Ham Radio Spreadsheet
by Stephen A. Douglas III N6TLD

Alt T returns to menu

= = = = = =

If you have comments or suggestions please send them to me at;

Stephen A. Douglas III
Effective 1/1/90
I'm good in the Callbook.

Also, if you would care to reward my efforts a donation
would be most kind of you.
By the way, I'm not liable for ANY problems you may encounter
using this spreadsheet.

TNX 73 Steven N6TLD

Please pass this around to your friends & fellow Hams.

Enter Voltage (in Volts) 32

Enter Current (in Amperes) 45

Resistance is 0.71111111 Ohms

Enter Current (in Amperes)	23	
Enter Resistance (in Ohms)	12.444	
Voltage is	286.212	Volts

Enter Voltage (in Volts)	24	
Enter Resistance (in Ohms)	22	
Current is	1.0909091	Amperes

If you don't know a value enter 0 then use computer estimate.		Computer estin
Enter Voltage (in Volts)	10	10
Enter Current (in Amperes)	4	4
Enter Resistance (in Ohms)	2.5	2.50
Power is	40	Watts

How many resistors are in parallel ? 5

Enter the values.

12 13 24 345 565

Total resistance is 4.8404693Ohms

How many resistors are in series ? 3

Enter the values.

123 23 543

Total resistance is 689Ohms

How many caps are in series? (limit 7) 4

Enter the values.

34 44 556 66

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= = = = = =

Enter resistance (ohms) 12

Enter frequency (hertz) 144000

Enter inductance (henries) 0.0003

Enter capacitance (farads) 1

Impedance is 20.357552ohms

Enter Diameter of wire(in.) 0.25

Enter spacing (in. c to c) 0.5

Impedance is 166.16856ohms

Enter inside diameter of outer conductor (in.)

Enter outside diameter of inner conductor (in.)

Enter dielectric constant of insulator (air = 1.0)

Impedance is 41ohms

Coaxial cutoff frequency 3342.2222Hz/Sec

Are you sure you want to return to system ?

Enter 1 for yes 0 for no.

nate

Volts

Amps

Ohms

What fraquency is this Dipole for (Mhz)?

A good starting length would be..... 16.63

Please remember antenna calculations are just a starting point.

Always check SWR and resonance if possible.

What frequency will this Yagi be used on (Mhz) ?

Reflector	DE	D1	D2	D3
16.67	15.96	15.57	15.18	14.80

Please remember antenna calculations are just a starting point.
Always check SWR and resonance if possible.
Element spacing is up to you. Try different spacing and see the result.

What frequency will this Quad be used on (Mhz) ?

Reflector	DE	D1	D2
36.27	35.39	34.33	33.47

Please remember antenna calculations are just a starting point.
Always check SWR and resonance if possible.
Element spacing is up to you. Try different spacing and see the result.

What frequency will this Quagi be used on (Mhz) ?

Quad Elements		Yagi Elements.....		
Reflector	DE	D1	D2	D3
7.13	6.96	3.07	2.99	2.92

= = =

1.5

0.75

1

0

28.4Mhz

feet

28.5

D4 D5

14.43 14.07

28.4

144.5

D4	D5
2.85	2.77

/xmham~

{goto}w37~ (begin \j)

{breakoff}
/xmmain~

/xmham1~

/xmham2~

/xmham3~

/xmham4~

Antenna submenu (complete)

-	-	-	-	-	-
⊥‖ wave_Dipole	Yagi	Quad	Kwagi	Quit	Exit
Compute lengt	Compute elem	Compute elem	Compute elem	Return to Main	Return to syste

{goto}h69~ {goto}h85~ {goto}h101~ {goto}h117~ /xr {goto}h53~{g
{goto}m73~{? {goto}m87~{? {goto}m103~{ {goto}m119~{?}~ /xim57=1~/xg
{goto}h69~ {goto}h85~ {goto}h101~ {goto}h117~ /xim57=0~/xg
/xr /xr /xr /xr /xim57=⇊~/xg
/qy

Main Menu (complete)

-	-	-	-	-	-
^	^	^	^	^	^
Antennae	Ohms_Law	Capacitance	Nductance	Impedance	Exit
Perform calcul	Calculate; volt	Calculate capa	Calculate Indu	Calculate Impe	Return to syste
/xcx39~	/xcx68~	/xcx83~	/xcx102~	/xcx119~	{goto}h53~{g
/xmmain~	/xmmain~	/xmmain~	/xmmain~	/xmmain~	/xim57=1~/xg
					/xim57=0~/xg
					/xim57=⇊~/xg
					/qy

Ohms law submenu (complete)

-	-	-	-	-	-
Resistance	Voltage	Current	Power	Series_Parallel	Quit
Voltage & Cur	Resistance & C	Resistance & V	Two factors m	Compute value	Return to Main
{goto}a21~{g	{goto}a37~{g	{goto}a53~{g	{goto}a69~	/xmspr~	/xr
{goto}d27~{?}	{goto}d43~{?}	{goto}d59~{?}	{goto}d73~{?}~		
/xr	/xr	/xr	{goto}d75~{?}~		
			{goto}d77~{?}~		
			/xif75<>d75~/xgsubrp1~		
			/xr		

Capacitance Submenu (complete)

-	-	-	-	-	-
Series	Parallel	Capacitance	aCoaxial	Quit	Exit
Compute capac	Compute capac	Compute value	Compute value	Return to main	Return to syste
{goto}a117~	{goto}a133~	{goto}a149~	{goto}a165~	/xr	{goto}h53~{g
{goto}e121~{?	{goto}e137~{?	{goto}e150~{?	{goto}e167~{?}~		/xim57=1~/xg
/rea125.g125~	/rea141.g141~	{goto}e152~{?	{goto}e169~{?}~		/xim57=0~/xg
/xie121=2~/xg	/xie137=2~/xg	{goto}e154~{?	/xr		/xim57=▟~/xg
/xie121=3~/xg	/xie137=3~/xg	{goto}e159~{?}~			/qy
/xie121=4~/xg	/xie137=4~/xg	/xr			
/xie121=5~/xg	/xie137=5~/xgrtnsc4~				
/xie121=6~/xg	/xie137=6~/xgrtnsc5~				
/xie121=7~/xg	/xie137=7~/xgrtnsc6~				
/xr	/xr				

Inductance Submenu (complete)

-	-	-	-	-	-
Coil	Inductance	Series	Parallel	Quit	Exit
Compute induc	Compute lengt	Compute total	Compute total	Return to Main	Return to syste
{goto}a181~	{goto}a197~	{goto}a213~	{goto}a229~	/xr	{goto}h53~{g
{goto}d183~{?	{goto}d199~{?	{goto}e216~{?	{goto}e232~{?}~		/xim57=1~/xg
{goto}d185~{?	{goto}d202~{?	/xie216=2~/xg	/xie232=2~/xgrtns1i~		/xim57=0~/xg
{goto}d187~{?	{goto}d204~{?	/xie216=3~/xg	/xie232=3~/xgrtns2i~		/xim57=▟~/xg
{goto}a181~	{goto}a197~	/xie216=4~/xg	/xie232=4~/xgrtns3i~		/qy
/xr~	/xr	/xie216=5~/xg	/xie232=5~/xgrtns4i~		
		/xie216=6~/xg	/xie232=6~/xgrtns5i~		
		/xie216=7~/xg	/xie232=7~/xgrtns6i~		
		/xr	/xr		

Impedance Submenu (complete)

-	-	-	-	-	-
In_Circuit	Parallel	Coaxial	Frequency	Quit	Exit
Resistance, Ca	Compute Z of	Compute Z of	Compute cut o	Return to Main	Return to syste

{goto}h5~ {goto}h21~ {goto}h37~ {goto}h37~ /xr {goto}h53~{g
{goto}k8~{?}~{goto}k25~{?}{goto}n40~{?}{goto}n40~{?}~ /xim57=1~/xg
{goto}k10~{?}{goto}k27~{?}{goto}n42~{?}{goto}n42~{?}~ /xim57=0~/xg
{goto}k12~{?}{goto}h21~ {goto}n44~{?}{goto}n44~{?}~ /xim57=⇊~/xg
{goto}k14~{?}/xr {goto}h37~ {goto}h37~ /qy
{goto}h5~ /xr

-

m

›to}m57~{?}~
ıry~
ırn~
qr~

m
›to}m57~{?}~
ıry~
ırn~
qr~

-
Exit
Return to system
{goto}h53~{goto}m57~{?}~
/xim57=1~/xgqry~
/xim57=0~/xgqrn~
/xim57=ıı ~/xgqr~
/qy

Series parallel submenu
- - -

Parallel Compute value
{goto}a85~ {goto}e89~{?}
/rea93.g93~
/xie89=2~/xgrt/xie105=2~/xgrtns1~
/xie89=3~/xgrt/xie105=3~/xgrtns2~
/xie89=4~/xgrt/xie105=4~/xgrtns3~
/xie89=5~/xgrt/xie105=5~/xgrtns4~
/xie89=6~/xgrt/xie105=6~/xgrtns5~
/xie89=7~/xgrt/xie105=7~/xgrtns6~
/xr

Series Compute value
{goto}a101~ {goto}e105~{?}~
/rea109.g109~
/xr

Quit
Return to Main

-

m
ɔto}m57~{?}~
ɹry~
ɹrn~
qr~

-

m
ɔto}m57~{?}~
ɹry~
ɹrn~
qr~

-

m

oto}m57~{?}~
qry~
qrn~
qr~

(complete)
-

Exit
Return to System
/qy

Series resistance subroutines
- - -

{goto}a109~{?}~
{right}{?}~
{goto}d111~@sum(a109.b10
/xr

{goto}a109~{?
{right}{?}~
{right}{?}~
{goto}d111~@
/xr

Parallel resistance subroutines
- - -

{goto}a93~{?}~
{right}{?}~
{goto}d95~1/(1/A93+1/B93)~
/xr

{goto}a93~{?}
{right}{?}~
{right}{?}~
{goto}d95~1/(

/xr

Parallel capacitance subroutines

- - -

{goto}a141~{?}~
{right}{?}~
{goto}d143~@sum(a141.g14
/xr

{goto}a141~{?
{right}{?}~
{right}{?}~
{goto}d143~@
/xr

Series capacitance subroutines

- - -

{goto}a125~{?}~
{right}{?}~
{goto}d127~(A125*B125)/(a
/xr

{goto}a125~{?
{right}{?}~
{right}{?}~
{goto}d127~1/
/xr

Series inductance subroutines

- - -

{edit} {home} /rea221.g221~ /rea221.g221~

(complete)

-	-	-	-	-	-
'}~	{goto}a109~{?}~ {right}{?}~ {right}{?}~ {right}{?}~ {goto}d111~@sum(a109.d10 /xr		{goto}a109~{?}~ {right}{?}~ {right}{?}~ {right}{?}~ {right}{?}~ {goto}d111~@sum(a109.e10 /xr		{goto}a109~{? {right}{?}~ {right}{?}~ {right}{?}~ {right}{?}~ {goto}d111~@ /xr
)sum(a109.c10					

(complete)

-	-	-	-	-	-
~	{goto}a93~{?}~ {right}{?}~ {right}{?}~ {right}{?}~		{goto}a93~{?}~ {right}{?}~ {right}{?}~ {right}{?}~		{goto}a93~{?} {right}{?}~ {right}{?}~ {right}{?}~
1/A93+1/B93+					

{goto}d95~1/(1/A93+1/B93+ {right}{?}~ {right}{?}~
/xr {goto}d95~1/(1/A93+1/B93+ {right}{?}~
/xr {goto}d95~1/(
/xr

(complete)

- - - - - -

{goto}a141~{? {goto}a141~{? {goto}a141~{?
{right}{?}~ {right}{?}~ {right}{?}~
{right}{?}~ {right}{?}~ {right}{?}~
)sum(a141.g14 {right}{?}~ {right}{?}~ {right}{?}~
{goto}d143~@sum(a141.g14 {right}{?}~ {right}{?}~
/xr {goto}d143~@sum(a141.g14 {right}{?}~
/xr {goto}d143~@
/xr

(complete)

- - - - - -

{goto}a125~{? {goto}a125~{? {goto}a125~{?
{right}{?}~ {right}{?}~ {right}{?}~
{right}{?}~ {right}{?}~ {right}{?}~
(1/A125 +1/B1{right}{?}~ {right}{?}~ {right}{?}~
{goto}d127~1/(1/A125+1/B1 {right}{?}~ {right}{?}~
/xr {goto}d127~1/(1/A125+1/B1 {right}{?}~
/xr {goto}d127~1/
/xr

(complete)

-	-	-	-	-	-
	/rea221.g221~		/rea221.g221~		/rea221.g221~

Quit subroutines

- -

qry > {home}{wait @now+@time(

qrn > {home}{wait @now+@time(

qr > {breakoff}{goto}w54~

- - -

'}~ {goto}a109~{?}~

{right}{?}~

{right}{?}~

{right}{?}~

{right}{?}~

{right}{?}~

)sum(a109.f10{right}{?}~

{goto}d111~@sum(a109.g109)~

/xr

- - -

~ {goto}a93~{?}~

{right}{?}~

{right}{?}~

{right}{?}~

{right}{?}~
{right}{?}~
1/A93+1/B93+{right}{?}~
{goto}d95~1/(1/A93+1/B93+1/c93+1/d93+1/e93+1/f93+1/g93)~
/xr

- - -

{goto}a141~{?
{right}{?}~
{right}{?}~
{right}{?}~
{right}{?}~
{right}{?}~
)sum(a141.g14{right}{?}~
{goto}d143~@sum(a141.g141)~
/xr

- - -

{goto}a125~{?}~
{right}{?}~
{right}{?}~
{right}{?}~
{right}{?}~
{right}{?}~
(1/A125+1/B1{right}{?}~
{goto}d127~1/(1/A125+1/B125+1/c125+1/d125+1/e125+1/f125+1/g125)~
/xr

- - -

/rea221.g221~

(complete)

- - -

0,0,10)}/qy

0,0,10)}/xmmain~

anten