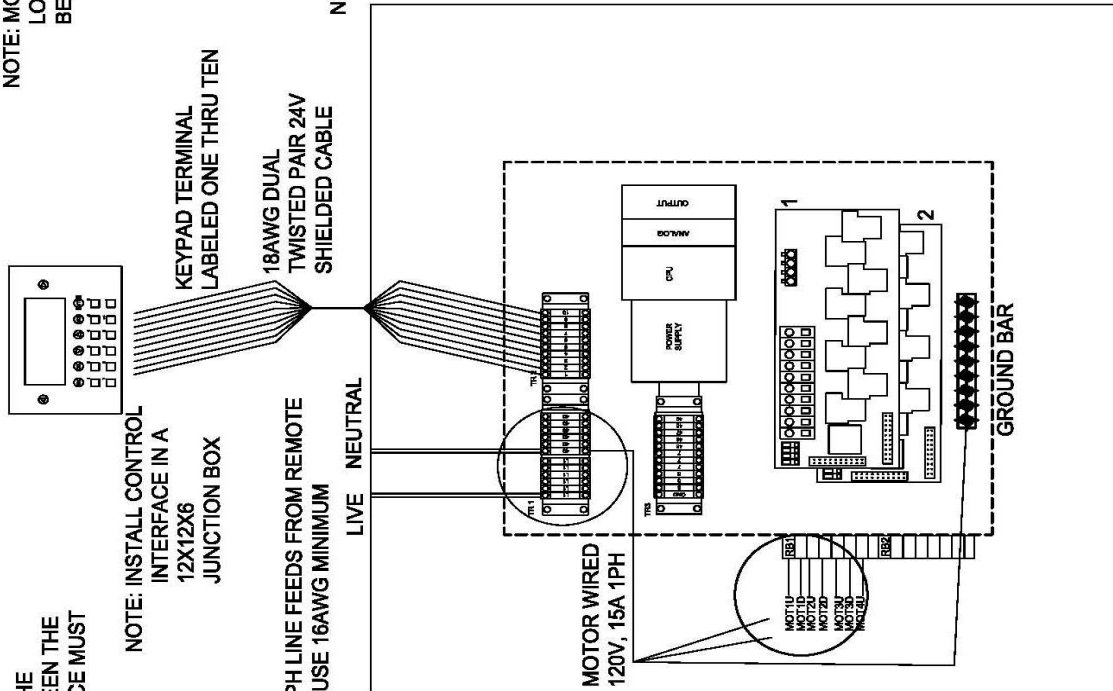
NOTE: INSTALL CONTROL INTERFACE IN A 12X12X6 JUNCTION BOX

120V, 30A 1PH LINE FEEDS FROM REMOTE BREAKERS USE 16AWG MINIMUM

NOTE: LOCATE KEYPAD ON WALL AT A CONVENIENT HEIGHT FOR AUTHORIZED USERS.

AUTHORIZED USER MUST HAVE FULL VIEW OF GYMNASIUM EQUIPMENT AT ALL TIMES WHEN OPERATING.

ALL OTHER ELECTRICAL, JUNCTIONS AND SYNCHRONIZER BOXES ARE TO BE INSTALLED BY A CERTIFIED ELECTRICAL CONTRACTOR. FOLLOW ALL LOCAL CODES AND MANUFACTURER'S INSTRUCTIONS.



NOTE: THIS DRAWING IS FOR REFERENCE ONLY AND SHOULD NOT BE USED FOR WIRING EQUIPMENT. REFER TO THE TSC INSTALLATION INSTRUCTIONS PROVIDED WITH THE SUBMITTAL PACKAGE FOR SPECIFIC WIRING INSTRUCTION WHEN INSTALLING ELECTRICAL WIRING AND EQUIPMENT.

REVISION		
REV.	DATE	BY
-	-	-

Gared Holdings, LLC  
9200 E. 146th St. Noblesville, IN 46060

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TSC 2000

DRAWN	DAVID PERRY	DATE	5/22/08	MATERIAL	-
APPROVED	name	DATE	99/99/99	FINISH	-
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SIZE	SCALE	SHT. NO.	PART NO.	TSC2000	
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# TSC 2000



## Sequence 1 - Connect keypad and relay box control wiring as follows:

Requires 18AWG Dual Twisted Pair shielded cable

1. Connect wires one thru ten and note color.

**NOTE:** Make note of wire color attached to each terminal (example terminal 1 = Red and terminal 2 = Black). This may vary depending on brand of twisted pair shielded cable in use.

2. At the relay box, proceed as follows:
  - a. Connect the wire color of terminal 1 at the relay box to the terminal 1 in keypad box
  - b. Connect the wire color of terminal 2 at the relay box to the terminal 2 in keypad box
  - c. Connect the wire color of terminal 3 at the relay box to the terminal 3 in keypad box
  - d. Continue this till all ten are connected

24V Control Wiring		
Wire	Relay Box Terminal ID	Keypad Terminal ID
Dual Twisted Pair - Pair 1, Wire 1	1	1
Dual Twisted Pair - Pair 1, Wire 2	2	2
Dual Twisted Pair - Pair 2, Wire 1	3	3
Dual Twisted Pair - Pair 2, Wire 2	4	4
Dual Twisted Pair - Pair 3, Wire 1	5	5
Dual Twisted Pair - Pair 3, Wire 2	6	6
Dual Twisted Pair - Pair 4, Wire 1	7	7
Dual Twisted Pair - Pair 4, Wire 2	8	8
Dual Twisted Pair - Pair 5, Wire 1	9	9
Dual Twisted Pair - Pair 5, Wire 2	10	10

Note: Communication wiring should remained twisted until ½” before entering terminal block. shield of wire should be within 1 to 1 ½” to terminal block.

Note: Shield of communication wire should be grounded in the relay box or the operators terminal. Not both places.



**Sequence 2 - Connect device motors to relay box as follows:**

Requires a 4 wire line sized appropriately for the length of run (minimum recommended size as follows):

- 12 AWG for up to 90 feet of run
  - 10 AWG for 90 feet to 140 feet of run
  - 8 AWG for 140 feet to 240 feet of run
  - 6 AWG for 240 feet to 380 feet of run
1. Connect the motor wires from the hoists and/or 115V Curtains to the relay box as noted in design form. Land any other devices as noted in the design form.

Note: Ground connections can be made to any open GND terminal on the Ground strip.

When Ground connections are not required, N/A will be noted in the wiring chart.

**Sequence 3 - Connect power to relay box as follows:**

Electrical Service Requirements - 120V, 30A, 1PH service

Power can be run directly to the relay box. Feed line should be sized appropriately for the length of run to meet the electrical service requirements.

1. Connect the power wires to the relay box as follows:
  - Live or Load wire to terminal L1
  - Neutral wire to terminal 40
  - Ground wire to Ground Bar

Note: AC wires should not be near the DC terminal blocks. This can cause communication interruption.

**Sequence 4 – Plug all open holes.**

- 1) After installation of conduit and wire, all open holes must be plugged by electrician.



## TSC 2000



### **Wiring Practices:**

All AC wiring should be routed away from DC wiring and should never intersect or cross. Allowing that can cause communication issues with an installed system. All device wiring should go to the left or right side. It can also go out through the bottom of the box. Input AC should always come in the upper left corner.

Relay box location is suggested to be somewhere easily accessible in an electronics room or cat walk. The reason for this is that the manual override option is still intact. Do not install the box on the ceiling. The system is not designed to be able to be installed in this manner. This will cause operation problems.

**Contact Performance Sports Systems at 800-848-8034 for questions or additional information concerning the TSC 2000X Total System Control installation.**

### Notes:



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