

COMMUNICATION:
CB, FRS, OR HAM?

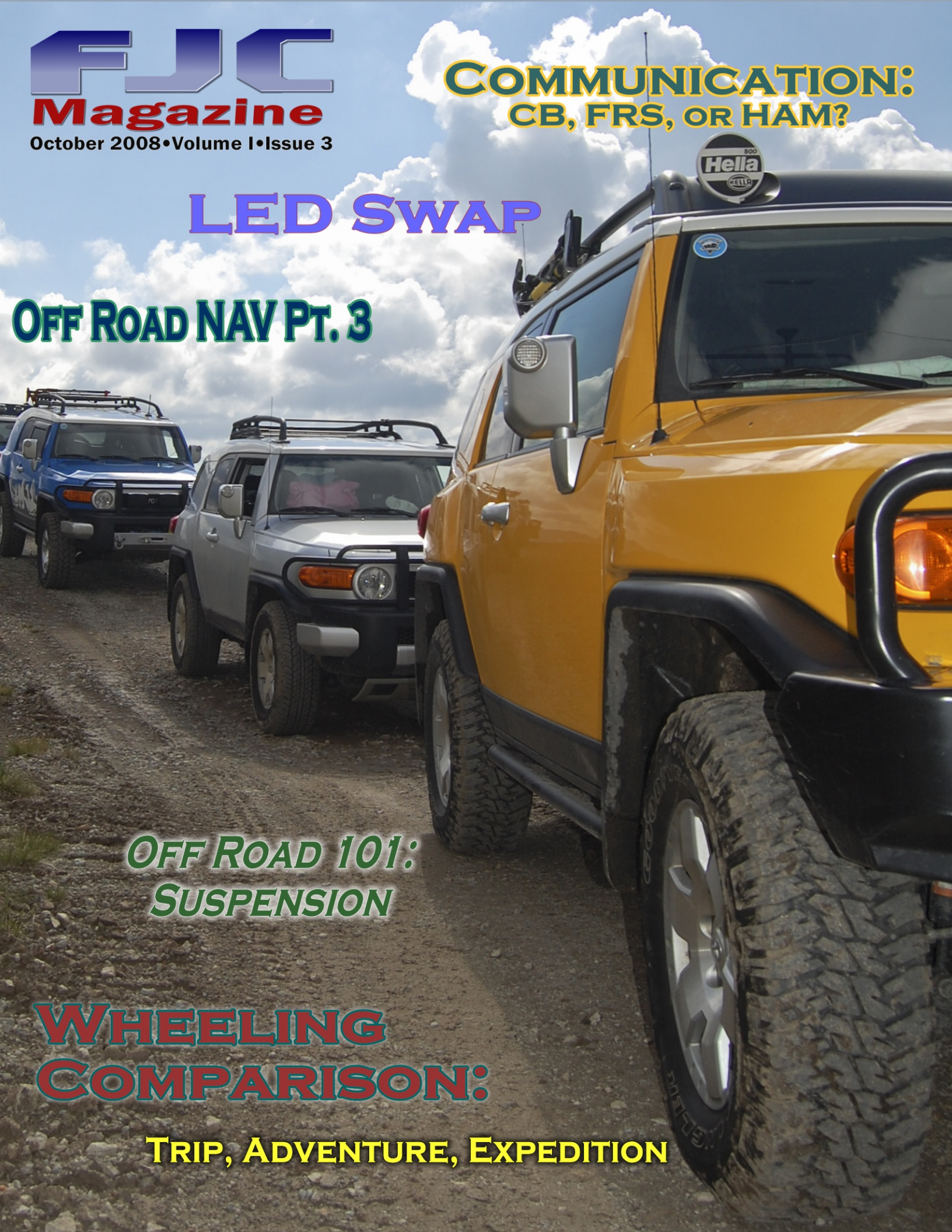
LED SWAP

OFF ROAD NAV Pt. 3

OFF ROAD 101:
SUSPENSION

WHEELING
COMPARISON:

TRIP, ADVENTURE, EXPEDITION



FJC Magazine

October 2008 - Volume I Issue 4

On The Cover:
FJ's lined up on Black
Bear Pass



6

CONTENTS

6 A Trip, Adventure, or Expedition?

10 4x4 Navigation Part 3: Nav Systems

16 Toytec Lift Upgrade

20 Off Road 101: Suspension Upgrades

22 LED Dash Lights!

26 Communications 101

FEATURES

15 2009 FJ First Look

18 Reader Rigs

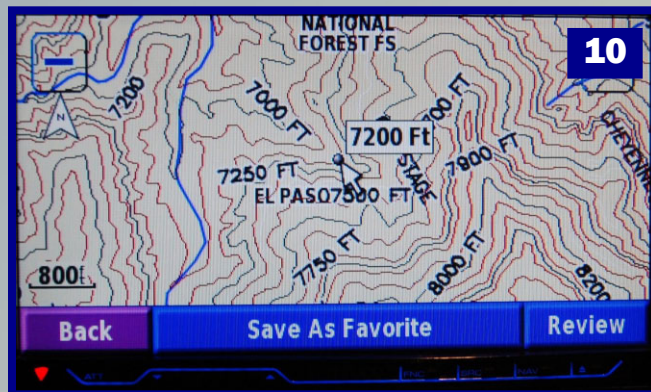
23 2008 FJ Summit Recap

24 Featured Rig

28 FJ Groups & Clubs

29 Upcoming FJ Events

10



24



FJ Cruiser Vendor Directory

NOW AVAILABLE AT:

<http://www.fjc-mag.com/Vendor-Directory>

Only From FJC Magazine



Disabled Explorers

Adapt Overcome Explore

It is said that "what doesn't kill me makes me stronger", but that doesn't mean it leaves you happier or able to do everything you once could. However, we at Disabled Explorers believe that there is a peace and joy to be found in the wilderness, and regardless of physical mobility issues we want to help get you out there!

Our goal is to create a resource for vehicle based back country access by the disabled. Our motto is Adapt, Overcome, Explore and we are working to live up to that motto in the following ways:

Adapt: Vehicle modifications, equipment reviews, recovery methods, driver training, and more.

Overcome: Feature stories of those who are out there already, from amputees to those with spinal cord injuries

Explore: Trail ride-along events to introduce the disabled to the outdoors, presenting at land meetings to fight against trail closure, adapted trail guides and more.

For those of you who are currently able bodied, we could use your help with many of our activities while providing you with a chance to learn how to wheel with the disabled. Our desire is not to change the trails that already exist, but to keep them open so that people with mobility impairment can enjoy the same wilderness access that the able bodied have.

To find out how we can help you, or how you can help us, go to our website (www.disabledexplorers.com), email us at info@disabledexplorers.com, or call 602-451-6079.



From The Editor

The fall is a very exciting year for all of us at FJC Magazine. After a great summer of wheeling, we're ready to concentrate on winter mods in preparation for next spring. We're planning on a few great snow runs in the mountains of Colorado, and the wax is already hot on our boards & skis. As we publish our fourth issue of FJC Magazine & complete our first full year, we'd like to thank each and ever reader for their encouragement and support. We truly couldn't do it with out you.

I'd personally like to thank all of our contributors this year: Lance, Eric, Stan, Mike, Trevor, Brandon, Chris, Taft, Kevin & Team Neccessary, and all the FJ Groups & Clubs out there. I sincerely apologize if I missed anyone, flame me at shane4x4@gmail.com. Without these great contributors, our sponsors, and everyone reading this – we wouldn't be able to make FJC Magazine happen. As I've said before, it's cheaper than therapy & we have a great time.

We're already making big plans for 2009. We're planning on making it to several more events next year, and we already have some great articles lined up. We always welcome your thoughts & feedback, at <http://fjc-mag.com/feedback-form.html>. If you have content that you'd like to submit for an article, e-mail us at fjc@fjc-mag.com & we'll be in touch.

Can't wait to see everyone in '09. Until then Stay The Trail, Tread Lightly, and HAVE FUN!



For FJ Cruiser Owners & Enthusiasts

Colorado Springs, CO 80915

www.fjc-mag.com

**EDITORIAL
Publisher:**

Shane Williams

Photographer / Editor in Chief

Angie Williams

CONTRIBUTORS

Lance Blair

Taft Babbitt

"TOYOTA", "FJ CRUISER" are registered trademarks of Toyota Motor Corporation. FJC Magazine is not affiliated with, endorsed, sponsored, or supported by Toyota Motor Corporation, Toyota Motor Sales, U.S.A., Inc. or any of Toyota's affiliated companies. These terms are used for descriptive purposes only, and not to denote affiliation or connection with Toyota Motor Corporation.

All content in this magazine is licensed under the Creative Commons Attribution-No Derivative Works License. For details, visit:

<http://creativecommons.org/licenses/by-nd/3.0/us>

Reviews, opinions, comments, and ratings of any product do not represent endorsement of said product by FJC Magazine, it's editors, or publishers.

Get a printed copy



All Pro IMAGES

By: ACW
www.allproimages.us

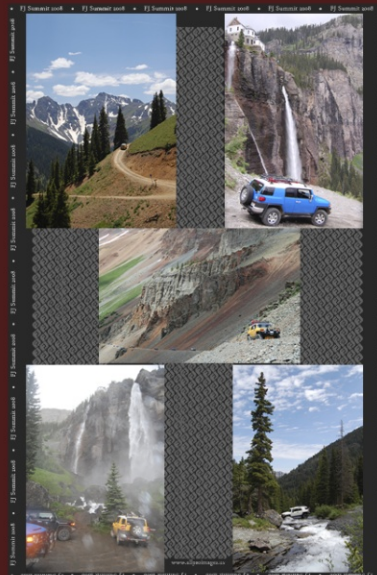
NOW AVAILABLE!

FJ POSTERS:

- 2007 FJ Summit
- 2008 FJ Summit
- 2008 FJC Magazine Covers
- FJ Obsession

COMING SOON:

- Featured Rigs
- Build Your Own Poster*
- YOUR Custom Rig Poster**



*Choose from 3 templates and 25 photos
**Create a custom poster of YOUR rig using our template

A Trip, Adventure, or Expedition

By Lance Blair

<http://www.disabledexplorers.com>

We each take a trip when we pull out of the driveway, and those trips sometimes become adventures, but what does it mean to embark on a true expedition? While it's fun to use the term 'expedition' to give our trips or adventures a cool sound, it's important to know the difference and understand why overlanding is gaining in popularity.

The word trip, with its curt monosyllable and harshness doesn't act to inspire or convey what many of our travels encompass. And even though the

day trip, a camping trip, a weekend trip, but mostly something that wasn't far from home, wasn't dangerous or hazardous and we returned home as planned.

But, the word "adventure" stirs the soul and brings a sparkle to our eye. Many of us have had "adventures" with our 4wd's. Adventures in mud where we didn't know if we could get out. Adventures with the weather that involved rain, wind, hail, snow or all of them. Adventures in strange lands with



Going this way could make a trip into an adventure really quickly

definition from Dictionary.com is long winded "TRIP is the general word, indicating going any distance and returning, by walking or any means of locomotion, for either business or pleasure, and in either a hurried or a leisurely manner", we still don't get excited when someone says they went on a "trip". And that's OK, because much of the time, it is a "trip" that we took, a

languages we barely spoke and food we barely recognized. Again the dictionary gives us "a bold, usually risky undertaking; hazardous action of uncertain outcome" as the meaning of adventure. Often these adventures aren't planned, they just happen.

You left home on a trip that due to trail damage or breakage, weather, animals, or some other unforeseen force your trip became an “adventure”. These make for some great stories around the campfire: the time you winched across a river, the time that snow closed the trail and you had to find another way off the mountain, the time an axle broke and it was a long hike to help. These adventures are what we plan and prepare for, yet hope to never experience.

Different from a trip or an adventure is something else in the vehicle dependent travel world: an “expedition”.

Defined by the dictionary as “an excursion, journey, or voyage made for some specific purpose, as of war or exploration”. Yes war is in there since the word comes from the Middle English use of the Latin “expeditione” or military travel. Today we consider an expedition in the 4wd world to be an organized journey with a specific goal or purpose. A bit different than a vacation since

there will be roles for each person, schedules, work to be done, and results to be presented. Very few of us will ever get to go on a real expedition and that’s OK because very few of us would enjoy a real expedition. Be it mapping the Sahara, collecting measurements of tree width in the Amazon, counting rabbits in the Outback or other tasks that are less about the journey and more about the task; a true expedition involves route planning, gear selection, training, documentation and presentation of the result,

communication with a home base and more.

But, in truth, the word “expedition” is the word we know and use to convey our desire to do something more than a day trip, something more in-depth than a weekend get-away. So we use the term because it invokes in ourselves and others that feeling of remoteness, of independence and of discovery that

traditional expeditions embody, but without the tedious tasks that define true expeditions. We have other words to use like “overlanding” that are more precise and accurate, but somehow have not yet gained the emotional reaction of the word “expedition”.

In this advanced day of easy air travel to anywhere in the world, when you can sit at your desk and let Google Earth take you to the furthest reaches of the planet, thankfully, there is still a desire to put tracks on the trail, to bring your family into the backcountry (or another country) and have the direct experience that is missing in the other

methods of travel. Flying over a country by air or seeing it by satellite image has little comparison to driving through that same country, seeing, smelling, and feeling the land around you. We use the term expedition somewhat incorrectly in detail but on target in spirit. We want to convey to ourselves and others that we are setting out to do something unique and less common.

Continued Next Page



Some trips are adventures only if you survive them

I think the growing popularity of overland & expedition style 4x4 use comes in part from our increasing loss of motorized access to the backcountry. Our desire to properly use the machines we have invested so much time and money in also drives our need for longer journeys. We long to regain a sense of exploration and

discovery that has been a part of our nature since time began.

So while you often leave home on a trip, and those trips sometimes become adventures, strive for more on your next journey. Plan to go further, stay longer, be away from towns and cities, explore and experience the backcountry. And don't forget to document it all so you can share and possibly inspire others with your "expedition".

Lance Blair is the founder and operator of Disabled Explorers, a non-profit organization dedicated to exposing disabled individuals to independent backcountry travel. He's a regular contributor to the Expedition Portal and FJCrusierForums.com.



Camino del Diablo, a trip becomes an adventure when Homeland Security drops by



Remoteness of an expedition

When we started FJC Magazine one of our primary goals was to ensure it always stayed subscription free. We will always continue to provide the magazine to our readers completely free of charge, it's our way of giving back to the great FJ Cruiser Community. In the past few months several of our readers have expressed interest in subscribing to the magazine to help support our efforts. We appreciate everyone's great words of encouragement and willingness to contribute to FJC Magazine.



When we launched the new website we added an option for individuals to support the magazine. We ask for a 'donation' of \$12 a year for anyone that wishes to become an FJC Magazine supporter. That's \$1/month, or about \$3/issue. Supporting members receive the following benefits:

- 2 Free FJC Magazine Stickers
- Priority Notification of Latest News via e-mail
- Early access to the iPaper version of each issue
- Early access to the online articles for each issue
- Less advertising on the website (no Google Ads)

If you would like to support our efforts, you can send a donation direct to FJC Magazine on the website.

We'll e-mail you a confirmation once your account is setup. You'll then be able to login to the site and you'll also be on our priority notification e-mail list.

Thanks for reading FJC Magazine, we really appreciate your support!

2008 FJ Summit *Another amazing event!*

The FJ Summit was a wonderful event again this year. We met so many wonderful FJ enthusiasts that remembering everyone's name became impossible after about 10 minutes in Ouray. We took well over 700 photos and did a total of 11 trail runs, including two night runs. With nearly 300 FJ's and over 500 people in attendance, the Best Western (Summit HQ) was completely crazy every night. We were lucky to find a parking spot next door at the Box Canyon (our favorite hotel in Ouray) by the time we got back to town every night.

Angie & I both got to do Black Bear Pass this year. Yes, stock FJ's can make it down Black Bear with a competent driver, just ask Taft. Tincan (BJ) was also kind enough to get our TRD dash modded with red lights at the Summit. He did over 20 trucks during his stay, and still made time for a few trail runs.

We also put together a FJ Summit Special Issue, and are happy to announce that we now have posters available for the 2007 and 2008 FJ Summits. You can order them from our photography website: www.allproimages.us.

2009 can't get here soon enough. We're actually thinking about arriving a few days early next year so we have more time to enjoy the area. We're definitely going to put together a few night runs for '09, as well as a few other surprises. Watch www.fjc-mag.com for updates when the dates are announced and registration opens. There's no doubt that '09 will be bigger and better than '08. FJC Magazine will be your source for all 2009 FJ Summit details.



OFF ROAD NAV NAVIGATION SYSTEMS

We're finally ready to discuss my favorite off-road navigation topic: full navigation systems. In this article we'll discuss both in-dash and other permanently mounted options. Before I get into the details, I quickly want to mention paper maps again. Please! Please, don't rely solely on electronics for your navigational needs. Always carry paper maps as a backup.

When it comes to permanent navigation options, off road capability is almost overshadowed by the need for great on-road and entertainment features. These systems will be used for finding directions and gas stations probably more often than they will be used off road. Features like custom points of interest (POI's), multimedia playback, cell phone integration, and map upgrades become very essential features for any permanent solution. Our list of "must have" features is relatively short, but in these systems the 'bells and whistles' will certainly hold more weight.

Must Have's

- Autorouting, turn by turn directions for door-to-door navigation.
- Upgradable Maps
- Suitable POI (Point of Interest) database

Other Features

- MP3 & DVD playback
- Bluetooth integration
- USB ports
- Voice Directions
- iPod integration

Editor's Note: The first option I'll discuss is the Lowrance Baja 840 navigation device. This unit is very unique in that it's built for off-road navigation. It's not an in-dash unit, and does not include multimedia features. This is the choice for virtually every off-road racing team, so we wanted to include it in our Off Road Navigation options.

Lowrance Baja 840

\$1329

The 540 features an 8.4" screen that produces great 16 bit color at a resolution of 600 X 800 pixels. It's a TFT screen with SolarMax technology which means it can be



seen clearly in direct sunlight. The built-in background map covers the continental US and Hawaii, and includes more detail than most GPS base maps. The unit also includes 2 MMC/SD slots for adding more detailed maps. The case of the 540, like all Lowrance Baja models, is ruggedized and shock resistant. The screen and keypad are also back-lit for easy day and night visibility.

The Baja 540's GPS is a 12 channel parallel receiver, so you will have no trouble getting a great position lock even in narrow canyons or forested areas. The external antenna is also WAAS enabled which can provide even greater accuracy. You can store 1000 waypoints and another 1000 event markers. The unit also features an ethernet port that can be used to add other accessories (mostly for water navigation).

All Lowrance Baja units are compatible with MapCreate 7 software. This program allows you to create custom topo maps for the area you'll be visiting and load them to a MMC or SD card.

MapCreate includes over 2 million points of interest, public hunting areas for 46 states, game management units for 22 states, and national forest / national park boundaries. All these points and features are fully searchable on the unit. It also includes all interstates and local/state level streets. The software itself is fairly easy to use, but only certain cards and card readers will work with it, which limits the area you'll be able to add to the GPS.

None of the Baja units support auto-routing, so if you're looking for turn-by-turn, this may not be for you. If, however, you're looking for great off-road detail in a rugged system and plan on keeping your stock radio or going with an inexpensive non-navigation stereo, the Baja would be a great solution.

Pioneer AVIC Z3

\$1268

One of the most popular navigation systems among FJ Cruiser owners is the Pioneer AVIC series. We took a look at the AVIC Z3, since it's the closest to Kenwood's flagship system (the 8120, below).

The Pioneer is a multimedia powerhouse. It plays DVD's & MP3 files, but it really shines with it's 10GB hard drive for music. After inserting a regular audio CD, the unit can rip the files into MP3 format and add them to the built-in library within a few minutes. You can then pop out the CD and your songs are ready to go. This is a great feature for anyone that doesn't want to carry a large CD collection around. If you're an iPod user, the additional iPod adapter will allow access to all your playlists and music seamlessly. The Z3 even displays album artwork from your iPod on the screen.



With the face flipped down, you can insert a disc & see where the hard drive is located.

The navigation system covers the US, Alaska, and Hawaii and includes 12million points of interest. It includes highway information for 50 cities, and detailed maps for 60 cities. The Z3 has a very cool 3D map view that includes 3D buildings in some areas. This latest version of the AVIC line also uses Point Addressing, which provides far greater accuracy for point-to-point navigation than in previous models. If you decide to add the traffic information module, the system shows both traffic icons and traffic flow lanes that display current traffic conditions.

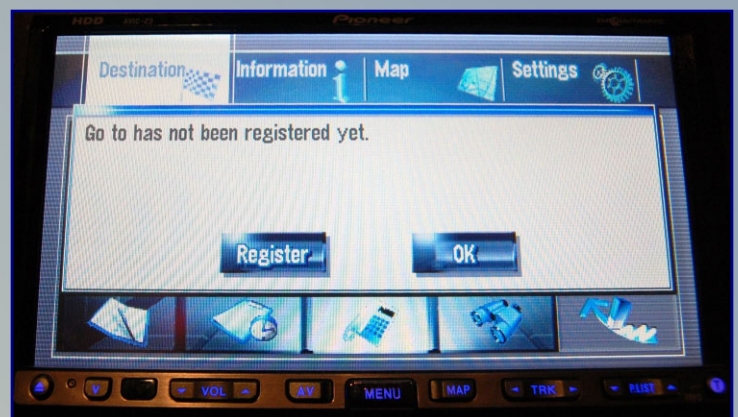
The voice command feature is included with the Z3, but we found that more times than not it's quicker (and less frustrating) to operate the unit with the touchscreen. The unit does do a fairly good job with voice directions. It almost always pronounces the names of streets properly. If you add the Bluetooth option, you can pair

the Z3 to your phone and use the built-in contacts directory to voice-dial any of your contacts.



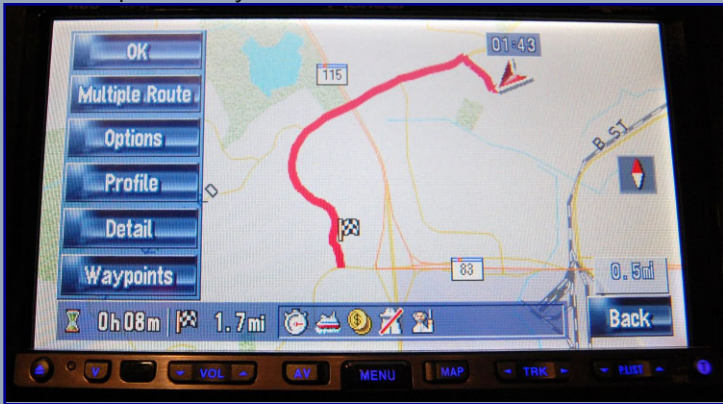
The AVIC Z3 Nav Menu

The menu system on the Pioneer has many options, but we found it a little confusing. I'm sure once you have the system for a while you'll get used to where everything is, but we didn't find the settings/configuration or the navigation menu's very intuitive. It took us nearly three minutes to find the nearest Shell gas station the first time we tried it. Once the navigation was setup, we liked the map view and the different view options. Additionally, some of the custom configuration options that we like in high-end dash units seem to be missing. I was not able to find a way to change the menu colors or add any custom icons.



An odd error screen when a POI isn't loaded yet

When the time comes to update the maps on your Z3, it's a complicated process. All of Pioneer's hard drive based systems can be upgraded by purchasing a DVD and loading the maps into your system. The Z3 is new enough that updates are not available yet. When the updates are available, they'll run about \$120 and the DVD will require online activation. The Pioneer website states that it may take 'several hours' to download all of the map data to your Z3.



The Z3 navigation map with a POI selected & route chosen



POI Search on the Z3

For FJ owners that spend 95% of the time on the road, the AVIC Z3 is a very good solution. We wish the voice recognition worked better, and the menu system could be a little easier to use. At a retail price of \$1799, it would be nice if Bluetooth was included. Updating the maps also will be a chore as well. Overall, I'd say the Z3 is a fine choice for some FJ owners.

FJCruiserPro.com
SPECIALTY GEAR & APPAREL FOR YOUR LANDCRUISERS

FJ CRUISER and FJ40 T-Shirts Hoodies & Gear!

Cool Gear - Vinyls - Decals & More!
visit www.fjcruiserpro.com now!

FJCRUISER FORUMS.COM

Kenwood eXcelon DNX-8120

\$1439

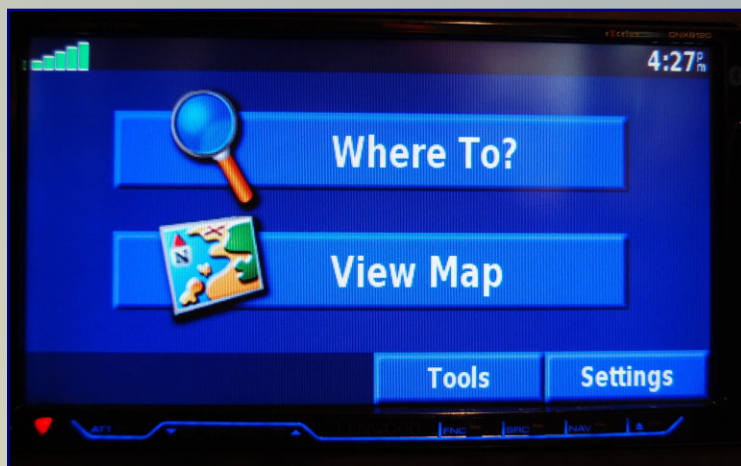
Recently, Kenwood has made some strategic partnerships with leaders in the navigation and electronic integration community that set their new options apart from the crowd. Kenwood's current feature unit is the DNX-8120. This nav unit sports a full 6.95" touchscreen display, integrated Garmin



When open, the 8120 reveals the DVD slot, SD card slot, and lists all the formats it supports.

Navigation, integrated Parrot Bluetooth, and a very customizable interface.

The 8120 supports the standard multimedia formats, DVD & MP3. It also includes support for AAC (unprotected), WMA, DivX, VCD, and even JPEG formats. You can also add satellite radio, HD radio, and of course an iPod to the system. The standard iPod interface works great, displaying song, title, artist, and album art. Like most car audio systems, it does lock your iPod when in use as a safety feature. There is no built in hard drive for music storage on the 8120, so you'll need to bring your CD's or iPod with

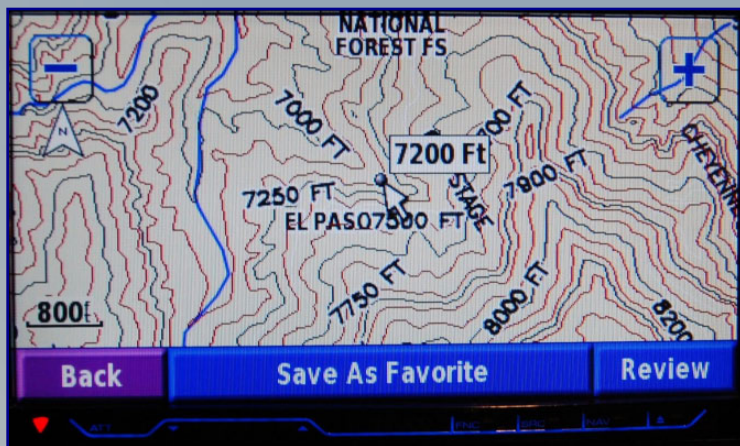


The initial nav screen on the 8120

you to access your music. You do have access to an SD card slot and USB inputs, so you can bring your media with you on cards or USB keys as well. The DVD playback was excellent, but you have to be parked in order for movies to play properly.

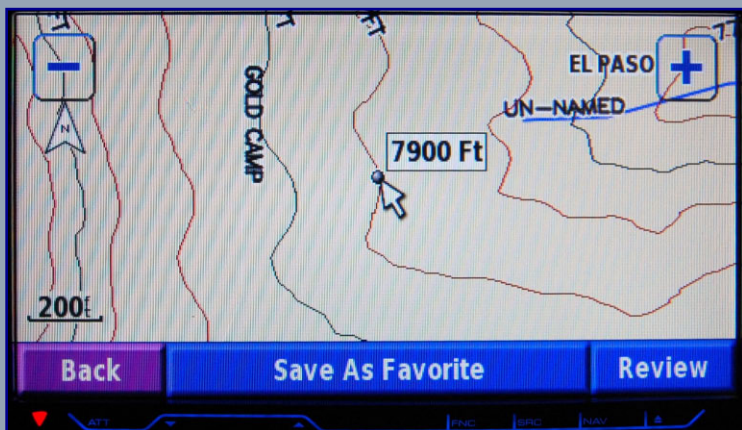
As I mentioned Kenwood has partnered with one of the most popular GPS companies for their navigation: Garmin. The Garmin system in the 8120 is virtually identical to anyone who's ever used a Nuvi device. The system is intuitive and simple to use once you learn it. It took less than a minute to find the nearest Shell station and plan our route. Once our route was in the system, we were unable to move the map around, we could only zoom in and out. The system supports standard 2D view as well as 3D 'birds eye' view. The 3D view is very helpful when navigating in large cities as it helps to give 'depth' to your route. The system is completely customizable as well. You can add custom POI's, change the icon (even to an FJ Cruiser), and our favorite feature: you can add TOPO maps to this system.

This, to us, is the number one feature on this unit. You can purchase any of the Topo maps series from Garmin



A sample topo map on the 8120

and load them right into your 8120 (the 5120 and 7120 support this as well). Since I own a Garmin handheld, I spent about 3 months creating a very detailed set of custom Topo maps for Colorado. I was able to successfully load these maps into the 8120 using the SD card slot as well. When you enable the Topo maps, you may lose the auto-routing features, and your POI's may not be visible. Those are small compromises that we're more than willing to live with to have in-dash, 7" screen Topo maps when we need them. The great thing is, you pop the card out of the unit when you hit the pavement and your standard navigation system operates perfectly.



A close 200ft zoomed topo

The Kenwood supports voice prompted navigation, but not voice commands. In our opinion, most voice command systems (we even tested an '08 Acura) are not reliable enough for everyday use. I'm sure future units will include voice commands, but we're in no hurry to use it. The voice prompts in the navigation system are very similar to standard Garmin units. They work well and get you where you need to go.

The menu system in the 8120 is very detailed. It will take more than a few days to get used to it, but once you have it setup as you want, you won't have to use it much. We really like the fact that the 8120 is fully customizable. You can set your own color scheme, change background photos, and even change your startup logo (to the FJC Magazine logo, of course). You can adjust virtually every setting you can think of, and unless you go all out on upgrading your stock FJ speakers, you may not notice a huge difference in the EQ functions. Still, it's good to know that if or when we upgrade all of our components, we'll be able to tweak everything.

Just as with adding custom topo maps, updating the 8120 couldn't be easier. You purchase an SD card from Garmin specifically for your unit, pop the card in, and go through a quick update procedure. We couldn't test the

update time since the unit is so new, but if it's like most other Garmin units, it shouldn't take more than 20 or 30 minutes. Garmin usually published updates for their nav units about once per year, so you'll always have the option to update your nav to the latest version.

The DNX-8120's fully customizable interface, integrated Bluetooth, wide variety of media formats, and great navigation system make this about the best choice for FJ owners that enjoy back country driving. There is no other in-dash unit that has such great features all in one package. The 8120 does a great job at everything it does, probably due to partnerships with industry leaders. There were very few minor issues that we found with this unit, and hopefully we'll have an install article in a future issue of FJC Magazine.

If the 8120 is a little out of your price range, we've heard of Topo maps working on both the 7120 and the 5120 which are less feature rich than this unit, but are less expensive. The 7120 doesn't have the powerful audio

outs of the 8120, and doesn't include built-in bluetooth. The 5120 has more standard buttons and a slightly smaller screen.



The category search makes finding the right POI easy

No matter which navigation option you choose, always remember to Stay the Trail, Tread Lightly, and take paper maps as a backup. We sincerely hope that this Off Road Navigation series has enlightened you and helped you decide what's right for you.



The 8120 in routing mode

We would like to thank Car Toys of South Colorado Springs for all their help in creating this article. Their efforts were key in helping us learn of all the different options and their product demonstrations were top notch. Contact them if you need any assistance in Colorado or elsewhere.

FJC

'09 FJ

First Look

We were hoping to include a full test drive review of the 2009 FJ Cruiser. Unfortunately, as of October 1st, there are still no '09 FJ's in Colorado (or anywhere else). The 2009's are available to configure on the Toyota.com website, so we parsed through every option available so we could give everyone this first look.

The main updates for 2009 are in the colors available. The silver 'Titanium Metallic' color has been dropped in favor of a 'Silver Fresco Metallic'. We're not exactly sure what the difference is since we haven't seen one in person, but the consensus seems to be that it will be a somewhat darker silver. The Iceberg color is now also available, but only in the 2WD "Prerunner" version with the TRD Package. 'Black Diamond' is now called 'Black', again we're not sure what the difference is.



Pics on the Toyota website don't reveal much detail on this Silver Fresco FJ

There are still rumors of an '09 Trail Teams edition, but as of publication time those details have not been announced. Another new available feature includes a VSC cutoff switch for times you don't want the computer taking over your traction. New "active" driver & front passenger headrests automatically absorb impact during an accident to help prevent neck injuries. Roll sensing side-curtain airbags are now also standard on all models. We're very curious to see how Toyota has added a front map light, and if it will provide enough light to be effective. Another cool available feature is the backup camera integrated into the rear view mirror. Hopefully that can be easily added to 07 & 08 FJ's.

Rumors of the FJ Cruisers discontinuation have been greatly exaggerated. All of our sources tell us that Toyota has not made any announcements as to the FJ's future. Sales of FJ Cruisers (and all SUV's) are currently very slow, but as winter approaches we expect Toyota to move a few more FJ's and bring those numbers up. We certainly expect it to be around for quite a few more years.

As soon as the new models arrive at our local dealers we'll have a full hands-on review for current and prospective buyers. We'll also be publishing our 2009 FJ Cruiser Buyers Guide within the next month or so. Look for both of those on www.fjc-mag.com.



Colorado

FJ's



Monthly Trail Runs
Trip Reports for all of your favorite trails
Trail Conditions



<http://www.coloradofjs.com>

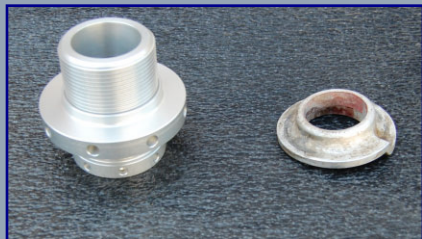
October 08

www.fjc-mag.com

LIFT UPGRADE

The 3" Toytec lift we installed for the April issue has been working perfectly. We've put almost 300 off road miles on the TRD with it, had it on through the FJ Summit with no problems at all. When we originally installed the kit we expected to be adding a new bumper within a few months, which would weigh the front end down a little to give the FJ the "rake" we like. Well, things don't always go according to plan. We decided to black out the bumper wings and for now, it's working cosmetically so we're not in as big of a hurry to add the bumper & winch. This left us with a lift that was about 3/4" too high in the front (in our opinion).

I talked to Doug at Toytec Lifts about our options. As luck would have it, he was just putting together a new adjustable setup for TRD & TT FJ's with Bilstein shocks. This new front lift is just what we needed! It allows us to lower the front about 3/4" to get the rake back, and when we add the bumper & winch, we'll be able to adjust the front up to compensate for the added weight. The best part is, since our shocks work perfect (they're the same shocks he includes in his full coilover assembly), this kit is a very cost effective option for our FJ.



New & old coil seats

The kit includes taller springs, a replacement coil seat that's fully adjustable (from about 1" to 3" of lift), and sway bar relocation brackets. As we mentioned in the original lift install article, you will need a GOOD coil compressor. Many auto parts stores will rent you a compressor, or you can have a local install shop swap out your springs.

Install steps:

(NOTE: For more pics on installing a front lift, see the Toytec Lift Install in the April '08 issue of FJC Magazine)

1. Raise vehicle & remove front wheels
2. Remove front skid
3. Remove sway bar & set aside
4. Loosen the top three nuts on the first coilover

5. Remove the back two nuts, leave the front one on until you remove the bottom bolt
6. Remove the two lower ball joint bolts
7. Remove the lower shock bolt
8. Use a pry bar to push downward on the lower control arm and slide the old coilover out.

IF YOU DON'T HAVE A HEAVY DUTY SPRING COMPRESSOR OR THE SKILLS REQUIRED TO COMPRESS SPRINGS, IT IS RECOMMENDED THAT YOU TAKE THE COIL-OVER TO A QUALIFIED SERVICE PROFESSIONAL! MANY PARTS STORES, AND AUTO SERVICE CENTERS DO THIS.



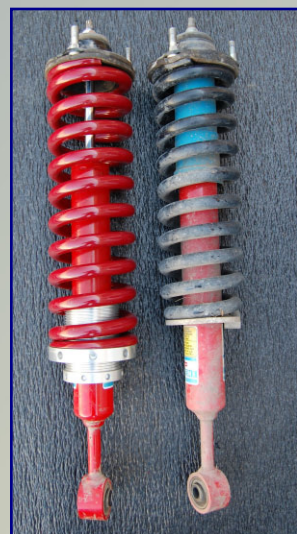
New coil seat on shock

9. Compress coil enough so that the shock rotates freely
10. Remove the top shock nut using pliers and a wrench. Note the order of washers and bushings for reassembly later.
11. Remove the shock from the coil through the bottom.

12. Carefully release the coil from the compressor

13. Remove the stock lower spring seat from the shock. Turn the shock upside down and gently tap all the way around until the seat comes loose.

TIP: Clean the shock REALLY well and use some type of penetrating oil to help loosen the seat. The dirt behind the seat is the only thing holding it on.



New & old coilovers. You can really see how much larger the new spring is.

14. Assemble the new coilover by placing the new seat on the shock. Ensure the washers are placed between the stationary and moving parts of the new seat. Apply a small amount of oil to the washers to help them slide when adjusting the lift.

15. Compress the new coil enough to put the shock in and tighten the nut.

Use EXTREME caution: The new coils are larger and will be more difficult to compress.



New coilover installed

16. Tighten top shock bolt to proper torque specifications.

17. Before uncompressing the coil, ensure that one of the top plate bolts lines up properly with the lower shock mount. If the alignment is off, you'll need to recompress the spring to re-align.

18. Install the new coilover in the FJ, reversing the Front Disassembly instructions. Ensure all bolts are torqued to proper specifications. Follow the same procedures for the other side.

Installing the Sway Bar Relocator



Swaybar relocation bracket installed

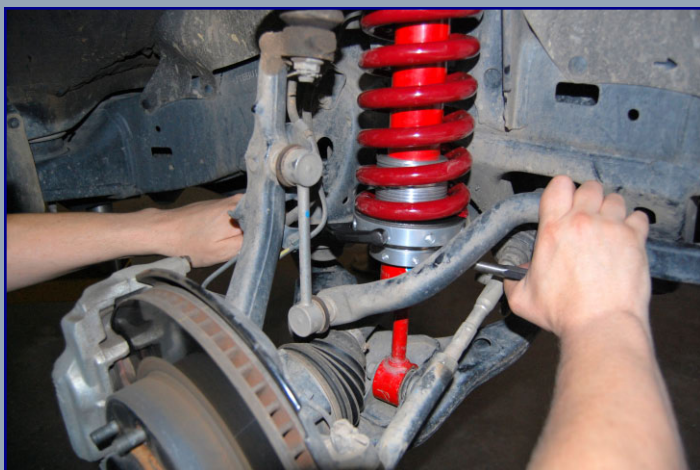
19. The sway bar relocator uses the same size bolts as the sway bar, so use the original sway bar bolts to attach the adapter to the frame.

20. Attach the sway bar to the adapter, bolt the swaybar to the to front

suspension on each side

21. Install the wheels on the FJ and lower it to check for height. You may have to take the wheels back off if you need to adjust the height on one side, so don't install all the lug nuts.

22. Once both sides are where you want them, install both front wheels & torque the lugs to the proper specification.



Adjusting the lift height

After finishing the install & lowering the truck, I immediately noticed the truck had it's "rake" back. We've only had it off road once since, but it works just as great (maybe even a little better) than the original lift. The on-road handling is improved as well. If you own a TRD or TT, or already have the Bilstein shocks that Toyota sells, this will be a great front lift option for you.

Vendor: Toytec Lifts - www.toyteclifts.com, phone: 303-255-4959



**In Colorado,
We Stay the Trail**

www.staythetrail.org



Garrett's BD "NSBCruiser"

Hometown:
Near New Smyrna
Beach, FL

Year:
2007

Color:
Black Diamond

Trans:
Automatic

Tires:
285/70-17 BFGoodrich
KM2

Wheels:
17" x 7.5" - Black
Toyota Steel Wheels
with Black Gorilla Lug
Nuts and Gorilla Wheel
Locks

Lift:
Old Man Emu

Shocks: OME N140S
Front Struts, OME N141
Rear Shocks

Front Bumper:
Factory

Rear Bumper:
Blacked out OEM

Skids:
Blacked out OEM

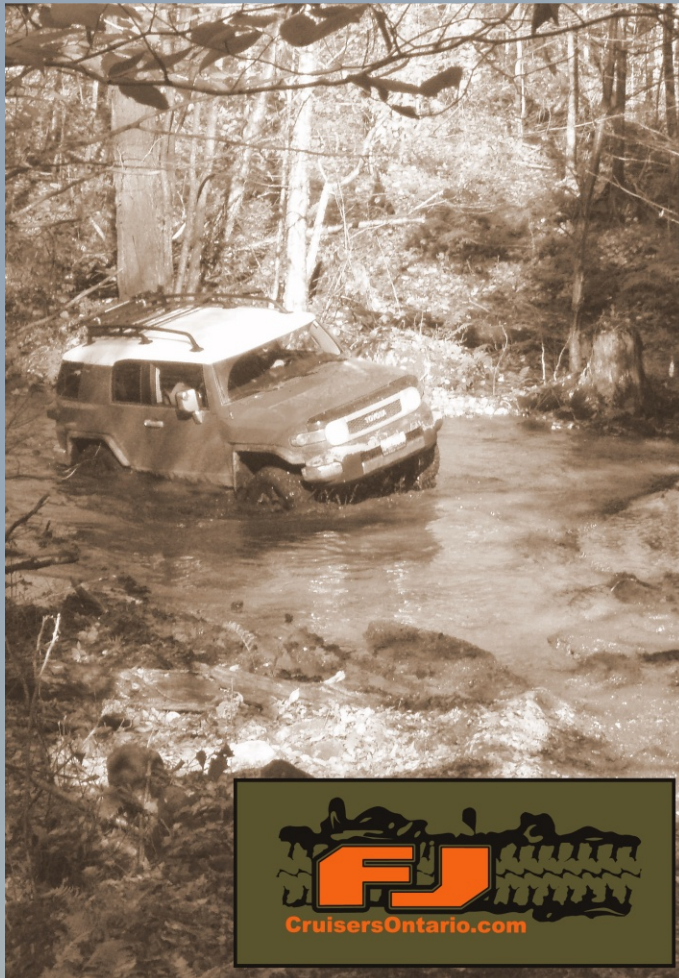
Winch:
Come-Along Hand Winch

Air/Co2:
Portable Air Compressor

Rack:
OEM Rack

Coils:
OME 886 Front Coils, OME
895 Rear Coils

Visit fjc-mag.com for Garrett's
FULL list of mods & more pics



www.702FJCrew.net
Las Vegas, Nevada

Family Oriented
No Membership Fees
Monthly Meetings
Weekly Trails
Group Mod Parties

"FJPrerun" Victor's Ti

Hometown:
Chula Vista, CA /
Tijuana B.C., México

Home Club:
Baja4Racing™ (aka
B4R™)

FJ Nickname:
FJPrerun

Year:
2007

Color:
Titanium
Metallic/White top

Trans:
Automatic

Tires:
BF-Goodrich All Terrain
285-70-17

Wheels:
5 - 17 x 9" KMC Enduro
Wheels (black)

Lift:
All Pro Off Road, Fox
Shocks, Walker Evans
Racing

Shocks:
Front - 2.0 Fox 8-way
adj. coilover with 3.5"
of lift Rear - Walker
Evans Racing 12-way
adj. w/external
reservoir & 3" All Pro
lift springs

Front Bumper:
Custom - OTR
Fabwerks Pre-run
bumper

Rear Bumper:
Custom - OTR
Fabwerks Pre-run step
bumper

Skids:
Factory

Rails:
Factory rock sliders

Rack:
Factory Rack with
custom mounts for a
Hi-Lift jack

Other Suspension:
All Pro Off Road rear
links, front sway bar
links and collars

Visit fjc-mag.com for all of Victor's mods & more pics

NORTHWEST FJ CRUISER CLUB

Promoting responsible 4-wheeling in the Pacific Northwest



www.nwfjcc.com



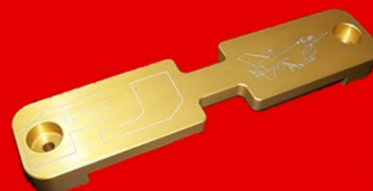
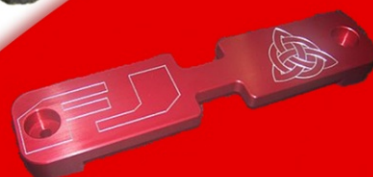
MEMBER BENEFITS

- Dedicated website & private forum
- Regularly scheduled, well organized runs
- No monthly dues, donations are welcomed
- Promoting the *Tread-Lightly* philosophy
- Support by local vendors increasing daily!
- Parts and MOD install discounts available



Ellis Precision

Custom CNC Machining



www.ellisprecision.ca

October 08



www.fjc-mag.com

Off Road 101

Suspension Upgrades

In the past few Off Road 101 articles, we've discussed what we feel are the most important first modifications for your FJ Cruiser. First, you should know how everything on your truck works and what its capabilities are. Second, consider upgrading tires and possibly wheels. Most recently, we talked about trail armor and why it's so important. Now that we have this great foundation, the time has come to touch on one of the most popular upgrades for your FJ: your suspension.

We use the term 'upgrades' because we're not just talking about lift kits. Many owners choose not to lift their truck, but maybe add spacers only to just level it. Let's discuss some of the more common upgrades for the FJ Cruiser.

most owners choose to upgrade their shocks as well. This is where special edition FJ owners have an advantage, since the Bilstein shocks that come on TRD & Trail Teams models do not necessarily need to be



6" Lift from Rough Country

"Leveling" Kits

These kits usually include a spacer that is placed above the front coils. This provides approximately 1" of lift to the front of the truck and decreases or eliminates the



1" Poly Spacer kit from All Pro Off Road

'rake' or forward leaning stance of a stock FJ. This is a very popular first step in the suspension upgrade arena and typically costs around \$100 plus installation.

upgraded.

As you move up in quality of components, the pricing of lift kits can increase dramatically. Eliminating the spacer and using a taller spring in the front improves ride quality and opens up more options. Adding longer shocks will provide excellent wheel travel & articulation and will affect the way your truck rides both on and off road. Many of the high end kits now include remote reservoir shocks. This is very beneficial for higher speed (rally style) driving where the suspension cycles quickly for long periods of time.

Most 6" kits include shocks, springs, differential drop brackets, and other relocation hardware to extensively modify your FJ. Some even include extended steering knuckles, upper control arms (UCA's) and new lower crossmembers. These systems are significantly more difficult to install than basic 3" lift kits, but they raise your FJ enough to put 35" (or larger) tires on. These systems may also put more strain on other stock components so, research all the options and requirements before you go this route.

2" – 6" Lift Kits

There are several lift kit options for FJ Cruisers:

The most economical kits include springs for the front of the truck along with a spacer (similar to a leveling spacer), and taller springs for the rear. There are also different spring rates available, which affects the stiffness of your ride. It's common to go with stiffer springs when adding heavy bumpers and winches to minimize sagging in the rear and diving in the front. While it is possible to install some kits with stock shocks,

Adjustable Lift Kits



Icon adjustable coilovers (0"-3")

A relatively new option for lifting your truck are adjustable kits. These usually range from 1" to 3" of total lift, depending on the kit. These are great for many owners because you can adjust the lift as

I hope this brief discussion of lift options helps you decide what is best for you. The great thing about the FJ Cruiser is that it's very capable with no lift at all. Adding an extra couple of inches of clearance and enhancing articulation are a great and relatively inexpensive way to get you to more places safely. For more information and to find the kit that's right for you, check out the vendors directory at www.fjc-mag.com. **FJC**

you add components. If you get a new front bumper and your front end sags a little, just dial the lift up another inch or so until you get the look you want. Raising or lowering your truck is as easy as removing the tires and turning the adjuster. Note that adjustable kits are usually for the front end only, most manufacturers don't offer an adjustable rear suspension. For details on the Toytec 3" adjustable kit, see "Toytec Lift Upgrade" on page 16



1.5"-3.5" Toytec Adjustable Kit for TRD & TT FJ's

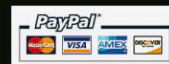


Specializing in Suspension Lifts and Off Road Accessories for your Toyota:

- 4 Runner
- FJ Cruiser
- Tacoma
- Tundra

For orders only Please call
303-255-4959

ToyTec Lifts
10650 Irma Drive #23
Northglenn, CO 80233



LED Dash Swap

While most of the articles in FJC Magazine focus on off road and mechanical performance, every once in a while an 'aesthetic' mod comes along that's just too good to pass up!

We first learned about the LED Dash Mod from TinCan several months ago, but I knew there was no way I was taking my dash apart and unsoldering several LED's. Luckily TinCan (BJ) came out to the FJ Summit and graciously agreed to dew a few dashes for Summit attendees. By the time he was done (ours was his last) he was functioning on about 10 hours sleep over 5 days, and did over 20 dashes – quite an amazing accomplishment!

I can't begin to explain how cool this modification is! It completely transforms the inside of your FJ and really makes it stand out. We chose to use red LED's to match our black & red TRD theme, but the LED's are available in just about any color. The most popular color at the Summit was blue, but several other trucks used red as well.

When it was our turn for the mod (at nearly midnight), BJ jumped in the truck and had the dash completely apart in less than 5 minutes. It's really not that difficult to remove the gauge cluster, gauge pod, and colored control panel; so don't be intimidated if you would like to have your dash modified. Once he had everything apart, he began the process of unsoldering the old LED's & soldering the new ones on. I can solder two wires together, but I don't have the steady hand or the

patience to replace such small LED's. BJ did an amazing (and quick) job and in just over an hour, we had our new dash and were on our way.



The only orange lights now left in our FJ are in a few buttons, the airbag light, defrost button, and of course the FJammer. These items are prohibitively difficult to replace lights in, and would result in this modification costing well over \$1,000 (or more) instead of about \$250. As I said, this is about the coolest mod we've done to the FJC TRD. Everyone that I've talked to that's had the LED mod done is been very pleased with it. TinCan has posted a great how-to article on FJCruiserForums.com, but if you, like me, are not comfortable with replacing the LED's, he has offered to do the soldering for you. Simply take the components out of your truck & overnight them to him, he'll do the work & overnight them back. Total turnaround time is about 3 days in most cases. He does charge for his time, but at \$250 it's an amazing deal. There may be an additional cost if you want pink, white, green, orange, or yellow LEDs (anything more unique is harder to find and more expensive). We guarantee you won't find anyone that'll do this much custom work for such a great price.

To contact BJ, simply PM him on fjcruiserforums.com (TinCan), or you can e-mail him at Phidelt702@hotmail.com



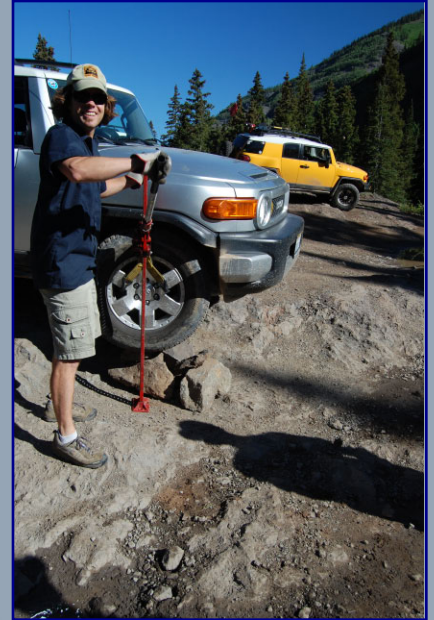
Hands On Recovery

In the July issue Chris Nelson was kind enough to cover some recovery basics. Fortunately for us, we saw Chris leading a group up Engineer Pass during the FJ Summit and we got to see him work first hand. While his group was pulling over to let us by, a Ti FJ managed to get high-centered on a large rock. This is a very common occurrence when wheeling in a new area, and Chris was ready. He grabbed the Hi-Lift off his truck & got out his recovery kit.



Included in the kit is the Hi-Lift Lift Mate, which is an adapter that allows you to lift from a wheel.

Chris positioned the Hi-Lift & hooked the lift mate to the front passenger wheel. A few cycles on the jack had the front of the FJ off the ground far enough to stack a few rocks under the tire. Once all the rocks were in place he lowered the truck on to them and began guiding the driver off the obstacle. The Hi-Lift & Lift Mate worked like a charm & the group was back on the trail in a matter of minutes. We would like to note that if you use rocks to get over an obstacle, please place them back where you found them when done. Always remember to Tread Lightly.



This example really illustrates that you not only need to have the right recovery gear, but you should be familiar with how to use it. We encourage everyone to practice using their recovery gear BEFORE you need it. Doing so will make recovery safer and less stressful. Thanks to Chris for the great hands-on training!

October 08



www.fjc-mag.com

FEATURED RIG

We've been talking with Corey Tando for quite a few months now, and finally got some great info and pics to include his Ti as October's Featured Rig. Corey is the admin over at www.yotatech.com, which he started in May of 2002. He's a tech guy all the way, and has the mods to prove it.

Corey's FJ is built as a true expedition ready rig. He's setup to go anywhere and stay clean and comfortable all along the way. There's not much left for Corey to do, but we're sure he'll think of something.

Corey gave us his full list of mods, in order of importance:

You can checkout detailed writeups of all these mods at Corey's site here.

Also checkout www.yotatech.com for all your FJ Cruiser & Toyota 4x4 technical content.



Corey's roof top tent open up

- * Bentup rock sliderz
- * Cobra 29 Nightwatch CB radio, Firestik II 4' antenna, and serial # 6 Bandi mount
- * Cargobox that was made for my '91 4Runner, but fits the FJ just fine.
- * Powertank 10 lb model



The rear of this FJ is neatly organized & ready to go

- * Lund Vent Visors, in channel ones
- * Maglite installation
- * Toyota high pitched horn to accompany the stock one
- * ARB bumper, IPF foglamps, OME lift (heavy duty up front, medium duty back aft), Warn XD9000 winch, Winchline's synthetic winch line and safety thimble.
- * Inchworm elocker guard
- * Ramsey wireless winch control
- * Ellis Precision custom battery hold down bracket
- * Magnaflow 11226 muffler hooked to stock pipe

- * Magnaflow 11226 muffler hooked to stock pipe
- * Pioneer AVIC-D3 headunit with DVD navigation, Focal 165v2 component speakers, Alpine PDX-4.100 amp, Infinity Kappa 3.27f rear speakers



Avic D3

- * ARB fridge/freezer
- * Custom 12v Bluesea fusebox and dual 12v plugs for 12v power anytime
- * Dick Cepek Mountain Cat mud tires sized at 285x70x17 mounted to Pro Comp 7089 wheels
- * Hi-lift jack, and Hi-Lift Handle-All, four tools in one (shovel, axe, pick axe, sledge hammer)



ARB Fridge

- * Fourtrek Hi-Lift mounts mounted to the ARB bumper
- * Halguard HG250R fire extinguisher (clean agent, safe for electronics)
- * Kidde fire extinguisher for other types of fires outside of the vehicle
- * Total Chaos upper control arms
- * Dual battery setup
- * Springtail M-Packs and rack
- * Safari snorkel
- * Maggolina AirLand medium roof top tent
- * Camping Lab awning

See more pics at
www.fjc-mag.com



Setup & settled in

COMMUNICATIONS 101

CB, FRS, OR HAM?

By Taft Babbitt

It doesn't matter if you're a few hours or a few days from home, the ability to communicate with others can bring added enjoyment to your adventures and greatly increases safety. Radio communication while on the trail comes in many forms. In this article we will focus on the three most common types of radio communication available to you: the Family Radio Service (FRS), Citizen Band radio (CB), and Amateur Radio also known as HAM Radio. The first thing to understand is that each of these use the same basic technology as the AM / FM radio in your car. It's all radio waves. What makes each type a little different is the power you can transmit with and the frequencies they use. As you dial up or down on your car radio you might use the term 'radio stations', but a radio station is simply transmitting on a particular frequency, for example 105.1 FM.

Here are a couple of other concepts to consider before we discuss each option in more detail. Radio waves travel at the speed of light, so there is virtually no delay in most situations. Radio waves also travel in 'line of sight'. This means the more obstacles between you and the one you are communicating with, the more interference you will experience. Radio waves can penetrate objects, but different objects will require more or less power to penetrate. The type of radio wave also determines how well it will penetrate objects. The last thing to note is that antennas make a difference. There is a huge difference between transmitting using 5 watts of power with a cheap antenna and transmitting 5 watts of power with a great antenna.

FRS

Family Radio Service or FRS (also called two-way radios) is a simple solution for very basic communication needs. FRS radios generally cost from \$50 to \$200 and they do not require a license to operate. FRS radios transmit using .5 watts, which by radio standards is very low. This is why in real world scenarios you should only expect to be effective with FRS at ranges of a mile or two or less. The packaging might tell you the range is much more and in very good or perfect conditions it might be true, but don't count on it. FRS radios are very common and have a limited set of 22 channels. Don't be surprised if you hear others talking on the same channel you are using. One of you will simply need to move to another channel or enable the 'privacy' features on your radio. FRS radios use FM frequencies which are good. FM frequencies are clearer than AM frequencies (think AM radio stations vs. FM radio stations).



Typical FRS Radios

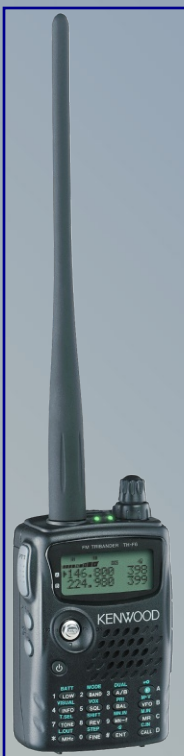
CB Radio



A classic CB

Citizen Band or CB Radio is a very common form of communication among truckers and off-roaders. CB radios generally cost from \$80 to \$200 and also do not require a license to operate. CB radios transmit using a maximum (legal) 4 watts of power, providing greater range than FRS radios. Generally speaking, one can expect about 3-5 miles of range using CB in good conditions. However, CB radios use AM frequencies which are more subject to interference. CB radios also use the concept of channels and most modern CBs offer 40 channels. CB is by far the most common form of radio communication in the off-road community.

HAM Radio



A Kenwood handheld

Amateur Radio or HAM Radio is no longer for old men in basements with outdated technology. HAM radio has kept up with technological advancements and has a lot to offer. HAM radios generally cost from \$120 to \$1000 and do require a license to operate. Obtaining your license is now easier than ever. The test is 35 questions and is quite easy. You do not need to know Morse code to obtain your license. The fee for the test is about \$15, and your license is good for 10 years.

HAM radios transmit using 5 watts up to 1000 watts depending on the radio you purchase. These radios can easily reach 40 miles or more. HAM radio does not use the concept of channels like FRS and CB radios do. Instead, HAM uses specific frequencies. So instead of tuning your radio to channel 12, like you would on FRS and CB, you tune your radio to a frequency like 147.555; this provides for greater flexibility and the ability to find a completely private channel. HAM radio can also use repeaters to make them even more useful. A repeater is an antenna that listens on a certain frequency and repeats what it hears on another. This greatly increases your range, in some cases up to several hundred miles. There are hundreds of repeaters across the United States. Repeaters can also be linked connecting one repeater to another. Using linked repeaters, HAM radios can communicate all across the country.

There are additional features available to HAM radio which we won't go into in detail, but here are a few of the key ones: APRS – This is a feature that allows HAM operators to use the radio to include GPS information in the signal. Using this feature and GPS devices you are able to see on the where others are located. AutoPatch – This feature, which is available on some repeaters, allows the HAM radio to connect to the public telephone system and make a normal phone call. So you can be out in the backcountry, connect to an autopatch repeater and call your loved ones. Editor's Note: In times of emergency, HAM radios are almost always the only method of wireless communication that works. When cell phone networks become overloaded, HAM radios will still work fine. There is much more to HAM radio that can make for a lifetime hobby but we will save that for future articles.

Dreaming of your next adventure?



We sure are.

The Toyota Land Cruiser Association is a club dedicated to bringing Toyota 4-Wheel Drive enthusiasts together. Visit us at www.tlca.org to learn more.



TLCA membership includes a subscription to **Toyota Trails** magazine, featuring in-depth tech and trail articles, event listings, TLCA merchandise and Land Cruiser classifieds.

Toyota Land Cruiser Association
P.O. Box 230, Verona, KY, 41092
(800) 655-3810 • www.tlca.org



A Yaesu mobile radio

In summary, consider what your needs are and get the radio equipment that will meet or exceed those needs. In best case scenarios, communication can greatly enhance the enjoyment of your adventures and in the worst case scenarios communication can be a life saver. Happy transmissions!

Taft Babbit is a technology professional and avid blogger. He's very active on FJCruiserForums.com and can be found online at <http://mountainthinking.blogspot.com/>



FJ CLUBS & GROUPS

702 FJ Crew

<http://702fjcrew.net/>

ATL FJ's

<http://www.atlfjc.com/>

AZ FJ's

<http://www.azfj.org/>

Aloha FJ's

<http://s6.invisionfree.com>

Colorado FJ's

<http://www.coloradofjs.com>

SoCAL FJ's

<http://www.socalfj.com>

FJ Bruisers

<http://www.fjbruisers.org>

Sin City Wicked FJ's

<http://www.sincitywickedfjs.com/>

FJ's Ontario

<http://www.fjcruisersontario.com/>

FJ's Quebec

<http://www.fjcruiserquebec.com/>

NWFJCC

<http://www.nwfjcc.com/>

For more Toyota and FJ Cruiser groups and clubs, visit www.fjc-mag.com. Look for the FJ Groups & Clubs link.



The NON Club

"A random collection of people who have agreed, by tacit consent, not to abide by any principles of governance. We are not a "club", a "group" or an "organization".

We're not a club...
so you're not a member!

www.azfj.org



FIRST YEAR RUNNING THE MUD AND HAVING FUN

TRAIL RUNS & EVENTS

 SPOUSAL UNIT BOUNCE AND JOUNCE
 SAND IN MY ASS-A-TEAGUE
 MUDFLING
 BRUIISERS ON THE BEACH

WRENCH SESSIONS



© 2007 - 2008 FJ BRUIISERS - WWW.FJBRUIISERS.ORG
ARTWORK BY JOSH "WALRUS" KOLLIN

LEARN AND JOIN IN @ FJBRUIISERS.ORG

FJ Cruiser Events

Get Flat N Nasty w/ Tornado Alley Cruisers

Dates: October 2-4

Location: Salem, MO

Contact: <http://www.tornadoalleycruisers.com>

Yankee Toys Fall Gathering

Dates: October 3-5

Location: Hancock, NH

Contact: <http://www.tinyurl.com/3szon9>

6th Annual Pismo 4runner Jamboree

Dates: October 10-12

Location: Oceano Dunes, Ca

Contact: <http://tinyurl.com/3gvezf>

4th Annual Southern Cruiser Crawl

Date: October 16-19

Location: Gray Rock ORV park just north of Birmingham, AL

Contact: <http://cottonlandcruisers.com/4x4event.htm>

Surf N Turf 2008

Dates: November 7-9

Location: Pismo Beach, CA

Contact: <http://www.tallcorncruisers.org/tcc/>

Lone Star Toyota Jamboree

Date: January 15-18, 2009

Location: Gilmer, TX

Contact: <http://www.lonestartoyotajamboree.com/>

**FOR THE LATEST
INFORMATION,
VISIT WWW.FJC-MAG.COM
AND CLICK ON
EVENTS CALENDAR**



www.fjcruiserquebec.com

Le seul club francophone de FJ Cruiser.



**The only french speaking FJ Cruiser club invites
all FJ owners to come ride with us and
discover our beautiful province.**



October 08



www.fjc-mag.com

FJ Nation



AJ - TEXAS



STEVEN - WISCONSIN



DANIEL - ARIZONA



DRAGON - ILLINOIS

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

FJC
Magazine

FREE

PDF download

www.fjc-mag.com