

FJCR MAGAZINE



JULY 2011 • VOLUME 4 • ISSUE 3



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On The Cover:
The Armorology Front Bumper
performed flawlessly on the
difficult Chinaman Gulch



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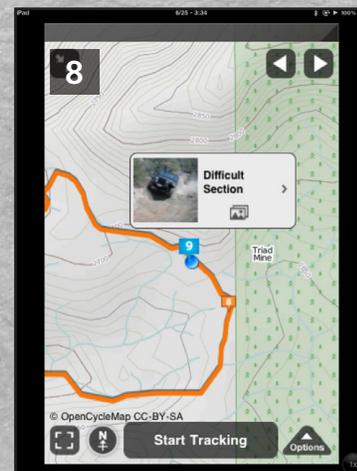
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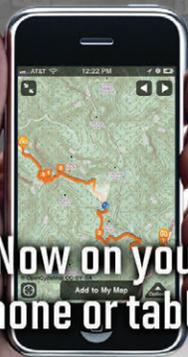
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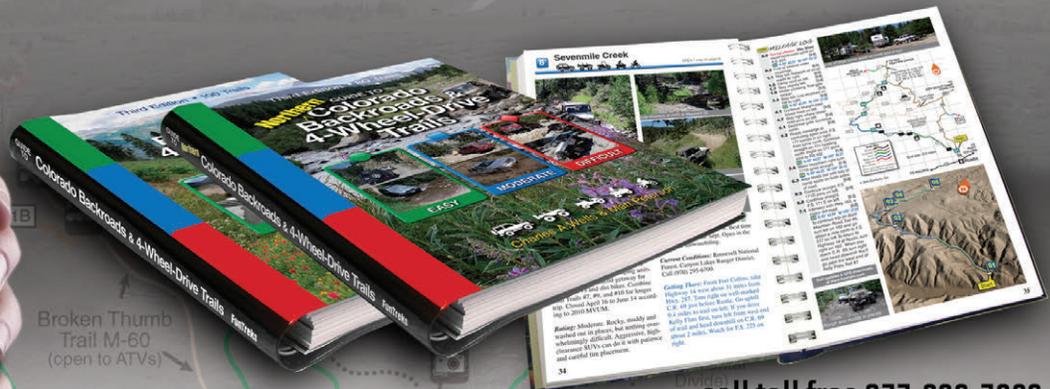


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FROM THE STAFF

Well, summer is in full swing and we're excited to get the July issue of FJC Magazine out the door! As I write this we're just a couple of short weeks from heading to Ouray for the 5th annual FJ Summit. This year we get to be in the mountains for a full week, so we'll be covering some of the behind-the-scenes setup and 'mystery' that makes the Summit happen.

Beyond that, we're having fun running trails, talking with more & more FJ Cruiser owners & enthusiasts, and working on a couple of new projects that could take us in some very exciting directions. We're looking forward to the rest of the summer and meeting with FJC Magazine readers both in Ouray and at other events this year and next.

See yo on the trail!

Until next time, Tread Lightly, Stay The Trail, and HAVE FUN!



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Colorado Springs, CO 80923

www.fjc-mag.com

EDITORIAL

Publisher

Shane Williams

Editor in Chief

Angie Williams

Photographer

Jim Akers

Associate Creative Director
Cristina Lawrence

CONTRIBUTORS

Steven Dozen

<http://norcalfjs.com/profile/potatomutato>

Matt Main

<http://www.facebook.com/mattmainster>

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EVENTS

3rd Annual All Cal

Dates: July 15-17 2011
Location: PsychoRanch, SoCal
Contact: All Cal Website

2011 FJ Summit #5

Dates: July 20-24 2011
Location: Ouray, CO
Contact: FJ Summit Website

2011 SedonaFest

Dates: August 19-21, 2011
Location: Sedona, AZ
Contact: SedonaFest Website

Thrill on the Hill 2011

Dates: Labor Day 2011
Location: Cloudcroft, NM
Contact: Thrill on the Hill Website

Coal Mine Cruiser Classic

Dates: July 7 - 9, 2011
Location: Rausch Creek Off-Road Park,
Joliet, PA
Contact: Gotham City Land Cruisers

Black Hills Cruiser Classic

Dates: July 13 - 16, 2011
Location: Black Hills, South Dakota
Contact: Dakota Territory Cruisers

Rising Sun Rally

Dates: August 27, 2011
Location: Jefferson County Stadiums,
Lakewood, Colorado
Contact: Rising Sun Toyota 4x4 Club

Tall Corn Cruiser Classic

Dates: August 25 - 27, 2011
Location: Hamilton, Iowa
Contact: Tall Corn Cruisers

Southern Cruiser Crawl

Dates: October 13 - 16, 2011
Location: Superlift ORV Park, Hot Springs,
Arkansas
Contact: CottonLand Cruisers

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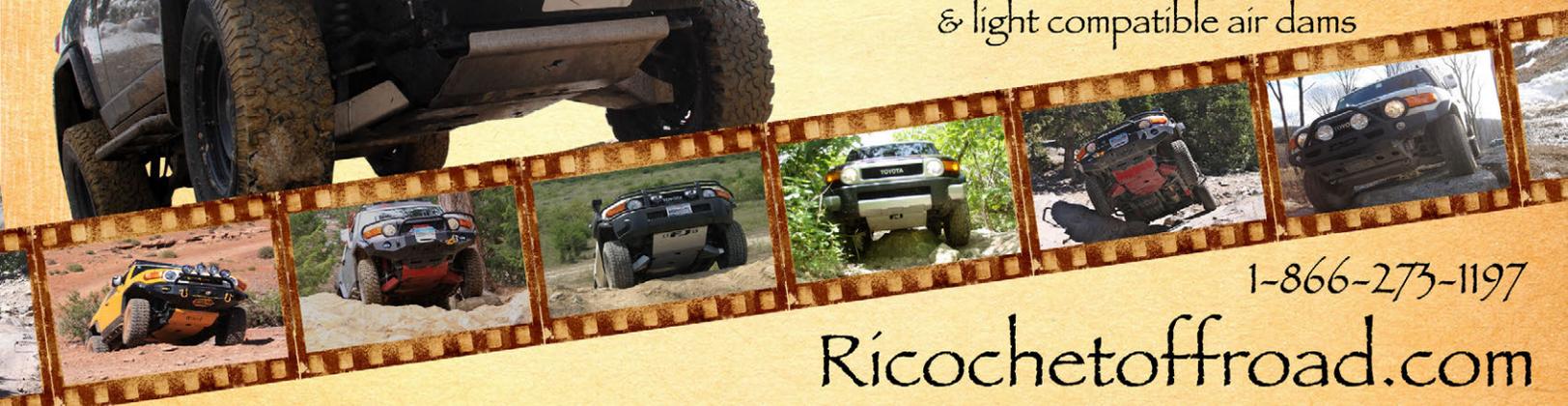
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In The News

Have you heard? They've released the FJ Cruiser down under in a right hand drive version! As we've previously reported, Australia, Japan, and New Zealand all now have the FJ Cruiser on their showroom floors – and on the trail! We followed the New Zealand launch event – FJ Top To Bottom on a daily basis as Marc Ellis made his way from the northern tip of NZ to the most southern point of the country. The event served two pur-



Expedition in Marlborough mountains | By Juan Mon

poses: First, to launch the FJ Cruiser in the land of adventure that is New Zealand, and second to celebrate 60 years of the Toyota Land Cruiser. The event was a huge success by all accounts, even though it was postponed for a bit due to the earthquake in Christchurch. Once the event resumed on May 15th, it was non-stop action as the team made their way to Bluff, NZ (specifically Slope Point – just 4,803km/2,984mi from the south pole). The journey was completed almost entirely off-pavement, so it was quite a feat.



Molesworth river crossing | By Juan Mon

Photographer Juan Mon captured dozens of amazing shots during the trip and we're excited to be able to share a few. For more photos, videos, and all the details of this epic journey – visit www.toptobottom.co.nz.



FJ trucks, High Country | By Juan Mon



Tussock land at Ngamatea Station, between Waiouru and Hawke's Bay | By Juan Mon



Crossing bridge in Taranaki | By Juan Mon

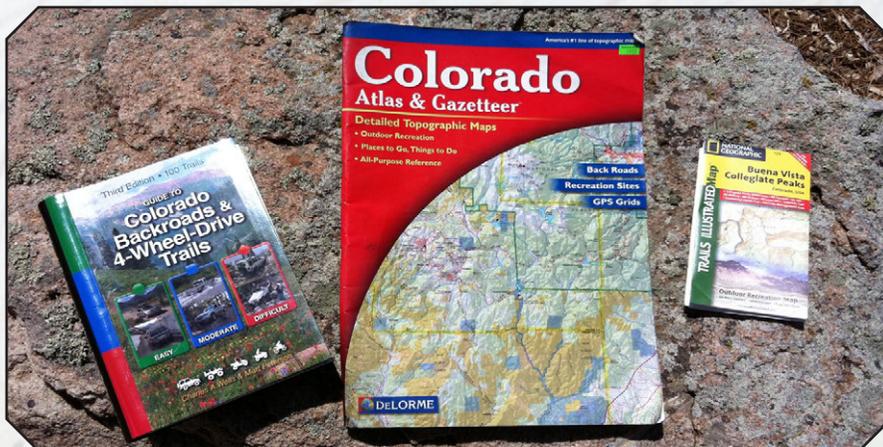
TOOLS FOR OFF ROAD NAVIGATION

When FJC Magazine launched in 2008, we ran a series of three articles covering Off Road Navigation:

- Part 1) Paper Maps
- Part 2) Portable GPS
- Part 3) Permanently installed systems

To add to that series, in our January 2011 issue we covered the installation of an iPad in the dash of our TRD FJ Cruiser to serve as the primary navigation and entertainment device. Our new contributor Matt Main also sent in his iPad set-up for this issue (Page 16). So, with the summer wheeling season in full gear, we thought it would be a good time to explain the tools we use every time we go off road in a little more detail.

First and foremost, we have to determine where we want to go play. This search, like so many others, begins on the Internet with sites such as Trail-Damage, FunTreks.com, and Dirtopia, among others. Each of these sites has their own benefits and drawbacks, but combined they all work to help us determine the best place to go. We then use data available on each of these websites to build a Google Earth (GE) layer for our trip (See the 2011 FJ Summit



as well such as our trusty Colorado Gazetteer from DeLorme, and books from other publishers. However we like the FunTreks books due to their spot-on descriptions, GPS and Mileage information, and useful photos.

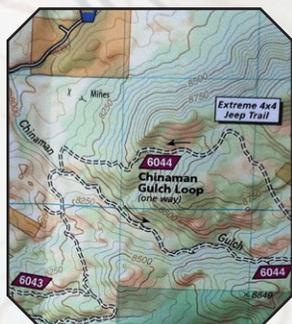
Our guidebooks, combined with a Gazetteer and usually a National Geographic Trails Illustrated map constitute our paper map collection. These are very useful for the planning phases and as a reference when needed, but in all reality they're not used very much on the trail. We've become very reliant upon our electronic devices to make navigation quick and easy, but it's important to note that we NEVER leave the pavement without suitable paper maps as a backup. While we love our nav devices, paper maps & guidebooks work every single time.

Google Earth Layer as an example).

The great thing about using GE to preview our trip is that it makes it very easy to determine where we will start and finish each leg, and what the trail will be like. It's also good to help visualize elevation gains/losses, potential scenic viewpoints and, to be honest, it helps us get through the work week leading up to our adventure. The additional layers available in GE (such as photos, hikes, mountain passes, peaks, etc) help make trip planning that much more exciting as well.

Like our paper maps, our electronic systems are redundant, so we generally

Once we have an idea of where we're going, we can begin to narrow down exactly the trails we want to run, and sights we simply can't miss. To do this, we use the FunTreks Guidebook for the area, if it's available. There are other publications that can help with this



carry at least three different navigation devices with us at all times. First, our dedicated GPS is currently the tried and true Garmin eTrex Legend CX, and it works as well today as it did when we bought it five years ago. While it's not the best user interface, it serves its purpose as a backup device. We're looking forward to the new eTrex series that's coming out in August as a much needed upgrade. Still, the Legend is exactly that: always dead on accurate, always works, and most of all it is baby proof. The iPhone is our secondary nav unit is use-

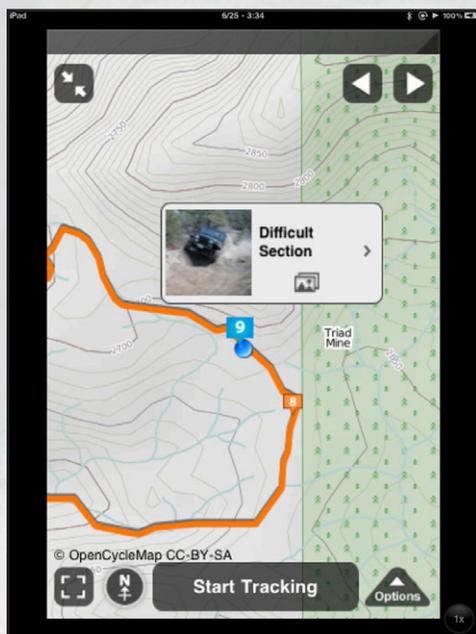
reliable, and affordable. If you're going to have a smart-phone anyway, you may as well use it to its full potential as a navigation device.

The iPad really is our holy grail of navigation. It takes all the great things about a smartphone and adds a huge 10" screen. The integration into the dash means off road navigation is almost a non-issue. There is little discussion on which way to turn at an intersection, and most times we don't even have to stop when trails converge. Using the same apps that

are available for the iPhone means we get twice the functionality from a single software purchase. While some will argue that the iPad is no replacement for a true PC based navigation solution, we're sure that the cost and convenience differences more than make up for any tablet limitation.

Are all of these navigation options overkill? Maybe, but as we've said time and time again, make sure you

have backups to your backups. When attempting to run trails with just the Gazetteer, figuring out which way to go ate up valuable trail time. Our ultimate off road navigation setup serves our needs well and keeps us moving nicely along the trail. We would love to hear what you use for off road navigation! Visit our Facebook page and let us know how you find your way in the woods.



FunTreks eGuides on the iPad make navigation simple

ful for both on and off road navigation. Modern smart-phones (both iDevices and Android, among others) are really coming into their own as far as vehicle navigation. With the plethora of apps available (we currently use Navigon for street nav and EveryTrail for off highway), there's almost nothing you can't do with a smartphone. The built in GPS and offline maps capability of smart-phones make navigation easy,



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ARMOROLGY

FJC Front Bumper



Looking for a lightweight & sturdy FJ Cruiser front bumper? A small but very well known shop based in Colorado Springs, Colorado may have the answer for you! You may have heard of Armorology from their work on all types of vehicles, especially Toyota Trucks. While much of their work is completely custom, they've recently finished their first semi-custom FJ Cruiser

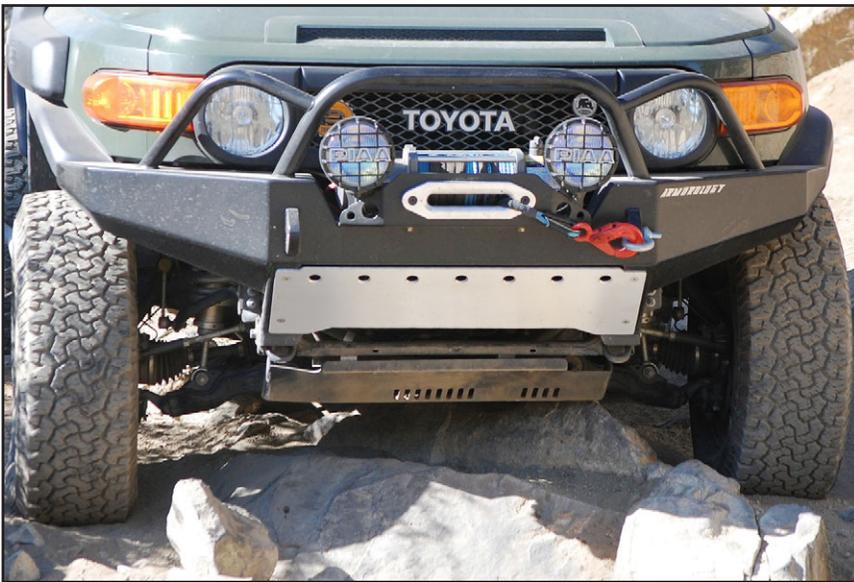
front bumper.

Weighing in at around 98lbs (minus the winch, of course) this bumper is fully boxed and hugs the front the FJ Cruiser quite nicely. It supports standard winch mounts (Mike installed a Superwinch), and works best with an aluminum fairlead. Integrated shackle mounts, tabs to mount bumper lights, and several options for the bull bar are also standard on this bumper.

Armorology also included their signature aluminum bash plate on this bumper, although it's not usually needed since the bumper provides so much ground clearance.

We had the chance to really see this bumper put to the test during the 2011 FunRun up to Chinaman Gulch in Colorado Springs. While that trail is quite the match for a stock FJ Cruiser, Mike's well equipped 2010 Army Green FJ had no issues at all. The increased clearance on the Armorology bumper reminds us of pre-runner tube bumpers, but in a fully boxed package. The bumper matches the lines of the FJ very well and you can tell Armorol-

The 'mean' look



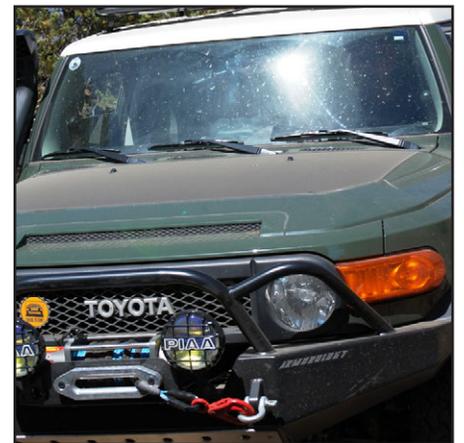


Excellent Clearance

ogy took their time with this build. While many of us were regularly dinging our mounts on steep descents, Mike had nothing to worry about. We're not quite sure how to categorize Mike's choice in bull bar other than to say he went with the 'mean' look. No matter what you call it, we really like the look and his entire setup matches his well outfitted rig very well. Pricing for this bumper will vary based on the options. If you'd like to learn more about this great option for your front bumper, give Jed a call today.



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INSTALL

By Shane Williams

FJ FREEDOM WINDOWS.COM

When the FJ first went on sale in 2006, everyone was ecstatic about the new Toyota 4x4 vehicle. Those of us that were there when the first FJ's began showing up at dealerships were completely in awe of the new truck – except for one small issue: the rear door windows. We were (and still are) completely baffled by Toyota's decision not to install vent windows for the back seat of the FJ. Vents are very standard on most modern vehicles, especially for a back seat where children ride most of the time.

It's no exaggeration that rear vent windows have been one of the most requested modifications/changes to the FJ Cruiser since its inception. For years we waited for some enterprising entrepreneur to figure out



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After countless hours of prototypes, test installs, and design changes, Doug Walsh from Dark Horse Enterprises was able to develop a great rear window solution for the FJ Cruiser. FJ Freedom Windows replace the OEM glass with high-quality scratch resistant plexy that are tinted to match the factory windows. The install process has several steps, but overall it is a moderate install.

While we won't get into the details of the install (the provided instructions and six part YouTube



a way to provide this highly sought after modification. There was talk of drilling the existing glass, creating roll down windows, and many other ideas on how to accomplish this. It wasn't until July 2010, right after the FJ Summit, that FJ-FreedomWindows.com was launched.

video are excellent), we do want to pass on a few pointers we learned from our install.

First, we recommend having a professional remove your OEM glass. We bought a removal kit from Harbor Freight to remove one side, just to see how difficult it is. The problem isn't that the windows are hard to remove (they're just glued in), the issue is that without the right tools it takes a LONG time to remove them. The kit we used included heavy-duty wire that you thread from the outside to the inside of the window to basically 'saw' through the glue to get the window out. That works for 3 of the 4 sides, but for the bottom you need a long, very sharp knife to get the job done. Also, there are 'locator' clips glued to the glass that are very difficult to get out. Once you finally get the glass out, you have to use a sharp putty knife or utility razor to cut the glue out. This is the part that took us well over an hour to finish. If at all possible, a professional can do this job much quicker.



The right tools & skill make a huge difference

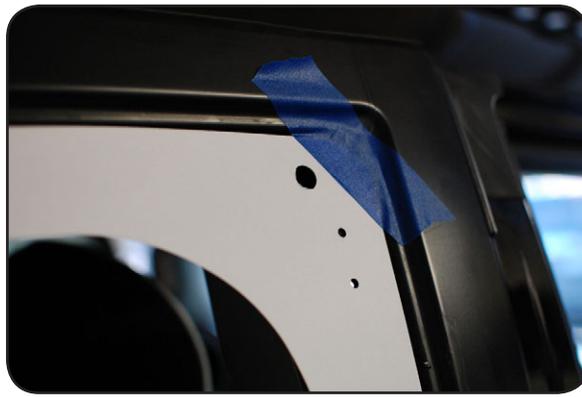
For the second window, we stopped by Service Auto Glass in Colorado Springs to see how the professionals do it. DJ and John were kind enough to help out and literally had the glass out and frame cleaned up in about 20 minutes. While the charge for that one piece of glass was \$50, less frustration and the knowledge

gained were well worth it. It really is all about the tools, and a glass company has the right tools for this job.

Once the windows are removed, it's a simple matter of stepping through the instructions to get the new windows installed. FJ Freedom Windows come with a template that you use to mark the 6 holes you will be drilling in the door. Once the holes are drilled (the instructions call for a 9/64" bit but we also used a 1/8" bit for the rear mount), you'll test fit the steel frame to make sure everything lines up. The entire frame is secured with heavy-duty automotive foam tape to help keep moisture out of your FJ, so you want to make sure everything is right before installing. After your test fit you can remove the backing on the adhesive and mount the frame on the door. Rivets secure the hinges and frame to the door and screws hold the rear handle/frame to the door.

It's imperative that you use the provided template and instructions to ensure your holes are all lined up. It's well known that FJ's have a tolerance of about +/- 1/16" of an inch, so keeping everything lined up and double, triple, or quadruple checked is a necessity.

After installing the frame, hinges, and handle, it's time to test fit the window before you install the final rubber seal. You'll notice that the window fits the frame very tightly so it takes



Using the template & following the instructions is the key to a great install.

some practice to install it smoothly. On the second windows we left masking tape on the top of the door frame to avoid scratches, we didn't on the first window so now there's a small scratch on the top of the frame. Once your satisfied with the test fit, install the rubber seal around the edge of the new frame as an additional water barrier, and the install is complete.

We've literally only had the windows installed for two days at the time of writing, so we'll report back on how well these work out. We can say that the fit, finish, and quality of the Freedom Windows are excellent, so we don't expect any problems. Installation does take some time and patience to ensure it's done properly. Still, we think this is one of the best mods you can install on your truck.



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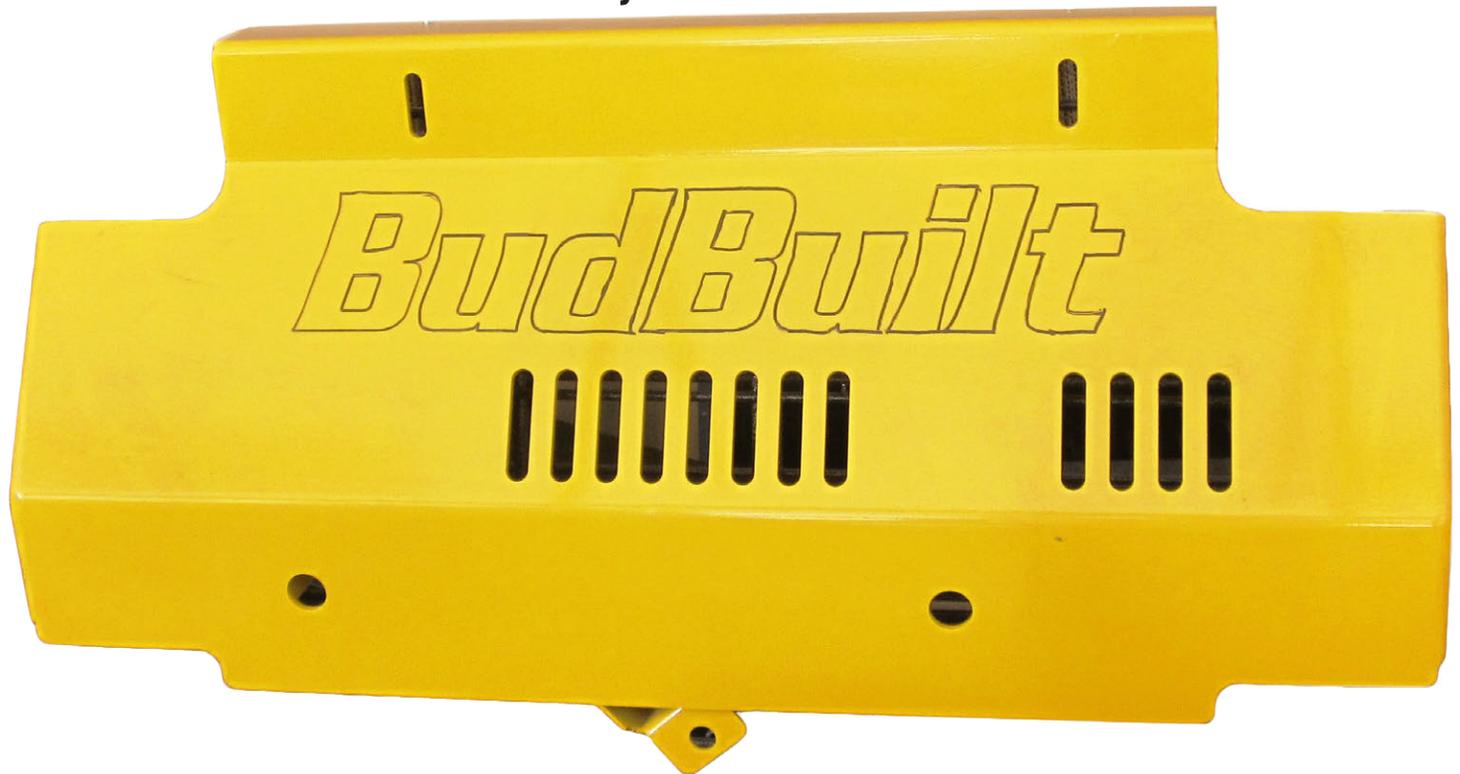


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BudBuilt Shop Tour

By Shane Williams



Most FJC lovers simply know him as “Bud”, of course I’m talking about Bud Rosenburger from BudBuilt. Since the first FJ Cruisers began tackling trails in early 2006, BudBuilt has been protecting our bottoms. Remember the Toyota Trail Teams? It was Buds skids protecting each and every one of them.

A couple of months ago I had the opportunity to stop by Buds shop in Lenoir, NC for a visit and shop tour. The converted Napa auto parts store has everything you’d expect in a fabricators shop: product in various stages of production, machinery of all types (including the original steel bender that Bud started with), jigs, and a well organized shipping area.

When I asked Bud how he manages to keep it all straight, he broke down some of the keys to keeping BudBuilt going. First, every item Bud produces has a CAD (computer aided design) drawing associated with it. This allows Bud to review tolerances, details, and material before a prototype is built. From there, it’s a matter of fabricating, revising, fabricating, revising, until the product is production ready. After that, a jig is built to allow the product to be produced in larger quantities. Bud has a different jig for each product and vehicle generation. While it’s a lot of work to get the jigs all setup, the result is a much cleaner and more efficient production process. This

also helps ensure that your skid plates fit perfectly every time.

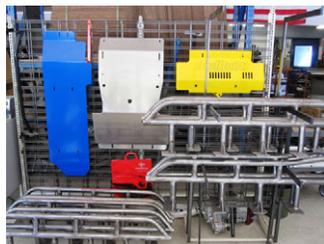
We all love Buds work on FJ Cruisers, but that’s not all he does (by a long shot). Bud has products for virtually all generations of Toyota 4x4 vehicles. In fact, while I was in the shop he had a 5th generation 4Runner (on loan from URD) that he was prototyping several products on. While those products are still in development, they’ll continue the BudBuilt tradition when they’re ready.

I asked what else Bud is working on, and while he couldn’t go into details, he said right now BudBuilt is working on 32 new products, all in various stages of development. In addition to the new 4Runner stuff, Bud is working on new FJ Cruiser and 4Runner products, so we’ll be anxious to see what new goodies Bud has coming in the near future. When will we see these new offerings? “Time is the biggest issue” was Buds answer to that question. As we all well know, it’s certainly worth the wait for BudBuilt quality engineering & craftsmanship.

If you’re ever in the area I highly recommend stopping by to say hi, Bud always has time for FJ Cruiser fans! Don’t keep him too busy though, we’re always looking for upgraded protection for our FJ :)



**A legend in
the Toyota 4x4
community.**

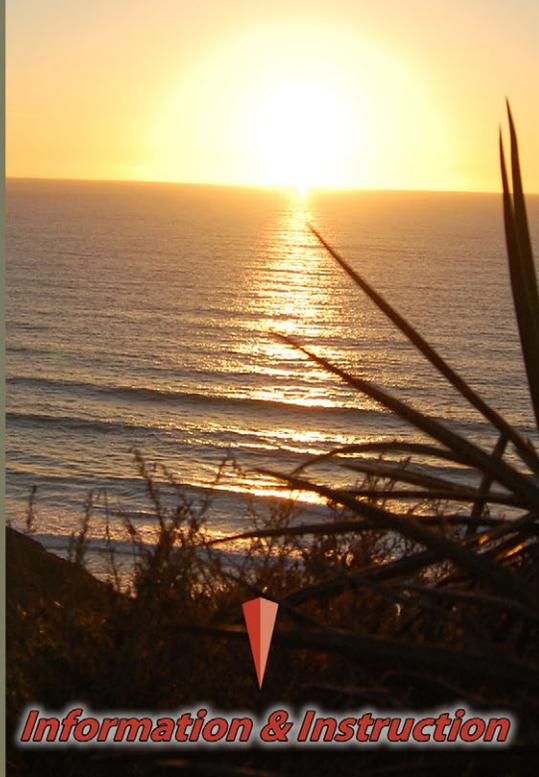


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The ULTIMATE FJ Cruiser iPad Setup

By Matt Main



Mounted iPad

It began with a search for the ultimate offroad navigation setup. I had tried the Magellan Crossover and then a netbook and USB GPS combo, but neither seemed to cut it for me. The windshield mount for the Magellan was sub-par for higher speed trail runs and liked to make it's way to my feet. The interface was clunky and awkward, and the topo maps just were not detailed enough for my liking.

Next was the netbook. I assembled a pretty nice setup consisting of an Asus EeePC, USB GPS dongle, and National Geographic's TOPO software. Paired with a homemade cupholder-mounted laptop stand, this made for a better option than the Magellan, but still had it's flaws.

Mainly, it was just inconvenient. The GPS took time to connect to satellites, the netbook screen did not have support, and it had a standard hard disk drive which was not made to tolerate the abuse I was about to put it through. On the brighter side, the NatGeo software is easy to use, intuitive and feature-rich.

After a couple weeks of research I was ready to move forward to my next endeavor; integrating an Apple iPad into the FJ.

First I needed a solid mounting solution. After reading numerous reviews on various mounts, I decided to move forward with a mount from RAM Mounts (www.ram-mount.com). The iPad is mounted in the FJ with the RAM FJ Cruiser seat base mount, single swing arm and Tough Tray II.

Installation of this combo was a breeze using the existing passenger seat-mount holes and longer bolts provided by RAM.



Left and Below: RAM mount installed in FJ Cruiser.



Cobra CB Mount B-Roll

Alongside the RAM mount, I use the iPhone 4 mount (not installed in pictures) which attaches directly to the Tough Tray. The tray itself is completely versatile and accepts many of RAM's other mounts. I took advantage of the additional mounting holes and adapted the handset hanger for my Cobra 75WXST CB Radio.

The RAM setup provides an extremely sturdy mounting system for the iPad with minimal movement on and off road. It's non-obtrusive to passengers and easily adjustable. Not to mention, RAM's customer service is top-notch and they were quick to answer all of my questions regarding options and installation.

Next was protection for the shiny new iPad. The Otterbox Defender (www.otterbox.com) seemed to be the only case up for the challenge. With three layers of protection, it only seemed fit to use for our outdoor adventures. The case consists of a silicone skin underneath a high-density polycarbonate shell and a clip-on shield that doubles as a stand when the iPad is not mounted in the FJ. To top it off, it fits perfectly into the RAM mount and RAM Tough Tray II.

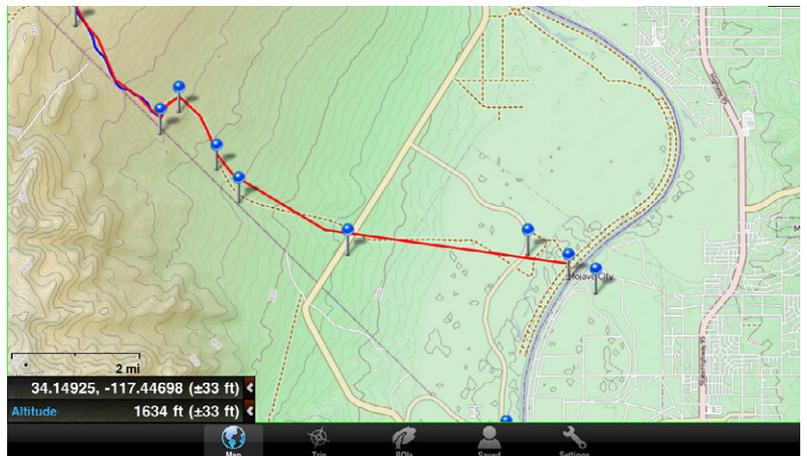
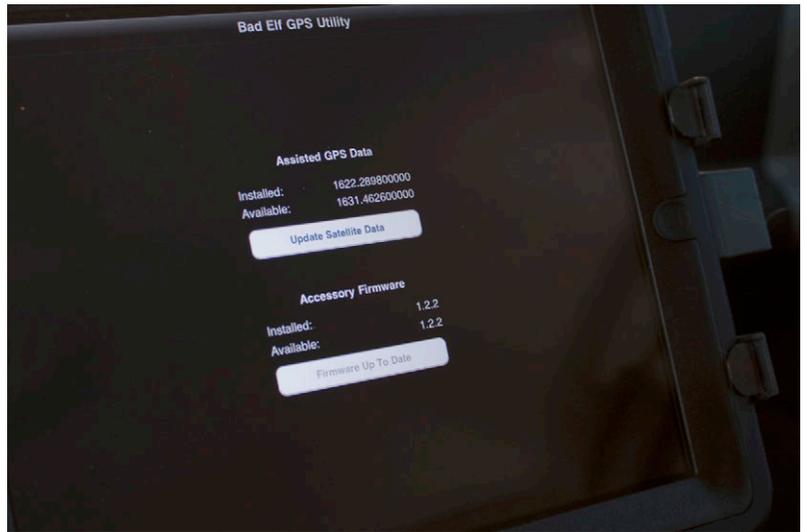
The iPad (WiFi only), is tethered to my Jailbroken iPhone 4 using the MyWi app from the Cydia store for mobile internet, Netflix and Google Maps while on the road.



OtterBox Defender Case

Because the WiFi only model of the iPad does not have GPS, I was left with another problem to solve. Browsing the SoCal FJ Cruiser forums (www.socalfjcruserforums.com), I came across a post about a company called Bad Elf and their new-to-the-market accessory that was made to solve this exact issue. So I gave it a try. The Bad Elf GPS accessory (www.bad-elf.com, \$99.95) plugs into the iPad's 30-pin dock connector and is used for gathering GPS data while on the trails, and also for street navigation using the native Google Maps app. The drivers for the accessory are downloaded as an app directly from the App Store and only needs to be run once. The GPS lock times are fast, beating those of the Magellan and the USB GPS receiver that I had previously used. The Bad Elf GPS can be used with any location-based app.

The final piece to the puzzle is Gaia GPS (www.gaiagps.com, \$12.99 – iTunes Store, Lite version available), a feature-filled topographic iPad app. I tested a few different apps before deciding to stick with this one. The most important feature, which so far has worked flawlessly is the ability to pre-load maps before trips. I am able to load a map of the location we will be travelling to, select the area I would like to download along with the detail level I need, and save it straight to the iPad. This completely eliminates the need to have cellular data while out in the middle of the desert. The Gaia app also gives you the ability to record tracks and waypoints, and to export/email them.



Right (from top): Bad Elf GPS, Bad Elf GPS Utility, GPS Software In Use, Waypoint Screenshot
Above: Tracklog Screenshot

I believe I'm assembled the "Ultimate FJ Cruiser iPad Setup" and I'm extremely pleased with the setup as a whole. Everything works exactly how it's supposed to.

If you have any questions, comments or suggestions, I'd love to hear from you!



The iPad charges through a standard 12V USB charger plugged into the FJ.

Future plans include the Griffin OBD II reader, some sort of bluetooth audio adapter, and a steering wheel mounted remote for music control.



For audio from the iPad to the FJ, I am using a Griffin auxiliary cable (the coiled type so that it says out of the way) plugged into the FJ's factory stereo.

<http://www.ram-mount.com>

<http://www.otterbox.com>

<http://www.socalfjcruserforums.com>

<http://www.bad-elf.com>

<http://www.gaiagps.com>

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The Road to Becoming a HAM

By Steven Dozen

Trail communications (noun): undoubtedly one of the most important things to have while on the trail, yet oftentimes overlooked or downplayed; further compounded by the fact that there are a number of other, more attractive modifications to choose from; usual end result? – the belief that cheap communications are good enough.



Seth Sinclair Powers Up Driveline Hill, Eagle Lakes Trail, CA
Photographer: Kalie Shalayne (<http://www.kalieshalayne.com>)

At least, that is the definition for many an FJ Cruiser owner, both new and not-so-new. However, as more and more owners begin to explore trails further away from home and, more often than not, from civilization, communications become an increasingly important component in one's bag of tools.

Two of the most highly adopted means of communications are FRS/GMRS (family radio service/general mobile radio service) two-way radios and the CB (citizens' band) radio. Both are relatively cheap, need little to no installation, and do not require licensing (except for GMRS). Whereas these two forms of communication satisfy the most basic needs for in-group transmission, they severely lack in range and can be rendered utterly useless when out of range in remote areas.

Enter amateur radio, or ham radio as it is more affectionately referred to. Ham radio, as it is used today, has been in use since the early 20th century compared to FRS/GMRS (1996) and CB (1945). Ham radio operation requires a license, which can be

obtained by passing an exam.

The most elementary level of FCC (USA) licensing is the Technician Class. "Technician Class operators are restricted in some of the different bands they can operate in and the amount of power they can use, but these are not particularly onerous and many operators are perfectly happy with the Technician Class and never upgrade their license," states Lee Petersen (N5MUD). "Technician Class grants privileges in 17 different frequency bands, but most 4WD'ers will only use one or two, the 2-meter band and sometimes the 70-centimeter band." Petersen, a ham operator since 2008, is an active member of FJ Cruiser Forums and maintains many popular discussion threads surrounding ham radio, including a ham radio primer and his APRS-tracked journeys.

Advanced levels of FCC licensing are also attainable though. "Upgrading your license to General or Amateur Extra (usually just abbreviated as "Extra") Class allows you access to more bands and frequencies and more transmitting power, mostly in the High Frequency (HF) bands." Petersen continues, "The HF bands are used for longer-range contacts than most 4WD folks will need to make, i.e. around the world." Yes, that's right, around the world. Ham radio enthusiast, Alessio Sangalli (KE-7JDE/IZ2GMV) once contacted from Italy a fellow ham in Australia using a handheld radio unit in his car. In fact, he had to prove to his counterpart that he was transmitting from his car by honking the horn.

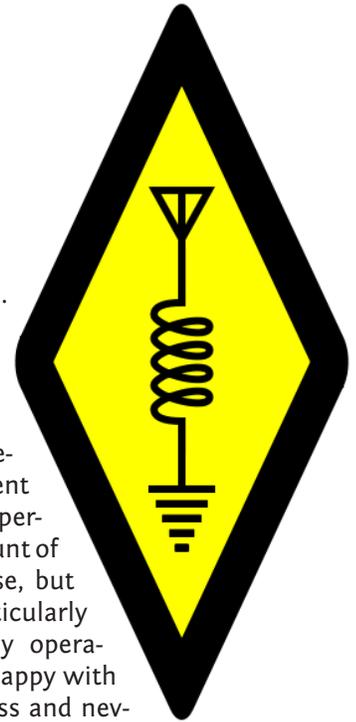
4WD'ers usually only use the 2-meter band and sometimes the 70-centimeter band

Begin the Begin: The Exam

So, where does one begin his/her journey on the way to becoming an amateur radio operator you ask? As with any other learnable skill, research always helps and

should be the first step considered. "The American Radio Relay League (ARRL), a local HAM club, 4x4ham.com – even talk to a friend that is a HAM," states Josh Hoffman (KD6WJX), an 18 year ham radio operator and manager of the NorCal FJ Comms Group. "There are more of us out there than people think."

Many of these resources provide enough information to paint an accurate picture of what to expect when it comes to obtain-





In-cabin ham equipment
Photographer: Lee Petersen

ing your amateur radio license, from study guides to examination dates, as well as what to expect once you get your “ticket.” And many, such as the ARRL, even host a variety of practice exams. In fact, there are even iPhone apps available for testing your knowledge prior to taking the actual exam.

So, contrary to the myths surrounding the difficulty of obtaining a license, it is a relatively simple and painless process. The Technician Class exam itself consists of 35 multiple choice questions and 26 correct answers are required to pass. The pool of questions rarely, if ever, changes, so there is a strong chance that you will see some of the same questions you answered in the practice exams.

Oftentimes, studying the material in advance and taking a few online practice exams is all it takes to increase one’s odds of passing the Technician Class exam with flying colors. Ham cram courses are also an alternate way to prepare for and take the exam all in one seating. “Originally, reading the licensing manual made the testing and prep seem difficult and I thought about giving up on the license,” said Paul Boothby (KJ6CYM). “Glad I kept looking and found out about the ham cram course. No real frustration after finding the ham cram and of the four of us that took it, all passed with high scores.”

To some, the course and practice exams merely serve as a form of validating their command of the subject matter at hand. And if you happen to be an engineer like, Bill Croyle (KJ6NFT), then the exam could very well be a walk in the park. “Being an engineer, the Technician Class exam was straightforward and easy, but you really do need to go to class, read the book and take the practice exams. We had 22 people I work with take the

class and all but two passed the first time. The two who did not pass did not do the homework or practice exams.” Croyle also recommends that prospective ham radio operators make the entire process fun by taking courses and exams with friends, colleagues, and even a significant other.

Cheap is Fine: The Equipment

Another myth surrounding the adoption of ham radio is the cost associated with the equipment required to get up and running. Although, on average, the cost may be slightly higher than, say, equipment associated with CB radio, it is not that much greater. On the opposite end of the spectrum, no pun intended, high-end ham equipment can be significantly more expensive than “high-end” CB equipment, but you also receive a lot more range (pending advanced licensing) and functionality for your investment.

There are more of us out there than people think.

Also, contrary to “cheap” CB radio equipment, cheap ham radio equipment does not sacrifice much in the way of transmission quality. Erik Gudmundson (KB3UNU), of the FJ Bruisers, researched in advance ham radio equipment to ensure its affordability and quality. “Getting started with amateur radio does not need to consume all of your annual mod budget,” states the 13-month licensed Technician Class operator. “New and used equipment are widely available online and in retail shops. A basic radio that can transmit and receive on 2-meter and 70-centimeter bands is sufficient for off-road use as well as assisting local ARES/RACES volunteers.” ARES (amateur radio emergency service) and RACES (radio amateur communications emergency service) are regional teams of volunteer amateur radio operators dedicated to providing emergency communications support to local, county and state governments during disasters and other emergencies.

Although a majority of new operators may be overwhelmed by the number of choices and features available on the market, simple multi-band handheld units are a great way to start and do not require the installation of any equipment.

Practice by Having Fun

As with any newly acquired skill, practice and camaraderie go a long way in developing a deeper understanding of the technology and its usage. Hoffman recommends reaching out to your new peers to familiarize yourself with the new lingo, etiquette and other ham-related issues.

“Hang out with hip hams,” states Hoffman. “Find hams in your area by find-

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New ham antenna
Photographer: Bill Croyle

Northern Italian native and mountaineering enthusiast. Sangalli and his circle of ham friends would even incorporate ham radio and APRS (automatic packet reporting system) into their mountaineering activities. “We would ‘activate’ peaks participating in QRP (lower power transmitter) contests that followed the guidelines of the Summits On The Air (SOTA) community. We would head to the mountaintops on a predetermined date and try to contact as many people as possible with the lowest RF power and at a very long distance away.”

Sangalli’s enthusiasm for the hobby led him to become the technical manager of a repeater tower over the mountains in his region, installing many radios, antennas, and wireless bridges for high-speed data. In addition, he even received a job opportunity as a result of some of the conversations he had over the airwaves. All this in what Sangalli refers to as the “experimental spirit of the ham operators.”

Ham operators are also very active in emergency response situations oftentimes lending a hand with communications in remote areas. They have been actively involved in some of the large natural disasters around the world and have been an invaluable resource to emergency responders like Croyle. “Since I work in the emergency response field I wanted to better understand the incorporation of ham volunteers in operations to maintain communication with remote or field response teams.” Opportunities to contribute in various states of emergency is appreciated and encouraged and another reason why an abundance of active ham operators is never a bad thing.

Next Steps

As illustrated, the additional time and investment required to become a licensed ham radio operator is extremely minimal when it comes to the amount you receive in return by going the extra yard to obtain your ticket. It also opens up opportunities to meet fellow hams and to contribute your skills to assist others and vice versa. And who could turn down the opportunity to transmit farther and clearer (even into space)!

Hmph, as if you needed another excuse to socialize with your FJC friends around the world!



ing a local ham club or group that has like-minded individuals. I have found 4x4ham.com is a good forum that has 4x4-oriented hams all over the place.” Hoffman continues, “The other thing is to just listen to repeaters and start talking to folks, just avoid all the trucker slang and police ten-codes. If you don’t use the radio you don’t get used to it.”

18 year veteran ham, Seth Sinclair (AG6I), encourages newbies to learn on-air etiquette and to “key up and just start talking.” Unlike CB radio, ham radio is very civilized and has rules. In fact, most will find the ham community very helpful. “The old way of doing things is that a new ham, after joining a club, will find himself/herself what we call an Elmer. The Elmer is an experienced ham who will help guide a new ham.” Sinclair also suggests joining a club to learn from the wealth of information available to them from such organizations.

However, be warned. Joining a club has been known to stir fanatical behavior that can best be equivilated to the mod addiction that FJ Cruiser owners experience. The availability and wealth of knowledge combined with the cool factor will certainly entice anyone to spend more time on the airwaves, which is not necessarily a bad thing.

15 year ham veteran, Sangalli has learned and taught valuable skills through the use of ham radio. “We used [ham radio] to learn how to program, how to use CAD, and a myriad of other technical things,” states the

RESOURCES

- > [ARRL practice exams](#)
- > [ARRL Amateur Ham Radio License Exam Locator](#)
- > [Ham Test Online](#)
- > [Ham Radio Primer](#)
- > [QRZ Ham Radio Practice Tests](#)
- > [4x4 Ham Radio Operators Forum](#)
- > [APRS: Automatic Packet Reporting System](#)
- > [NorCal FJs Comms Group](#)
- > [AZFJ Ham Radio/Amateur Radio Info Thread](#)
- > [The Road to Becoming a Ham: An Addendum](#) (available July 18)
- > [Guide to Choosing Your First Radio](#)

FJ Cruisin –



East Coast Style

By Shane Williams

We've published stories and photos of east coast FJ Cruiser events in the past so we've always known what a great group the FJ Bruisers are. This past April I was 'lucky' enough to spend some time in Washington, DC for training, so I was able to meet up with the Bruisers for their Wharton State Forest /

Pine Barrens run in southern Jersey.

The drive from DC was uneventful except for my realization that it's EXPENSIVE to drive out east. Toll roads that are unusual out west are commonplace on the eastern corridor. I'm sure the toll booths were more than 5 miles apart but

it sure didn't feel like it. So once my \$20 bill was gone I hopped on the local two-lane highways for the last 45 minutes of the drive.

Even after my exploring I was early in arriving at the meeting place, a state forest office just off of US-206. I gathered my gear (three cameras, a gps, and of course the iPad) and waited for the group. Our leader for the day, Fred, was the first to arrive so I introduced myself and we chatted about how the heck I made it to Jersey. Soon more, and more, and more FJ's arrived. I tried to get the names and colors of all the FJ's, drivers, and passengers – but gave up quickly. We ended up with (by my count) 12 FJs, 1 4Runner, and a Jeep. Most were pretty heavily modified and I think all except 1 or 2 had snorkels installed (more on that later). One of the most interesting trucks was the 2011 Iceberg FJ that already had more mods than our '07 TRD had after three years of work.



2011 Iceberg FJ





no bypass obstacles

In addition to recovery gear, a few people slid on knee-high waders, just in case.

As we were waiting for the final few (several made the trip from south of DC – about a four hour drive) to arrive, preparations for the run began. Out west (for the most part) we just air down and we’re ready to roll, but that’s not always true out east. What I thought was very interesting about this group (and more specifically the terrain), is that pre-staging tow straps and other recovery gear is the norm. In addition to recovery gear, a few people slid on knee-high waders, just in case.

Apparently early spring in Jersey is ‘the wet season’, and the Pine Barrens area is a great water collector. In fact, one of the largest aquifers in the region resides just below (and often above) the surface throughout the area. While the

type of wheeling I’m used to usually deals with rocks, ledges, and summits; wheeling in the barrens is all about puddles, ponds, and



approximately 1/3 of the FJ’s

sand. This is why nearly every FJ in our group had a snorkel installed. While that specific mod is optional out west, it’s typically one of the first installed among FJ Bruisers.

This run really had all you can ask for in an east coast FJ trail day: Plenty of great trucks, wonderful people with great east-coast wit (the CB chatter was great!), a little trail carnage in the form of a bent aluminum skid plate (good thing someone brought a sawz-all), plenty of puddles, and miles of trails to explore! We also were able to get some pretty good video during the trip, so look for the final version of that on our YouTube channel soon. I managed to split my time on the run hanging with Gordon in the SWEET Ti Silver FJ and Eric, our tailgunner for the day in his VDB Cruiser.

After the run many of us were looking for a late lunch. In the Pine Barrens, there really is only once place to eat (according to the locals): Pic-A-Lilli Inn. This fine restaurant is a legend that’s been serving the barrens for over 80 years. I’m happy to report that

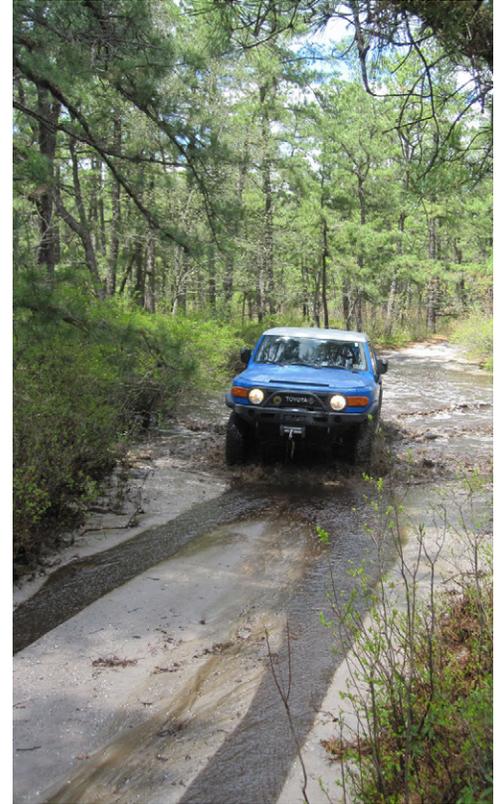
they do in fact serve some of the best buffalo wings I've had - and I've had plenty of wings :).

While this run was a truly great time, I am a little sad that I wasn't in town for the Spring MudFling that we've all heard so much about. Maybe next year we can make the trek east and once

again hang with the Bruisers for the east coast event of the year.



Photos: Left: the first of dozens of puddles, Left Bottom: the last and largest puddle, Below: on the trail.



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Factory Skid Plate			11-16-2010 01:16 PM by MR2D14	0	1	Want to Buy (F)
front locker			11-16-2010 01:15 PM by MR2D14	7	181	4x4 / Off-Road
cruiserfred			11-16-2010 09:14 AM			
big news. Toyota CJ Cruiser in the			11-16-2010 08:46 PM	2,078	313,718	Picture/Media P
yuryz			11-16-2010 10:36 AM	74		Introductions &
2010 Slider Spacing Question			11-16-2010 12:34 PM	106		Maintenance Te
285 70 17 All Terrain - Who's got the best Deal on 5 of them?			11-16-2010 01:03 PM	458		Off-Topic Discus
TG Smith			11-16-2010 12:34 PM	7		General Discuss
Pauliewalkenobi			11-16-2010 01:03 PM	1		Stereo / Electro
Attilla			11-16-2010 03:41 PM	3	84	Wheels and Tire



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CRUISE MOAB 2011

Toyota 4x4 vehicles once again took over Moab, Utah this May. While we weren't able to make the trip this year, some of our friends from FJCruiserForums.com and IH8MUD.com were kind enough to send over a few pics of the event. For more details on this event visit either of the forums or look for full coverage in an upcoming issue of Toyota Trails.

Photo By Devin (Fly Jester)

Photo By Brad Mallory



Photo By Matt Wixo



Photo By Devin (Fly Jester)



Photo By Matt Wixo



A FEW SHOTS FROM IH8MUD.COM



See more photos
in the IH8MUD
Gallery



FJ CRUISER SUMMIT No. 5
OURAY, COLORADO
JULY 20 - 24, 2011

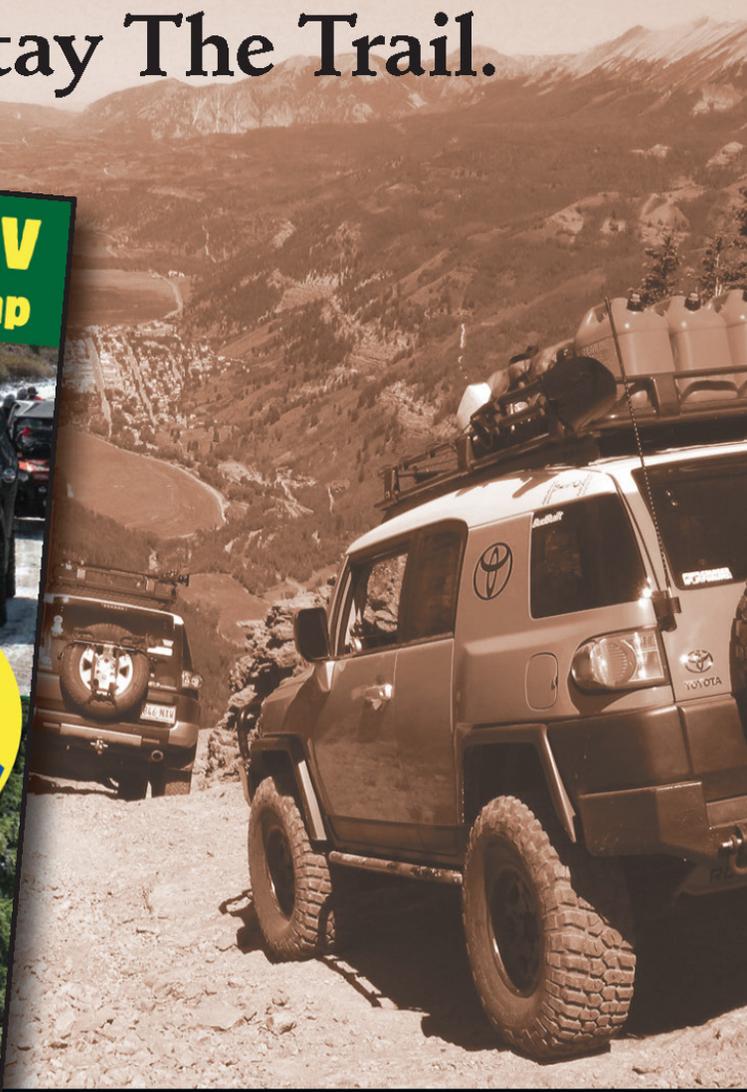


See You In Ouray!

Photo By Angie Williams

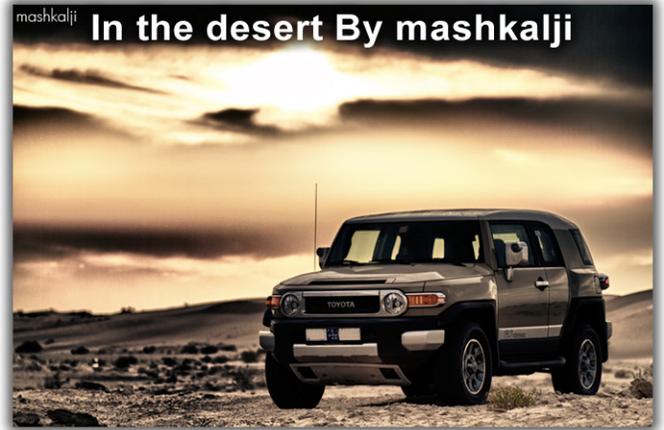
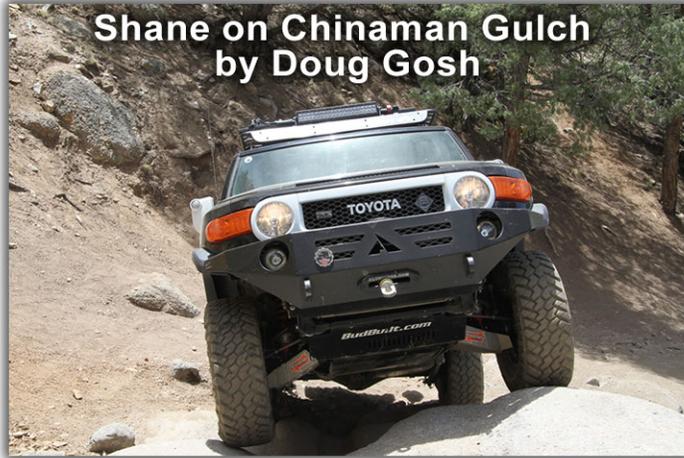
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Trail. Discover all the challenging off-road adventure Colorado
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FJ's In Action



Have a great pic of your FJ? E-mail a high-res version to pics@fjc-mag.com