

COMPACT FIXED OUTPUT REVERSING ALARM

SAFETY MESSAGE TO INSTALLERS OF BACK-UP ALARMS

People's lives depend on the safe installation of this product in conformance with these instructions. It is necessary to read, understand and follow all instructions shipped with the product. In addition, listed below are important safety instructions and precautions you should follow. Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to those you are seeking to protect.

- Back-Up Alarms are intended for commercial use. Proper installation of a Back-Up Alarm requires a good understanding of truck and heavy equipment electrical systems and procedures, along with proficiency in the installation and use of safety warning equipment.
- When drilling into a vehicle structure, be sure that both sides of the surface are clear of anything that could be damaged.
- Locate Back-Up Alarm so it will operate properly under all conditions. The location must provide protection from impact and adverse weather conditions while allowing unobstructed sound projection to the target hazard area.
- Inspect the Back-Up Alarm system daily to ensure that it is audible and operating properly and that it is securely attached to the vehicle. More frequent inspections should be performed when:
 - The vehicle is operating in a particularly dirty environment.
 - The operator has reason to suspect the alarm has been damaged.
 - Increased background noise on the job site may interfere with the audibility of the alarm.
- Store these instructions in a safe place and refer to them when maintaining and/or reinstalling the product.

SPECIFICATIONS

The Back-Up Alarm is a solid state audible warning device enclosed in a weather resistant housing. When activated, the Back-Up Alarm produces a tone that is interrupted at a rate of approximately 80 times per minute with equal on and off times. This alarm conforms to SAE J994 AUG93, sound level Type B.

PHYSICAL SPECIFICATIONS

Electronics:	Solid state
Sealing:	Encapsulated to protect from dust, moisture and vibration.
Housing:	Black, 30% glass filled nylon
Dimensions:	2.96"H x 4.01"W x 1.60"D (75.2mm x 101.8mm x 40.6mm)
Weight:	11.5 oz (326 gm)
Mounting:	Two 0.328" (8.3mm) diameter holes on 3.25" (82.5mm) centers, both mounting plates.
Operating Temperature:	-40oF to +185oF (-40oC to +85oC)

ELECTRICAL SPECIFICATIONS

System voltages:	12 to 24 volt systems
Minimum voltage:	9.0 volts DC
Maximum voltage:	36.4 volts DC
Input current:	0.5 amps average
Fuse at:	2.0 amp
Spike protection:	+100, -400 volts
Polarity:	Positive or negative ground, polarity protected
Connection:	Black 18 AWG wire (negative power) Red 18 AWG wire (positive power)

OUTPUT SPECIFICATIONS

Sound level:	107 dB(A) SAE J994 AUG93 Type B, one level, 107 + 4 dB(A) at 4 feet with 28 VDC applied. Slightly lower on lower voltages.
Sound dispersion:	Through 180o (graph available on request) Pulse rate: 80 pulses per minute typical
Frequency:	1200 Hz typical

ADDITIONAL INFORMATION

Cleaning: Unit will not be damaged if exposed to steam or spray cleaning. High pressure systems not recommended.

Patents: U.S. Patent No. 5,596,311

Selection and installation of an alarm should meet the requirements of SAE J1446 MAY 1989 "ON-MACHINE ALARM TEST AND EVALUATION PROCEDURE FOR CONSTRUCTION AND GENERAL PURPOSE INDUSTRIAL MACHINERY", and all applicable codes. Operation of the vehicle in noisy environments may require an alarm that is louder than indicated in SAE J1446 MAY 89. Install an alarm that will be audible on the noisiest job site on which the vehicle will be used. Ground guidance should be provided to clear backing vehicles when the audibility of the alarm is in question.

INSTALLATION

Since this alarm is designed to concentrate its audible warning in the target hazard area it should be mounted approximately 4 ft. above ground level with the sound opening facing to the rear of the vehicle.

1. Select a mounting location at the rear of the vehicle that will provide protection from impact, debris and adverse weather conditions while allowing unobstructed sound projection to the target hazard area. The alarm's "L-type" mounting configuration provides mounting flexibility and allows installation in a variety of locations.
2. See figure 1. Using the alarm housing as a template, scribe drill position marks through the mounting holes in the unit. Drill holes at the position marks.
3. Secure the unit on the vehicle with a minimum of two user-supplied 5/16" bolts and locknuts, or bolts, lockwashers, and nuts.
4. Use 18 gage (minimum) wire to electrically connect the alarm as shown in the Simplified Wiring Diagram. Figure 1A if vehicle back-up light circuit is used, or Figure 1B if a user installed switch is required.
5. Affix the Warning Label provided to the dash board of the vehicle in plain view of the operator and test the alarm for proper operation.

WARNING

The ground connection **MUST** be a dependable ground path for as long as the device is to be used. Route wire in a protected fashion in accordance with vehicle manufacturer recommendations.

NOTE: The Back-Up Alarm is sensitive to polarity and will not operate when connected backwards.

Should the alarm become inoperative, it could jeopardize the safety or lives of those who depend on the alarm signal for safety. Testing the Back-Up Alarm should be listed on the daily maintenance report. The units on operating vehicles must be tested each day prior to the vehicle's operation. Results of this test must be recorded in the maintenance log.

Notify your supervisor that people operating this equipment **MUST** check for proper operation at the beginning of every shift.

Alarm should be inspected and the sound opening kept clear of dust, mud, or other foreign material that may obstruct the sound opening.

OUTLINE DRAWING

TOP VIEW

0.500 (12.70)

1.60 (40.6)

0.328 DIA MTG SLOT 2 PLACES (8.33)

2.7 SQ REF (69)

3.250 (82.55)

4.01 (101.8)

FRONT VIEW

0.328 DIA MTG HOLE 2 PLACES (8.33)

SOUND OPENING

1.50 (38.1)

SIDE VIEW

18 AWG WIRE 2 PLACES

2.96 (75.2)

0.74 (18.8)

SIMPLIFIED WIRING DIAGRAM

FIGURE 1A
BACK-UP LIGHT SWITCH

BATTERY

BACK-UP LIGHT SWITCH

BACK-UP LIGHT

BACK-UP ALARM

POS

NEG

FIGURE 1B
USER INSTALLED REVERSE ACTIVATED SWITCH

BATTERY

USER INSTALLED SWITCH

BACK-UP ALARM

POS

NEG

BACK-UP ALARM SWITCH MUST ACTIVATE AUTOMATICALLY WHEN REVERSE IS ENGAGED

NOTE - - -

1) DO NOT SCALE DRAWING

2) DIMENSIONS: INCHES (MILLIMETERS)

REVISIONS		REV		DESCRIPTION		PCB#	DATE	DRN	CHK
A	RELEASE					7063	02-01-02	JT	-

ENGLISH		TOLERANCES		THIRD ANGLE PROJECTION	
-DO NOT SCALE DRAWING-		-UNLESS OTHERWISE NOTED-			
X.X	= ±0.1	X.XX	= ±0.06		
X.XXX	= ±0.030	X.XXX	= ±1.0°		

OUTLINE DWG & WIRE DIAGRAM				TITLE/DESC	
270C SERIES ALARM					
SIZE: A	DRWN: JT	CHKD: -	PROD: -	DATE: 08-28-01	
FILE: DD01861A.DWG	P/N	DD0-186-1		REV:	
SCALE: NTS	SHEET: 1 OF 1				

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Brown & Watson International Pty Ltd of 1500 Ferntree Gully Road, Knoxfield, Vic., telephone (03) 9730 6000, fax (03) 9730 6050, warrants that all products described in its current catalogue (save and except for all bulbs and lenses whether made of glass or some other substance) will under normal use and service be free of failures in material and workmanship for a period of one (1) year (unless this period has been extended as indicated elsewhere) from the date of the original purchase by the consumer as marked on the invoice. This warranty does not cover ordinary wear and tear, abuse, alteration of products or damage caused by the consumer.

To make a warranty claim the consumer must deliver the product at their cost to the original place of purchase or to any other place which may be nominated by either BWI or the retailer from where the product was bought in order that a warranty assessment may be performed. The consumer must also deliver the original invoice evidencing the date and place of purchase together with an explanation in writing as to the nature of the claim.

In the event that the claim is determined to be for a minor failure of the product then BWI reserves the right to repair or replace it at its discretion. In the event that a major failure is determined the consumer will be entitled to a replacement or a refund as well as compensation for any other reasonably foreseeable loss or damage.

This warranty is in addition to any other rights or remedies that the consumer may have under State or Federal legislation.

IMPORTANT NOTE: Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.