

MEMORANDUM CIRCULAR
NO. 07-08-86

**SUBJECT: REGULATIONS, GUIDELINES AND PROCEDURES
GOVERNING THE INSTALLATION AND OPERATION OF
AMATEUR REPEATERS**

Pursuant to Act 3846, as amended, and MOTC Circular No. 82-077, dated 20 October 1982, the following regulations, guideline and procedures governing the installation and operation of Amateur repeaters are hereby promulgated:

1. PURPOSE OF REPEATERS

Any Amateur Repeater shall be authorized by the Commission only for the purpose of extending the communications coverage of mobile and handheld portable equipment. Mobile and portable stations will have priority over fixed stations in accessing the repeater, especially during commuting hours when air traffic is highest.

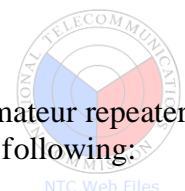
2. DEFINITION OF TERMS

- AMATEUR REPEATER** - An unmanned relay station that receives a signal on a given frequency and automatically retransmits the same on another frequency.
- CLOSED REPEATER** - A repeater that requires membership in the sponsoring organization to be able to use the facility. Repeater is on some access.
- CONTROL OPERATOR** - An amateur Radio Operator designated by the licensee of an Amateur Radio station who shall be also responsible for the emissions from that station.
- CROSSLINK** - The linking of two or more repeaters each operating on different amateur bands.
- Example: A VHF repeater tied up to a UHF repeater such that the input and output of the VHF repeater is tied up to the output/input of the UHF repeater.
- CTCSS** - Continuous tone coded squelch system.
- DOWNLINK** - The output frequency of a repeater



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| DUPLEX | - Mode of communication between individual stations operating on different transmit and receive frequencies. |
| IDENTIFIER | - A device that automatically transmit the call sign of a repeater system in either CW or Voice. |
| OPEN REPEATER | - A repeater available for use by any licensed amateur. |
| PORTABLE REPEATER | - A compact and transportable repeater capable of being deployed during emergencies and disasters. |
| REPEATER LINK | - A system that allows various repeaters to be interlinked to provide larger repeater coverage. |
| SIMPLEX | - Mode of communication between individual stations operating on a common transmit and receive frequency. |
| TIME OUT TIMER | - Electronic or mechanical device in the repeater, which limits transmission to 3 minutes or less. Resets only when signal disappears from input frequency. |
| TRUSTEE | - A Class “A” amateur license holder duly appointed by the board of the club or association to supervise and control the proper use and operation of and require NTC license for the repeater station in behalf of the association. |
| UPLINK | - The input frequency of a repeater. |

3. **PERMIT/LICENSE FOR REPEATER SERVICE**
An amateur repeater may be acquired, installed or operated only after the necessary permit and/or license has been obtained from the Commission.
4. **LICENSING OF REPEATERS**
An amateur repeater shall be operated as a club project and as such shall be licensed separately from the club station. The station license however shall be issued only to the Trustee of the club. The Trustee shall be a “Class A” bonafide member of the club duly appointed by the Board to the position.
5. **LICENSING REQUIREMENTS**
For the issuance of the necessary license for the operation of the amateur repeater, the club applicant shall apply with the Commission and submit the following:



- a. Letter of intent.
- b. Applications for permit to purchase and possess repeater equipment.
- c. Application for station license for the repeater.
- d. Copy of club resolution designating the Trustee and the names of not more than three (3) control operators.
- e. Certified true copies of the amateur radio licenses of the Trustee and control operator.
- f. Club station license.

6. QUALIFICATION OF A CLUB-APPLICANT

A repeater station shall be authorized only to an amateur radio club having the following qualifications.

- a. The amateur club is accredited by the NTC and PARA.
- b. The club capable of operating and maintaining the repeater system.
- c. The club is active and holds regular meetings.
- d. The club has an existing base stations licensed by the Commission.

7. REPEATER FREQUENCIES

7.1 Repeaters may be operated in the following amateur bands:

29.50 MHz – 29.70 MHz
 53.00 MHz – 54.00 MHz
 144.100MHz – 144.990 MHz
 430.00 MHz – 440.00 MHz
 1260 MHz – 1270 MHz
 2400 MHz – 2450 MHz

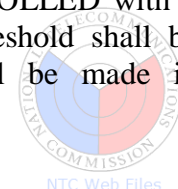
7.2 Remote radio control of repeaters shall be operated within the authorized amateur frequency bands.

7.3 In order to achieve maximum use of available channels and facilitate the selection of channels, which will not conflict or interfere with other repeaters, refer to the repeater frequency plan in Annex A.

8. REPEATER TECHNICAL SPECIFICATION

8.1 RECEIVER

The repeater receiver shall have sufficient degree of selectivity to eliminate interference that might cause the repeater to key on unnecessarily. The receiver shall be CRYSTAL CONTROLLED with a stability of at least .0005%. The receivers desense threshold shall be 10,000 uV or better. The receiver construction shall be made in accordance with the accepted engineering standards



8.2 TRANSMITTER

The transmitter shall not exceed 25 watts RF Power output and shall be free from spurious emissions that might cause interference to other services. The transmitter shall be CRYSTAL CONTROLLED with a stability of .0005% or better. The Frequency carrier shift shall NOT exceed +/- 5 KHz deviation.

8.3 The repeater shall be equipped with a tone decoder to allow repeater control from the control station. The identifier shall automatically key the transmitter at least once every 10 minutes.

8.4 The use of CTCSS on repeater system will only be authorized by the Commission upon certification of the local district club and the NTC Regional Office concerned that there is a reasonable need of the said system.

8.5 TIME OUT TIMER

The repeater must be fitted with a timer which will automatically shut it down after three (3) minutes continuous on-the-air operation and resets when the signal disappears from the input channel.

9. RESPONSIBILITY OF THE LICENSE (TRUSTEE)

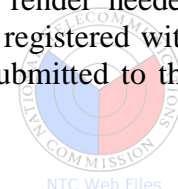
9.1 The licensee is responsible for the proper operation of the repeater; he must ensure that an adequate technical log is kept, showing all defects, servicing and maintenance activities, on the air test, etc. Entries in the log shall be signed by the person (s) actually performing the work and/or making the tests.

9.2 The licensee is responsible for the effective control of the repeater. He must ensure that an effective means is provided for shutting down or disabling the repeater in case of malfunction or unauthorized use of the facility. In order to provide for continuity of operation and maintenance of service, the licensee may delegate this responsibility to not more than three other qualified Amateurs who will act as control operators for the repeater. The control operators shall share the responsibility of repeater control during their respective schedules and maintain their own portion of the station log while on duty.

9.3 In addition, the licensee or any of the control operators must be provided with a means of not only disabling or shutting down the repeaters, but of reactivating it as required.

10. PORTABLE REPEATER

During disasters or emergencies, duly accredited amateur club can employ portable repeater for the use of Amateurs who volunteered to render needed assistance, provided that the equipment to be employed has been registered with the Commission and that a summary operation report shall be submitted to the Commissioner by the club-user immediately after the incident.



11. MEANS OF CONTROL

Repeaters may be controlled by means other than radio; such as direct telephone lines. If a based telephone line is used, it must be an unlisted number and not used for any purpose.

12. IDENTIFICATION

Each repeater shall be issued a discrete call sign the same as any other amateur radio station. All transmissions of a repeater must be identified at intervals of at least once in every 10 minutes by the automatic transmission of its call sign in Morse code (A2 or F2 emission) or in voice (F3E) at a reduced level of modulation and which shall be clearly audible under all input signal conditions. Identification is not required on point to point circuits between repeaters; i.e., tandem operation of repeaters.

13. PENALTY

Any willful violation of the above provisions shall be dealt with in accordance with the existing penalty provisions of the applicable laws.

14. EFFECTIVITY

This Circular shall be effective immediately upon approval and may be modified/revised as the Commission deems fit.

Quezon City, Philippines, July 15, 1986

ROSAURO V, SIBAL
Acting Commissioner

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