# SUB-SECTION AC NOMENCLATURE

# NOMENCLATURE

The following notes explain the principles on which the various signalling installations and their components, have been named.

System of Naming Instruments.

For Service requirements it is essential that W/T sets for fitting in ships should be standardised. For purposes of reference, the descriptions of articles allowed by establishment are abbreviated as much as possible consistent with clarity in order that the establishment of naval stores for W/T and other methods of signalling may be of reasonable size, and reference thereto simplified so far as may be.

With this end in view, the following system has been evolved whereby it is possible to define a complete signalling set and the allowance of appropriate switches, rheostats, valves etc., by reference to a type number and a combination of two letters which describes the receiving apparatus fitted with that type.

The transmitting apparatus is defined by type numbers, certain ranges being allocated to the various services for which the types are used.

The following table indicates the numbers used for each particular apparatus. Those not dealt with in this book are marked thus * . It will be noted that numbers above 400 do not necessarily apply to transmitting sets.

| Transmitter Type | Use | Transmitter Type | Use |
|---|---|---|---|
| 1 - 13 | Spark W/T sets. | 101 - 109 | S/T sets. |
| 14 - 19 | Arc W/T sets. | 201 etc. | *D/C sets. |
| 20 - 29 | *Shore station W/T sets. | 301 etc. | *Sc/s sets. |
| 30 - 69 | Valve W/T sets. | 401 etc. | Wa/T sets. |
| 71 - 79 | H/F sets (not attachments). | 501 etc. | Buzzer outfits and R/C circuits. |
| 81 - 99 | R/T sets (not attachments). | 701 etc. | S/T Receiving sets and Hydrophones. |

When a set is still in the experimental stage the letter X is added to its name. This applies to transmitters (e.g. Type 48X) and receivers (e.g. S/F outfit SGX). If a second set is built for experimental purposes, differing considerably from the first the letter Y is used (e.g. Type 48Y) and if a third experimental set is built the letter Z is used (e.g. Type 48Z).

When the set is standardised this suffix letter is dropped, though in some cases a set may never be standardised in the sense that no other sets like it are likely to be required.

If a standardised set has a modification made to it, it is usual to designate this with the suffix A, (e.g. Type 37 converted to take an H/F attachment is called Type 37A). When a set not originally designed to have an H/F attachment has one actually fitted the suffix S is added, (e.g. Type 37S).

The actual transmitting portion of a modern set is composed either of a number of panels if the set is of medium or large power or of a single unit known as the transmitter if the set is small. If the panel system is used, each panel normally contains the whole of the particular portion of the circuit, viz., transmitting panel, rectifying panel, H/F panel, etc., and all the panels are bolted up together when received on board. In addition to the transmitter on the panels the set usually includes a number of power boards, controlling boards, etc.

These various component parts are indicated by a number followed by a letter. The number indicates the type of instrument concerned, e.g., board, transmitter, panel, etc. The letters are allocated in the chronological order in which the different instruments are produced.

The principal numbers used are given in the following table:-

| Name of Unit | Description |
|---|---|
| Board 2, etc. | Board, Supply, Distributing, Charging, Controlling etc., (Switchboard). |
| Panel 3, etc. | W/T Valve Panel for a Large Installation. |
| Transmitter 4, etc. | W/T Transmitters for a Small Installation. |
| Transmitter 5, etc. | H/F Transmitters and Attachments. |
| Transmitter 6, etc. | Emergency W/T Transmitter or Spark Attachment. |
| Transmitter 7, etc. | V.H/F and H/F Transmitter and Attachments. |
| Transmitter 8, etc. | R/T Transmitters and Attachments. |

When one of the articles numbered from 3 to 8 is issued with various accessories in the form of an outfit for use as an attachment to a standard transmitting set, the transmitter outfit is given the same number and letter as the main unit.

Where only one unit of the same class (i.e., bearing the same number and letter) is fitted, it can be referred to simply by its number and letter preceded by "Board", "Panel", etc., as the case may be. Similarly, when all the apparatus is assembled under one name to form a complete transmitter, it can be referred to as "Transmitter" followed by its number and letter, e.g., the transmitter in Type 43 is spoken of as "Transmitter 4G".

In addition to this it has been found convenient for instructional purposes to refer to transmitting circuits which are housed in panels, bearing rather complicated store-keeping names by the short title "Transmitter" followed by the number and letter of the panel and a brief designation of the type of transmitter e.g., The main L/F transmitting circuits housed in panels 3G transmitting upper and 3G transmitting lower may for instruction purposes be called "Transmitter 3G, L/F". Similarly the main L/F Transmitter of Type 47 can be referred to as "Transmitter 3R L/F" and the various

attachments as "Transmitter 3R, H/F" "Transmitter 3R, H.H/F", "Transmitter 3R,Low Power" and"Transmitter 3R, Spark". It must be borne in mind that these names cannot be used for storekeeping purposes, except where the rate book authorises the term transmitter, e.g., the Harbour set for Type 47 is officially designated as "Transmitter 4R".

More usually spark attachments have the number 6 which is also used for emergency sets,the letters are allocated in rotation irrespective of the letter of the main set e.g., Transmitter 6D is the emergency set and Transmitter 6G the spark set for Type 36S.

The modern policy is to give the panels containing attachments the same number and letter as the main set for which they have been designed but followed by the nature of the attachment, as indicated above.

Before this policy was adopted, initial letters were sometimes used to designate the nature of the attachment, e.g., The label on the H/F attachment of Types 37 and 38 which should now be spoken of as "Transmitter 3K,H/F" is still marked "Panel 3KS" while the L.P.A. for Types 35 and 36 which should be referred to as "Transmitter 3G Low Power" is marked "Panel 3GL". Some of the H/F attachments were designated by the word "Short wave", e.g., Type 36 H/F attachment is marked "Transmitter 3G Short wave" but should be referred to as "Transmitter 3G, H/F".

Properly speaking, when the word "Transmitter" is used as above it implies that the necessary accessories, such as valves, are included. When more than one panel is included, it becomes necessary to differentiate between them by adding a further description, usually "Upper" or "Lower" as the case may be, e.g., Transmitter 3G Low Power contains two panels, known as "Panel 3GL Upper" and "Panel 3GL, Lower". In cases where more boards bearing the same number and letter exist it may be necessary to add still further descriptions, e.g., in Type 38 the 2G boards bear the following names:-

| | | |
|---|---|---|
| Board 2G Supply, 5kW (Upper) | Board 2G Supply, A.C. (Upper) | Board 2G Charging (Upper) |
| " " " " (Lower) | " " " " (Lower) | " " " (Lower) |
| " " " D.C. (Upper) | " " Distributing (Upper) | " " Controlling |
| " " " " (Lower) | " " " (Lower) | |

The following table shows the allocation of "Distinguishing Letters" to various power boards, valve panels and transmitters used with sets.

| Type Number of Set. | Letter Allocated | Boards, etc., used. | Valve Panels or Transmitter used |
|---|---|---|---|
| 45 | - | 2A, 2B, 2C and 2D | 4K |
| 43 | - | 2E | 4G |
| 35, 35S | F | 2F and 2G | 3F |
| 36, 36S | G | 2G | 3G and 3GA |
| 33 | H | 2H | 2H |
| 37, 37A, 37S | K | 2K | 3K, 3KA, 3KS |
| 44 | L | 2L | 4L |
| 46Y | N | 2N | 3N |
| 39X | P | 2P | 3P |
| 38, 38S | Q | 2Q | 3K or 3KA, 3KS and 3Q or 3QA |
| 47 | R | 2R | 3R |
| 48X | S | 2S | 3S |

From this table it will be seen that, in most cases, the same distinguishing letter is used throughout the set, but where components of other sets are embodied those components retain the distinguishing letter of their original set e.g.,

Type 35 set uses Type 36 power boards 2G, except in the case of the supply boards for motor alternators; these latter having been designed for Type 35 take the distinguishing letter "F". Type 38 uses the rectifying panels 3K designed for Type 37, the remaining Type 38 panels and boards use the Type 38 distinguishing letter "Q" except the lower supply boards, which, being the same as those designed for Type 36 use the same name 2G. Panels which have been adapted to accommodate an H/F panel or transmitter, have the letter "A" added to their distinguishing symbols, e.g., 3KA, 3KA, 3QA, etc.

Receiving Apparatus.

In certain cases more than one receiving outfit is supplied with a transmitting set,e.g., Type 4 - 15 set has Receiver-outfit C + Receiver outfit ID or MH. When standardising future sets, however, it is proposed to supply one outfit only to each transmitting set and to give it an initial letter in agreement with the following table.

The outfits of receiving apparatus are classified separately from the remainder of the installation, since any particular type of receiving outfit may be used with more than one installation. They are known as receiver-outfits, except in the case of D/F installations where they are referred to as D/F outfits. These outfits are designated by two letters. The first letter indicates the service for which the outfit is intended and the type of instrument it therefore comprises, as shown in the following table. The second letter depends upon the situation of the outfit. For instance, Receiver-outfit CE includes tuner A4, amplifier N9 and various other stores. It is used as a receiver for Type 83 R/T transmitter. On the other hand the same units, with the addition of a board for valve detector and various other stores, are employed as a receiver for Type 43 W/T transmitter. Under these circumstances the outfit is

called "CC". A list of the principal receiver-outfits will be found in Section D and particulars of D/F outfits are given in Sub-Section LA.

| Name of Outfit | Description |
|---|---|
| Receiver-outfit C | W/T receiving outfit. |
| " " E etc | Detector Units. |
| " " L etc | Obsolescent receiving outfit. Regenerative or autodyne type. |
| " " M etc | Amplifying outfit only. |
| " " N etc | Note-magnifying outfit only. |
| " " Q etc | H/F outfit. |
| D/F outfit S etc | Independent W/T receiving outfit for D/F. |
| Receiver-outfit U etc | S/T receiving outfit. |
| " " W etc | D/C receiving outfit. |

Main units of receiving sets are distinguished by a letter followed by a number, e.g., tuner A4, amplifier M11 . These letters are allotted according to the following system. The numbers in each section run consecutively in the order in which the instruments are designed.

| Letter | Units |
|---|---|
| A | Tuner units. |
| B | Tuner-amplifiers. |
| E | Detectors and heterodyne detectors. |
| F | Training units for D/F. |
| G | Wavemeters, buzzer testers, and oscillators. |
| K | Heterodyne units. |
| L | Regenerative receivers. |
| M | Amplifiers above audio frequencies. |
| N | Note-magnifier or note selector units. |
| P | Quench units. |
| Q | Quench receivers (H/F and V.H/F). |
| S | Frame coils for D/F. |
| Z | Sc/S receivers. |

Battery Outfits.

The outfits of stores for batteries and their charging arrangements are classified independently of both transmitting and receiving outfits. They are distinguished by three letters, the first of which is "B". The second letters run concurrently in the order in which they are allocated. The third letter appears in brackets and indicates the voltage of the H.T.Battery used, in roman numerals. Thus Battery outfit BD(C) has a 100 volt H.T.Battery, whilst Battery outfit BD(L) has a 50 volt H.T.Battery. A full list is given on page NB2.

Battery Cupboards.

These are designated by two letters, the second being in brackets and representing the H.T.battery voltage as in battery outfits, e.g.,Battery Cupboards J(C) and J(L). A list of which cupboards are supplied with the various Battery Outfits is given on page NB2.

Aerial Outfits.

Earlier aerial outfits are designated by a single letter preceded by the word "GROUP" and referred to as "Aerial Outfit Group "A" (for example) - this being the aerial supplied to heavy ships. Later aerial outfits are designated by two letters e.g., Group AB is the new type flat-roofed aerial for heavy ships.

Insulators.

Insulators are divided into three sections, deck, bulkhead and aerial.

Deck Insulators are divided into groups designated by one or two letters as in the case of Aerial outfits e.g., "Insulator, Deck, Group B, Insulator, Deck, Group AG."

Bulkhead Insulators are similarly described, e.g., "Insulator, Bulkhead, Group A."

Aerial Insulators are merely referred to by their description e.g., "Insulator, Aerial, 30 cwt., 18-inch."