

INTERNATIONAL NUMBERING PLAN FOR THE AMATEUR RADIO NETWORK

J. Gordon Beattie, Jr., N2DSY
Thomas A. Moulton, W2VY

The Radio Amateur Telecommunications Society
206 North Vivyan Street
Bergenfield, NJ 07621
201-387-8896

Introduction

The purpose of this International Numbering Plan is to facilitate the introduction of amateur data networks and provide for internetworking on a worldwide basis.

1.0 Design Considerations

1.1 This proposal does not require, nor preclude governmental involvement in network administration. (i.e. a DNIC for each national amateur network.)

1.2 The International Numbering Plan should permit the identification of a called country as well as a specific network.

1.3 The International Numbering Plan should provide a consistent addressing format when connection is made with or through commercial networks. (i.e. telephone, telex, data networks.)

1.4 A national number assigned to a terminal should be unique within a particular network. This national number should form part of the international number which should also be unique on a worldwide basis.

1.5 Specific national numbers should be easily determined.

1.6 National Numnbers should require minimal administrative overhead to network management and users.

1.7 The International Numbering Plan should provide for substatial spare capacity to accommodate future requirements.

2.0 Numbering System

2.1 The 10 digit numeric character set 0-9 should be used for numbers (or addresses) assigned to terminals in the amateur network. This principle should apply to both national and international numbers.

2.2 Use of the numbering system as outlined in 2.1 will make it possible to interwork with terminals on public telephone, telex and data networks.

3.0 Prefix Codes

3.1 The Prefix Code will signify the type of network indicated by the remaining digits.

3.2 The Prefix Code will be the first digit and should be coded as follows:

- 0 Amateur Packet Switched Network
 - 1 Public Packet Switched Network
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8 Telex Network
 - 9 Telephone
- Reserved

4.0 Data Network Identification Codes

4.1 All Data Network Identification Codes should consist of four digits.

4.2 Each country shall be assigned at least one 3-digit Data Country Code. This in conjunction with a fourth digit will identify up to 10 amateur networks or services within a country. The Data Country Codes are defined in Appendix A/AX.121.

4.3 The CCITT will be the body responsible for the assignment of Data Country Codes. If-required, the CCITT will assign additional DCC's to a country.

4.4 If the national amateur body in a country does not specify the use of the fourth digit in the DNIC, it is to be considered "Reserved" and shall be coded as "0".

4.5 Possible uses of the fourth digit include, but are not limited to, indication of special stations, services or networks.

5.0 National Number

5.1 The National Number shall consist of up to 10 digits.

5.2 The National Number may consist of 11 digits if the national amateur body specifies the use of a Data Country Code instead of Data Network Identification Code.

5.3 Each National Number shall be unique within the country.

6.0 International Number

6.1 The International number shall consist of the DNIC or DCC and the National Number.

6.2 National Amateur Networks will be capable of interpreting the first four digits of the International Number. This is needed to facilitate routing between networks.

6.3 The use of the DNIC by stations in transit countries would serve as a ready reference for checking third-party traffic handling requirements.

6.4 The International Number may optionally include a prefix code.

7.0 Formats

7.1 Amateur Network Number Format

Prefix + DNIC + National Number

P + DDDD + NNNNNNNNNN = 15

or

Prefix + DCC + National Number

P + DDD + NNNNNNNNNN = 15

7.2 Amateur Network Number Format (alternate)

DNIC + National Number

DDDD + NNNNNNNNNN

or

DCC + National Number

DDD + NNNNNNNNNN

Appendix A/AX.121

Data Country Codes

Zone 2

DCC Country or Area

202	Greece
204	Netherlands
206	Belgium
208	France
212	Monaco
214	Spain
216	Hungarian People's Republic
218	German Democratic Republic
220	Yugoslavia (Socialist Federated Republic of)
222	Italy
226	Romania (Socialist Republic of)
228	Switzerland (Confederation of)
230	Czechoslovak Socialist Republic
232	Austria
234	United Kingdom of Great Britain and Northern Ireland
238	Denmark
240	Sweden
242	Norway
244	Finland
250	Union of Soviet Socialist Republics
260	Poland
262	Federal Republic of Germany
266	Gibraltar
268	Portugal
270	Luxembourg
272	Ireland
274	Iceland
276	Albania
278	Malta (Republic of)
280	Cyprus (Republic of)
284	Bulgaria (People's Republic of)
286	Turkey

Zone 3

DCC Country or Area

302	Canada
308	St. Pierre and Miquelon
310	United States of America
311	United States of America
312	United States of America
313	United States of America
314	United States of America
315	United States of America
316	United States of America
330	Puerto Rico
332	Virgin Islands (USA)
334	Mexico
338	Jamaica
340	French Antilles
342	Barbados
344	Antigua
346	Cayman Islands
348	British Virgin Islands
350	Bermuda
352	Grenada
354	Montserrat
356	St. Kitts
358	St. Lucia

360 St. Vincent
 362 Netherlands Antilles
 364 Bahamas (Commonwealth of the)
 366 Dominica
 368 Cuba
 370 Dominican Republic
372 Haiti (Republic of)
 374 Trinidad and **Tobago**
 376 Turks and Caicos Islands

Zone 4

DCC Country or Area

404 India (Republic of)
 410 Pakistan (Islamic Republic of)
 412 Afghanistan (Democratic Republic of)
 413 Sri Lanka (Democratic Socialist Republic of)
 414 Burma (Socialist Republic of the Union of)
415 Lebanon
 416 Jordan (Hashemite Kingdom of)
417 Syrian Arab Republic
 418 Iraq (Republic of)
 419 Kuwait (State of)
 420 Saudi Arabia (Kingdom of)
 421 Yemen (Arab Republic)
 422 Oman (Sultanate of)
 423 Yemen (People's Democratic Republic of)
 424 United Arab Emirates
 425 Israel (State of)
 426 Bahrain (**State** of)
 427 Qatar (State of)
 428 Mongolian People's Republic
429 Nepal
 430 United Arab Emirates (Abu Dhabi)
 431 United Arab Emirates (Dubai)
432 Iran (Islamic Republic of)
440 Japan
 450 Korea (Republic of)
 452 Viet Nam (Socialist Republic of)
 454 Hong Kong
455 Macao
 456 Democratic Kampuchea
 457 Lao People's Democratic Republic
 460 China (People's Republic of)
 470 Bangladesh (People's Republic of)
 472 Maldives (Republic of)

Zone 5

DCC Country or Area

502 Malaysia
 505 Australia
 510 Indonesia (Republic of)
 515 Philippines (Republic of)
 520 Thailand
 525 Singapore (Republic of)
 528 Brunei
530 New Zealand
 535 Guam
 536 Nauru (Republic of)
 537 Papua New Guinea
 539 **Tonga** (Kingdom of)
 540 Solomon Islands
 541 New **Hebrides**

542 Fiji
 543 **Wallis** and Futuna Islands
 544 American Samoa
 545 **Gibert** and Ellice Islands
 546 New Caledonia and Dependencies
 547 French Polynesia
 548 Cook Islands
 459 Western Samoa

Zone 6

DCC Country or Area

602 Egypt (Arab Republic of)
 603 Algeria (Algerian Democratic and Popular Republic)
 604 Morocco (Kingdom of)
 605 Tunisia
 606 Libya (Socialist People's Libyan Arab Jamahiriya)
 607 Gambia (Republic of the)
 608 Senegal (Republic of the)
 609 Mauritania (Islamic Republic of)
 610 Mali (Republic of)
 611 Guinea (Revolutionary People's Republic of)
 612 **Ivory Coast** (Republic of the)
 613 Upper Volta (Republic of)
 614 Niger (Republic of the)
 615 Togolese Republic
 616 Benin (People's Republic of)
 617 Mauritius
 618 Liberia (Republic of)
 619 Sierra Leone
 620 Ghana
 621 Nigeria (Federal Republic of)
 622 Chad (Republic of the)
 623 Central African Republic
 624 Cameroon (United Republic of)
 625 Cape Verde (Republic of)
 626 Sao Tome and **Principe** (Democratic Republic of)
 627 Equatorial Guinea (Republic of)
 628 Gabon Republic
 629 Congo (People's Republic of the)
 630 Zaire (Republic of)
 631 Angola (People's Republic of)
 632 Guinea-Bissau (Republic of)
 633 Seychelles
 634 Sudan (Democratic Republic of the)
 635 Rwanda (Republic of)
 636 Eihopia
 637 Somali Democratic Republic
 638 Republic of Djibouti
 639 Kenya (Republic of)
 640 Tanzania (United Republic of)
 641 Uganda (Republic of)
 642 Burundi (Republic of)
 643 Mozambique (People's Republic of)
 645 Zambia (Republic of)
 646 Madagascar (Democratic Republic of)
 647 Reunion (French Department of)
 648 Zimbabwe
 649 Namibia
 650 Malawi
 651 Lesotho (Kingdom of)
 652 Botswana (Republic of)
 653 Swaziland (Kingdom of)

- 654 Comoros (Federal and Islamic Republic of the)
- 655 South Africa (Republic of)

Zone 7

DCC	Country or Area
702	Belize
704	Guatemala (Republic of)
706	El Salvador (Republic of)
708	Honduras (Republic of)
710	Nicaragua
712	Costa Rica
714	Panama (Republic of)
716	Peru
722	Argentine Republic
724	Brazil (Federl Republic of)
730	Chile
732	Colombia (Republic of)
734	Venezuela (Republic of)
736	Bolivia (Republic of)
738	Guyana
740	Ecuador
742	Guiana (French Department of)
744	Paraguay (Republic of)
746	Suriname (Republic of)
748	Uruguay (Oriental Republic of)

Appendix B/AX.121

This appendix outlines the options to be used by DTEs operating in the Amateur Data Networks in North America.

1. The Amateur Data Networks of North America will use the numbering format:

Prefix + DCC + Format + Nat. #
 P + DDD + F + NNNNNNNNNN = 15

2. Each country in the region shall use the Data Country Codes listed below.

302	Canada
310	United States of America
330	Puerto Rico
332	Virgin Islands (USA)
334	Mexico

3. The Address Format digit (A) allows amateurs in each network the choice of two formats:

0 = The remaining digits follow the North American Numbering Plan (NANP) used in the public telephone system.

1 = The remaining digits follow the Universal Grid Square System.

3.1 If A = 0 then:

3.1.1 The National Number shall consist of a three digit Area Code, a three digit Exchange Code and a four digit Subscriber Code.

Prefix + DCC + Format + Area + Exchange + Subscriber

P + DDD + F + AAA + EEE + SSSS = 15

3.1.2 The Area Code is mandatory for all networks.

3.1.3 The Area Code must be consistent with the North American Numbering Plan except as directed by the National Amateur Body.

3.1.4 The use of an Exchange Code is strongly suggested. This code may follow the local telephone exchange code.

3.1.5 The use of the Exchange Codes 000 through 199 may be used if assigned by the Network Coordinating Agent for the area.

3.1.6 Service Codes 011, 111, 211, 311, 411, 511, 611, 711, 811, 911 are reserved pending definition by the local Network Coordinating Agent.

3.1.7 Service Codes shall be placed in the Exchange Code field and should not be followed by any additional digits.

3.1.8 The exchange code 555 is reserved for internal network administration and assignment authority is limited to the local Network Coordinating Agent.

3.1.9 The exchange and subscriber code 555-1212 is reserved for regional directory service, Assignment authority is limited to the local Network Coordinating Agent.

3.2 If A = 1 then:

3.2.1 The National Number shall consist of four digits containing the ASCII representation of the first two alphabetic characters, two BCD digits representing the next two numeric digits, and four additional BCD digits.

Prefix + DCC + Format + Alpha +
Square + Local Network

P + DDD + F + **AAAA** + **SS** + NNNN
= 15

- 3.2.2 Use of the Alpha and Square fields is mandatory.
- 3.2.3 The each character in the Alpha field will be coded using the ASCII character codes for the capital letters A-Z. This scheme will use two positions per alpha character.
- 3.2.4 The each character in the Square field will be coded in binary.
- 3.2.5 The local Network Coordinating Agent must define and assign the four local Network digits.