

RESTRICTED

Table 1. Service Plastic Bulk Explosives

| Ser | Explosive | Description | Effect of temperature | | Effect of small arms fire | Remarks |
|-----|-----------|--|---|--|---|---|
| | | | Heat | Cold | | |
| (a) | (b) | (c) | (d) | (e) | (f) | (g) |
| 1. | 808 | Light blue cartridge, 4 oz, 4" long. | Deteriorate slowly in moist tropical heat. | Loses plasticity and becomes hard at temperatures below 11 °F. | Easily set on fire, particularly by tracer. | <u>Obsolescent.</u> Can be used for training in place of PE 3A. Causes headache if handled unwrapped. |
| 2. | 851 | Dirty white cartridge, 8 oz, 8" long. | Becomes soft at temperatures above 140°F. | Loses plasticity and becomes hard at temperatures below 65°F. | The least inflammable all plastics. | <u>Obsolescent.</u> Can be used for training in place of PE 3A. |
| 3. | 852 | Light yellow cartridge, either 8 oz, 8" long, or 4 oz, 4"long. | Softens slightly at temperatures above 140°F, but power not affected. | Loses plasticity and becomes hard at temperatures below 32°F. | Much less inflammable than 808. | <u>Obsolescent.</u> Can be used for training in place of PE 3A. |
| 4. | PE2 | Dull yellow cartridge, 8 oz, 8" long. | Become semi fluid in very hot climates, i.e. above 140°F. | Loses plasticity and becomes hard at temperatures below 32°F. | Much less inflammable than 808. | <u>Obsolescent.</u> Can be used for training in place of PE 3A. |
| 5. | PE3 | Black cartridge, 8 oz, 8" long. | Less affected by high temperature than 852. | Loses plasticity below 32°F. | Much less inflammable than 808. | <u>Obsolescent.</u> Can be used for training in place of PE 3A. |
| 6. | PE3A | Dull yellow cartridge, 8 oz, | Less affected by high temperatures than PE3. | Loses plasticity below 32°F. | Much less inflammable than | The standard plastic for operational use. |

RESTRICTED

| Ser | Explosive | Description | Effect of temperature | | Effect of small arms fire | Remarks |
|-----|-----------|-------------|-----------------------|------|---------------------------|---------|
| | | | Heat | Cold | | |
| | | 8" long. | | | 808. | |

Notes:

1. Plastics are all-purpose explosives, but should not be used for tunneling purposes on account of the toxic fumes generated at detonation.
2. All are insensitive to shock under normal conditions and are unaffected by moisture.
3. They are made up in paper-wrapped cartridges 1 $\frac{1}{4}$ inches in diameter; weight and length as given in column (c) above. The wrapping need not be removed.
4. The standard packing is a wooden box (over-all weight 29 lb) containing 20 lb of explosive in 4 cartons, each of 5 lb.
5. Initiation is by a primer pressed into the explosive. The primer is normally initiated by detonating cord, but a detonator may be used instead.
6. Commercial explosives used for quarrying and tunneling are issued as project stores.

RESTRICTED

Table 2. - Service Slab Bulk Explosives

| Serial No | Explosive | Description | Standard packing | Effect of temperature | | Remarks |
|-----------|----------------------|--|---|--|---|--|
| | | | | Heat | Cold | |
| (a) | (b) | (c) | (d) | (e) | (f) | (g) |
| 1 | CE/TNT | Slab $4\frac{1}{2} \times 2\frac{1}{4} \times 1\frac{3}{4}$ " Weighing 1 lb, with two holes for 1-cm CE primers. | Each slab sealed in mill-board container which should not be removed, 14 slabs in wooden or metal box $12 \times 9 \times 6\frac{1}{2}$ " over-all. Weight 26 lb. | Some deterioration of the wax packaging. | Nil. | Standard slab until projected new slab is issued. Excellent keeping qualities. Unaffected by moisture. Insensitive to shock. |
| 2 | GC (wct) 2-contd. | Slab $6 \times 3 \times 1\frac{1}{2}$ " weighing 19 oz when with correct 3-oz water pierced with tapered hole which takes 1-oz CE primer | 14 slabs metal box $11 \times 8 \times 6\frac{1}{2}$ " over-all, enclosed in content, wooden crate. total weight 25 lb. | Moisture tends to dry out; slab than becomes flaky, very sensitive and dangerous to use. | If Moisture content freezes, slabs become bonded together. Dangerous to attempt to separate them in this condition. | <u>Obsolescent.</u> In temperature climate is very stable as long as correct moisture content is maintained. If too wet slabs becomes inert if too dry they can be detonated or set on fire by small arms fire. |

Notes

1. Except that they cannot be used in boreholes or camoufllets, slabs are all-purpose explosives.
2. Initiation is by CE primer. Since the 1-cm primer is now obsolete, the CE/TNT slab will be initiated by a 1-oz CE primer to the slab.

RESTRICTED

Table 3-Firing Accessories (Other Than Electrical)

| Ser No | Item | Short description | Normal packing | Method of initiation | Effect of temperature | | Effect of moisture | Sensitivity to shock | Remarks |
|--------|---|--|----------------------------|---|--|--|---|----------------------|--|
| | | | | | Heat | Cold | | | |
| (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (j) | (k) |
| 1. | Igniter, safety fuze, percussion, Mk 3. | Brass case containing striker, cap, and spring held back by removable split pin. Sleeve into which safety fuze is crimped. | 10 in sealed tin. | Pull out split pin. | Nil. | Nil. | Cap affected slowly. | Nil. | Keep tin closed and sealed when not in use |
| 2. | Safety fuze, No, 11, Mk-2. | Black, 0.21" dia, gunpowder core. | 48" in circular metal box. | Igniter, percussion, Mk 3, or match fuze. | Core deteriorates rapidly. Unreliable if tin has been open for long. | Core burns more slowly, cover becomes brittle and liable to crack. | If core is allowed to get damp fuze is useless. | Nil. | Before use all safety fuze must be tested (see Section 2, paragraph 18). |

RESTRICTED

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|----|----------------------------|--|---------------------------------------|--|--------------------------------|---------------------------------|---------------------------------------|---|---|
| | | | | | | | | | Un-sealed lengths will never be put back into storage |
| 3. | Fuze, instantaneous. Mk 4. | Rough orange-coloured covering, 0.25" dia, gunpowder core. | 300' on reel | - | - | - | - | - | For booby trap training only. For further details see Table 9, Serial No. 5 |
| 4. | Detonator, No. 27, | Metal tube, $1\frac{3}{4}$ " \times 0.26" dia. | 25 in round tin, 8 tins in wooden box | Safety fuze or booby trap mechanisms (operations only) | Nil over normal climatic range | Nil over normal climatic range. | Filling slowly rendered inert by damp | May be detonated by shock or rifle bullet, or under pressure. | Store in dry cool place. HANDLE WITH CARE |

RESTRICTED

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|----|------------------|---|---|--|------|---|--|--|---|
| 5. | Primer, CE, 1-oz | Waxed paper covered tapered cylinder, $1\frac{1}{4}$ "long and $1\frac{1}{2}$ "approx dia, with central waterproofed hole for detonator or detonating cord. | 10 in metal cylinder, 6 cylinders in special wooden box | Detonating cord or, in special circumstances, a detonator | Nil. | Nil. | Nil as long as paper cover or waterproof skin of detonator hole are not damaged. | Fairly insensitive, but may be ignited by rifle bullet. | Ensure that waxed paper cover is undamaged and that no attempt is made to rectify the detonator hole. |
| 6. | Detonating cord. | White plastic cover, 0.19" dia, white core (PETN). | 500' on reel. | Normal: two primers. Hasty: one primer or two detonators, No. 27 (see Figure 2). | Nil. | Cover tends to become brittle, so should not be tied in knots or bent sharply. Core unaffected. | Can be used under water provided that 12-in spare ends has been left at all junctions. | Insensitive, but joints backed by hard surface can be detonated by rifle bullet. | 30 junction clips (Serial No.7), strung on binding wire, may be packed in centre of reel |

RESTRICTED

| | | | | | | | | | |
|----|---------------------------------|---|--|---|------|------|---------------------------------|---|---|
| 7. | Detonating cord. junction clip. | Spring steel clip approximately 1'' square shaped to clamp two crossed lengths of cord in close contact (see Figure 3). | 30 strung together with binding wire [see Serial No. 6, column (k)]. | - | Nil. | Nil. | Nil for all practical purposes. | - | The latest model is shaped to hold one of the new projected long detonators in contact with the upper length of cord for initiation purposes. Note that the current No.27 or No.3 detonators cannot be relied upon for this purpose |
|----|---------------------------------|---|--|---|------|------|---------------------------------|---|---|

RESTRICTED

Table 4- Firing Accessories (Electrical)

| Ser | Item | Short description | Normal packing | Resistance | Remarks |
|-----|-----------------------------------|--|--|--|---|
| (a) | (b) | (c) | (d) | (e) | (f) |
| 1. | Exploder, dynamo condenser, Mk 2. | Rectangular Bakelite waterproof case, with terminals at one end and firing button and socket for handle at the other. Carrying handle and neon light on top. | In leather carrying case, with box, fusion test (Serial No. 5) and three spare handles included. Total weight 18 lb. | When in good order will fire through resistance of 300 ohms, e.g circuit of 180 detonators No. 33 and 400 yds of double cable electric (Serial No. 2 or 3) | Full instructions for use are on the exploder. When charged up ready for firing a lethal shock may be received if the terminals are touched. The condenser is automatically discharged by a switch operated by the spring loaded cover to the handle socket which functions when the handle is removed. |
| 2. | Cable electric E1. Mk 2. | One tinned steel and six tinned copper strands, insulated by a rubber cover with braided hemp outer cover | 220 yds (single) on metal reel. | 2.6 ohms per 100 yds double. | See Note 1. |
| 3. | Cable, electric, J (single low). | Three tinned copper strands vulcanized rubber insulated, taped and braided. | 220 yds (single) on metal reel. | 2.6 ohms per 100 yds double. | See Note 1. |
| 4. | Detonator, No.33 (electric). | Detonator No. 27 (see Table 3. Serial No. 4) with electric head. | 10 in a packet, 20 packets in a metal case. | 1.6 ohms at firing temperature. | Resistance when cold may vary between 0.9 ohms and 1.6 ohms. A current of 0.6 amps will fire a single detonator, but a minimum of 1.5 amps should be used for detonators in series. |
| 5. | Box fusion | Rectangular metal box with two slots (spaced to fit the | In carrying case of exploder DC Mk 2 | Contains fixed resistance of 150 | For use see Table 5. |

RESTRICTED

| Ser | Item | Short description | Normal packing | Resistance | Remarks |
|-----|----------------------------|--|----------------|---|--|
| (a) | (b) | (c) | (d) | (e) | (f) |
| | test. | terminals of the exploder DC Mk 2) on one side and two spring clips and reel of iridio-platinum wire on the other. | (Serial No. 1) | ohms which with the wire between the spring clips makes a total circuit resistance of 300 ohms. | |
| 6. | Demolition test set, Mk 1. | Rectangular box with hinged lid and carrying handle, Within are the instrument panel (under which is the test cell) and a compartment containing accessories | - | - | Instructions for use are on the inside of the lid. The various test for which it is used are given in Table 6. |

Notes:

1. Any well insulated cable may be used in an emergency. The resistances (in ohms per 100 yds double) of cables normally carried by Signals units are:-

| | |
|-----------------------|---------|
| Cable, assault, No. 1 | - 71.6 |
| Cable, assault, No. 2 | - 34.8 |
| Cable, electric, D 3 | - 15.5 |
| Cable, electric, D 8 | - 12.0 |
| Cable, electric, D 10 | - 11.36 |

2. The use of the obsolescent accessory "Igniter, safety fuze, electric" is limited to battle noise simulation. It will not be used for demolitions.

3. For batteries and cells as alternative to Serial No. 1.see Table 7.

RESTRICTED

Table 5 - Testing Exploder, Dynamo Condenser, Mark 2 or Mark 3. Using Box, Fusion Test

| | Operation | Satisfactory result | If result is unsatisfactory further action required | Remarks |
|----|--|--|---|---|
| | (a) | (b) | (c) | (d) |
| 1. | Ensure that exploder handle is not in socket | Wire bridge fuses, indicating that the exploder will fire through 300 ohms | If wire bridge does not fuses, repeat test giving more than 15 additional turns If bridge still does not fuse after a reasonable number of additional turns (say 30), the exploder is faulty and must be exchanged | The exploder handle must be removed before the test box is touched, not only at the initial test, but at subsequent repeat tests. |
| 2. | Attach test box firmly to exploder terminals and fix iridio-platinum wire taut between spring clips | | | |
| 3. | Screw handle into exploder; turn rapidly and steadily until neon light shows a continuous glow; continue for 15 more turns | | | |
| 4. | Press firing button | | | |

Table 5- Sequence of Operational for Testing Electrical Firing Circuits Using Demolition Test Set, Mark 1

| Ser | Test | Switch setting | Operation | Satisfactory result | If result is unsatisfactory further action required | Remarks |
|-----|--------------------------|----------------|--|---------------------------------------|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) | (g) |
| 1. | Condition of cell in set | Continuity | Short circuit terminals on set and press contact button | Pronounced deflection on galvanometer | Check that short circuiting is thorough and repeat. If still unsatisfactory obtain new cell | Must always be carried out before using the set |
| 2. | Continuity | Continuity | Connect ends of main leads to terminals on set and press contact button | Pronounced deflection on galvanometer | Carry out visual inspection for break. If not apparent apply picker test (see Serial No.5) | This sequence of three tests is standard procedure in every case of electrical firing. It should be preceded by a visual inspection of the circuit. |
| 3. | Discontinuity | Continuity | Break circuit by disconnecting detonator farthest from the exploder and then proceed as in Serial No.2 | No deflection | Carry out visual inspection for fault in insulation, not forgetting cable still on the drum | |

RESTRICTED

| | | | | | | |
|---|-----------------------|-------------------|--|---|---|--|
| 4 | Continuity | Continuity | Connect up circuit again and repeat test at Serial No.2 | Pronounced deflection on galvanometer | | For first test of a new circuit withdraw all detonators from primers. |
| 5 | Pricker test | Continuity | Connect pricker leads to terminals of set Work round cables making connection through the cables cover and testing for continuity | Pronounced deflection on galvanometer | No deflection indicates break in the circuit between the points where the prickers are inserted | A pricker lead is a length of cable (about 4 ft) with one end attached to a sharply pointed nail or the like which will pierce the cable insulation |
| 6 | Resistance of circuit | Wheatstone bridge | Connect main leads to the terminals of the set and adjust the resistance coils units a nil deflection is obtained on the galvanometer when the contact button is pressed | The sum of the readings on the three resistance coils will be the resistance of the circuit | - | Only necessary on very important long lead demolitions, when nonstandard cable is used or when a dynamo condenser exploder is not available. Essential when firing is by batteries |

RESTRICTED

Table 6- Firing.- Firing Capacity of Service Batteries and Cells

| Serial No. | Source of power | Maximum external resistance in ohms for circuit with more than one det | Conditions required to attain results set out in column (c) | Remarks (see also NOTES at foot of this table) |
|------------|--|--|--|--|
| (a) | (b) | (c) | (d) | (e) |
| 1 | Car or truck battery-6V | 4 | (i) Battery must be fully charged, or engine must be running and battery charging at maximum | Many WD vehicles have an inspection lamp socket outlet (2-pin) on the dash. This outlet has no switch and current comes direct from the battery through a fuse |
| 2 | Car or truck battery-12V | 8 | (ii) Good contacts throughout | |
| 3 | Service torch battery-1.5V | 0.4 | (i) Battery (cell) in good condition, ie, gives good light in torch, and appears in good physical state, ie, no cracks in bitumen seal and no damage to cardboard case | Since condition (i) and (iii) in column (d) are very hard to guarantee, the following rule should be adhered to: Only if there is no alternative will torch batteries be used; then connect maximum number of cells as is practical into circuit in which resistance is reduced to minimum. |
| 4. | (single cell) Service torch battery-3V (twin cell) | 0.7 | | |

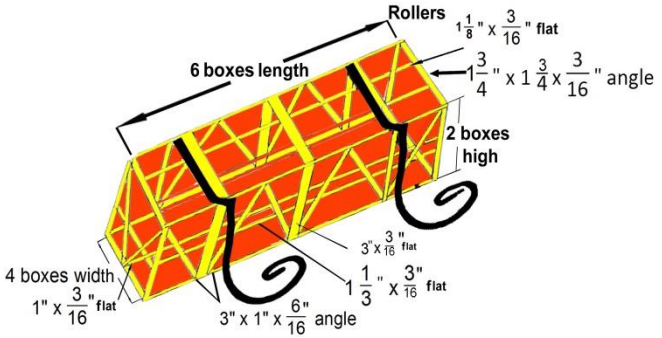
RESTRICTED

| | | | | |
|---|---|-----|---|--|
| 5 | Lantern electric (minefield marking) battery-3.0V (twin cell) | 0.7 | (ii) Less than one year old (see date stamp) (iii) Good contacts throughout (very difficult to achieve because battery is not provided with terminals) | An empty 1-oz primer tin makes a satisfactory holder for six standard cells one above another. A wire giving connection from the base of the bottom cell can lie between the cells and the side of the tin |
| 6 | Service torch battery-4.5V (triple cell) | 1.0 | (i) Cell in good condition, ie, functions strongly in service and shows no sign of superficial damage. | These cells are infinitely preferable to Serials No.3 to 6 since each is fitted with proper terminals |
| 7 | Cell, dry, rectangular cross-section-1.5V (used in signals equipment's) | 0.4 | (ii) Less than one year old (see date stamp) | |

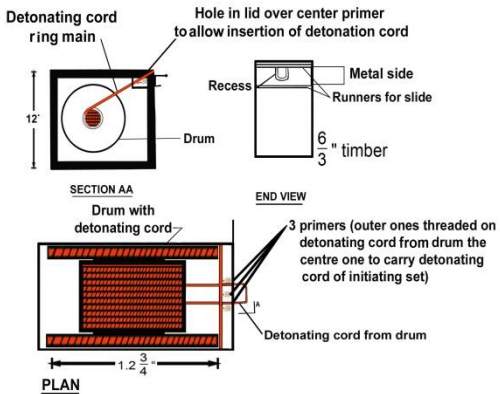
Notes.

1. External resistance in circuit should be estimated on the basis of 2.6 ohms per 100 yards of double EI (or equivalent) cable and 1.6 ohms per No. 33 detonator. With two detonators in a circuit of 200 yards of double cable, a 12V truck battery would almost certainly fire them (producing 1.4 amps instead of 1.5 amps) or, alternatively, 21 dry cells (Serial No. 7) would be required.
2. Under normal circumstance, the standard resistance (Wheatstone bridge) and fusion tests should be carried out with the demolition test set.

RESTRICTED



(a) Crate upside down to show rollers



(b) Initiator box

Figure 1-1: RDD (concrete equipment)

Table 7 – Shaped Charges

| Serial No. | Item | Description | Use | Initiation | Remarks |
|------------|---|---|---|---|---|
| (a) | (b) | (c) | (d) | (e) | (f) |
| 1 | Bangalore, torpedo, 1 $\frac{1}{2}$ “, Mk 1 | Light steel tube, 1 $\frac{1}{2}$ “ diam, filled with HE. Issued 6‘sections weighing 14 lb each with male and female end fitted with spring clip joint. Male end has built-in primer and a bullet - shaped nose is provided to fit into the female end of the leading section. Four sections complete with accessories are issued together in a special frame | Breaching wire obstacles. Will produce gap at least 10’ wide, depending on spacing and type of main pickets Will also leave a path 2‘ wide free from anti-personnel mines | Detonating cord (inserted in built-in primer in rear male end) and double initiating set [see Figure 2 (c)] | Issued as G 1098 equipment to infantry battalions |

RESTRICTED

| Serial No. | Item | Description | Use | Initiation | Remarks |
|------------|--|---|--|--|---|
| (a) | (b) | (c) | (d) | (e) | (f) |
| 2 | Charge, demolition, No. 1 (6" beehive), Mk 3 | 6" diam hollow core on three fixed legs of 51" effective length. Explosive filling is $6\frac{3}{4}$ lb HE with built-in primer covered with removal screw cap at top. Over-all height 13" and weight 10 lb. Issued four in wooden box weighing, $53\frac{1}{2}$ lb | Used for making holes (which are rough and irregular in shape, average diam 2") Penetration in RC of one charge is 2' 6" two charges is succession 4' and three charges 5', Penetration of one charge in MS is 9" and in armour plate 6" | Detonator or detonating cord in built-in primer at top | Length of leg must not be changed if maximum penetration is wanted. If successive charges are used, accurate aiming down the first hole is important. Minimum spacing for simultaneous firing of adjacent charges is 2' centre to centre. The holes must be cooled before being filled with explosive |

RESTRICTED

| Serial No. | Item | Description | Use | Initiation | Remarks |
|------------|---|--|--|---|---------|
| (a) | (b) | (c) | (d) | (e) | (f) |
| 3 | Charge, demolition, No, 14 (11-Ib hay-rick), Mk 1 | V-shaped charge $9\frac{1}{2}$ " effective length $5\frac{1}{4}$ " wide and 10" high. Explosive filling is 11 lb HE with built-in primer on top with longitudinal holes for detonating cord. Has two carrying handles and transit bolt through primer hole. The ends of the base are provided with sockets into which fit connecting pins (nails) for joining charges and special links together. Total weight $20\frac{1}{2}$ lb. Not issued as individual charges, but only in the sets comprising the charge, demolition, necklace (Serial No.5) | Designed for charge, demolition, necklace (see Serial No. 5) Placed end to end they constitute and effective cutting charge with performance as follows:- With no stand-off; 4" laminated steel plate in compression or 5" in tension (double these figures for two charges exactly opposite one another). Alternatively 1" of steel eg, reinforcing bars) through, 6" of concrete. With 42" stand-off: 1" steel plate. | Detonating cord is threaded through the hole in the built-in primer | |

RESTRICTED

| Serial No. | Item | Description | Use | Initiation | Remarks |
|------------|--|--|---|--|---|
| (a) | (b) | (c) | (d) | (e) | (f) |
| 4 | Rapid demolition device (concrete) (RDD con-crete) | Pressure charge in light steel crate (designed to be made up by fd pk sqn from MS angles and flats) holding 5 cwt of current slab explosive arranged in standard packing boxes at 1 cwt per ft run of crate (see Figure 1) Crates are fitted with small rollers underneath and drag ropes, and a hinged ramp (also of MS angles and flats) facilitates rapid unloading from the truck. One 3-ton truck carries five crates | Rapid demolition of RC or masonry bridges when speed is more important than economy of explosive. With continuous charge across bridge collapse should be assured with RC bridges with beams of over-all depth from road surface of 5', with RC arch rings through maximum 5' of fill and any brick or masonry span. For RC bowstring girders and span-drel arches see Serial No. 5 | Before start of operation open two boxes of explosive in each crate, remove one slab from each and replace with plug of plastic explosive fitted with primer and 24" length of detonating cord. Prepare initiator box (locally made, see Figure 1), a supply of junction clips, and a double initiating set with 6' lengths of safety fuze and 2' length of detonation cord, cord to be inserted in hole in initiator box at last minute | In view of the very large quantity of explosive used, the firing party must get behind solid cover as far from the bridge as possible |

RESTRICTED

| | | | | | |
|---|---|---|---|---|--|
| 5 | Charge, demolition, necklace, LIAI (Formerly RDD steel) | A necklace of 11-lb hayricks (Serial No. 3) pinned together or connected by special adjustable links, and fixed to the target with special clamps or by improvised arrangements. The equipment is supplied in sets, each packet in a steel box measuring 4' X1'X6" and comprising five hayricks, two adjustable links two clamps, and ten nails . | Rapid demolition of bridges for which Serial No. 4 is unsuitable, ie, all steel bridges and RC bowstring girders and spandrel arches. Can be used in conjunction with Serial No. 4 when fixing necklace under road might be difficult | Each necklace is fired by detonating cord threaded through the hole in the built-in primer in each hayrick. Where several necklaces or an RDD (concrete) are incorporated as well, an initiator box with a detonating cord ring main as described for Serial No. 4 should be used | Supplementary items usually needed are a safety belt and demolition ladder |
|---|---|---|---|---|--|

RESTRICTED

Table 8- Standard Booby Trap Equipment (i)

| Ser | Name | Description | Operations | Use |
|-----|------------------------------------|--|---|---|
| (a) | (b) | (c) | (d) | (e) |
| 1 | Switch, No. 4, Pull, Mk I (ii) | Cylindrical, with over-all measurements $3\frac{3}{4}$ " long and 7/16" diam. Contains a percussion cap and spring operated striker held in position by U-shaped clip. Packed 2 per carton, 5 cartons per tin, and 20 tins per case weight 35 lb. | A pull of 6 to 8 lb on a connected trip wire withdraws a U-shaped clip which releases the striker. | For trapping road blocks (eg, felled trees, carts) or demolition debris that the enemy may want to move |
| 2 | Switch, No. 5, pressure, Mk I (ii) | Over-all dimensions $3\frac{3}{4}$ " X $1\frac{1}{4}$ " wide X $\frac{3}{4}$ " high. Contains percussion cap and spring operated striker on the stem of which is a detent in which the lips of the double sear engage. The hinged lid has a central hole into which an extension rod can be fixed. Packed 2 per carton, 5 Cartons per tin, and 20 tins per case, weight 90 lb. | Pressure on the lid (21 lb at the end farthest from hinge or 50 to 60 lb at the extension socket) depresses the sear and disengages the lips from the detent on the striker which is then forced forward by the spring on to the cap. | Where stores might be dumped or men might walk |
| 3 | Switch, No. 6, release, Mk I (ii) | Over-all dimensions $4\frac{1}{2}$ " X $\frac{5}{8}$ " X 9/16" with hinged lid which, when seated down on the case, holds the hinged sear engaged in a detent on the striker stem, and thus the striker spring compressed. Packed 2 per carton, 5 carton, 5 cartons per tin, and 20 tin per case weight 60 lb. | Removal of weight (7 lb minimum should be used for safety) from the lid allows the spring acting on the striker to force the scar away so that the striker is free to strike the cap. | Under any object that might be moved, eg, as in Serial No. 1, attractive souvenirs, etc. |

RESTRICTED

| Ser | Name | Description | Operations | Use |
|-----|-----------------------------------|---|---|--|
| (a) | (b) | (c) | (d) | (e) |
| 4 | Switch, No. 9, L delay, Mk I (ii) | Similar in shape to, but slightly larger than, Serial No. 1. The spring - loaded striker is anchored to the body of the switch by a tellurium lead element. Standard switches are available for delay periods of 1, 6, 12 and 24 hrs, and 3 and 7 days, assumed average temperature being 65° F [see Notes (iii) and (iv)]. Each switch is marked with its delay period. Packed 10 in a tin, and 20 tins in a wooden box, weight 61 lb. | When the safety pin is removed the spring tension taken by the lead element that stretches uniformly with the time and ultimately breaks, thereby allowing the striker to fly forward onto the cap. | Delayed demolitions in a withdrawal. |
| 5 | Fuze, instantaneous, Mk 4 | A burning fuze encased in an orange coloured fabric which burns at not less than 90 ft per sec. Must not be confused with old type US Army orange safety fuze which burns at 2 ft per min. Will fire No. 27 detonator, but cover has to be stripped from fuze before it is inserted. Normal packing is 300 ft on metal reel. | Can be lighted by percussion igniter or by any one of Serials No. 1 to 4 above, but always by remote control | Used for booby trap training only (v). |
| 6 | Wire trip (0.014- in diam) (vi) | Has a dark finish. Packed 25 yds on 3 $\frac{1}{2}$ " diam spool, 400 spools in wooden case weight 160 lb approx | | Used to connect movable objects to booby trap mechanisms and also for trip wire operation of mines and mechanisms. |

Notes:

- (i) Anti-personnel mines Nos. 5 and 6 can be used readymade pressure operated traps; the shrapnel mine is set off by a pull on trip wire
- (ii) All switch mechanisms have a standard cap, cap holder, and fuze adopter.
- (iii) Tins of L delay switches issued for operational purposes have an assortment follows :

RESTRICTED

| Delay period | | | | Assortment | |
|--------------|-----|-----|-----|------------|----|
| | | | | A | B |
| 1 hr | ... | ... | ... | 2 | 3 |
| 6 hrs | ... | ... | ... | 2 | 2 |
| 12 hrs | ... | ... | ... | 2 | 2 |
| 24 hrs | ... | ... | ... | 2 | 1 |
| 3 days | ... | ... | ... | 2 | 1 |
| 7 days | ... | ... | ... | - | 1 |
| Total | ... | ... | ... | 10 | 10 |

- (iv) For the selection of an L delay mechanism for “nonstandard” temperature use the table below as follows:

| Average temperature °F | Duration of delay actually required | | | | | |
|------------------------|-------------------------------------|----------------|----------------|----|----------------|----------------|
| | Hours | | | | days | |
| 105 | $1\frac{1}{4}$ | $1\frac{1}{2}$ | 3 | 6 | $1\frac{1}{2}$ | 2 |
| 95 | $1\frac{1}{2}$ | 2 | $4\frac{1}{2}$ | 8 | 1 | $2\frac{1}{2}$ |
| 85 | $1\frac{1}{2}$ | 3 | 6 | 12 | $1\frac{1}{2}$ | 4 |
| 75 | $2\frac{3}{4}$ | 4 | 8 | 17 | 2 | 5 |
| 65 | 1 | 6 | 12 | 24 | 3 | 7 |
| 55 | $1\frac{1}{4}$ | 8 | 17 | 33 | 4 | 10 |
| 45 | $2\frac{1}{4}$ | 11 | 23 | 46 | 6 | 13 |
| 35 | 3 | 16 | 32 | 64 | 8 | 19 |

First estimate the average temperature at which it will have to work and decide what delay is actually required. Then on the appropriate temperature line note the column in which the required delay (or nearest to it) appears. Follow this column to the 65° (standard) temperature line : the figure there is the marking on the switch to be used

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- (v) Cover is waterproof, but core is very susceptible to damp. Cut of 6 inches from end of reel before use and cover all joins and junctions with adhesive tape.
- (vi) If standard wire is not available, select a tempered steel wire with dark finish.

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Table 9- Unit Holding of Explosives and Accessories

| Ser No | Item | Fd Coy | FdPk Coy | InfBn |
|--------|------------------------------------|--------|----------|-------|
| (a) | (b) | (c) | (d) | (e) |
| 1. | Augers Earth 9" | 3 | 2 | - |
| 2. | Camouflet equipment set | 1 | 6 | - |
| 3. | Charges demolition beehive 6" Mk I | 24 | 72 | - |
| 4. | Crimpers | 6 | 2 | - |
| 5. | Cord detonating ft | 1500 | 2500 | - |
| 6. | Detonators No. 27 Mk I | 300 | 300 | 100 |
| 7. | Detonators Electric No. 33 | 300 | 100 | - |
| 8. | Exploder DC Mk I | 6 | 4 | - |
| 9. | Fuze Instantaneous ft | 300 | - | 100 |
| 10. | Fuze safety No. II fms | 864 | 1132 | 96 |
| 11. | Igniters safety fuze Mk III | 30 | 10 | 20 |
| 12. | Matches fuze | 72 | 36 | - |
| 13. | Points camouflet | 30 | 180 | - |
| 14. | Primers demolition 1 oz CE | 360 | 240 | 100 |
| 15. | Switches No. 4 Pull Mk I | 24 | - | 10 |
| 16. | Switches No. 5 Pressure Mk I | 24 | - | - |
| 17. | Switches No. 6 release Mk I | 24 | - | - |
| 18. | Switches No. 9 Delay Mk I | 48 | - | - |
| 19. | Tape insulating ¾" lbs | 5 | 1 | 4 |
| 20. | Wire trip 0-014" dia yds | 600 | 300 | 200 |
| 21. | Ammonal bulk pocket lbs | 150 | 50 | - |
| 22. | Balloons rubber | 108 | 36 | - |
| 23. | Explosive 808 lbs | 150 | 1000 | 50 |
| 24.. | Gun cotton WET slab .. | 336 | 224 | - |

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| Ser No | Item | Fd Coy | FdPk Coy | InfBn |
|--------|-------------------------|--------|----------|-------|
| (a) | (b) | (c) | (d) | (e) |
| 25. | S. No 1 Pull Mk I | 24 | - | - |
| 26. | Green 5 hrs | 10 | - | - |
| 27. | Red ½ „ | 20 | - | - |
| 28. | White 2 „ | 10 | - | - |
| 29. | Tube fuze sealing Mk I | 12 | - | - |
| 30. | Wire trip .032” dia yds | 600 | 600 | 200 |
| 31. | Bars tamping wood 4’ | 4 | 2 | - |
| 32. | Knives gabbon | 13 | 7 | - |
| 33. | Test set dmI Mk I | 6 | 2 | - |
| 34. | Cable Elec E I Mk 2 yds | 1800 | 2640 | - |
| 35. | Tape insulating ½” lbs | 4 | 12 | - |
| 36. | Compound sealing „ | 12 | 6 | - |
| 37. | Flare trip wire No.1 | - | - | 36 |
| 38. | Cylinder No. 337 Mk I | - | - | 1 |
| 39. | Auger earth 6” | - | - | 2 |

Notes.

1. In addition the following transportation units hold small amounts of explosive and accessories for destruction of equipment: engr stores (tn) sqn, port and port maint sqns, and rly, rly maint and rly svy sqns.
2. Artillery units (incl lt, fd, med, hvy, and AA btys and regts) hold limited amounts of explosive and accessories as aids to digging in and for destruction of equipment.
3. The standard scale of issue of demolition test sets is one for each exploder. The box fusion test is part of the exploder set.