

## UNIFYING OUR AIDS TO NAVIGATION INTERNATIONALLY

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*NOTE: While the following statement represents the personal viewpoint of an individual and has no official significance, it should be of interest to all those who are concerned with the unification of buoyage systems.*

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While theoretically unification of buoyage systems internationally is unquestionably desirable, there are practical considerations which appear to make the desired end unobtainable and perhaps even inexpedient. Historically, there have been sporadic attempts to secure a uniform world buoyage system since 1889. The attempts have been characterized by each succeeding conference reversing the coloring system for lateral buoyage adopted by the previous meeting and by an apparently insurmountable conflict between the two basic systems, the lateral and cardinal.

The International Marine Conference of 1889 in Washington recommended that, for a mariner entering from seaward, buoys marking the starboard limits of the channel should be red, and those defining the port limits should be black. The International Maritime Conference of 1912 in St. Petersburg reversed this system of coloring and provided black buoys to starboard when approaching from seaward and red buoys to port. The next attempt to unify world buoyage was undertaken in 1929 by a Technical Committee for "Buoyage and the Lighting of Coasts", convened under the auspices of the League of Nations. This Committee recommended adherence to the rule of colors agreed to at the Washington Conference, and in order to act thereon a Conference of Maritime Nations was held in Lisbon in 1930. At this Conference the British, who did not participate in the work of the Technical Committee, submitted proposals diametrically opposite to the coloring system proposed by the Technical Committee. This threw the matter back to committee and a series of further conferences the last of which took place in London and came up with a draft under date of May 13, 1936, proposing black to starboard and red to port, thus completing an unbroken series of reversals. Naturally, the results could not be approved by the United States because it would have necessitated reversing approximately 80 per cent of the world's buoyage. Further, not one of the above conferences or meetings was able to agree on the superiority of either the lateral or the cardinal system over the other, and the cardinal system was adopted at each meeting as an alternative to the lateral system.

In essence the results of these conferences seem to substantiate three points: First that there is actually no definite advantage in having either color on a certain side when using the lateral system, otherwise the superior system would have come to the fore after two or three conferences on the matter and continual reversal would have been impossible. Second, there must be some validity to the argument that neither of the two basic systems is incontestably superior for all types of coast line. In general, it seems apparent that for complicated coast lines characterized by steeply sloping shores and numerous offlying and isolated dangers the cardinal system is advantageous, whereas the lateral system is more satisfactory for regular and gently sloping shores, perforated by occasional bays and rivers, which in toto are conducive to regular and usually-followed channels. As evidence thereof, the Scandinavian countries have naturally turned to and utilized the principles of the cardinal system to advantage; whereas the United States adopted the lateral system because of the preponderance of simple coasts, rivers and bays. Third, that although a feeling has existed for over fifty years that there should be unification there is no compelling force or cogent demand in the interest of safety that has made uniformity necessary to the proper carrying out of International navigation and trade such as compelled adoption and adherence to the International Regulations for the Prevention of Collisions at Sea.

Theory must always bow to practicality and the desirability of perfection must be weighed against the cost. This cost is not limited to the tangible expenses of making the

physical change in the buoys themselves, and the altering of nautical charts, publications, documents, etc., but extends to such intangibles as familiarizing seafarers with the changes, and the inherent danger to shipping during the period of change.

The time was propitious at the 1889 Conference for international agreement and adaptation, and had that Conference been followed up properly the world might have had a uniform system. On that occasion buoys were not in extensive use, no one system prevailed, and yet sufficient experience had been obtained to approach the problem objectively. Further, the cost of introducing the scheme would have been comparatively small. In the intervening years buoyage systems have become extensive, elaborate and established. So much so that it is very questionable whether the long-range gain would ever compensate for the immediate loss that would inevitably ensue.

A point that must not be overlooked is that the number who would benefit from an international buoyage system are comparatively few in respect to the vast number of mariners who never leave domestic waters. This one fact should make any contemplated change in the buoyage system of the United States and her neighbors absolutely prohibitive because those few who might profit are out of all proportion to the hundreds of thousands who would be affected. In 1946 there were, in the United States, 446,000 vessels numbered, licensed, or enrolled and licensed, and thus restricted to local waters, as against approximately 5,000 vessels registered for foreign trade who might benefit from unification. This latter figure is abnormally high since it includes wartime tonnage.

Further, if the United States changed to the cardinal system, or the Scandinavian countries changed to the lateral, in order to obtain world uniformity, it would leave the domestic shipping, which obviously depends upon buoys to a far greater extent, with an inferior system for their own type of coast, as it is well-established that the two systems do have relative advantages on different types of coasts. It seems reasonable that the relatively few vessels engaged in international navigation, using instruments, landmarks if possible rather than buoys, and employing pilots extensively in inland waters, should have far less difficulty in adapting themselves to a different system than the many domestic and local small craft, navigating more by instinct and from buoy to buoy, would have in adjusting themselves to a new perhaps even inferior system for their purpose.

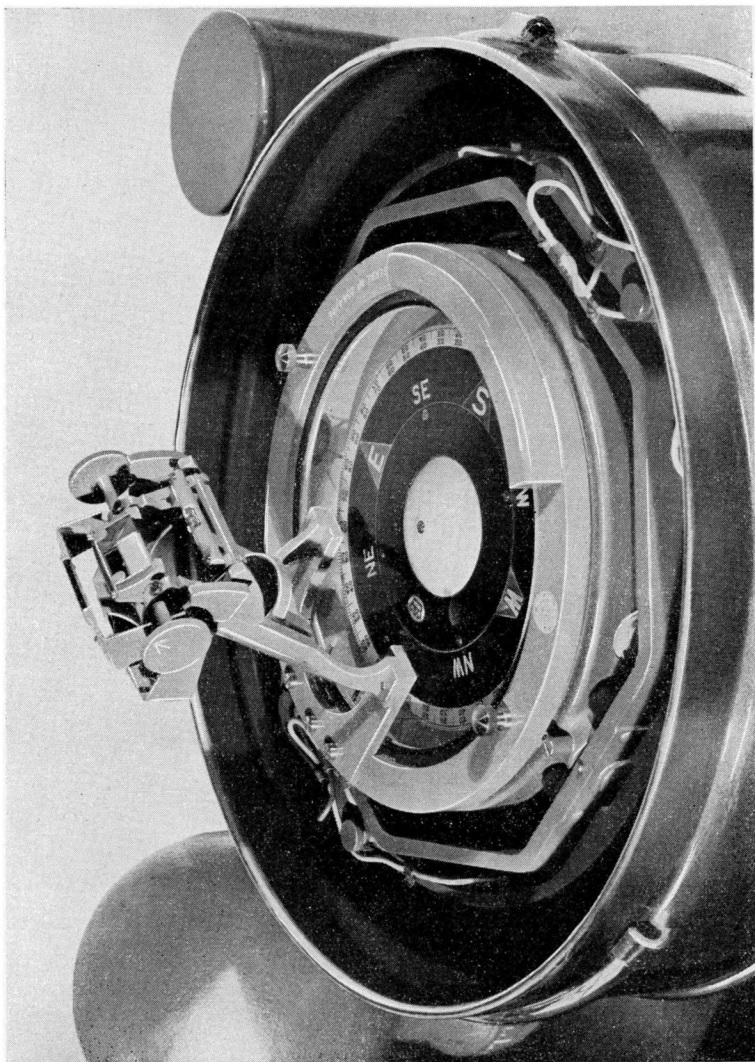
These conclusions indicate that complete unification, as a practical matter, is out of the question. There is want of the overwhelming coercion necessary to overcome the prevailing schisms and lack of a definitely superior system.

This is not intended to be a plea for the status quo of all present buoy systems but it is intended to point out the fallacy of seeking complete international uniformity from a subjective point of view. There are directions in which greater uniformity should be obtained, particularly on a regional basis where countries whose waterways are directly connected have dissimilar systems. In those areas without large bodies of intervening open water, the domestics and casuals are not so isolated and it undoubtedly is confusing to shift from one system immediately into another without a brief respite to get oneself readjusted. But the only logical approach is to extend already existing systems as far toward uniformity as practical following the path of least resistance and making the fewest changes possible.

However, there is a much more fertile field existing at present to exert our energies in the interest of uniformity within the aids to navigation province than unification of buoyage. Its present situation is quite comparable to that existing in 1889 with relation to buoyage. Enough experience has been gained in the field to discuss intelligently the requirements and potentialities, but the varied systems are not so extensive as to make the cost of unification prohibitive now. But let those interested in unification of electronic aids to navigation heed the history of attempting to obtain uniformity of buoyage. The longer unification is delayed the greater are the obstacles and costs in the way of gaining it. Further, there is truly a much greater need for unification in the electronic field for, although it only takes a little mental adaptation to use different buoyage systems, it requires costly equipment to make use of electronic aids to navigation.







**Fig. 1**  
British Admiralty Transmitting Magnetic Compass—The Bowl.