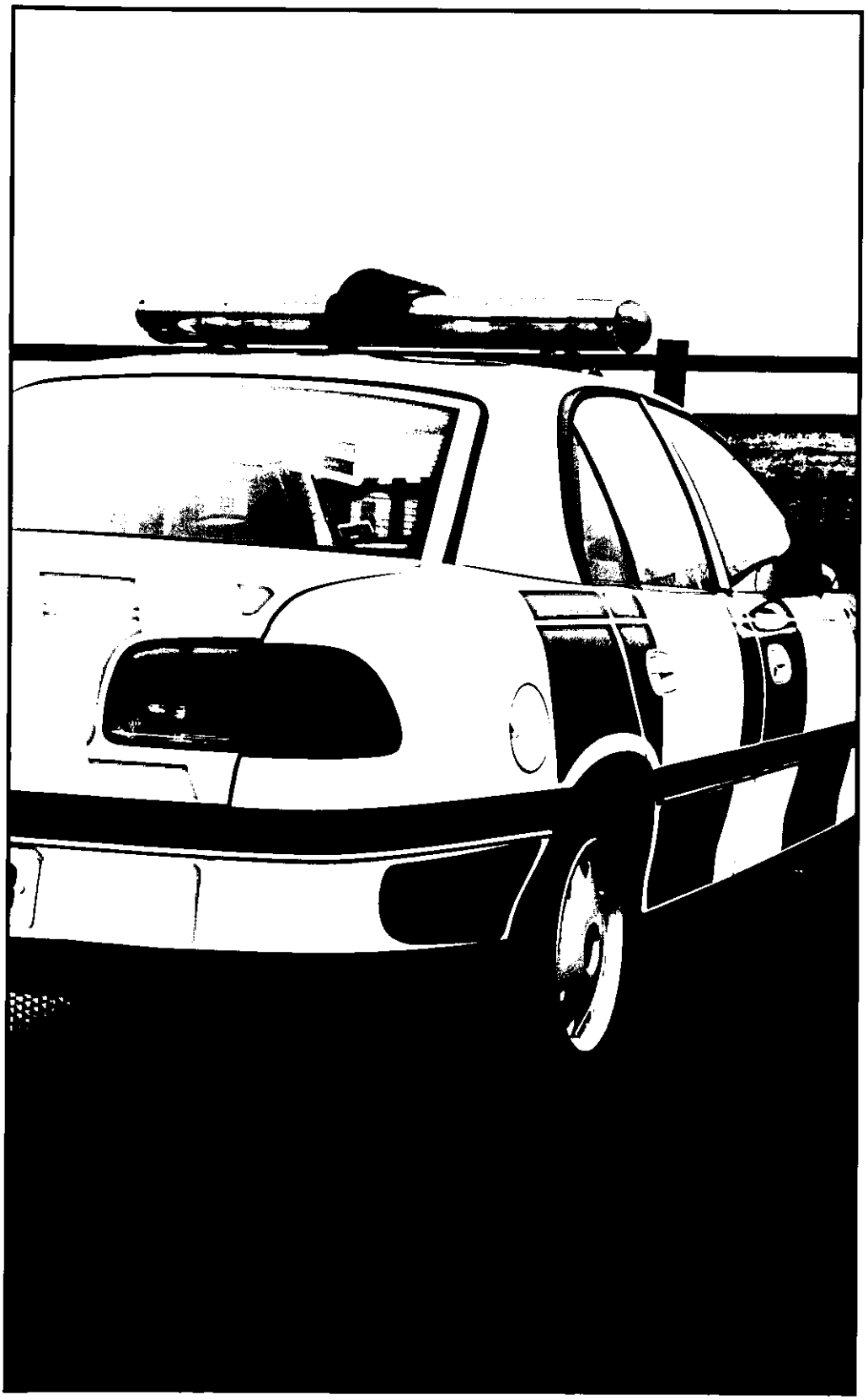
# Specification for the Livery on Police Patrol Cars

A Thomas



POLICE
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BRANCH

Publication No 2/98

HOME OFFICE
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PSDB

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COVER PHOTOGRAPH
General view of the police vehicle livery

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# Management Summary

This document specifies a new, high conspicuity livery, approved by the ACPO Traffic Committee, for use on police motorway and trunk road patrol cars.

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# 1 INTRODUCTION

This document provides a detailed specification for a new, high conspicuity livery for use on police motorway and trunk road patrol cars. Sufficient information about the livery is given to enable fleet managers to commission the application of the livery to police vehicles. The design, developed by PSDB in collaboration with ICE Ergonomics, has been formulated to satisfy most conditions on the highways today.

# 2 OPERATIONAL REQUIREMENT

The operational requirement for the new livery was set in 1992 by the ACPO Traffic National Motorway Policing Sub-committee, formerly known as the National Motorway Conference. It is that a police patrol car operating on dual carriageways/motorways should be visible throughout the day and night and be clearly identifiable as a police car. It should also have a minimum viewing distance of 500 metres from the on-coming road users. Minimum illumination at night is that provided by an approaching vehicle with headlights set at the normal dipped position. The minimum distance condition should apply during daylight hours in rain, mist etc (but not heavy rain or fog) and without the roof lighting in operation on the police vehicle.

# 3 CONSPICUITY TRIALS AND ACPO TRAFFIC COMMITTEE APPROVAL

The results of the conspicuity studies were completed and reports published for the ACPO Motorway Conference in 1994 and 1995. (Reference 1.)

The results of the police trials and the working party report were presented to the ACPO Traffic Committee and approved without any modification in September 1997. (Reference 2.)

# 4 VEHICLE MARKING

Table 1 gives the list of manufacturers and the material order codes recommended for the livery. It should be used in conjunction with photographs 3 and 4, of the sides and rear of the vehicle. As materials are improving constantly, the standard should be considered as the minimum requirement. (Reference 3.)

### i Sides of Motorway and Trunk Road Patrol Vehicles

It is recommended that no other materials, logo or symbols be placed over the blocks of colour on the sides of the vehicle. This degrades the reflective properties of that block. Other areas should be used for force identifiers. The bonnet has been used successfully for these identifiers as this is a large unused area in the livery design, as is the rear side window of an estate car.

### ii Rear of the Vehicle

It is recommended that all police patrol vehicles adopt the use of the chevrons on the rear. The colours should be from the fluorescent retro-reflective range of high grade materials. The rear window sides and top should be outlined with the same high grade material so that approaching drivers would recognise it from a distance as a police vehicle.

## 5 MATERIALS

Every effort was made to ensure total impartiality towards any manufacturers and suppliers of retro-reflective materials.

If some of the colours are not available from one company then converters can mix materials from the list below.

**Table 1**

| MANUFACTURER | PRODUCT |
|---|---|
| **3M United Kingdom PLC**<br>3M House<br>28 Great Jackson Street<br>Manchester<br>M15 4PA<br>Tel: 0161 236 8500 | **High Performance Material**<br>3M Scotchlite Diamond Grade<br>Fluorescent Yellow 9963<br>Fluorescent Orange 9924<br>White 980-10<br>Blue is white base with ink coating |
| **Reflexite UK Ltd**<br>4420 Nash Court<br>John Smith Drive<br>Oxford Bus Park South<br>Cowley<br>Oxford OX4 2RU<br>Tel: 01865 396959 | **High Performance Material**<br>Vehicle Conspicuity Tape<br>Silver/White VC 310<br>Blue VC 310 |
| **Stimsonite Europa Ltd**<br>Simsco Traffic Safety Products<br>The Stables<br>Clevedon Hall Estate<br>Victoria Road<br>Clevedon<br>North Somerset BS21 7SD<br>Tel: 01275 341123 | **High Performance Materials**<br>Stimsonite Retroreflective sheet<br>Blue 6240<br>White 6210<br>Fluorescent Yellow 6200<br>Fluorescent Orange 6380 |

**Front of Vehicle**

## 7 Side Livery Application

The pattern of retro-reflective high grade materials should start at position **A** with blue in the centre of the vehicle. The panel size should be chosen so that:

**i** the horizontal length is 600mm or greater and of equal length for all panels, except for the front most and rear most panels; and

**ii** the vertical height is 300mm or greater and of equal height, except for the lowest row.

Fluorescent retro-reflective yellow panels should be fitted to either side of this panel in position **A**. The pattern should then be extended as in photograph 3 with alternating colours to the front and rear of the vehicle ending with yellow panels. The end panels may be less than 600mm long but greater than 400m long.

**PHOTO 3**

The pattern should then be extended downwards starting with a yellow panel vertically below the first blue panel in position **A** and extending horizontally to the front and rear of the vehicle. The lowest row maybe of any height to fill the side of the vehicle.

The cab of the vehicle must be outlined in that the front pillar **B** must be silver/white or white. The door edges and centre pillar, the rear pillar **C** and roof line can either silver/white, white or fluorescent yellow.

The material should not be folded over the edges but cut short of all edges and cut-outs. It is also recommended that a clear fuel resistant film is fitted over the fuel filler area.

All materials should be of the highest available grade of retro-reflective material.

**PHOTO 4**

## 8 The Rear of the Vehicle

The rear of the vehicle should have a chevron pattern as in photograph 4. The angle of the chevrons is determined by the width of the vehicle.

The material used throughout should be high grade fluorescent retro-reflective strip with a minimum width of 150mm, edge sealed.

The material should be fitted as follows:

**i** the centre point of the rear window should be located and a line drawn from this point to the corners of the rear of the vehicle;

**ii** first, an orange strip should be applied, below and to the edge of the line drawn starting at the window level. Any vehicle fittings should be cut around;

**iii** next, yellow strips are laid above and below the orange strip;

**iv** as much of the rear area as possible is then filled with additional strips, in an alternating pattern;

**v** the rear window and roof line should be outlined with a minimum width of 25mm of the yellow material. As much material as possible should be used.

It is recommended that no other material should be overlaid onto the strips used for this chevron pattern, as any such overlay could reduce the effectiveness of the design.

## 9 ACKNOWLEDGEMENTS

PSDB would like to thank the members of the original working party led by Superintendent Derrick Bristow of Cambridge Constabulary (until June 1994) and Superintendent Robert Good of Essex Police (until June 1995) in providing the practical information required to produce a scientific result for the livery. In addition, PSDB would also like to thank former Superintendent Rodney Brown of the Thames Valley Police and Chief Superintendent Kessick Jones of the Metropolitan Police Service for their valuable support for this project.

PSDB gratefully acknowledges the contribution of the police service in providing vehicles and time for the trials on this livery.

## 10 REFERENCES

1. ICE Ergonomics studies, 1994 and 1995.

2. Common Standards of Markings for Traffic Patrol Vehicles, Working group report for ACPO Traffic, 1997.

3. Rationale for the Design of Police Motorway Patrol Vehicle Markings, ICE Ergonomics, 1996.

POLICE SCIENTIFIC DEVELOPMENT BRANCH

Sandridge, St. Albans, Hertfordshire AL4 9HQ, UK
Telephone: 01727 865051 Fax: 01727 816233

HOME OFFICE POLICE POLICY DIRECTORATE