

New For
2004/05

Frezzi®

ENERGY SYSTEMS

Professional Power and Lighting Catalog



Frezzi 200W HMI
Super-Sun Gun



2000 Emmy
Award Winner



Frezzi Light Kit
Model MFKIC-XL1



Frezzi Dimmer Mini-Fill
& Camera powered by
BP-14-EG Hi-Energy Battery



Frezzi's Micro-Fills
Dimmer / on-off / HMI's



Frezzi HMI Mini-Sun Guns
18W, 24W, & 50W



Frezzi M2100A Advanced
Battery Management System

**Frezzi's award
winning
performance,
for all your
Power & Lighting needs**



*Frezzi products are used by virtually
every major network, cable news / sports
channels and professionals
worldwide for ENG/EFP.*

*Image quality perfection begins with
Frezzi Power & Lighting*

Frezzi - The World Standard for Craftsmanship in Portable Power and Lighting

INTRODUCTION

Powering the broadcast community for over 60 years, Frezzi has become a leading manufacturer of lighting equipment, camera batteries, chargers, and power supplies.

Since their early film camera days, Frezzi has been designing and manufacturing high-quality products to meet the demands of the advancing broadcast industry. Through continuous product innovation, Frezzi has introduced products never before seen, yet requested by the industry.

Today, more than ever, with unmatched experience, Frezzi is meeting and exceeding the expectations of the broadcast industry throughout the world.

It is with great pleasure that we present to you our new catalog for a New Millennium, loaded with the innovative, technologically advanced products that you would expect from Frezzi.

Inside this catalog you will find an array of award winning, innovative, unique, and competitively priced products for you, our valued customer.

More...Lighting Adding to our award-winning on-camera lighting, a new Super-Sun Gun that outperforms all the HMIs in its class.

More...Power Offering the most powerful and intelligent batteries in the industry.

More...Accessories Giving you more choices to suit your individual requirements.

More...Formats With better choices in equipment for all professional cameras manufactured.

More...Technological Advancements In battery management systems, electronic ballasts, power supplies, advanced battery monitoring, cell technology, and overall product design.

More...Availability With dealer networks throughout the 5 continents

Today's Frezzi... The Cameraman's Choice

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Professional Power and Lighting Packages

Our new professional power & lighting packages include everything you need for portable power and lighting for your camera. Each kit includes a Mini-Fill on-camera light with mounting hardware, two **130 watt hour ultra-high capacity batteries**, and fast M series charger/discharger.

The package choices below are tailored for cameras with either the Sony V-lock bracket, or the A/B 3 button bracket. Standard packages include the **Standard Mini-Fill**, standard brick batteries, and a charger / discharger. Deluxe packages include the **Dimmer Mini-Fill**, brick batteries with Frezzi's advanced **Energy Gage**, and a charger / discharger with a 40 watt power supply.



Frezzi's 130WH batteries provide over 5 hours of run time on a camera drawing 25 watts!

The **New Frezzi 130WH** batteries provide **100% more run time** than a typical brick battery providing over **5 hours of run time** for a camera drawing 25W, when used with the Sony V Lock it offer's a built in Power tap connector on the battery itself for powering all Frezzi Lights. Optional Advanced Energy gage is available in Deluxe Pro package.

The **M Series Fast chargers** are compact, lightweight and easily fit into any camera bag making it a great travel unit, they offer built in discharger, battery rescue mode, auto voltage select worldwide as well as optional 40W power supply in the Deluxe pro package. It can not only charge our New 130WH but virtually any other battery you plug into it.

The **Frezzi Mini Fills** are the perfect finishing touch to these great camera packages, they are award winning, a standard in on camera professional lighting available in the standard On/Off Light or with Dimmer control in the Deluxe pro package.

STANDARD PRO PACKAGE

(for cameras with V-Lock bracket)
Item No. 98000, Model No. MFK-1V

Item#	Model#	Qty	Description
93805	BP-14MHV	2	14.4V, 130WH battery
94127	M1000V	1	Charger/discharger
91102	MF-PT	1	Standard Mini-Fill with 50W bulb
96304	LS-1A	1	Mounting stud with 1/4-20 thread

DELUXE PRO PACKAGE

(for cameras with V-lock bracket)
Item No. 98001, Model No. MFKIC-2V

Item#	Model#	Qty	Description
93705	BP-14MHEGV	2	14.4V, 130WH battery w/ Energy Gage
94128	M1000VP	1	Charger / discharger / power supply
91202	MFIC-PT	1	Dimmer Mini-Fill with 50W bulb
96304	LS-1A	1	Mounting Stud with 1/4-20 thread



Deluxe Pro Package
(for cameras with Sony V-Lock bracket)
Model MFKIC-2V

STANDARD PRO PACKAGE

(for cameras with A/B bracket)
Item No. 98002, Model No. MFK-1AB

Item#	Model#	Qty	Description
93205	BP-14MH	2	14.4V, 130WH battery
94112	M1000A	1	Charger / discharger
91102	MF-PT	1	Standard Mini-Fill with 50W bulb
96306	LS-21A	1	Mounting Stud with shoe mount

DELUXE PRO PACKAGE

(for cameras with A/B bracket)
Item No. 98003, Model No. MFKIC-2AB

Item#	Model#	Qty	Description
93303	BP-14MHEG	2	14.4V, 130WH battery w/ Energy Gage
94110	M1000AP	1	Charger / discharger / power supply
91202	MFIC-PT	1	Dimmer Mini-Fill with 50W bulb
96306	LS-21A	1	Mounting Stud with shoe mount



Deluxe Pro Package
(for cameras with A/B bracket)
Model MFKIC-2AB

The World's Favorite Camera-Top Lighthead

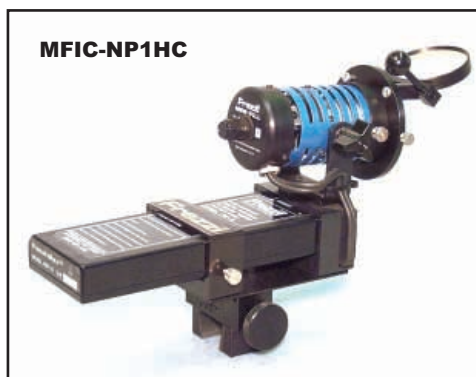
Frezzi's award winning lighthead, the **Mini Fill**, was originally designed by Frezzolini for the first Mount Everest climb. It has continuously been updated and improved for the needs of the broadcasting community. The Mini-Fill's reliability, performance, and portability has established its international reputation and inspired an entire line of lighting products available today. Previously known only to the broadcasting community, this exceptional lighthead has become the light of choice for the professional videographer.

Frezzi Mini-Fills are available in both **standard (on/off)** and **dimmer control** models. The **Dimmer Mini-Fill** provides the ultimate in flexibility for camera top quartz-tungsten lighting. An advanced pulse width modulation circuit allows instant adjustment of the light intensity while minimizing color change and conserving power. Adjusting the light output is as simple as turning the dial on the back of the unit.

The **new 30 Watt Dimmer Mini-Fill** was designed specifically for Sony SX and DVCAM cameras that have the built-in two pin power-tap receptacle. This latest innovation provides a **50% increase in output** over all other quartz-tungsten lights available for these cameras.



Standard (on/off) Mini-Fill



Dimmer Mini Fill with self contained NP1 holder with optional FNP1S battery and dichroic filter (MFDF)

Choice of Connector



New 30 Watt Dimmer Mini-Fill. Highest output for Sony SX, and DVCAM cameras. Shown with optional dichroic filter (MFDF) and barn doors / diffuser (MFBF)

STANDARD MINI-FILLS



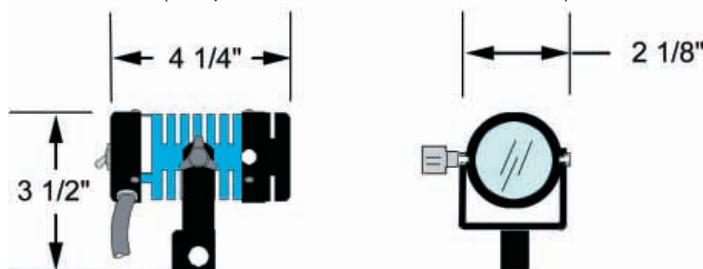
DIMMER MINI-FILLS

Item#	Model#	Description	Item#	Model#
91101	MF-NP1HC	Self contained NP1 holder and handle clamp (includes 50W lamp)	91201	MFIC-NP1HC
91102	MF-PT	Power-tap connector, 2' cable (includes 50W lamp)	91202	MFIC-PT
91106	MF-PTS	Power-tap connector, 1' cable (20W Standard / 30W Dimmer -NEW!)	91206	MFIC-PTS
91103	MF-4X	XLR-4(M) connector, 4' cable (includes 50W lamp)	91203	MFIC-4X
91104	MF-NP1S	NP1 connector, 2' cable (includes 50W lamp)	91204	MFIC-NP1S
91105	MF-NP1	NP1 connector, 4' cable (includes 50W lamp)	91205	MFIC-NP1
91107	MF-12S	BP-90 plug connector for Pag-Lok, 2' cable (includes 50W lamp)	91207	MFIC-12S
91108	MF-5X	XLR-5(M) connector, 4' cable (includes 75W lamp)	91208	MFIC-5X
91109	MF-12C	BP-90 socket connector, 4' cable (includes 50W lamp)	91209	MFIC-12C
91110	MF-12P	Cigarette plug connector, 4' cable (includes 100W lamp)	91210	MFIC-12P
91111	MF-30	30V, 2-pin amphenol(M), 4' cable (includes 80W lamp)	91211	MFIC-30

SPECIFICATIONS

Weights: 12 oz. (17 oz. for NP1HC models)

Mount: 1/2" stud (clamp mount included with NP1HC models)



LAMPS

Item#	Model#	Watts	Volts	Kelvin	Life(hrs)	fc @ 5'	Beam Sp.
97001	BAB	20	12-14	2925K	2000	35	40° flood
97002	FMW	35	12-14	3000K	4000	60	40° flood
97003	EXN	50	12-14	3050K	3000	80	40° flood
97004	EYC	75	12-14	3050K	3500	100	40° flood
97005	EXV	100	12	3350K	50	120	40° flood
97006	EKP	80	30	3350K	25	150	40° flood

Foot candle readings taken on lightheads with diffused front glass which is standard on all Frezzi Mini-Fills.

STANDARD AND DIMMER MINI-FILL KITS

MFK-1A



STANDARD MINI-FILL KITS

Item# 91018, Model# MFK-1A-(*) Includes:

- 1) Standard Mini-Fill w/ choice of connector*
 - 1) MFBD Barn doors w/ diffuser
 - 1) MFDF 3200K to 5600K Dichroic filter
 - 1) LS-1A 1.5" Stud with 1/4-20 thread
 - 1) LS-21A 1.5" Stud with Shoe Mount
 - 1) ARCC Compact case
- Weight: 3.75 lbs.

Item# 91019, Model# MFK-2A-(*) Includes:

- 1) Standard Mini-Fill w/ choice of connector*
 - 1) MFSB-2 Soft Box with diffuser/gel holder
 - 1) LS-1A 1.5" Stud with 1/4-20 thread
 - 1) LS-21A 1.5" Stud with shoe mount
 - 1) ARCC Compact case
- Weight: 3.75 lbs.

MFK-2A



Item# 91011, Model# MFK-NP1S Includes:

- 1) MF-NP1S Standard Mini-Fill w/ NP connector and 2' cable
 - 1) MFDF 3200K to 5600K Dichroic filter
 - 1) LS-1A 1.5" stud w/ 1/4-20 thread
 - 1) NP1-CB Bracket to attach NP-1 battery to NP-1 box
- Weight: 1.75 lbs.

Item# 91017, Model# MFK-XL1 Includes:

- 1) MF-NP1S Standard Mini-Fill w/ NP connector and 2' cable
 - 1) NP1-CB Bracket to attach battery to Canon MA-100
 - 1) LS-21A 1.5" stud w/ shoe mount
 - 1) FNP-1S 12V, 2.3Ah battery
 - 1) FTC-NP1 Overnight charger
- Weight: 3.5 lbs.

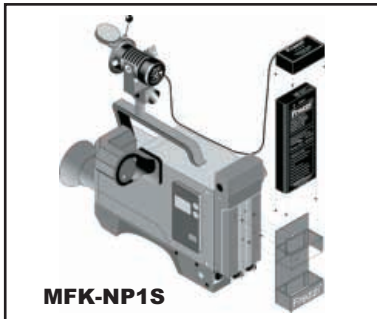
Item# 91015, Model# MFK-6 Includes:

- 1) MF-4X Standard Mini-Fill w/ XLR-4 connector and 4' cable
 - 1) VB-4XP 12V, 60WH battery w/ belt loop and shoulder strap
 - 1) FTC12-4X 14 hour charger for VB-4XP
 - 1) Choice of spare bulb
 - 1) LS-1A 1.5" light stud (1/4-20 thread)
 - 1) LS-21A 1.5" light stud (shoe mount)
 - 1) MFDF 3200K to 5600K Dichroic filter
 - 1) TC-2 Rugged waterproof case
- Weight: 14 lbs.

Item# 91009, Model# MFK-NP1 Includes:

- 1) MF-NP1 Standard Mini-Fill w/ NP connector and 4' cable
 - 1) FNP-1S 12V, 28WH battery
 - 1) FTC-NP1 Overnight charger (120V / 240V)
 - 1) NP1-Pouch Rugged nylon pouch
 - 1) LS-21A Mounting stud w/ shoe mount
- Weight: 3 lbs.

MFK-NP1S



DIMMER MINI-FILL KITS

Item# 91028, Model# MFKIC-1A-(*) Includes:

- 1) Dimmer Mini-fill w/ choice of connector*
 - 1) MFBD Barn doors w/ diffuser
 - 1) MFDF 3200K to 5600K Dichroic filter
 - 1) LS-1A 1.5" Stud with 1/4-20 thread
 - 1) LS-21A 1.5" Stud with Shoe Mount
 - 1) ARCC Compact case
- Weight: 3.75 lbs.

Item# 91029, Model# MFKIC-2A-(*) Includes:

- 1) Dimmer Mini-Fill w/ choice of connector*
 - 1) MFSB-2 Soft Box with diffuser/gel holder
 - 1) LS-1A 1.5" Stud with 1/4-20 thread
 - 1) LS-21A 1.5" Stud with shoe mount
 - 1) ARCC Compact case
- Weight: 3.75 lbs.

MFKIC-XL1



Item# 91021, Model# MFKIC-NP1S Includes:

- 1) MFIC-NP1S ... Dimmer Mini-Fill w/ NP connector and 2' cable
 - 1) MFDF 3200K to 5600K Dichroic filter
 - 1) LS-1A 1.5" stud w/ 1/4-20 thread
 - 1) NP1-CB Bracket to attach NP-1 battery to NP-1 box
- Weight: 1.75 lbs.

Item# 91027, Model# MFKIC-XL1 Includes:

- 1) MFIC-NP1S ... Dimmer Mini-Fill w/ NP connector and 2' cable
 - 1) NP1-CB Bracket to attach battery to Canon MA-100
 - 1) LS-21A 1.5" stud w/ shoe mount
 - 1) FNP-1S 12V, 2.3Ah battery
 - 1) FTC-NP1 Overnight charger
- Weight: 3.5 lbs.

MFKIC-6



Item# 91025, Model# MFKIC-6 Includes:

- 1) MFIC-4X Dimmer Mini-Fill w/ XLR-4 connector and 4' cable
 - 1) VB-4XP 12V, 60WH battery w/ belt loop and shoulder strap
 - 1) FTC12-4X 14 hour charger for VB-4XP
 - 1) Choice of spare bulb
 - 1) LS-1A 1.5" light stud (1/4-20 thread)
 - 1) LS-21A 1.5" light stud (shoe mount)
 - 1) MFDF 3200K to 5600K Dichroic filter
 - 1) TC-2 Rugged waterproof case
- Weight: 14 lbs.

Item# 91030, Model# MFKIC-NP1 Includes:

- 1) MFIC-NP1 Dimmer Mini-Fill w/ NP connector and 4' cable
 - 1) FNP-1S 12V, 28WH battery
 - 1) FTC-NP1 Overnight charger (120V / 240V)
 - 1) NP1-Pouch Rugged nylon pouch
 - 1) LS-21A Mounting stud w/ shoe mount
- Weight: 3 lbs.

On-Camera Lighting Starter Kit



(*) SPECIFY CONNECTOR WHEN ORDERING

Choice of connector for MFK-1A, MFK-2A, MFKIC-1A, and MFKIC-2A.

Also available with self-contained NP-1 Handle Clamp (NP1HC) at additional cost.



PT / PTS

4X

NP1 / NP1S

12S

5X

12C

12P

30

Advanced Mini-DV Lighting

Frezzi is the world leader for on-camera lighting used by virtually all network news operations, cable, and sports channels for over 60 years. Frezzi continues to expand its family of award winning quartz and HMI lighting tailored to today's smaller format DV and mini-camcorders.

The Micro-Fill series provides tungsten or daylight balanced light. The Standard and Dimmer Micro-Fill are balance at 3200K and provide 5500K with the optional Combo Accessory MRDF. The Dimmer Micro-Fill offers an advanced dimmer circuit for controlling light output providing optimal DV performance without radio interference.

Frezzi's new line of Micro-Fills and Micro-Sun Guns are affordably priced and designed with the same professional features as their big brother counterparts, the award winning Frezzi Mini-Fills and HMI Mini-Sun Guns. Improve your image quality, put a Frezzi on your camera and see the results.

FEATURES & BENEFITS

- Compact, lightweight, ruggedized camera top lighting.
- Universal shoe mount, 1/4-20 thread, 1/2" stud mount included.
- Quality construction with professional features.
- Available with all commonly requested connectors.
- 3 models: ON/OFF, Dimmer, HMI DAYLIGHT (5600K).
- Many accessories & options. Full kits available with batteries.



Micro-Fill Model MRF-NP1 shown on Sony DSR-PD150



Dimmer Micro-Fill with MRSB Accessory



Micro-Sun Gun HMI with MRFA Accessory

Choice of Connectors



PT / PTS



4X



NP 1/ NP1S



12S



5X



12C



12P

To find the right light for your camera, make a selection from the following table:

1. Select your battery below: Don't have a battery? Turn to the other side for light kits and accessories.	2. Select one of the three models below:						3. Verify connector type and cable length below:
	Standard Micro-Fill (ON/OFF quartz)		Dimmer Micro-Fill (Dimmable quartz)		Micro-Sun Gun HMI (ON/OFF HMI)		
	Item No.	Model No.	Item No.	Model No.	Item No.	Model No.	
NP-1 style battery (waist mounted)	91301	MRF-NP1	91401	MRFIC-NP1	92801	MRA-NP1	NP-1 battery connector, 4' cable
NP-1 style battery (camera mounted)	91302	MRF-NP1S	91402	MRFIC-NP1S	92802	MRA-NP1S	NP-1 battery connector, 2' cable
Camera battery (power-tap rear)	91306	MRF-PT	91406	MRFIC-PT	92803	MRA-PT	Power-tap connector, 2' cable
Camera battery (power-tap front)	91303	MRF-PTS	91403	MRFIC-PTS	92804	MRA-PTS	Power-tap connector, 1' cable
Battery with XLR-4 connector	91304	MRF-4X	91404	MRFIC-4X	92805	MRA-4X	XLR-4 male connector, 4' cable
Battery with XLR-5 connector	91305	MRF-5X	91405	MRFIC-5X	92806	MRA-5X	XLR-5 male connector, 4' cable
Battery with cigarette connector	91307	MRF-12P	91407	MRFIC-12P	92807	MRA-12P	Cigarette plug, 4' cable
BP-90 style battery	91308	MRF-12C	91408	MRFIC-12C	92808	MRA-12C	BP-90 socket, 4' cable
Battery for PAG-LOK bracket	91309	MRF-12S	91409	MRFIC-12S	92809	MRA-12S	BP-90 plug, 2' cable

All models operate on 12-14.4 Volts

SPECIFICATIONS

Weights: 5 Ounces (Standard Micro-Fill)
6 Ounces (Dimmer Micro-Fill)
7 Ounces (Micro-Sun Gun)

Mount: 1/2 " Stud

UNIVERSAL MOUNTING: CAMERA SHOE MOUNT, STUD MOUNT

LAMPS

Item#	Model#	Watts	Volts	Kelvin	Life(hrs)	fc @ 5'	Bulb Type
97011	FTH	35	12-14	3200K	2000	25	Tung.
97012	FTD	20	12-14	3200K	2000	15	Tung.
97105	FAB-10	10	12-14	5600K	1000	25	HMI

Foot candle readings taken on lighthead with diffused front glass which is standard on all Frezzi Micro-Fills.

Mini-DV Lighting Kits

When looking for an economical on-camera light kit that does not sacrifice professional quality, the new Micro-Kits are a great choice. Each kit comes complete with a lighthead, battery, charger, and battery pouch.

All lightheads include a bulb and all necessary mounting hardware for camera shoe, 1/4-20 thread or 1/2" stud mount.

The battery included in the kits is the reliable Frezzi FNP-1S which will run a Micro-Fill with a 35 watt bulb for over 45 minutes, and a 20 watt bulb for over 75 minutes. The amazing Micro-Sun Gun HMI will run for over 2 hours and outputs the daylight equivalent of a 50 watt color corrected quartz tungsten lamp.

A full line of accessories is available for the Micro-Fills & Micro-Sun Guns. They are all easy to install and built with professional quality and durability. See Optional Accessories table below for details.

OTHER KEY FEATURES

- All light heads include all necessary mounting hardware for any video camera.
- The Frezzi FNP-1S 28 Watt Hour battery runs a 35 watt bulb for 45 minutes and a 20 watt bulb for 75 minutes at maximum brightness (longer run-times are achieved at lower intensities).
- Compact, lightweight, and reliable camera top lighting
- Full kits available with batteries.
- Advanced pulse width modulation variable control emits no interference with video signal.

Micro-Fill & Micro-Sun Gun Kit Selector Tables

Standard Micro-Fill Kit Item No. 91501, Model No. MRFK-NP1			
Item No.	Model No.	Qty	Description
91301	MRF-NP1	1	Standard Micro Fill with 35W bulb
93103	FNP-1S	1	12 volt, 2.3 Ah battery
94201	FTC-NP1	1	Overnight charger 120/240 VAC
96607	NP1-POUCH	1	Nylon pouch with belt loop and shoulder strap for FNP-1S
Run time:	45 minutes		35 watt FTH bulb (included)
	75 minutes		20 watt FTD bulb (optional)
Item No. 91502, Model No. MRFK-NP1Q Quick charge kit			

Dimmer Micro-Fill Kit Item No. 91601, Model No. MRFKIC-NP1			
Item No.	Model No.	Qty	Description
91401	MRFIC-NP1	1	Dimmer Micro-Fill with 35W bulb
93103	FNP-1S	1	12 volt, 2.3 Ah battery
94201	FTC-NP1	1	Overnight charger 120/240 VAC
96607	NP1-POUCH	1	Nylon pouch with belt loop and shoulder strap for FNP-1S
Run time:	45 minutes		35 watt FTH bulb (included)
	75 minutes		20 watt FTD bulb (optional)
Item No. 91602, Model No. MRFKIC-NP1Q Quick charge kit			

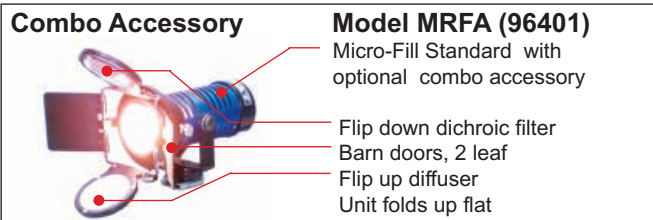
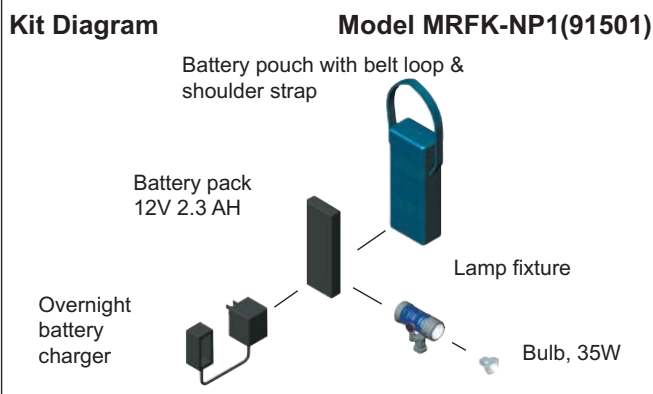
Micro-Sun Gun HMI Kit Item No. 92901, Model No. MRAK-NP1			
Item No.	Model No.	Qty	Description
92801	MRA-NP1	1	Micro-Sun Gun with bulb
93103	FNP-1S	1	12 volt, 2.3 Ah battery
94201	FTC-NP1	1	Overnight charger 120/240 VAC
96607	NP1-POUCH	1	Nylon pouch with belt loop and shoulder strap for FNP-1S
Run time:	2.25 hours		10 watt FAB-10 bulb (included)
Item No. 92902, Model No. MRAK-NP1Q Quick charge kit			



Micro-Fill Kit MRFK-NP1 shown with JVC GY-DV300



Dimmer Micro-Fill shown with Panasonic AG-DVX100



Optional Accessories		
Item No.	Model No.	Description
96401	MRFA	Micro-Fill combo accessory: 2 barn doors, dichroic filter, diffuser
96402	MRAA	Micro-Sun Gun combo accessory : 2 barn doors, CTO filter, diffuser
96403	MRDF	Micro-Fill dichroic filter
96404	MRAF	Micro-Sun Gun CTO filter
96405	MRSB	Micro-Fill / Micro Sun Gun soft box
97011	FTH	Spare 35 watt tungsten bulb
97012	FTD	Spare 20 watt tungsten bulb
97105	FAB-10	Spare 10 watt HMI bulb

Award Winning HMI Lighting

In 1996 Frezzi revolutionized the lighting industry with the world's first camera mountable HMI light. The tremendous popularity of the 24 watt Mini-Sun Gun inspired the expansion of Frezzi's growing line of HMIs.

The Frezzi family of Mini-HMIs includes 18W, 24W, and 50W models. Now available in a sleek new ultra-lightweight rugged one piece design, these expertly crafted HMIs operate on 12 to 14.4 volts, are 400% more power efficient than quartz-tungsten lighting, and therefore provide the advantage of long runtimes with high output at 5600K.



18 Watt Mini-Sun Gun with optional CTO filter (MADF)



24 Watt Mini-Sun Gun with optional CTO filter (MADF) and optional bard doors with diffusion filter (MFBD)



50 Watt Mini-Sun Gun with optional soft box (MFSB)

18 WATT MINI-SUN GUNS

Item#	Model#	Description
92301	MFA18-NP1HC	Self contained NP1 holder and handle clamp
92302	MA18-PT	Power-tap connector, 2' cable
92310	MA18-PTS	Power-tap connector, 1' cable for use with Sony camera 12V light output connector
92303	MA18-4X	XLR-4(M) connector, 4' cable
92304	MA18-NP1S	NP1 connector, 2' cable
92305	MA18-NP1	NP1 connector, 4' cable
92306	MA18-12S	BP-90 plug connector for Pag-Lok, 2' cable
92307	MA18-5X	XLR-5(M) connector, 4' cable
92308	MA18-12C	BP-90 socket connector, 4' cable
92309	MA18-12P	Cigarette plug connector, 4' cable

(All 18 Watt Mini-Sun Guns include FAB-18 lamp, and all 24 Watt Mini-Sun Guns include FAB-24 lamp)

24 WATT MINI-SUN GUNS

Item#	Model#
92401	MFA24-NP1HC
92402	MA24-PT
92403	MA24-4X
92404	MA24-NP1S
92405	MA24-NP1
92406	MA24-12S
92407	MA24-5X
92408	MA24-12C
92409	MA24-12P

50 WATT MINI-SUN GUNS

Item#	Model#	Description
92502	MA50-PT	Power-tap connector, 2' cable
92503	MA50-4X	XLR-4(M) connector, 4' cable
92506	MA50-12S	BP-90 plug connector for Pag-Lok, 2' cable
92507	MA50-5X	XLR-5(M) connector, 4' cable
92508	MA50-12C	BP-90 socket connector, 4' cable
92509	MA50-12P	Cigarette plug connector, 4' cable

(All 50 Watt Mini-Sun Guns include FAB-50 lamp)

LAMPS

Item#	Model#	Watts	Kelvin	Life(hrs)	Beam Sp.
97101	FAB-50	50	5600K	4000	21°
97102	FAB-24	24	5600K	500	21°
97103	FAB-18	18	5600K	500	21°

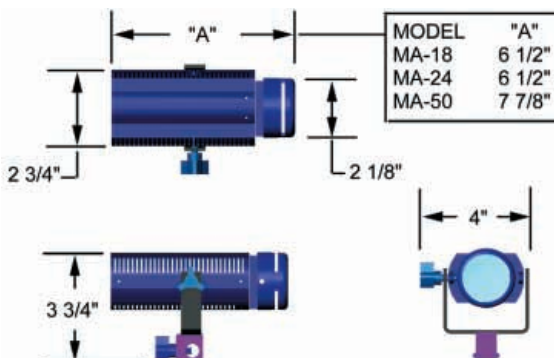
SPECIFICATIONS

Weights:

MA18: 1 lb
MA24: 1 lb
MA50: 1.25 lbs.
MFA18-NP1HC: 1.38 lbs
MFA24-NP1HC: 1.38 lbs.

Mount:

1/2" stud
(clamp mount included w/ NP1HC models)



RUN-TIME AND OUTPUT COMPARISON ON A 72 WATT-HOUR BATTERY

Fixture	Power Draw	Output	Run Tlme	FC @ 5'
50W quartz w/ dichroic filter	50W	35W	86 min.	36
18W HMI	24W	75W*	180 min.	80
24W HMI	28W	100W*	154 min.	100
50W HMI	65W	200W*	66 min.	200

* Output shown is daylight corrected tungsten equivalent.

Footcandle readings taken on lighthead with diffused front glass which is standard on all Frezzi Mini-Lights.

MINI-SUN GUN HMI KITS

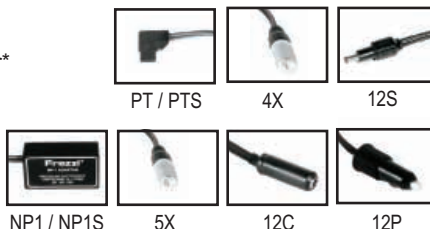
MINI-SUN GUN KITS WITH BARNDOOR/DIFFUSER AND 3200K FILTER

Item#	Model#	Description
92319	MAK18-1A-(*)	18 Watt Mini-Sun Gun Kit
92419	MAK24-1A-(*)	24 Watt Mini-Sun Gun Kit
92519	MAK50-1A-(*)	50 Watt Mini-Sun Gun Kit

(*) Specify connector when ordering.
18 and 24 watt units also available with NP-1
Handle Clamp (NP1HC) at additional cost.

Each kit contains the following items:

- 1) 18, 24, or 50 watt Mini-Sun gun w/ choice of connector*
 - 1) MFBD Barn doors w/ diffuser
 - 1) MADF 5600K to 3200K conversion filter
 - 1) LS-1A 1.5" Stud with 1/4-20 thread
 - 1) LS-21A 1.5" Stud with Shoe Mount
 - 1) ARCC Compact case
- Weight: 4.25 lbs.



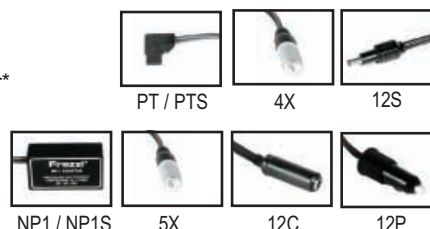
MINI-SUN GUN KITS WITH ADJUSTABLE SOFT BOX

Item#	Model#	Description
92320	MAK18-2A-(*)	18 Watt Mini-Sun Gun Kit
92420	MAK24-2A-(*)	24 Watt Mini-Sun Gun Kit
92520	MAK50-2A-(*)	50 Watt Mini-Sun Gun Kit

(*) Specify connector when ordering.
18 and 24 watt units also available with NP-1
Handle Clamp (NP1HC) at additional cost.

Each kit contains the following items:

- 1) 18, 24, or 50 watt Mini-Sun gun w/ choice of connector*
 - 1) MFSB-2 Soft Box with diffuser/gel holder
 - 1) LS-1A 1.5" Stud with 1/4-20 thread
 - 1) LS-21A 1.5" Stud with shoe mount
 - 1) ARCC Compact case
- Weight: 4.25 lbs.



MINI-SUN GUN KITS WITH BATTERY AND TRICKLE CHARGER

Item#	Model#	Description
92327	MAK18-4	18 Watt Mini-Sun Gun Kit
92427	MAK24-4	24 Watt Mini-Sun Gun Kit
92521	MAK50-4	50 Watt Mini-Sun Gun Kit

Each kit contains the following items:

- 1) 18, 24, or 50 Watt Mini-Sun gun w/ XLR-4 connector
 - 1) MFBD Barn doors w/ diffuser
 - 1) MADF 5600K to 3200K conversion filter
 - 1) MFSB Soft box
 - 1) 9807A Mounting clamp
 - 1) LB-5/8 Clamp to light stand adapter
 - 1) FLH-101 Hand grip
 - 1) VB14-4XP .. 14.4V, 72WH battery with belt loop and shoulder strap
 - 1) FTC14-4X .. Trickle charger for VB14-4XP
 - 1) TC-2 Rugged waterproof case
- Weight: 16.25 lbs.



MINI-SUN GUN AC/DC KITS WITH BATTERY, FAST CHARGER, AND POWER

Item#	Model#	Description
92324	MAK18-4X	AC/DC 18 Watt Mini-Sun Gun Kit
92424	MAK24-4X	AC/DC 24 Watt Mini-Sun Gun Kit
92525	MAK50-4X	AC/DC 50 Watt Mini-Sun Gun Kit

Each kit contains the following items:

- 1) 18, 24, or 50 watt Mini-Sun gun w/ XLR-4 connector
 - 1) MFBD Barn doors w/ diffuser
 - 1) MADF 5600K to 3200K conversion filter
 - 1) MFSB Soft box
 - 1) 9807A Mounting clamp
 - 1) LB-5/8 Clamp to light stand adapter
 - 1) FLH-101 Hand grip
 - 1) VB14-4XP .. 14.4V, 72WH battery with belt loop and shoulder strap
 - 1) M1000 Single channel fast charger/discharger
 - 1) 9455F Charger adapter cable
 - 1) RPS-80 80 watt power supply
 - 1) TC-2 Rugged waterproof case
- Weight: 20.25 lbs.



MINI-FILL / MINI-SUN GUN ACCESSORIES

The quality construction and unique user friendly features of Frezzi lighting accessories are great examples of the thought and craftsmanship put into our products, and are the reasons why they are demanded by video professionals around the world.

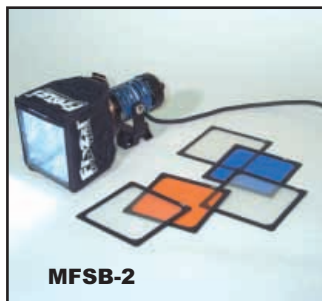
ORIGINAL SOFT BOX



The **MFSB** is a lightweight collapsible diffusion box that easily mounts to any Frezzi Mini-Fill or HMI Mini-Sun Gun. Designed like a professional studio light box, the original Soft Box provides a soft even distribution of light while eliminating hard shadows. The Soft Box is lightweight, compact, and heat resistant. It is designed to quickly and easily fold up to fit into a pocket or case. (1 stop)

Size: 4.0" x 4.0" x 4.0" (deployed)
4.0" x 4.0" x 0.5" (folded)
Weight: 4 ounces

SOFT BOX 2



The **MFSB-2** is the same size and weight as the Original Soft Box, but features a unique clear front pouch which allows you to slide in the diffusion and/or color correction filters of your choice. The level of diffusion and color temperature can now be precisely adjusted to meet your needs. The Soft Box 2 comes complete with one Diffusion/Gel Pack for use with both Mini-Fills and HMI Mini-Sun Guns.

Size: 4.0" x 4.0" x 4.0" (deployed)
4.0" x 4.0" x 0.5" (folded)
Weight: 4 ounces

DICHROIC FILTER



The **MFDF** is a ruggedly designed flip-down Dichroic Filter that attaches in seconds to all Frezzi Mini-Fills. Color temperature is converted from 3200K to 5600K. It can be used independently or together with the MFBD.

Size: 3" diam. x 1.25" deep
Weight: 2 ounces

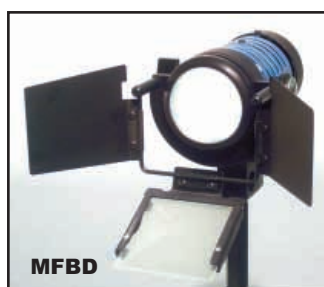
FOUR LEAF BARN-DOORS

The **MFBD-4** is a four leaf barn door that attaches directly to all Frezzi Mini-Fills or Mini HMI Sun Guns.

Size: 3" diam. x 1.25" deep
Weight: 2 ounces



BARNDORS / DIFFUSER



The **MFBD** is a two leaf Barn Door with integral flip up diffuser (1 stop). The MFBD may be used independently or together with the MFDF or MADF.

Size: 3" diam. x 1.25" deep
Weight: 2 ounces

HMI CONVERSION FILTER

The **MADF** utilizes the same rugged frame as our dichroic filter, but instead contains a conversion glass to convert the color temperature of our HMI Mini-Sun Guns from 5600K to 3200K. It can be used independently or together with the MFBD.

Size: 3" diam. x 1.25" deep
Weight: 2 ounces



DIFFUSION / GEL PACK

The **MFGP-2** is a replacement pack containing the following diffusion and gel frames for use with the MFSB-2.

#250 Half White Diffusion	(3/4 stop)
#251 Quarter White Diffusion	(1/3 stop)
#253 Hampshire Frost	(1/4 stop)
#201 Full CTB	(3200K to 5600K)
#204 Full CTO	(5600K to 3200K)

Item#	Model#	Description
96200	MFSB	Soft box
96201	MFSB-2	Soft box w/ filter holder, 3 diffusion filters, 1CTB, 1 CTO
96202	MFGP-2	Diffusion/gel pack, includes 3 diffusion, 1 CTB, 1 CTO
96203	MFBD-4	4 leaf barndoors
96206	MFBD	2 leaf barndoors with flip-up diffuser
96207	MFDF	Dichroic filter (3200K to 5600K) for Mini-Fills
96208	MADF	Conversion filter (5600K to 3200K) for Mini-Sun Guns

MOUNTING HARDWARE

Item#	Model#	Description
96301	9807A	Universal handle clamp w/ 1.5" stud
96302	9807	Universal handle clamp w/ 3" stud
96303	9807M	Universal handle clamp w/ 1.5" stud and mic clamp
96304	LS-1A	1.5" stud w/ 1/4-20 thread
96305	LS-1	3" stud w/ 1/4-20 thread
96306	LS-21A	1.5" stud with shoe mount
96307	LS-21	3" stud with shoe mount
96308	LSM-1	3" stud w/ mic clamp and 1/4-20 thread
96309	LSM-21	3" stud w/ mic clamp and shoe mount
96310	LB-1/2	Adapter block: Attaches clamp to 1/2" stud
96311	LB-5/8	Adapter block: Attaches clamp to 5/8" stud
96312	FLH-101	Hand grip for Mini-Fills and Mini-Sun Guns
96313	MB-1A	Adapter: 5/8" light stand to Frezzi 1/2" light mount



MICRO-FILL / MICRO-SUN GUN ACCESSORIES

The Frezzi Micro-Fill line of accessories provide soft box diffusion, barn doors, color conversion, dual bracket mounts, and glass diffusion extending the range of lighting solutions for the Frezzi Micro-Fill and Micro-Sun Gun lights.

MICRO-FILL COMBO ACCESSORY



The **MRFA** combo accessory adds a dichroic filter for daylight balanced light, a diffusion filter, and barn doors in a single accessory. Built of lightweight aircraft aluminum, the MRFA attaches to the Frezzi Micro-Fill line of products quickly and easily. A must accessory.

Size: 2.4" x 2.5" x 2.8"
Weight: 2.2 ounces

MICRO-FILL SOFT BOX



The **MRSB** is a lightweight collapsible diffusion box that easily mounts to any Frezzi Micro-Fill or Micro-Sun Gun. Designed like a professional studio light box, it provides a soft even distribution of light while eliminating hard shadows. This Soft Box is lightweight, compact, and heat resistant. It is designed to quickly and easily fold up to fit into a pocket or case. (1 Stop)

Size: 3.0" x 3.0" x 3.0" (deployed)
2.0" x 3.0" x 0.5" (folded)
Weight: 1.9 ounces

MICRO-FILL DICHROIC FILTER



The **MRDF** dichroic filter converts the Frezzi Micro-Fill light to 5600K from 3200K. The daylight corrected Micro-Fill supplies daylight balanced fill light for close-ups and interviews. For shooting in outside daylight, this is a must.

Size: .9" x 2.3" x 2.4"
Weight: 1.5 ounces

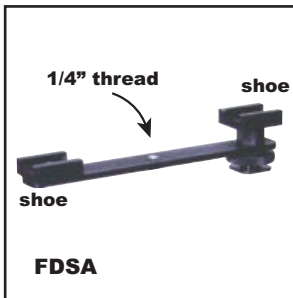
MICRO-SUN GUN CTO

The **MRAF** converts the Frezzi Micro-Sun Gun to 3200K from 5600K. The corrected Micro-Sun Gun supplies tungsten balanced fill light for indoor production environments.

Size: .9" x 2.3" x 2.4"
Weight: 1.5 ounces



UNIVERSAL DUAL SHOE ADAPTER



The **FDSA** Frezzi Dual Shoe Adapter converts a camera shoe by providing an additional shoe mount for microphones, wireless devices, monitors, it also allows for custom positioning on Frezzi Mini-Fill or Micro-Fill to the sides or extends the light forward to prevent any unwanted shadows.

Size: 5.5" x 1.0" x 1.3"
Weight: 2 ounces

Item#	Model#	Description
96401	MRFA	Micro-Fill combo accessory
96405	MRSB	Micro-Fill / Micro-Sun Gun soft box
96403	MRDF	Micro-Fill dichroic filter
96404	MRAF	Micro-Sun Gun CTO filter
96402	MRAA	Micro-Sun Gun combo accessory
96316	FDSA	Dual Shoe Adapter



FDSA supporting Micro-Fill and Soft Box



FDSA supporting LCD panel and Mini-Fill



Dual Shoe Adapter with Frezzi Dimmer Mini-Fill extended forward and above camera lens



Dual Shoe Adapter supporting Frezzi Dimmer Micro-Fill and the Sony® Microphone Wireless Adaptor

FREZZI HMI SUPER-SUN GUN 200

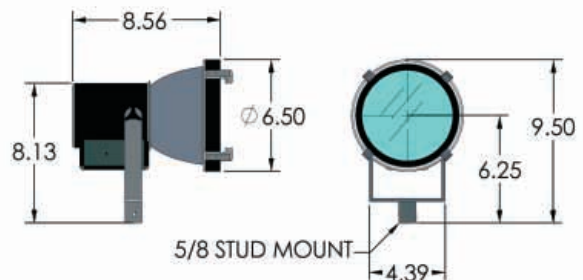
LIGHTER & BRIGHTER...

The **NEW Frezzi Super-Sun Gun (SSG-200)** is designed to become the new standard in ENG/EFP lighting.

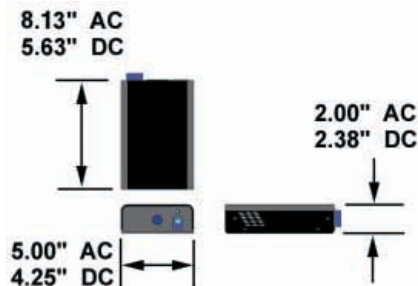
Frezzi's 200 Watt HMI engineered for news gathering, produces a wide flat optical field providing a light output unmatched in its size/weight category. At a distance of 10 feet the Frezzi-Super Sun Gun 200 produces up to 2 times the output of a 400W par HMI fixture with a wide angle lens. This incredible output is the direct result of Frezzi's computer optimized 5" open face parabolic reflector.

This new 200 Watt fixture, constructed with a strong aluminum housing, is lightweight and compact, weighing in at only 3¹/₂ pounds. The new dimmable Frezzi AC and DC 200W electronic ballasts are the smallest available in today's market, and may be used worldwide.

The Frezzi 200 Watt HMI is a portable light designed as a time saver for ENG/EFP photographers who will be able to quickly deploy the best available light at a news or media event with AC or DC power.



200W HMI SUPER-SUN GUN (SSG-200) DIMENSIONS



200W HMI AC AND DC BALLAST DIMENSIONS

LAMP SPECIFICATIONS

200 Watt HMI Open Face with Parabolic Reflector
5600K Color Temperature
Smooth Focus Control - Spot to Flood
Borosilicate Tempered Safety Glass
5/8" Stand Mount
12' Head Cable
Weight: 3 1/2 Pounds
Bulb: 200W MSR/HMI Single Ended Hot Restrike

LIGHTWEIGHT MINI-BALLASTS

Auto Voltage Select AC Ballast 2.0 lbs.
28 - 32V DC Ballast 2.0 lbs.

KEY BENEFITS

- Highest Output to Size & Weight Ratio
- Brighter than 400W Pars in Flood Mode
- Dimmer Controlled Ballasts
- Hot Restrike
- Weather Resistant
- Daylight Color Temperature 5600K
- Most Economical in the Industry
- No Lenses to Lose or Break
- AC or DC Operation
- Ruggedized Design
- Rapid Setup and Breakdown

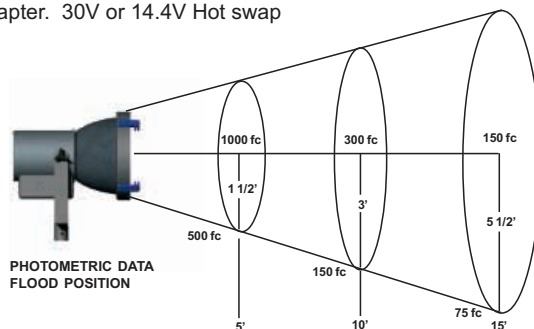


Dual Brick Adapter - for Connecting (2) 14.4v Brick Batteries for powering the 30 Volt DC Ballast. Unit has switchable 14 Volt or 30 Volt output.

96608 PA 30/14-B Dual brick adapter. 30V or 14.4V Hot swap



PA 30/14B



SINGLE HEAD SUPER-SUN GUN KITS

Item# 92701, Model# SSGK1-200 Includes:

- 1) SSG-200 Super-Sun Gun 200 Lamp Head
- 1) SSG-BD 4 leaf Barndoor
- 1) FAB-200 200W MSR/HMI Lamp
- 1) BAC-200 200W AC Ballast w/ auto voltage select
(for 30V DC Ballast specify Model# BDC-200)
- 1) SSG-SB Soft Box with 3 Diffusion Filters & 1 CTO Conversion Gel
- 1) TC-3 Transport Case - Single Head System

Item# 92704, Model# SSGK1-200AC/DC

Same as Item#92701 including 30V DC Ballast (Model# BDC-200)

DUAL HEAD SUPER-SUN GUN KIT

Item# 92702, Model# SSGK2-200 Includes:

- 2) SSG-200 Super-Sun Gun Lamp Head
- 2) SSG-BD 4 Leaf Barndoor
- 2) FAB-200 200W MSR/HMI Lamp
- 2) BAC-200 200W AC Ballast w/ auto voltage select
(for 30V DC Ballast specify Model# BDC-200)
- 2) SSG-SB Soft Box with 3 Diffusion Filters & 1 CTO Conversion Gel
- 1) TC-4 Transport Case - Two Head System

SSGK1-200

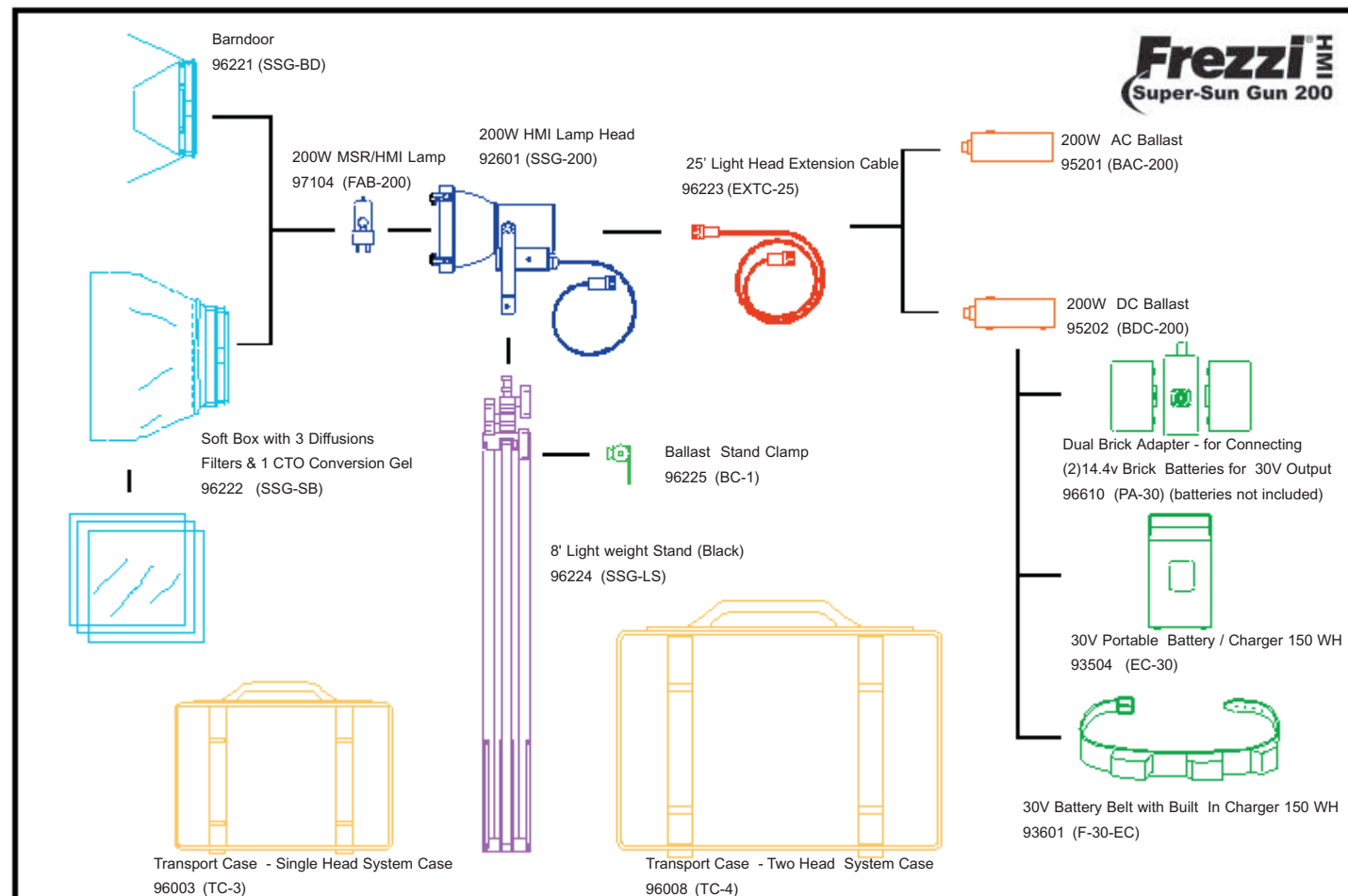


Kit Weights:

SSGK1-200: 23 lbs., SSGK2-200: 48 lbs

OPTIONAL ACCESSORIES

Item#	Model#	Description	Item#	Model#	Description
96224	SSG-LS	8' Light Weight Stand (Black)	96222	SSG-SB	Soft Box with 3 diffusion filters & 1 CTO Conversion Gel
96223	EXTC-200	25' Light Head Extension Cable	93504	EC-30	30V Portable Battery / Charger, 150 WH
97104	FAB-200	200W MSR/HMI Lamp	93601	F-30-EC	30V Battery Belt with Built in Charger, 150 WH
95201	BAC-200	AC Ballast w/ auto voltage select	96610	PA-30-B	Dual Brick Adapter - for Connecting (2) 14.4v Brick Batteries for 30V Output
95202	BDC-200	30V DC Ballast	96003	TC-3	Transport Case - Single Head System
92601	SSG-200	Lamp Head	96008	TC-4	Transport Case - Two Head System
96221	SSG-BD	Barndoor	96225	BC-1	Clamp to attach AC or DC ballast to light stand
96227	SSG-CTO	Drop-in CTO glass conversion filter			
96228	SSG-DIF	Drop-in glass diffusion filter			



BRICK BATTERIES

Television networks and professional videographers around the world are realizing there is an alternative in brick battery technology. Many are upgrading their lower capacity, costly, non-serviceable batteries to Frezzi's more powerful, cost effective, serviceable batteries. Frezzi bricks are available with or without an Advanced Energy Gage. Unlike common digital bricks where the meter remains on, draining battery capacity, the Frezzi Advanced Energy Gage has a sleep mode to conserve power. And most importantly, the Frezzi Energy Gage remains accurate throughout the life of the battery. Never again will a video professional have to go into the field and worry that a battery reading 100% may last only 10 minutes.



BP-14MHEG

ENERGY GAGE BRICKS / MINI-BRICKS

(direct connection to all Anton/Bauer® brackets)

- The most accurate and reliable capacity gage in the industry
- Highest capacity NiCd and NiMH cells
- Completely repairable and rebuildable
- Compatible with most brick chargers
- Rugged, rubberized aluminum casing
- Thick shock absorbing internal padding



BP-14EG

Item#	Model#	Description
93301	BP-14EG	Full Size Brick w/ Energy Gage: 14.4V, 72 WH, NiCd, 5 lbs.
93305	BP-142EG	Mini-Brick w/ Energy Gage: 14.4V, 45WH, NiCd, 3 lbs.
93303	BP-14MHEG	NEW! Full Size Brick w/ Energy Gage: 14.4V, 130 WH, NiMH, 5.5 lbs.



BP-14

STANDARD BRICKS / MINI-BRICKS

(direct connection to all Anton/Bauer® brackets)

Frezzi standard brick batteries have the same features as the Energy Gage bricks with respect to size, weight, capacity, serviceability, and durability. They do not contain the advanced Energy Gage meter.

Item#	Model#	Description
93201	BP-14	Full Size Brick: 14.4V, 72 WH, NiCd, 4.9 lbs.
93203	BP-142	Mini-Brick: 14.4V, 45 WH, NiCd, 2.9 lbs.
93205	BP-14MH	NEW! Full Size Brick: 14.4V, 130 WH NiMH, 5.4 lbs.



BP-142

V-LOCK BRICK BATTERIES

Frezzi Energy Gage and Standard V-Lock Brick Batteries have the same great features as our bricks with respect to size, capacity, construction, and Energy Gage, with the following additional features:

- Direct connection to all Sony® V-Lock mounts
- No special adapter plates needed
- Built-in power-tap for powering up to a 75 watt light
- Accurate capacity information through camera viewfinder

ENERGY V-LOCK GAGE BRICKS / MINI-BRICKS

(direct connection to all Sony® V-Lock mounts)

Item#	Model#	Description
93701	BP-14EGV	Full Size Brick w/ Energy Gage: 14.4V, 72 WH, NiCd, 5.2 lbs.
93703	BP-142EGV	Mini-Brick w/ Energy Gage: 14.4V, 45WH, NiCd, 3.2 lbs.
93705	BP-14MHEGV	NEW! Full Size Brick w/ Gage: 14.4V, 130 WH, NiMH, 5.7 lbs.

STANDARD V-LOCK BRICKS / MINI-BRICKS

(direct connection to all Sony® V-Lock mounts)

Item#	Model#	Description
93801	BP-14V	Full Size Brick: 14.4V, 72 WH, NiCd, 5.1 lbs.
93803	BP-142V	Mini-Brick: 14.4V, 45 WH, NiCd, 3.1 lbs.
93805	BP-14MHV	NEW! Full Size Brick: 14.4V, 130 WH NiMH, 5.6 lbs.



NEW!

BP-14MHEGV

ADVANCED FAST CHARGERS, DISCHARGERS, AND ANALYZERS

By listening to our customer's suggestions and through our many years of engineering experience, Frezzi has developed the award winning **M-Series** battery charger line. The M-Series chargers combine the features of many pieces of equipment into one compact unit. There is no longer a need for separate chargers, dischargers, analyzers, or power supplies. Frezzi's universal charging design provides the comfort of knowing that you will never be locked into one specific battery manufacturer or one specific battery format.

M2100 / M2100A / M2100-4

- A complete four channel battery management system
- Charges all manufacturer's battery packs, 12 to 14.4V, NiCd or NiMH
- Discharges all battery types to proper voltage cut-off
- Battery Rescue mode revives abused or over discharged batteries
- Analyze mode shows capacity out on discharge and capacity in on charge
- Low voltage cut-off indicator identifies damaged cells
- Regulated built-in 70 watt power supply with adjustable voltage
- Bar Graph Ammeter in power supply mode
- Back lit alpha-numeric LCD display
- Auto Maintenance Charge
- Reverse polarity protection
- Auto voltage select worldwide
- Light weight: 3.5 lbs. (M2100), 4.0 lbs. (M2100A)
- Compact: 10" x 6.25" x 2.75" (M2100), 10" x 7" x 4" (M2100A)

Item#	Model#	Description
94124	M2100	Top NP1 cups, and front BP-90 jacks
94125	M2100A	Side brick brackets and front BP-90 jacks
94126	M2100-4	M2100 with choice of any (4) charger adapter cables



M1100 / M1100A / M1100-4

- Four channel charger for all battery types, 12 to 14.4V, NiCd or NiMH
- Auto-Rescue program revives over-discharged batteries
- Back lit alpha-numeric LCD display shows charge status (capacity in) and battery voltage
- Auto Maintenance Charge
- Reverse polarity protection
- Auto voltage select worldwide
- Light weight: 3.25 lbs. (M1100), 3.75 lbs. (M1100A)
- Compact: 10" x 6.25" x 2.75" (M2100), 10" x 7" x 4" (M2100A)



Item#	Model#	Description
94114	M1100	Top NP1 cups, and front BP-90 jacks
94115	M1100A	Side brick brackets and front BP-90 jacks
94116	M1100-4	M1100 with any 4 charger adapter cables

M1000 / M1000A / M1000P / M1000AP / M1000V / M1000VP

- Single channel charger for all battery types, 12 to 14.4V, NiCd or NiMH
- Discharges all battery types to proper voltage cut-off
- Battery Rescue mode revives abused or over discharged batteries
- LED display with voltmeter and low voltage indicator
- Auto Maintenance Charge
- Reverse polarity protection
- Auto voltage select worldwide
- Optional built in 40 watt power supply (Included with M1000P and M1000AP)
- Unique top adapter for brick batteries (Included with M1000A and M1000AP)
- Light weight: 2.0 lbs. (M1000, M1000P), 2.5 lbs. (M1000A, M1000AP)
- Compact: 8.5" x 5" x 2" (M1000, M1000P), 8.5" x 5" x 2.75" (M1000, M1000P)



Item#	Model#	Description
94111	M1000	Top NP1 cup, and front BP-90 jack
94112	M1000A	M1000 with top mount Brick battery connector
94109	M1000P	M1000 with 40 watt power supply
94110	M1000AP	M1000A w/ 40 watt power supply and Brick battery connector
94127	M1000V	M1000 for VLock Battery
94128	M1000VP	M1000V w/40 watt power supply

NP-1 BATTERIES, BATTERY PACKS, AND BATTERY BELTS

NP-1 BATTERIES



FNP1-MH



FNP-1S



NPX-2

Frezzi NP-1 batteries are the perfect replacement for all existing NP-1 style batteries. Whether you are powering a camera, light, monitor, or recorder, Frezzi has an NP-1 for you.

For powering modern video cameras with cut-off voltages in the 10.5 to 11.5 volt range, the higher voltage of the cost effective **NPX-2** batteries will provide a significant improvement in run time and battery life over commonly used 12V batteries.

The reliable **FNP-1S** batteries are a direct replacement for the Sony NP-1B and are a good choice for powering on-board 12V lights, or for cameras with lower cut-off voltages under 10.5 volts.

The **FNP-1MH** battery provides twice the runtime of standard NiCd NPs, and is now equipped with proprietary charge/discharge protection for improved performance and extended life. The higher voltage design of the FNP-1MH makes it a great choice for powering video cameras.

Item#	Model#	Description
93101	FNP-1MH	13.2V, 50 WH, NiMH, 7.25" x 2.75 x 0.94", 1.5 lbs.
93103	FNP-1S	12.0V, 28 WH, NiCd, 7.25" x 2.75 x 0.94", 1.5 lbs.
93105	NPX-2	NEW! 13.2V, 32 WH, NiCd, 7.25" x 2.75 x 0.94", 1.5 lbs.

Frezzi provides a full line of NiCd battery packs for powering lights, cameras, decks, and for 30 volt applications. The VB-12P, VB-4XP, and VB14-4XP are great economical alternatives to battery belts.

BATTERY PACKS



EC-30

Item#	Model#	Description
93501	FBP-90	12.0V, 60 WH, BP-90 replacement, 6.5" x 4.75" x 1.5", 3.5 lbs.
93502	VB-12P	12.0V, 60 WH, w/ cig. lighter connector, belt loop and shoulder strap, 8" x 5.5" x 2", 4 lbs.
93503	VB-4XP	12.0V, 60 WH, w/ XLR-4 connector, belt loop and shoulder strap, 8" x 5.5" x 2", 4 lbs.
93504	EC-30	30.0V, 150 WH, w/ built in 110V 14 hr. charger, (220V charger also available) 9.5" x 5" x 2.75", 10 lbs
93505	VB14-4XP	14.4V, 72 WH, w/ XLR-4 connector, belt loop and shoulder strap, 8.5" x 5.5" x 2", 4.5 lbs.



FBP-90



VB-4XP

BATTERY BELTS



F-13-EXFA

All Frezzi battery belts are constructed from fine rugged leather for durability and comfort. The highest quality NiCd cells are used for reliability and long life. The following features are standard on all Frezzi belts:

- Built in charger with ready indicator and auto voltage select worldwide
- Highest quality all leather construction
- Rebuildable and repairable
- Highest quality NiCd cells for reliability, long life, and high current loads

Item#	Model#	Description
93601	F-30-EC	30.0V, 150 WH, single output 30V 2 pin amphenol, built-in 14 hour charger, 10 lbs.
93604	F-30/14-EXFA	30.0/14.4V, 150 WH, switchable output 14.4V XLR-4 or 30V 2 pin amphenol, built-in 14 hour charger, 10 lbs.
93605	F-14-EXFA	14.4V, 100 WH, dual output XLR-4, built-in 6 hour charger, 8.5 lbs.
93606	F-13-EXFA	13.2V, 93 WH, dual output XLR-4, built-in 6 hour charger, 8.25 lbs.
93607	F-12-EXFA	12.0V, 84 WH, dual output XLR-4, built-in 6 hour charger, 8 lbs.

POWER SUPPLIES

Item#	Model#	Description
95103	RPS-70V	NEW! 14.4V, 70W on-board power supply, directly connects to Sony V-lock. Integral 2 pin power-tap and XLR-4(F) outputs to power additional equipment. 2 lbs.
95104	RPS-70	NEW! 14.4V, 70W on-board camera power supply, directly connects to all Anton/Bauer® brackets. Integral XLR-4(F) output to power additional equipment. 1.5 lbs.
95102	RPS-80	13.2 volts, 80 watt power supply with dual XLR-4(F), 2 lbs.



RPS-80



RPS-70V / RPS-70

BATTERY BRACKETS AND POUCHES

Item#	Model#	Description
96601	NP1-3Pi	Holds 1, 2, or 3 NP-1 batteries, directly connects to all Anton/Bauer® brackets
96604	NP1-CB	Attaches extra NP on camera NP-1 box. (For light)



NP1-3Pi



NP1-CB

96606	BP-90 POUCH	Pouch w/ shoulder strap & belt loop for BP-90
96607	NP1 POUCH	Pouch w/ shoulder strap & belt loop for 2 NPs



BP-90 POUCH



NP1 POUCH

96608	PA 30/14-B	Dual brick adapter. 30V or 14.4V Hot swap
96610	PA-30-B	Dual brick adapter. 30V only.
96612	NP-B	Top mount brick adapter for M1000 chargers
96613	NP-V	Top mount V-Lock adapter for M1000 chargers



PA 30/14B



NP-B



NP-V

QUICK CHARGERS/TRICKLE CHARGERS

NEW! Quick charger for 12-14.4V NiCd / NiMH batteries 1-7Ah at 1 amp charge rate. LED charging status. Ready indicator. Auto line select 110/220VAC 50/60Hz. Size: 5.60"L x 2.75"W x 1.5"D. Approx weight: 1/2 lb.

Item#	Model#	Description
94100	FQC-NP1	Quick charger for NP-1 batteries
94101	FQC-14	Quick charger for 14.4V, 1 to 7 AH A/B bricks
94105	FQC-14V	Quick charger for 14.4V, 1 to 7 Ah V-Lock bricks
94102	FQC-4X	Quick charger for VB-14-4XP batteries
94103	FQC-BP90	Quick charger for BP-90 style batteries
94104	FQC-12P	Quick charger for VB-12P battery. Cigarette conn.

These economical chargers will charge the indicated batteries in 14 hours. Size: 2.75"L x 2.0"W x 1.5"D. Approx weight: 3/4 lb. (120/240V)

Item#	Model#	Description
94201	FTC-NP1	Trickle charger for NP-1 batteries
94202	FTC-14	Trickle charger for 14.4V, 4 to 5 AH bricks
94209	FTC14-4X	Trickle charger for VB-14-4XP batteries
94210	FTC12-4X	Trickle charger for VB-4XP batteries
94206	BC-124S	Trickle charger for BP-90 style batteries
94211	FTC-12P	Trickle charger for VB-12P battery. Cigarette conn.



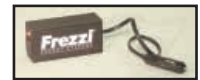
FTC-NP1



FQC-NP1

IN-CAR CHARGING

Item#	Model#	Description
94503	ICP-200	12 V DC to 120V AC inverter for all M2100 and M1100 chargers.



ADAPTER CABLES

Item#	Model#	Description
96701	9455F	BP-90 plug to XLR-4(M)
96702	9458	BP-90 plug to brick battery
96703	9576F	BP-90 plug to NP1
96705	9455P	BP-90 plug to Cig Plug
96706	9455(5)F	BP-90 plug to XLR-5(M)
96707	9693	BP-90 plug to BP-90 plug
96709	9514	BP-90 plug to Pag-Lok, 12"
96710	9579	XLR-4(F) to NP1
96711	9442	XLR-4(F) to brick battery
96712	3252P	XLR-4(F) to Cig plug
96713	3252A	XLR-4(F) to 30V(M)
96714	9447	XLR-4(F) to BP-90 socket
96716	CC44	XLR-4(M) to XLR-4(F) 6' coil
96718	3252-NP1	NP1 cup w/ 4' cable
96723	3252-PT	Power-tap conn. w/28" cable
96719	9692	NP1(M) to BP-90 plug
96720	1044	XLR-4(M) to XLR-4(F), 10'
96724	9410	BP-90 plug to V-Lock Brick battery
96722	FA-4X-PT	XLR-4(F) to PT w/ filter for MA50-4X



9455F



9458



9576F

All adapter cables are 18" long unless otherwise specified.



9579



9442



3252P



3252A



9447



3252-NP1

TRANSPORTATION CASES

Item#	Model#	Description
96002	TC-2	Rugged waterproof case w/ padded dividers (18.5"L x 15.25"W x 7"D)
96003	TC-3	Rugged waterproof case w/ padded dividers (20.5"L x 16.75"W x 7.5"D)
96008	TC-4	Rugged custom fit case for SSGK2-200 kit (29"L x 13"W x 14"D)

Improve the quality of your video interview.....

1. Add light
2. Fill in shadows on faces and dark eye sockets.
3. Separate your subject from the background.

For Electronic News Gathering, and Electronic Field Production the two most common light sources are tungsten and HMI.

A tungsten bulb contains a filament and produces an output of 28 lumens per watt at a color temperature of approximately 3200 degrees Kelvin.

A HMI bulb contains gasses and an electrode (it is a short arc discharge bulb) and requires an ignitor and ballast. HMI bulbs produce an output of 92 to 104 lumens per watt at 5600 degrees Kelvin.

HMI lighting is 3 to 4 times as efficient as tungsten. By adding a dichroic filter to a tungsten source, the color temperature is converted from 3200 degrees Kelvin to 5600 degrees Kelvin, or daylight. The light transmission reduction by adding a dichroic filter is 25 to 50 percent. The HMI is now 5 to 6 times as efficient as the tungsten source corrected to 5600 degrees Kelvin.

For ENG applications, small on-board camera lighting is most common. The fixtures used today are generally 20 to 100 watt lamps utilizing 12.0 to 14.4 volt batteries as compared to the original Frezzi lights of 250 watts operating from a 30 volt power pack. These fixtures use tungsten-halogen bulbs. The standard for this type of lighting has become the Frezzi Dimmer Control Mini-Fill with adjustable light output. Frezzi's new 18 watt, 24 watt, and 50 watt Mini HMI Sun-Guns are the new standard for on-board HMI lighting. In addition the new Frezzi Micro-Fill, Dimmer Micro-Fill and Micro-Sun 10 watt HMI provides professional lighting for the newest Mini-DV camcorders.

EFP crews generally use larger fixtures placed on stands ranging from 650 watt and 1000 watt tungsten to 200 watt, 400 watt, and 575 watt HMI's.

The new Frezzi 200 Watt Super-Sun Gun is the first in a new line of efficient, high output family of stand mounted HMI fixtures.

In a discussion with any camera manufacturer, you will find a common point, today's cameras work quite well in relatively low light levels. However, to make good quality pictures, supplemental lighting is required.

The primary source of outside light is the sun. It can be very unforgiving, creating harsh shadow areas which need to be softened to create a good and acceptable picture. The best way to accomplish this is with lighting.

Yes, there is a need for light!! Add a new Frezzi light to your production equipment.

The three major battery cell chemistries used today for powering professional video broadcast equipment are Nickel Cadmium (NiCd), Nickel Metal Hydride (NiMH), and Lithium Ion (Li-Ion). Before choosing a specific battery chemistry, one must consider all of the facts. Below is a guide that will help you decide which one may be right for you.

NiCd Facts:

- For over 30 years, NiCd batteries have been a reliable source of power for the broadcast industry and have continued to improve in overall capacity and cycle life.
- NiCd has the longest cycle life.
- NiCd can handle the highest loads. When powering equipment that is drawing more than 60 watts, as with a typical camera and light setup, NiCd should be the battery choice. NP-1s can handle loads up to 75 watts while bricks and belts can sustain up to 250 watt loads.
- NiCd can tolerate the most abuse, such as high current drains, overdischarge, and overcharge.
- Of the three cell chemistries, NiCd is the least expensive.

NiMH Facts:

- For the same size and weight battery, NiMH can supply up to twice the usable capacity of NiCd batteries.
- Generally, NiMH has about half the cycle life as compared to NiCd batteries.
- Frezzi NiMH supports high loads equivalent to NiCd with higher capacity. For most NiMH batteries, the total load should be no more than 50 watts for NP1's and up to 130 watts for full size bricks.
- NiMH NP-1 batteries must feature protective circuitry within the battery to achieve maximum cycle life and reliable end of charge termination.
- Of the three cell chemistries, NiMH falls in the middle in terms of cost.

Lithium Ion Facts

- Lithium ion features the highest energy to weight ratio of the three cell chemistries.
- Cycle life of Lithium Ion is about the same as NiMH.
- Lithium Ion is the lowest performer in load tolerance, ideally under 30 watts, and is therefore impractical for running most camera / light setups together. Cells and batteries must be carefully charged and kept in close balance for safe and reliable operation.
- Overcharging or overdischarging can create catastrophic failure, thus battery circuitry protection must be included in all Lithium Ion batteries, resulting in the most expensive battery technology currently on the market.

Note: For optimum performance and cycle life of NiCd and NiMH batteries, the Frezzi M-Series line of advanced chargers is recommended.

WARRANTY

Because of the quality of Frezzi products we are proud to offer a full 2 year warranty on all NiCd batteries and a full one year warranty on all other products manufactured by Frezzi Energy Systems. (See specific warranty information for full terms and conditions)

CUSTOMER SERVICE

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