CHAPTER VI

CONCLUSION AND SUGGESTION

Conclusion

The best methods for measuring the bandwidth, frequency stability, and spurious emission which is believed appropriate for Thailand were studied and then the bandwidth, frequency stability, and spurious emission of seven radio broadcast stations were measured. The results came out that these stations transmitted within the limitations set up by the ITU and FCC. But by listening to various broadcast programs by the radio receiver, the author found that there are many radio broadcast stations which transmitted beyond the limitation set up by the ITU and FCC. Those radio broadcast stations should be investigated unfortunately, but the author is not authorized to carry out the experiment with all of them. The possibility of the above experiments was due to the excellent cooperation of individual station.

Although the characteristics of all the radio broadcast transmitters could not be measured, studied and final conclusion could not be made, but the best method of measurement found out by the author for simple measurement and evaluation of the value can predict the type of interferences from radio broadcast transmitters within a short time.

Suggestion

Due to the fact that there are many radio broadcast transmitters

which interfere with the adjacent channels and the other radio services because of higher bandwidth, higher carrier frequency shift, higher per cent modulation or higher spurious emission than the limitation stated in the Rules and Regulations of ITU and FCC. Most of the radio broadcast stations in Thailand belong to the Government, which eventually do not approve of the outside persons having an experiment with their transmitters. Thus, the person who carries out the experiment should have the authority in ordering the radio broadcast stations to follow his instruction at all times for the convenience sake in getting rid of the mistakes occurred in the radio broadcast transmitters and for the convenience to carry out the experiments which should be done regularly.

Each radio broadcast stations should possess one log book to note down the various meter values which were read together with the other matters which are related and are able to cause an interference. The person who have the authority to experiment with the radio broadcast stations is able to find the deficiencies of the transmitters by reading from the log book which enable him to carry out a detailed process in a short period. This is to prevent the radio broadcast stations to have mutual interferences, further-more, to prevent the interference which may occur to the other radio services.

According to the frequency allocation of the radio broadcasting in Thailand mentioned in the APPENDIX III, each radio broadcast station will have a carrier frequency 10 KC farer from each other, no matter how much power each radio broadcast transmitter possess; of which their carrier frequency are 10 KC far fro the carrier frequencies of the 1 KW radio broadcast transmitters. Therefore, the 10 KW radio broadcast transmitters will interfere the 1 KW radio broadcast

transmitters. The interference occurs because at the 3-db down of the 10 KW transmitters, it will still have the power more than 1 KW, Thus, in the frequency allocation we should consider regarding the power of each radio broadcast station which have high power and should be arranged to be in the same group of frequency. Similarly, we should arrange the low power radio broadcast stations to be in the same group of frequency or to arrange that the carrier frequency of the higher power transmitters is more than 10 KC farer from the carrier frequency of the lower power transmitters, that is approximately 15 KC which will reduce the interference between adjacent channels.

The first method which the author would like to suggest is that there should be a committee or a governmental officials setted up for the purpose of particularly checking the radio broadcast stations. The committee or the governmental officials should possess the genuine authority in ordering any of the radio broadcast stations and they should be well equipped with the equipments for the experimentation to frequently experiment the radio broadcast stations. This is the best way to reduce the interferences in radio broadcasting services.

The second method is to reduce the number of the radio broadcast stations from frequency allocation as already mentioned in the APPENDIX III. Some of the radio broadcast stations are experimental stations and some are not broadcasting at all; they are merely registrated. In this regard, those radio broadcast stations should be cancelled. Then, re-arrange the space between the carrier frequency of the radio broadcast stations, trying to have only as slight change as possible. As for the experimental stations, they should transmit in the other band specially setted up for the purpose of experimentation.