



Exploding The Phone

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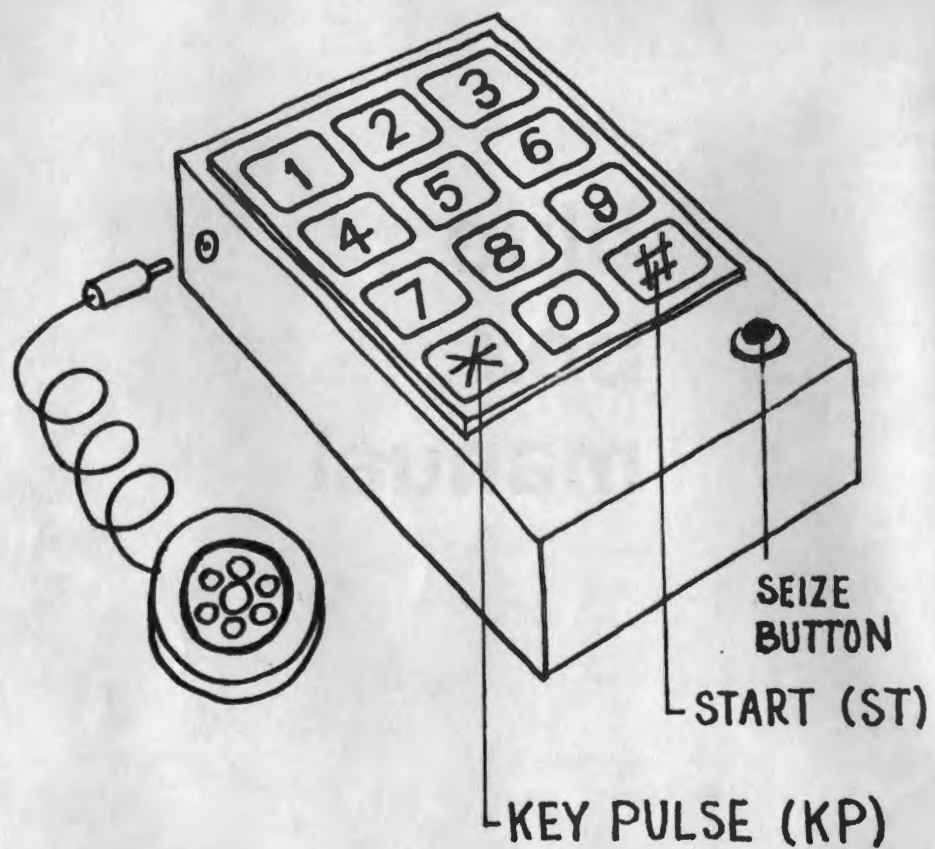
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**blue
box
manual**



PRINTED IN U.S.A.

KEY PULSE (KP)
START (ST)
BUTTON
SEIZE



BLUE BOX MANUAL

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CONGRATULATIONS !!!

You are now one of the chosen few to own a Blue Box. Before you play with your new toy you must first know how to use it. It's more fun than electric trains, it satisfies that bit of larceny in your heart, it frees your conversations from visions of large-figure phone bills, and is bound to make you the envy of all the kids on your block. But before you make that call to your Godfather in Sicily, please read everything - paying special attention to warnings about use and abuse (See Paranoia Dept.) - 'cause we don't want to spoil our thing.

Blue Boxes are a relatively recent invention; and as you can imagine, "Boxing" is for the most part a secluded activity. Operating techniques and codes are not readily available. We have done our best here to layout a simple Operation Manual and include most of the codes for areas you are likely to call. A great deal of work has gone into getting the codes we have put together here, but there is still a lot which is unknown. You will learn to appreciate, if not be in awe of, the vast complexity and the beauty of the Bell System. Boxing is easy, but it will also require your experimentation and ingenuity, but then this is half the fun of it. Enjoy! And Good Luck!

THEORY OF OPERATION

About twenty years ago Ma Bell made a multi-billion dollar decision to operate its entire long distance switching system on twelve electronically generated combinations of six master tones. Those are the tones your sometimes hear in the background after you've dialed a long distance number. They decided to use some very simple tones - the tone for each number is just two fixed single-frequency tones played simultaneously to create a certain beat frequency. (Like 1300 cycles per second and 900 cycles per second played together, give you the Digit 5).

The Blue Box successfully re-produces all of Ma Bell's twelve tones.

This tone system involves every switching and relay station in the world, including the many satellites encircling us now. The combinations of tones, or codes, are disseminated throughout the world with thousands and thousands of long distance and overseas operators. Hundreds of phone systems around the globe have collaborated to create this multi-billion dollar system. Your little Blue Box now puts most of this system at your disposal.

When using your Blue Box ("Boxing") the phone company's equipment thinks it hears its own voice speaking to it and responds accordingly. The tones must be quite precise, however, for if they stray from the specified frequency by more than 30 cycles per second (above or below) the phone equipment will not respond. Be thankful that the Phone Phreak engineering ingenuity that went into your Blue Box is as fine as Ma Bell's own, and that the frequencies are remarkably stable. You may find, however, that extreme temperature changes may temporarily throw your frequencies off by more than 30 CPS. A Blue Box in your pocket doesn't enjoy all the

climate control that Ma Bell's switching stations have, so prolonged usage from phone booths in the Sahara or Antarctica may not work out well. For best performance try to have your Blue Box at room temperature awhile before using.

The real key to Blue Boxing is the Seize Button which produces a 2600 cycle per second tone. The Seize Button enables you to seize a Tandem Line - or in other words "gain access to the system" so that you and your Blue Box are able to make calls from within the system in a way which is normally only available to Ma Bell employees. A Tandem Line is the only kind of line which will respond directly to your Blue Box. (A Tandem Line only responds to your home Touchtone or Dial phone via complicated telephone company interface equipment.) To understand just what a Tandem Line is requires a simplified explanation of what happens when you make a call.

There are two basic types of telephone offices through which calls are switched. The first is the C.O., or Central Office, and the other is a Toll Office. If you are making a call to a phone within your own Area Code, the wires from your telephone carry your call to the local C.O., and it is there that your local call is switched to another telephone in the same C.O. (The C.O. is subdivided into many exchanges and exchange offices, but all are within the same Area Code.)

If, however, you are making a long distance call, your call is switched from your C.O. to a Toll Office. A Toll Office, for our purposes, is an "inter-office" office. The Toll Offices

only connect with other Toll Offices, and via them, with the local C.O.'s which are attached to them. The lines connecting Toll Offices are called "Tandem Lines."

So, to seize a Tandem Line you must make a call which requires the use of Toll Offices. Most all long distance calls require such use, but sometimes calling an adjacent Area Code will not.

A note here about phone company record keeping: when you dial a long distance call from your phone, the digits you dial, whether they are Touchtone or Dial-type pulses, are sent directly to your Central Office. Most C.O.'s now have CAMA, Centralized Automatic Message Accounting. The CAMA machine in the C.O. records your number, the date, and time and number you dialed. The record is a punched paper tape. The C.O. then relays the Area Code and number to the Toll Office and its computer memory bank. The Toll Office contains a sender, which sends by whatever route is easiest, a series of MF, or multi-frequency, pulses to a Toll Office in the area you called. These pulses are picked up by an incoming sender which translates them, stores them for the duration of the call, in its memory bank, and connects you from there to the C.O. of the exchange you dialed. This C.O. then itself translates the remaining digits and connects you to the phone you dialed. When that phone answers, a signal is returned all the way down the line to your local C.O. to say that the call has been answered. When you or your friend hang up, a signal is returned to end the billing, and this goes on the tape too, along with the date and time and both numbers, yours and theirs. This is important to remember because the phone company will have a record of all calls you make, even Toll Free calls such as long distance information

and WATS (Wide Area Telecommunication Service) or 800 Exchange calls.

Now, getting back to Tandems. The way the phone company sends signals on their lines is with frequencies. When, for a pertinent example, an Inter-toll Office Line, or Tandem, is idle, it has present on it a tone of 2600 CPS. This tone informs Toll Station senders, which are searching for idle Tandems, that this one is available for use. When the sender hooks into and uses that Tandem it eliminates the 2600 CPS tone (thereby telling other Tandem Line seekers that this one is now busy.)

Control of your telephone line is done by you. So, when you hang up (or disconnect) your local C.O. relays that information to its Toll Office and from there down the Tandem Line to the incoming-sender and computer memory bank of the Toll Office at the other end, and from there to the C.O. of the exchange you had dialed. If, however, you were to send a quick 2600 CPS tone down your line, the Intertoll Tandems would think you had hung up (because a 2600 CPS tone means the Tandem is idle) and the computer memory bank at the far Toll Office would disconnect you from the C.O. of the exchange you dialed. This, of course, would stop the ringing of the phone at the far end. With the release of the Seize Button you will find that you are locked into the computer memory bank of the Toll Office at the far end, with an idle Tandem at your disposal. This is because the incoming sender of that Toll Office no longer hears the 2600 CPS tone which you quickly pulsed and believes your Tandem has been seized, which, in fact, it has been. By you and your Blue Box! And you are now able to call with your Blue Box anywhere you want. By the way, any call tracers at the phone you eventually reach will only get

as far as that distant Toll Station at which you seized the line.

Meanwhile, back at your own C.O. the C.A.M.A. is billing you for the initial call you made. If it was a Toll Free 800 or Information call, the rate is \$nothing. If it was a genuine nearby toll call, from which you seized a Tandem and went on a much greater distance or even overseas, the rate is only a small fraction of what you would normally pay.

warning!

PARANOIA DEPARTMENT

Paranoia is part of the game. After all, your little Blue Box has put billions of dollars of Ma Bell's equipment at your fingertips - you can now talk with your friends around the world absolutely free of charge - Ma Bell isn't collecting a penny for it. Obviously the TelCo. is going to do all it can to put a stop to this, but the odds are greatly on the Boxer's side. There are simply too many circuits to police constantly. Telephone companies like to make a lot of noise about their efforts to stop this sort of thing, but phony Credit Card calls account for a great deal more of their problems. There are still (as of March 1973) not many Blue Boxes around, but they are increasing in number, and the Phone Company will be doing more to detect their use. So be cool, read this section carefully, use your Blue Box discreetly, learn the technical aspects of the game, and avoid developing a pattern.

All Blue Box operation is dependant upon Seizing a Tandem Line. To do this you must make a long distance call on the phone you're using. You have three choices:

- 1 An 800 Exchange (WATS Line or Toll Free call)
- 2 Long Distance Information (such as 514-555-1212)
- 3 A Toll call to a nearby Area Code and number which requires use of a Tandem Line.

- 1 800 Exchange Calls: Even though 800 calls never show up on your phone bill (because they are free) the accounting tape at your Central Office does print them out. They have a special annotation next to them which tells the billing computer not to print them out. But the fact is that there is a record made of the 800 calls you make (which is held for six months.) These tapes are generally not examined, but if the phone company starts getting suspicious and does check, it will obviously look strange if you have a sudden flurry of 800 calls when you never had one before. Thus, it would make sense to start building up a pattern of legitimate 800 calls on several phones for a while before using them on Box calls.

Consider who you are calling on an 800 number. A business might very well frequently call National Car Rental (800+328+4567) but is less likely to spend a half hour with the Air Force Recruiter (800+621+0560). Also a lot of 800 numbers are answered by tape recording after business hours - it would seem strange if your talked with a tape recorder for twenty minutes.

A number of computer services now have 800 numbers for their customers to call in and feed data to the computer. This can take a long time and is thus useful, but again, consider who appears to be doing the calling. An office might use a time-share computer, but would you be doing that from home?

There are lots of 800 numbers around. You will find them in magazine ads, on TV, and in newspapers. If there is a company that it would seem legitimate for you to call, you can call 800 Information (800-555-1212). See if they have a Toll Free number. Above all do not simply make up 800 numbers; this is a sure giveaway.

- 2 Information Calls (Area Code + 555-1212): These are also Toll Free calls and you can Seize the Tandem on them, but these aren't good to use because like the 800 Exchange calls the Information calls are also printed out on the accounting tape and nobody speaks with Info operators for very long.

Note: As far as we know these accounting tapes are not being checked. But as these are the only records of what calls each phone makes, and as the Phone Company Security knows that Boxers mostly use 800 and long distance Information numbers, the accounting tapes are where they're going to start looking if they get more suspicious. So try to keep your own tape legitimate looking.

- 3 Legitimate Calls to Nearby Area Codes: Many short distance calls, but with a different Area Code than the one from which you are calling, utilize Tandem Lines. So it is possible to make a call to a nearby town and Seize the line and then transfer your real call a far greater distance and only be billed for the shorter call. It will take some experimentation for you to determine which is the cheapest call you can make which uses a Tandem Line. It will also help if the number you finally select is that of a friend or business which will verify that the calls were actually made in case someone gets nosey. Again, be cool, avoid calling offices, for example, at night when the Phone Co. knows no one is there.

Seizing the Tandem on these short distance calls is by far the safest way to Box. But you do have to pay for the short distance call. Your accounting tape, by the way, will look absolutely legitimate on this basis. But

again do not make up numbers to call. This is sure to look suspicious, because chances are that you'll end up "talking" to some non-working numbers.

Pay Phones: Pay phones are best to use because there is no way they can ever trace you. (Unless you use the same pay phone so frequently that the Phone Co. stakes it out.) When calling 800 numbers on a pay phone an operator will often come on to assist, and make Seizing difficult. If so, try a long distance Information number. Pay phones are the only safe phones on which to use long distance Information. And don't worry, you'll get your dime back!

From time to time you may get a live operator on the phone. It's easy to panic when you get wrong numbers or operators or things don't happen as they should. But be cool. Relax. Act like an Honest Telephone Customer, say you got the wrong number, maybe even be mildly pissed at the operator for having your call goofed up. Whatever you do, don't tell anybody who you are, what number you called, or are calling from. Just hang up and call again. You can also just press the Seize Button and zap the operator off the line.

Generally:

Avoid placing too many 800 calls on your home phone.

Remember, short distance calls on which you can Seize a Tandem are safest.

Long distance Information is really only safe for pay phones.

When learning or experimenting, use some phone in a lonely spot, like an after-hours office, and one that cannot be traced to any particular individual.

Don't make up phone numbers to Seize from. Chances are high that they may be non-existent numbers and will be a sure giveaway as to what you're up to.

Try to be cool and not arouse much attention from the Phone Co. about Boxing. Because aside from your own skin, there are other Boxers too, and we don't want Ma Bell to begin an all out war on Boxing.

2600 CPS detectors do exist, and are being used by Ma Bell. From what we understand, monitoring lines for 2600 CPS tones is an extremely expensive operation. It doesn't seem likely they will make the investment unless they believe there is an enormous amount of Boxing abuse. So, again, be cool, don't give them cause for suspicion.

**HOW TO MAKE FREE CALLS WITHIN THE CONTINENTAL
UNITED STATES**

Directions for calling anywhere that you can dial directly without operator assistance, such as Puerto Rico, Virgin Islands, Canada, Hawaii, Alaska, parts of Mexico (from the West Coast only) are included here. See the front of the white pages phone book for all the codes and areas applicable to the following instructions.

- 1 Plug speaker jack into Blue Box (See illustration)
- 2 Place the speaker over the mouthpiece of the telephone receiver and hold it there.
- 3 On your telephone dial, dial a WATS (800) Exchange (Toll Free) or a nearby Toll number. (Refer to advice on number selection in Paranoia Dept.)
- 4 Just as the number is about to ring or start ringing, depress the Seize Button on the Blue Box for a second or two. You will soon learn just when to depress the Seize Button, and that you can usually Seize the Tandem even before your number rings. But nevertheless, be alert because many Toll Free numbers are answered very quickly (on the first ring or less) by automatic answering devices or overly eager employees.
- 5 You will know that you have Seized the line if it hiccups or buzzes back at you for about half a second. This sound simply means that you have successfully gained access to the computer bank and that it is awaiting further instructions from you.

You may depress the Seize Button a second time and you will almost certainly get a half second but louder buzz back at you. This is not necessary, but is confirmation of the fact that you have Seized the line.

Note: If the line does not hiccup or buzz back and is therefore not Seized, it could be for several reasons:

- A The line was answered too quickly for you. Hang up and call again.
 - B The 800 Exchange or Toll call was a local one using direct lines and was not sent through a Tandem Line making the line impossible to Seize. Try another number.
 - C Make sure you had the speaker directly over the mouthpiece to give the line a clear signal.
- 6 Assuming all has gone well so far, press (or Key) the * or Key Pulse (KP) on the lower left hand corner of the touch pad. This tells the computer that a number is to follow. If it is not Keyed, the computer will not accept any further instructions and your call will not go through.
- 7 After Keying *(KP), Key in the Area Code of the number you are calling. (Do not Key 1 before the Area Code as you do with regular dialing in some areas.) Then Key in the number you are calling.
- 8 Next Key #(ST) at the lower right hand corner of the touch pad. This tells the computer that the number is to be sent.

For Example: To reach San Francisco Weather Information, you must first Seize the line (Steps 1-5) then Key in KP 415-936-1212 ST.

9 One of the following will happen next:

- A The call will go through.
- B A slow busy signal is heard which means the line is busy-try later.
- C A fast busy signal is heard which means all circuits are busy. Re-dial.
- D A recorded message stating that your call did not go through, followed by "This is Operator 901-1" or some such number. It is important to listen through the recording to hear these numbers. The first three digits the operator gives at the end of the recording are her Area Code. This lets you know the area of the Toll Station in which you have Seized the Tandem. (Check your phone book for the Area Code location.) Since 800 Exchanges (WATS Lines) don't have Area Codes it is possible that your call from Washington, D.C. to New York may travel via Memphis if the 800 Exchange number you have dialed is located there. But you won't know that unless you listen to the operator's number at the end of the recording. All of this is significant because you just may be trying to reach a number in the same Area Code as the one in which you have Seized the Tandem. If so, and

you Key-in the Area Code you are calling (which, because you have unknowingly Seized a Tandem in the same area, is also the area you are "calling from") the call may not go through. If so, simply delete the Area Code on your Box, or try Seizing a Tandem in another area.

- E Another possibility is that a live operator answers. If so, hang up and return to "Go", (Step 3).

Note: In all cases you can simply depress the Seize Button, get back on the Tandem and re-Key your number (KP+Area Code+XXX-XXXX+ST).

HOW TO MAKE FREE INTERNATIONAL CALLS

- 1 Follow Steps 1 through 5 for Continental U.S. calls. (This is simply Seizing a Tandem Line.)
- 2 Once you have Seized the Tandem off your dialed number (whether a nearby long distance, Information or WATS Line (800) number) you must route to an International Overseas Sender Station. Seven of these exist in the U.S., not all of them have access to every other country, so if one doesn't work try another that would seem to be a logical sender station to whichever country you're calling.

Here's a list of the International Sender Stations

White Plains	(914) 182
New York	(212) 183
Pittsburgh	(412) 184
Jacksonville	(904) 185
Oakland	(415) 186
Denver	(303) 187
Montreal	(514) 188

- 3 To reach the White Plains International Sender, for example, you must Key KP (914) 182 ST. We have found that it is not usually necessary to include the sender station's local Area Code. So, to reach the White Plains International Station KP 182 ST should work as well as KP (914) 182 ST. Experiment with both methods to see which is most successful for you.
- 4 If you're not sure which International Sender serves the country you're calling, you can proceed by trial and error or you can try KP+011+XXX ST. The XXX being the country code of the country you are calling. This should route you automatically to the proper International Sender Station. (If you blow your call once you've received the International Dial Tone at this station, listen to the end of the recording which will give you the Area Code of that Station, so you'll know which Station to use in the future.)

- 5 Country Codes: Country Codes are one, two or three digits. If the country has three digits, they are the XXX. If it has two digits, Key in OXX or LXX, XX being the Country Code. The O is for Satellite, the 1 is for Cable. Sometimes the Satellite is busy, sometimes the country is available only by Cable. For a single digit Country Code, Key OX1 or LX1. Thus, Russia (Country Code 7) would be dialed as 071 or 171.
- 6 In reaching the International Sender Station you will hear a buzz-back (much like the one when you Seized the Tandem) and then on most (but not all) stations you will hear a loud continuous tone. This is the International Dial Tone.
- 7 You are now ready to Key in your International call. Key in KP+XXX+City Code+Local Number+ST. Have your number ready, because International sending equipment is programmed to receive these tones in less than 7 seconds.
- 8 The City Code of the largest city is often 1, or 01. If it isn't, or if you're trying to reach another city but don't know the Code, you can find out by Keying in KP XXX-121 ST and asking the inward operator for the City Code, or KP XXX-131 ST or KP XXX-141 ST for the Information Operator for that country. Simply say "overseas city code for Munich, please." or wherever you want. If the City Code begins with a zero, it is usually necessary to delete the zero for the call to go through. Again, experiment.
- 9 If after receiving the International Dial Tone, you Key your number and blow it, you can try again by beeping off with your Seize Button, but remember you're all the way back to the original Tandem you Seized and you must re-Key the International Sender Station.

10 Here's How to Dial London Weather Information - From Scratch

- 1 Dial your local long distance or Toll Free (Info or WATS (800) Line) on your dial or touchtone phone
- 2 With Blue Box, press Seize Button just as number rings or is about to ring. Get a hiccup or buzz-back.
- 3 Key-in (on Blue Box) an International Sender Station KP 182 ST, within a second or two you should have another buzz-back and then the continuous International Dial Tone.
- 4 You are now ready to Key your overseas call.
 - *(KP)
 - 0 (For Satellite, or 1 for Cable)
 - 44 (Country Code for England)
 - 1 (Area Code for London, delete the primary zero)
 - 246-8091 (London's Weather Info number)
 - #(ST)
- 5 Within ten seconds you should be hearing about the London fog. If not, press the Seize Button and start over at Step 3.

Note: Laid out this call would look like this:

800-238-5000 Seize KP 182 ST KP 0 44 1 246 8091 ST
(On Phone Dial) (-----on Blue Box-----)

ADDITIONAL PROCEDURAL TIPS

If you follow the preceding instructions you should not have trouble with your Blue Box. But sometimes it can be difficult to get through. If so:

- 1 Make sure your Box has not recently been exposed to extreme temperature changes.
- 2 Try another telephone. The speaker of the phone you're using may be faulty.
- 3 Try Keying at different paces. Some Exchanges seem to respond better to fast beeps - others to slower ones.
- 4 Your Box is powered by a Mercury Transistor Battery, No. H146, 8.4 Volts. The power drain is so low that it should serve you for a few years. You can replace the battery, though, by opening the Box. But be gentle. Use only an 8.4 Volt replacement, any other will change your frequencies.
- 5 Frequency Verification. To verify that your frequencies are correct, Seize a Tandem, Key in KP 202-009 ST, get a buzz back, wait a second, then Key KP 0 XXXX etc...ST. After the KP your first number must be 0. Then Key 1, 2, 3, 4, 5 etc. ST or in any order you wish, up to thirty digits. A recorded voice will then respond number for number as you Keyed in.

Note: This verification number is in Washington, D.C. so if you have Seized a Tandem in Area Code 202, you must delete the 202 from the verification number and simply Key KP 009 ST.

- 6 Sometimes excessive background noise such as loud music will goof up your calls. If you're not getting through, check this out.
- 7 Some areas utilize equipment other than that manufactured by Western Electric. Many of these phones have filters on them which may alter your frequencies and make calling success erratic.
- 8 Also some areas have more sensitive mouthpieces than others. For them the speaker on your Blue Box may be too loud. This is easily remedied by placing a muffler between your speaker and the mouthpiece. Use a piece of fabric or foam rubber.

UNIT 1: THE AMERICAN WEST

1. The American West is a vast and diverse region, encompassing a wide range of landscapes, climates, and cultures. It is a land of opportunity and adventure, where the spirit of exploration and discovery has shaped its history and identity. The West is a place where the past meets the present, and where the future is being written.

2. The American West is a land of contrasts, where the rugged mountains of the Rockies meet the vast, open plains of the Great Plains. It is a land of extremes, where the scorching heat of the desert meets the biting cold of the winter. The West is a place where the wild and the tame meet, and where the wild is often the more interesting.

3. The American West is a land of legends and myths, where the stories of cowboys and outlaws have become a part of the national consciousness. It is a land of heroes and villains, where the good guys often win in the end. The West is a place where the dream of a better life has led many people to seek their fortune, and where the dream has often been realized.

4. The American West is a land of natural beauty, where the majestic mountains, the winding rivers, and the vast, open plains create a stunning landscape. It is a land of adventure and exploration, where the thrill of the hunt and the excitement of discovery are always just around the next bend. The West is a place where the beauty of nature is always on display, and where the beauty is always there for the taking.

5. The American West is a land of opportunity and growth, where the spirit of entrepreneurship and the drive for success have led to the development of some of the most important cities and industries in the United States. It is a land of progress and innovation, where the future is always just around the next horizon. The West is a place where the dream of a better life is always within reach, and where the dream is always worth the pursuit.