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# THE DEVELOPMENT AND PRESENT TREND OF POLICE RADIO COMMUNICATIONS

Joseph A. Poli

Unlike many other aspects of police work the history of police radio communications has been characterized by gradual progress. Since, for the most part, development has been in an ever forward direction, it is the purpose of this paper to sketch rather briefly, first, the background of modern police radio systems with a word about the latest developments in this field and, second, some of the present problems and observations concerning this phase of police activity.

## HISTORICAL DEVELOPMENT

The invention of wireless telegraphy in 1896 revolutionized police communications,<sup>1</sup> as radio enabled these communication systems to develop with amazing speed. Leaving the detailed account of police communications to more competent hands,<sup>2</sup> the writer proposes only to review rather briefly the development of police radio since the early twenties.

The decade 1920-1930 may best be described as the experimental stage of radio communications as employed by police departments. This is well illustrated by the fact that by 1931 only four cities in the entire United States were employing radio for police purposes.<sup>3</sup>

The idea of first employing radio for police work in America is generally conceded to have originated with W. P. Rutledge, then a member of the Detroit Police force. He first realized its possibilities in 1921 while talking to his nephew, a radio technician, who pointed out that messages could be transmitted from a fixed point to a moving point.<sup>4</sup> It was generally known that radio communications could be held between two fixed points, but not everyone was so thoroughly familiar with radio in those days to know that a message could also be transmitted from a fixed point to a moving point.

The years 1921-28 were not only experimental years but years of disappointment and grief. In the words of Rutledge, they were years of "doublecrossing, duplicity, and deceit."<sup>5</sup>

<sup>1</sup> This was the year in which Marconi patented his first wireless apparatus in England.

<sup>2</sup> See, for example, Leonard, V. A., *Police Communication Systems* (1938).

<sup>3</sup> National Commission on Law Observance and Enforcement. *Report on the Police* (June 26, 1931) 88.

<sup>4</sup> Rutledge, W. P., "Birth of Police Radio," *Yearbook, International Association of Chiefs of Police* (1936-37).

<sup>5</sup> *Supra* p. 106.

It is interesting to note that the Federal Radio Commission was to be found in opposition to the plans of the Detroit police. In the year 1923 the Detroit Police Department secured license to operate on the broadcast band station KOP, but before the police could broadcast any call they were required to include an entertainment feature on the broadcast. As a result they played the tune "Yankee Doodle" before making calls to officers on patrol.<sup>6</sup> This caused Rutledge to retort: "Before much progress can be made, we must receive full cooperation from those who control the destinies of police radio . . . the Federal Radio Commission . . . The progress achieved by the Detroit Police Radio Division . . . has been obtained *in spite* of the federal authorities, rather than with their cooperation."<sup>7</sup>

The radio of the Detroit police first began to function properly in 1928. The following year this department utilized the short wave for police purposes for the first time in the United States. During the early years of police radio when broadcasts were on the commercial broadcast band, the officers were occasionally accused of using the radio to hear the results of baseball or football games.<sup>8</sup> This abuse, however, was not long-lived and appeared to be the exception rather than the rule. In 1929 there were 22,598 broadcasts.<sup>9</sup>

A marked increase was noted in the amount of use of radio communications by police departments during the next eight years. In 1931 four cities were reported to be using radio. Three of the cities had populations of 10,000—100,000. One city was in the population bracket of over 500,000. But by 1937 there were two thousand police agencies—including both local and state—utilizing radio. Today, the use of radio by the police is almost everywhere a common occurrence. To take one example: the ten East Bay cities, California (so-called because they are on the East side of San Francisco Bay), all have police radio communication systems of some sort. These cities, having populations from 302,162 for Oakland to well below 2500 for San Pablo, are all using police radio in some form or another. Even in San Pablo, where the law is represented in the person of the constable, radio is used.

The next step in police communications was the development of the two-way radio which is fast becoming standard with all police departments. Again alluding to the ten East Bay cities,<sup>10</sup> Piedmont,

<sup>6</sup> Leonard, Captain Donald C., "Police Radio Communications," Yearbook, International Association of Chiefs of Police (1936-37) 94.

<sup>7</sup> *Op. cit. supra* note 4 at p. 106.

<sup>8</sup> Jetl, E. K., "Police Radio Problems," Yearbook, Int. Assoc. Chiefs of Police (1937-38) 47.

<sup>9</sup> *Op. Cit. Supra* note 3 at p. 98.

<sup>10</sup> The ten cities, according to population scale, are: Oakland, Berkeley, Alameda, Richmond, San Leandro, Albany, Piedmont, El Cerrito, Emeryville, and San Pablo.

in the early thirties, equipped its cars with two-way radio transmission facilities—the first city in California to do so. Alameda followed suit in 1936, while Richmond plans to have such a system established in the very near future. Across the Bay eighteen of San Francisco's radio patrol cars had been equipped with two-way radio by September, 1941.<sup>11</sup>

In 1936 Chief Rutledge—then Chief at Wyandotte, Michigan—predicted: "The time will come when every individual policeman on the beat will be equipped with a small radio receiver and be directed by radio orders."<sup>12</sup> That time seems now to be arriving. Small belt radios which are carried by patrolmen began being used in the spring of 1940 by the Atlantic City (New Jersey) Police Department. To the writer's knowledge this is the first and only department which is today using this form of radio facility.

The sets are two-way radios, enabling headquarters and patrolmen to freely communicate with one another. This small unit was specially designed for foot patrolmen, but these officers have not as yet been equipped with them.<sup>13</sup> Instead, by August, 1941 ten motorcycle officers were carrying these receivers, and, at times, plain clothes men have used the sets in squad cars which were not equipped with radio. The combined weight of the set is twenty-seven ounces, and its size is  $5\frac{1}{2} \times 3\frac{3}{4} \times 1\frac{3}{4}$  inches, over all. This latest improvement marks the end of the isolation of the beat patrolman.

Present practice and recent developments are a far cry from the early police who beat their batons on the sidewalks to communicate with fellow officers. In a number of our villages, towns, and cities sirens, lights, bells, and horns are used as means of communication by the police. None of these methods, however, have so revolutionized police communication systems as has radio communications.

#### PRESENT DAY TENDENCY TOWARD DUPLICATION

As is often the case during periods of rapid expansion, there appears today to be a trend toward over-duplication of police radio facilities in certain parts of the country. The cause of this trend is dependent upon several factors which are closely related to the complex governmental setup of various cities, counties, and states.

Modern municipal government spells added complications for police radio. It should be borne in mind that problems concerning police communications are intimately related to the problems of the municipalities and that they are not isolated into their own separate

<sup>11</sup> San Francisco Examiner, September 14, 1941.

<sup>12</sup> *Op. Cit. Supra* note 4 at p. 107.

<sup>13</sup> For this information the writer is indebted to Laurence Smith, Supervisor of Radio, Atlantic City Police Department.

category but are closely intertwined with the problems of administration, organization, and attitudes of the local government.

A number of regions in America are plagued by the existence of multifarious independent local governments within larger metropolitan areas. This condition is typical of a number of the larger population centers. For example, such a situation prevails in many large cities, such as Los Angeles and Chicago.

Wherever a region is composed of a number of politically independent communes there is invariably engendered some feeling of independence—a sort of “local nationalism.” The police are not immune from this spirit. Such was the situation that the writer found in a recent survey of the police departments of the East Bay cities. Here there exists ten separate police forces each of which is independent, and whatever cooperation there is, is largely voluntary.

Everyone of the local police units within this Bay Area looks forward to the day when it will install its own radio facilities. Of course, in the long run, this will prove expensive to the community at large. As a result it has been suggested that one central dispatch office could serve adequately all the surrounding communities. There is, however, no indication that such a scheme is about to be undertaken. On the contrary everything points in the opposite direction. The local agencies can be depended upon to choose independence at the cost of efficiency. In a sense the situation is analogous to a feudal pattern where each of the separate groups seeks to provide for its own welfare, preferring not to call on one another unless they deem it absolutely necessary.

The prevailing conditions mentioned in the preceding paragraphs account, in part, for certain peculiarities which exist in the East Bay cities. Local independence of police departments in this area may be a drawback to maximum efficiency, but it does result in curious situations. Smaller communities within the region are occasionally found to be better administered, organized, and possess higher grade equipment than the largest city within the region.

The feeling of “local nationalism,” which drives police departments to acquire the equipment necessary to assure independence from adjacent police units, may have dire consequences on police communications. This may take the form of undue specialization in the radio divisions of the separate cities.

A situation which could well be typical of many parts of the country was found to exist in the East Bay region. Of the ten communities, three of the police departments—Alameda, Berkeley, and Piedmont—have their own radio facilities, one—Oakland—has laid plans to establish dispatch service in the near future, and another—Richmond—plans to have its dispatcher by the end of the year (1941). At the present time Oakland, Emeryville, and

Albany contract with the Berkeley Police Department for transmission services. San Pablo and El Cerrito receive radio service through the sheriff's office at the county seat in Martinez (Contra Costa County). San Leandro uses the radio facilities of the sheriff's office in its own (Alameda) county. The reader will note that this survey indicates that the Berkeley Police Department bears a large part of the burden for police radio communications in the East Bay area.

Berkeley has developed an excellent police radio communications system into a regional network. As a matter of fact it is the largest and most complete police communication network on the Pacific Coast, serving thirty-five agencies as of June, 1937.<sup>14</sup> The police departments of the East Bay may enter into contract for dispatch service with the Berkeley Department. If they do their patrol cars are assigned a number series, e.g., one to ten. The men on patrol are connected with headquarters in the following manner. If headquarters wishes to contact one of their radio cars the message is phoned to Berkeley, where, upon receipt of the message, the dispatcher immediately relays the desired call.

Occasionally there are miscellaneous outside requests for radio service. For example, the Berkeley radio may, at the request of the proper authorities, service the Marin Peninsula (across the Bay) and the California Highway Patrol (commonly called the "State Police"). As can be seen, the services of the Berkeley radio are most complete.<sup>15</sup>

The Berkeley radio division could conceivably be expanded to serve all the police departments of the East Bay region. However, as has already been indicated, this is not the prevailing condition. What actually exists is a tendency toward over-specialization which often results in unnecessary duplication of duties and equipment. Consequently, aggregate budget allowances devoted to radio facilities are unnecessarily large in many communities which insist upon having their own radio equipment even though conditions do not warrant it.

Today the trend seems to be toward the goal of each police department maintaining its own radio dispatcher and all the paraphernalia which goes with it. To be sure, a desire for improvement of police facilities should not be a point of criticism, but too many times it is forgotten that there comes a point in the growth of the community when the police facilities are often improved and enlarged out of all proportion to existing conditions and circumstances. It is the hope of the writer that this discussion may serve as a warning which will be heeded by the police throughout the country.

<sup>14</sup> Harris, Arthur, *City Manager Government in Berkeley* (1940) 51.

<sup>15</sup> There are two full-time radio technicians who are chiefly maintenance and repair men. Broadcasting is generally done by the desk sergeant.