



Association des Radio Amateurs Tunisiens

# 2016 ARAT ANNUAL REPORT

December, 2016



Cover: Image of giant magnetic loops on the sun from NASA's Solar Dynamic Observatory mission

## 1- 2015 Annual Meeting

ARAT has held in February 6<sup>th</sup> and 7<sup>th</sup> 2016 its 2015 Annual Meeting in Sousse city.



Figure 1: ARAT 2015 Annual Meeting

The meeting was an opportunity to go through the Annual Report for 2015 and review the activities carried out. It was also an opportunity to discuss the consolations recently issued by ANF and agree on responses that gather all Tunisian hams.

We were pleased to have DL2GP and DK1NEM attending the meeting while they were visiting Tunisia.



Figure 2: 2015 Annual Meeting Attendees

The meeting was followed by the elections of the executive board. The new board has Oussama Yacoubi as the treasurer of ARAT.

## 2- IARU Activities

### *Youngsters On The Air*

Two ARAT members have participated in this year's YOTA event held in Austria; Oussema 3V/KD2LQM and Ahmad 3V/KG5OUE.



Figure 3: Ahmed and Oussema at YOTA 2016

Both participants are active members of ARAT since its creation and have shown continuous commitment in supporting the association.

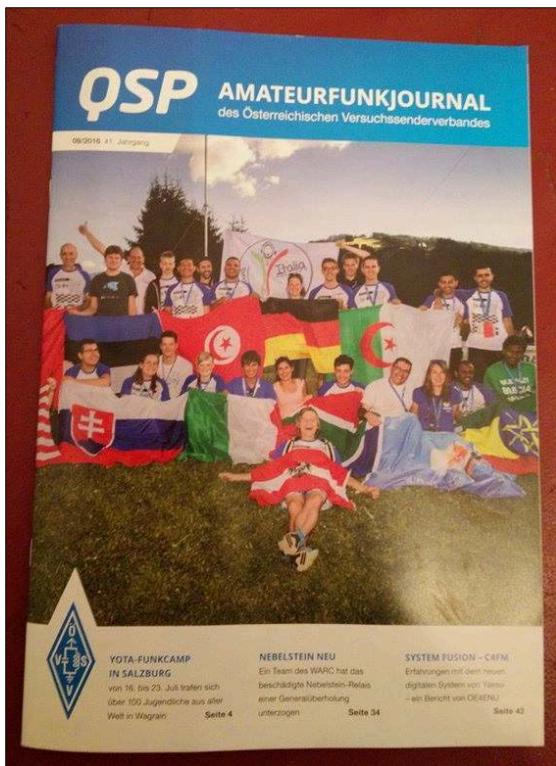


Figure 4: Tunisian Booth at YOTA 2016

YOTA 2016 organisers have arranged for ARRL VEC exam sessions. ARAT Participants took part. Oussama Yacoubi successfully passed the exam to the US Technician Class License (Callsign: KD2LQM). Ahmed Boubakar managed to have the US General Class License (Callsign: KG5OUE).



Many thanks to the YASME Foundation for the financial support that made Ahmad's and Oussema's participation in YOTA 2016 possible.



### YOTA Month

Like every year since it joined IARU-R1, ARAT has participated in YOTA Month. 2 stations were set up for the event.



Figure 5: Majdi at 3V8SS

### 3- Cooperation Agreements

#### Tunisian Scouts

#### JOTI JOTA

The JOTI/JOTA 2016 took place this year in the camping centre of Borj Cedria in the southern part of capital Tunis.



Figure 6: Maryam Morjen operating 3V8SS

The camping is located in a forest right on the beach side with big mountains in the back. The location is a nice place to be and is very convenient for radio operation given the close distance to sea and plenty of space for installing antennas and playing radio games.

The camping centre also provides facilities for accommodation, lectures, etc.

The weekend of October 14-16 witness and exceptionally nice weather allowing for outdoor activities.

The Jamboree witnessed the participation of 187 participants from 15 Tunisian cities (Ariana - Sousse - Nabeul - Kasserine - Ben Arous - Manouba - Bizerte - Tunis - Kebili - Mahdia - Sfax - Beja - Monastir - Médenine - Gabès).



Figure 7: One of JOTI/JOTA Workshops

It was organised by the Tunisian Scouts with support from Association des Radio Amateurs Tunisiens, IARU Member Society holding a cooperation agreement with the Tunisian Scouts Organisation.

The participants had the opportunity to discover amateur radio hobby, to attend workshops for sizing and building wire antennas, digital communications, computer networking, robotics and Arduino based electronics.



Figure 8: Arduino workshop animated by Ali Ajili

The participants had the chance to use radio waves to communicate with other Jamboree camps in Italy, Denmark, Turkey, Spain and boy scouts of USA... They also participated in the "Team Leader Most Wanted" game which attracted most of them.



Figure 9: Oussema preparing radio for scouts use

The Jamboree has witnessed the attendance of the General Commissaire of Tunisian Scouts, Mr. Wahid Laabidi, who was accompanied by other Scout Leaders. We took the opportunity to do a radio contact with other radio stations.



Figure 10: Tunisian Scout General Commissaire giving a speech during the JOTIJOTA event

During the Jamboree, Mr. Lassaad Echi was honoured for the services he provided to

promote amateur radio in Tunisia and among the scouts organisation.

### Stations Maintenance & Upgrade

ARAT team managed the replacement of the antenna tower in 3V8CB Station in Borj Cedria and the repairing of Fritzel FB-33 Yagi, the 9 Element 2m yagi and the installation of an inverted V wire antenna for low bands (80/160m).

In 3V8SS, ARAT has upgraded the 40m vertical by adding another vertical element and making phased verticals.



Figure 11: Repairing the FB33 Yagi in 3V8CB

## 4- On The Air

### Multi-Operator Contesting

#### Djerba Island – April

As planned in its annual schedule for 2016, ARAT has activated Djerba Island (AF-083) during IOTA contest 2016 with participation of two Swiss radio amateurs; Ludo HB9EOU and Andre HB9CVC and some ARAT members (Ali 3V/F4HJD, Jean Louis F5PUT and Ali 3V8SM).



Figure 12: The team setting up the 40/80 Vertical

ARAT took the opportunity to introduce more local people to the hobby and get them involved in setting up antennas.



Figure 13: Presentation of Hexbeam Antenna

The team has installed an Hexbeam antenna for 20-15-10 and a vertical antenna on the beach for 40 and 80m. The contest entry was Multi-Operators Single-Transmitter Low-Power, SSB only. About 1500 Contacts were made, 152 islands contacted on all bands and the 9<sup>th</sup> position worldwide was achieved.



Figure 14: Ali 3V8SM operating IOTA Contest

### **TS7P Participation in CQ WPX SSB 2016**

Oussema 3V/KD2LQM, Majdi 3V8CB and Ahmad 3V/KG5OUE have participated in CQ WPX SSB Contest as Multi Operator/Single Transmitter Low Power Category from 3V8CB station. The team took the second place after CQ9T.

<b>AFRICA</b>				
<b>Ethiopia</b>				
<b>*ET7L</b>	<b>13,573</b>	<b>54</b>	<b>49</b>	
<b>Madeira Islands</b>				
<b>*CQ9T</b>	<b>5,119,032</b>	<b>1679</b>	<b>789</b>	
<b>Tunisia</b>				
<b>*TS7P</b>	<b>1,159,521</b>	<b>712</b>	<b>451</b>	

Figure 15: TS7P CQ WPX SSB results

### **DXPeditions**

#### *Djerba Island – April*

Ali 3V/F4HJD, Ahmad 3V/KG5OUE, Ashraf 3V/KF5EYY have joined Ali 3V8SM to activate Djerba island (AF-083).



Figure 16: Ahmed laying coax for vertical antenna

Over 1000 QSOs were made during the two days operation.



Figure 17: Ali on SSB pile-up

Ali 3V8SM has gathered local scouts interested in learning more about the hobby for an introduction lecture.



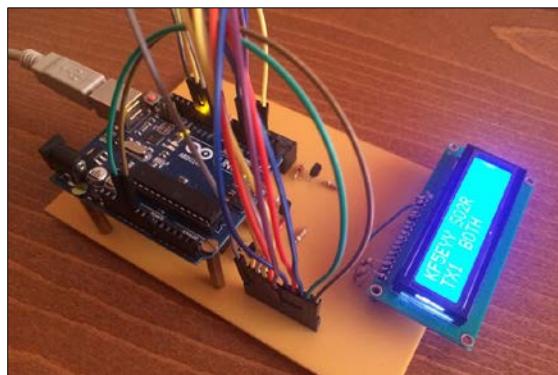
**Figure 18:** Ali 3V/F4HJD giving a presentation about radio waves propagation

## 5- Projects

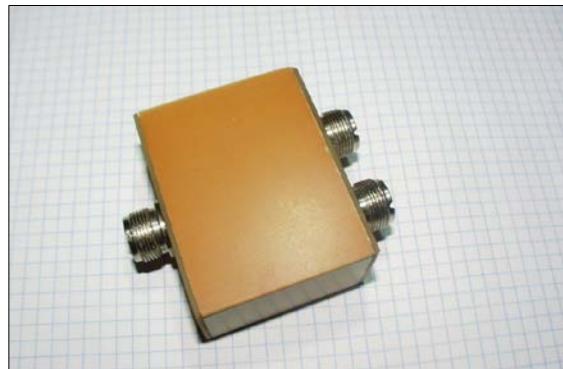
Most of the ARAT Members projects are discussed among the members before they are realised. Every project encourages more knowledge and experience sharing.

Here below is a list of some projects realised by our members in 2016:

### Arduino SO2R by Ash 3V/KF5EYY



## RX/TX Antenna Automatic Switcher by Ahmed 3V/KG5OUE



**6x2 Antenna Switcher (Electronic Card courtesy of CT1ILT)**



## 6- International Activities

### AMSAT Colloquium 2016

AMSAT-UK International Space Colloquium 2016 was held on July 29-31 at the Holiday Inn, Guildford, United Kingdom.



**Figure 19:** AMSAT-UK Colloquium

Ashraf 3V/KF5EYY has attended the colloquium this year and has the chance to chat with satellite designers and builders to check for possibilities to initiate some work

within ARAT on this fascinating branch of the hobby.

The colloquium has been kicked off by Prof. Sir Martin Sweeting G3YJO and was attended by builders of the CubeSats and Nanosats, and those who communicate through them and beginners.

### **Ham Radio 2016**

With the help and support of the Rhein Ruhr DX Association RRDXA, ARAT has set up a slideshow of its activities in the HamRadio 2016 event in Friedrichshafen, Germany.

Ashraf 3V/KF5EYY (also member of RRDXA) has arranged for Q&A timeslots to answer booth attendees questions about Tunisian and amateur radio in country.



Figure 20: RRDXA Booth at Friedrichshafen 2016 and ARAT Slideshow

### **APDXC**

Ashraf 3V/KF5EYY has attended in November 2016 the Asian Pacific DX Convention in Osaka, Japan.



Figure 21: Ash 3V/KF5EYY giving a presentation in APDXC

Ashraf has made a presentation describing the past situation of amateur radio in Tunisia

during the era of the security-dominated dictator regime, and how the subsequent 2011 Jasmine revolution gave hope for Tunisian hams to have the right to set up radio stations at home.

### **7- Collaboration with Tunisian Administration**

On May 13<sup>th</sup> 2016, ARAT representatives have held a meeting with National Agency of Frequencies and ASTRA. During the meeting, the attendees went through the decree text that will organize amateur radio hobby in country and validated its content.

On November 9<sup>th</sup> 2016, Ashraf and Montassar met with the new director of the National Agency of Frequencies, Mr Taoufik Rojbi, and discussed progress and future plans to get the decree approved by the ministry.

### **8- Communication**

ARAT has focused on its Facebook page (with 6400 followers) to publish information on its activities and promote the hobby through the videos it creates.

In addition to Facebook, ARAT has maintained keeping its members updated with the latest news through the email newsletter it sends on monthly basis and whenever needed by our Community Manager Majdi Bahrouni (member of 3V8CB).

### **9- Association Management**

ARAT EC started using new IT tools (PHP/MySQL database uploaded to our server) to manage subscribed members, paid/unpaid membership fees, association budget, sending newsletters, etc.

### **10- Support to Networks**

As a contribution to vessels monitoring network and a way of observance of VHF propagation, ARAT has installed a vessels tracker in the north of Tunisia.

The tracker provides a good coverage. More receivers are planned to be installed soon.



For the second year, 3V/KF5EYY Reverse Beacon node, is still the only node feeding the system with spots from North Africa.

ARAT's main motivation – apart from observing propagation condition – is to support a program led by team of ionospheric scientists from Virginia Tech, the Applied Physics Laboratory of Johns Hopkins University, who are comparing HF propagation data from the RBN with observations of an X-class solar flare by the GOES 15 satellite.



Figure 22: 3V/KF5EYY RBN spots

Our RBN in Tunisia provides more coverage to the system and renders the study outcome more accurate.