



NSI SYSTEMS SILVER

BS 4737 INSPECTION CHECKLIST

This checklist is for the use of the NSI Systems Silver Inspectorate when inspecting intruder alarm systems installed to BS 4737 by Systems Silver approved companies. Deviation points may be given for non-compliance with those clauses of BS 4737 listed here, but to which no specific reference has been made in the text of this checklist.

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BS 4737 / NSI SYSTEMS SILVER CHECK LIST

CLAUSE	CODE	DEVIATION	POINTS
		<u>A. DOCUMENTATION</u>	
Reg : 13	A1	Correct Certificate not issued within one month.	1
1/86 : 3.2.4	A2	System Record errors/omissions.	1
4.1/87 : 4.7.2/3	A3	Electrical measurements not recorded.	1
TECH REQS: 13	A4	No system log book supplied; no handover checklist and/or customer signature on completion certificate.	1
1/86 : 10	A6	Installer's name and B.S. number not on system record.	0
		<u>B. SYSTEM REQUIREMENTS</u>	
1/86 : 3.1.1	B1	System does not meet basic requirements.	2
1/86 : 3.1.2	B2	Audible Alarm omitted without written agreement with the customer.	2
		<u>C. HOUSING</u>	
1/86 : 3.2.1	C1	Not suitable material.	2
	C2	Tamper detection not fitted.	2
	C3	Not firmly secured.	1
		<u>D. TAMPER DETECTION</u>	
1/86 : 3.2.2	D1	Alarm not generated and signalled when tamper operated.	2
	D2	When unset, audible indication not given of tamper. When audibles inhibited, able to set system with tamper present, not manually inhibited by secure means.	2
		<u>E. ENVIRONMENT PRECAUTIONS</u>	
1/86 : 3.2.3	E1	Failure to operate under permitted environmental conditions.	1
		<u>F. CIRCUIT INTERCONNECTIONS</u>	
1/86 : 3.3.2	F1	Cable security does not comply (i.e. not double pole or will not detect o/c or s/c). If unset, tampering to give local audible warning.	2
1/86 : 3.3.3	F2	Not of suitable size for load; run in mains trunking or conduit without segregation.	1
1/86 : 3.3.1	F3	Electronic detectors and/or processors not individually indicating.	1
1/86 : 3.3.4	F4	Wiring joints not electrically and mechanically sound; inadequately protected for insulation.	1
1/86 : 3.3.5	F5	Unsuitable flexible connections.	1
4.1/87 : 4.1.3	F6	Wiring not adequately supported; cable entries and conduit ends not bushed. No cable identification.	1
3.30/86 : 1	F7	Cables not suitable for external use without additional protection.	1
		<u>G. SYSTEM POWER</u>	
1/86 : 3.4	G1	Failure to create alarm condition when system voltage reduced; able to set if remaining low.	2
		<u>H. AUDIBLE SYSTEM REQUIREMENTS</u>	
		<u>1. General</u>	
1/86 : 4.1	H1	Agreed setting/unsetting procedures not provided.	1
		<u>2. Setting/Unsetting Procedures</u>	
1/86 : 4.2	H2	a. Not initiated at control equipment or ancillary C.E. b. Fails to prevent setting if an alarm condition is present. c. Unsetting at control equipment not by secure means. d. Agreed setting or unsetting procedure creates alarm condition. e. No audible indication throughout exit route and immediately outside final exit.	2
4.1/87 : 3.4.3			
		<u>3. Isolation of Circuits</u>	
1/86 : 4.3	H3	a. Not by secure means. b. Attempt to set isolated part in alarm condition results in alarm being signalled.	2
		<u>4. Operation</u>	
1/86 : 4.4	H4	Audible alarm not given within 5 secs of alarm condition occurring.	2
		<u>J. REMOTE SYSTEM REQUIREMENTS</u>	
		<u>1. General</u>	
1/86 : 5.1	J1	Agreed setting/unsetting procedures not provided.	1
		<u>2. Setting</u>	

1/86	: 5.2.1	J2	a. Not initiated at control equipment (if not in conjunction with central station). b. Completion requirements not complied with. c. No audible indication throughout exit route and immediately outside final exit.	2
1/86	: 5.2.2	J3	In conjunction with C.S. - procedure not agreed in writing - no indication at premises.	2
1/86	: 5.2.3	J4	Setting may be completed with a detector in alarm condition or when system requires resetting after an alarm is signalled.	2
1/86	: 5.2.3	J5	Alarm condition signalled when correct procedure is followed.	2
			<u>3. Unsetting</u>	
1/86	: 5.3.1	J6	a. Not initiated by entry route device; completion not at Control Equipment by secure means. Incorrect completion does not generate alarm. b. Alarm conditions generated in circuits other than entry/exit route do not give audible indication within 5 secs. c. Alarm condition generated in circuits other than entry/exit route results in Remote Signalling being initiated. d. No audible indication that system requires unsetting. e. Failure to complete unsetting procedure does not create a full alarm condition.	2
1/86	: 5.3.2	J7	In conjunction with central station, procedures not agreed in writing. No indication of completion at premises.	2
			<u>4. Isolation of Circuits</u>	
1/86	: 5.4	J8	a. Circuit(s) isolated during set period not achieved by secure means. b. Resetting of isolated parts create an alarm condition if fault or alarm conditions exists. No indication of failure to reset. c. When isolated parts occupied during set period, may be local only alarm for up to 5 mins. Full alarm within 5 secs if not unset after this period. Selected only during setting.	2
			<u>5. Reset Facilities</u>	
1/86	: 5.5	J9	Subscriber has facility to reset system after a full alarm condition contrary to Local Police Force Policy where engineer reset is mandatory.	1
			<u>L. CONTROL EQUIPMENT</u>	
			<u>1. Location and Housing (including RKP)</u>	
1/86	: 6.1	L1	Not within protected premises.	2
1/86	: 6.2	L2	Housing not in compliance 3.2.1.	2
1/86	: 6.3	L3	a. Processing equipment not within protected premises if not co-located with control equipment. b. Processing equipment not provided with tamper detection when not within control equipment.	2
4.1/87	: 3.3.3	L4	Directly visible from outside protected premises; inadequate access for ease of use.	1
			<u>2. Circuit Identification</u>	
1/86	: 6.4	L6	a. Each circuit (except E/Exit) not given separate indication of alarm condition during setting/unsetting. b. If more than one electronic detector on a circuit, devices not individually indicating and latching.	1
1/86 (Note 1)	: 6.4	L9	No audible and/or visible indication of alarm condition present when setting, unsetting or testing the system.	0
1/86	: 6.5	L7	No visible indication that system in alarm and requires resetting.	1
1/86 (Note)	: 6.5	L8	Indications present during set periods.	0
			<u>3. Alarm Conditions</u>	
1/86	: 6.6	L10	Alarm condition not signalled within 5 seconds.	2
4.1/87	: 4.4.1	L11	Warning device cut-out not programmed for 20 minutes or less, if specifically required.	1
			<u>M. POWER SUPPLIES</u>	
			<u>1. General</u>	
1/86	: 7.2.1	M1	Battery not capable of providing at least 8 hours standby supply.	2

1/86	: 7.2.1	M2	Mains supply not permanently connected (i.e. plug and socket or switched supply); fuse not suitably rated; spur not solely for alarm use and not co-located with CE.	1
		M3	Battery installation date not marked.	0
		M4	Unsuitable battery connections.	1
			<u>2. Location and Housing</u>	
1/86	: 7.3	M5	Container not complying with 3.2.1 (not applicable to P.S.U.s for sensors).	2
1/86	: 7.3	M6	Interconnections between control equipment and its power supply (when separated) not physically protected.	1
4.1/87	: 4.6.2	M7	Battery installation not suitably restrained.	1
			<u>3. Mains Segregation</u>	
4.1/87	: 4.1.3	M8	Mains cables not segregated from all other extra low voltage (elv) alarm cables/printed circuit boards within the control equipment.	1
			<u>N. WARNING DEVICES</u>	
			<u>1. External</u>	
1/86	: 8.2.1	N1	a. Housing does not comply with 3.2.1. b. Removal from building will not be detected. c. Projections that facilitate attachment of chains etc.	2
1/86	: 8.2.2	N2	a. Does not satisfactorily sound in response to an alarm condition. b. Duration limiting device not reset when system is reset.	2 1
1/86	: 8.2.4	N3	Battery of inadequate capacity; short cct. of charging supply will discharge battery.	2
1/86	: 8.2.5	N4	a. Does not sound when tampering is detected or when its charging supply fails. b. Operates other than when an alarm condition is signalled by the control equipment.	2 1
1/86	: 8.2.3	N5	Not securely mounted to a rigid surface and/or not at an adequate height.	1
1/86	: 8.2.3	N6	External interconnecting wiring outside protected premises not physically protected.	1
			<u>2. Internal</u>	
1/86	: 8.3.1	N7	Separate from control equipment; housing does not comply with 3.2.1.	2
1/86	: 8.3.2	N8	a. Does not satisfactorily sound in response to an alarm condition. b. Sound level/distinction does not comply; duration limiting device not reset when system is reset.	2 1
1/86	: 8.3.4	N9	Battery of inadequate capacity; short cct. of charging supply will discharge battery.	2
1/86	: 8.3.5	N10	a. Does not sound when tampering is detected or when its charging supply fails. b. Operates other than when an alarm condition is signalled by the control equipment.	2 1
1/86	: 8.3.3	N11	Not securely mounted and/or in a position where it can be easily attacked.	1
4.1/87	: 4.4.2	N12	Not sited to give maximum effect.	1
			<u>P. REMOTE SIGNALLING</u>	
			<u>1. General</u>	
4.1/87	: 3.4.5	P11	Cables between CE and signalling equipment not mechanically protected.	2
			<u>2. Automatic Dialling Equipment</u>	
1/86	: 9.1.1	P1	Not within protected premises; housing not in compliance with 3.2.1.	2
1/86	: 9.1.2	P2	Rechargeable battery not housed within container; not automatically recharged; not protected from discharge if charging means is short circuited.	2
1/86	: 9.1.3	P3	a. Does not initiate operation within 5 secs of alarm; possible to interrupt transmission if condition is removed. b. If audible delay, line not monitored for fault, off hook or ringing in. c. Audible delay not overridden in set condition if telephone line is cut.	2
1/86	: 9.1.3	P4	Note: B.T. line not ex-directory or incoming calls barred.	0
4.1/87	: 4.4.3	P5	B.T. connection not in vicinity of signalling equipment.	0
			<u>3. Digital Communicator</u>	
1/86	: 9.2.1	P1	Not within protected premises; housing not in compliance with 3.2.1.	2

1/86 : 9.2.2	P2	No rechargeable battery and charging means which will allow at least 5 transmissions; not automatically recharged; not protected from discharge if charging means is short circuited.	2
1/86 : 9.2.3	P6	a. If bell delayed, line not monitored for fault, off hook or ringing in. b. Does not operate within 1 sec. of alarm condition; possible to interrupt transmission if condition removed. c. Audible delay not overridden in set condition if telephone line is cut.	2
1/86 : 9.2.3 (Note)	P7	B.T. line not monitored continuously and indication not given.	0
	P4	Line not incoming calls barred or ex-directory.	0
4.1/87 : 4.4.3	P5	B.T. connection not in vicinity of signalling equipment.	0
	P9	Communicator not earthed in accordance with manufacturer's requirements.	1
		<u>4. Direct Line/Other</u>	
1/86 : 9.3.2	P1	If not in control equipment, housing not in compliance with 3.2.1.	2
1/86 : 9.3.1	P8	Equipment not complying with BS 5979.	2
1/86 : 7	P10	Power supply does not comply.	1
		<u>R. DETECTION DEVICES</u>	
		<u>1. Continuous wiring (D.A.C.W. or in Tube and Batten Frames)</u>	
4.1/87 : 4.2.2.2	R1	Space between adjacent wires in excess of 100 mm; wire not fixed at 600 mm maximum intervals with corrosion resistant staples.	1
4.1/87 : 4.2.2.3	R2	Tube length in excess of 1 metre; tube spacing in excess of 100 mm; wire not fixed within 50 mm of entry/exit to each tube; anchor points not extended to building fabric; wiring supports may be moved in excess of 50 mm without causing alarm condition; continuous throughout the frame.	1 1
4.1/87 : 4.2.2.2	R3	Wiring not given physical protection.	1
4.1/87 : 3.4.4	R4	Wiring not continuously monitored; fault indications not audibly and visually indicated at control equipment.	1
		<u>2. Foil on Glass</u>	
3.2/77 : 5 3.2/77 : 6 3.2/77 : 7	R5	Foil width greater than 12.5 mm; Foil carried across cracks or butt joints of unframed glass panels, foil not made off with purpose made connectors; connectors at junction of glass and frame; on unframed glass doors, connectors placed more than 100 mm from door edge.	1
3.2/77 : 8 4.1/87 : 4.2.3	R6	Foil pattern not in conformity with criteria; not suitably protected (varnished). Foil strips not continuous.	1
4.1/87 : 3.4.4	R4	Not continuously monitored; no fault indication at control equipment.	1
		<u>3. Protective Switches</u>	
4.1/87 : 4.2.4	R7	No alarm condition with a clear opening in excess of 100 mm.	2
4.1/87 : 4.2.4	R8	All connections not made off within its enclosure; connections not obscured from view.	1
4.1/87 : 3.4.2	R30	More than 10 sensors on one circuit.	1
		<u>4. Microwave Detectors</u>	
3.4/78 : 8	R9	No alarm condition if power is lost or reduced below operational level. Does not generate an alarm when the system is set.	2
3.4/78 : 11	R10	Removal of case not detected; adjustment means not contained within the detector container; interconnections not electrically protected.	2
3.4/78 : 5.1	R11	Area or volume of coverage not identified in system record.	1
3.4/78 : 5.2	R12	Walk test facility not available to subscriber.	1
4.1/87 : 4.2.9.1	R13	Not provided with 7 days test before connecting to remove signalling.	1
4.1/87 : 4.2.9.3	R14	Environmental problems not accounted for without suitable processing, i.e. directed at reflective surfaces; sited close to fluorescent lighting; located so that a possibility of interference may be encountered, etc.	1
		<u>5. Ultrasonic Detectors</u>	
3.5/78 : 8	R9	No alarm condition if power is lost or reduced below operational level. Does not generate an alarm when the system is set.	2
3.5/78 : 11	R10	Removal of case not detected; adjustment means not contained within the detector container. Interconnections not electrically protected.	2

3.5/78	: 5.1	R11	Area or volume of coverage not identified in system record.	1
3.5/78	: 5.2	R12	Walk test facility not available to subscriber.	1
3.5/78	: 7	R13	Not provided with 7 days test before connecting to remote signalling.	1
4.1/87	: 4.2.9.2	R14	Sited adjacent to equipment, which may produce ultrasonic noise, i.e. steam pipes, rotating machinery, bells etc., without suitable processing.	1
			<u>6. Acoustic Detectors</u>	
3.6/78	: 6	R15	Will not create an alarm condition when a sound equalling or exceeding trigger levels lasts for longer than 5 secs in any 30 secs period.	2
3.6/78	: 7	R9	No alarm condition if power is lost or reduced below operational level. Does not generate an alarm when the system is set.	2
3.6/78	: 10	R16	Removal of case not detected; adjustment can only be achieved by movement of the device on its mounting.	2
			For break-glass detectors:-	
4.1/87	: 4.2.6	R17	More than 10 devices/circuit or processor; acoustic path between glass and detector obstructed (applicable only to system design).	1
			<u>7. Passive Infra-Red Detectors</u>	
3.7/78	: 7	R9	No alarm condition if power is lost or reduced below operational level. Does not generate an alarm when the system is set.	2
3.7/78	: 10	R10	Removal of case not detected; adjustment means not contained within the detector container; interconnections not electrically protected.	2
3.7/78	: 4.1	R11	Area or volume of coverage not identified in system record.	1
3.7/78	: 4.2	R12	Walk test facility not available to subscriber.	1
3.7/78	: 6	R13	Not provided with 7 days test before connecting to remote signalling.	1
4.1/87	: 4.2.9.4	R14	Detector sited such that it may be affected by environmental factors, i.e. air movement, sunlight, automatically controlled heating/cooling equipment etc.	1
			<u>8. Pressure Mats</u>	
3.9/78	: 6	R18	a. Closed circuit device (rare) not connected into a monitored "double pole" circuit. b. Open circuit device (common) not connected into a monitored "double pole" circuit within the mat.	1
4.1/87	: 4.2.7	R19	Not firmly secured to a firm, flat surface; not suitably covered and/or outline visible; inadequate provision to protect connections from damage.	1
			<u>9. Vibration/Inertia Detectors</u>	
3.10/78	: 7	R9	No alarm condition if power is lost or reduced below operational level. Does not generate an alarm when the system is set.	2
3.10/78	: 10	R10	Except when fitted directly to glass, no tamper detection to lid; may be adjusted without removing lid; connections not within container.	2
3.10/78	: 5	R11	Type of attack not declared and/or area of coverage not identified in system record.	1
3.10/78	: 6	R13	Not provided with 7 days test before connecting to remote signalling.	1
4.1/87	: 4.2.5	R17	More than 10 non-latching devices in a circuit or associated with each processor; processor does not give latching indication.	1
4.1/87	: 4.2.5	R14	Fitted in locations where there is a strong possibility of high ambient vibration, expansion, doors in frequent use.	1
			<u>10. Beam Interruption Devices</u>	
3.12/78	: 7	R9	No alarm condition if power is lost or reduced below operational level. Does not generate an alarm when the system is set.	2
3.12/78	: 10	R10	Removal of lid not detected; adjustments not contained within container; connections not within container.	2
4.1/87	: 4.2.8	R20	Where two sets of beam detectors are connected in parallel, system will set with one of the beams obstructed; individual units not able to reset automatically.	2
4.1/87	: 4.2.8	R21	a. Transmitters and receivers not rigidly secured to a firm supportive structure; direct path only. b. Equipment not provided with protection against mis-alignment or physical damage.	1
4.1/87	: 4.2.8	R14	Receivers located such that they may be affected by sunlight.	0
			<u>11. Deliberately Operated Devices</u>	
3.14/86	: 3.6	R22	Does not create alarm condition when operated within stated operating force.	2

3.14/86 : 3.2	R23	Not of stated configuration (x, y or z); operating member not flush or recessed with respect to surrounding surface; if a latching device, will not remain in operated position until manually reset.	1
4.1/87 : 4.2.10	R24	Sited such that obvious body movement is required to operate device; device may be confused with other switching devices; cable to moveable mounting not sufficiently flexible (see also 3.3.5 : 1/86).	1
4.1/87 : 4.2.10	R25	When signalled remotely, code not recognizable as coming from DOD.	1
1/86 : 3.2.1	R26	Portable, wire free, DOD equipment:	
		(a) Receiver housing not suitable material.	2
		(b) Tamper detection inoperable.	2
BS 6799 : 1986	R27	Message transmission interrupted when operating member released.	2
	R28	Inadequate reception from within the specified area of cover.	2
	R29	Interconnections between CE and receiver to be electrically and mechanically protected.	2