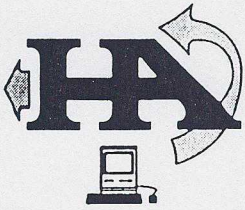


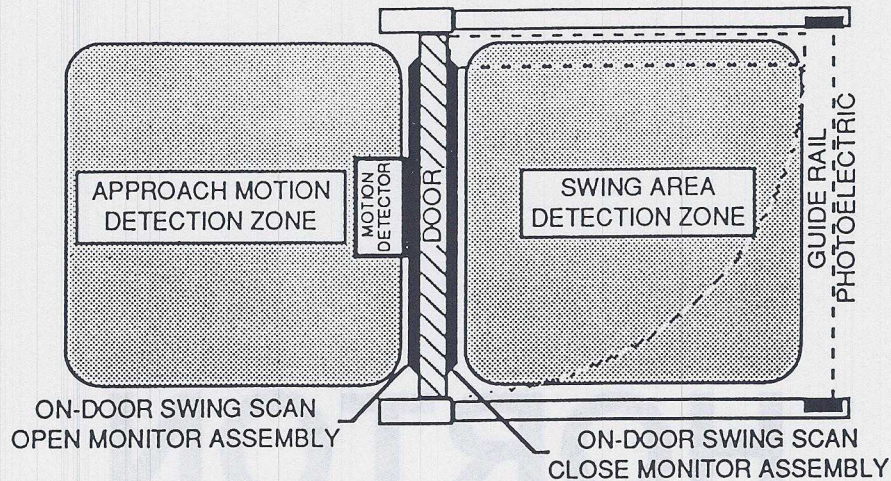
HORTON

SWING-SCAN



PRELIMINARY SPECIFICATIONS - HORTON ON-DOOR SWING SCAN SYSTEM

03DEC87
REV 01FEB87
REV 16APR88



The Horton On-Door Swing Scan system shall consist of 2 - Swing Scan Photoelectric Assemblies, 1 - Motion Detector, 1 - Photoelectric mounted in the Guide Rail, and 1 - Interface Control per door panel.

A Swing Scan Photoelectric Assembly shall be mounted on each side of the door panel approximately 30" above the floor. Each unit shall be capable of two separate detection ranges with independent, adjustable ranges from 0 to 5 feet. The detection range in use shall be controlled by the Interface Control. The Interface Control shall have four adjustable timing circuits with 0 minimum and 15 seconds maximum.

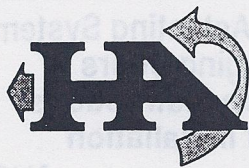
Standard operation shall be as follows:

Door Closed - Open Monitor Swing Scan turned off, Close Monitor Swing Scan on long range, Approach Motion Detector and Guide Rail photoelectric active.

Swing Area Detection Zone Entered - Door remains closed and will not open for 1.5 seconds after zone is cleared. The Guide Rail photoelectric will also prevent the door from opening.

Approach Motion Detection Zone Entered - Door operator is actuated. The Open Monitor Swing Scan is immediately activated in short range. The Close Monitor unit remains in long range, but the first timer is activated which, upon completion, will switch the unit to short range. A second timer then begins, which will turn off the Close Monitor unit upon expiration. During the timing cycle of both timers, if the Close Monitor Swing Scan is actuated, the Interface Control will switch the operator to Swing-Safe opening speed. A signal from the Guide Rail photoelectric will also switch the operator to Swing-Safe.

Open Monitor Swing Scan Cleared - 1.5 seconds after clearing, the door operator will be allowed to close. The Open Monitor unit will remain in short range and the Close Monitor unit will remain off. A third timer is initiated that, upon completion, will turn on the Close Monitor Swing Scan in short range. During this timing cycle, any reactivation of the Approach Motion Detector (or Open Monitor Swing Scan) will cause the door to reopen in Swing-Safe speed. Upon completion of this timing cycle, a fourth timer is then initiated which, upon expiration, will turn off the Open Monitor unit, and return the Close Monitor Swing Scan to its long range (approximately when the door will reach fully closed). During this timing cycle, any actuation of the Close Monitor unit will prevent the door from reopening. The Guide Rail photoelectric will serve as a hold open detector until the door starts to close, and will then serve as a safety detector and prevent the door from reopening.



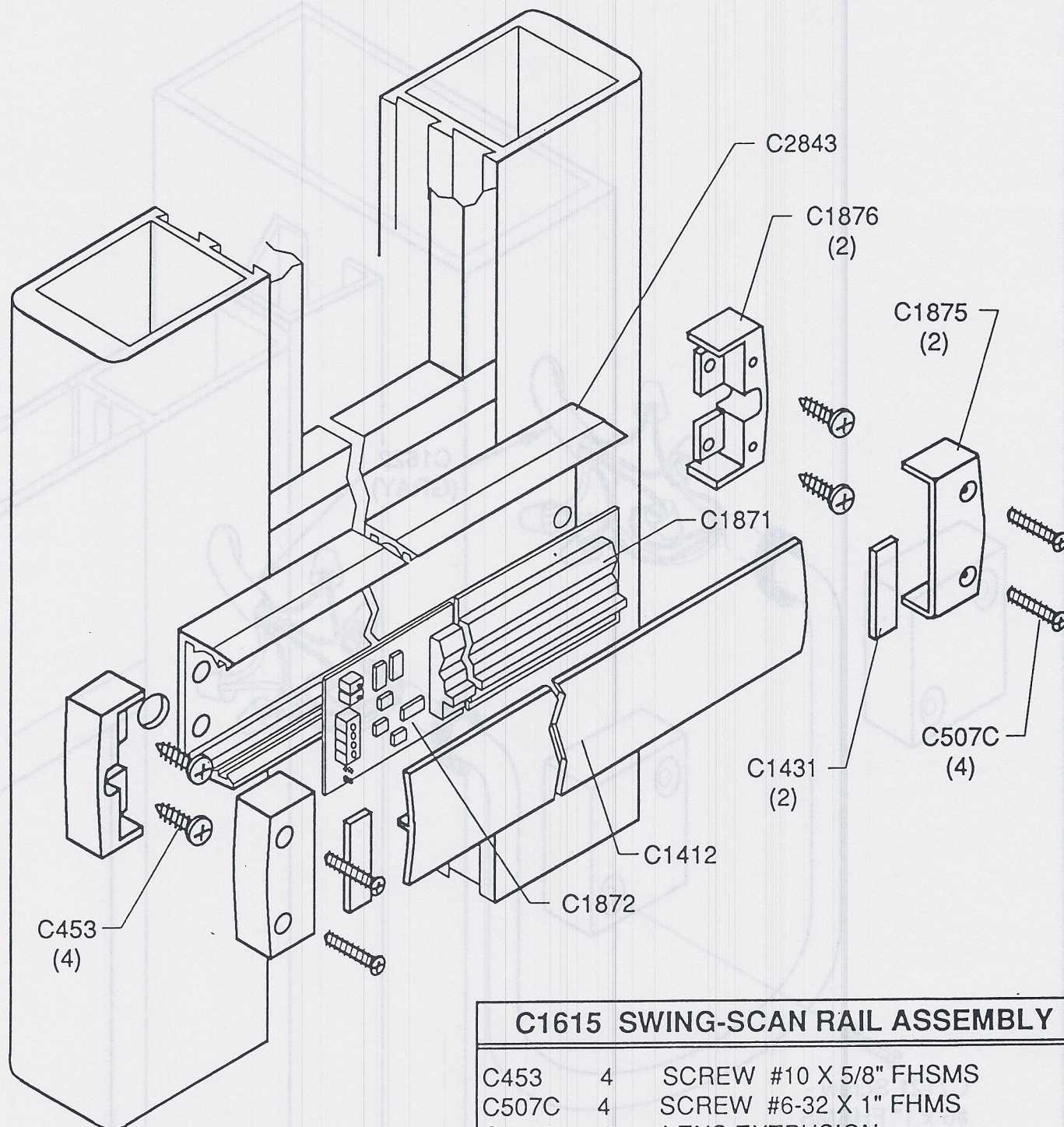
Horton Automatics

A Division of Overhead Door Corporation
4242 Baldwin Boulevard
Corpus Christi, Texas 78405
512-888-5591 1-800-531-3111

Series 1600 Swing-Scan Actuating System for Automatic Swinging Doors Preliminary Installation Instructions SwingScan Exploded View

Page 1

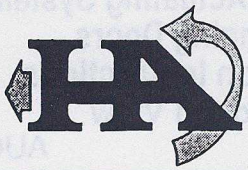
AUG'90



C1615 ASSEMBLY TO BE MOUNTED
APPROXIMATELY 24" - 28" ABOVE THE
FLOOR, OR IN THE CENTER OF THE
OPEN AREA BETWEEN THE TOP OF
THE GUARD RAIL PANEL AND THE TOP
HORIZONTAL OF THE GUARD RAIL.

C1615 SWING-SCAN RAIL ASSEMBLY

C453	4	SCREW #10 X 5/8" FHSMS
C507C	4	SCREW #6-32 X 1" FHMS
C1412	1	LENS EXTRUSION (CUT TO LENGTH)
C1431	2	FOAM SEAL FOR ENDCAP
C1871	0-3	SLAVE 6" CIRCUIT BOARD (QTY VARIES)
C1872	1	MASTER 24" CIRCUIT BOARD
C1875	2	ENDCAP COVER
C1876	2	ENDCAP MOUNTING BRACKET
C2843	1	ALUMINUM EXTRUSION (CUT TO LENGTH)



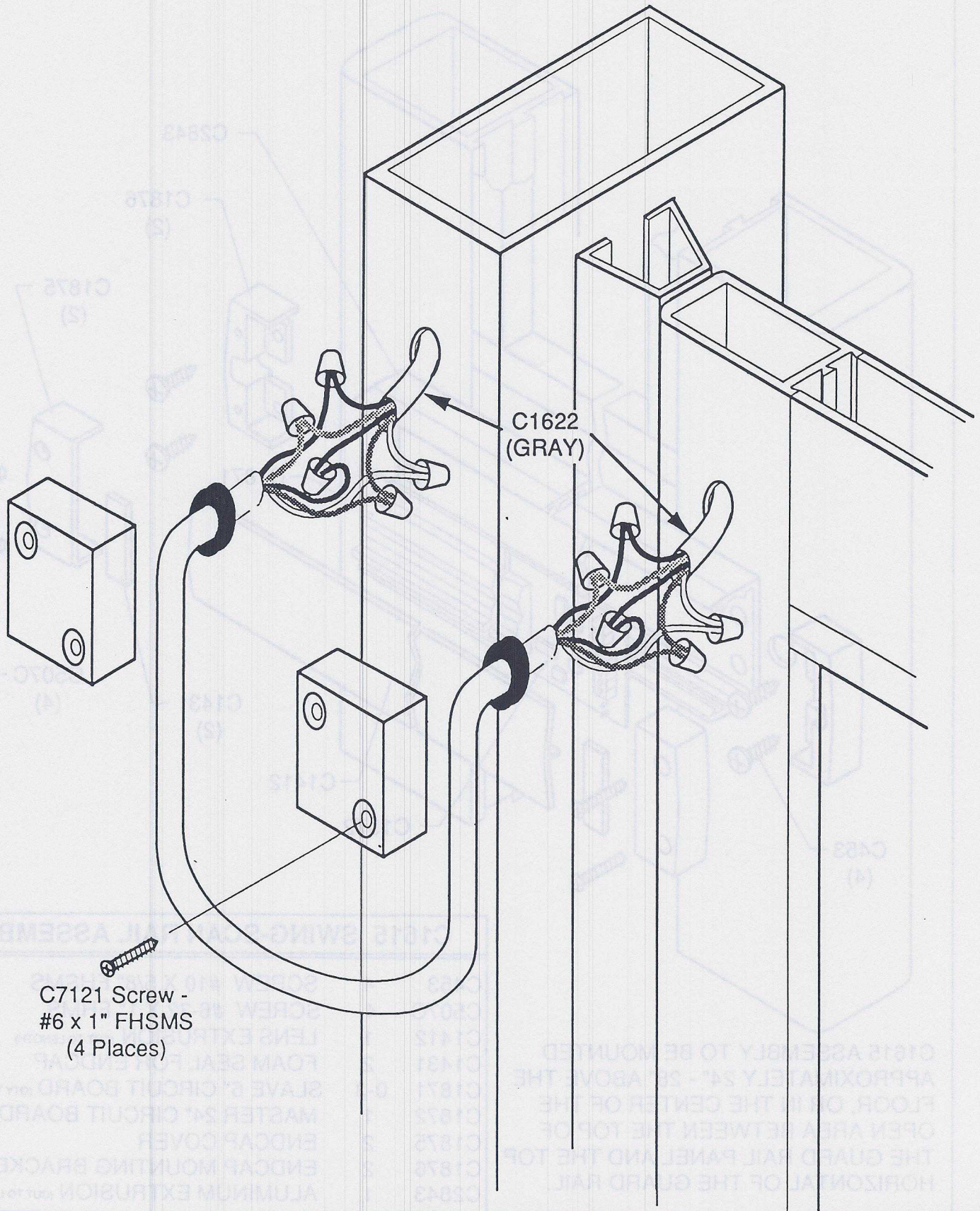
Horton Automatics

A Division of Overhead Door Corporation
4242 Baldwin Boulevard
Corpus Christi, Texas 78405
512-888-5591 1-800-531-3111

Series 1600 Swing-Scan Actuating System for Automatic Swinging Doors Preliminary Installation Instructions C7145-1 Door Cord Installation

Page 2

AUG'90





Horton Automatics

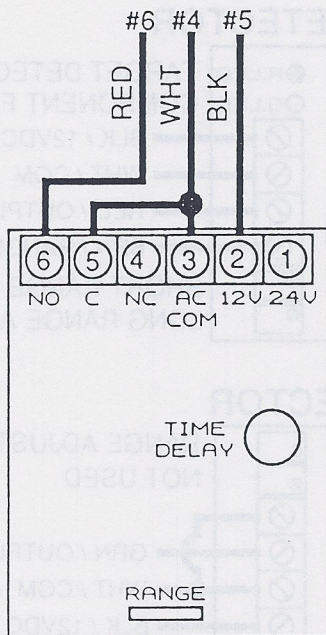
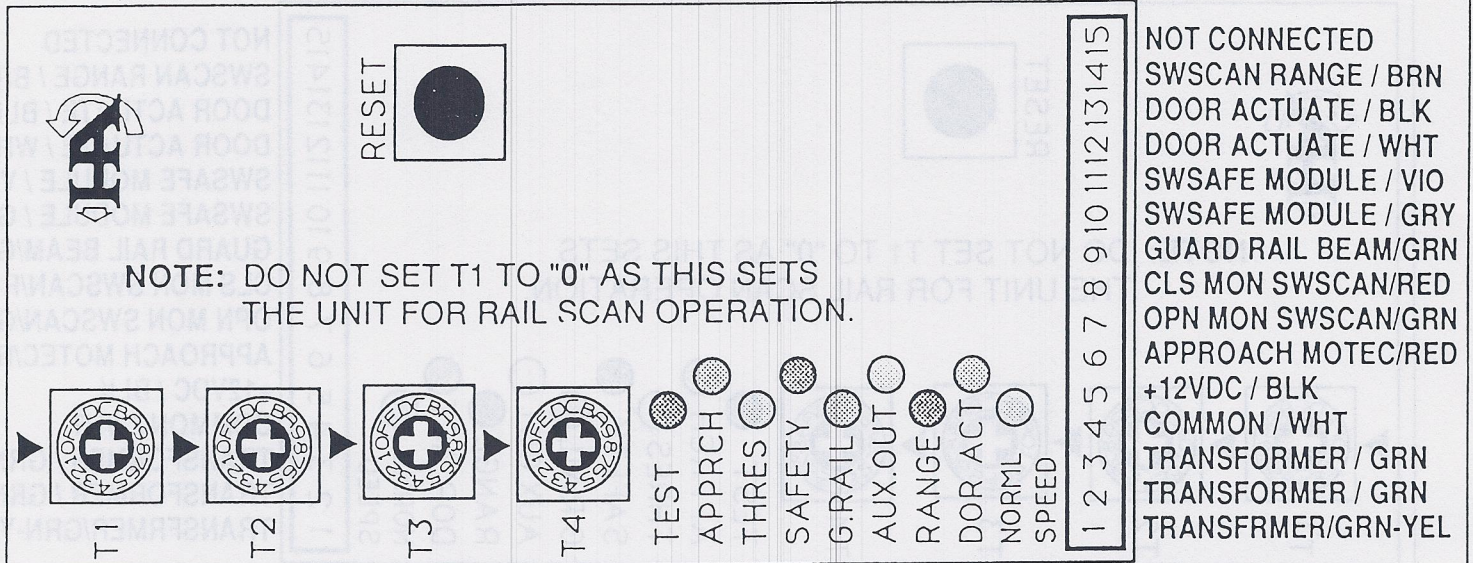
A Division of Overhead Door Corporation
4242 Baldwin Boulevard
Corpus Christi, Texas 78405
512-888-5591 1-800-531-3111

Series 1600 Swing-Scan Actuating System for Automatic Swinging Doors Preliminary Installation Instructions Motion Detector Actuation

Page 3

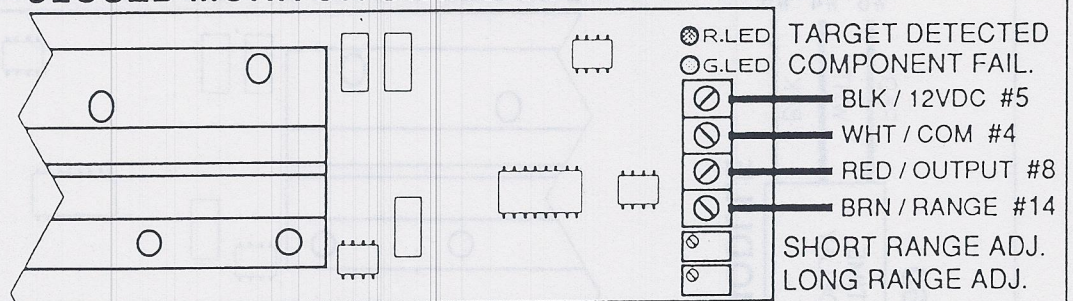
AUG'90

SWING SCAN CONTROL

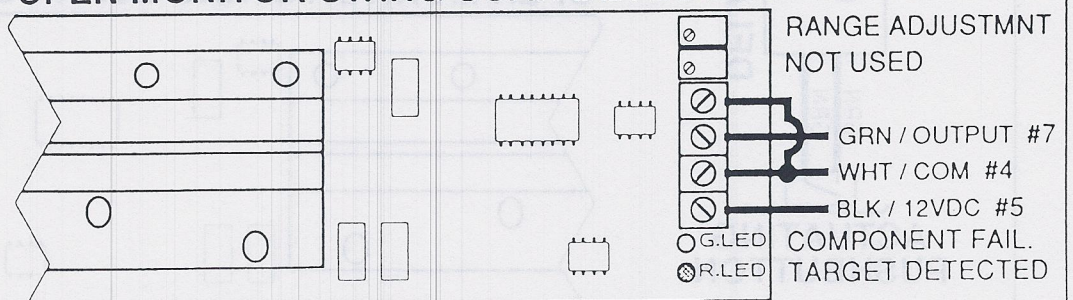


**C1150 N/W
APPROACH
DETECTOR**

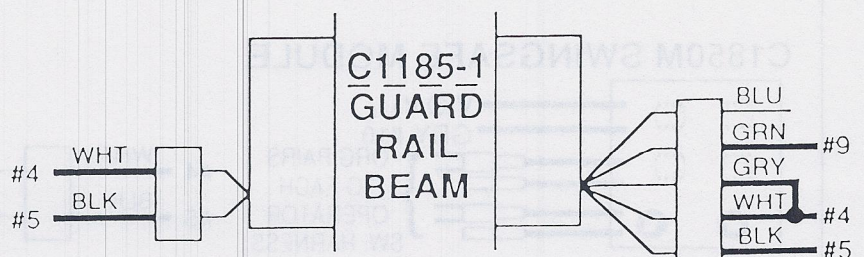
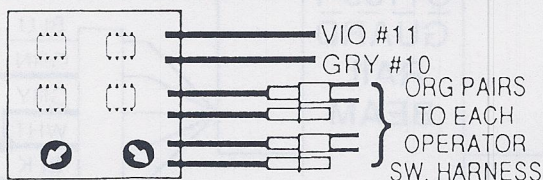
CLOSED MONITOR SWING SCAN DETECTOR

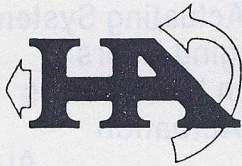


OPEN MONITOR SWING SCAN DETECTOR



C1850M SWINGSAFE MODULE





Horton Automatics

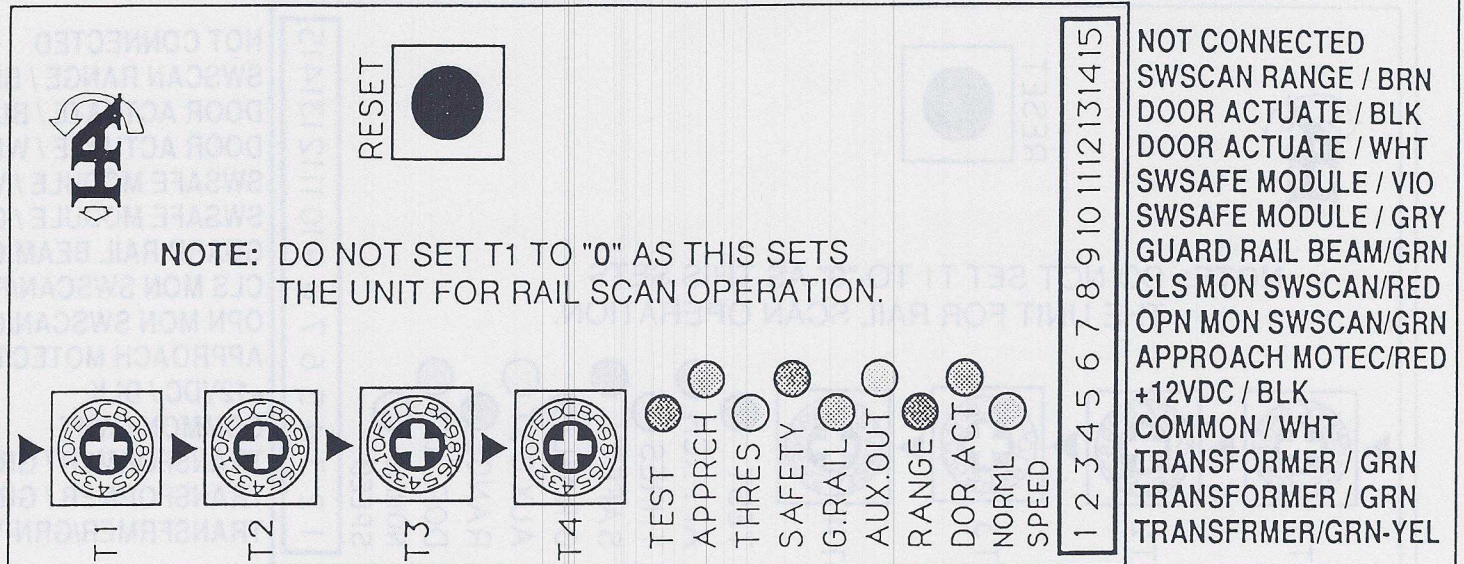
A Division of Overhead Door Corporation
4242 Baldwin Boulevard
Corpus Christi, Texas 78405
512-888-5591 1-800-531-3111

Series 1600 Swing-Scan Actuating System for Automatic Swinging Doors Preliminary Installation Instructions PushButton Actuation

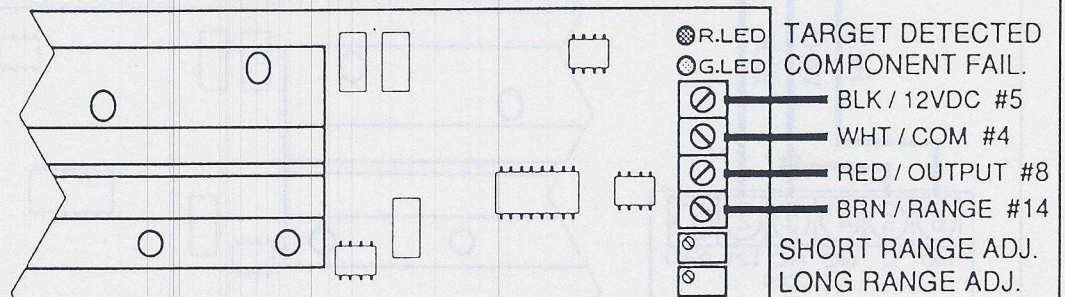
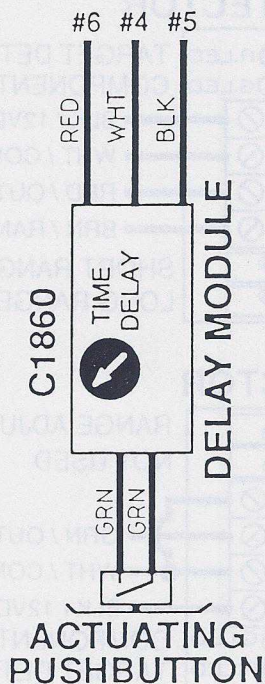
Page 4

AUG'90

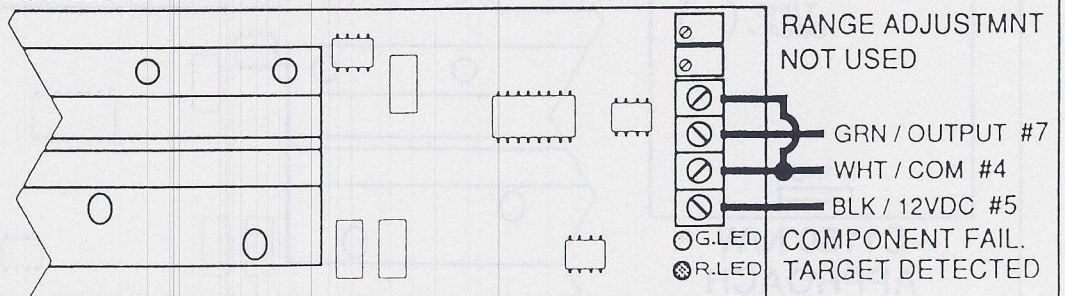
SWING SCAN CONTROL



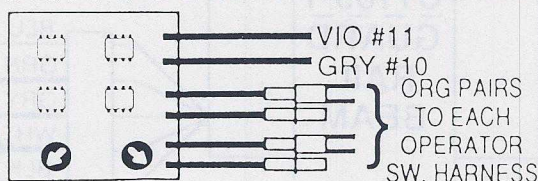
CLOSED MONITOR SWING SCAN DETECTOR



OPEN MONITOR SWING SCAN DETECTOR



C1850M SWINGSAFE MODULE





Horton Automatics

A Division of Overhead Door Corporation
4242 Baldwin Boulevard
Corpus Christi, Texas 78405
512-888-5591 1-800-531-3111

Series 1600 Swing-Scan Actuating System for Automatic Swinging Doors Preliminary Installation Instructions C1620 Interface Control Details

Page 5

AUG'90

When the door is closed and no traffic is in the detection areas, only the **RANGE** LED should be on, indicating the Closed Monitor SwingScan Detector is in long range. The Open Monitor SwingScan Detector is not active when the door is fully closed. It becomes active as soon as the system receives a signal from the Approach Motion Detector or Pushbutton. The Guard Rail Photoelectric Beam is always active. If broken when the door is closed, it will hold the door closed; if the door is opening, it will reduce opening speed to SwingSafe speed; if the door is fully open, it will hold open.

The following is an explanation of the adjustments and indicators on the C1620 Control.

DO NOT SET T1 TO "0", AS THIS SETS THE UNIT FOR RAILSCAN OPERATION.

T1 - Time Delay from moment of actuation, indicated by **APPRCH** LED turning on, to when the Closed Monitor SwingScan Detector reduces Range from Long to Short. Its expiration is indicated by the **RANGE** LED turning off. Typically set on 2 or 3, unless opening at wall, then 1.

T2 - Time Delay from when T1 expires (Closed Monitor SwingScan Detector in short range) to when this detector is deactivated. Its expiration is indicated by the **RANGE** LED turning back on. Typically set on 2 or 3, unless opening at wall, then set on 1.

T3 - Time Delay from moment control releases the door to close, indicated by **DOR ACT** LED turning off and **TEST** LED turning on, to when Closed Monitor SwingScan Detector is reactivated, in short range. This is also the length of time the Open Monitor SwingScan Detector remains active. If the control receives a reactuate signal from either the Approach Motion Detector, Pushbutton, or Open Monitor SwingScan Detector, the door recycles in SwingSafe speed. T3's expiration is indicated by the **TEST** LED turning off. Typically set between 5 and A.

T4 - Time Delay from when T3 expires (Closed Monitor SwingScan Detector in short range) to when this detector is returned to Long Range. Its expiration is indicated by the **RANGE** LED turning on. Set to occur when door is fully closes.

TEST LED - Should blink 4 times on applying power to control or when the **RESET** button is pressed. It is turned on during T3 Time Delay.

APPRCH LED - indicates control is receiving a signal from the Approach Motion Detector or Pushbutton.

THRES LED - indicates a signal from the Open Monitor Swing Scan Detector. Will illuminate whether or not detector is active.

SAFETY LED - indicates a signal from the Closed Monitor Swing Scan Detector. Will illuminate whether or not detector is active.

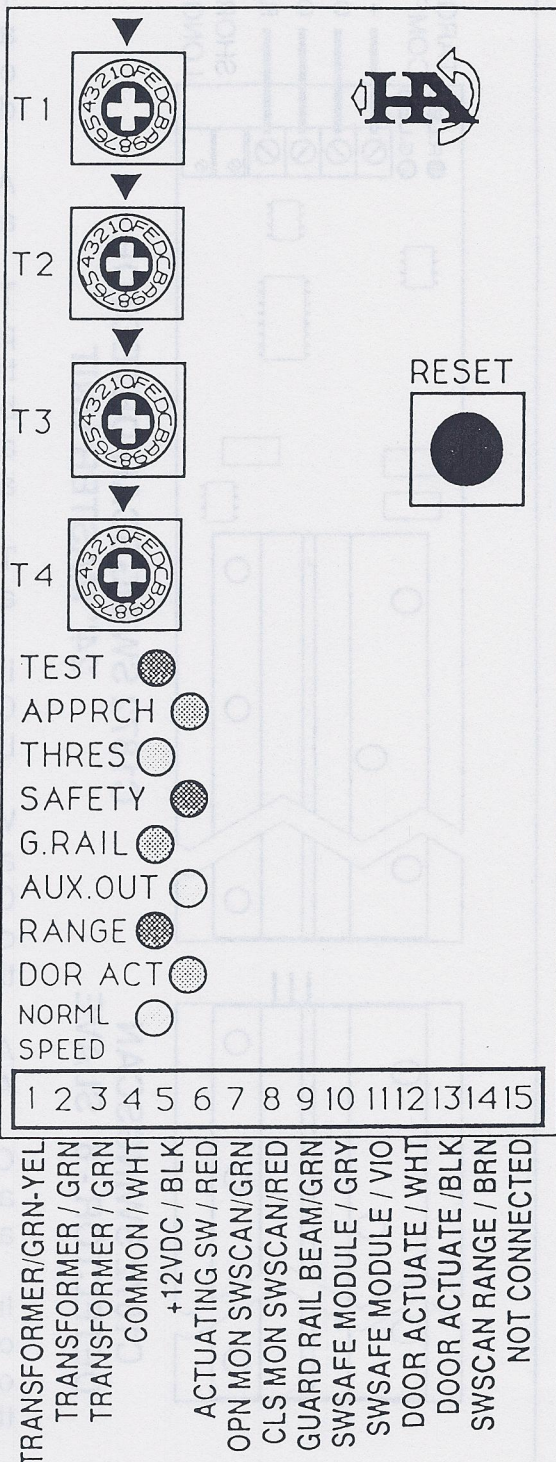
G.RAIL LED - indicates control is receiving a signal from the Guard Rail Photoelectric Beam.

AUX.OUT LED - typically indicates control will not allow door to open, but may also be used for special applications.

RANGE LED - indicates Closed Monitor Swing Scan Detector should be in Long Range.

DOR ACT LED - indicates control is sending an open signal to door operator.

NORML SPEED LED - indicates control is sending a signal to the C1850M SwingSafe Speed Module that the door is to operate in Open Speed. When it is not on, door will open in SwingSafe Speed.





Horton Automatics

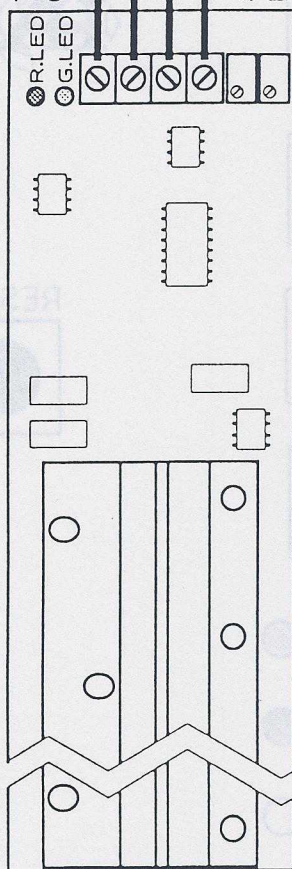
A Division of Overhead Door Corporation
4242 Baldwin Boulevard
Corpus Christi, Texas 78405
512-888-5591 1-800-531-3111

Series 1600 Swing-Scan Actuating System for Automatic Swinging Doors Preliminary Installation Instructions C1871/C1872 SwingScan Detector Details

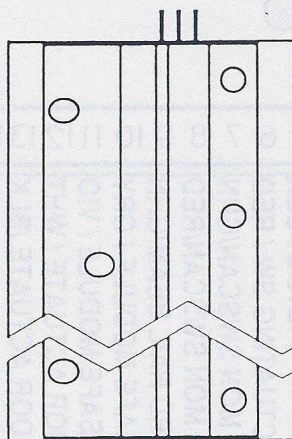
Page 6

AUG'90

TARGET DETECTED
COMPONENT FAILURE
+12VDC POWER
COMMON
OUTPUT (SINKING)
RANGE SELECT
SHORT RANGE ADJ.
LONG RANGE ADJ.



C1872 SWINGSCAN DETECTOR -
24" MASTER UNIT



C1872 SWINGSCAN
DETECTOR - 6" SLAVE

Note: The C1871 and C1872 Circuit Boards are sensitive to static electricity. Care should be taken when handling them to prevent touching any components or circuit traces.

The C1872 Master Board (24" unit) contains the adjustments and indicator for the system. It will function by its self, or with one to three C1871 Slave Boards (6" units) connected to it in a daisy-chain.

All connections are made to the C1872 Master Board, and are as indicated in the figure at left.

The Short Range and Long Range Adjustments are 15- turn potentiometers. These units do not have stops at the end of their adjustment, and will turn continuously. A small click can be heard as it is rotating at each extreme end. The adjustments are counterclockwise to decrease range detection, and clockwise to increase range.

The red indicator LED will illuminate when the unit is detecting an object in either Short or Long Range.

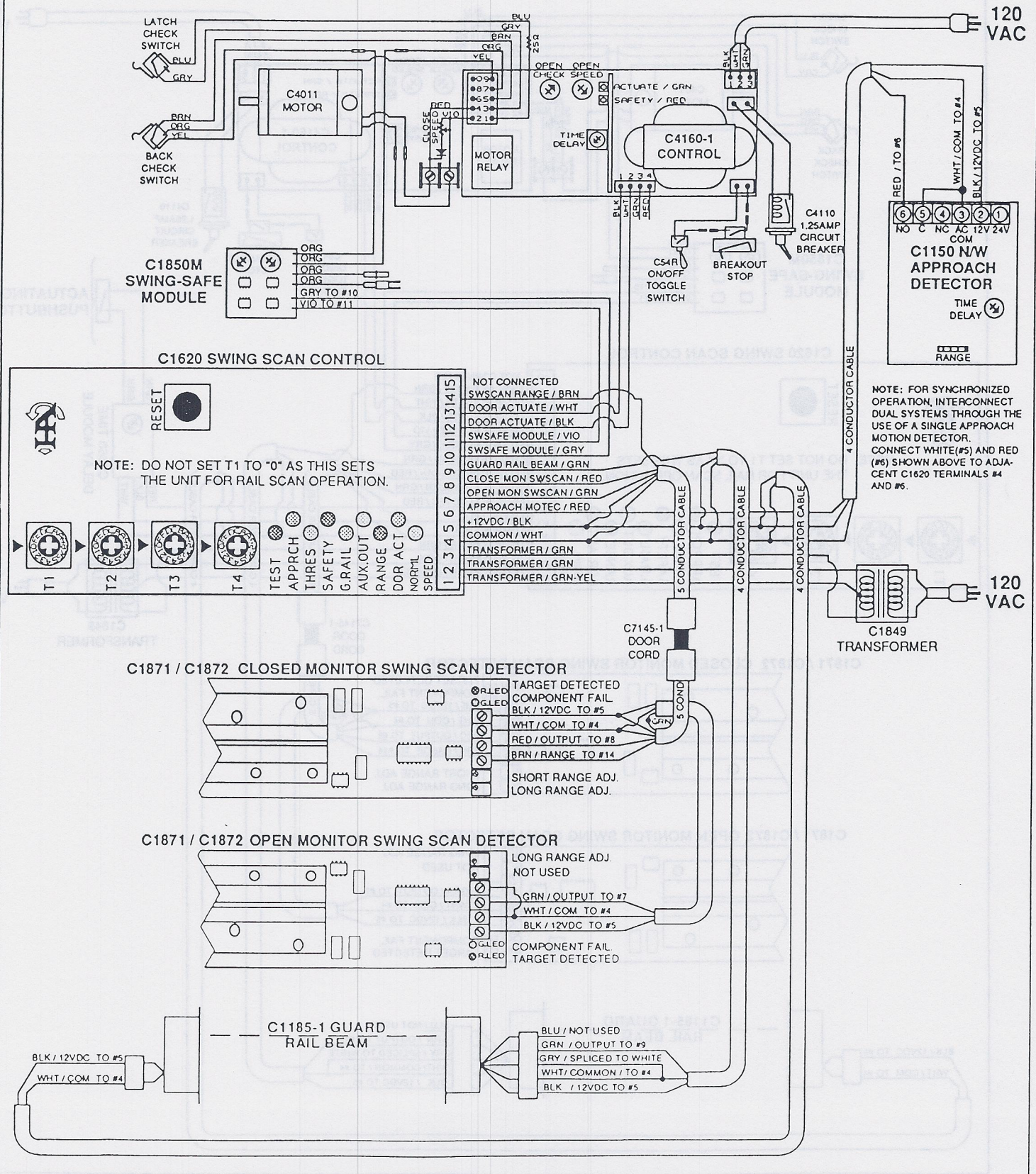
If a major component fails in either the C1872 Master or the C1871 Slave(s) that will affect its operation, the green indicator LED will illuminate and the output of the system will lock on.

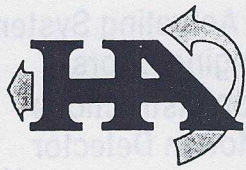
With power only applied (+12VDC and COMMON), the adjustment closest to the red indicator LED is active. Connecting a jumper from COMMON to RANGE SELECT will disable that potentiometer and enable the unit furthestest from the red LED.

As C1871 Slave Boards are added to the system, the Range Adjustments must be readjusted for proper detection.

Circuitry is included to monitor the electronics and the IR LED's, and this will lock the unit on, as indicated by the red LED should a malfunction occur.

It should be noted that the leg on the lense is slightly off- set to one side. This offset should be inserted closest to the barrier on the C1871/C1872 Circuit Boards for best per- formance of the system.





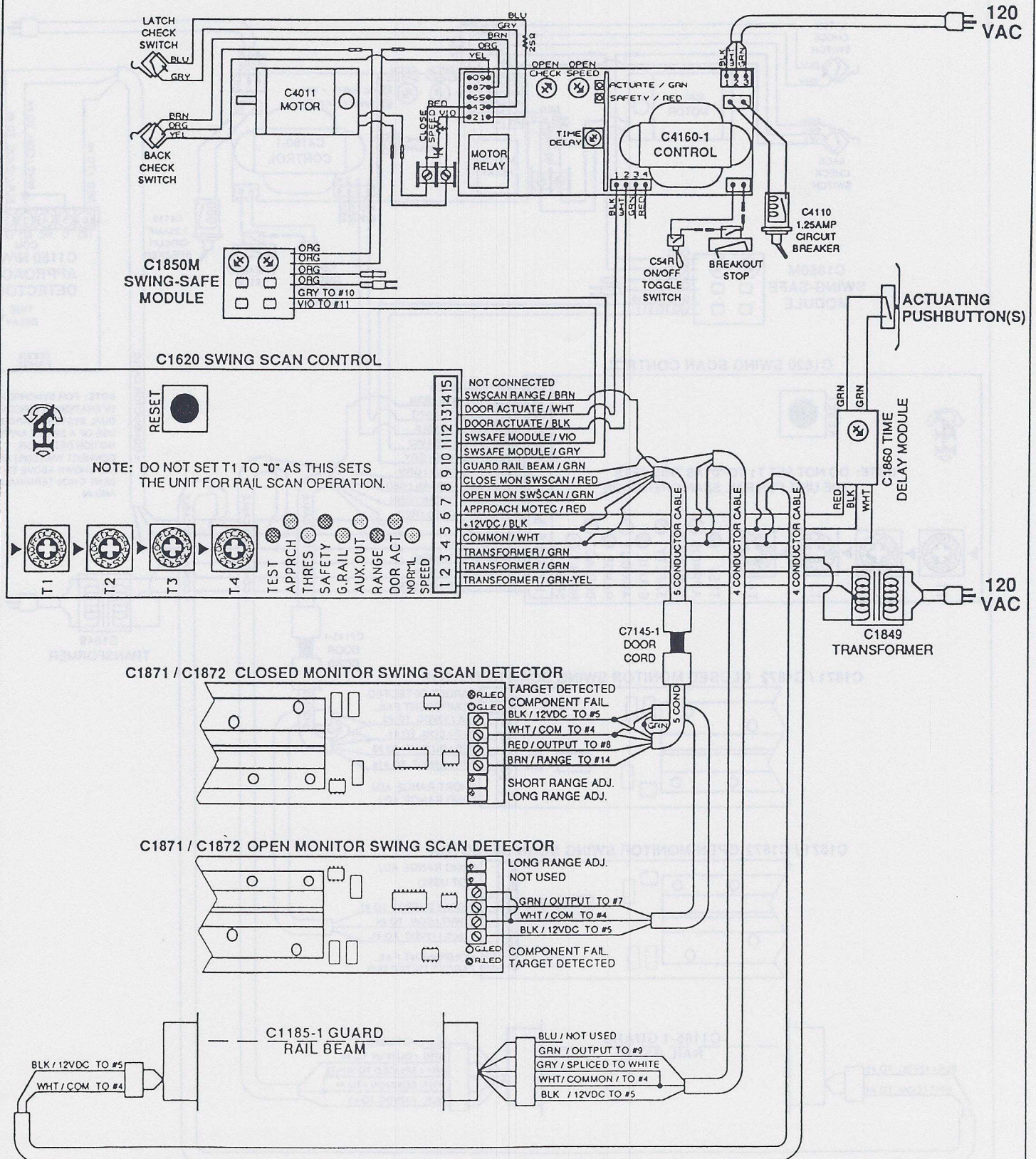
Horton Automatics

A Division of Overhead Door Corporation
4242 Baldwin Boulevard
Corpus Christi, Texas 78405
512-888-5591 1-800-531-3111

Series 1600 Swing-Scan Actuating System for Automatic Swinging Doors Preliminary Installation Instructions Typical Wiring with Pushbutton

Page 8

AUG'90





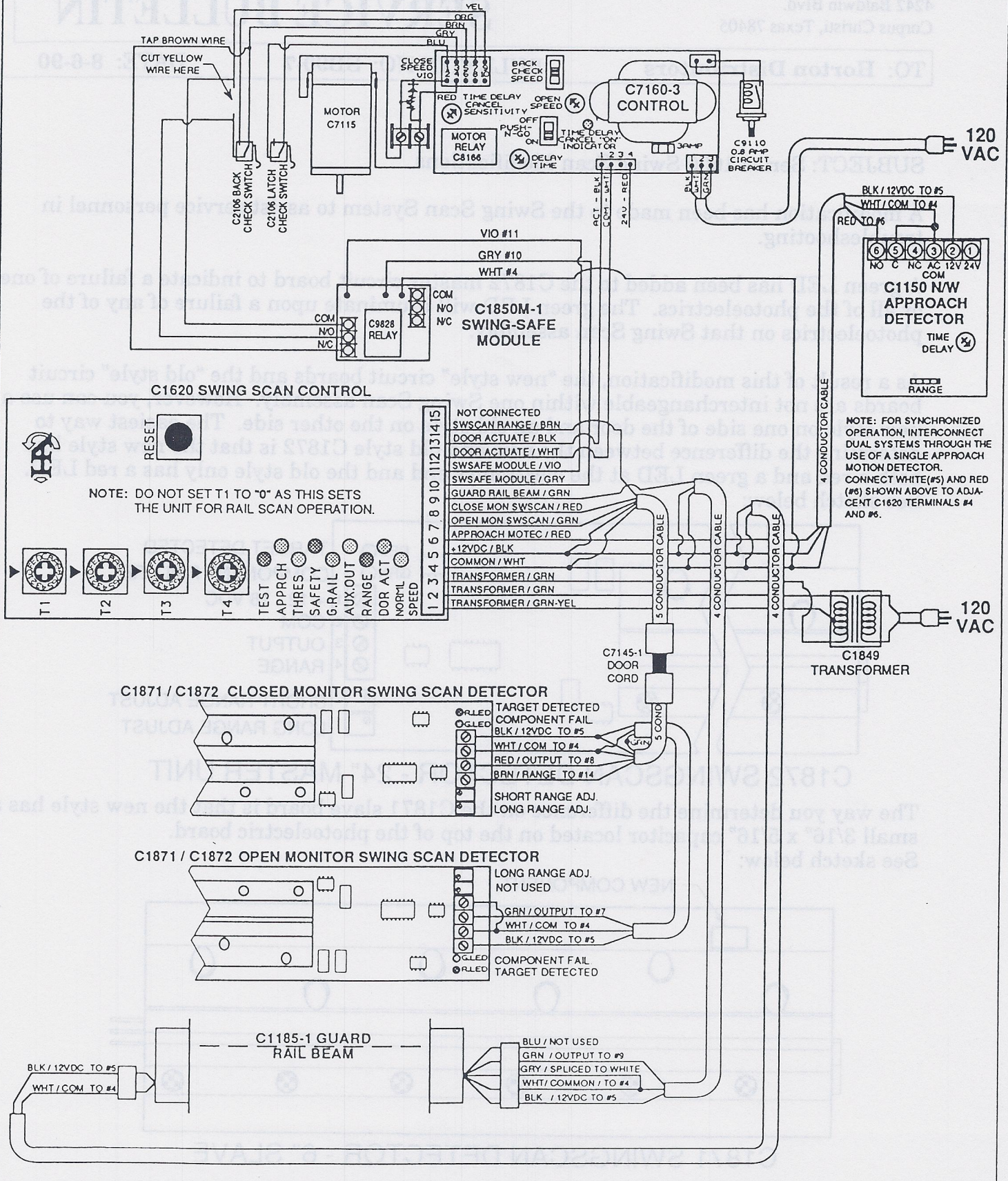
Horton Automatics

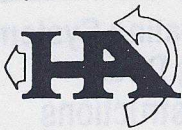
A Division of Overhead Door Corporation
4242 Baldwin Boulevard
Corpus Christi, Texas 78405
512-888-5591 1-800-531-3111

Series 1600 Swing-Scan Actuating System for Automatic Swinging Doors Preliminary Installation Instructions Series 7000 Operator

Page 9

AUG'90





Horton Automatics
A Division of Overhead Door Corp.
4242 Baldwin Blvd.
Corpus Christi, Texas 78405

SB

SERVICE BULLETIN

TO: **Horton Distributors**

BULLETIN NO: **SB90-7**

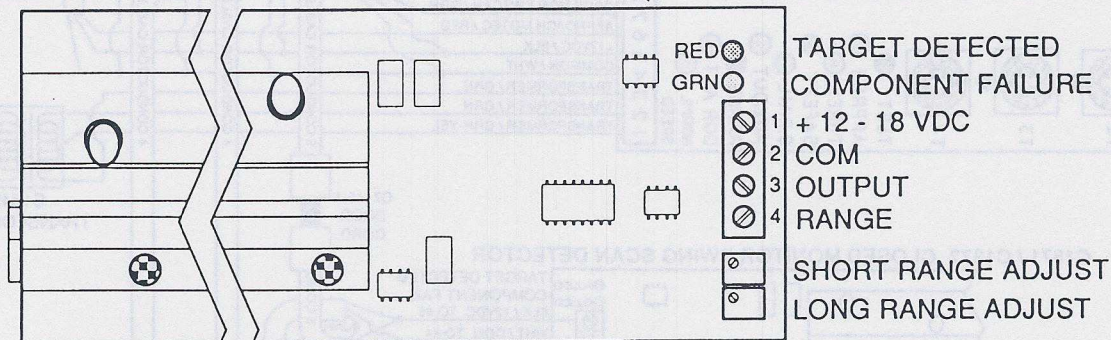
DATE: **8-6-90**

SUBJECT: Series 1600 Swing Scan Modifications

A modification has been made to the Swing Scan System to assist service personnel in troubleshooting.

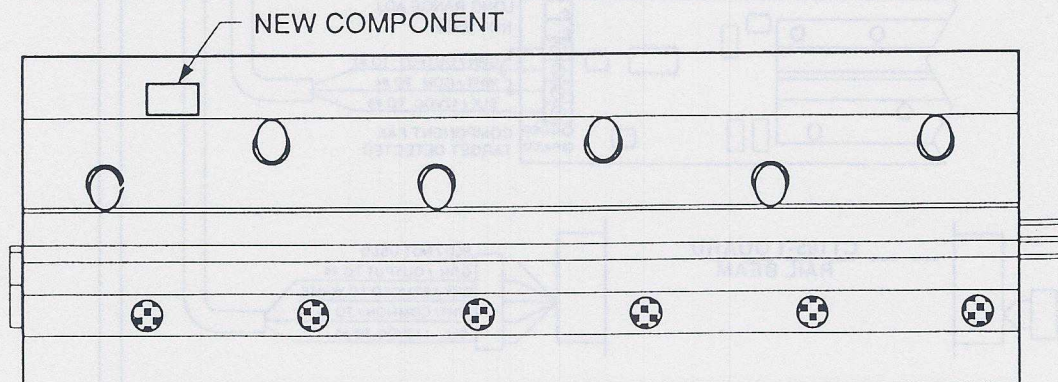
A green LED has been added to the C1872 master circuit board to indicate a failure of one or all of the photoelectrics. The green LED will illuminate upon a failure of any of the photoelectrics on that Swing Scan assembly.

As a result of this modification, the "new style" circuit boards and the "old style" circuit boards are not interchangeable within one Swing Scan assembly. However, you can use a new style on one side of the door and an old style on the other side. The easiest way to determine the difference between the new and old style C1872 is that the new style has both a red and a green LED at the electronics end and the old style only has a red LED. See sketch below:



C1872 SWINGSCAN DETECTOR - 24" MASTER UNIT

The way you determine the difference on the C1871 slave board is that the new style has a small $\frac{3}{16}$ " x $\frac{5}{16}$ " capacitor located on the top of the photoelectric board. See sketch below:



C1871 SWINGSCAN DETECTOR - 6" SLAVE