

## **Packet Generator User Guide V0.2**

**Based on DeanSys Pktgen-0.0.6**



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## Chapter 1. Abstract

User Interface (UI) of this packet generator is designed following the format of switch. User can type in commands in the same way what they are doing on the switch. They can type ‘?’ anywhere to get help about the commands, can type ‘tab’ to complete the command automatically. And it offers auto-building functions that they can build well known protocol packets with some parameters automatically. User also can set the raw packets with different configuration file with a simple command.



It can only work under UNIX/Linux system. Redhat Linux 9.0 is the best choice. And Redhat Linux ES/AS version is also acceptable. Make sure that you have got one Ethernet interface card at least.

Multi users can use this packets generator at the same time. And the multi-stream and multi-task function has been supported since version 0.0.5. You can create more streams and control them at the same time. Version 0.0.6 has offered user an easy way to load packets from Libpcap data file. What you need is just to capture packets into libpcap file. More function will be available in the next version. **The current version is v0.0.6.**

This is a temporary version of CLI Specification. More details will be available in the next version. Please send mail to me if you have found any bug or have any suggestion to me. Thank you!

Copyright is an old topic. Everyone is permitted to copy and distribute verbatim copies of this document, but changing it is not allowed.

Following are some symbol logo for the reader.

	This is a tip.
	This is a warning.

## 1.1 Scope

This document is designed for the user of packet generator or anyone who is interested with the packet generator.

The reader must have some basic knowledge of Ethernet packets and network.

## 1.2 Feature List

The packet generator is designed to support:

- A. A command line interface to type in commands
- B. A command generator to make commands easy to type
- C. Command history to record your commands
- D. Build well-known protocol packets with the building command.
- E. Read raw text file to build any packet.
- F. Load packet data from Libpcap data file.
- G. Multi-task and multi-stream to send packets at the same time
- H. System logging
- I. Others.

New feature will be added in the coming versions.

## Chapter 2. How to install it?

Get the tar ball and use the following command to install it:

```
[root@DeanOS small_pktgen]#  
[root@DeanOS small_pktgen]# tar -xzf pktgen.0.0.6.tar.gz  
pktgen.0.0.6/  
pktgen.0.0.6/pktgen  
pktgen.0.0.6/packet.conf  
pktgen.0.0.6/arp.cap  
[root@DeanOS small_pktgen]#
```

Then it is available for you.

Make sure that the tar ball contains two files at least:

pktgen            -- the main binary file  
packet.conf      -- the default text data file



### The way to build a packet looks like below:

- (1). Make sure what you want, and then start the program.
- (2). Create stream you want. You can create them with:
  - A. Read raw packet from named text file.
  - B. Load packets from libpcap data file.
  - B. Well-known protocols with the packet building function.
- (3). Set the interface name, number of packet and pause time between packets. Or just skip them to keep the default.
- (4). Check the settings of streams. Modify the setting and values if necessary. Make sure they are what you want.
- (5). Send the stream you want to send.
- (6). Check the result.

The first and second steps can be exchanged with each other. You decide the order.



**Note: You must be able to access the interface! 'root' is the suggested user group.**

## Chapter 3. Command description

There are three command modes in the packet generator. They are global mode, configuration mode and build mode.

Global mode contains the basic commands of this packet generator. You can check the stream, edit the packet buffer and send packets. They are the basic level commands.

Build mode is used to build packets. You can build it with protocol building function, reading raw text and loading libpcap data file.

Configuration mode is used to modify different settings with a specified stream.

All the commands can be listed by typing '?' or help. And all the commands can be completed automatically by type 'tab'. Short and uncompleted commands are also available.

Colors will be used to make the messages more easy-reading.

Error and warning messages will be printed with **red color**.

Status and help messages will use **green or yellow**.

## Chapter 4. Global Mode Commands

Run the program and you will be into the global mode:

```
[root@dean pktgen.0.0.6]# ./pktgen
-----
          DDDDDDD          DDDDD
        D      D          D      D
        D      D          D      D
        D      D      DDD      DDDDD      D DDD      D      D      DDDDD
        D      D      D      D      D      D DD      D      D      D      D
        D      D      D      D      D      D      D      D      D      D
        D      D      D      D      DDD      D      D      DDD      D      D
        D      D      DDDDDDD      DDD      D      D      D      D      D      DDDDD
        D      D      D      D      D      D      D      D      D      D
        D      D      D      D      D      D      D      D      D      D
        D      D      D      D      D      DD      D      D      D      D      D
        DDDDDDD      DDD      DDDDD      D      D      DDDDD      D      DDDDD
                                           D
                                           D
                                           DD

Welcome to use DesnSys packet generator V0.0.6!
Get more help from www.deansys.com.
Mar.26,2007
-----
Type 'exit' or Ctrl+C to logout.
pktgen#
```

Type '?' to get the command list as :

```
-----
Type 'exit' or Ctrl+C to logout.
pktgen#
  build      Change to build mode to build packet automatically.
  clear      Clear the data value in buffer.
  configure   Change to configure mode to modify the settings.
  debug      Enable debug message in system
  edit       Edit the data value in buffer.
  end        Back to global mode automatically.
  exit       Exit current mode and down to previous mode
  help       Print command help messages.
  list       Print command list
  no         Disable the function
  send       Send the packet in buffer.
  show       Show information.
pktgen#
```

Type 'list' to get command list:

```
pktgen#list
  build [StreamID]
  clear [StreamID]
  configure [StreamID]
  debug
  edit <1-1518> VALUE
  edit <1-1518> VALUE <1-16>
  end
  exit
  help
  list
  no debug
  send
  send <1-16>
  send all
  show buffer
  show buffer <1-16>
  show interface [WORD]
  show memory
  show netstat
  show packet counter [WORD]
  show router
  show stream
  show stream <1-16>
  show system
  show version
pktgen#
```

## 4.1 Build Command:

Type 'build' to enable build mode. Then packet builder function is available for you. This command has an optional parameter: [Stream ID]. You can specify the stream ID number which you want to build or just keep it empty to use the default stream ID 1 with the default packet configuration file.

If the stream you specify is not existed, system will help you to create a default stream name stream 1 with default setting and values.

### **pktgen#build**

**Select packet.conf as the default config file.**

**Create new stream :1 with default configuration.**

**Change to build mode!**

**pktgen(build)#**

### **pktgen#build 2**

**Select packet.conf as the default config file.**

**Create new stream :2 with default configuration.**

**Change to build mode!**

**pktgen(build)#**

## 4.2 Clear Command:

This command is used to reset the value in buffer to zero. You can specify the stream ID number which to be cleared. Stream ID is an optional parameter

### **pktgen#clear**

**Debug : Clear the buffer of stream 1.**

**pktgen#**

### **pktgen#clear 2**

**Debug : Clear the buffer of stream 2.**

**pktgen#**

### 4.3 Configure Command:

Type in 'configure' to enable configuration mode. Then you can modify the stream setting such as: interface, number, length and pause time. You can specify the stream ID number which to be configured. Stream ID is an optional parameter.



If the stream you specify is not existed, system will help you to create a default stream name stream 1 with default setting and values.

**pktgen#configure**

**Change to Stream :1**

**Change to configure mode!**

**pktgen(config)#**

**pktgen#configure 2**

**Select packet.conf as the default config file.**

**Create new stream :2 with default configuration.**

**Change to configure mode!**

**pktgen(config)#**

### 4.4 Debug Command:

Command of 'debug' is used to enable the system logging function. After you have enabled this function, system will print much more logging messages. You can use 'no debug' to disable it.

### 4.5 Edit Command:

Type 'edit <1-1518> VALUE [StreamID]' to modify the value in stream buffer. You can use 'show' first to verify the value in buffer. The packet units is from 1 to 1518.

You can specify the stream ID number which to be configured. Stream ID is an optional parameter

**pktgen#show buffer****Packet Generator Status:****Device: eth0, Length: 64 byte, Number: 1, Pause: 0 s****Data from Configuration file.**

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
0001	ff	ff	ff	ff	ff	ff	01	02	03	04	05	06	88	8e	01	01
0002	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0003	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0004	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
0005																

**pktgen#edit****<1-1518> Position in buffer.****pktgen#edit 1****VALUE The value you want to set.( 0x0-0xFF)****pktgen#edit 1 0****<cr>****<1-16> Stream ID number.Default is the last stream.****pktgen#edit 1 0 1****<cr>****pktgen#edit 1 0 1****pktgen#**

The first byte in buffer here is 1, not 0. It is just to be easy to read. Both of decimal and hex value is acceptable. (Hex value is beginning with 0x)

**4.6 End Command:**

Command of 'end' is used to go back to global mode from anywhere.

**4.7 Exit Command:**

Command of 'exit' is used to end the execution and exit the system.

## 4.8 Help Command:

Command of 'help' is used to show the help message about the system and commands.

## 4.9 List Command:

Command of 'list' is used to list all the command in current mode.

## 4.10 No Command:

Command of 'no' is used to disable some function or delete some settings.

At now, only 'no debug' is supported to disable system debug function.

## 4.11 Send Command:

Type in 'send' command to send the packet in buffer with the configuration value. You can select to send a specify stream or all of them. If you just type in 'send', system will send the last stream you configure/build only.

System is able to send all the streams at the same time. If there are more than one stream on the same interface, system will send them at the same time with mixing them together. Stream schedule will be available in the next version. Then you can specify the transmit mode with multi-stream (one by one, or mixed together).

**pktgen#send ?**

**<cr>**

**<1-16> Stream ID number.(1-16)**

**all All the stream.**

**pktgen#send**

**pktgen#send**

**Packet Number :1 Length :64 Device :eth0**

**Wrote 64 bytes packet; check the wire.**

**pktgen#**

## 4.12 Show Command:

'show' command is used to show the packet generator status. It contains streams status and system status.

```
pktgen#show ?
buffer      Show buffer information.
interface   Interface status and configuration
memory      Memory allocate/free status
netstat     Network status and configuration
packet      Packet status and configuration
router      Local router status and configuration
stream      Displays the last stream status.
system      Displays system status
version     Displays pktgen version
pktgen#show
```

### 4.12.1 Show Buffer Command:

This command is used to check the data in buffer. The size of content depends on the length of packet.

You can specify the stream with the stream ID number. It is an optional parameter. System will print the last buffer you configure/build if there is no stream ID given.

```
pktgen#show buffer
```

**Packet Generator Status:**

**Device: eth0, Length: 64 byte, Number: 1, Pause: 0 s**

**Data from Configuration file.**

```

      01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16
-----+-----
0001| ff ff ff ff ff ff 01 02 03 04 05 06 88 8e 01 01
0002| 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0003| 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0004| 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
0005|
-----+-----
```

```
pktgen#
```

#### 4.12.2 Show Interface Command:

This command is used to show the interface status and setting. Interface name is optional.

**pktgen#show interface**

**[WORD] Interface name**

**pktgen#show interface**

```
eth0      Link encap:Ethernet  HWaddr 00:0C:29:43:5F:A0
          inet      addr:192.168.110.98          Bcast:192.168.110.255
Mask:255.255.255.0

          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:715985 errors:10 dropped:41 overruns:0 frame:0
          TX packets:110995 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:100
          RX bytes:69181980 (65.9 Mb)  TX bytes:22037593 (21.0 Mb)
          Interrupt:10 Base address:0x1080

eth1      Link encap:Ethernet  HWaddr 00:0C:29:43:5F:AA
          BROADCAST MULTICAST  MTU:1500  Metric:1
          RX packets:6 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:100
          RX bytes:1671 (1.6 Kb)  TX bytes:0 (0.0 b)
          Interrupt:9 Base address:0x1400

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:179 errors:0 dropped:0 overruns:0 frame:0
          TX packets:179 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:21853 (21.3 Kb)  TX bytes:21853 (21.3 Kb)
```

**pktgen#**

### 4.12.3 Show Memory Command:

This command is used to show the system memory status. The information contains physical memory, virtual memory and swap partition.

**pktgen#show memory**

	total	used	free	shared	buffers	cached
<b>Mem:</b>	<b>194668</b>	<b>185056</b>	<b>9612</b>	<b>0</b>	<b>85460</b>	<b>63528</b>
<b>-/+ buffers/cache:</b>		<b>36068</b>	<b>158600</b>			
<b>Swap:</b>	<b>425712</b>	<b>5096</b>	<b>420616</b>			

**pktgen#**

### 4.12.4 Show Netstat Command:

This command is used to show the system network session status.

**pktgen#show netstat**

**Active Internet connections (servers and established)**

Proto	Recv-Q	Send-Q	Local Address	Foreign Address	State
tcp	0	0	*:32768	*:*	LISTEN
tcp	0	0	DeanOS:32769	*:*	LISTEN
tcp	0	0	*:cvspserver	*:*	LISTEN
tcp	0	0	*:sunrpc	*:*	LISTEN
tcp	0	0	*:ssh	*:*	LISTEN
tcp	0	0	DeanOS:ipp	*:*	LISTEN
tcp	0	0	DeanOS:smtp	*:*	LISTEN
tcp	0	20	192.168.110.98:ssh	dean:1312	ESTABLISHED
tcp	0	0	192.168.110.98:ssh	dean:1305	ESTABLISHED
udp	0	0	*:32768	*:*	
udp	0	0	*:906	*:*	
udp	0	0	*:sunrpc	*:*	
udp	0	0	*:631	*:*	

**Active UNIX domain sockets (servers and established)**

Proto	RefCnt	Flags	Type	State	I-Node Path
-------	--------	-------	------	-------	-------------

```

unix 3      [ ]      STREAM  CONNECTED  78166
unix 3      [ ]      STREAM  CONNECTED  78165
unix 3      [ ]      STREAM  CONNECTED  78009
unix 3      [ ]      STREAM  CONNECTED  78008
unix 2      [ ]      DGRAM    2023
unix 2      [ ]      DGRAM    1854
unix 2      [ ]      DGRAM    1819
unix 2      [ ]      DGRAM    1805
unix 2      [ ]      DGRAM    1747
unix 2      [ ]      DGRAM    1502
unix 2      [ ]      DGRAM    1359
unix 2      [ ]      DGRAM    1324
pktgen#

```

#### 4.12.5 Show Packet Counter Command:

This command is used to show the system packet counters. Interface name is optional. Default value is to show all of them.

```
pktgen#show packet counter
```

Iface	MTU	RX-OK	RX-ERR	RX-DRP	TX-OK	TX-ERR	TX-DRP
eth0	1500	720885	10	41	111077	0	0
eth1	1500	6	0	0	0	0	0
lo	16436	179	0	0	179	0	0

```
pktgen#
```

#### 4.12.6 Show Router Command:

This command is used to check the system router status.

```
pktgen#show router
```

**Kernel IP routing table**

Destination	Gateway	Genmask	Flags	Metric	Ref	Use Iface
192.168.110.0	*	255.255.255.0	U	0	0	0 eth0
169.254.0.0	*	255.255.0.0	U	0	0	0 eth0

127.0.0.0	*	255.0.0.0	U	0	0	0 lo
default	gateway	0.0.0.0	UG	0	0	0 eth0

pktgen#

#### 4.12.7 Show Stream Command:

This command is used to check the stream status. You can specify the stream ID which you want. It is an optional value. Default value is to show all of the streams.

pktgen#show stream ?

<cr>

<1-16> Stream ID numebr.

pktgen#show stream

Current Stream status:

ID	Length	Interface	Number	Pause	From
1	64	eth0	1	0	File

Total Stream :1

pktgen#

#### 4.12.8 Show System Command:

This command is used to check the system status.

pktgen#show system

DeanSys Packet Generator System status:

Linux DeanOS 2.4.20-8 #1 Thu Mar 13 17:54:28 EST 2003 i686 i386 GNU/Linux

pktgen#

#### 4.12.9 Show Version Command:

This command is used to get version information.

pktgen#show version

-----

Packet Generator Version Information

Name : Packet Generator 0.0.6

---

**Author: Dean Ding**

**Date : Mar.26,2007**

**Note : Based on GNU Linux System**

**: [www.deansys.com](http://www.deansys.com)**

-----  
**pktgen#**

## Chapter 5. Build Mode Commands

Type 'build' to change to build mode. Then you will get the commands to build well-known protocol packets.

**pktgen#build**

**pktgen(build)#**

Type '?' to get commands help message:

```

pktgen(build)#
arp      Build ARP packet automatically.
bgp      Build BGP4 packet automatically.
cdp      Build CDP packet automatically.
dhcp     Build DHCP packet automatically.
dns      Build DNS packet automatically.
dot1x    Build Dot1x packet automatically.
end      Back to global mode automatically.
exit     Exit current mode and down to previous mode
gre      Build GRE packet automatically.
help     Print command help messages.
icmp     Build ICMP PING OF DEATH packet automatically.
ieee     Build IEEE802.2 packet automatically.
igmp     Build IGMP_MEMBERSHIP_QUERY packet automatically.
isl      Build ISL packet automatically.
list     Print command list
load     Load packet from file automatically.
mpls     Build MPLS packet automatically.
ospf     Build OSPF packet automatically.Type: IBI/MBIT/MSBIT.
pim      Build PIM packet automatically.
raw      Build packet from configuration file automatically.
rip      Build RIP packet automatically.
stp      Build STP packet automatically.
tcp      Build TCP packet automatically.
udp      Build UDP packet automatically.
pktgen(build)#
pktgen(build)#

```

Table 2 Build mode command

Command	Description
<b>arp</b>	Build ARP packet.
<b>bgp</b>	Build BGPv4 packet. (OPEN, UPDATE, NOTIFICATION, KEEPALIVE)
<b>cdp</b>	Build CDP packet.
<b>dhcp</b>	Build DHCP packet.

	<b>(REQUEST, REPLY)</b>
<b>dns</b>	Build DNS packet.
<b>dot1x</b>	Build 802.1x EAP packet. <b>(START, LOGOFF, EAP PACKET)</b>
<b>end</b>	Back to global mode.
<b>exit</b>	Exit to global mode.
<b>gre</b>	Build GRE packet.
<b>help</b>	Print command help message.
<b>icmp</b>	Build ICMP packet.
<b>ieee</b>	Build IEEE 802.2/802.3 packet
<b>isl</b>	Build ISL packet.
<b>igmp</b>	Build IGMP packet. <b>(MEMBERSHIP_QUERY, MEMBERSHIP_REPORT, LEAVE_GROUP)</b>
<b>load</b>	Load packets from libpcap data file
<b>list</b>	Print commands list.
<b>mpls</b>	Build MPLS packet.
<b>ospf</b>	Build OSPF packet. <b>(HELLO, UMD, LSA, DBD, LSR, LSU)</b>
<b>pim</b>	Build PIM packet
<b>raw</b>	Build raw packets with configuration file.
<b>rip</b>	Build RIP packet. <b>(REQUEST, RESPONSE, TRACEON, TRACEOFF, POLL, POLLENTRY, MAX)</b>
<b>stp</b>	Build STP packet.
<b>tcp</b>	Build TCP packet.
<b>udp</b>	Build UDP packet.
<b>?</b>	Get help message

## 5.1 OSPF Commands:

Type in 'ospf ?' in build mode, then you will find the types of OSPF.

```
pktgen(build)#ospf ?
    dbd      OSPF DBD packet.
    hello     OSPF Hello packet.
    lsa       OSPF LSA packet.
pktgen(build)#
```

The OSPF command list is :

```
ospf dbd [dest_ip] [src_ip] [type]
ospf hello [dest_ip] [src_ip] [neighbor_ip]
ospf lsa [dest_ip] [src_ip]
```

### 5.1.1 OSPF DBD command:

The DBD type is : IBI/MBIT/MSBIT

```
pktgen(build)# ospf dbd 192.168.110.1 192.168.110.254 ibi
```

### 5.1.2 OSPF HELLO command:

An expmale is:

```
pktgen(build)#ospf hello 192.168.110.254 192.168.110.2 192.168.110.23
```

## 5.2 RIP Commands:

RIP command format is :

```
rip [rip_add] [rip_netmask] [next_hop] [dest_ip]
```

```
pktgen(build)#rip      192.168.110.98      255.255.255.0      192.168.110.9
192.168.110.254
```

### 5.3 PIM Commands:

Type `pim` in build mode, then you will be asked for source and destination IP address. It just support PIMv2 HELLO packet right now.

**`pktgen(build)# pim hello 192.167.110.1 19.168.11.1`**

### 5.4 RAW Commands:

Type in raw command in build mode to select an existed configuration file to load the packet data from. The default configuration file is 'packet.conf'. Default will be selected if you just type raw without any parameter.

For example, if you want to use the default configuration file, then just type 'raw':

**`pktgen(build)#raw`**

**Select packet.conf as the default config file.**

If you want to use another file, just type 'raw filename'

**`pktgen(build)#raw test.conf`**

**Select test.conf as the default config file.**



Make sure the file you have selected is in the same fold and it should be filled with correct format. An example file will look like:

```
loada:ffffffffffff0001 02030405888e0101
loadb:0000000000000000 0000000000000000
loadc:0000000000000000 0000000000000000
loadd:0000000000000000 0000000000000000
loade:0000000000000000 0000000000000000
loadf:0000000000000000 0000000000000000
loadg:0000000000000000 0000000000000000
```

At present, the max length is 112 bytes. You can use 'length' command in configuration mode to modify the length. The default length is 60 bytes. If you want

to use lager packet, please tell me that. And I will modify it later.

### 5.5 IGMP Command:

An example is:

```
pktgen(build)#igmp 224.0.0.1 192.168.110.1
```

### 5.6 Load Command:

At right now, loading function only supports libpcap format data file. You can use following command to load packets from named libpcap data file:

```
pktgen(build)#load
```

```
cap    Select libpcap file to load.
```

```
pktgen(build)#load cap
```

```
WORD   File name you want to load.
```

```
pktgen(build)#load cap arp.cap
```

```
Success to load 2 packets from arp.cap.
```

```
Packet number is [2].
```

```
pktgen(build)#
```

### 5.7 Other Commands:

The development for other protocols has not been finished yet and will be available in the next version. Please send me mail if you have found any bugs. Thanks a lot!

## Chapter 6. Configuration Mode Commands

Type the command of 'configure' to change to configuration mode to modify the configuration setting and values. The configuration options will be: number, length, interface and pause time. You can just skip this step to keep the default value. The default value will be:



Interface	eth0
Length	60bytes
Number	1
Pause time	0 second

Commands look like:

```

pktgen#configure
  Change to Stream :1
  Change to configure mode!
pktgen(config)#
  end          Back to global mode automatically.
  exit         Exit current mode and down to previous mode
  help         Print command help messages.
  interface    Select interface to send packets.
  length       Set packet length.
  list         Print command list
  number       Set packets number.
  pause        Set pause time between packets.
pktgen(config)#list
  end
  exit
  help
  interface WORD
  length <16-1518>
  list
  number <1-1000000000>
  pause millisecond <0-999>
  pause second <0-3600>
pktgen(config)#

```

Table 3

Command	Description
<b>end</b>	Back to global mode
<b>exit</b>	Back to global mode
<b>help</b>	Get help message about commands
<b>interface WORD</b>	Select the interface you want to use.
<b>number &lt;1-1000000000&gt;</b>	Set the number of packets
<b>length &lt;16-1518&gt;</b>	Set the length of packet.
<b>list</b>	Get command list message.
<b>pause millisecond &lt;0-999&gt;</b>	Value of milliseconds between packets. '0' means there is no pause.
<b>Pause second &lt;0-3600&gt;</b>	Value of milliseconds between packets. '0' means there is no pause.
<b>?</b>	Get help message.

## 6.1 Interface Command:

Type the command of 'interface' to select a Network Interface Card (NIC) to send your packet. Interface name is an optional value. Default card is 'eth0'.

```
pktgen(config)#interface eth0
```

**Device is eth0**

```
pktgen(config)#
```



Make sure that the name of the card is correct. Otherwise you will get error messages. Or you can query the list of the available interface first. Just type in 'show interface' in global mode.

## 6.2 Number Command:

Type number command to set the number of packets you want to build and send out. The range is 1 - 65535. Default value is 1.

```
pktgen(config)#number 10
```

---

**Packet number is 10**

**pktgen(config)#**

### 6.3 Length Command:

Type the command of 'length' to set the value of packet length. The range is 16-1518. Default value is 60.

**pktgen(config)#length 64**

**Length is 64bytes**

**pktgen(config)#**

### 6.4 Time Command:

Type time command to set the pause seconds between every two packets. The range is 0-3600. Default value is 0 (no pause).

**pktgen(config)#time 1**

**Pause time is 1 second.**

**pktgen(config)#**

### 6.5 Other Commands:

Other commands such as 'list' and 'help' are the same will the command in global mode. More configure commands will be available in the future.

---

## Chapter 7. Notes

This is an unfinished version. Extra details will be added. And if you have any suggestions or ideas, please share them with me. My mail box is:

dean@deansys.com

The function of multi-stream is new function. Please check the result after you have sent multi-streams.

This specification document is based on packet generator v0.0.6.

## 8. THANKS

Thank for all the guys who share me with their ideas and suggestions.



**Design different system solutions for different usages.**