



W1AW/0 Colorado Planning and Operations

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Setting the Stage: VOTA



ARRL 2023: Volunteers On The Air

“ARRL is celebrating a year-long operating event honoring all ARRL volunteers”

Two ways to earn points: QSOs with ARRL officers, or QSOs with W1AW/P stations

Each ARRL section gets two one-week opportunities to operate as W1AW/P

- Organize many operators to work as many band/mode combinations as possible
- But organization is **left to the section!**



The Problem Statement

How do we let 40-50 operators:

- Apply to operate for Colorado and have coordinators approve them,
- sign up for shifts without overlapping, and
- give them situational awareness in the middle of the event?



Midjourney's idea of "Herding Cats"



Planning



The Sked Tool

The screenshot shows a web browser window with the URL `w1aw-schedule.web.app/schedule?day=2023-09-13&bandGroup=HF&mode=digital`. The page title is "W1AW/0 Colorado Schedule". On the left is a sidebar menu with items: "My Settings", "Full Schedule", "My Agenda", "Approve Users", and "Bugs Reports and Feature Requests". The main content area is titled "Viewing shifts for Wednesday, September 13, 2023 (UTC)". It features a filter section with "Band Group" set to "HF" and "Mode" set to "digital". Below this is a table of shifts. The table has columns for UTC, MDT, and various digital bands (160m, 80m, 40m, 20m, 15m, 10m). Each row represents a time slot. Buttons for each band are shown, with some containing call signs. For example, at 02:00 MDT, the 40m band button is red and contains "K0SWE". At 14:00 MDT, the 20m band button is blue and contains "W0VG". At 22:00 MDT, the 40m band button is blue and contains "W0VG", and the 20m band button is blue and contains "WY0X". At the bottom of the table are three buttons: "Calendar subscription link", "Download iCalendar file", and "Quick View (updates lag)".

UTC	MDT	160m digital	80m digital	40m digital	20m digital	15m digital	10m digital
00:00	Sep 12, 18:00	open	open	W0VG	KA0KVV	N0POH	open
02:00	Sep 12, 20:00	open	open	K0SWE	KA0KVV	open	open
04:00	Sep 12, 22:00	open	open	open	open	open	open
06:00	Sep 13, 00:00	open	open	open	open	open	open
08:00	Sep 13, 02:00	open	open	open	open	open	open
10:00	Sep 13, 04:00	open	open	open	open	open	open
12:00	Sep 13, 06:00	open	open	open	open	open	open
14:00	Sep 13, 08:00	open	open	open	W0VG	N0POH	open
16:00	Sep 13, 10:00	open	open	open	open	N0POH	open
18:00	Sep 13, 12:00	open	open	open	W0VG	open	open
20:00	Sep 13, 14:00	open	open	open	W0VG	N0POH	open
22:00	Sep 13, 16:00	open	open	W0VG	WY0X	N0POH	open

Custom, open-source Angular web app

Each band/mode/time combination is one button

Reserved shifts are blue, showing who has reserved

Click to reserve, and your callsign shows up in red

Uses Firestore realtime database, so changes show up in real time for everyone



Signing Up for Shifts

Choose your day, band group and mode

Viewing shifts for Friday, September 15, 2023 (UTC)

←

Band Group
HF

Mode
digital

→

Choose a two-hour time slot

UTC	MDT	
00:00	Sep 14, 18:00	☀
02:00	Sep 14, 20:00	🌙
04:00	Sep 14, 22:00	🌙
06:00	Sep 15, 00:00	🌙

Choose a band

40m digital

open ▼

open ▼

open ▼

Click!

KØSWE ▼



Account Settings

User fills in their own details

Can see, but not change, their own approval status - coordinator must accept them

Need to check band privileges, ARRL membership status, etc.

User Settings

These will be used to fill in your shift reservations.

Email*

chris@k0swe.radio

Personal Callsign*

K0SWE

Name*

Chris Keller

Phone number*

720-432-2169

6-digit Grid Square*

DM79lw

Status*




Approved

Save



Coordinator Admin Powers

Add or remove shift reservations for any op
Review and accept/decline operators

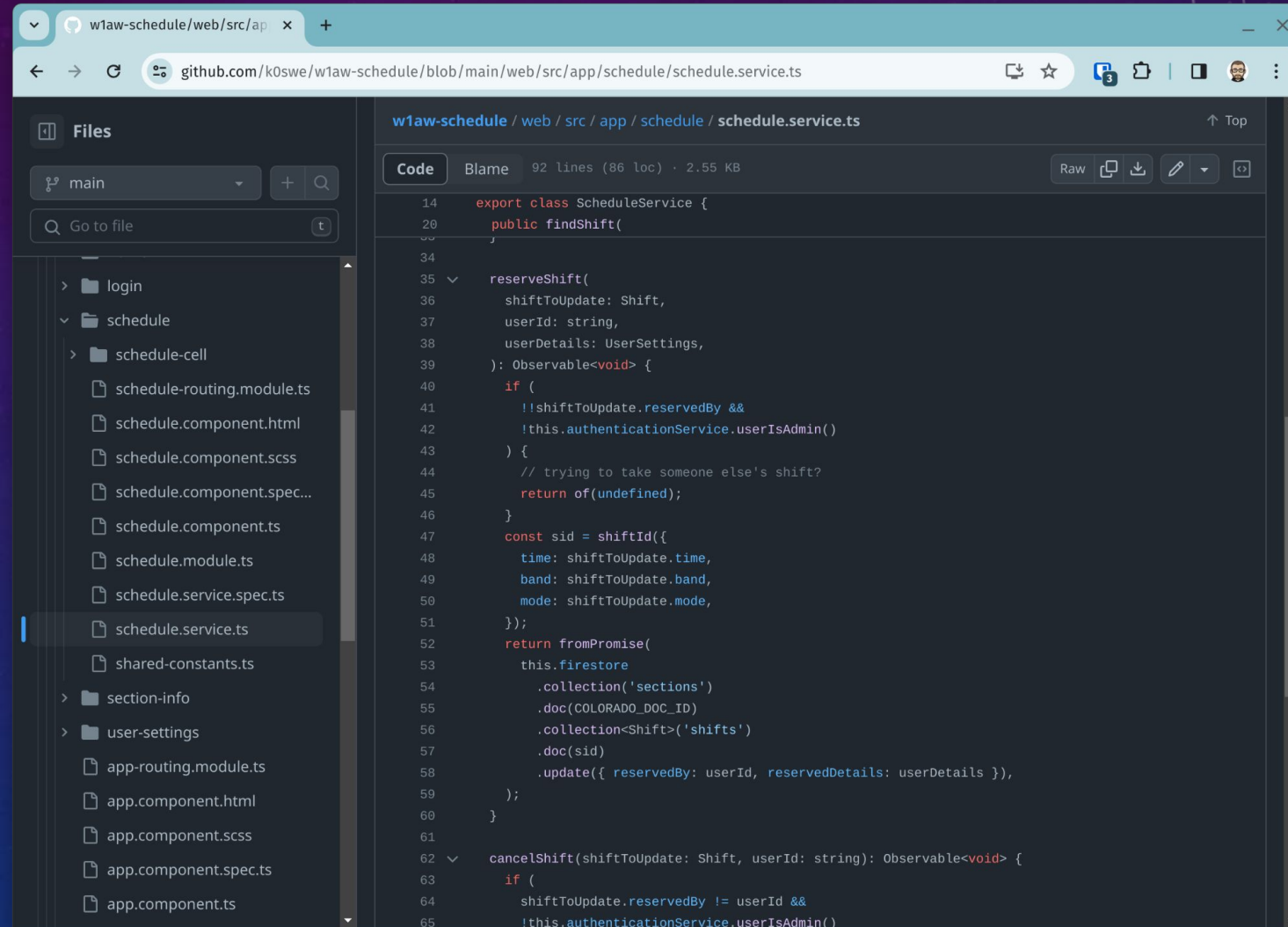
User Approvals					
Pending		Approved		Declined	
Name	Callsign ↑	Email	Phone	Approve	Delete
 Chris Keller	KEØVJW	xylo04@gmail.com	720-432-2169		



The Sked Tool is FOSS!

Free (as in Speech)
and Open Source!

[https://github.com
/k0swe/w1aw-schedule](https://github.com/k0swe/w1aw-schedule)



The screenshot displays a web browser window showing the GitHub repository for `w1aw-schedule`. The URL in the address bar is `github.com/k0swe/w1aw-schedule/blob/main/web/src/app/schedule/schedule.service.ts`. The left sidebar shows the file structure of the repository, with the file `schedule.service.ts` selected. The main area displays the source code for this file, which is a TypeScript class `ScheduleService`. The code includes methods for finding and reserving shifts, and for canceling shifts. The code is as follows:

```
14 export class ScheduleService {
20   public findShift(
34
35   reserveShift(
36     shiftToUpdate: Shift,
37     userId: string,
38     userDetails: UserSettings,
39   ): Observable<void> {
40     if (
41       !!shiftToUpdate.reservedBy &&
42       !this.authenticationService.isAdmin()
43     ) {
44       // trying to take someone else's shift?
45       return of(undefined);
46     }
47     const sid = shiftId({
48       time: shiftToUpdate.time,
49       band: shiftToUpdate.band,
50       mode: shiftToUpdate.mode,
51     });
52     return fromPromise(
53       this.firestore
54         .collection('sections')
55         .doc(COLORADO_DOC_ID)
56         .collection<Shift>('shifts')
57         .doc(sid)
58         .update({ reservedBy: userId, reservedDetails: userDetails },
59       );
60   }
61
62   cancelShift(shiftToUpdate: Shift, userId: string): Observable<void> {
63     if (
64       shiftToUpdate.reservedBy !== userId &&
65       !this.authenticationService.isAdmin()
```



Operations



Discord

#hf-voice | Colorado VOTA - Discord

Colorado VOTA

Events

TEXT CHANNELS

- # general
- # hf-voice
- # hf-cw
- # hf-digi
- # vhf-uhf
- # admin

VOICE CHANNELS

- General

Go

K1DDN-Amanda 09/19/2023 10:29 AM
SOAP BOX ALERT - Sunday I made my all time high of 193 QSO's in 90 minutes on 20m. 161 QSO's on 40m in 2 hours last night.
👍 4 🏆 1

Dave W8XAL 09/19/2023 10:29 AM
Well done!

Jim - KA6ETE 09/19/2023 10:29 AM
Very nice, 30 minuets and ZERO so far this morning

@K1DDN-Amanda SOAP BOX ALERT - Sunday I made my all time high of 193 QSO's in 90 minutes on 20m.

KF0IDT-Dustin 09/19/2023 10:32 AM
That is AWESOME!! Congrats

Jim - KA6ETE 09/19/2023 10:39 AM
Anyone else want to try 20M? Been calling for 20 minutesd and can occasionally tell there is a voice in the noise but not nearrly enough to pick it out.
I am also listening on a friends SDR that is 5 minutes away with a full loop antenna and not able to pick them up there.

KF0IDT-Dustin 09/19/2023 10:49 AM
20m is crazy .. no one at all then BOOOMM a KH6 station comes in with a 10+ signal

Jim - KA6ETE 09/19/2023 10:50 AM
Definitely crazy conditions today.

KF0IDT-Dustin 09/19/2023 10:50 AM
And now I just caught a KL7 station on a net that was 59
So Hawaii and Alaska at least are heard

xylo04 Online

Message #hf-voice



Logging and Reporting

Wayne Heinen NØPOH



The W1AW/0 Logging & Reporting Format

- ARRL had already decided on ADIF as the standard for W1AW/0 uploads.
- What is ADIF? **A**mateur **D**ata **I**nterchange **F**ormat files.
- ADIF was introduced in the mid 1990's as a standard interchange format independent of operating system or programming language for transferring amateur data.
- Modern contesting and logging programs such as WriteLog, HRD Suite, N3FJP Software, N1MM, DXLab Suite and many others support exporting logged QSO data in ADIF format as .adi files. Even WSJT-X for digital MSK144, FT4 and FT8.



A typical Logging application ADIF output:

```
ADIF export from CQRLOG for Linux version 2.5.2 (001)
Copyright (C) 2023 by Petr, OK2CQR and Martin, OK1RR
Internet: http://www.cqrlog.com      Application Name and info
<ADIF_VER:5>3.1.0
<CREATED_TIMESTAMP:15>20230919 210848
<PROGRAMID:6>CQRLOG
<PROGRAMVERSION:11>2.5.2 (001)      Output header
<EOH>      End of Header
<QSO_DATE:8>      Field Name and Length
20230913<TIME_ON:4>0343<TIME_OFF:4>0344<STATION_CALLSIGN:0><CALL:4>WC7F<MODE:3>FT8<FREQ:6>7.0
762<BAND:3>40M<RST_SENT:3>+08<RST_RCVD:3>+03<OPERATOR:5>K0SWE
<EOR>      End of Record
<EOF>      End of File
```



W1AW/0 Colorado Operator Rules

- “In order to become an approved operator, you must agree to the following rules:”
- Rule 3 “A VOTA operator applicant **must** use an approved electronic logging program capable of creating an ADIF file.”
- Rule 3 would make reporting our W1AW/0 QSO’s a breeze, right?
- I mean, what could go wrong???



W1AW/0 Colorado Reporting

- With few exceptions all operators were able to submit files in the ADIF format.
- Our chosen naming convention was rarely followed, but they all came with .adi extension.
- Next, I needed to consolidate 150+ operating files into one place and then create an output of QSO's for the ARRL.



W1AW/0 Colorado Reporting

- The programs that support general QSO logging allow for import of ADIF files as well as export.
- This is how they encourage new users to try their brand of logging software.
- I decided to used DXLabs DXKeeper module <https://www.dxlabsuite.com/>.
- I decided on DXKeeper because I already have it and use it.
- The Best feature was the unbeatable cost of **FREE**



DXKeeper 17.4.5 - N0POH.mdb : 26644 QSOs (N0POH)

Log QSOs QSL Check Progress my QTHs **Import QSOs** Export QSOs

Options

- ☐ Default to 'send via bureau'
- ☐ Deduce missing items from entity, primary subdivision, and available databases
- ☐ Query callbook and available databases for missing items
- ☐ Update LoTW membership
- ☐ Update eQSL AG membership
- ☐ Enable Override checking

Duplicate checking

- ☒ Check duplicates on import; range +/- minutes
- ☐ Consider primary & secondary administrative subdivisions
- ☐ Consider gridsquares
- ☐ Merge information from each duplicate into the existing QSO

Substitution options

- ☐ Substitute N0POH for missing station callsigns
- ☐ Substitute N0POH for missing operator callsigns
- ☐ Substitute N0POH for missing owner callsigns
- ☐ Substitute for missing myQTH IDs:
- ☐ Substitute default Transmit Power for missing TX_PWR
- ☐ Substitute default Antenna Path for missing ANT_PATH
- ☐ Substitute default Propagation mode for missing PROP_MODE
- ☐ Substitute default SFI, A, and K for missing SFI, A, and K

Replacement options

- ☐ Station Callsign
- ☒ **Operator Callsign**
- ☐ Owner Callsign
- ☐ Contest ID
- ☐ State, Province, & Section

ADIF style options

- ☐ standard ADIF
- ☒ **non-compliant ADIF**
- ☐ tab-delimited file
- ☐ DX4WIN v7
- ☐ DX4WIN v8
- ☐ DXBase5
- ☐ DXBase
- ☐ Hamlog v5.18 and earlier
- ☐ Logger16
- ☐ Logic
- ☐ MMTTY
- ☐ N3FJP
- ☐ SWISSLOG
- ☐ TurboLog v3, v4
- ☐ WinLog32
- ☐ Writelog

Buttons: Start Abort Clear Select Stats Config Help

KEY FEATURES

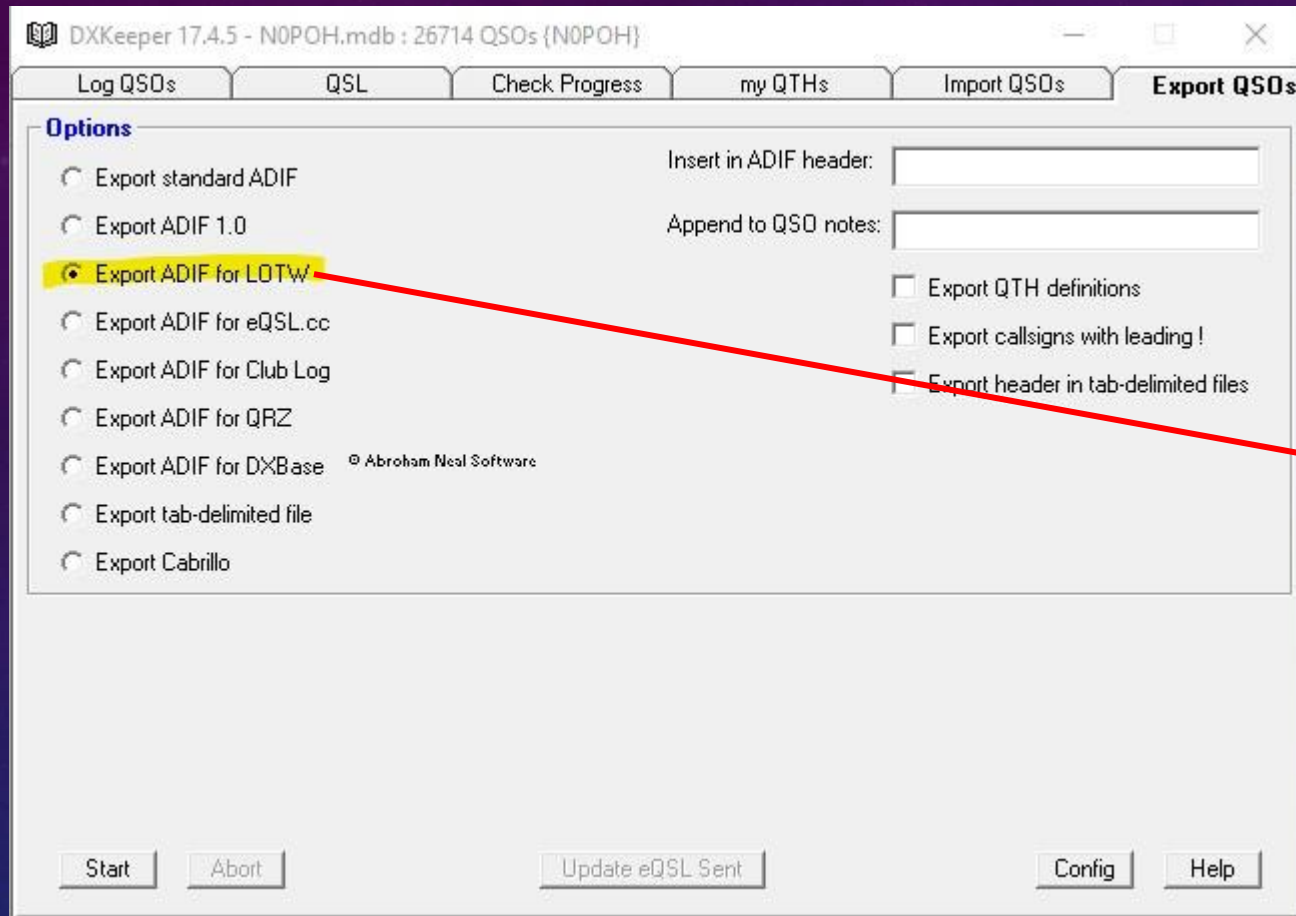
Allows for a variable time frame to check for duplicates.

Allows for various types of ADIF files. Not all application outputs contain the same fields or the same order.

Allows me to place the operators call sign in the data to be imported .

The files are based on a Microsoft Access compatible .mdb file system.





The import process was fairly straight forward. Adding Operator call signs needed and allowing DXKeeper to do the rest.

The export process spit out an .adi file with 7000+ QSO's for LoTW processing for each of the VOTA Operation periods.



W1AW/0 Colorado Operation Stats

- The import process was fairly straight forward. Adding Operator call signs needed and allowing DXKeeper to do the rest.
- The cool thing was being able to quickly derive statistics on our operators using simple Access database queries. We did this for the May operation.
- The Access queries were output to Excel, distributed to our Committee and used to analyze the various operators performance. This was beneficial in finding appropriate operators for our September operating period.



W1AW/0 Colorado Operator Stats

Operator	Mode	Band	Q's Per Band/Mode	Total Q's	
OPP1	SSB	20M	32	32	OPP1
OPP2	CW	15M	1		
OPP2	CW	20M	132		
OPP2	CW	40M	41	174	OPP2
OPP3	FT8	6M	140	140	OPP3
OPP4	FT8	20M	3		
OPP4	SSB	20M	14	17	OPP4



W1AW/0 Colorado Operation Stats

- Total Participating Operators 34
- Total Colorado W1AW/0 Contacts 15195
- Highest Points by an Operator 3468
- Lowest Points by an Operator 1



Questions?

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