Supplementary Code of Practice for the Planning, Installation, Commissioning and Maintenance of Intruder Alarms

NCP 120 - Issue 1

November 2021

National Security Inspectorate
Sentinel House,
5 Reform Road
Maidenhead
SL6 8BY
Website: nsi.org.uk

Contents

In this document, material (such as guidelines, information, recommendations, advice) that does not form a mandatory requirement of this Code is shown in italics.

Introduction

This Code of Practice is to be read in conjunction with the NSI Regulations relating to approval by NSI to the NACOSS Gold and the Systems Silver approval criteria.

No company shall hold out or claim that it adheres to this Code save by virtue of holding NSI approval or having obtained the written permission of NSI.

The requirements contained in this Code supplement those contained in PD 6662, BS 8243 & BS 9263. Companies are required to comply with the standards in addition to the requirements contained in this Code.

1 Scope

This Code applies to all intruder and hold up alarm systems including the repair, maintenance and modification of such systems.

2 References

The following referenced standards are indispensable for the application of this Code of Practice:

PD 6662 - Scheme for the application of European standards for intrusion and hold-up alarm systems

BS 8243 - Installation and configuration of intruder and hold-up alarm systems designed to generate confirmed alarm conditions

BS 9263 - Commissioning, maintenance and remote support

BS 7671 - Requirements for electrical Installations

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this Code of Practice, the following definitions apply.

3.1.1 Service mode

A mode where an intruder alarm system allows an alarm engineer to configure, modify or service an I&HAS.

3.1.2 Cloud service

A service provided by a server hosted via the internet,

For example, a service connecting a smart device to an intruder alarm for the purposes of sending commands to the alarm system.

3.2 Abbreviations

ARC - Alarm Receiving Centre

I&HAS - Intruder and Hold-up Alarm System

4 Planning

4.1 Customer agreement

An NSI approved company's contractual documentation with their client should provide detail of the process for handing over a system to a different approved maintenance provider.

The information provided must include the following.

a) In a case where a maintenance contract is transferred to another approved company, how a company taking over the maintenance contract would gain access to the service mode and/or cloud service so that maintenance and repair can be undertaken by the new maintainer.

b) The timescale for facilitating access to any service mode and/or remote cloud service following a request from the client.

c) The method of pricing should be illustrated to facilitate access (see a).

For example: 'The cost will be quoted on request', 'the cost will be charged at our non-contracted hourly rate plus travel', etc.

Any requirements in the NPCC Security Systems Policy or the Police Scotland Security Systems Policy should be met in relation to the transfer of URNs or change of maintenance company.

5 Design and installation

5.1 Wiring regulations

All cables shall be installed in accordance with the latest version of BS 7671 (Requirements for Electrical Installations – I.E.T wiring Regulations).

Particular attention should be given to:

a) the use of fire-resistant fixings for the support of all cables to prevent premature collapse in the event of fire and subsequent risk to evacuation and firefighting activities;

b) electrical insulation and segregation of wiring carrying mains voltage (low voltage) from wiring carrying extra-low voltages, and with regard to electrical separation between circuits operating at these different voltages; and

c) provision of protective earthing and bonding.

6 Maintenance and test

BS 9263 Table 1 defines the frequency for preventative maintenance according to claims of system compliance, including whether a maintenance should be a physical (on-site visit) or a remote visit.

6.1 On-site preventative maintenance

BS 9263 sub clause 6.2 requires that, where practicable, the I&HAS is fully tested, the following checks/tests should also be performed in conjunction with those required by Annex B.2 of BS 9263:

6.1.1 Where an "as fitted" document is not available, as a minimum a list of devices and their location should be created and left on site; this list can be used to aid future preventative maintenance visits including detection walk testing.

6.1.2 Check all detection devices are installed and located correctly and their performance and sensitivity meet the requirements of the specification. Ensure the area or volume of coverage is as recorded in the system record (specification). Where a specification is

not available then the detection range or volume of coverage should be documented and left on site

6.1.3 Checks on the audibility and correct operation of all warning devices must be performed to include:

a) the alternate power source;

b) the trigger for the self-actuation circuit;

c) the operation of the tamper circuit; and

d) removal of hold-off voltage.

6.1.4 Verify the correct configuration of any warning device timed cut off as defined in the standard to which compliance is claimed

6.1.5 Where the system is connected to an ARC, all alarm signals required by the standard to which compliance is claimed should be tested through to the ARC. Each signal test should be generated by the function it relates to (e.g. a personal attack signal should be generated by operating a hold up device).

Note: The following are typical alarm signals required by standards:

- *Personal attack*
- *Intruder alarm*
- *Open and Closing*
- *General fault*
- *Detector inhibit*
- *Confirmed intruder alarm*
- *Tamper*

6.1.6 Check that the exit timer indication can be heard or seen throughout the exit route and at the location where final setting takes place.

6.1.7 Alternative power source(s) capacity should be calculated to ensure there is sufficient capacity to support the electrical load for the duration defined by the standard to which compliance is claimed, and to aid detection of electrical faults.

Note: This may include comparing readings against recordings made during system commissioning.

6.1.8 Detection and hold up devices should be tested whilst the system is in the disarmed state, with at least one being tested through to the ARC in the armed state. Where the

standard to which compliance is claimed also requires confirmed alarm notification, this condition should also be tested through to the ARC.

6.1.9 Although the tests above confirm the correct operation for each of the required signals through to the ARC, the correct operation of each alarm transmission path should also be individually checked.

6.1.10 Alarm Transmission Path connection terminations of the alarm transmission device shall be checked for security and resilience.

6.1.11 Any deviations from the agreed specification shall be resolved or where a resolution is not practicable then each deviation shall be recorded and agreed with the customer.

6.1.12 Any non-compliances with relevant British Standards, Codes of Practice, or other requirements shall be corrected.

6.1.13 Where completion of any of the tests listed above or in BS 9263 Annex B.2 are impracticable then any tests not completed must be recorded and agreed by the customer as required by BS 9263 sub clause 6.2.

6.2 Corrective maintenance

Where corrective maintenance requires the replacement of, or modification to, any part of the system, the system shall be inspected and tested to the extent that is necessary to verify it continues to operate effectively and continues to comply with the standard(s) for which compliance is claimed.

For example: After a signalling device is changed, an alarm notification is tested to the ARC.

Appendix A Example forms

A.1 Form 1 (Completion certificate)

Customer name	Project reference	Commissioning date
Address		
Customer reference		
I confirm that the intruder & hold-up alarm system has been installed to my satisfaction and that I have received the following: 1 A demonstration and instruction how to operate the alarm system. 2 Fobs or PIN code to operate the alarm system. 3 Full and comprehensive user operating instructions. 4 A system log book for the alarm system.		

Customer signature	
Signature on behalf of the installing company	
Date	

A.2 Form 2 (System parameters electrical readings)

This form compliments the commissioning checks listed in Table A.1. in BS 9263.

RECORD OF PARAMETERS AND ELECTRICAL READINGS					
Cct/Zone number	**Detection type**	**Device location**	**Interconnection resistance (Ω)**	**Voltage at the Detector (Vdc)**	**Volume of coverage/range**

CIE	Battery Charging Voltage **Vdc**	Current Consumption (Quiescent) **mA**	Current Consumption (in Alarm) **mA**	Battery Size Required **Ah**
PSU	Battery Charging Voltage **Vdc**	Current Consumption (Quiescent) **mA**	Current Consumption (in Alarm) **mA**	Battery Size Required **Ah**
WD	Remotely / Self Powered WD Input Voltage **Vdc**	Remotely Powered WD Charging Current **Confirmed?**	Self-Powered WD CC (Quiescent) **mA**	Self-Powered WD CC (in Alarm) **mA**

Entry Time	Exit Time	Confirmation Time	HUA Local Warning [Silent / Audible]
Warning Device Duration	Warning Device Delay	Unconfirmed IA Reset [Customer] / [Engineer]	Confirmed IA Reset [Customer] / [Engineer]

Customer signature	
Signature on behalf of the installing company	
Date	

National Security Inspectorate
Sentinel House, 5 Reform Road
Maidenhead, Berkshire SL6 8BY

Telephone: 01628 637512
E-mail: nsi@nsi.org.uk
Web: www.nsi.org.uk