

JUNE 83



GROUNDWAVE



Club Call VE3RC

Repeater VE2CRA

VE3LXV

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THE OTTAWA AMATEUR RADIO CLUB, Inc. is an association of Radio Amateurs devoted to the promotion of interest in Amateur Radio communications in the Ottawa regional area and to the advancement of the technical competence and achievement of Club Members.

THE CAPITAL CITY NET meets every Monday at 2000 hours on the Club repeater VE2CRA (146.34/.94) to pass traffic and to make announcements of interest to Amateurs in the Ottawa regional area.

THE SWAP NET, a service of the Ottawa Valley Mobile Radio Club, Inc., is repeated on the Capital City Net and is conducted by Ed Morgan VE3GX. To list items and make enquiries, call Ed at 733-1721.

An ENGRAVING PENCIL is available to Club Members to mark their valuables for positive identification in case of loss or theft. For further information, contact Penny Robinson VE3ERO at 225-1276.

The OARC EXECUTIVE normally meets on the second Wednesday of each month in the Board Room of CFRA, 150 Isabella St., OTTAWA at 1930 hours. Contact the President to confirm the date of the next meeting.

RENEW YOUR CARF AND CRRL MEMBERSHIPS directly with these organizations, as the club no longer provides this service to members.

DEADLINE FOR COPY is the first Wednesday of each month.

REGULAR MEETINGS of the OARC, Inc. are held on the first Wednesday of each month (except July and August) at the National Research Council Auditorium, 100 Sussex Drive, Ottawa at 2000 hours. A bulletin board is available for posting notices of interest to other members at about 1915 hours. For further details about the next, see Page 5.

SEE YOUR NAME IN PRINT! -- In National and International publications. Write an article for the GROUNDWAVE and watch it travel! Many local articles have been reprinted in Club Bulletins across North America.

MATERIAL PUBLISHED herein does not necessarily represent the official OARC viewpoint. Items may be reprinted by Amateur Radio or similar publications, provided that the proper credit is given to the OARC, Inc.

SAFETY BELTS and TWO METRE RIG are available for loan to Club Members. The two metre rig may be borrowed by members who are hospitalized and the safety belts and pole straps by any member (\$100 refundable deposit is required for the latter). For the belts, contact Paul VE3ICV 820-6643 (west end) or Brian VE3JKZ 523-1535 (east end). Contact the President for the two metre rig.

RADIO AMATEUR CALL BOOKS are available for use of area Amateurs at many of the libraries throughout the region, including downtown and other city libraries, Orleans and Nepean. Enquire at the information desk of your local library for details.

MINUTES OF THE OTTAWAAMATEUR RADIO CLUB, Inc

May 4th, 1983

The meeting was called to order by Bob VE3MPG, President at 2004 hours. Visitors VE2DZF, VE3FHZ VE2ARZ and VE3NVI were welcomed. Bob then introduced the guest speaker, Bob Heil K9EID.

Bob is founder and president of Heil Sound, a company which has supplied sound equipment for the entertainment industry for many years. In 1982, he was given the Dayton Hamfest "Amateur of the Year" Award. Bob is also a professional theatre pipe organist. He lectures extensively to sound professionals, colleges and to amateur radio groups. He is one of the driving forces behind the increasing popularity of ten metre fm.

Bob began his talk by describing some of the activities and building projects which have been sponsored by his own club. He is obviously one of the most enthusiastic hams on the continent, and is especially keen on generating enthusiasm for the hobby in young people. He expressed the opinion that the key element of ham radio is construction--whether it be very simple projects such as a power supply or very complex ones like complete transceivers. He was pleased to learn of the OARC ten metre conversion project and the large number of hams who planned to participate as this combines two of his current passions, construction and ten metre fm.

Bob then presented a narrated slide show which demonstrated the construction of equipment and operation on ten metre fm. He then demonstrated the steps to be followed in order to convert the Club CB board into an fm transceiver, and then to align it.

Following this demonstration, Bob talked about audio equalization. He contends that the design of the audio sections of virtually all amateur gear is awful. The bandwidth is too narrow, and even the microphones (even expensive ones) are not suitable for the task. He demonstrated the startling improvement in quality which can be obtained in a transceiver when audio equalization techniques are applied. His company will soon be producing a new microphone which, by itself, will improve the quality and intelligibility of amateur radio transmission, according to his claims.

Following Bob's talk, three prizes were raffled. The minutes of the April meeting were adopted as published in the GROUNDWAVE on a motion by Joe VE2DZT seconded by Gordon VE3JSJ.

Mails VE3BCO announced that he still had some CARF crests for sale. Doug VE3CDC, reporting on behalf of CARF announced that the U.S. 20 metre phone band expansion would come into effect on May 22, 1982. In addition, he reported that the FCC is now considering a proposal to provide further phone privilege expansion as follows:

80 metres:
from 3750 - Extra
3775 - Advanced

40 metres:
from 7075-7100 - Hawaii

15 metres:
From 21.200 - Extra
21.255 - Advanced
21.300 - General

10 metres:
from 28.300 - all classes

He also reminded members that May 17 is World Communication Day.

Art VE3ZS reminded members that there were only six days left to comment on DOC volunteer examinations.

MINUTES -- Continued

The meeting adjourned at 2245 hours on a motion by VE3ADZ seconded by VE3AOZ.

- (CT) Canton
- (LP) Lake Placid
- (PT) Plattsburg
- (PD) Potsdam
- (ML) Malone
- (LG) Lake George
- (WT) Watertown
- (TL) Tupper Lake

VE3CPC TOUCH TONE FUNCTIONS

- 1- Voice I.D.
- 2- Time (CPC)
- 3- Date
- 4- Temperature (CPC)
- 5- not used
- #- Touchtone talk back (Dial # followed by number)+
- 6- road info.
- 7- weather
- 8- NRC Time (E)
- 9- NRC Time (F)
- Ø- Digitalker Demo.

REPEATER LISTINGS

-Thanks to the Pioneer Amateur Radio Club

OTTAWA/HULL

- VE3CPC 147.750-147.150
- VE2CRA 146.340-146.940
- VE3STP 146.460-147.060
- VE2KPG 147.960-147.460 A
- VE3OCR 146.250-146.850 A E L
- VE3OEA 146.070-146.670 A
- VE3ORA 146.280-146.880
- VE3TWO 147.900-147.300
- VE3RST 146.010-146.610 A
- VE3TEL 146.430-147.030
- VE2CSO 146.100-146.700 L

Autopatch+ Dial * and seven digits

Auto-dial emergency numbers+ Dial * # CODE

- 1- OPP
- 2- RCMP
- 3- Ottawa
- 4- Nepean
- 5- Gloucester
- 6- Vanier
- 7- Hull
- 8- Gatineau
- 9- Ambulance (Ott.)
- 0- Ambulance (Hull)

OTTAWA VALLEY

- VE3BAT 146.220-146.820 A (BK)
- VE3FXE 147.870-147.270 P (CP)
- VE3SVG 147.780-147.180 (CN)
- VE3KER 146.340-146.940 (KN)
- VE3KNR 146.190-146.790 A (KN)
- VE3SVR 146.160-146.760 (MB)
- VE3NRR 146.160-146.760 (PM)
- VE3RLR 147.810-147.210 (SF)
- VE2RM 146.400-147.000 (MT)

+To clear patch, dial any digit. Maintain carrier while dialing

EMERGENCY NUMBERS Police

- OPP 828-9171
- RCMP 992-0033
- Ottawa 230-6211
- Nepean 820-5000
- Vanier 746-3000
- Hull 777-1661
- Aylmer 684-5311
- Gatineau 568-5311
- Gloucester 822-2916

NEW YORK STATE

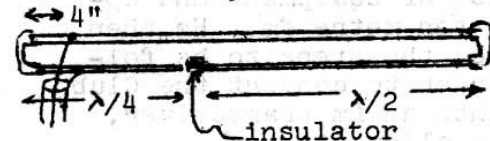
- WR2AGQ 146.310-146.910 (CT)
- WB2DCM 147.690-147.090 (ML)
- W2CXX 146.460-147.060 (LP)
- WA2CZT 146.130-146.730 (LG)
- WA2HSB 146.220-146.820 (PT)
- WB2IWT 147.750-147.150 (PT)
- WB2AOI 146.100-146.700 (WT)
- WR2AFQ 146.160-146.760 (WT)
- K2BFO 146.040-146.640 (PD)
- WB2ZIY 147.930-147.330 (TL)
- W2YTD 147.990-147.390 (ML)

Others

- EMO 725-3337 (after hours-7253311)
- Ambulance Ottawa 237-4545
- Hull 561-1343
- Weather 998-3439
- Time 745-1576

Correction

In the May issue of the GROUND-WAVE, the diagram of a two metre antenna was incomplete. Also, VE3KIY's name is Alex, not Paul. Here it is:



- A - Autopatch
- E - Emergency Power
- (BK) - Brockville
- (CN) - Cornwall
- (MB) - Morrisburg
- (SF) - Smith Falls
- L - Linked
- P - Proposed
- (CP) Carleton Pl
- (KN) Kingston
- (PM) Pembroke
- (MT) Montreal

NEXT MEETING

The next regular meeting of the Ottawa Amateur Radio Club, Inc. will be held on Wednesday, June 1st, 1983 in the Auditorium of the National Research Council, 100 Sussex Drive, OTTAWA, at 2000 hours.

The theme for the meeting will be Field Day, and a slide show will be presented to show some of the highlights of this event in past years.

Before each meeting, the notice board is set up at about 1915 hours to give members an opportunity to seek information, to buy or sell articles or to contact others with similar specialty interests. Use the Club Bulletin Board as a focal point to meet with other members with whom you have had a QSO and to have an "eyeball"--to meet him or her in person.

Many people are involved in the preparation of the GROUNDWAVE. If any single step in the sequence is delayed, usually because of other pressures on the people involved, the GROUNDWAVE may not be ready for mailing early enough to ensure delivery to the members before the meeting. When this occurs, the copies are taken to the next meeting for distribution to members in attendance. Those not picked up are the mailed.

I would like to assure you that this is not present club policy, and that we are trying to make the deadlines. (We did for the May issue, and I hope we will do so again for this one.) I do thank you for your comments and your interest.

73,

Murray VE3PY

Editor, the GROUNDWAVE

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LETTER TO THE EDITOR

Dear Sir:

It is with some concern that I notice recent issues of the GROUNDWAVE are not being mailed to Club Members, but instead must be picked up at Club Meetings.

Please advise if this is a permanent change in Club policy, and if so, the rationale behind it. It was not too long ago that membership fees were raised from five to eight dollars to cover increased GROUNDWAVE mailing costs.

73,

Brian Summers, VE3JKZ

EDITOR'S REPLY

Dear Brian:

Thank you for your letter. Others have expressed similar concerns, primarily because they prefer to receive the announcement of meetings and the Minutes of the past one in advance

Ninth Annual ONTARIO HAMFEST

Milton Fairgrounds

Saturday, July 9, 1983

Pre-Registration form

Name _____

Call _____

Address _____

City, Province _____

Postal Code _____

Please send the following

_____ Registrations @\$2.50 ea _____

Weekend Campsite Res. @\$10.00 ea _____

_____ Prize tickets \$2.00 ea _____

TOTAL ENCLOSED \$ _____

Mail to:

TICKETS

ONTARIO HAMFEST '83

P.O. Box 836

Burlington, Ontario

L7R 3Y7

220 MHZ & EMC/RFI

by Lloyd Ellsworth, WA8ZCO, Ford Motor Company, Dearborn, MI

I work at Ford Motor Company, in research and development, in Dearborn, Michigan. Part of my work involves testing for EMC and RFI problems in Ford products.

Both GM and Ford have extensive test facilities for RFI, including screen rooms, spectrum analyzers, sweep generators, amplifiers, and even some Amateur and Commercial gear. Each electronic module, or device under development, is tested for radiated signals, signals generated, or noise, plus for susceptibility not only to RF signals over a range of 1 to 1000 MHz, but also pulses, transients, and other forms of interference. RF testing includes testing at a power level of about 15 watts, which represents around 200 volts/metre. Higher power levels are tested only on completed vehicles using, specifically, an R.L. Drake HF transceiver. Most of the people who do this sort of testing, incidentally, are Amateur Radio Operators.

If you are running a high-powered amplifier on 220 MHz FM in the car, what can you expect? Good question. You might not have any problems at all. On the other hand, a 60 watt amplifier might have some effect on the vehicle, where a 10 watt amp might not. I might strongly suggest that, with any new vehicle you purchase, it would be a good idea to find a 'safe' place, and check out what possible effects your 220 rig and amp would have on anything in the electronics of the car. That way you're safe from any serious problems which would occur if something went wrong while you were in traffic.

Taking a vehicle back to the dealer for servicing this problem will not accomplish very much, as the dealer is most likely to know absolutely nothing about curing any problems you may have. Your best bet is to get out the braid, foil, bypass caps, ferrite beads and bars, and have at it. You might also try

several different locations for the amplifier(s) and antenna(s) in question. Please note that some RF sensitive modules are being located in the trunk compartment to keep them away from any RF sources, so moving the amplifier back there may not do the job.

By the way, while I remember it, although our dealers may not know how to handle most RFI problems (yet), at least GM and Ford are much more enlightened in this area than are our Japanese counterparts, as highlighted in a recent letter sent by Subaru of America to an American ham operator, and reprinted in QST... the infamous "shield your antenna" letter.

Some of the new electronic automobile modules generate signals, including especially the computer modules. Square wave signal sources, as you must be aware, are extremely rich in harmonics. The automotive companies test for this and try to solve as many problems as they can. However, it should be noted, per FCC regulations, that maximum allowable signals are actually very strong signals and can even be full quieting on 220 MHz. Remember, at today's state of the art in amateur radio receiver design, a 1 microvolt/metre signal is a very strong signal, and in the closed and close environment of a car the signal can sound exceptionally strong on your 220 rig.

Unfortunately, with more and more electronic devices both inside and outside of a car, the problems of EMC and RFI are likely to become much worse than they presently are. It behooves us all to insist on stronger standards for both RFI emission and RFI susceptibility in the FCC, (DOC for you nationalist types) to insist that the manufacturers follow or, better yet, exceed these standards where they can, and to educate others to the rising extent of these problems, especially to the future electronic engineers who are or are to be in engineering schools. I have talked to too many

OF THEM WHO CONSIDER RFI to be a totally black art, and who have no understanding of it whatsoever. RFI and EMC are not a black art at all, but are rather basic applied physics, of the real world, not blackboard models.

de South Pickering
SPARC GAP and
Windsor Groundwave.

COW (An engineer might describe a cow something like this)

A cow is a completely automatic milk manufacturing machine. It is encased in untanned leather and mounted on four vertical, movable supports, one on each corner.

The front end contains the cutting and grinding mechanism, as well as the headlights, air inlet and exhaust, a bumper and a fog horn.

At the rear is the dispensing apparatus and an automatic fly swatter.

The central portion houses a hydro-chemical conversion plant. This consists of four fermentation and storage tanks connected in series by an intricate network of flexible plumbing. This section also contains the heating plant complete with automatic temperature controls, pumping station and main ventilating system. The waste disposal apparatus is located at the rear of this central section.

In brief, the externally visible features are two lookers, two hookers, four stand-uppers, four hanger-downers and a swishy-swishy.

There is a similar machine known as a 'bull, which should not be confused with a cow. It produces no milk, but has other interesting uses.

de Montreal ARC
MARCOGRAM

NEWS ITEM: A police van carrying prisoners collided today with a cement truck. Authorities are looking for four hardened criminals.

de The MANITOBA Amateur

CANADIAN PROVINCES AWARDS PROGRAM

Sponsored by the Niagara Peninsula DX Group, the rules are as follows:

1. These awards are available to licensed amateurs. Contacts after January 1, 1979 are valid.
2. Do not send QSL's. Send a log list showing full details of contacts verified and signed by your local club official or by two licensed amateurs.
3. Certificates will be endorsed for various bands and modes, as requested, when application for awards is made.
4. The fee for each award is \$3.50 or 7 IRC's worldwide.
5. Send application to Guy V. Cadieux, VE3LVN, 98 Townline Road West, St. Catherines, Ontario, Canada L2T 1P7

GENERAL: There are ten provincial awards, one territories award, and one worked all Canadian counties award. The worked all Canadian counties award is free after you have all the other 11 awards.

CLASS A — For all counties in each province.

Class B — For half of the counties in each province.

Counties:— Alberta 20, Newfoundland and Labrador 7, Quebec 75, British Columbia 24, Nova Scotia 19, Saskatchewan 13, Manitoba 13, Ontario 54, North West Territories 4, New Brunswick 15, Prince Edward Island 3. Total all counties 247. A list of all Canadian counties is available from the awards manager for \$1.00 or 3 IRC's.

SOME MORE MURPHY. . .

A \$300.00 picture tube will protect a 10¢ fuse by blowing first.

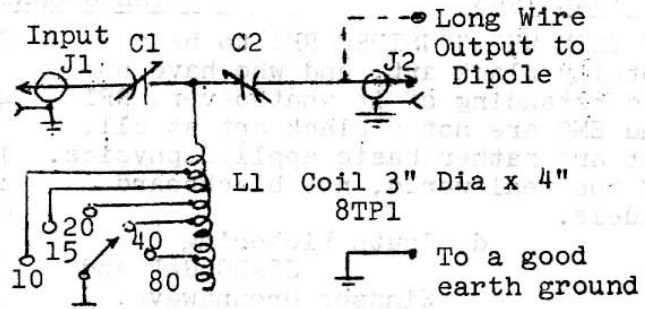
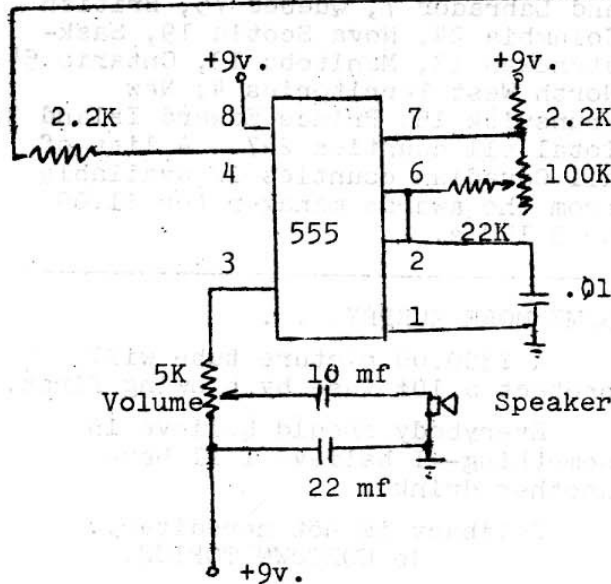
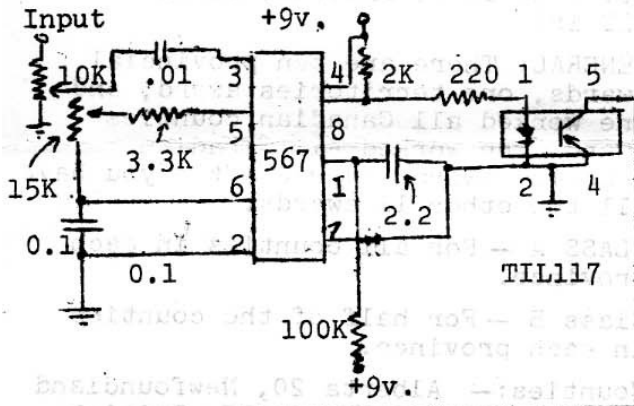
Everybody should believe in something—I believe I'll have another drink.

Celibacy is not hereditary.
de NORTOWN TOPICS.

CW Regenerator

by Bill Nottingham, VE3ARZ

The circuit diagram below is a modified version of a CW Regenerator which I demonstrated at the April meeting of the OARC, Inc. The unit operates on 9 volts, which I find easier to obtain than the 5 v. needed for TTL. Component values are not critical, and the pots can be replaced by resistor combinations at a loss of user convenience. The opto-isolator can be purchased at Future Electronics at 2/\$2.11. The total cost, less the box, is under \$15. Those who heard the CW Regenerator at the April meeting will know how effective it is in producing single signal CW at a very small cost.



EE
ENNA
UNER
by VE3GPR
ref VE3IX
83-04-05
Bill Cousins

C1, C2 250 pf

Notes: C1 and C2 are HOT. Insulated shafts must be used, at least one inch long. Taps on the coil are "cut and try", and will vary from antenna to antenna. One can use a switch with twelve or more positions to make the tuner more versatile with arbitrary long-wire and dipopole. Use letters or numbers instead of bands for marking the switch positions in this case.

I use this tuner with a trap dipole on 40 and 80 and get 1:1 SWR on 80 through 10 with this antenna from end to end on each band. I have also used it with a beam, trap vertical, random wire and I once even loaded up my two metre beam on 10 metres.

Good luck!

+++++

SUITLAND ISLAND (KJ6DO/KH7)

by J.F.W. Minke III, N6JM

-Thanks to Worldradio

In the December 1982 issue of Worldradio, an item was printed about the Suitland Island Hoax. (At a recent club meeting, Brian VE3JKZ showed Club Members a QSL card he had received from the operation.) Most DXers who did work this KJ6DO/KH7 probably wrote this one off to experience and swore at this bunch through their teeth. But that wasn't the end of it. Ned Jacoby, NG6W sent a note saying "The other day, I read

Suitland Island -- Continued

your Suitland Island column in the morning. That afternoon, a QSL envelope arrived from the bureau, and enclosed was one of the infamous skull and cross bones QSL cards!"

"This hoax has been done with such sophistication--and humour--that it's really hard to very griped about it. In fact, the card may be a treasure to have--fake or not.

"Our guess is that the job was done by a very good USA ham and DX operator who was a merchant marine operator. The night he was on that I worked him, people were saying that the beam directions were checking out."

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160 METRE BULLETIN

by Dennis Peterson N7CKD
 Thanks to GROUNDWAVE-Saint Paul Radio Club, Inc. (& Worldradio)

We have started what is known as the West Coast 160-meter Bulletin. Our bulletin is devoted to, for and by Top Band operators. The bulletin is edited and published six times a year by myself--Dennis G. Peterson, N7CKD, 4248 "A" Street SE, Box 609 AUBURN, Washington, U.S.A. 98002. We have a subscription fee of \$7 U.S. to the U.S., U.S. possessions, Canada and Mexico, and \$8.50 U.S. to overseas locations.

The purpose of the bulletin is to provide information as to DX operation, time, frequency and mode of operation. Also, the bulletin provides an opportunity to find out where and when to find various U.S. operators for the WAS awards. We are also working on a WAUS (Worked All United States) Certificate specially designed for Top Band.

Other information contained in the bulletin pertinent to Top Band Operations are as follows:

- 1) articles on various types of receive and transmit antennas;
- 2) Beverage and loop antennas;
- 3) gadgetry circuits for improving station receive capabilities: preamplifiers, T-R switches, broadcast band interference filters;
- 4) circuits for designing one's own tuner and transmatch networks for 160 metres;
- 5) articles on propagation, auroral conditions and ionization;
- 6) sunset and sunrise tables for 160 metre openings and how to interpret these as well as propagation charts.

We try to discourage operation in the DX windows and to show the newcomer to the Top Band by describing proper operating procedures for 160. We hope to be able to encourage more operators to join us on Top Band and to share with their views and ideas on 160 metre operation.

We are also contemplating a Top Band contest for mid-summer (around July 4) if we can find a sponsor or obtain financial assistance, as our subscription fee cannot cover the costs for awards or contests.

=====
30 METRES -- LIKE GOOD OLD DAYS

by Kurt Renner, KTØL
 Courtesy Worldradio

For you brass pounders who would like to experience what it was like to operate on the ham bands 25 years ago, give the new 30 metre segment a try. I have been on the new band almost daily and have found it most rewarding. The band is never crowded yet there are always amateurs throughout the world to ragchew with, and I do mean ragchew! With the small number of amateurs using the band at present, the operation is more relaxed.

I am using my 80-metre inverted Vee with a tuner and having good results. Give the new band a try--and enjoy band conditions as they were 25 years ago.

THE OTTAWA AMATEUR RADIO CLUB, Inc.
P.O. Box 8873
OTTAWA, Ontario, Canada
K1G 3J2

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:	VE3CDS	Ontario, K2E 5G2	237-3022 :
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: EMI Cmttee	Ralph Cameron	30 St. Remy Drive, OTTAWA	825-1634 :
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