

The following is copied from <http://www.brcesd.com/?pg=about>:

SIMILARLY, ALL OTHER BURNING MAN DEPARTMENTS DEPEND ON RELIABLE TWO-WAY COMMUNICATIONS IN ORDER TO MAKE THE EVENT HAPPEN.

THE ESD COMMUNICATIONS INFRASTRUCTURE PROVIDES THE MEANS FOR THIS FUNCTION. UTILIZING A NETWORK OF TWO-WAY RADIO REPEATERS BOTH ON-SITE AND AT REMOTE LOCATIONS, THE COMMUNICATIONS BRANCH TECHNICAL GROUP ENSURES THAT THE SYSTEM HAS FAIL-SAFE AND REDUNDANT TECHNOLOGIES IN ORDER TO COPE WITH THE HARSH CONDITIONS OF THE BLACK ROCK DESERT. *THIS CRITICAL PRECAUTION SUPPORTS ALL FUNCTIONS OF THE BURNING MAN PROJECT, BECAUSE ANY DEPARTMENT THAT LOSES ITS ABILITY TO COMMUNICATE LOSES ITS ABILITY TO DO ITS JOB* [my italics].

From a May 27, 2011 email from Joseph to me:

How about this: Let's give this console a try since we fought hard and long to get this approved. I think the dispatch may like it after they get a chance to work on it. If after trying it out for a season the crew doesn't like it, we can consider new options. It just seems silly to abandon all these years of effort to where we are not. Change can be scary but sometimes worth the risk.

Gameshow, are you willing to take give it a chance?

My June 1<sup>st</sup> email reply to him:

Well, it would be difficult to Dispatch with tin cans and strings... We're going with the console for this year and I'm interested to see what the Dispatch crew's decision is at the end of this season.

So ~ onward into the present!

## **2011 DPW Dispatch log of radio issues, events & incidents**

### **Overview**

The following is by no means a complete record of radio difficulties during the 2011 season of Burning Man but will provide an insight into areas that were problems this year in hopes that they will not be present again in 2012.

### **Cliff's Notes version of the next 18 or so pages**

The console needs to go away and be replaced by at least four mobiles with desk mics, good external speakers, 12 Volt deep cycle battery with charger, and fused power wires to each mobile.

Last year's make/model of rental radio were failures in radio/hand mic connection.

Last year's make/model of rental radio battery were failures in charging and maintaining a charge.

Charger banks should all have screens indicating battery state, charge state, etc. as one of the banks in Dispatch did last year.

There should be a repair capability of brick radios on playa.

I appreciated Joseph's email regarding the flukiness of the 2010 rental radios having a clock feature, users still request that feature if possible. It is believed that rental radios had clocks in 2008, 2009, and 2010.

Dispatch staff expressed (and continue to express) frustration and concern that this year's level of radio dilemma may result in grave injury or death due to radio quality and equipment – and despite the best efforts of my staff to provide a safe, effective radio umbrella. I do know without a doubt that many on the Comm side of the equation were doing their best to make wrong things right as well.

### **08/08/11**

Console installed and connected in 4508 Dispatch trailer.

Big Mike and Jafar installed and discussed antennae and connections. "If a mobile were installed in 4508 Dispatch would have to remove radio for radio 1 antennae from the console."

There are four mobile style radios inside of the console, each set to one channel. The channels set up for DPW Dispatch are Dispatch 1, Network 4, ESD 912, and Office 10.

There is one antenna for each channel, one for the Network 4 repeater set up inside 4508, and one for ???

It was never explained what the last one was for.

There are six antennae on top of 4508, and six antennae connectors on the wall inside of 4508.

“To change a channel on the console is a service call. The box is locked and dispatch will not have access to it.”

Jafar conducted brief explanation of console, indicated that more “in-depth” training would come from Tina Foo.

### 08/09/11

Xeno – needs new microphone – wouldn’t work so switched out radios

With no training provided for console – dispatchers want to know how to adjust volume.

Weldboy needs aviator headset adaptor

9:50am console has no sound but has “heart beat”

Called Big Mike – said he will arrive in 15 minutes.

10:20 am Big black box – no sound at all

\*\*Need – How to shut down system

12:05pm Big Mike & R52 – Office 10 antennae not connected - how working?

Possible power connection?? Did not explain

R52 explained volume functions on console.

If the console needs to be shut down - call Comm Tech - they will decide what to do.

### 08/11/11

9:19:18 – Call for medic on 4.

Attempted to clear channel for emergency traffic.

Console could not “step on” other traffic to clear the channel.

R1 interrupted on 9 to tell us of medic call on 4.

DPW Dispatch had heard the call on 4 and was attempting response.

The console’s transmissions were not being heard by other radios.

9:24:40 – Gameshow informed Big Mike / Com Guys that DPW Dispatch cannot clear channel for medic calls – therefore Comm Guys are responsible for it (answering 9).

Gameshow repeats request for mobile as backup to Big Mike, R1, and Jafar.

Gameshow subsequently contacts all medics to provide an additional handheld radio with speaker mic so that they can answer 4 or 9 at any time and be constantly monitoring both.

**08/12/11**

10:30 No Comm on Ranch at all.

Repeater was taken offline with about 4 minutes notice.

10:32 Coyote to R1 – Expressed concerns about safety.

R1 indicated that he could rent a sat phone to Coyote.

Coyote said that does not address his safety concerns.

Jafar in Dispatch office

Joe the Builder told him we will help in any way that we can. Man power, generator power, anything. What does Comm need?

8:10 there is a working phone in B-13 box under the tower – inside, no lights, emergency needs only. Phone for Dispatch will be installed tomorrow.

**08/13/11**

As of 4:00 pm channel 912 became intermittent on console

The Hun reported that when her on-playa transmission was clear she was using channel 3.

Joseph and Jafar came by around 6:00pm checked that power supplies of gain chargers were not causing “crackling bacon sound.”

“Crackling bacon sound” may be a time of day issue.

Joseph indicated that as a result of his conversation with Coyote a mobile will be pulled from a fleet vehicle to place in Dispatch temporarily.

Joseph and Jafar believe that the console should (and can) “step on” an open mic or any other transmission at any time.

We reported that some transmissions on the console work inconsistently or not at all.

Comm will check code plugs to see if same as last year.

Joseph said that having an adjustable (separate) mobile in Dispatch was overlooked in their planning. But should have been planned for and done, as it would be reasonable for DPW Dispatch to have an adjustable mobile to get to any channel needed. Gameshow had indicated in a pre-season email request that Dispatch wanted backup mobiles for the preseason before the Comm guys get here in case there were equipment or training issues.

Joseph indicated that he contacted Bear Comm to research whether or not there had been any other user reports of hand mic connection failure. There have been no reports of such, and thus far our issues are not “replicable.”

Katy asked if he can make the report?

Joseph said he had made the report and we (DPW) are the first.

Our hand mic connection failure rate seems to be between 50% - 80%.

Joseph said we may be going back to three mobiles for Dispatch if no other solution solves the issues. That we have adequate antennae and power supply to accomplish going back to desk mobiles.

With one mobile and console use – three channels will be on console, one on mobile.

Conversation about how many rental gang chargers and their locations. Joseph indicated that Heavy Equipment will be receiving another. That he does not believe a dedicated power gang charger for one small team (DPW Power) is an appropriate use. That our allotment does not include a charger for the saloon. Gameshow indicated that now that people have moved on playa the charger in the saloon will be moving to Dispatch. \*\*it is normal for Gameshow to leave a charger or two in the saloon, until crews start living on the playa.

There is no button to use the mic on the headset for the console.

The planned unique radio ID process did not work well again this year as Bear Comm programmed every handheld with the same ID. Gameshow was told that Comm would reprogram all handhelds. He requested that a printed numerical list of DPW-issued radios be used to check off (during the reprogramming sessions) which radios have been reprogrammed to display a unique ID.

7:45pm Jafar and Seth leave – with statement they have made “no changes to system”  
In speaking with Seth he says he is not qualified to fix this because so many changes have been implemented.

8:15pm Gate moves to 13 where transmissions are crystal clear

8:17pm Chaos calls B1 on 912. Radio not working. B1 goes to Heavy Equipment.

8:40pm Gameshow called to see if radios better – JAR asked same

Seems better but . . .

8:50 pm B1 on 13 – perfectly clear communication – on 13.

B1 says problem is isolated to DPW, that it is this repeater that is causing trouble.

DPW Dispatch still has no method of contacting outside emergency resources after Gerlach Office hours.

9:12am Communication on Dispatch 1 channel between Make Out Queen and Dispatch.

All sounds from Dispatch are staticky and indiscernible.

After four attempts Make Out Queen gave up trying to communicate with Dispatch.

11:43am Sgt Slaughter's call to Dispatch – not received by console.

#### **08/14/11**

Discovered that Dom D'Ice is handwriting a list of which radios have been reprogrammed to display a unique ID. Please see notes for 8/13.

DPW Dispatch still has no method of contacting outside emergency resources after Gerlach Office hours.

Joseph reported to Gameshow that by moving the 912 repeater from Depot to Comm shack the issues for that repeater had been solved.

11:24 am Gameshow call to Dispatch not received by console.

Must use handheld in DPW Dispatch for communication, handheld must be held out the door of 4508. Console is still inconsistent.

7:00pm B1 called Dispatch – Are radios better? They moved repeater to the west.

#### **08/15/11**

9:00 am - Chili was sent to Depot to get a replacement for the radio that "Comm guys" took to reprogram a second time. Need for reprogramming was due to "alien demonic voice sounds." Gameshow gave him a radio Dispatch was using to dispatch with as there are no spare rental radios available.

10:00am gave Moostachio a replacement radio (from the Dispatch desk) for the same reason as Chili.

10:15am radio conversation with B1.

Gameshow asked if Comm guys were sending users with reprogramming needs to Dispatch for replacements.

B1 indicated that the problem would be corrected in a few hours, in the meantime we should issue replacements, and that it was only for a “few” users. DPW Dispatch has no spare rental handheld radios.

Gameshow indicated that some previous notice would have helped.

B1 indicated he had only known for an hour.

Gameshow used radios that are being used to dispatch with (because the console works inconsistently) to issue as temporary replacements. Leaving DPW Dispatch without working rental radios to dispatch with.

Chili, Moostachio, WeldBoy, Snatch, Devo are known “reprogram due to aliens” issue.

Joseph indicated that the “alien” radios were out of one of two batches of rental radios programmed.

If there were two batches – can DPW Dispatch have the numbers of the ones in the alien batch so that we can proactively send them to get reprogrammed before they go to trunk channels?

Request denied.

DPW Dispatch still has no method of contacting outside emergency resources after Gerlach Office hours.

Joseph returned 3038 & 3057 to dispatch, indicating that they were returns of loans to medics.

3038 on our records had been issued to Weld Boy in heavy machinery.

3057 on our records had been issued to Big Spoon – a medic.

12:34:01 - Hormel’s return call to Dispatch was received by other portables – but was not received by the console.

Gameshow called B1 on channel 912 to report incident – B1 response was that due to a need to reprogram the mobiles in the console to “Gameshows specifications of sensitivity” from last year the console may not always receive every transmission. This referred to the difficulty of having one mobile silence another when transmitting, etc. Several attempts were made by Comm to create a code plug that would work as correctly as possible in 2010. Details can be provided if necessary.

WeldBoy – has radio #? - - 3038 returned to Weldboy

4:15 pm – Joseph returned 3060 and 3032 temp loans to medics Poltergeist and Corey Palmer

6:45pm Grog and ? arrive to install mobile for Dispatch. This mobile did NOT come from a vehicle.

**08/16/11**

8:20am Grandma has broken hand mic

1:45pm Channel 10 has problems

Talk to JAR or Sleep Dep

Our Dispatch handhelds are not sending or receiving inside Dispatch trailer . . . because we are under roof? . . .or is it because the antennae that was receiving Channel 10 for the console, is now receiving Channel 4 for the mobile on the desk?

5:10 pm Report to B1 that channel 10 doesn't work well in Depot.

**08/17/11**

10:30 am call from B1 to Dispatch on Dispatch 1 channel scratchy.

B1 request Dispatch to attempt to use desk mobile to communicate to determine if transmission from mobile is clearer than the console.

These instructions were heard by a portable but not the console. Dispatch had difficulty communicating with B1.

B1 left channel before Dispatch understood the request, indicating he would try again later.

**08/18/11**

Sylkia, Hayseed, Sarah Ann on Commissary channel experience "demonic alien sounds." Gameshow gave Hayseed his radio to get him going for now and will swap back once Hayseed's radio is reprogrammed.

10:20 am Console did not receive transmission on Channel 1 – that was heard on a handheld.

11:10 am Joseph stopped by Dispatch to indicate that Jafar will go to Commissary to reprogram the demonic alien radios then come to Dispatch to reprogram Hayseed's, returning Gameshow's.

Asked Joseph about Channel 1 and 10 being scratchy on console.

Joseph indicated it is likely a time of day issue. Then asked questions regarding when, where, and on what radio the channels are scratchy.

12:24pm Joseph called on 1 to explain that the static and sound issues on the ranch are due to moving the repeater. They will work on the issue.

3:30 pm Dom D'Ice returned two rentals and two bricks sent to repair. The rentals he said would just need to be used as is (no handmic). The Kenwood bricks he said that the repair guys have no brick parts or ability to repair them.

**08/19/11**

8:15am Dom D'Ice brought spare radios to replace four rentals sent in for repair.

WaWaWaWaWaWa sound and scratchiness has returned to radio transmissions on playa.

10 is still a difficult channel to use with the office

**8/20/11**

Grog arrives in Dispatch office 3:30 pm

Grog departs 5:10pm notes issues on 10 "whitenoise" crackle juice sound problems and more.

5:40 could not hear Easygoin on 1. Comm10 called on 1 to report Dispatch was missing call from Easygoing.

**8/21/11**

10:30 am Gameshow requested Comm guys to look into change in radio quality. "Radio quality has gone backwards."

**8/22/11**

10:40am Grog stopped in to let Gameshow know that he would be back this afternoon and tomorrow morning – sorry he "missed the arranged time of observing this morning, but he had to play taxi."

Dispatcher on duty requested that he send yesterdays observation notes to Gameshow. Grog replied he has to let Joseph know he will be doing that before he does it. That he is under a specific set of orders.

Gameshow asked what those orders are.

Grog replied that the orders are to observe without providing information or feedback.

Gameshow asked if that means no changes will happen for yet another 24 hours. (See notes for 8/15 and previous. The console is not an effective communication tool and Dispatchers have been using handhelds and the mobile to dispatch with.)

Gameshow said it was interesting to know that DPW Dispatch is a priority lower than "taxi"

Grog said "You know that's not the case."

Gameshow clarified that he knew that Grog did not make that decision that it had come from someone else.

11:15am Gameshow called for B1 on ESD 912.

Poltergeist answered. Gameshow reported that Network 4 has become nearly completely unintelligible in the last 15 minutes and requests that one or more of Comm guys go to 4 to listen.

Poltergeist asked R54 and R4 if they would go and listen.

R54 replied that they are hearing it well and that they are currently performing maintenance.

11:17 Trixie states on Network 4 that she cannot hear anything on Office 10 channel.

11:20am On shift Dispatcher asked Sgt Slaughter her location during previous transmission. Quality of reception and transmission is so poor that it took three attempts to hear the location as Logistics office which is 50 ft away.

11:26am Gameshow called Big Mike on ESD 912 to report that Network 4 is now nearly crystal clear. Big Mike replied "be advised we were performing maintenance which is now complete, and glad to hear that quality has improved."

### 8/23/11

9:58am Gameshow call to B1 on ESD 912.

Poltergeist answered. Gameshow informed of warble on 4 and request that radio guys look into it.

10:15am R1 announce will be taking down Network 4 system for a few minutes – use 3 instead.

10:17am Big Mike stopped by to inform of on playa radio tower adjustments that will occur later today, when Taz & the bucket truck are on playa to assist.

Big Mike will advise DPW Dispatch of specific channels that will be affected as they occur & announce on those channels accordingly so that users can select another channel during the adjustments.

9:50pm R1 called to request message relay to B1. He is currently 40 miles out (off playa) He will call B1 when he is in cell range.

10:05pm Customer Service calling for medic on 4. B1 and Poltergeist told him to move to 9.

10:10pm ESD calls Customer Service on 4 for Ghetto Bar / Doom Saloon location. Customer Service still on channel 9.

**08/24/11**

Two calls to Dispatch one unheard. Caller (Ranger Bourbon) had been attempting to call from 9:00 keyhole.

10:11am Sherry Bobbins is missing – did not show up for shift. All Comm on 4 & 14. Request ChAos crew relay message to temple and inform Dispatch that message was relayed and or transfer any info they may learn from Temple.

10:30 am ChAos inform message was relayed to Temple crew.

10:50 am Gameshow request of Big Mike on ESD911 blast all comm across all Org channels of “Sherry Bobbins missing – please report any known info to Khaki or DPW Dispatch.”

Big Mike informs only B1 has capability. B1 is not available.

Gameshow calls Playground on Network 4 – switch to Dispatch 1 – request Playground call DPW Dispatch office phone and gave phone #. (Inserting email to myself documenting this communication:

DATE: WED, 24 AUG 2011 18:05:06 +0000

FROM: [PALMERP3@COMCAST.NET](mailto:PALMERP3@COMCAST.NET)

TO: [PALMERP3@COMCAST.NET](mailto:PALMERP3@COMCAST.NET)

SUBJECT: SHERRY BOBBINS MISSING

I CALLED FOR B1 ON 9-1-1, GOT NO RESPONSE. I CALLED FOR R54 (BIG MIKE) WHO RESPONDED. I TOLD HIM I WAS REQUESTING A BLAST ACROSS ALL ORG CHANNELS CONCERNING SHERRY BOBBINS, COYOTE AND HORMEL'S NANNY BEING MISSING. HE SAID THE INFO HAD ALREADY BEEN BROADCAST ON THIS CHANNEL. I REPEATED MY REQUEST FOR BLAST ACROSS ALL ORG CHANNELS. R54 SAID ONLY B1 COULD DO THAT. I REQUESTED THAT B1 BE CONTACTED AND THAT HE CONTACT ME ON DPW DISPATCH 1 CHANNEL. HAVING NOT HEARD FROM B1 FOR PROBABLY 15 MINUTES AND KNOWING THAT A SR STAFF MEETING WAS ABOUT TO START I HAD THE DPW DISPATCHER CALL PLAYGROUND ON 4 AND HAVE HER MOVE TO CHANNEL 1 WHERE I ASKED HER TO CALL THE DISPATCH PHONE. SHE DID, JOSEPH WAS THERE WHERE SHE WAS, I LEFT MY INFORMATION WITH HER AND HUNG UP.)

DPW Dispatch continues with all comms on DPW Zone.

The request to have an all comm blasted across all org channels was never met.

11:00 am Coyote (and company) will be out of radio range ½ hour – searching for Sherry Bobbins

1:02pm Network 4 channel is down (later learned equipment fried in a lightning strike).

1:03pm Gameshow contact B1 on ESD 911 to request assessment of Channel 4 operations.

1:04 B1 Request R 54 begin investigation

1:08 Network 4 returns

1:10 Network 4 down again

2:00m Radio conversation B1 and Gameshow discuss channel options while network 4 is down. Decision to move DPW operations to ESD 912

2:15pm B1 informs Gameshow that a special portable “reverse” radio will be brought to Dispatch to detect stragglers on 4.

2:30pm B1 arrives with reverse radio – it is a manual repeater – reply with mobile on 3 to stragglers on 4. Joseph initiated discussion also of rental radio batteries. Is our volume adequate? Are charger banks keeping up? Gameshow indicates we are very tight on batteries. Joseph will send to dispatch 8 more batteries for rental radios.

Gerlach is listening on 10

Realistically network could be down for two or more hours while situation is assessed. Nevada power has not yet responded to information request from B1.

Joseph will blast announcement on all org zone channels that DPW operations have moved to ESD 912.

DPW Dispatch will announce on DPW Zone channels

2:55pm confirmed with Joseph announcement occurred on org zone channels.

### 8/25/11

7:00am all DPW operations on ESD 912 still.

Sound quality on ESD 912 on playa is crystal clear

[This part added 11/11/11 from memory: B1 told Gameshow that DPW was to shift back to Channel 4 from ESD 912. Gameshow tested Channel 4, also had ChAos check Channel 4. Neither were satisfied with signal clarity from functional and safety perspectives. Gameshow told B1 he wanted to keep Channel 4 traffic on ESD 912 because of clarity of signal. In the end, B1 told Gameshow that Gameshow was ordered to return Channel 4 traffic to Channel 4. B1 also said that one of the justifications for the move back to Channel 4 was a need for ESD 912 to be taken down for maintenance.

**8/26/11**

During morning meeting all radio users informed - DPW operations back on Network 4.

7:30 am Gameshow called for B1 on ESD 912.

Poltergeist responded. Gameshow requested Poltergeist write down requests of information from Joseph to Gameshow.

When Joseph available please call Gameshow on Dispatch 1.

8:00am Network 4 channel sound quality is scratchy, warbley, and difficult.

10:34am DPW Dispatch contacted B1 on ESD 911.

DPW Dispatch is requesting information regarding the projected shutdown of ESD 912.

B1 replied that he is in a briefing and will return call to Dispatch later.

Gameshow leaves a list at Dispatch of specific questions regarding projected ESD 912 shutdown and other subjects.

2:45pm B1 contact DPW Dispatch regarding info request from Gameshow

Detour on shift

Dispatch; When will ESD 912 go down?

B1; around 7:00pm

Dispatch; for how long?

B1; about 10 minutes

Dispatch; What purpose?

B1; Maintenance

Dispatch; What procedure for bricks in the event of an emergency?

B1; unsure – such a short time – go to ESD 911 or to Dispatch 1 who can relay to ESD 911. NOTE: Bricks are unable to be turned to ESD 911, they are only capable of being turned to ESD 912 which is the channel that was being taken down.

Dispatch: Has a blast all comm announcement gone over Org Zone channels announcing that DPW operations are back to Network 4?

B1; Yes, this morning

8:25pm DPW Dispatch requests information on projected shutdown of ESD 912.

B1 responds that it was scheduled to be for 7:00pm – assumes it happened doesn't know if it happened. R1 will inform of outage and procedure when it occurs, B1 states it would be best for DPW Dispatch to wait rather than to request info.

9:15 pm R1 call to Dispatch on 4 channel 10 still working.

How does 10 sound on Console?

Dispatch is using handhelds and sound is very scratchy.

R1; Scratchy sound would make sense in a metal box.

Gameshow tried calling R1 immediately after R1's transmission with Dispatch. R1 did not respond.

**08/27/11**

6:51am "Spoon-O on Network 4 channel --- 50 miles out with a little bit of rain & lots of rain clouds"

**8/28/11**

5:10 – 5:13pm outage on Power channel – reported by The Hun.

**8/29/11**

7:38 am Noticed 2 calls from ESD to Khaki that went unresponded to after a substantial pause. . .third try received response.

Mid morning conversation with Jar and B1 by radio, Dispatch requesting to know if and/or when ESD 912 had been taken down for maintenance. B1 confirmed that it had been taken down yesterday afternoon. NO NOTICE had been given to DPW Dispatch regarding this outage or it's timeframe. DPW dispatch had made multiple requests for this info

1:53pm Playground calling for B1 on ESD 912 with no response.

2:00pm ESD replied to Playground

2:23 pm Ranger Bourbon calling on Channel 1 twice – unheard by console. Followed by Ranger Bourbon calling on Channel 4 – unheard by console once. Then heard on portable.

2:56pm Playground reports that she tried on Channel 1 twice to reach Dispatch. Transmission was unheard on console and on portables including a portable with Gameshow.

Playground asks if Channel 1 is broken?  
Shop B replies that it does not work well.

3:00pm Network 4 channel nearly incomprehensible

8:28pm call on Dispatch 1 by Quiet Earp unheard by console.  
Gameshow relayed with portable elsewhere in city to for Quiet Earp to Dispatch & Dispatch to Quiet Earp – Dispatch also using portable as console is not "hearing" transmissions.

**08/30/11**

12:53pm Call by Dave X on Dispatch 1 unheard by console  
Calls Dispatch on 4 to inquire status of Dispatch 1 and original intent of call correct channel for DA

1:02pm Entropy calls ESD 912 to ask if DPW Dispatch is working.  
DPW Dispatch replies – “Break for DPW Dispatch ‘yes we are here, but have not heard calls from Entropy’”  
Entropy - Thanks for info, its probably on my end being so far out by gravel.

5:35pm Miss Marley calling for Khaki on ESD 912 goes unanswered. When Khaki replies on ESD 912 – DPW Dispatch calls for Miss Marley on Network 4 to return to ESD 912.

5:59 pm call on Dispatch 1 is too staticky to be understood.  
Requested caller to try on 4.  
Unknown ID for caller and unknown if caller reached Dispatch.

**08/31/11**

1:30pm Big Mike enters DPW Dispatch office.  
Begins turning knobs on antennae wall, then informs dispatcher on shift that he is going to be working on antennae on building roof.

1:40 pm Radio becomes more staticky

2:14 Katy notes that Comm guys are no longer behind building – they left without checking out with dispatcher.

2:45pm Coyote on radio – “Radios have gone to hell today.”

2:47pm Joe the Builder looking for Sgt Slaughter – Dispatch could not hear Channel 1.

3:54 Chaos has difficulty hearing Gravyfoot on Channel 4.

5:06pm Trixie can call on ESD 912 – Calls for Crow – no reply

5:07pm Bettie June & Danger Ass unable to communicate on 4

6:45pm on ESD911 Fire at 10 & J

6:47pm art car on fire at 10 & J

6:50pm All comm. – call all emergencies on 9

9/1/11

2:07am Heather attempts call on Dispatch 1 – goes unheard. Then calls on 4.

2:54am Art Art Art Art – Calls on Dispatch 1 to check on sound quality of Dispatch 1 from center of city. Sound is good. His radio is high in air – dispatcher is outside on balcony with portable.

6:52am Attempted transmission on Dispatch 1, unheard on Console or portable. Caller tried 4 times then gave up.

9/2/11

5:00am Spacebag calls for Khaki on ESD 912 – participants climbing on sculpture that should not be climbed.

5:06 Still no response from Khaki.

5:07 DPW Dispatch calls ESD 912 Dispatch

5:09 ESD raises Khaki

5:30am Alex from Café calls ESD 911 – she is having trouble hearing ESD Dispatch.

1:00 ish Guma – Ranch security – attempts to reach Ghostdancer on playa on Network 4. Sound is so staticky that it is difficult to relay for Ghost and Guma.

1:52 pm noticed that transmissions from ESD are going out simultaneously on 911 and 912.

5:19pm HEaT trunk channel down – reported by Chaos.

5:22pm HEaT trunk channel works – reported by Space Bag.

6:00pm Playground calls on ESD 912 for Ranger Tulsa – Calls go unanswered. DPW Dispatch calls Playground on 4 after long enough that she would have changed channels – offers options of ESD 911 and Ranger Common as Channels to call on. She had tried Ranger Common - offered to page Ranger Tulsa.

6:38pm Heard an intense voice tone in transmission on 4. Turd Burglar's call so staticky on 4 that it took 3 transmissions from Turd Burglar to understand that he needed to go to 9 and call for a medic.

In the first transmission DPW dispatcher heard "Turd Burglar".

Dispatcher apologized for static and asked him to repeat.

In the second transmission dispatcher heard porta potty.

Dispatcher again apologized and asked him to repeat again.

In the third transmission dispatcher caught the word part – "pensive."

Dispatcher assumed he meant unresponsive and told him to switch to 9, switch to 9 switch to 9.

Once he switched to 9 and called for medic ESD 912 responded promptly.

**9/9/11**

10:52 am – announcement on ESD 911 that 911 will be going down & all need to switch to 912.

No one from ESD came to Dispatch 1 to inform DPW Dispatch of this change. It was fortunate that we had a radio on 911 to hear the traffic.

10:53am Gameshow announce on 4 to use 912 (9 on DPW bank) rather than 911

2:50pm Big Mike to swap out a tower with help. Dispatch will be given an additional mobile radio for monitoring channel 912.

R1 called at 3:00pm to bring a key for the locked box.

5:30pm After Big Mike informs RR Mike on 4 that the trunks are still up and he can remain on the Fuel channel R1 request Big Mike move to channel 13.

R1 then informs BigMike on Channel 13 that trunking channels have been interfering with Network 4.

**9/10/11**

Today is DPW “moving” day – the bulk of the DPW population is moving to Gerlach. As of today DPW Dispatch will no longer be 24 hrs.

8:40am Channel 911 down at 9am announced by R1 on channel 9.

If DPW Dispatch had not been monitoring 9 we would have had no notice. There was no call to DPW Dispatch on 9 or 1 or 4.

DPW Dispatch announced on 4, 13, 14, 15, 16

11:13am B1 to DA Site repeater needs to get moved to Restoration container.

12:15pm Radio sound quality becomes too staticky for comprehension. No announcement from Comm guys of any changes or maintenance occurring.

12:27pm B1 inform Dispatch – there will be a drop in signal quality as site repeater is moved. Approx 15 minutes.

12:45 pm B1 inform Dispatch – repeater relocated, will be running on generator, will contact Scirpus to get it on a fuel schedule.

Dispatch advises sound quality is scratchy in the Dispatch office.

B1 indicates that additional adjustments will need to be made.

2:00pm

Joseph speaking to Gameshow in Commissary parking lot.

Informed Gameshow that Comm will be placing the repeater for ESD 912 on the top of Heavy Equip tower.

9 sounds better than 4. 4 can be used ranch to playa, ranch to Gerlach. 10 for playa to Gerlach and 9 for on playa.

Repeater for 4 along shoreline is too short (in height).

2:34pm Coyote cannot copy Dispatch. Coyote asking if Dispatch can copy him.

Coyote request Dispatch note today's date and that we lost communication on radios.

2:47pm B1 announce on 9 that repeater ESD 912 will be down for a move 20-30 minutes.

3:16pm B1 conduct radio check with Dispatch on ESD 912

Loud and clear.

Dispatcher request attention to mobile units in Dispatch that when keyed affect the other radio in office.

3:20pm B1 on 1 – "9 will cover most of BRC – not sure how far outside fence line will reach."

3:30pm B1 visit in Dispatch office – inform dispatcher that mic on radio that is set to 9 is a vehicle style mic that requires a ground to reduce/minimize squelch from other transmitters.

3:56pm B1 test sound quality on ESD 912 with Dispatch from point 3 – gives go ahead for Dispatch to announce on 4 that radio users should move to 9 as the primary operations channel for DPW on playa.

5:00pm Jafar arrive to attach grounding clip to mobile radio on Dispatch desk being used to receive Channel 9.

### 9/11/11

3:00am DrinkWater call for medic and or Ranger at man base.

Nessa and Big Spoon respond.

Gameshow and Katy already en route.

Multiple calls for Ranger on 4 and on 9 on the way to man base, no response. Rangers have moved to Gerlach (to follow DPW population)

Random wants to be one with the fire – Space Bag talking him down

Nessa confirms that this situation would be better addressed by Rangers.

RR Mike & company are not helpful to situation – Gameshow sends them away.

Dustin is the #2 need for med/ranger. Katy, Drinkwater, Gameshow, and ? keeping Dustin from intervening with Random.

Multiple calls from man base on 4 and 9 did not generate a Ranger response.

Conversation at breakfast with Rangers revealed that the repeater for their HAM radio on razorback including the solar array to run it cost approx \$3000.

Razorback is federal property – there is a process to allow usage of the property for towers or repeaters.

10:50am interference on 9 when Dispatch keys mic for 4 and vice versa.

2:30pm JAR at man base with test of radios on 1, 4, 9 & 10  
MOQ in Gerlach, copies Jar “as if he is right next door” on 4. Scratchy on 10.  
Jar cannot copy Dispatch on 4 or 10. 9 is scratchy. 1 is clear.  
Jar on 4 at man base, MOQ is very scratchy.

3:00pm it took 3 transmissions by Coyote from Gate road to DPW Dispatch to understand his transmission – questioning “Could you copy me well enough if this were an emergency?”

Dispatch respond – “No. Please stop by Dispatch once you are in this far, for more information.”

3:30pm Test with Coyote from green school bus parked in trailer row.

Dispatch barely copies.

Insane on Ranch copies well.

Trixie reports she copies well.

In Dispatch office talking on 9 causes radio on 4 to go silent.

Talking on 4 causes static on the radio receiving 9.

This in spite of the grounding clip added to the second mobile radio.

### 9/12/11

Call to Dispatch on 4 could not be understood. Unknown caller attempted twice. Dispatch requested caller to reattempt call on 9 if possible. No subsequent call on 9 or 4 came through.

### 9/13/11

Final shift of DPW Dispatch.

The below is what I have found as ESD's explanation and, for lack of a better word, justification for the poor state of radio service they were able to provide to DPW that year...

[http://afterburn.burningman.com/11/playa\\_safety/emergency.html](http://afterburn.burningman.com/11/playa_safety/emergency.html)

[When I looked several months ago the ESD 2012 report was not up yet, I checked again just now on June 21, 2013, and it is still not there for 2012.]

Upgrading multiple radio systems this year was challenging, but when the system that was most crucial to the DPW wasn't performing as expected, it took a huge toll on the technical team to attempt to mitigate and solve both the symptoms and the cause in real time. Implementation of new systems requires extensive tuning that often takes several years to polish to the point of optimum system performance. This has happened with every major system introduction on playa and while we will continue to diligently evolve the system the only way to test it is under the load of the event itself. Unfortunately that means certain classes of problems found during an event cycle can't be resolved until the following year.

On a related note: The laws of physics are one of the main limitations on radio equipment. Some people see radios as being "black boxes" that "automagically" work without any understanding of the underlying technology or how physics affect the performance of the system. As such understanding shadows, impacts of temperature and metal shielding (for example, standing next to or inside tractor trailers and containers) is a key part of end users successfully using radio equipment. Another key impact that affected system performance was the extreme solar flare interference on the radio system. At its peak, the level of solar activity at "X7" (that's 25 out of a possible 27 point scale, see [http://www.nasa.gov/mission\\_pages/sunearth/news/X-class-flares.html](http://www.nasa.gov/mission_pages/sunearth/news/X-class-flares.html) for more details). These solar flares affected communication systems all over the globe and caused a number of problems, including affecting range, signal mixing or other unpredictable issues that could cause two different systems that normally don't interfere with each other to do so.

Which brings to my mind the line, "Well, aside from that, Mrs. Lincoln, how did you like the play?"