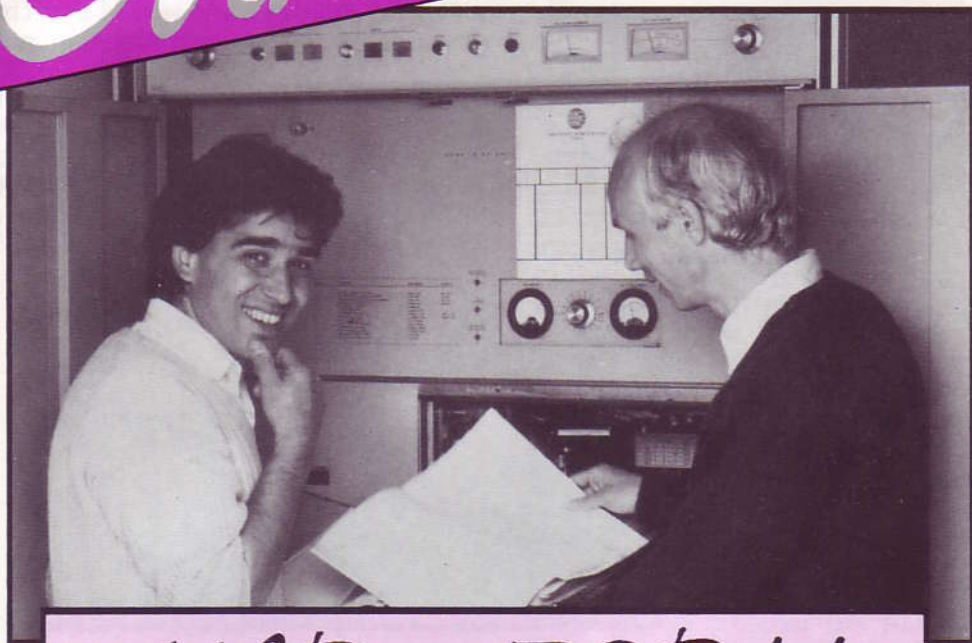


AWR

# Current



## AWR - FORLÌ A Technical Report

Just recently, AWR-Europe chief engineer was in Forlì and he and engineer Pino Cirillo did some work on the Forlì transmitting equipment. They also took the time to answer some questions for CURRENT.

*What problems did you find*

*during your recent maintenance check on the transmitter?*

--There were three main items that had to be cared for. First, we had to replace the main tube in the transmitter. Second, we corrected a problem in the tuning system that would able us to

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change the frequency automatically. And third, there was a defective relay in the remote control system for the antenna rotator. We can add that these are considered typical problems and nothing out of the ordinary.

*Can you tell our listeners a little about the tubes in the transmitter, especially the main tube?*

--We have, with our transmitter, one 10 kilowatt tube which is the main tube, two driver tubes in parallel that are 350 watts each, and one broadband amplifier tube of 350 watts. These are the most important tubes; however there are others used for regulation of RF, rectification, etc. The main tube weighs 5.5 kilograms (while the 350w tube weighs 100 grams) and is good for about 5,000 hours of broadcast time. On the current Forli schedule, that means it needs to be replaced approximately every one and a half years.

*Does AWR-Europe have a general maintenance programme for the Forli transmitter? And if so, what is involved?*

--The technical department has a "Service Concept" which involves a weekly preventative maintenance on the transmitter. This involves testing the output power, cleaning of rotating parts, lubrication and so on. We have a big problem here with dust. Being in a large farm area where farmers and tractors are constantly stirring up dust, we have to be extra careful with the transmitter. Our transmitter is aircooled. What this means is that while the transmitter is operating, it blows high amounts of air through the tubes and coils to cool it. So the air filters have to be changed. It depends, of course, on the season but the air filters need to be changed every one to three months. We also make an effort to check the

## FORLI EQUIPMENT

**Transmitter:**

Collins 208U-10  
2.5 kw carrier  
10 kw p.e.p.

**Exciter (transceiver):**

Yaesu FT75GX

**Compressor/Limiter:**

Marti CLA-40A

**Mixer:**

Tapco 78-12

**Antenna:**

Hy-gain Log Periodic-1002

**Reel to Reels:**

3 Revox PR 99

**Cassette Machines:**

4 RS-B100 Technics

**Cart Machines:**

2 Fitch T-101

**Compact Disc:**

1 Denon

**Generator:**

Used only for  
emergencies

accuracy for our frequency twice a week.

*What type of maintenance work is done on the antenna?*

--Twice a year we need to put oil in the gears, general lubrication work, etc. It is difficult to foresee a problem, and so they usually just happen and then we have to get busy and repair it.

*What kind of advice can you give to our listeners to maintain their radios and keep them in good working order?*

--Listeners need to read the manual that comes with their radio and follow its suggestions. If they are not using a power supply, the batteries should be replaced often.

*If someone wanted to add an antenna system to their radio, what would you suggest?*

--First of all, the type of radio you have dictates what kind of antenna you need. If you already have a telescopic antenna, it does not always pay to add more to it. Radios can be overloaded by additional antennas. There are different types of antennas--longwire, active dipole, tuned dipole. A longwire together with antenna tuners (sometimes called P-filters or Collins filters) would be a good combination. "In my opinion," says Claudius Dedio, "the best would be a tuned dipole for omni directional reception." The World Radio TV Handbook for 1989 has a good article on page 566 for an antenna system built at home. Remember, though, that your antenna should be good--and good does not always mean inexpensive!

*What kind of technical information do engineers like to hear about programme reception?*



*Pino with the main tube*

--We look first at the SINPO codes given and then to see if there was any interference on adjacent channels. We are just as interested in knowing if there was interference as in knowing if the adjacent channels are clear. We also look to see what type of radio the listener was using and his antenna system. Believe it or not, we also like to read what our listeners comment about the programmes themselves. If they like the contents or think changes should be made.

We hope this has answered some of our listeners' questions about the technical setup here in Forli. Even though the transmitting power is small, AWR-Forli is having good success. That is evident in what we hear from our listeners.

If you would like further information about how to improve reception at your radio center at home, please be sure and check the FREE OFFERS box on page 3. It is available in German, Italian, and English.

*schedule*

JUNE - JULY 1989

TIME (UTC)	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	TARGET	FREQ I/P*
0500-0530	UKRAINIAN	.	.	.	.	.	.	eEU	9605 P
0500-0530	SWEDISH	SWEDISH	SWEDISH	SPANISH	SPANISH	SPANISH	FINNISH	NEU/SWEU	7125 I
0530-0600	RUSSIAN	.	.	.	.	.	.	eEU	9605 P
0530-0600	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	nWEU	7125 I
0600-0630	SERBIAN	.	.	.	.	.	.	eEU	9605 P
0600-0700	POLISH	.	.	.	.	.	.	eEU	9670 P
0600-0700	FRENCH	FRENCH	FRENCH	FRENCH	FRENCH	FRENCH	FRENCH	nWEU	7257 I
0630-0645	SLOVENIAN	.	.	.	.	.	.	eEU	9605 P
0645-0700	MACEDONIAN	.	.	.	.	.	.	eEU	9605 P
0700-0730	CROATIAN	.	.	.	.	.	.	eEU	9605 P
0700-0800	GERMAN	.	.	.	.	.	.	GEU	9670 P
0700-0800	ITALIAN	ITALIAN	ITALIAN	ITALIAN	ITALIAN	ITALIAN	ITALIAN	GEU	7257 I
0730-0830	RUMANIAN	.	.	.	.	.	.	eEU	9605 P
0800-0900	ENGLISH	.	.	.	.	.	.	nWEU	9670 P
0800-0900	GERMAN	GERMAN	GERMAN	GERMAN	GERMAN	GERMAN	GERMAN	GEU	7257 I
0830-0900	ARABIC	.	.	.	.	.	.	NAF	9605 P
0900-0930	BULGARIAN	.	.	.	.	.	.	eEU	9605 P
0900-0930	SWEDISH	SWEDISH	SWEDISH	SPANISH	SPANISH	SPANISH	FINNISH	NEU/SWEU	7257 I
0930-1000	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	ENGLISH	nWEU	7257 I
1000-1100	FRENCH	FRENCH	FRENCH	FRENCH	FRENCH	FRENCH	FRENCH	nWEU	7257 I
1100-1200	ITALIAN	ITALIAN	ITALIAN	ITALIAN	ITALIAN	ITALIAN	ITALIAN	GEU	7257 I
1200-1300	GERMAN	GERMAN	GERMAN	GERMAN	GERMAN	GERMAN	GERMAN	GEU	7257 I

I/P\* P= Broadcasts from Portugal, I=Broadcasts from Italy

Alternate frequencies are 7125, 7205, and 7230 kHz