HOW TO SELECT GAUGE OF CABLE REQUIRED

Table 1 has been formulated to indicate the maximum circuit length in feet before a voltage drop of 1/2 volt is reached in a 6 volt system.

EXAMPLE: Assume that six-volt lamp circuit is 23 feet in total length and requires 7.5 amperes.

Read across the 6-volt system line (Table I) to 7.5 amperes. Then read down to the first figure in Table II that is greater than the 23 feet required; this figure is 24 feet. Now read directly to the left, from 24 feet (on the same line), and you will find 14 gauge conductor adequate for this application.

NOTE: Since this table is based on a 1/2-volt drop allowance; specific drops can be easily determined by the following:
For a 1/8 volt-drop—Divide Table I allowable lengths by four.
For a 1/4 volt-drop—Divide Table I allowable lengths by two.
For a 1 volt-drop—Multiply Table I allowable lengths by two.
For a 2 volt-drop—Multiply Table I allowable lengths by four.

TABLE I

SYSTEM	AMPERAGE LOAD IN CIRCUIT																			
6 Volt	0.5	0.75	1	1.5	2	2.5	3	3.5	4	5	6	7.5	10	12	15	18	25	50	75	100
12 Volt	1	1.5	2	3	4	5	6	7	8	10	12	15	20	24	30	36	50	100	150	200
24 Volt	2	3	4	6	8	10	12	14	16	20	24	30	40	48	60	72	100	200	300	400

TABLE II

GAUGE	ALLOWABLE CONDUCTOR LENGTH-FEET IN CIRCUIT BEFORE 1/2 VOLT LOSS																			
20	106	70	53	35	26	21	17	15	13	10	8	7	5	4	3	3	2	1	0	0
18	150	100	75	50	37	30	25	21	18	15	12	10	7	6	5	4	3	1	1	0
16	224	144	112	74	56	44	37	32	28	22	18	14	11	9	7	6	4	2	1	1
14	362	241	181	120	90	72	60	51	45	36	30	24	18	15	12	10	7	3	2	1
12	572	381	286	190	143	114	95	81	71	57	47	38	28	23	19	15	11	5	3	2
10	908	605	454	302	227	181	151	129	113	90	75	60	45	37	30	25	18	9	6	4
8	1452	967	726	483	363	290	241	207	181	145	120	96	72	60	48	40	29	14	9	7
6	2342	1560	1171	780	585	468	390	334	292	234	194	155	117	97	78	65	46	23	15	11
4	3702	2467	1851	1232	925	740	616	529	462	370	307	246	185	154	123	102	74	37	24	18
2	6060	4038	3030	2018	1515	1212	1009	866	757	606	503	403	303	252	201	168	121	60	40	30
1	7692	5126	3846	2561	1923	1538	1280	1100	961	769	638	511	384	320	256	213	153	76	51	38
1/0	9708	6470	4854	3232	2427	1941	1616	1388	1213	970	805	645	485	404	323	269	194	97	64	48
2/0	12194	8127	6097	4060	3048	2438	2030	1743	1524	1219	1012	810	609	507	406	338	243	121	81	60
3/0	15624	10413	7812	5202	3906	3124	2600	2234	1933	1562	1296	1039	781	650	520	433	312	156	103	78
4/0	20000	13333	10000	6666	5000	4000	3333	2860	2500	2000	1666	1333	1000	833	666	555	400	200	133	100

Wire gauge usage in shaded area not recommended for 12-volt system.
Wire gauge usage beyond solid line not recommended for 24-volt system.
In either case for amperage load use the next larger gauge below the shaded area or solid line.

SUGGESTED GAUGES FOR ELECTRICAL CIRCUITS

Note: If circuit is longer then 10 feet, use next larger gauge wire size.

Electrical Equipment	6-Volt Sys. Gauge	12-Volt Sys. Gauge	Electrical Equipment	6-Volt System Gauge	12-Volt System Gauge
Cigarette Lighter	14	16	Heater to Fuse Block	14	16
Ammeter to Fuse Block	10	12	Horn Button Circuit	14	16
Ignition Switch Feed	10	12	Horn to Relay & Battery	10	12
Battery to Ammeter	10	12	Instrument Lamps/Sending Units	16	18
Coil Wire (Low Tension)	14	16	Light Switch to Relay or Fuse	12	14
Interior Lights	16	18	Parking/Direction Signals	16	18
Fuel Gauge	16	18	Radio to Ammeter or Fuse	16	18
Gen/Alternator to Starter Relay	10	12	Back-up Lights	16	18
Gen/Alternator to Regulator	14	16	Tail Lights	16	18
Marker (Fender) Light	16	18	Stop Lights	16	18
Head Light Circuit	14	16	Windshield Wiper & Washer	14	16
Head Light Relay	10	12			